



CITY OF GLEN COVE
Building Department

SANITARY DISPOSAL GUIDELINES

CERTIFICATION OF CONSTRUCTION REQUIRED (FINAL APPROVAL)

1. *SINGLE FAMILY RESIDENCES COVERED HEREIN.* Sewage disposal systems for single family residences shall be constructed to conform to these Standards. Applicants are required to obtain Department certification of conformance to these Standards.
2. *BACKFILLING INSPECTION PROCEDURES.* Prior to backfilling, the installed sewage disposal system shall be inspected and authorized for backfilling by a representative of the Department. In the case of buildings to be served by sewers, DPW is usually the designated representative of the Department. Otherwise, the Department shall be notified at least forty-eight (48) hours in advance of scheduled backfilling. Failure to contact the Department to observe the backfilling process may result in re-excavation of backfill. No approval or permit will be made or issued by the Department unless there is compliance with these requirements.
3. *"AS BUILT" PLANS REQUIRED.* Certification of completed construction will be granted to the applicant on "as built" plans which are to be submitted after the final satisfactory field inspection is completed. These plans shall include accurate measurements from permanent, fixed reference points to each component of the sewage disposal system and the water supply well or public water service line. These plans are to be signed and sealed by a design professional.
4. *SEPARATE CERTIFICATION OF CONSTRUCTION MAY BE REQUIRED.* In some cases, the Department may also require a separate certification of construction by a licensed design professional. Occupancy of a building or discharge to any sewage disposal system is prohibited without the final approval/certification of construction issued by the Department.

SITING OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS

A. PRIORITY FOR SEWAGE DISPOSAL SYSTEM

Because the failure of a sewage disposal system has the potential for significant public health impacts, first priority during planning shall be given to the location of sewage disposal systems over the location of other improvements on the property.

1. *CONSIDER ALL FACTORS CAREFULLY.* The design professional is responsible to carefully consider the significance of the existing and proposed topography, soils, locations of existing and proposed water supply wells, surface waters and wetlands, groundwater conditions, and the planned locations of other improvements such as foundations, driveways, and construction on adjacent properties, property lines and other limitations of a physical or legal nature.
2. *A SUPERIOR SITE SHALL NOT BE FOREGONE.* A disposal site available prior to development which is adequate for installation of a disposal system which can conform to these standards shall not be sacrificed to enhance the siting of other improvements being considered for the site.

ITE CONDITIONS PROHIBITED. Sewage disposal systems shall not be located:

1. In areas with a surface elevation lower than the 10 year flood level;
2. In any area subject to imminent erosion, which cannot be controlled so as to protect the sewage disposal system;
3. In areas where the maximum high groundwater level is less than one foot below the original ground surface;
4. In areas with slopes greater than 15%;
5. In areas where the existing subsoils contain meadow mat, bog, silts, clays, or other impervious material extending below the groundwater table;
6. In areas where groundwater conditions are not conducive to the proper functioning of subsurface sewage disposal systems;
7. In a swale;
8. Where the topography concentrates runoff onto or into the area where the system is proposed;
9. Where surface water discharges would be induced to artificially raise the groundwater level below the system;
10. In any area or under any part of a building, roadway, driveway, or other improvement that does or may prevent reasonable access for repair or maintenance of the system.

SITE CONDITION REQUISITES. Sewage disposal systems shall be located:

1. On land owned in fee by the Applicant;
2. On the same parcel as the building to be serviced;

3. In an unimproved area which allows adequate access for maintenance and fifty percent expansion of the leaching facilities. Deepening the system is not permitted in lieu of providing this expansion area;
4. In the "front yard". A location other than the front yard will be considered in order to protect drinking supply wells and to accommodate unique grading situations, provided it is in conformance with the other aspects of these Standards;
5. At least sixty-five (65) feet from bluffs or landward of the dwelling;
6. The minimum separation distances for subsurface sewage disposal systems are presented in Table 1.

SUBSOIL AND GROUNDWATER CRITERIA FOR SUBSURFACE SYSTEMS

SOIL INVESTIGATION

Subsoil conditions shall be shown on the plan. The nature of the soil shall be determined by excavation of one or more test holes at the site of the proposed subsurface sewage disposal system.

The soil investigation shall be subject to the following conditions:

1. ***TEST HOLES.*** The test hole shall be carried to a depth of six feet in excess of the proposed leaching pool bottom or, in the case of unusual soil, until a strata of six feet of sand and gravel, acceptable to the Department, is encountered. The test holes shall be a minimum of seventeen (17) feet deep or six feet into groundwater. A test hole log and grade elevation at the test hole location shall be indicated on the plan.
2. ***RESPONSIBILITY OF DESIGN PROFESSIONALS.*** The design professional, by providing this information on the submitted plan, is considered as certifying the results. Test holes listed as "by others" are unacceptable unless independently certified by a design professional. Test holes undocumented as to time and location of test are not acceptable.
3. ***ADDITIONAL TEST HOLES.*** Additional test holes witnessed by a representative of the Department may be required prior to approval to construct in areas of unusually poor soils or where data on record with the Department indicates inconsistent conditions.
4. ***REMOVAL OF SOILS UNSUITABLE FOR LEACHING POOLS.*** Unsuitable soils shall be removed and replaced with sand and gravel, acceptable to the Department, for a diameter six feet greater than the leaching pool (three foot collar) extending down into a minimum six foot strata of acceptable sand and gravel. In those areas where these criteria cannot be met, consult the Department. Percolation tests will be required in accordance with 10 NYCRR, Appendix 75A.4 for absorption systems where groundwater is less than or equal to eight feet below grade and where unsuitable soils cannot be removed.

GROUNDWATER INVESTIGATION

Groundwater elevation, if encountered shall be shown on soil test logs submitted on plans. The plans are subject to the following conditions:

1. ***MEAN HIGH TIDE.*** In areas subject to tidal action, groundwater elevations shall be measured at mean high tide and be so noted on plans.
2. ***GRADING PLAN REQUIRED IF LESS THAN SEVEN FEET TO GROUND WATER.*** In cases where groundwater elevation is less than seven feet below surface elevation a grading plan is required to be shown on the plans. The grading plan shall indicate plan and profile views of the disposal system, the residence first floor and the waste pipe invert, respectively, and final grade elevation. The plan view shall indicate final grade by showing one foot contour lines for at least twenty (20) feet from the leaching system.

DEPARTMENT INSPECTION PRIOR TO INSTALLATION

In the case of unacceptable soil and/or groundwater conditions, inspection of the excavation by a representative of the Department is required prior to the installation of the leaching pool.

MINIMUM SYSTEM REQUIREMENTS

A. SEPTIC TANK CAPACITY

Septic tank minimum capacity shall be provided in accordance with Table 2.

B. LEACHING POOL LEACHING AREA

The minimum leaching area is specified in Tables 3 and 4.

CONSTRUCTION MATERIAL REQUIREMENTS

A. DEPARTMENT APPROVAL REQUIRED

All materials used in the sewage disposal system shall be approved by the Department prior to use.

B. APPROVAL PROCEDURE

1. *DESIGN DRAWINGS*. Drawings of products which meet the functional design criteria of this code and which contain thereon the signed, dated manufacturer's certification as to the structural integrity of the designed and manufactured product for the purpose intended shall be filed with the Department.

2. *APPROVED PRODUCT DRAWINGS KEPT IN DEPARTMENT FILE*. Once approved, a copy of the product drawing shall be kept on file in the Department. Products so approved are approved for general use and do not require further or repeated product submittal or approval unless such approval is withdrawn by the Department.

C. PRODUCT IDENTIFICATION

All materials shall be identified as to manufacturer and have the identification visible at the time of inspection.

D. GUIDELINES USED BY THE DEPARTMENT

Compliance with the National Sanitation Foundation, The American Society of Testing and Materials and/or The American Water Works Association requirements and specifications shall be used as a guideline in reviewing applicable materials of construction for approval by the Department.

SEPTIC TANK REQUIREMENTS

A. SEPTIC TANK CONSTRUCTION CRITERIA

1. *TYPICAL CONFIGURATIONS*. Alternate tank configurations may be accepted if designed in accordance with 10NYCRR, Appendix 75-A.

2. *INVERT SEPARATION AND LIQUID LEVEL*. The outlet invert shall be six inches below the inlet invert. The invert must be a minimum of four feet above the tank bottom, unless the tank is otherwise designed in accordance with 10NYCRR, Appendix 75A.

3. *AIR SPACE*. There shall be a minimum one foot air space measured from the outlet invert to the bottom of the tank cover.

4. *ACCESS OPENINGS, COVER AND CASTING*. There shall be one 20-inch diameter covered opening located over the inlet and a second opening provided over the outlet. The outlet opening shall be equipped with a 20-inch diameter watertight and insect-proof locking castiron cover at final grade.

5. *TRAFFIC TOPS FOR TRAFFIC CONDITIONS*. When a septic tank is approved to be installed in a driveway or parking area, traffic bearing tops shall be used.

6. *COMPRESSIVE STRENGTH REQUIREMENTS*. Concrete shall have a minimum compressive strength of 3,000 pounds per square inch (psi) at 28 days set.

7. *DESIGN STRENGTH AND WALL THICKNESS*. Wall thickness shall be a minimum of three inches unless the design has been certified by a New York licensed professional engineer as complying with all appropriate requirements for thin-wall construction. All walls, bottom and top shall contain reinforcing to resist an applied force of 300 pounds per square foot (psf).

8. *WATERTIGHT TANKS*. All joints shall be sealed so that the tank is watertight and certified as to watertightness after installation. Tanks that are cast in place must be certified by a licensed professional engineer and, as a minimum, have the floor and walls monolithically poured.

9. *GARBAGE GRINDERS REQUIRE SPECIAL SEPTIC TANK PROVISIONS*. An additional 250 gallons of capacity and seven square feet of surface area is required when a garbage grinder can reasonably be expected at the time of construction. A gas deflection baffle or other acceptable outlet modification and a dual compartment tank or two tanks in series shall also be provided.

10. *DESIGN TANKS ACCORDING TO 75-A*. Unless otherwise stated, tanks shall be designed based upon 10 NYCRR, Appendix 75-A.

SEPTIC TANK INSTALLATION STANDARDS

1. *INSTALL TANK ACCORDING TO MANUFACTURER'S RECOMMENDATIONS*. All applicable recommendations provided by the manufacturer shall be implemented.

2. *INSTALL TANK LEVEL*. The septic tank shall be installed at level in all directions (with a maximum tolerance in any direction of +/- one quarter inch) on a minimum 3 inch thick bed of properly leveled and compacted sand (free from rocks) or pea gravel.

3. *DROP 'T' OR EQUIVALENT BAFFLE*. All outlets from the septic tank shall be provided with drop 'T' or equivalent baffle approved by the Department extending into the liquid one third of the liquid depth.

4. *GAS DEFLECTION BAFFLES*. Gas deflection baffles are recommended for installation below each effluent drop 'T'.

5. *SINGLE OUTLET*. Tanks shall be provided with a single outlet. A distribution box is required for all systems with multiple leaching pools unless an alternative design is approved by the Department.

6. *MAXIMUM DIRECT FLOW PATH*. The outlet shall be located at the maximum possible flow path from the inlet.

7. *GROUND COVER OVER SEPTIC TANK.* The top of the septic tank shall not be located greater than four feet or less than one foot below final grade. For septic tanks with domes, the top of the dome shall not be located greater than two feet or less than one foot below final grade.

LEACHING POOL REQUIREMENTS

A. LEACHING POOL DESIGN AND CONSTRUCTION

1. TYPICAL LEACHING POOL AND LAYOUT.

2. *DISTANCE TO GROUNDWATER.* The bottom of any leaching pool system shall be at least three feet above the highest recorded groundwater level at the proposed system's location and at least two feet for shallow alternative systems approved by the Department.

3. *ABSORPTION RATES.* For areas of sand and gravel, the design of the leaching pool shall be based upon a maximum leaching rate of 1.5 gallons of sewage per day per square foot of sidewall area.

4. *ONE TO FOUR BEDROOMS.* The minimum disposal systems for a one to four bedroom single-family residence are described in Table 3.

5. *FIVE OR SIX BEDROOMS.* The minimum disposal systems for a five or six bedroom single family residence are described in Table 4.

6. *PIPE DIRECTLY.* The leaching pools shall be piped directly from the septic tank or a distribution box

7. *PRECAST REINFORCED CONCRETE.* Leaching pools are to be constructed of precast reinforced concrete (or equal) leaching structures, solid domes and/or slabs.

8. *DIAMETER.* Leaching pools shall be a minimum of eight feet in outside diameter.

9. *MULTIPLE POOLS OF UNIFORM SIZE.* When more than one leaching pool is used, all pools shall be of nominally equal size.

10. *ACCESS OPENINGS.* Access openings with a minimum diameter of twenty (20) inches shall be provided for each pool as shown in Figure 4.

11. *GROUND COVER OVER LEACHING POOLS.* Leaching pool covers shall be at least one foot below grade, but not more than two feet. For deeper systems, "dummy" rings shall be used to bring the top of the slab or dome to within four feet of final grade.

12. *MAXIMUM DEPTH OF LEACHING POOL.* The maximum permissible depth of a precast concrete leaching pool is twenty-five (25) feet below grade.

13. *CHIMNEYS.* Leaching pool "chimneys" shall be of reinforced precast concrete, securely affixed, and may not exceed two feet in height; or four feet, if a locking cast-iron cover is installed at grade.

14. *SAND AND GRAVEL REQUIRED.* The effective leaching area of a leaching pool (below the inlet pipe) shall be installed entirely in sand and gravel, acceptable to the Department.

15. *DEBRIS.* The bottom and sidewall area of the leaching pools shall be free of debris before backfilling.

FINAL GRADING AND BACKFILLING

A. FINAL INSPECTION

At the time of completion, the system shall be left visible for inspection. Prior to inspection, the bottom of the pipe trench shall be backfilled with granular material and stabilized to provide a firm bedding. The property lines shall be "staked" in order to ascertain that the system is located on the property in accordance with these Standards.

B. BACKFILL & GRADING

The completed system shall be backfilled and covered with suitable soil following approval to do so by the Department. The property shall be graded so as to minimize surface drainage into the system. A maximum five percent slope shall be maintained for a minimum of twenty (20) feet horizontally from the nearest edge of the leaching pool(s) before tapering off to prevent seepage of the leachate through the toe or edge of the slope. Steep grades further than twenty (20) feet from the leaching pools shall be stabilized pursuant to local codes.

C. RETAINING WALLS

1. In cases where the maximum five percent slope cannot be maintained, the utilization of retaining walls, or other means, may be approved. In such cases, the retaining walls, or other means, shall be designed by a licensed professional engineer or registered architect and be shown as part of a grading and plot plan. The plan shall be reviewed and approved by the Department prior to construction.

2. Retaining walls shall be designed in accordance with good engineering practice and applicable building codes. In addition, retaining walls cannot be closer than ten feet from the nearest part of the sewage disposal system. Retaining walls within twenty (20) feet of a leaching pool(s) shall be waterproof concrete.

TABLE 2 - MINIMUM SEPTIC TANK CAPACITIES

Number of Bedrooms	Minimum Tank Capacity (gallons)	Minimum Liquid Surface Area (SF)
1,2,3 or 4	1,000	27
5 or 6	1,500	41