

ENGINEER'S REPORT for 94 SOMERSTOWN ROAD SUBDIVISION
TOWN OF OSSINING
SBL: 90.11-1-1

PREPARED BY: ALAN L. PILCH, PE, RLA
ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC
Date: June 14, 2025

Proposal:

This application is to subdivide the 94 Somerstown Road property into three (3) residential single family house lots. The subject property is 281,282.6 square feet in size (6.457 acres) in size and is located on the east side of Somerstown Road. The property is bounded by existing single family residentially-zoned lands to the north, east and south. Somerstown Road and other residential properties are to the west. The boundary line with the Town of New Castle is coincident with the northern property line.

The proposed houses would be accessed via a 18-foot width paved common driveway with a 1-foot wide gravel shoulder on each side for a total driveway width of 20 feet. A 30-foot wide easement is proposed for the common driveway which would extend through Lots 3 and 1 to provide access to all of the lots. The proposed driveway is 684 feet in length from its intersection with the edge of pavement of Somerstown Road to the end of the common driveway on Lot 1.

Tax Map Information:

Town of Ossining SBL: 90.11-1-1

Zoning District:

R-40 One Family Residence District Zone

Design flow:

4 bedroom dwelling, 440 gallons per day for each of the three lots

Design Percolation Rate:

31 to 45 minutes per inch as per percolation testing performed by the project engineer

Soils:

Lot 1: 0" to 12" topsoil, 12" to 42" sandy loam, 42" to 72" and 84" to bottom of deep hole test compacted loam and medium sandy loam.

Lot 2: 0"-12" topsoil, medium sandy loam 12" to bottom of deep hole which varied between 42" to 54" to 64".

Lot 3: 0" to 12" topsoil, 12" to 42" compacted medium sandy loam with some gravel, 42" to 84" loam with some clay.

Required linear feet fields:

Primary OWTS: 734 lineal feet of conventional absorption trench based on the soil percolation rate of 31 to 45 minutes per inch as per testing.

243 lineal feet of gravelless geotextile sand filter system would be required in accordance with the 2022 Rules and Regulations for The Design and Construction of Residential Onsite Wastewater Treatment Systems.

The project proposes the following:

Lot 1 – Primary OWTS: 256 lineal feet of Eljen B43 modules
100 Expansion Area OWTS: 252 lineal feet of Eljen B43 modules

Lot 2 – Primary OWTS: 248 lineal feet of Eljen B43 modules
100 Expansion Area OWTS: 256 lineal feet of Eljen B43 modules

Lot 3 – Primary OWTS: 244 lineal feet of Eljen B43 modules
100 Expansion Area OWTS: 248 lineal feet of Eljen B43 modules

Required septic tank:

Each of the three proposed four (4) bedroom houses would require a minimum 1,250 gallon septic tank. A 1,250 gallon septic tank is proposed on each of the lots.

Other improvements required:

Potable Water Well on each lot.

Lot 1: 1 feet run-of-bank fill for Lot 1 OWTS as a leveling course

Lot 2: 2.5 feet run-of-bank fill for Lot 2 Primary OWTS; 3.5 feet of run-of-bank fill for Lot 2 expansion area

Lot 3 - None.

Watershed:

Oliver Pond Basin; Pocantico and Saw Mill River Basin Watershed. Project site lies *outside* of the NYC water supply watershed.

USDA Soils within SSTA:

According to the Web Soils Survey, the soils over the property consist of Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky and Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky.

Slope across primary and 100% expansion areas:

Lot 1 – 8% across primary OWTS; 8% across 100% expansion area

Lot 2 – 1.8% across primary OWTS; 8% across 100% expansion area

Lot 3 – 3.6% across primary OWTS; 8% across 100% expansion area

Depth to Ledge Rock:

Lot 1 – 72” to >84” depth

Lot 2 – 42” in one hole; 54” and 56” in two other holes and 64” in the fourth hole

Lot 3 – >84 inches in all holes

Depth to Water Table:

84” in one test pit on Lot 1. None in the other deep hole test pits.

Estimated Construction Dates for SSTA:

September 2025 to September 2026

Disturbance Area:

Disturbance of 102,800 s.f. for the construction of the house, common driveway, septic system and stormwater management practices.

TEST PIT DATA REQUIRED TO BE SUBMITTED WITH APPLICATION

DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH G.L.	HOLE NO. <u>DH 1-1</u>	HOLE NO. <u>DH 1-2</u>	HOLE NO. <u>DH 1-3</u>	HOLE NO. _____
6"	0" to 12" topsoil	0" to 12" topsoil	0" to 12" topsoil	
12"				
18"				
24"	12" to 42"	12" to 42"	12" to 84"	
30"	sandy loam	sandy loam	compacted medium	
36"			sandy loam	
42"				
48"	42" to 84"	42" to 72"		
54"	compacted loam	loam with some		
60"		clay, compacted		
66"				
72"				
78"				
84"	Groundwater @ 8' No bedrock	No groundwater, no seeps, no bedrock	No groundwater, no seeps, no bedrock	

WAS GROUNDWATER ENCOUNTERED? YES/NO Yes, in DH 1.1 only

INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED 8'-0" Ft/InINDICATED LEVEL FOR WHICH WATER LEVEL RISES AFTER BEING ENCOUNTERED 8'-0" Ft/InDEEP TEST MADE BY Alan L. Pilch DATE OF DEEP TESTS 08/13/2024WCDOH PERSONNEL PRESENT: Xinxin Li and Katie Main

DESIGN

Soil Rate Used _____ Min/1" Drop: S.D. Usable Area Provided _____

No. of Bedrooms _____ Septic Tank Capacity _____ Gals. Masonry _____ Metal _____

Absorption Area Prov. by _____ L.F. x 24" _____ width trench. Other _____

Name _____

Signature _____

Address _____

Seal _____

Westchester County Health Department

Soil Rate Approved _____ Sq. Ft./Gal

Checked by _____

S.D. 27.6

1/22

WESTCHESTER COUNTY DEPARTMENT OF HEALTH
Bureau of Environmental Quality
25 Moore Avenue
Mount Kisco, NY 10549

DESIGN DATA SHEET - SEPARATE SEWAGE SYSTEM

FILE NO. _____

Owner: Jennifer and Pascal Smith-Couti Address 94 Somerstown Road

Located at (Street): Edgewood Road Sec. 90.11 Block 1 Lot 1
(Indicate nearest cross street)

Municipality Town of Ossining Watershed Pocantico and Saw Mill River Basin

SOIL PERCOLATION TEST DATA REQUIRED TO BE SUBMITTED WITH APPLICATION

Presoak Date: 09/29/2024 Run Date 9/30/2024

LOT 1

Hole #1	CLOCK TIME				PERCOLATION			
Hole Number	Run No.	Start	Stop	Elapsed Time (min.)	Depth to Water from Ground Surface Start Inches	Stop Inches	Water Level Drop In Inches	Soil Rate Min/in. Drop
PT 1-1	1	11:14 AM	11:45 AM	31	22	23	1	31
	2	11:45 AM	12:24 PM	39	22	23	1	39
	3	12:25 PM	1:08 PM	43	22	23	1	43
	4	1:08 PM	1:52 PM	44	22	23	1	44
	5							
PT 1-2	1	11:17 AM	11:30 AM	13	22	23	1	13
	2	11:31 AM	11:48 AM	17	22	23	1	17
	3	11:49 AM	12:06 PM	17	22	23	1	17
	4							
	5							
PT 1-3	1	11:51 AM	12:14 PM	23	21	22	1	23
	2	12:15 PM	12:53 PM	38	21	22	1	38
	3	12:54 PM	1:35 PM	41	21	22	1	41
	4							
	5							

Perc test done by: Alan L. Pilch, PE

WCDOH Personnel present: None. Not in NYC Watershed

Notes:

1. Tests to be repeated at same depth until approximately equal soil rates are obtained at each percolation test hole. All data to be submitted for review
2. Depth measurement to be made from top of hole. DO NOT REPORT INCREMENTS LESS THAN ONE INCH.

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Hole Number	Run No.	Start	Stop	Elapsed Time (min.)	Depth to Water from Ground Surface Start Inches	Stop Inches	Water Level Drop In Inches	Soil Rate Min/in. Drop
PT 1-4	1	11:53 AM	12:15 PM	22	18	19	1	22
	2	12:16 PM	12:45 PM	29	18	19	1	29
	3	12:46 PM	1:17 PM	31	18	19	1	31
	4							
	5							
	1							
	2							
	3							
	4							
	5							
	1							
	2							
	3							
	4							
	5							

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TEST PIT DATA REQUIRED TO BE SUBMITTED WITH APPLICATION

DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH G.L.	HOLE NO. <u>DH 2-1</u>	HOLE NO. <u>DH 2-2</u>	HOLE NO. <u>DH 2-3</u>	HOLE NO. <u>DH 2-4</u>
6"	0" to 12" topsoil	0" to 12" topsoil	0" to 12" topsoil	0" to 12" topsoil
12"	↓	↓	↓	↓
18"		12" to 42"	12" to 42"	12" to 54"
24"	12" to 60"	compacted brown	compacted brown /	compacted medium
30"	medium sandy	sandy loam	orange sandy loam	brown loam
36"	loam		with some gravel	
42"			↓	
48"			Rock at 42"	
54"				↓
60"	↓	Rock @ 56"		Rock @ 54"
66"	60"-64" brown/orange			
72"	sandy loam w/gravel			
78"	Rock @ 64"			
84"	No groundwater, seeps	No groundwater, no seeps	No groundwater, no seeps	No groundwater, no seeps

WAS GROUNDWATER ENCOUNTERED? YES/NO No.

INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED _____ Ft/In not applicable

INDICATED LEVEL FOR WHICH WATER LEVEL RISES AFTER BEING ENCOUNTERED _____ Ft/In

DEEP TEST MADE BY Alan L. Pilch DATE OF DEEP TESTS 08/13/2024WCDOH PERSONNEL PRESENT: Xinxin Li and Katie Main

DESIGN

Soil Rate Used _____ Min/1" Drop: S.D. Usable Area Provided _____

No. of Bedrooms _____ Septic Tank Capacity _____ Gals. Masonry _____ Metal _____

Absorption Area Prov. by _____ L.F. x 24" _____ width trench. Other _____

Name _____

Signature _____

Address _____

Seal _____

Westchester County Health Department

Soil Rate Approved _____ Sq. Ft./Gal

Checked by _____

S.D. 27.6

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SOIL PERCOLATION TEST DATA REQUIRED TO BE SUBMITTED WITH APPLICATION

Presoak Date: 10/17/2024 Run Date 10/18/2024

LOT 2

Hole #1	CLOCK TIME				PERCOLATION			
Hole Number	Run No.	Start	Stop	Elapsed Time (min.)	Depth to Water from Ground Surface Start Inches	Stop Inches	Water Level Drop In Inches	Soil Rate Min/in. Drop
PT 2-1	1	11:19 AM	11:28 AM	9	22	23	1	9
	2	11:29 AM	11:39 AM	10	22	23	1	10
	3	11:40 AM	11:51 AM	11	22	23	1	11
	4	11:52 AM	12:03 PM	11	22	23	1	11
	5							
PT 2-2	1	11:22 AM	11:30 AM	8	22	23	1	8
	2	11:31 AM	11:41 AM	10	22	23	1	10
	3	11:42 AM	11:53 AM	11	22	23	1	11
	4	11:54 AM	12:05 PM	11	22	23	1	11
	5							
PT 2-3	1	12:28 PM	12:35 PM	7	21	22	1	7
	2	12:36 PM	12:46 PM	10	21	22	1	10
	3	12:47 PM	12:59 PM	12	21	22	1	12
	4	1:00 PM	1:15 PM	15	21	22	1	15
	5	1:16 PM	1:33 PM	17	21	22	1	17

Perc test done by: Alan L. Pilch, PE

WCDOH Personnel present: None. Not in NYC Watershed

Notes:

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Hole Number	Run No.	Start	Stop	Elapsed Time (min.)	Depth to Water from Ground Surface Start Inches	Stop Inches	Water Level Drop In Inches	Soil Rate Min/in. Drop
PT 2-4	1	12:30 PM	12:48 PM	18	18	19	1	18
	2	12:49 PM	1:16 PM	27	18	19	1	27
	3	1:18 PM	1:51 PM	33	18	19	1	33
	4	1:52 PM	2:26 PM	34	18	19	1	34
	5							
	1							
	2							
	3							
	4							
	5							
	1							
	2							
	3							
	4							
	5							

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6"	0" to 12" topsoil	0" to 12" topsoil	0" to 12" topsoil	
12"	↓	↓	↓	
18"		12" to 42"	12" to 42"	
24"	12" to 42"	compacted medium	compacted medium	
30"	compacted sandy	sandy loam with	sandy loam with	
36"	loam with gravel	some gravel	some gravel	
42"	↓	↓	↓	
48"	42" to 84"	42" to 84"	42" to 84"	
54"	loam with some	loam with some	loam with some	
60"	clay	clay	clay	
66"				
72"				
78"				
84"	No groundwater, seeps, no bedrock ↓	No groundwater, no seeps, no bedrock ↓	No groundwater, no seeps, no bedrock ↓	

WAS GROUNDWATER ENCOUNTERED? YES/NO No.

INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED _____ Ft/In not applicable

INDICATED LEVEL FOR WHICH WATER LEVEL RISES AFTER BEING ENCOUNTERED _____ Ft/In

DEEP TEST MADE BY Alan L. Pilch DATE OF DEEP TESTS 08/13/2024WCDOH PERSONNEL PRESENT: Xinxin Li and Katie Main

DESIGN

Soil Rate Used _____ Min/1" Drop: S.D. Usable Area Provided _____

No. of Bedrooms _____ Septic Tank Capacity _____ Gals. Masonry _____ Metal _____

Absorption Area Prov. by _____ L.F. x 24" _____ width trench. Other _____

Name _____

Signature _____

Address _____

Seal

Westchester County Health Department

Soil Rate Approved _____ Sq. Ft./Gal

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LOT 3

Hole #1	CLOCK TIME				PERCOLATION			
Hole Number	Run No.	Start	Stop	Elapsed Time (min.)	Depth to Water from Ground Surface Start Inches	Depth to Water from Ground Surface Stop Inches	Water Level Drop In Inches	Soil Rate Min/in. Drop
PT 3-1	1	9:14 AM	10:14 AM	60	20	20.5	0.5	120
	2							FAIL
	3							
	4							
	5							
PT 3-2	1	9:16 AM	9:35 AM	19	21	22	1	19
	2	9:36 AM	10:09 AM	33	21	22	1	33
	3	10:10 AM	10:45 AM	35	21	22	1	35
	4							
	5							
PT 3-3	1	9:31 AM	9:48 AM	17	20	21	1	17
	2	9:49 AM	10:17 AM	28	20	21	1	28
	3	10:19 AM	10:55 AM	36	20	21	1	36
	4	10:56 AM	11:32 AM	36	20	21	1	36
	5							

Perc test done by: Alan L. Pilch, PE

WCDOH Personnel present: None. Not in NYC Watershed

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LOT 3

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Hole Number	Run No.	Start	Stop	Elapsed Time (min.)	Depth to Water from Ground Surface Start Inches	Stop Inches	Water Level Drop In Inches	Soil Rate Min/in. Drop
PT 3-4	1	9:33 AM	9:58 AM	25	20	21	1	25
	2	9:59 AM	10:29 AM	30	20	21	1	30
	3	10:30 AM	11:05 AM	35	20	21	1	35
	4	11:06 AM	11:43 AM	37	20	21	1	37
	5							
	1							
	2							
	3							
	4							
	5							
	1							
	2							
	3							
	4							
	5							

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