

SECTION 101100
VISUAL DISPLAY UNITS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Horizontal sliding visual display units.

1.02 REFERENCE STANDARDS

- A. ANSI A135.4 - Basic Hardboard; 2012 (Reaffirmed 2020).
- B. ANSI A208.1 - American National Standard for Particleboard; 2022.
- C. ASTM A424/A424M - Standard Specification for Steel, Sheet, for Porcelain Enameling; 2018.
- D. ASTM C208 - Standard Specification for Cellulosic Fiber Insulating Board; 2022.

1.03 SUBMITTALS

- A. Product Data: Submit construction details, descriptions of materials, dimensions of each component and profile, finishes, and accessories for all visual display units.
- B. Shop Drawings: Indicate plans, wall elevations, dimensions, joint locations.
 - 1. Indicate panel joint locations, including field-assembled joints for factory units exceeding shipping size, if applicable.
- C. Color Samples: Color charts for selection of color and texture of Sliding Visual Displays.
- D. Samples: Two, 10" by 10" inches (254 by 254 mm) in size illustrating materials and finish, color and texture of Sliding Visual Display Units.
- E. Manufacturer's printed installation instructions.
- F. Manufacturer's Qualification Statement.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum 20 years documented experience.

1.05 WARRANTY

- A. Provide Life Time warranty for chalkboard and markerboard and [Five Year] warranty for tackboard to include warranty against discoloration due to cleaning, crazing or cracking, and staining.
- B. The warranty excludes labor and any additional material expenses related to the removal or reinstallation of markerboards.

- C. When properly installed per manufacturer instructions, Horizontal Slidings are warranted for one year against material and workmanship defects. This warranty excludes damage from misuse, vandalism, or improper handling and covers only material replacement, not removal or reinstallation costs.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Visual Display Units

1. Nelson Adams NACO
2. Address: 420 S E st, San Bernardino, CA, 92401.
3. P. (877) 810-4080.
4. Web page: <https://nelsonadamsnaco.com>

2.02 Horizontal Sliding Visual Display Unit: Cabinet with horizontal sliding panels and fixed rear panel.

A. HOUSING

1. **Cabinet:**
 - a. **Housing:** Cabinet (By others)
 - b. **Tracks:** [One][Two][Three][Four][Five][As indicated on drawings] .
 - c. **Height:** As indicated on drawings.
 - d. **Length:** As indicated on drawings.
 - e. **Frame:** Extruded aluminum.
 - f. **Frame Profile:** As indicated on drawings.
 - g. **Frame Finish:** Anodized, natural.
2. **Surface mounted:**
 - a. **Housing:** Nelson Adams NACO Aluminum.
 - b. **Tracks:** [One][Two][Three][Four][Five][As indicated on drawings] .
 - c. **Size:** As indicated on drawings.
 - d. **Height:** As indicated on drawings.
 - e. **Length:** As indicated on drawings.
 - f. **Frame:** Extruded aluminum.
 - g. **Frame Profile:** As indicated on drawings.
 - h. **Frame Finish:** [Anodized, natural][Powder C].

B. Configuration (Available Alternate Configurations):

1. Two-Track:
 - a. Fixed Rear Panel: Full length of unit.
 - b. 2 Sliding Panels: Each panel not less than one-half of unit length.
2. Three-Track:
 - a. Fixed Rear Panel: Full length of unit.
 - b. 3 Sliding Panels: Each panel not less than one-half of unit length.
3. Four-Track:
 - a. Fixed Rear Panel: One-half length of unit, minimum; centered in unit.
 - b. 2 Fixed Front Panels: One-quarter length of unit, minimum; on each side of unit.
 - c. 4 Sliding Panels: Each panel not less than one-quarter of unit length.

- C. **Sliding Panels:** [Markerboard][Chalkboard][Tackboard].
- D. **Fixed Rear Panel:** [Markerboard][Chalkboard][Tackboard][Forbo].
- E. **Sliding Panels - General:**
 - 1. **Height:** As indicated on drawings.
 - 2. **Length:** As indicated on drawings.
 - 3. **Frame:** Extruded aluminum .
 - 4. **Frame Profile:** As indicated on drawings.
 - 5. **Frame Finish:** [Anodized, natural][Powder Coating].
 - 6. **Ball Bearing Nylon Rollers:** Two per panel up to 4 feet (1220 mm) wide and three per panel up to 8 feet (2440 mm) wide.
 - 7. **Nylon Guide Rollers:** Two per panel up to 4 feet (1220 mm) and three per panel up to 8 feet (2440 mm) wide.
 - 8. **Finger Pulls:** One pair per sliding panel.
- F. **Sliding Panel Options:**
 - 1. **Sliding Chalkboard Panels:** Porcelain enamel on steel, laminated to core.
 - a. **Color:** [Green][Black].
 - b. **Steel Face Sheet Thickness:** 24 gauge, 0.0239 inch (0.61 mm).
 - c. **Core:** [Fiberboard], [1/2" Inch Thick (12.7 mm)], laminated to face sheet.
 - 1) **Alternate Cores – Available:**
 - a) Particleboard.
 - b) Fiberboard.
 - c) Hardboard.
 - d) MDF.
 - e) Honey Comb.
 - 2) **Alternate Thicknesses – Available:**
 - a) 7/16" Inch Thick ([11.11 mm]).
 - b) 1/2" Inch Thick ([12.7 mm]).
 - c) 3/8" Inch Thick ([9.52 mm]).
 - d) 1/4" Inch Thick ([6.35 mm]).
 - d. **Backing:** Aluminum foil [0.015 in (0.381 mm)][0.005 in (0.127 mm)], laminated to core.
 - e. **Map Rail:** Extruded aluminum, manufacturer's standard profile, with cork insert and runners for accessories; [**1" inch**][**2" inch**] wide overall, full width of frame.
 - 1) **Map Rail Insert Options:** [Natural Cork]
 - a) Natural Cork.
 - b) Bulletin Forbo.
 - 1 **Color:** As indicated on drawings.
 - 2. **Sliding Markerboard Panels:** Porcelain enamel on steel, laminated to core.
 - a. **Color:** White.
 - b. **Steel Face Sheet Thickness:** 24 gauge, 0.0239 inch (0.61 mm).
 - c. **Core:** [Fiberboard], [1/2" Inch Thick (12.7 mm)], laminated to face sheet.
 - 1) **Alternate Cores – Available:**
 - a) Particleboard.
 - b) Fiberboard.
 - c) Hardboard.

- d) MDF.
 - e) Honey Comb
 - 2) **Alternate Thicknesses – Available:**
 - a) 7/16" Inch Thick ([11.11 mm]).
 - b) 1/2" Inch Thick ([12.7 mm]).
 - c) 3/8" Inch Thick ([9.52 mm]).
 - d) 1/4" Inch Thick ([6.35 mm]).
 - d. **Backing:** Aluminum foil [0.015 in (0.381 mm)][0.005 in (0.127 mm)], laminated to core.
 - e. **Map Rail:** Extruded aluminum, manufacturer's standard profile, with cork insert and runners for accessories; [**1" inch**][**2" inch**] wide overall, full width of frame.
 - 1) **Map Rail Insert Options:** [Natural Cork]
 - a) Natural Cork.
 - b) Bulletin Forbo.
 - 1 **Color:** As indicated on drawings.
- 3. **Sliding Tackboard Panels:** Vinyl or Fabric on Natural Cork and MDF.
 - a. **Material Facing:** [Vinyl][Fabric].
 - b. **Color:** As selected from manufacturer's full range.
 - c. **Options Available:**
 - 1) Koroseal - Vinyl
 - 2) Carnegie Xorel - Fabric
 - 3) Guildford of Maine - Fabric
 - 4) Maharam - Vinylf
 - d. **Core:** [1/4" Inch (6 mm) Natural Cork on 1/4" Inch (6 mm) MDF]
 - 1) **Alternate Core Options:**
 - a) 1/2" Inch (12.7 mm) Fiberboard
 - b) 1/4" Inch (6 mm) Natural Cork on 1/4" Inch (6 mm) Hardboard
 - c) 1/4" Inch (6 mm) Natural Cork on 1/4" Inch (6 mm) MDF
- 4. **Sliding Tackboard Panels:** Forbo Bulletin Board
 - a. **Options:** [1/4" Inch (6 mm) Forbo on 1/4 Inch MDF]
 - 1) **Alternate Options:**
 - a) 1/4" Inch (6 mm) Forbo on 1/4 Inch MDF
 - b) 1/4" Inch (6 mm) Forbo on 1/4 Inch Hardboard
 - b. **Color:** As indicated on drawings.
- 5. **Custom Panels are Available.**

G. **Accessories:** Provide flag holder and map hook.

2.03 MATERIALS

- A. Porcelain Enameled Steel Sheet: ASTM A424/A424M, Type I, Commercial Steel, with fired-on vitreous finish.
- B. Hardboard for Chalk Surface: ANSI A135.4 Tempered type.
- C. Particleboard: ANSI A208.1; wood chips, set with waterproof resin binder, sanded faces.
- D. Fiber Board: ASTM C208, cellulosic fiber board.

- E. Foil Backing: Aluminum foil sheet, 0.005 inch thick (0.13 mm thick).
- F. Aluminum Sheet Backing: 27 gauge, 0.014 inch (0.36 mm) thick.
- G. Adhesives: Type used by manufacturer.

2.04 ACCESSORIES

- A. Temporary Protective Cover: Sheet polyethylene, 8 mil (0.2 mm) thick.
- B. Flag Holders: [**1" inch**][**2" inch**] **Plastic** bored to receive 1 inch (25 mm) diameter flag staff, bracketed to fit top rail of board.
- C. Map Hooks: [**1" inch**][**2" inch**] [**Plastic**] designed to hold and support pull-down maps, charts, or visual aids in classrooms, bracketed to fit top rail of the board.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that internal wall blocking is ready to receive work and positioning dimensions are as indicated on shop drawings.
- C. Verify flat wall surface for frameless adhesive-applied boards.

3.02 PREPARATION

- A. Remove switchplates, wall plates, and surface-mounted fixtures where tackable wall paneling is applied. Reinstall items on completion of installation. [**By Others**]
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions. [**By Others**]

3.03 INSTALLATION

- A. Install boards in accordance with manufacturer's instructions.
- B. Secure units level and plumb.
- C. Mounting Brackets: [**Concealed Z Clips**][**L Clips**].

3.04 CLEANING

- A. Clean board surfaces in accordance with manufacturer's instructions.
- B. Cover with protective cover, taped to frame.
- C. Remove temporary protective cover at Date of Substantial Completion.

END OF SECTION