

**ITEM 0330201**

**CONCRETE PAVERS ON BITUMINOUS CONCRETE**

**DESCRIPTION**

This item shall include the furnishing of all labor, materials, and equipment required to provide and install concrete pavers on bituminous concrete in the locations shown and as detailed and described in the Contract Documents.

**REFERENCED ITEMS**

Item 010430

**REQUIRED SUBMITTALS**

Certificates

The Owner's Representative shall be furnished with duplicate signed copies of a statement from the appropriate vendor certifying the analysis of the Processed Aggregate and Joint Sand.

The Owner's Representative shall also be furnished with duplicate signed copies of a statement from the manufacturer of each manufactured product that the product complies with the requirements of the Contract Documents.

Samples:

Provide the samples listed below prior to commencing construction:

- a. Concrete paving unit samples for each type of paving required. Include in each set the full range of color and texture to be expected in the completed work.
- b. Colored concrete mortar samples for the color required showing the range of color which can be expected in the finished work. Label samples to indicate type and amount of colorant used.

**PRODUCT HANDLING**

Protect concrete materials during storage and construction against wetting by rain, snow or ground water and against soilage or intermixture with earth or other types of materials.

Protect grout and mortar materials from deterioration due to moisture and/or temperature. Store in a dry location or in a weatherproof container. Keep containers tightly closed and away from open flame. Protect liquid components from freezing.

Cold Weather Protection: Frozen Materials: Do not use frozen materials or materials mixed or coated with ice or frost. Frozen Work: Do not build on frozen subgrade or setting beds. Remove and replace concrete work damaged by frost or freezing.

### SPECIAL REQUIREMENTS

#### Additional Pavers

Purchase and deliver to the City Yard, located at 40 Jennings Road, 2 palettes of each of the paver types and colors.

### MATERIALS

#### Foundation:

All foundation material under the bituminous base shall be processed traprock conforming to the material requirements of item 0103703.

Bituminous Concrete shall be Class I per item 0104702.

#### Concrete Paving Units:

The paving units shall be as manufactured by Pavestone, 888-409-7992, or approved equal. The colors and shapes shall be as listed below. The compressive strength shall average greater than 8,000 psi minimum. The absorption shall be 5% or less. The pavers shall meet or exceed ASTM C-936-01.

Special Conditions - The paver color(s), if specified, may be a "custom order". The contractor shall coordinate with the manufacturer to provide samples on a timely basis and secure orders in time to prevent delays due to production schedules.

#### Concrete Paver Descriptions:

NOTE: Paver names, descriptions, and special patterns are based on PAVESTONE product descriptions.

PAVER A: Running Bond at back of curb.  
Half Holland Stone, Heritage Series (tumbled texture): 2.5" x 4" x 4"  
Color: As specified on the plans or as approved by the engineer

PAVER B: Random length Running Bond next to Paver A  
Adirondack, Standard Series (tumbled texture) 2.5" pavers: a mixture of approximately seven eighths small (5.5" x 4.75"), medium (5.5" x 4.75"), and large (5.5" x 4.75") rectangles, and one eighth extra large (5.5" x 9.25") rectangles. Arrange pavers in a random, Runner Bond pattern, with all corner cuts made from extra large rectangles.  
Color: As specified on the plans or as approved by the engineer

PAVER C: Basket Weave pattern next to Paver B  
Holland Stone, Heritage Series (tumbled texture): 2.5" x 4" x 7.75", four pieces each location.  
Color: As specified on the plans or as approved by the engineer

PAVER D: Center of Basket Weave pattern, Paver C  
Half Holland Stone, Heritage Series (tumbled texture): 2.5" x 4" x 4".  
Color: As specified on the plans or as approved by the engineer

PAVER E: Soldier Course bordering Field Pavers, Paver F  
Holland Stone, Heritage Series (tumbled texture): 2.5" x 4" x 7.75", in soldier course pattern.  
Color: As specified on the plans or as approved by the engineer

PAVER F: Field Pavers behind border pattern  
Adirondack, Heritage Series (tumbled texture) 2.5" thick pavers: a proportional mixture of small (5.5" x 4.75"), medium (5.5" x 6.75"), large (5.5" x 7.75"), and extra large (5.5" x 9.25") rectangles. Arrange pavers in a 4 Piece System with Giant Random pattern.  
Color: As specified on the plans or as approved by the engineer

## **CONSTRUCTION METHODS**

### **General**

Do not use concrete pavers with excessive chips, cracks, voids, discoloration or other defects which might be visible or cause staining in finished work.

Cut concrete pavers with motor-driven saw equipment to provide clean, sharp, unchipped edges. Cut units to provide patterns shown and to fit adjoining work neatly. Use full pavers without cutting wherever possible.

Set concrete pavers in patterns shown in the Contract Documents and with uniform joint of widths indicated herein.

Surface Tolerances: The surface plane for finished concrete pavers shall not exceed a tolerance of 3mm in 10' when tested with a 10' straight edge.

Foundation:

Excavation for foundation shall be to a minimum depth of 13.5" below finished walk grade and to a minimum width of 4" outside the edge of the walk.

The bottom of the excavation shall be graded smooth and thoroughly compacted to a firm, even surface using a roller weighing not less than five tons or a motor driven vibratory compactor.

The processed material shall be placed in 6" layers the full width of the excavation, each course shall be compacted satisfactorily to a uniform surface with at least two passes of a motor driven vibratory compactor. Additional fine material shall be added to the top course to fill any voids that may have developed during compaction and to bring the completed foundation to true line and cross section 5.75" below and parallel to the finished grade of the walk.

Should the sub-base material become churned up or mixed with the bottom course material at any time, the contractor shall, without additional compensation, remove the mixture, reshape and re-compact the sub-base, and replace the material removed with clean, coarse material which shall be compacted to a firm uniform surface.

Bituminous Concrete Base

Shall conform to the construction methods of Item 0104702.

Concrete Pavers on Bituminous Concrete Base

Apply primer to bituminous concrete base.

Prepare for setting bed placement by locating .75" deep control bars approximately 11' apart and parallel to one another, to serve as guides for striking board (12' long, 2" X 12" board). Adjust bars to subgrades required for accurate setting of paving units to finished grades indicated.

Place bituminous setting bed where shown, in panels, by spreading bituminous material between control bars and pulling this bed with striking board several times to produce a smooth, firm and even setting bed, not less than .75" thick. Add fresh materials to low, porous spots after each pass of striking board. After each panel is completed, advance first control bar to next position in readiness for striking adjacent panels. Carefully fill up any depressions that remain after removing depth control bars.

Roll setting bed with power roller to a minimal depth of .75" while it is still hot. Adjust thickness as necessary to allow for setting of paving units to finished grades indicated.

Apply neo-asphalt adhesive to cold setting bed by mopping, squeegeeing or troweling. If troweled on, use trowel with serration not exceeding 1.6mm. Do not proceed with setting of paving units until adhesive is tacky and just skins over (2-3 hours) Coverage: 3± gallons per 100 square feet.

Place paving units carefully by hand maintaining accurate alignment and uniform top surface. Protect newly laid paving units with panels of plywood. Do not allow workers or the public on the installed pavers. Advance protective panels as work progresses, but maintain protection in areas subject to continued movement of materials and equipment to avoid creating depressions or disrupting the alignment of paving units. If additional leveling of paving is required, roll with power roller after sufficient heat has built up in the surface from several days of hot weather.

Joint Treatment: Place paving units with hand tight joints; +/- 3mm.

Fill hand tight joints with a dry concrete sand by sweeping mixture over paved surface until joints are filled. Follow by fogging lightly with water and refilling of joints as required to bring the sand to the surface of the joints.

### **METHOD OF MEASUREMENT**

The work will be measured for payment by the number of square feet of surface area acceptably paved.

### **BASIS OF PAYMENT**

This work will be paid for at the contract unit price per square foot of "CONCRETE PAVERS ON BITUMINOUS CONCRETE" completed and accepted including all bituminous and modular concrete materials, equipment, tools, labor and incidental expenses thereto.

PAY ITEM  
0330201

DESCRIPTION  
Concrete Pavers on Bituminous Concrete

PAY UNIT  
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