

Barry Medenbach, P.E.
NY Lic. No. 60142
NJ Lic. No. 27646

Medenbach, Eggers & Carr
Civil Engineering and Land Surveying P.C.
4305 US Highway 209
Stone Ridge, New York 12484-5620

William R. Eggers, L.S.
NY Lic. No. 49785

Caleb Carr, P.E.
NY Lic. No. 102177

Phone (845) 687-0047 www.mecels.com

November 12, 2024

Project: Buttermilk Falls Resort Site Plan / Special Use

Re: Stormwater comments

Please see our response to Partick Hines September 30, 2024, memo to the planning board on the proposed stormwater infrastructure.

1. The site discharge is directly to the Hudson River. The projects eastern property boundary is coterminous with the Hudson River. The Hudson River is the fourth order stream or greater negating the requirements for overbank flood protection and extreme storm protection. Overall, the site meets the requirements for overbank and flood protection and extreme storm protection for the overall site discharges.

Noted.

2. The total stormwater discharge is reduced from the pre versus post development site runoff has been reduced for each of the 1, 10 and 100-year storm event.

Noted.

3. The required water quality volume treatment has been calculated. 31,098 Cubic feet is required while 97,053 cubic feet is provided. A runoff reduction volume has been calculated utilizing NYSDEC worksheet forms to be 4,963 cubic feet required while 13,809 cubic feet are provided through the stormwater practice.

Noted.

4. Fourteen bioretention areas are proposed on the site to treat runoff from proposed parking areas and proposed buildings. Six of the bioretention areas are identified as infiltration bioretention areas. Pretreatment of the bioretention areas is provided via gravel diaphragm and grass filter strips.

Noted.

5. Provide spot elevations at the outlet control structures for Bioretention areas 7 and 8. Confirm invert at overflow.

We have added spot elevations at the outlet control structures for Bioretention areas 7 and 8 on Sheet 5 of the Site Plans. We have also added more spot elevations to the other bioretention areas.

6. Label all inverts, pipe sizes and slopes on all proposed pipe runs.

6. Label all inverts, pipe sizes and slopes on all proposed pipe runs.

We have added labels to all inverts, pipe sizes and slopes on all proposed pipe runs.

7. Label pipe size of existing pipe crossing at North Road from stormwater basin located at the northwest quadrant of the Mahoney Road north road intersection.

The existing pipe crossing North Road has been labeled on Sheet 5 of the Site Plans.

8. Show soil testing performed for each of the infiltration bioretention areas.

We have performed many percolation tests for the septic areas. The percolation rates vary from 1 minute to 30 minutes per inch. The percolation data near several of the bioretention areas are less than 10 minutes per inch. All of the percolation rates are greater than the required 0.5 inch per hour rate required for an infiltration bioretention area.

9. Address run off from the easterly portions of the banquet hall / hotel facility roofs.

We have added a note to the Grading and Utility Plan – Hotel (Sheet 4) that indicates the all the roof drainage from the hotel is to be directed to the west toward Bioretention Plan #9.

10. Roof leaders should address the discharge to the steep slopes to the east. Stormwater practices that return the flow sheet to the sheet flow prior to discharging down the steep slope should be addressed.

There are to be no proposed roof leaders discharging to the east of the Hotel.

11. A Stormwater Facilities Maintenance Agreement with the Town of Marlborough will be required for long term operation and maintenance of the stormwater facilities.

Agreed, a Stormwater Facilities Maintenance Agreement with the Town of Marlborough will be required. A draft copy is being prepared by the applicants attorney Michael Moriello.

12. A 20 foot of 12-inch HDPE is identified at the north side of the easterly portion of Mahoney Road. This pipe should be depicted as to be eliminated.

We have revised the topography around the proposed 20 foot of 12-inch HDPE pipe. The pipe is proposed below a pedestrian path.

13. The SWPPP should be updated with all information from the Office of Parks Recreation and Historic Preservation.

The SWPPP will be updated once we get the anticipated final authorization from the Office of Parks Recreation and Historic Preservation. The SWPPP references the Archaeological Avoidance Plan on Sheet 22 of the Site Plans.

14. The plans contain a detail for green parking area with subsurface detention. Areas for pervious parking should be depicted on the plans.

The green parking areas are shown in green and labeled on Sheet 5 of the Site Plans.

15. The emergency access road off of Van Orden is identified with a stabilized construction entrance. This area was identified to be emergency access only.

We have removed the stabilized construction entrance from the emergency access road off of Van Orden on Sheet 18 of the Site Plans.

16. The drywell detail is identified on the plans for cottages. The location of these drywells should be depicted on the plan sheets.

The drywell locations have been included on sheet 10 of the Site Plans. The majority of the drywells will take roof drainage from 2 cabins.

17. A phasing plan should be provided listing disturbance to five acres at any time.

The Phasing Plan is shown on sheet 18 of the Site Plans. The proposed phasing plan is to limit the disturbance to five acres at any one time.

A handwritten signature in black ink, appearing to read 'Caleb Carr', with a stylized flourish at the end.

Caleb Carr P.E.

NY License # 102177