



CLINTON COUNTY HEALTH DEPARTMENT

135 Margaret Street, Plattsburgh, NY, 12901 Phone: (518) 565-4870 Fax: (518) 565-4843

SEWAGE TREATMENT SYSTEM PERMIT APPLICATION

This packet contains all the information needed to obtain a construction permit and Certificate of Acceptance from the Clinton County Health Department (CCHD) as required by Article IX of the Clinton County Sanitary Code and Appendix 75-A of the New York State Sanitary Code. Enter appointment date and time here _____

*** CONSTRUCTION PERMITS ARE REVIEWED BY APPOINTMENT ONLY ***

MONDAY – FRIDAY (Please call this office at 565-4870 to schedule an appointment.)

NEW SYSTEM on a PRIVATE LOT (<i>Conventional</i>)	-	\$ 70.00
NEW SYSTEM in a CCHD APPROVED SUBDIVISION	-	\$ 50.00
REPLACEMENT SYSTEM (<i>Conventional</i>)	-	\$ 55.00
NEW ENGINEERED SYSTEM (<i>Alternative</i>)	-	\$170.00
REPLACEMENT ENGINEERED SYSTEM (<i>Alternative</i>)	-	\$ 75.00
REPLACEMENT COPY OF CERTIFICATE OF ACCEPTANCE	-	\$ 10.00

Consult the CCHD to determine whether the septic system is a new or a replacement system

PLEASE MAKE CHECKS PAYABLE TO: CLINTON COUNTY TREASURER

INSTRUCTIONS for NEW CONSTRUCTION on Undeveloped Property

If a replacement system, skip to NEXT page.

1. If property is a lot within a Clinton County Health Department (CCHD) Realty Subdivision, complete Permit Application - App. Page 1 (Design Criteria).
2. Obtain soil test and system location requirements from CCHD approved Realty Subdivision plans. This will allow proper drawing on App. Page 2 - Complete App. Page 2 and schedule a review for approval.

If proposing a NEW System, NOT in an approved CCHD subdivision:

1. Complete information on Permit Application – App. Page 1 (Design Criteria);
2. Obtain the services of a Soil Professional, recognized on attached referral list;
3. Schedule a Soil Professional to complete "Site Description, Deep-Hole, and Percolation Data;"
4. If soil tests are within acceptable ranges for a conventional system, continue; **If not, consult CCHD.**
5. Complete App. Page 2 Plot Drawing using checklist and generic drawing as a guide.
6. Owner reviews all pages of submission (with signature on App. Page 1) and then schedule a System Permit Application Review with the CCHD (See above space for recording your appointment date/time).

SOIL PROFESSIONALS - MINIMUM RESPONSIBILITIES

1. Complete "Site Description and Deep-Hole Test Data". Determine intended depth of leach area considering limitations and owners intentions. Perform percolation tests at that depth. Complete "Percolation Test Data,"
2. Complete App. Page 2 "Plot Plan Sketch". Establish and use a Scale; Label downward slope of grade (ground slope) and north direction; draw property lines, show soil test locations; Indicate nearby water bodies, inhibiting/problem vegetation; recent fill placed, grading/ add fill to intended leach-area.

HOMEOWNERS RESPONSIBILITIES: Complete/finalize the drawing with the intended property layout and Septic System specific components [Many soil professionals complete the drawing; ask when hiring]. Make plan with soil professional to have all needed equipment (i.e., backhoe) on-site.

REPLACEMENT SYSTEM INSTRUCTIONS

Page 2

1. Fill out the attached "**REPLACEMENT SYSTEM STATUS REVIEW FORM**" (next page) and have it reviewed by CCHD. Once the CCHD determines that the system is a Replacement System, you may continue with the replacement system instructions; otherwise follow the instructions for a New System.
2. You will need to have **SOIL TESTS** conducted on your site/property: For Replacement Systems, soils tests may be completed by either: (i) a Soils Professional (See attached Soil Test Referral List); (ii) your contractor, or; (iii) yourself.
3. The person completing the soils test **MUST** complete: (a) the Site Description Information; (b) the Deep-Hole Test Data; and (c) the Percolation Test Data.
4. Complete Permit Application - App. Page 1 "Design Criteria"; except signature (last step).
5. Obtain the services of a qualified septic system installation contractor. Some contractors WILL complete the permitting process FOR YOU [Ask when hiring].
6. If soil tests are within acceptable ranges for a Conventional System, continue, **if not, consult CCHD**.
7. Complete Plot Drawing (Permit Application – App. Page 2) - Use checklist, requirements, generic drawing as guide.
8. The Owner shall review all pages of the Permit Application, sign App. Page 1, and schedule appointment for CCHD approval review [See Front Page - Enter appointment date and time].

INSTRUCTIONS and CRITERIA for REPLACEMENT SYSTEMS USING AN EXISTING SEPTIC TANK

1. An approved leach-field will fail if the septic tank is insufficient. A final "Certificate of Acceptance" (CA) requires confirmation of an adequate septic tank. A septic tank with less than 1,000 gallons volume OR with insufficient baffling will not be accepted.
2. Existing tanks will be acceptable if they meet all current standards and are confirmed at an inspection. Determine and state all septic tank components and septic tank size on the Permit Application.
3. If all components are known; schedule pumping of the septic tank to coincide with the system construction and inspection. Contractors and inspectors cannot work with an active system.
4. If all components are not known; pumping of the tank must be completed before Permit Application Review appointment to determine septic tank specifics stated in Permit Application and tank condition.

CONSTRUCTION INSPECTION POLICY and PROCEDURE

If permit requirements CANNOT be achieved, CALL the CCHD before continuing construction!

1. All components specified in attached "Construction Requirements" must be in place. For example (Conventional Systems); fabric cover should be placed over leach-field pipe stone - Immediately placing fabric cover over stone protects the pore space from being filled with dirt/debris from wind/rain and trench collapse. Do not backfill trenches with soil - Leave top, sides, and ends visible for all components. Manholes and covers must be accessible. Tank vents must be cleared.
2. Request an inspection by CCHD staff using the Permit Number and Town where property is located - Indicate what date and hour the system will be completed and ready for inspection. Requests for inspection should be made at least one business day before completion. Requests for special circumstances can be accommodated with sufficient notification.
3. If the final inspection is satisfactory, a CCHD completed "Construction Inspection Form" will be left on-site for the Contractor and/or the Home Owner.
4. The CCHD will mail a "Certificate of Acceptance" (CA) for the individual sewage treatment system to the owner. Possession of a copy of the Certificate of Acceptance is your assurance that the system has been installed in accordance with NYS Standards, and if well maintained, should function properly.

This page NOT required for NEW SYSTEMS

REPLACEMENT SYSTEM STATUS REVIEW FORM

For: (Tax Map ID#): _____ at (911 Address): _____

Please answer the following questions with best known information:

1. Why is the current septic system being replaced? _____
2. If system is failing; explain DETAILS (what, when, and where): _____
3. Is this system to be installed associated with any ongoing complaint? **NO** __. **YES** __. If yes; Who is the person enforcing the complaint? _____. This person must be consulted before CCHD approval. They may require a soil professional based on the setting.

	CHECK	YES (or) NO
Is this system for a <i>NEW</i> home, residence, or camp structure? <i>IF YES, STOP</i> ; This project is <i>NOT</i> a <i>REPLACEMENT SYSTEM</i> .	<input type="checkbox"/>	<input type="checkbox"/>
Is this a <i>seasonal dwelling</i> being converted to <i>year-round use residence</i> . If <i>YES</i> , it is a <i>NEW System</i> , <i>NOT</i> a Replacement System. A soil professional and all separation distances are required.	<input type="checkbox"/>	<input type="checkbox"/>
Will there be an additional bedroom, change in buildings purpose, or increase in waste water generated? If <i>YES</i> ; this would be a <i>New System</i> requiring new soil tests, <i>UNLESS the original permit has professional soil tests for the specific leach-field area. If not in same area, a soil professional is required</i> . If <i>NO</i> ; continue to <i>PRIOR (Existing) SYSTEM</i> , below.	<input type="checkbox"/>	<input type="checkbox"/>
<u>PRIOR (Existing)SYSTEM:</u>		
Was there a previous septic system installed on this lot? If so; When _____ by Who _____ What year was the house built/structure placed on this lot? _____	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a copy of Original Certificate of Approval from the CCHD?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a copy of the Original Permit Application (w/ soil test data) from the CCHD?	<input type="checkbox"/>	<input type="checkbox"/>
How long has the existing system been in use? _____ Years; Has system been continuously used? Explain your ownership history: _____	<input type="checkbox"/>	<input type="checkbox"/>
If <i>YES</i> for the above four (4) questions; the system is <i>Replacement Status</i> .		

Incorrect information may revoke permit. I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS TRUE:

CURRENT PROPERTY OWNER'S SIGNATURE

DATE

HEALTH DEPARTMENT USE ONLY

BASED ON THE ABOVE CRITERIA, this Septic System is considered a _____ SYSTEM.

Reviewing Sanitarian _____

DATE _____

SOIL EVALUATORS GENERAL NOTES/COMMENTS (Page 4):

Please add any information not requested which may improve understanding for CCHD Permit Reviewer and/or Contractor

Sewage Treatment System Planning Worksheet

IMPORTANT RECOMMENDATION NOTES TO HOMEOWNERS: *When planning a new home or a replacement sewage treatment system for your existing home, it is very important that you (the homeowner) ALSO evaluate your property soil conditions AND identify your intended system component elevations.*

ALTHOUGH NOT REQUIRED, *pre-planning the following specific items (listed in Worksheet format) in accordance with your specific property layout and soils can help you, your home designer, professional engineer/architect and/or contractor design and construct a properly operating sewage treatment system. Improperly planned systems often fail CCHD inspection because the system is constructed too deep. The below listed items can be very important for all systems, but are especially important in cases where only a minimal thickness of usable soils is available.*

Sewer line Pipe (Invert) elevation at foundation wall: _____ inches
Distance from home to tank: _____ feet
Intended slope: _____ inch/foot
Tank inlet Pipe (Invert) elevation: _____ inches
Tank outlet Pipe (Invert) elevation: _____ inches
Tank bottom elevation: _____ Inches

Distance from Tank to D-box: _____ feet
Intended slope: _____ inch/foot
D-Box inlet Pipe (Invert) elevation: _____ inches
D-Box outlets Pipe (Invert) elevation: _____ inches
D-box bottom elevation: _____ inches

Distance to 1st Trench: _____ feet Intended depth: _____ inches, &/or elevation: _____ inches
Distance to 2nd Trench: _____ feet Intended depth: _____ inches, &/or elevation: _____ inches

If Additional Trenches are Needed

Distance to 3rd Trench: _____ feet Intended depth: _____ inches, &/or elevation: _____ inches
Distance to 4th Trench: _____ feet Intended depth: _____ inches, &/or elevation: _____ inches
Distance to 5th Trench: _____ feet Intended depth: _____ inches, &/or elevation: _____ inches
Distance to 6th Trench: _____ feet Intended depth: _____ inches, &/or elevation: _____ inches

Note: *Remember, the Depth of Level Trenches does not have to be at same elevations; The end of level trenches need to be about 2-3 inches deeper than the start of trenches to accommodate a slight slope in the perforated pipe; Use below space to sketch an elevation profile drawing and ensure end of trenches will not be too deep.*

PERMIT #:20____ - _____

SEWAGE TREATMENT SYSTEM CONSTRUCTION PERMIT APPLICATION [App. Page 1]

Instructions: Fill in all blanks and CIRCLE correct information

Owner Name _____ Telephone (H) _____ (C) _____

Mailing Address: _____

DESIGN CRITERIA

Tax Map ID# _____ [Lots <1 acre **MUST** attach a **COPY** of your **TAX MAP**;

Real Property phone number is 565-4760]. Township _____ Legislative District _____

911 Address or distance and direction from an identifiable 911 address: _____

Exact Directions to Site: _____

If lot is in the **APA**, Is a permit required? Yes / No (if yes, please contact the **APA** first for coordination of soil tests).

Lot Type: Private Lot **OR** CCHD Approved Subdivision (5 lots or more) **OR** Local (Minor) Subdivision (4 lots or less)

Subdivision Name: _____ **Lot #** _____ [Contact CCHD Re: Subdivision Requirements]

System Type: **Conventional** (New / Replacement) **OR** **Engineered** New / Replacement [If Replacement, see Page 3]

Building Information: Residential? (Number of Bedrooms _____) **OR** Other use? _____ -GPD Demand _____

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

Water Supply: Public Water / Drilled Well / Dug Well / Surface water; Describe _____

Private water - Water Pump Type: Submersible in well / Siphon-Jet (Suction-Show pump location on plot drawing)

Plumbing fixtures: NEW-Low Flow or OTHER _____; *Indoor hot tub/spa (w/ filter & backwash): YES / NO

*Kitchen Sink Garbage Disposal: YES / NO; *Grinder Pump (basement toilet to feed sewer main): YES / NO

Tank Type /Size: Concrete **OR** Plastic; Gallons: _____; **Dual Compartment?** *Gas Deflection Baffle?

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

System To be installed by: **Contractor** _____; Phone _____ **OR** **Homeowner**

Homeowner installations require **OWNER** to confirm/know all attached construction specifics - Read such before CCHD review;

Attached Requirements understood by Owner/Contractor? _____ {**Note:** (*) Septic tank size will relate to asterisk items}

Owner's Signature _____; **Date** _____ **Owners' signature is REQUIRED!**

[Do not sign until all above information and Plot Plan Drawing are complete and confirmed to be your intentions.]

HEALTH DEPARTMENT USE ONLY

Fee Paid _____

Receipt # _____

Permit Approved by _____

Approval Date _____

Permit expires 2 years from the date of approval

HEALTH DEPARTMENT USE ONLY

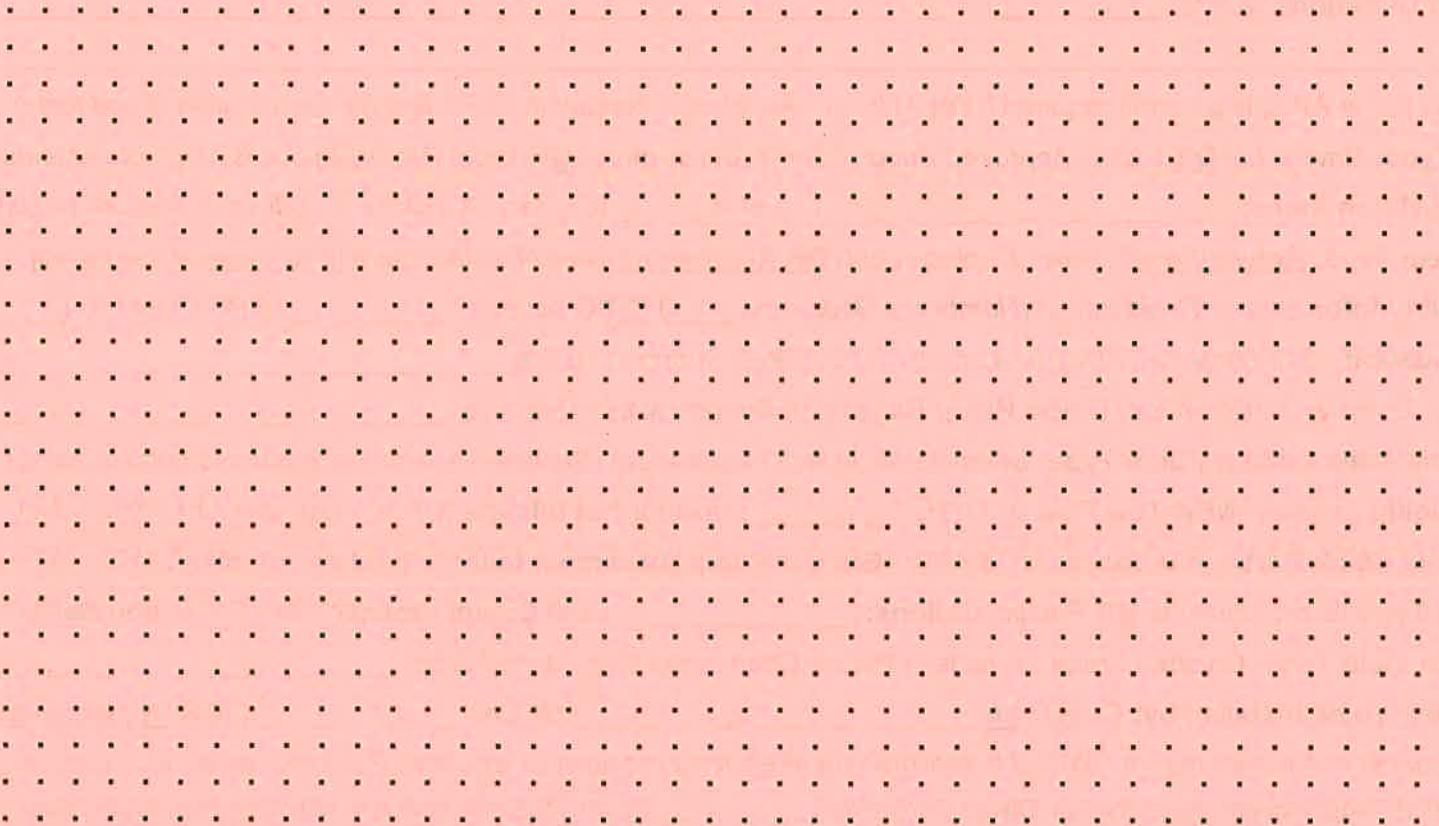
Final Construction Approval By _____

Date _____

Use "Construction Requirements" (Req. Page 1) drawing as a guide to complete a drawing showing all separation distances. **Check item when drawn and distance labelled OR write N/A if not present or not intended.**

Property Lines (location or distance + direction)	Access Roads
Drainage: ditches/swales /buried collection pipes	Driveways
Public Water lines & Connection to Home (+10')	Home- show shape incl.: porches, decks, etc.
Water Supply Line from Well to Home	Other structures- garages, sheds, pools, etc.
Septic Tank – show orientation of inlet and outlet	Distance from Well to Septic Tank (+50')
Proposed D-Box and Leach lines	Well suction pump location(s); yours/ neighbors
50% Leach expansion area (All distances apply)	Suction Water line(s) to leach-field (+100')
Distance from Proposed Well (PW)	Distance from Leach field - Property Line (+10')
Neighbor's Well (NW) to leach area (+100')	Distance from Existing Well
Distance from Leach Field (+100') & Tank (+50') to Nearby Stream, Lake or Wetland Boundaries	

SOILS EVALUATOR must show deep-hole and percolation test locations orientation to property lines; North direction; Downward slope direction and establish a **SCALE: Each 4-dot square on grid is (circle) 10'x10' OR 5'x5' OR x .**
DH = Deep-Hole Test Location P1 = Percolation Test #1 Location P2 = Percolation Test #2 Location



SYSTEM SPECIFIC REQUIREMENTS (To be completed by Health Department Personnel)

Leach-field type of trenches: Crushed Stone / Plastic Chambers / Eljen Units / Other _____
Septic tank: Concrete OR Plastic **Minimum Tank Size (gallons):** 1,000 / 1,250 / 1,500 / 1,750 / 2,000
Required Tank Components: Dual-Compartment / Gas Deflection Baffle / Effluent Filter
Bottoms of trenches are to be no deeper than * _____ *inches below the grade (Determined at deep-hole test);*
Additional Fill to be placed in area prior to Trench Build; 18-inches(-)Available Usable Soil (inches)= _____ *(inches);*
Minimum Total Trench Length: _____ *feet; Minimum # of Eljen Units:* _____ *; Sand Source* _____

NOTE: Replacement Systems using Existing Tank require prior PUMPING - MUST be empty for inspection.

ALL CONSTRUCTION MUST BE INSPECTED PRIOR TO BACK-FILLING; REVIEW "CONSTRUCTION INSPECTION POLICY and PROCEDURE;" THEN CALL 565-4870 to REQUEST an INSPECTION

SOIL TEST REFERRAL LIST (updated 02/06/2015)

Clinton County Health Department requires percolation and deep hole tests for all NEW Individual Sewage Treatment (IST) Systems to be conducted by one of the following: PROFESSIONAL ENGINEER, REGISTERED ARCHITECT, LICENSED LAND SURVEYOR, SOIL SCIENTIST OR CERTIFIED GEOLOGIST. This Department recommends contacting several of the firms on this referral list since prices and types of services vary. If your building site requires an ALTERNATIVE SYSTEM, engineered plans must be submitted by a Design Professional, who reserve the right to base the design on his/her may own percolation and deep hole test data. Therefore, if you determine that a Design Professional may be required, you may want to have him/her conduct the initial percolation and deep-hole tests.

ARCHITECTURAL & ENGINEERING DESIGN ASSOCIATES – DESIGN PROFESSIONAL

1246 Rt. 3, 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

PAUL AGNEW – GEOLOGISTS

51 Agnew Road
Morrisonville, NY 12962
(518) 534-0122
(518) 566-6554 pcagnew@gmail.com

MARK BUCKLEY (ADIRONDACK PROFESSIONAL SERVICES) – DESIGN PROFESSIONAL

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

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

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

EARTH SCIENCE ENGINEERING, P.C.

DOUGLAS R. FERRIS, P.E. – DESIGN PROFESSIONAL

P.O. Box 2412
Plattsburgh, NY 12901
(518) 572-3036 dferris@zebratechllc.com

ALFRED SWEENOR, P.E., NORTH COUNTRY ENGINEERING & PLANNING – DESIGN PROFESSIONAL

2136 NYS Route 22B
Morrisonville, NY 12962
(518) 561-7560 NCEP@charter.net

SOIL TEST REFERRAL LIST, cont. (updated 02/06/2015)

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

1778 A Main Street
Keeseville, NY 12944
(518) 834-7729 toml@tjlpe.com

MICHAEL OLIVER, P.E., DESIGN PROFESSIONAL

170 Trombley Ln
Chazy, NY 12921
(518) 420-5566 oliver1465@gmail.com

MARK PETRASHUNE – LICENSED LAND SURVEYOR

P.O. Box 821
Dannemora, NY 12929
(518) 492-2215

CINDY GARSO P.E., NORTH WOODS ENGINEERING

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

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

208 Flynn Street
Burlington, VT 05401
(802) 863-6225

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

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

DEAN LASHWAY, L.L.S

2788 Miner Farm Road
Altona, NY 12910
(518) 236-9333 dhlsurveying@aol.com

JAMES MOSER, P.E., MOSER ENGINEERING

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

MATHEW S. STOWE – SOIL SCIENTIST

62 Bart Merrill Rd.
Cadyville, NY 12918
(518) 578-2413

CONSTRUCTION SAFETY FOR DEEP-HOLE TESTS AND SEPTIC SYSTEM INSTALLATIONS

SAFETY WARNINGS: Excavations, such as for deep-hole tests and septic tanks, may create safety hazards. Experience should warn us that depths as shallow as five (5') feet 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 excavations and trenches.

Homeowner's 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 that may lie underground there.

**“DIG- SAFE”
CAN BE CONTACTED BY DIALING “8-1-1”**

DIG-SAFE is required to be called 2 – 10 days before digging.

Called on: _____ Confirmation Ticket Number: _____

SITE DESCRIPTION

TAX MAP NUMER OR ADDRESS: _____ **PERMIT #:** 20 _____ - _____

SLOPE in the area of proposed leach-field: Flat (<1%) / Slight (1-5%) / Steep (> 15%)
Describe downward slope direction and label the slope on "Plot Plan Sketch": _____

Are there ANY nearby streams, wetlands, or waterbodies? YES / NO – Describe _____

VEGETATION: Dense Woods / Sparse Trees / Open Field / Lawn / Other. Label limitations on drawing.

GRADING: Will any original soil be removed from the proposed leach-field area? **YES / NO**
If yes, how many inches? _____; **WHY?** _____

FILL MATERIAL: Has any been placed on the intended leach area within the recent past? **YES / NO**
If yes, how many inches? _____; **WHY?** _____

DEEP-HOLE TEST DATA

INSTRUCTIONS:

At least **ONE (1)** deep-hole test must be performed in the area of the proposed leaching system. The hole must be at least 6-feet (72-inches) deep. The Health Department recommends that the deep-hole test be completed during the high groundwater season (*in the spring before June 30th*). **Safety and caution must be exercised** when examining the hole in order to obtain the following information:

DESCRIPTION OF SOIL LAYERS

DEPTH	SOIL HORIZON	COLOR	TEXTURE	MOTTLING
0 " to _____ "				
_____ " to _____ "				
_____ " to _____ "				
_____ " to _____ "				
_____ " to _____ "				
_____ " to _____ "				

Depth of hole: (*If under 72" explain why?* _____) equals _____ inches
 Was bedrock encountered? **YES / NO** at _____ inches
 Was an impermeable till or clay layer encountered? **YES / NO** at _____ inches
 Was groundwater seepage observed? **YES / NO** at _____ inches
 Soil mottling - Evidence of seasonal high groundwater? **YES / NO** at _____ inches

A - Total depth of useable soil (*): (*smallest # above*)..... is _____ inches
B - Minimum Separation to Limiting Factor (*i.e., Water Table, Clay Soil, Bedrock*): = 24 inches
 Maximum Trench Bottom Depth (**A - B**): = _____ inches

(* *Above Limiting Factor (i.e., bedrock, impermeable soil layer, seasonal high groundwater; smallest above #)*)

I CERTIFY THAT THE DEEP-HOLE TEST RESULTS and Site DESCRIPTION ARE TRUE, and ACCURATE with Location of deep-hole test (DH) labelled on plot plan sketch.

SIGNATURE OF PERSON CONDUCTING TESTS TEST DATE STAMP/CERT. #

Circle Title: P.E. / L.L.S / R. A. / AIPG Geologist / Certified Soil Scientist / Contractor / Homeowner

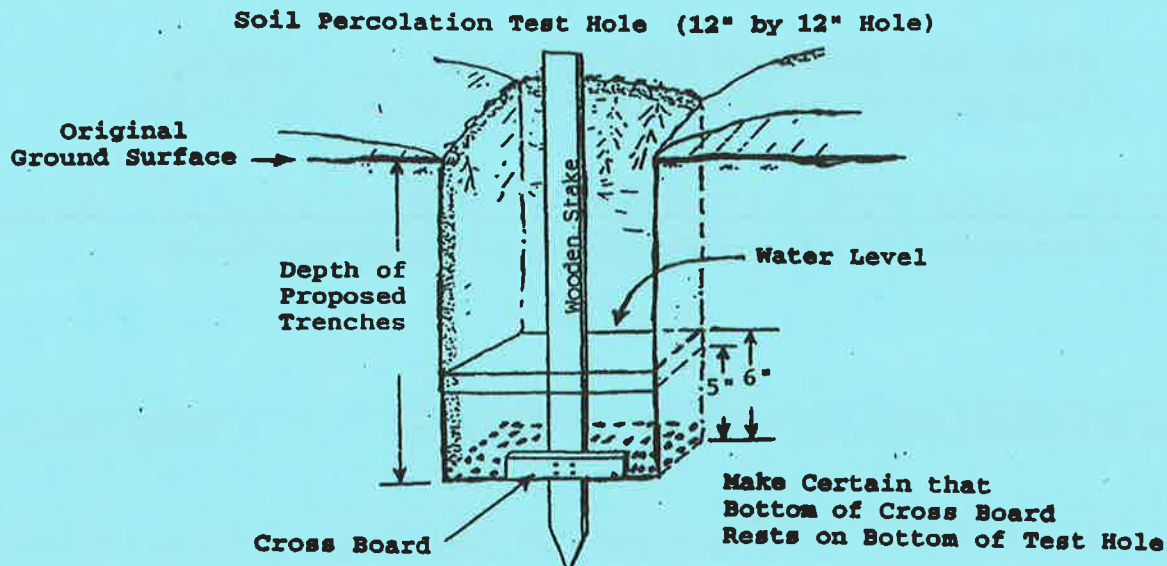
PERCOLATION TESTS INSTRUCTION SHEET

INSTRUCTIONS:

- After the deep-hole test determines depth limitation, and owner has determined final grading intentions; dig two (2) percolation test holes in the existing soil, representing the proposed trench area and depth.
- **NOTE: Percolation test holes must be dug in the area of, and 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 in the soil layer represented at 6".
- The depth of the proposed absorption trenches is determined by the Deep-Hole Test, as trench bottoms must be a minimum of 2-feet 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 situation 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!** Stabilize means the 1-inch drop times are within 10% of each other for the same hole [*i.e., for 10 minute soil percolation – test results yield 9 min., 10 min., 30 sec., or 11 min.*]
8. Mark the location where each hole was dug (P1 & P2) on the "Plot Plan Sketch".



PERCOLATION TEST DATA

TAX MAP NUMER OR ADDRESS: _____ PERMIT #:20____ - _____

PERCOLATION TEST RESULTS – HOLE 1 (P1)

TEST	START TIME	FINISH TIME	TOTAL TIME
#1			
#2			
#3			
#4			
#5			
#6			
#7			

Depth of Hole 1: _____ inches

Stabilized percolation rate for Hole 1: _____ min. (longest time).

.....

PERCOLATION TEST RESULTS – HOLE 2 (P2)

TEST	START TIME	FINISH TIME	TOTAL TIME
#1			
#2			
#3			
#4			
#5			
#6			
#7			

Depth of Hole 1: _____ inches

Stabilized percolation rate for Hole 1: _____ min. (longest time).

STABILIZED PERCOLATION RATE OF SOIL: _____ MINUTES
 (The longer of the two stabilized percolation times for both holes)

I CERTIFY THAT THE PERCOLATION TEST RESULTS ARE TRUE, and ACCURATE, with the locations of Percolation Tests (P1 and P2) labelled on the Plot Plan Sketch.

Signature of Person Conducting Tests

Test Date

Stamp / Cert. #

CIRCLE TITLE: P. E. / L. L. S / R. A. / AIPG Geologist / Cert. Soil Scientist / Contractor / Homeowner

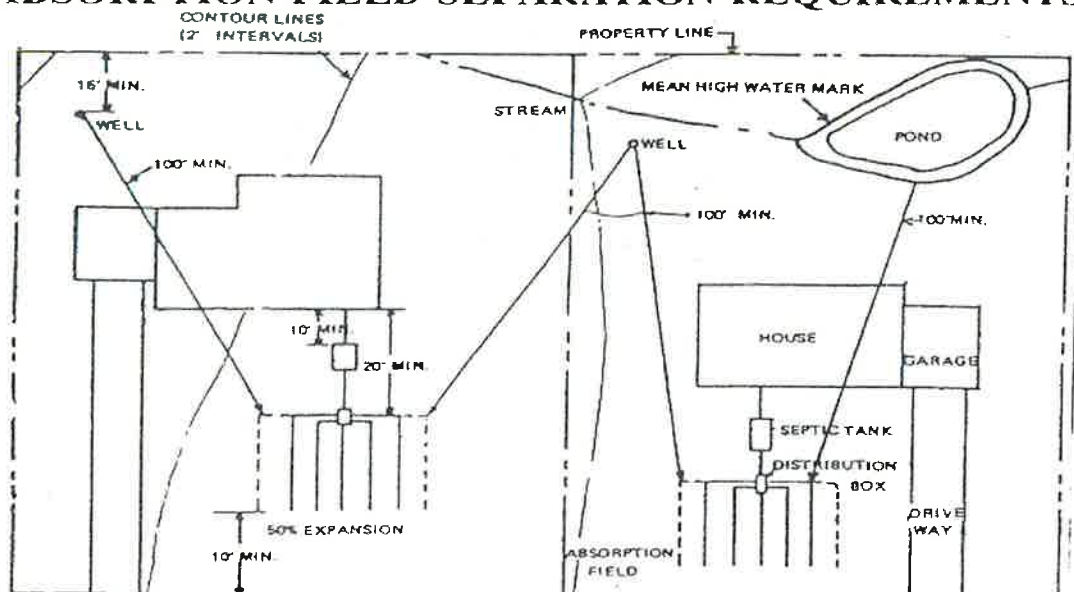
CONSTRUCTION REQUIREMENTS (Req. Page 1)

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/0-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' (a)	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'

- (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 sanitary privy shall be installed inside a larger diameter water main to protect the potable water supply.

ABSORPTION FIELD SEPARATION REQUIREMENTS



SEWER PIPE REQUIREMENTS – STRUCTURE TO SEPTIC TANK (Req. Page 2)

1. Four inch (4") minimum diameter ridged pipe laid on a firm foundation of soil.
2. Pipe should have no less than ¼" per foot slope.
3. All connections must be sealed watertight.
4. Pipe must have no sharp bends (angles of more than 45°). If a sharp turn is needed; consider tank rotation and/or side entry **OR** separate 45° fittings with 5-10 feet separation.
5. Tank Inlet pipe must extend approximately one inch inside the tank wall.
6. Pipe must have a clean-out fitting in the basement or crawl space.
7. If pipe must be under a vehicle pathway; a method of protection must be approved.

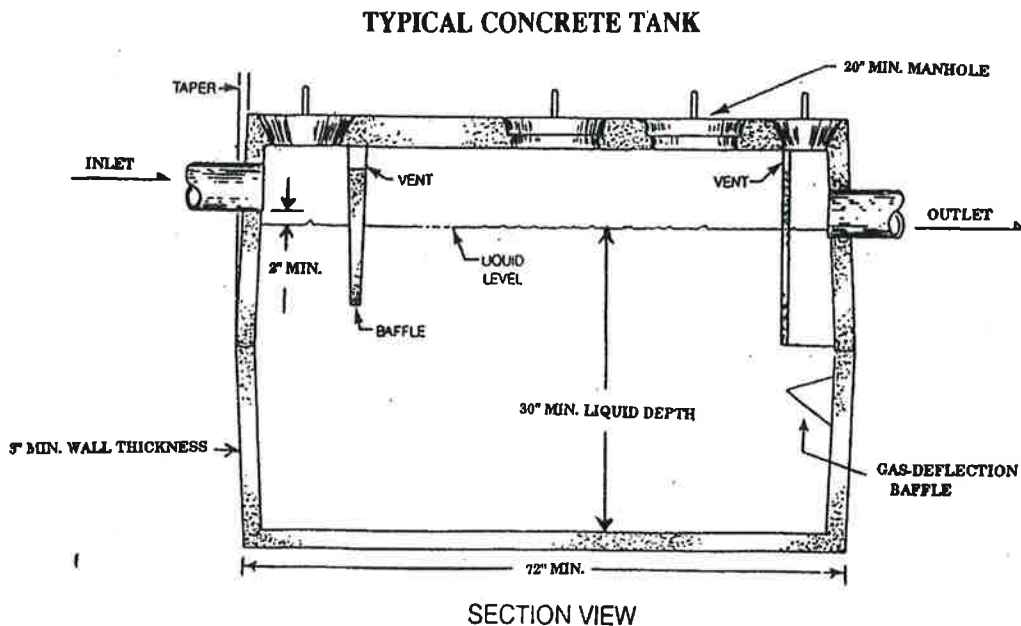
**SEPTIC TANK REQUIREMENTS
Minimum Tank Size**

# 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*

(*)DC = Dual Compartment Septic Tank Required. DUAL COMPARTMENT TANKS MUST MEET HEALTH DEPARTMENT SPECIFICATIONS, AND MAY INCLUDE A GAS DEFLECTION BAFFLE OR OTHER OUTLET MODIFICATION.

PLASTIC SEPTIC TANKS ARE NOT TYPICAL! Requirements for Plastic Septic Tanks cannot be properly evaluated with simple measurements and observations. *The MANUFACTURER'S SPECIFICATIONS* should be provided as part of the Permit Application for review and MUST be also be provided at the inspection.

All tanks must be level on a firm foundation of soil, with sealed connections, and open cleared vents.



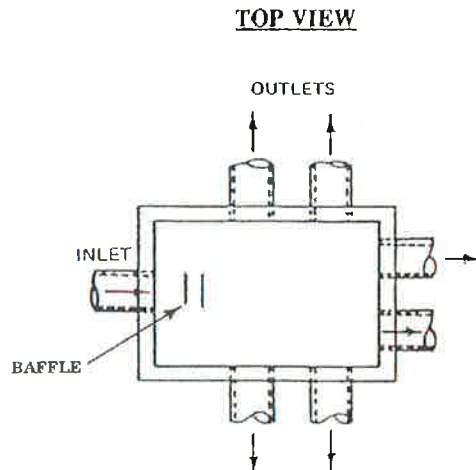
SEWER PIPE REQUIREMENTS – SEPTIC TANK TO DISTRIBUTION BOX (Req. Page 3)

1. Four inch (4") minimum diameter ridged pipe laid on a firm foundation of soil.
2. Pipe should have no less than 1/8 inch per foot slope.
3. All connections must be sealed watertight.
4. Pipe must have no sharp bends (angles of more than 45°). If a sharp turn is needed; consider tank rotation and/or side entry **OR** separate 45° fittings with 5-10 feet separation.
5. Pipe must extend approximately one inch inside the tank and D-box walls.
6. If pipe must be under a vehicle pathway; a method of protection must be approved.

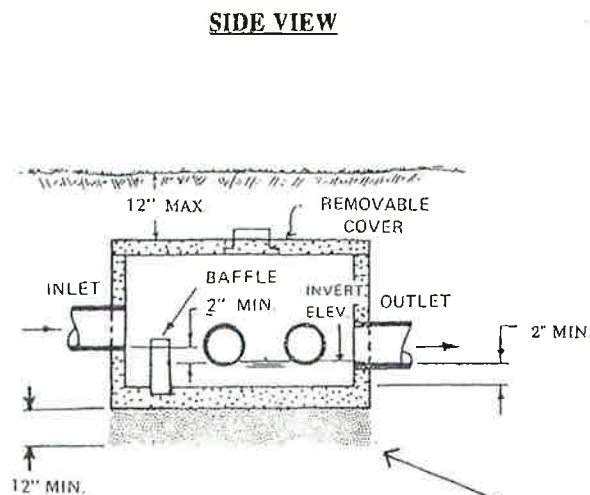
DISTRIBUTION BOX REQUIREMENTS

1. A removable cover not located more than 12" below final grade.
2. Level on firm foundation of sand, crushed stone or pea gravel.
3. Outlet pipes **MUST** be solid, not perforated. Perforated pipe/stone can start after 5-feet from D-box.
4. Outlet pipes connect directly to an individual trench. No "T's" from one pipe to multiple trenches.
5. All outlet pipes must be with the same angle, trim, and level to insure even flow distribution.

TYPICAL DISTRIBUTION BOX



All outlet pipes must be solid (non-perforated) for at least the first 5' from the d-box.

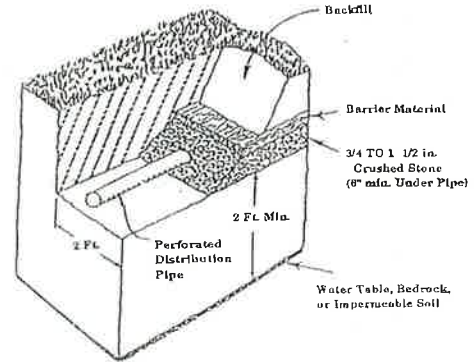


sand, crushed stone or pea gravel

CONSTRUCTION REQUIREMENTS (Req. Page 4)

CONVENTIONAL STONE ABSORPTION TRENCH REQUIREMENTS

1. If fill is required, the fill must have similar percolation rate as undisturbed soils, and be placed **BEFORE** excavation.
2. Trenches are to be a minimum of 24-inches wide, and installed parallel to ground contours (*Across Slope*). The undisturbed soil between adjacent trenches must be at least 2-times the trench width (typically 4-feet required).
3. Trench bottoms must be **level**, and at least 2-feet above limiting factor determined on permit. **Trench bottoms do not need to be at the same elevation.**
4. All minimum separation distances on Req. Page 1 apply.
5. All trenches are to be similar length; and less than 60 feet length.
6. Trench bottoms are to be on undisturbed soil; **NOT ON TOP OF FILL.**
7. Sides and bottoms of trenches must be raked prior to placement of crushed stone.
8. The aggregate **must** be washed gravel or crushed stone 3/4" to 1-1/2" in diameter. Larger diameter material, finer substances, or run of bank gravel are unacceptable.
9. Perforated pipe is to be sloped between 1/16" and 1/32" per foot within the crushed stone. This requires the **start of the trenches** to have **14"** of crushed stone; with **8" below** perforated pipe.
10. Minimum depth of crushed stone at end of trenches must be **12"** with **6" below** the 4" perforated pipe and 2" above the perforate pipe. Pipe ends must be capped, sealed, and visible at inspection.
11. Perforated pipe/stone can start after a 5-foot radius from D-box. D-box solid outlet pipes must connect directly to an individual trench. Solid pipes can have various slopes allowing trench bottoms to be at equal depths on a slope.
12. Finished trenches must have **square** top corners (not rounded) and are to be covered with permeable paper, fabric, or 4" thick layer of hay. Place this cover as the stone is placed.
13. The intended backfill (including topsoil) over the trench cover should be 6 to 12 inches.



LINEAR FEET OF ABSORPTION TRENCH NEEDED (based on 2 feet wide trench)

Time for water to drop 1-inch in Test Hole	2 BR HOME	3 BR HOME	4 BR HOME	5 BR HOME
NEW - LOW-FLOW FIXTURES / OLD-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 / *	* / *

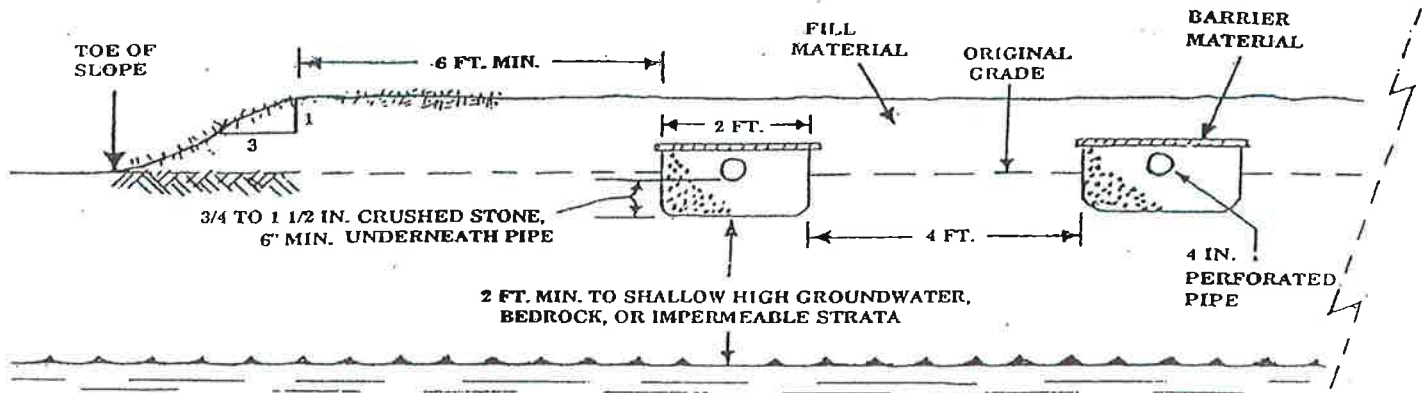
NOTE – (*) MORE THAN 500 LINEAR FEET OF TRENCHES REQUIRES DOSING / SPECIAL DESIGN SHALLOW ABSORPTION TRENCHES

CONSTRUCTION REQUIREMENTS (Req. Page 5)

SHALLOW ABSORPTION TRENCHES (Required when the usable soil is 2 to 3 feet deep)

Shallow trenches are constructed in fill material, extending into the existing natural soil.

SHALLOW TRENCH SYSTEM – END VIEW



CONSTRUCTION SPECIFIC'S

TRENCHES ARE INSTALLED AS DESCRIBED UNDER "CONVENTIONAL TRENCHES" WITH THE FOLLOWING ADDITIONAL CONSIDERATIONS:

1. Usable fill shall have a percolation rate similar to, but not faster than, the usable 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 must be on undisturbed 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.

SYSTEMS THAT REQUIRE A PROFESSIONAL ENGINEER: When Usable soil is LESS than 2-feet OR other separation distance cannot be achieved, a NYS Licensed Professional Engineer is needed to complete system design. In these cases, a pump station is typically required to pump post-septic tank wastewater to the absorption system.

The following procedure is used for the approval of non-conventional alternative systems.

1. Engineered plans for alternative (non-conventional) systems must be submitted by NYS Licensed Professional Engineer.
2. The Professional Engineer must contact CCHD for engineered submission instructions. All further instructions will be stated in CCHD approval letter.
3. While the system is being installed, the Design Engineer **MUST** inspect all components to make sure they were installed according to their plan, and applicable code requirements; and submit a "Letter of Completed Works" to CCHD. **Inspection of the system by CCHD staff prior to backfill may also be required (Check with CCHD staff during Permit Application review OR see CCHD Letter of Approval).**
4. Once the Health Department receives the "Letter of Completed Works" from the Design Engineer, a "Certificate of Approval" will be issued by the CCHD.

**CLINTON COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL DIVISION
133 Margaret Street
Plattsburgh, NY 12901
Telephone (518) 565-4870 Fax (518) 565-4843**

YOUR PRIVATE WATER WELL

Before the well is installed:

Establish a site for the well that will protect it from contamination;

- ❖ Where possible, the well should be located uphill and a maximum possible distance from any potential sources of contaminants, such as septic systems, pesticide or fertilizer storage areas, road salt storage, gasoline and fuel oil tanks.
- ❖ Surface water should drain away from the area of the well.
- ❖ Maintain the following minimum separation distances:
 - 10 ft. to any building
 - 15 ft. to property lines
 - 50 ft. to septic tank
 - 100 ft. to sewage system
 - 50 ft. to stream, lake, or wetland

Hire a well driller who is registered with the New York State Department of Environmental Conservation (NYSDEC). A list of registered drillers can be obtained from the Clinton County Health Department (CCHD).

Determine if there are any existing unused wells on the property. These wells should be properly abandoned to protect your groundwater source from contamination. Please contact the CCHD for information on proper well abandonment procedures.

After installation:

- ✓ The well casing should extend at least 18 inches **ABOVE** the ground surface (at least 2 feet above the 100 year flood elevation).
- ✓ The well casing should extend at least 50 feet **BELOW** the ground surface.
- ✓ The ground surface immediately around the well should be graded to direct surface water away from the well.
- ✓ The new well should be shock-disinfected. This procedure is often performed by the well driller at the time of installation. The CCHD can also provide directions on how to shock-disinfect the well.
- ✓ Make sure the well is protected with a tight fitting, vermin-proof well cap or sanitary seal that is properly vented. The vent should face downward, be screened, and be at least 1 foot above the ground surface.
- ✓ The water should be tested to establish safety of the new water source. This should be done after shock-disinfection, when there is no longer any chlorine present in the water. Please refer to Table 1 for tests recommended by the CCHD.
- ✓ Get a complete well log, receipt and results of any tests from your well driller and keep these records in a safe place!
- ✓ Please note that the CCHD does not recommend dug wells as potable water supplies

Table 1: Individual Residential Well Water Supply Quality Testing	
Test	Maximum Contaminant Level (MCL)
Coliform Bacteria	Any positive result is unsatisfactory
Chloride	250.0
Lead	0.015 mg/L
Nitrates	10 mg/L at Nitrogen
Nitrites	1 mg/L as Nitrogen
Iron	0.3 mg/L
Manganese	0.3 mg/L
Sodium	No designated limit**
pH	No designated limit
Hardness	No designated limit
Alkalinity	No designated limit
Turbidity	5 NTU

mg/L- milligrams per liter

MCL- defines the highest concentrations of contaminants allowed in public water supplies as set by the New York State Health Department and the Environmental Protection Agency (EPA).

NTU- Nephelometric Turbidity Units

More than 20mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. More than 270 mg/L should not be consumed by people on moderately restricted sodium diets.

Also test for contaminants that might be located in your area. For example: Test for volatile organic chemicals (VOCs) if oil, petroleum, or solvents are stored nearby; if there has been a spill; or for pesticides and herbicides if a well is located close to an area used for agriculture. Contact the CCHD if you have any questions.

Maintaining your well:

- Protect the well from animal, chemical and groundwater contamination.
- Occasionally check the condition of the well cap or seal to ensure it is not cracked or loose. Also check the casing for cracks or holes and make sure that surface water is diverted away from the well.
- Prevent backflow of contaminated water into your water supply by installing backflow prevention devices (check valves or vacuum breakers) on all faucets with hose connections. An air gap should also be maintained between water supply lines and a potential source of contamination (For example: a hose and water in a swimming pool or puddle).
- Test for coliform bacteria and nitrate annually. You should test more frequently if there is a change in water taste, odor, color or clarity; if your neighbors find a particular contaminant in their water; or if there is a pregnancy or unexplained illness in the household. Under these circumstances, you may also contact the CCHD for assistance and advice.
- Disinfection of a well should be performed any time the well is exposed to the environment. For example: if the well cap is removed and/or repairs are made to the well or submersible pump. Contact the CCHD for technical advice.
- Have your well inspected every 10-20 years by a qualified well driller or pump installer.
- Keep good records on your well!