

January 17, 2017

Mr. Craig Dixon
Chairman
New Bedford Conservation Commission
New Bedford City Hall
133 William Street
New Bedford, MA 02744

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

Dear Mr. Dixon:

This letter is in regards to the proposed NStar Energy Company project located at 50 Duchaine Boulevard in New Bedford, Massachusetts. Nitsch Engineering has received and reviewed the following documents for compliance with the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards:

- Site Plan for 50 Duchaine Boulevard, prepared by Farland Corp., dated November 18, 2016; and
- Notice of Intent, including the Stormwater Management Report, prepared by Farland Corp.

We previously reviewed the Notice of Intent (NOI) application and plans for the Parallel Products project at 50 Duchaine Boulevard in early 2016. The Order of Conditions was issued on March 22, 2016. We also performed a pre-construction site visit with Sarah Porter, Conservation Agent, and Farland Corp. on April 1, 2016. During the site visit, we observed that vegetative clearing had been performed on the project site (see aerial photos below); however, construction did not continue and Farland Corp. is now submitting a new project for the NStar Energy Company for the 50 Duchaine Boulevard project site.



Google Aerial, June 2015



Google Aerial, August 2016

We reviewed this project with respect to the MassDEP Stormwater Management Standards, as described below:

1. The existing condition stormwater calculations generally match the final design documents from the Parallel Products project that were previously reviewed by Nitsch Engineering and approved by the Conservation Commission. We agree that this is the appropriate approach and that the existing condition should reflect the undisturbed condition before site clearing in 2016 occurred.
2. The proposed project appears to add approximately 5.9 impervious acres to the project site. Since this is more than 5 acres, the project may be subject to Massachusetts Environmental Policy Act (MEPA) review and the Environmental Notification Form process. We recommend that the Applicant review the MEPA filing thresholds and confirm if further coordination with MEPA is required.
3. As discussed during the Parallel Products project review, the existing wet area located at the southernmost portion of the site is considered a jurisdictional wetland resource area under the Wetlands Protection Act. Therefore, all proposed stormwater treatment, recharge, and peak flow mitigation must occur prior to discharging into the area. Currently, the peak flow directed towards this wetland (referenced as "Existing Detention Basin" in HydroCAD) is higher in the proposed condition than the existing condition. Therefore, Standard 2 of the MassDEP Stormwater Management Standards is not being met. The onsite stormwater management system should be designed so that there is no increase in peak run-off rate to the wetland.
4. In the proposed conditions HydroCAD model, the time of concentration for subcatchment S-10 (proposed parking lot) is listed as 16 minutes. We recommend that this be revised to 6 minutes, consistent with the MassDEP stormwater handbook and standard engineering practice for paved areas.
5. The Applicant is using the Dynamic Storage Indication (Dyn-Stor-Ind) pond routing for the proposed conditions. While Nitsch Engineering agrees that the method is appropriate for the proposed conditions, we would request that the model messages and error report be included in the HydroCAD output to confirm that there are no HydroCAD issues created by using the Dyn-Stor-Ind routing setting. The model output appears to indicate that the time step has been increased by three. It is unclear why this is necessary.
6. The Applicant indicates that portions of the proposed project are considered a redevelopment under the MassDEP Stormwater Management Standards since the building and site access driveway is existing. Under Standard 7, redevelopment projects are defined as, "Development, rehabilitation, expansion and phased projects on previously developed sites, provided the redevelopment results in no net increase in impervious area." Since the project results in a 5.9-acre increase in impervious area and there are substantial changes proposed to the site and stormwater management system, a vast majority of the site is considered new development and should be designed to meet all of MassDEP Stormwater Management Standards. The existing site driveway that is to remain could be considered a redeveloped area; however, the Applicant should confirm that the same level of treatment is being provided in the proposed condition as the existing condition. The Applicant should indicate whether 1,000 vehicle trips per day will be generated by the proposed project.
7. Large portions of the proposed project site, including drainage areas S-3, S-4, S-6, S-7, and S-9 discharge to jurisdictional wetland resource areas with minimal treatment or peak flow mitigation. These areas include new impervious roadway and parking areas and should be designed in compliance with the water quality treatment requirements of Standard 4.


8. Portions of the proposed project site may be considered a Land Use with Higher Potential Pollutant Loads. Under the MassDEP Stormwater Management Standards, LUHPPLs include parking lots with exterior fleet storage area or exterior vehicle service maintenance and cleaning areas, and parking lots with high-intensity-uses (1,000 vehicle trips per day or more). The intended use of the site by NStar is unclear and the Applicant should confirm if these uses will occur within the proposed project site.
9. The TSS removal calculations are incomplete for the proposed project. Two calculations should be provided for each treatment train to demonstrate that the treatment train (1) achieves an overall TSS removal of 80% and (2) a pretreatment TSS removal of 44% before discharging to the proposed infiltration basins.
10. MassDEP Stormwater Management Standard 8 requires the preparation of a construction period erosion and sediment control plan for project sites greater than 1 acre. Since the project is greater than 1 acre, it also requires a National Pollutant Discharge Elimination System (NPDES) Construction General Permit and the preparation of a Stormwater Pollution Prevention Plan (SWPPP). MassDEP allows the preparation of a single document that fulfills both of these requirements. Nitsch Engineering recommends that the Conservation Commission include a Condition, if the project is approved, that requires the SWPPP be submitted for review prior to the start of construction.
11. The Operation and Maintenance (O&M) Plan should be updated to include catch basins, proprietary water quality structures, sediment forebays, and any other stormwater practices proposed for the project site.
12. The Exhibits referenced within the Stormwater Report narrative are not consistent with the actual Exhibits provided in this report. The follow documents were not provided with this submittal:
 - a. Groundwater recharge calculations;
 - b. Drawdown calculations;
 - c. Water quality volume calculations;
 - d. Sediment forebay sizing calculations; and
 - e. Sizing calculations for the water quality structure to demonstrate that it is sized for the water quality volume flow rate.
13. Closed drainage calculations should be provided to confirm that the existing infrastructure to remain and the proposed pipes are sized appropriately for the 10-year storm using the Rational Method.
14. The Grading and Utility Plan provided sufficient detail in some areas determine the major drainage divides on the proposed project site. However, additional spot grades should be provided to indicate critical elevations for the drainage design, such as at high points, low points, curb openings, and berm elevations within the basins.
15. The table in the infiltration basin detail should be reviewed for consistency with the HydroCAD model. Some of the elevations for the overflow berm appear to be different. We would also recommend adding these as spot grades to the Grading Plan.
16. The crushed stone, gravel, and riprap indicated in the details should include a reference to the Massachusetts Department of Transportation (MassDOT) material specifications.

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We appreciate the opportunity to review this project for the Conservation Commission. Please contact us with any questions.

Very truly yours,

Nitsch Engineering, Inc.



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

Approved by:



Scott D. Turner, PE, AICP, LEED AP ND
Director of Planning

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