SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Non-structural framing which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.
B. Section Includes:
   1. Non-load-bearing steel framing systems for interior gypsum board assemblies.
   2. Suspension systems for interior gypsum ceilings, soffits, and grid systems.
C. Related Requirements:
   1. Section 054000 "Cold-Formed Metal Framing" for exterior and interior load-bearing and exterior non-load-bearing wall studs; floor joists; roof rafters and ceiling joists; and roof trusses.

1.3 ACTION SUBMITTALS
A. Product Data: For each type of product.
B. LEED Submittals:
   1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.

1.4 INFORMATIONAL SUBMITTALS
A. Evaluation Reports: For dimpled steel studs and runners and firestop tracks, from ICC-ES.
PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 FRAMING SYSTEMS

A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of pre-consumer recycled content not less than twenty five (25) percent.

B. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

C. Studs and Runners: ASTM C 645 Retain both "Steel Studs and Runners" and "Dimpled Steel Studs and Runners" subparagraphs below and option in "Studs and Runners" Paragraph above to allow Contractor to choose type of steel studs and runners.

D. Slip-Type Head Joints: Where indicated, provide one of the following:

E. Firestop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of the structure while maintaining continuity of fire-resistance-rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs.

F. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.

G. Cold-Rolled Channel Bridging: Steel, 0.053-inch (1.34-mm) minimum base-metal thickness, with minimum 1/2-inch- (13-mm-) wide flanges.

H. Hat-Shaped, Rigid Furring Channels: ASTM C 645.

I. Resilient Furring Channels: 1/2-inch- (13-mm-) deep, steel sheet members designed to reduce sound transmission.

J. Cold-Rolled Furring Channels: 0.053-inch (1.34-mm) uncoated-steel thickness, with minimum 1/2-inch- (13-mm-) wide flanges.
K. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches (32 mm), wall attachment flange of 7/8 inch (22 mm), minimum uncoated-metal thickness of 0.018 inch (0.45 mm), and depth required to fit insulation thickness indicated.

2.3 SUSPENSION SYSTEMS

A. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch- (1.59-mm-) diameter wire, or double strand of 0.048-inch- (1.21-mm-) diameter wire.

B. Hanger Attachments to Concrete: Anchors, ASTM E 488; Powder-Actuated Fasteners, ASTM E 1190

C. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.16 inch (4.12 mm) in diameter.

D. Flat Hangers: Steel sheet, in size indicated on Drawings.

E. Carrying Channels: Cold-rolled, commercial-steel sheet with flanges.

F. Furring Channels (Furring Members):
   1. Dimpled Steel Studs and Runners: ASTM C 645.
   2. Hat-Shaped, Rigid Furring Channels: ASTM C 645, 7/8 inch (22 mm) deep.
   3. Resilient Furring Channels: 1/2-inch- (13-mm-) deep members designed to reduce sound transmission.

G. Grid Suspension System for Gypsum Board Ceilings: ASTM C 645, direct-hung system composed of main beams and cross-furring members that interlock.

2.4 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards.
   1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

B. Isolation Strip at Exterior Walls: Provide one of the following:
   1. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No. 15 asphalt felt), non-perforated.
   2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch (3.2 mm) thick, in width to suit steel stud size.
PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.

1. Set aside scrap material to be returned to manufacturer for recycling into new product.

END OF SECTION 092216
SECTION 092400 - CEMENT PLASTERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Interior portland cement plasterwork on metal lath unit masonry and monolithic concrete.
   2. Exterior portland cement plasterwork (stucco) on metal lath unit masonry and monolithic concrete.

B. Related Sections:
   1. Section 054000 "Cold-Formed Metal Framing" for structural, load-bearing (transverse and axial) steel studs and joists that support lath and portland cement plaster.
   2. Section 061000 "Rough Carpentry" for wood framing and furring included in portland cement plaster assemblies.
   3. Section 061600 "Sheathing" for sheathing and water-resistant barriers included in portland cement plaster assemblies.
   4. Section 072100 "Thermal Insulation" for thermal insulations and vapor retarders included in portland cement plaster assemblies.
   5. Section 092216 "Non-Structural Metal Framing" for non-structural framing and suspension systems that support lath and portland cement plaster.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. LEED Submittals:
   1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.
   2. Product Data for Credit IEQ 4.1: For sealants, documentation including printed statement of VOC content.
   3. Laboratory Test Reports for Credit IEQ 4: For sealants, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
C. Shop Drawings: Show locations and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other work.

D. Samples for Initial Selection: For each type of factory-prepared finish coat indicated.

E. Samples for Verification: For each type of factory-prepared, colored, textured finish coat indicated; 12 by 12 inches (305 by 305 mm), and prepared on rigid backing.

1.4 QUALITY ASSURANCE

A. Fire-Resistance Ratings: Where indicated, provide portland cement plaster assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

B. Sound-Transmission Characteristics: Where indicated, provide portland cement plaster assemblies identical to those of assemblies tested for STC ratings per ASTM E 90 and classified according to ASTM E 413 by a qualified testing agency.

C. Mockups: Before plastering, install mockups of at least 100 sq. ft. (9.3 sq. m) in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Install mockups for each type of finish indicated.
2. For interior plasterwork, simulate finished lighting conditions for review of mockups.
3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 - PRODUCTS

2.1 METAL LATH


B. Wire-Fabric Lath:

C. Paper Backing: FS UU-B-790, Type I.

2.2 ACCESSORIES

A. General: Comply with ASTM C 1063 and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.
2.3 MISCELLANEOUS MATERIALS

A. Water for Mixing: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.

B. Fiber for Base Coat: Alkaline-resistant glass or polypropylene fibers, 1/2 inch (13 mm) long, free of contaminants, manufactured for use in portland cement plaster.

C. Bonding Compound: ASTM C 932.

D. Steel Drill Screws: For metal-to-metal fastening, ASTM C 1002 or ASTM C 954, as required by thickness of metal being fastened; with pan head that is suitable for application; in lengths required to achieve penetration through joined materials of no fewer than three exposed threads.

E. Fasteners for Attaching Metal Lath to Substrates: Complying with ASTM C 1063.

F. Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, not less than 0.0475-inch (1.21-mm) diameter, unless otherwise indicated.

G. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

H. Acoustical Sealant: As specified in Section 079200 "Joint Sealants."

2.4 PLASTER MATERIALS


B. Masonry Cement: ASTM C 91, Type N.

C. Plastic Cement: ASTM C 1328.

D. Colorants for Job-Mixed Finish Coats: Colorfast mineral pigments that produce finish plaster color to match Architect's sample.

E. Lime: ASTM C 206, Type S; or ASTM C 207, Type S.

F. Sand Aggregate: ASTM C 897.

G. Perlite Aggregate: ASTM C 35.


I. Acrylic-Based Finish Coatings: Factory-mixed acrylic-emulsion coating systems, formulated with colorfast mineral pigments and fine aggregates; for use over portland cement plaster base coats. Include manufacturer's recommended primers and sealing topcoats for acrylic-based finishes.
2.5 PLASTER MIXES

A. General: Comply with ASTM C 926 for applications indicated.

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.
   1. Set aside scrap material to be returned to manufacturer for recycling into new product.

END OF SECTION 092400
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Gypsum board which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section Includes:

1. Interior gypsum board.
2. Tile backing panels.

C. Related Requirements:

1. Section 092216 "Non-Structural Metal Framing" for non-structural framing and suspension systems that support gypsum board panels.
2. Section 093000 "Tiling" for cementitious backer units installed as substrates for ceramic tile.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. LEED Submittals:

1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.
2. Product Certificates for Credit MR 5: For products and materials required to comply with requirements for regional materials, certificates indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating distance to Project, cost for each regional material, and fraction by weight that is considered regional.
3. Product Data for Credit IEQ 4.1: For adhesives used to laminate gypsum board panels to substrates, documentation including printed statement of VOC content.
PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 GYPSUM BOARD, GENERAL

A. Recycled Content of Gypsum Panel Products: Postconsumer recycled content plus one-half of pre-consumer recycled content, percentage at contractors option.

B. Regional Materials: Gypsum panel products shall be manufactured within 500 miles (800 km) of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.

C. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 INTERIOR GYPSUM BOARD

A. Gypsum Wallboard: ASTM C 1396/C 1396M.

B. Gypsum Board, Type X: ASTM C 1396/C 1396M.

C. Flexible Gypsum Board: ASTM C 1396/C 1396M. Manufactured to bend to fit radii and to be more flexible than standard regular-type gypsum board of same thickness.

D. Gypsum Ceiling Board: ASTM C 1396/C 1396M.

E. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.

2.4 EXTERIOR GYPSUM BOARD FOR CEILINGS AND SOFFITS

A. Exterior Gypsum Soffit Board: ASTM C 1396/C 1396M, with manufacturer's standard edges.

B. Glass-Mat Gypsum Sheathing Board: ASTM C 1177/C 1177M, with fiberglass mat laminated to both sides and with manufacturer's standard edges.

C. Cellulose Fiber-Reinforced Gypsum Sheathing Board: ASTM C 1278/C 1278M, gypsum sheathing, with manufacturer's standard edges.
D. Water Resistant Gypsum Backing Board: ASTM C 1396/C1396M, with manufacturer’s standard edges.

2.5 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.
C. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.
   1. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221 (ASTM B 221M), Alloy 6063-T5.

2.6 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.
B. Joint Tape:
C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
D. Joint Compound for Exterior Applications:
E. Joint Compound for Tile Backing Panels:

2.7 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
D. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
E. Acoustical Joint Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
F. Thermal Insulation: As specified in Section 072100 "Thermal Insulation."
G. Vapor Retarder: As specified in Section 072100 "Thermal Insulation."

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.

B. 1. Set aside scrap material to be returned to manufacturer for recycling into new product.

END OF SECTION 092900
SECTION 093000 – CERAMIC TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Ceramic tile which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section Includes:
   1. Ceramic tile.
   2. Setting adhesives and sealants.
   3. Waterproof membrane.
   5. Tile backing panels.
   6. Metal edge strips.

C. Related Sections:
   1. Section 079200 "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.
   2. Section 092900 "Gypsum Board" for cementitious backer units.

1.3 DEFINITIONS

A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.


C. Module Size: Actual tile size plus joint width indicated.

D. Face Size: Actual tile size, excluding spacer lugs.
1.4 PERFORMANCE REQUIREMENTS

A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. LEED Submittals:

1. Product Data for Credit IEQ 4.1: For adhesives and sealants, documentation including printed statement of VOC content.
2. Product Data for Credit IEQ 4.3: For adhesives and grouts, documentation including printed statement of VOC content.

C. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.

D. Samples for Initial Selection: For each type of tile and grout indicated. Include Samples of accessories involving color selection.

E. Samples for Verification:

1. Full-size units of each type and composition of tile and for each color and finish required.
2. Assembled samples mounted on a rigid panel, with grouted joints, for each type and composition of tile and for each color and finish required. Make samples at least 12 inches (300 mm) square, but not fewer than 4 tiles. Use grout of type and in color or colors approved for completed Work.
3. Full-size units of each type of trim and accessory.
4. Stone thresholds in 6-inch (150-mm) lengths.
5. Metal edge strips in 6-inch (150-mm) lengths.

F. Recycled Content: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating costs for each product having recycled content.

G. Local/regional Materials: For each material, including its source, cost, and the fraction by weight that is considered regional and that has been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.

H. VOC Content: For adhesives and sealants, for site installation including printed statement of VOC content.

1. Indicate VOC limits of the product. Submit MSDS highlighting VOC limits.
2. Submit manufacturer’s certification that products comply with SCAQMD Rule 1168 in areas where exposure to freeze/thaw conditions and direct exposure to moisture will not occur. In areas where freeze/thaw conditions do exist or direct exposure to moisture can occur, submit manufacturer’s certification that products comply with Bat Area AWMD.
Reg. 8, Rule 51 for containers larger than 16 oz and with California Air Resource Board (CARB) for containers 16 oz or less.

I. Submit environmental data in accordance with Table 1 of ASTM E2129 for products provided under work of this Section.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer.

B. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.

C. Product Certificates: For each type of product, signed by product manufacturer.

D. Material Test Reports: For each tile-setting and -grouting product.

1.7 QUALITY ASSURANCE

A. Source Limitations for Tile: Obtain tile of each type and color or finish from one source or producer.

1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.

PART 2 - PRODUCTS

2.1 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard grade requirements unless otherwise indicated.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCA installation methods specified in tile installation schedules, and other requirements specified.

C. Floor Score Compliance: Tile for floors shall comply with requirements of Floor Score Standard.

D. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

E. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.
F. Factory-Applied Temporary Protective Coating: Where indicated under tile type, protect exposed surfaces of tile against adherence of mortar and grout by precoating with continuous film of petroleum paraffin wax, applied hot. Do not coat unexposed tile surfaces.

G. VOC Content: Adhesives applied on-site on the interior of the building and products used on the interior of the building shall comply with VOC limits as specified in Section 01 81 13 Sustainable Design Requirements.
   1. Use materials that have the minimum VOC content in units of 500 g/l when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

H. Ceramic Tile Recycled Content: Minimum percentage post-consumer recycled content or minimum percentage pre-consumer recycled content at Contractor’s option.

2.2 TILE PRODUCTS

A. Tile Type: Factory-mounted unglazed ceramic mosaic tile.
   1. Manufacturers: Subject to compliance with requirements, provide products by the following:
      a. Daltilce; Division of Dal-Tile International Inc.
   2. Composition: Porcelain.
   3. Module Size: 1 by 1 inch (25.4 by 25.4 mm) or 2 by 2 inches (50.8 by 50.8 mm).
   4. Thickness: 1/4 inch (6.35 mm).
   5. Face: Plain with cushion edges.
   6. Surface: Smooth, without or Slip resistant, with abrasive admixture.
   7. Tile Color and Pattern: As selected by Architect from manufacturer's full range.
   8. Grout Color: As selected by Architect from manufacturer's full range.
   9. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:

B. Tile Type: Glazed wall tile.
   1. Manufacturers: Subject to compliance with requirements, provide products by the following:
      a. Daltilce; Division of Dal-Tile International Inc.
   3. Thickness: 5/16 inch (8 mm).
   4. Face: Plain with modified square edges or cushion edges, Plain with modified square edges, Plain with cushion edges, Pattern of design indicated, with manufacturer's standard edges.
   5. Finish: Bright, opaque, Bright, clear, Mat, opaque, Mat, clear, Semimat, opaque, Semimat, clear, Vellum, opaque, Vellum, clear, Crystalline glaze.
   6. Tile Color and Pattern: As selected by Architect from manufacturer's full range.
   7. Grout Color: As selected by Architect from manufacturer's full range.
9. Mounting: Pregrouted sheets of tiles factory assembled and grouted with manufacturer's standard white silicone rubber.

10. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:

C. Accessories: Provide vitreous china accessories of type and size indicated, suitable for installing by same method as adjoining wall tile.

1. Color and Finish: As selected by Architect from manufacturer's full range.

2.3 TILE BACKING PANELS

A. Cementitious Backer Units: ANSI A118.9 or ASTM C 1325, in maximum lengths available to minimize end-to-end butt joints.

B. Fiber-Cement Underlayment: ASTM C 1288, in maximum lengths available to minimize end-to-end butt joints.

2.4 WATERPROOF MEMBRANE

A. General: Manufacturer's standard product that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.

B. Chlorinated Polyethylene Sheet: Nonplasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric; 0.030-inch (0.76-mm) nominal thickness.

C. PVC Sheet: Two layers of PVC sheet heat-fused together and to facings of nonwoven polyester; 0.040-inch (1.01-mm) nominal thickness.

D. Polyethylene Sheet: Polyethylene faced on both sides with fleece webbing; 0.008-inch (0.203-mm) nominal thickness.

E. Fabric-Reinforced, Modified-Bituminous Sheet: Self-adhering, SBS-modified-bituminous sheet with woven reinforcement facing; 0.040-inch (1.01-mm) nominal thickness.


G. Fluid-Applied Membrane: Liquid-latex rubber or elastomeric polymer.

H. Latex-Portland Cement: Flexible mortar consisting of cement-based mix and latex additive.

I. Urethane Waterproofing and Tile-Setting Adhesive.

2.5 CRACK ISOLATION MEMBRANE

A. General: Manufacturer's standard product, selected from the following, that complies with ANSI A118.12 for standard or high performance and is recommended by the manufacturer for...
the application indicated. Include reinforcement and accessories recommended by manufacturer.

B. Chlorinated Polyethylene Sheet: Non-plasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric; 0.030-inch (0.76-mm) nominal thickness.

C. PVC Sheet: Two layers of PVC sheet heat-fused together and to facings of nonwoven polyester; 0.040-inch (1.01-mm) nominal thickness.

D. Polyethylene Sheet: Polyethylene faced on both sides with fleece webbing; 0.008-inch (0.203-mm) nominal thickness.

E. Corrugated Polyethylene: Corrugated polyethylene with dovetail-shaped corrugations and with anchoring webbing on the underside; 3/16-inch (4-mm) nominal thickness.

F. Fabric-Reinforced, Modified-Bituminous Sheet: Self-adhering, modified-bituminous sheet with fabric reinforcement facing; 0.040-inch (1.01-mm) nominal thickness.


H. Fluid-Applied Membrane: Liquid-latex rubber or elastomeric polymer.

I. Latex-Portland Cement: Flexible mortar consisting of cement-based mix and latex additive.

J. Urethane Crack Isolation Membrane and Tile-Setting Adhesive.

2.6 SETTING MATERIALS


E. Water-Cleanable, Tile-Setting Epoxy: ANSI A118.3.

F. Chemical-Resistant Furan Mortar: ANSI A118.5.

G. Organic Adhesive: ANSI A136.1, Type I.

2.7 GROUT MATERIALS

A. Sand-Portland Cement Grout: ANSI A108.10, composed of white or gray cement and white or colored aggregate as required to produce color indicated.

C. Polymer-Modified Tile Grout: ANSI A118.7.
D. Water-Cleanable Epoxy Grout: ANSI A118.3.
E. Chemical-Resistant Furan Grout: ANSI A118.5.
F. Grout for Pre-grouted Tile Sheets: Same product used in factory to pregrout tile sheets.

2.8 ELASTOMERIC SEALANTS
A. General: Provide sealants, primers, backer rods, and other sealant accessories that comply with the following requirements and with the applicable requirements in Section 079200 "Joint Sealants."
B. Retain first subparagraph below if required for LEED-NC, Credit IEQ 4.1.
C. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints unless otherwise indicated.
D. One-Part, Mildew-Resistant Silicone Sealant: ASTM C 920; Type S; Grade NS; Class 25.
E. Multipart, Pourable Urethane Sealant for Use T: ASTM C 920; Type M; Grade P; Class 25; Uses T, M, A, and, as applicable to joint substrates indicated, O.
F. Chemical-Resistant Sealants: For chemical-resistant floors, provide chemical-resistant elastomeric sealant of type recommended and produced by chemical-resistant mortar and grout manufacturer for type of application indicated, with proven service record and compatibility with tile and other setting materials, and with chemical resistance equivalent to mortar/grout.

2.9 MISCELLANEOUS MATERIALS
A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
B. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.
C. Grout Sealer: Manufacturer's standard silicone product for sealing grout joints and that does not change color or appearance of grout.

2.10 MIXING MORTARS AND GROUT
A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
B. Add materials, water, and additives in accurate proportions.
C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

2.11 ACCESSORIES

A. Adhesive:
   1. Toxicity/IEQ: Comply with applicable regulations regarding toxic and hazardous materials, GS-36 for Commercial Adhesive, South Coast Air Quality Management District Rule 1168 as specified.

B. Urethane Waterproofing and Tile-Setting Adhesive: Comply with applicable regulations regarding minimum VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. Urethane Crack Isolation Membrane and Tile-Setting Adhesive: Comply with applicable regulations regarding minimum VOC content when calculated according to 40 CFR Subpart D (EPA Method 24).

D. Water-Cleanable, Tile-Setting Epoxy: ANSI A118.3 Comply with applicable regulations regarding minimum VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

E. Organic Adhesive: ANSI A136.1 Type 1. Comply with applicable regulations regarding minimum VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

F. Sealants:
   1. Toxicity/IEQ: Comply with applicable regulations regarding toxic and hazardous materials, Bay Area Air Quality Management District Reg. 8 Rule 51, and as specified.

G. Prepared Grouts:
   1. Toxicity/IEQ: Cement based, petroleum-free and plastic-free grout; ANSI A 118.4.

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.
   1. Set aside scrap material to be returned to manufacturer for recycling into new product.

END OF SECTION 093000
SECTION 095123 - ACOUSTICAL TILE CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Acoustical tile ceilings which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B.

C. Section Includes:

1. Acoustical tiles for ceilings.
2. Concealed suspension systems.

D. Products furnished, but not installed under this Section, include anchors, clips, and other ceiling attachment devices to be cast in concrete.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. LEED Submittals:

1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating costs for each product having recycled content.

2. Product Data for Credit EQ 4.1: For adhesives and sealants, documentation including printed statement of VOC content.

3. Laboratory Test Reports for Credit EQ 4: For ceiling systems, adhesives and sealants, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services’ “Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers.”

C. Samples: For each exposed product and for each color and texture specified, 6-inches- (150-mm-) in size.

D. Samples for Initial Selection: For components with factory-applied color finishes.
E. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of size indicated below.

1. Acoustical Tile: Set of full-size Samples of each type, color, pattern, and texture.
2. Concealed Suspension-System Members: 6-inch- (150-mm-) long Sample of each type.
3. Exposed Moldings and Trim: Set of 6-inch- (150-mm-) long Samples of each type and color.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Ceiling suspension-system members.
2. Method of attaching hangers to building structure.
   a. Furnish layouts for cast-in-place anchors, clips, and other ceiling attachment devices whose installation is specified in other Sections.
3. Size and location of initial access modules for acoustical tile.
4. Ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.

B. Qualification Data: For testing agency.

C. Product Test Reports: For each acoustical tile ceiling, for tests performed by manufacturer and witnessed by a qualified testing agency.

D. Evaluation Reports: For each acoustical tile ceiling suspension system and anchor and fastener type, from ICC-ES.

E. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For finishes to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to the National Voluntary Laboratory Accreditation Program (NVLAP) for testing indicated.

B. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockup of typical ceiling area as shown on Drawings.
2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Acoustical ceiling shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

B. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   1. Flame-Spread Index: Comply with ASTM E 1264 for Class A materials.
   2. Smoke-Developed Index: 450 or less.

C. Fire-Resistance Ratings: Comply with ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.2 ACOUSTICAL TILES, GENERAL

A. Low-Emitting Materials: Acoustical tile ceilings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

B. Source Limitations:
   1. Acoustical Ceiling Tile: Obtain each type from single source from single manufacturer.
   2. Suspension System: Obtain each type from single source from single manufacturer.

C. Source Limitations: Obtain each type of acoustical ceiling tile and supporting suspension system from single source from single manufacturer.

D. Recycled Content: Postconsumer recycled content plus one-half of pre-consumer recycled content.

E. Acoustical Tile Standard: Provide manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectances unless otherwise indicated.
   1. Mounting Method for Measuring NRC: Type E-400; plenum mounting in which face of test specimen is 15-3/4 inches (400 mm) away from test surface according to ASTM E 795.

F. Acoustical Tile Colors and Patterns: Match appearance characteristics indicated for each product type.
1. Where appearance characteristics of acoustical tiles are indicated by referencing pattern
designations in ASTM E 1264 and not manufacturers' proprietary product designations,
provide products selected by Architect from each manufacturer's full range that comply
with requirements indicated for type, pattern, color, light reflectance, acoustical
performance, edge detail, and size.

2.3 ACOUSTICAL TILES

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. Armstrong World Industries, Inc.

B. Classification: Provide tiles complying with ASTM E 1264 for type, form, and pattern as follows:

1. Type and Form: Type III, mineral base with painted finish; Form 1, nodular or 2, water
felted or 4, cast or molded.
2. Type and Form: Rectangular.

C. Color: White

D. LR: Not less than 0.65 or 0.70 or 0.75 or 0.80.

E. NRC: Not less than 0.50 or 0.55 or 0.60 or 0.60 or 0.70.

F. CAC: Not less than 20 or 25 or 30 or 35 or 40.

G. AC: Not less than 170 or 180 or 190 or 200 or 210.

H. Edge/Joint Detail: Square.

I. Thickness: 5/8 inch (15 mm) or 3/4 inch (19 mm) match current installations on campus.

J. Modular Size: As indicated on Drawings.

K. Broad Spectrum Antimicrobial Fungicide and Bactericide Treatment: Provide acoustical tiles
treated with manufacturer's standard antimicrobial formulation that inhibits fungus, mold,
mildew, and gram-positive and gram-negative bacteria and showing no mold, mildew, or
bacterial growth when tested according to ASTM D 3273 and evaluated according to
ASTM D 3274 or ASTM G 21.

2.4 METAL SUSPENSION SYSTEMS, GENERAL

A. Recycled Content: Postconsumer recycled content plus one-half of pre-consumer recycled
content.

B. Metal Suspension-System Standard: Provide manufacturer's standard metal suspension systems of
types, structural classifications, and finishes indicated that comply with applicable requirements
in ASTM C 635/C 635M.
C. Attachment Devices: Size for five times the design load indicated in ASTM C 635/C 635M, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.

1. Anchors in Concrete: ASTM E 488 or ASTM E 1512 as applicable, conducted by a qualified testing and inspecting agency.

2. Power-Actuated Fasteners in Concrete: ASTM E 1190, conducted by a qualified testing and inspecting agency.

D. Wire Hangers, Braces, and Ties: ASTM A 641/A 641M, ASTM C 635/C 635M.

E. Hanger Rods or Flat Hangers: Mild steel, zinc coated or protected with rust-inhibitive paint.

F. Angle Hangers: Angles with legs not less than 7/8 inch (22 mm) wide; formed with 0.04-inch- (1-mm-) thick, galvanized-steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation; with bolted connections and 5/16-inch- (8-mm-) diameter bolts.

G. Seismic Struts: Manufacturer's standard compression struts designed to accommodate lateral forces.

H. Seismic Clips: Manufacturer's standard seismic clips designed and spaced to secure acoustical tiles in-place.

2.5 METAL SUSPENSION SYSTEM

A. Direct-Hung, Double-Web, Fire-Rated Suspension System: Main and cross runners roll formed from and capped with cold-rolled steel sheet, prepainted, electrolytically zinc coated, or hot-dip galvanized according to ASTM A 653/A 653M, G30 (Z90) coating designation.

2.6 METAL EDGE MOLDINGS AND TRIM

A. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations complying with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension-system runners.

B. Extruded-Aluminum Edge Moldings and Trim: Where indicated, provide manufacturer's extruded-aluminum edge moldings and trim of profile indicated or referenced by manufacturer's designations, including splice plates, corner pieces, and attachment and other clips and complying with seismic design requirements and the following:

2.7 ACOUSTICAL SEALANT

A. Acoustical Sealant: Manufacturer's standard sealant complying with ASTM C 834 and effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
2.8 MISCELLANEOUS MATERIALS

A. Acoustical Tile Adhesive: Type recommended by acoustical tile manufacturer, bearing UL label for Class 0-25 flame spread.

B. Staples: 5/16-inch- (8-mm-) long, divergent-point staples.

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.
   1. Set aside scrap material to be returned to manufacturer for recycling into new product.

END OF SECTION 095123
SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Resilient base and accessories which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section Includes:
   1. Resilient base.
   2. Resilient molding accessories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. LEED Submittals:
   1. Product Data for Credit IEQ 4.1: For adhesives, documentation including printed statement of VOC content.
   2. Laboratory Test Reports for Credit IEQ 4.1: For adhesives, documentation indicating that products comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
   3. Product Data for Credit IEQ 4.3: For adhesives, documentation including printed statement of VOC content.
   4. Product Data for Credit IEQ 4.3: For resilient stair accessories, documentation from an independent testing agency indicating compliance with the FloorScore standard.
   5. Laboratory Test Reports for Credit IEQ 4.3: For resilient stair accessories, documentation indicating that products comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

C. Samples: For each exposed product and for each color and texture specified, not less than 12 inches (300 mm) long.
D. Samples for Initial Selection: For each type of product indicated.

E. Samples for Verification: For each type of product indicated and for each color, texture, and pattern required in manufacturer's standard-size Samples, but not less than 12 inches (300 mm) long.

F. Product Schedule: For resilient base and accessory products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. FloorScore Compliance: Resilient base shall comply with requirements of FloorScore certification.

B. Low-Emitting Materials: Flooring system shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

2.2 THERMOSET-RUBBER BASE

A. Manufacturers: Subject to compliance with requirements, [provide products by the following] [provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:

1. Burke Mercer Flooring Products, Division of Burke Industries Inc.

B. Product Standard: ASTM F 1861, Type TS (rubber, vulcanized thermoset), Group I (solid, homogeneous).

1. Style and Location:
   a. Style A, Straight: Provide in areas with carpet.
   b. Style B, Cove: Provide in areas with resilient flooring.

C. Thickness: 0.125 inch (3.2 mm).

D. Height: 4 inches (102 mm).

E. Lengths: Coils in manufacturer's standard length.

F. Outside Corners: Preformed.

G. Inside Corners: Preformed.

H. Colors: As selected by Architect from full range of industry colors.
2.3 THERMOPLASTIC-RUBBER BASE

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. Burke Mercer Flooring Products, Division of Burke Industries Inc.

B. Product Standard: ASTM F 1861, Type TP (rubber, thermoplastic).

2. Style and Location:
   a. Style A, Straight: Provide in areas with carpet.
   b. Style B, Cove: Provide in areas with resilient flooring.

C. Thickness: 0.125 inch (3.2 mm).

D. Height: 4 inches (102 mm).

E. Lengths: Coils in manufacturer's standard length.

F. Outside Corners: Preformed.

G. Inside Corners: Preformed.

H. Colors: As selected by Architect from full range of industry colors.

2.4 VINYL BASE

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. Burke Mercer Flooring Products, Division of Burke Industries Inc.

B. Product Standard: ASTM F 1861, Type TV (vinyl, thermoplastic).

2. Style and Location:
   a. Style A, Straight: Provide in areas with carpet.
   b. Style B, Cove: Provide in areas with resilient flooring.

C. Minimum Thickness: 0.125 inch (3.2 mm)

D. Height: 4 inches (102 mm).

E. Lengths: Coils in manufacturer's standard length.

F. Outside Corners: Preformed.

G. Inside Corners: Preformed.

H. Colors and Patterns: As selected by Architect from full range of industry colors.
2.5 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

C. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edges of flooring, and in maximum available lengths to minimize running joints.

D. Floor Polish: Provide protective, liquid floor-polish products recommended by resilient stair-tread manufacturer.

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.
   1. Set aside scrap material to be returned to manufacturer for recycling into new product.

END OF SECTION 096513
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Resilient sheet flooring which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section includes vinyl and rubber sheet flooring.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. LEED Submittals:

1. Product Data for Credit IEQ 4.1: For adhesives and chemical-bonding compounds, documentation including printed statement of VOC content.

2. Laboratory Test Reports for Credit IEQ 4.1: For adhesives, documentation indicating that products comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

3. Product Data for Credit IEQ 4.3: For adhesives and chemical-bonding compounds, documentation including printed statement of VOC content.

4. Product Data for Credit IEQ 4.3: For resilient sheet flooring, documentation from an independent testing agency indicating compliance with the FloorScore standard.

5. Laboratory Test Reports for Credit IEQ 4.3: For flooring system and chemical bonding compounds, documentation indicating that products comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

C. Shop Drawings: For each type of flooring. Include flooring layouts, locations of seams, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.

1. Show details of special patterns.
D. Samples: For each exposed product and for each color and texture specified in manufacturer's standard size, but not less than 6-by-9-inch (150-by-230-mm) sections.

1. For heat-welding bead, manufacturer's standard-size Samples, but not less than 9 inches (230 mm) long, of each color required.

E. Samples for Initial Selection: For each type of resilient sheet flooring indicated.

F. Samples for Verification: In manufacturer's standard size, but not less than 6-by-9-inch (150-by-230-mm) sections of each different color and pattern of resilient sheet flooring required.

1. For heat-welding bead, manufacturer's standard-size Samples, but not less than 9 inches (230 mm) long, of each color required.

G. Welded-Seam Samples: For seamless-installation technique indicated and for each resilient sheet flooring product, color, and pattern required; with seam running lengthwise and in center of 6-by-9-inch (150-by-230-mm) Sample applied to a rigid backing and prepared by Installer for this Project.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For each type of resilient sheet flooring to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for resilient sheet flooring installation and seaming method indicated.

1. Engage an installer who employs workers for this Project who are trained or certified by resilient sheet flooring manufacturer for installation techniques required.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For resilient sheet flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
B. FloorScore Compliance: Resilient sheet flooring shall comply with requirements of FloorScore certification.

C. Low-Emitting Materials: Flooring system shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

2.2 UNBACKED VINYL SHEET FLOORING


B. Thickness: 0.080 inch (2.0 mm).

C. Wearing Surface: Smooth.

D. Sheet Width: As standard with manufacturer.

E. Seamless-Installation Method: Heat welded or Chemically bonded.

F. Colors and Patterns: As selected by Architect from full range of industry colors.

2.3 VINYL SHEET FLOORING WITH BACKING


B. Wearing Surface: Smooth.

C. Sheet Width: As standard with manufacturer.

D. Seamless-Installation Method: Heat welded or Chemically bonded.

E. Colors and Patterns: As selected by Architect from full range of industry colors.

2.4 UNBACKED RUBBER SHEET FLOORING


B. Wearing Surface: Smooth.

C. Sheet Width: As standard with manufacturer.

D. Seamless-Installation Method: Heat welded or Chemically bonded.

E. Colors and Patterns: As selected by Architect from full range of industry colors.
2.5 RUBBER SHEET FLOORING WITH BACKING

B. Wearing Surface: Smooth.
C. Sheet Width: As standard with manufacturer.
D. Seamless-Installation Method: Heat welded or Chemically bonded.
E. Colors and Patterns: As selected by Architect from full range of industry colors.

2.6 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient sheet flooring manufacturer for applications indicated.
B. Adhesives: Water-resistant type recommended by flooring and adhesive manufacturers to suit resilient sheet flooring and substrate conditions indicated.
C. Seamless-Installation Accessories:
   2. Chemical-Bonding Compound: Manufacturer's product for chemically bonding seams.
D. Integral-Flash-Cove-Base Accessories:
   1. Cove Strip.
   2. Corners.
E. Floor Polish: Provide protective, liquid floor-polish products recommended by resilient sheet flooring manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
   1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient sheet flooring.
B. Proceed with installation only after unsatisfactory conditions have been corrected.
3.2 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient sheet flooring.

B. Perform the following operations immediately after completing resilient sheet flooring installation:

1. Remove adhesive and other blemishes from surfaces.
2. Sweep and vacuum surfaces thoroughly.
3. Damp-mop surfaces to remove marks and soil.

C. Protect resilient sheet flooring from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Floor Polish: Remove soil, adhesive, and blemishes from flooring surfaces before applying liquid floor polish.

E. Cover resilient sheet flooring until Substantial Completion.

END OF SECTION 096516
SECTION 096519 - RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Resilient tile flooring which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section Includes:

1. Vinyl composition floor tile.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. LEED Submittals:

1. Product Data for Credit IEQ 4.1: For adhesives, sealants and chemical-bonding compounds, documentation including printed statement of VOC content.

2. Product Data for Credit IEQ 4.3: For adhesives and chemical-bonding compounds, documentation including printed statement of VOC content.

3. Product Data for Credit IEQ 4.3: For resilient tile flooring, documentation from an independent testing agency indicating compliance with the FloorScore standard.

C. Shop Drawings: For each type of floor tile. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.

1. Show details of special patterns.

D. Samples: Full-size units of each color and pattern of floor tile required.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.
1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.

1. Engage an installer who employs workers for this Project who are trained or certified by floor tile manufacturer for installation techniques required.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

B. FloorScore Compliance: Resilient tile flooring shall comply with requirements of FloorScore certification.

C. Low-Emitting Materials: Flooring system shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

D. This project shall conform to all requirements of California Building Code, 2010; and shall be approved by the California Division of the State Architect.

E. The design of this project shall be based on LEED Silver; however, the request for certification shall not be submitted.

F. ASTM and AISC requirements apply to all facets of this project.

2.2 VINYL COMPOSITION FLOOR TILE

A. Products: Subject to compliance with requirements, provide the following:

1. Armstrong World Industries, Inc; Premium Excelon.

C. Wearing Surface: Smooth Embossed. Class 1, solid-color or Class 2, through-pattern or Class 3, surface-pattern tile.

D. Thickness: 0.125 inch.

E. Size: 12 by 12 inches.

F. Colors and Patterns: As selected by Architect from full range of industry colors.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds:

B. Adhesives.

C. Floor Polish.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.
   1. Set aside scrap material to be returned to manufacturer for recycling into new product.

3.2 FLOOR TILE INSTALLATION

A. Lay tiles square with room axis, at a 45-degree angle with room axis and/or in pattern indicated.

3.3 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.

B. Perform the following operations immediately after completing floor tile installation:
   1. Remove adhesive and other blemishes from exposed surfaces.
   2. Sweep and vacuum surfaces thoroughly.
   3. Damp-mop surfaces to remove marks and soil.

C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

END OF SECTION 096519
SECTION 096813 - TILE CARPETING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Tile carpeting which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section includes modular carpet tile. Carpet to match College standard for design and style.

C. Related Requirements:

1. Section 024119 "Selective Demolition" for removing existing floor coverings.

2. Section 096513 "Resilient Base and Accessories" and Section 096519 "Resilient Tile Flooring" for resilient wall base and accessories installed with carpet tile.

1.3 DEFINITIONS

A. CRI: Carpet and Rug Institute

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include manufacturer's written data on physical characteristics, durability, and fade resistance.

2. Include installation recommendations for each type of substrate.

3. Recycled Content: As defined according to the Federal Trade Commission’s “Guide for the Use of Environmental Marketing Claims”, 16 CFR 260.7 (e), indicating the percentage and cost of post-consumer recycled content and percentage of salvaged/refurbished content as applicable.

4. VOC Data:

   a. For Tile Carpet and Backing: Meeting CRI’s “Green Label” program.

   b. For Installation Adhesive: Certification that VOC content of products complies with Bay Area AQMD Reg. 8, Rule 51 for containers larger than 16oz and with California Air Resource Board (CARB) for containers 16 oz or less, and that product is an Approved Adhesive Product under the CRI’s Green Label Program.

B. LEED Submittals:

Victor Valley Community College District
New Science/Health Building
Outline Specifications

TILE CARPETING 096813 - 1
1. **Product Data for Credit EQ 4.3:**
   
a. For carpet tile, documentation indicating compliance with testing and product requirements of CRI's "Green Label Plus" program.
b. For installation adhesive, documentation including printed statement of VOC content.

C. **Shop Drawings:** Show the following:

1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet tiles.
2. Carpet tile type, color, and dye lot.
3. Type of subfloor.
4. Type of installation.
5. Pattern of installation.
6. Pattern type, location, and direction.
7. Pile direction.
8. Type, color, and location of insets and borders.
9. Type, color, and location of edge, transition, and other accessory strips.
10. Transition details to other flooring materials.

D. **Samples:** For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.

2. Exposed Edge, Transition, and Other Accessory Stripping: 12-inch- (300-mm-) long Samples.

E. **Product Schedule:** For carpet tile. Use same designations indicated on Drawings.

F. **Sustainability:** Provide the Statement of the Achievement Level the carpet has attained for Silver, 37-51 points, based on specific Sustainable Attribute Performance for all product stages according to ANSI/NSF 140.

### 1.5 INFORMATIONAL SUBMITTALS

A. **Qualification Data:** For Installer.

B. **Product Test Reports:** For carpet tile, for tests performed by a qualified testing agency.

C. **Sample Warranty:** For special warranty.

### 1.6 CLOSEOUT SUBMITTALS

A. **Maintenance Data:** For carpet tiles to include in maintenance manuals. Include the following:

   1. Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
2. Precautions for cleaning materials and methods that could be detrimental to carpet tile.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who is certified by the International Certified Floor covering Installers Association at the Master II certification level.

B. Fire-Test-Response Ratings: Where indicated, provide carpet tile identical to those of assemblies tested for fire response according to NFPA 253 by a qualified testing agency.

C. This project shall conform to all requirements of California Building Code, 2010; and shall be approved by the California Division of the State Architect.

D. The design of this project shall be based on LEED Silver, however, the request for certification shall not be submitted.

E. ASTM and AISC requirements apply to all facets of this project.

1.8 WARRANTY

A. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.

1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.

2. Failures include, but are not limited to, more than 10 percent edge raveling, snags, runs, dimensional stability, excess static discharge, loss of tuft bind strength, loss of face fiber, and delamination.

3. Warranty Period: ten (10) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CARPET TILE

A. Products: Subject to compliance with requirements, provide one of the following:
   1. Shaw Carpets
   2. Collins and Aikman
   3. Lees

B. Color: As selected by Architect from manufacturer's full range.

C. Pattern: Match Architect's samples.

D. Fiber Content: 100 percent nylon 6, 6.

E. Primary Backing/Backcoating: Manufacturer's standard composite materials.

F. Secondary Backing: Manufacturer's standard material.
G. Size: 24 by 24 inches.

H. Applied Soil-Resistance Treatment

I. Antimicrobial Treatment

2.2 INSTALLATION ACCESSORIES

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

B. 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 is recommended by carpet tile manufacturer for releasable installation.

1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
2. Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
3. Adhesive: Low VOC material, to comply with Code requirements limiting combustibility and flammability for installed carpet. Adhesive must comply with CRI Green Label program document GS-36 for Commercial Adhesive, and with California Air Resources Board (CARB) for containers 16 oz or less, and as specified.

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.
1. Set aside scrap material to be returned to manufacturer for recycling into new product.

B. Indoor Air Quality
1. Temporary Ventilation: Provide temporary ventilation during work of this section.
   a. Ventilate products prior to installation. Remove from packaging and ventilate in a secure, dry, well-ventilated space free from strong contaminant sources and residues. Provide a temperature range of 60 degrees F Minimum to 90 degrees F maximum continuously for minimum 72 hours. Do not ventilate within limits of work unless otherwise approved by owner.

3.2 CLEANING AND PROTECTION

A. Perform the following operations immediately after installing carpet tile:
1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet tile manufacturer.
2. Remove yarns that protrude from carpet tile surface.
3. Vacuum carpet tile using commercial machine with face beater element.
4.

B. Protect installed carpet tile to comply with CRI 104, Section 16, “Protecting Indoor Installations.

C. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

END OF SECTION 096813
SECTION 096900 - ACCESS FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Access Flooring which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section Includes:
   1. Access-flooring panels.
   2. Understructure.
   3. Floor panel coverings.

C. Related Requirements:
   1. Section 233600 "Air Terminal Units" for variable-air-volume diffusers.
   2. Section 260526 "Grounding and Bonding for Electrical Systems" for connection to ground of access-flooring understructure.
   3. Section 033000 “Cast In Place Concrete for sub-floor and support for access flooring.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. LEED Submittals:
   1. Product Data for Credit IEQ 4.1: For pedestal-installation adhesives, documentation including printed statement of VOC content.
   2. Product Data for Credit IEQ 4.3: For pedestal-installation adhesives, documentation including printed statement of VOC content.
   3. Product Data for Credit IEQ 4.3: For floor panel coverings, documentation from an independent testing agency indicating compliance with the FloorScore Standard.
   4. Product Data for Credit IEQ 4.4: For particleboard used in steel-encapsulated, wood-core panels, documentation indicating that product contains no urea formaldehyde.

C. Shop Drawings: Include layout of access-flooring system and relationship to adjoining Work based on field-verified dimensions.
1. Details and sections with descriptive notes indicating materials, finishes, fasteners, typical and special edge conditions, accessories, and understructures.

D. Samples:

1. Floor Covering: Full-size units for each color and texture specified.
2. Exposed Metal Accessories: Approximately 10 inches (250 mm) in length.
3. One complete full-size floor panel, pedestal, and understructure unit for each type of access-flooring system required.

E. Samples for Initial Selection: For each type of product and exposed finish.

F. Samples for Verification: For the following products:

1. Floor Covering: Full-size units.
2. Exposed Metal Accessories: Approximately 10 inches (250 mm) in length.
3. One complete full-size floor panel, pedestal, and understructure unit for each type of access-flooring system required.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Certificates: For each type of access-flooring system.

C. Product Test Reports: For each type of flooring material and exposed finish, for tests performed by a qualified testing agency.

D. Seismic Design Calculations: For seismic design of access-flooring systems including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. Mockups: Build mockups to verify selections made under Sample submittals to demonstrate aesthetic effects and to set quality standards for materials and execution.

1. Build mockup of typical access-flooring assembly as shown on Drawings. Size to be an area no fewer than five floor panels in length by five floor panels in width.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Access flooring shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

B. Structural Performance: Provide access-flooring systems capable of complying with the following performance requirements according to testing procedures in CISCA's "Recommended Test Procedures for Access Floors":

C. Fire Performance:

1. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   a. Flame-Spread Index: 25 or less.
   b. Smoke-Developed Index: 450 or less.


D. Low-Emitting Materials: Flooring system shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.2 MANUFACTURERS

A. Source Limitations: Obtain access-flooring system from single source from single manufacturer.

2.3 FLOOR PANELS

A. Floor Panels, General: Provide modular panels interchangeable with other field panels without disturbing adjacent panels or understructure.

B. Cementitious-Core Steel Panels: Fabricated from cold-rolled steel sheet, with the die-cut flat top sheet and die-formed and stiffened bottom pan welded together, and with metal surfaces protected against corrosion by manufacturer's standard factory-applied finish. Fully grout internal spaces of completed units with manufacturer's standard cementitious fill.

C. Unfilled Steel Panels: Fabricated from cold-rolled steel sheet, with the die-cut flat top sheet and die-formed and stiffened bottom pan welded together, and with metal surfaces protected against corrosion by manufacturer's standard factory-applied finish.
2.4 UNDERSTRUCTURE

A. Pedestals: Assembly consisting of base, column with provisions for height adjustment, and head (cap); made of steel or aluminum.

B. Stringer Systems: Modular steel or aluminum stringer systems designed to bolt to pedestal heads and form a grid pattern. Protect steel components with manufacturer’s standard galvanized or corrosion-resistant paint finish.

2.5 FLOOR PANEL COVERINGS

A. FloorScore Compliance: Floor panel coverings shall comply with requirements of FloorScore Standard.

B. Static-Dissipative Vinyl Tile: Factory applied, ASTM F 1700, Class I (Monolithic Vinyl Tile), Type A (Smooth Surface), fabricated in one piece to cover panel face with edging.

C. Conductive Vinyl Tile: Factory applied, ASTM F 1700, Class I (Monolithic Vinyl Tile), Type A (Smooth Surface), fabricated in one piece to cover panel face with edging.

2.6 FABRICATION

A. Fabrication Tolerances:

1. Size: Plus or minus 0.020 inch (0.50 mm) of required size.
2. Squareness: Plus or minus 0.015 inch (0.38 mm) between diagonal measurements across top of panel.
3. Flatness: Plus or minus 0.035 inch (0.89 mm), measured on a diagonal on top of panel.

B. Panel Markings: Clearly and permanently mark floor panels on their underside with panel type and concentrated-load rating.

C. Bolted Panels: Provide panels with holes drilled in corners to align precisely with threaded holes in pedestal heads and to accept countersunk screws with heads flush with top of panel.

D. Cutouts: Fabricate cutouts in floor panels for cable penetrations and service outlets. Provide reinforcement or additional support, if needed, to make panels with cutouts comply with structural performance requirements.

2.7 ACCESSORIES

A. Adhesives: Manufacturer’s standard adhesive for bonding pedestal bases to subfloor.

1. Adhesive shall have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
2. Adhesive shall comply with the testing and product requirements of the California Department of Health Services’ “Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers.”
B. Post-Installed Anchors: For anchoring pedestal bases to subfloor, provide post-installed expansion anchors or threaded concrete screws made from carbon-steel components, zinc plated to comply with ASTM B 633.

C. Service Outlets: Standard UL-listed and -labeled assemblies, for recessed mounting flush with top of floor panels; for power, communication, and signal services; and complying with the following requirements:

D. Occupant Adjustable Diffusers: Manufacturer's standard diffusers.

E. Floor Grilles: Standard load-bearing grilles formed from aluminum to produce removable one-piece unit precisely fitted in factory-prepared openings of standard field panels, with adjustable/removable or without dampers and complying with the following requirements:

F. Plenum-Wall Brush Grommets: Self-sealing cable brush grommet.

G. Cavity Dividers: Provide manufacturer's standard metal dividers located where indicated to divide underfloor cavities.

H. Closures: Where underfloor cavity is not enclosed by abutting walls or other construction, provide metal-closure plates with manufacturer's standard finish.

I. Panel Lifting Device: Panel manufacturer's standard portable lifting device for each type of panel required for each computer room.

J. Perimeter Support: Where indicated, provide manufacturer's standard method for supporting panel edge and forming transition between access flooring and adjoining floor coverings at same level as access flooring.

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.

1. Set aside scrap material to be returned to manufacturer for recycling into new product.

END OF SECTION 096900
SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Exterior painting which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section includes surface preparation and the application of paint systems on the following exterior substrates:
   1. Concrete.
   2. Clay masonry.
   3. Concrete masonry units (CMU).
   4. Steel.
   5. Galvanized metal.
   6. Aluminum (not anodized or otherwise coated).
   7. Stainless-steel flashing.
   8. Wood.
   11. Exterior gypsum board.

C. Related Requirements:
   1. Section 051200 "Structural Steel Framing" for shop priming of metal substrates with primers specified in this Section.
   2. Section 099600 "High-Performance Coatings" for special-use coatings.
   3. Section 099123 "Interior Painting" for surface preparation and the application of paint systems on interior substrates.

1.3 DEFINITIONS

A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
C. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

D. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

E. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

F. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples for Initial Selection: For each type of topcoat product.

C. Samples for Verification: For each type of paint system and each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches (200 mm) square.
2. Step coats on Samples to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

D. Product List: For each product indicated, include the following:

1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
2. Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
3. VOC content.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Frazee Paint.
2. Sherwin-Williams Company (The).
3. Vista Paint.

2.2 PAINT, GENERAL

A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."

B. Material Compatibility:
1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

C. Colors: As selected by Architect from manufacturer's full range.

D. VOC Content: Coatings applied on-site on the interior of the building, exclusive of colorants added to a tint base, shall comply with VOC limits as specified in Section 01 81 13 Sustainable Design Requirements.

1. Use materials that have the minimum VOC content in units of g/L when calculated according to 40 CRR 59, Subpart D (EPA Method 24).

2. Flat Paints and Coatings: VOC content of not more than the minimum VOC content in units of g/L.

3. Non-flat Paints and Coatings; VOC content of not more than the minimum VOC content in units of g/L.

4. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).

5. Restricted Components: Paints and coatings shall not contain any of the following:

   a. Acrolein.
   b. Acrylonitrile.
   c. Antimony.
   d. Benzene.
   e. Butyl benzyl phthalate.
   f. Cadmium.
   g. Di (2-ethylhexyl) phthalate.
   h. Di-n-butyl phthalate.
   i. Di-n-octyl phthalate.
   j. 1,2-dichlorobenzene.
   k. Di-ethyl phthalate.
   l. Di-methyl phthalate.
   m. Ethyl benzene.
   n. Formaldehyde.
   o. Hexavalent chromium.
   p. Isophorone.
   q. Lead.
   r. Mercury.
   s. Methyl ethyl ketone.
   t. Methyl isobutyl ketone.
   u. Methylene chloride.
   v. Naphthalene.
   w. Toluene (methylbenzene).
   x. 1,1,1-trichloroethane.
   y. Vinyl chloride.

E. Low-Emitting Materials: Interior coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

Victor Valley Community College District
New Science/Health Building
Outline Specifications

EXTERIOR
PAINTING
099113 - 3
2.3  BLOCK FILLERS
    A.  Block Filler, Latex, Interior/Exterior: MPI #4

2.4  PRIMERS/SEALERS
    A.  Primer, Alkali Resistant, Water Based: MPI #3
    B.  Primer, Bonding, Water Based: MPI 17
    C.  Primer, Bonding, Solvent Based: MPI #69
    D.  Wood-Knot Sealer:  Sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.

2.5  METAL PRIMERS
    A.  Primer, Alkyd, Anti-Corrosive for Metal: MPI #79
    B.  Primer, Alkyd, Quick Dry, for Metal: MPI #76
    C.  Primer, Galvanized, Water Based: MPI #134
    D.  Primer, Galvanized:  As recommended in writing by topcoat manufacturer.
    E.  Primer, Quick Dry, for Aluminum: MPI #95

2.6  WATER-BASED PAINTS
    A.  Latex, Exterior Flat (Gloss Level 1): MPI #10
    B.  Latex, Exterior Low Sheen (Gloss Level 3-4): MPI #15
    C.  Latex, Exterior Semi-Gloss (Gloss Level 5): MPI #11
    D.  Latex, Exterior, Gloss (Gloss Level 6): MPI #119
    E.  Light Industrial Coating, Exterior, Water Based (Gloss Level 3): MPI #161
    F.  Light Industrial Coating, Exterior, Water Based, Semi-Gloss (Gloss Level 5): MPI #163
    G.  Light Industrial Coating, Exterior, Water Based, Gloss (Gloss Level 6): MPI #164

2.7  SOLVENT-BASED PAINTS
    A.  Alkyd, Exterior Flat (Gloss Level 1): MPI #8
    B.  Alkyd, Exterior, Semi-Gloss (Gloss Level 5): MPI #94
C. Alkyd, Exterior Gloss (Gloss Level 6): MPI #9
D. Alkyd, Quick Dry, Semi-Gloss (Gloss Level 5): MPI #81
E. Alkyd, Quick Dry, Gloss (Gloss Level 7): MPI #96

2.8 MPI #42: MPI #40 ALUMINUM PAINT
A. Aluminum Paint: MPI #1

2.9 FLOOR COATINGS
A. Sealer, Water Based, for Concrete Floors: MPI #99
B. Sealer, Solvent Based, for Concrete Floors: MPI #104
C. Floor Paint, Latex, Low Gloss (Maximum Gloss Level 3): MPI #60
D. Floor Enamel, Alkyd, Gloss (Gloss Level 6): MPI #27

2.10 SOURCE QUALITY CONTROL
A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:
   1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
   2. Testing agency will perform tests for compliance with product requirements.
   3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT
A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.
   1. Set aside scrap material to be returned to manufacturer for recycling into new product.
SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Interior painting which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section includes surface preparation and the application of paint systems on interior substrates:
   1. Concrete.
   2. Concrete masonry units (CMU).
   3. Steel.
   4. Cast iron.
   5. Galvanized metal.
   6. Aluminum (not anodized or otherwise coated).
   7. Wood.
   8. Gypsum board.

C. Related Requirements:
   1. Section 051200 "Structural Steel Framing" for shop priming of metal substrates with primers specified in this Section.
   2. Section 099113 "Exterior Painting" for surface preparation and the application of paint systems on exterior substrates.

1.3 DEFINITIONS

A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

D. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
E. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
F. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
G. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. LEED Submittals:
   1. Product Data for Credit EQ 4.2: For paints and coatings, including printed statement of VOC content and chemical components.
   2. Low-Emitting Materials: Complying with LEED for Schools Credit EQ 4.

C. Samples for Initial Selection: For each type of topcoat product.

D. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.
   1. Submit Samples on rigid backing, 8 inches (200 mm) square.
   2. Step coats on Samples to show each coat required for system.
   3. Label each coat of each Sample.
   4. Label each Sample for location and application area.

E. Product List: For each product indicated, include the following:
   1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
   2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.
   3. VOC content.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Frazee Paint.
   2. Sherwin-Williams Company (The).
   3. Vista Paint.

2.2 PAINT, GENERAL

A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
B. Toxicity/IEQ: Comply with applicable regulations regarding toxic and hazardous materials, and as specified. Paints and coatings must meet or exceed the VOC and chemical component limits of Green Seal requirements.

C. Material Compatibility:
   1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
   2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

D. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction and, for interior paints and coatings applied at Project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
   1. Nonflat Paints and Coatings: 150 g/L.
   2. Dry-Fog Coatings: 400 g/L.
   3. Primers, Sealers, and undercoaters: 200 g/L.
   4. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
   6. Pretreatment Wash Primers: 420 g/L.
   7. Floor Coatings: 100 g/L.
   8. Shellacs, Clear: 730 g/L.
   9. Shellacs, Pigmented: 550 g/L.

E. Colors: As selected by Architect from manufacturer's full range.

2.3 MATERIALS, GENERAL

A. VOC Content: Coatings applied on-site on the interior of the building, exclusive of colorants added to a tint base, shall comply with VOC limits as specified in Section 01 81 13 Sustainable Design Requirements.
   1. Use materials that have the minimum VOC content in units of g/L when calculated according to 40 CRR 59, Subpart D (EPA Method 24).
   2. Flat Paints and Coatings: VOC content of not more than the minimum VOC content in units of g/L.
   3. Non-flat Paints and Coatings; VOC content of not more that the minimum VOC content in units of g/L.
   4. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
   5. Restricted Components: Paints and coatings shall not contain any of the following:
      a. Acrolein.
      b. Acrylonitrile.
      c. Antimony.
      d. Benzene.
      e. Butyl benzyl phthalate.
f. Cadmium.
g. Di (2-ethylhexyl) phthalate.
h. Di-n-butyl phthalate.
i. Di-n-octyl phthalate.
j. 1,2-dichlorobenzene
k. Di-ethyl phthalate.
l. Di-methyl phthalate.
m. Ethyl benzene.
n. Formaldehyde.
o. Hexavalent chromium.
p. Isophorone.
q. Lead.
r. Mercury.
s. Methyl ethyl ketone.
t. Methyl isobutyl ketone.
u. Methylene chloride.
v. Naphthalene.
w. Toluene (methylbenzene).
x. 1,1,1-trichloroethane.
y. Vinyl chloride.

2.4 BLOCK FILLERS
A. Block Filler, Latex, Interior/Exterior: MPI #4.

2.5 PRIMERS/SEALERS
A. Primer Sealer, Latex, Interior: MPI #50.
B. Primer, Alkali Resistant, Water Based: MPI #3.
C. Primer Sealer, Interior, Institutional Low Odor/VOC: MPI #149.
D. Primer, Latex, for Interior Wood: MPI #39.
E. Primer Sealer, Alkyd, Interior: MPI #45.
F. Primer, Bonding, Water Based: MPI #17.
G. Primer, Bonding, Solvent Based: MPI #69.
H. Wood-Knot Sealer: Sealer recommended in writing by topcoat manufacturer for use in paint systems indicated.

2.6 METAL PRIMERS
A. Primer, Rust-Inhibitive, Water Based: MPI #107.
2.7 WATER-BASED PAINTS
A. Latex, Interior, (Gloss Level 2): MPI #44.
B. Latex, Interior, (Gloss Level 3): MPI #52.
C. Latex, Interior, (Gloss Level 4): MPI #43.
D. Latex, Interior, Semi-Gloss, (Gloss Level 5): MPI #54.
E. Latex, Interior, Gloss, (Gloss Level 6, except minimum gloss of 65 units at 60 degrees): MPI #114.
F. Latex, Interior, Institutional Low Odor/VOC, (Gloss Level 2): MPI #144.
H. Latex, Interior, Institutional Low Odor/VOC, Semi-Gloss (Gloss Level 5): MPI #147.
J. Latex, Interior, High Performance Architectural, (Gloss Level 3): MPI #139.
L. Latex, Interior, High Performance Architectural, Semi-Gloss (Gloss Level 5): MPI #141.
M. Light Industrial Coating, Interior, Water Based (Gloss Level 3): MPI #151.
O. Light Industrial Coating, Interior, Water Based, Gloss (Gloss Level 6): MPI #154.

2.8 SOLVENT-BASED PAINTS
A. Alkyd, Interior, (Gloss Level 3): MPI #51.
B. Alkyd, Interior, Semi-Gloss (Gloss Level 5): MPI #47.
C. Alkyd, Interior, Gloss (Gloss Level 6): MPI #48.
D. Alkyd, Quick Dry, Semi-Gloss (Gloss Level 5): MPI #81.
E. Alkyd, Quick Dry, Gloss (Gloss Level 7): MPI #96.

2.9 ALUMINUM PAINT
A. Aluminum Paint: MPI #1.

2.10 FLOOR COATINGS
A. Stain, Interior, for Concrete Floors: MPI #58.
B. Sealer, Water Based, for Concrete Floors: MPI #99.
C. Sealer, Solvent Based, for Concrete Floors: MPI #104.
D. Floor Paint, Latex, Low Gloss (Maximum Gloss Level 3): MPI #60.
E. Floor Enamel, Alkyd, Gloss (Gloss Level 6): MPI #27.

2.11 INTERIOR PAINTING SCHEDULE
A. Concrete Substrates, Non-traffic Surfaces:
   1. Latex System.
   2. Latex over latex aggregates system.
   3. Institutional low-odor/VOC latex system.
   4. High-performance architectural latex system.
B. Concrete Substrates, Traffic Surfaces:
   1. Latex floor enamel system.
C. Clay-Masonry Substrates:
   1. Latex system.
   2. Latex aggregate system.
   3. Institutional low-odor/VOC latex system.
   4. High-performance architectural latex system.
D. CMU Substrates:
   1. Latex system.
   2. Institutional low-odor/VOC latex system.
   3. High-performance architectural latex system.
E. Steel Substrates:
   1. Latex over alkyd primer system.
   2. Water-based dry-fall system.
   3. Institutional low-odor/VOC latex system.
   4. High-performance architectural latex system.
F. Galvanized-Metal Substrates:
1. Latex over waterborne primer system.
2. Water-based dry-fall system.
3. Institutional low-odor/VOC latex system.
4. High-performance architectural latex system.

G. Aluminum Substrates:
1. Latex system.
2. Institutional low-odor/VOC latex system.
3. High-performance architectural latex system.

H. Wood Substrates: Including wood trim, architectural woodwork, doors, windows, wood-based panel products, glued laminated construction, exposed joists, and/or exposed beams.
1. Latex system.
2. Latex over alkyd primer system.
3. Latex system.
4. High-performance architectural latex system.
5. Alkyd system.

I. Wood Substrates, Traffic Surfaces:
1. Latex floor paint system.

J. Fiberglass and Plastic Substrates:
1. Latex system.
2. Institutional low-odor/VOC latex system.
3. High-performance architectural latex system.

K. Gypsum Board and/or Plaster Substrates:
1. Latex system.
2. Institutional low-odor/VOC latex system.
3. High-performance architectural latex system.

L. Spray-Textured Ceiling Substrates:
1. Latex system.

M. Cotton or Canvas and ASJ Insulation-Covering Substrates: Including pipe and duct coverings.
1. Latex system.
2. Institutional low-odor/VOC latex system.

2.12 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove non-complying paint materials from Project site, pay for testing, and repaint surfaces painted
with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.
1. Set aside scrap material to be returned to manufacturer for recycling into new product.

END OF SECTION 099123
SECTION 099600 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. High performance coatings which meets the certification goals as established by the Victor Valley Community College District (VVCCD) Program for the individual Project requirements, of the following types.

B. Section includes surface preparation and application of high-performance coating systems.

1. Exterior Substrates:
   a. Concrete, vertical and horizontal surfaces.
   b. Clay masonry.
   c. Concrete masonry units (CMU).
   d. Steel.
   e. Galvanized metal.
   f. Aluminum (not anodized or otherwise coated).
   g. Wood.

2. Interior Substrates:
   a. Concrete, vertical and horizontal surfaces.
   b. Clay masonry.
   c. Concrete masonry units (CMU).
   d. Steel.
   e. Galvanized metal.
   f. Aluminum (not anodized or otherwise coated).
   g. Wood.
   h. Gypsum board.

C. Related Requirements:

   1. Section 051200 "Structural Steel Framing" for shop priming of metal substrates with primers specified in this Section.
   2. Section 099113 "Exterior Painting" for special-use coatings and general field painting.
   3. Section 099123 "Interior Painting" for special-use coatings and general field painting.
1.3 DEFINITIONS

A. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
B. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include preparation requirements and application instructions.

B. LEED Submittals:
   1. Product Data for Credit EQ 4.2: For interior coatings, documentation including printed statement of VOC content.
   2. Laboratory Test Reports for Credit EQ 4: For interior coatings, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

C. Samples for Initial Selection: For each type of topcoat product indicated.

D. Samples for Verification: For each type of coating system and in each color and gloss of topcoat indicated.
   1. Submit Samples on rigid backing, 8 inches (200 mm) square.
   2. Step coats on Samples to show each coat required for system.
   3. Label each coat of each Sample.
   4. Label each Sample for location and application area.

E. Product List: For each product indicated, include the following:
   1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
   2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.
   3. VOC content.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Frazee Paint.
   2. Sherwin-Williams Company (The).
   3. Vista Paint.
B. Products: Subject to compliance with requirements, listed in other Part 2 articles for the paint category indicated.

2.2 HIGH-PERFORMANCE COATINGS, GENERAL

A. MPI Standards: Provide products that comply with MPI standards indicated and are listed in "MPI Approved Products List."

B. Material Compatibility:
   1. Provide materials for use within each coating system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
   2. For each coat in a coating system, provide products recommended in writing by manufacturers of topcoat for use in coating system and on substrate indicated.
   3. Provide products of same manufacturer for each coat in a coating system.

A. VOC Content: Coatings applied on-site on the interior of the building, exclusive of colorants added to a tint base, shall comply with VOC limits as specified in Section 01 81 13 Sustainable Design Requirements.
   1. Use materials that have the minimum VOC content in units of g/l when calculated according to 40 CRR 59, Subpart D (EPA Method 24).
   2. Flat Paints and Coatings: VOC content of not more than the minimum VOC content in units of g/L.
   3. Non-flat Paints and Coatings; VOC content of not more that the minimum VOC content in units of g/L.
   4. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
   5. Restricted Components: Paints and coatings shall not contain any of the following:
      a. Acrolein.
      b. Acrylonitrile.
      c. Antimony.
      d. Benzene.
      e. Butyl benzyl phthalate.
      f. Cadmium.
      g. Di (2-ethylhexyl) phthalate.
      h. Di-n-butyl phthalate.
      i. Di-n-octyl phthalate.
      j. 1,2-dichlorobenzene.
      k. Di-ethyl phthalate.
      l. Di-methyl phthalate.
      m. Ethyl benzene.
      n. Formaldehyde.
      o. Hexavalent chromium.
      p. Isophorone.
      q. Lead.
      r. Mercury.
      s. Methyl ethyl ketone.
t. Methyl isobutyl ketone.
u. Methylene chloride.
v. Naphthalene.
w. Toluene (methylbenzene).
x. 1,1,1-trichloroethane.
y. Vinyl chloride.

B. Low-Emitting Materials: Interior coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

C. Colors: As selected by Architect from manufacturer's full range.

2.3 BLOCK FILLERS

A. Block Filler, Latex, Interior/Exterior: [MPI #4.]
B. Block Filler, Epoxy: [MPI #116.]

2.4 INTERIOR PRIMERS/SEALERS

A. Primer Sealer, Latex, Interior: [MPI #50.]
B. Wood-Knot Sealer: White shellac or other sealer recommended in writing by manufacturer for this purpose.

2.5 METAL PRIMERS

A. Primer, Zinc-Rich, Inorganic: [MPI #19.]
B. Primer, Zinc-Rich, Epoxy: [MPI #20.]
C. Primer, Rust-Inhibitive, Water Based: [MPI #107.]
D. Primer, Epoxy, Anti-Corrosive, for Metal: [MPI #101.]
E. Primer, Vinyl Wash: [MPI #80.]

2.6 EPOXY COATINGS

A. Epoxy, Gloss: [MPI #77.]
B. Epoxy-Modified Latex, Interior, Gloss (Gloss Level 6): [MPI #115.]
C. Epoxy, High-Build, Low Gloss: [MPI #108.]
D. Epoxy Deck Coating (Slip-Resistant): [MPI #82.]

2.7 POLYURETHANE COATINGS

A. Polyurethane, Two-Component, Pigmented, Gloss (Gloss Level 6): [MPI #72.]

B. Varnish, Aliphatic Polyurethane, Two-Component (Gloss Level 6 or 7): [MPI #78.]

2.8 SOURCE QUALITY CONTROL

A. Testing of Coating Materials: Owner reserves the right to invoke the following procedure:

1. Owner will engage the services of a qualified testing agency to sample coating materials. Contractor will be notified in advance and may be present when samples are taken. If coating materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.

2. Testing agency will perform tests for compliance with product requirements.

3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying coating materials from Project site, pay for testing, and recoat surfaces coated with rejected materials. Contractor will be required to remove rejected materials from previously coated surfaces if, on recoating with complying materials, the two coatings are incompatible.

PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

A. Manage construction waste in accordance with provisions of Section 01 74 19 Construction Waste Management and Disposal. Submit documentation to satisfy the requirements of that Section.

1. Set aside scrap material to be returned to manufacturer for recycling into new product.

END OF SECTION 099600