**SECTION 10 11 33**
**GLASSBOARDS (MAGNETIC & NON-MAGNETIC)**

## PART 1 - GENERAL

### 1.1 DESCRIPTION

A. This section includes:

1. Framed Magnetic Glass Markerboards.

2. Framed Non-Magnetic Glass Markerboards.

3. Magnetic and Non-Magnetic Glass Markerboard Accessories.

### 1.2 RELATED WORK

A. //Sustainable Design Requirements: Section 01 81 13, SUSTAINABLE
   CONSTRUCTION REQUIREMENTS.//

B. Section 06 10 00 - Rough Carpentry.

C. Manufacturer, Color, and Style of Chalkboards Markerboards and
   Presentation Boards: Section 09 06 00, SCHEDULE FOR FINISHES.

D. Tackable, fabric-covered panels mounted on walls: Section 09 72 16,
   VINYL COATED FABRIC WALL COVERINGS.

E. Tackable, fabric-covered panels mounted on walls: Section 09 72 31,
   POLYPROYLENE FABRIC WALL COVERINGS.

F. Section 09 94 00, PAINTING.

G. Section 10 11 13, CHALKBOARDS AND MARKERBOARDS.

H. Section 10 11 23, TACKBOARDS.

I. Individually framed and enclosed, wall-mounted bulletin boards and for
   tackboards within display cases, Section 10 13 00, DIRECTORIES.

### 1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 years documented experience
   manufacturing similar products.

B. Installer Qualifications: Minimum 2 years documented experience
   installing similar products.

C. Mockups: Provide a mock-up for evaluation of surface preparation
   techniques and application workmanship:

1. Finish areas designated by Architect.

2. Do not proceed with remaining work until workmanship, color, and finishes are approved by Architect.

3. Refinish mock-up area as required to produce acceptable work.

4. Accepted mock-ups shall be comparison standard for remaining Work

## 1.4  SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

B. //Sustainable Design Submittals, as described below:

1. //Volatile organic compounds per volume as specified in PART 2 - PRODUCTS.// //

C. Shop Drawings: Provide for each type of visual display board including section details indicating trim, face material, colors, core and backing materials, dimensions, joint locations and special anchor details.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: Submit samples not less than 12 inch square and framed on two adjacent sides, to illustrate materials, finish, color, and configuration of each type of visual display board required.

F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

## 1.5  DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handle materials to avoid damage.

## 1.6  PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

## 1.7  APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Architectural Manufacturers Association (AAMA):

611-14..................Anodized Architectural Aluminum
2603-20.................Voluntary Specification, Performance
                        Requirements and Test Procedures for Pigmented

<div style="text-align:center">Organic Coatings on Aluminum Extrusions and Panels</div>

C. American National Standards (ANSI):

    Z97.1-2015(R2010).......Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test

D. ASTM International (ASTM):

    B221-14.................Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Shapes and Tubes
    B221M-13................Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Shapes and Tubes (Metric)
    C1048-18................Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass
    E84-20..................Surface Burning Characteristics of Building Materials

E. Code of Federal Regulation (CFR):

    40 CFR 59...............Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coating

F. National Association of Architectural Metal Manufacturers (NAAMM):

    AMP 500-06..............Metal Finishes Manual

G. Porcelain Enamel Institute (PEI)

    1001-11.................Architectural Porcelain Enamel

## PART 2 - PRODUCTS

## 2.1 SPECIAL MARKERBOARD DISPLAYS

A. White Wall Panels General: Dry-erase, magnetic-steel, removable, frameless whiteboard wall paneling, for full or partial wall surfacing, with mounting rails and accessories.

  1. Wall Panel Layout: As specified.

    a. Materials:

      1) Writing Surface and Edges: Tension-leveled, 22 gauge (0.0299 inches or 0.72 mm) magnetic steel with MagnaLux proprietary white dry-erase finish; fabricated and formed into frameless, self-edged, magnetic whiteboard with reinforced corners.

      2) The honeycomb core material is made of commercial grade honeycomb Kraft paper consisting of 80 percent recycled material.

      3) Core: 3/4 inch (19 mm) cellular fiber.

      4) Weight: 1.34 lb./ft.2.

       5) Back: Textured aluminum sheet is 24 gauge (0.0239 inches) (0.607 mm).

       6) Aluminum alloy backer conforms to ASTM standard B 209, H3105-H234.

       7) Panel Type: As specified

  2. Fire Resistance: Class A; Flame Spread 5 or less, Smoke Developed 25 or less; in accordance with ASTM E 84.

## 2.2 MAGNETIC GLASS MARKERBOARDS

A. Frameless Magnetic Glass Markerboards:

  1. Materials

    a. Glass: 1/4 inch thick, low-iron, tempered, soda-lime float glass with polished beveled edge. Glass complies with ANSI Z97.1.

    b. Backing: 24 gauge steel backer and aluminum (ASTM B 221, 6063 alloy with T5 temper) mounting framework with high bond adhesive used to securely attach steel to glass.

    c. Finish: Proprietary back-painted finish available in any Pantone color

  2. Viewing Style:

    a. Horizontal Glass Markerboards

      1) Size: //  //

    b. Vertical Glass Markerboards

      1) Size: //  //

  3. Mounting Methods (specify):

    a. Z-bar hangers concealed to the back of the board with no visible mounting hardware. Number of Z-clips will vary from 4-12 depending on width of markerboard.

    b. 4 inch hidden aluminum edge grips for standoff mounting at the top of the markerboard (two for 3 foot wide, three for 4 foot wide, four for 6 foot wide, and five for 8 foot wide boards) and one 1 inch full-width, minus 5.75 inches on each side, hanger bar with clamps to secure the bottom of the board in place.//

B. Framed Glass Magnetic Glass Markerboards:

  1. Materials:

    a. Glass: 1/4 inch thick, low-iron, tempered, soda-lime float glass with polished beveled edge. Glass complies with ANSI Z97.1.

b. Backing: 24 gauge steel backer and aluminum (ASTM B 221, 6063 alloy with T5 temper) mounting framework with high bond adhesive used to securely attach steel to glass.

c. Finish: proprietary back-painted finish available in any Pantone color

2. Viewing Style:

a. Horizontal Glass Markerboards

1) Size: //  //

b. Vertical Glass Markerboards

1) Size: //  //

3. Mounting Methods (specify):

a. Z-bar hangers concealed to the back of the board with no visible mounting hardware. Number of Z-clips will vary from 4-12 depending on width of markerboard.

b. 4 inch hidden aluminum edge grips for standoff mounting at the top of the markerboard (two for 3 foot wide, three for 4 foot wide, four for 6 foot wide, and five for 8 foot wide boards) and one 1 inch full-width, minus 5.75 inches on each side, hanger bar with clamps to secure the bottom of the board in place.

C. Magnetic Glass Markerboard Accessories:

1. Mounted Aluminum Marker Caddy: ___.

a. Colors:

1) Stainless Steel

2) Pewter Blue

3) Gunmetal

4) Copper

5) Brass

D. Hidden Marker and Eraser Tray (Standoff Mounted Boards only): ___.

1. Board Cleaner: ___.

2. Dry-Erase Supplies: ___.

3. Glass Grip Card Holders and Inserts: ___.

4. Glass Grip Symbols: ___.

5. Glass Grip Document Display Jackets

**2.3 NON-MAGNETIC GLASS MARKERBOARDS**

A. Frameless Glass Markerboards:

1. Materials

      a. Glass: 1/4 inch thick, low-iron, tempered, soda-lime float glass with polished beveled edge. Glass complies with ANSI Z97.1.

         1) Painted glass (painted surface to wall)

         2) Frosted glass (frosted surface to wall)

            a) Finish: Proprietary back-painted finish available in any Pantone color.

   2. Viewing Style:

      a. Horizontal Glass Markerboards

         1) Size: //  //

      b. Vertical Glass Markerboards

         1)  Size: //  //

   3. Mounting Methods (specify):

      a. Install per manufacturers provided instructions.

      b. Boards up to 4'x6' will have minimum of 4 mounting brackets.

      c. Boards over 4'x6' will have minimum of 6 mounting brackets.

   4. Magnetic Glass Markerboard Accessories:

      a. Mounted Aluminum Marker Caddy: ___.

      b. Hidden Marker and Eraser Tray (Standoff Mounted Boards only): ___.

      c. Board Cleaner: ___.

      d. Dry-Erase Supplies: ___.

      e. Glass Grip Card Holders and Inserts: ___.

      f. Glass Grip Symbols: ___.

      g. Glass Grip Document Display Jackets

## 2.4 FABRICATION:

A. Laminate facing sheet and backing sheet to core material under pressure, using manufacturer's recommended adhesive. (Magnetic boards only)

B. Provide factory-assembled visual display boards, except where sizes demand partial field assembly.

C. Assemble units in one piece without joints, wherever possible. Where required dimensions exceed maximum panel size available, provide two or more pieces of equal length, as indicated on approved shop drawings. Assemble to verify fit at factory, then disassemble for delivery and final assembly at project site

D. Mounting: Manufacturer's standard adhesive or adhesive-foam tape mounting.

## 2.5 MATERIALS

A. Clear Tempered Glass: ASTM C1048, Kind FT, Condition A, Type I, Class 1, Quality Q3, with exposed edges seamed before tempering.

B. Extruded Aluminum: ASTM B221 (ASTM B221M), Alloy 6063.

C. Adhesives for Field Application: Mildew-resistant, nonstaining adhesive for use with specific type of panels, sheets, or assemblies; and for substrate application; as recommended in writing by visual display unit manufacturer.

D. Primer/Sealer: Mildew-resistant primer/sealer complying with requirements in [Section 099123 "Interior Painting"] <Insert Section number and title> and recommended in writing by visual display unit manufacturer for intended substrate.).

## 2.6 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM's AMP 500 Series for Architectural and Metal Products for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. 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.

## 2.7 ALUMINUM FINISHES

A. //Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm (.39 mil) or thicker. //

B. //Color Anodic Finish: AAMA 611, AA-M12C22A32/A34, Class II, 0.010 mm (.39 mil) or thicker. //

C. //Baked-Enamel or Powder-Coat Finish: AAMA 2603, except with a minimum dry film thickness of 0.04 mm (1.5 mil). //

## PART 3 - EXECUTION

## 3.1 EXAMINATION

A. Verify that substrates are properly prepared to receive visual display boards.

B. Do not begin installation until substrates have been properly prepared.

C. If substrate preparation is the responsibility of another installer, notify COR of unsatisfactory preparation before proceeding.

## 3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

## 3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Where visual display boards must be partly assembled at project site, use factory-supplied H-bar to maintain proper alignment.

C. Install visual display boards level and plumb, keeping perimeter trim aligned in accordance with manufacturer's recommendations.

## 3.4 ADJUSTING AND CLEANING

A. Verify that all accessories are installed as required for each unit.

B. Upon completion of installation, clean surfaces and trim in accordance with manufacturer's recommendations, leaving all materials ready for use.

## 3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion

## 3.6 SCHEDULES

## 3.7 CLOSEOUT SUBMITTALS

A. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for cleaning, stain removal and maintenance of all components.

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