

Medenbach, Eggers & Carr

Civil Engineering and Land Surveying PC
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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 VanOrden 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 Marlobough 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



ting, Municipal & Environmental Engineers
rs • Surveyors • Landscape Architects

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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

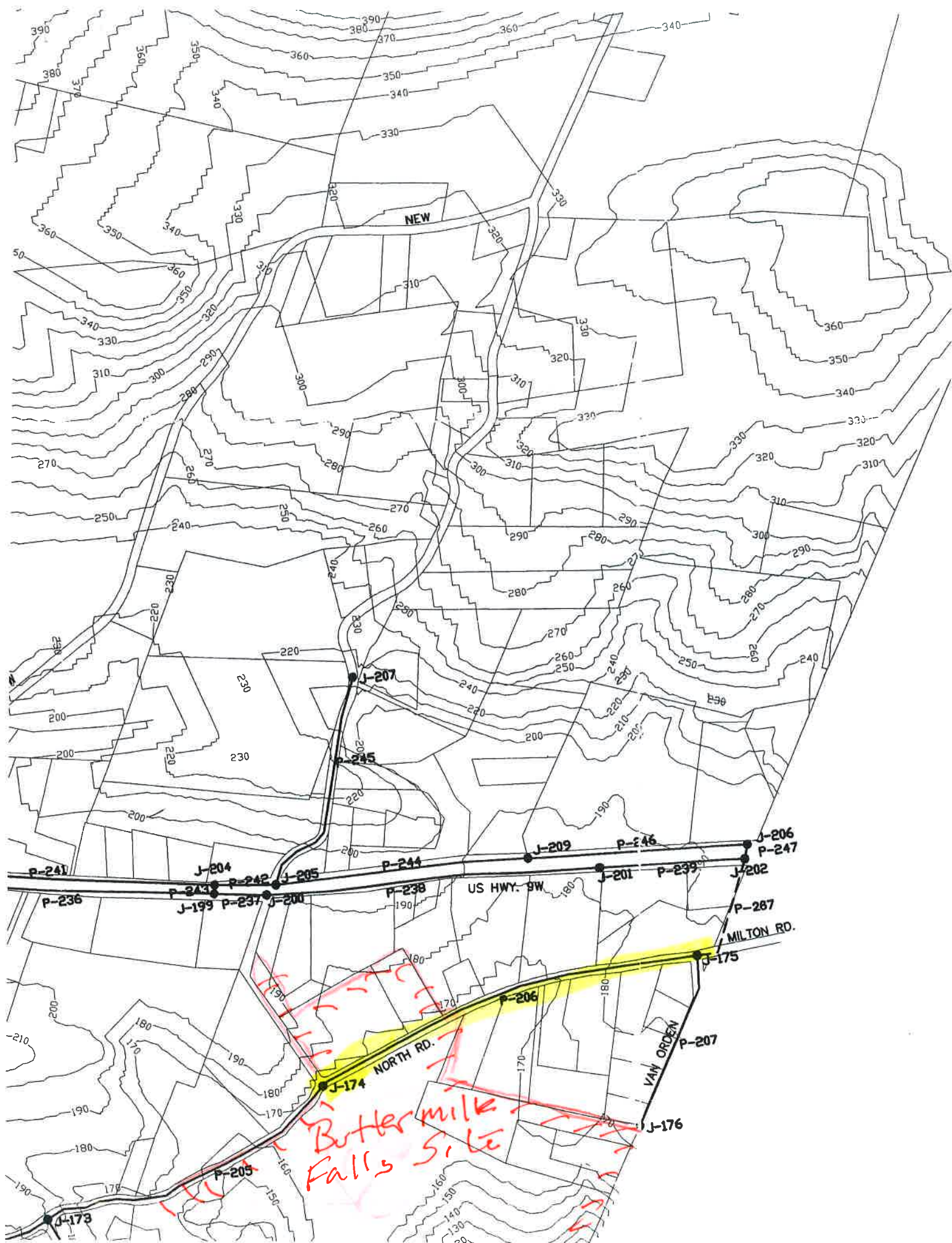
Eric Affuso, Councilman
Betty Diorioi, Councilwoman
John Bellucci, Councilman
Pete Neckles, Councilman

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)	M 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	0.09	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	1.08	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	2.67	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	3.77	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	4.09	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	0.00	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	1.91	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	1,264.2	1,267.1	20.00	20.00	0.00	3.37	J-197	0.00	3.37	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	1.54	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	0.00	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	7.32	J-197	0.00	7.32	J-19
J-188	1,000.0	1,000.3	false	258.0	258.3	20.00	20.00	0.00	8.14	J-197	0.00	8.14	J-19
J-189	1,000.0	1,002.9	true	1,536.1	1,539.1	20.00	43.68	0.00	0.00	J-197	0.00	0.00	J-19
J-190	1,000.0	1,001.3	true	1,360.0	1,361.3	20.00	20.00	0.00	1.47	J-197	0.00	1.47	J-19
J-191	1,000.0	1,001.0	true	1,264.9	1,265.9	20.00	20.00	0.00	2.19	J-197	0.00	2.19	J-19
J-192	1,000.0	1,001.3	true	1,536.1	1,537.4	20.00	45.30	0.00	0.00	J-197	0.00	0.00	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	1.96	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	0.00	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	5.18	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	11.35	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	29.07	J-196
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	5.14	J-197
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	0.08	J-197
J-200	1,000.0	1,001.6	false	906.7	908.3	20.00	20.00	0.00	4.70	J-197	0.00	4.70	J-197

Title: Marlborough Water System

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