



Berkeley Heights Environmental Commission

29 Park Avenue, Berkeley Heights, NJ 07922
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February 7, 2022

TO: Zoning Board and Township Engineer

RE: 725 Mountain Avenue, Block 32, Lot 2006

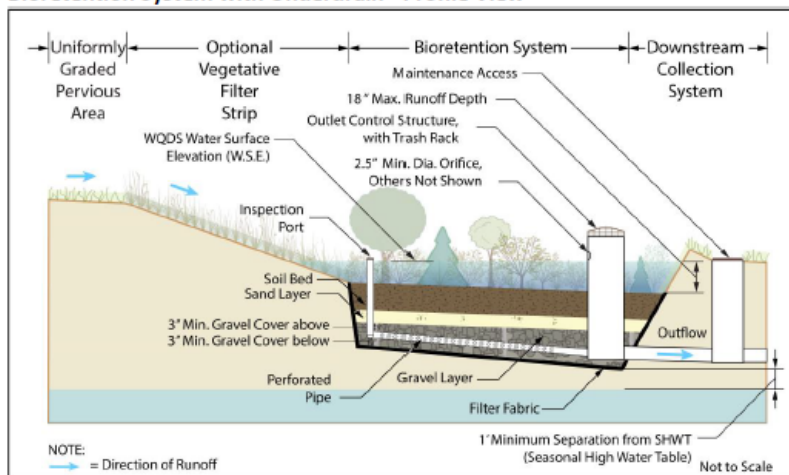
At the hearing on the subject, I heard the representative from Murphy & Hollows state that there is high groundwater. And according to the representative, because there is high groundwater, the water flowing into the bioretention ponds will be directed to the storm drains on Plainfield Avenue. But the Test Pit Report, starting on page 70 of the Stormwater Management Report, seems to be indicating no groundwater at most test pits. Only SP-106 shows some groundwater at 84", and SP-107 at 106". The report does mention mottling, but does this mottling mean the high water table is only six inches below the surface?

The **NJ Best Management Practices Chapter 9.1 Bioretention** states the seasonal high water table must be at least one foot below the bottom of the gravel layer. If it is indeed the case that the seasonal high water table is more than a foot below the bottom of the gravel layer, would this eliminate the need for an impermeable liner? What would be the lifespan of such an impermeable liner, and what would need to be done at that point.

Could the bioretention basin be designed as shown below with filter fabric at the bottom? Chapter 9.1 also states:

- The bottom of a bioretention system must be as level as possible in order to allow runoff to uniformly infiltrate into the subsoil.
- The SHWT or bedrock must be at least 2 feet below the bottom of the soil bed.
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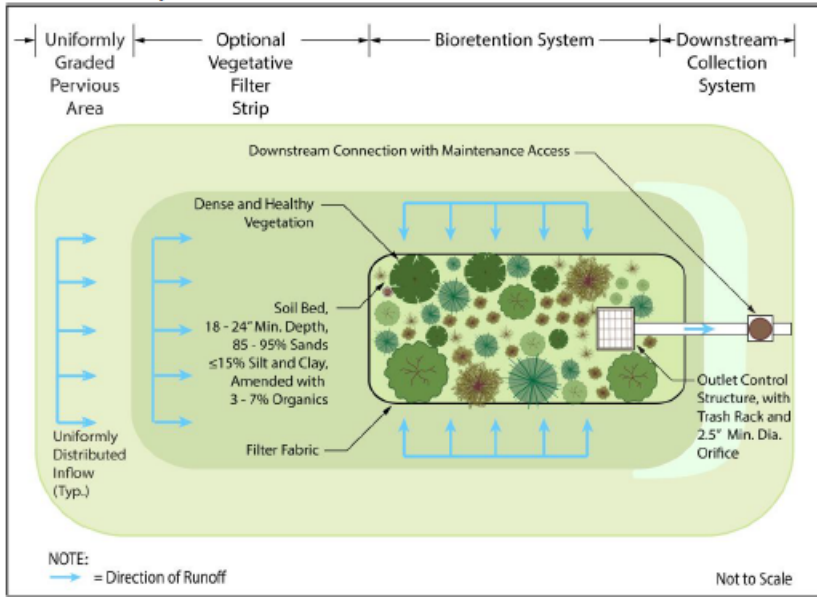
Bioretention System with Underdrain - Profile View



The Environmental Commission also recommends the construction of the bioretention basin include low maintenance landscaping, which encourages retention, and the planting of native vegetation, as suggested in the plan view below.

MORE

Bioretention System Basics - Plan View



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