DESIGN CRITERIA

1. 2 BEDROOM HOUSE AT 110 GALLONS PER BEDROOM PER DAY EQUALS 220 GALLONS PER DAY DAILY FLOW.
2. EXISTING TERRAIN APPROXIMATELY 2–3 PERCENT SLOPE.
3. PERCOLATION RATE: 1–5 MIN/INCH EXISTING SOIL
4. SOIL: FINE SAND, SANDY LOAM
5. GROUNDWATER ENCOUNTERED WITHIN 55" WITH MOTTLING AT 32" .
6. NO BEDROCK WAS ENCOUNTERED WITHIN TEST DEPTH.

CALCULATIONS

1. REQUIRED NUMBER OF MODULES: PER TABLE 4 OF THE ELJEN GSF:
NY DESIGN AND INSTALLATION MANUAL: 2 BEDROOM AT 110 GPD = 11 MODULES
TOTAL ELJEN MODULES REQUIRED = 12

SYSTEM NOTES – ELJEN SYSTEM

BUILDING TO SEPTIC TANK

4 IN. CAST IRON OR 4 IN. PVC SCHEDULE 40 WITH TIGHT JOINTS, MINIMUM SLOPE: 1/4 IN. PER FOOT.

SEPTIC TANK TO DISTRIBUTION BOX

4 IN. PVC SCHEDULE 40 WITH TIGHT JOINTS, MINIMUM SLOPE: 1/8 IN. PER FOOT.

DISTRIBUTION BOX TO GSF MODULES

4 IN. PVC SCHEDULE 40 WITH TIGHT JOINTS, MINIMUM SLOPE: 1/2 TO 1/8 IN. PER FOOT.

SPECIFIED SAND

MUST MEET ASTM C33 SPECIFICATIONS, WITH LESS THAN 10% PASSING A #100 SIEVE AND LESS THAN 5% PASSING A #200 SIEVE

GSF MODULE PLACEMENT

1. CAREFULLY PLACE THE SPECIFIED SAND IN THE TRENCH. DO NOT CREATE RUTS IN THE BOTTOM OF THE SYSTEM. LEVEL THE SAND TO A MINIMUM DEPTH OF 6 IN.
2. PLACE THE GSF MODULES END TO END ON THE SAND WITH THE PAINTED STRIPE FACING UP. THE MODULES SHOULD BE SET LEVEL
3. PLACE 4" PERFERATED DISTRIBUTION PIPES IN THE CENTER OF THE GSF MODULE WITH THE HOLES AT 4 AND 8 OCLOCK, SECURE WITH ELJEN WIRE CLAMPS.
4. PLACE SAND AROUND THE MODULES AS SHOWN IN THE DETAIL AND PLACE INCLUDED ELJEN GEOTEXTILE FABRIC OVER THE PIPE CAREFUL NOT TO BLOCK PERFORATIONS.
5 BACKFILL TRENCH WITH EXCAVATED MATERIAL CARFULLY REMOVING ALL ORGANIC MATERIAL AND ROCKS GREATER THAN 3" DIAMETER
6. COVER ENTIRE SYSTEM W/ 6" OF TOPSOIL, SEED AND MULCH
7. VENTING AT DISTAL END IS REQUIRED IF MORE THAN 18" IF SYSTEM HAS MORE THAN 18" TOTAL COVER MEASURED FROM TOP OF MODULES TO FINISHED GRADE

COVERING

1. PLACE 6 IN. OF GOOD QUALITY TOPSOIL OVER THE ENTIRE SYSTEM AND FILL BUFFER SURFACE.
2. PLANT GRASS OVER THE ENTIRE SYSTEM USING GRASSES ADAPTED TO THE AREA. SHRUBS CAN BE PLANTED AROUND THE BASE AND UP THE SIDE SLOPES. SHRUBS SHOULD BE SOMEWHAT MOISTURE TOLERANT SINCE THE DOWN SIDE PERIMETER MAY BECOME MOIST DURING THE EARLY SPRING AND LATE FALL. PLANTINGS ON TOP OF THE SYSTEM SHOULD BE DROUGHT TOLERANT, AS THE UPPER PORTION OF THE SYSTEM CAN BECOME DRY DURING THE SUMMER.

ALL PLANTS SHOULD BE SHALLOW ROOTED

GENERAL

1. ALL SEPTIC SYSTEMS ARE TO BE DESIGNED AND CONSTRUCTED IN COMPLIANCE WITH ALL NYSDOH, EPA AND APA STANDARDS FOR A CONVENTIONAL SYSTEM.
2. BUILDER TO VERIFY GRADE OF SOIL PIPE AT BUILDING PRIOR TO CONSTRUCTION OF SYSTEM.
3. THERE SHALL BE NO CHANGES TO THESE PLANS UNLESS FIRST APPROVED BY THE ENGINEER.
4. NO FOOTING, ROOF, GARAGE, CELLAR OR SURFACE WATER DRAINAGE TO BE DISCHARGED TO SYSTEM. NO WATER SOFTENER BACKWASH OR GARBAGE GRINDER WASTE TO ENTER SYSTEM.
5. PER APA STANDARDS THE SOIL SHALL BE AUGMENTED WITH FINES TO REDUCE THE PERCOLATION RATE TO MINIMUM 3 MINUETS AND A MAXIMUM OF 7 MINUETS.
6. ALL DIMENSIONS ARE APPROXIMATE AS WELL AS THE PROPERTY BOUNDS IT IS RECOMMENDED THAT THE PROPERTY BOUNDS ARE SURVEYED.
7. NO WELLS OBSERVED WITHIN 100' OF THE PROPOSED SYSTEM

MINIMUM DISTANCES

HOUSE TO DISTRIBUTION LATERALS – 20'
DISTRIBUTION LATERALS TO PROPERTY BOUNDARY – 10'
HOUSE TO SEPTIC TANK – 10'
ANY PART OF SYSTEM TO WATER LATERAL – 10'
DISTRIBUTION LATERALS TO STREAM OR WETLAND – 100'

PERCOLATION TEST RESULTS

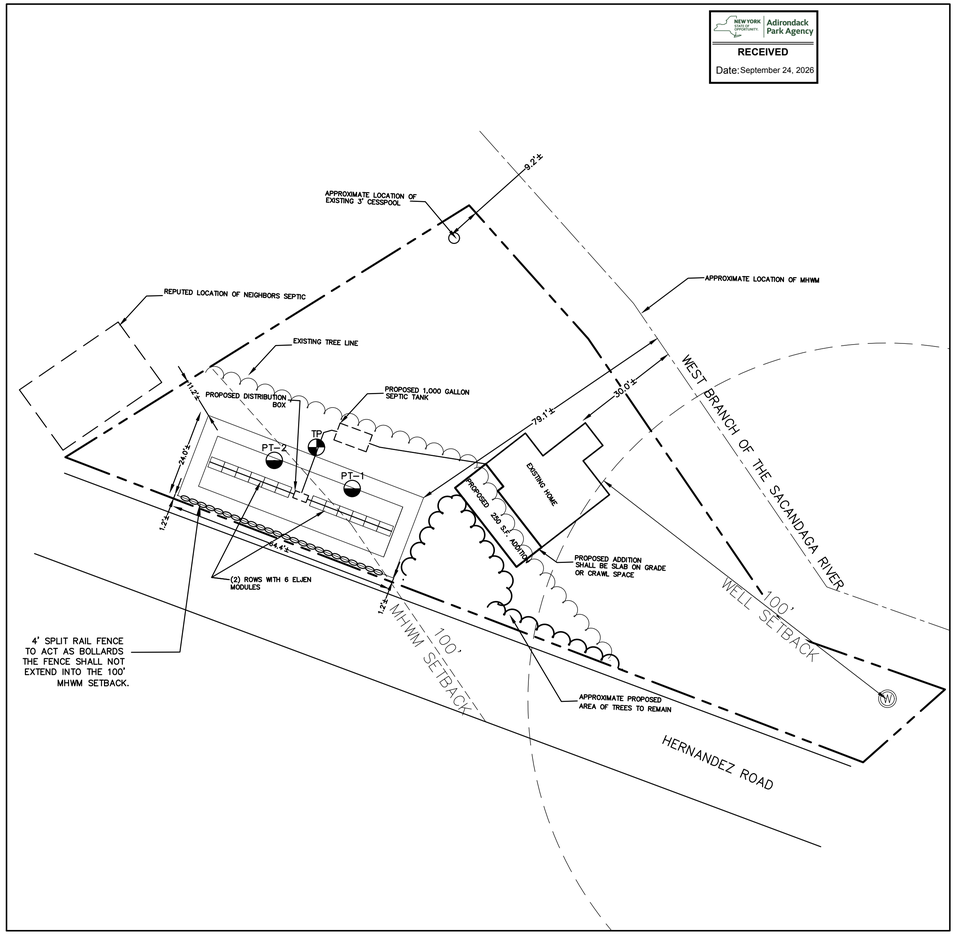
HOLE NO.	DEPTH (IN.)	STABILIZED PERC. RATE (MIN./IN.)
PT–1	24	1 min. 57 sec.
PT–2	24	2 min. 15 sec.

THE ABOVE PERCOLATIONS TESTS WERE PERFORMED BY STEENBURGH CONSULTING ENGINEERING ON 4/22/2026

TEST PIT DATA

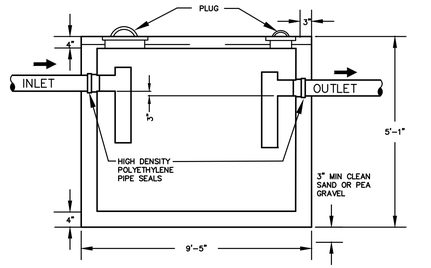
HOLE NO.	DEPTH (IN.)	VISUAL DESCRIPTION
1	0"–3"	Dk BR TOPSOIL
	3"–55"	BR. SAND WITH FINES
	32"	MOTTLING
	55"	GROUNDWATER
		NO BEDROCK

THE ABOVE TEST PITS WERE PERFORMED BY STEENBURGH CONSULTING ENGINEERING ON 4/22/2026

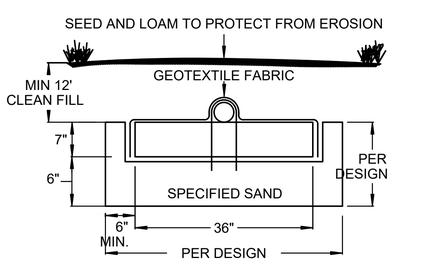


DETAILED SEPTIC/SITE PLAN

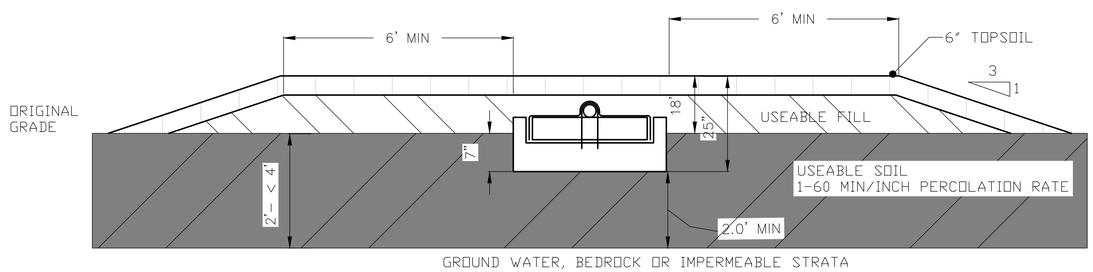
SCALE 1" = 20'



GUARDIAN OR ACCEPTABLE EQUAL
1000 GAL. PRECAST SEPTIC TANK
N.T.S.



ELJEN TRENCH CROSS SECTION
N.T.S.



GROUND WATER, BEDROCK OR IMPERMEABLE STRATA

NOTES

1. BOTTOM OF ALL TRENCHES SHALL NOT BE ABOVE ORIGINAL USEABLE SOIL AND SHOULD PREFERABLY BE AT LEAST 6" BELOW ORIGINAL GRADE.
2. USEABLE FILL SHOULD HAVE A PERCOLATION RATE SIMILAR TO BUT NOT FASTER THAN THE USEABLE SOIL PERCOLATION RATE (3-7 MINUTES). ADDITIONALLY ALL IN-SITU SOIL WITHIN 2' HORIZONTALLY AND VERTICALLY OF THE SYSTEM SHALL BE AMENDED WITH FINES TO HAVE A 3-7 MINUTE PERCOLATION RATE.
3. MAXIMUM DEPTH OF USEABLE FILL PLUS SIX (6) INCHES OF TOPSOIL SHALL NOT EXCEED 25 INCHES
4. TRENCH BOTTOMS SHALL BE LEVEL. TRENCHES SHALL BE PARALLEL TO GROUND CONTOURS
5. ON SLOPED SITES, A DIVERSION DITCH SHALL BE CONSTRUCTED UP HILL FROM THE FILL TO PREVENT SURFACE RUNOFF FROM ENTERING THE FILL
6. HEAVY EQUIPMENT SHALL BE KEPT OUT OF ABSORPTION AREA.
7. FILL MATERIALS IS CAREFULLY PLACED WITHIN THE ABSORPTION AREA.

NO.	DATE:	REVISIONS	BY:
1.	8.18.26	APA COMMENTS	CLS

Dig Safely. New York Call 811 before you dig

Scaling off these drawings shall be done only by experienced personnel and such shall use dimensions and electronic data only for layout and construction.

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COUNTY OF HAMILTON
STATE OF NEW YORK

DRAWN BY: CLS
CADD FILE:
CHECKED BY:
JOB NO.
DATE: SEPTEMBER 23, 2026
SCALE: 1" = 20'
SHEET 1 OF 2