

2.1 Materials:	3.1 Installation	H. Accessories	DIVISION 5 - METALS
<div><div>A. Resinous Flooring: Manufacturer: afflooring</div><div>1. Contact: 1218 West 41st Street, Suite B, Tulsa, Oklahoma 74107. Phone: 918-445-0627</div></div>	<div><div>A. Surface Conditions</div><div>1. Examine substrate, with installer present, for conditions affecting performance of finish. Correct conditions detrimental to timely and proper work. Do not proceed until unsatisfactory conditions are corrected.</div><div>2. Verify that base slab meets finish and surface profile requirements in Division 3 Section "Cast-In-Place Concrete," and Project Conditions above.</div><div>3. Prior to application, verify that floor surfaces are free of construction latents.</div></div> <div><div>B. Application</div><div>The following RetroPlate process will be followed as listed below: A concrete grinding machine must be used. Please proceed accordingly. The process is as follows:</div><div>1. Floors should be started using 50, 80 or 100 grit diamond pucks depending on the condition of the slab.</div><div>2. Clean the floor using automatic scrubber or comparable.</div><div>3. Grind floor using 200 grit resin diamonds.</div><div>4. Clean the floor using automatic scrubber or comparable.</div><div>5. Apply RetroPlate 99 to floor at 200 sq. ft. per gallon, scrubbing product into the floor and allowing product to soak until turning slick. If it becomes sticky, apply water to the surface as necessary, leaving the product on the floor for at least 60 minutes.</div><div>6. Grind floor using 400 grit resin diamonds.</div><div>7. Clean the floor using automatic scrubber or comparable.</div><div>8. Clean and remove any excess RetroPlate. Let the floor dry overnight.</div><div>9. Continue the polishing process using 800 grit resin diamonds.</div><div>10. Clean the floor using automatic scrubber or comparable.</div><div>11. Alternately, depending on slab condition, grind floor using 1200-1500 grit resin diamonds.</div><div>12. Clean the floor using automatic scrubber or comparable.</div><div>13. The same process will be used for new floors as well as rehab floors. Floor prep for the rehab floors will be separate.</div><div>14. Apply an even coat of RetroGuard Sealer with a brush, roller, or low-pressure sprayer, and when surface is dry, burnish the floor with a black burnishing pad. Apply a second coat of RetroGuard one hour after the initial application, and again burnish the floor with a black burnishing pad.</div><div>15. Do not walk on surface for 12 hours, and do not introduce any water or moisture for at least 48 hours, allowing for proper drying and setting of RetroPlate and RetroGuard. Water will minimize the sealing properties of RetroPlate and RetroGuard.</div></div> <div><div>C. Start any of the floor finish applications in presence of manufacturer's technical representative.</div></div> <div><div>D. Sealing, Hardening and Polishing of Concrete Surface</div><div>1. Concrete must be in place a minimum of 28 days or as directed by the manufacturer before application can begin.</div><div>2. Application is to take place at least 10 days to the prior to racking and other in-store accessory installation, thus providing a complete, uninhibited concrete slab for application.</div><div>3. Only a certified applicator shall apply RetroPlate 99. Procedures must be followed as recommended by the product manufacturer and as required to match approved test sample.</div><div>4. Achieve waterproofing, hardening, dust-proofing, and abrasion resistance of the surface without changing the natural appearance of the concrete, except for the sheen.</div><div>5. Polish to a level 2 shine.</div></div> <div><div>E. Workmanship and Cleaning</div><div>1. The premises shall be kept clean and free of debris at all times.</div><div>2. Remove spatter from adjoining surfaces, as necessary.</div><div>3. Repair damages to surface caused by cleaning operations.</div><div>4. Remove debris from jobsite</div><div>a. Dispose of materials in separate, closed containers in accordance with local regulations.</div></div>	<div><div>1. Reinforcing bars: ASTM A615, Grade 60, deformed billet steel bars of sizes indicated.</div><div>2. Wall weeps: Dur-O-Wal D/A 1006 "Cell Vent", clear flexible polypropylene co-polymer.</div><div>3. Compressible joint material: Dur-O-Wal "Rapid Soft-Joint" D/A 2010.</div><div>4. Bond breaker strips: ASTM D226 No. 15 asphalt saturated roofing felt.</div><div>5. Cleaning agents:<div>a. Face Brick and CMU: ProSoCo, Inc., "Sure Klean New Masonry Cleaners."</div><div>b. ACMU: ProSoCo, Inc., "Sure Klean Burnished Custom Masonry Cleaner."</div></div><div>6. Expansion/Control joint sealants: Polyurethane-based, elastomeric joint sealant complying with ASTM C920 and Section 07900 requirements. Color matched to adjacent surfaces.</div></div>	<div><div>SECTION 05120 - STRUCTURAL STEEL</div><div>1.1 General: Provide structural steel in accordance with the General Structural Notes and structural drawings and details.</div><div><div>A. Standards: Materials and construction shall conform to following:<div>1. AISC "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings."</div><div>2. AISC "Code of Standard Practice."</div><div>3. AWS "Structural Welding Code, D11.1-Steel."</div></div></div><div>2.1 Materials:</div><div><div>A. Materials compliance: When requested, submit acceptable data documenting materials compliance for each type of material required.</div><div>B. Structural Shapes: ASTM A36/A36M, 36 ksi steel.</div><div>C. Tubular Steel: ASTM A500, 46 ksi yield strength steel, cold-formed welded and seamless.</div><div>D. Structural pipe: ASTM A53, type and grade selected by the fabricator as required for design loading, standard finish, standard weight (Schedule 40) except as otherwise indicated.</div><div>E. Grout: ASTM C1107, pre-mixed, shrinkage resistant, non-metallic, non-corrosive, non-staining grout.</div><div>F. Shop paint primer: Refer to Section 09900 - Paints and Coatings.</div><div>G. Fabrication: Fabricate structural steel in accordance with AISC "Specification - Structural Steel for Buildings" and "Code of Standard Practice." Provide welded or bolted connections in accordance with the Structural Drawings connection requirements.<div>1. Welding: Conform to AWS welding standards. Provide only continuous welds, spot welding is not acceptable. Grind all exposed welds smooth.</div><div>2. Splicing: Material, if spliced, shall have maximum one splice per structural member. Perform splicing by full penetration butt-welding using AWS qualified welders and welding methods.</div><div>3. Shop painting: Shop paint structural metal members, except members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded and galvanized surfaces. Refer to Section 09900 - Paints and Coatings.</div></div></div><div>3.1 Installation:</div><div><div>A. Erection: Erect structural steel in accordance with AISC "Specification - Structural Steel for Buildings" and "Code of Standard Practice".</div><div>1. Plumb, level and align base plates for structural members with steel shims.</div><div>2. Grout structural steel base plates solid that bear on concrete or masonry surfaces.</div></div><div>B. Testing: When required, comply with drawings testing requirements.</div></div>
<div><div>2.2 Flooring System:</div><div>A. System Description: Clear, thin film system 18-22 mils thick with texture agent added for slip resistance.<div>1. TerraPrime: A 2 component, 100% solids clear polyamide-cured epoxy coating.</div><div>2. TerraThane Satin: A 2 component, 90% solids polyurea clear finish coat.</div><div>3. TerraGrip: A graded, plastic aggregate added to finish coat for slip resistance.</div></div></div> <div><div>2.3 Product Substitutions:</div><div>A. Substitutions: No substitutions permitted.</div></div> <div><div>2.4 Source Quality:</div><div>A. Source Quality: Obtain resinous materials, including patching and leveling materials from a single manufacturer.</div></div> <div><div>3.1 Manufacturer's Instructions:</div><div>A. Compliance: Comply with manufacturer's product data, including product technical data sheets and application instructions.</div></div> <div><div>3.2 Examination:</div><div>A. Site Verifications of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.<div>1. Before applying materials, inspect surfaces to receive new materials and report any unsatisfactory conditions. Absence of any such report shall constitute installer's acceptance of surfaces as satisfactory for installing materials.</div></div></div> <div><div>3.3 Preparation:</div><div>A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.</div><div>B. Surface Preparation:<div>1. Mechanical Cleaning: Concrete floor surfaces receiving polymer flooring systems shall be thoroughly cleaned and prepared by shotblasting and/or diamond grinding.</div><div>2. Patching Damaged Substrate: Holes, voids, static cracks, and other substrate surface defects should be patched and repaired according to manufacturer's recommendations.</div><div>3. Prepare and clean control joints well and fill with an appropriate elastomeric.</div></div></div> <div><div>3.4 Installation:</div><div>A. Resinous Flooring Installation: The following are abbreviated guidelines that should provide for basic application steps for the installation of the systems. Detailed instructions should be obtained from the manufacturer.<div>1. Patching: After substrate preparation, surface defects shall be patched according to manufacturer's recommendations.</div><div>2. Priming: Apply afflooring TerraPrime, 100% solids epoxy primer, at a rate of 125-150 square feet per gallon. Allow 6-12 hours (depending on temperatures) of cure before applying finish coat. Finish coat must be applied within 24 hours of TerraPrime application.</div><div>3. Finish Coat: Apply afflooring TerraThane Satin, 90% solids polyurea topcoat, at a rate of 200 square feet per gallon. TerraGrip should be added to the TerraThane mix at a rate of 1 pint per 3 gallon kit for slip resistance. Note that TerraThane Satin must be metered out by notched squeegee prior to rolling.</div></div><div>B. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.</div></div> <div><div>3.5 Protection:</div><div>A. Protection: Protect installed product and finish surfaces from damage during construction.</div></div>	<div><div>SECTION 04810 - UNIT MASONRY ASSEMBLIES</div><div>1.1 General: Provide unit masonry assemblies as shown and specified.</div><div><div>A. Standards: Materials and construction shall conform to the following:<div>1. ACI 530.1-02/ASCE 6-02/TMS 602-02 "Specifications for Masonry Structures."</div><div>2. NCMA "TEK Bulletins."</div><div>3. BIA "Technical Notes on Brick Construction."</div></div></div><div>2.1 Materials:</div><div><div>A. Concrete Masonry Units (CMU): Size and thickness as shown on drawings.<div>1. ASTM C90, load-bearing, normal weight, natural color CMU, properly cured at time of delivery, linear shrinkage not to exceed 0.065%.</div><div>2. Provide special shapes where required.</div><div>3. Provide exterior wall CMU containing an integral polymeric water-repellent admixture.<div>a. Manufacturer: W. R. Grace "Dry-BlockR System Block Admix".</div></div></div><div>B. Face Brick:<div>1. Manufacturer:<div>a. Endicott, (402) 729-3315, www.endicott.com (Iron Spot Brick), or as approved by architect</div><div>b. Belden Brick Company, (330) 451-2031, www.beldenbrick.com (White Brick), or as approved by architect</div></div><div>2. Type: "Face Brick C216" complying with ASTM C216, Grade SW, Type FBS. No efflorescence when tested in accordance with ASTM C67.</div><div>3. Size: Modular size, laying three courses to 8" vertically.</div><div>4. Color: "Alaska White Velour" or "Maganese Ironspot, Velour" as noted on Exterior Elevations</div><div>5. Provide special shapes where required.</div></div><div>C. Mortar Materials:<div>1. Portland cement: ASTM C150, Type I or III, natural color.</div><div>2. Masonry cement: ASTM C91, Type indicated, natural color.</div><div>3. Aggregate: ASTM C144, clean masonry sand.</div><div>4. Water: Clean, fresh and potable.</div><div>5. Provide all exterior wall masonry mortar containing an integral polymeric water-repellent admixture.<div>a. Manufacturer W. R. Grace, "Dry-BlockR Integral Water-Repellent Mortar Admixture".</div></div></div><div>D. Unit Masonry Mortar Mixes: ASTM C270 proportions by volume.<div>1. Face brick: Type N mortar.</div><div>2. Dye:<div>a. SGS #60A "White" by Solomon Grind Services (White)</div><div>b. SM #750 "Silverstone" by Spec Mix (Iron Spot)</div></div></div><div>E. Reinforced Unit Masonry Grout Mixes<div>1. Concrete fill: ASTM C94 3,000 psi concrete.</div></div><div>F. Joint Reinforcement, Wall Ties And Anchors: Finish, ASTM A-153 hot-dip galvanized<div>1. Manufacturer: Hohman & Barnard, INC.</div><div>2. Horizontal joint reinforcement: Welded ladder type with matching corners and Tee units.<div>a. Single Wythe masonry: Standard single 9 gage side and cross rods. H&B - #220 Ladder-Mesh.</div></div><div>3. Anchoring devices: Provide strap anchors, inserts, bolts and rods of type and size indicated.<div>a. CMU to CMU: Strap anchors 1/4" x 1-1/4" x 24" steel with bent ends.</div><div>b. CMU to structural steel: H&B - VBT - Vee Byne-Tie With Plain Steel (Tie) Used In Conjunction With H&B #359 Weld-on Ties (Anchor Rods).</div></div><div>4. Masonry Veneer To Woof Framing: H&B - DW-10HS Veneer Anchor, With Adjustable 3/16" Cold-Drawn Steel Wire Tie Sections and 14 GA. Screw-On Attachment Plate.<div>a. Fasteners: Self-Drilling, Self-Tapping Screws, 1-1/4" X #10, Corrosion-Resistant Coated. Provide Two (2) Screw Fasteners for each Attachment Plate.</div></div><div>5. Seismic Masonry Veneer to Wood Framing: (When Required) H&B Seismic Plate Pintle HB-2135 with HB-213 (T-Lok Tie)<div>a. Fasteners: Seld-Drilling, Self-Tapping Screws, 1-1/4" X #10, Corrosion-Resistant Coated. Provide Two (2) Screw Fasteners For Each Attachment Plate.</div></div></div><div>G. Concealed Masonry Through-Wall Flashing: W. R. Grace "Perm-A-Barrier" self-adhering modified bituminous sheet, 40 mils thick.<div>1. Termination Mastic: W.R. Grace "Bituthene Mastic."</div><div>2. Primer: W.R. Grace "Bituthene P-300 Primer."</div><div>3. Termination bars: Extruded aluminum or stainless steel, 1" wide and .098" thick pre-punched at 6" on center, secured with stainless steel drive pins.</div></div></div><div>I. Architectural Concrete Masonry:<div>1. Keep ACMU walls clean during installation. Remove excess mortar on daily basis using brushes, rags or burlap squares.</div><div>2. Clean completed walls with detergent masonry cleaner recommended by the ACMU manufacturer. Acid cleaning agents, abrasive cleaners, tools or powders and metal cleaning tools and brushes are not permitted.</div><div>3. After final clean down and when walls are dry, apply ACMU acrylic finish coating in accordance with ACMU manufacturer's application instructions.</div></div></div>	<div><div>SECTION 05400 - COLD-FORMED METAL FRAMING</div><div>1.1 General: Provide cold-formed metal framing in accordance with the General Structural Notes and structural drawings and details.</div><div><div>A. Standards: Materials and construction shall conform to following:<div>1. AISI S602.2-01 "Design of Cold-Formed Steel Structural Members."</div><div>2. AWS "Structural Welding Codes, D11.3-Sheet Steel."</div></div></div><div>2.1 Materials:</div><div><div>A. Materials compliance: When requested, submit acceptable data documenting materials compliance for each type of material required.</div><div>B. Load-Bearing Cold-Formed Metal Framing: ASTM A1003, Gage, Grade and Type indicated.<div>1. Components: Provide sizes and shapes indicated.</div><div>2. Finish: Galvanized complying with ASTM A653, minimum G60 coating.</div></div><div>C. Fabrication:<div>1. Cold-formed metal framing may be prefabricated into panels before erection. Fabricate panels plumb, square, true to line and braced against racking with joints welded.<div>a. Provide one-piece full-length cold-formed metal framing members. Splicing not permitted.</div></div><div>2. Attach and join other components by welding or screw fasteners, as indicated. Wire tying of framing components is not permitted.</div><div>3. Cut framing to fit squarely for attachment to perpendicular members or as required for angular fit against abutting members. Hold members securely in position until properly fastened.</div><div>4. Saw cut field cut framing. Torch cutting not acceptable.</div></div></div><div>3.1 Installation:</div><div><div>A. Erection: Erect cold-formed metal framing members of gage and at spacing indicated on the Structural Drawings. Align and secure studs to top and bottom runner tracks by welding or screw fasteners at both inside and outside flanges.</div><div>B. Tolerance Acceptance: Install cold-formed metal framing member as indicated on the plans. Install to 1/16" tolerance.</div></div></div>	
<div><div>SECTION 05400 - SEALING AND POLISHING</div><div>1.1 General: Provide a sealed and polished concrete floor finish as shown and specified.</div><div><div>A. Standards</div><div>1. American Society for Testing and Materials:<div>a. ASTM C779, Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces.</div><div>b. ASTM G23-81, Ultraviolet Light & Water Spray</div><div>c. ASTM C805, Impact Strength</div></div><div>2. American Concrete Institute<div>a. ACI 302.1R-89, Guide for Concrete Floor and Slab Construction</div></div></div><div>B. Submittals: Provide the following:<div>1. Manufacturer's product data, specifications and installation instructions. Include Material Safety Data Sheets (MSDS) and identify application requirements, curing time and safety requirements.</div><div>2. Certified test reports, prepared by an independent testing laboratory, confirming compliance with performance criteria.</div><div>3. Manufacturer's certification that installer is a certified applicator of special concrete floor finishes, and familiar with manufacturer's installation procedures and requirements for the specified sealed and polished concrete floor finish.</div><div>4. Manufacturer's and installer's written acceptance of substrate surface and installation conditions.</div></div></div> <div><div>C. Quality Assurance:</div><div>1. Installer Qualifications:<div>a. Use a certified installer and adequate number of skilled workmen who are thoroughly trained and experienced in the necessary craft.</div><div>b. The special concrete finish manufacturer shall certify the applicator.</div><div>c. Applicator shall be familiar with the specified requirements and the methods needed for proper performance of work of this section. Applicator shall have not less than three years successful experience installing sealed and polished floor finishes similar to those required for this project.</div><div>d. Provide a letter of certification from special concrete finish manufacturer stating that installer is a certified applicator and is familiar with proper procedures and installation requirements required by the manufacturer.</div></div><div>2. Protection: Contractor shall provide all necessary materials, means, methods and procedures acceptable to the floor finish manufacturer and required to protect the concrete floor surface and provide a suitable substrate for the installation of the specified sealed and polished concrete floor finish.</div></div> <div><div>D. Project Conditions:</div><div>1. Comply with the floor finish manufacturer's environmental limitations for substrate temperature and moisture content, ambient temperature, and humidity, ventilation and other conditions affecting the special floor finish performance.<div>a. Concrete must have an average Floor Flatness rating of at least 40.</div><div>b. Concrete must have an average Floor Levelness rating of at least 40.</div><div>c. Concrete must be cured a minimum of 28 days or as directed by the manufacturer before application of RetroPlate can begin. Wet cure of the concrete is preferred. No concrete sealer is necessary.</div><div>d. Application of RetroPlate shall take place prior to installation of equipment, thus providing a complete, uninhibited concrete slab for application.</div></div><div>2. Before general sealer/hardener application, prepare and coat a jobsite test area of size acceptable to the Architect, to verify and approve proper surface preparation, application techniques and coverage rate.</div><div>3. Close finished floor areas to traffic during floor finish application and after application for time period directed by the floor finish manufacturer.</div><div>4. The completed RetroPlated slab will be covered to prevent damage by the other trades during store completion.</div></div>			

2.1 Materials

A. Hardening/ Sealing Agent

1. RetroPlate 99 manufactured by Advanced Floor Products Inc. (801) 812-3420 www.retroplatesystem.com

2. RetroGuard Stain Inhibitor

3. Joint Filler: CreteFill Pro 75. Two component 100% solids non-staining Polyurea Elastomer.

4. Spall Repair: Multiple minor surface defects and irregularities: Crete Fill Spall Repair: High Strength hybrid urethane, two part 100% solids.

5. Coefficient of friction for Retroguard finish shall not be lower than .40.

6. Manufacturer's Representative: Contact Scott Maxfield at RetroPlate for a list of Certified Applicators (888)942-3144 scott.maxfield@retroplatesystem.com