



851 Chemung Street
Horseheads, New York 14845

September 26, 2022

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

**Re: Coca Cola Beverages – 2022 Facility Improvements
Latta Brook Industrial Park Road, Horseheads, New York
Review of Stormwater Management Plan**

Mr. Larnard:

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 this project.

- Stormwater Management Report for Coca-Cola Beverages Northeast, Inc, Stamped by a NYS Licensed Professional Engineer, Prepared by Design Group, Dated August 25, 2022, Received on September 2, 2022
- Site Development Plans for Coca-Cola Beverages Northeast, Inc., 2022 Facility Improvements, Sheets C1 through C5, Stamped and signed by a NYS Licensed Professional Engineer, Prepared by Design Group, Signature dated August 26, 2022, Received on September 7, 2022. This plan set does not include information for the proposed additional access drive and stone trenches.
- Site Development Plans for Coca-Cola Beverages Northeast, Inc., 2022 Facility Improvements, Sheets C1 through C4, Stamped (but not signed) by a NYS Licensed Professional Engineer, Prepared by Design Group, Signature dated August 26, 2022, Received on September 7, 2022. This plan set includes information for the proposed additional access drive and stone trenches.

My review comments and questions regarding the SWPPP and site development plans for the above-referenced project, based upon the submitted information, are as follows.

GENERAL

1. As noted above, two sets of plans were submitted. One set includes the proposed additional access drive and stone trenches, while the other does not. Are the proposed additional access drive and the stone trenches intended to be in the overall project? If so, it is requested that a single set of plans be provided that includes all of the proposed improvements.
2. On Sheet C1 of each of the submitted plan sets, it is noted that the plan set shall have 6 sheets. One of the submitted plan sets has 5 sheets and the other has 4 sheets. Are plan sheets missing?

3. As per Sheet C1 of the submitted plans, it is noted that “*Anticipated Land Disturbance is less than 1 acre (+/- 15,000 SF)*”. On the contrary, the submitted Stormwater Management Report indicates that the anticipated land disturbance is approximately 1.5 acres (66,200 SF). This discrepancy should be addressed.
4. As noted on Page 5 of the submitted Stormwater Management Plan, it is noted that “*The project does include a building addition...*”. Is this accurate?
5. As per Page 15 of the submitted report, it is mistakenly noted that because the project site is not located within the MS4 Boundaries, the project is not subject to Chemung County Stormwater jurisdictional review. This is not correct. Via a recent e-mail correspondence to the Applicant’s engineer, clarification regarding this subject was provided and this misunderstanding has been resolved. As such, it is requested that this statement be corrected in the SWPPP.

STORMWATER MANAGEMENT

1. As per the submitted hydraulic modeling data in the SWPPP, the proposed “Vegetated Swale” is intended to reduce peak stormwater flow rates. As an example, for a 10-year storm event, peak flows are estimated to be reduced from 8.03 CFS to 0.89 CFS. This is contrary to the NYS Stormwater Management Design Manual.

As per the NYS Stormwater Design Manual, a *Dry Swale* (Chapter 6) is intended to meet water quality treatment goals only and is not appropriate for channel protection or peak flow attenuation. In addition, *Vegetated Swales* (Chapter 5) that are designed in accordance with the Design Manual will only provide a modest (10 to 20%) runoff reduction for the water quality volume (WQv) for certain development conditions.
2. In regards to the submitted hydraulic modeling data in the SWPPP, proposed Infiltration Trenches along the down-gradient edges of pavement areas are intended to address WQv requirements, as well as to reduce peak stormwater flow rates.
 - a) The required stormwater pretreatment facilities, as outlined in the NYS Stormwater Manual, are not provided.
 - b) Of note, positioned along the edge of the pavement areas, the infiltration trenches (as currently proposed) would be vulnerable to impacts of snow plowing. Snow plowing can concentrate debris (including sand) that would (in turn) be introduced directly to the infiltration trenches, when the snow piles melt.
 - c) From the submitted information, it appears that these infiltration trenches are also referred to “Stone Drip Trenches” and “Stone Trenches”. Do these terms apply to the proposed infiltration trenches along the edge of the proposed parking lots/drives?
3. As per Page 28 of the submitted report, the estimated post-project peak 100-year flow rates are higher than the existing peak 100-year flow rates for Points of Interest 002 and 003. This is contrary to Chapter 4 of the NYS Stormwater Management Design Manual. As currently proposed, the peak 100-year stormwater flow rates to County Route 77 would be increased, as well as along the frontage of five existing commercial developments to the south of the Coca Cola property. The stormwater management plan should include facilities to reduce the post-project peak 100-year flow rates to this area to the existing peak 100-year rates (or lower).

4. Soils evaluation and testing are required for permanent stormwater management practices that involve infiltration. Information to be collected includes field-verification of soil type and profile, depth to groundwater, and infiltration rates. Refer to the NYS Stormwater Management Design Manual for soil evaluation and testing requirements.
5. In regards to the existing loading dock area, as per Table 4.3 of the NYS Stormwater Management Design Manual, outdoor loading/unloading facilities are deemed a hotspot land use. What is the nature of the materials to be handled at this loading dock? Would this material represent a significant risk to the environment (in regards to pollutant/contamination potential), if a spill occurred? Given the nature of the materials to be handled at the loading dock, would the loading dock area constitute a hotspot land use at this time? Stormwater runoff from hotspots cannot be allowed to infiltrate untreated into groundwater.

HYDROLOGIC & HYDRAULIC MODELING

1. In regards to the hydraulic modeling of the proposed infiltration trenches, information regarding the development of the Stage versus Storage relationship and the Stage versus Discharge relationship is requested.
2. It is requested that the total impervious areas for the existing conditions and the post-developed conditions be checked. Is the area of the proposed gravel shoulders included in the total impervious area of the post-developed condition?
3. It is unclear why the estimated Tc for Pre-Developed Subarea 30 is less than the Tc for the Post-Developed Subarea 302? Similarly, it is unclear why the estimated Tc for Pre-Developed Subarea 40 is less than the Tc for the Post-Developed Subarea 402?
 2. Pre-Developed Conditions
 - a) Given the well vegetated, uniform, and gently sloping nature (as well as the lack of channelization) for the lawn areas in Pre-Developed Subareas 30 and 40, a sheet flow length of 100 feet for each of these subareas would be reasonable.
 3. Post-Developed Conditions
 - a) Calculations for the estimated Tc values for Post-Developed Subareas 400, 402, and 404 are requested.

STORMWATER CONVEYANCE

1. Hydrologic and hydraulic calculations justifying the sizing and design of the proposed driveway culvert should be provided and included in the SWPPP.
2. The plans indicate that the drive culvert for the proposed new access drive shall be 15-inch diameter. In the submitted Stormwater Management Report, the size of this culvert is noted as being 18-inch diameter. What type of end-sections are proposed for this culvert?
3. What is the specific width of the proposed Vegetated Swale? The detail on Sheet C5 (of the plan set without the proposed new access drive) indicates that the width shall be between 2 and 8 feet. The detail on Sheet C4 (of the plan set with the proposed new access drive) indicates that the width shall be between 4 and 10 feet.
4. Detail 5/C4 on Sheet C4 (of the plan set with the proposed new access drive) appears to be mis-titled.

SOIL RESTORATION & DECOMPACTION

1. Soil restoration and decompaction requirements and specifications should be included in the SWPPP. It is requested that NYSDEC's requirements for soil restoration and decompaction be included in the SWPPP and Plans. Also, it is requested that NYSDEC's Deep Ripping and Decompaction (April 2008) document be included in the SWPPP and referenced in the Plans.

As per the New York State Stormwater Management Design manual, for pervious areas that are compacted during construction, but do not undergo soil restoration, the Hydrologic Soil Group (for modeling purposes) has to be increased by one group (for example, HSG B to HSG C). Is it reasonable to expect that soil restoration will be completed for 100 percent of the compacted pervious soils on the project site? Was this considered in the development of the post-developed CNs?

2. Soil restoration and decompaction activities for the project should be noted in the Sequence of Construction.

EROSION & SEDIMENT CONTROL

1. Given that a sizeable amount of concrete shall be poured for this project, it would be prudent to provide a Concrete Washout. It has been our experience on other projects that operators will often wash their concrete trucks on-site (or nearby), soon after the truck has been emptied. As such, a detail for the proposed Concrete Washout is requested. The location of the Concrete Washout should be indicated on the plans.
2. Where will the contractor staging and storage area be located? Will additional erosion & sediment control measures be needed for this area?
3. It is noted on Sheet C2 of the submitted plans that temporary construction entrances "may be optional". The use of temporary Stabilized Construction Entrances is required and is not optional.
4. As per Page 11 of the submitted report,
 - a) It is indicated that 10" diameter silt sock or straw wattles shall be utilized. On the contrary, the Wattle Detail on Sheet C3 of the plans indicates 8" diameter silt sock and wattles. This discrepancy should be addressed.
 - b) It is noted that silt sock, straw wattles, or similar shall be placed at the downstream limit of earth disturbance. It is requested that "or similar" be removed.
5. A detailed Construction Phasing Sequencing Plan is requested in the SWPPP that includes erosion & sediment control activities.
6. It is requested that sediment control/soil stabilization details and specifications from the New York State Standards and Specifications for Erosion and Sediment Control that are pertinent to this project be included in the SWPPP, including compost filter sock, storm drain inlet protection, soil restoration, topsoiling, mulching, and temporary construction area seeding.

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 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.

2. The formal, signed enforceable maintenance agreement for the stormwater management system shall be provided by the Applicant/Owner, accepted by the Town, and executed by the Applicant. Also, the Applicant shall convey to the Town easements and/or rights-of-way to assure access for periodic inspections of the stormwater management system by the Town or their representatives. 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. That agreement must be fully consistent with the Town's Stormwater Management and Erosion and Sediment Control Ordinance and accepted by the Town and their attorney.

The maintenance agreement shall include a detailed operation & maintenance plan for the proposed permanent post-construction stormwater management facilities that has specific provisions for the long-term maintenance of these, including (but not limited) to the following items.

- i. Specific operation and maintenance tasks
- ii. Monitoring requirements (including frequency)
- iii. Frequency of and thresholds (triggers) for maintenance activities

MISCELLANEOUS

1. This review pertains to stormwater management. The Applicant is responsible to obtaining all necessary approvals, including those from the Town of Horseheads and the Chemung County Health Department of Public Works.

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 in greater detail.

Sincerely,



Jimmie Joe Carl, P.E.

Cc: Design Group/DG Facilities Solutions, LLC
Andrew Avery, P.E., Chemung County DPW