

July 2, 2018

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

RE: Nitsch Project #9972
South Coast Rail
New Bedford Main Line
New Bedford, MA

Dear Mr. Dixon:

This letter is regarding the proposed South Coast Rail New Bedford Main Line and Whale's Tooth Station project. Nitsch Engineering has reviewed the following documents for compliance with the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards:

- Notice of Intent, "New Bedford Main Line," prepared by The VHB/HNTB Team, dated June 7, 2018.
- Plans entitled "South Coast Rail – New Bedford Notice of Intent Plans, Track and Whales Tooth Station Infrastructure," prepared by The VHB/HNTB Team, dated June 1, 2018.
- Report entitled "Stormwater Report for New Bedford, Track Corridor," prepared by the VHB/HNTB Team, dated May 30, 2018.
- Report entitled "Stormwater Report, Whale's Tooth Station, New Bedford, Massachusetts," prepared by VHB, dated May 2018.

The submitted project includes improvements to the existing rail main line as well as the construction of the Whale's Tooth station only. The design of the King's Highway Station is not included as part of this project. All of the design information for the rail improvements as well as the Whale's Tooth Station is included in a single set of design plans. However, separate stormwater reports have been submitted for the rail improvements project and the Whale's Tooth Station project.

Below are our comments on the proposed rail line improvements portion of the project:

1. The plans submitted for permitting are 30% plans. Therefore, there is detail that is not included on the plans that is customarily submitted. For instance, there is limited grading shown on the plans for the rail improvements. Although swales are depicted graphically and shown on the cross sections, they are not graded in plan views. The narrative also describes the inclusion of water quality best management practices at stormwater discharge points and sediment forebays that are not shown clearly on the plans. Fill of Bordering Land Subject to Flooding is shown graphically but not graded.
2. The stormwater report describes the project as a redevelopment project since the rail bed has previously been disturbed and there does not appear to be any additional impervious surfaces proposed. We do not have details regarding the increase in rail trips on this line. We expect there will be more activity on the line once the South Coast Rail is active, which could have increased impacts than are typically experienced now.
3. The project involves the replacement of three cross culverts under the proposed tracks. The plans have not included any details for the cross culverts. We recommend that culvert details be included on the plans.
4. As described above, the plans do not clearly show the water quality measures described in the stormwater report. It is unclear whether the proposed measures, including sediment forebays with check dams, are proposed to treat water generated by all areas of the tracks. Underdrains with filter

fabric are not acknowledged by the Stormwater Management Guidelines as a TSS removal best management practice. We recommend that the Applicant clearly show which areas of the proposed rail bed are receiving additional TSS removal and also quantify the removal rates.

5. The Stormwater Report acknowledges the presence of a vernal pool near station 2553 of the proposed rail and identifies this resource as an Outstanding Resource Water. There does not appear to be any special consideration given to this area. No water quality Best Management Practices are proposed to provide additional protection to this critical area. The Notice of Intent (NOI) also identifies Priority Habitat in the vicinity of the rail. The impacts to this Priority Habitat are unclear. It does not appear that there are any measures proposed to protect this Habitat.
6. The Stormwater Report describes the installation of a water quality treatment structure to treat stormwater in the vicinity of Kings Highway Station site. This water quality unit does not appear on the plans.
7. The Stormwater Report states that a SWPPP will be prepared prior to construction and then an erosion and sedimentation plan will be included in the NOI Application. The NOI application includes some language regarding erosion controls. This language appears generic in that it describes pavement sweeping and catch basin inlet protection. Neither of these items are part of the rail improvements. To comply with the requirements of the Guidelines, we would expect that an erosion and sedimentation plan would be submitted as part of the Stormwater Report. The NOI also states that a SWPP will be prepared prior to construction.
8. The Stormwater Report describes that a Long Term Stormwater Operations and Maintenance Plan will be included in the NOI application. The NOI states that a Long Term Stormwater Operations and Maintenance Plan will be developed during the final design phase of the project. An Operations and Maintenance Plan has not been submitted.
9. Typically, an Illicit Discharge Statement is included in the Stormwater Report. This statement was not included.
10. The Stormwater Report includes a table showing dimensions for rip-rap pads at the underdrain discharge points. The dimensions shown in this table should be reflected in the plans, either with labels at each location or a table on the detail sheet. The pads should be drawn to scale on the plans. The rip-rap pads prevent scour and erosion at the discharge points. However, they do not provide TSS removal.
11. The Stormwater Report includes a sketch of the layout for the Kings Highway station. The submitted plans do not include any design information for this station. It is unclear if this station is part of the project or not since this area is not included in the plans. The sketch shows a site layout, no grading information, and a schematic layout of the site drainage system. The drainage system does not have rims, inverts, pipe sizes, etc. The sketch shows 'PROP. STORMWATER QUALITY STRUCTURE,' which we presume to be Stormceptor because sizing information for a Stormceptor unit is provided. A Stormceptor detail is not included in the plans.
12. The Stormwater Report does not include any pipe sizing information, sediment forebay sizing information, or TSS removal calculations.
13. The detail sheets include an Oil/Water Separator detail. It is unclear where this unit is proposed.
14. The detail sheets include a Stone Diaphragm Pretreatment Filter Strip detail. It is unclear where this is proposed.

Below are our comments on the proposed Whale's Tooth station portion of the project:

1. The piping from the platform canopy is shown as reinforced concrete pipe. The HydroCadd model shows this piping as PVC. The plans show this pipe's slope at 8% while it is modeled at 4.8%. The plans show 48 feet of pipe and the model shows 83 feet. The plans and model should be consistent.
2. We recommend a minimum Time of Concentration of six minutes be used consistent with TR-20.
3. We recommend the weir overflow elevations be depicted on the plans consistent with the HydroCadd calculations.

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4. Bioretention basins should show a foot of freeboard for all storms. Both bioretention basin 1 and 2 do not meet this requirement for the 10-year and 100-year storms. The Guidelines require a foot of freeboard in bioretention basins.
5. The HydroCadd calculations show the stone overflow elevation at 9.5. They also show the bottom of the forebay at elevation 9.5, effectively indicating that there is no berm between the sediment forebay and the bioretention basin.
6. The detention basin underdrain detail shows the crushed stone surrounding the underdrain to be brought to the bottom of the bioretention basin. The bioretention basin shows the underdrain sitting in a 12-inch stone bed. We agree with the underdrain shown in the bioretention basin detail.
7. The bioretention basin 1 design shows the bottom of the basin at elevation 2.5. Existing grade in this area is approximately 7.3. It is unclear whether the excavation will intrude upon the cap. It is also unclear what groundwater elevations are in this area.
8. A Stormwater Pollution Prevention Plan (SWPPP) was not provided for review.

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

Very truly yours,

Nitsch Engineering, Inc.



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

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