

May 2, 2022

Mr. Dennis Audette
Chairman
New Bedford Conservation Commission
New Bedford City Hall
133 William Street
New Bedford, MA 02744

RE: Nitsch Project #9972
Pare Corporation
Shoreline Marine Terminal
26 North Front Street
Stormwater Review
New Bedford, MA

Dear Mr. Audette:

This letter is regarding the stormwater review associated with the Notice of Intent (NOI) submitted for the proposed Shoreline Marine Terminal Project located at 26 North Front Street. As requested, Nitsch Engineering received and reviewed the following documents for consistency with the Massachusetts Stormwater Management Standards, the City of New Bedford (the City) Stormwater Rules and Regulations (2021), and standard engineering practice. Project impacts within jurisdictional wetland resources areas were also reviewed.

- NOI prepared by Pare Corporation, dated March 2022.

The project involves the demolition of two (2) vacant industrial buildings (Buildings #2 and #12) and associated site work including construction of drainage improvements, utility work, a bulkhead wall, and new asphalt pavement. A new rail spur and a new marine travel lift pier are also being constructed under a separate cover, which was not reviewed by Nitsch Engineering.

We offer the following comments:

GENERAL COMMENTS

1. Page 8 – The total area of Riverfront Area on-site was calculated to be 15,290 feet but the proposed alteration of the Riverfront Area was calculated to be 345 square feet. Please explain how the proposed alteration area was calculated.
2. Page 34 – The total area within the limit of work that is within the 100-foot Coastal Bank Buffer Zone was calculated to be 37,147 square feet. Please clearly delineate the limit of work.
3. Page 56 – It is mentioned that the “penetration of the new overflow pipe through the bulkhead wall will be coordinated and designed by others.” Please confirm that this is referencing the relocated Outfall 005 and please confirm that all applicable permitting will be completed by others for this work. In addition, clarify whether Outfall 003, which includes the installation of a Tidegate inline valve, is to be installed by the Applicant or by others. Additionally, the Applicant should clarify whether the work is within any resources areas.
4. Page 74 – The soil log for MW-7, which is the closest boring to the proposed subsurface system, was performed in August of 1999. Nitsch Engineering recommends the Applicant perform a test pit at the location of the proposed subsurface system to estimate seasonal high groundwater and confirm that 2 feet of separation between the bottom of the system and groundwater is achieved.

5. Page 192 – The Stormwater Pollution Prevention Plan (SWPPP) notes that the “Total Area Expected to be Disturbed by Construction Activities” is 2 acres. The demolition of Buildings #2 and #12 and associated site work appear to be greater than 2 acres. Please explain how 2 acres was determined.
6. Page 204 – Appendix E, Step 1 states, “Do you plan on installing any stormwater controls that require subsurface earth disturbance, including, but not limited to, any of the following stormwater controls at your site.” Nitsch Engineering recommends the Applicant list the CULTEC subsurface system under “other.” In addition, on page 206 the Applicant shall check the following box to account for the CULTEC system, “Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow.” The Applicant shall submit the necessary information to the United States Environmental Protection Agency (EPA) regional office.
7. Per the HydroCAD model, it appears that CB P-4 through P-7 surcharge in the two-year (2-year) storm. For example, in the two-year (2-year) storm CB P-4 has a peak elevation of 3.91 feet, but it has a rim elevation of 3.50 feet. Similarly, the Stormceptor surcharges in the 10-year storm. The Applicant should comment on whether the catch basins and Stormceptor were designed to surcharge and clarify the intended drainage patterns in the surcharged condition. Alternatives to provide additional capacity should be reviewed to minimize surcharge on the site.
8. Please clearly delineate the extents of the resource area on the plans. No work shall be done within the resource areas without the proper permits.
9. Drainage pipes are typically designed to a minimum slope of 1 percent to maintain downward flow and prevent clogging. All proposed pipes have a slope less than 0.55 percent and the pipe slope between DMH P-1 and DMH P-2 is only 0.13 percent. Please explain why the pipes were designed with minimal slope and comment on whether clogged pipes are of a concern, especially in smaller storm events.
10. DMH P-1 accepts two (2) 24-inch pipes, one (1) 15-inch pipe, and one (1) 28.5-inch steel casing pipe. The Applicant should size the manhole so that the diameter is large enough to accept the pipes in the configuration shown.
11. There are a series of catch-basin-to-catch-basin connections (CB P-5, CB P-6, CB P-7) and one (1) DMH to CB connection (DMH P-2 to CB P-3). Standard engineering practice provides catch basins connecting directly to drain manholes in series. The reasoning for this practice is that catch-basin-to-catch-basin connections increase the resuspension of collected solids in the sumps of the catch basins and disrupts the hydraulic flows in the system. With the project discharging directly to the Acushnet River, Nitsch Engineering recommends the Applicant remove catch-basin-to-catch-basin connections.

MASSDEP STORMWATER MANAGEMENT STANDARDS

12. The Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards require redevelopment projects to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice (BMP) requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

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13. We recommend the Applicant prepare a MassDEP Stormwater Checklist to document compliance with the Massachusetts Stormwater Management Standards.
14. Page 166 – Per the Massachusetts Stormwater Handbook, Target Depth Factor Type D soils use a factor of 0.1-inch. In addition, on page 166 the existing/proposed impervious area listed is different from the area used in the calculation. Please recalculate the recharge volume provided using the correct information.
15. Standard 5 of the Stormwater Handbook requires source control and pollution prevention to eliminate or reduce the discharge of stormwater runoff from land uses with higher potential pollutant loads to the maximum extent practicable. The Stormwater Handbook classifies marinas and boatyards as Land Uses with Higher Potential Pollutant Loads. The project includes the installation of a marine travel lift (under a separate cover). Please confirm the intended use is not classified as a boatyard or applicable to Standard 5.

CITY OF NEW BEDFORD STORMWATER RULES AND REGULATIONS

16. The Regulations define a redevelopment as any construction, alteration, or improvement on land that contains existing impervious cover, including all projects requiring Planning Board Site Plan Review, provided that the activity does not involve an increase in the net amount of impervious cover. Per this definition, the project is considered a Redevelopment. Per Section 3.2.13, a Redevelopment project where site conditions prevent the reduction in impervious cover are presumed to meet the Stormwater Rules and Regulations when stormwater practices are implemented to provide stormwater controls for at least 40% of the site's impervious area. Please confirm that this standard has been met.
17. Per Section 3.2.14.B, Redevelopment projects that disturb equal to or greater than 1 acre are required to retain the volume of runoff equivalent to 0.80 inches multiplied by the total post-construction impervious surface area on the site. In addition, redevelopments are required to remove 80% of the average annual TSS and 50% of the Total Phosphorous. Per HydroCAD, the available storage for the CULTEC system is 0.62 acre-feet which is approximately 2,700 cubic feet. Please confirm the impervious area within the limit of work and confirm that the 2,700 cubic feet of storage provided meets the required storage volume. Regarding the Total Phosphorous, please provide documentation that the 50% phosphorous removal requirement is met.

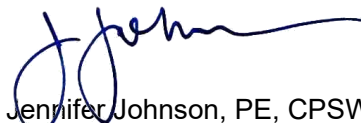
If you have any questions, please call us at (617) 338-0063.

Very truly yours,

Nitsch Engineering, Inc.



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Senior Project Designer



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Project Manager

BJB/JJ/ajc