

*Township of Lower Makefield, PA
Tuesday, July 2, 2019*

Chapter 200. Zoning

Article XIIID. Impervious Surface Credit for Pervious Pavement Systems

[Added 3-19-2014 by Ord. No. 395]

§ 200-50.4. Pervious pavement systems.

A. Purpose and findings.

- (1) The purpose of this section is to reduce the amount of impervious surface being built in the Township and to take advantage of the significant environmental benefits when properly designed and maintained pervious pavement is used in place of impervious surface.
- (2) The use of pervious pavement is consistent with the Township's stormwater management and low-impact development (LID) goals by significantly reducing stormwater runoff, improving the water quality of stormwater runoff, protecting nearby trees and reducing the need for other stormwater control structures and thereby reducing the development footprint.
- (3) Allowing a credit for the use of pervious pavement will encourage its use and provide a valuable tool in meeting the Township's stormwater ordinances and reduce the number of requests for variance or waivers from the Township's impervious surface requirements.

B. Applicability of credit. The pervious pavement system 50% credit provided for herein cannot be taken at new or existing single-family detached dwellings, single-family attached dwellings, two-family dwellings or multiple-family dwellings as defined in § **200-7**.

C. Pervious pavement credit.

- (1) When a pervious pavement system is used in the development of a site, 50% of the area covered by the pervious pavement shall be considered as impervious surface when determining compliance with the impervious surface requirements in Chapter **200**, Zoning, and the stormwater management requirements of Chapter **173**, Delaware River South Watershed, and Chapter **174**, Neshaminy Creek Watershed Ordinances.
- (2) The total of all impervious and pervious pavement surfaces shall not exceed a factor of 1.25 of the maximum percent of impervious surface allowed for the site in Chapter **200**, Zoning.
- (3) In order to receive the fifty-percent credit, the pervious pavement system must be designed, installed and maintained in accordance with § **200-50.4D, E and F**.

D. Design standards.

- (1) Pervious pavement systems shall be limited to parking lots, walking paths, sidewalks,

plazas, tennis courts, patios, or other areas deemed appropriate by the Township Engineer on a case-by-case basis.

- (2) Pervious pavement systems shall be designed in accordance with the PADEP BMP Manual, as amended (BMP 6.4.1 Pervious Pavement with Infiltration Bed) by a registered professional engineer or landscape architect and installed by a contractor, experienced or certified in the construction of the particular proposed system.
- (3) A subsurface investigation with infiltration testing shall be conducted at the proposed location in accordance with SALDO § **178-93B(3)** to ensure the pervious pavement system is properly designed. Acceptable infiltration rates at the site of the pervious pavement shall be greater than or equal to 0.2 inches per hour (after the appropriate safety factor has been applied) and no higher than 10 inches per hour. Soils with rates in excess of six inches per hour may require an additional soil buffer (such as an organic layer over the bed bottom) if the cation exchange capacity (CEC) is less than five and pollutant loading is expected to be significant.
- (4) If the proposed area of pervious pavement is less than 1,000 square feet, the Township Engineer may waive the requirement for a subsurface investigation if it is demonstrated that the pervious pavement system is located where soils are of the hydrologic soil groups (HSG) of A, B, and C.
- (5) At a minimum, the pervious pavement system must be designed to have sufficient storage capacity to accommodate the NRCS two-year twenty-four-hour design storm and infiltrate the resultant stormwater which falls onto the porous pavement into the soil below within 72 hours.
- (6) The bottom of the pervious pavement system shall be at least two-feet above the seasonally high water table or bedrock.
- (7) The site design must minimize the potential for routing of sediment laden runoff from other areas directly onto the pervious surface.
- (8) Pervious pavement systems shall be so located to minimize any risk to groundwater quality, at least 50 feet from individual water supply wells, and 100 feet from community or municipal water supply wells.
- (9) Pervious pavement systems shall be so located to present no threat to subsurface structures, at least 10 feet down gradient, 100 feet up gradient from building basement foundations, and 50 feet from septic system drain fields unless specific circumstances allow for reduced separation distances.

E. Maintenance plan and inspections.

- (1) The builder or contractor installing the pervious pavement system shall provide maintenance instructions and a maintenance schedule to the property owner.
- (2) A pervious pavement maintenance agreement in the form attached hereto as Appendix C and an operations and maintenance (O&M) plan for the pervious pavement shall be prepared, properly executed and recorded in the Office of the Recorder of Deeds for Bucks County by the owner of any land upon which pervious pavement shall be installed. The operations and maintenance (O&M) plan shall consist of a description of how and by whom the pervious pavement system will be inspected and maintained, including the frequency of inspection by the owner and methods of preventing the surface pavement and stone storage layer from being clogged with sediments.
- (3) The Township shall inspect the pervious pavement system at a minimum of once every

three years to ensure it is properly functioning.

- (4) At a minimum, semiannual inspections evaluating the condition and performance of the pervious pavements must be conducted by the property owner or owner's designee.
 - (5) Vegetated areas adjacent to the pervious pavement shall be well maintained to prevent soil washout onto the pervious pavement.
 - (6) Vehicle anti-skid materials such as sand or cinders must not be applied on or adjacent to the pervious pavement.
 - (7) The owner of the property upon which pervious paving has been installed shall be responsible to clean the pervious pavement at a minimum frequency of once every two years.
 - (8) Repaving with impervious material or seal coating the pervious pavement surface is prohibited.
- F. Responsibility for compliance. The owner of the property upon which a pervious pavement system has been installed shall be responsible for maintaining and repairing the pervious pavement system in compliance with the provisions of this article. Failure of the property owner to comply with the provision of this article shall (1) result in a violation of the Township Zoning Ordinance and subject the owner to fines and penalties as set forth herein, (2) result in the property losing its pervious pavement credit granted hereunder or (3) result in the Township or its representatives entering upon the property and taking whatever actions are deemed necessary to maintain the pervious pavement system at the cost of the owner.