



# Permeable Pavement System BIO-AQUIFER STORM SYSTEM

## Specifications for Construction (Section 02780)

### PART 2 – PRODUCTS

#### 2.01 ECOLOGICAL PAVERS

A. All interlocking paving stones shall comply with the quality specifications for solid concrete interlocking paving units as required per ASTM C 936.

1. Portland Cement: Conform to ASTM C 150.
2. Aggregates: Conform to ASTM C 33 for normal weight concrete aggregate (no expanded shale or lightweight aggregate) except that grading requirements shall not necessarily apply.
3. Water: Clean and free from any deleterious matter.
4. Other Constituents: Air-entraining admixtures, integral water repellents and finely ground silica shall have a proven record of performance and shall conform to the relevant ASTM standards.
5. Compressive Strength: At the time of delivery to the work site, the average compressive strength of the pavers shall not be less than 8,000 psi, with no individual unit less than 7,200 psi. Testing procedures shall be in accordance with ASTM C 140.
6. Absorption: The average absorption shall not be greater than five percent (5%) with no individual unit result greater than seven percent (7%) per ASTM C 140.
7. Resistance to Freezing and Thawing: The manufacturer shall satisfy the purchaser by laboratory testing that the paving units have adequate resistance to freezing and thawing per ASTM C 67. The specimens shall have no breakage and not greater than 1% loss in dry weight of any individual unit when subjected to 50 cycles of freezing and thawing.
8. Dimensional Tolerances: Pavers shall be prismatic in plan and formed with straight, uniform edges. The tolerance for the flat portions of the sides shall not exceed 1/32" as measured with a steel straight edge. "Slumped" pavers exceeding this tolerance will be rejected. The length, width and thickness of the paving stones shall meet the allowable tolerances specified in ASTM C 936.

9. Pigment: Conforming to ASTM C979.
10. Color: Monochromatic colors [specify] or natural gray (no pigment).
11. No paver shall be used for this project which has been manufactured in a mold that exceeds the mold life specified in the Method Statement, without written approval of the installer and owner.
12. The measurement across a cluster from any cube shall not vary by more than the allowable tolerance of the individual paver units (1/16" per paver times the number of pavers across the cluster).

## 2.02 VISUAL INSPECTION

All units shall be sound and free of defects that would interfere with the proper placing of the unit or impair the strength or permanence of the construction. Minor cracks incidental to the usual methods of manufacture, or minor chipping resulting from customary methods of handling in shipment, delivery and installation, shall not be deemed grounds for rejection.

## 2.03 AGGREGATE MATERIALS

### A. Bedding Course and Void Filler Aggregate

The bedding course and void filler aggregate shall be washed, free of organics and soluble salts, or other contaminants likely to cause efflorescence. The grading requirement shall be in compliance with the following gradation chart.

<u>ASTM Sieve Size</u>	<u>Percent Passing (by weight)</u>
1/2 inch	100 – 100
3/8 inch	94 – 100
1/4 inch	39 – 94
No. 4	23 – 39
No. 8	8 – 23
No. 16	0 - 8

### A. Base Course Aggregate

The base course aggregate shall consist of washed, open-graded stone and meet the following gradation chart.

<u>ASTM Sieve Size</u>	<u>Percent Passing (by weight)</u>
1-1/2 inch	100 – 100
1 inch	90 – 100
3/4 inch	48 – 90
1/2 inch	27 – 48
1/4 inch	12 – 27
No. 4	0 - 12

B. Sub-Base Course Aggregate

The sub-base course aggregate shall consist of washed, open-graded stone and meet the following gradation chart.

<u>ASTM Sieve Size</u>	<u>Percent Passing (by weight)</u>
4 inch	100 – 100
3 inch	80 – 100
2-1/2 inch	50 – 80
2 inch	20 – 50
1-1/2 inch	5 - 20
1 inch	0 – 5



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