

Appendix D: Geomatrix System Information



July 23, 2019

Annual Remote Monitoring Agreement

Lutheran Home
990 Main Street North
Southbury, CT 06488

The following will be conducted for your site:

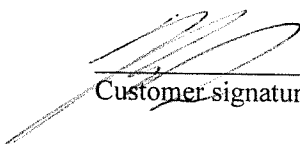
- Respond to alarm(s) reported by remote telemetry and communicating to site contact.
- Review of data associated with alarms.
- Quarterly review of data.
- If troubleshooting any alarm or other issues exceeds ½ hour per quarter and/or there are more than 3 alarms per quarter, you will be billed at our standard technician labor rate of \$187.50 per hour or at our applicable engineering rate. We will notify you if this will exceed \$500 per alarm/issue.
- We will only perform site visits with your authorization; this work will be billed on a time and materials basis.
- Any engineering services that you or your engineer may request of Geomatrix, will be performed on a time and materials basis.

The cost for the above work is \$3,828.60.

If you would like us to move forward with this work, please sign below and return with a check for \$3,828.60.

This proposal is valid for 30 days. This agreement is for 12 calendar months and will take effect when a signed copy and full payment is received by Geomatrix.

The undersigned acknowledges that he/she has read and understands the provisions set forth in this Agreement and agrees to be bound hereby.


Customer signature

Kevin Gordon
Customer Name (Print)

8/1/19
Date

Geomatrix, LLC
114 Mill Rock Road East – Old Saybrook, CT 06475
Phone: 860-510-0730 – Fax: 860-510-0735



Advanced Wastewater Solutions

PROJECT:

Lutheran Home of Southbury
990 Main Street North
Southbury, CT

REVISION: 0

DATE: May 26, 2016

Geomatrix Systems, LLC
114 Mill Rock Road East
Old Saybrook, CT 06475
Phone: 860-510-0730 – Fax: 860-510-0735
www.geomatrixsystems.com
www.soilair.com

Geomatrix Systems, LLC (Geomatrix) is pleased to provide you with the following information and pricing for our components of the septic system at Lutheran Home, Southbury, CT. as designed by BETA Group, Inc.

Geomatrix will provide:

Forms and training of the Geomatrix GST6212 Leaching system - 2 days of training by Geomatrix employee, then the rental of the forms until leach field is installed.

57,024 Sq. Ft. / 3,240 lf - CTDEEP ELA rating of 17.6

2" PVC pipe distribution line for over the GST, drilled to engineers specification.

GeoGuard diffuser shields for distribution pipe

Distal end ports per engineer's specification

Inspection ports for ends of GST rows

SoilAir RF29450 4hp units (quantity 6)

Custom control panel to run SoilAir units and effluent pumps

Floats, weights and hangers for pump station

Applications Engineering

Installation Assistance for piping, SoilAir and Control Panel

Price: \$469,258.40

The following are some of the items that contractor is responsible for, this is a partial list; please refer to engineers plan for all items.

- ASTM C-33 Sand –147 yards per zone x 6 zones = **Approximately 882 Yards**

NOTE: Amount of sand calculated to fill the form, a base of 4" and a 4" perimeter around the form. Installer is responsible for ordering additional sand for larger and/or irregularly shaped excavations, to account for spillage, etc. **MUST MEET ASTM C-33 SPEC.**

ASTM C33 Sand

Sieve Size	Percent Passing by Weight
3/8"	100.0
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	5-30
No. 100	0-10
No. 200	0-3

- ¾" **clean washed** stone –190 yards per zone x 6 zones = **Approximately 1140 Yards**

NOTE: Amount, of stone calculated to fill form and to provide 6" over GST to accommodate distribution pipe. Installer is responsible for ordering additional necessary stone to account for spillage, etc. **STONE MUST BE WASHED & CLEAN!**

- Stego Wrap 15-mil Vapor Barrier for over GST leach fields
<http://www.stegoindustries.com/products/stego-wrap-15-m-1.php>
- Filter Fabric
- All pipe and fittings (other than the distribution pipe for leaching fields)
- Excavation
- Labor
- Electrical for
 - (6) Pumps, 460VAC 3Ø 3Hp (4.8 FLA each)
 - (4) Pumps, 460VAC 3Ø 7-1/2Hp (11 FLA each)
 - (10) Blowers, 460VAC 3Ø 4Hp (6.2 FLA each)A dedicated phone line, internet connection with a static IP Address and Email, or an optional cell modem link can be provided. There is an additional charge for the cell modem.

For any questions regarding the electrical requirements contact Dan Borkowski at dborkowski@geomatrixllc.com or 860-227-3157



BENEFITS OF SOILAIR

- Rapidly restores proper septic system function
- Enhanced B.O.D., pathogen, nitrogen & phosphorus removal
- Minimal disruption and damage to existing landscaping
- Lower installation, operation & maintenance costs
- Long term solution

SoilAir products are manufactured by:

Geomatrix, LLC

114 Mill Rock Road East
 Old Saybrook, CT 06475
 860-510-0730 – P
 860-510-0735 - F

Manufactured under the following U.S. patents; 6,485,647, 6,726,401, 6,814,866, 6,887,383, 6,923,905, 6,959,882, 6,969,464, 7,157,011, 7,309,434, 7,374,670, 7,465,390, 7,744,759, D646,151, 8,617,390, 8,834,727 – other patents pending.

© 2015 – Publication number SA042915 – SoilAir is a trademark of Geomatrix, LLC

Models

**RF9858 • RF15652
 RF21650 • RF29450**

SoilAir™ units are utilized for rejuvenation of failed leach fields and for enhanced treatment of wastewater. All are controlled by a microprocessor controller. One year of remote monitoring is standard with these models. The controller can log 365 days worth of data and can be set to control the operation of the system on a daily basis, allowing the system to be shutdown on certain days or times, or to run more or less on other days, depending on flows or other constraints.

On a gravity system, an optional float switch can be installed in the outlet baffle or effluent filter to automatically dose a set volume of effluent to the leach field. A float can also be utilized in conjunction with a pump system to alternate the flow of air and water.

SPECIFICATIONS

Enclosure:

H.D.P.E., weather/UV rated. Pedestal base for burial - Nominal dimensions:

38" long x 26" wide x 33" high

38" long x 26" wide x 25" high - installed/buried

Weight:

RF-9858MP	RF15652MP	RF21650MP	RF29450MP
167 lbs	175 lbs	192 lbs	226 lbs

Electrical:

Model	HP	Volts	FLA -1 ph	FLA - 3 ph
RF9858	1.5	208/230	7.3	5.0
RF15652	2.0	208/230	12.0	6.3
RF21650	3.0	208/230	N/A	9.0
RF29450	4.0	208/230	N/A	12.9

@ full load with surge protection
 Breakers to be determined by electrician

Air pipe: sch. 40 PVC

RF9858MP	RF15652MP	RF21650MP	RF29450MP
Min. 3" Max run 50'	Min. 3" Max run 50'	Min. 4" Max run 100'	Min. 4" Max run 100'

Sound level: dbA @ 10'

RF9858MP	RF15652MP	RF21650MP	RF29450MP
64.8	70.5	73.0	78.7

Treatment capacity*

Model	Max ft ²	Max gpd
RF 9858MP	2178	1742
RF 15652MP	3467	2774
RF 21650MP	4800	3840
RF 29450MP	6533	5226

*contact representative for additional information

Time dosing, dual alternating pump controls and other options available.

*phone line required and an agreement for ongoing monitoring after the one year period must be entered into.

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Geomatrix GST™ 37 & 62 Series Leaching System Installation Instructions

GST VIDEO LINK - <https://drive.google.com/open?id=0ByzkjWaAMzo0SXVXTnhjUkZxdnc>

These instructions serve as a general overview for the installation of Geomatrix Systems GST 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 applications and systems
that are over 2,000 gallons per day.**

Geomatrix Systems, LLC (Geomatrix) advises 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 limited, proper treatment and long term hydraulic function are jeopardized.

**An authorized representative of Geomatrix Systems, LLC must be present unless
the contractor is certified by Geomatrix Systems.**

1. Layout system.
2. Prepare site and remove any trees with a drip line falling within 10 feet of the leaching system.
3. Excavate trench to a depth that is at least 2" below the base elevation of the GST to accommodate a minimum of 2" of sand. Trench width should be a minimum of 45" for the GST 37 series and 70" for GST 62 series.
4. Rake/scarify sidewalls and bottom of trench to address any smearing of fines, and then do not walk in trench bottom.
5. Place a minimum of 2" of ASTM C-33 sand or approved equivalent (sand) in the bottom of the excavation to serve as base for GST, rake and level and uniformly compact. If a 2" lift of sand is present simply walking on it should provide sufficient compaction.
6. Set the GST forms in center of trench
7. Place covers over entire center stone channel and alternating stone finger compartments.
8. Place sand into void space between trench sidewall and GST form. Also fill the sand finger voids in the forms and uniformly compact.
9. Remove all covers from over entire center stone channel and stone finger compartments.
10. Place clean CT DOT #6 (3/4") stone into the interior of the GST form
11. Pull first GST form and "leap frog" form ahead of the last GST form.
12. Repeat sequence until desired trench length is installed.
13. Ensure that sand and backfill materials are compacted to prevent settlement
14. Install approved distribution piping on top of the 12" central stone channel.
15. Place stone around the distribution pipe.
16. Put approved filter fabric over the system.
17. Backfill system to ensure that uniform cover and compaction exists over the top of the system (a

minimum of 6" of cover is required). When GST is installed below areas subject to H-20 loading, see Note below.

18. Finish grade over the system should ensure that storm water sheet flow is diverted away from the leaching system, tank(s) and pump tank(s) if present.
19. Seed and hay disturbed area. The use of wood chips as cover material is NOT recommended.
20. Maintain the area to prevent tree roots from impacting the system.
21. Properly service the septic tank every 3-5 years; or as advised by the regulatory agency or your service provider.

Note: If the GST is to be installed under an area where vehicle traffic is likely, a minimum of 12" of cover is recommended. A geogrid such as Tensar BX1100 or equal can also be utilized. Refer to the Geomatrix GST maintenance recommendation for care of system.

Any questions call Geomatrix Systems, LLC at 860-510-0730
or visit our website www.geomatrixsystems.com

Typically 75 – 150' of GST 6212 can be installed in a day. Footage varies on site constraints, material staging among other things.

For any details on GST installation please email or call Dave Jewett at djewett@geomatrixllc.com or 860-575-8769.

Geomatrix Systems, LLC
STANDARD LIMITED WARRANTY

(a) The structural integrity of leaching products ("Product(s)") manufactured by Geomatrix Systems, LLC (Geomatrix), when installed and operated in a leach field of a septic system, in accordance with Geomatrix's instructions for the Product, is warranted to the original purchaser ("Purchaser") against defective materials and workmanship for one year from the date that the septic permit is issued for the septic system containing the Product; provided, however, that if a permit is not required by applicable law, the warranty period will begin upon the date that the Product is received by the Purchaser. To exercise its warranty rights, Purchaser must notify Geomatrix in writing at its main office in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Geomatrix will supply replacement Products for Products determined by Geomatrix to be covered by this Limited Warranty. Geomatrix's liability specifically excludes the cost of removal and/or installation of the Product.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE PRODUCT, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE

(c) This Limited Warranty shall be void if any part of the leaching system is manufactured by anyone other than Geomatrix. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Geomatrix shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Purchaser or any third party. Specifically excluded from Limited Warranty coverage are damage to the Product due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Product; the Product being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground cover set forth in the installation instructions; the placement of improper materials into the system containing the Product; failure of the Product or the septic system due to improper siting or improper sizing, excessive water usage including leaking or running plumbing fixtures, storm water flow into leach field and/or Product, insufficient oxygen to meet the demands of the wastewater, improper grease disposal, or improper operation; or any other event not caused by Geomatrix. This Limited Warranty shall be void if the Purchaser fails to comply with all of the terms set forth in this Limited Warranty. Furthermore, in no event shall Geomatrix be responsible for any loss or damage to the Purchaser, the Product, or any third party resulting from installation or shipment, or from any product liability claims of Purchaser or any third party. For this Limited Warranty to apply, the Product must be installed in accordance with all conditions required by the septic system designer, state and local codes; all other applicable laws; and Geomatrix's installation instructions.

(d) No representative of Geomatrix has the authority to change or extend this Limited Warranty. No warranty applies to any party other than the original Purchaser.

This represents the Standard Limited Warranty offered by Geomatrix. A limited number of states and counties have different warranty requirements. Any purchaser of Product should contact Geomatrix's main office in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of the Product.



The following are the terms and conditions pursuant to which Geomatrix, LLC (including its authorized agent, us, we) agrees to install and monitor the SoilAir System for the Customer (you, your), and you agree to maintain the septic system and comply with certain other obligations.

1. **Installation of Equipment.** If our proposal so provides, we will install the SoilAir System equipment (the "Equipment") on the existing septic system according to our standard operating procedures. Installation shall be deemed complete upon installation of the SoilAir Equipment (the "Operation Date"). The work area will be rough graded; however, restoration of landscaping and pavement is NOT included, unless specifically stated in the Proposal.
2. **Operation, Monitoring & Maintenance.** The SoilAir System relies on the use of mechanical components to enhance the performance of the septic system. Like all mechanical components, as well as all septic systems, proper oversight and upkeep is advisable. We can structure a Proposal for your consideration to provide continuing operation, monitoring and maintenance services if you so desire. Certain states require that these services be provided by licensed professionals.
3. **Maintenance and Repair.** You agree to be responsible for future maintenance and repairs to the septic system. You are also responsible for the costs to maintain and repair Equipment that is not covered by Warranty; for example air filter replacement, blower repair, etc. You must have the septic tank(s) and grease trap(s) pumped at the frequency specified or recommended.
4. **Customer Obligations.** You agree: (a) to provide the electrical supply with surge protection and in certain cases a non-dedicated phone line on a continuous basis for operation of the Equipment, including resetting ground fault circuit interrupters (GFCI) and circuit breakers if necessary; (b) to make no substantial increase in the wastewater flow (including the timely repair of leaking or running plumbing fixtures) or character, nor place improper materials into the septic system, including non-biodegradable or inorganic items, petroleum products and other hazardous, toxic, pollutant, or dangerous substances; (c) not to discharge a garbage disposal or water softener into the septic system; (d) that in the event of any problem in the operation of the septic system or Equipment, to disconnect the electrical supply to the Equipment and immediately notify us of the nature of the problem, (if the problem is not covered by the Warranty, a service fee will be charged if we make a site visit in response to your call); (e) to provide us with adequate access to install, inspect, monitor, and maintain the Equipment; (f) not to, or allow others to, modify or work on the septic system or Equipment without our prior written approval (including placing additives into the septic system or installing additional equipment on the septic system); (g) not to make holes into or adjacent to the septic system and not to change the character of cover material over the septic system (including grading, paving, repaving etc.); (h) to maintain adequate liability insurance, as applicable; and (i) that the technology underlying the SoilAir System is owned by us and that all information about the characteristics and operation of the SoilAir System and the Equipment is proprietary information of SoilAir. You agree that you will not use, share or assist any third party in obtaining or using, this proprietary information, at any time in the future, or to attempt to reverse engineer or disassemble the Equipment for any reason.
5. **Customer Acknowledgements Regarding Septic System Performance.** You acknowledge that routine maintenance of the septic system and Equipment is critical for proper function and performance; and if

not performed, could result in damage to the septic system components and Equipment. You also acknowledge that certain events which are unrelated to the performance of the Equipment can cause the septic system to malfunction, including overflow or back up, which could affect use of premises or create a nuisance. Such malfunctions might be caused by, for example, changes in wastewater flow or character, blockages in pipes, uncontrolled storm events, groundwater, system misuse, placing foreign objects or materials into the septic system, effects of motor vehicles or heavy equipment, earth movements, unforeseen equipment or power failures, etc.

6. **Limitation on Liability.** We will be liable only for direct damages and losses which are incurred by you because of our gross negligence or intentional misconduct in the installation or maintenance of the Equipment. WE DISCLAIM ALL RESPONSIBILITY FOR ANY AND ALL OTHER DAMAGES, CLAIMS OR LOSSES WHICH YOU OR ANY OTHER PARTY MAY HAVE OR INCUR, WHETHER THEY ARE DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL, INCLUDING THOSE TO ANY PERSON, PROPERTY, AND BUSINESS OR PERSONAL ACTIVITY, EVEN IF WE ARE INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. OUR LIABILITY HEREUNDER SHALL NOT EXCEED THE AMOUNT YOU ACTUALLY PAY TO US UNDER THIS INSTALLATION, MONITORING AND MAINTENANCE AGREEMENT.

7. **Warranty.** The Equipment is subject to a one year Limited Warranty on all mechanical and electrical components (the "Warranty"). However, damage caused by or resulting from electrical surges, lightning or power outages is specifically not covered. You will have no other rights, and we shall have no other obligations, arising from the performance of the SoilAir System or Equipment or your septic system. This limited warranty and associated remedies are exclusive. NO OTHER WARRANTIES ARE PROVIDED, AND WE EXPRESSLY DISCLAIM ALL OTHER WARRANTIES, INCLUDING ANY EXPRESS OR IMPLIED WARRANTIES OF PERFORMANCE, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

8. **Term, Early Termination of Agreement.** We may terminate this Agreement if you fail to pay any amount due under this Agreement within 30 days after the date of invoice, or if you commit any other material breach of this Agreement.

9. **Customer Authorization.** You represent that you own the Premises or are authorized to enter into this Agreement. You may not assign or transfer this Agreement.

10. **Connecticut Law.** This Agreement shall be governed and construed under the laws of, and (except as set forth below) adjudicated in the courts of, the State of Connecticut, without effect to its conflict of laws provisions. Any dispute relating to the performance of the SoilAir System or Equipment or payment under this Agreement shall be resolved solely by arbitration in Middletown, Connecticut before a single arbitrator under the Rules of the American Arbitration Association. The parties' reasonable costs of resolution, including reasonable attorneys' fees, shall be allocated to one or both parties by the arbitrator, according to the merit of each party's case and equity.

11. **Entire Agreement.** This Agreement (including the documents referred to herein) constitutes the entire agreement between the parties and supersedes any prior understandings, agreements, or representations by or between the parties, written or oral, to the extent they relate in any way to the subject matter hereof.

12. **Amendments.** No amendment of any provision of this Agreement shall be valid unless the same shall be in writing and signed by you and us.