TOWN OF WILLSBORO
CODE ENFORCEMENT OFFICE

Technical Leaflet

On-site Wastewater Treatment System Application Procedure

In order to issue a permit for an on-site wastewater treatment system (septic system), the Code Enforcement Officer needs to review a soil analysis from a licensed design professional (either a Professional Engineer (P.E.) or a Registered Architect (R.A.) - licensed by the NY State Ed. Department).

A soil analysis will include two perk tests and a deep-hole test. The perk test holes shall be 1' in diameter and approximately two feet deep. They should be dug with a shovel. The results will show how fast water will drop 1" in each of the holes. If the tests are done in the summer (low ground water), the holes need to be pre-soaked. In sandy soils water will drop 1" in 1 to 15 minutes - a good percolation rate. In loamy to clay soils it may take from 16 - 60 minutes - not a good rate.

A deep-hole test should be 6' deep, and done with a backhoe. It should cut through the ground like a knife blade to expose a shear wall. From this test, one can determine a soil profile; i.e.: the first 6" may be top soil, the next 6-18" sandy loam, the next 18-36" sandy-gravels, the next 36-48" clay, and then perhaps bedrock. The design professional shall also look for the level of groundwater (seeping) and/or the mottling layer. The mottling layer is a "scar" - the level that groundwater reaches in springtime. One should not place your leach pipes below this level - or else when you flush your toilet in the springtime the water will have no place to go. The mottling layer is usually indicated by orange-rust colored spots. So, for example, if the SHGW (seasonal high ground water) or mottling layer is only 12" below the surface of the ground, one needs to add at least 2' of fill (depending what the design professional recommends).

With the results of the deep-hole and perk tests, and if the design professional follows the NYS Dept. of Health standards (Public Health Law, Appendix 75-A), the Code Enforcement Officer could issue a permit. The standards in Appendix 75-A give specifics for a simple system, i.e.; a three bedroom house, with new plumbing fixtures, and soils with a 15 minute perk rate will require 207 linear feet of leach field (see other side). If soils, bedrock, or surrounding conditions are particularly problematic, or the design professional uses an "alternate system" then the Professional Engineers at the NYS Dept. of Health Regional Office, Saranac Lake, (Kevin Scheuer, P.E. or Susan Kennedy, P.E.) must be contacted for their assistance, approval and/or a waiver from Appendix 75-A. Only after their review and approval should the Town of Willsboro Code Enforcement Officer issue a permit.

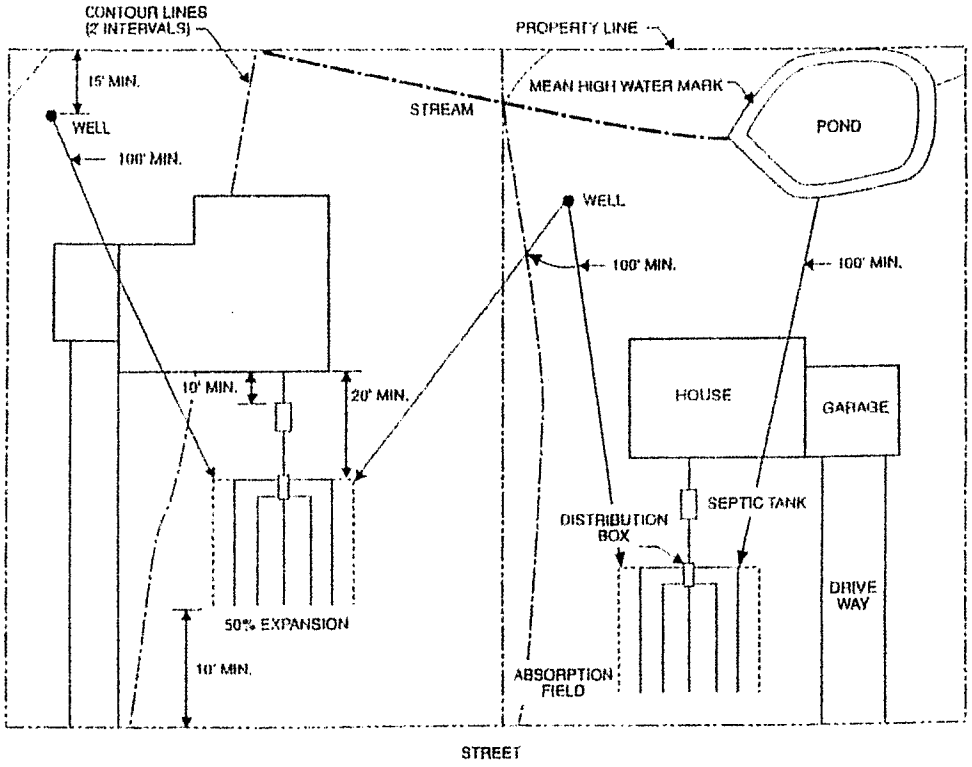
If the project is identified as a Class A Regional Project (which requires a permit from the Adirondack Park Agency) then there are more stringent standards for on-site wastewater treatment systems. One would then need to comply with Appendix Q-4, of the Rules and Regulations of the Adirondack Park Agency.

For more information, please contact the Code Enforcement Officer.

P.O. BOX 370, 5 FARRELL ROAD • WILLSBORO, NEW YORK • 12996
PHONE: 518-963-7411 • FAX: 518-963-7488

From NY STATE DEPARTMENT OF HEALTH – APPENDIX 75-A

WASTEWATER TREATMENT SYSTEM FIELD SEPARATION REQUIREMENTS



REQUIRED LENGTH OF ABSORPTION TRENCH

Percolation Rate Min./Inch	Flow Rate (Gals/Day)														
	2 bedrooms			3 bedrooms			4 bedrooms			5 bedrooms			6 bedrooms		
	220	260	300	330	390	450	440	520	600	550	650	750	660	780	900
1 - 5	92	108	125	138	162	187	184	216	250	230	270	312	275	325	374
6 - 7	110	130	150	165	195	225	220	260	300	275	325	375	330	390	450
8 - 10	123	145	167	184	217	250	245	290	333	306	360	417	367	433	500
11 - 15	138	162	188	207	244	281	275	325	375	344	406	469	413	488	563
16 - 20	158	186	214	236	279	321	315	372	429	393	464	536	472	557	643
21 - 30	184	217	250	275	325	375	367	433	500	459	542	625	550	650	750
31 - 45	220	260	300	330	390	450	440	520	600	550	650	750	660	780	900
46 - 60	245	290	333	367	433	500	489	578	667	612	722	833	734	867	1000*
	Dosing Not Required							Dosing or Alternate Design Required							

*Greater than 1,000 ft. of trench requires Alternate Dosing

MINIMUM SEPTIC TANK CAPACITIES

Number of Bedrooms	Minimum Tank Capacity (gal.)	Min. Liquid Surface Area (sq.ft.)
1, 2, 3	1,000	27
4	1,250	34
5	1,500	40
6	1,750	47

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Percolation Test Data
(see instructions on reverse side)

Development Site: _____ (T/V/C): _____ County: _____

Date: _____ Tests Conducted By: _____

Weather Conditions: _____

Test Hole No.	Test Hole Depth (inches)	Lot No.	Soil Profile Description and Groundwater Depth (if identified)	Presoaking Date & Time	Time	Percolation Test					
						1	2	3	4	5	6
					End						
					Begin						
					Result						
					End						
					Begin						
					Result						
					End						
					Begin						
					Result						
					End						
					Begin						
					Result						
					End						
					Begin						
					Result						
					End						
					Begin						
					Result						

Begin time, end time, and result in minutes for a water elevation change from 6" to 5" above the bottom of the test hole.

INSTRUCTIONS

Procedure:

1) At least two percolation tests shall be performed within the proposed absorption area. At least one percolation test should also be performed within the proposed absorption system expansion area.

(2) Dig each hole with vertical sides approximately 12 inches in diameter. If an absorption field is being considered, the depth of test holes should be 24 to 30 inches below final grade or at the projected bottom of trenches in shallower/deeper systems based upon test hole evaluation. The sides of the percolation holes should be scraped to avoid smearing. Place washed aggregate in the lower two inches of each test hole to reduce scouring and silting action when water is poured into the hole.

(3) Presoak the test holes by periodically filling the hole with water and allowing the water to seep away. This procedure should be performed for at least four hours and should begin one day before the test (except in clean coarse sand and gravel). After the water from the final presoaking has seeped away, remove any soil that has fallen from the sides of the hole.

(4) Pour clean water into the hole, with as little splashing as possible, to a depth of six inches above the bottom of the test hole.

(5) Observe and record the time in minutes required for the water to drop from the six-inch depth to the five-inch depth.

(6) Repeat steps (4) and (5) a minimum of three times until the time for the water to drop from six inches to five inches for two successive tests is approximately equal (i.e., ≤ 1 min. for 1-30 min./inch, ≤ 2 min. for 31-60 min./inch). The longest time interval to drop one inch will be taken as the stabilized rate of percolation.

(7) Percolation test results shall be consistent with soil classification and if different results are obtained for multiple holes in a proposed absorption area, the slowest stabilized rate shall be used for system design.

I_____, the undersigned certify that the percolation tests were conducted by me or under my direction in accord with the above procedure. The data and results are true and correct.

Date: _____

Signature: _____

License No. (P.E., R.A., L.S.) _____

TOWN OF WILLSBORO, NY — WASTEWATER TREATMENT SYSTEM APPLICATION

Property Tax Map #: _____ Permit #: _____

Property Owner: _____ Phone(w): (____)_____
Phone(h): (____)_____

Address: _____ Town: _____ State: ____ Zip: _____

Project site: _____ Town: __ _____ State: _____Zip: _____

Licensed Design Professional:	Contractor:
Name: _____	_____
Address: _____	_____
Phone #s: _____	_____

Worker's Compensation/Disability wages: ____yes ____no Policy #: _____

New System: _____ Repair: _____ Water supply: _____ Number of Bedrooms: _____

Depth to Season High Water Mark: _____ Percolation Test Results: _____ min./inch _____ min./inch

Site Map: (show dwelling location, potable water supply, septic tank, distribution box, absorption field or seepage pit, and give all dimensions and sizes.)

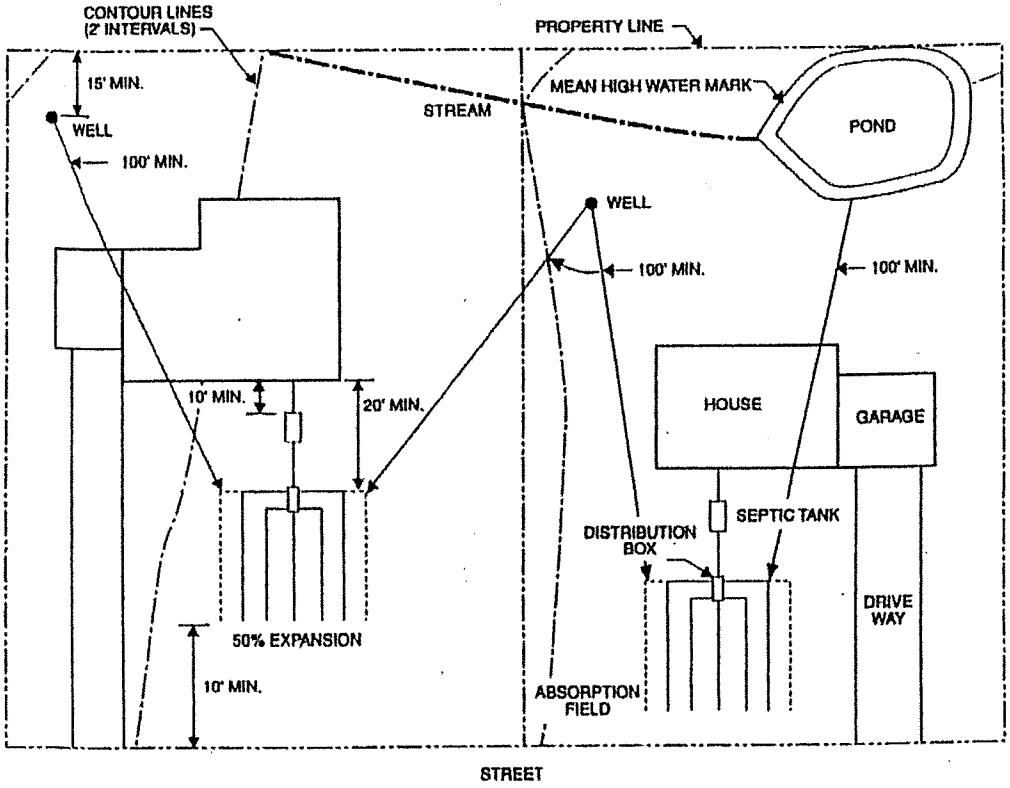
⇨ **Dig Safely New York 1-800-962-7962** ⇦

Signature of Applicant/
Authorized Agent_____ Date _____

Required fee: $ _____ cash:____ check #:_____ Make checks payable to: **Town of Willsboro**

Date Received: _____ Reviewed/Approved by: _____ Cert. of Completion Issued: _____

Wastewater Treatment System Field Separation Requirements



Required Length of Absorption Trench

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Minimum Septic Tank Capacities

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