

I. GENERAL:

1. Furnish all materials, labor, services and incidentals necessary for the completion of all metal studs, gypsum board work and incidentals required to make installation complete.
2. Related work in other sections:
 - A. Painting, Division 9.
 - B. Carpentry and Millwork, Division 6.
 - C. Insulation, Division 7.
 - D. Sealants, Division 7.
3. Store materials in dry place. Lay flat, away from traffic and doors.
4. Gypsum wall board, joint system and accessories shall be from one manufacturer. U.S.G., Gold Bond, Bestwall are approved manufacturers.
5. Submittals:

Submit detailed shop drawings and samples to Architect for approval. Shop drawings shall show exact profile, length, width, height, thickness, joints, terminations and methods of attachment. Include detailed information and manufacturer's data, instructions and recommendations. Include all information related to attachments and devices. Include cut through sections for each condition. Distinguish between factory furnished items and field assembled work. Provide certification document that Materials meet specification requirements. Provide product data sheets, Material Safety Data Sheets, samples of each material specified, properly labeled, sample of each fastener type, manufacturer's standard color and finish charts/samples, manufacturer's warranty.
6. Guarantee all work, materials and installations for a period of 1 year from the date of Substantial Completion. Guarantee shall cover any defect in operation or appearance, failure or blemish due to improper installation, material defect or workmanship. All defective items shall be replaced immediately at no cost to the Owner.
7. Use only thoroughly trained and experienced personnel completely familiar with the specified products, and with the manufacturer's recommended methods of installation.
8. Alternates may affect the scope of the work in this section. See Division 1 for alternate bid items.

II. PRODUCTS:

1. Gypsum Wallboard and Ceiling Applied Gypsum Board:

- A. Gypsum board: 5/8" 1 hour fire rated – see drawings for locations; Type X, with tapered edges. Conform to the requirements of ASTM C-26-67.
- B. Gypsum board: 1/4" with tapered edges. Conform to the requirements of ASTM C 1396.
- C. Moisture resistant gypsum board: 5/8" 1 hour fire rated. Type X with tapered edges. Conform to the requirements of ASTM C-26-67. Install on partitions and ceilings in Men's and Women's Rest Rooms and/or where indicated on drawings.
- D. Fasteners: 1 1/2" & 1" drywall metal screws, and screws as described on fire-rated partitions on the Drawings, specially designed for application of gypsum panels to metal studs and shall be the length and pattern recommended in writing for that purpose by gypsum board manufacturer used.
- D. Casing bead: #200A.
- E. Corner bead: #102 Dur-a-bead 1 1/4" X 1 1/4".
- F. Provide USG #093 control joints at gypsum board ceiling where indicated/required. Provide control joints from top of door jambs and other openings to ceilings.
- G. Joint treatment system:
 - 1. Joint tape: perforated, conforming to ASTM C-475 or FF SS-J-570, Type II.
 - 2. Joint compound: powdered or ready-mixed conforming ASTM C-475 or FF SS-J-570, Type I. Taping and topping joint compound or all purpose joint compound may be used.
- H. Moisture Resistant Joint System:
 - 1) Mix and apply USG Durabond joint compound according to manufacturer's written instructions.
 - 2) Pre-fill joints of ceiling board with Durabond Compound. After pre-fill is hardened, embed reinforcing tape centered over joint. When compound has hardened, immediately apply fill coat.

- 3) Apply compound over flanges of control joints, metal beads and trim. Spot fastener heads.
- 4) After fill coat has hardened, apply finishing coat of compound. Completely cover all joints, angles, beads, control joints and fasteners.

2. Metal Studs:

- A. Studs and runners shall be channel type, roll-formed in the following sizes and gauges. Submit written information for approval.
 - 1) Interior partitions shall receive 25 gauge, 3 5/8" and 6" galvanized metal studs at 16" o.c. with floor and ceiling runners, except as noted below or as noted otherwise on drawings, and 20 gauge at vestibules.
 - 2) Door jambs shall receive double 20 gauge studs. Secure studs together and fasten at head and sill. Brace jambs at ceiling height.
 - 3) Exterior wall studs (6") and structural studs: 16 and 20 gauge as noted. See drawings and details for gauges.
 - B. Furring Channels: 16 and 25 gauge, as noted, galvanized type.
 - C. Top runners of all partitions shall be 20 gauge galvanized.
 - D. Runner channels: Cold rolled 16 gauge, 1 1/2" channels weighing 500 pounds per 1,000 lineal feet; galvanized.
 - E. Insulation Hangers: Stick on type.
3. Direct Suspension Systems: Manufacturer's standard zinc coated or painted steel system of furring runners, furring tees, and accessories designed for concealed support of gypsum drywall ceilings; of proper type for use intended.

III. EXECUTION:

1. General:

- A. Install casing beads at window jambs and heads and where walls abut a different material.
- B. Install corner beads at all corners.
- C. Where gypsum board walls abut window frames, masonry walls and floors, caulk so light, moisture and sound will not be transmitted.

2. Gypsum board:

A. Walls:

- 1) Gypsum board shall be applied vertically with edges centered on supports. Attach with drywall screws spaced at 12" o.c. joints on opposite sides of the wall shall occur on different studs. Tape and bed all joints.
- 2) Fire-rated Partitions: Gypsum board shall be applied to conform to the referenced UL or GA regulation.

B. Installation of Framing:

- 1) Install metal runners, studs, chase walls and accessory walls, and soffit members according to USG no. SA-923. Provide double studs at door jambs, double runners over jamb studs, and adjacent studs to make doors more rigid. Stud spacing shall be 16" o.c. unless noted otherwise. Anchor floor runners with power driven anchors at 24" o.c. maximum. Anchor ceiling runners on 24" centers with toggle bolts or power driven anchors (24" o.c.).
- 2) Provide blocking in walls as required for wall mounted items.
- 3) Ceiling suspension system shall be installed according to manufacturer's recommendations with furring runners at 4'-0" o.c. and furring tees at 24" o.c. Screw attach gypsum panels in both directions with minimum of 43 screws per 4 x 8 panel to meet U. L. requirements.
- 4) Studs shall be located no more than 2" from all abutting partitions, corners and other construction.

3. Joint System:

- A. Maintain building temperature of 60 degrees to 70 degrees prior, during and after drywall joint system operation. Provide adequate ventilation to exhaust excessive moisture.
- B. Tape, fill and sand exposed joints,, edges, corners and openings to prepare flat firm surface to receive finish. Maximum camber: 1/32". Care shall be taken to prevent scuffing wallboard paper when sanding.

end of section

I. GENERAL:

1. Work includes: Labor and materials to complete installation of ceramic wall and floor tile as indicated and/or specified herein.
2. Submit detailed shop drawings and samples to Architect for approval. Shop drawings shall show exact profile, length, width, height, thickness, joints, terminations and methods of attachment. Include detailed information and manufacturer's data, instructions and recommendations. Include all information related to attachments and devices. Include cut through sections for each condition. Distinguish between factory furnished items and field assembled work. Provide certification document that Materials meet specification requirements. Provide product data sheets, Material Safety Data Sheets, samples of each material specified, properly labeled, sample of each fastener type, manufacturer's standard color and finish charts/samples, manufacturer's warranty.
3. Guarantee all work, materials and installations for a period of 1 year from the date of Substantial Completion. Guarantee shall cover any defect in operation or appearance, failure or blemish due to improper installation, material defect or workmanship. All defective items shall be replaced immediately at no cost to the Owner.
4. Tile Manufacturing Standard: Furnish tile complying with Standard Grade requirements of ANSI A137.1.
5. Provide materials obtained from one source for each type and color of tile, grout, and setting materials. Deliver packaged materials and store in original containers with seals unbroken and labels intact until time of use, in accordance with manufacturer's instructions. Handle, store, mix and apply setting and grouting materials in compliance with reference standards and manufacturer's printed instructions.
6. Maintain environmental conditions and protect work during and after installation in accordance with referenced standards and manufacturer's printed recommendations.
7. Substitutions of equal products must be approved in writing by Architect prior to bid date. Submit manufacturer's detailed and technical information and samples for approval.
8. Provide 1 unopened carton of extra tiles (from the same 'run') of each color and type of tile to Owner for future maintenance use upon completion of work. These extra tiles are for Owner's future use and shall not be used for warranty corrections.

II. PRODUCTS:

1. Ceramic Wall Tile:
 - A. Furnish glazed, semi-gloss ceramic wall tile as manufactured by Interceramic, "IC Brites" (main field of tile), with accents of

"Bold Tones", or approved equal (submit comparison samples/data for approval). Match existing colors.

- B. Size: 6" x 6".
- C. Tile, accessories, grout and installation shall be rated IV (Commercial, heavy traffic).
- D. Comply with ANSI A137.1 (submit certificate of compliance).
- E. Provide trim of the same color, size, and finish of adjacent flat tile.
- F. Glazed wall tile pre-grouted in factory mounted sheets with white silicone rubber meeting FS TT-S 001543 Class A or B.
- G. Colors:
1) Field verify all colors. Submit matching samples to Architect for approval.
- H. Setting Materials:
Latex Portland Cement Mortar: ANSI A118.4. Mixture of Portland Cement, sand, and special latex additives. Follow latex manufacturer's directions explicitly.
- I. Grouting Material:
Latex-Portland Grout: Use latex additive in grout compatible with latex Portland Cement mortar.
- J. Tile Council of America (TCA) installation method W243-91.

2. Ceramic Floor Tile & Base:

- A. Furnish semi-gloss, unglazed porcelain ceramic floor tile as manufactured by Interceramic, Intertech Series (main field of tile), or approved equal (submit comparison samples and data for approval). Match existing.
- B. Floor Tile Size: 12" x 12".
- C. Base Size: 6" x 8" cove base.
- D. Tile, accessories, grout and installation shall be rated IV (Commercial, heavy traffic).
- E. Comply with ANSI A137.1, ANSI A108.5 for installation (submit certificate of compliance).
- F. Provide cove trim of the same color, size and finish of adjacent flat tile.
- G. Color: "Dotti Dark Grey".

H. Waterproof membrane: as recommended by tile manufacturer.

I. Setting Materials:

Latex Portland Cement Mortar: ANSI A118.4. Mixture of Portland Cement, sand, and special latex additives. Follow latex manufacturer's directions explicitly.

J. Grouting Material:

Latex-Portland Grout: Use latex additive in grout compatible with latex Portland Cement mortar. ANSI A118.6.

K. Maximum variation in floor slab: 1/8" in 10'-0". Verify compliance prior to starting work.

L. Tile Council of America (TCA) installation method F122-91 (thinset).

3. Mortar and Grout:

A. Color Pigment: Mineral oxides, unaffected by lime, cement or weathering. Use as required to produce selected grout. Color as selected by Architect from Manufacturer's standards. Submit samples for selection/approval. Grouting materials shall be as recommended in the Tile Council of America "Handbook for Ceramic Tile Installation" and by specific manufacturer's brand.

III. EXECUTION:

1. Tile Installation Standards:

A. ANSI Standards: Comply with applicable requirements of ANSI A108 series for Ceramic Tile Installation.

B. Comply with manufacturer's instructions for mixing and installation of proprietary materials.

2. Preparation:

A. Inspect sub-surface before starting work. Notify Architect and General Contractor, in writing, of unsatisfactory conditions which would prohibit proper installations. Do not continue work until unsatisfactory conditions are corrected.

B. Prior to installing tile, remove dust, oil and other foreign substances from surfaces. Scarify surfaces by grinding or sanding to remove oil, wax, adhesive residues or other finishes to provide a clean roughened surface for bonding.

3. Installation:

- A. Extend tile work into recesses and under or behind equipment and fixtures, to form a complete covering without interruptions, except as otherwise shown. Terminate work neatly at obstructions, edges and corners without disrupting pattern or joint alignments.
 - B. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures and other penetrations so plates, collars, or covers overlap tile.
 - C. Placement Methods: Install tile in accordance with the reference standards and Tile Council of America "Handbook for Ceramic Tile Installation".
 - 1) Joints shall align horizontally and vertically between trim and field tile. Unless otherwise shown, lay tile in grid pattern. Align joints when adjoining tiles on floor, base, walls and trim are same size. Layout tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise shown.
 - 3) Grout: Per TCA and manufacturer's recommendations.
 - 4) Vinyl Edge Strips: Provide where shown, and/or where exposed edge of ceramic tile flooring is to meet carpet, wood or other resilient floor covering.
 - 5) Tile and installation shall be rated Class IV, heavy traffic.
4. Cleaning and Protection:
- A. Cleaning: Upon completion of installation and grouting, clean all surfaces so they are free of foreign matter. Leave finished installation clean/free of cracked, chipped, broken, unbonded, or defective tile work.
 - B. Protection: When recommended by tile manufacturer, apply a protective coat of neutral protective cleaner to completed tile walls and floors. Protect installed tile work with Kraft paper or other heavy covering during construction period to prevent damage and wear.
 - C. Prohibit foot and wheel traffic from using tiled floors for 7 days minimum after grouting is completed.
 - F. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

end of section

I. GENERAL:

1. Work Includes: Labor and material to complete acoustical ceiling installation as indicated on drawings and specified.
2. Related Work In Other Sections:
 - A. Carpentry, Division 6.
 - B. Insulation, Division 7.
 - C. Mechanical and Electrical Work, Division 15 and 16.
3. Submittals:

Submit detailed shop drawings, samples and schedule of work beginnings and completions and schedule of delivery to Architect for approval. Shop drawings shall show exact profile, length, width, height, thickness, joints, terminations and methods of attachment. Include detailed information and manufacturer's data, instructions and recommendations. Include all information related to attachments and devices. Include cut through sections for each condition. Distinguish between factory furnished items and field assembled work. Provide certification document that Materials meet specification requirements. Provide product data sheets, Material Safety Data Sheets, samples of each material specified, properly labeled, sample of each fastener type, manufacturer's standard color and finish charts/samples, manufacturer's warranty.
4. Guarantee all work, materials and installations for a period of 1 year from the date of Substantial Completion. Guarantee shall cover any defect in operation or appearance, failure or blemish due to improper installation, material defect or workmanship. All defective items shall be replaced immediately at no cost to the Owner.

II. PRODUCTS:

1. Suspension System: See electrical plan for layout. All main beams shall conform to ASTM C 635, intermediate duty lay-in exposed grid, as manufactured by USG or approved equal.
 - A. Grid pattern: See drawings, 2' x 2'.
 - B. Color: White, match ceiling tiles.
 - C. Donn DX/DXL USG intermediate duty, Double Web Suspension System. Components include Main Runners, cross tees, and perimeter angle moldings. Components shall be fabricated from commercial quality, cold rolled, electro-galvanized steel with factory applied finish to be selected (to match ceiling panel color).

- D. The system shall be complete with all supporting members, anchors and adapters for light fixtures and mechanical grilles and other accessories required for a complete installation.

2. Acoustical Panels:

- A. Ceiling panels shall be mineral fiber panels, lay in rabbetted system, 2220 Radar Climaplus panels with Teglar (SLT) reveal edge as manufactured by USG. Color: White. Submit samples for selection and approval. Size: 2' x 2', see drawings.

III. EXECUTION:

1. This contractor shall be responsible for complete installation of acoustical grid ceiling, including all component parts to complete system. Install exposed grid in accordance with ASTM C 636-83. Accurately level all main runners. Deflection of any component shall not exceed 1/360 of the span. All grids shall be straight within a tolerance of 1 in 1000.
2. Minimum wire size for hanging main runners shall be #12 steel hanger wires, securely anchored to structure (max. spacing: 48" along the length of the main beams). Provide additional supports where lights fit into grid.
3. Install perimeter angle molding at heights indicated and at the intersection of the suspended ceiling and all vertical surfaces. Wall angles at all corners must be mitered.
4. All ceiling tiles not seating properly or showing damage at final inspection will be replaced at no cost to Owner.
5. Finish ceilings shall be dead level, true to plane. Border unit shall be of greatest possible size unless indicated otherwise.
6. Thoroughly clean all fingerprints and traces of soil from the surfaces of grid, ceiling panels and gypsum wall board.
7. Furnish Owner six (6) unopened cartons of each ceiling tile for Owner's future replacement. These units are not to be used by the contractor for warranty replacements.
8. Refer plans for grid layout and sizes.

end of section

I. GENERAL:

1. Work includes: Labor and materials required to complete resilient floor and base work as indicated and specified. See room finish schedule.
2. Work does not include: Ceramic tile and installation.
3. Submittals:

Submit detailed shop drawings, samples and schedule of work beginnings and completions and schedule of delivery to Architect for approval. Shop drawings shall show exact profile, length, width, height, thickness, joints, terminations and methods of attachment. Include detailed information and manufacturer's data, instructions and recommendations. Include all information related to attachments and devices. Include cut through sections for each condition. Provide product data sheets, Material Safety Data Sheets, samples of each material specified, properly labeled, sample of each fastener type, manufacturer's standard color and finish charts/samples, manufacturer's warranty.
4. Guarantee all work, materials and installations for a period of 1 year from the date of Substantial Completion. Guarantee shall cover any defect in operation or appearance, failure or blemish due to improper installation, material defect or workmanship. All defective items shall be replaced immediately at no cost to the Owner.
5. Reference Standards:
 - A. FS SS-312-Tile, Floor: Asphalt, Rubber, Vinyl, Vinyl-Composite.
 - B. FS SS-W-40- Wall base: Rubber and Vinyl Plastic.
6. Extra Material:
 - A. Provide 10 extra tiles to Owner for future maintenance use. These tiles are for Owner's future replacement use and shall not be used for warranty replacement parts.

II. PRODUCTS

1. Tile: 1/8" x 12" x 12" vinyl composition tile, Armstrong Excelon Imperial Texture series. Color and pattern to be selected. Main field and border colors as indicated on Room Finish Schedule.
2. Vinyl base: 4" x 1/8" Type II vinyl set-on cove-type with factory pre-moulded corners. Color: Match existing, to be selected from samples submitted to Architect. Color of premoulded corners shall exactly match base color. Non-matching corners shall be rejected.

3. Bevel edge strips: Vinyl. Color: Charcoal (Verify).
4. Adhesives, Primers, Fillers, etc: As recommended by floor material manufacturer for specific material.
5. Underlayment: Latex type as recommended by floor manufacturer.
6. Wax and floor sealer: as recommended by the tile manufacturer for material type and location.
7. Sub-Floor Filler: White premix latex, mix with water to produce cementitious paste.

III. EXECUTION:

1. Surfaces and condition:
 - A. Inspect subfloor before starting work. Notify Architect in writing of any defects in subfloor. Do not proceed until such defects have been corrected. Starting work implies acceptance by the subcontractor of underflooring. Fill minor cracks and defects with sub-floor crack filler. Ensure floor surfaces are smooth and flat with maximum variation of $\frac{1}{8}$ " in 10'.
 - B. Use only experienced workmen.
 - C. Do not start until samples have been submitted and approved in writing by Architect.
 - D. Deliver materials to job in manufacturer's original unopened containers with manufacturer's brand name clearly marked thereon.
 - E. Do not begin work until other trades have been completed.
 - F. Maintain rooms and subfloors at 70 degrees F. minimum for at least 3 days before and 48 hours after tile is installed. Ensure concrete floors are dry (maximum 7% moisture content) and exhibit negative alkalinity, carbonization or dusting.
 - G. Store flooring materials in area of application. Allow 3 days for material to reach equal temperature as area.
 - H. Clean floor and apply, trowel and float filler to leave smooth, hard, flat surface. Prohibit traffic until filler is cured.
2. Installation:
 - A. Sweep floors clean, removing all pebbles and obstructions that would cause uneven or unsatisfactory laying.
 - B. Obvious or excessive unevenness in subfloor to be brought to level using leveling material.

- C. Spread Adhesive evenly in accordance with manufacturer's recommendation.
 - D. Mix tile to ensure shade variations do not occur in one area. Lay tile so as to insure good contact with close, even edges and to a true, smooth plane. Lay tile square with room axis. Fit neatly into breaks and recesses, against base, around pipes, cut and scribe to walls. Press with heavy roller to ensure full adhesion.
 - E. Install tile with minimum tile width $\frac{1}{2}$ full size at room or area perimeter.
 - F. Terminate tile work at centerline of door openings where adjacent floor finish is dissimilar.
 - G. Scribe flooring to walls, columns, cabinets, floor outlets and other appurtenances to produce tight joints.
 - H. Install bevel protective edge where tile edge is exposed. (Do not use where carpet meets tile).
 - I. Vinyl base set on tile. Securely bond base and pre-formed corners to walls. Fit joints tight and vertical. Maintain minimum measurement of 18" between joints.
 - J. Miter internal corners. Use premolded sections for external corners and exposed ends.
 - K. Install base on solid backing, adhere tightly to wall and floor surfaces.
 - L. Install straight and level to variation of plus or minus $\frac{1}{8}$ " in 10' maximum.
3. Cleaning: At completion, clean tile work and base. Remove cement, dirt or other foreign substances. Polish, wax to uniform coating and consistency and do not permit traffic on finished floors for 48 hours after installation.
4. Adjustment: Inspect and make necessary adjustments within one month of time that heat is supplied continuously to finished areas. Tiles that have not sealed in level plane with surrounding tiles to have heat applied and rolled to surrounding floor level. Repair tile showing breaks or fractures.

end of section

I. GENERAL:

1. RELATED DOCUMENTS:
 - A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
2. SUMMARY:
 - A. This section includes the following:
 - 1) Tufted carpet tile.
3. SUBMITTALS:
 - A. Manufacturer's Data - Submit two (2) copies of manufacturer's specifications and installation instructions for carpet tile and related items specified.
 - B. Fiber verification - Certification from the fiber producer verifying use of the branded fiber in the submitted carpet product.
 - C. Shop Drawings - Submit shop drawings for areas to be carpeted showing installation of carpeting, seam diagram, pattern direction, necessary installation accessories, and provisions for work of other trades. Show location of different patterns or styles of carpet. Also, show locations of any threshold conditions.
 - D. Samples - Submit standard size carpet samples of each type of carpet, in each specified pattern, color and construction.
 - 1) Any alternates to specified products must be submitted for approval by a representative of the end user at least ten (10) working days prior to bid or proposal.
 - 2) Final Sample Submittal - Submit two (2) sets of samples for each carpet type.
 - 3) No carpet shipments are permitted until acceptance of final samples by representative of the end user or architect/design firm, certifying that samples are the approved color, pattern, and texture.
 - 4) Samples submitted will be assumed to be the manufacturer's best obtainable match to the carpet described under Materials section.
 - E. Maintenance Instructions - Submit to the Owner two (2) copies of the manufacturer's carpet maintenance instructions, including information needed for the removal of common stains from each type of carpet required.
4. SUBSTITUTES:
 - A. Substitutes - Where a selected manufacturer or product has been specified, an equal or superior product may be accepted only upon review and written acceptance by the architect. It is mandatory that such review and approval be obtained prior to bidding, or the substitution will not be considered. All such proposed substitutions shall be submitted to the architect with appropriate manufacturer's specifications, literature, and independent laboratory testing data. The architect's decision as to whether a product is equal or superior to the one specified shall

be final. This section applies to any "or equal" noted in the specification.

5. PRODUCT DELIVERY AND STORAGE:
 - A. Deliver carpeting materials in sealed protective cartons for carpet tile and sealed containers for related materials. Carpet materials shall be bound with secure protective wrapping.
 - B. Storage and staging area at the site must be coordinated with the Owner.
 - C. Provide 3% overage of calculated yardage for each type of carpet (calculated yardage shall include carpet needed for complete installation plus waste and usable scraps).
 - D. Materials shall be stored in an enclosed and dry area protected from damage and soiling.

6. WARRANTY:
 - A. Provide warranties by Carpet Manufacturer and Trade Contractor agreeing to replace defective materials and workmanship of carpet work during one (1) year warranty period following substantial completion. Also, submit carpet manufacturer's warranties as follows:
 - 1) Wear - Surface wear shall not be more than 10% by weight throughout the life of the product.
 - 2) Static - Carpet will maintain static generation at less than 2.5 KV at 70 degrees F, and 20% R.H. throughout the life of the product.
 - 3) No delamination throughout the life of the product.
 - 4) No edge ravel throughout the life of the product.
 - 5) No dimensional instability, I.e. shrinkage, curling, and doming which adversely affect the ability of the tile to lay flat throughout the life of the product (per installation instructions). See Aachen test.
 - B. Submit manufacturer's certified independent test results to show that carpet meets or exceeds product performance specification criteria for carpet testing requirements (i.e. see section 2.3 flame, smoke, Aachen test, etc.).
 - C. Lifetime Commercial Limited Warranty (Owner's Option) - Owner will be completely satisfied with the performance of the carpet product when installed in accordance with the manufacturer's current installation specifications and is maintained in accordance with the current carpet care recommendations and such maintenance continues throughout the duration of the original installation when owned and maintained by the original end user.

II. PRODUCTS:

1. MANUFACTURER:
 - A. Shaw Contract Modular Tile
 - B. Approved Equal: Bigelow Modular Tile
 - C. Approved Equal: Lees Modular Tile

- D. Approved Equal: Tandus Modular Tile
 - E. Approved Equal: Patcraft Modular Tile; Conundrum
2. CARPET TILE:
- A. Package Marking - Mark each carpet package according to style, color, pattern, dye lot, run number and quantity. Within each continuous carpet area, install carpet from same dye lot and run.
3. Carpet shall meet the following performance standards:
- A. Carpet flammability
 - 1) Pill Test (ASTM D2859 or CPSC FF-1-70): Passes
 - 2) Radiant Panel Test (ASTM E648): > .45 watts/cm², Class I
 - B. Smoke Density (ASTM E662): < 450 Flaming Mode
 - C. Dimensional Stability (Aachen Method DIN 54318): < 0.1% change
 - D. Static Generation at 700 F. (AATCC 134 w/ neolite): < 2.5 KV at 20% R.H.
 - E. Lightfastness (AATCC 16E): 4.0 after 60 hours
 - F. Crocking (AATCC 165): 4.0 wet, dry
 - G. Cold Water Bleed (AATCC 107): 4.0
 - H. Sublimation (AATCC 117): 4.0
 - I. Gas Fade (AATCC 23): 4.0
 - J. Ozone Fade (AATCC 109): 4.0
 - K. Antimicrobial (AATCC 174, part II): > 95.0% reduction
 - L. Fungicidal (AATCC 174, part III): No growth
 - M. Soil/Stain Protection (AATCC 175-1991): > 8.0 on the Red 40 Stain Scale
 - N. Appearance Retention Rating (ASTM D-5252 or ASTM D-5417): Heavy use classification
4. PRODUCT SPECIFICATIONS:
- A. Product: Balance Tile
 - B. Construction Type: Multilevel Pattern Loop
 - C. Face Fiber: Eco Solution Q® Nylon
 - D. Yarn Treatment: Florsept, Antistatic, SSP
 - E. Gauge: 1/12
 - F. Stitches: 9.0
 - G. Tufted Weight: 17.0
 - H. Average Density: 5,885
 - I. Yarn Weight: 19 oz/sq yd
 - J. Pile Thickness (ASTM D-418): 0.104 inches
 - K. Backing Structure: Ecoworx
 - L. Total Weight: 96.15
 - M. Total Thickness: .257 inches
 - N. Size: 24 in. x 24 in.
 - O. Base Color Method: 86% solution dyed, 14% yard dyed
5. RELATED CARPET MATERIALS:
- A. Leveling Compound - Latex type as recommended by carpet manufacturer and is compatible with carpet adhesive and curing/sealing compound on concrete.

- B. Releasable pressure sensitive type adhesive - Use the following as recommended by the carpet manufacturer which will allow removal of carpet at any time without damage or adherence to carpet:
- C. Multi-purpose Adhesive - Provide the following adhesive as recommended by carpet manufacturer for direct glue-down of carpet on steps.
- D. Carpet Edge Guard, Nonmetallic - Extruded or molded heavy duty vinyl or rubber carpet edge guard of size and profile indicated and with minimum 2 inch wide anchorage flange; colors selected by architect from among standard colors available within the industry.
- E. Miscellaneous Materials - As recommended by manufacturer of carpet, cushion and other carpeting products and selected by Trade Contractor to meet project circumstance and requirements.

III. EXECUTION:

- 1. PRE-INSTALLATION REQUIREMENTS AND PREPARATORY WORK:
 - A. The Trade Contractor shall measure carefully and check all dimensions and other conditions in the field to insure proper fit in the areas designated. Trade Contractor shall be totally responsible for the accuracy of his measurements on total yardage requirements, individual floor yardage requirements and dye lot yardage requirements. No request for carpet or installation extras from the owner will be considered due to measurement or takeoff errors by the Trade Contractor. The Trade Contractor shall confirm total yardage required, including 3% attic stock along with bid.
 - B. The Trade Contractor shall coordinate all installation activities with the General Contractor & Owner.
 - C. Sequence carpeting with other work so as to minimize possibility of damage and soiling of carpet during remainder of construction period. Carpet installation must not commence until painting and finishing work is complete and ceiling and other overhead work has been tested, approved and completed, unless specifically approved by Owner's Representative, in writing.
 - D. Trade Contractor and manufacturer's representative must examine substrates for conditions over which carpeting is to be installed.
 - 1) New concrete shall be allowed to cure for ninety (90) days before carpet installation.
 - 2) Trade Contractor shall perform moisture content testing as required in manufacturer's instructions to ensure pH readings of no more than 9. Moisture transmission of 5.5 pounds per sqm per 24 hours is acceptable. If values exceed this level manufacturer's recommendations must be followed for moisture transmission mitigation. Do not proceed until unsatisfactory conditions are corrected.
 - 3) Cracks 1/16 inch or more, holes, unevenness and roughness must be filled, leveled and made smooth with a compatible

latex floor patching compound. Prior to filling, the floor must be swept clean of all loose granular debris. After filling, allow filler to dry. Then damp mop the floor with warm water and allow to dry. Vacuum after mopping, to ensure all loose granular debris is removed and provide a proper substrate to install carpet.

- E. All surfaces to receive carpet shall be clean and dry, and in a condition satisfactory to the Trade Contractor. Trade Contractor shall notify Architect in writing of any conditions which will prevent him from producing satisfactory finish work after above specified preparatory work is completed.
- F. Trade Contractor shall vacuum floors again immediately before installation of carpeting.
- G. Confirm compatibility of adhesive with curing compounds on concrete floors.
- H. Once the Trade Contractor commences installation work under this contract, it shall be assumed that the condition of the floor has been accepted and any repairs or further corrections in the floor surface shall become the responsibility of the Trade Contractor.

2. INSTALLATION:

A. General:

- 1) Comply with manufacturer's instructions and recommendations for uniformity of direction of carpet installation.
- 2) Install carpet under open-bottom obstructions and under removable flanges and furnishings, and into alcoves and closets of each space.
- 3) Provide cut outs where required. Conceal cut edges with protective edge guards or overlapping flanges.
- 4) Run carpet under open-bottom items such as heating convectors and install tight against walls, columns and cabinets so that the entire floor area is covered with carpet. Cover over all floor type door closures.
- 5) Install edging guard at all openings and doors wherever carpet terminates, unless indicated otherwise. Prior to installation, report to the Construction Manager all other obstructions which may occur.
- 6) Cutting shall be done in accordance with the manufacturer's recommendation, using the tools designed for the carpet being installed.
- 7) Edges shall be butted together with the proper pressure to produce the tightest joint possible without distortion.
- 8) All carpet shall be installed with pile-lay in the quarter-turned method.
- 9) Use leveling compound where necessary. Any floor filling or leveling shall have a minimum of 4'0" of feather.
- 10) Expansion joints - Do not bridge building expansion joints with continuous carpeting. Provide for movements.

B. Installation:

- 1) Install carpet according to carpet manufacturer's printed instructions.
 - 2) Measuring - Divide the room into four quadrants and snap a chalk line. Make sure quadrants meet at right angles (offset the center line, if necessary, to ensure that perimeter tiles will be cut no less than half size (9 inches).
 - 3) Apply adhesive as per instructions in the area to be carpeted first.
 - 4) Note carefully if the product is designed to be installed "quarter turned" only. Arrows should point in the same direction every other tile and diagonally. Arrows on alternating tiles should be turned 90° in either direction, consistently.
 - 5) Begin installing by laying an anchor row of tiles on one side of the center chalk line. Ensure straight lines and square corners. Repeat anchor rows in each quadrant, extending out from center. Fill in each quadrant with tiles using a stair step technique.
 - 6) Tip individual tiles into place to avoid catching pile in the joint. Frequently check tile joints for proper alignment and firm abutment.
 - 7) Although tiles are nominally 24 inches by 24 inches square, there will be slight gain due to joints. To check, measure 10 installed tiles from edge to edge, spanning 10 joints. This measurement should be no greater than 240 and 1/8 inches for tufted product. If more gain is measured, tiles are not butted tightly enough. Reposition and check again. Use this method to continually check for excessive gain.
 - 8) Fixtures, architectural elements, and perimeters will require tile cutting. Cut tiles from the back. Secure cut or partial tiles with adhesive.
 - 9) Electrical floor outlets are usually wired after tile installation. Install tile over electrical boxes and mark locations with a piece of tape. Tiles can be lifted for cut-outs later.
 - 10) Center trench headers directly under a full tile row.
 - 11) In open perimeter designs, use a fixed reducer strip to secure the tile area.
 - 12) Compatible edge trim and nosing products may also be required.
3. CLEANING AND PROTECTION:
- A. On completion of the installation in each area, all dirt, carpet scraps, etc., must be removed from the surface of the carpet. Any soiling spots or excessive adhesive on the carpet shall be removed with the proper spot remover.
 - B. Construction traffic other than as may be required to fit up specific carpeted area will not be allowed to traverse the completed work.
 - C. Protect carpeting against damage during construction. Cover with 6-mil thick polyethylene covering with taped joints during the

construction period, wherever protection is required, so that carpet will be without any indication of deterioration, wear, or damage at the time of acceptance.

- D. At the completion of the work and when directed by the General Contractor, vacuum carpet using commercial dual motor vacuum of type recommended by carpet manufacturer. Remove spots and replace carpet where spots cannot be removed. Remove rejected carpeting and replace with new carpeting. Remove any protruding yarns with shears or sharp scissors.
 - E. Protection of carpeting shall be maintained on each floor or area until accepted.
4. INSPECTION:
- A. Preliminary Acceptance - Upon completion of the carpet installation of each floor, it shall be inspected by Owner, the Architect and Trade Contractor.
 - B. Upon completion of the installation, verify that work is complete, properly installed and acceptable. Remove and replace all work not found acceptable to the owner at the installer's expense.

end of section

I. GENERAL:

1. Work includes: Labor and materials to complete painting work as indicated, scheduled, specified and required.
2. Work does not include: Items completely finished at factory, plastics, unless noted otherwise. See other sections.
3. Related work in other sections:
 - A. Mechanical & Electrical, Division 15 and 16.
4. Colors shall be as shown on Drawings or shall be selected from paint manufacturer's color charts for all types of finish. Submit in triplicate. Prepare as many samples as may be required/requested.
5. Submit detailed shop drawings and samples to Architect for approval. Shop drawings shall show exact profile, length, width, height, thickness, joints, terminations and methods of attachment. Include detailed information and manufacturer's data, instructions and recommendations. Include all information related to attachments and devices. Distinguish between factory furnished items and field assembled work. Provide product data sheets, Material Safety Data Sheets, samples of each material specified, properly labeled, manufacturer's standard color and finish charts/samples, manufacturer's warranty.
6. Guarantee all work, materials and installations for a period of 1 year from the date of Substantial Completion. Guarantee shall cover any defect in operation or appearance, failure or blemish due to improper installation, material defect or workmanship. All defective items shall be replaced immediately at no cost to the Owner.
7. Job Conditions:
 - A. Apply paint only under the following prevailing conditions:
 - 1) Air and surface temperatures not below 50 degrees F.
 - 2) Prevent wide variation of temperature which might result in condensation on freshly coated surfaces.
 - B. Protect surfaces not to be coated.
 - C. Clean free of dust.
 - D. Provide adequate illumination.
8. Storage and protection: Deliver and store materials as directed in original sealed containers with labels intact. Protect floors and surrounding work. Remove and replace hardware, fixtures, etc. Prevent accumulation of combustible material and keep location free

from hazard of fire or other damage. Store materials in protected area at a temperature of not less than 50 degrees.

9. Workmanship: First class work in every respect is required with materials evenly spread and flowed on without runs or sags. Employ only certified mechanics. Beginning of work constitutes acceptance of surface and responsibility for best results to be obtained.

II. PRODUCTS:

1. Approved paint manufacturers: Sherwin-Williams. All numbers and items specified are from Sherwin-Williams. Shellac, turpentine, oil, shall be of best quality.
2. Finishes: The following specification is not intended to mention every particular item which will receive painter's finish, but is intended to establish type and quality which will be required on various materials. Manufacturer's specification numbers are from Sherwin Williams. Various colors shall be selected by Architect from manufacturer's color chips.

EXTERIOR WORK:

- 1) Galvanized Metal: clean surface with mineral spirits.
 - a) 1st coat: SW Galvite Primer B 50W3 (2mils DFT)
 - b) 2 coats: SW A100 Exterior Latex House & Trim A6, A8, A82 Series (1.4 mils DFT)
- 2) Ferrous metals (not galvanized):
 - a) 1 coat SW KEM Kromik primer B50 W1. (3 mils DFT)
 - b) 2 coats Promar 200 Alkyd S/G Enamel B34W200 series (1.7 mils DFT)
- 3) Wood:
 - a) 1 coat SW A100 Alkyd Exterior wood primer Y24W20 (2.2 mils dft)
 - b) 2 coats SW A100 Exterior Latex House & Trim A6, A8, or A82 series (1.4 mils DFT).

INTERIOR WORK:

- 1) Gypsum board walls (Splatter spray and knock down texture, prepare sample for approval):
 - a) 1st coat: SW ProMar 200 Latex Wall Primer, B28W200 (4 mils wet, 1.2 mils dry)

- b) 2nd coat: SW ProMar 200 Latex Satin Enamel B31W200 (4 mils wet, 1.5 mils dry)
- c) 3rd coat: SW ProMar 200 Latex Satin Enamel B31W200 (4 mils wet, 1.5 mils dry)
- 2) Gypsum board ceilings (lightly textured, orange peel texture, prepare sample for approval):
 - a) 1st coat: SW ProMar 200 Latex Wall Primer, B28W200 (4 mils wet, 1.2 mils dry)
 - b) 2nd coat: SW ProMar 200 Latex Satin Enamel B31W200 (4 mils wet, 1.5 mils dry)
 - c) 3rd coat: SW ProMar 200 Latex Satin Enamel B31W200 (4 mils wet, 1.5 mils dry)
- 3) Hardwoods:
 - a) 1st coat: SW WoodClassics Interior Oil Stain, A49 Series
 - b) 2nd coat: SW Sher-wood High Solids Vinyl Sealer
 - b) 3rd coat: SW Sher-wood High Solids Vinyl Sealer
 - d) 4th coat: SW Sher-wood Hi-Bild Precat Lacquer
 - e) 5th coat: SW Sher-wood High Solids Vinyl Sealer
- 4) Softwoods:
 - a) 1st coat: SW Wall and Wood Primer B49W2 (4 mils wet, 2 mils dry)
 - b) 2nd coat: SW Promar 200 Alkyd Semi Gloss Enamel B34W200 Series(4 mils wet, 2 mils dry)
 - c) 3rd coat: SW Promar 200 Alkyd Semi Gloss Enamel B34W200 Series(4 mils wet, 2 mils dry)
- 5) Ferrous Metals (not galvanized):
 - a) 1 coat SW KEM Kromik Primer B50 W1 (8 mils wet, 3 mils dry)
 - b) 2 coats SW Silicone Alkyd Enamel, B56 Series Semi-Gloss (8 mils wet, 3 mils dry, per coat)
- 6) Galvanized Metal:
 - a) 1st coat: SW Galvite Primer B 50W3 (2 mils DFT)

- b) 2 coats: SW A100 Exterior Latex House & Trim A6, A8, A82 Series (1.4 mils DFT)

- 3. Material Preparation: Mix materials according to manufacturer's latest printed instructions.

III. EXECUTION:

- 1. General: Back prime all wood trim and cabinet work. Finish top and bottom of doors same as door face. Access panels, grilles, registers and like items to be painted same color as surrounding surfaces unless noted otherwise.

- 2. Pre-work inspection:

- A. Examine surfaces to be coated and report any conditions that would adversely affect the appearance or performance of the painting systems and which cannot be put into an acceptable condition by specified surface preparation.
- B. Do not proceed with surface preparation and application until the surface is acceptable or authorization to proceed is given by the Architect.
- C. Beginning of work constitutes acceptance and responsibility of surfaces.

- 3. Surface Preparation:

- A. General

- 1) Prior to all surface preparation and application operations, completely mask, remove or otherwise adequately protect all hardware, accessories, plates, lighting fixtures, and similar items in contact with coating surfaces but not scheduled to receive paint. Remove all un-used mounting hardware, screws, nails, etc. and patch & fill holes/openings.
- 2) Before applying paint, thoroughly clean all surfaces involved. Schedule all cleaning so that dust and other contaminants from the cleaning process do not fall on wet, newly painted surfaces.
- 3) All surfaces shall be clean, dry and adequately protected from dampness. Surfaces shall be smooth, even and true to place, and free of any foreign material which will adversely affect adhesion or appearance of applied paint.
- 4) Mildew shall be removed and neutralized.
- 5) Beginning of work constitutes acceptance of surfaces.

B. Preparation of Drywall, Plaster, Concrete and Masonry Surfaces

- 1) Before paint is applied, surfaces shall be tested with moisture-testing device. No paint shall be applied when moisture content exceeds 12% except as may be required by manufacturer of the paint materials used. Test sufficient area in each space and as often as necessary to determine the proper moisture content for application.
- 2) Patching and repair of defects and damage to drywall, concrete, masonry, and other materials refer to related section.
- 3) Provide recommended priming for all surfaces to receive paint.
- 4) Contractor shall sand and reprime all abrasions and damage spots in the surface of the prime coat before proceeding with subsequent finish coat.
- 5) Masonry: Wash down completely with water and stiff brush.
- 6) Drywall: Mud and tape joints and nail heads. Fill cracks, small holes with joint compound. Sand smooth.

C. Metals

- 1) Shop coated, unprimed or damaged areas shall be cleaned to meet the requirements of the Steel Structures Painting Council SP-3 Power Tool Cleaning and primed in accordance with these specifications.
- 2) Before painting, clean greasy oily spots with turpentine or benzine. Remove rust and scale. Touch up welds, cuts, scratches and scuffed marks with metal protective primer.

D. Wood

- 1) Touch up knots, resinous spots with shellac ten (10) hours prior to applying prime coat. Putty nail holes, cracks, blemishes after prime coat has dried. Match putty to shade of finish coat.

4. Application:

- A. Follow manufacturer's recommendations and instructions carefully so as to provide the best quality work.
- B. Equipment shall be kept clean and in proper condition to provide best quality work as intended by this Specification.

- C. All materials shall be applied under adequate illumination, evenly spread and smoothly applied free of runs, sags, holidays, lap marks, air bubbles and pin holes to assure a smooth finish.
 - D. Apply all material in strict accordance with manufacturer's recommendations and proper environmental conditions.
 - E. Do no spray painting without prior approval.
 - F. Batch enough of the various colors to complete job.
 - G. Sand and dust between coats; surfaces to be dry and thoroughly clean.
 - H. Undercoats shall be tinted with the color of the finish coat.
 - I. Apply materials evenly spread and flowed on without runs or sags.
 - J. The number of finish coats required is shown on the schedule included in this Section. The coats scheduled are field applied coats, and shall be in addition to prime coats or any special preparation.
 - K. Should any coat or coating be deemed unsatisfactory, it shall be sanded and additional coats applied as necessary until satisfactory finish is achieved.
 - L. Protection: Concrete floor slabs may be exposed in many areas. Protect and cover concrete floor during entire operation to avoid blemish to floor. Damaged or blemished areas shall be removed and replaced. Chemical compounds remaining where painting equipment, supplies and materials have been stored or set-up shall be removed at Contractor's expense.
5. Inspection:
- A. Request acceptance of each coat before applying succeeding coats.
 - B. Touch-up and repair all work that is not acceptable to the Architect and request final acceptance.
6. Cleaning:
- A. Remove paint spatters from glass, plumbing fixtures and adjoining surfaces.
 - B. Repair any damage to coatings or surfaces caused by cleaning operations.
 - C. Remove debris and surplus materials from the job site and leave storage area clean.

D. Leave job perfect, free from blemish.

7. Repairs:

A. Make sure area to be repaired is spackled, then sanded smooth and level.

B. The area patched must be then spot primed.

end of section

