



January 28, 2016

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

**Re: UHaul Storage Facility  
2494 Corning Road, Horseheads, New York  
Review of Stormwater Pollution Prevention Plan**

Mr. Skebey:

I have completed a review of the above-referenced project regarding the proposed stormwater management system for that project.

- Stormwater Pollution Prevention Plan (SWPPP) for UHaul Storage Facility - Horseheads, NY, Stamped by a NYS Licensed Professional Engineer, Prepared by Marathon Engineering, Prepared for Amerco Real Estate/UHaul, Dated December 16, 2015, Received December 21, 2015
- Site Development Plans for Amerco Real Estate/UHaul - Location of Site 2494 Corning Road (State Route 14), Town of Horseheads, Chemung County, NY, Stamped by a NYS Licensed Professional Engineer, Prepared by Marathon Engineering, Issue dated December 18, 2015, Received December 21, 2015

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.

**STORMWATER CONVEYANCE**

1. As per the submitted storm sewer sizing calculations, the proposed storm sewer was sized to accommodate a 10-year storm event. Given that the stormwater management system is intended to accommodate the 100-year storm event, will peak developed 100-year stormwater flows should be able to reach the stormwater management systems. Will flow rates, in excess of the capacity of the storm sewer system, reach the respective stormwater management systems? Appropriate calculations should be provided to demonstrate this.
2. In regards to the storm sewer sizing calculations, consideration should be given to the tailwater created by the pre-treatment, control structures, and bioretention basins.
3. The ability of the proposed stormwater inlets to hydraulically accept peak stormwater flow rates should be demonstrated with appropriate calculations. Consideration should be given to the inlets being partially blocked.

4. How will roof drainage be conveyed to the proposed stormwater management system? What design storm event will the roof drainage system be designed to accommodate? Whom would complete the design of this portion of the collection system and when would this design be provided to the Town for their review and acceptance?
5. The top and bottom of curb elevations are requested to be noted on the grading plan.
6. The proposed grading plan in the vicinity of DA-4, DA-5, and DA-6 should be refined. For example, proposed spot elevations should be shown in the vicinity of DA-6.

#### STORMWATER TREATMENT

1. Justification for the sizing of the Pre-Treatment Rows of the proposed underground detention systems should be provided that references pertinent portions of the NYS Stormwater Management Design Manual.
2. As per Section 6.4 of the NYS Stormwater Management Design Manual, "*Filtering systems should not be designed to provide stormwater detention or channel protection except under extremely unusual conditions*".
3. As per Section 6.4.2 of the NYS Stormwater Management Design Manual, "*If runoff is delivered by a storm drain pipe or is along the main conveyance system, the filtering practice shall be designed off-line*".
4. Can the roof drainage for the proposed larger building be directed to the pre-treatment row? If not, would adequate pre-treatment of this runoff be provided?

#### STORMWATER MODELING

1. In regards to the Times of Concentrations for the existing Sub-Area #1 and the post-developed Sub-Area #1, there appears to be a disparity in that the Tc value for the existing Sub-Area #6 is only 4.2 minutes and the Tc value for the post-developed Sub-Area #6 is 20.6 minutes.

#### MISCELLANEOUS

1. Details and specifications regarding the proposed Soil Restoration should be clearly outlined in the SWPPP and Plans for each hydrologic soil group. In regards to the calculation of CNs for post-developed conditions, consideration should be given that (from a practical standpoint) soil restoration can't be completed for all disturbed areas that shall remain vegetated. In accordance, for compacted soils that will not undergo Soil Restoration, the Hydrologic Soil Group for this soil has to be changed (by one level) to a less permeable HSG from the current HSG.
2. As per Section 4.11 of the NYS Stormwater Management Design Manual, outdoor loading/unloading facilities are noted as being *stormwater hotspot* landuses. What potential pollutants could be associated with the proposed loading docks? Appropriate measures to address any potential pollutants from being introduced to stormwater should be outlined in the Operations & Maintenance Plan.

3. 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 that are specific to the proposed stormwater management practices. It is recommended that the O & M Plan outline steps and measures to be implemented if operational/performance issues are encountered with the proposed stormwater infiltration system.

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, their attorney, and Chemung County Stormwater Coalition.

4. This review pertains to stormwater management. The Applicant is responsible to obtaining all necessary approvals, including those from the Town of Horseheads.

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: Marathon Engineering