

VICINITY MAP
NTS

SITE DATA
OWNER: TIMOTHY SCOTT FAIRCLOTH
SITE ADDRESS: 836 BUNNLEVEL ERWIN RD.
BUNNLEVEL, NC 28834
PIN: 0566-99-7229
AREA: 22.37 AC
FIRM MAP: 3720056600J
APPLICANT: TJ BANKS



Know what's below.
Call before you dig.

CONSTRUCTION PLANS

FOR MOUND SEPTIC SYSTEM 836 BUNNLEVEL ERWIN RD BUNNLEVEL, NC 28334

IN

HARNETT COUNTY,
NORTH CAROLINA

SHEET INDEX

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34 CASTLEWOOD DRIVE
CLAYTON, NC 27520
(919) 624-8925
FIRM # C-5206

PNTA ENGINEERING, PC

TIMOTHY SCOTT FAIRCLOTH PROPERTY
836 BUNNLEVEL ERWIN RD
BUNNLEVEL, NC 28334

COVER PAGE

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NA

NA

11/12/2025

NA

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Design Specifications

Daily Waste Flow	480 gpd
Septic Tank Type	Double chamber
Septic Tank Size	Min. 1000 gal
Pumping Tank Size	500 gal
Loading rate for mound fill	0.6 gal/ft ² /day
Distribution area	800 ft ²
Loading rate for in-situ soil	0.4 gal/ft ² /day
Basal Area	1,200 ft ²
Height of mound	2.5 ft
Volume of fill	146 yd ³
Volume of topsoil	48.7 yd ³
Volume of gravel	20.7 yd ³
Total length of laterals	260 ft
Lateral diameter	1 1/4 in
Lateral configuration	5 lines x 3 ft spacing
Supply line length	245 ft
Supply line diameter	2 in
Manifold placement	Side
Hole size	5/32 in
Hole spacing	3 ft
Number of holes	85
Pressure head	1.3 psi (3 ft)
Flow rate per hole	0.5 gpm
Total flow	42.5 gpm
Elevation head	6.35 ft
Friction head	10.7 ft
Pressure head	3.0 ft
Total head	20.0 ft
Pump requirements	42.5 gpm at 20.0 ft head
Storage volume in supply line	39.7 gal
Storage volume in laterals	16.64 gal
Total storage volume in lines	56.34 gal
Check valve required*	No

* Check valve is required if the total volume of storage in supply and distribution lines exceeds 25% of the total daily waste flow

Materials

Type	Size	Quantity	Description
Septic Tank (2-Chambers)	1,000 gal min.	1	Two chamber septic tank
Pumping Tank	500 gal	1	500 gallon fiberglass lift station tank Septic Solutions, Inc. www.septicsolutions.com
Pump	1/2 HP	1	Liberty Pumps FL50 Series or equivalent
Switch		1	Sealed level controls adjustable to 9.6-in drawdown
Alarm		1	Sealed mercury float switch and alarm light
Control Panel		1	50A006 Model Simplex or equivalent
Wiring		1	Approved outdoor receptacle, wire, and conduit for 110V service
Risers		As needed	Concrete or PVC riser to raise tank lids 6" above final grade
Lids		As needed	Compatible with septic tank and pumping tank
Concrete block		2	Raised support for pump
Nylon Rope		As needed	To remove pump from tank
Mortor			To seal around supply line and riser
Pipe (Sch 40 PVC)	2 in	245 ft	Supply line
Pipe (Sch 40 PVC)	1 1/2 in.	15 ft	Supply manifold
Pipe (Sch 40 PVC)	1 1/4 in.	~300 ft	Lateral lines plus extra length for turn-ups and tee risers
Tee	1 1/2 x 1 1/2 x 1 1/4 in.	3	For joining manifold to middle laterals
Elbow	1 1/2 x 1 1/4 in.	2	For joining manifold to end laterals
Elbow	1 1/4 in.	10	5 for joining laterals to manifold 5 for turn-ups
Male adapter	1 1/4 in.	5	For turn-ups
Threaded cap	1 1/4 in.	5	For turn-ups
Gate valve	2"	1	PVC or brass
Threaded union	2"	1	For quick removal of pump
PVC glue			
PVC primer			
Mound fill	146 yd ³		80-90% sand, 10-20% fines
Topsoil	49 yd ³		To support good grass cover
Gravel	20.6 yd ³		Washed stone
Geotextile Fabric	~1000 ft ²		Barrier between the gravel and topsoil
Grass / Sod			Locally available Bermuda
Fertilizer/Lime			Apply per topsoil test results

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MOULD SYSTEM SPECIFICATIONS/MATERIALS

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REVISION

NA

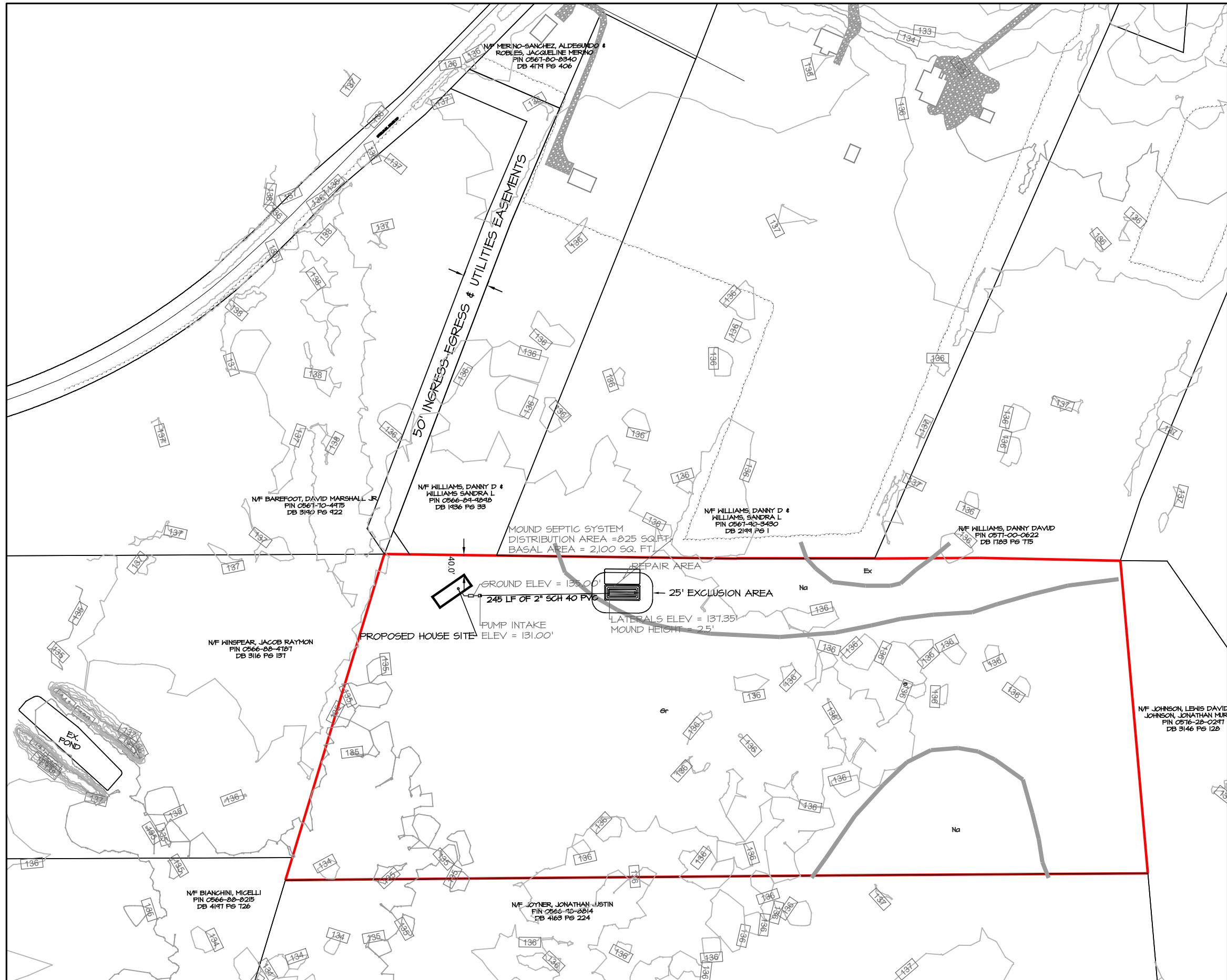
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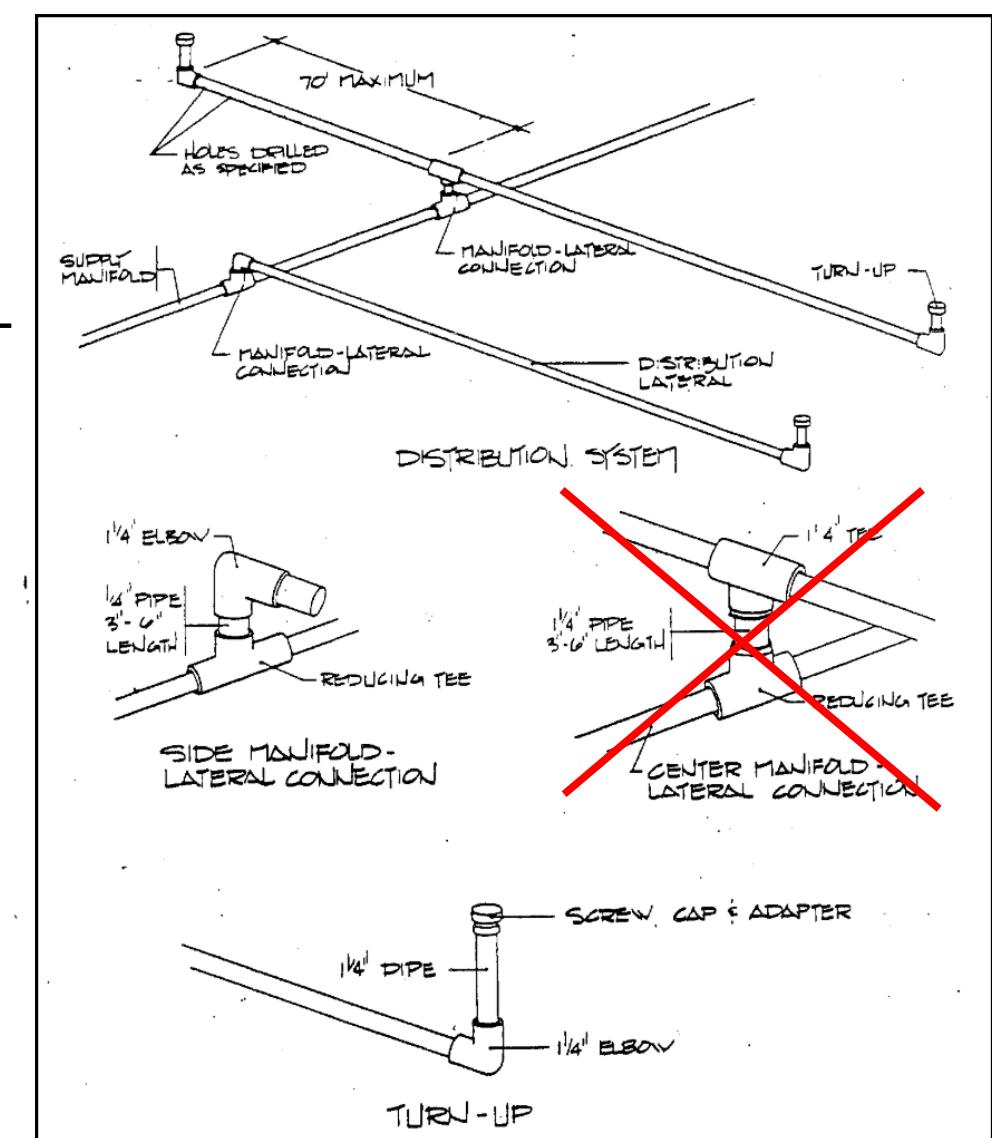
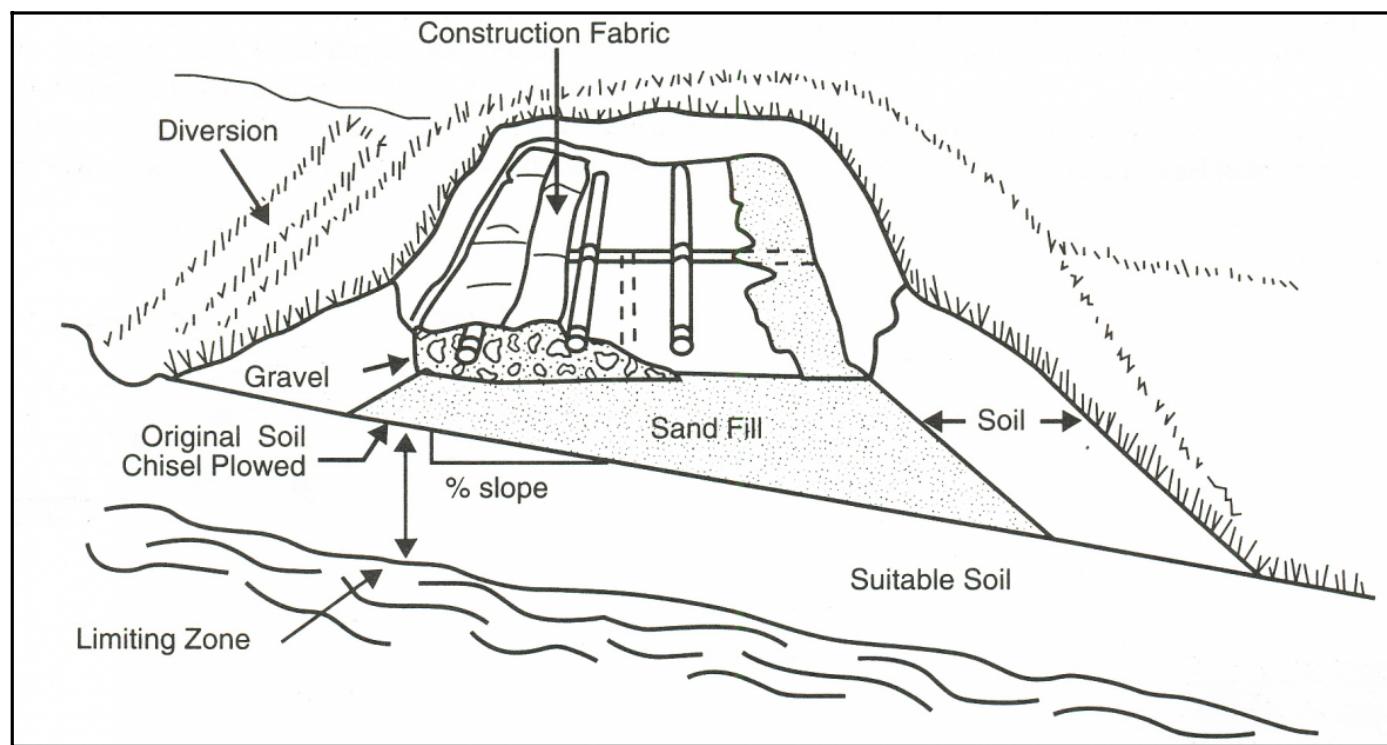
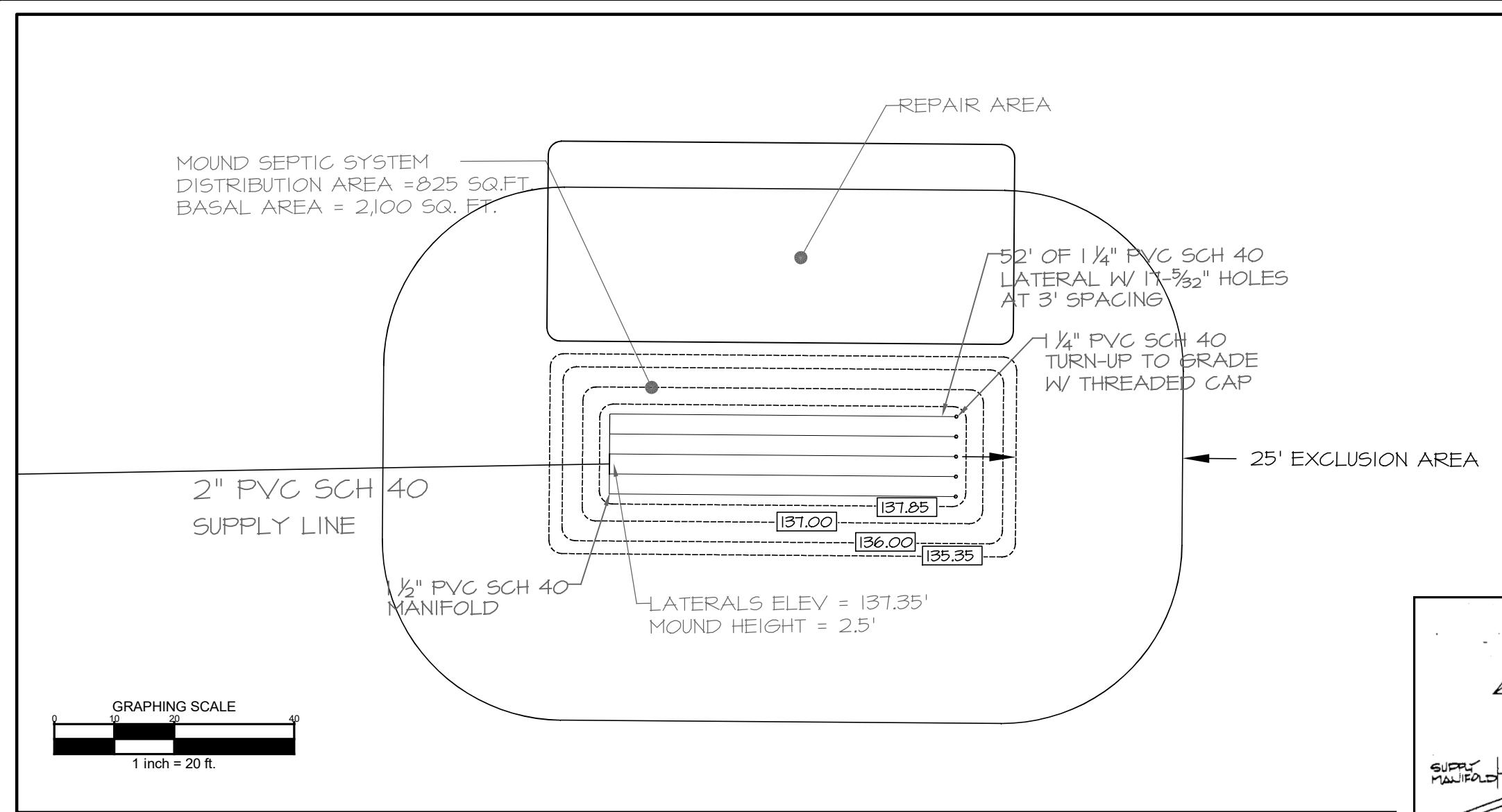


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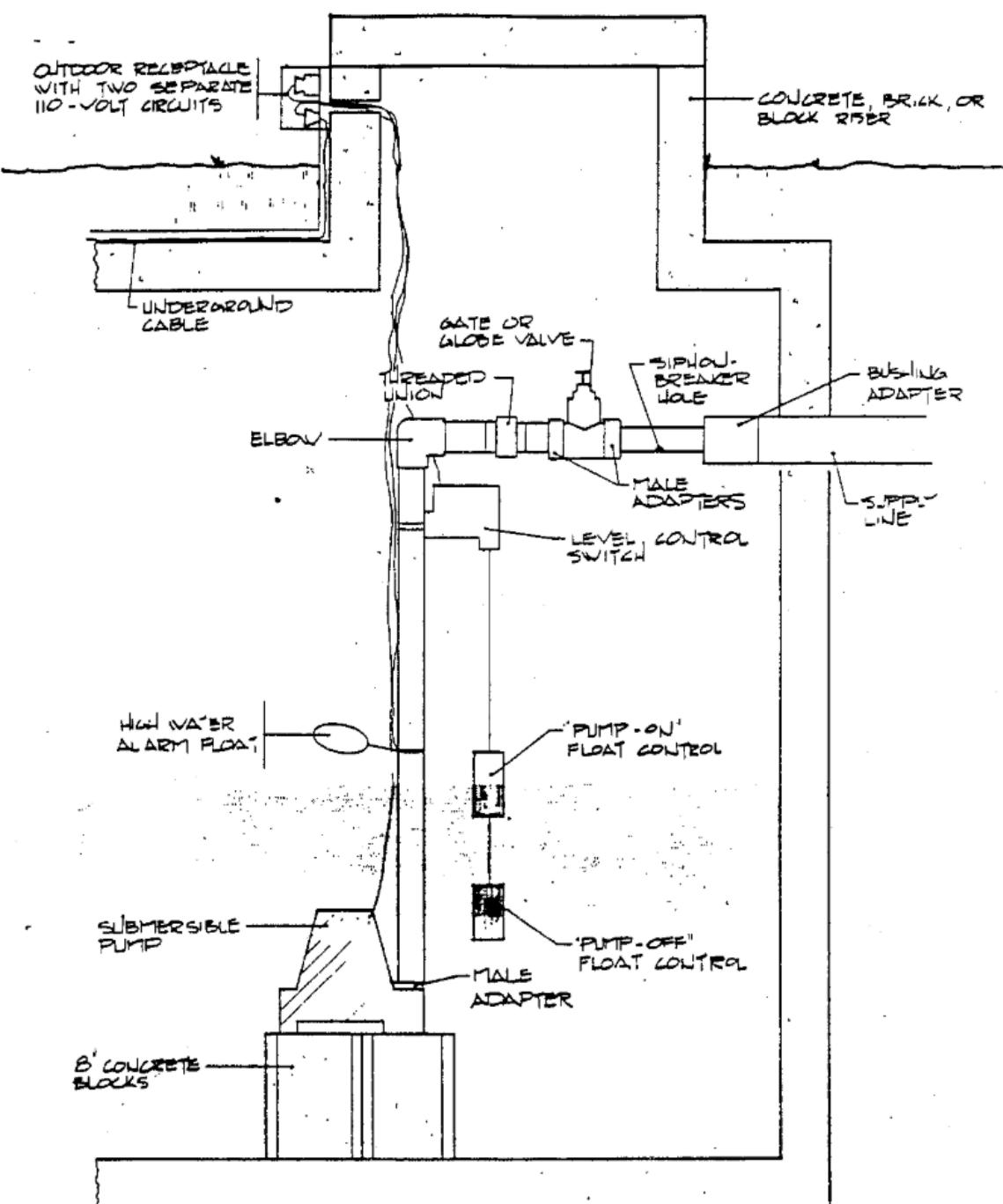
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TIMOTHY SCOTT FAIRCLOTH PROPERTY
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1" = 200'
11/12/2025
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PUMPING CHAMBER SCHEMATIC



PUMP STATION

500 GALLON FIBERGLASS

LIFT STATION TANK

STRONG FIBERGLASS DESIGN

This 500 gallon fiberglass tank is designed to be directly buried outside of the home. This tank can be used for collection of wastewater that will then be pumped using a submersible sewage, effluent, or grinder pump.

DEFAULT TANK DIMENSIONS

- 70" Diameter x 67" Tall
- 500 Gallon Capacity
- 4" inlet hole with rubber grommet seal
- 2" or 1-1/2" outlet PVC hub (based on pump size)
- 47" from tank bottom to bottom of inlet
- 20" from tank access lid to bottom of inlet
- 49" from tank bottom to bottom of outlet
- 18" from tank access lid to bottom of outlet

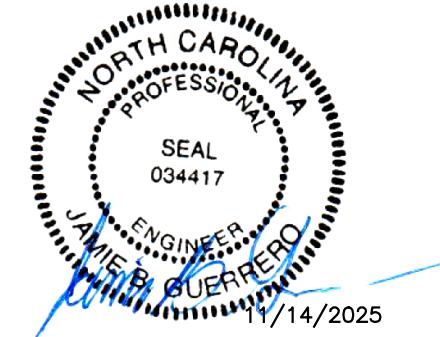
Custom Inlet & Outlet Configurations Available
Max Burial Depth: 3 ft Above Tank Dome



RISERS AND HEAVY DUTY COVERS AVAILABLE



(877)-925-5132
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MOULD SYSTEM
PUMPING CHAMBER
TIMOTHY SCOTT FAIRCLOTH PROPERTY
836 BUNNLEVEL FAWN RD
BUNNLEVEL, NC 28334

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REVISIONS
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C3.2

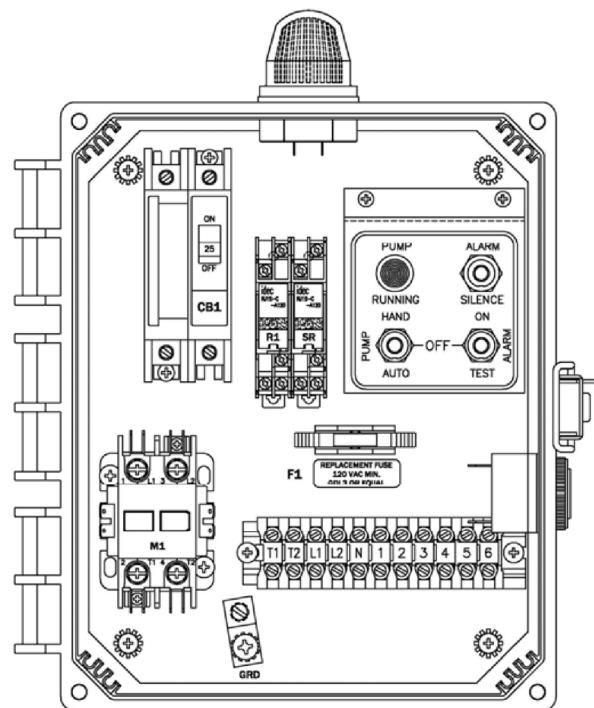


CONTROL PANEL

“50A006” Model Simplex 115/208/230V 1 Phase Control Panel

Features & Benefits

- Circuit Breakers for Pump Circuit
- Definite Purpose Contactor
- Easy to Access Terminal Block
- Usable with 115, 208 or 230 VAC
- Alarm Silence & On-Off-Test Switches
- Externally Mounted Audible Alarm
- Pump Hand-Off-Auto Switch
- Pump Running Light
- External Alarm Light
- Control Circuit Fuse Protection
- Ground Lugs
- Color Coded Internal Wiring
- Rugged Weather Resistant Hinged Poly Enclosure w/Stt Latch
- Built and Labeled to UL 508A Standard w/Nema 4x Rating
- Provided with Wiring Schematic and Detailed Connection Diagram for Installer
- Mounting Feet for Enclosure



(Standard 50A006 Shown)



Available Options(*)

- Fiberglass Enclosure
- IEC Motor Contactor
- Flasher
- Dead Front Inner Door
- Auxiliary Alarm Contacts
- Elapsed Time Meter
- Event or Cycle Counter
- Mercury or Mechanical Float Switches for the Pumps and High Water Alarm Circuits

*Note: Consult the factory for other available options. Also some options may require an increase in the enclosure size.

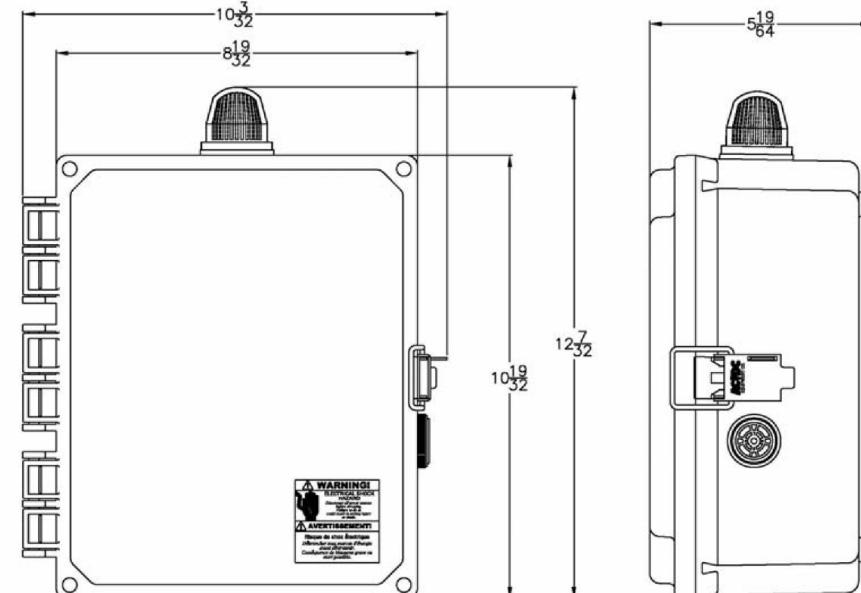
Septic Products, Inc. 1378 Twp Rd Ashland, Ohio 44805 Ph: (419)282-5933 Fax: (419)282-5943



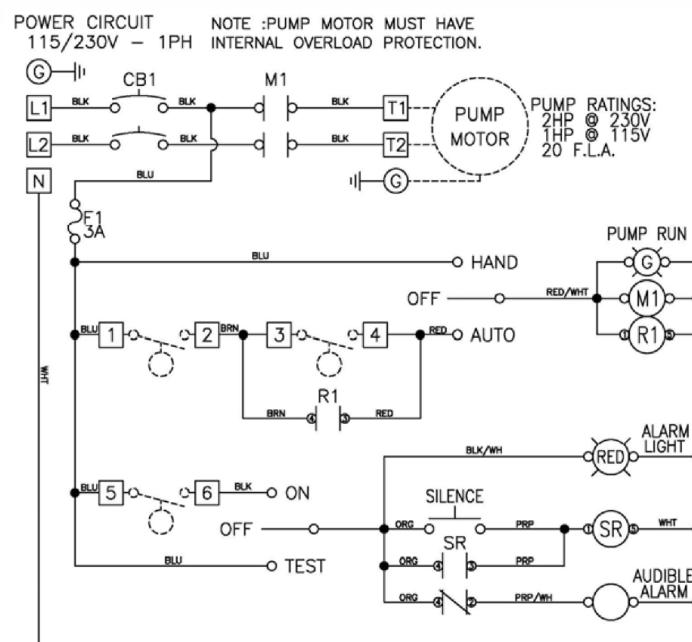
CONTROL PANEL

“50A006” Model Simplex 115/208/230V 1 Phase Control Panel

Panel Dimensions



Panel Schematic



Septic Products, Inc. 1378 Twp Rd 743 Ashland, Ohio 44805 Ph: (419)282-5933 Fax: (419)282-5943

PROPER OPERATION CHECK

AFTER ALL COMPONENTS HAVE BEEN INSTALLED AND CONNECTED, THE SYSTEM SHOULD BE CHECKED FOR PROPER OPERATION. WITH ELECTRICAL POWER TURNED OFF, FILL THE PUMPING CHAMBER WITH WATER UNTIL THE LIQUID RISES TO THE LEVEL OF THE HIGH-WATER ALARM FLOAT.

TURN ON THE ELECTRICAL POWER. THE ALARM LIGHT SHOULD GO ON IN THE HOUSE, AND THE PUMP SHOULD START OPERATING. THE ALARM LIGHT SHOULD GO OFF WHEN THE LIQUID LEVEL FALLS BELOW THE HIGH-WATER FLOAT. THE PUMP SHOULD TURN OFF WHEN THE LIQUID REACHES THE LOWEST FLOAT CONTROL. BE SURE THE PUMP IS STILL COMPLETELY SUBMERGED.

PRESSURE HEAD ADJUSTMENT

THE PRESSURE HEAD MUST BE ADJUSTED TO MATCH THE SPECIFIED DESIGN PRESSURE. THE PRESSURE HEAD IS MEASURED AS THE HEIGHT LIQUID WILL RISE ABOVE THE TURN-UP ELBOW WHEN THE PUMP IS RUNNING. TO ADJUST THE HEAD, GLUE A FOUR-FOOT LENGTH OF PIPE (PREFERABLY CLEAR) TO A THREADED ADAPTER THAT WILL SCREW ONTO THE TURN-UP ADAPTER. THEN TURN THE POWER ON TO ALLOW LIQUID TO RISE IN THE PIPE AND ADJUST THE GATE OR GLOVE VALVE IN THE PUMPING TANK UNTIL THE EFFLUENT REACHES THE DESIRED HEIGHT IN THE PIPE. REMEMBER TO INCLUDE THE DISTANCE BELOW THE MOUND SURFACE TO THE LATERAL LINE WHEN MEASURING HEIGHT. ALTERNATIVELY, A PRESSURE GAUGE CAN BE FITTED TO THE TURN-UP ADAPTER, AND THE PRESSURE CAN BE ADJUSTED TO THE SPECIFIED PARAMETER.

FINAL LANDSCAPING

AFTER THE MOUND SYSTEM IS INSTALLED, THE FOLLOWING SHOULD BE CHECKED TO ENSURE THE SYSTEM WILL NOT BE OVERLOADED WITH EXCESS RAINWATER AND RUNOFF:

- THE MOUND IS LEVEL AND FREE OF LOW AREAS.
- CURTAIN DRAINS, GRASSY SWALES OR DITCHES FOR DIVERTING GROUND AND SURFACE WATER ARE PROPERLY INSTALLED.
- GUTTER AND DOWNSPOUT DRAINS ARE DIRECTED AWAY FROM THE SYSTEM.

ANY PROBLEMS SHOULD BE CORRECTED BEFORE APPROVING THE SYSTEM. FINALLY, THE ENTIRE AREA MUST BE PLANTED WITH GRASS IN ORDER TO PREVENT EROSION. THE MOUND SHOULD BE LIMED AND FERTILIZED IN ACCORDANCE WITH THE SOIL TEST RESULTS. AFTER APPLYING AN APPROPRIATE GRASS SEED, THE AREA SHOULD BE HEAVILY MULCHED WITH STRAW OR OTHER SUITABLE MATERIALS.

INSPECTION AND MAINTENANCE

INSTALLATION INSPECTION

THE SUCCESSFUL PERFORMANCE OF A MOUND RELIES ON PROPER DESIGN AND INSTALLATION. THE DETAILS FOR A GIVEN SYSTEM, FROM SITE PREPARATION TO FINAL LANDSCAPING, SHOULD BE CAREFULLY SPECIFIED ON THE IMPROVEMENTS PERMIT. THIS HELPS CLARIFY THE RESPONSIBILITIES OF THE PROPERTY OWNER, CONTRACTOR, AND PERMITTING AGENCY AND HELPS AVOID LAST-MINUTE SURPRISES WHEN ISSUING A CERTIFICATE OF COMPLETION. A CHECKLIST SHOULD BE COMPLETED AND FILED EACH TIME A SYSTEM IS INSTALLED TO ENSURE COMPLETION OF THE REQUIREMENTS.

ROUTINE MAINTENANCE

ALL SEPTIC TANKS, WHETHER CONVENTIONAL OR ALTERNATIVE SYSTEMS, REQUIRE OCCASIONAL PUMPING. SLUDGE AND SCUM ACCUMULATION SHOULD BE CHECKED ANNUALLY. VIRTUALLY ALL SOLIDS WILL BE RETAINED IN THE FIRST COMPARTMENT OF THE TWO-COMPARTMENT TANK. LITTLE TO NO ACCUMULATION SHOULD OCCUR IN EITHER THE SECOND COMPARTMENT OF THE SEPTIC TANK OR IN THE PUMPING CHAMBER. THE RATE OF SLUDGE ACCUMULATION WILL VARY WITH INDIVIDUAL LIVING HABITS. MOST SEPTIC TANKS REQUIRE PUMPING ABOUT ONCE EVERY FOUR YEARS.

SOME MOUND SYSTEMS MAY GRADUALLY ACCUMULATE SOLIDS AT THE ENDS OF THE LATERAL LINES. THESE SHOULD BE REMOVED AT LEAST ONCE A YEAR BY UNSCREWING THE CAPS ON EACH OF THE TURN-UPS AND BACK FLUSHING THE LATERALS WITH A GARDEN HOSE.

PRESSURE HEAD IN THE LATERALS SHOULD ALSO BE CHECKED AND ADJUSTED ONE MONTH AFTER INSTALLATION AND ANNUALLY THEREAFTER. PROPER PUMP AND FLOAT CONTROL OPERATION SHOULD BE CHECKED DURING ALL ROUTINE INSPECTIONS. IF THE ALARM PANEL HAS A "PUSH-TO-TEST" BUTTON, IT SHOULD BE CHECKED REGULARLY. PUMP MAINTENANCE SHOULD FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.

REPAIR PROCEDURE

THE ALARM LIGHT SHOULD GO ON WHENEVER EFFLUENT IN THE PUMP CHAMBER RISES ABOVE THE PUMP-ON LEVEL CONTROL. THIS CAN OCCUR FOR SEVERAL REASONS:

- POWER FAILURE – IF THERE HAS BEEN A POWER FAILURE, EFFLUENT WILL CONTINUE TO ACCUMULATE IN THE TANK UNTIL POWER IS RESTORED. AT THIS TIME THE ALARM MAY COME ON FOR A BRIEF PERIOD (LESS THAN 30 MINUTES), BUT WILL GO OFF AS SOON AS THE PUMP DRAWS DOWN THE EFFLUENT.
- PUMP OR SWITCH FAILURE – IF THE PUMP OR LEVEL CONTROLS MALFUNCTION, THEY CAN BE QUICKLY REPLACED BY UNSCREWING THE PVC UNION AND LIFTING THE ENTIRE ASSEMBLY OUT OF THE PUMP CHAMBER (USE THE NYLON LIFT ROPE). BE SURE TO TURN OFF POWER SUPPLY AND DISCONNECT ALL CORDS BEFORE REMOVING OR REPLACING THE PUMP OR CONTROL ASSEMBLY.
- CLOGGED VALVE OR DISCHARGE HOLES – IF THE DISTRIBUTION SYSTEM BECOMES CLOGGED, THE TANK WILL NOT BE EMPTIED. BACKFLUSH THE LATERALS AND SUPPLY MANIFOLD IF NECESSARY.

BEFORE REPLACING ANY COMPONENTS, MAKE SURE THAT THE LEVEL CONTROLS HAVE NOT SIMPLY BECOME TANGLED. THE PROBLEM CAN USUALLY BE ISOLATED BY CHECKING THE PUMP OPERATION INDEPENDENTLY FROM THE CONTROLS. REPAIR OR REPLACE THE APPROPRIATE COMPONENTS.



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MOULD SYSTEM
NOTES - 2

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