



851 Chemung Street  
Horseheads, New York 14845

November 20, 2013

Mr. Robert Young, Code Enforcement Officer  
Village of Horseheads  
202 South Main Street  
Horseheads, New York 14845

**Re: Proposed Hotel, NYS Route 14, Village of Horseheads  
Review of Stormwater Management Plan**

Mr. Young:

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 the Horseheads Hotel, Not stamped by a NYS Licensed Professional Engineer, Prepared by Bergmann Associates, Dated October 2013, Received October 21, 2013.
- Site Plan Drawings for Horseheads Hotel, Not Stamped by a NYS Licensed Professional Engineer, Prepared by Bergmann Associates, Dated October 10, 2013, Received October 21, 2013

My cursory review comments and questions regarding the stormwater management system for the above-referenced project, based upon the submitted information, are as follows.

**I. HYDROLOGIC & HYDRAULIC CALCULATIONS AND MODELING**

1. In the selection of CN values, are areas of existing impervious to be converted to lawn considered to be HSG A? Appropriate soil restoration should be completed in accordance with Chapter 5 of the New York State Stormwater Management Design Manual. Associated information should be included on the plans and the SWPPP.
2. In regards to the development of the Stage versus Discharge relationship for the proposed infiltration basin, the model output indicates that exfiltration is based on a rate of 4 inches/hour applied to the surface area of the basin above 908 feet (thereby excluding 5840 sq. ft.). For the 100-year event (on Page 31 of the Proposed Hydrology calculations), it is unclear how a total exfiltration rate of 1.59 CFS is calculated at a water depth of 911.26 feet.

**II. STORMWATER MANAGEMENT**

Infiltration Basin

1. Only two infiltration tests were completed in the location of the proposed infiltration basin. As per Appendix D of the New York State Stormwater Design Manual 1 infiltration trench and 1 test pit is required per 200 SF of infiltration basin area.

2. The bottom elevation of the proposed infiltration basin is indicated to be 908 feet, which is approximately 3 feet below the existing ground elevation. As per the table in Appendix C of the SWPPP, it appears that the infiltration tests were conducted at depths lower than the bottom elevation of the proposed basin (6.1 feet, 5.9 feet, 10 feet, and 10.1 feet). Are these completed infiltration tests representative of the proposed conditions?
3. Were soil profiles determined at various locations, via test pits or borings? Could there be a soil layer that would restrict/limit infiltration rates from the infiltration basin?
4. What is the elevation of the seasonally high groundwater in the vicinity of the proposed infiltration basin? The vertical separation between groundwater and the bottom of the proposed infiltration basin (including the forebay) should be verified/determined and, in turn, compared to the minimum separation requirements outlined in the New York State Stormwater Management Design Manual.
5. What are the estimated times to drain for the proposed infiltration basin?
6. What size rip rap shall be utilized for the proposed infiltration basin?
7. Are catch basins with sumps and hoods proposed to reduce sediment and pollutants (such as oils) being directed to the proposed infiltration?

### **III. STORMWATER CONVEYANCE**

1. Mapping, denoting the individual drainage sub-areas to the various proposed stormwater inlets, is requested. Also, the respective area and hydrologic parameters of each of these sub-areas is also requested.
2. As per the submitted Storm Sewer Sizing calculations, it appears that the proposed storm sewer is designed to accommodate a 10-year storm event. How will peak storm flows beyond the capacity of the proposed storm sewer be conveyed to the proposed infiltration basin? The proposed infiltration is intended to accommodate up to a 100-year storm event.
3. The type of storm sewer pipe should be clearly indicated on the plans. On the Utility Plan, the pipe is designated as "CPP". Does this refer to Corrugated Plastic Pipe? If so, will the Corrugated Plastic Pipe have a smooth bore interior? Under the Storm Sewer Section of the General Notes (Sheet C000), the use of Corrugated Metal Pipe (CMP) is noted. Is CMP proposed for this project?
4. It is unclear if the impacts of the tailwater, presented by the proposed infiltration basin (including the forebay), were taken into account in the hydraulic calculations for the proposed storm sewer. It appears that the proposed storm sewer system, as presently designed, would be prone to surcharge due to the tailwater offered by the infiltration basin. The invert elevation of the proposed storm sewer discharge to the proposed forebay is shown to be 4 feet below the elevation of the overflow from the forebay.

Furthermore, the top of grate elevation of a number of proposed stormwater inlets within the parking area is 911.5 feet, only 0.3 feet above the spillway elevation of the proposed infiltration basin. This should be considered by the applicant's engineer, as this could result in the following.

- Restriction of the hydraulic capacity of the conveyance system.
  - Increased sedimentation/deposition within the collection system.
5. The storm sewer from CB #1 is proposed not to discharge to a forebay, contrary to the New York State Stormwater Management Design Manual.

**IV. STATUS OF NYSDOT REVIEW AND PLAN ACCEPTANCE**

1. What is the status of the review and acceptance of the proposed drainage plan for this project, as it relates to the relocation of the NYSDOT's existing 30-inch diameter storm sewer? Will the proposed relocation/rerouting of this storm sewer result in a reduction of the hydraulic capacity of that storm sewer?
2. What is the status of NYSDOT's approval to construct within their existing easement on the western side of the project property?

**V. POST-CONSTRUCTION OPERATION & MAINTENANCE OF STORMWATER MANAGEMENT SYSTEM**

1. In accordance with the Village'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 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 Village easements and/or rights-of-way to assure access for periodic inspections by the Village 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 Village of Horseheads, their attorney, and Chemung County Stormwater Coalition.

2. The O & M Plan should also outline requirements/actions associated with the following items.
  - Routine mowing of infiltration basin
  - Actions to be taken if standing water persists over 48 hours within infiltration basin
  - Inspection and removal of sediment/deposition within storm sewers
3. Information, regarding the maintenance of dumpsters and the associated dumpster areas to prevent contaminants from being exposed to precipitation and entering runoff, should be provided in the O & M plan.
4. In the submitted O & M Plan, various O & M tasks are noted as being required to be completed on a monthly basis. It appears that certain tasks, such as the inspection of the inlet grates, should occur at a more frequent interval, including after rainfall events.

**VI. EROSION & SEDIMENT CONTROL**

1. How many acres will be disturbed at one time?
2. The "Sequence of Construction" on Sheet C000 of the plans does not match the "Construction Sequence" on Page 10 of the SWPPP. Is the use of temporary sediment basins proposed?
3. The Erosion and Sediment Control Plan should include the locations of the proposed concrete wash-out area, the temporary stabilized construction entrance, temporary sediment basins, and stone check dams (in addition to the silt fence).

**VII. MISCELLANEOUS**

1. This review pertains only to stormwater management. The Applicant is responsible to obtaining all necessary approvals, including those from the Village of Horseheads, the Chemung County Sewer District, and the New York State Department of Transportation.
2. In accordance with the SPDES Stormwater General Permit for Construction Activity, documentation must be included in the SWPPP that the proposed construction activities will not adversely affect a property that is listed or is eligible for listing on the State of National Register of Historic Places (including archeological sites). As per Appendix T of the SWPPP, the site is located in an Archeo Sensitive Area. Has SHPO reviewed this project and provided an associated letter?

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: Galen Salisbury, Chemung County Sewer District  
Al Curran, NYSDOT