

SECTION 12494  
ROLLER SHADES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes black-out shades.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions.
- B. Shop Drawings: Show location and extent of roller shades. Include elevations, sections, details, and dimensions not shown in Product Data. Show installation details, mountings, attachments to other Work, operational clearances, and relationship to adjoining work.
- C. Samples for Selection: For each colored component of each type of roller shade indicated.
  - 1. Include similar Samples of accessories involving color selection.
- D. Window Treatment Schedule: Include roller shades in schedule using same room designations indicated on Drawings.
- E. Product Certificates: For each type of roller shade product, signed by product manufacturer.
- F. Product Test Reports: For each type of roller shade product.
- G. Maintenance Data: For roller shades to include in maintenance manuals. Include the following:
  - 1. Methods for maintaining roller shades and finishes.
  - 2. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performance.
  - 3. Operating hardware.
  - 4. Motorized shade operator.
- H. LEED Submittal:
  - 1. Credit MR 2.1 and 2.2: Comply with Division 1 Section "Construction Waste Management."
  - 2. Credit MR 5.1: Product Data indicating location of material manufacturer for regionally manufactured materials.
    - a. Include statement indicating cost and distance from manufacturer to Project for each regionally manufactured material.

## PART 2 - PRODUCTS

### 2.1 BLACK-OUT SHADES

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Draper, LightBloc Shading system:
    - a. Shade Material; Light Bloc Flexshade.
  - 2. Substitute products by the following:
    - a. Mechoshade.
- B. Shade Band Material: PVC-coated fiberglass, 12.0 oz. weight.
  - 1. Material Width: As required.
  - 2. Bottom Hem: Straight.
  - 3. Material Color: As selected by Architect from manufacturer's full range.
- C. Rollers: Electrogalvanized or epoxy primed steel or extruded-aluminum tube of diameter and wall thickness required to support and fit internal components of operating system and the weight and width of shade band material without sagging; designed to be easily removable from support brackets; with manufacturer's standard method for attaching shade material. Provide capacity for one roller shade band per roller, unless otherwise indicated on Drawings.
- D. Direction of Roll: Regular, from back of roller.
- E. Mounting Brackets: Galvanized or zinc-plated steel.
- F. Fascia: L-shaped, formed-steel sheet or extruded aluminum; long edges returned or rolled; continuous panel concealing front and bottom of shade roller, brackets, and operating hardware and operators; length as indicated on Drawings; removable design for access.
- G. Top/Back Cover: L shaped; material and finish to match fascia; combining with fascia and end caps to form a six-sided headbox enclosure sized to fit shade roller and operating hardware inside.
- H. Audiovisual Light-Blocking Shades: Designed for eliminating all visible light gaps when shades are fully closed; fabricated from blackout shade band material with fascia, pocket, and bottom bar extended and formed for light-tight joints among shade components and between shade components and adjacent construction.
  - 1. Side Channels, Sill Channel, and Perimeter Seals: Manufacturer's standard design for eliminating light gaps when shades are closed.
  - 2. Shade Band Retention System: Manufacturer's standard design for guiding shade band material through range of travel and holding shade band flat with edges of material within side channels.
- I. Mounting: Wall extension brackets mounting permitting easy removal and replacement without damaging roller shade or adjacent surfaces and finishes.
- J. Hold-Down Brackets and Hooks or Pins and Side Channels: Manufacturer's standard for fixing shade in place, keeping shade band material taut, and reducing light gaps when shades are closed.

## 2.2 ROLLER SHADE FABRICATION

- A. Product Description: Roller shade consisting of a roller, a means of supporting the roller, a flexible sheet or band of material carried by the roller, a means of attaching the material to the roller, a bottom bar, and an operating mechanism that lifts and lowers the shade.
- B. Concealed Components: Noncorrodible or corrosion-resistant-coated materials.
  - 1. Lifting Mechanism: With permanently lubricated moving parts.
- C. Unit Sizes: Obtain units fabricated in sizes to fill window and other openings as follows, measured at 74 deg F (23 deg C):
  - 1. Shade Units Installed between (Inside) Jambs: Edge of shade not more than 1/4 inch (6 mm) from face of jamb. Length equal to head to sill dimension of opening in which each shade is installed.
  - 2. Shade Units Installed Outside Jambs: 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.
- D. Installation Brackets: Designed for easy removal and reinstallation of shade, for supporting fascia, roller, and operating hardware and for hardware position and shade mounting method indicated.
- E. Installation Fasteners: Not fewer than two fasteners per bracket, fabricated from metal noncorrosive to shade hardware and adjoining construction; type designed for securing to supporting substrate; and supporting shades and accessories under conditions of normal use.
- F. Color-Coated Finish: For metal components exposed to view, apply manufacturer's standard baked finish complying with manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness.
- G. Colors of Metal and Plastic Components Exposed to View: As selected by Architect from manufacturer's full range, unless otherwise indicated.

## 2.3 MOTORIZED ROLLER SHADE OPERATORS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Manufacturer of roller shade.
  - 2. Elero USA Inc.
  - 3. SIMU US, Inc.
  - 4. SOMFY Systems.
- B. General: Provide factory-assembled motorized shade operation systems designed for lifting shades of type, size, weight, construction, use, and operation frequency indicated. Provide operation systems of size and capacity and with features, characteristics, and accessories suitable for Project conditions and recommended by shade manufacturer, complete with electric motors and factory-prewired motor controls, remote-control stations, remote-control devices, power disconnect switches, enclosures protecting controls and all operating parts, and accessories required for reliable operation without malfunction. Include wiring from motor controls to motors. Coordinate operator wiring requirements and electrical characteristics with the building electrical system.

- C. Comply with NFPA 70.
- D. Control Equipment: Comply with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6.
- E. Electric Motors: UL-approved or -recognized, totally enclosed, insulated motor, complying with NEMA MG 1, with thermal-overload protection, brake, permanently lubricated bearings, and limit switches; sized by shade manufacturer to start and operate size and weight of shade considering service factor or considering Project's service conditions without exceeding nameplate ratings.
  - 1. Service Factor: According to NEMA MG 1, unless otherwise indicated.
  - 2. Motor Characteristics: Single phase, 110 V, 60 Hz.
  - 3. Motor Mounting: Within manufacturer's standard roller enclosure.
- F. Position of Motor and Electrical Connection: Left or right side of roller, as determined by hand of user facing shade from inside, unless otherwise indicated.
- G. Remote Controls: Electric controls with NEMA ICS 6, Type 1 enclosure for recessed or flush mounting. Provide the following devices for remote-control activation of shades:
  - 1. Control Stations: Keyed, maintained-contact, three-position, switch-operated control station with open, close, and off functions. Provide two keys per station.
    - a. Color: To match electrical covers.
    - b. Product: Subject to compliance with requirements, provide "Decora Plus" by Leviton Manufacturing Co. Inc..
- H. Limit Switches: Adjustable switches, interlocked with motor controls and set to automatically stop shade at fully raised and fully lowered positions.
- I. Operating Function: Stop and hold shade at any position.

## PART 3 - EXECUTION

### 3.1 ROLLER SHADE INSTALLATION

- A. Install roller shades level, plumb, square, and true according to manufacturer's written instructions, and located so shade band is not closer than 2 inches (50 mm) to interior face of glass. Allow clearances for window operation hardware.
- B. Connections: Connect motorized operators to building electrical system.

### 3.2 ADJUSTING

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

### 3.3 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.

END OF SECTION