

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  
Downey Street  
Review Letter  
New Bedford, MA

Dear Mr. Motta:

This letter is in regard to the proposed Claremont Hangar project located on Downey Street at the New Bedford Regional Airport in New Bedford, Massachusetts. Nitsch Engineering has reviewed the following revised items submitted as part of the proposed project:

- Plan set entitled, "Site Plan, Claremont Hanger, Downey Street, Assessors Map 123-Lot 3, New Bedford, MA," prepared by Thompson Farland, revised May 29, 2014;
- Response Letter to the New Bedford Conservation Commission, prepared by Thompson Farland, dated May 29, 2014;
- Revised stormwater documentation, prepared by Thompson Farland, including:
  - A Pre-Subcatchment Plan, dated May 29, 2014;
  - A Post-Subcatchment Plan, dated May 29, 2014;
  - Pre-Development HydroCAD Report (13894PRE), revised May 30, 2014; and
  - Post-Development HydroCAD Report (13894POST), revised May 20, 2014;
- "Long Term Operation and Maintenance Plan, Site Plan, Downey Street, New Bedford, MA", prepared by Thompson Farland, dated May 20, 2014;
- "Construction Period Pollution Prevention & Erosion and Sediment Control Plan, Site Plan, Downey Street, New Bedford, MA", prepared by Thompson Farland, dated May 20, 2014; and
- Letter ref: Air Craft Hangar Drainage, prepared by Zade Company, Inc., dated May 22, 2014.

The design of the stormwater management system has been revised in response to the comment letter issued by Nitsch Engineering on May 14, 2014 and the comments received at the Conservation Commission hearing on May 20, 2014. The revised plans include two (2) bioretention basins located between the proposed parking lot and Downey Street and other minor changes to the stormwater management system. Additionally, Nitsch Engineering understands that the Commission and the Applicant have come to an agreement that the proposed project will be considered a redevelopment under the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards despite the increase in impervious area.

Nitsch Engineering's current comments are provided below:

1. The revised plans include two (2) bioretention basins located adjacent to the proposed parking lot and driveway. As currently proposed, there are no contributing impervious areas being routed to the basins and, therefore, they are providing only treatment and recharge of the rainwater falling directly on the basin area.
  - a. Nitsch Engineering recommends that the Applicant consider directing impervious area from the site to the basins to provide treatment and recharge to the maximum extent possible.

- b. The bioretention basins should be designed with the required pretreatment, as required by the MassDEP Stormwater Handbook. Nitsch Engineering recommends that the Applicant consider the use of a sediment forebay or pea stone diaphragm combined with a vegetated filter strip to pretreat any impervious areas directed to the basins.
  - c. In case of clogging, a means of overflow should be provided from the basin either through a perforated underdrain or an area drain that would be connected to the closed drainage system.
  - d. Soils test should be performed within the footprints of the proposed bioretention basins to confirm soil texture, permeability rate, and estimated seasonal high groundwater elevation. If the seasonal high groundwater elevation is too high to provide recharge, the bioretention basins could be lined so that water quality treatment can still be provided. The response letter refers to the bioretention basins being designed to consider seasonal high groundwater elevations. However, soil testing results were not provided.
  - e. The detail for the proposed bioretention basins indicates a 1.5-foot thick layer of filter media. Nitsch Engineering recommends that the thickness of this layer be increased to 2 feet in compliance with the MassDEP Stormwater Handbook.
2. Based on the existing topography, it appears that the contributing drainage areas should include offsite area to the north and west. Because this area will flow into the site and contribute flow to the proposed stormwater management system, they should be accounted for in the design calculations, including sizing calculations for the proposed water quality structures and the closed drainage system.
3. The revised HydroCAD reports provide summaries for the 5-, 25-, 50-, and 100-year storm events. The 2- and 10-year storm event summaries should also be provided in compliance with Standard 2 of the MassDEP Stormwater Management Standards.
4. The Post-Development HydroCAD Report indicates that the stormwater generated by Subcatchment S-6 discharges into Downey Street, but not to one (1) of the two (2) design points. This routing should be reevaluated, as the grading in the site and Downey Street appears to indicate that the Subcatchment should be routed to WQI-1 and eventually the southern BVW design point.
5. Proprietary water quality structure sizing calculations that are consistent with the current MassDEP-approved methodology should be provided for the proposed Contech water quality inlets to confirm that they will adequately treat the water quality flow rate. Due to the fact that these structures are the sole treatment device for the proposed paved surfaces, Nitsch Engineering recommends that the structures be designed to remove 80% of total suspended solids (TSS) for the water quality flow rate.
6. The Long Term Operation and Maintenance Plan (O&M Plan) should be revised to include maintenance requirements for the bioretention basins. Additionally, the snow storage language should be updated to prohibit stockpiling of snow within the bioretention basins.
7. The Long Term O&M Plan should be revised to reference maintenance requirements for the proposed Contech water quality structure, rather than the Stormceptor.
8. The Utilities and Grading Plan (Sheet 4 of 6) appear to show a portion of the proposed drainage system connecting to an existing catch basin. Catch basin to catch basin connections are not a preferred engineering practice. Nitsch Engineering recommends that the system be reconfigured to provide catch basin to manhole connections.

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9. The proposed project area is currently used for fueling of planes. Nitsch Engineering observed planes being fueled in this area during the site visit. Inspections of existing catch basins in the project area indicated a significant amount of gas and oil floating on the surface of the water that has collected in the catch basins. The existing catch basins do not have hoods on them so under current conditions, oil and gas are being discharged to the wetlands. Due to the nature of the use, as well as the fact that fueling is occurring in the project area, we recommend the project be considered a Land Use with Higher Potential Pollutant Loads (LUHPPL) and comply with the requirements of Section 5 of the MassDEP Stormwater Management Guidelines. This should be addressed in Stormwater Management Checklist. The Checklist submitted does not include any checked boxes for Section 5.
10. The Commission may want to include the installation of a gate valve in the proposed drainage system that can be closed in the event of a fuel spill to prevent the flow of fuel to the wetlands.

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

Very truly yours,

**Nitsch Engineering, Inc.**



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Senior Project Engineer



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

JLJ/SDT/fmk