



August 26, 2019

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

**Re: Stormwater Management Review  
Temporary Parking Lot on Ogden Avenue, City of Elmira  
Arnot Health**

Mr. Skebey:

As per your request, I have completed a review of the following submitted items for the above-referenced project regarding the proposed stormwater management system for that project.

- Engineering Drawings for Arnot Health, Temporary Parking Lot, City of Elmira, Prepared by Hunt Engineers, HUNT No. 2387-022, Received 1<sup>st</sup> week of August

My review comments and questions are as follows.

**I. Area of Disturbance & Associated Permitting**

1. As per Sheet L4.1 of the plans, the area of the proposed Limit of Disturbance is indicated to be 0.96 acres. If 1 acre or greater is disturbed, the Applicant would need to obtain a SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-15-002) and, as such, would need to comply with the requirements of that permit.

If the Applicant wishes to stay below the 1-acre threshold and avoid the need for the General Permit, care and planning would need to be exercised by the contractor to ensure that a land disturbance of 1 acre (or more) does not occur. It is recommended that the limits of disturbance be clearly demarcated prior to and during construction.

**II. Design Information & Soils Data**

1. A Design Report (with calculations) should be provided regarding the sizing of the proposed stormwater collection and infiltration system. In the Design Report, soils information should be provided, including the depth to groundwater and measured infiltration rates.
2. What vertical separation would exist from the bottom of the proposed infiltration system to the seasonally high groundwater table?
3. Is adequate horizontal separation proposed from the StormTech infiltration system, such that impacts from groundwater to adjacent existing basements would be avoided?

### **III. Site Grading**

1. Additional spot elevations for the proposed grading of the proposed parking lot are warranted.
2. Will the proposed slopes of the parking lot pavement be sufficient avoid the occurrence of bird baths?

### **IV. StormTech Infiltration System**

1. It is recommended that observation ports be provided for each of the StormTech rows, including the Isolation row?
2. The design elevations for the StormTech infiltration system should be provided on the plans, including elevations of the bottom and top of the StormTech chambers (as well as the Isolation Row) and the storm sewer invert elevations.
3. What type of stone is proposed to be used for the proposed StormTech infiltration system?
4. To provide improved pre-treatment for the proposed StormTech infiltration system, it is recommended that consideration be given to deeper sumps within the proposed catch basins and the use of hoods.

### **VI. Erosion & Sediment Control**

1. The location of concrete wash-out(s) should be included on the Erosion & Sediment Control Plan. Also, a detail for concrete wash-outs should be provided in the plans.
2. The Soil Stockpile detail on Sheet L6.2 indicates that silt fence shall be utilized and be placed around the perimeter of the pile. As such, a detail for the silt fence should be included on the plans.
3. A sequence of construction should be included in the SWPPP that includes erosion and sediment control practices. When developing this sequence, it is recommended that consideration be given to the detrimental impacts to the StormTech infiltration, if sediment is allowed to enter this system.
4. Provisions for dust control should be included in the erosion & sediment control plan. An appropriate specification should be included.
5. On Sheet L4.1, the locations where Inlet Protection is proposed should be clearly indicated.

### **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 porous asphalt 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 has an effective life span, after which the repair and/or replacement of these systems 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. The O & M plan should address the future replacement of this system.

3. As part of the Operation & Maintenance Agreement, it is recommended that a provision be included in the agreement requiring the Owner to make prompt modifications to, additions to, and/or replacement of the proposed StormTech infiltration system, if the stormwater management system is not able to completely infiltrate the post-developed runoff (up to a 100-year storm event) and developed stormwater from the parking lot reaches off-site areas.

#### **VIII. Entrance Drives**

1. The Applicant should approach the City of Elmira Engineering Department for requirements associated with proposed new driveway entrances onto Ogden Avenue, including the associated permitting process. As an example, the City requires that the concrete sidewalks to be extended through the entrance drive.

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 this project in greater detail.

Sincerely,



Jimmie Joe Carl, P.E.

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