

## **Medenbach, Eggers & Carr**

Civil Engineering and Land Surveying PC  
4305 US Highway 209, Stone Ridge, NY 12484  
845-687-0047  
[www.mecels.com](http://www.mecels.com)

### **Design Report**

### **for proposed water usage at**

#### **Buttermilk Falls**

#### **Proposed Hotel and Resort Expansion**

**North Road, Town of Marlborough, Ulster County, NY**

**December 4, 2023**

**Revised June 10, 2024**

## **1. General Description:**

Buttermilk Falls is an existing Bed and Breakfast facility with a restaurant known as Henry's, Spa, banquet hall, and accessory facilities situated on 50.7 acres overlooking the Hudson River on east side of North Road in Milton New York.

The proposal is to add a 65-room hotel, 35 individual cabins, 60 seat restaurant and 300 seat banquet hall among other accessory facilities. This will include adding 5.3 adjacent acres to the main parcel and 6 acres on the west side of North Road on corner of Mahoney Road for parking. Total Site area is 62.0 acres.

The main hotel building will be located on top of a hilltop overlooking the Hudson River with the restaurant and banquet hall attached. The cabins will be situated in a wooded area to the north with some on piers to protect the old growth trees. Two existing single-family homes with access from Van Orden Road and Two on North Road will remain for workforce housing. The proposed parking lot on the west side of North Road contains an existing warehouse type building portion to be removed and balance renovated for facility storage and deliveries. Two of the existing single-family homes will remain for workforce housing on this site.

## **2. Water Usage**

The existing facility has existing public water from the town on site with fire hydrants. The proposed facilities will connect to the existing water main on site and extend the 6" water main through the site and connect to the existing water main on Van Orden Road. Two additional Fire Hydrants will be provided on site to serve the new facilities.

The increase in water usage will be 16,800 gpd based on NY Dept of Health usage requirements.

### 3. Design Flows Calculations

#### **Existing Facility**

14 Room Bed and Breakfast	1540 gpd
Henrys Restaurant 120 seats	3360 gpd
SPA 11 rooms w/ employees	981 gpd
Barn Banquet Hall 120 seats	1,200 gpd
Single family dwelling 1BR	110 gpd

**Total Existing 7,191 gpd**

#### **Proposed Facilities**

Hotel	65 rooms @ 110 gpd	= 7,150 gpd
Cabins	35 rooms @110 gpd	
	With 8 two bedrooms	= 4,730 gpd
Restaurant	60 seats @ 28 gpd	= 1,680 gpd
Banquet hall	300 seats @ 8 gpd	= 2,400 gpd
Employees	70 @12 gpd	= 840 gpd

**Total Proposed = 16,800 gpd**

**Total Facility existing and proposed = 23 ,979 gpd**

**Note.**

The four existing dwellings to be used for staff housing are already connected to the town's water and not included in the flows above.

#### **4. Supply and Pressure**

Water Supply Storage for the Milton water includes two 500,000 gallon water tanks with a typical daily usage of 500,000 gallon and system capacity of 1 million gallons per day. As discussed with Town Water Superintendent, the water supply is adequate for the proposed project in attached letter dated March 22,2024. He also reported the pressure along the water line on North Road is reputed to be high > 100 psi requiring pressure reducing for all connections and most recent hydrant tests at North Road for J-174 to be 4,320 gpm at 20 psi and J-175 North Road and Van Orden 1183 gpm at 20 psi. See attached map for location of J-174 &175. Attached is a copy of portion of Water System Facility Evaluation Report for the Town of Marlborough prepared by Maser Consulting, PA dated November 2003 with flow analysis.

With the proposed 6" extension thru the site between North Road and Van Orden Rd will increase the flow/ pressure capacity for the facility and adequate fire flow will be provided at the existing and proposed hydrants. During design of the sprinkler system for the proposed hotel, the design engineers will provide more detailed calculations and determine if a buster pump is needed for the building sprinklers.

#### **Attachments**

March 22, 2024 Water Department Letter

Maser water system report with map and flow analysis.

**TOWN OF MARLBOROUGH**  
**Water Department**  
**1650 Route 9W - P. O. Box 305**  
**Milton, NY 12542**  
**Telephone: (845) 236-3415 Fax: (845) 795-2031**

March 22, 2024

Re: Buttermilk Falls Proposed Hotel and Resort Expansion

Chairman Brand and Planning Board Members:

This letter is in regard for the Town of Marlboro to be able to supply water to this project.

Your concern is about the Serviceability of this project. There should not be a problem in the supply of 16,800 gallons daily, as long as the proper pressure are met for every individual dwelling.

If you have any other questions feel free to contact me.

Thank You

Charles Muggeo  
Town of Marlboro Water Superintendent



One Crosfield Avenue, Suite 1, West Nyack, NY 10994  
Tel: 845.727.1160 • Fax: 845.727.1162  
[www.maserconsulting.com](http://www.maserconsulting.com)

## ***WATER SYSTEM FACILITY EVALUATION REPORT***

***FOR THE***

***TOWN OF MARLBOROUGH, ULSTER COUNTY, NEW YORK***

***PREPARED FOR:***

***TOWN OF MARLBOROUGH  
1650 ROUTE 9W  
P.O. BOX 305  
MILTON, NY 12547***

*Thomas T. Coupart, Supervisor*

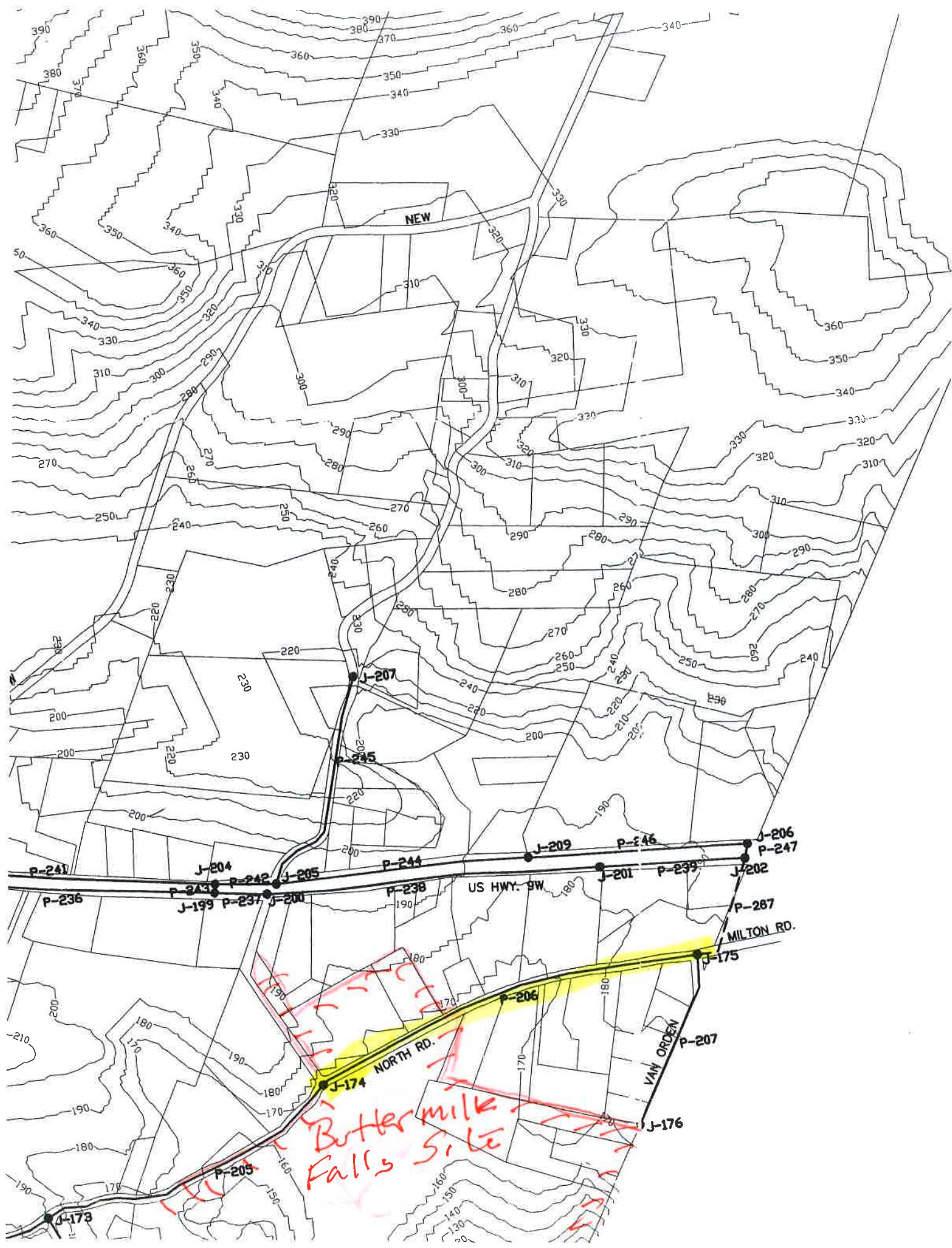
*Town Board  
Eric Affuso, Councilman  
Betty Diorioi, Councilwoman  
John Bellucci, Councilman  
Pete Neckles, Councilman*

***PREPARED BY:***

*Maser Consulting, P.A.  
One Crosfield Ave., Suite 1  
West Nyack, NY 10994*

*November 2003*

*MC PROJECT NO. 02-0638G*



**Scenario: 2F-Current Conditions, MDD**  
**Fire Flow Analysis**  
**Fire Flow Report**

Label	Needed FF (gpm)	Total Flow Needed (gpm)	Satisfies Constraints?	Avail. Fire Flow (gpm)	Total Flow Avail. (gpm)	Res. Pres. (psi)	Calc. Res. Pres. (psi)	Min. Zone Pres. (psi)	Calc. Min. Zone Pres. (psi)	Min. Zone Junc.	Min. Sys. Pres. (psi)	Calc. Min. Sys. Pres. (psi)	N S Ju
J-151	1,000.0	1,002.3	true	1,476.5	1,478.8	20.00	20.00	0.00	3.61	J-197	0.00	3.61	J-19
J-152	1,000.0	1,002.6	true	1,307.7	1,310.3	20.00	20.00	0.00	4.27	J-197	0.00	4.27	J-19
J-153	1,000.0	1,002.3	true	1,348.0	1,350.2	20.00	20.00	0.00	4.12	J-197	0.00	4.12	J-19
J-154	1,000.0	1,000.7	true	1,135.5	1,136.2	20.00	20.00	0.00	4.87	J-197	0.00	4.87	J-19
J-155	1,000.0	1,001.0	true	1,025.7	1,026.7	20.00	20.00	0.00	5.22	J-197	0.00	5.22	J-19
J-156	1,000.0	1,002.3	true	1,438.8	1,441.0	20.00	20.00	0.00	3.76	J-197	0.00	3.76	J-19
J-157	1,000.0	1,001.6	true	1,281.7	1,283.4	20.00	20.00	0.00	4.36	J-197	0.00	4.36	J-19
J-158	1,000.0	1,001.6	true	1,985.4	1,987.0	20.00	48.28	0.00	0.00	J-197	0.00	0.00	J-19
J-159	1,000.0	1,003.6	true	1,932.1	1,935.7	20.00	53.71	0.00	0.00	J-197	0.00	0.00	J-19
J-160	1,000.0	1,111.8	true	1,864.7	1,976.6	20.00	59.88	0.00	0.00	J-197	0.00	0.00	J-19
J-161	1,000.0	1,001.6	true	1,827.1	1,828.8	20.00	66.32	0.00	0.00	J-197	0.00	0.00	J-19
J-162	1,000.0	1,004.2	true	1,771.5	1,775.7	20.00	89.71	0.00	0.00	J-197	0.00	0.00	J-19
J-163	1,000.0	1,002.3	true	1,872.1	1,874.4	20.00	37.27	0.00	0.00	J-197	0.00	0.00	J-19
J-164	1,000.0	1,002.6	true	1,846.7	1,849.3	20.00	34.44	0.00	0.00	J-197	0.00	0.00	J-19
J-165	1,000.0	1,000.7	true	1,836.4	1,837.1	20.00	46.14	0.00	0.00	J-197	0.00	0.00	J-19
J-166	1,000.0	1,001.3	true	1,836.4	1,837.7	20.00	23.53	0.00	0.00	J-197	0.00	0.00	J-19
J-167	1,000.0	1,000.3	true	1,833.5	1,833.8	20.00	35.43	0.00	0.00	J-197	0.00	0.00	J-19
J-168	1,000.0	1,001.6	true	1,794.9	1,796.6	20.00	83.65	0.00	0.00	J-197	0.00	0.00	J-19
J-169	1,000.0	1,001.6	true	1,786.6	1,788.2	20.00	89.44	0.00	0.00	J-197	0.00	0.00	J-19
J-170	1,000.0	1,001.0	true	1,774.9	1,775.9	20.00	83.62	0.00	0.00	J-197	0.00	0.00	J-19
J-171	1,000.0	1,001.3	true	1,775.9	1,777.2	20.00	78.72	0.00	0.00	J-197	0.00	0.00	J-19
J-172	1,000.0	1,001.0	true	1,763.7	1,764.7	20.00	20.00	0.00	0.09	J-197	0.00	0.00	J-19
J-173	1,000.0	1,001.6	true	1,625.7	1,627.4	20.00	20.00	0.00	1.08	J-197	0.00	0.09	J-19
J-174	1,000.0	1,001.6	true	1,380.7	1,382.4	20.00	20.00	0.00	2.67	J-197	0.00	1.08	J-19
J-175	1,000.0	1,001.6	true	1,183.1	1,184.7	20.00	20.00	0.00	3.77	J-197	0.00	2.67	J-19
J-176	1,000.0	1,002.0	true	1,116.1	1,118.1	20.00	20.00	0.00	4.09	J-197	0.00	3.77	J-19
J-177	1,000.0	1,003.9	true	1,781.2	1,785.2	20.00	54.36	0.00	0.00	J-197	0.00	4.09	J-19
J-178	1,000.0	1,001.6	true	1,507.1	1,508.8	20.00	20.00	0.00	1.91	J-197	0.00	0.00	J-19
J-179	1,000.0	1,004.6	true	1,787.1	1,791.7	20.00	41.43	0.00	0.00	J-197	0.00	0.00	J-19
J-180	1,000.0	1,002.9	true	1,284.2	1,267.1	20.00	20.00	0.00	3.37	J-197	0.00	1.91	J-19
J-181	1,000.0	1,002.0	true	1,559.5	1,561.5	20.00	20.00	0.00	1.54	J-197	0.00	3.37	J-19
J-182	1,000.0	1,002.3	true	1,680.2	1,682.5	20.00	90.34	0.00	0.00	J-197	0.00	1.54	J-19
J-183	1,000.0	1,001.0	true	1,675.8	1,676.8	20.00	91.12	0.00	0.00	J-197	0.00	0.00	J-19
J-184	1,000.0	1,002.0	true	1,536.1	1,538.1	20.00	95.78	0.00	0.00	J-197	0.00	0.00	J-19
J-185	1,000.0	1,001.0	true	1,480.0	1,481.0	20.00	44.71	0.00	0.00	J-197	0.00	0.00	J-19
J-186	1,000.0	1,000.7	false	313.9	314.6	20.00	23.08	0.00	0.00	J-197	0.00	0.00	J-19
J-187	1,000.0	1,000.3	false	263.6	264.0	20.00	20.00	0.00	0.00	J-197	0.00	0.00	J-19
J-188	1,000.0	1,000.3	false	258.0	258.3	20.00	20.00	0.00	7.32	J-197	0.00	0.00	J-19
J-189	1,000.0	1,002.9	true	1,536.1	1,539.1	20.00	43.68	0.00	8.14	J-197	0.00	7.32	J-19
J-190	1,000.0	1,001.3	true	1,360.0	1,361.3	20.00	20.00	0.00	0.00	J-197	0.00	8.14	J-19
J-191	1,000.0	1,001.0	true	1,264.9	1,265.9	20.00	20.00	0.00	1.47	J-197	0.00	0.00	J-19
J-192	1,000.0	1,001.3	true	1,536.1	1,537.4	20.00	45.30	0.00	2.19	J-197	0.00	1.47	J-19
J-193	1,000.0	1,001.3	true	1,295.9	1,297.2	20.00	20.00	0.00	1.96	J-197	0.00	2.19	J-19
J-194	1,000.0	1,000.3	true	2,152.3	2,152.7	20.00	51.48	0.00	0.00	J-197	0.00	1.96	J-19
J-195	1,000.0	1,000.7	true	1,060.2	1,060.9	20.00	20.00	0.00	5.18	J-197	0.00	0.00	J-19
J-196	1,000.0	1,000.7	false	232.8	233.4	20.00	20.00	0.00	11.35	J-197	0.00	5.18	J-19
J-197	1,000.0	1,000.7	false	158.8	159.4	20.00	20.00	0.00	29.07	J-196	0.00	11.35	J-19
J-198	1,000.0	1,001.3	false	796.6	797.9	20.00	20.00	0.00	5.14	J-197	0.00	29.07	J-19
J-199	1,000.0	1,001.0	true	1,666.6	1,667.6	20.00	20.00	0.00	0.08	J-197	0.00	5.14	J-19
J-200	1,000.0	1,001.6	false	908.7	908.3	20.00	20.00	0.00	4.70	J-197	0.00	0.08	J-19

Title: Marlborough Water System

u:\current 02-0638g\marlborough water system-2.wcd

07/16/03 03:44:15 PM

© Haestad Methods, Inc.

Maser Consulting

37 Brookside Road Waterbury, CT 06708 USA

+1-203-755-1666

Project Engineer: John D. Van Dorpe

WaterCAD v6.0 [6.0103b]

Page 4 of 5