



**SPECIAL PROVISIONS
FOR
PERMEABLE PAVEMENT**

**Dubuque County
TAP-U-2100(683)--8I-31**

**Effective Date
November 17, 2015**

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.

1 GENERAL

1.01 SCOPE

- A. The work under this section shall consist of providing all work, materials, labor, equipment and supervision necessary to provide and construct the permeable pavement system as shown in the plans or as described herein.
- B. Work included:
 - 1. Permeable Clay Bricks.
 - 2. Base Stone and Bedding Stone
 - 3. Leveling Course and Jointing Material.
 - 4. Engineering Fabric.

1.02 SUBMITTALS, MOCK-UPS AND QUALITY ASSURANCE

- A. Submit the following for review and approval prior to use on the project:
 - 1. Sample paver unit
 - 2. Color selections for jointing sand and materials
 - 3. Aggregate gradations for base, leveling, and jointing material.
 - 4. Material specifications for paver units, aggregates, and engineering fabric.
- B. Mock-Ups: Build mock-ups at each new installation site representing the materials to be used at that location. Mock-up shall be used to verify color selections, demonstrate aesthetic effects and to set quality standards for materials and execution. Provide a minimum 5 foot by 5 foot area for all monolithic paving areas. Mock-ups must be reviewed and approved by Contracting Authority prior to proceeding with full installation. Approved mock-ups may become part of the completed work if undisturbed at the time of substantial completion.

- C. Store pavers on elevated platforms in a dry location after delivery to the project site. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproofing sheets, securely tied.
- D. Store aggregates where grading and other required characteristics can be maintained and the stockpile can be protected from contamination.

2 MATERIALS

2.01 PERMEABLE CLAY BRICK

- A. Permeable brick pavers shall be nominal 4 inch by 8 inch by 2.75 inch, A grade permeable clay pavers, CMC-PRZ015289 full range storm pave by Pine Hall Brick, or equal.

2.02 BASE STONE AND BEDDING STONE

- A. Comply with Section 4121 of the Standard Specifications. Materials for base stone shall meet the gradations as indicated in the plans.

2.03 LEVELING COURSE AND JOINT MATERIAL

- A. Permeable Clay Bricks:

1. Leveling course for permeable alleys and parking lots shall be 1 inch thick above the stone base course. Material shall be washed crusher run, free from fines, organics, soluble salts and other contaminants. Gradation shall comply with ASTM No. 89.
2. Joint material shall be SEK-Surebond Perm Chip Stormy Gray Granite Chips, or equal and shall comply with ASTM No. 9 gradation.

2.04 ENGINEERING FABRIC

- A. Engineering fabric shall be a needle punched nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position, inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids, meeting AASHTO M288-06 Class 3 for elongation > 50%, Marifi 600X or equal.
- B. Engineering fabrics, shall be permeable, synthetic textile materials suitable for use with soil, rock, or other geotechnical engineering related materials as an integral part of a highway project, structure, or system. They shall be mildew, rot, insect, and rodent resistant and shall be inert to commonly encountered chemicals found in soil. During all periods of shipment and storage, the fabric shall be maintained, wrapped in a heavy duty protective covering to protect the fabric from direct sunlight, ultraviolet rays, mud, dirt, dust, and debris. The fabric shall be free of defects or flaws which significantly affect its physical properties.

3 EXECUTION

3.01 GENERAL

- A. All unit pavement installations shall conform to the minimum requirements of the American Disabilities Act Accessibility Guidelines (current edition and any supplements) and the following:
 1. All surfaces shall be firm, stable, and slip-resistant.
 2. 3/16 inch preferred, 3/8 inch maximum joints between individual pavers.

3. Flush, level installations with no changes in level (surface discontinuity) between individual units or pavements and adjacent surfaces unless specifically indicated on the drawings.

- B. Examine all surfaces indicated to receive clay pavers with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installations only after unsatisfactory conditions have been corrected.
- C. Do not install any frozen materials or any materials mixed with or coated with ice or frost. Do not build on frozen subgrades or setting beds. Remove and replace any clay paver work damaged by frost or freezing.
- D. Do not use clay pavers with chips, cracks, voids, discolorations or other defects that might be visible or cause staining in the finished work.
- E. Mix pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures across the entire installation.
- F. Use fill paver units wherever possible. Cut pavers only as necessary and only with motor-driven masonry saw equipment to provide clean, sharp and unchipped edges. Cut units shall fit adjoining work neatly with no gaps greater than 1/8 inch.
- G. Tolerances: Do not exceed 1/16 inch unit-to-unit offset from flush nor 1/4 inch in 10 feet from level, or indicated slope, for finished surface of paving.

3.02 PERMEABLE BRICK PAVERS

- A. Grade and prepare subgrade and place filter fabric.
- B. Place lower level open grade base course over filter fabric and compact.
- C. Place upper level open graded base course over lower level base and compact.
- D. Place leveling course over upper level course, compact and hand trim to grade.
- E. Place permeable pavers and fill joints with joint material.

4 MEASUREMENT AND PAVEMENT

4.01 The cost for permeable pavement shall be paid for according to the unit price bid per square yard of completed permeable pavement surface. Price bid shall include all materials, labor, and equipment to prepare subgrade, place base courses and pavers, and install jointing material as specified herein and as shown on the plans. Jointing material, bedding stone, base stone and engineering fabric materials shall be included in unit price bid for permeable pavement.