

# Permeable Interlocking Concrete Pavement (PICP)

Scrubtown Brick Paving, LLC  
Marine on St. Croix, MN 55047  
Office: 651.433.0148  
Site: 651.368.1588  
scrubtownbrick@gmail.com  
www.scrubtownbrick.com



**SCRUBTOWN BRICK**

## The Benefits of PICP

Permeable Interlocking Concrete Pavement (PICP) is a sustainable paving system engineered to manage storm water runoff and improve water quality. When storm water falls on PICP the water travels from the surface of the pavers into stone filled gaps between the pavers and then down through several layers of progressively larger pervious stone. Organisms that cover the stones over time work as a filter to remove environmental toxins. These layers of rock beneath the pavers store the water until it naturally permeates into the subsoil below. The detoxified water then joins a network of subsurface water channels leading to local watersheds. With a capacity of five times its own surface area, PICP has the capacity to incorporate rainfall from rooftops and other nearby hardcover surfaces for additional environmental gain and to help resolve potentially damaging residential and commercial drainage issues.

### PICP Creates a 100% Pervious Surface

100-300 inches  
per hour

Processes vehicular pollutants

Absorbs 5X its own  
surface area

Decreases local  
flood potential

Eliminates need for  
retention ponds

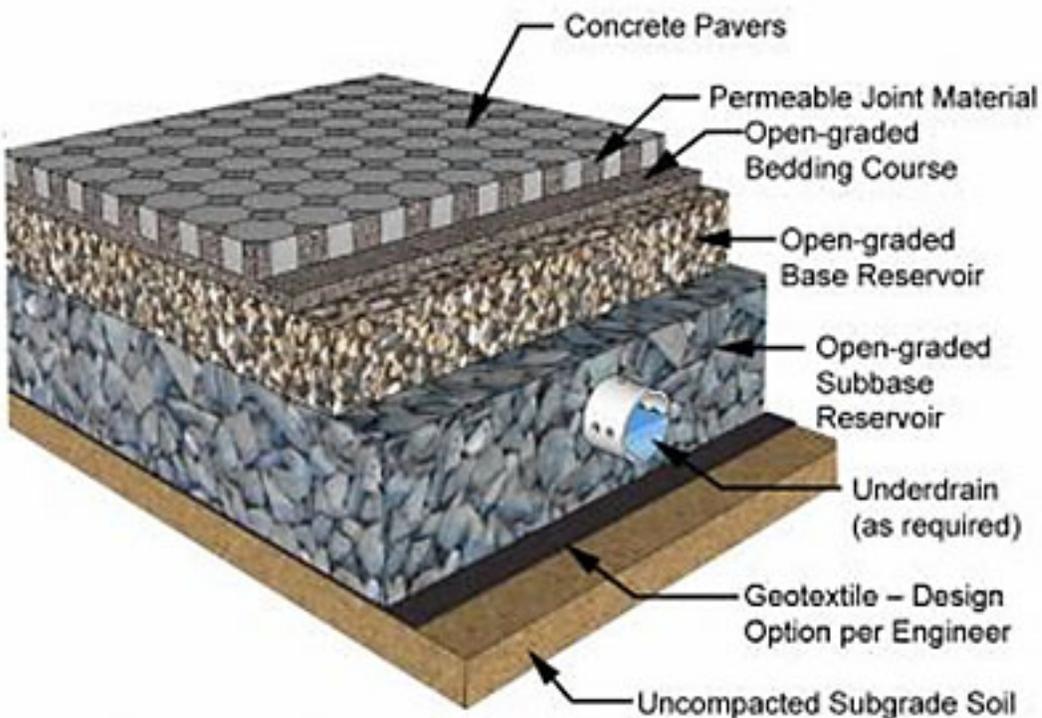
## PICP Performance

Permeable Interlocking Concrete Pavement is a proven pavement system:  
Recognized as a Best Management Practice (BMP) and Low Impact Development (LID) tool.  
Awards LEED and Green Globe points.  
Provides local and national watershed (CWP) tax credit opportunities.  
Meets EPA performance criteria and complies with NPDES regulations.

## PICP Installation and Maintenance

The great difference between PICP and traditional pavements is the base. The minimum depth of excavation for a permeable paver installation is twenty-four inches—allowing for 16 inches of #2 stone; 4 inches of #57; 2 inches of #8 (3+ inches for the paver and compaction). The #8 stones and/or a ¼ inch version fill the paver joints. The depth of base may increase depending the soil type. A permeable road fabric or geotextile and/or a perforated under drain may also be required.

PICP base work should be done with track machines in order to minimize subsoil disturbance. Stone layers are compacted in lifts using a #5000+ *lbf* plate compactor and/or roller. Pavers can be installed mechanically or by hand. Paver pavements are ready for use immediately after installation.



**So here's the catch:** Permeable Interlocking Concrete Pavement must be maintained to ensure a lifetime of optimum performance. Depending on the location of the pavement area the maintenance will need to occur every 1-2 years. The top ¼ of chip (#8) stone is removed and replaced with a debris-free layer. At these intervals, other minor repairs can be addressed. Many installers will also provide routine maintenance services.

## PICP Winter Bonus

Research has shown that PICP base maintains a temperature warmer than the world above. Air in the spaces between the stones and heat from the earth retained in the soil below have been proven to thaw surface snow and ice more rapidly than traditional asphalt and concrete pavements. If any standing water within the open-graded base materials freezes it can expand 9% to prevent heaving.



### References:

*Permeable Interlocking Concrete Pavements—Design.Specifications.Construction.Maintenance*; Fourth Edition; David R Smith; Interlocking Concrete Pavement Institute, 2011

*Permeable Pavements in Cold Climates: State of the Art and Cold Climate Case Studies*; John S. Gulliver; University of Minnesota; MnDOT, 2015