

## **DIVISION 9 - FINISHES**

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### **09 00 00. FINISHES**

#### **09 00 03. GENERAL PROVISIONS**

- .1 DESIGNS: All materials, colors, finishes, product specifications, applications and details are to be reviewed and approved by the University Architect prior to the final development of the Construction Documents.

All materials shall meet or exceed the Ohio Building Code (OBC) and University use requirements for the area.

In remodeled areas, all material patches shall blend as close as possible. Complementary colors and patterns are to match the existing materials so they do not appear patched. Testing is required for asbestos and lead paint in older finishes of a suspect nature. This is important whenever surfaces are to be patched and repaired.

- .2 LEED POLICIES: The University promotes energy efficient green design, construction and building operations. Whenever possible, materials are to be selected and specified following the United States Green Building Council LEED (Leadership in Energy and Environmental Design) Green Building Rating System® consensus-based national standard for developing high-performance, sustainable buildings. Refer to the website: <http://www.usgbc.org/>.

#### **09 01 00. MAINTENANCE OF FINISHES**

- .1 DESIGNS: The Associate shall specify only finishes that require little maintenance and can be easily maintained by the University.

#### **09 06 00. SCHEDULES FOR FINISHES**

- .1 DESIGNS: The Associate shall clearly note all finishes and their extent of coverage on the drawings and specifications using room finish schedules and include notations on elevations and details.

#### **09 06 90. SCHEDULES FOR PAINTING AND COATING**

1. COATINGS SCHEDULE: The Associate shall prepare a schedule listing all surfaces in generic terms, all coating or finish operations, the types of finish materials and the number of coats of each material.

#### **09 08 00. COMMISSIONING OF FINISHES**

- .1 RESILIENT FLOORING: Immediately prior to final inspection, resilient flooring and base shall be cleaned as per the manufacturer's recommended guidelines and ready for final finishes. The Contractor shall finish the floor using the manufacturers or University provided waxes.

- .2 CARPETS: Immediately prior to FF&E installation, all carpeted areas shall be cleaned and vacuumed of all construction debris and made ready for installation of FF&E. The Contractor shall clean and vacuum.

**09 20 00. PLASTER AND GYPSUM BOARD**

09 21 13. PLASTER ASSEMBLIES

.1 DESIGNS: The use of plaster for ceilings and of stucco for exterior finish, including canopy soffits, is prohibited without written permission of the University Architect; however, these materials may be used for patching existing plastered surfaces. The Associate may request permission to use these materials in limited areas, only if the situation is unique and architecturally demanding.

09 21 16. GYPSUM BOARD ASSEMBLIES

.1 DESIGNS: For sound control requirements, refer to PART ONE, paragraph 00035.

**09 30 00. TILING**

.1 DESIGNS: Ceramic floor and wall tile or other suitable solid surface material approved by the University Architect, is required for all restrooms, shower rooms, food preparation, food serving and other common areas where water and food is present.

All floor tiles shall be non-slip and rated for heavy duty use.

For designs where floor and wall tile indicate a pattern of colors, details shall be clearly detailed on the Construction Drawings using specific tile sizes, dimensions and details of all surfaces to receive tile.

Designs of ceramic "mosaics" shall include specific tile sizes and detailed drawings showing extent or complexity of patterns.

All floor tile grout shall be sealed. In frequently wet areas such as shower and pools areas, floor and wall grout shall be sealed.

**09 50 00. CEILINGS**

.1 DESIGNS: All ceilings shall be designed to be easily accessible for maintenance and other access needs such as technology installations. A single type of ceiling tile, tile size and suspension system shall be used throughout a building to minimize maintenance and repair costs. Limited exceptions to this are special feature areas or specialized function areas where no accessibility is required. The use of 3 foot tile and other non standard tile sizes is prohibited.

Fire code gypsum board or fire rated acoustic tile with rated suspension assembly shall be used for fire-rated ceilings.

**09 51 00. ACOUSTICAL CEILINGS**

.1 DESIGNS: Mineral fiber lay-in type acoustic ceilings shall be specified. Panels shall be a minimum of 5/8 inch thick and maximum panel size shall be 2 ft. x 4 ft or 2 ft x 2 ft. A single type and size of acoustic ceiling panel shall be consistent throughout a building for maintenance purposes.

Other size panel sizes and materials proposed are subject to review and approval by the University Architect.

For design requirements relative to sound control, refer to PART ONE, paragraph 00035.

**09 50 00. CEILINGS (Cont'd)**

**09 53 00. ACOUSTICAL CEILING SUSPENSION ASSEMBLIES**

.1 DESIGNS: Ceiling suspension assemblies shall be supported directly from the building structure and shall be supported at all four corners of fluorescent light fixtures. Ceilings shall not be supported from ductwork, electrical conduit, heating or plumbing lines, and vice versa. Each utility system and the ceiling grid system shall be a separate installation and each shall be independently supported from the building structure. Where interferences occur, provide trapeze type hangers or other suitable supports for each system. Locate hangers and supports where they will not interfere with access to mixing boxes, fire dampers, valves, and other appurtenances requiring servicing.

The requirements for independent supports for ceiling grid systems shall be repeated in the applicable sections of the specifications. If patented ceiling suspension systems are required for plaster, gypsum board, and acoustic ceilings, a separate section may be written for the systems; or each separate system may be specified in the section for the particular ceiling material, at the option of the Associate; however, it is preferred that suspension systems for acoustic ceilings be specified with the ceiling materials to avoid divided responsibilities.

Stainless steel hanger wires must be specified for canopy suspension systems and for other systems in locations subject to moisture penetration or condensation

.2 ANCHORAGES: Power-driven anchors are prohibited and shall be noted in the specifications. Ceiling suspension systems shall be secured to the structure with toggle, molly bolts, self-drilling anchors, cast-in inserts, or bolts in expansion shields. The use of wood, lead, or plastic plug anchors is also prohibited.

**09 60 00. FLOORING**

.1 DESIGNS: Associate selections shall be based on extra heavy duty commercial grade flooring, rated for intended use by the manufacturer. Custom materials and colorations are prohibited as they increase later costs for repair and renovations. Specify designs for visually impaired where applicable. Specify designs for static dissipation requirements where applicable.

All product specifications, accessory items, colors, finishes, applications and details are to be reviewed and approved by the University Architect prior to the final development of the Construction Documents.

In some cases, the University may choose to purchase Flooring for a project. In these cases, the cost of Flooring is moved from Construction funds to Equipment funds for the purchase. Design of spaces, door clearances and scheduling of the work where Flooring is required must provide for these installations, whether Flooring is provided by the Contractor or by the University.

The Associate shall provide detailed specifications of at least one selected product and two additional products which are acceptable equals in material construction and color for bidding.

The Associate shall specify products that can be obtained and installed by Contractors of an established firm, experienced in the installation of the specified product. The specifications shall request Contractors to have completed at least three projects of equal size, material and complexity to verify experience.

**09 60 00. FLOORING (Cont'd)**

.2 INSTALLATION CONDITIONS: The Associate shall specify critical Flooring Substrate Conditions appropriate to the material specified. The Associate shall include standard testing methods for determining Relative Humidity in concrete flooring, Moisture Vapor Emission Rate of concrete subfloor. The Associate shall outline Contractor responsibility for conducting the tests prior to installation.

**09 65 00. RESILIENT FLOORING**

09 65 13. RESILIENT BASE AND ACCESSORIES

09 65 13.13 RESILIENT BASE

.1 MATERIALS: Base to be 1/8 inch thick, rounded top edge and 4-inch minimum height. Specify straight wall base for carpeted areas and coved wall base with toe for resilient flooring areas. Specify that internal and external corners be formed on the job with joints at 18-inches from corners. Terminal ends of base shall be beveled and toes rounded. Color to be integrated with the material. Material can be vinyl or rubber.

.2 WARRANTIES: Meet or exceed 5 year material warranty.

09 65 13.23 RESILIENT STAIR TREADS AND RISERS

.1 MATERIALS: Color integrated treads and risers, vinyl or rubber. Slip resistant and easily maintainable.

.2 WARRANTIES: Meet or exceed 5 years material warranty.

09 65 16. RESILIENT SHEET FLOORING

.1 MATERIALS: Commercial grade, high performance homogeneous sheet flooring. Seams to be heat welded, when possible. Use standard 4 inch high cove base at wall. A 6 inch high flash coving may be specified to enhance hygienic qualities. Where applicable, manufacturers to provide stain resistance test data, coefficient of friction ratings (wet and dry), load bearing capacity and other standardized test data as may apply.

Overall Nominal Thickness: .080 inches

Reference Specs: Meets or exceeds ASTM F-1913; Type II, Grade 1

Fire Test Data: Meets ASTM E-648 (Critical Radiant Flux) / ASTM E-662 (Smoke Density)

Static Load Limit: ASTM F-970 250 PSI (Std.), 700 PSI

Slip-Retardant Performance: ASTM D-2047 James Test; Exceeds ADA recommendation.

Traffic Performance: Rated for extra heavy commercial traffic.

Recycled Vinyl Content to be 10% or greater.

.2 WARRANTIES: Meet or exceed 5 years material warranty.

**09 60 00. FLOORING (Cont'd)**

**09 65 00. RESILIENT FLOORING (Cont'd)**

**09 65 16.13 LINOLEUM FLOORING**

.1 MATERIALS (SHEET): Homogeneous linoleum sheet floor covering made of primarily natural materials consisting of linseed oil, wood flour, rosin binders and dry pigments mixed and calendared using a two-layered process onto a jute backing including a strong, durable primer and a top layer. Seams to be heat welded.

Reference Specs: Meets or exceeds ASTM F2034 for Linoleum Sheet Flooring.

Overall nominal thickness: .100 inches.

Static Load Limit: 450 pounds per square inch.

Traffic Performance: Rated for extra heavy commercial traffic.

Recycled content: 45% or greater Post Industrial Recycled Content.

.2 MATERIALS (TILE): Homogeneous linoleum tile floor covering shall be made of primarily natural materials consisting of linseed oil wood flour, rosin binders and dry pigments mixed and calendared using a two-layered process) onto a polyester back . Standard sizes no customs.

Reference Specs: Meets or exceeds ASTM F2195 for Linoleum Tile

Static Load Limit 1500 pounds per square inch

Traffic Performance: Rated for extra heavy commercial traffic.

Recycled content: 45% or greater Post Industrial Recycled Content.

.3 WARRANTIES: Meet or exceed 5 years material warranty.

**09 65 19. RESILIENT TILE FLOORING**

.1 MATERIALS: Vinyl Composition Tile, 1/8 inch thick, thru-pattern or thru-chip construction and meets the requirements of the ADA for static coefficient of friction when installed in accordance with manufacturer's guidelines, waxes and coatings. Recycle content (post-consumer and post-industrial waste) minimum 10%. Resilient tile is prohibited next to urinals. Specify standard tile sizes.

Static load limit: 75 PSI

Flooring Radiant Panel Test: Passes

Flame Spread: Passes

The Associate may propose resilient materials other than vinyl composition tile that are advantageous to the project. Approval of the University Architect is required prior to specifying such materials.

Acceptable material quality: equal or better than Armstrong Excelon Vinyl Composition Tile.

.2 WARRANTIES: Meet or exceed 5 years material warranty.

**09 60 00. FLOORING (Cont'd)**

**09 66 00. TERRAZZO FLOORING**

.1 MATERIALS: Terrazzo floors separated from the structural slab by a sand cushion are preferred. Approximately 2-3/4 inches shall be allowed from rough slab to finish floor.

**09 66 23. RESINOUS MATRIX TERRAZZO FLOORING**

.1 DESIGNS: If design conditions, or budget, dictate thinset method of installation, marble chip or ceramic granule toppings may be installed with chemical matrix or with cement matrix chemically bonded to the substrate, only when such methods and materials are approved by the University Architect.

**09 68 00. CARPETING**

.1 MATERIALS: Acceptable material quality: equal or better than Dupont Antron Legacy nylon and Antron Lumena nylon.

Yarn: 100% first quality, bulk continuous filament nylon type 6, 6 offering a construction and performance standards testing program by fiber producer. The fiber shape to have a maximum Modification Ratio of 1.5 for soil release capabilities. The fiber identification is to AATCC 20. Static Control: By permanent means (i.e. antistatic filaments) and without chemical treatment, static generation below 3.5 kilovolts under standard conditions of 65 F and 20% relative humidity. Electrostatic Propensity (Static delayed signal): AATCC 134.

Construction: tufted or woven, level or multi-level loop pile with maximum height variation of 1/32 inch.

Dye Method: Meets or exceeds Stain Resistance specification with greater than 5 years on the floor performance history.

Pile Weight: minimum 24 oz/yd<sup>2</sup>

Primary Backing: polypropylene or non-woven

Secondary Backing: to provide permanent moisture barrier

Resistance to Delamination: ASTM D3936 minimum 3.0 lbs/inch

Tuft Bind: ASTM D1335 minimum 20 lbs

Pile density 36 x face weight/finished pile HEIGHT: minimum 5800

Flammability – Must pass Methenamine Pill test (DOC FF1-70). Meet Flooring Radiant Panel Test – Class 1. NBS Smoke Chamber – must meet or exceed 350 or less in flaming mode.

Colorfastness to Light: AATCC 16E, 200 AFU, International Gray Scale for Color Change rating min 3-4.

Colorfastness to atmospheric contaminants: AATCC 164(ozone) & AATCC 129 (oxides of nitrogen) for 2 cycles, International Gray Scale for Color Change rating min. 3-4.

**09 60 00. FLOORING (Cont'd)**

**09 68 00. CARPETING (Cont'd)**

Stain Resistance - AATCC 138 for 5 washings to simulate removal of topical treatments by hot water extraction, followed by: AATCC 175, minimum level 8 using AATCC Red Dye 40 Scale with greater than 5 years on the floor performance history.

Soil Resistance: An average of 3 fluorine analyses (AATCC 189) of a single composite sample to be a minimum of 500 ppm fluorine by weight when new and 400 ppm fluorine by weight after 2 AATCC 171 (HWE) cleanings.

Coloration: Color hue and values to be in optimum light reflectance rating for soil hiding enhancement.

Appearance Retention - Vetterman Drum Test ASTM D5417 for 22,000 cycles. This is a minimum rating of 3.0 using CRI TM-101 Reference Scale. Testing without underpad or brushing.

Indoor Air Quality - maximum 0.5 mg/m<sup>2</sup>hr total VOC emission, ASTM D5116

Warranty: Must meet or exceed 10 year warranty.

.2 SUBMITTALS: Specify shop drawing submittals with seam layouts for approval. Specify sample materials submittal for approval.

.3 INSTALLATIONS: In normal installations, carpet shall be glued to the substrate with no cushion or pad using premium quality waterproof non-flammable adhesive.

For exceptional instances requiring carpet installation over padding, the cushion or pad shall be factory applied and an integral part of the product. Use high density sponge rubber carpet cushion equal to or better than Tred-Mor flat profile carpet cushion as manufactured by SCI (Sponge-Cushion, Inc.) with minimum specifications for extra heavy commercial and institutional traffic.

.4 RECLAMATION: Designate Reclamation Program or agency firm providing used carpet recycling. Reclamation agency and carpet remover shall certify in writing that used carpet was removed and recycled in accordance with Reclamation Program.

Adhesive removal Solvents must comply with Carpet and Rug Institute Publication 104.

**09 70 00. WALL FINISHES**

.1 DESIGNS: Associate selections shall be based on extra heavy duty commercial wall finish, rated for intended use by the manufacturer. Custom materials and colorations are prohibited as they increase later costs for repair and renovations.

All product specifications, accessory items, colors, finishes, applications and details are to be reviewed and approved by the University Architect prior to the final development of the Construction Documents.

The Associate shall provide detailed specifications of at least one selected product and two additional products which are acceptable equals in material construction and color for bidding.

The Associate shall specify products that can be obtained and installed by Contractors of an established firm, experienced in the installation of the specified product. The specifications shall request Contractors to have completed at least three projects of equal size, material and complexity to verify experience.

**09 70 00. WALL FINISHES (Cont'd)**

**09 72 00. WALL COVERINGS**

.1 MATERIALS: Materials must conform to ASTM E-84 and OBC. Research code carefully to determine class of fire and smoke resistance required for the specific application.

Vinyl wall covering must satisfactorily pass Class A physical requirements for Type II wall covering as listed in G.S.A. CCC-W-408A and CFFA Quality Standards for vinyl coated fabric wall covering.

**09 90 00. PAINTING AND COATING**

**09 91 00. PAINTING**

09 91 23. INTERIOR PAINTING

.1 APPLICATIONS:

TOP AND BOTTOM EDGES OF WOOD DOORS shall be sealed after fitting and finished with at least two coats of varnish or paint.

TOPS AND BOTTOMS OF METAL DOORS shall be painted with the same materials and number of coats as used on the door faces.

DRY FILM THICKNESSES shall be specified for all coats of paint on metals.

ACCENT COLORS: If it is anticipated 5% or more of the scheduled finishes will be in accent colors, attention should be called to this fact. Estimated percentage of accent colors should be given as an aid to bidders in preparation of bids. A statement should be made to the effect that the information given in no way restricts the Associate in his final selection of colors.

COLOR CODING FOR PIPING: Include finish painting of insulated and uninsulated piping in the General Construction Documents and include color banding of finished piping in the appropriate locations. See Divisions in the Facilities Services Subgroup.

INTERIOR WOODWORK: Painted finish -- primer and 2 coats semi-gloss alkyd enamel.

METAL DOORS AND FRAMES: Shop coat, touch up and two coats semi-gloss enamel.

NEW GYPSUM WALLBOARD OR PLASTER: Spackle as required, primer and 2 coats semi-gloss alkyd enamel or 2 coats semi-gloss latex.

EXISTING PREVIOUSLY PAINTED GYPSUM WALLBOARD OR PLASTER: Primer and 1 coat semi-gloss alkyd enamel or semi-gloss latex. If surface is poor, remove finish to substrate, repair and finish the same as new gypsum wallboard or plaster.

INTERIOR CONCRETE OR CONCRETE BLOCK (Unpainted): 1 coat self-sealing heavy filler-type primer and 2 coats semi-gloss alkyd enamel or 2 coats semi-gloss latex. For laboratories requiring chemical resistance, replace the alkyd or latex paint with epoxy two-component finish. For corridors or abuse areas, replace the semi-gloss alkyd or latex paint with high gloss alkyd enamel.

**09 90 00. PAINTING AND COATING (Cont'd)**

**09 93 00. STAINING AND TRANSPARENT FINISHING**

.1 APPLICATIONS:

INTERIOR WOODWORK: Natural finish -- stain, 2 coats sanding sealer, 2 coats semi-gloss varnish. If polyurethane varnish is used, delete sanding sealer.

TOP AND BOTTOM EDGES OF WOOD DOORS shall be sealed after fitting and finished with at least two coats of varnish or paint.

EXTERIOR WOOD PLATFORMS OR BENCHES: Use Behr plus 10 Solid Color Stain or approved equal in accordance with manufacturer's directions.

**09 96 00. HIGH PERFORMANCE COATINGS**

**09 96 43. FIRE RETARDANT COATINGS**

.1 INSTALLATIONS: Materials shall be applied by applicators franchised and approved by manufacturers of materials approved for use. General Contractor shall furnish the manufacturer's certification that materials delivered to the project meet requirements specified. Certification shall be countersigned by the General Contractor, who shall assume the responsibility of complying with the manufacturer's specifications. Materials and application equipment shall be of type approved by the manufacturer.

09 96 53. ELASTOMERIC COATINGS

.1 INSTALLATIONS: If coatings specified can be applied with equipment ordinarily used by painters, these coatings may be specified in the section entitled, PAINTING.

**09 97 00. SPECIAL COATINGS**

**09 97 23. CONCRETE AND MASONRY COATINGS**

.1 DESIGNS: Mechanical Room and other Service Room floors in all buildings shall be completely sealed from water and moisture penetration to the floors below.

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END OF DIVISION 09 - FINISHES