



851 Chemung Street
Horseheads, New York 14845

January 11, 2019

Mr. Tom Skebey, Code Enforcement Officer
Town of Horseheads Code Enforcement Department
150 Wygant Road
Horseheads, New York 14845

**Re: New Byrne Dairy
Miracle Mile, Horseheads, New York
Review of Stormwater Management Plan**

Mr. Skebey:

I have completed a review of the following submitted information for the above-referenced project regarding the Stormwater Pollution Prevention Plan (SWPPP) and stormwater management system design for that project.

- Stormwater Pollution Prevention Plan for Construction Activities at the Horseheads Byrne Dairy, Stamped by a NYS Licensed Professional Engineer, Prepared by Plumley Engineering, Dated December 2018, Received December 20, 2018
- Site Development Plans for Horseheads Byrne Dairy, Stamped by a NYS Licensed Professional Engineer, Prepared by Plumley Engineering, Dated December 2018, Received on December 20, 2018

My review comments and questions regarding the SWPPP and stormwater management system for the above-referenced project, based upon the submitted information, are as follows.

GENERAL

1. What is the status of New York State Department of Transportation's (NYSDOT) review and approval of the proposed access drives and the proposed stormwater system, including the proposed driveway culvert? Have they provided any input that resulted in the change of the proposed design?
2. Is it anticipated that any downstream areas would be impacted by the increased runoff volumes leaving the project site?
3. The estimated Tc appears to be too high for developed drainage area D2B.

STORMWATER CONVEYANCE

1. Hydraulic calculations for the sizing of the proposed stormwater conveyance systems, including the proposed driveway culvert, roof drains, and the proposed swales are requested. Potential tailwater impacts on the proposed culvert and storm drains should be considered.
2. It is recommended that the design and sizing of the proposed rip rap pads be consistent with the NYS Standards and Specifications for Erosion and Sediment Control.
3. In regards to the proposed drainage swales, the following questions and comments are noted.
 - Cross-sections (including depth, width, side slopes, and surface treatments) for each of the proposed swales are requested to be included on the plans.
 - A portion of the proposed diversion swale on the south end of the site would have a slope of over 10 percent. Would this be erosive? Is stone lining or other measures needed to prevent erosion?
 - The proposed diversion swale at the base of the slope along the west side of the development would receive runoff from a sizeable drainage area. What measures would be employed to stabilize this proposed swale, given that runoff would be directed to it prior to its stabilization?
4. On Sheet C201, a designated Snow Storage area is shown in the area at the base of the existing slope to the west of the proposed building. The proposed diversion swale passes through this area and it appears that this swale could become blocked by plowed snow. Could this diversion swale be relocated to avoid this potential?
5. In regards to the proposed north entrance drive, based upon the Grading Plan (Sheet C401), it appears that more area of pavement would drain towards NYS Route 14 than that depicted in the Developed Drainage Area Plan.
6. In regards to the proposed south entrance drive, it appears that gaps (“Gravel Spillways”) in the curbing are proposed to allow runoff from the entrance drive pavement to drain to the adjacent culvert and bioretention filter area. A concern exists that the intended performance of the proposed gaps would be compromised during periods when snow has accumulated along the edge of the proposed drive.
7. In regards to the portion of the proposed parking lot and lawn area along the frontage of the property between the proposed entrance drives, the Grading Plan should clearly demonstrate how this area would be graded to maintain the intended drainage area boundaries.

STORMWATER TREATMENT & MANAGEMENT

1. Information regarding the proposed oil and grease trap is requested, including manufacturer’s information, details, and sizing calculations.
2. In regards to the proposed bioretention filters, the following items are noted.
 - As per Section 6.4.3 of the NYS Stormwater Design Manual, *“A flow regulator (or flow splitter diversion structure) shall be supplied to divert the WQv to the filtering practice, and allow larger flows to bypass the practice”*.
 - Specific requirements for the pretreatment of stormwater prior to a bioretention filter are outlined in the NYS Stormwater Design Manual. Have these requirements been applied to the proposed design?
 - The plan dimensions of the proposed bioretention filters should be noted on the plans.
 - In regards to the Plant Chart and Bioretention Area Plantings table on Sheet C301, do these plant quantities pertain to a single bioretention filter or both of the proposed bioretention filters?
 - It is requested that the layout of the proposed underdrain piping be shown on the plans.

3. In regards to the proposed stormwater infiltration basin, the following items are noted.
 - As per Section 6.3.1 of the NYS Stormwater Design Manual, *"The bottom of the infiltration facility shall be separated by at least three feet vertically from the seasonally high water table or bedrock layer, as documented by on-site soil testing"*. As per the soils information provided on Sheet C101, *"Gray Weathered Silt Stone"* is noted at being at a depth of 1 to 2.5 feet (+/-). Does adequate separation from the seasonally high groundwater table and bedrock exist for the proposed infiltration basin?
 - As per Sheet C101, it does not appear that any infiltration tests or test pits were completed in the footprint of the proposed infiltration basin.
 - Calculations regarding the sizing of the pretreatment system, prior to the infiltration basin, are requested.
 - As per the Infiltration Basin Detail on Sheet C404, the spillway height shall only be 0.25 feet. This may be difficult to construct and maintain. What is the length of the proposed spillway?
4. Will runoff from the proposed adjacent parking lot sheet drain across the proposed dumpster pad area?

EROSION & SEDIMENT CONTROL

1. The location of the proposed concrete washout should be indicated on the plans.
2. It appears that silt fence (or other perimeter erosion control measure) is warranted between along the project side of the proposed diversion swale.

OPERATION & MAINTENANCE AGREEMENT

1. In accordance with the Town's Stormwater Management and Erosion and Sediment Ordinance, a formal, signed enforceable operation and maintenance agreement for the stormwater collection and management system shall be provided by the Applicant. Furthermore, this agreement must reference and include an approved Operation & Maintenance Plan.

This agreement shall be binding on all subsequent landowners and recorded in the office of the County Clerk as a deed restriction on the property. Also, the Applicant shall convey to the Town easements and/or rights-of-way to assure access for periodic inspections by the Town or their representatives (and for maintenance if required). These agreements, as well as the Operation & Maintenance Plan, shall be subject to the review and approval of the Town of Horseheads, the Town's attorney, and Chemung County Stormwater Coalition.

If you have any questions regarding these comments, please do not hesitate to contact us. Furthermore, I would be happy to meet to discuss this project.

Sincerely,



Jimmie Joe Carl, P.E.

Cc: Plumbly Engineering