
SECTION 10 11 00 - Visual Display Surfaces

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Porcelain enamel markerboards and tackboards
- B. Trim, display rail and accessories

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Shop Drawings: For each type of visual display board required:
 - 1. Include dimensioned elevations. Show locations of joints between individual panels where unit dimensions exceed maximum panel length
 - 2. Include sections of typical trim members.
 - 3. Show anchors, grounds, reinforcement, accessories, layout and installation details.
- C. Product Data
 - 1. Provide data on markerboards, tackboards and trim and accessories
- D. Manufacturer's Installation Instructions
 - 1. Indicate special procedures and perimeter conditions requiring special attention.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, handle and protect units to site under provisions of Section 01 60 00. Wrap or otherwise package markerboards and tackboard assemblies for protection against damage and staining. Store in a clean, dry storage area, as packaged by manufacturer with manufacturer's seals and labels intact. Store sheet material flat. Provide blocking or other supports to retain original shape during storage.

1.5 ENVIRONMENTAL CONDITIONS

- A. Store materials in dry area at no less than 55 degrees Fahrenheit for at least 24 hours before installation. Maintain temperature of at least 55 degrees Fahrenheit in area receiving installation of markerboards and tackboards for 24 hours prior to, during and for 24 hours after installation is completed. Provide adequate ventilation when using contact adhesive.

1.6 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

- B. Installer Qualifications: Engage an experienced installer who is an authorized representative of the visual display board manufacturer for both installation and maintenance of the type of display unit required for this project.
- C. Source Limitations: Obtain visual display boards through one source from a single manufacturer.
- D. Product Options: Drawings indicate size, profiles and dimensional requirements of visual display boards and are based on the products indicated. Other manufacturers' products with equal performance characteristics may be considered. Refer to Division 1 Section 01 60 00.
 - 1. Do not modify intended aesthetic effects, as judged solely by the Architect, except with the Architect's approval and only to the extent needed to comply with performance requirements. Where modifications are proposed, submit comprehensive explanatory data to Architect for review.

1.7 FIELD MEASUREMENTS

- A. Verify field measurements before preparation of shop drawings and before fabrications to ensure proper fitting. Coordinate fabrication schedule with construction progress to avoid delaying the work.
- B. Allow for trimming and fitting where taking field measurements before fabrication might delay the work.

1.8 WARRANTY

- A. Warranty on porcelain enamel markerboards: furnish manufacturers written warranty, agreeing to replace, within warranty period, porcelain enamel markerboards which do not retain original writing and erasing qualities, become slick and shiny, or exhibit crazing, cracking or flaking: provided manufacturer's instructions for handling, installing, protecting and maintaining markerboards have been followed. Replacement is limited to material replacement only and does not include labor for removal and installation.
- B. Warranty Period: Life of the building or 50 years.

PART 2 – PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
 - 1. Aarco Products, Inc. as distributed by Blackboard and Casework Design, Inc, P.O. Box 5687, Wyomissing, Pennsylvania, 19610, telephone: 610-777-4226, fax: 610-777-3994, email: paoffice@blackboardcaseworkdesign.com
 - 2. Equal as approved by Architect under provisions of Section 01 60 00.

2.2 MARKERBOARD AND TACKBOARD MATERIALS

- A. Porcelain Enamel Markerboards: Balanced, high-pressure-laminated, porcelain enamel markerboards of 3-ply construction consisting of face sheet, core material and backing. Markerboards shall be suitable for use with dry erase marker pens and also a movie, video and slide/interactive projectors.
1. Face Sheet: 0.024-inch enameling grade steel meeting ASTM A526, galvanized to G90 designation or ASTM A424, Type I, commercial quality especially processed for temperatures used in coating porcelain on steel. Coat exposed face and edges with a 3-coat process consisting of primer, ground coat and color cover coat. Coat concealed face with a 2-coat process consisting of primer and ground coat. Fuse cover and ground coats to steel at manufacturer's standard firing temperatures, but not less than 1200 degrees F.
 - a. Cover Coat: Provide manufacturer's standard, light-colored, special writing surface with gloss finish intended for use with erasable dry markers.
 - b. Core: 1/2" MDF
 2. Backing Sheet: Manufacturer's standard aluminum-sheet backing adhered with special glues, leaving no unbonded areas.
 3. Laminating Adhesive: Manufacturer's standard, moisture-resistant, thermoplastic-type adhesive
- B. Vinyl Fabric-Faced Tackboards: Mildew-resistant, washable vinyl fabric complying with FSCCC-W-W08, Type I and Type II, weighing not less than 13 oz/sq. yd laminated to 1/8" thick cork sheet. Provide Fabric with a flame-spread rating of 15 or less; smoke development 20 or less when tested according to ASTM E-84. Color and texture of vinyl fabric selected from manufacturers standards.
1. Backing: Factory laminate face sheet under pressure to 3/8" fiberboard
- C. Fabric Wrapped Tackboards
1. Tackboards shall have vinyl fabric tightly wrapped around all edges and securely adhered to the back of the fiberboard
 2. Where indicated.

2.3 CORE AND FRAME MATERIALS

- A. Hardboard
1. AHA AI35.4; tempered, smooth face.
- B. Particleboard
1. NP A A208.1; wood chips, shaving and flakes, set with waterproof resin binder, sanded faces.
- C. Foil Backing
1. Aluminum foil sheet, 5 mil thick
- D. Frame and Display Rail
1. Aluminum extrusions, ASTM B221, 6061 alloy, T5 temper.

2.4 ACCESSORIES

- A. Adhesives
1. Waterproof type; type as recommended by manufacturer, behind all markerboards and tackboards 16" O.C.

B. Map Supports

1. Formed aluminum sliding hooks to fit map rail.

C. Temporary Protective Cover

1. Sheet polyethylene, 8 mil thick.

D. Flag Holders

1. Cast Aluminum bored to receive 1" diameter flagstaff, bracketed to fit top rail of markerboard and tackboard.

2.5 FABRICATION - FRAME AND TRIM**A. Aluminum Frame**

1. Extruded aluminum, of snap-on profile; concealed fasteners; 2" map rail with cork insert over markerboard and tackboard surfaces in combination. Complete with box tray with aluminum end caps.

B. Display Rail

1. Extruded aluminum, snap-on style, with aluminum grounds one piece continuous, full length of markerboard; molded end closures; concealed fasteners.

2.6 FINISHES**A. Aluminum Trim**

1. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations relative to applying and designating finishes. Finish designations prefixed by AA conform to the system established by The Aluminum Association for designating aluminum finishes. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: Nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 607.1.

a. Architect: Option to powder coat if required**B. Porcelainized steel special writing surface**

1. Engineered from enameling-grade steel. Exposed coat face produced with a 3-coat process and concealed coat face produced with a 2-coat process fused at manufacturer's standard firing temperatures, but not less than 1200 degrees Fahrenheit (649 degrees Celsius). Exposed face color coat 60-micro-mm thick enamel minimum.

C. Tackboard Surface

1. Tack Surfaces - color as selected from manufacturer's entire range. Submit colors to Architect for selection

PART 3 – EXECUTION**3.1 EXAMINATION**

- A. Verify site conditions under provisions of Division 1. Verify that surfaces and internal wall blocking are ready to receive work and positioning dimensions are as indicated on shop drawings. Verify that surfaces to receive markerboards and tackboards are free from dust, grease or scaly paint, free from projections or depressions that will affect smooth finished surface of markerboards and tackboards and dry and free of substance that might impair bond between units and wall. Roughen slick or smooth substrate to provide a satisfactory bond. Beginning of installation means acceptance of existing surfaces or substrate construction.

3.2 INSTALLATION

- A. Install markerboards and tackboards in accord with manufacturer's instructions (include spacing or anchor clips and adhesive use). Secure units level and plumb. Installation to include adhesive 16" on center behind all markerboards and tackboards
- B. Markerboards and Tackboards
 - 1. Butt panels tight with concealed spline to hairline joint and in same plane on both sides of the joint

3.3 ACCESSORY SCHEDULE

- A. Each room to have at least a minimum of:
 - 1. Two roller map brackets per board.
 - 2. One flag holder per room
 - 3. (2) Map hooks per 48" of map rail
- B. Music Staff Rules Panels:
 - 1. Where Shown.

3.4 CLEANING AND PROTECTION

- A. General:
 - 1. Verify that accessories required for each unit have been properly installed and that operating units function properly.
 - 2. Clean face panels and aluminum trim in accordance to manufacturer recommendations, leaving all materials ready for use.
 - 3. Remove construction debris from project site and dispose of in accordance to local laws.
- B. Protection:
 - 1. Properly protect finished surfaces from site damage where possible.

End of Section 10 11 00