APPENDIX G: UTILITIES

August 25, 2023

Patrick F. Brady
Joint Regional Sewerage Board
Ecology Lane
West Haverstraw, NY 10993

RE: Haverstraw Chair Factory – Sewer Loading Calculations
Village of Haverstraw, Rockland County, NY
LaBella Project #2230414

Dear Mr, Brady

We are pleased to present you with the sanitary sewer loading letter evaluation in support of the proposed redevelopment Haverstraw Chair Factory project, located adjacent to Allison Avenue, Broad Street and Liberty Street, in the Village of Haverstraw, Rockland County, New York. Pennrose, LLC. (the "Developer") is proposing to redevelop 11 parcels to include: affordable, mixed-income and market rate housing (441,500 sf, 450 units); commercial retail space and a cultural/community facility (15,000 sf); speculative hotel and museum/cultural space (82,800 sf), and structured and surface parking. A summary of the anticipated increase in sewer loading from the project is presented below.

Municipal Sanitary Sewer System:
The project proposes an internal gravity sewer system which will discharge to a proposed municipal duplex pump station with an associated backup generator. The internal gravity sewer main that discharges to the pump station will be approximately 1,500 LF of 8" SDR35 PVC sewer pipe with a manhole spacing of approximately 300 ft. Portions of the buildings along Allison and Broad Street may be serviced via gravity to the public sewers within those streets if desired. The pump station will discharge to a proposed 4-inch force main approximately 500 LF to the gravity sewers within Allison Avenue and Broad Street.

The anticipated average daily sewer loading can be calculated by using Table B.3 of the NYSDEC Design Standards for Intermediate-Sized Wastewater Treatment Systems, March 2014. As mandated by Section 15-0314 of the Environmental Conservation Law, plumbing facilities in new and renovated buildings must use water-saving fixtures and, therefore, the demand per Table B.3 is representative.

The resulting anticipated average daily sewer loading for the proposed development is summarized in Table 1 below.

Table 1: Anticipated Average Daily Sewer Loading

BLD	Use		Units		Hydraulic Loading	Average Daily Demands		Maximum Daily Demands		Peak Hourly Demand	
1	Residential	Studio	28 units	28 bdr	110 GPD/bedroom	3,080 GPD		6,160 GPD		12,320 GPD	
		One-Bedroom	66 units	66 bdr		7,260 GPD		14,520 GPD		29,040 GPD	
		Two-Bedroom	67 units	134 bdr		14,740 GPD		29,480 GPD		58,960 GPD	
		Three-Bedroom	6 units	18 bdr		1,980 GPD		3,960 GPD		7,920 GPD	
	Retail/Community Space		15,000 sf		0.10 GPD/sf	1,500 GPD		3,500 GPD		6,000 GPD	
					Total	**28,560 GPD**	**19.8 GPM**	**57,620GPD**	**40.0 GPM**	**114,240 GPD**	**79.3 GPM**
2	Residential	Studio	27 units	27 bdr	110 GPD/bedroom	2,970 GPD		5,940 GPD		11,880 GPD	
		One-Bedroom	63 units	63 bdr		6,930 GPD		13,860 GPD		27,720 GPD	
		Two-Bedroom	31 units	62 bdr		6,820 GPD		13,640 GPD		27,280 GPD	
		Three-Bedroom	7 units	21 bdr		2,310 GPD		4,620 GPD		9,240 GPD	
					Total	**19,030 GPD**	**13.2 GPM**	**38,080 GPD**	**26.4 GPM**	**76,120 GPD**	**52.9 GPM**
3	Residential	Studio	8 units	8 bdr	110 GPD/bedroom	880 GPD		1,760 GPD		3,520 GPD	
		One-Bedroom	32 units	32 bdr		3,520 GPD		7,040 GPD		14,080 GPD	
		Two-Bedroom	27 units	54 bdr		5,940 GPD		11,880 GPD		23,760 GPD	
		Three-Bedroom	4 units	12 bdr		1,320 GPD		2,640 GPD		5,280 GPD	
					Total	**11,660 GPD**	**8.0 GPM**	**23,320 GPD**	**16.2 GPM**	**46,640 GPD**	**32.4 GPM**
4	Residential	Studio	5 units	5 bdr	110 GPD/bedroom	550 GPD		1,100 GPD		2,200 GPD	
		One-Bedroom	55 units	55 bdr		6,050 GPD		12,100 GPD		24,200 GPD	
		Two-Bedroom	20 units	40 bdr		4,400 GPD		8,800 GPD		17,600 GPD	
		Three-Bedroom	4 units	12 bdr		1,320 GPD		2,640 GPD		5,280 GPD	
					Total	**12,320 GPD**	**8.5 GPM**	**24,640 GPD**	**17.1 GPM**	**49,280 GPD**	**34.2 GPM**
5	Hotel	Sleeping Units	Up to 120 units		110 GPD/ sleeping unit	13,200 GPD		26,400 GPD		52,800 GPD	
		Banquet Hall	250 seats		20 GPD	5,000 GPD		10,000GPD		20,000 GPD	
		Lounge, Bar	100 seats		10 GPD	1,000 GPD		2,000 GPD		4,000 GPD	
					Total	**19,200 GPD**	**13.3 GPM**	**38,400GPD**	**26.6 GPM**	**76,800 GPD**	**53.3 GPM**
					Project Total	**90,770 GPD**	**63.0 GPM**	**182,060 GPD**	**126.4 GPM**	**363,080 GPD**	**252.1 GPM**

As demonstrated above, the anticipated increase in average daily sewer loading for the project is estimated to be 90,770 GPD. Applying a factor of two (2) to determine the maximum daily demand yields 182,060 GPD. Applying a factor of four (4) to determine the peak hourly sewer loading yields 363,080 GPD or 252.1 GPM. The project is located within the Haverstraw Joint Regional District Area. Under SPDES Permit Number NY0028533, the Haverstraw Joint Regional Sewer Treatment Plant is approved up to 8 MGPD.

In summary, it is anticipated that the proposed development will not adversely affect the Haverstraw Joint Regional Sewer Treatment Plant. We are requesting that the Haverstraw Joint Regional

Sewerage Board verify that the system can accommodate the increase in loading in the form of a will serve letter. If you have any questions regarding the above, please do not hesitate to contact this office at 518-266-7362 or by email at sfarrell@labellapc.com.

Respectfully submitted,

LaBella Associates



Sean Farrell, CPESC
Senior Project Manager

cc: Roger Keating, PE

Information Required for Willingness to Serve

Date: 8/25/23

Project Name: Haverstraw Chair Factory

Project Address (Street Name/Town): Village of Haverstraw SBL: 27.05-2-6.6, 27.09-1-3, 27.46-1-77, 27.46-1-78, 27.46-1-80 thru 27.46-1-86, 27.54-2-16

Brief Project Description: Construction of 450 residential units,15,000sf of commercial/retail, and a 82,800sf hotel.

Size and Length of Main: 8" DIP Approx. 750' in length

Number of Hydrants: Two (2)

Number of Domestic Services: Five (5)

Number of Fire Services: Five (5)

Number of Irrigation services: Project is proposing cisterns for Irrigation

Commercial (Type and Number Square Feet): 15,000 sf of Commercial/Retail

Residential (Number of Units and Number of Bedrooms per Unit): 450 Residential Units & 100 Hotel Rooms

Contact Name: Sean Farrell

Contact Address: 4 British American Blvd

Contact Number: 518-439-8235

Contact Email: sfarrell@labellapc.com

Projected Demand Summary (if more than one building, attach a Project Demand Summary Table):

1. Domestic Average Daily Demand (gpd): _____ (gpm): _____
2. Domestic Maximum Daily Demand (gpd): See Attached Letter (gpm): See Attached Letter
3. Domestic Peak Hourly Demand (gph): _____ (gpm): _____
4. Lawn Irrigation Demand (gpd): Project is proposing cisterns for Irrigation (gpm): _____
5. Required Fire Hydrant Flows (gpm): > 400 gpm
6. Required Fire Sprinkler System Flows (gpm): 400 gpm

Additional Comments: _____

STATE OF NEW YORK ★ ROGER E. KEATING ★ EXCELSIOR 083455 LICENSED PROFESSIONAL ENGINEER

Additional Requirements:

- Attach a detailed project description including detailed project demand calculations and back-up information supporting all project demand calculations.
- Attach a copy of site plan calling out the block and lots and local vicinity with elevations in NGVD 1929, if elevations are not in NGVD 1929, please provide conversion factor.
- This form and backup calculations to be signed and sealed by a NYS P.E.

August 25, 2023

Veolia North America
Frank McGlynn
New Business Manager
162 Old Mill Road
West Nyack, NY 10994
Frank.mcglynn@veolia.com

RE: Haverstraw Chair Factory – Domestic Water Demand
Village of Haverstraw, Rockland County, NY
LaBella Project #2230414

Dear Mr. McGlynn

We are pleased to present you with the domestic water letter evaluation in support of the proposed redevelopment Haverstraw Chair Factory project, located adjacent to Allison Avenue, Broad Street and Liberty Street, in the Village of Haverstraw, Rockland County, New York. Pennrose, LLC. (the "Developer") is proposing to redevelop 11 parcels to include: affordable, mixed-income and market rate housing (441,500 sf, 450 units); commercial retail space and a cultural/community facility; speculative hotel and museum/cultural space (82,800 sf), and structured and surface parking. A summary of the anticipated increase in water demand from the project is presented below.

Water Conveyance System:
All domestic water for the project will be serviced by a proposed connection to the existing water main on Broad Street. The connection will then extend into the project site via Liberty Street. Four out of the five buildings will be serviced from the proposed water main along Liberty Street. The remaining building will be serviced from the existing main along Allison Street. The proposed water system will consist of 750+/- LF of 8" CL52 ductile iron pipe.

The anticipated average daily water demand can be calculated by correlating water supply to wastewater generation using Table B.3 of the NYSDEC Design Standards for Intermediate-Sized Wastewater Treatment Systems, March 2014. As mandated by Section 15-0314 of the Environmental Conservation Law, plumbing facilities in new and renovated buildings must use water-saving fixtures and, therefore, the demand per Table B.3 is representative.

The resulting anticipated average daily domestic water demand for the proposed development is summarized in Table 1 below.

Table 1: Anticipated Domestic Water Demand

BLD	Use		Units		Hydraulic Loading	Average Daily Demands		Maximum Daily Demands		Peak Hourly Demand	
1	Residential	Studio	28 units	28 bdr	110 GPD/bedroom	3,080 GPD		6,160 GPD		12,320 GPD	
		One-Bedroom	66 units	66 bdr		7,260 GPD		14,520 GPD		29,040 GPD	
		Two-Bedroom	67 units	134 bdr		14,740 GPD		29,480 GPD		58,960 GPD	
		Three-Bedroom	6 units	18 bdr		1,980 GPD		3,960 GPD		7,920 GPD	
	Retail/Community Space		15,000 sf		0.10 GPD/sf	1,500 GPD		3,500 GPD		6,000 GPD	
					Total	**28,560 GPD**	**19.8 GPM**	**57,620GPD**	**40.0 GPM**	**114,240 GPD**	**79.3 GPM**
2	Residential	Studio	27 units	27 bdr	110 GPD/bedroom	2,970 GPD		5,940 GPD		11,880 GPD	
		One-Bedroom	63 units	63 bdr		6,930 GPD		13,860 GPD		27,720 GPD	
		Two-Bedroom	31 units	62 bdr		6,820 GPD		13,640 GPD		27,280 GPD	
		Three-Bedroom	7 units	21 bdr		2,310 GPD		4,620 GPD		9,240 GPD	
					Total	**19,030 GPD**	**13.2 GPM**	**38,080 GPD**	**26.4 GPM**	**76,120 GPD**	**52.9 GPM**
3	Residential	Studio	8 units	8 bdr	110 GPD/bedroom	880 GPD		1,760 GPD		3,520 GPD	
		One-Bedroom	32 units	32 bdr		3,520 GPD		7,040 GPD		14,080 GPD	
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		Three-Bedroom	4 units	12 bdr		1,320 GPD		2,640 GPD		5,280 GPD	
					Total	**11,660 GPD**	**8.0 GPM**	**23,320 GPD**	**16.2 GPM**	**46,640 GPD**	**32.4 GPM**
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		Two-Bedroom	20 units	40 bdr		4,400 GPD		8,800 GPD		17,600 GPD	
		Three-Bedroom	4 units	12 bdr		1,320 GPD		2,640 GPD		5,280 GPD	
					Total	**12,320 GPD**	**8.5 GPM**	**24,640 GPD**	**17.1 GPM**	**49,280 GPD**	**34.2 GPM**
5	Hotel	Sleeping Units	Up to 120 units		110 GPD/ sleeping unit	13,200 GPD		26,400 GPD		52,800 GPD	
		Banquet Hall	250 seats		20 GPD	5,000 GPD		10,000GPD		20,000 GPD	
		Lounge, Bar	100 seats		10 GPD	1,000 GPD		2,000 GPD		4,000 GPD	
					Total	**19,200 GPD**	**13.3 GPM**	**38,400GPD**	**26.6 GPM**	**76,800 GPD**	**53.3 GPM**
					Project Total	**90,770 GPD**	**63.0 GPM**	**182,060 GPD**	**126.4 GPM**	**363,080 GPD**	**252.1 GPM**

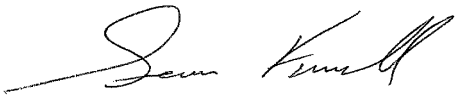
As demonstrated above, the anticipated increase in average daily domestic water demand for the project is estimated to be 90,770 GPD. Applying a factor of two (2) to determine the maximum daily demand yields 182,060 GPD. Applying a factor of four (4) to determine the peak hourly domestic water demand yields 363,080 GPD or 252.1 GPM.

In summary, it is anticipated that the proposed Haverstraw Chair Factory project will not adversely affect the Veolia, formerly Suez, water system. We are requesting that the Veolia verify that the

system can accommodate the increase in demand in the form of a will serve letter. If you have any questions regarding the above, please do not hesitate to contact this office at 518-266-7362 or by email at sfarrell@labellapc.com.

Respectfully submitted,

LaBella Associates



Sean Farrell, CPESC
Senior Project Manager

cc: Roger Keating, PE

COMMISSIONERS:
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PATRICK F. BRADY, P.E.

JOINT REGIONAL SEWERAGE BOARD

ECOLOGY LANE
WEST HAVERSTRAW, NEW YORK 10993
(845) 429-5715
FAX (845) 429-3512

October 31, 2023

Mr. Sean Farrell
LaBella Associates
4 British American Blvd
Latham, NY 12110

Re: Haverstraw Chair Factory
"Willingness to Serve"

Dear Mr. Farrell:

We have reviewed your letter, dated August 25, 2023 requesting the "willingness to serve", by the Joint Regional Sewerage Board (JRSB). The "willingness to serve" is for the treatment of the domestic wastewater from the proposed Haverstraw Chair Factory project. It is our understanding, based on your letter that 100% of the domestic wastewater produced by this facility would be treated by the JRSB. The total proposed quantity of wastewater would be as follows:

- Building 1 – Residential and Retail/Community Space, avg. daily flow of 28,560 gpd
- Building 2 – Residential, avg. daily flow of 19,030 gpd
- Building 3 – Residential, avg. daily flow of 11,660 gpd
- Building 4 – Residential, avg. daily flow of 12,320 gpd
- Building 5 – Hotel, avg. daily flow of 19,200 gpd
- Total avg. daily flow from Buildings 1-5 is 90,770 gpd or 0.0756 MGD

The domestic wastewater from this facility would flow to the Dr. Girling pump station and then to the JRSB wastewater treatment facility (WWTP) for treatment. The WWTP has a flow capacity of eight (8) million gallons per day (MGD) and is using approximately 4.5-5.5 MGD of this capacity, however the WWTP is sensitive to peak hourly flows.

This letter acknowledges our "willingness to serve" the proposed Haverstraw Chair Factory project. Please provide the following:

- Peak Flow Sewer Capacity Study on Dr. Girling pump station, truck line from pump station to Main pump station and the Main pump station.
- Specific details related to wastewater service as this project progresses.

Please note that a JRSB User Unit Connection Permit shall be applied for each user unit connection, prior to issuance of a certificate of occupancy. Permits shall be applied for at the JRSB sewage treatment plant.

If you have any questions or require any additional information, please contact our office at 845-429-5715.

Very truly yours,

Patrick Brady, P.E.
Executive Director

Cc: Board of Commissioners
William Stein, Esq.

Frank McGlynn
New Business Department

VEOLIA
162 Old Mill Road
West Nyack, NY 10994
Tel: 845.620.6215

October 12, 2023

Sean M Farrell CPESC
LaBella Associates | Senior Project Manager
4 British American Blvd
Latham, NY 12110
sfarrell@labellapc.com

Re: *project:* *Haverstraw Chair Factory*
address: *Multiple addresses surrounding 8 Allison Ave*
Haverstraw, NY 10927

Dear Sean:

This is to advise you that water service can currently be made available to the proposed project: Haverstraw Chair Factory, located at the intersection of Broad Street and Allison Avenue, Rockland County, New York, using a projected max day demand of 182,060 gpd, and fire flow of 800 gpm subject to the following conditions:

1) Prior to the installation of any services or the extension of any mains, hydraulic data pertinent to the project must be provided to us, for our Engineering Department review and approval.
2) If, as a result of such review, it is decided that any extension of mains or pipes or modification of other facilities is required in order to meet the hydraulic needs of the project, those mains or facilities will be installed or extended by you in accordance with the terms and conditions of this Company's standard agreements for extensions.
3) Service will be provided in accordance with the terms and conditions set forth in the Company's filed Tariff, as amended or modified from time to time.
4) Water mains shall be laid in accordance with the Recommended Standards for Water Works (a.k.a. Ten State Standards).

This willingness to serve letter is contingent upon VEOLIA Water New York Inc. having County, State and Federal regulatory authorization to provide the requested water service and is valid for nine (9) months from the date of issuance. If the main installation/extension or service installation is not completed and approved by the Rockland County Department of Health within nine (9) months from the date this letter is issued, this willingness to serve letter will expire, and it will be necessary for you to request a new willingness to serve letter.

Please contact me at 845-620-6215 if you need additional information.
Very truly yours,



Frank McGlynn

cc: A. Ebi Elaahi, PH.D., P.E. - Rockland County Health Department
Elizabeth Mello, P.E. – Rockland County Health Department.