



Department of Public Infrastructure

Ronald H. Labelle

Commissioner

Water
Wastewater
Highways
Engineering
Cemeteries
Park Maintenance

CITY OF NEW BEDFORD

Jonathan F. Mitchell, Mayor

July 9, 2015

John Radcliffe, Chairman
Conservation Commission
133 William Street Room 304
New Bedford MA 02740

Dear Mr. Chairman, Commission Members, and Conservation Agent,

The City of New Bedford Department of Public Infrastructure (DPI) is undertaking construction of a municipal salt shed for purposes of housing salt piles used during winter for de-icing application on roads and paved areas in New Bedford. DPI as the applicant is proposing to develop a site for the salt shed on a parcel under the jurisdiction of the New Bedford Airport off Jones Street namely Map 119 Lot 139. The salt shed being procured by DPI is a prepackaged kit manufactured by Clearspan (See attached brochure) and the outside dimensions of the structure footprint are 100 feet long by 60 feet wide. The basic design consists of a multiple arched truss frame anchored to a concrete wall foundation the top of which is covered with a high durability reinforced PVC fabric. The concrete wall foundation can be a permanent poured in place concrete foundation wall or it can be based on closely spaced concrete blocks placed over a graded structurally sound, well drained area.

SITE DEVELOPMENT:

The proposed site is known to be filled with what appears to be randomly placed truckloads of earthen materials and debris, the source of which is unknown and which is the reason for the site to exhibit such great variety with respect to terrain surface. DPI proposes to clear all vegetation and grub any unsuitable root ball and soft materials from the overall footprint of salt shed footprint. DPI will then spread and compact the remaining existing materials using a bulldozer and remove any further unsuitable materials as needed. DPI will then import suitable structural fill material as needed and spread and compact the materials in layers filling to a sub-grade at the appropriate elevation. Upon achieving sub-base grade, DPI will pave a pad with dimensions of 120 feet long by 80 feet wide with a minimum pitch of 2% from side to side away from the centerline of the pad in the long dimension. This asphalt pad is intended to accommodate the erection of the concrete blocks to be used to support and anchor the shed structure and provide for a ten foot wide access strip around the three closed sides of the structure which will be used to collect and redirect drainage. The overall drainage design for the site is based on ensuring that all covered portions of the salt shed are higher and dryer than any other extent of the support pad so that no rain would be allowed to runoff into the covered portion of the structure thereby mixing with salt.

This proposed redevelopment project seeks to make use of an otherwise marginal parcel that because of the limited uplands available would not be suitable for a more substantial commercial project.

The design plan accompanying this letter details the proposed work associated with this project. Proposed contours depicted on this plan are based on the minimal elevation information obtained from instrument survey locating the wetland flags. Complete and accurate topographic information will be obtained when vegetation clearing is completed as the site is heavily overgrown. The proposed paved asphalt pad will be constructed to be higher in elevation than the driveway and ramp into the drive-in opening of the structure in order to ensure that heavy rain does not easily enter into the entrance opening when it is uncovered. The edge of the perimeter access way around the three closed sides of the structure will be treated with a berm intended to channel runoff and redirect it into a drainage collection system and further into an on-site subsurface bio-retention system for purposes of recharging. Storm water runoff management for this site was analyzed and it is noted that the scope of work for this project is limited to constructing a structural pad to support the salt shed. The runoff from the structure, outside perimeter of the pad, and along the driveway will be collected and recharged and the sloped fill surrounding the structural pad will be treated with erosion control materials to help establish and stabilize a slope hardy turf that will offer natural drainage beyond the asphalt pad.

There is minimal area to use for recharge of runoff at the structure pad, therefore the driveway area will be utilized to install sufficient drainage recharge to address the runoff generated from the new structure. Given that the usage of the salt shed is predominantly wintertime where many of the precipitation events are in the form of snow there is an expectation that the most significant impact of runoff will occur during the non-winter months when the salt shed will be closed and unused.

This project is not exempt from the Massachusetts DEP Storm Water Standards and is believed to meet the definition found in Standard 7 (Condition 1) with respect to re-development of an existing drainage system and the applicant seeks to make reasonable efforts to comply with the intent of Standard 7 and meet to the extent practicable Standards 2, 3, 4, 5, and 6 given the site constraints associated with this project.

The following narrative elaborates upon the applicant's planned effort to meet these standards to the extent practicable. The following explanations coincide with the pertinent sections in the Stormwater Management Form accompanying this letter.

Standard # 1: The limited scope of this project will not create a new point discharge into wetlands or Commonwealth waters of untreated storm water.

Standard # 2: The post development impervious drainage area is taken into consideration for sizing the recharge system. The recharge capacity for a 10 year storm will address runoff for most precipitation events and the overflow from the bio-retention system will sufficiently treat collected runoff for all but the most severe rain storm events which tend to occur in non-winter time periods.

Standard #3: This project embraces the use of LID measures and will recharge collected runoff for a design 10 year storm event.

Standard # 4: In addition to the collection and treatment of runoff from the subject site, the City's DPI is committed to long term scheduled street sweeping of the driveway in order to minimize the accumulation of salt that may drop from the trucks using the facility. The sub-surface bio-retention system will also be deigned to be maintained with periodic cleaning and debris removal.

Standard # 5: Given that this project will result in a substantial accumulation of road salt with the potential to act as a heavy pollutant load to the adjacent wetlands, the City's proposes to construct the salt shed in strict accordance with all the manufacturer's recommendations. In addition the City will seek to apply Best Management Practices as documented within the salt storage and handling industry for operating and maintaining the salt shed system including long term storage practices and cleaning of the access road.

Standard #6: This standard is believed to be not applicable as the storm water discharge area of concern is believed to not be a critical area as defined in the Storm Water Handbook.

Please refer to the design plan for other detail not mentioned in the above narrative. Also please note that prior to any construction, a silt fence and hay bale line will be placed in accordance with the design plan and other measures required by the Order of Conditions will be complied with.

Respectfully submitted,

David Fredette
City of New Bedford Engineering Department

CC: Ronald Labelle, Commissioner DPI
DEP Southeast Region
MA Division of Marine Fisheries