

## MEMORANDUM

**TO:** Sarah Porter, New Bedford Conservation Commission  
**FROM:** Scott Turner, PE, Nitsch Engineering   
**DATE:** July 16, 2015  
**RE:** Logal Project Site Observation                      Nitsch Project #9972

Below is a summary of the site observation conducted by Nitsch Engineering at the Logal Property located at 100 Duchaine Boulevard in New Bedford, Massachusetts on Tuesday, July 14, 2015 at 8:30 AM. The site walk was attended by Rich Riccio from Fields Engineering and representatives from the owner. The following items were observed during the site visit:

1. The parking area that was designed to sheet flow to the sediment forebay that is part of Wet Basin 1 was not graded properly. Instead of the parking area flowing directly to the sediment forebay, portions of the parking area flow towards a low point near the storage portion of the basin. During heavy storms, water collects in the low spot and then overtops the Cape Cod berm that was installed along the parking area before flowing directly into the storage area of the wet basin. The side slopes in this area of the wet basin have eroded. In some areas, this erosion is significant and has left deep channels in the side of the wet basin. The basin is not graded consistent with the approved plans. The plans show the side slopes to the basin be graded to the edge of the parking lot. However, there is a six to eight-foot flat area between the top of the side slopes to the basin and the edge of the parking lot.
2. Rich Riccio had submitted a plan depicting the extension of a rip-rap apron to collect stormwater that is overtopping the Cape Cod berm. During the site visit, additional options were discussed. It is important that stormwater that is generated by the parking lot be routed through the sediment forebay to insure that it receives adequate treatment in accordance with the Stormwater Management Guidelines. Therefore, if the parking lot is not regraded, a piped solution will be necessary to route this water to the forebay. Given the fact that there is some space between the edge of the parking lot and the top of the wet basin, there is an opportunity to create a depression or series of depressions that could collect the stormwater and route it directly to the sediment forebay. We discussed developing a plan that shows depressions along this flat area with field drains. The rim of the field drains should be set at an elevation that is higher than the bottom of the depressions but lower than the berm at the top of the storage portion of the wet basin. I recommended that as-built information be collected to perform this design. This design should be submitted to the Conservation Commission as part of the request for an Amended Order of Conditions.
3. The owner was not enthusiastic about regrading the parking area consistent with the approved plans. Due to the amount of disturbance this would require, it would significantly impact their business. The facility is currently operating and the area required to regrade the parking lot would prevent access to many of their loading areas.
4. The rip rap pad that is located upstream of the sediment forebay is not working properly. The stone is too small and the pad has accumulated a significant amount of sediment. Stormwater simply runs over the top of the pad. Erosion of the side slopes has also begun. The design of the rip-rap pad needs to be re-evaluated and installed with stone that meets the specifications of the approved plans.
5. The edge of the bituminous parking area near the sediment forebay has eroded. This could be due to water running off the edge of the parking area or vehicles backing into this area and rolling off the edge of the bituminous. I recommended that a curb be installed flush with the pavement in this area to prevent the bituminous from eroding further. The owner agreed to do this along with the other improvements in this area.

6. The stone between the sediment forebay and the storage area of the basin also appears to be too small.
7. The side slopes of the wet basin appear to be too steep. The owners' representative indicated that they do not mow them because they are too steep. The side slopes should be checked to see if they are at the proper slope. Any areas of the side slopes that have experienced significant erosion need to be repaired.
8. We recommend that an as-built of all of the stormwater features be performed sooner rather than later given the fact that portions of the site have not been built correctly. We are concerned that the wet and dry basins have not been constructed big enough to retain the proper volumes required in the approved calculations. Since there will be some work required, it would best to know if the basins need to be enlarged prior to this work beginning.
9. The wetlands vegetation in wet basin 1 appears to have taken extremely well.
10. The steel plate on the outlet control structure from wet basin 1 needs to be installed.
11. Additional rip-rap needs to be replaced at the discharge points into the sediment forebay at wet basin 2.
12. Similar to wet basin 1, it appears the side slopes around wet basin 2 may be too steep. We recommend an as-built be performed to insure that the proper volume is achieved in wet basin 2.
13. The wetlands vegetation in wet basin 2 has taken extremely well.
14. There are other issues with the grading in the parking lot. The area draining to the Stormceptor unit with a double grate has not been uniformly graded and there is significant puddling in the parking area. It is unclear whether the grate has been set too high or the parking area around the grate has either settled or is too low. This could become an issue in the winter.
15. The rip-rap at the discharge point to the swale located across the access drive south of the parking area needs to be re-installed with additional rip rap that meets the specifications shown on the plans.
16. The site plans imply that a uniform gravel driveway will be constructed along the western side of the building. The plans shows an 18' wide gravel drive with loam and seed on both sides of the gravel driveway. This area has not been loam and seeded. This was discussed with the owner who agreed to formalize the access drive and install the loam and seed.
17. There is evidence of frequent ponding on the west side of the gravel parking area that directs stormwater to the detention basin 1. It appears that the rim of the stormceptor may be set too high or perhaps the grading of the gravel parking area is inconsistent with the plans. The owner was going to look into this and modify as needed.
18. Rip-rap needs to be installed at the discharge pipes into detention basin 1. Rip-rap also needs to be placed at the overflow from detention basin 1.
19. Some of the side slopes along detention basin 1 have also eroded. These areas need to be repaired. We recommend performing an as-built survey of detention basin 1
20. We walked the erosion and sedimentation control line surrounding the stock piles as described in the Request for an Amended Order of Conditions. In general, the erosion and sedimentation control appeared to be in good condition.

Please call if you have any questions.