

February 10, 2016

Mr. John Radcliffe
Chairman
New Bedford Conservation Commission
New Bedford City Hall
133 William Street
New Bedford, MA 02744

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

Dear Mr. Radcliffe:

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

- Response Letter, prepared by Thompson Farland, Inc., dated January 26, 2016;
- Site Plans entitled, "50 Duchaine Boulevard, Assessors Map #134 Lots #456, 457, 458, & 459," prepared by Thompson Farland, revised January 27, 2016; and
- Stormwater Report, prepared by Thompson Farland, revised January 26, 2016.

Nitsch Engineering offers the following updates to our previous comments (dated 12/11/2015). For consistency, the original comment numbers are used but comments that have been addressed were removed.

1. In their response letter, the Applicant indicated that the existing drainage system was not surveyed because the majority of the existing closed drainage system will be maintained during the project and flow to the pipes will be reduced in the proposed condition. Closed drainage calculations should be provided to confirm this design approach. The calculations should include the existing drainage infrastructure to remain and the proposed closed drainage system.

Nitsch Engineering also notes that minimal cover is provided over culverts located beneath the northern driveways. Class V RCP is proposed in these areas, however ductile iron should be considered given that the pipes will be located directly under the pavement section.

2. Nitsch Engineering disagrees with the Applicant's response that peak flow mitigation can occur within the onsite wetland resource area. Our understanding is that the wetland located at the rear of the site is a jurisdictional wetland and not a stormwater facility. The peak run-off rate entering the onsite wetland is up to 20% higher in the proposed condition than the existing condition, which does not comply with the MassDEP Stormwater Management Standards. The onsite stormwater management system should be designed so that there is no increase in peak run-off rate to the wetland.
3. As requested in our initial comment, the Applicant incorporated the existing depressions in the existing condition HydroCAD model. However, rather than using consistent infiltration rates for the existing and proposed conditions, the stormwater recharge in the existing basins was modeled as 1.02 inches per hour based on the soil texture in the A and B soil horizons. Under the proposed conditions, the Applicant is proposing to remove the sandy loam at the location of the proposed infiltration basins so that recharge will occur in sandy material that has an infiltration rate of 8.27 inches per hour. Since test pits were not performed in the existing basins, Nitsch Engineering cannot confirm the existing soil texture at the bottom of the existing basins. However, since some of existing basins are excavated down to approximately elevation 75, they may also recharge into the C horizon subsoil with a higher

infiltration rate. We maintain the comment that the current approach to the calculations (using different existing and proposed infiltration rates) is not consistent with standard engineering practice. The same infiltration rate should be used for both the existing and proposed conditions.

7. The Applicant provided additional information regarding the proposed pump systems to convey flow from the trench drains on the north side of the building to the stormwater basins. They indicated that the pumps and pump chamber have been designed to accommodate the 10-year storm event, while run-off from larger storm events will surcharge the trench grates and cause ponding in the loading docks. As the Applicant notes, their model indicates that there will be approximately 7 inches of ponding in the loading dock and against the building during the 100-year storm. Nitsch Engineering does not endorse a design that could result in 7 inches of standing water accumulating against the building. However, we defer to the Applicant and Owner on this issue since this could be maintenance issue for the Owner.
10. The Applicant revised the model to use the 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.
11. All requested details were provided on the revised plans with the exception of the curb opening detail.

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

Very truly yours,

Nitsch Engineering, Inc.

Approved by:

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

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

JLJ/vas