



LETTER TO THE COMMISSION

LTC No: 25-250

TO: Honorable Mayor and Members of the Fort Lauderdale City Commission
FROM: Rickelle Williams, City Manager *RW*
DATE: December 4, 2025
SUBJECT: Permeable Concrete

The purpose of this Letter to the Commission (LTC) is to provide an overview on permeable concrete and its potential applications for City of Fort Lauderdale projects. At the October 23, 2025, City Commission Conference Meeting, the City Commission requested that staff conduct research on permeable concrete and potential applications to mitigate flooding.

Permeable concrete (also known as pervious or porous concrete) is a specialized pavement material designed to allow stormwater to pass through its surface and infiltrate into the underlying soil. Permeable concrete mimics the natural process that occurs on the ground's surface, consequently reducing runoff and returning water to underground aquifers. It also traps suspended solids and pollutants, keeping them from polluting the water stream.

The use of permeable concrete can help reduce surface runoff contingent upon sub-surface conditions, improve water quality, reduce urban heat island effect, support groundwater recharge, reduce flooding, optimize land use, and contribute to the City's broader climate resilience and sustainability goals. Typical applications of permeable concrete include sidewalks, pedestrian pathways, low-volume parking areas and/or parking lots, residential roadways and driveways, low-volume pavements, and other locations where improved surface drainage is beneficial.

In addition to its environmental advantages, permeable concrete may offer long-term cost efficiencies as it can reduce the need for certain traditional drainage infrastructure, such as catch basins, piping, and inlets. In suitable conditions, these reductions can help offset the higher initial installation cost of permeable concrete and potentially lower life-cycle expenses.

However, as a coastal city, permeable concrete is not always an appropriate solution for many areas within the City of Fort Lauderdale. Several local factors present challenges with the installation of permeable concrete, including but not limited to:

- High groundwater levels, which limit the effectiveness of infiltration-based systems;
- Coastal and salt-exposed environments, which can accelerate material deterioration;
- Soil conditions that may not provide adequate infiltration rates or structural support;
- Low elevations that shorten the required separation between the pavement system and the water table;
- Maintenance requirements, as permeable systems can clog over time and require consistent cleaning to maintain performance; and
- Load-bearing limitations, making the material less suitable for high-traffic or heavy-duty applications.

The above-referenced conditions indicate that permeable concrete may not provide adequate infiltration capacity, longevity, or cost-effectiveness in certain areas of Fort Lauderdale. The City's relatively low elevation, particularly within high-risk flood zones—combined with new state regulations, may also limit potential cost savings because traditional drainage infrastructure, such as baffles and exfiltration trenches, would still be required.

Additionally, the Florida Department of Transportation (FDOT) does not use permeable concrete for major roadway projects due to concerns regarding its lower structural strength compared to conventional concrete and its high susceptibility to clogging by fine sediments, which can compromise long-term performance and functionality in high-volume, heavy-load environments such as highways.

Given these considerations, City staff will continue to evaluate the use of permeable concrete on a case-by-case basis. Each potential installation will be reviewed individually, considering elevation, drainage needs, groundwater depth, soil characteristics, long-term maintenance requirements, expected loading, and overall cost.

If you have any questions regarding the foregoing, please contact Brad Kaine, Public Works Director, at bkaine@fortlauderdale.gov or call 954-828-5806.

c: D'Wayne M. Spence, Interim City Attorney
David R. Soloman, City Clerk
Patrick Reilly, City Auditor
City Manager's Office
Department Directors