



851 Chemung Street
Horseheads, New York 14845

March 13, 2019

Attn: Mr. Peter Rocchi, Stormwater Management Officer
Town of Southport
1139 Pennsylvania Avenue
Elmira, New York 14904

**Re: Dollar General
Stormwater Management Review
Pennsylvania Avenue, Southport, New York**

Mr. Rocchi:

As per the Town of Southport's request, I have completed a cursory review of the following submitted information for the above-referenced project regarding the drainage/stormwater management system for that project.

- Site Development Plans for Franklin Associates, LLC – 9100 Square Foot Retail Store, Stamped by a NYS Licensed Professional Engineer, Prepared by Bohler Engineering, Dated August 22, 2018, Received on January 7, 2019
- Stormwater Pollution Prevention Plan for Proposed Retail Development, Prepared for Franklin Land Associates, LLC, Stamped by a NYS Licensed Professional Engineer, Prepared by Bohler Engineering, Revision dated January 3, 2019, Received on January 7, 2019

My review comments and questions regarding stormwater management for this project, based upon the submitted information, are as follows.

Stormwater Management Considerations

1. The proposed stormwater management basin represents a potential source of contamination to existing and proposed wells and, as such, an appropriate separation distance from these wells should be provided. Also, other measures to further protect these wells should be considered. Although a pocket wetland is proposed, given the well-drained nature of the on-site soils, it is anticipated that this wetland would allow infiltration of stormwater runoff into the underlying soils. As per the Chemung County Soil Survey, the project site is situated upon Tioga silt loam. The Tioga series consists of deep, well-drained soils, medium-textured and moderately coarse textured soils.

Required minimum separation distances from contamination sources to water supply wells are provided in Table 1 of NYCRR Part 5, Subpart 5-1 Standards for Water Wells – Appendix 5B for non-public wells and Appendix 5D for wells that serve a public water system. As per Table 1 of those appendices, "Surface wastewater recharge absorption system constructed to discharge storm water from parking lots, roadways or driveways" is noted as being a contaminant source.

Within the area of the project site, the USGS has mapped a Stratified-drift Aquifer within the valley floor of Seeley Creek. Also, as per the General Soil Map within the Chemung County Soil Survey, the valley floor of Seeley Creek within the vicinity of the project site is noted as being *"Nearly level to gently sloping, deep, well-drained to somewhat excessively drained, gravelly and channery soils"*.

2. Will a greater volume of runoff (for a given storm events) be directed to the downstream drainage course, as a result of the proposed project? From a cursory review of LIDAR topography, it appears that the downstream drainage course is over 2000 feet in length and passes near a number of residential homes along the east side of Pennsylvania Avenue. Would increased runoff volumes impact these downstream properties?

Hydrologic Modeling & Stormwater Management Design

1. In regards to the modeling of the pre-development/existing conditions, the following items are noted.
 - The CN values for Subarea EX-1 are based entirely upon the site soils belonging to Hydrologic Soil Group (HSG) D. From the Chemung County Soil Survey, most of the soils within Subarea EX-1 are Tioga silt loam (which belongs to HSG A). The composite CN value should be revised.
 - In regards to Subarea EX-1, the existing land use appears to be meadow for the vegetated portions of this subarea.
 - The Tc value for Subarea EX-1 appears to be too low. The Tc values for alternate paths would result in a longer Tc value.
 - The topography, land use, soils, and boundaries of Subarea EX-2 should be provided in the SWPPP. Also, the assumed flow path used to estimate the Tc value should be provided.
2. How will runoff reduction be accommodated for the proposed parking lot area?
3. The following questions and comments pertain to some specific items regarding the proposed grading and drainage plan.
 - a. Will the runoff from the entire roof of the proposed building be directed to the proposed planter?
 - b. Where will snow from the proposed entrance drive and the parking areas be plowed to? Could plowed snow be placed within the stormwater management basin? If so, could this snow be problematic for runoff during certain times (such as early spring)?
4. The following questions and comments pertain to the Controlled Outlet Standpipe Detail on Sheet 11 of the plans.
 - a. What material shall the outlet standpipe be constructed of? Would exposure to sunlight act to deteriorate this material?
 - b. What type of joints would be used for the tee? Would these joints be water-tight and be resistant to deterioration by sunlight? Would the location of an orifice fall on a joint and, in turn, compromise the joint?
 - c. What are the specifics of the trash racks and trash rack screens, including material of construction, size of openings, dimensions of screens, and how the screens are fastened to the standpipe.

5. The following questions and comments pertain to the Stormwater Planter Detail on Sheet 13 of the plans.
 - a. What is the vertical distance between the top of the pressure-treated lumber wall and the top of the soil media layer?
 - b. Is the use of pressure-treated lumber for the side walls of the planter a good application, given the chemicals used with pressure-treated lumber? Could these chemicals be mobilized with contact to stormwater? As per Chapter 5 of the New York State Stormwater Design Manual regarding stormwater planters, *"Treated wood may leach toxic chemicals and contaminate stormwater, and should not be used"*.
 - c. The detail indicates "Waterproofing as Needed" for the pressure-treated lumber wall. What conditions would dictate, when waterproofing would be needed? Will the pressure-treated lumber wall above the top of the soil media layer be watertight?
 - d. Is a layer of geotextile needed between the soil media layer and the drainage layer? Given the perforated underdrain piping, could the sand in the drainage layer be problematic over time?

7. Documentation of the project site being outside of a designated Archeological Sensitive Area should be provided and included in the SWPPP.

Operation & Maintenance Plan

1. It is recommended that a 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, prior to the issuance of the start of construction for this project. 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 that includes specific provisions for the long-term maintenance of the stormwater management system, as well as a description of performance goals of the system.

2. In the submitted SWPPP, a Maintenance Inspection Checklist for Stormwater Pond/Wetland Operation is provided. Although this list outlines maintenance items to be inspected, it does not outline associated specific actions to be taken if maintenance is needed. For example,
 - How would rodent holes in and below the basin berm be repaired?
 - How frequently would parking areas be swept?
 - What specifics would be applied to litter control?
 - In regards to the Stormwater Planter, what maintenance actions would be required and when would these be required? What is the maximum period of time that water can pond within the planter?

Erosion & Sediment Control

1. The Owner is responsible to hire a Qualified Inspector to perform weekly inspection of the erosion and sediment control practices.
2. No erosion control measures are indicated for the proposed diversion swale around the sewage absorption field.
3. The limits of disturbance extend outside of the property boundaries. Erosion and sediment controls should be provided in this area.
4. What practices will be utilized to stabilize the proposed swale (from the existing 18-inch culvert on the adjacent property to the south to the north property line of the project site)?
5. Erosion & Sediment Control Note #2 on Sheet 8 of the plans is inconsistent with Part I.B.1.b of the SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-15-002).
6. Erosion & Sediment Control Note #10.4 on Sheet 8 of the plans is inconsistent with Table 4.2 of the New York Standards and Specifications for Erosion and Sediment Control.
7. The Erosion Control Notes During Winter Construction on Sheet 8 of the plans are inconsistent with the New York Standards and Specifications for Erosion and Sediment Control in regards to winter stabilization requirements.
8. In regards to Note #6 of the Erosion Control Notes During Winter Construction, the use of straw bales within drainage swales is indicated as an appropriate practice. The use of straw bales within drainage swales is not an accepted practice per New York Standards and Specifications for Erosion and Sediment Control.

If you have any questions or comments regarding this letter, please do not hesitate to contact me. Furthermore, I would be happy to meet to discuss this project in greater detail.

Sincerely,



Jimmie Joe Carl, P.E.

Cc: Kathleen Szerszen, Town of Southport Supervisor
Mark Watts, Chemung County Soil & Water District Manager
Bohler Engineering