Financial Management Departmei
Purchasing Division
1112 Manatee Ave W Suite 803
Bradenton, FL 34205
Phone: (941) 749-3074
www.mymanatee.org

email
February 24, 2015

TO: All Interested Bidders

SUBJECT: Invitation for Bid #15-0382DC
Supervisor of Elections Phases 2 and 3

ADDENDUM #2

Bidders are hereby notified that this Addendum shall be acknowledged on the Bid Form and made a part of the above named bidding and contract documents.

1. Bid Opening is changed to **March 13, 2015 at 3:00 P.M.**, same location.

2. Bids are to be submitted in triplicate, one (1) original and two (2) copies. Electronic Bid Form will be included in Addendum #3.

3. Interior finish on exterior walls – the contractor shall leave in place the existing finish on the exterior walls. Patch and repair walls as required to accommodate new construction – finish to match existing adjacent or per plans. Existing conduits and boxes may be reused if they are within the new space or within 18" of the new location.

4. Concrete cutting and patching – a concrete cut plan shall be determined by the contractor and submitted for review and approval prior to demolition. The repair detail shall be 3000psi concrete with #3 steel reinforcing drilled and epoxy doweled into the existing slab minimum 6" embed into existing slab and min. 6" embed into new slab with 6x6 W2.9 x W2.9 WWF – match existing slab thickness, minimum 4" thickness.

5. Asphalt Repair – the scope of this work is to patch and repair the existing asphalt where the existing fence is to be removed. Contractor to provide a patch detail based on existing conditions for approval prior to work commencement. See Architectural site plan – sheet A1.0.

6. Knee wall and casework in Flex Space – Knee wall is to be 42" H. wall type "C" with a plastic laminate cap – min. 6" wide. Base cabinet to be 34" H plastic laminate casework to match the rest of the cabinetry (min. 6" drawer with base doors).

7. Wood door species – Maple is preferred, however alternate species will be considered if cost is a consideration. Contractor shall submit bids with maple as the wood selection.

8. Overhead doors – a specification has been provided and shall become part of the contract documents.

9. Roller shades – a specification has been provided and shall become part of the contract documents. Contractor to provide a roller shade at each of the existing windows in Phases 2 and 3 only.

10. Painted wood chair rails are to be provided in the flex space, vote tabulation, conference areas and break room areas. Height of the chair rail is 36" off to centerline of rail, minimum 3 ½" width.

11. Open ceiling is currently primed and shall be patched, repaired and repainted as required – match existing finish.

12. Walltalkers finish – this is deleted from the project.

13. The contractor is responsible for disposing of all equipment on project worksite.

14. Cabling for IT Data and related work is included in IFB Specification Division 16, 16.07 and is a part of this project (additional information is attached, 5 pages). Plan Sheet E10.1, 2.13 B reference to "devices and wiring provided by others" is deleted.

15. Specification 083323 – Overhead Coiling Doors, pages 1 thru 8 – attached.

16. Specification 122413 – Roller Window Shades, pages 1 thru 4 – attached.

If you have submitted a bid prior to receiving this addendum you may request in writing that your original, sealed bid be returned to your firm. All sealed bids received will be opened on the date stated.

Bids will be received at Manatee County Purchasing, 1112 Manatee Avenue West, Suite 803, Bradenton, Florida 34205 until **March 13, 2015 at 3:00 P.M.**

Sincerely,

for

Melissa M. Wendel, CPPO
Purchasing Official

/dcr
Attachments

Manatee County Government

Supervisor of Elections Cabling Requirements.

1.0 SCOPE OF SPECIFICATION

This specification is intended to describe the requirements to furnish, engineer and install voice and data (universal) cables, and any associated hardware for the cabling requirements of the last two phases of the remodeling project for the Supervisor of Elections location. It is not the intent of this specification to list all the necessary parts required for the installation, although there are specific manufacture/model number items that must be used to coincide with the materials that were used in phase 1. These requirements will be specified below within section 2.0.

It is the contractor's responsibility to provide a list of all parts required to complete the installation. The bidder is responsible for furnishing and installing all necessary incidental installation materials.

1.1 SITE OF WORK TO BE PERFORMED

Manatee County Supervisor of Elections, at 600 US301 Blvd. West, Bradenton, Fl. 34205

1.2 EXAMINATION OF PROPOSED WORK SITE

Prior to the submission of a bid, bidders are encouraged to become familiar with any and all conditions that may in any manner affect the labor or services that are required to completely execute the full intent of this specification.

2.0 SCOPE OF WORK TO BE PERFORMED

Supply, install, terminate and test (2) "Blue" (color specific) category 6, plenum rated cables for data and voice applications (universal) at any outlet location so designated on the drawing. In addition, place (2) category 6, plenum rated cables terminated on a dual bisque within the ceiling area for AP's anywhere so designated on the drawing as well as (1) addition cat-6, plenum rated cable on a single biscuit within the ceiling anywhere a camera is designated on the electrical print. Provide all materials needed to terminate from work area outlet(s) to an existing rack within the TR (telecommunications room) using installation, termination and testing procedures as specified within the TIA-568-C standard(s).

3.0 CABLE INSTALLATION REQUIREMENTS

1. Tele/Data (Universal) cable pulls shall not exceed 90 meters from the telecomm / data closet to jack. It shall be the responsibility of Contractor to notify the County in advance if, in their opinion, this limit will be exceeded, prior to installation.
2. All universal, AP or camera cable installations shall be installed with Blue category 6 CMP rated four (4) pair cable. **CommScope/Systimax manufacture specific part to be used. Part number as follows;** Cable: 8773614/10. Terminate at the station end on 8-position RJ type category 6 jacks as specified below in section 3.3. Labeling will be IAW with existing scheme already in use. Labeling material should match (as close as possible) existing color and font of existing labels on existing patch panels.
3. Data jacks, face plates and blanks shall be colored to match 4-position faceplate and ivory in color. Blank filler inserts shall be installed when extra ports are not used. **CommScope/Systimax manufacture specific parts to be used. Part numbers as follows;** Data jacks: CC0020875/1. Face plate: 108168550. Blanks: 107067860 Wireless AP locations will require single surface or back box (biscuit type) in designated ceiling locations. Labeling will be compliant with TIA-606-B labeling specifications.
4. In the telecommunications room, all data, AP, camera or BAC device cabling shall terminate on 24 port, single "U" space, flat (non-angled) category 6 patch panels with rear cable management of sufficient port count to support the required installed cables plus twenty five (20) percent growth. **CommScope/Systimax manufacture specific parts to be used. Part number as follows;** Patch panel: 760180042. Labeling shall be in conjunction with TIA-606-B labeling specifications and County labeling materials and scheme.
5. Penetrations through floor and fire-rated walls shall utilize conduit sleeves and shall be firestopped after installation and testing, utilizing a firestopping assembly approved for that application.
6. Install all wiring from station location to the designated telecommunications room (TR), unless otherwise noted.
7. Installation shall conform to the following basic guidelines:
    a. Use of approved wire, cable, and wiring devices.
    b. Cable shall be installed in accordance with manufacturer's recommendations and best industry practices.
    c. The cable's minimum bend radius and maximum pulling tension shall not be exceeded. Pulling tension on 4-pair UTP cables shall not exceed 25-lbf.
    d. Cables shall not be attached to ceiling grid or lighting fixture wires. Where support for horizontal cable is required, Contractor shall install appropriate carriers to support the cabling.
    e. J-hook or trapeze system shall be used to support cable bundles, all horizontal cables shall be supported at a maximum of 48 to 60 inch intervals. At no point shall cable(s) rest on acoustic ceiling grids or panels.
    f. Horizontal distribution cables shall be grouped neatly and care should be taken to insure that bundling material does not cause deformation of the bottom cables within the bundle and degrade cable performance.
    g. Install cables in one continuous piece. Splices shall not be allowed under any circumstances.

h. Cables shall be dressed and terminated in accordance with the recommendations made in the TIA-568-C standard(s), manufacturer's recommendations and best industry practices.
i. Pair untwist at the termination shall not exceed manufacturer's recommendations.
j. Cables shall be neatly bundled and dressed to their respective panels or blocks. Each panel or block shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame.
k. The cable jacket shall be maintained as close as possible to the termination point.
l. Cable strain relief system shall be used in back of patch panels for cable support.
m. Manufacture/model specific single "U" space horizontal cable managers shall be provided and used in accordance with existing rack scheme. (pn: TE/558329-1

4.0 PRE-INSTALLATION INSPECTIONS

Visually inspect all cables, cable reels and shipping cartons to detect possible cable damage incurred during shipping and transport. Visibly damaged goods are to be returned to the supplier and replaced at no additional cost to THE COUNTY. If post-manufacture performance data has been supplied by the manufacturer of cables or connecting hardware, copies of such data shall be kept for inclusion in the documentation and made available to THE COUNTY upon request.

5.0 TESTING AND CERTIFICATION (category 6)

5.1 REQUIREMENTS

Contractor shall provide sufficient skilled labor to complete testing within the agreed upon test period. Contractor shall be responsible for supplying all of the required test equipment used to conduct acceptance tests. Contractor shall be responsible for submitting acceptance documentation.

5.2 TESTING OBSERVATION

The County reserves the right to be present during any or all testing. All cabling not tested strictly in accordance with these procedures shall be retested at no additional cost to THE COUNTY. A total of 100 percent of the installed cable shall be tested. All tests shall pass acceptance criteria defined below. Test equipment shall be fully charged prior to each day's testing or a fresh set of batteries shall be brought to the job site.

5.3 STANDARDS COMPLIANCE

All testing shall be performed in conformance with current TIA-568-C category 6 requirements. All tests shall be performed using a cable tester with current applicable firmware or software updates.
Contractor shall configure the tester to include at minimum the profile as follows:

- Attenuation

- Near End Cross Talk (NEXT)
- Power Sum Near End Cross Talk (PSNEXT)
- Return Loss
- Equal Level Far End Cross Talk (ELFEXT)
- Length (in feet)
- Propagation delay
- Delay skew
- Ambient Noise and Resistance.

5.4 DOCUMENTATION

Test results shall be provided in hardcopy report format (Adobe PDF) using the cable tester's software and electronic format on CD, compact flash or USB memory cards. Handwritten test reports or editable formats such as Excel spreadsheets or CSV files are not acceptable.

Test reports shall include the following information for each cabling element tested:

- Tester manufacture, model, serial number, software version and date of last factory calibration.
- Circuit ID number and project/job name.
- Auto-test specification used
- Date and time of test.
- Wiremap results that indicate the cabling has no shorts, opens, miswires, split, reversed or crossed pairs, and end-to-end connectivity is achieved.
- Attenuation, Near End Cross Talk (NEXT), Power Sum Near End Cross Talk (PSNEXT), Return Loss, Equal Level Far End Cross Talk (ELFEXT) and Power Sum Equal Level Far End Cross Talk (PSELFEXT) data that indicate the worst case result, the frequency at which it occurs, the limit at that point and the margin. Information shall be provided for all pairs or pair combinations and in both directions.
- Length (in feet), propagation delay and delay skew relative to the applicable limit.
- Any individual test that fails the relevant performance specification shall be marked as a FAIL and action taken to correct the problem.
- Overall pass/fail indication.

Test reports shall be submitted within five (5) business days of completion of testing.

6.0 ACCEPTANCE

Once all work has been completed, test documentation has been submitted, and THE COUNTY is satisfied that all work is in accordance with contract documents, THE COUNTY shall notify the contractor in writing of formal acceptance of the system.

- Designer/consultants and THE COUNTY may agree to allow certain cabling runs to exceed standardized performance criteria (e.g. length). In this event, such runs shall be explicitly identified and excluded from requirements to pass standardized tests.
- Acceptance shall be subject to completion of all work, successful post-installation testing, yielding 100 percent PASS rating, and receipt of full documentation as described above.

7.0 WARRANTY

Contractor must install universal cable system components with a manufacturer backed product defect and performance assurance warranty. Proof of warranty must be submitted in the form of site specific manufacturer documentation and certificate.

Incidental Materials

All incidental installation materials and equipment necessary to complete the relocation/installation as specified in this bid, i.e. screws, tie wraps, anchors, any type of equipment, tools, fire-stop material etc., shall be furnished by the bidder. The bidder is responsible for all test equipment and any special machinery that may be required to meet the requirements of this specification.

SECTION 083323 - OVERHEAD COILING DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Insulated overhead coiling service doors with electric operator – typical for all locations.

B. Related Sections:

1. Division 05 Section "Metal Fabrications" for miscellaneous steel supports.
2. Division 26 Sections for electrical service and connections for powered operators and accessories.

1.3 PERFORMANCE REQUIREMENTS

A. Delegated Design: Design overhead coiling doors, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B. Structural Performance, Exterior Doors: Exterior overhead coiling doors shall withstand the wind loads, the effects of gravity loads, and loads and stresses within limits and under conditions indicated according to SEI/ASCE 7.

1. Wind Loads:

a. Basic Wind Speed: (refer to structural drawings for design wind pressures)

2. Deflection Limits: Design overhead coiling doors to withstand design wind load without evidencing permanent deformation or disengagement of door components.

C. Operability under Wind Load: Design overhead coiling doors to remain operable under design wind load, acting inward and outward.

D. Windborne-Debris-Impact-Resistance Performance: Provide glazed and impact-protective overhead coiling doors that pass missile-impact and cyclic-pressure tests when tested according to the Florida Building Code.

1. Large Missile Test: For overhead coiling doors located within 30 feet of grade.

E. Operation Cycles: Provide overhead coiling door components and operators capable of operating for not less than number of cycles indicated for each door. One operation cycle is complete when a door is opened from the closed position to the fully open position and returned to the closed position.

1.4 SUBMITTALS

A. Product Data: For each type and size of overhead coiling door and accessory. Include the following:

1. Construction details, material descriptions, dimensions of individual components, profiles for slats, and finishes.
2. Rated capacities, operating characteristics, electrical characteristics, and furnished accessories.

B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.

1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
2. Wiring Diagrams: For power, signal, and control wiring.

C. Samples for Initial Selection: Manufacturer's finish charts showing full range of colors and textures available for units with factory-applied finishes.

1. Include similar Samples of accessories involving color selection.

D. Delegated-Design Submittal: For overhead coiling doors indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1. Summary of forces and loads on walls and jambs.

E. Qualification Data: For qualified Installer.

F. Maintenance Data: For overhead coiling doors to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

B. Source Limitations: Obtain overhead coiling doors from single source from single manufacturer.

1. Obtain operators and controls from overhead coiling door manufacturer.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.6 Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and the Florida Building Code.

PART 2 - PRODUCTS

2.1 DOOR CURTAIN MATERIALS AND CONSTRUCTION

A. Door Curtains: Fabricate overhead coiling-door curtain of interlocking metal slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated, and as follows:

1. Steel Door Curtain Slats: Zinc-coated (galvanized), cold-rolled structural steel sheet; complying with ASTM A 653/A 653M, with G90 zinc coating; nominal sheet thickness (coated) of 0.028 inch and as required to meet requirements.
2. Vision-Panel Glazing: Manufacturer's standard clear glazing, fabricated from transparent acrylic sheet or fire-protection rated glass as required for type of door; set in glazing channel secured to curtain slats.
3. Insulation: Fill slats for insulated doors with manufacturer's standard thermal insulation complying with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84. Enclose insulation completely within slat faces.
4. Metal Interior Curtain-Slat Facing: Match metal of exterior curtain-slat face.
5. Gasket Seal: Provide insulated slats with manufacturer's standard interior-to-exterior thermal break or with continuous gaskets between slats.

B. Endlocks and Windlocks for Service Doors: Malleable-iron casings galvanized after fabrication, secured to curtain slats with galvanized rivets or high-strength nylon. Provide locks on not less than alternate curtain slats for curtain alignment and resistance against lateral movement.

C. Endlocks for Counter Doors: Manufacturer's standard locks on not less than alternate curtain slats for curtain alignment and resistance against lateral movement.

D. Bottom Bar for Service Doors: Consisting of two angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch thick; fabricated from manufacturer's standard hot-dip galvanized steel, stainless steel, or aluminum extrusions to match curtain slats and finish.

E. Bottom Bar for Counter Doors: Manufacturer's standard continuous channel or tubular shape, fabricated from manufacturer's standard hot-dip galvanized steel, stainless steel, or aluminum extrusions to match curtain slats and finish.

F. Astragal for Interior Doors: Equip each door bottom bar with a replaceable, adjustable, continuous, compressible gasket of flexible vinyl, rubber, or neoprene as a cushion bumper.

G. Curtain Jamb Guides: Manufacturer's standard angles or channels and angles of same material and finish as curtain slats unless otherwise indicated, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain, and a continuous bar for holding windlocks.

2.2 HOOD

A. General: Form sheet metal hood to entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Form closed ends for surface-mounted hoods and fascia for any portion of between-jamb mounting that projects beyond wall face. Equip hood with intermediate support brackets as required to prevent sagging.

2.3 LOCKING DEVICES

A. Locking Device Assembly: Fabricate with cylinder lock, spring-loaded dead bolt, operating handle, cam plate, and adjustable locking bars to engage through slots in tracks.

1. Lock Cylinders: Provide cylinders standard with manufacturer and keyed to building keying system.
2. Keys: Provide Three for each cylinder.

B. Safety Interlock Switch: Equip power-operated doors with safety interlock switch to disengage power supply when door is locked.

2.4 CURTAIN ACCESSORIES

A. Weatherseals: Equip each exterior door with weather-stripping gaskets fitted to entire perimeter of door for a weathertight installation, unless otherwise indicated.

1. At door head, use 1/8-inch- thick, replaceable, continuous sheet secured to inside of hood.
2. At door jambs, use replaceable, adjustable, continuous, flexible, 1/8-inch- thick seals of flexible vinyl, rubber, or neoprene.

B. Push/Pull Handles: Equip each push-up-operated or emergency-operated door with lifting handles on each side of door, finished to match door.

1. Provide pull-down straps or pole hooks for doors more than 84 inches high.

2.5 COUNTERBALANCING MECHANISM

A. General: Counterbalance doors by means of manufacturer's standard mechanism with an adjustable-tension, steel helical torsion spring mounted around a steel shaft and contained in a spring barrel connected to top of curtain with barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.

B. Counterbalance Barrel: Fabricate spring barrel of manufacturer's standard hot-formed, structural-quality, welded or seamless carbon-steel pipe, of sufficient diameter and wall thickness to support rolled-up curtain without distortion of slats and to limit barrel deflection to not more than 0.03 in./ft. of span under full load.

C. Spring Balance: One or more oil-tempered, heat-treated steel helical torsion springs. Size springs to counterbalance weight of curtain, with uniform adjustment accessible from outside barrel. Secure ends of springs to barrel and shaft with cast-steel barrel plugs.

D. Torsion Rod for Counterbalance Shaft: Fabricate of manufacturer's standard cold-rolled steel, sized to hold fixed spring ends and carry torsional load.

E. Brackets: Manufacturer's standard mounting brackets of either cast iron or cold-rolled steel plate.

2.6 MANUAL DOOR OPERATORS

A. Crank Operator: Consisting of crank and crank gearbox, steel crank drive shaft, and gear-reduction unit, of type indicated. Size gears to require not more than 25 lbf force to turn crank. Fabricate gearbox to be oil tight and to completely enclose operating mechanism. Provide manufacturer's standard crank-locking device.

2.7 ELECTRIC DOOR OPERATORS

A. General: Electric door operator assembly of size and capacity recommended and provided by door manufacturer for door and operation-cycles requirement specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, remote-control stations, control devices, integral gearing for locking door, and accessories required for proper operation.

1. Comply with NFPA 70.
2. Provide control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6, with NFPA 70 Class 2 control circuit, maximum 24 V, ac or dc.

B. Usage Classification: Electric operator and components capable of operating for not less than number of cycles per hour indicated for each door.

C. Door Operator Location(s): Operator location indicated for each door.

1. Wall Mounted: Operator is mounted to the inside front wall on the left or right side of door and connected to door drive shaft with drive chain and sprockets. Side room is required for this type of mounting. Wall mounted operator can also be mounted above or below shaft; if above shaft, headroom is required.

D. Electric Motors: Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements specified in Division 11 Section "Common Motor Requirements for Equipment" unless otherwise indicated.

1. Electrical Characteristics:

a. Phase: Single phase.
b. Volts: 208 V.
c. Hertz: 60.

2. Motor Type and Controller: Reversible motor and controller (disconnect switch) for motor exposure indicated.
3. Motor Size: Minimum size as indicated. If not indicated, large enough to start, accelerate, and operate door in either direction from any position, at a speed not less than 8 in./sec. and not more than 12 in./sec., without exceeding nameplate ratings or service factor.
4. Operating Controls, Controllers (Disconnect Switches), Wiring Devices, and Wiring: Manufacturer's standard unless otherwise indicated.
5. Coordinate wiring requirements and electrical characteristics of motors and other electrical devices with building electrical system and each location where installed.

E. Limit Switches: Equip each motorized door with adjustable switches interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions. Obstruction Detection Device: Equip motorized door with indicated external automatic safety sensor capable of protecting full width of door opening.

1. Sensor Edge: Automatic safety sensor edge, located within astragal or weather stripping mounted to bottom bar. Contact with sensor activates device. Connect to control circuit using manufacturer's standard take-up reel or self-coiling cable.

F. Remote-Control Station: Momentary-contact, three-button control station with push-button controls labeled "Open," "Close," and "Stop."

1. Interior units, full-guarded, surface-mounted, heavy-duty type, with general-purpose NEMA ICS 6, Type 1 enclosure.

G. Emergency Manual Operation: Equip each electrically powered door with capability for emergency manual operation. Design manual mechanism so required force for door operation does not exceed 25 lbf.

H. Motor Removal: Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency manual operation.

2.8 DOOR ASSEMBLY

A. Service and Insulated Counter Doors: Overhead coiling door formed with curtain of interlocking metal slats.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Cookson Company.
b. Cornell Iron Works, Inc.
c. Lawrence Roll-Up Doors, Inc.
d. McKeon Rolling Steel Door Company, Inc.
e. Overhead Door Corporation.

B. Operation Cycles: Not less than 50,000.

C. Curtain R-Value: 6.0 deg F x h x sq. ft./Btu.

D. Door Curtain Material: Galvanized steel.

E. Door Curtain Slats: Flat profile slats of 3-1/4-inch center-to-center height.

1. Vision Panels: Approximately 10- by 1-5/8-inch openings spaced approximately 2 inches apart and beginning 12 inches from end guides; in two rows of slats at height indicated on Drawings; installed with vision-panel glazing.

F. Curtain Jamb Guides: Galvanized steel with exposed finish matching curtain slats. Provide continuous integral wear strips to prevent metal-to-metal contact and to minimize operational noise.

G. Hood: Stainless Steel.

1. Shape: Square.
2. Mounting: Face of wall.

H. Integral Frame for Counter Door: Stainless steel.

1. Mounting: Face of wall.

I. Sill Configuration for Counter Door: No sill (by Food Service Vendor).

J. Locking Devices: Equip door with locking device assembly.

1. Locking Device Assembly: Cremone type, both jamb sides locking bars, operable from inside with cylinders.

K. Manual Door Operator: Manufacturer's standard crank operator.

1. Provide operator with manufacturer's standard removable operating arm.

L. Door Finish:

1. Baked-Enamel or Powder-Coated Finish: Custom color to be selected by Architect.

2.9 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.10 STEEL AND GALVANIZED-STEEL FINISHES

A. Baked-Enamel or Powder-Coat Finish: Manufacturer's standard baked-on finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for cleaning, pretreatment, application, and minimum dry film thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates areas and conditions, with Installer present, for compliance with requirements for substrate construction and other conditions affecting performance of the Work.

B. Examine locations of electrical connections.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install overhead coiling doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.

B. Install overhead coiling doors, hoods, and operators at the mounting locations indicated for each door.

C. Accessibility: Install overhead coiling doors, switches, and controls along accessible routes in compliance with regulatory requirements for accessibility.

D. Smoke-Control Doors: Install according to NFPA 80 and NFPA 105.

3.3 STARTUP SERVICE

A. Engage a factory-authorized service representative to perform startup service.

1. Perform installation and startup checks according to manufacturer's written instructions.
2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.4 ADJUSTING

A. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion.

B. Lubricate bearings and sliding parts as recommended by manufacturer.

C. Adjust seals to provide weathertight fit around entire perimeter.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain overhead coiling doors.

END OF SECTION 083323

SECTION 122413 - ROLLER WINDOW SHADES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Manually operated roller shades with single rollers.

B. Related Requirements:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood blocking and grounds for mounting roller shades and accessories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions for roller shades.

B. Samples for Verification: For each type of roller shade.

1. Shadeband Material: Not less than 10 inches square. Mark inside face of material if applicable.
2. Roller Shade: Full-size operating unit, not less than 16 inches wide by 36 inches long for each type of roller shade indicated.
3. Installation Accessories: Full-size unit, not less than 10 inches long.

C. Roller-Shade Schedule: Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of shadeband material, signed by product manufacturer.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roller shades to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Roller Shades: Full-size units equal to 5 percent of quantity installed for each size, color, and shadeband material indicated, but no fewer than two units.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver roller shades in factory packages, marked with manufacturer, product name, and location of installation using same designations indicated on Drawings.

1.9 FIELD CONDITIONS

A. Environmental Limitations: Do not install roller shades until construction and finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operating hardware of operable glazed units through entire operating range. Notify Architect of installation conditions that vary from Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. Draper Inc.
2. Hunter Douglas Contract.
3. MechoShade Systems, Inc.

B. Source Limitations: Obtain roller shades from single source from single manufacturer.

2.2 MANUALLY OPERATED SHADES WITH SINGLE ROLLERS

A. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch that stops shade movement when bead chain is released; permanently adjusted and lubricated.

1. Bead Chains: Stainless steel.

a. Loop Length: Full length of roller shade.
b. Limit Stops: Provide upper and lower ball stops.
c. Chain-Retainer Type: Clip, jamb mount.

B. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate operating mechanisms and weights and widths of shadebands indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of shadebands for service.

1. Roller Drive-End Location: Right side of inside face of shade or left side of inside face of shade per installation situation. Specify on shop drawings.
2. Direction of Shadeband Roll: Regular, from back of roller.
3. Shadeband-to-Roller Attachment: Manufacturer's standard method.

C. Mounting Hardware: Brackets or end caps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.

D. Shadebands:

1. Shadeband Material: Light-filtering fabric.
2. Shadeband Bottom (Hem) Bar: Steel or extruded aluminum.

a. Type: Enclosed in sealed pocket of shadeband material.
b. Color and Finish: As selected by Architect from manufacturer's full range.

E. Installation Accessories:

1. Exposed Head box: Rectangular, extruded-aluminum enclosure including front fascia, top and back covers, end caps, and removable bottom closure.

a. Height: Manufacturer's standard height required to enclose roller and shadeband when shade is fully open, but not less than 4 inches.

2. Installation Accessories Color and Finish: As selected from manufacturer's full range.

2.3 SHADEBAND MATERIALS

A. Shadeband Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

B. Light-Filtering Fabric: Woven fabric, stain and fade resistant.

1. Source: Roller-shade manufacturer.
2. Type: Woven polyester and PVC-coated polyester.
3. Weave: Dense Basket weave - 2 x 2
4. Roll Width: Varies per window opening. Field verify dimensions.
5. Orientation on Shadeband: Up the bolt.
6. Openness Factor: 5 percent.
7. Color: As selected by Architect from manufacturer's full range.

2.4 ROLLER-SHADE FABRICATION

A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1, including requirements for flexible, chain-loop devices; lead content of components; and warning labels.

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F :

1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which shade is installed less 1/4 inch per side or 1/2-inch total, plus or minus 1/8 inch . Length equal to head-to-sill or -floor dimension of opening in which shade is installed less 1/4 inch , plus or minus 1/8 inch .

C. Shadeband Fabrication: Fabricate shadebands without battens or seams to extent possible except as follows:

1. Vertical Shades: Where width-to-length ratio of shadeband is equal to or greater than 1:4, provide battens and seams at uniform spacings along shadeband length to ensure shadeband tracking and alignment through its full range of movement without distortion of the material.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ROLLER-SHADE INSTALLATION

A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer's written instructions.

1. Opaque Shadebands: Located so shadeband is not closer than 2 inches to interior face of glass. Allow clearances for window operation hardware.

3.3 ADJUSTING

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

3.4 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 122413