

TOWN OF HARRIETSTOWN
39 MAIN STREET
SARANAC LAKE, NY 12983
(518) 891-0202

SEWAGE TREATMENT SYSTEM PERMIT APPLICATION

This packet contains all the information needed to obtain a construction permit and certificate of approval from the Town of Harrietstown as required by Article III, 102-7 of the Town of Harrietstown Sanitary Code and Individual Residence Wastewater Treatment Systems Design Handbook 1996 NYS Department of Health, Appendix 75-A of the New York State Sanitary Code.

New or Replacement System - \$80.00
Make Checks payable to – Town of Harrietstown

INSTRUCTIONS:

- (1) Fill out the Permit Form. Please include all the relevant information about your proposed or existing home.
- (2) Consult the Town of Harrietstown whether the septic system is a new or replacement system.

(3) **A NEW SYSTEM:**

If your lot is in a Realty Subdivision approved by the Town of Harrietstown, your soil evaluation has already been done for you. Proceed to Step 5.

If your lot is not in a Realty Subdivision, you will need a Professional Soil Evaluator to conduct the soil tests on your site. Make arrangements for the Soil Evaluator to come to your site and perform the tests. Inform the Soil Evaluator of the location of the proposed system, and have him/her indicate on the Plot Plan exactly where the tests were performed. The Soil Evaluator will fill out the Soil and Site Data Sheets.

Provide two (2) sets of engineered blueprints stamped by a New York State licensed design professional

HOMEOWNER RESPONSIBILITIES

1. Determine location of the individual sewage treatment system.
2. Arrange for all necessary excavations.
3. Supply an adequate amount of water for Percolation tests.
4. Obtain completed Soil & Site Data Sheets From the Soil Evaluator

SOIL & SITE EVALUATOR RESPONSIBILITIES

1. Conduct all soil & site evaluations according to NYS Sanitary Code, Appendix 75-A Standards.
2. Conduct deep-hole test and use test data to determine proper depth for percolation tests.
3. Conduct percolation tests.
4. Fill out Soil & Data Sheets with test results; Mark test locations on Plot Plan Sheet.

* The Soil & Site Evaluator is not responsible for the actual design of the septic system. The Town of Harrietstown can provide technical assistance and shall reserve the right to present any soil and site evaluation.

INSTRUCTIONS CONTINUED:

B: REPLACEMENT SYSTEM

Fill out the “Determination of Status” from page 3 and have this form reviewed by the Town of Harrietstown. Once the Town of Harrietstown determines that the system is a replacement system, you may continue with these replacement system instructions; otherwise, you must follow the instructions for a new system.

You will need soil tests conducted on your site. For replacement systems, these test may be performed by either; 1) a Soil Evaluator on the approved list, pages 14-15; 2) your chosen contractor or 3) yourself. Whoever is chosen as “Soil Evaluator” must fill out the Soil & Site Data Sheets.

Engineered blueprints stamped by a New York State licensed design professional may be required by the New York State Department of Health.

- (4) If soil tests are satisfactory, refer to pages 11-12 for absorption trench requirements.
- (5) Before any construction, complete and submit the Construction Permit Application form along with the Soil & Site Data Sheets to the Town of Harrietstown. For lots in an approved subdivision, the Soil & Site Data Sheets are not necessary as the soil and site information is taken from the approved subdivision plan on file at the Town of Harrietstown.
- (6) Only with an approved Construction Permit in your possession may you proceed with the insallation of the sewage treatment system. You should also contact any other agencies which may have jurisdiction to insure compliance with their regulations. The system must be installed as specified on the Construction Permit. It, in the course of installing the system, field changes become necessary, the Town of Harrietstown must be notified. The Town of Harrietstown must approve the proposed changes, and revise the approved Construction Permit before changes can be made to the system.
- (7) When the sewage treatment system has been completed, byt not covered, notify the Town of Harrietstown at least 24 hours in advance that you are ready for final inspection. An inspector will visit the site sometime between 8 a.m. and 4 p.m. to check the installed system against the Town of Harrietstown’s copy of the approved Construction Permit.
- (8) If the final inspection is satisfactory, a Certificate of Acceptance for the individual sewage treatment system will be issued to the owner. Possession of a copy of the Certificate of Acceptance is your assurance that the system has been installed in accordance with New York State Standards, and if well maintained, will function properly.

SEWAGE TREATMENT SYSTEM

DETERMINATION OF STATUS

*****REQUIRED FOR REPLACEMENT SYSTEMS ONLY*****

	YES	NO
Is this new construction on previously undeveloped property?	_____	_____
Is a new Certificate of Occupancy required by the Town?	_____	_____

CHANGE IN SIZE / INTENDED USAGE:

Is there an addition of one or more bedrooms compared with the pre-existing structure?	_____	_____
Is this a seasonal dwelling converted to year-round use?	_____	_____

PRIOR SYSTEM:

Was there a previous septic system installed on this lot?	_____	_____
Has it been in use for the past 5 years?	_____	_____
Was it approved by the Town of Harrietstown?	_____	_____

OCCUPANCY:

Has the lot been continuously occupied in present?	_____	_____
Has the lot been unoccupied for 5 years or more?	_____	_____
Is there a prior Certificate of Occupancy granted by the Town Codes Officer?	_____	_____

What year was the house build / structure placed on lot? _____

What year was sewage system installed? _____

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS TRUE:

_____	_____
OWNER'S SIGNATURE	DATE

TOWN OF HARRIETSTOWN USE ONLY		
Based on the above criteria the system is:	New	Replacement
Duty Officer / Program Supervisor _____	Date: _____	

***** NOTES *****

**SEWAGE TREATMENT SYSTEM
CONSTRUCTION PERMIT APPLICATION**

(Please print or type all information below)

Date: _____

Property Owner _____

Owner Telephone Number: (day) _____ **(evening)** _____

Mailing Address _____
(Street) (City / Town) (State) (Zip)

(Please circle / enter the description that applies)

E-911 Address of Property _____

Tax Map # _____ **Estimated Construction Cost \$** _____

Lot Type: Private Lot / Approved Subdivision **Subdivision Name** _____ **Lot #** _____

Wetlands: Is there a DEC regulated wetland on-site? **Yes / No** If yes, is the wetland permit attached? **Yes / No**

APA: Is an APA permit required? **Yes / No** If yes, is the permit attached? **Yes / No**

Building Type: Wood frame / Mobile Home / Double-Wide Mobile Home / Other _____

Number of Bedrooms: 1 / 2 / 3 / 4 / 5 / Other _____

Foundation: Full Basement / Half-Basement / Slab / Block Supports / Other _____

Type of Septic System: New / Replacement / Engineered (Consult Health Dept. for definitions)

Water Supply: Drilled Well / Dug Well / Public Water Supply / Other _____

If not on public water, indicate type of water pump: Submersible (pressure) / Siphon-jet (suction)

Will low-flow fixtures (1991 or newer, 1.6 gallons / flush toilets) be installed in the home? Yes / No

Will a garbage disposal be installed? Yes / No (if so you will need a dual compartment tank with gas deflection baffle)

Will a several-person hot tub or spa be installed? Yes / No

Leach Field Type: Crushed Stone Trenches / Plastic Chambers / Eljen Units / Other _____

Septic Tank Size: 1000 gal / 1250 gal / 1500 gal / 2000 gal

System to be Installed by: _____

Owner's Signature: _____ **Date:** _____

TOWN OF HARRIETSTOWN USE ONLY
Final Approval By: _____
Date: _____

TOWN OF HARRIETSTOWN USE ONLY
FEE PAID _____
DATE _____
RECIEPT # _____
ALL APPLICABLE FEES ARE NON-REFUNDABLE

CONSTRUCTION SAFETY FOR DEEP-HOLE TESTS AND SEPTIC SYSTEM INSTALLATIONS

Excavations, such as for deep-hole tests and septic tanks, may create safety hazards. Experience warns us that depths as shallow as five feet (5') below ground level have caused injury and loss of life. It is the contractor's and the soil evaluator's responsibility to ensure that working conditions on the work site are not hazardous to workers or to the public. Federal OSHA Construction Standards are applicable to excavation and trenches.

Homeowners constructing / repairing their own systems should be especially careful when working in or near excavations. Excavations should not be left open and unattended. Excavations should be covered, lighted and barricaded or fenced to prevent injury to the public.

It is recommended that the Underground Facilities Protection Corporation (UFPO) be contacted **PRIOR TO ANY EXCAVATION** to determine the location of any underground utilities in the area and thereby avoiding potential hazards and disruption of utility service.

THE UFPO TELEPHONE NUMBER FOR UPSTATE NEW YORK IS:

1 – 800 – 962 – 7962

It is important to remember that not every utility is registered with this service. It may be necessary to do a thorough investigation into the history of a site to identify all the potential hazards which may lie underground there.

PERCOLATION TEST INSTRUCTION SHEET

INSTRUCTIONS:

Once the deep-hole test has been completed, dig two percolation test holes in the existing soil, in the area of the proposed leaching system.

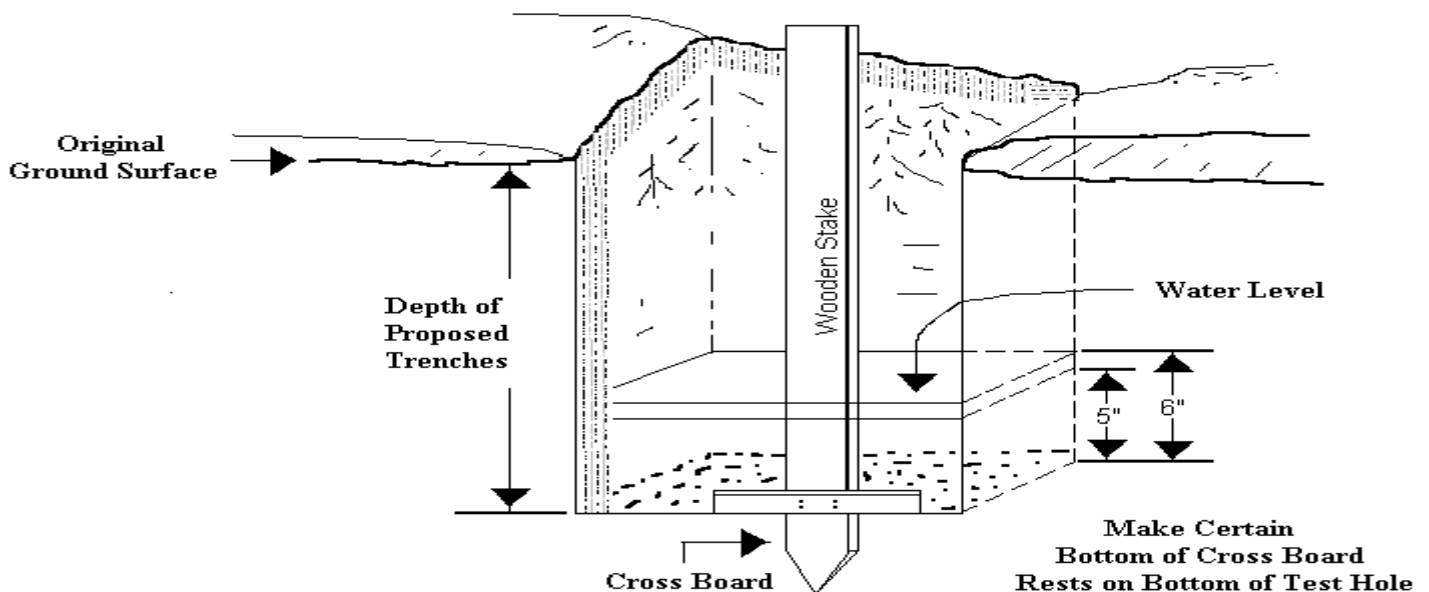
NOTE: Percolation test holes must be **dug to the depth of the proposed absorption trenches**. If the trench bottoms are to be installed at grade or less than 6" into grade, the percolation tests must be conducted 6" into the original soil. The depth of the proposed absorption trenches is determined by the deep-hole test, as trench bottoms must be a minimum of 2 ft. above any limiting factors (seasonal high groundwater, bedrock, or impermeable soils) that may be found during a deep-hole test. For on-site soil testing, please follow the sequence below:

1. Conduct deep-hole test
2. Determine limiting factors from deep-hole test results
3. Determine type of septic system allowed by limiting factors
4. Conduct percolation tests at the depth of the proposed system

FOR EACH HOLE:

1. Holes must be 12" X 12" square (or 12" in diameter for circular holes) and spaced at least 20 ft. apart within the proposed leach field area.
2. Scrape the sides of the hole and remove any loose soil from the bottom.
3. Line the bottom of the hole with 2" of crushed stone (to prevent siltation on the bottom of the hole).
4. Pre-soak the soil (Thoroughly saturate the hole by filling with water).
5. After pre-soaking, fill the hole with 6" of water.
6. Count the number of minutes it takes the water to drop a distance of 1", from the 6" mark down to the 5" mark. Enter the times on the percolation test data sheet.
7. Fill the hole back up to the 6" mark and repeat the test. Run the test at **least** 3 times in each hole until percolation times **stabilize** (time trials should be within 1 minute of each other for 1-30 min. soil; within 2 minutes for 31-60 min. soil).
8. Mark the location where each hole was dug (P1 & P2) on the Plot Plan.

Soil Percolation Test Hole (12" by 12" Hole)



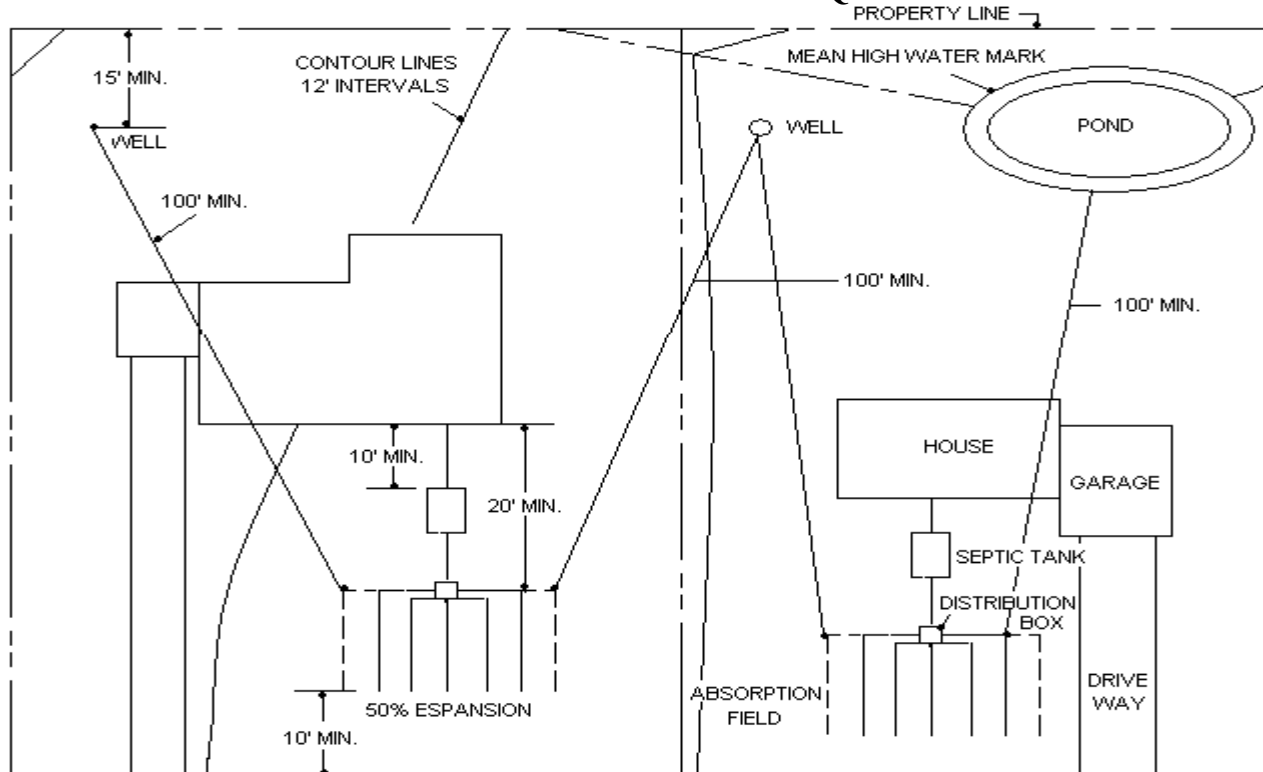
REQUIRED SEPARATION DISTANCES FROM WASTEWATER SYSTEM COMPONENTS

System Components	Well (d) or Suction Line	To Stream, Lake Watercourse (b) or Wetland	Dwelling	Property line	Drainage Ditch
House Sewer (Watertight Joints)	25' if cast iron or PVC w/O-ring joints; 50' if not	25'	3'	10'	-----
Septic Tank	50'	50'	10'	10'	10'
Effluent Line to D-Box	50'	50'	10'	10'	10'
Distribution Box	100'	100'	20'	10'	20'
Absorption Field (c) (incl. replacement area)	100'	100'	20'	10'	20'
Dry Well (Roof & Footing)	50'	25'	20'	10'	10'
Sanitary Privy Pit	100'	50'	20'	10'	20'
Privy. Watertight Vault	50'	50'	20'	10'	10'

NOTES:

- (a) When sewage treatment systems are located in coarse gravel or upgrade and in the general path of drainage to a well the closest part of the treatment system shall be at least 200' away from the well. The leach field must also be 200' away from any **public** water supply wells.
- (b) Mean high water mark.
- (c) For all systems involving the placement of fill material, separation distances are measured from the toe of slope of the fill.
- (d) Any water service under pressure located within 10' of any absorption field. Seepage pit or seepage pit or sanitary privy shall be installed inside a larger diameter water main to protect the potable water supply.

ABSORPTION FIELD SEPARATION REQUIREMENTS



SEWER PIPE REQUIREMENTS – HOUSE TO SEPTIC TANK

1. Four inch (4") minimum diameter.
2. Tight joining pipe (PVC, Cast Iron, etc...) with ¼" wall thickness.
3. The septic tank connection must be watertight.
4. Pipe should have no less than ¼" per foot slope.
5. Pipe must have a clean-out fitting in the basement or crawl space.
6. Inlet and outlet pipe must have ends cut flush with the inside of the tank (within ½")
7. Pipe must have no sharp bends (angles of more than 45 degrees).

SEPTIC TANK REQUIREMENTS

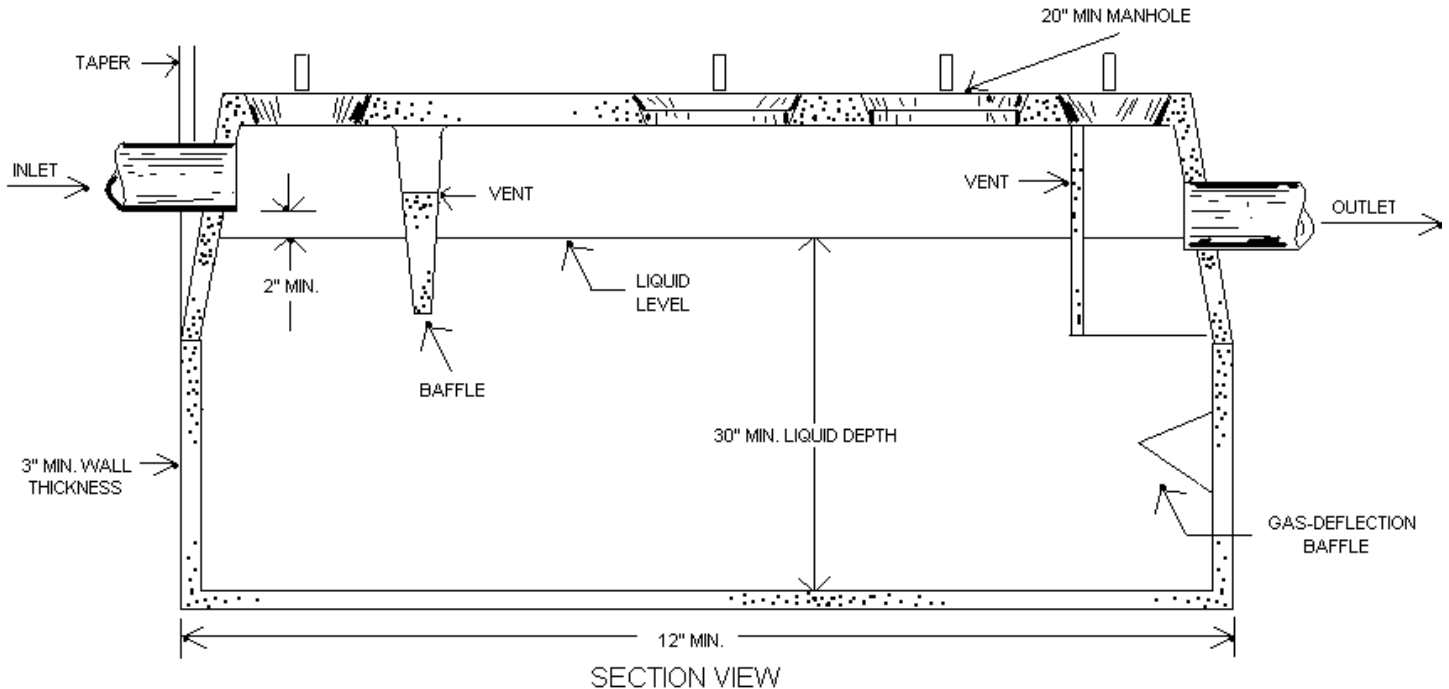
MINIMUM TANK SIZE

# Bedrooms	W/O Accessories	With Garbage Disposal	With hot tub/spa	Garbage Disposal & Hot tub/spa
1 - 2	1,000	1,000 DC*	1,000	1,250 DC*
3	1,000	1,250 DC*	1,250	1,500 DC*
4	1,250	1,500 DC*	1,500	1,750 DC*
5	1,500	1,750 DC*	1,750	2,000 DC*
6	1,750	2,000 DC*	2,000	2,250 DC*

*DC = Dual Compartment Septic Tank Required

DUAL COMPARTMENT TANKS MUST MEET HEALTH DEPARTMENT SPECIFICATIONS AND INCLUDE A GAS DEFLECTION BAFFLE OR OTHER ACCEPTABLE OUTLET MODIFICATION

TYPICAL CONCRETE TANK



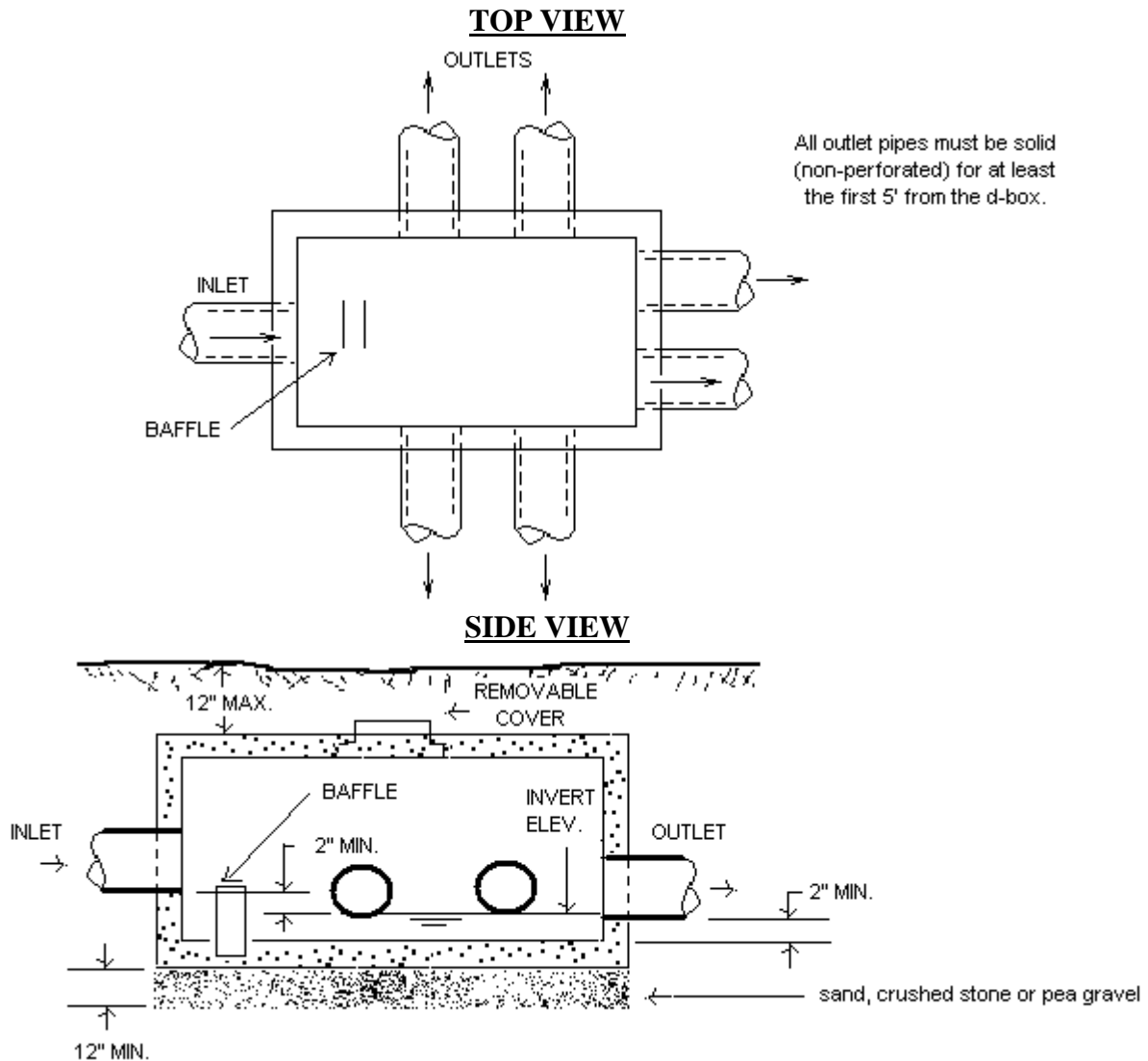
SEWER PIPE REQUIREMENTS – SEPTIC TANK TO DISTRIBUTION BOX

The pipe from the septic tank to the distribution box must be 4” minimum diameter tight joining pipe (PVC, Cast Iron, etc...) with 1/4” wall thickness. Pipe must have a slope of no less than 1/8” per foot.

DISTRIBUTION BOX REQUIREMENTS

1. Must have a removable cover and be located not more than 12” below grade, on a 12” bed of sand, crushed stone or pea gravel.
2. The distribution box must be level and all outlet pipes must be at the same level to insure even distribution of floe. All outlet pipes leaving the distribution box must be solid for at least the first 5 ft. Each absorption trench must be connected directly to an outlet of the distribution box (no “T”s allowed). The number of outlets required will be determined by the number of trenches. You may wish to get an oversized distribution box with extra outlets to provide for future expansion/replacement of the leach field. Pre-cast distribution boxes are available in a variety of sizes.

TYPICAL DISTRIBUTION BOX

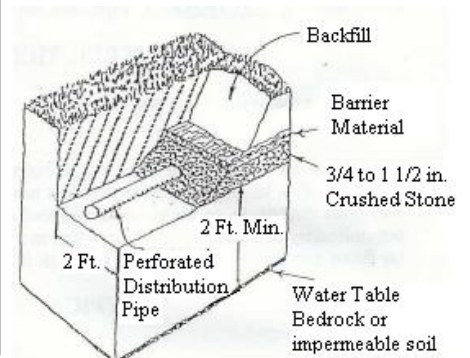


CONVENTIONAL STONE ABSORPTION TRENCH REQUIREMENTS

1. Trenches are to be 24” wide, and installed parallel to ground contours
2. Trench bottoms must be **level**, and at least 2’ above the high ground water level, bedrock, impermeable soil, or limiting factor.
3. Sides and bottoms of trenches must be raked prior to placement of crushed stone.
4. The aggregate required is washed gravel or crushed stone ¾” to 1½” in diameter. Larger diameter material, finer substances, or run of bank gravel are unacceptable.
5. Minimum depth of crushed stone must be 12” (6” of crushed stone **below** the distribution pipe line and 2” **above** the pipe).
6. Perforated pipe is to be graded between 1/16” and 1/32” per foot within the crushed stone.
7. All absorption trenches are to be of equal length, a maximum of 60’ long.
8. All lines must originate **directly** from the distribution box. At least the first 5’ of each pipe connecting the D-box to the trenches must be solid, and all of these solid pipes should have the same pitch.
9. There must be at least 4’ of undisturbed soil between adjacent trenches.
10. All absorption trenches must be a minimum of 100’ from **any** well or body of water.
11. All absorption trenches must be at least 10’ from any property line and 20’ from a basement foundation.
12. Finished trenches are to be covered with untreated building paper, permeable geotextile fabric, or a 4” thick layer of hay.
13. The soil backfill over the hay or building paper should not exceed 12”.
14. Ends of pipes must be properly capped (i.e., standard PVC plastic and caps).

LINEAR FEET OF ABSORPTION TRENCH NEEDED (Based on 2’ wide trench)

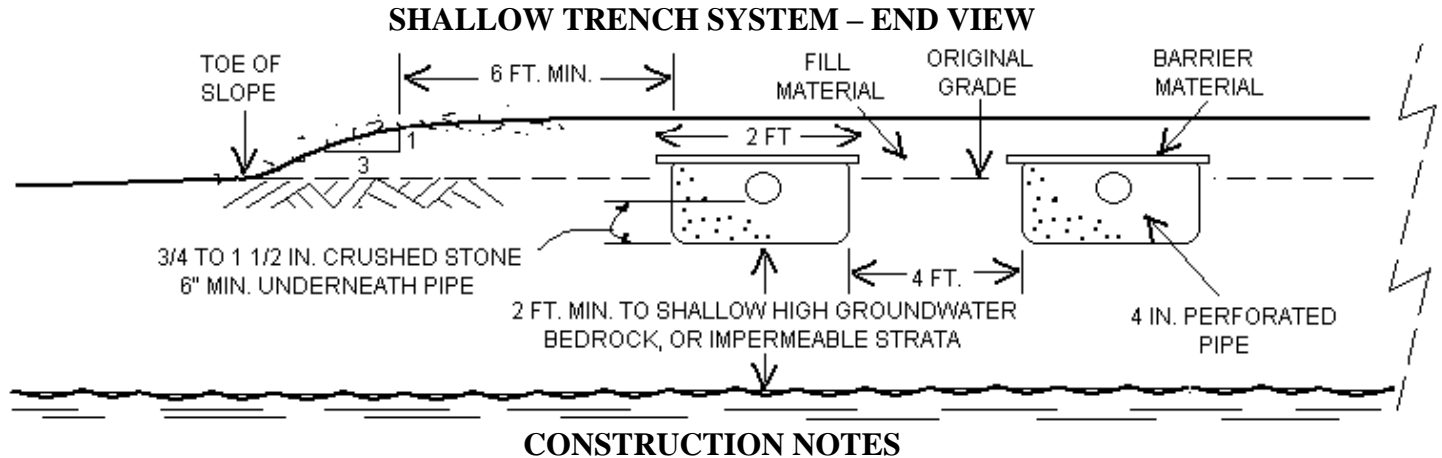
Time of water to drop 1" in test hole	2 BR HOME	3 BR HOME	4 BR HOME	5 BR HOME
	(LOW-FLOW FIXTURES/STANDARD FIXTURES)			
1-5 minutes	92 / 125	140 / 190	185 / 250	230 / 315
6-7 minutes	110 / 150	165 / 225	220 / 300	275 / 375
8-10 minutes	125 / 170	185 / 250	245 / 335	310 / 420
11-15 minutes	140 / 190	210 / 285	275 / 375	345 / 470
16-20 minutes	160 / 215	240 / 325	315 / 430	395 / *
21-30 minutes	185 / 250	275 / 375	370 / 500	460 / *
31-45 minutes	220 / 300	330 / 450	440 / *	* / *
46-60 minutes	245 / 335	370 / 500	490 / *	* / *



* ABOVE 500 LINEAR FEET REQUIRES DOSING / SPECIAL DESIGN *

SHALLOW ABSORPTION TRENCHES

APPLICATION: There is an alternative to conventional trenches for the sites that have less than 4' of usable soil. As long as there is at least **2' of useable soil** above groundwater, bedrock, or impermeable soil. **SHALLOW ABSORPTION TRENCHES** may be used. Shallow trenches are constructed in fill material, extending into the existing natural soil.



TRENCHES ARE INSTALLED AS DESCRIBED UNDER “CONVENTIONAL TRENCHES” (P.16) WITH THE FOLLOWING ADDITIONAL CONSIDERATIONS:

1. Useable fill shall have a percolation rate similar to, but not faster than, the useable soil percolation rate. And the fill must be placed **prior** to excavating the trenches.
2. The depth of the fill shall not be greater than 30” (including 6” of topsoil).
3. Fill shall extend at least 6’ beyond edges of trenches (in all directions) before starting the tapered edge.
4. The edge of the fill material shall be tapered at a slope of no greater than one vertical to three horizontal.
5. Bottoms of all trenches shall **not** be above original soil.
6. Trench bottoms shall be level, and trenches shall be parallel to ground contours.
7. All separation distances noted in the diagram above must be met. If trench bottoms are to be at grade, all separation distances are to be measured from the “toe of the slope” (see diagram).
8. On sloped sites, a diversion ditch must be constructed uphill from the fill to prevent surface runoff from entering the fill.

ALTERNATIVE TYPES OF SYSTEMS

If a soil and site evaluation reveals that there is **less than 2’ of useable soil** on a site, then **ALTERNATIVE** types of sewage treatment systems such as modified sites, mounds, etc... may be used. The plans for these systems must be designed and submitted by an engineer. The engineer that you choose may reserve the right to base his/her design on his/her **own** deep-hole and percolation tests. The following procedure is used for the approval of alternative systems.

1. Engineered plans for alternative systems must be submitted to the Health Department to be reviewed by a Health Department contract engineer. Please allow adequate time (several weeks) for the review process.
2. Once the plans are approved by the Health department, the system may be installed.
3. After the system is installed, the design engineer will inspect the system to make sure that it was installed according to his/her plan, and will issue a “Letter of Completed Works” to the Health Department which will assure that the system meets his/her specifications.
4. Once the Health Department receives the Letter of Completed Works from the design engineer, a Certificate of Approval will be issued.

**TOWN OF HARRIETSTOWN / VILLAGE OF SARANAC LAKE
SEWAGE TREATMENT SYSTEM INSPECTION**

OWNER: _____ **PERMIT #** _____

<u>ITEM</u>	<u>REQUIREMENT</u>	<u>NOTES</u>
Septic Tank	_____ Gallons	_____
	_____ Level, 2" drop inlet to outlet	_____
	_____ Baffled/Tees installed	_____
	_____ 1/4" thickness wall pipe	_____
	_____ inlet pipe 1/4" per foot slope	_____
	_____ Outlet pipe 1/8" per foot slope	_____
	_____ Pipes sealed	_____
	_____ 10' from foundation	_____
	_____ 50' from well(s)	_____
	_____ Multi-compartment	_____
_____ Gas/Deflection baffle	_____	
D-Box	_____ Level (on crushed stone/pea gravel)	_____
	_____ 1/4" thickness inlet pipe	_____
	_____ Pipes sealed	_____
	_____ 2" drop inlet to outlet	_____
	_____ 2" outlet above bottom	_____
	_____ Baffled (if slope over 1/2" per foot)	_____
Pipes to trenches	_____ Solid for first 5'	_____
	_____ All outlet pipes at same level	_____
Trenches	_____ Stone trench / SB-2 pipe	_____
	_____ Feet Total	_____
	_____ No water in trench	_____
	_____ No mottling	_____
	_____ Not in too deep	_____
	_____ 1/16" – 1/32" per foot slope	_____
	_____ End Caps	_____
	_____ Crushed Stone	_____
	_____ Hay/Paper/Cover	_____
	_____ 10' to property lines	_____
_____ 20' to basement	_____	
_____ 100' to all wells	_____	
Subdivision Specs/other	_____	_____

WAIVER NEEDED? YES / NO _____ **WAIVER GRANTED? YES / NO** _____

Inspected by: _____ **Date:** _____

Remarks: _____

Re-inspected by: _____ **Date:** _____

Remarks: _____

Conditions of Approval: _____

SYSTEM APPROVED FOR BACKFILLING? YES / NO

By: _____ **Date:** _____

SOIL TEST REFERRAL LIST

ARCHITECTURAL & ENGINEERING DESIGN ASSOCIATES – DESIGN PROFESSIONAL

P. O. Box 762
Plattsburgh, NY 12901
(518) 562-1800

ARCHITECTURE, ENGINEERING & LAND SURVEYING NORTHEAST, PLLC

10-12 City Hall Place, Suite 201
Plattsburgh, NY 12901
(518) 561-1598

MARK BUCKLEY (ADIRONDACK PROFESSIONAL SERVICES) – DESIGN PROFESSIONAL

P. O. Box 401
Willsboro, NY 12996
(518) 963-4467

PAUL AGNEW – GEOLOGISTS

51 Agnew Road
Morrisonville, NY 12962
(518) 566-6554

RYAN BURNS, P.E. – UPSTATE DESIGN ASSOCIATES, LLC – DESIGN PROFESSIONAL

P.O. Box 60
Port Kent, NY 12975
(518) 834-9898

DOUGLAS R. FERRIS, P.E. – EARTH SCIENCE ENGINEERING, P. C.

P. O. Box 398
Willsboro, NY 12996
(518) 963-8133

DEAN LASHWAY, L.L.S

2806 Miner Farm Road
Altona, NY 12910
(518) 236-9333

NORTH COUNTRY ENGINEERING & PLANNING – DESIGN PROFESSIONAL

2136 NYS Rt. 22B
Morrisonville, NY 12962
(518) 561-7560

THOMAS J. LABOMBARD, P.E. – DESIGN PROFESSIONAL

Civic Center, Rm. 3-8
1790 Rt. 22
Keeseville, NY 12944
(518) 834-7729

MICHAEL OLIVER, P. E. – DESIGN PROFESSIONAL

P. O. Box 365
West Chazy, NY 12992
(518) 570-0978 oliver1465@gmail.com

MARK PETRASHUNE – LICENSED LAND SURVEYOR

P. O. Box 821
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(518) 492-2215

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102 Sunnywood
Chazy, NY 12921
(518) 846-8703

NORTH WOODS ENGINEERING

348 Lake Street
Saranac Lake, NY 12983
(518) 891-4975

PETER E. GIBBS, P.E. – ENGINEERING VENTURES, INC.

208 Flynn Ave., Suite 2A
Burlington, VT 05401
(802) 863-6225

ROBERT M. SUTHERLAND, P.E. – DESIGN PROFESSIONAL

11 MacDonough Street
Plattsburgh, NY 12901
(518) 561-6145

MOSER ENGINEERING – JAMES MOSER, P.E.

73 Bugby Road
Chazy, NY 12921
(518) 846-3160 moserengineering@yahoo.com