

SECTION 122413

WINDOW SHADES

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

- A. Work of this Section includes all labor, materials, equipment, and services necessary to complete the window shades as shown on the drawings and/or specified herein, including, but not limited to, the following:
 - 1. Manually operated window shades.
 - 2. Field measurements of as-built conditions.
 - 3. Accessories and hardware required for complete installation and operation.

1.3 QUALITY ASSURANCE

- A. Provide assemblies which are complete assemblies produced by one manufacturer, including hardware, accessory items, mounting brackets, and fastenings.
- B. Provide materials in colors as selected by the Architect from manufacturer's standard colors.

1.4 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: Submit floor layout and elevations, indicating location of all window treatments, mechanism details, type and size of each unit, type and location of controls. Shop drawings must also show seaming of shade fabric. Submit shop drawings showing details of installation and relation to adjoining construction and conditions.
- C. Samples: Submit full size sample of each shade type for Architect's acceptance.
- D. Mock-Up
 - 1. Install each type of shade assembly on one complete column bay for Architect's acceptance of installation details, workmanship and operation.
 - 2. Approved mock-up shall be used as the standard for installation of work under this Section, and no further installation work shall proceed before Architect's acceptance of the mock-up.

1.5 WARRANTY

- A. Manufacturer's standard noon-depreciating 25-year limited warranty covering all hardware, chains, motors, motor control system and shade cloth.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Protect shades from damage, soiling and deterioration during transit, storage and handling to, until Owner's acceptance.

PART 2 PRODUCTS

2.1 MANUALLY OPERATED SHADES

- A. Provide manually operated shade systems with recessed pockets and fascias as scheduled below, made by MechoShade Systems, Inc., or equal made by Sol-R-Veil Inc., Draper, or approved equal conforming to standards specified herein.
- B. Shade system shall be pre-engineered overrunning clutch design that disengages to 90% during the raising and lowering of the shade. The brake can stand a pull force of 40 lb. in the stop position. Requires no adjustment. Self-lubricating hub on to which the brake system is mounted includes an articulated brake assembly which assures smooth, non-jerky operation in raising and lowering the shades. System shall include the following components:
 - 1. Roller Shaft: Heavy gage rigid aluminum tube; designed and fabricated to support shade without sag, prevent center wrinkling and assure trouble free roll ups; supported by anti-friction bearings.
 - 2. Manual Operator: Continuous #10 nickel plated ball chain, sized for operation from a convenient position, operating through a clutch mechanism that prevents overdrive, assures smooth raising and lowering and holds shade in position without slippage. Provide lift assist for window runs greater than 8'-0".
 - 3. Provide shade hardware allowing for the removal of shade roller tube from brackets without removing hardware from opening and without requiring end or center supports to be removed.
 - 4. Provide shade hardware that allows for removal and remounting of the shade bands without having to remove the shade tube, drive, or operating support brackets.
 - 5. Provide for universal, regular and offset drive capacity, allowing drive chain to fall at front, rear or non-offset for all shade drive end brackets. Universal offset shall be adjustable for future change.
 - 6. Provide shade hardware system that allows for removable regular and/or reverse roll fascias to be mounted continuously across two or more shade bands without requiring exposed fasteners of any kind.
 - 7. Provide shade hardware system that allow for operation of multiple shade bands (multi-banded shades) by a single chain operator. Connectors shall be offset to assure alignment from the first to the last shade band.

8. Provide shade hardware constructed of minimum 1/8" thick plated steel or heavier as required to support 150% of the full weight of each shade.
9. Drive Bracket/ Brake Assembly:
 - a. Mecho Shade Drive Bracket M5 at SS1 and SS2 locations, M10 at SS1/BO1 locations, and Slimline bracket at "Narrow Width Bracket" SS3 locations and #15 bracket at SS4/BO2 locations noted on drawings, or equal by other manufacturers noted herein.
 - b. Drive Chain: #10 qualified stainless steel chain rated to 90 lb.
 - c. Minimum Breaking Strength: Nickel plate chain shall not be accepted.
 - d. Each manual shade requires lift assist mechanism, without exception.
- C. Shade Bands: Construction of shade band includes the fabric, the hem weight, hem pocket, shade roller tube, and the attachment of the shade band to the roller tube. Sewn hems and open hem pockets are not acceptable.
 1. Hem Pockets and Hem Weights: Fabric hem pocket with RF welded seams (including welded ends) and concealed hem weights. Hem weights shall be of appropriate size and weight for shade band. Hem weight shall be continuous inside a sealed hem pocket. Hem pocket construction and hem weights shall be the same, for all shades within one room.
 2. Shade Band and Shade Roller Attachment:
 - a. Provide extruded aluminum shade roller tube of a diameter and wall thickness required to support shade fabric without deflection. Provide for positive mechanical engagement with drive/brake mechanism.
 - b. Provide for positive mechanical attachment of shade band to roller tube; shade band shall be made removable/replaceable with a snap-on/snap-off spline mounting without having to remove shade roller from shade brackets.
 - c. Mounting spline shall not require use of adhesives, adhesive tapes, staples and/or rivets.

2.2 SHADE CLOTH

- A. Dimensionally stable woven vinyl fabric; flame resistant per NFPA 701 requirements; in selected standard colors. Fabric shall be fastened to roller shaft and extruded aluminum bottom bar with removable splices; it shall be readily replaceable with dismounting roller tube. Solar Shade Color: EuroTwill Reversible Broken Weave #6450 Series (3% open), Color: 6456 Silver Birch; place reverse face on interior room side; and Blackout Fabric Color: Thermoveil 0701 White by MechoShade Systems, Inc.

2.3 SHADE POCKETS AND FASCIAS

- A. See drawings for locations and types. All products listed are to be manufactured by MechoShade Systems, Inc., Sol-R-Veil, Draper, or approved equal. All recessed pockets and fascias are to be painted manufacturer's standard white.
 1. At SS1 locations, provide MechoShade painted metal fascia attached to #M5 bracket.

2. At SS1/BO1 locations, provide MechoShade painted metal fascia attached to #10 double bracket.
3. At SS2 locations, provide MechoShade painted extruded aluminum recessed pocket #4133.
4. At SS4/BO2 locations, provide MechoShade painted steel recessed pocket #5133.

2.4 FABRICATION

- A. The shade and the fabric shall hang flat without buckling or distortion. The edge, when trimmed, shall hang straight without curling or raveling. An unguided roller shade cloth shall roll true and straight, without shifting sideways more than +/- 1/8" in either direction due to warp distortion or weave design. Shades shall fill window openings from head to sill and jamb to jamb.

PART 3 EXECUTION

3.1 INSPECTION

- A. Examine the areas and conditions where window treatments are to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.

3.2 INSTALLATION: GENERAL

- A. Coordinate with the work of other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.
- B. Install the work of this Section in strict accordance with the indicated design and the installation recommendations of the manufacturer as approved by the Architect.
- C. Upon completion of the installation, put all components through at least ten (10) complete cycles of operation, adjusting as necessary to achieve optimum operation.

3.3 INSTALLATION OF MANUAL ROLLER SHADES

- 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" to interior face of glass. Allow proper clearances for window operation hardware.
- B. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.
- C. Clean roller shade surfaces after installation, according to manufacturers written instructions.

3.4 PROTECTION AND CLEANING

- A. Protect installed units to ensure proper operating condition, without damage or blemishes. Repair or replace damaged units as directed by the Architect.

END OF SECTION