Nitsch Engineering

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FIELD REPORT

Nitsch Project #:	12808	Date:	September 9, 2021
Client:	Pine Hill Village, LLC	Time:	10:00 PM
Project:	Pine Hill Development	Location:	Harvard, Massachusetts
Weather:	70°F + Sunny		
Present:	Basel Alhadidi – Nitsch Engineering		

The purpose of this site visit was to observe general site condition, observe general construction activities, and to observe erosion and sedimentation control measures. The following was noted:

1) Water in the constructed wetland is murky. Sediment is entering the wetland. Nitsch Engineering recommends that the Contractor install additional erosion controls to minimize sedimentation into the drainage systems and the constructed wetland.


Figure – 1


Figure – 2

2) Sediment buildup around flared end inlet which is entering the constructed wetland should be removed and new wattles and erosion control measures installed.


Figure – 3


Figure – 4

3) Swale next to the driveway has sediment and washout form the construction area, swale and check dams shall be cleaned of sediment and disposed of properly.


Figure – 5


Figure – 6

4) Contractor shall prevent stormwater from running in to the driveway and any of the sediment shall be removed and disposed of properly.


Figure – 7


Figure – 8

5) Nitsch Engineering noticed that some parts of the straw wattles were torn. Nitsch recommends replacing these damaged sections of straw wattle.


Figure – 9


Figure – 10

6) Construction entrance stone needs to be refreshed as it is clogged with sediment from track out.


Figure – 11


Figure – 12

7) Ongoing work/ excavation for the fire water tank cistern location.


Figure – 13

Figure – 14

Past Recommended Items to be Completed:

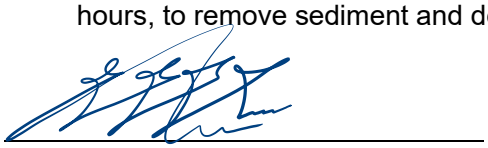
1. The Contractor to install erosion controls prior to the constructed wetland to minimize sedimentation into drainage systems and the constructed wetland.
2. Extending discharge pipe near the first building (that drains to constructed wetland adjacent to road) toward the wetland basin and provide a level slope (2% slope) over the extended pipe, toward the roadway shoulder.
3. The Contractor to provide erosion control measures along the non-stabilized slopes at the top and mid-slope of exposed surfaces to minimize erosion.
4. Remove sediment in swales and re-establish wattle and bale check dams with new wattles.
5. Establish a suitable substrate at stream crossing that minimizes sedimentation during rain events.
6. Maintain the installed bio-retention systems at the driveway entrance by removing weeds and replanting any dead shrubs or plantings that were part of the bio-retention system. This will be continuous maintenance task until the development is turned over to the HOA.
7. Contractor to re-establish the outlet rip rap to the constructed wetland per the approved detail which indicates a level spreader type splash pad, where there is a slight depression to pool water prior to discharge toward the wetland.
8. Lower the Fire Cistern by approximately six (6) feet, as directed by the Fire Chief.
9. Contractor to provide a detail for review that indicates how drainage will be conveyed at the roadway entrance to the wetland so that it prevents sediment from entering the wetland and prevents ponding at the subdivision entrance with Stow Road.

New Recommended Items to be Completed:

1. Repair or replace wattles in swales and pipe outlets and along erosion control lines as noted.
2. Remove sediment and re-establish the stabilized construction entrance between phased work areas.
3. Remove sediment from driveway and direct stormwater away from buildings.

Ongoing Recommendations:

1. The Contractor to re-grade, stabilize and maintain roadway shoulders, swales and un-stabilized areas.
2. The Contractor to maintain all perimeter erosion control barriers in good condition for the project duration.
3. The Contractor to sweep the roadway periodically and after rain events at or over 0.25-inches in 24-hours, to remove sediment and debris, which shall be disposed of properly.



Basel Alhadidi
Project Designer

BMA/SV

Disclaimer: Nitsch Engineering performed this site visit in compliance with the guidelines and requirements of the Commonwealth of Massachusetts COVID-19 Guidelines and Procedures for All Construction Sites and Workers at All Public Work dated March 2020 (COVID-Construction Safety Guidance) and with the COVID-19 guidelines and requirements issued by the CDC and OSHA. However, Nitsch Engineering's services DO NOT include observations for compliance of the general contractor and/or the construction site with the COVID-19 Construction Safety Guidance and with the COVID-19 guidelines and requirements issued by the CDC and OSHA. Jobsite/worker safety duties belong with the general contractor who has control of the jobsite and responsibility for constructing the project, including the implementation and compliance of the COVID-19 Construction Safety Guidance. Neither the professional activities of Nitsch Engineering, nor the presence of Nitsch Engineering or its employees and subconsultants at a construction/project site, imposes any duty on Nitsch Engineering, nor relieve the General Contractor of its obligations, duties and responsibilities including health or safety precautions required by any regulatory agencies.