

ITEM 420.9801NN04 – POROUS PAVING SURFACE PRODUCT, TYPE NN

DESCRIPTION

This work shall consist of furnishing and installing a porous paving surface product in accordance with these specifications, as shown on the contract documents and as directed by the Engineer.

All information indicated in this specification as being "...as specified in the contract documents" will be contained in either a special note(s) (in the contract proposal) or note(s) (on the contract plans) titled, *Porous Paving Surface Product*.

MATERIALS

The following ASTM specifications shall apply:

Standard Test Method for Static Coefficient of Friction of Polished-Coated Flooring Surfaces as Measured by the James Machine	D2047
Standard Test Method for Infiltration Rate of In Place Pervious Concrete	C1701

Porous Paving Surface – The porous paving product shall consist of recycled rubber granules and/or aggregate, bonded to create a porous paving surface. The recycled rubber granules and aggregate shall be per manufacturer’s specifications.

The porous paving surface shall be from one of the following manufacturers:

KBI Flexi-Pave HD200
as manufactured by
Atlantic Power and Infrastructure
4600 140th Avenue N., Suite 200
Clearwater, FL 33762
727.723.3300
<https://apaicorp.com/kbi.htm>

Porous Pave XL
as manufactured by
Porous Pave Inc.
4385 East 110th Street
Grant, MI 49327
888.448.3873; 231.834.7720
porouspaveinc.com

perkEpave
as manufactured by
perkEpave, LLC
418 Wilson Street
Pottstown, PA 19464
215.316.6383
www.perkEpave.com

or equal as approved by the Engineer

The slip resistance, when measured in accordance with ASTM D2047, shall have a coefficient of friction greater than or equal to 0.6.

Color – Color shall be as specified in the contract documents.

Pavement Thickness – The minimum product thickness shall be as shown in the contract documents.

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CONSTRUCTION DETAILS

Submittals

At least two (2) weeks prior to the placement of the test panel, the Contractor shall submit the following for approval:

- porous paving surface mix design,
- slip resistance test results,
- manufacturer's installation guidelines,
- equipment list, and
- installers certification and manufacturer's verification.

Color samples shall be submitted for approval two (2) **months** prior to installation of the test panel.

Equipment – All equipment, tools, machinery, and other appliances used in handling materials and executing any part of the work shall be subject to approval before the work begins.

Installers – If required by the manufacturer, the porous paving surface must be installed by a certified installer, certified by the manufacturer to install the product. The installer shall provide proof of certification and the manufacturer's verification. All methods of construction, and workmanship shall conform to applicable requirements, unless otherwise specified.

Test Panel – A test panel must be constructed, at no additional cost to the State, as described below.

At least one week prior to the placement of the permanent panels, the Contractor shall prepare the subgrade, place, joint (if required), cure, and finish a test panel. The test panel shall be at least 9 sq. ft. in size, constructed at the required thickness. The test panel will:

- be constructed at a pre-designated location,
- remain in place for the duration of the project, and
- be used as a reference for acceptance of the pavement surface.

The test panel must be tested in accordance with ASTM C1701. The test panel must have a minimum infiltration rate of 210 inches per hour. If the test panel does not meet this performance criterion, it shall be removed and redone at the Contractor's expense, and the failed test panel disposed of in an appropriate manner.

The test panel may be incorporated into the final work or may be removed when ordered.

Surface Preparation

The subgrade shall have all foreign material removed and be compacted to an even surface that is parallel to the finish grade of the porous paving surface or as directed. Contact surfaces of curbing, sidewalks, manholes, and other structures shall be coated with a thin uniform coating of the manufacturer's formulated polyurethane binding agent, or approved equivalent, prior to placing the porous paving surface against them.

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The Contractor shall provide appropriate and adequate protection of adjacent surfaces from splashing of paving materials. Remove all stains from exposed surfaces of paving, structures, and grounds. Remove all waste and spillage.

The Contractor shall, where required, provide appropriate, adequate, and suitable protection to assure no damage or disturbance to existing infrastructure – including vegetation – before starting work and maintain that protection throughout the course of the work.

Installation

Typical porous paving surface can be installed when the surface temperatures of the subgrade is 50°F or above, but not over 95°F. Refer to manufacturer's instructions on subgrade temperature and moisture content.

The Contractor shall not pave on days when the weather is foggy, or rain is forecast, unless a change in the weather results in favorable paving conditions.

Product shall be installed per the manufacturer's recommendations.

During installation and compaction of subbase materials, grade and drainage conditions should be considered and evaluated in the field to avoid over-compaction or the creation of areas of potential ponding.

The spreading and finishing of adjacent strips of the porous paving surface shall proceed so that the full pavement width will be completed in one 'pour' without the formation of longitudinal joints.

The porous paving surface finish shall be smooth and true to the existing or required grade(s).

Post Installation

Traffic on the product shall be restricted for at least 24 hours after installation or as required by the product manufacturer.

The Contractor shall restore damaged adjacent infrastructure (including vegetation) to their original condition or repair as directed at no additional cost to the state. This includes existing pavement on, or adjacent to, the installation site damaged because of the construction work.

If the porous paving surface becomes plugged with dirt or defective (in any other way) during construction, the porous paving surface shall be removed and replaced at no additional cost to the State. Any porous paving surface that becomes loose and broken prior to final contract closeout shall also be removed and replaced by the Contractor, at no additional cost to the owner.

METHOD OF MEASUREMENT

The work will be measured as the number of square feet of porous paving surface installed.

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BASIS OF PAYMENT

The unit bid price per square foot of porous paving surface furnished and installed shall include the cost of all labor, materials, and equipment necessary to satisfactorily complete the work.

No direct payment will be made for any losses of material which may result from shrinkage, compaction, settlement, waste, overflow, or any other causes.

Excavation, furnishing and placement of subbase course materials (aggregate and geotextile) shall be paid for under separate payment items.

Payment will be made under:

Item Number	Item Description	Unit
420.9801NN04	Porous Paving Surface Product	SF

Where:

NN = A serialization pay item number for each unique color of porous paving surface installed.