Geomatrix S-Box™ Leaching System

Residential Installation Instructions

These instructions serve as a general overview for the installation of Geomatrix Systems S-Box™ Leaching System. These installation instructions, associated drawings and all applicable standards and regulations of the Connecticut Department of Public Health should be strictly adhered to.

Contact Geomatrix for non-residential application engineering assistance.

Geomatrix Systems, LLC (Geomatrix) advises the Designer, Installer and Owner of the Geomatrix Leaching System that oxygen transfer rates should be evaluated to ensure sufficient oxygen is available for the leaching system to operate properly for the actual wastewater flow and strength. Geomatrix advises that when oxygen is limiting, proper treatment and long term hydraulic function are jeopardized.

Note: Do not install the system when soil conditions are unsuitable.

1. Layout system.
2. Prepare site and remove any trees with a drip line falling within 10 feet of the leaching system to help prevent root intrusion.
3. Locate and mark out location of trenches, piping and other components. Set stakes for location and elevation reference points.
4. The S-Box system should be utilized with an appropriate sized two compartment septic tank.
5. Excavate trenches to design elevation plus a minimum of 2". Trenches should be level end to end. Trenches should be excavated a minimum of 8" wider than the Product width.
6. Rake bottom and sides of trench if smearing of fines is present. Remove any large stones (3"+) and other debris. *Note: When soil conditions necessitate, avoid walking in the trench bottom to prevent compaction and loss of soils structure.*
7. Spread a minimum of 2" of ASTM C-33 sand or approved equivalent (sand), in bottom of trench to bring back up to design elevation. Use a transit or laser level to confirm that the sand is level and smooth. Walk the sand in to compact it. *Note: Use of a mechanical compactor should be avoided when soil conditions could be negatively impacted.*
8. Set the first S-Box unit into the trench.
9. Install additional S-Box units into the trench to achieve the required design length.
10. Glue distribution pipe together using two-part primer and solvent weld glue or approved equivalent.
11. Pull/push units together to fully engage distribution pipe into the coupling on the adjacent unit.
12. Cap the distal end of S-Box distribution pipe; unless manifolded to the air supply line. (see 17)
13. Carefully place sand over and around S-Box units, uniformly filling in 6" lifts.
14. Between each lift, using standard 2x4 wood stud, compact sand in and around the S-Box units.
15. Fill any remaining voids with sand, to a level a minimum of two inches above the S-Box fabric material. Be careful to fill and compact the area below distribution pipe.
16. Connect S-Box distribution pipe to septic tank, pump tank and/or D-Box using appropriate fittings.

17. Install SoilAir™ system, or at a minimum an appropriate air supply line for future use. Air supply lines for typical residential homes of up to 5 bedrooms should be a minimum of 2" sch. 40 PVC. The air line should pitch towards the leaching system and is installed by teeing into the distribution piping anywhere downstream of the septic tank. The air line is then extended to grade or run to a convenient location and capped. If a distribution box is utilized, it should be sealed with silicone prior to backfilling to minimize air leakage. Contact Geomatrix for additional air line / SoilAir details and instructions.
18. After all inspections by regulatory agency and Engineer (if required) cover the system with clean fill (no rocks or debris) as uniformly as possible with a minimum cover depth of 6".
19. Grade area over and around the system to shed storm water and sheet flow
20. Seed and hay as soon as possible to prevent erosion.

NOTE: If multiple rows are utilized, it is recommended to equally feed the rows, parallel distribution, to evenly distribute the effluent over the whole system.

NOTE: If installing leach field in a fill section, top soil and other impermeable layers must be removed from under the entire fill section or tested to assure suitability.

NOTE: When system is being dosed by a pump station, float chamber, or siphon chamber the dose volume should not exceed the interior void space of the Product. A dose should ideally be between 25 and 50 percent of the interior void space. See chart below:

Model	ELA	Storage Volume per Module Maximum	Storage Volume per Module at 25% Capacity	Storage Volume per Module at 50% Capacity
SB1-3.5-36	4.4	6.7 Gallons	1.7 Gallons	3.4 Gallons
SB1-7-36	8.2	12.8 Gallons	3.2 Gallons	6.4 Gallons
SB1-13-36	14.7	23.3 Gallons	5.8 Gallons	11.7 Gallons
SB1-26-36	28.7	45.8 Gallons	11.5 Gallons	22.9 Gallons
SB1-3.5-72	8.5	12.2 Gallons	3.1 Gallons	6.1 Gallons
SB1-7-72	15.9	23.8 Gallons	6.0 Gallons	11.9 Gallons
SB1-13-72	28.5	43.6 Gallons	10.9 Gallons	21.8 Gallons

Please call Geomatrix Systems with any questions or suggestions – 860-510-0730
or visit our website at www.geomatrixsystems.com