PERVIOUS CONCRETE PAVEMENT
CITY OF ATLANTA PROJECT OVERVIEW

The City of Atlanta constructed a parking lot in 2001 for 55 cars with pervious (porous) concrete at the corner of Pryor St. and Memorial Dr. The lot is used for employee parking at the Bureau of Corrections. During most rainfall events, this parking lot does not generate any storm water runoff because of the characteristics of pervious pavement and the careful planning and design of the structure.
A map on the reverse side shows the facility within walking distance of City Hall, the GWCC Convention facility and other downtown locations. Cool Communities, the Georgia Concrete & Products Association, and Trees Atlanta were instrumental in coordinating efforts to build the facility and secure landscaping. Following are some of the key participants in the project:

Georgia Concrete & Products Association: John Love - (770) 621-9324 **(**www.gcpa.org)
Design and technical support: Dan Brown - (678) 428-3610
Cool Communities: Lucie Griggs - (706) 295-7540or Gordon Kenna - (404) 262-3140
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Construction of Pervious Concrete

Design, engineering, and installation of pervious concrete pavement is not overly complex, but it is very different from conventional concrete. *An experienced installation contractor is highly recommended.* Pervious concrete pavement will reduce or eliminate storm water runoff and is especially valuable for the protection of environmentally sensitive areas such as stream corridors and wetlands. Pervious paving can conserve land by reducing or eliminating the need for detention ponds. It can also promote more vigorous tree growth around parking lots and other developed areas and conserve water by beneficially using storm water for irrigation. Pervious concrete pavement is ideal for parking lots and other light duty applications but is typically not suitable for high-speed roads or heavy vehicles. Following are some important considerations:

- The site should be planned and designed to prevent surface runoff from adjacent areas which contain silt or debris from flowing onto pervious pavement. Pervious pavements typically do not clog unless sediments and fines from off site are eroded and carried onto the site.
- The pavement and supporting structure should be designed as a drainage system to minimize erosion of soils beneath the site. Water beneath the surface must be able to percolate into the soils, slowly seep off site, or flow into other engineered collection, conveyance or storage systems beneath the surface.
- In a typical installation where relatively impervious soils are present, the site is graded to minimize slope, a non-woven geo-textile fabric is put on the soil, and crushed stone (usually a #57 stone) put down as a sub-base material.
- The amount of stone (#57 stone is commonly used) applied as a sub-base will vary (from 2 to 12 inches or more) depending on the local conditions and requirements for water detention. A six-inch sub base of #57 stone was used in the Atlanta Jail application.
- Pervious concrete mix can be supplied by most concrete producers. A typical mix contains no fine aggregate (sand), a # 89 washed stone, and a high percentage of cement. The slab for the Atlanta site is six inches with a void content of about 15 – 20%.
- A pervious concrete mix is relatively dry when discharged from the concrete truck. Control of moisture is a critical element of proper installation.
- The mix is usually raked in place like gravel and a vibrating screed is often used to level the surface. The surface is rolled with a pipe or other roller to achieve a flat surface.

- Plastic sheeting is placed on the surface immediately after rolling to assure proper curing. The plastic should be weighted to completely cover the pervious concrete surface for 5 to 7 days to allow complete hydration of the cement. Failure to properly compact and cure the concrete is likely to result in raveling and loose stones.
- Porous pavements will last 25 years or longer if properly designed, installed and maintained.

Directions to this location:
MARTA: This site is just south and east of the Garnett St. MARTA station.(The Garnett station in on the north-south MARTA line, one stop south of the 5 Points station.
Driving: On the downtown connector (I-75/85), exit at State Capitol, MLK Jr. Dr.; turn left at the Capitol on Washington St., go 3 blocks to Memorial Dr.; turn right, the lot will be on your left at the intersection of Pryor St.