



Town of Greenwich
Department of Health
Division of Environmental Services

Checklist for **Engineered Design Proposal** for Sewage Disposal

Job Site: _____

Owner: _____

Design Engineer: _____

circle (O) = deficiencies; check mark (✓) = satisfactory

- Original signature and seal of the design engineer on each copy of plans required (blue print of seal and signature is unacceptable).
- Plan drawn to scale: 1" = 20' for residential lots; 1" = 30' or 1" = 40' for large projects such as schools, shopping centers, etc.
- Key plan or locus of subject parcel required in upper right hand corner.
- Title must be placed in lower right hand corner of drawings and on plot plan and shall include: owner's name and address, location of project with street number or lot number and street number, parcel ID number, scale used, and latest design date.
- Plot plan included, showing lot #, size, property lines.
- Legend to identify various indicators of stone walls, well, deep test holes, percolation tests, curtain drains, storm drains, etc.
- Existing contours in building and leaching areas.
- Proposed contours showing fill extensions and cuts.
- Cross sections through leaching area indicating elevations of system, ledge, curtain drain, groundwater, fill, etc.
- Sewer line from building to septic tank, effluent distribution piping and distribution boxes, specify pipe sizes and type.
- Septic tank location and size. Include riser and manhole covers specifications.
- Pump chamber location and size, chamber cross section showing manhole, float controls, and discharge volume. Show specifications for pump, piping, float levels, disconnect chain, valves, dose volume and emergency storage capacity.

- Retrofit work: If either the tank or pump chamber are existing indicate whether they are in compliance with the riser and manhole cover requirements of the Technical Standards or else indicate that retrofit work will need to be performed as part of the permit to meet the requirements and describe what work needs to be done.
- Dimension leaching system with center line distances, lengths, widths and depths; building to septic tank, curtain drain with inverts, embankments, etc. Do not rely on installer to accurately scale critical dimensions of plan.
- Invert elevations at foundation wall, inlet and outlet of septic tank, inlets and outlets at distribution boxes and inverts at end of pipes, proposed bottom elevation of leaching structures.
- Stable benchmark adjacent to proposed building and sewage disposal system with horizontal and vertical controls. Installer should not be required to transfer benchmarks when considerable differences (more than 10' to 15') exist between the bench mark and leaching area. If the benchmark is disturbed prior to construction, the engineer should set another one for construction purposes.
- North arrow (may be true, magnetic or assumed, note on plan).
- Written description of basis of design or proposed use of building, i.e. number of bedrooms, number of employees, etc. Specify whether or not the tank will be receiving flows from a large tub(s) (if so, indicate volume(s)) and/or whether a garbage grinder is accounted for in the sizing of the tank. If an ejector pump is proposed for the design, indicate the percentage of the total flow is going to the pump – this could affect tank sizing.
- Written description of proposed leaching system including required including required leaching area by code. Example: design percolation rate 1"/20 mins., proposed 4 bedroom dwelling – 225 sq.ft. required per bedroom – 900 sq. ft. required. 900 sq. ft. provided with 300 lineal ft. of 3' wide, 18" deep leaching trench.
- Soil test data shown on plan to include deep test hole soil descriptions and time and measurement readings of percolation tests. Soil and percolation test locations.
- Proposed well location, with protective radius, and supply line to house or public water supply line. Recommend increasing 75' distance for private residential well where possible to provide maximum protection. Note locations of potential pollution sources (i.e. oil tanks, propane, etc.) on lot, existing and proposed.
- Locate existing or proposed well water treatment wastewater structures along with appropriate setbacks called out.
- Locate wells, septic systems and other potential sources of pollution on adjacent properties. If locations not shown, provide statement certifying that none exist.
- Show building footing drain discharges, leader and driveway drain and stormwater detention locations, storm drains in roads, streams brooks, drainage swales, wetlands, watercourses and ledge rock outcrops (w/ separation distances).
- The Inland Wetland and Watercourses Agency informed; approval granted if necessary.

- Show existing structures on same lot.
- Call “Call Before You Dig” 1-800-922-4455, to locate all underground utilities on property and show service lines to building. Public utilities shown on plan. Excavations within 5 to 25 feet of the septic system shall not be backfilled with free draining material.
- Show detail of leaching system proposed – trenches, galleries, etc. as well as curtain drain if proposed.
- Indicate driveway location and front and rear of dwelling.
- Provide detail specifications of materials to be used such as fill, force main piping, pump model and manufacturer, H-20 loading for structures under pavement (including risers and covers), curtain drain backfill, manhole frames and covers and other non-typical items required for design.
- If a Low Pressure Distribution is proposed provide the following:
 - Access and Flushing provisions
 - Flow adjustment capability
 - Pressure filters
 - Orifice shields
 - Manifold access and pipe information (size, specifications, hole diameter/spacing)
 - Operation and Maintenance requirements (i.e. flushing, checking pressure heads)
- Identify 100% Reserve Area, if required, by layout of a leaching system of acceptable size, with description of proposed design with appropriate separation distances.
- Revision dates shown on plan.
- MLSS calculations shown on plan; show points used to calculate slope (from just above proposed system to 25 - 50 feet down slope of system) including information from a down-gradient test hole. Show required spread vs. proposed spread.
- The following notes are required on all plans:
 - All select fill material must meet the requirements specified in Section VIII A of the State of Connecticut Public Health Code Technical Standards. A sieve analysis must be submitted and approved by the engineer prior to the installation.
 - Fill shall be placed on the perimeter of the trench area and spread with a small crawler, tractor or other approved machinery.
 - Contractor shall contact the certifying engineer and the Health Department at least 24 hours prior to construction; if not, the system installation will not be certified.
 - A Connecticut registered Professional Engineer acceptable to the Director of Health shall inspect construction to insure compliance with the proposed plan.
 - An “As Built” plan, certified by a Professional Engineer, shall be submitted to the Department of Health before a “Permit to Use” is issued.

For Septic System Repairs: any variances that may be requested must be noted on the plan along with reasons (i.e. restrictions) for the request for the variance. Variances granted by the Department of Health will be noted on the Permits along with any restrictions for use.

Comments: _____

Reviewed by: _____ Date: _____

Revision Information

contact	date	revision fee	comments