DOCUMENT 00911

ADDENDUM NUMBER 1

Issued: July 3, 2014

Westside Facility (9703 Wohler Road)

FROM: Sonoma County Water Agency
404 Aviation Boulevard
Santa Rosa, CA 95403-9019

TO: Prospective Bidders

This Addendum forms a part of and modifies the Project Manual dated June 2014. Bidder shall acknowledge receipt of this Addendum in the space provided in Document 00400 (Bid Form).

Modified text is indicated as follows: Double-underline designates text to be inserted; ~~strikethrough~~ designates text to be deleted.

Addendum Number 1 consists of 10 pages (size 8 ½" x 11") and 0 revised Drawings.

I. General Changes

A. No changes.

II. Changes to Prior Addenda

A. N/A.

III. Changes to Introductory Information and Bidding Requirements

A. Document 00200 (Instructions to Bidders):

1. Modify Paragraph 3.B.2)a.i as follows:
   i. Within the past five years completed three construction projects of a similar nature and complexity with a contract dollar amount for electrical work of at least $200,000~~1 million~~ each

IV. Changes to Contracting Requirements

A. No changes.

V. Changes to Conditions of the Contract

A. No changes.

VI. Changes to Specifications

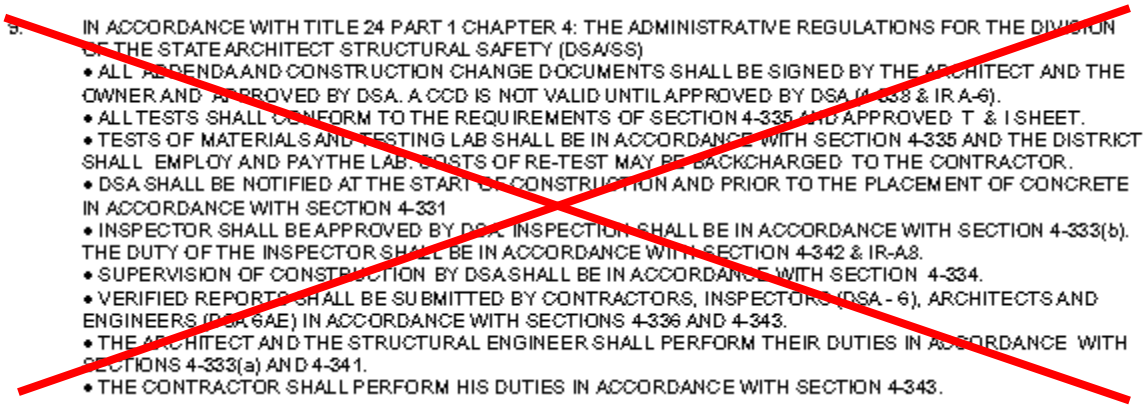
A. Section 12 2100 (Window Shades):

1. Delete Section 12 2100 in its entirety and replace with attached Section 12 2100 marked "** REVISED 7/2/14 **"

VII. Changes to Drawings

A. Drawing No. G-0.2:

1. Delete General Note 9:


9. IN ACCORDANCE WITH TITLE 24 PART 1 CHAPTER 4: THE ADMINISTRATIVE REGULATIONS FOR THE DIVISION OF THE STATE ARCHITECT STRUCTURAL SAFETY (DSA/SS)
• ALL ADDENDA AND CONSTRUCTION CHANGE DOCUMENTS SHALL BE SIGNED BY THE ARCHITECT AND THE OWNER AND APPROVED BY DSA. A CCD IS NOT VALID UNTIL APPROVED BY DSA (4-338 & IR A-6).
• ALL TESTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 4-335 AND APPROVED T & I SHEET.
• TESTS OF MATERIALS AND TESTING LAB SHALL BE IN ACCORDANCE WITH SECTION 4-335 AND THE DISTRICT SHALL EMPLOY AND PAY THE LAB. COSTS OF RE-TEST MAY BE BACKCHARGED TO THE CONTRACTOR.
• DSA SHALL BE NOTIFIED AT THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE IN ACCORDANCE WITH SECTION 4-331
• INSPECTOR SHALL BE APPROVED BY DSA. INSPECTION SHALL BE IN ACCORDANCE WITH SECTION 4-333(b). THE DUTY OF THE INSPECTOR SHALL BE IN ACCORDANCE WITH SECTION 4-342 & IR-A8.
• SUPERVISION OF CONSTRUCTION BY DSA SHALL BE IN ACCORDANCE WITH SECTION 4-334.
• VERIFIED REPORTS SHALL BE SUBMITTED BY CONTRACTORS, INSPECTORS (DSA - 6), ARCHITECTS AND ENGINEERS (DSA 6AE) IN ACCORDANCE WITH SECTIONS 4-336 AND 4-343.
• THE ARCHITECT AND THE STRUCTURAL ENGINEER SHALL PERFORM THEIR DUTIES IN ACCORDANCE WITH SECTIONS 4-333(a) AND 4-341.
• THE CONTRACTOR SHALL PERFORM HIS DUTIES IN ACCORDANCE WITH SECTION 4-343.

B. On Civil Drawings, modify sheet numbers as follows:

~~1 of 4~~C0.1
~~2 of 4~~C-1.0
~~3 of 4~~C-2.0
~~4 of 4~~C-3.0

VIII. Question(s)/Answer(s)

A. No questions received that require a response from Owner as of issue date of this Addendum Number 1.

END OF DOCUMENT

SECTION 12 2100

WINDOW SHADE SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Manually-operated window shades and accessories for sun/glare/heat control and room darkening.

B. Motorized window shades and accessories for sun/glare/heat control and room darkening.

1.02 RELATED SECTIONS

A. Section 09 2216 - Non-structural Metal Framing

B. Division 08: Pertinent sections specifying window, door and/or storefront opening systems.

C. Division 09: Pertinent Sections specifying wall finishes adjacent to window shades.

1.03 SUBMITTALS

A. Product Data: Manufacturer's catalog data, product descriptions, installation instructions, detail sheets, and specifications for each type system specified.

B. Samples for Selection: Manufacturer's color chart or sample sets;
   1. Color swatches for initial blind color selection from manufacturer’s full range of available colors.
   2. Standard aluminum finish color samples from manufacturer’s range of standard colors.

C. Manufacturer's standard installation instructions.

D. Design Data, Test Reports, Certificates: Current reports from independent testing laboratories demonstrating compliance with specified criteria.

1.04 QUALITY ASSURANCE

A. Fire Resistance: Provide shade fabrics tested in accordance with:
   1. 1989 NFPA 701 small scale Vertical Burn Test and rated “PASS”.
   2. 1996 NFPA 701 small scale Vertical Burn (telephone booth test) and rated "PASS."

B. Toxicity: Provide shade fabrics tested in accordance with University of Pittsburgh Toxicity Protocol including LC50 analysis and toxicity characteristics.

C. Anti-microbial: ASTM G-22-80 results for ATCC6538 (Staphylocaoccus aureus) and ATCC13388 (Psuedomonas aeroginosa) indicating minimum 5mm (0.197 inches) ‘No Growth Contact Area’.
   1. ASTM G-21-85 results for ATCC9642, ATCC9644, ATCC9348 and ATCC9645 indicating ‘No Growth’.

D. Do not fabricate shades without obtaining field dimensions for each opening. Coordinate construction of surrounding conditions to allow for timely field dimension verification.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to project site in manufacturer's original cartons.

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.

E. Do not deliver items to the project until all concrete, masonry, plaster, painting and other wet work has been completed and dry.

1.06 WARRANTY

A. Motorized roller shade hardware and shadecloth and all other components of shade system manufacturer's standard non-depreciating 25 year limited warranty. Roller Shade EDU's and EDU Control Systems: Manufacturer's standard non-depreciating five-year warranty.

B. Roller Shade Installation: One year from date of Substantial Completion, not including scaffolding, lifts or other means to access to the work above 12' Feet AFF, which are the responsibility of others.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design: Manufacturer for Window Shade System: products by MechoSystems; 42-03 35th Street, Long Island City, NY, 11101; Tel: (718) 729-2020; Local rep: Mr. Guido Murnig, 415.595-2713 cell; guym@mechosystems.com.

B. Provide all window shade systems from a single manufacturer.

2.02 EQUIPMENT

A. Bead/Chain Operation: Bi-directional, wrap spring clutch made of high-strength fiberglass-reinforced polyester and high carbon steel.
   1. Continuous loop, certified No. 10 metal bead chain in appropriate length.

2.03 ROLLER SHADE ASSEMBLIES

A. Shadebands: Construction of shadeband includes the fabric, the hembar and hempocket, and the attachment of the shadeband to the roller tube:
   1. Vinyl Room darkening Shadecloth (single-fabric): MechoShade Systems, Inc., "0700 Series", Blackout material, or Approved Equal, washable and colorfast laminated and embossed vinyl coated fabric, 0.012 inches thick (.30 mm) blackout material and weighing 0.81 lbs. per square yard, with a minimum of 62 threads per square inch in colors selected from manufacturer's available range.
   2. Exposed (Blackout) Hembar: 3/8 x 1-1/2 inches with vinyl seal and concealed attachment to shadecloth. Bevel top and bottom of hembar to smoothly travel up and down inside side channels. Extend shadeband and hembar into side channel as a single element where side channels are required.

B. Shade Hardware and Shade Brackets:
   1. Provide shade hardware constructed of minimum 1/8" thick (3.175 mm) cadmium plated steel or thicker as required to support 150% of the full weight of each shade.
   2. Allow for removal of shade roller tube from brackets without removing hardware from opening or without requiring end or center support brackets to be removed.
   3. Allow for removal and re-mounting of the shade bands without having to remove the shade tube, drive or operating support brackets.
   4. Allow for field adjustment of motor or replacement of any operable hardware component without requiring removal of brackets regardless of mounting position (inside or outside mount).
   5. Allow for removable regular roll fascia(s) to be mounted continuously across two or more shades without requiring exposed fasteners.
   6. Allow for operation of multiple shadebands offset by a maximum of (12) (45) from the motor axis between shadebands, (6) (22.5) on each side of the radial line, by a single motor (Multi-banded shades) subject to manufacturer's design criteria.
   7. Provide positive mechanical engagement of drive mechanism to shade roller tube. Friction fit connections for drive mechanism to shade roller tube shall not be acceptable.
   8. Use only Delrin engineered plastics by DuPont, or Approved Equal, for all plastic components of shade hardware. Styrene based plastics are not acceptable: polyester or reinforced polyester shall not be acceptable.

9. Shade roller and shadecloth attachment:
10. Use extruded aluminum shade roller tube of diameter and wall thickness required to support shade fabric without (excessive) deflection. Roller tubes less than 2.55 inches (65 mm) in diameter are not acceptable.
11. Provide for positive mechanical engagement with drive / brake mechanism.
12. Provide for positive mechanical attachment of shadeband without requiring use of adhesives, adhesive tape, staples or rivets. Two sided pressure sensitive adhesive tape is not acceptable, shade bands stapled to roller tube shall not be acceptable.
13. Attach shadebands to tube such that removal and replacement of a shadeband can be accomplished without removing either the tube from the brackets or without removing shade brackets or the drive operator. Shadebands must be replaceable on site.

C. Intelligent Encoded Electronic Drive system
   1. Electronic Drive Unit (EDU):
      a. Intelligent Encoded EDU, and Control System: Tubular, asynchronous (non-synchronous) EDU's, with built-in reversible capacitor operating at 120VAC/60Hz, (230VAC/50Hz) single phase, temperature Class B, thermally protected, totally enclosed, maintenance free with line voltage power supply equipped with locking disconnect plug assembly furnished with each EDU.
         1) Quiet [42 – 46 db] (within 3 feet open air)
         2) Conceal EDU's inside shade roller tube.
         3) Maximum current draw for each shade EDU of 0.9Amps at 120VAC.
         4) Use EDU's rated at the same nominal speed for all shades in the same room.
         5) Use EDU's with minimum of 34RPM, that shall not vary due to load / lift capacity.
         6) Total hanging weight of shade band shall not exceed 80 percent of the rated lifting capacity of the shade EDU and tube assembly.

   2. EDU System: (software, two-way communication): Specifications and design are based on the Intelligent EDU Control System, WhisperShade®IQ® System) as manufactured by MechoSystems. Other systems may be acceptable providing all of the following performance capabilities are provided. EDU and control systems not in complete compliance with these performance criteria shall not be accepted as equal systems.
      a. EDU shall support two methods of control
         1. Local Dry Contact Control Inputs
         2. EDU shall be equipped with dry contact inputs to support moving the EDU/shade to the upper and lower limits.
         3. EDU shall be equipped with dry contact inputs to support moving the EDU/shade to local switch preset positions.
         4. Shall support configuring the EDU under protected sequences so that a typical user would not change the EDU's setup. At a minimum the configuration should include setting limits, setting custom presets and configuring key modes of operation.
         5. Network Control
         6. EDU shall be equipped with a bi-directional network communication capability in order to support commanding the operation of large groups of shades over a common backbone. The network communication card shall be embedded into the tubular EDU assembly.
      b. Upper and lower stopping points (operating limits) of shade bands shall be programmed into EDU's using either a hand held removable program module / configurator or a local switch.

c. Alignment Positions: Each EDU shall support a minimum of 133 repeatable and precisely aligned shade positions (including limits and presets).
   1. All shades on the same switch circuit or with the same network group address with the same opening height shall align at each limit or preset (intermediate stopping position) when traveling from any position, up or down.
   2. Shades of differing heights shall have capability for custom, aligned intermediate stop positions when traveling from any position, up or down.
   3. Alignment of shades mechanically aligned on the same EDU shall not exceed +/- 0.125 inches (3.175mm) when commanded to the same alignment position.
   4. Alignment of shades on adjacent EDU's shall not exceed +/- 0.25" inches (6.35mm) when commanded to the same alignment position.
   5. Local Switch Presets: A minimum of 3 customizable preset positions shall be accessible over the local dry contact control inputs and over the network connection.
   6. Upon setting the limits for the shade EDU these preset positions shall automatically default to 25%, 50% and 57% of the shade travel.
   7. These positions shall be capable of being customized to any position between and including the upper and lower limits of the shade. A removable program module / configurator or local switch shall be capable of customizing the position of these presets.
   8. Network Presets: A minimum of 29 customizable preset positions (including the 3 local switch presets) shall be accessible via network commands.
   9. Upon setting the limits for the shade EDU these preset positions shall automatically default to the lower limit unless customized elsewhere.
   10. These positions shall be capable of being customized to any position between and including the upper and lower limits of the shade. A removable program module / configurator shall be capable of customizing the position of these presets.

d. Network Control
   1. The system shall have the capability of two-way digital communication with the EDU's over a common backbone.
   2. Each EDU shall possess 8 addresses capable of being employed for various levels of of group control. These addresses shall be configurable via a handheld configurator and/or a PC controller. A 9th unique address shall enable the EDU(s) to be independently controlled and configured over the network via a handheld configurator and/or a PC controller.
   3. Low Voltage Communication Network Implementation.
   4. The low voltage network shall employ a bus topology with daisy chained network connections between nodes over a CAT5 cable (4 UTP) or over a 2 UTP cable employing at least 1 pair at 16 AWG for power and 1 pair at 22 AWG for data.
   5. The low voltage network (+/- 13VDC) shall be powered by the nodes attached to it. These nodes could be line voltage powered EDU's attached to 120 VAC or 230 VAC. Alternatively, low voltage nodes shall be powered typically by a centralized low voltage power supply. If a CAT5 network cable is employed and the node draws less than 1W then the node may be powered by DC power supplied by an associated line voltage EDU.
   6. Network Capacity: 4000 ft max, 250 nodes max
   7. The number and size of a centralized DC supply shall vary depending upon the network requirements.

e. Operating Modes
   1. Uniform or Normal Modes of Operation:
   2. Uniform mode shall allow for shades to only move to defined intermediate stop positions to maintain maximum uniformity and organization.
   3. Normal Mode shall allow for shades to move to both intermediate stop positions, plus any position desired between the upper and lower limits as set by the installer.

f. Wall Switches:
   1. Conference Center: Shades shall be operated by, 5, 7, or 10-button low voltage standard switches, or programmable intelligent switches [IS]. Standard switch shall be wired to a bus interface and the bus interface will be programmed to transmit an address for the local switch.
   2. Intelligent switches may be installed anywhere on the bus line. Each IS shall be capable of storing one control level address to be broadcast along the bus line.
   3. An address that is transmitted by either a switch or central controller shall be responded to by those EDU's with the same address in their control table.
   4. IS shall provide for interface with other low voltage input devices via a set of dry contact terminals located on the switch.
   5. Standard switch or IS may control an individual, sub-group or group of EDU's in accordance with the address in each EDU.

D. Regular Roll Fascia:
   1. Continuous removable extruded aluminum fascia (Owner to select color from manufacturer's standards) that attaches to shade mounting brackets without the use of adhesives, magnetic strips or exposed fasteners.
   2. Fascia shall be able to be installed across two or more shadebands in one piece.
   3. Fully conceal brackets, shade roller and fabric on the tube.
   4. Chain drive shall fall behind the bottom return edge of the fascia without requiring notching of the fascia.

E. Motorized Shade Hardware and Shade Brackets:
   1. Provide shade hardware constructed of minimum 1/8-inch (3.18 mm) thick plated steel, or heavier, thicker, as required to support 150 percent of the full weight of each shade. Plastic components without use of steel angle construction do not meet the intent of this specification and shall not be accepted.
   2. Provide shade hardware system that allows for field adjustment of EDU or replacement of any operable hardware component without requiring removal of brackets, regardless of mounting position (inside, or outside mount).
   3. Provide shade hardware system that allows for operation of multiple shade bands offset by a maximum of 8-45 degrees from the EDU axis between shade bands (4-22.5 degrees) on each side of the radial line, by a single shade EDU (multi-banded shade, subject to manufacturer's design criteria).
   4. All bands within a single EDU group shall be aligned within ¼ inch.

2.04 FABRICS

A. Fabric for Sun/Glare/Heat Control: Style 1500 Thermo Veil; PVC, or Approved Equal, coated fiberglass and polyester weave, 3 percent open; 14.6 ounces per square yard, 0.027 inch thick; meet or exceed California flame tests.
   1. Color: As selected from manufacturers standards.

2.05 FABRICATION

A. Fabricate units to completely fill existing openings from head to sill and jamb to jamb, unless specifically indicated otherwise. Comply with manufacturer's edge clearance standards and recommendations.

B. Fabricate shadecloth to hang flat without buckling or distortion. Fabricate with heat-sealed trimmed edges to hang straight without curling or raveling. Fabricate unguided shadecloth to roll true and straight without shifting sideways more than 1/8 inch in either direction per 8 feet of shade height due to warp distortion or weave design.

C. Provide battens in non-railroaded shades as required the by manufacturer to assure proper tracking and uniform rolling of the shadebands, in accordance with the manufacturer''s published width x height fabricate guide and standards.

D. Weighted batten bars: At locations recommended by manufacturer.

E. For railroaded shadebands, provide seams or battens in railroaded multi-width shadebands as required by manufacturer to meet width:height ratios and size requirements.

F. Provide batten pockets utilizing self-colored fabric front and back, RF welded into the shadecloth.

G. Provide a self-colored opaque liner front and back to eliminate any see through of the batten pocket and shall not exceed 1-1/2 inches (38 mm) high and be totally opaque. A see-through moiré effect which occurs with multiple layers of transparent fabrics is not acceptable. Reinforce batten pockets using coil coated, roll formed spring steel to insure flatness of shadebands in accordance with manufacturer's standards. Concave formed profile of batten stiffeners to be compatible with diameter of shade roller tube.

2.06 FINISHES

A. Aluminum Components: Owner shall select from manufacturer's standard PPG Duracron baked enamel colors, or Approved Equal.

B. Steel Components: Cadmium-plated, satin-finished, or bonderized prior to painting with manufacturer's standard baked-enamel finish.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrate and conditions for installation. Do not commence installation until conditions are satisfactory. Commencement of installation indicates acceptance of site conditions by Contractor.

B. Verify that utilities and control conduits are of the correct types and in correct locations.

3.02 PREPARATION

A. Turn-Key Single-Source Responsibility for Interior Roller Shades: To control the responsibility for performance of the electric roller shade system; assign the design, engineering, and installation of electronic drive roller shade control system, shades, addressable controls, communication interfaces, and any required sensors, switches and low voltage control wiring specified in this Section to the manufacturer of the shade and control system. Owner will not produce a set of electrical drawings for the installation of control wiring for the electric roller shade control system.

B. Contractor responsibilities:
   1. Provide power panels and circuits of sufficient size to accommodate roller shade manufacturer's requirements, as indicated on the mechanical and electrical drawings and manufacturer's shop drawings.
   2. Coordinate with requirements of subcontractor for this section before inaccessible areas are constructed.
   3. Coordinate requirements of ALSCS before inaccessible areas are constructed.
   4. Provide conduit with pull wire in all areas, which might not be accessible to ALSCS due to building design, equipment location or schedule:
   5. Coordinate with the main building electrical subcontractor to provide duplex 120 VAC power receptacle in Electric closet for floor/riser Communication Gateways.
   6. Verify that wiring conditions, which have been previously installed under other sections or at a previous time, are acceptable for product installation in accordance with manufacturer's instructions.

7. Comply with manufacturer's product data, including shop drawings, technical bulletins, product catalog installation instructions, and product carton instructions for installation.
8. Protect installed product and finished surfaces from damage during all phases of installation including preparation, testing, and cleanup.
9. Be responsible for all other required electrical work including but not limited to roof penetrations, conduits, fireproofing, etc.
10. Provide conduit with pull wire in all areas, which might not be accessible to subcontractor due to building design, equipment location or schedule.

C. Window Covering Subcontractor responsibilities:
1. Ensure that shade control subcontractor furnishes and installs shade controllers, interfaces, splitters, coupler, sensors, switches, junction boxes, etc mounted in the ceiling in an accessible location. Locations for all visible devices to be coordinated with Owner. Ensure that shade control subcontractor inspects all material furnished prior to installation. Notify manufacturer of unacceptable material prior to installation.

2. Line Voltage Wiring:

a. Ensure that the window covering subcontractor furnishes and installs power connection between shade control system and EDU, and shall be capable of providing single line voltage wire pull for each EDU.

D. Shade Power Wiring
1. Furnish and install line voltage Cable from roller shade motor into line voltage side of control system.
2. Wire, provided, power junction box to each motor on the shade network.
3. Furnish and install a disconnect plug at the end of the power wiring run to each EDU. The disconnect plug must mate with a matching disconnect plug on the motor cable. EDU cable disconnect plug must be prefabricated by the manufacturer to meet UL and ETL systems requirements.

E. Integration to 3rd party systems

1. Coordinate and furnish, install, or program any interfaces or wiring to integrate 3rd party systems to the roller shade control system as specified herein. Integration to shade control network can be accomplished locally through dry contact closures, or RS-232.

3.02 INSTALLATION

A. Install window shade systems in accordance with manufacturer's instructions and these specifications. Install units to comply with the manufacturer's instructions for the type of mounting and operation required. Provide units plumb, true, and securely anchored in place with recommended hardware and accessories to provide smooth operation without binding.

B. Assume responsibility for all field dimensions and mounting surfaces.

C. Adjust window shade systems for proper operation.

D. Tolerances:
1. Maximum variation of gap at window opening perimeter: 1/4 inch, per 8 feet (+/- 1/8 inch) of shade height (6.35 mm per 2438 mm +/- 3.2 mm).
2. Maximum offset from level: 1/16 inch per 5 feet of shade width (1.587 per 1524 mm of shade width).

E. Furnish and Install Responsibilities:
1. Supervise the roller shade installation, and setting of intermediate stops of all shades to assure the alignment of the shade bands within a single EDU group, which shall not exceed +/- 0.125 inches

(3.175mm), and to assure the alignment between EDU groups, which shall not exceed +/- 0.25" inches (6.35mm).

2. Inspect during construction to confirm proper mounting conditions per approved shop drawings.
3 Provide accurate to 0.0625" inch (1.5875mm); field measurements for custom shade fabrication on the Roller Shades manufacturers input forms.
4. Installer shall install roller shades level, plumb, square, and true according to manufacturer's written instructions, and as specified here in.
5. The horizontal surface of the shade pocket shall not be out-of-level more than 0.625" (15.875mm) over 20 linear feet (6.096 meters).
6. Shades shall be located so the shade band is not closer than 2 inches (50 mm) to the interior face of the glass. Allow proper clearances for window operation hardware.
7. Adjust, align and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.
8. Set Upper, Lower and up to 3 intermediate stop positions of all motorized shade bands, and assure alignment in accordance with the above requirements.
9. Certify the operation of all motorized shades and turn over each floor for preliminary acceptance.
10. Train Owner's maintenance personnel to adjust, operate and maintain roller shade systems.

3.03 ADJUST AND CLEAN

A. Adjust drive / brake mechanism of units for smooth operation. Adjust shade and shadecloth to hang flat without buckling or distortion. Replace any units or components which do not hang properly or operate smoothly.

B. Touch up damaged finishes and repair minor damage in order to eliminate evidence of repair. Remove and replace work that cannot be satisfactorily repaired.

C. Clean exposed surfaces, including metal and shadecloth, using non-abrasive materials and methods recommended by the shadecloth manufacturer. Remove and replace work which cannot be satisfactorily cleaned

3.04 DEMONSTRATION

A. Demonstrate operation method and instruct Owner in the proper operation and maintenance of the window shade systems.

END OF SECTION