



Memorandum

Date: May 27, 2020

Recipient: HMFH Architects

Copy To: Ms. Lori Cowles and Mr. Arthur Duffy

Sender: William J. Burns, L.S.P. and Jonathan W. Patch, P.E.

Project: Arlington High School

Project No: 6531.2.16

Subject: Summary of Site Contamination Issues and Challenges Relative to Stormwater Infiltration for Conservation Commission

The former industrial and commercial use of surrounding properties has contaminated soil and groundwater across the project site. In addition, localized areas of soil have been contaminated by fuel oil that was stored in underground storage tanks (USTs) and formerly used to heat the school complex. These releases of contamination have been documented with the Massachusetts Department of Environmental Protection (DEP) under Release Tracking Numbers (RTNs) 3-4241, 3-22352, 3-22371, 3-24460 and 3-30236.

Soil and groundwater across the northern portion of the project site are contaminated by a release of metals, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), petroleum hydrocarbons, and cyanide to which the DEP has assigned RTN 3-4241. The above referenced contaminants of concern (COCs) are primarily related to the historical operations performed by others at the adjacent Arlington Department of Public Works (DPW) facility (51 Grover Street) which included chromite ore processing activities (saw blade chroming) and manufactured gas plant (MGP) operations. The most prevalent of the COCs include chromium (trivalent and hexavalent), MGP residuals and petroleum compounds. Soil and groundwater at the southern portion of the project site is affected by a release of tetrachloroethene (PCE) to which RTN 3-30236 was assigned by the DEP. The release of PCE has migrated onto the site with the north-northeasterly direction of groundwater from a former off-site drycleaner located on the opposite side of Massachusetts Avenue.

Due to the solubility and mobility of some of the COCs (in particular PCE and hexavalent chromium), infiltration of stormwater into the subsurface at many locations within the School campus may exacerbate site contamination via migration with groundwater flow. The design team has coordinated the location of the proposed infiltration systems with the Arlington Remedial Action Settlement Trust. This coordination effort has resulted in the infiltration system being located in its presently shown location to the east of the proposed building. Location of additional infiltration systems elsewhere on-site would require extensive evaluation of the leaching potential to assure that the COCs will not migrate elsewhere within the site or off-site with increased groundwater flow velocities.

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