

Conservation Commission Requests for Information #6 & 9



Re: Arlington High School Expansion

SCI File #17211.00

RE: Conservation Requests June 25, 2020

We reviewed the possibility of removing curbing in the eastern parking area for stormwater management as requested, and our findings are provided within this narrative. A sketch has been provided with this narrative to show the proposed strategy to meet the request to the maximum extent practicable, pursuant to the discussion below. In summary, we can remove curbing to provide overland flow through a landscape area prior to stormwater entering the deep sump catch basins associated with the proposed stormwater management system.

There are several concerns that removal of the curbing between the south and north portions of the east parking area provides from a safety, aesthetic, and engineering perspective. First and foremost, the island itself has steep slopes, with areas having up to 3:1 landscape slopes across a large portion of the island, that would make any treatment infeasible. Curbing provides a useful barrier for vehicles parking in the spaces on the upper side of the island to keep them from rolling into that slope.

From an engineering perspective, a key portion of the stormwater design for the site includes utilization of an underground stormwater infiltration system, which provides the site with groundwater recharge and water quality treatment in accordance with the requirements of the Massachusetts Stormwater Handbook. If this curbing were to be removed, given the grades in the lower portion of the parking area, a large portion of the tributary area to that underground system that is captured in the gutter on the south side of the parking area and conveyed to the underground system would be lost, and therefore provide less water quality treatment and recharge to groundwater of the parking area. In order to meet the requirements, additional proprietary water quality treatment units would be necessary, which incur additional costs and do not provide the required recharge to groundwater.

Therefore, we are proposing to utilize the landscape island on the far east side of the parking area to send stormwater flows overland through the landscaping prior to discharging to the proposed water quality unit as shown in the sketch provided.

P:\Projects\2017\17211.00 Arlington HS, 869 Mass Ave (Civil)\Documents\Item#6 Curb Removal in East Parking Area

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