

## SPECIFICATIONS

### Item No. AD-1.1:                      Reference Revised Sections

- A.     The following revised specification section is hereby issued:
- 10 11 16, Markerboards

### Item No. AD-1.2:                      Reference New Sections

- A.     The following new specification sections hereby issued:
- 09 30 13, Ceramic Tile  
12 24 13, Roller Shades

### Item No. AD-1.3:                      Reference Section 06 41 16, Casework

- A.     Delete Paragraph 2.11.Q.
- B.     In Paragraph 2.10.A, add the following new subparagraph:
- "12.    Heavy-Duty, Soft-Close Undermount Waste and Recycling Bins:
- a.    Double Bin Units: USC15-2-35PT by Knape and Vogt or equal.
- 1).    Sliding Assembly Width: 14-13/16"
- 2).    Dimensions: 14-13/16" x 9-3/16" x 22-7/16"
- 3).    Finish: Platinum
- 4).    Number of Bins: 2
- b.    Replacement Bins and Lids: QT35PB-PT by Knape and Vogt or equal.
- 1).    Dimensions: 14-1/4" x 17-1/2" x 9-3/16"
- 2).    Finish: Platinum
- 3).    Units per Carton: 6"

### Item No. AD-1.4:                      Reference Section 09 51 00, Acoustical Ceilings - Lay-In

- A.     Delete Article 2.02, substitute therefor:
- "2.02. MATERIALS
- A.    AC1 Acoustical Panels: Armstrong Ultima Health Zone, ASTM E1264.
1.    Size: 24" x 48"
2.    Thickness: 15/16"
3.    Light Reflectance: 0.80
4.    CAC: 38
5.    Edge: Square Lay-In
6.    Surface Color: Factory White
7.    Refer to Drawings
- B.    AC2 Acoustical Panels: Armstrong School Zone Fine Fissured, Item

No. 1714, ASTM E1264.

1. Size: 24" x 48"
2. Thickness: 3/4"
3. Light Reflectance: 0.85
4. CAC: Minimum 40
5. Edge: Square Lay-In
6. Surface Color: Factory White
7. Refer to Drawings.

C. Hold Down Clips for kitchen and food service ceilings: Armstrong UHDC Clip at fire-rated corridors and exitways, manufacturer's standard at non-rated ceilings."

B. Delete Paragraph 3.02.G.

Item No. AD-1.5:                    Refer Section 10 14 23, Signs-Restrooms

A. Delete Paragraph 2.04.E, Substitute therefor:

"E. Colors: Color to match existing campus standard and verified by Architect."

B. Delete Paragraph 2.04.F, Substitute therefor:

"F. Lettering Type Style: Font to match existing campus standard and verified by Architect. Refer to Drawings, refer to REGULATORY REQUIREMENTS for letter-proportion compliance."

Item No. AD-1.6:                    Reference Section 10 28 00, Toilet, Bath, and Laundry Accessories

A. Delete Subparagraph 2.03.C.1.a, Substitute therefor:

"a. Bobrick: B-2111."

B. Delete Paragraph 2.03.B, Paper Towel (Folded) Dispenser.

Item No. AD-1.7:                    Reference Section 11 31 00, Residential Equipment

A. Delete Paragraph 3.06.C, Substitute therefor:

"C. Dishwasher: GE GLDT696JSS"

B. In Article 3.06, add the following new Paragraph:

"D. Island Hood: GE PV977NSS"

## **DRAWINGS**

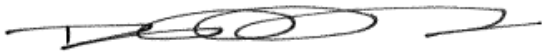
Item No. AD-1.8:                    Reference Revised Drawings

A. The following revised drawings are hereby issued:

A2.1

A2.3  
A3.1  
A7.10  
A7.11  
A7.12  
A8.10  
A10.60  
A10.61  
A10.91  
E0.2  
E2.1  
E2.2  
E2.3

**HMC ARCHITECTS**

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end.

By \_\_\_\_\_  
(Signature of Architect of Record or Alternate)

**SECTION 10 11 16**

**MARKERBOARDS**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Markerboards, dry-erase, magnetic.
- B. Magnetic, glass markerboard.
- C. Trim, chalkrail and accessories.

1.02 REFERENCE STANDARDS

- A. Conform to current adopted reference standards by date of issue of the current code cycle and the date of the Contract Documents.
- B. ASTM B209 - Aluminum-Alloy Sheet and Plate.
- C. ASTM A653/A 653M Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- D. ASTM B221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes and Tubes.
- E. ASTM C1036 - Standard Specification for flat glass.
- F. ASTM C1048 - Standard specification for heat treated glass - Kind HS, Kind FT, Coated and Uncoated Glass.
- G. ASTM C1172 - Standard specification for laminated architectural flat glass.
- H. CPSC 16 CFR - Federal Safety standard for architectural glazing materials.
- I. PEI - Porcelain Enamel Institute - Performance Specifications for Porcelain Enamel Markerboards.
- J. ASTM A424 - Sheet Steel for Porcelain Enameling.
- K. ANSI A208.1 - Mat Formed Wood Particleboard.
- L. ASTM D1308 - Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
- M. ASTM D3359 - Standard Test Methods for Rating Adhesion by Tape Test.
- N. ASTM D3363 - Standard Test Method for Film Hardness by Pencil Test.

# HMC Architects

- O. CSPC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.

## 1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination Glass Markerboards: Ensure that surfaces to receive color coated glass comply with manufacturer's installation requirements. Provide adhesion testing for substrates not addressed by manufacturer's literature.

## 1.04 SUBMITTALS

- A. Shop drawings indicating, wall elevations, sizes, dimensions and joint locations between panels, and mounting details.
- B. Provide product data on trim and accessories.
- C. Three samples illustrating materials and finish, color and texture of markerboard.
- D. Include maintenance information on regular cleaning, stain removal and removal of damaged components.

## 1.05 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Ten or more years of experience manufacturing color-coated glass.
- B. Glazing Publications:
  - 1. For fabrication and glazing, comply with GANA's "Glazing Manual" unless more stringent requirements are indicated.
  - 2. For adhered glass, comply with GANA Mirror Division's "Mirrors, Handle with Extreme Care: Tips for the Professional on the Care and Handling of Mirrors."

## 1.06 WARRANTY

- A. General Warranty: Special Markerboard warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of Contract Documents.
- B. Markerboard Warranty: Submit written warranty executed by manufacturer agreeing to replace porcelain-on-steel markerboards that do not retain their original writing and erasing qualities, become slick and shiny, or exhibit crazing, cracking, or flaking within specified warranty period, provided manufacturer's written instructions for handling, installation, protection, and maintenance have been followed.
- C. Warranty Period: Life of building.
- D. Glass Markerboards: Manufacturer's standard warranty against glass, glass failure and delamination of color coating.
  - 1. Warranty Period: 5 years from date of manufacture.

# HMC Architects

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Products of following manufacturers form basis for design and quality intended.
  - 1. Platinum Visual Systems/ABC School Equipment, Inc., Corona, CA.
  - 2. Egan Visual, Inc./The Scheffey Group, Los Angeles, CA.
  - 3. ADP Lemco Inc., Salt Lake City, UT.
  - 4. Marsh Industries, New Philadelphia, OH.
- B. Or equal as approved in accordance with Division 01, General Requirements for Substitutions.

### 2.02 MATERIALS

- A. Sheet Steel: ASTM A424, minimum 28 gauge , .
  - 1. Can support papers by means of magnets [with Dry-erase qualities]. Quantities of magnets: As required by Architect.
  - 2. Color: white, low sheen.
- B. Sheet Steel: ASTM A653, galvanized to G60 designation.
- C. Aluminum Sheet: ASTM B209, H1100 Alloy H-19 temper
- D. Aluminum Extrusions: ASTM B221, 6061 alloy, T5 temper
- E. Particle Board: ANSI A208.1; wood chips or shavings set with waterproof resin binder, sanded faces.
- F. Adhesives: Type recommended by manufacturer. Waterproof type.

### 2.03 ACCESSORIES

- A. Map Supports: Formed aluminum roller brackets, sliding type to fit map rail.
- B. Provide instructions for markerboard cleaning.
- C. Manufacturer's standard support clip , hangers, and accessories for markerboards to function properly.

### 2.04 FABRICATION - MARKERBOARDS

- A. Outer Face Sheet: Platinum Visual Systems Writanium , ASTM A424, steel, 0.0150" thick, with vitreous porcelain enamel finish, primer, ground and cover coat. Markerboards 16 feet and wider: 0.0240" thick and routed steel splined joint .
- B. Core: ANSI A208.1, particleboard; 1/2 inch thick Industrial Grade M2 .
- C. Backing Surface: ASTM B209, aluminum sheet, 0.015 inch thick, or ASTM A653, 26 gauge galvanized steel.

# HMC Architects

- D. Sizes: Refer to Drawings for sizes, locations and quantities.
- E. Frame: aluminum frame .

## 2.05 FRAME AND TRIM

- A. Frame: Extruded aluminum; Platinum Visual Systems STS SERIES Series except with 0.015" aluminum backing, concealed fasteners :
  - 1. Display (map) Rail: 2 inch, with natural cork insert, 1/4" thick, with vinyl covering, full length of markerboard. Vinyl to match tackboard vinyl.
  - 2. Head and Side Trims: C-18, 1-1/2" aluminum trim, 0.062", clear anodized.
  - 3. Mullion Trim at markerboards 16' and wider: Butt joints, routed steel splined joints.
- B. Marker tray: Platinum Visual Systems, blade profile marker tray, extruded aluminum, full length of markerboard, solid sections with smooth curved ends, concealed fasteners.
- C. Provide 1 each map hook every 2 linear ft of maprail and two roller brackets for each markerboard unit. One flag holder per room.

## 2.06 FINISHES

- A. Porcelain Enamel: Glass fired enamel in accordance with PEI Type A. Color, white or similar, as selected from manufacturer's standard range, low sheen.
- B. Aluminum Frame and Accessories: Anodized to clear natural finish.

## 2.07 MAGNETIC, GLASS MARKERBOARD

- A. Manufacturer: Pulp Studio, Gardena, CA or approved equal in accordance with Division 01, General Requirements for Substitutions.
  - 1. Model: Pintura Magboard, 2999 LIBP, with water based back lacquered glass and proprietary coating technology.
  - 2. Dimensions: as indicated on Drawings
  - 3. Thickness: 5/16"
  - 4. Glass: Low Iron, tempered glass, ASTM C1048.
  - 5. Edges: Polished.
  - 6. Accessories:
    - a. Neodymium magnets, 3 per markerboard
  - 7. Colors: Custom colors as selected by Architect.
- B. Adhesive and Glazing Sealant: Neutral cure silicone sealant complying with ASTM C920, Type S, Grade NS, Class 50, Use NT, Dowsil 795, or equal, and as approved by manufacturer.
- C. Mounting Hardware: as recommended by Manufacturer for products specified herein.
- D. Fabrication
  - 1. Comply with manufacturer's instructions.

# HMC Architects

- a. Color coat glass before fabricating glazing units.
  - b. Fabricate glazing units to fit openings and sizes indicated in Drawings.
    - 1) Fabricate cutouts for notches and holes in glazing units without marring visible surfaces. Locate and size cutouts to fit closely around penetrations.
    - 2) Provide bite, edge clearances and joint sizes indicated in Drawings.
  - c. Clean cut or flat grind edges of adhered, unless noted otherwise, glazing units. Grind smooth and polish exposed edges and corners.
2. Tolerances: face dimension and squareness shall not vary more than 1/16", measured according to ASTM C1036.

## PART 3 - EXECUTION

### 3.01 INSPECTION

- A. Verify that surfaces and internal wall blocking are ready to receive Work and dimensions are as indicated on shop drawings.
- B. Beginning of installation means acceptance of substrate construction.

### 3.02 INSTALLATION

- A. Install markerboards in accordance with manufacturer's instructions.
- B. Install magnetic glass markerboards in accordance with manufacturer's written installation instructions and GANA Glazing Manual.
  1. Adhering to Vertical Surfaces: Install with adhesive and permanent support hardware, complying with color-coated glass manufacturer's instructions.
  2. Glazing: Comply with Section 08 80 00.
  3. Joints: Space joints straight, avoid glass to glass contact.
    - a. Butt Joints: Seal butt joints according to GANA "Glazing Manual"
    - b. Joints in Adhered Glass: Seal face joints and tool concave. At edges, seal joint between glass and substrate and tool concave.
- C. Establish bottom of frame perimeter as approved by Architect.
- D. Secure units level and plumb.
- E. Where markerboard adjoins tackboard or chalkboard, join panels with H/Bar divider joint.
- F. NO holes in markerboard permitted.

### 3.03 CLEANING

- A. Clean markerboard surfaces and aluminum in accordance with manufacturer's instructions.
- B. Cover markerboard surfaces with clear protective covering.



HMC Architects

- C. Remove protective cover at Date of Notice of Completion.

**END OF SECTION**

**SECTION 09 30 13**

**CERAMIC TILE**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Ceramic tile walls and base using thinset application method.

1.02 REFERENCE STANDARDS

- A. Conform to current adopted reference standards by date of issue of the current code cycle and the date of the Contract Documents.
- B. ADA – Americans with Disabilities Act of 1990 as amended
  - 1. ADA Standards – ADA Title II Regulations and the 2010 ADA Standards for Accessible Design.
- C. ANSI/TCNA A108.5 - Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar.
- D. ANSI/TCNA A108.10 - Installation of Grout in Tile Work.
- E. ANSI/TCNA A118.6 - Cement Grouts for Tile Installation.
- F. ANSI/TCNA A118.1 - Dry-Set Portland Cement Mortar.
- G. ANSI/TCNA A118.4 - Latex-Portland Cement Mortar.
- H. ANSI/TCNA A118.7 - Polymer Modified Tile Grouts for Tile Installation.
- I. ANSI/TCNA A137.1 - Ceramic Tile.
- J. ASTM C144 - Aggregate for Masonry Mortar.
- K. ASTM C150 - Portland Cements.
- L. ASTM C207 - Hydrated Lime for Masonry Purposes.
- M. ASTM C373 - Water Absorption, Bulk Density, Apparent Porosity and Apparent Specific Gravity of Fired Whiteware Products.
- N. ASTM D1056 - Flexible Cellular Materials.
- O. ASTM C920 - Elastomeric Joint Sealants.
- P. TCNA (Tile Council of North America) - Handbook for Ceramic Tile Installation, Latest Edition.

Q. SDAPCD - San Diego County Air Pollution Control District, Regulation IV.

1.03 SUBMITTALS

A. Product Data: For each type of tile, bond coat, grout, and other products specified.

B. Shop Drawings: Include following:

1. Tile patterns and locations.
2. Widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.

C. Samples for Verification: Of each item listed below, prepared on Samples of size and construction indicated. Where products involve normal color and texture variations, include Sample sets showing full range of variations expected.

1. Each type and composition of tile and for each color and texture required, at least **12 inches** square, mounted on braced cementitious backer units, and with grouted joints using product complying with specified requirements and approved for completed work in color or colors selected by Architect.
2. Full-size units of each type of trim and accessory for each color required.
3. Metal edge strips in **6-inch** lengths.

D. Product Certificates: Master Grade Certificate signed by the manufacturer certifying that products furnished comply with requirements of Standard Grade.

E. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names of architects and owners, and other information specified.

1.04 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Company specializing in the manufacture of products specified in this Section with minimum five years' experience.

B. Installer Qualifications: Engage experienced installer who has completed tile installations similar in material, design, and extent to that indicated for this Project and with record of successful in-service performance. Minimum 5 years of documented experience of tile installation.

1. Installer-Tile Layer: Journeyman Level Classification required, recognized by California Directory of Industrial Relations or the U.S. Department of Labor. Certification required or Installer employs Certified Tile Installer (CTI) by the Ceramic Tile Education Foundation (CTEF)

C. Source Limitations for Tile: Obtain each color, grade, finish, type, composition, and variety of tile from one source with resources to provide products from same production run for each contiguous area of consistent quality in appearance and physical properties without delaying Work.

- D. Source Limitations for Setting and Grouting Materials: Obtain ingredients of uniform quality for each bond coat, and grout component from single manufacturer and each aggregate from one source or producer.
- E. Pre-installation Conference: Conduct conference at Project site to comply with requirements of Division 01, General Requirements.

#### 1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site only in cartons which have been grade sealed by manufacturer in accordance with ANSI A137.1 and with grade seals unbroken. Seconds grade seal quality not permitted.
- B. Tiles delivered to job or installed in Work that do not fall within specified standards of quality or accepted color range shall be removed from jobsite and properly be replaced with acceptable material.
- C. Store and protect products in dry, secure areas.

#### 1.06 ENVIRONMENTAL REQUIREMENTS

- A. Do not install volatile materials in a closed, unventilated environment.
- B. Maintain 50 degrees F or above during installation of adhesive and grout materials.
- C. Shade work from direct sunlight during tile installation as needed to prevent rapid evaporation caused by excessive heat.

### PART 2 - PRODUCTS

#### 2.01 MANUFACTURERS

- A. Products of following manufacturers form basis for design and quality intended.
  - 1. Dal-Tile, Corona, CA./American Olean Tile, City of Industry, CA.
  - 2. Interceramic Inc., Anaheim, CA.
  - 3. SpecsCeramics, Inc., Anaheim, CA.
- B. Or equal as approved in accordance with Division 01, General Requirements for Substitutions.

#### 2.02 TILE

- A. Ceramic Wall Tile: ANSI/TCA A137.1, conforming to following:
  - 1. Moisture Absorption As permitted by ANSI A137.1.
  - 2. Size, Surface Finish and Colors: as indicated on drawings.
  - 3. Patterns: Per Architectural Drawings.

#### 2.03 BOND COAT

- A. ANSI/TCNA A118.1 - Dry-Set Portland Cement Mortar.

- B. ANSI/TCNA A118.4 - Latex Portland Cement Mortar.

#### 2.04 GROUT

- A. Grout: ANSI/TCNA A118.6, A118.7 – Factory-prepared cementitious type, dry polymer-modified. Un-sanded type for joints less than 1/8 inches and sanded type for joints 1/8 inch and greater. Colors as selected by Architect and as indicated on Drawings.
  - 1. Laticrete Unsanded Grout (1600 Series)

#### 2.05 ACCESSORIES

- A. Curing Paper: Kraft paper conforming to ASTM C171.
- B. Grout Sealer for Walls and Floors, cement based grouts:
  - 1. Pro Spec Grout Sealer (acrylic), by Bonsal American Co, Charlotte, NC.
  - 2. Grout Armor Color Sealer (acrylic), by Grout Armor, Fort Lauderdale, FL.
  - 3. Acrylic Grout Sealer (acrylic), by Glaze 'N Seal.
  - 4. Or equal and as recommended by grout manufacturer.
- C. Cementitious Backer Units: Standard type; 5/8 inch thick; Solid tapered edges, ends square cut, maximum permissible length, DUROCK INTERIOR TILE CEMENT BOARD.

#### 2.06 EXPANSION JOINT MATERIALS

- A. Joint Sealer: ASTM C920
  - 1. Vertical Joints: One part silicone sealant, non-sag, elongation movements 25/25 percent, Shore A, hardness range 20 -27, Pecora 890FTS and 890FTS-TXTR.
  - 2. Horizontal Joints: Polyurethane joint sealant; ASTM C 920, Type M, Grade NS, Class 25, Use T, M, A and O. Pecora DynaTred or equal.
  - 3. Color: to match grout color.
- B. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- C. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- D. Joint Backing: ASTM D1056; round, closed cell polyethylene foam rod; oversized 25 percent larger than joint width; Backer Rod Mfg. DENVER FOAM or Nomaco Green rod.
- E. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application. Apply to bottom of joints that are too shallow to receive foam backer rod.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work. Verify types of materials that may have been in contact with surfaces.
- B. Beginning of installation means installer accepts condition of existing substrate.
- C. Verify waterproof paper and Backer Units have been installed per Section 09 29 00 for thin set application on walls.

3.02 PREPARATION

- A. Protect surrounding work from damage or disfiguration.
- B. Vacuum clean existing substrate and damp clean.
- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

3.03 MIXING BOND COAT

- A. Use brand of prepackaged dry mix specified by manufacturer.
- B. Mixing: Mix dryset Portland-cement bond coat or latex Portland-cement bond coat in accordance with manufacturer's instructions.
- C. Add dry bond coat mix to amount of latex specified by manufacturer and mix thoroughly to obtain complete and visually uniform wetting of dry bond coat mix. Slake for 15 minutes and remix before using.
- D. Proper bond coat consistency is such that when applied with recommended notched trowel to backing, ridges formed in bond coat will not flow or slump.
- E. During use, remix mortar occasionally. Additional water or fresh materials shall not be added after initial mixing. Mortar shall not be used after initial set.

3.04 INSTALLATION: THIN SET AT WALLS.

- A. Walls: Install in accordance with TCNA Handbook for Ceramic and ANSI A108.5 and A118.1 Tile Installation for thin-set application:
  - 1. No. W244E for cement board, ASTM C1325
- D. Align wall tile grout with floor tile grout.

3.05 BOND COAT APPLICATION

- A. Clean surface thoroughly. Dampen if very dry, but do not saturate.

- B. Apply bond coat with flat side of trowel over an area no greater than covered with tile while bond coat remains plastic.
- C. Within ten minutes before applying tile and using a notched trowel of type recommended by bond coat manufacturer, comb bond coat obtain even setting bed without scraping backing material.
- D. Cover surface uniformly with no bare spot, with sufficient bond coat to ensure a minimum bond coat thickness of 3/32 inch between tile and backing after tile has been beaten into place. Tile shall not be applied to skinned-over bond coat.

### 3.06 INSTALLATION OF TILE

- A. Refer to mortar and latex manufacturers directions.
- B. Do not soak tile.
- C. Set tile firmly on bond coat over cementitious backerboard surfaces with minimum of 95 percent coverage at floors and wet areas. Back-butter ribbed tiles and other tiles in accordance with ANSI/TCNA 108.5. Spacers on tile determine joint width between tile. Strings or pegs may be used to space tile that have no spacers. Bring all surfaces to a true plane at proper position or elevation. Thoroughly beat-in all tile with a beating block while bond coat is still plastic. Beating shall fill minimum of 95 percent of entire space between units and setting bed. 80 percent coverage is permitted for walls in non-wet areas.
- D. Lay tile to pattern indicated on Drawings or request tile pattern from Architect. Do not interrupt tile pattern through openings.
- E. Place edge strips at exposed tile edges.
- F. Cut and fit tile tight to penetrations through tile.
- G. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight without voids, cracks, excess setting bed mix or excess grout. All inside corners shall be coved and exterior corners shall be bullnose. No butted 90 degree intersections permitted. All outside corners shall be bullnose. All tile edges and terminations shall have bullnose unless noted otherwise.
- H. Sound tile after setting. Replace hollow sounding units.
- I. Keep expansion or control joints free of setting bed mix or grout. Apply sealant to joints.
- J. Allow tile to set for a minimum of 16 hours prior to grouting.
- K. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

- L. If tile is face-mounted, remove paper within one hour after tile is set and adjust all tiles that are out of line or level. Use no more water than necessary in removing paper.
- M. Align wall tile grout with floor tile grout.

### 3.07 INSTALLATION OF GROUT

- A. Remove bond coat from face and edges of tile.
- B. Mixing: Refer to manufacturer's directions.
- C. Dry blend contents of an entire container of grout prior to mixing with water or latex.
- D. Use caution to prevent scratching or damaging tile surfaces.
- E. Dampen dry joints prior to grouting. Do not leave puddles of water in joints before grouting.
- F. Force maximum amount of grout into joints. Cushion edge tile shall be finished evenly to depth of cushion. Square-edge tile shall be finished flush with surface. Finished joint shall be uniform in color, smooth and without pinholes, voids or low spots.
- G. Grout width: 1/16" unless noted otherwise on drawings.

### 3.08 CURING

- A. Damp-Cure grout for a minimum of 72 hours. Remove and replace improperly cured grout.
  - 1. Cover with 40-pound kraft paper.
  - 2. Polyethylene curing membrane not permitted.

### 3.09 GROUT SEALING FOR PORTLAND CEMENT GROUTS

- A. Walls: Seal wall and grout, 2 coats required, install per manufacturer's instructions.
- B. Verify that grout is dry, clean and properly cured. Ensure grout has been installed minimum of 10 days prior to sealing.
- C. Apply undiluted sealer to grout joints in accordance with manufacturer's instructions and recommendations. Maintain abundance of sealer on joint until porosity has been satisfied.
- D. Thoroughly remove excess material; allow to dry, minimum 24 hours prior to use.
- E. Remove excess sealer that has dried on tile surface.

### 3.10 EXPANSION JOINTS

- A. Install expansion joints over any construction (cold joint), contraction joint, expansion joint, at juncture of floors and walls, changes in material at other restraining surfaces



such as curbs, columns, bases, and wall corners and where recommended by TCNA EJ171F for thin set tile.

- B. Expansion joint shall penetrate full depth of setting bed.
- C. Do not damage waterproofing membrane.
- D. Install sealant in accordance with manufacturer's instructions, using hand pointing tools.
- E. Measure joint dimensions and size materials to achieve required width/depth ratios. Minimum width: 3/8 inch.
- F. Install joint backing to achieve a neck dimension no greater than 1/3 joint width. Concrete shall be fully cured.
- G. Install bond breaker where joint backing is not used. Install removable masking material to maintain clean lines and protect adjoining surfaces.
- H. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges. Do not install sealant on wet or damp surfaces.
- I. Install sealant free of air pockets, foreign embedded matter, ridges and sags.
- J. Tool joints concave, channel shaped or as detailed. Use slicking agent type recommended by manufacturer.

### 3.11 EDGE STRIP

- A. Install according to manufacturer's recommended procedures.

### 3.12 CLEANING

- A. Clean tile work and adjacent surfaces.

### 3.13 PROTECTION

- A. Protect finished installation.
- B. Do not permit traffic over finished floor surface.

**END OF SECTION**

**SECTION 12 24 13**

**ROLLER SHADES**

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Manually operated roller shades with single rollers.

B. Related Requirements:

1. Section 06 10 00 "Rough Carpentry" for blocking, backing, and grounds for mounting roller shades and accessories.
2. Section 07 92 00 "Joint Sealants" for sealing the perimeters of installation accessories for light-blocking shades with a sealant.

1.02 REFERENCE STANDARDS

A. Conform to current adopted reference standards by date of issue of the current code cycle and the date of the Contract Documents.

B. ANSI – American National Standards Institute  
WCMA – Window Covering Manufacturers Association

1. A100.1 – Safety of Corded Window Covering Products

C. NFPA – National Fire Protection Association

1. 701 – Flame Propagation of Textiles and Films

D. UL – Underwriters Laboratories

1. 325 – Door, Drapery, Gate, Louver, and Window Operators and Systems

1.03 COORDINATION

A. Verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.04 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. Shop Drawings: Show fabrication and installation details for roller shades, including shadeband materials, their orientation to rollers, and their seam and batten locations.
- C. Samples: For each type of roller shade.
  - 1. Shadeband Material: Not less than 10 inches square. Mark inside face of material if applicable.
  - 2. Installation Accessories: Full-size unit, not less than 10 inches long, for each color and finish proposed.
- D. Roller-Shade Schedule: Use same designations indicated on Drawings.
- E. Product Test Reports: For each type of shadeband material, for tests performed by a qualified testing agency.
- F. Closeout Submittals
  - 1. Maintenance Data: For roller shades to include in maintenance manuals.

## 1.05 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.
  - 2. Provide additional 5% of the total length of qualified stainless steel chain required on the project, not to exceed the quantity of one 500' spool.
  - 3. Provide additional 5% of each type of shade mounting hardware or brackets, but not less than one pair of each type.
  - 4. Provide additional 5% of each motor type used on project, but not less than quantity of one each.
  - 5. Clearly label all spare components and supply to Owner upon completion in original packaging for storage on site by Owner.

## 1.06 QUALITY ASSURANCE

- A. Qualifications:
  - 1. Manufacturer: 10 years minimum experience manufacturing products comparable to those specified in this section.
  - 2. Installer: 3 years minimum experience installing products comparable to those specified in this section.
- B. Mock-ups: Build mock-ups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
  - 1. Approval of mock-ups does not constitute approval of deviations from the Contract Documents contained in mock-ups unless Architect specifically approves such deviations in writing.
  - 2. Subject to compliance with requirements, approved mock-ups may become part of the completed Work if undisturbed at time of Substantial Completion.

# HMC Architects

## 1.07 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.

## 1.08 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.

## 1.09 WARRANTIES

- A. Operating Components: 5 years from Date of Substantial Completion and contain provisions that installation is to remain operational without fault for the warranty period and include all operating parts, including shade-cloth.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, acceptable manufacturers include, but are not limited to, the following:
  1. Castec Inc, North Hollywood, CA.
  2. Draper Inc, Spiceland, IN.
  3. Hauser Shade Co, Richmond, CA.
  4. Hunter Douglas Fabrication Co, Poway, CA.
  5. Mariak Contract, Rancho Dominguez, CA.
  6. MechoShade Systems Inc, Long Island City, NY.
  7. Roll-A-Shade, Lake Elsinore, CA.
  8. Skyco Shading Systems Inc, Santa Ana, CA.
  9. Solar Shading Systems, Costa Mesa, CA.
  10. Or equal, as approved in accordance with Division 01 requirements for Substitutions.
- B. Source Limitations: Obtain roller shades from single source from single manufacturer.

### 2.02 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, rated 90 lbs breaking strength.

- a. Loop Length: extend chain to mount at 42" AFF.
- b. Limit Stops: Provide chain retainer device, RollEase Safety Hold3. Provide backing for installation.
- c. Chain-Retainer Type: Chain tensioner, jamb or sill mounted.
2. Spring Lift-Assist Mechanisms: Manufacturer's standard for balancing roller-shade weight and lifting heavy roller shades.
  - a. Provide for shadebands that weigh more than 10 lb or for shades as recommended by manufacturer, whichever criteria are more stringent.
- 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.
  2. Direction of Shadeband Roll: Regular, from back of roller.
  3. Shadeband-to-Roller Attachment: Removable spline fitting integral channel in tube.
- C. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.
- D. Shadebands: Light-filtering or light-blocking fabric as indicated.
  1. Shadeband Bottom (Hem) Bar: Steel or extruded aluminum, enclosed in sealed pocket of shadeband material.

## 2.03 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-Blocking Fabric: Opaque fabric, stain and fade resistant,
  1. Orientation on Shadeband: Up the bolt.
  2. Acrylic coated/woven fiberglass:
  3. MechoShade ThermoVeil Blackout Series 0700, laminated and embossed vinyl coated fabric, 0.012" inch thick, weighing 0.81 lbs per sq. yd, 0 percent OF.
  4. Colors: 0702 Light Grey.

## 2.04 INSTALLATION ACCESSORIES:

- A. Recessed Shade Pocket: Rectangular, extruded-aluminum enclosure designed for recessed ceiling installation; with front, top, and back formed as one piece, end plates, and removable bottom closure panel.
  1. Height: Manufacturer's standard height required to enclose roller and shadeband when shade is fully open, but not less than 6 inches.

2. Provide pocket with lip at lower edge to support acoustical ceiling panel.
3. Provide where above-ceiling installation is indicated.

B. Endcap Covers: To cover exposed endcaps.

C. Closure Panel and Wall Clip: Removable aluminum panel designed for installation at bottom of site-constructed ceiling recess or pocket and for snap-in attachment to wall clip without fasteners.

1. Closure-Panel Width: 2 inches.

D. Side Channels: With light seals and designed to eliminate light gaps at sides of shades as shades are drawn down. Provide side channels with shadeband guides or other means of aligning shadebands with channels at tops.

1. Provide where light-blocking fabric is indicated.

E. Installation Accessories Color and Finish: As scheduled in Drawings or, if not scheduled, manufacturer's standard baked enamel or powder-coat finish in custom color to match adjacent wall.

## 2.05 ROLLER-SHADE FABRICATION

A. Product Safety Standard: Fabricate roller shades to comply with ANSI/WCMA A100.1, 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.
2. Outside of Jamb Installation: Width and length as indicated, with terminations between shades of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.

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

1. 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.
2. Railroaded Materials: Railroad material where material roll width is less than the required width of shadeband and where indicated. Provide battens and seams as required by railroaded material to produce shadebands with full roll-width panel(s) plus, if required, one partial roll-width panel located at top of shadeband.

## PART 3 - EXECUTION

### 3.01 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.

### 3.02 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.

### 3.03 ADJUSTING

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

### 3.04 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.

### 3.05 INSTRUCTIONS/TRAINING TO OWNER'S PERSONNEL

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain motor-operated roller shades
- B. Instruct Owner's personnel in proper operation and maintenance of all systems, equipment and similar items which were provided as part of Work.
- C. Contractor shall provide schedule to Owner for approval for each of instruction periods required. Total hours of training, not less than 1 hour for each individual equipment specified or scheduled.

## HMC Architects

- D. Instruction sessions will be held in Owner designated area on project site and at Owner's convenience.
- E. Instructors shall be qualified by product manufacturer in subject matter presented at training session.

**END OF SECTION**