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October 20, 2017

Ref: 12815

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Mr. Craig Dixon
New Bedford Conservation Commission
New Bedford City Hall
133 Williams Street
New Bedford MA 02744

Re: South Coast Rail, Proposed Wamsutta Layover Facility DEP File No. 049-0777

Dear Mr. Dixon and Commissioners,

On October 17th, we received the peer review comments from the Commission's consultant, Nitsch Engineering (VHB provided a copy of the NOI and plans to Scott Turner at Nitsch on October 4th). This letter provides a written response to their comments: we hope that any issues can be resolved prior to the re-scheduled hearing on November 7th.

We would like to note that, prior to filing the NOI, the plans and stormwater calculations were thoroughly reviewed by the City Engineer and the Department of Public Utilities, and incorporated their comments into the plans. The City has accepted the proposed layover facility and drainage connection. As a separate project, the City is planning to replace the pipe in Wamsutta Street in the near future, as we noted to the Commission at the hearing on October 3rd.

Below, we provide responses to each of Nitsch Engineering's comments.

1. The site is a redevelopment site. Therefore, the project is required to meet the Massachusetts Stormwater Management Standards to the maximum extent practicable.

   *As documented in the NOI, the project meets the Stormwater Standards to the maximum extent practicable. The site is entirely disturbed and consists of fill material placed over a permeable cap. There is 3 feet of fill material over the cap. The restrictions on the site development do not allow MassDOT to penetrate this cap, therefore it is not practicable to install deep sumps or retention/detention basins on the site. Precipitation currently infiltrates into the site or runs offsite towards Wamsutta Street, where runoff is picked up by the municipal system. The project retains these characteristics: precipitation falling onto the track area (including the ballasted areas and the paved drives between the tracks) will infiltrate through the grassed swales and gravel-filled underdrain trenches. Excess runoff will flow into the perforated pipes and be carried to the water quality units before discharge from the site. Runoff from the paved parking area will be collected,*

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*pass through catch basins with shallow sumps, and the water quality units before discharge from the site.*

2. The project's stormwater management system proposes to discharge directly to the municipal stormwater system in Wamsutta Street. The municipal system appears to discharge to the wetlands system on site. However, the submitted plans to not include invert information so we cannot verify that occurs. We recommend that the applicant verify that the municipal drainage system discharges to the wetland system on site and/or provide invert information for the municipal drainage system.

   *For clarification, the wetland system is not on the project site. The project team has confirmed pipe sizes and inverts with DPI and confirmed that the municipal system discharges to the wetland adjacent to the project site.*

3. The applicant contends that the wetlands system on-site is subject to tidal influence, which precludes the project from meeting Stormwater Management Standard #2 regarding peak rate attenuation. The wetlands system discharges to a culvert that travels beneath existing railroad tracks and Herman Melville Boulevard before discharging to a sizeable channel that ultimately discharges to the Acushnet River. Therefore, the project's discharge is not directly to an uprotected coastal area. The discharge to the Acushnet River is north of the Hurricane Barrier as well as Pope's Island, which provides protection to the discharge area. The Stormwater Management Standards state that Standard 2 may be waived for projects that discharge to land subject to coastal storm flowage as described in the Wetlands Protection Act (WPA). The WPA describes land subject to coastal storm flowage as "land subject to any inundation caused by coastal storms up to and including the 100-uear storm, surge of record, or storm of record, whichever is greater." The Federal Emergency Management Agency (FEMA) map submitted with the application indicates that the area of the proposed project lies within the 500-year floodplain (0.2% annual chance flood) and areas protected by levees from the 1% annual chance flood. We feel the applicant should provide additional documentation that the project discharges to land subject to coastal storm flowage, and is therefore exempt from Standard 2. If the project is not exempt from Standard 2, hydrological calculations will need to be prepared to demonstrate compliance with Standard 2.

   *Although the proposed project is within the mapped 500-year (0.2%) flood zone, the wetland to which it discharges is within the mapped 100-yeare (1%) flood zone and is therefore considered Land Subject to Coastal Storm Flowage. Despite the protection offered by the levee system, it is our understanding that the New Bedford Conservation Commission and DEP consider New Bedford Harbor and the tidal Acushnet River to be LSCSF.*

4. The proposed project appears to be increasing the amount of impervious surface on site. This would result in an increase in flows from the site and into the municipal system. The project is proposing a 24-inch reinforced concrete pipe to connect to the municipal system. There is an existing 24-inch diameter pipe downstream from the proposed connection. The applicant should

quantify the increase in flows and also verify that the existing municipal stormwater piping in Wamsutta Street can accommodate the flow from the project, as well as the existing flow in the Wamsutta Street municipal system.

*The pipes between the catch basins in the layover yard are perforated pipe and the storm water collected in these catch basins will be infiltrated in the yard area. The storm water from the layover yard will only be conveyed to the manholes and the municipal system when infiltration is not possible. The City of New Bedford and DPI, with the assistance of CDM Smith, have a prepared a storm water study for this area and are planning to replace the municipal piping in Wamsutta Street. They have reviewed the project plans and MassDOT has committed to help the City with their plan for this outfall.*

5. The applicant has not provided pipe sizing calculations for the proposed stormwater management system on-site. We recommend that calculations be provided to verify that the system is sized appropriately, as well as the system downstream of the connection point as described above.

   *This comment is primarily about engineering design rather than compliance with WPA performance standards. Pipe size calculations will be submitted under separate cover.*

6. The proposed project includes catch basin to catch basin connections along the drain lines between the tracks. Typically, catch basin to manhole connections are installed to prevent sediments collected in the catch basin sumps from being re-suspended.

   *The access roadways between the layover tracks will have light traffic and the sumps will be cleaned by the MBTA. Due to the cap under most of the site the project is proposing catch basins with 2-foot sumps. A detail for these catch basins is attached. The collection system design is consistent with MBTA standards for this type of facility. Access roads are intentionally graded to drain to the center of the access road and away from the track. Installation of a drainage trunk line with catch basin laterals would have to be to the side and too close to the track ballast, resulting in an unbalanced collection of stormwater that filters through the ballast.*

7. The applicant states that the proposed project is located on a site that is capped to isolate contaminated soils, precluding the project from providing groundwater recharge. Assuming the site is capped, we agree with that approach.

   *The site is indeed capped, as shown on the project plans and described in the Stormwater Report. The cap is, however, pervious (as was clarified in the Public Hearing on October 3). The project design mimics the existing infiltration as much as possible given the site constraints.*

8. The proposed project includes a Water Quality Structure that will treat all of the stormwater generated by the proposed project. Stormwater calculations were provided that show a Stormceptor 4800 unit for water quality unit 1, and a Stormceptor 450i unit for water quality unit 3. The proposed plans show details that are effectively the same units described in the calculations.

*No response required.*

9. The stormwater management report includes descriptions of erosion and sedimentation control measures, including catch basin protection, construction entrance/exit, diversion channels, etc. The grading plan shows a filter tube for erosion control only along the perimeter of the disturbance generally within the buffer zone only. We recommend that additional erosion controls, such as a construction exit, catch basin protection, etc. be shown on the plans as well.

   *The project plans show all appropriate erosion and sedimentation controls within the area of the Commission's jurisdiction. Additional controls may be needed for compliance with the NPDES General Permit, and are therefore dependent on the Contractor's schedule and staging. They will be included in the SWPP submitted by the Contractor under the NPDES permit, and contract specifications will be clear on establishing the standard requirements noted above.*

10. The grading and utility plan 1 does not show grading on the plans. This plan includes the work to be performed in the buffer zone. We recommend grading be shown on this plan.

    *Sheet UT-303, Facility Grading and Utility Plan, shows proposed grading in the area of the driveway and parking lot. The storage yard grading is flat (0%) and only spot grades for establish high and low points along each access road can and are provided. Contour grading outside the track storage yard is also provided.*

11. A grass channel is described as a Low Impact Development measure in the stormwater checklist. There is no detail for the grass channel or location shown on the plans.

    *The plans show this feature labeled "ditch" and "water quality swale" (see sheet CV-304). A detail for this grass channel is included in this response.*

On behalf of MassDOT, we thank the Commission for their attention to this project, and look forward to reviewing these responses at the hearing scheduled for November 7th. We hope that the Commission will close the hearing on that date.

Please contact me at 617-607-2164, or lstandley@vhb.com, if you have any questions about this information.

Sincerely,

Lisa A. Standley

Lisa A. Standley, Ph.D.

Chief Environmental Scientist

Enclosures: Detail, Catchbasin

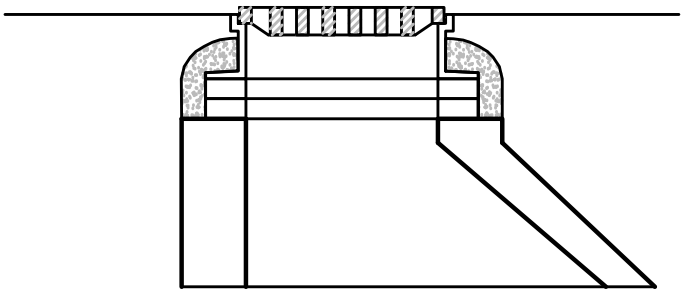
Detail, Grass Swale

Cc: Scott Turner, Nitsch Engineering

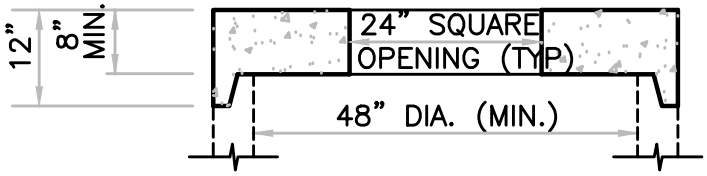
Chris Ross, DEP SERO

Jean Fox, MassDOT

Holly Palmgren, MBTA



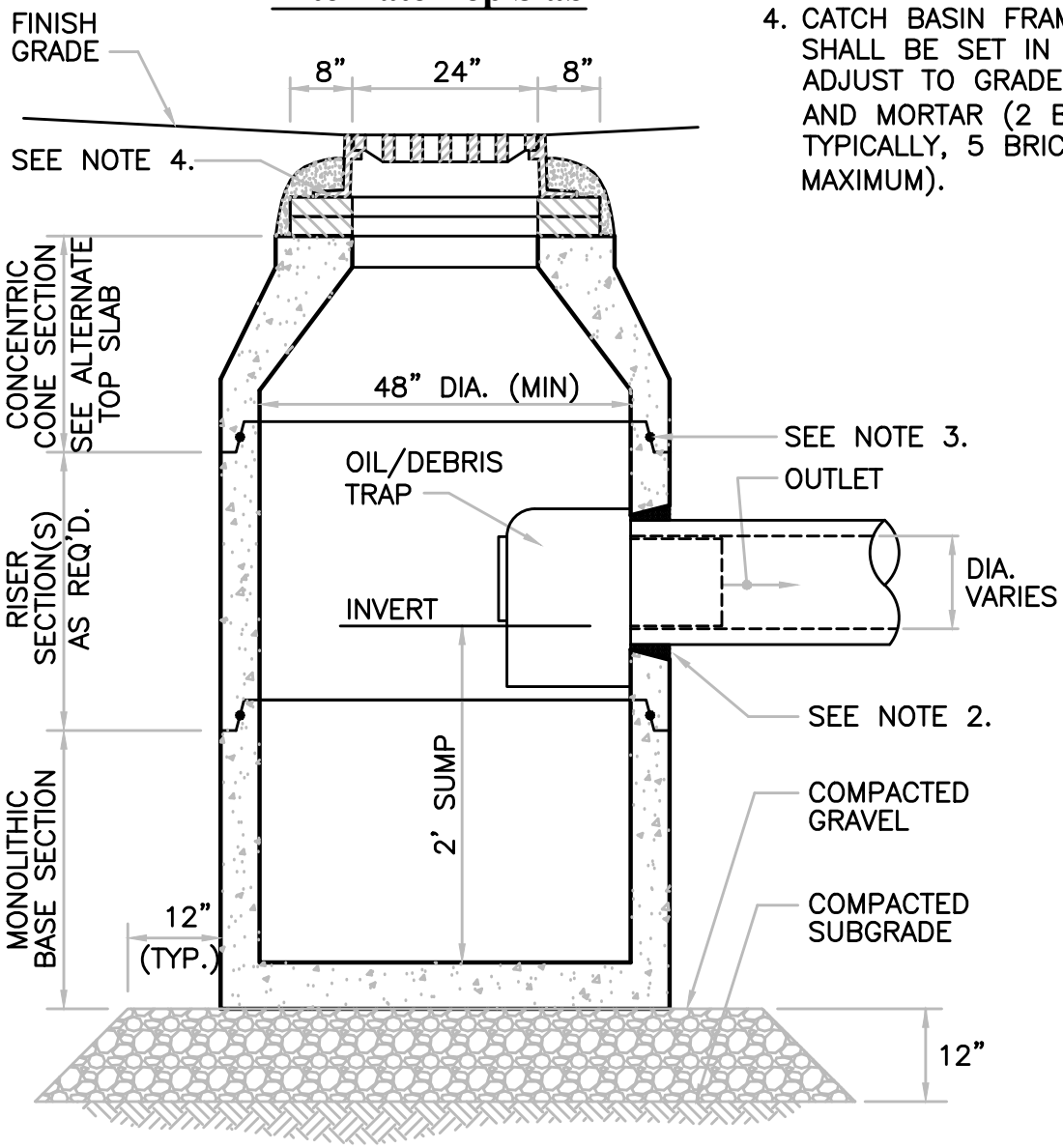
**Alternate Eccentric Cone Section**




**Alternate Top Slab**

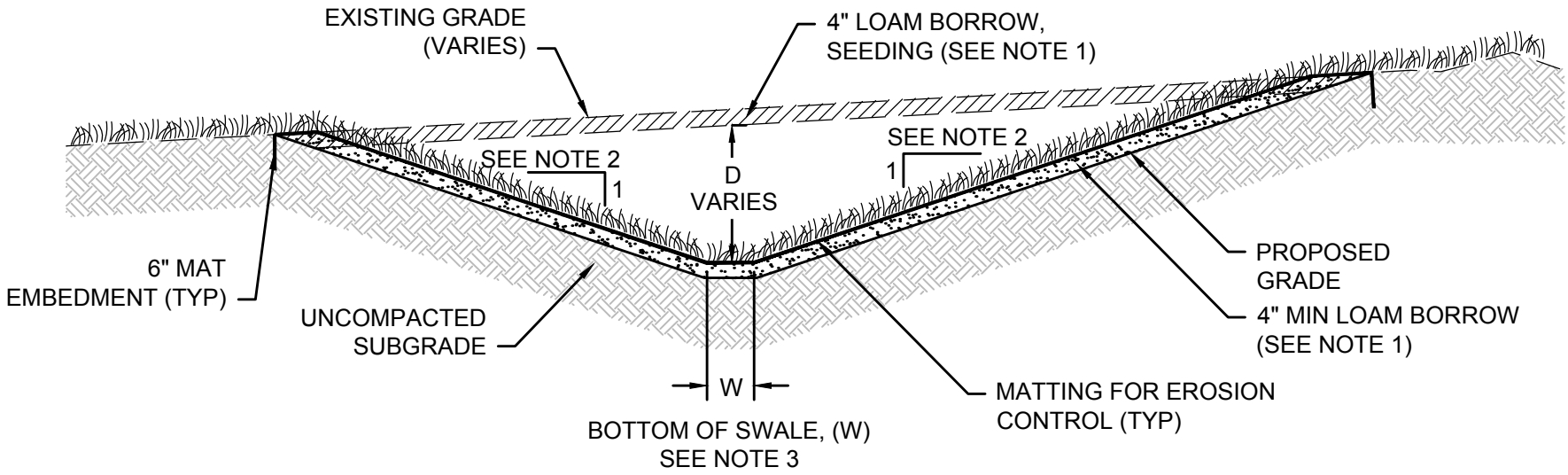
Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS–20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).




# Catch Basin (CB) with Oil/Debris Trap - 2' Sump

SCALE: N.T.S.




NOTES:

1. PLACE LOAM BORROW TO A MINIMUM DEPTH OF 4". SEEDED WITH ITEM 765.457 INFILTRATION BASIN BOTTOM/SWALE MIX.
2. SIDE SLOPES TO MATCH PROPOSED OR EXISTING GRADE AS SHOWN ON PLANS BUT SHOULD NOT EXCEED 4:1.
3. CONTRACTOR TO MATCH EXISTING SWALE GEOMETRY WHERE REMOVING CONCRETE SWALE. BOTTOM SWALE WIDTH (W), LABELED ON PLANS, IS APPROXIMATE AND VARIES FROM 3' TO 7'.

## Grass Channel Section

SCALE: N.T.S.