

## Conservation Commission Requests for Information #6 &7



Re: Arlington High School Expansion

SCI File #17211.00

RE: Conservation Requests July 9, 2020 Items #6 and 7

At the request of the Conservation Commission, this memo responds to items 6 and 7 regarding the turf meeting ecological standards, SMP standards, and how the stormwater system filters infill material. The project will now meet the specifications of the New York State Standards per the request of the Commission, the strictest guidelines that are available. Additionally, the project meets all the MA DEP Performance standard for how the turf fields would affect the waters and wetland plantings, as there are no studies nor data available showing that any runoff from turf fields has a detrimental affect on those resources for us to meet. The following are how the Turf Fields (and the overall project as previously illustrated) meets the SMP standards:

- Standard 1 – No new, untreated discharges associated with the synthetic turf field
- Standard 2 - Peak rate attenuation – No increase in peak rates
- Standard 3 – Recharge – None at synthetic turf due to contaminated groundwater and soil (project is a redevelopment of a contaminated site with a hard-environmental cap below grade); Standard 3 met overall where infiltration is allowed.
- Standard 4 – Water quality:

TSS reduced due to synthetic turf field providing vertical infiltration and filtering through the turf into drainage pad layer, which discharges into the field's subsurface detention basins. Also, the size of the rubber granules is larger than sediment; these granules are filtered and / or covered by the synthetic turf fibers preventing migration of these granules into the trench drain surface collection system and the downgradient subsurface detention system. Runoff flows into the structured voids that are wrapped with drainage fabric and then into the surrounding stone, being stored in both the voids and the stone.

While it is often said that Owners add infill through the life of these fields due to migration of infill, this perception is not factual as infill is rarely ever added, contrary to popular belief. Most fields are installed with one to two surplus "super-sacks" of infill for infill loss and migration. This material is mostly used to level out the surface in front of goals and at penalty shot area, typically a five-gallon bucket here and there during a season. Sometimes infill is added due to settlement, caused by poor maintenance practices, but this is rare due to improved maintenance practices. A properly maintained field is unlikely to require even a small portion of a single super-sack of infill though its life. There will be some infill which migrates off the field in players socks and shoes due to static cling, but this quantity is again very, very small.

Testing of US manufactured passenger tires under testing using EN 71/3 indicates SBR passes this water quality requirement and ASTM F 3188 (toy standards). Several non-USA manufacturer samples did not pass. Our specification requires only US passengers be used in our infill.

- Standard 5 – Not Applicable

**Samiotes Consultants, Inc.**  
Civil Engineers + Land Surveyors

20 A Street  
Framingham, MA 01701-4102

**T** 508.877.6688  
**F** 508.877.8349

[www.samiotes.com](http://www.samiotes.com)

- Standard 6 – Not Applicable
- Standard 7 – Redevelopment – Not Applicable (meets all standards)
- Standard 8 - Construction Period Pollution Prevention and Erosion and Sedimentation Control - Included with overall project
- Standard 9 - Operation and Maintenance Plan – A basic program was provided however, the selected vendor is required to provide a product specific maintenance program
- Standard 10 - Prohibition of Illicit Discharges - None