

June 16, 2014

Mr. Kenneth Motta  
Chairman  
New Bedford Conservation Commission  
New Bedford City Hall  
133 William Street  
New Bedford, MA 02744

RE: Nitsch Project #9972  
100 Duchaine Boulevard  
Review Letter  
New Bedford, MA

Dear Mr. Motta:

This letter is in regard to the proposed Logal, LLC project located at 100 Duchaine Boulevard in New Bedford, Massachusetts. Nitsch Engineering has reviewed the following revised items submitted as part of the proposed project:

- Response Letter to New Bedford Conservation Commission, prepared by Field Engineering Co., Inc., dated June 9, 2014;
- Plan set entitled, "Proposed Site Development, Logal, LLC, 100 Duchaine Boulevard, New Bedford, Massachusetts," prepared by Field Engineering Co., Inc., revised June 6, 2014; and
- "Stormwater Management System Report, Addendum 2, Logal, LLC, Proposed Site Improvements," prepared by Field Engineering Co., Inc., dated June 5, 2014.

We have the following comments with regard to the above-referenced information, pertaining to drainage design only:

1. The Applicant is proposing site and drainage improvements at an existing facility, including the construction of 16 loading docks, a gravel tractor trailer parking lot, a gravel driveway, 15 paved parking spaces, and new paved access to the loading dock. The existing site has approximately 267,540 square feet of impervious area, while the proposed site has approximately 239,231 square feet of impervious area plus an additional 55,522 square feet of gravel surface. The Stormwater Report indicates that the site is considered a redevelopment due to the decrease in impervious area. The Applicant has revised the drainage analysis to account for compaction of the gravel but still wishes the site to be considered redevelopment due to a decrease in the amount of impervious surface. A redevelopment site should meet the Guidelines to the maximum extent practicable. We are comfortable with the project being defined as a redevelopment and encourage the Applicant to meet the Guidelines to the fullest extent.
2. The Site Layout Plan indicates that there is a proposed above-ground fueling facility to be located west of the existing building and within the 100-foot Buffer Zone to Bordering Vegetated Wetland (BWV). This proposed use is a Land Use with Higher Potential Pollutant Loads (LUHPPLs) under the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards. We understand that the construction of this facility may not occur immediately. Additional details have been included as part of the revised plans. We recommend that the Site Plans be further revised to include more detail including a more detailed Grading Plan, drainage structures, details of the tanks, a leak detection system, a fuel containment tank equivalent in size to the size of the fuel tank, and some type of valve configuration that will prevent fuel from discharging to the wetlands. If the Applicant cannot provide that detail at this point, we recommend that a condition be included in any Order of Conditions that are issued that requires the applicant to file an Amended Order of Conditions for this area which includes the details described above.

3. Soil testing was performed subsequent to the first submittal. The results of the soil testing were performed by Field Engineering and not observed by Nitsch Engineering. The results of the test holes show groundwater elevations ranging between 74 and 76. Based on the survey, the wetlands flags were hung at approximately elevation 77 for flag series 2 and 5 and 76 for flag series 4. In general, the estimated groundwater elevations as shown in the test holes seem a little low based on the elevations of the wetlands flags, but groundwater elevations appear consistent from hole to hole which is expected where sandy soils are encountered. The soil testing results show the lower limits of the planting soil in all three (3) of the bioretention basins at seasonal high groundwater levels. The proposed detention/infiltration field will have less than the 2 feet of separation between seasonal high groundwater and the bottom of the detention/infiltration field that is recommended in the Stormwater Management Guidelines.
4. There are low flow outlets set at the bottom of bioretention basins 1, 2, and 3. Ideally, low flow outlets would be set above the required water quality volume in the bioretention basins.
5. A Stormceptor 450i water quality was added to the project prior to discharge to the underground detention/infiltration system. The sizing spreadsheet shows 75% total suspended solids (TSS) removal which is less than the 80% TSS removal standard required in the Guidelines.
6. The approach to ground cover should be consistent between the existing conditions and the proposed conditions. For example, the unpaved areas are modelled as 'grass' for pre-development area D and 'woods' for post development area 3A. Grass has a higher curve number and, therefore, generates more flow than an area described as woods. The same situation occurs when comparing Pre-Development Area B and Post-Development Area 1A.
7. The Existing Conditions HydroCAD Report indicates that the existing concrete rubble areas are modelled as impervious. However, Nitsch Engineering observed these areas to be pervious with concrete debris. The existing conditions model should be revised to denote this area as pervious, similar to the gravel in the proposed conditions model.
8. There does not appear to be infiltration proposed from the Bioretention Basins; however, there are no underdrains proposed which may result in extended ponding within the subsurface and above-grade areas of the basins. As described above, the results of the soil testing indicate that seasonal high groundwater occurs within the sub-surface media proposed in the bioretention basins.
9. The Applicant's response letter indicates that rip-rap will be placed at the discharge point of the existing drain line south of the site. The plans have been noted to remove the silt from the bottom of the swale as requested but rip-rap is not shown on the plans.

If you have any questions, please call us at 617-338-0063.

Very truly yours,

**Nitsch Engineering, Inc.**

  
Jennifer L. Johnson, PE, LEED AP BD+C, CPSWQ  
Senior Project Engineer

  
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Director of Planning

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