
USACE / NAVFAC / AFCEA UFGS-09840 (August 2004)

Preparing Activity: USACE Superseding
UFGS-09840A (October 2003)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated 25 June 2004

Latest change indicated by CHG tags

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08/04

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SECTION 09840

ACOUSTICAL WALL TREATMENT 08/04

NOTE: This guide specification covers the requirements for fabric covered acoustical wall panel systems.

Comments and suggestions on this guide specification are welcome and should be directed to the technical proponent of the specification. A listing of technical proponents, including their organization designation and telephone number, is on the Internet.

Recommended changes to a UFGS should be submitted as a Criteria Change Request (CCR).

Use of electronic communication is encouraged.

Brackets are used in the text to indicate designer choices or locations where text must be supplied by the designer.

PART 1 GENERAL

1.1 REFERENCES

NOTE: Issue (date) of references included in project specifications need not be more current than provided by the latest guide specification. Use of SpecsIntact automated reference checking is recommended for projects based on older guide specifications.

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

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

AATCC 16 (1998) Colorfastness to Light

ASTM INTERNATIONAL (ASTM)

ASTM C 423 (2002a) Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method

ASTM D 1117 (2001) Evaluating Nonwoven Fabrics

ASTM D 5034 (1995; R 2001) Breaking Strength and Elongation of Textile Fabrics (Grab Test)

ASTM E 84 (2003) Surface Burning Characteristics of Building Materials

INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO)

ICBO UBC (2000) Uniform Building Code (3 Vol.)

1.2 SUBMITTALS

NOTE: Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item should be required.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy projects.

Submittal items not designated with a "G" are considered as being for information only for Army projects and for Contractor Quality Control approval for Navy projects.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Approved Detail Drawings

Drawings showing plan locations, elevations and details. Drawings shall include details of method of anchorage, location of doors and other openings, base detail and shape and thickness of materials.

SD-03 Product Data

Installation

Manufacturer's installation instructions and recommended cleaning instructions.

Acoustical Wall Panels

Manufacturer's descriptive data and catalog cuts.

SD-04 Samples

Acoustical Wall Panels

Fabric and vinyl swatches, minimum 450 mm 18 inches wide by 600 mm 24 inches long [3] [_____] samples of each color range specified.

SD-07 Certificates

Acoustical Wall Panels

Certificates of compliance from an independent laboratory accredited by the National Laboratory Accreditation Program of the National Institute of Standards. A label or listing from the testing laboratory will be acceptable evidence of compliance.

1.3 DELIVERY AND STORAGE

Materials delivered and placed in storage shall be stored with protection from the weather, humidity and temperature variations, dirt, dust, or other contaminants.

1.4 WARRANTY

Manufacturer's standard performance guarantees or warranties that extend beyond a one year period shall be provided.

PART 2 PRODUCTS

2.1 FABRIC COVERED ACOUSTICAL WALL PANELS

NOTE: Drawings must show locations and dimensions of acoustical panels, details of joints, base, head, and mounting details.

The same or similar acoustical benefits can possibly be obtained by other means such as wall covering, etc.

Omit the following items that do not meet project requirements.

Acoustical wall panels shall consist of prefinished factory assembled, seamless fabric covered, fiber glass or mineral fiber core system as described below. Wall panels shall be manufactured to the dimensions and configurations shown on the approved detail drawings. Perimeter edges shall be [non-reinforced.] [reinforced by either an aluminum frame or a formulated resin edge hardener.] Acoustical wall panels installed in non-sprinklered areas must comply with the requirements of ICBO UBC, Standard 42-2. The Contractor shall comply with EPA requirements in accordance with Section 01670 RECYCLED / RECOVERED MATERIALS.

- a. Panel Width: [Widths shall be [600] [750] [1200] [1500] mm[24] [30] [48] [60] inches] [End panels may vary in width as necessary to cover wall] [Panel width shall be as detailed.]
- b. Panel Height: [Heights shall be [2400] [2700] [3000] mm.[96] [108] [120] inches.] [[Panels shall be field measured for custom fit to ceiling.] [Tolerance at floor to be as detailed].] [Panel height shall be as detailed.]
- c. Thickness: [Panel thickness shall be as required to meet the indicated NRC range] [_____].
- d. Fabric Covering: Seamless [non-woven, embossed texture, needle punched 100 percent polyester, minimum 0.034 kg per linear meter. 11 ounces per linear yard. Tear strength shall be minimum 110 N 25 pounds machine direction and minimum 178 N 40 pounds cross-machine direction in accordance with ASTM D 1117. Tensile strength shall be minimum 220 N 50 pounds machine direction and minimum 330 N 75 pounds cross-machine direction in accordance with ASTM D 5034.] [plain woven 2-ply 100 percent polyester, minimum 0.47 kg per linear meter. 15 ounces per linear yard. Tear strength shall be minimum 129 N. 29 pounds. Tensile strength shall be 667 N 150 pounds minimum in accordance with ASTM D 5034.] [perforated vinyl covering with fabric backing, minimum 0.62 kg per linear meter 20 ounces per linear yard total weight.] Fabric covering shall be stretched free of wrinkles and then bonded to the edges and back or bonded directly to the panel face, edges, and back of panel a minimum distance standard with the manufacturer. Light fastness (fadeometer) shall be approximately 40 hours in accordance with AATCC 16.
- e. Fire rating for the complete composite system: Class A, 200 or

less smoke density and flame spread less than 25, when tested in accordance with ASTM E 84.

- f. Substrate: Fiber glass or mineral fiber.
- g. Noise Reduction Coefficient (NRC) Range: [0.50-0.60] [0.80-0.90] [_____] ASTM C 423.
- h. Edge Detail: [Half bevel] [Bevel] [Radius] [Square] [Mitered] [_____] edge.
- i. Core Type: [Standard acoustical] [High impact acoustical] [Acoustical/tackable] [_____] core.
- J. Mounting: Acoustical panels shall be mounted by manufacturer's standard [concealed spline] [mechanical fasteners] [magnetic fasteners] [hook and loop] [adhesive mounting] [_____].

NOTE: Editing of color reference sentence(s) shall be coordinated with the Government. Generally the 09915 COLOR SCHEDULE or drawing is used when the project is designed by an Architect or Interior designer. Color shall be selected from manufacturers standard colors or identified as a manufacturers color in this specification only when the project is very simple and has minimal finishes.

When the Government directs that color be located in the drawings a note shall be added that states:
"Where color is shown as being specific to one manufacturer, an equivalent color by another manufacturer may be submitted for approval. Manufacturers and materials specified are not intended to limit the selection of equal colors from other manufacturers. The word "color" as used herein includes surface color and pattern."

Prior to specifying a custom color finish, research to determine if additional cost and lead time is feasible. Note there is often a minimum order requirement; this requirement will also affect future orders.

When a manufacturer's name, stock number, pattern, and color is used, be certain that the product conforms to this specification, as edited.

- k. Color: Color shall be [in accordance with Section 09915 COLOR SCHEDULE.] [as indicated on the drawings.] [selected from manufacturers standard colors.] [[_____.] Color listed is not intended to limit the selection of equal colors from other manufacturers.]

PART 3 EXECUTION

3.1 SURFACE CONDITIONS

Walls shall be clean, smooth, oil free and prepared in accordance with panel manufacturer's instructions. Installation shall not begin until all wet work, such as, plastering, painting, and concrete are completely dry.

3.2 INSTALLATION

Panel installation shall be by personnel familiar with and normally engaged in installation of acoustical wall panels. Panels shall be applied in accordance with the manufacturer's installation instructions.

3.3 CLEANING

Following installation, dirty or stained panel surfaces shall be cleaned in accordance with manufacturer's instructions and left free from defects. Panels that are damaged, discolored, or improperly installed shall be removed and new panels provided as directed.

-- End of Section --