

Frequently Asked Questions about Pervious Concrete

1. Won't the pores in the pervious concrete eventually fill up with sand, silt and debris and essentially become impervious?

A: Pervious concrete at 15% porosity will handle approximately 300 inches of rain an hour. While it is true that in the coastal areas the pervious will collect sand, sand itself is pervious. Pervious concrete was installed on a street near the beach in Atlantic Beach, NC over five years ago. No maintenance has been done at that location and the pervious is still performing as well as when first installed even though it has been repeatedly covered in sand.

Because the surface of the pervious concrete is compacted when it is installed, the pores at the surface of the concrete are smaller than those at the bottom the profile for a given pour. Thus, particulate accumulate at the surface where they can be easily removed by an industrial sweeping machine. Researchers at the University of South Carolina have been unable to make pervious concrete impervious by clogging it with sand.

2. Can pervious concrete be used even if the underlying soil is clay or "gumbo"?

A: Yes. This becomes a balance between budget and function. In situations where the natural soils have limited porosity, some of the underlying soil is excavated and replaced with a gravel sub-base over which the pervious is poured. This gravel sub-base provides storage so that the water has more time to slowly infiltrate into the soils below.

3. Can compaction of the underlying soil during the construction phase cause the soil to become impervious and affect the function of the pervious concrete?

A: While installers should be wary of the impacts of heavy machinery during the construction phase, the Carolinas Ready Mixed Concrete Association recommends up to 90% soil compaction to create a stable base.

4. Even when there is highly porous sandy soil under the pervious concrete, won't it compact and become less porous over time?

A: Think of beach sand; sand is made of a solid that does not compress like silly putty or other more ductile substances do.

5. Isn't pervious concrete is a lot more expensive than regular concrete?

A: Pervious concrete may cost up to 25% more to install than conventional concrete, but when lifecycle costs and the savings associated with reduced stormwater management infrastructure are considered, pervious is much cheaper.

It important to consider the cost savings attained when use of pervious concrete negates the need for constructing expensive off site stormwater retention (and devoting valuable real estate to do so). Further, when we consider the non-market values associated with using an unstable petroleum based product such as asphalt vs. a stable product such as pervious concrete that promotes pollutant removal, we find that the ecological cost of pervious is much lower.

6. Doesn't pervious concrete require a lot of maintenance?

A: Pervious concrete, when properly installed and maintained can last thirty to forty years, which is as long or longer than conventional concrete and much longer than asphalt, which must be seal coated or resurfaced about every 4 years.