CHEMUNG COUNTY STORMWATER COALITION

851 Chemung Street
Horseheads, New York 14845

May 26, 2021

Attn: Mr. John McCracken, Director of Code Enforcement
City of Elmira
Inspection Services Department
101 West Second Street
Elmira, New York 14901

Re: Hilliard Corporation Warehouse- College Ave. Plant
City of Elmira
Review of Stormwater Management System & SWPPP

Mr. McCracken:

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.

- Project Drawings for Hilliard Corporation Warehouse, Elmira, New York, PRELIMINARY PRINTS – NOT FOR CONSTRUCTION, Prepared by Fagan Engineers, Dated March 2, 2021, Received May 24, 2021, Stamped by a licensed professional engineer
- Stormwater Pollution Prevention Plan (SWPPP) for Hilliard – College Ave. Plant, Prepared by Fagan Engineers, Dated May 2021, Received May 24, 2021, Stamped by a licensed professional engineer
- Submittal letter from Fagan Engineers, dated April 3, 2021. On May 24, 2021, Fagan provided updated plans and SWPPP to replace the initial sets provided earlier.

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. Given that the submitted plans are preliminary in nature, my review comments are also preliminary.

I. Soils Testing & Groundwater Levels

1. It is requested that the locations of the test pits and infiltration tests be included on the plans.

2. What is the depth to the seasonal high groundwater level? Will adequate separation exist from the bottom of the infiltration system to groundwater?

II. Hydrologic Modeling

1. In regards to the hydrologic modeling of the post-developed conditions, the following items are noted.

   - Background calculations, documenting the Stage vs. Storage characteristics of the proposed StormTech infiltration system, are requested.

   - Soil restoration and decompaction requirements should be noted on the plans and SWPPP, including the proposed Construction Sequence. 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 A to HSG B). 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?

III. Stormwater Infiltration System

1. Does the existing Wallin building have a basement or crawl space? Could this existing building (including its basement or crawl space) be negatively impacted by the proposed StormTech infiltration system and the stormwater flows it would receive?

2. The design elevations for the various infiltration system components should be noted on the infiltration system details on Sheets C11, C12, and C13.

3. Will the proposed Nyloplast inlet be capable of accepting the proposed storm sewer?

4. Will incoming stormwater flows be first directed to the proposed Isolator Row? If so, how will this be accomplished?

5. Does sufficient volume exist within the Isolator Row for pretreatment?

6. The Stormtech layout and details on Sheets C11, C12, and C13 are noted as “Not for Construction”. Will a final design be provided?

7. It appears that the header pipe for the StormTech infiltration system does not connect to one of the StormTech rows.

IV. Stormwater Collection and Conveyance

1. The data (diameter, length, slope, invert elevations, top of manhole elevations, and pipe material) for the proposed storm sewer along the west side of the proposed warehouse building should be noted on the Utility Plan (Sheet C5).

2. The specifics of the proposed storm sewer cleanouts are unclear. What diameter piping shall be used for the cleanouts? How will a cleanout transition/connect to the proposed 15-inch dia. storm sewer? Are cleanout covers needed? A detail for these cleanouts is requested.

3. As per the SWPPP, in regards to the proposed stormwater management system, the design objective is to have sufficient hydraulic capacity to collect and convey the peak 100-year stormwater flow to the proposed StormTech infiltration system. Likewise, the proposed StormTech infiltration system is intended to have adequate capacity to accept the peak 100-year stormwater flows without overtopping. The following questions and comments pertain the hydraulic capacity of the stormwater collection system.

   - As per the submitted stormwater modeling results, the peak 100-year stormwater elevation in the proposed StormTech infiltration system is 860. The submitted calculations utilize a water elevation of 858.41.

   - Will the roof gutter and downspout system be sized to accommodate the peak 100-year stormwater flow rates? Has the roof gutter and downspout system been designed? If so, are the design and supporting calculations available?

     The "Typical Roof Drain Detail" on Sheet C8 indicates that the 4-inch dia. storm laterals will collect/connect to the building downspouts. Does the sizing of the storm lateral pipes take into account the size of the proposed downspouts and the associated discharge rates? What are the sizes of these downspouts?

   - In regards to the submitted calculations, the effects of minor losses should be considered and included in the calculations. What Manning's n-value was utilized?

V. Erosion & Sediment Control

1. No silt fence (or compost filter sock) is shown along the north side of the project site. How will sediment control be accommodated on that end of the project site?

2. The Construction Sequence of Sheet C9 of the Plans does not match the Construction Sequence in the SWPPP.

3. From what municipal streets will construction traffic access the project site? Is a Stabilized Construction Entrance proposed for the construction drive entrance at that location?

4. In accordance with the New York State Stormwater Management Design Manual, "*Infiltration practices shall never serve as a sediment control device during the site construction phase. In addition, the Erosion and Sediment Control plan for the site shall clearly indicate how sediment will be prevented from entering an infiltration facility*." This should be considered in the development of the sequence of construction.

VII. Operation & Maintenance Plan/Agreement

1. In accordance with the City'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 is especially pertinent to this project as stormwater infiltration systems will have specific O & M needs to maintain the on-going performance.

   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 City easements and/or rights-of-way to assure access for periodic inspections by the City 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 City of Elmira, their attorney, and Chemung County Stormwater Coalition.

2. In regards to the proposed stormwater infiltration systems, a detailed O & M Plan should be developed that includes (but not be limited to) the following items.

   i. Specific operation and maintenance tasks

   ii. Monitoring requirements (including frequency)

   iii. Frequency and thresholds of maintenance activities

   Like other stormwater infiltration systems, the proposed StormTech system would have an effective life span, after which the repair and/or replacement of this system would be needed. A number of factors impact the effective life of an infiltration system, including the nature of the existing soils, the nature and amount of solid particulates discharged to the system, and the degree of maintenance. Maintenance of the proposed infiltration systems will be critical to the long-term performance and effective life of these systems.

3. In regards to the entrance drive for the 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. As such, stormwater runoff from hotspots cannot be allowed to infiltrate untreated into groundwater.

   As per the submitted SWPPP, it is indicated that the loading dock for the proposed warehouse would not be considered a hotspot, because all that is to be stored within the proposed building would be paper products. If the City accepts that opinion, it is recommended that provisions be included in the O & M Agreement that address the potential of the proposed loading dock becoming a hotspot at some point in the future. For example, if (in the future) material with the potential of being a pollutant source for runoff begins being be loaded/unloaded at this loading dock.

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

Sincerely,

Jimmie Joe Carl, P.E.

Cc: Andy Avery, P.E., City of Elmira
Rick Vary, City of Elmira