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△ Professional Civil Engineer
△ Building Permit & Site Plans
△ Parking Lot & Road Designs
△ Septic, Sewer, Drain & Water

July 12, 2022

Re: Soil Evaluation Witness
Map 136A, Lot 884
Pequot Street
New Bedford, MA

On 7/12/2022, I met Chancery Perks, City of New Bedford Agent and two representatives from Farland Corp. onsite for a second opinion as to the soil conditions found in the test pit excavated prior to my arrival. A full soil evaluation was not conducted by myself, rather a discussion with all parties present as to the findings by Farland Corp. Upon Arrival there were clearly signs of disturbed soils both overland and beneath the surface. Test pit presented an inconsistency in depth of excavated soil replaced with fill by others over the years. The fill encroaches down to what appears to be signs of an original 'C' Layer. The apparent 'C' layer exposed was sandy by texture, however was saturated with walls collapsing as time progressed. The different layers of fill and soil disturbance over the years makes it complex to evaluate in comparison to the original ground. As discussed in the field, the fill and unsuitable material was to be removed and replaced beneath and surrounding the stormwater Infiltration basin, I also recommend, as may already be proposed, a remove and replace around the Foundation, or any other component installed which relies on certain soil structure, texture, etc.

In addition, the water table used for the design, as determined by others, was presented in comparison to the bottom of the proposed roof infiltration system. The elevation shown was found to be 2.5' +/- below grade within the fill layer, well above the actual standing water found. The USGS Massachusetts Real Time Groundwater Level network identifies the water level in the majority of the test wells to be at a normal elevation on 7/12/22. A discussion was held about the possibility of computing the Frympter Method as a check, which is a statistical calculation as to the deviation of water table depths in wells with similar soil characteristics and applied as a safety factor to the standing water found at time of testing. In as much as the Frympter Method is a useful tool, care should be taken as results can be misleading in disturbed soils which alters water table characteristics.

In summary, the elevations as presented at the time of evaluation appear consistent with that of normal practice and recommend the city and engineer be present at time of foundation/field excavations to confirm soil consistency and water table prior to pouring foundation footing to adjust if needed prior to construction.

Respectfully,



Kevin J. Silva, PE, SI, SE