

Pervious Concrete: Concrete Industry Perspective

November 14th, 2017

PAVE  AHEAD

DURABLE. SUSTAINABLE. **CONCRETE.**

The Importance of Water

- Water Quality
- Water Conservation
- Water Availability



**Imagine a Day
Without Water**
October 12, 2017



Pervious Pavement Profile: A System For Water Management



Pervious Concrete 6" – 10"

Open-Graded Base 6" – 24"+

Filter Fabric (optional)

Subgrade

Where is Pervious Concrete Pavement?

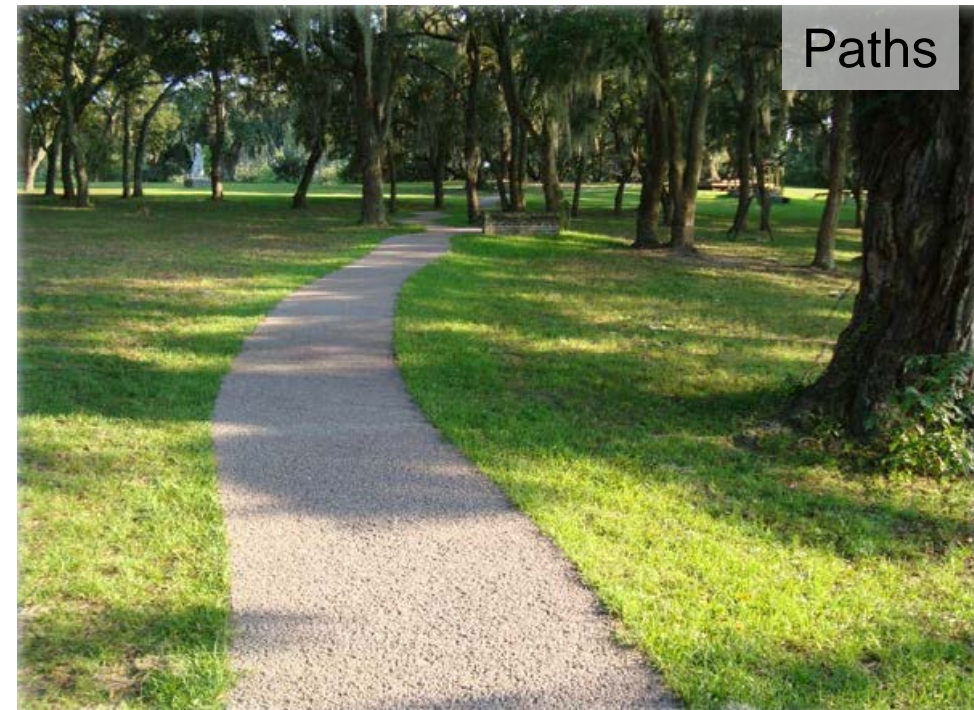
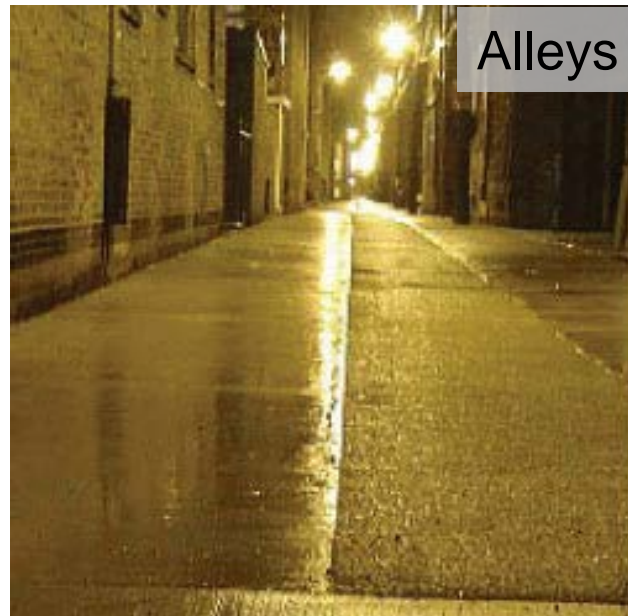
Streets and Roads



Parking Lots

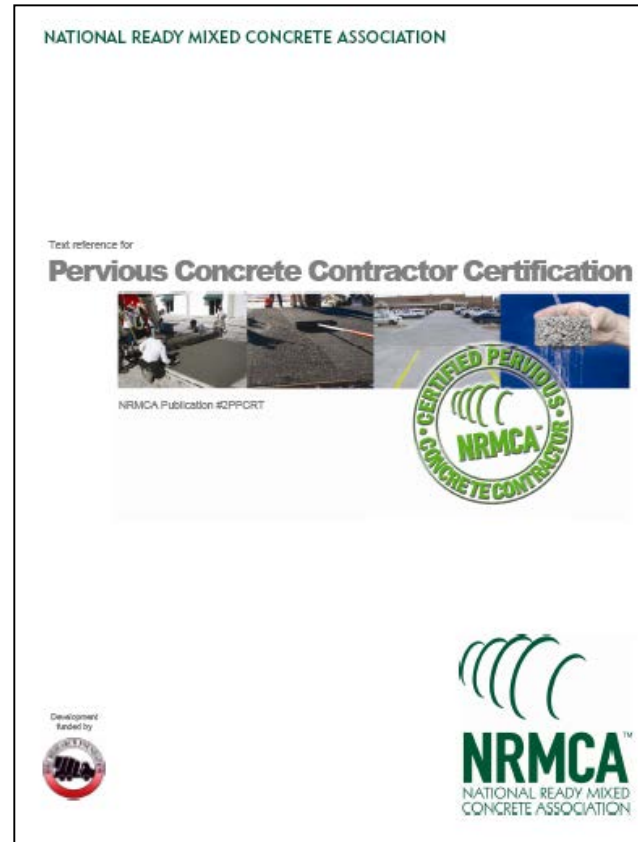
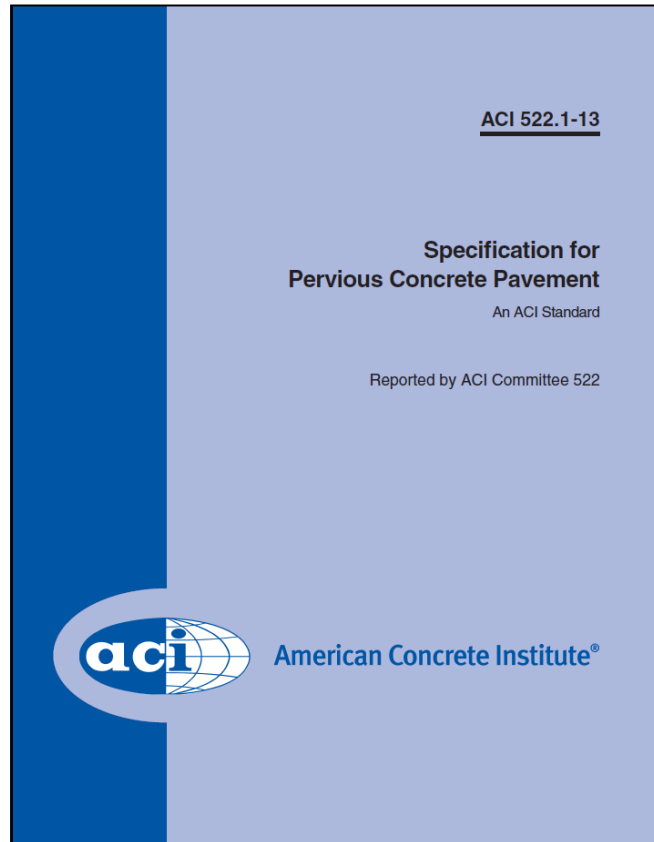


Where is Pervious Concrete Pavement?



Industry Leadership and Programs

- American Concrete Institute Committee 522
- NRMCA Pervious Concrete Contractor Certification



Education - NRMCA Concrete Answers Series (All Audiences: Consumer, Specifier, Designer, Contractor, Owner)



Link



Concrete Answers Series Hub Site for Architects, Engineers and Developers

ConcreteAnswers

Concrete Answers Series Hub for Architects, Engineers & Developers

- Home
- About
- Certification Programs
- Concrete or Asphalt
- Design Assistance Program
- Education
- Services

Google Custom Search

Welcome to the "Hub" Site for the Concrete Answers Series

These pages and the sites listed below have been developed to assist architects, engineers, developers, builders and commercial owners who are planning new concrete projects or need assistance on current projects.

This site describes the services provided by the National Ready Mixed Concrete Association (NRMCA) and our affiliated local, state and regional partner associations in support of building design, construction and maintenance.

NRMCA and our network of association partners are non-profit service organizations, not sales organizations; our mission is to provide up-to-date construction information and support to help you make informed decisions.

Concrete Answers Sites

- Concrete Buildings.org
- Building Design Assistance
- Ready Mixed Concrete Producer
- Concrete Parking.org
- Concrete Streets.org
- Decorative Architectural Concrete
- Flowable Fill.org
- Green Concrete.info
- Green Roof Tops.org
- Pervious Pavement.org
- Roller Compacted.org
- Self Consolidating Concrete.org
- National Account Services

Links

BUILD WITH STRENGTH
A QUALITY OF THE NATIONAL READY MIXED CONCRETE ASSOCIATION

- Industry Links
- Publications
- Link to us

Free Concrete Design & Project Assistance

If you're a commercial or municipal engineer, architect, geotech, developer, builder or owner, we invite you to get free project design and planning assistance from the National Ready Mixed Concrete Association (NRMCA) and our network of non-profit trade association partners across North America.

Design Assistance Program (DAP)

This program provides detailed pavement design and CAD jointing recommendations to designers and specifiers to help deliver quality parking lot and street designs to ensure successful concrete projects. There is no charge for this service.

Free Project Assistance

Free project and planning assistance is available from NRMCA and our network of trade association partners across North America. Our mission is to provide up-to-date construction information to

Thanks to our Website

<http://www.perviouspavement.org/>

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Education – Specifiers

- Pervious in Practice Series:
 - Guide to Specifying Pervious Concrete
 - Importance of Using Certified Pervious Concrete Contractors
 - Guide to Pervious Concrete Mix Design
 - Pervious Concrete System Design



Pervious in Practice
Methods, materials, mixtures

PIP 2 - Importance of Using Certified Pervious Concrete Contractors

Proper design and installation of pervious concrete systems is essential to ensure that the material meets the permeability requirements for the project while achieving optimum structural capacity and durability for pavement performance. It is critical that the designer of the pervious concrete pavement system understands the hydrologic and structural requirements and develops appropriate specifications to achieve them. The designer is referred to the consensus reference specification ACI 522.1 Specification for Pervious Concrete Pavement, developed by Committee 522 of the American Concrete Institute.

Just as importantly, the pervious concrete contractor must clearly understand that installation procedures for pervious concrete pavements are unique and that procedures used to construct conventional concrete pavement will not work with this material and can detract from its intended function. Additionally, he/she should understand the basic hydrologic function of a pervious concrete pavement system and be able to recognize errors in the design, specification and construction of the system, and potential problems with the pervious concrete mixture as proposed and when delivered.

Failure to recognize and follow established rules for successful pervious installations leads to poor results and expensive repairs. The costs associated with removing and replacing a failed pervious concrete pavement go far beyond the materials and labor. Construction delays can have a considerable effect on the overall cost of a project. And it is difficult to put a dollar amount on the shaken confidence of the design community when a material fails to perform as intended. For this reason, ACI 522.1 lists certain minimum qualifications for pervious concrete contractors.

To ensure that a cadre of knowledgeable contractors is available to meet these needs, the National Ready Mixed Concrete Association (NRMCA) has developed the Pervious Concrete Contractor Certification program. The certification program is designed to be administered locally by sponsoring groups in conjunction with planned training sessions and/or demonstrations of pervious concrete placement. NRMCA provides certification exams and performance evaluations to approved local sponsoring groups for administering the certification. By requiring that certification be renewed every five years, the program ensures that individuals remain current with changing technology and practices.

In developing the certification program, NRMCA recognized that there is no substitution for experience. With that in mind, the program identifies three levels of certification:

- Pervious Concrete Technician
- Pervious Concrete Installer
- Pervious Concrete Craftsman

A Pervious Concrete Technician is a person who has demonstrated knowledge by successful completion of a written exam about pervious concrete. There is no field experience evaluated for this certification level. The Technician level is intended for contractor and non-contractor personnel to understand the proper techniques of installing pervious concrete, but does not purport to represent any level of hands-on experience.

A Pervious Concrete Installer is a person who has demonstrated the ability to place, compact, finish, edge, joint, cure and protect pervious concrete pavements and has documented a limited project-based field experience in placing pervious concrete. To qualify as an Installer, the individual must not only pass the written exam, and also complete a Performance Evaluation administered by the Local Sponsoring Group. He/she must also provide project experience documentation of successful construction of a minimum of three projects with a total area exceeding 10,000 square feet. It is anticipated that contractor personnel that have achieved the Installer level of certification will upgrade to Craftsman level when they achieve the work experience criteria for that level.

Education - Maintenance for Long-Term Performance (Owners)



**Pervious Concrete
Pavement Maintenance
and Operations Guide**

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Thank You

NRMCA Local Paving Division

