



851 Chemung Street
Horseheads, New York 14845

November 20, 2015

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 cursory 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 October 15, 2015, Received October 28, 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 October 26, 2015, Received October 28, 2015

My cursory 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 MODELING

1. In regards to the hydrologic calculations for the pre-development conditions, it appears that peak stormwater flow rates and runoff volumes are overestimated given the following considerations. Furthermore, these items could impact the design and sizing of the proposed stormwater management system.
 - a) As per the SWPPP, the existing soils are taken to be Hydrologic Soil Group (HSG) D soils. Also, as per the SWPPP, the site has been filled within sandy soil to a depth of 3.5 to 14 feet above the original grade. As per a review of the boring logs and a site visit after a period of rain, the assumed HSG D designation does not seem apply to these soils and a HSG A (or possibly HSG B) seems more appropriate, given the sandy nature of this fill material. The hydrologic calculations for the pre-development conditions should be based on HSG A (or possibly HSG B).

As per Chapter 7 (Hydrologic Soil Groups) of Part 630 of the National Engineering Handbook, HSG A soils typically have less than 10 percent clay and more than 90 percent sand or gravel and have gravel or sand textures. HSG A soils have low runoff potential when thoroughly wet. On the other hand, HSG D soils have high runoff potential when thoroughly wet. HSG D soils typically have greater than 40 percent clay, less than 50 percent sand, and have clayey textures. On November 13, 2015, after a period of rainfall, there was no ponding/puddling observed on the grassed portion of the site (to the east of the existing building), suggesting a well-drained soil.

- b) From the existing topographic mapping, existing shallow topographic depressions are located on the project site. These topographic depressions would act to store runoff and, in turn, allow this runoff to infiltrate. The submitted calculations do not appear to consider the effects of these topographic depressions, when estimating existing flow rates or volumes. These depressions would also act to increase the times of concentrations.
2. Details regarding the proposed Soil Restoration should be clearly outlined in the SWPPP and Plans. 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.
 3. A portion of the existing pavement is proposed to be replaced. This work could constitute redevelopment, per the NYS Stormwater Design Manual, and applicable requirements regarding stormwater management be addressed.
 4. How is runoff from the proposed Building B and adjacent pavement proposed to be managed?

MISCELLANEOUS

1. 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.

2. 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,

A handwritten signature in blue ink that reads "Jimmie Joe Carl". The signature is written in a cursive style with a large, stylized 'J' and 'C'.

Jimmie Joe Carl, P.E.

Cc: Marathon Engineering