SECTION 12 24 13

MOTORIZED ROLLER SHADES

\*\* NOTE TO SPECIFIER \*\* WT Shade; roller shades.  
This section is based on the products of WT Shade, which is located at:  
77 Second Ave.  
Garden City Park, NY 11040  
Toll Free Tel: 877-294-3580  
Tel: 516-294-3580  
Fax: 516-294-0444  
Email: info@wtshade.com  
Web: www.WTShade.com

WT Shade was started in 1977 and is a leading manufacturer of manual and motorized roller shade products. From their state-of-the-art facility in Long Island, NY they produce high quality products that get shipped around the globe. WT Shade is a frontrunner in innovative daylight management control and has solutions for virtually any window.

Note: This document was last updated and reviewed for accuracy on 7/26/19

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below that are not required for your project.

* + 1. Roller shades including the following:
       1. Single motorized roller shades.
       2. Double motorized roller shades.
       3. Shade accessories.
       4. Fabrics.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Add related sections as required for your project.

* + 1. Section 06 10 00 - Rough Carpentry. Wood blocking for the attachment of brackets.
    2. Section 09 59 00- Acoustical Ceilings. Shade accessories including shade pockets and tile support
    3. Section 26 00 00- Electrical. Wiring requirements.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings: Provide elevation of each type of installation and details for mounting.

\*\* NOTE TO SPECIFIER \*\* Delete requirement for selection samples if colors have already been selected.

* + 1. Selection Samples: Two complete sets of color chips representing manufacturer's full range of available colors and patterns.
    2. Provide wiring diagrams showing how motors and controls are connected
    3. Verification Samples: For each fabric specified, two samples (minimum size 2 inches square) representing actual material and color.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 10 years of experience manufacturing similar products.
     2. Installer Qualifications: Minimum 5 years of experience installing similar products.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size or complexity warrants the need.

* + 1. Mock-Up: Provide a finished mock-up with correct fabric and accessories representative of the project.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Child Safety Standards: Shades and installation shall be in compliance with ANSI/WCMA child safety standards. Product must be Certified: Best for Kids™.
  1. PRE-INSTALLATION MEETINGS
     1. Conduct on-site meeting prior to starting work of this section to review project requirements.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
     2. Handling: Handle materials to avoid damage.
     3. Roller shade installation to commence once all finish work has been completed.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions between 32 and 104 degrees Fahrenheit and humidity below 90%. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: WT Shade: 77 Second Ave.; Garden City Park, NY 11040; Toll Free Tel: 877-294-3580; Tel: 516-294-3580; Fax: 516-294-0444; Email:[info@WTShade.com](mailto:info@WTShade.com) Web:[www.WTShade.com](http://www.WTShade.com)

\*\* NOTE TO SPECIFIER \*\* Delete either B or C below depending on requirements for your project.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. MOTORIZED ROLLER SHADES

\*\* NOTE TO SPECIFIER \*\* Delete sections below that are not required. Section A is comprised of line voltage motor systems with options and Section B is comprised of low voltage motor systems with options.

* + 1. Line Voltage Systems: 120VAC/230VAC:
       1. Available Motor Types:

\*\* NOTE TO SPECIFIER \*\* Delete motor types not required. Select corresponding control system in section 2.5. Motor types can be seen here [Motor Reference Guide](http://wtshade.com/wp-content/uploads/2017/03/MotoRise-Motor-Reference-Guide.pdf)

* + - * 1. Wired-To-Switch Technology
        2. RTS Radio Controlled Technology
        3. Digital Technology
      1. Motors shall be fabricated with quick disconnect 12" away from motor unless otherwise noted.
      2. Tubular, asynchronous motors with thermal overload protection.
      3. Total hanging weight of shade band(s) shall not exceed 80 percent of the rated lifting capacity of the shade system.
      4. Available Shade Systems

\*\* NOTE TO SPECIFIER \*\* Optional MR250 Slim. Delete all of Section a below if not required.

* + - * 1. MotoRise MR250 Slim System as manufactured by WT Shade.

Model MotoRise MR250 Slim.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 3-3/4 inches (95 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: Slim Brackets in Zinc Plated (-49).

Multi-banded up to six (6) bands.

\*\* NOTE TO SPECIFIER \*\* Optional MR250 SoloMount System with optional fascia. Delete all of Section b below if not required.

* + - * 1. MotoRise MR250 SoloMount System as manufactured by WT Shade.

Model MotoRise MR250 SoloMount. SoloMount brackets are available with optional Front Fascia and/or Rear Fascia.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 3-3/4 inches (95 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: SoloMount Brackets in White (-10) or Black (-90). SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Multi-banded up to six (6) bands.

Optional Notchless Front and/or Rear Fascia size: 4-7/16 inches.

Front Fascia and Rear Fascia finishes are 6063 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).

Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount Brackets. Taping is not acceptable. End Cap finish to be exact finish of Front and/or Rear Fascia. Plastic end caps are not acceptable.

\*\* NOTE TO SPECIFIER \*\* Optional MR250 Piggyback Slim Systems for double shade configuration. Delete all of Section c below if not required.

* + - * 1. MotoRise MR250 Piggyback Slim System as manufactured by WT Shade.

Model MotoRise MR250 Piggyback Slim.

Mounting bracket shall be Ceiling or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 3-3/4 inches (95 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: Slim brackets in Zinc Plated (-49).

Multi-banded up to six (6) bands.

\*\* NOTE TO SPECIFIER \*\* Optional MR250 Piggyback SoloMouny Systems for double shade configuration with optional fascia. Delete all of Section d below if not required.

* + - * 1. MotoRise MR250 Piggyback SoloMount System as manufactured by WT Shade.

Model MotoRise MR250 Piggyback SoloMount. SoloMount Brackets are available with optional Front Fascia and/or Rear Fascia.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 3-3/4 inches (95 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: SoloMount Brackets in White (-10) or Black (-90). SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Multi-banded up to six (6) bands.

Optional Notchless Front and/or Rear Fascia size: 4-7/16 inches.

Front Fascia and Rear Fascia finishes are 6063 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).

Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount Brackets. Taping is not acceptable. End Cap finish to be exact finish of Front and/or Rear Fascia. Plastic end caps are not acceptable

\*\* NOTE TO SPECIFIER \*\* Optional MR350 Slim System for large shades (typically wider than 13 feet and taller than 20 feet). Delete all of section e below if not required.

* + - * 1. MotoRise MR350 Slim System as manufactured by WT Shade

Model MotoRise MR350 Slim

Universal mounting brackets shall be Ceiling, Wall, or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 4-5/8 inches (118 mm)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP)

Heavy Duty Idler Mechanism with Set Pin to be Zinc Plated (-49).

Finish: Slim Brackets in Zinc Plated (-49).

Optional MR350 Safety Brackets with Catch Pins and Retainer Rings available for extra large or high bay applications.

\*\* NOTE TO SPECIFIER \*\* Optional MR450 Catch Bracket System (for shades up to 32 feet tall). Delete all of section f below if not required.

* + - * 1. Motor: MotoRise MR450 Catch Bracket System

Model MotoRise MR450 Catch Bracket

Mounting brackets shall be Safety Brackets with Catch Pins and Retainer Rings and can be Ceiling or Wall Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 5-1/4 inches (133 mm)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP)

Heavy Duty Idler Mechanism with Set Pin to be Zinc Plated (-49).

Finish: Slim Brackets in Zinc Plated (-49).

* + 1. Low voltage systems 24V DC
       1. Available motor types:
          1. Wired-To-Switch Technology
          2. RTS Radio Controlled Technology
          3. Digital Technology
       2. Total hanging weight of shade band(s) shall not exceed 80 percent of the rated lifting capacity of the shade system.
       3. Available shade systems:

\*\* NOTE TO SPECIFIER \*\* Optional MR150 Slim System. Delete all of Section a below if not required.

* + - * 1. MotoRise MR150 Slim System as manufactured by WT Shade

Model MotoRise MR150 Slim

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 2-3/4 inches (70 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: Slim Brackets in Zinc Plated (-49).

Multi-banded up to three (3) bands.

\*\* NOTE TO SPECIFIER \*\* Optional MR150 SoloMount System with optional fascia. Delete all of Section b below if not required.

* + - * 1. MotoRise MR150 SoloMount System as manufactured by WT Shade

Model MotoRise MR150 SoloMount. SoloMount brackets are available with optional Front Fascia and/or Rear Fascia.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 2-3/4 inches (70 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: SoloMount Brackets in White (-10) or Black (-90). SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Multi-banded up to three (3) bands.

Optional Notchless Front and/or Rear Fascia size: 4-7/16 inches.

Front Fascia and Rear Fascia finishes are 6063 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).

Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount Brackets. Taping is not acceptable. End Cap finish to be exact finish of Front and/or Rear Fascia. Plastic end caps are not acceptable.

\*\* NOTE TO SPECIFIER \*\* Optional MR150 Piggyback SoloMount with optional fasca. Delete all of Section c below if not required.

* + - * 1. Motor: MotoRise MR150 Piggyback SoloMount System as manufactured by WT Shade

Model MotoRise MR150 Piggyback SoloMount. SoloMount Brackets are available with optional Front Fascia and/or Rear Fascia.

Universal mounting bracket shall be Ceiling, Wall or Jamb Mount capable. Refer to drawings.

Regular or Reverse Roll available. Refer to drawings.

Maximum Roll Diameter: 2-3/4 inches (70 mm).

\*\* NOTE TO SPECIFIER \*\* Alternative styles available here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)

Hembar: Aluminum slat heat sealed inside 1-3/4 inches (44 mm) hem pocket (to include side pockets, SSP).

Idler mechanism shall be spring loaded. Finished: White (-10) or Black (-90). Idler color will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Finish: SoloMount Brackets in White (-10) or Black (-90). SoloMount Brackets will be color coordinated based on fabric color. See WT Shade Color Coordination Guide for details.

Multi-banded up to three (3) bands.

Optional Notchless Front and/or Rear Fascia size: 6-13/16 inches. (21 mm)

Front Fascia and Rear Fascia finishes are 6063 Aluminum in White (-10), Ivory (-04), Silver (-20), Bronze (-50), Black (-90).

Available 1060 Aluminum End Caps are not to exceed 1/32” thick and are press fit onto SoloMount Brackets. Taping is not acceptable. End Cap finish to be exact finish of Front and/or Rear Fascia. Plastic end caps are not acceptable

\*\* NOTE TO SPECIFIER \*\* Motorized Shading systems are available with a variety of controls depending on the control type chosen in A.1.a. Delete controls not required

* 1. CONTROLS
     1. Wired Technology:
        1. Line Voltage Switching via single pole double throw (SPDT) or double pole double throw (DPDT) switches. Switches can be either momentary or maintained.
        2. Motors shall have rapid limit switches to set the upper and lower limits of the shade.
     2. RTS (Radio Controlled Technology):
        1. Furnish with wireless handheld remote transmitter.
        2. Furnish with wireless wall switch.
        3. Options:
           1. Interior Sun & Temperature Sensor. Refer to drawings.
           2. RTS Repeater. Refer to drawings.
           3. Timer and Sun Sensor. Refer to drawings.
           4. Universal RTS Interface for 3rd Party Integration. Refer to drawings.
     3. Digital - Fully Scalable Motor Network:
        1. Intelligent encoded programmable/addressable motors for shade grouping.
           1. Up to 16 addresses for a multitude of overlapping groups.
           2. Motors are capable of up to 16 custom intermediate shade positions.
        2. The system shall have the capability of two way digital communication over the entire network.
        3. Available with Line Voltage or Low Voltage systems.
        4. Network communication of up to 4000' per network.
        5. Single point of integration to 3rd party systems.
        6. Electronic limits for accurate shade positioning.
        7. Available with optional comprehensive solar management system to minimize the use of electric light by maximizing controllable usable daylight into the space through precise automated movements of motorized shades.
     4. Dry Contact:
        1. Motors shall be equipped with dry contacts to support moving the shades up and down and setting the limits.
        2. Available with Line Voltage or Low Voltage systems.

\*\* NOTE TO SPECIFIER \*\* Shading systems are customizable and available with a variety of accessories that will enhance the performance of your shades.

* 1. SHADE ACCESSORlES
     1. Light Blocking: Provide side channels, center channels, sill channel and light stop angles to seal interior space from exterior light source.
        1. Extruded 6063 aluminum.
        2. 1/4 inch (6 mm) non-adhesive brush insert Grey (-80)
        3. Color: White (-10), Ivory (-04), Silver (-20), Black (-90), Bronze (-50).
        4. Provide channel top caps and hole plugs with channels.
        5. Provide where indicated or required by drawings.
     2. Shade Pockets: Provide shade pockets as indicated or required drawings.
        1. Extruded 6063 aluminum (.075” thick) in White (-10).
        2. Provide splice pins and end caps where indicated or required by drawings.
        3. Provide ceiling tile support where indicated or required by drawings.
        4. Sizes:

\*\* NOTE TO SPECIFIER \*\* Delete sizes not required.

* + - * 1. 5" x 5" (extruded aluminum).
        2. 5" x 5" with tile support (extruded aluminum).
        3. 6" x 9" in Mill Finish (-99) with White (-10) aluminum closure mount (20 gauge galvanized 1018 CRS).
        4. 6" x 9" in Mill Finish (-99) with White (-10) aluminum closure mount with tile support (20 gauge galvanized 1018 CRS)

\*\* NOTE TO SPECIFIER \*\* Optional. See bottom closure and mount options here: [Shading Enclosures](http://wtshade.com/shop/?product-cat=shading-enclosures&parent-id=38) Delete all of Section C below if not required.

* + 1. Shade Pocket Closure and Mount
       1. Extruded 6063 aluminum (.060 thick).
       2. Color: White (-10).
       3. Sizes:

\*\* NOTE TO SPECIFIER \*\* Delete sizes not required.

* + - * 1. 2" Bottom Closure.
        2. 3" Bottom Closure.
        3. 5" Bottom Closure.
        4. Closure Mount.
        5. Closure Mount with Tile Support.

1. \*\* NOTE TO SPECIFIER \*\* Optional. Delete if not required. If SSP (a hembar surrounded in a sealed fabric pocket) is not selected as standard then select one of the alternative hembar options. See all hembar options here: [Hembar styles](http://wtshade.com/shop/?product-cat=hembar-styles&parent-id=38)
   * 1. Optional Shade Hembar Styles
        1. External hembar with 1/2 inch (12mm) non-adhesive brush insert Grey (-80)
           1. Extruded 6063 aluminum
           2. Color: White (-10), Ivory (-04), Silver (-20), Black (-90), Bronze (-50)
           3. End caps available in White (-10) or Black (-90).
        2. Heavy Duty External Hembar with 1/2 inch (12 mm) non-adhesive brush Grey (-80)
           1. Extruded 6063 aluminum
           2. Color: White (-10).
           3. Color matching end caps and screws
        3. Round External Hembar
           1. Extruded 6063 aluminum
           2. Color: White (-10), Silver (-20), Black (-90)
           3. End caps available in White (-10) or Black (-90)
        4. Round Internal Hembar
           1. Extruded 6063 aluminum wrapped inside shade pocket.
           2. Color coordinated with shade fabric color.
           3. End caps available in White (-10) or Black (-90)

**\*\*NOTE TO SPECIFIER\*\* Choose a fabric from the selection below or replace with the appropriate information for the fabric of your choice. Fabric option can be explored at www.ecofabrix.com/products. Additional options can also be viewed at www.mermetusa.com and www.phifer.com/suncontrol/interior. More than one fabric may be specified. Delete all not required.**

\*\* NOTE TO SPECIFIER \*\* Sheer fabric is considered anything from 2%-18% Open. If no sheer fabric is used on this project, delete all of Section A.

* + 1. Product: ECOFABRIX Solar Protective Sheer Fabrics.

\*\* NOTE TO SPECIFIER \*\* Modify to the correct percentage. Leave as range if multiple fabrics are selected from the options below.

* + - 1. Sheer Fabric: 2 percent to 18 percent Openness Factor

\*\* NOTE TO SPECIFIER \*\* Modify to the correct percentage. Leave as range if multiple fabrics are selected from the options below.

* + - 1. UV Blockage: 98 percent-82 percent.
      2. Ecofabrix Sheer Selection:

\*\* NOTE TO SPECIFIER \*\* Delete all not required. Multiple may be selected.

* + - * 1. 132 Fabric (Openness Factor: 2 percent), PVC Free 2 x 2 Basketweave.

Composition: 100 percent Polyester

Fabric Thickness: 0.021", Fabric Weight: 9.3 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 150 Fabric (Openness Factor: 18 percent), Slim Vertical Stripe

Composition: 100 percent Polyester

Fabric Thickness: 0.015", Fabric Weight: 3.6 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 160 Fabric (Openness Factor: 18 percent), Thick Vertical Stripe

Composition: 100 percent Polyester

Fabric Thickness: 0.016", Fabric Weight: 4.2 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 170 Fabric (Openness Factor: 17 percent), 1 x 1 Basketweave

Composition: 100 percent Polyester

Fabric Thickness: 0.014", Fabric Weight: 4.8 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 180 Fabric (Openness Factor: 17 percent), Medium Horizontal Stripe

Composition: 100 percent Polyester

Fabric Thickness: 0.017", Fabric Weight: 5.0 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 250 Fabric (Openness Factor: 10 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.025", Fabric Weight: 11.7 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 253 Fabric (Openness Factor: 3 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.024", Fabric Weight: 12.7 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 255 Fabric (Openness Factor: 5 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.023", Fabric Weight: 12.2 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 315 Fabric:

315 Fabric (Openness Factor: 15 percent), 1 x 6 Irregular Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.032", Fabric Weight: 14.3 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 353 Fabric (Openness Factor: 3 percent), Twill Weave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.026", Fabric Weight: 12.7 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 355 Fabric (Openness Factor: 5 percent), Twill Weave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.026", Fabric Weight: 12.1 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 450 Fabric (Openness Factor: 10 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.028", Fabric Weight: 14.1 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 453 Fabric (Openness Factor: 3 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.029", Fabric Weight: 16.2 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 455 Fabric (Openness Factor: 5 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.029", Fabric Weight: 15.3 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

\*\* NOTE TO SPECIFIER \*\* Privacy fabric is considered anything 1% Open. If no privacy fabric is required, delete all of Section B.

* + 1. Product: Ecofabrix Solar Protective Privacy Fabrics.
       1. Privacy Fabric: 1 percent Openness Factor
       2. UV Blockage: 99 percent
       3. EcoFabrix Privacy Selection

\*\* NOTE TO SPECIFIER \*\* Delete all not required. Multiple may be selected.

* + - * 1. 251 Fabric:

251 Fabric (Openness Factor: 1 percent), 2 x 2 Basketweave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.028", Fabric Weight: 15.2 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 351 Fabric:

353 Fabric (Openness Factor: 1 percent), Twill Weave.

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.026", Fabric Weight: 12.7 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 441 Fabric:

441 Fabric (Openness Factor: 1 percent).

Composition: 25 percent Polyester/ 75 percent PVC.

Fabric Thickness: 0.039", Fabric Weight: 20.4 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 840 Fabric:

840 Fabric (Openness Factor: 3 percent), PVC Free Cloth.

Composition: 100 percent Polyester.

Fabric Thickness: 0.016", Fabric Weight: 6.3 (OZ/YD).

Select color from manufacturers standard colors.

\*\* NOTE TO SPECIFIER \*\* Blackout fabric is considered anything 0% Open. If no blackout fabric is required, delete all of Section C.

* + 1. Product: ECOFABRIX Solar Protective Light Blocking Fabrics.
       1. Blackout Fabric: 0 percent Openness Factor.
       2. UV Blockage: 100 percent.
       3. EcoFabrix Blackout Selection

\*\* NOTE TO SPECIFIER \*\* Delete all not required. Multiple may be selected.

* + - * 1. 700 Fabric:

700 Fabric (Openness Factor: 0 percent).

Composition: 75 percent Vinyl / 25 percent Fiberglass.

Fabric Thickness: 0.013", Fabric Weight: 12.5 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 740 Fabric:

700 Fabric (Openness Factor: 0 percent).

Composition: 100 percent Polyester (Acrylic Coated).

Fabric Thickness: 0.013", Fabric Weight: 7.96 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 772 Fabric:

772 Fabric (Openness Factor: 0 percent).

Composition: 100 percent Polyester.

Fabric Thickness: 0.026", Fabric Weight: 11.2 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + - * 1. 784 Fabric:

784 Fabric (Openness Factor: 0 percent).

Composition: 100 percent Polyester (Acrylic Coated).

Fabric Thickness: 0.027", Fabric Weight: 12.1 (OZ/YD).

Greenguard Gold Certified.

Select color from manufacturers standard colors.

* + 1. Specialty Fabric:

\*\* NOTE TO SPECIFIER \*\* If no Specialty fabric is required, delete all of Section D.

* + - 1. Sheer Fabric: 10 percent Openness Factor
      2. UV Blockage: 100 percent
      3. 900 Fabric
         1. 900 Fabric (Openness Factor: 10 percent). Mylar Film
         2. UV Blockage: 90 percent
         3. Composition: Metalized Polyester
         4. Fabric Thickness: 0.004", Fabric Weight: 5.0 (OZ/YD).
         5. Select color from manufacturers standard colors.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions. Test for proper operation and adjust until satisfactory results are obtained.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Verify child safety hold-down is installed correctly.
  1. PROTECTION
     1. Protect installed products until completion of project.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION