



**SPECIAL PROVISIONS
FOR
AESTHETIC PCC TRAIL**

**Black Hawk County
BRM-CHBP-8155(771)--NB-07**

**Effective Date
September 21, 2021**

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

152052.01 DESCRIPTION.

This specification specifies the requirements for constructing a 6 inch thick aesthetic PCC trail.

152052.02 MATERIALS.

- A. For PCC Pavement, use Class B PCC for sidewalks and recreational trails. The Contractor may use the approved paving mixture for the project. A Class 2 durability or better aggregate, according to Article 4115.04 of the Standard Specifications, will be required. For reinforcing, meet the requirements of Section 4151 of the Standard Specifications.
- B. Job Mock-Up: Construct on the job site a mock-up of 10 foot by 10 foot concrete slab, including all colors and jointing types planned for construction. Mock-up shall represent the final work in material, finish, and texture. Leave the accepted mock-up in place until all pavement work is completed and accepted. For accurate color, the quantity of concrete mixed to produce the sample should not be less than 2 cubic yards (or not less than 1/3 the capacity of the mixing drum on the ready-mix truck) and should always be in full cubic yard increments. Excess material shall be discarded according to local regulations. Contractor may, at their own risk, use the planned pavement as the job mock-up. If mock-up is not acceptable, it shall be removed at the contractor's expense.
- C. Construct mock-up using processes and techniques intended for use on permanent work, including curing procedures. Include samples of control, construction, and expansion joints in sample panels. Mock-up shall be produced by the individual workers who will perform the work for the project.
- D. Samples: Submit samples of color to the Engineer for approval prior to building a mock-up section.
- E. Test Reports: Submit certified test reports of pigment showing compliance with ACI 303.1, ASTM C 979, ASTM C494 and AASHTO M194. Color pigments shall be light fast, wettable,

weather resistant, ultra-violet resistant, alkali resistant, and free of deleterious fillers and extenders.

- F. **Manufacturer Qualifications:** Manufacturer shall have minimum 5 years' experience in the production of specified products.
- G. **Installer Qualifications:** An installer shall have minimum 5 years' experience with work of similar scope and quality and shall be able to provide list of three projects similar in scope to this project which have been completed within the local area to prove qualifications.
- H. **Integral Color:** The integral color shall be Dark Gray by L.M. Scofield Company, Solomon Grind-Chem Service, Inc., Chem Masters Chemtint, or approved equal. The integral color admixture shall be added to the concrete mix at the batch plant as per manufacturer's recommendation. Exact color determination will be from manufacturer's standard color palette and from Job Mock-Up.
- I. **Sealant:** Sealant shall comply with ASTM C 309 as a non-yellowing, curing membrane in accordance with the manufacturer's recommendations. Contractor shall submit manufacturer's data for sealant for approval.
- J. **Antiquing Release:** A colored, powdered bond breaker shall be used when imprinting surface texture. Antiquing agent shall be L. M. Scofield Lithochrome Antiquing Release, Brick Form Antiquing Release, or approved equal.

152052.03 CONSTRUCTION.

- A. A pre-pour conference shall be scheduled a minimum of 14 days prior to first Colored, Tooled Concrete Pavement placement. Conference shall be conducted by Contractor. Contractor shall ensure representatives of the paving contractor, concrete supplier, aggregate supplier, admixture supplier, and Engineer are present at meeting. Purpose of meeting is to:
 - 1. Discuss concrete mix proportions to ensure compliance with specifications and admixture supplier requirements.
 - 2. Discuss contractor's paving sequence and operations
 - 3. Discuss finishing work, including jointing, surface texturing, release agent and sealing operations.
 - 4. Discuss any other issues needing resolution prior to paving to ensure the quality of the final pavement product.
- B. Concrete placement shall be in accordance with Section 2301 of the Standard Specifications and manufacturer's recommendations.
- C. **Integrally Colored Concrete Environmental Requirements:**
 - 1. Schedule placement to minimize exposure to wind and hot sun before curing materials are applied.
 - 2. Avoid placing concrete if rain, snow, or frost is forecast within 24 hours. Protect fresh concrete from moisture and freezing.
 - 3. Comply with professional practices described in ACI 305R and ACI 306R.
- D. Schedule delivery of concrete to provide consistent mix times from batching until discharge. Mix times shall meet manufacturer's written recommendations.
- E. Do not add water to concrete mix in field.

- F. Admixture: The Engineer must approve the use of admixtures. Calcium chloride admixture is not allowed.
- G. Integral Mix: Mix color pigment into the designated mix at the rate recommended by the manufacturer to produce the specified color.
- H. Slump shall be maintained at 3 to 4 inches. Addition of a super-plasticizer is acceptable to improve the placing and finishing of concrete. While concrete is still in the plastic stage of set, tooling and finishing shall be done to make the desired surface.
- I. Tooled Joints: Joints shall be made with a 1/2 inch deep parting tool to produce straight lines of uniform depth in the patterns as detailed in the plans.
- J. Broom Finish: Broom finish applies to areas of standard color pavement.
- K. Surface Finish: The entire surface of the colored, tooled concrete shall be textured using a system of pattern-matched tools to provide a 'fractured slate' appearance. The surface texturing shall be done in such a manner as to provide a uniform appearance over the entire paved area. All work shall be done in accordance with manufacturer's guidelines. The use of a release agent prior to texturing the concrete is recommended. Excess release material shall be removed in accordance with the manufacturer's instructions.
- L. Cleaning: Prior to sealing, the entire surface of the pavement shall be thoroughly cleaned to ensure no foreign material is sealed with the pavement. This may require the use of hand tools, detergent, power-washing and/or other tools as needed to ensure the surface is clear of all debris, effervescence, concrete dust, and all other materials.
- M. Curing: The use of white-pigmented cure compounds, burlap, plastic sheeting, or fogging with water is not allowed.
- N. Sealant: Sealant shall be specifically recommended by manufacturer of integral color admixture for use with their product. Sealant shall be applied in a fine spray to form a continuous, uniform film on the surface as soon as the free water has appreciably disappeared. Surface shall be protected from construction damage, dirt, debris, oil, etc. by covering with waterproof paper for a period of 24 hours. A second sealant application shall then be made and protected from foot traffic for a minimum of 8 hours and vehicular traffic for a minimum of 7 days.
- O. The Contractor shall patch and repair all defects in the surface.
- P. In areas of standard pavement color paid for under this item, all other requirements, including sealing and reinforcing, shall apply.

152052.04 METHOD OF MEASUREMENT.

The quantity of Aesthetic PCC Trail, 6 Inch will be computed in square yards by the Engineer from measurements of the finished surface. Deductions will not be made for fixtures having an area of 1 square yard or less. If accepted by Engineer and if it is part of the planned pavement area, initial mock-up areas will be measured and included for payment.

152052.05 BASIS OF PAYMENT.

For the area of Aesthetic PCC Trail, 6 Inch measured, the Contractor will be paid the contract unit price per square yard. This payment shall be full compensation for all equipment, tools, labor and materials necessary to construct Aesthetic PCC Trail, 6 Inch as specified in the contract documents. Removal of mock-up will not be measured or paid for separately but shall be considered incidental to this item.