DIVISION 9  FINISHES

09000  MISCELLANEOUS REQUIREMENTS

09000.1  PROHIBITED CONSTRUCTION PRACTICES AND MATERIALS:

09001.1  ANCHORAGES: Suspensions for ceiling runners must be secured to the structure above by toggle, molly bolts, self-drilling anchors, cast-in inserts, or bolts in expansion shields. The use of wood, lead, or plastic plugs is prohibited.

09001.2  USE OF INK MARKING PENS ON SURFACES of any kind of materials is prohibited. Experience has shown that such marks bleed through paint and other finishes.

09001.3  ASBESTOS: Use of this material, in any form, is expressly prohibited.

09001.4  ACOUSTIC TILE: The use of acoustic tile or lay-in panels at less than 8 feet above floor is prohibited unless approved by University Architect.

09001.5  FIRE-RATED CEILINGS: Provide as required for floor/ceiling and roof/ceiling assemblies.

09001.6  RESILIENT TILE: The use of resilient tile in front of urinals is prohibited.

09001.7  USE OF INK MARKING PENS ON SURFACES of any kind of materials is prohibited. Experience has shown that such marks bleed through paint and other finishes.

09001.8  NON-STANDARD SIZES OF RESILIENT TILE are prohibited.

09002  FIRE-RATED CEILINGS

Because of the limitations applying the use of lath and plaster for ceiling construction, finish materials for fire-rated ceilings will generally, but not necessarily, be limited to gypsum board.

09003  REMODELING

In buildings requiring remodeling, patched materials and surfaces must be made to look as much like new as is economically feasible. It is the intent to avoid a patched appearance. Where patching is required, finish material should be applied to an apparent transition (change in elevation).

09003.1  TRANSITIONS: In areas where partitions must be removed to create new areas, careful planning is required to insure that finishes of the newly created surfaces are homogeneous. If new materials butt against existing materials in any one plane, existing and new materials must be finished to match each other, not only in color but also in patterns and surface texture. If such a match is impossible to achieve and the budget is such that existing materials cannot be replaced, the consultant shall show, by detailed drawings, and specify that existing materials be blended with the new in such a manner that the transitions from one material to another cannot be readily observed, OR that the different materials be arranged in a pleasing design at the juncture of the materials.

09003.2  SURFACE PREPARATION: Existing surfaces with several old coats of paint or varnish, to which paint, vinyl covering or other thin finishes will be applied, must have old finishes stripped off, down to the substrate. Deteriorated areas of substrate must be removed and replaced with suitable filler; voids and gouged areas must be patched. A skim coat of veneer plaster shall be applied to previously plastered areas and troweled to a true, smooth surface. Wood surfaces shall be spackled and sanded smooth.

09005.  COLOR SELECTIONS

Color selections must be approved by the University Architect before finish schedules are furnished to the contractor.

09100  METAL SUPPORT SYSTEMS

09120  CEILING SUSPENSION SYSTEMS

09120.1  SUPPORTS IN MOIST LOCATIONS: Stainless steel hanger wires must be specified for canopy suspension systems and for other systems in locations subject to moisture penetration or condensation.

09120.2  SUPPORTS FOR CEILINGS: Ceiling grid systems 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 interference’s 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. However, it is preferred that suspension systems for acoustic ceilings be specified with the ceiling materials to avoid divided responsibilities.

09200 LATH AND PLASTER
09220 EXTERIOR PORTLAND CEMENT PLASTER STUCCO: Use integral color, or paint. Comply with Portland Cement and Plastering Standards ANSI A42.2 and ANSI A42.3.

09300 TILE
09310 CERAMIC TILE: The use of the word “mosaics” is prohibited on drawings or in the specifications because of the connotation of this word implying pictorial work. If ceramic mosaics are actually used, specify by giving tile sizes.

09310.1 FLOOR TILE: Where ceramic tile is specified for toilet room floors, colors shall be specified as a mixed design. Plain colors and dark colors are not desirable. A/E to specify price group. Provide unglazed tile in all floor and base locations.

09310.2 WALL TILE: Glazed ceramic tile is required for tile walls.

09310.3 Request installer to furnish extra box of tile for maintenance purposes.

09500 ACOUSTICAL TREATMENT
09500.1 ACOUSTIC MATERIALS: 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 feet x 2 feet. Other size panels may be used subject to review and approval by the University Architect. Edge treatment shall be Tegular, unless otherwise specified. All ceiling panels shall be non-directional fissured.

09500.2 COORDINATION WITH WORK OF OTHER TRADES: Ceiling panels may be laid only after ALL work, including telephone wiring, has been completed above the ceiling.

09500.3 FIRE RATED CEILINGS: When fire rated ceilings are required, an alternate solution for obtaining fire separation must be developed.

09500.4 SUSPENSION SYSTEMS: Ceiling suspension systems shall be supported directly from the building structure and shall be supported at all four (4) corners of fluorescent light fixtures. Installations require coordination with electrical layouts. Separate safety supports for light fixtures must be specified in Division 16.

09500.5 EXTRA MATERIALS: Furnish quantity of full size units equal to 3% of amount installed, for each type, composition, color, pattern, and size.

09650 RESILIENT FLOORING
09655 MATERIALS:

09655.1 RESILIENT TILE FLOORING: Vinyl composition tile, 1/8 inch thick. Non-standard sizes are prohibited.

09655.2 OTHER RESILIENT FLOORING MATERIALS: In some instances the consultant may feel that the use of rubber tile, vinyl tile, sheet vinyl, or materials other than vinyl composition tile may be advantageous. Approval by the University is required prior to specifying such materials.

09655.3 WALL BASES: 1/8 inch thick with coved toe, rounded top edge and four (4) inch minimum height; preformed internal and external corners shall be used when available. Terminal ends of base shall be beveled and toes rounded.

09656 SUBMITTALS

09656.1 EXTRA MATERIALS: Furnish not less than one box for each fifty (50) boxes or fraction thereof, of each class, wearing surface, color, pattern, and size of resilient floor installed.

09656.1 NON-STANDARD RESILIENT FLOOR OR BASE MATERIALS may be required to submit
evidence of their resistance to flame propagation and smoke development as well as production of toxic gases. Four (4) copies of test results from a recognized laboratory and four copies of a notarized statement, signed by an officer of the manufacturing company, confirming that the flooring or base products proposed for use are those which have passed flammability, smoke, and toxic gas tests selected.

09656.1 AFFIDAVIT BY INSTALLER: If test reports and certification shall be required, the installer shall submit four (4) copies attesting that materials actually installed are the same as those certified by the manufacturer as meeting specified requirements.

09657 CLEANING:
Resilient flooring and base shall be totally cleaned and waxed with one layer of commercial grade wax.

09680 CARPETING (Glue-Down Installation)
09680.1 RESTRICTED AREAS:
09680.1.1 HEAVY TRAFFIC AREAS: Do not plan carpet for corridors which carry heavy traffic.
09680.1.2 VENDING AREAS: Do not use carpet under vending machines and for a distance of at least six (6) feet in front of machines.
09680.1.3 CAFETERIA SERVING LINES: Omit carpet in or near serving line area.
09680.1.4 PREVIOUSLY UNCARPETED AREAS: Particularly areas below grade and subject to moist conditions shall not be carpeted without review and approval for carpet by the University Architect.
09680.1.5 No carpet on stairs, under water coolers, and at direct entry from exterior.

98680.2 CARPET TILE:
PART A – GENERAL

1.1 SUMMARY DEFINITION
Modular tile carpeting for use in designated USF educational facilities shall be a high-performance, branded 100% Type 6 or 6.6 nylon with a modification ratio of less than 2.5. Fibers with a post-consumer content will be considered. Mill extruded nylon will not be accepted. Carpet shall be tufted and have a manufacturer’s standard vinyl or hard-back backing system which provides a non-permanent installation application, using pressure sensitive, releasable adhesive or a pre-adhered adhesive system, meeting or exceeding requirements for certification according to the CRI Green Label Plus IAQ Test Program. Carpet tile shall be recyclable meeting USGBC LEED Rating System requirements and shall have third party certification.

1.2 APPLICATION
A. Intended Use:
   1. This Design Criteria shall be used in determining and specifying tile carpeting and walk-off mats at USF facilities. It is not intended to be an all-inclusive specification in and of itself, in that, it is supplemental to other specifying tools such as MasterSpec.

1.3 SELECTION CRITERIA
A. Industry Standards And Tests
   1. NFPA 253
   2. Floor Covering Installation Board (FCIB)
   3. Carpet and Rug Institute (CRI)
   4. Floor Covering Installation Contractors Association
B. Applicable Publications
   1. MasterSpec Section 09 68 13 Tile Carpeting
   2. CRI 104 Standard for Installation of Commercial Carpet
C. Sustainable Compliance: USF prefers those carpet tile manufacturers with an
operational carpet tile-recycling program for 100% of the carpet product (at the end of its useful life). Third party certification shall be required.

1.4 QUALITY ASSURANCE

A. Contractor Qualifications:
   1. Employ only experienced Contractors (Installers) skilled in the successful installation of the specified materials and accessories on similar projects for a minimum of five (5) years, acceptable to the carpet tile manufacturer in writing to Owner/USF.

B. Manufacturer(s) Qualifications
   1. Utilize only manufacturers making the specified materials as a current and regular production item.
   2. Manufacturers of specified carpet tiles shall have a minimum of fifteen (15) years of production experience with carpet tiles of similar types and whose published product literature clearly indicates compliance of their product with a particular carpet tile specified.
   3. Manufacturer shall provide verification of registration to ISO 9001/9002 Quality Management System and ISO 14001 Environmental Management System.
   4. Manufacturer to provide three (3) references of installations in similar facilities.
   5. Manufacturer must provide Chain of Responsibility that states they will take back their product for recycling at the end of its useful life.

C. Preparation/Field Verification
   1. Examine substrates to verify conditions are satisfactory for carpet tile installation and that they comply with the requirements identified in the Project Specifications.
   2. Check concrete slabs to ensure that alkalinity and moisture content are within tolerances specified by the manufacturer and the Project Specifications. Verify slab substrates are clean, dry and free of curing compounds, sealers, hardeners and other materials that may interfere with adhesive bond, all acceptable to Carpet Tile Manufacturer's instructions and recommendations.
   3. Verify that substrates are free of cracks, ridges, depressions, scale and foreign deposits.
   4. Proceed with installation of items only after unsatisfactory conditions have been corrected.

D. Source Limitations: Unless specifically noted otherwise, provide carpet tile of the same manufacturer for each type of carpet specified.

1.5 SUBMITTALS

A. Manufacturer’s Product Data sheets shall be required for each type of tile carpeting, adhesives and accessories specified.

B. Full size samples shall be required for each type of tile carpeting specified.

1.6 WARRANTY

A. Project Warranty shall be as stated in Division 01 of the Specifications.

B. Special Tile Carpeting Warranty: Written warranty, non-prorated, signed by carpet tile manufacturer agreeing to remove and replace tile carpeting installation that fails in materials and workmanship within the specified warranty period.
   1. Warranty does not include deterioration or failure of tile carpeting due to unusual traffic, failure of substrate, vandalism, or abuse.
   2. Failures include, but are not limited to, more than ten percent (10%) loss of face fiber/yarn loss by weight normal use, edge raveling, runs, loss of tuft bind strength, dimensional stability, excess static discharge, delamination and stain resistance.
   3. Warranty shall not require the use of chair pads.
   4. Warranty Period: Fifteen (15) years from date of Order.
   5. Manufacturer shall warranty that dyelots are mergeable.
   6. Warranty shall identify the following: Pattern name; pattern color; square yards used.
In case of multiple buildings where tile carpeting has been used, identify building name/number and pattern, pattern color, square yards used.

C. Installer’s Warranty: The Contractor (Installer) shall fully guarantee the installation against defects in workmanship, seaming and loss of adhesion to floor for a period of one (1) year from the date of Substantial Completion. Upon written notice, the Installer shall repair or replace the affected area at no cost to USF.

1.7 OPERATIONS AND MAINTENANCE

A. Cleaning
1. The tile carpeting and walk-off tile manufacturer shall provide instructions to designated USF personnel on the proper methods and procedures for cleaning tile carpeting material furnished utilizing the above method.
2. Tile carpeting and walk-off manufacturer shall provide a representative to demonstrate cleaning and stain removal processes to USF maintenance personnel at: (1) 30 days prior to Substantial Completion; (2) at 6 months from date of Substantial Completion and; (3) 11 months from date of Substantial Completion.

PART 2 - PRODUCT SYSTEM

2.1 CARPET TILE COMPONENT CHARACTERISTICS (Minimum)
A. Fiber Content: 100% nylon Type 6 or 6,6 with Modification Ratio of less than 2.5.
B. Fiber Type: Branded type, Aquafil Struttura, Invista, Solutia
C. Dye Method: Minimum of 65% Solution dyed.
D. Mergeability: Tile carpeting that is of the same style/color, but from different dyelots and/or manufacturing dates, may be merged and used interchangeably, both at initial installation and at later selective replacement, to create a continuous carpeted surface with no tile appearing out of place.
E. Color and Pattern: Selected by Architect and approved by Owner/USF.
F. Pile Density: 5400 minimum.
G. Gauge: 1/12” minimum.
H. Surface Pile Weight: 17 oz./sq.yd. minimum.
I. Size: Approximately 18” x 18” to 40” x 40” square.
J. Stitches per Inch: 8.00” minimum.
K. Backing System: Manufacturer’s standard vinyl or thermoplastic hard-backed backing system, 39% minimum total recycled content, maintaining a 100% true moisture barrier between secondary backing and the floor substrate below, passing the British Spill Test, Method E.
L. Critical Radiant Flux Classification: Not less than 0.45 W/sq.cm.
M. Colorfastness to Crocking: Not less than 4, wet and dry, per AATCC-165, per AATCC-165.
N. Colorfastness to Light: Not less than 4 after 60 AFU (AATCC fading units) per AATCC-16.
O. Stain Resistance: AATCC-175, must pass Acid Red 40 spot test with an 8 or better.
P. Antimicrobial Treatment: Must have low water solubility and not be metallic or halogen based. Not less than 2-mm halo of inhibition for gram-positive bacteria; not less than 1-mm halo of inhibition for gram-negative bacteria; no fungal growth; per AATCC-174, Part II, AATCC 138 Washed; AATCC 174 Parts 2 & 3. (If requested, provide USF with independent test certification(s) [i.e. EPA, etc.] that states use of antimicrobial treatment is in compliance with all governmental regulations, including the AATCC specifications stated in this paragraph, regarding its use within the complete carpet tile construction/assembly). Antimicrobial preservative should be incorporated into primary backing of the product during manufacturing and not topically applied to the fiber.
Q. Dimensional Stability: Aachen Method Din 54318, 0.2% or less per ISO 2551.
R. Smoke Density: < or = 450 flaming.
S. Static Generation: AATCC 134 w/neolite < or = 3.5KV at 20% r.h.
T. Flame-Spread and Flammability:
a. Carpet flammability shall meet federal Flammability Standards CPSC FF 1-70, when tested in accordance with ASTM D2959-70T (Methenamine Pill Test).

U. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement based formulation provided by carpet tile manufacturer.

V. Adhesives: Water-resistant, mildew-resistant, nonstaining, pressure-sensitive type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and recommended by carpet tile manufacturer for releasable installations.

W. Indoor Air Quality Control: Carpet tile and adhesive shall be CRI Green Label Plus certified by published class (product type) and certification number.

X. Water intake for Manufacturing and Finishing purposes must not exceed 1 gallon per square meter.

Y. Climate Neutral: Product shall be Climate Neutral as certified by a Third Party Entity ensuring that all greenhouse gas emissions associated with the life cycle of the product have been offset.

2.2 ALLOWABLE SUBSTITUTIONS

A. From time-to-time, USF Design may approve other products and additional items meeting both Design Criteria and Specifications when submitted in accordance with the Substitution provisions contained in Division 01.

B. Tile carpeting other than those specified may be substituted when in conformance with all of the individual requirements stated in Component Characteristics and approved by USF Design, 10 days in advance of the Bid Opening. It shall be the responsibility of the A/E to review all of the proposed substitution carpet tile specifications in that it meets all minimum criteria of this guideline before forwarding to USF Design for final approval.

PART 3 - QUALITY ASSURANCE DURING EXECUTION

3.1 INSTALLATION ENVIRONMENTAL CONDITIONS

A. Tile carpeting shall not be delivered or installed until building is enclosed, wet work completed and HVAC system is operating and maintaining temperature and humidity at occupancy level during remainder of construction period.

B. Comply with CRI 104, Section 6.1 Site Conditions: Temperature and Humidity.

C. Ensure that carpet tile is installed only when the concrete moisture content is below the carpet manufacturer’s written recommendations.

3.2 EXTRA MATERIALS

A. Provide additional carpet tiles equal to 1% of each type, color and pattern furnished for USF use as maintenance stock.

B. This stock shall be designated for use by USF only, after completion of the Project and shall not be used for repair or replacement during warranty period.

3.3 DELIVERY, STORAGE, HANDLING

Comply with CRI 104 Section 5 Storage and Handling.

3.4 INSTALLATION PROCEDURES

A. Provide all items and accessories as required for a total and complete installation in every respect.

B. Complete preparation and field verification procedures identified in Paragraph 1.5.C.

C. Use trowelable leveling and patching compounds as recommended by carpet tile manufacturer for filling cracks, holes and depressions in substrates.

D. Remove coatings including curing compounds and other substances that are incompatible with adhesives.

E. Install tile carpeting and walk-off tile using releasable installation method. Comply with CRI 104, Section 13, Carpet Modules (Tiles).

1. Provide adhesive free system that suits subfloor conditions indicated and complies with flammability requirements for installed carpet tile.
2. As an alternate, if prior approval is obtained from USF, provide water-resistant, mildew-resistant, non-staining, pressure-sensitive adhesive to suit products and subfloor conditions indicated; that complies with flammability requirements for installed carpet tile and recommended by carpet tile manufacturer for releasable installations.

3. Provide rubber or metal tile carpeting transition divider strip/nosing between carpet tile and walk-off tile when total thickness of each material is not equal. Divider strip nosing and typed selected by Architect.

F. Where tile carpeting does not continue beyond a door to another room, extend carpet tile into door reveals so that carpet tile stops under door when door is in closed position.

G. Remove any adhesives, paint, or other products on the carpet immediately during carpet installation.

3.5 PROTECTION DURING CONSTRUCTION

A. Protect tile carpeting against damage from construction operations and placement of equipment and fixtures during remainder of construction period as recommended by manufacturer and as required by CRI 104, Section 15, Protection of Indoor Installations. Do not use plastic, adhesive sheet.

09680.3 SUBMITTALS (for approval by the University Architect):

09680.3.1 SHOP DRAWINGS of seam layout. Avoid seams in heavy traffic paths or areas.

09680.3.2 NOTARIZED STATEMENT FROM MANUFACTURER: Before carpet materials are ordered, submit four (4) copies of the test results from a recognized laboratory and four (4) copies of a notarized statement, signed by an officer of the manufacturing firm(s), confirming that the carpet products proposed for use are those which have passed the required tests defined above.

09680.3.3 AFFIDAVIT BY GENERAL CONTRACTOR: Submit four (4) copies attesting that materials actually installed were the same as those certified as meeting specified requirements.

09680.4 CLEANING: Immediately prior to final inspection, carpeted areas shall be totally cleaned of all soil, including dirt, dust, spots, stains, adhesive, paint, etc.

09700 SPECIAL FLOORING: 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.

09800 SPECIAL COATINGS

09830 ELASTOMERIC COATINGS: If coatings specified can be applied with equipment ordinarily used by painters, these coatings may be specified in Section 09900. Painting.

09840 FIRE RESISTANT COATINGS: The following provisions must be included in the specifications:
Qualifications of Applicator. 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.

09900 PAINTING

09901 COATINGS SCHEDULE: The consultant 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. Preferred finishes for certain locations or surfaces are as follows:

09901.1 INTERIOR WOODWORK: Natural finish - stain, two (2) coats sanding sealer, two (2) coats semi-gloss varnish. If polyurethane varnish is used, delete sanding sealer. Painted
finish - primer and two (2) coats semi-gloss alkyd enamel.

09901.2 METAL DOORS AND FRAMES: Shop coat, touch up and two (2) coats semi-gloss enamel.

09901.3 NEW GYPSUM WALLBOARD OR INTERIOR PLASTER: Spackle as required, primer and two (2) coats semi-gloss alkyd enamel or two (2) coats semi-gloss latex.

09901.4 EXISTING PREVIOUSLY PAINTED GYPSUM WALLBOARD OR INTERIOR PLASTER: Primer and one (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. Also refer to Section 09003.2.

09901.5 INTERIOR CONCRETE OR CONCRETE BLOCK (Unpainted): One (1) coat self-sealing heavy filler-type primer and two (2) coats semi-gloss alkyd enamel or two (2) coats semi-gloss latex. For laboratories requiring chemical resistance, replace the alkyd or latex paint with epoxy two-component finish.

09901.6 EXTERIOR WOOD PLATFORMS OR BENCHES: Use Behr Plus 10 Solid Color Stain or approved equal in accordance with manufacturer’s directions.

09901.7 EXTERIOR PORTLAND CEMENT PLASTER (STUCCO): Use integral color, or paint.

09902 ITEMS TO BE NOTED IN SPECIFICATIONS

09902.1 TOP AND BOTTOM EDGES OF WOOD DOORS: Shall be sanded and sealed after fitting and finished with at least two (2) coats of varnish or paint.

09902.2 TOPS AND BOTTOMS OF METAL DOORS: Shall be painted with the same materials and number of coats as used on the door faces.

09902.3 DRY FILM THICKNESS: Shall be specified for all coats of paint on metals.

09902.4 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 consultant in his final selection of colors.

09902.5 COLOR CODING FOR PIPING: Include finish painting of insulated and uninsulated piping in the General Contract documents and include color banding of finished piping in the appropriate contract documents.

09920 INTERIOR PAINTING

Finish coat to be semi-gloss in all corridors and stairwells. Use washable type of finish material on walls for ease of maintenance and cleaning.

09950 WALLCOVERING

09950.1 Materials must conform with ASTM E-84. Research code carefully to determine class of fire and smoke resistance required for the specific application.

09950.2 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.

END OF DIVISION 9 FINISHES