

## SECTION 12 24 13

### ROLLER WINDOW SHADES

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Manually operated window shades and accessories for sun/glare/heat control and room darkening.
- B. Related sections:
  - 1. [\_\_\_\_\_].

##### 1.02 REFERENCE STANDARDS

- A. [ASTM International:]
  - 1. [ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.]
- B. [National Fire Protection Association:]
  - 1. [NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.]

##### 1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
  - 1. Coordinate the Work with window shade installation and placement of concealed blocking to support window shades.
- B. [Preinstallation Meeting:]
- C. [Sequencing:]
- D. Scheduling: Schedule installation of window shades to occur after application of exposed finishes wherever installation will not damage exposed finish surfaces and completion of finishes will not impede installation.

##### 1.04 [SUSTAINABLE CHARACTERISTICS]

- A. Section 01 35 63 - Sustainability Project Requirements: Requirements for sustainable design compliance.
- B. Materials and Resources Characteristics:
  - 1. [Recycled Content Materials: Furnish materials with maximum available recycled content including:

**SPEC NOTE** *List materials specified in this section required to have recycled content.*

- a. [\_\_\_\_\_].
- 2. [Regional Materials: Furnish materials extracted, processed, and manufactured within 500 miles of Project site.]

**SPEC NOTE** *List materials specified in this section required to be regional materials.*

- a. [\_\_\_\_\_].

### 1.05 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. Product Data: Manufacturer's catalog data, product descriptions, installation instructions, detail sheets, and specifications for each type of system specified.
- C. Samples for Selection: Manufacturer's color chart or sample set.
- D. Shop Drawings: Prepared specifically for this project; show dimensions and interface with other products.
  - 1. Room schedule including field-verified dimensions of each opening to receive window shade systems.
  - 2. Indicate System Series, operator, fabric selection, and mounting type.
  - 3. Indicate control type.

### 1.06 [SUSTAINABLE DESIGN SUBMITTALS]

- A. Section 01 35 63 - Sustainability Project Requirements: Requirements for sustainable design submittals.
- B. Manufacturer's Certificate: Certify products meet or exceed specified sustainable design requirements.
  - 1. Materials Resources Certificates:
    - a. Certify source and origin for [salvaged] [and] [reused] products.
    - b. Certify recycled material content for recycled content products.
    - c. Certify source for regional materials and distance from Project site.
- C. Product Cost Data: Submit cost of products to verify compliance with Project sustainable design requirements. Exclude cost of labor and equipment to install products.
  - 1. Provide cost data for the following products:
    - a. [Salvage products.]
    - b. [Reused products.]
    - c. Products with recycled material content.
    - d. Regional products.

### 1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Installer Qualifications: Installer trained and certified by the manufacturer with a minimum of five years experience in installing products comparable to those specified in this Section.
- C. [Fire-Test-Response Characteristics: Passes NFPA 701 small and large-scale vertical burn. Materials tested shall be identical to products proposed for use.]

### 1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver shades in factory-labeled packages, marked with manufacturer and product name, [fire-test-response characteristics,] and location of installation using same room designations indicated on Drawings.
- B. Individually package and mark shades with room number and opening number.

- C. Inspect the materials upon delivery to assure that specified products have been received.
- D. Store and handle shades to prevent damage to fabrics, finishes, and operators prior to installation.

## 1.09 SITE CONDITIONS

- A. Environmental Limitations: Maintain ambient temperature and humidity conditions during installation of window shades at the levels indicated for Project when occupied for its intended use.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Roller Window Shade Manufacturers:
  - 1. MechoShade Systems, Inc.
  - 2. Solarfective Products Limited,
  - 3. or equal.
- B. Provide all window shade systems from a single manufacturer.

### 2.02 MANUAL WINDOW SHADE

- A. [Type \_\_\_\_\_,] Window Shade, Ceiling Mounted
  - 1. Description:
    - a. Ceiling mounted.
    - b. Operation: Chain operated, gear and sprocket mechanism.
    - c. Fabric for Sun/Glare/Heat Control: Twill weave pattern at 2 percent open.
    - d. Fascia: Snap lock type for non-recessed shade installation, as supplied by manufacturer.
    - e. Roller and Mounting Brackets: Manufacturer's standard.
  - 2. Product: MechoShade Systems, Inc.'s "MechoShade/5 with Thermal Veil 3300 Series Shade"; or equal.
  - 3. Color: As indicated on Drawings.
- B. [Type \_\_\_\_\_,] Window Shade, Recessed Ceiling Mounted:
  - 1. Description:
    - a. Operation: Chain operated, gear and sprocket mechanism.
    - b. Mounting: Recess mounted with ceiling pocket and closure.
    - c. Fabric for Sun/Glare/Heat Control: Twill weave pattern at 2 percent open.
    - d. Fascia: Snap lock type for non-recessed shade installation, as supplied by manufacturer.
    - e. Roller and Mounting Brackets: Manufacturer's standard.
  - 2. Product: MechoShade Systems, Inc.'s "MechoShade/5 with Thermal Veil 3300 Series Shade"; or equal.
  - 3. Color: As indicated on Drawings.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Examine construction to support, adjoin, or otherwise contact and verify that:

1. Field conditions and dimensions are acceptable and are ready to receive items.
2. Load-bearing studs are available where required by weight of items.
3. Dimensions of roller and shade clearance in the up position before mounting brackets.
4. Setting conditions are dry, clean, and otherwise proper for installation.

B. Do not install items until unsatisfactory conditions have been corrected.

### **3.02 PREPARATION**

- A. Insure adequate support will be available at time of installation.
- B. Clean surfaces thoroughly prior to installation.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### **3.03 INSTALLATION**

- A. Install roller window shades in accordance with manufacturer's written recommendations and reviewed Shop Drawings.
- B. Install roller window shades level, plumb, square, and true
- C. Located so shade band is not closer than 2 inches to interior face of glass. Allow proper clearances for window operation hardware.
- D. Assume responsibility for all field dimensions and mounting surfaces.
- E. Use manufacturer's brackets and fasteners as required to penetrate material to which attached.
- F. Fastenings: Use expansion bolts in concrete and machine screws or bolts to metal backing. Toggle bolts will not be permitted.

### **3.04 ADJUSTING**

- A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.
- B. Adjust window shade systems for proper operation.

### **3.05 CLEANING**

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

### **3.06 PROTECTION OF INSTALLED WORK**

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

### **3.07 DEMONSTRATION AND TRAINING**

- A. Engage Installer to train University's maintenance personnel to adjust, operate and maintain roller shade systems.

**END OF SECTION**