

12851 WESTMORELAND FARM RD

12/26/2007

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
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FEE: _____ **AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION**
DATE: _____ **VOID SIXTY (60) MONTHS FROM DATE OF ISSUANCE**

DATE: 3/22/01 PERMIT NO: 1544B
PARCEL NO: 007 422 17

JOB LOCATION ADDRESS: Westmoreland Farm Rd
PROPERTY OWNER: James W. Herring
BUILDING CONTRACTOR: _____
SUBDIVISION NAME: Westmoreland Farms
AUTHORIZATION ISSUED BY: Philo S. Walker RS. DATE: _____
DEHNR AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NO. 1544B, AND THE ATTACHED SITE PLAN WITH SYSTEM DETAILS. CONSTRUCTION AND INSTALLATION MUST ALSO MEET ALL REQUIREMENTS SET FORTH IN THE RULES GOVERNING SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL AND ANY OTHER APPLICABLE RULES AND LAWS.

2. AN INSTALLA...)VAL MUST BE SECURED ... HE INSTALLER OF ... TRACTOR WITH MECKLI...

Hold For:
1) Agreement forms
2) Address
3) Certified Operator prior to OP release

3. ANY ALTERAT...)F STRUCTURES ... WASTEWATER ... IN THE ASSOCIATED ... HIS AUTHORIZATI...

4. OTHER CONDITIONS: hall be recorded ... on file prior to Certified Operations permit release.

OWNER CERTIFICATION

I CERTIFY THAT THERE HAVE BEEN NO ALTERATIONS IN SITE OR SOIL CONDITIONS OR MODIFICATIONS TO FACILITY, WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS FROM THOSE SPECIFIED IN THE ORIGINAL APPLICATION OR ASSOCIATED IMPROVEMENT PERMIT UNLESS AUTHORIZED IN WRITING BY THE MECKLENBURG COUNTY HEALTH DEPARTMENT. I ALSO UNDERSTAND THAT ANY SUCH ALTERATIONS, MODIFICATIONS, OR FALSE INFORMATION ARE GROUNDS FOR REVOCATION OF PERMITS AND AUTHORIZATION TO CONSTRUCT.

SIGNATURE OF OWNER/OWNER'S REPRESENTATIVE DATE

CONDITIONS OF IMPROVEMENT PERMIT

Permit Number: 1544B

Tax Number: 007 422 17

- The IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be NO grading, filling or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is NOT transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization. Lot 20
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

Basement	___ Yes	✓ No	___ Partial Basement
Type Primary Wastewater System Type (circle one): I II III (IV) V VI	___ Conventional ___ Prefabricated, permeable block panel system ___ Shallow Placed Conventional	___ Low Pressure Pipe ___ Large Diameter Pipe ___ Fill ___ Other	___ Innovative or Experimental: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1

1/5 Long-term acceptance rate	480 Max gallons/day wastewater flow	3200 Absorption Area (sq ft)	5' Trench spacing (min. on centers)
NO Serviced by private well	1500 Gallon septic tank	640' Total trench length (ft)	18" Maximum trench depth (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions)
4 Bedrooms in residence	1000 Gallon pump tank	12" Depth of stone	

Any surface waters present: NO Type: Minimum separation distance:

Site modifications required:

Additional Conditions: Install septic system in accordance to approved plot plan. Agreement forms shall be recorded and on file prior to cons. Autho. release. Public Management Entity W/a certified operator must be obtained prior to operations permit release, septic pumped from lot 20 to lot 7

Repair Area System Type Type (circle one): I II III IV V VI	___ Conventional ___ Prefabricated, permeable block panel system ___ Shallow Placed Conventional	✓ Low Pressure Pipe ___ Large Diameter Pipe ___ Fill ___ Other	___ Innovative or Experimental: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1

3200 Absorption Area (Sq ft) 640' Total Trench Length (Ft)	6" Depth of Stone Trench	5' Trench spacing (min. on centers)	24" Maximum Trench Depth

For existing system, enter the year originally installed:

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for the Job Location contained in this document. This approval is granted in accordance with the provisions of Laws and Rules For Sewage, Treatment and Disposal in effect at the time of issuance of the permit and is subject to the following provisions:

- No work shall be conducted on the septic tank system until an Installation, Construction, Alteration and/or Repair Approval is granted by this Department
- This Improvement permit is transferable.

Phila A. Walker RS. 3/22/01

DEHNR Authorized Agent Date

x

Owner/Agent Signature Date

MECKLENBURG COUNTY
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR.
SUITE 211
700 N. TRYON ST.
CHARLOTTE, N.C. 28202.
(704) 336-5102

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL, HEALTH,
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

Specifications and Scope of Work

For

INDIVIDUAL RESIDENCE

LOW PRESSURE PIPING

GROUND ABSORPTION, WASTEWATER

DISPOSAL SYSTEM

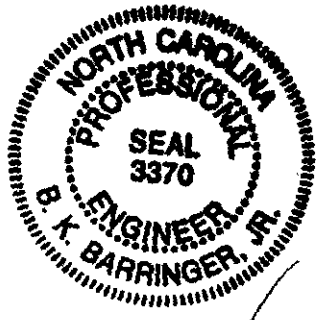
For

James Herring
Lot 20
Westmoreland Farm Road
Davidson, (Mecklenburg County), NC

March 8, 2001

File: 1544B

Tax Parcel No.: 0007-422-17



PREPARED FOR:

James Herring
420 West Carolina Avenue
Summerville, SC 29483
Phone: (843) 832-2854

PREPARED BY:

B. K. BARRINGER & ASSOCIATES, P.A.
Suite 104 Westfield Center
125 East Plaza Drive
Mooresville, N. C. 28115
Phone: (704) 664-7888
Fax: (704) 664-1778

B K Barringer
3-8-01

LOW PRESSURE PIPING SYSTEM

DESIGN CONSIDERATIONS AND RECOMMENDATIONS:

The Owner proposes to construct a 4-bedroom residence, which will be served by public water.

Soils investigation by Mecklenburg County Soils Scientist William Marlin reveals provisionally suitable soils suitable for a nitrification field. The Septic Tank and Pump Tank are to be located at the residence. The remote nitrification field is 1,720 feet west of the property.

Due to provisionally suitable soil, a LPP distribution system is proposed. A 100% repair area has been designated.

The design is based on an LTAR if .15 G/SF/D.

Location: Westmoreland Farm Subdivision is located on Davidson-Concord Road approximately ¼ mile south of the Concord Road intersection East of Davidson. The remote nitrification field is West of Westmoreland Farm Road at the end of the cul-de-sac.

REFERENCE MATERIAL:

(1) DESIGN AND INSTALLATION (Manual) OF LOW PRESSURE PIPE WASTE WATER TREATMENT SYSTEMS, By: Craig Cogger; Bobby L. Carlisle; Dennis Osborne; Ed Holland; Published by: UNC Sea Grant College Pub. UNC-SC-82-03, May 1982.

(2) LAWS AND RULES FOR GROUND ABSORPTION SEWAGE DISPOSAL SYSTEMS. SECTION .1900 OF THE N.C. Administrative Code: Title 10 Health Services; Environmental Health; Subchapter 10a; Sanitation. Published by: N.C. Dept. of Human Resources; July 1, 1982.

(3) EPA 625/1-80-012 Design Manual - On-site Wastewater Treatment and Disposal System; Oct. 1980; Chapter 7.

RECOMMENDATIONS:

This area shall be barricaded from any vehicular traffic. There shall be no earth disturbing activities within the designated area.

Laterals will be placed at 5' minimum separation or wider as flagged. The area adjacent to the laterals is available for repair and shall be barricaded from any traffic or disturbance. Due to encroachment of an adjacent nitrification line the lower line shall be set 20' from the encroaching line.

OWNERSHIP RESPONSIBILITY FOR A LOW PRESSURE PIPING SYSTEM:

The Owner must enter into a contract with a certified operator to provide system reviews and/or maintenance a minimum of 2 times per year. The operator and maintenance procedure shall include the steps outlined herein in the Operation and Maintenance procedure.

The Owner shall have the operating agreement before obtaining an improvement permit or otherwise as agreed by the County Health Department.

It must be kept in mind that this system is designed to accept a moderate amount of wastewater (which is called the EFFLUENT), in a minimal water absorbing soil.

Conservation measures must be undertaken by all members of the facility to minimize the volume of waste water entering the disposal system, including, but not limited to, the following precautions:

1. Provide water conserving plumbing fixtures within the facility; including toilets with flush volume not exceeding 1.6 gallons/flush.
2. Develop conservative water use habits;
3. Monitor and maintain the system as necessary for proper operation;
4. Check and pump the septic tank sludge on a regular basis or approximately every three years, otherwise as required by the regulations.
5. Make rapid repairs to leaking plumbing fixtures and faucets.
6. Avoid excessive watering of the lawn in the vicinity of the disposal field and prevent the growth of weeds.
7. Check system filters and clean initially after one month of operation, and; thereafter, as determined by the system operator.

TREATMENT SYSTEM

COMPONENTS OF SYSTEM:

1. Two compartment septic tank with Biofilter
2. Pumping chamber
3. Submersible effluent pump with filter and level controls
4. High water alarm signals (audible and visible)
5. Supply pipe - Schedule 40
6. Distribution laterals - PR160 (SDR 26) with corrugated plastic sleeve

Furnish and install all items required for a complete system in accordance with plans and specifications; for requirements of the County Dept. of Environmental Health (CDEH); the NC Dept. of Environmental Health (NCDEH); the N. C. Building Code, Plumbing Code and Electrical Code; and the National Electric Code. A qualified competent contractor must properly install system.

1. General Requirements - The Contractor shall furnish, install, test, and place into service and warrant the complete system. The major system components including septic tank, slotted filter, pump tank with pump and control screen filter. Accessories shall be supplied by a single operating entity and shall be equal to that as specified.
2. Precast Structures - General: This section shall apply to the septic tank and pump tank as shown on the Contract Drawings.

3. Approvals: The tank designs shall have been approved by the Division of Environmental Health of NC DENR and shall have the approval number imprinted on the delivered tank. The tank shall be equal to that manufactured by Stay-Right Tank Company or High Point Concrete, Inc. Openings or inserts shall be cast in during manufacture. Concrete shall have a minimum compressive strength of 4,000 psi @ 28 days. Shop drawings shall be submitted to the Engineer for approval. The tanks that are to be located in traffic area shall be constructed to meet H-20 highway loadings.

4. Precast Tank Installation: Installer shall excavate for and install all precast concrete tanks as per plans. Installer shall ensure that the tank remains level and true to grade after placement and filling with water. All precast tanks shall be tested for water tightness by an approved method such as 24-hour water tightness test with maximum allowable leakage not to exceed ½ inch per 24 hours. Testing shall begin after the water level in the tank has stabilized. Each tank shall be installed in the location and to the elevations shown on the plans. A 6" undercut shall be made to allow for washed stone leveling course for the tank to rest on.

   Once testing of the tank has been completed, the tanks shall be backfilled in lifts with well compacted, debris free earth to a level, which directs surface water away from the tanks. Tank access holes in the yard shall be installed and grouted watertight and the earth raked smooth for grassing. All tank lids shall be lockable or constructed to prevent easy removal. Tank access in traffic area shall be 24" cast iron manhole frame and lid.

5. The Septic Tank shall consist of a 1,000-gallon capacity, reinforced, precast concrete tank with full baffle and shall have easy access to each chamber from ground level for checking and pumping. The first chamber of the septic tank shall consist 2/3 to 3/4 of the volume of the total tank and the baffle shall contain a horizontal opening across the tank at about midway its height. The PVC outlet tee shall extend one-fourth depth of liquid level and contain a bio-filter. Locate the septic tank at such height as to provide approximately 8" of cover soil over top of the tank or as necessary to receive gravity flow from the collection system. Provide access at each end of the tank.

6. Slotted-Filter A ZABEL A1800 8 x 12 micro-filter WITH 1/16" infiltration shall be installed in the PVC outlet tee. The filter shall be manufactured by ZABEL or approved equal, ZABEL Environmental Technology, 10409 Watterson Trail, Louisville, KY, 40299, 1-800-221-5742, 502-267-8801 Fax.

7. Effluent Pump Tank Shall consist of a 1,000-gallon capacity, reinforced, precast concrete tank without baffle and shall have a concrete mounting pad (concrete blocks) for accommodating the pump.

   Provide access for entry into the tank directly over the pump location. In yard areas, the riser shall extend 6" above final grade. Use a Zeus Access System as manufactured by ZABEL including lid, risers and tank adapter or approved alternate. Riser shall be made watertight at the tank. In traffic areas, the access shall be through 24" cast iron manhole frame and cover.

8. Pump: The submerged pump shall be Model ME 100 manufactured by F. E. Meyers Co., Ashland, OH, or equal, 1.0 hp, 230v/1ph; capable of pumping 45.8 gallons per minute at a 63.56' head. Pump shall be powered by a Simplex pump control properly sized, in a NEMA 4 enclosure. Install adjacent to the pump tank on a 4"x4" treated post or other approved method. Control shall accept signal from pump actuator float and alarms.

9. Pump Installation: Details of pump installation are shown on the plan. The pump shall be elevated off the bottom of the tank by placement on two concrete blocks next to each other on the bottom of the tank. This prevents the pumping of any solid particles, which can clog the system. A piece of nylon rope or other non-corrodible material should be attached to the pump and to the outlet pipe for lifting the pump in and out of the chamber. (The PVC outlet pipe is too fragile to support the pump.)

10. Float Switches: Water level float control switches shall be equal to S.J. Electro System, Inc., mercury or mechanically activated switches, with cable of adequate length to terminate in the pump control panel. No splicing of wire allowed between switch and control box. Use mercury switched on control circuits and properly rated mechanical switches on power circuits. Conduit between the pump tank and the control panel shall be sealed to prevent sewer gas from entering the control panel. The dosing tanks shall have 2 float switches, a "pump enabling" float and a "high water alarm" float.

    Fasten float switch to a "Float Tree" constructed of 1-1/2" diameter PVC pipe anchored by a concrete base sized to support the pipe and float switches. Strap Float Switch to a 2" diameter PVC pipe that shall slide over the 1-1/2" pipe. The manufacturer shall supply clamps or brackets. The lower level control or "pump-off" must be positioned above the pump, so that the pump remains submerged at all times. The upper level control "pump-enabling" is positioned to pump a specified volume of effluent or assures that a full dose is available for timer controlled dosing. The "high water alarm" control float is mounted about 3" above the upper pump-on control. (Note: Care must be taken to insure that floats do not become fouled by other components in the tank such as the electric power cord or the lifting rope.)

11. Electrical Control Panel: Simplex NEMA 4X sized to fit the pump. Pump and control circuits shall be provided with manual circuit disconnects within a watertight, corrosion-resistant, outside enclosure (NEMA 4X or equivalent) adjacent to the pump tank, securely mounted at least 12 inches above finished grade. The pump(s) shall be manually operable without requiring the use of special tools or entrance into the tank for testing purposes. Conductors shall be conveyed to the discount enclosure through waterproof, gas proof and corrosion-resistant conduits, with no suitable material shall be used to seal around wire and wire conduit openings inside the pump tank and discount enclosure.

12. A Warning Sign shall be located within the facility to inform the owner of what action to take in case the "High Water Alarm" is activated. This sign shall contain the name, address, telephone number, and emergency telephone number of the person to contract immediately upon malfunction of the system.

13. Sim Tech Effluent Filter: An effluent filter shall be placed in the pump tank connected directly to the pump discharge. The filter shall be equal to the GAG Sim/Tech filter and shall include the following component STF 101 Filter, STF 101 Pressure Alarm Switch, STF 102 Filter Screen, STF 102 Lid/Screen Removal Wrench, STF 103A Screen Removal Tool, STF104 Sock, STF107 Tank Alert XT with Latching Light. The contractor shall demonstrate that filter screens function as intended and are serviceable. The pressure alarm switch shall be wired to the high water alarm. The filter is available through Zoeller Pump Representative, Confederate Sales, (704) 542-7096.

    The pump outlet pipe filter should be connected to the supply manifold with a threaded PVC union (or dresser coupling) to allow quick removal. The valve must also be installed in the supply line (within the pump chamber) to allow final adjustment of the pressure. If effluent will be pumped down hill, a 1/4" siphon-breaker hole must be drilled in the bottom of the supply line before it leaves the pump tank. This breaks any vacuum in the system and prevents the inadvertent siphoning of effluent out of the tank. This hole is very important.

14. Force Main and Manifold: The force main and manifolds from the pump tank to the laterals shall be Schedule 40 PVC sized as shown on the plans. Minimum bury depth shall be 30". All fittings and connections shall be as detailed. All valves within this piping system shall be True Union PVC ball valves capable of sustaining the working pressure and imposed loads. Each valve shall be accessible through a properly sized valve box brought flush with the ground surface.

15. LPP LATERALS: Prior to installation of PVC, force main, manifold and lateral piping, fabricate 1¼" diameter PR-160 lateral piping with orifices (holes) at scheduled locations along the top of the pipe. (See chart for size and spacing.) LPP lateral shall be 1-1/4" diameter PR 160 PVC pipe encased in 4" diameter corrugated plastic tubing and shall be certified as complying with applicable ASTM standards. The corrugated tubing shall have three rows of holes, each hole between 1/2" and 3/4" in diameter, and spaced longitudinally approximately 4" on centers. The rows of holes may be equally spaced 120° on centers around the periphery, or three rows may be located in the lower portion of the tubing, the outside rows being approximately on 120° centers.

16. True Union Swing Check Valves: All check valves shall be True Union design manufactured from Clear PVC Type I, Cell Class 16453. Valve shall be specifically designed to be disassembled by unscrewing the nuts in line leaving the tail pieces attached to the associated piping providing for cleaning of the check mechanism or replacement of the valve body. Valve shall be full-bore design and shall not restrict flow. Check valves shall contain no metallic components to insure corrosion resistance. Check valve flapper shall be weighted to allow either vertical or horizontal installation. Flapper shall be shielded to withstand backpressure to 125 psi. All valves shall be warranted against defects in material and workmanship for a period of one year. Check valves shall be swing check valves meeting requirements of ASTM - D1784 as supplied by Flo Control, Inc., Burbank, CA, 91510, Telephone 1-(800) 423-2741 or approved equal.

CONSTRUCTION SEQUENCE

Rule of Thumb: "If soil is too wet to plow, it is too wet to disturb for LPP system construction."

1. Lay out nitrification field network area with stakes and flagging. As soon as the absorption area is designated, it should be flagged, roped off and isolated from construction traffic. This barrier should be maintained until the system is accepted by the Owner. Refer to site plan for the size of absorption area and field locations. The Engineer has located and flagged the laterals as shown on the site plan.

2. Clear site of any and all man-made debris, construction materials, etc. Dispose of legally. Cut all trees in the area of the nitrification field flush with the ground. Do not remove any stumps. Consult with Owner before cutting any trees.

3. Prior to actually beginning construction of the system, carefully locate, lay out and identify disposal site, manifolds and the lateral piping networks, using a tripod mounted engineer's leveling instrument to accurately establish each lateral along a level contour. Note: Lateral pipe runs which conflict with cut-off-in-place stumps or trees shall "snake" by with a 12" minimum trench clearance and then continue along its projection run. (A 5' minimum trench separation must be maintained centerline to centerline.)

4. Nitrification trench shall be constructed, as level as possible, but in no case shall the fall in a single trench bottom exceed 1/4" in 10' as determined by an Engineer's level. The nitrification trench shall not exceed a width of 18" and be 24" deep, except as approved by the County Health Dept.

   Rock used in nitrification trench shall be clean, washed gravel or crushed stone and graded or sized between 3/8" to 1" The rock shall be placed a minimum of 12" deep with at least 6" between the pipe and the trench bottom and 2" over the pipe, and distributed uniformly across the trench bottom and over the pipe.

5. All joints in lateral and the manifold piping shall be watertight connections to ensure that the only source of the water seepage from the system is through the orifices as designed. See layout, details, and data sheet. Carefully install pressure piping and lateral network according to the attached designed layout using care to insure that holes shall be located at required intervals and as shown on the "typical section through the lateral trench." A larger diameter protective sleeve with cap or approved valve box with lid shall be placed over the turned up lateral and positioned level with the ground surface (so as not to be damaged by mowing machine). The lateral shall be positioned for easy removal of the end cap for flushing.

6. Leave absorption area with a raked surface, ready for grassing.

7. Carefully backfill manifold trenches to finish grade with clean debris free earth (no stone).

8. Electrical Connections: The pump and high water alarm must be placed on separate electrical circuits. (If the pump circuit fails, the alarm must still be able to operate.) Follow the manufacturers' recommendations for the proper fuses or circuit breakers. All electrical connections must be made outside the pumping chamber. Power cords from the pumps and controls should enter into a NEMA-4X approved outdoor pump control / alarm panel mounted outside of the pumping chamber.

   Wiring between the pumping chamber and the facility should meet State and local code requirements. A lightning arrester is recommended to protect the pump and controls from electrical surges.

9. 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 from a garden hose (or allow effluent to accumulate) 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 facility, 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.

10. Pressure Head Adjustment: The pressure head must be adjusted to match that specified in the design. 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:

    (a) Glue a 4' length of pipe (preferably clear) to a threaded adapter that will screw onto the turn-up adapters. (Call this the "test tube").
    (b) Replace the turn-up cap with the "test tube".
    (c) Turn the power on to allow liquid to rise in the "test tube".
    (d) Adjust the valves at the manifolds and/or in the pumping tank until the effluent reaches the desired height in the "test tube". Remember to include the distance below the ground surface to the lateral line when measuring the height. Refer to the flow calculation chart relative pressure head (h) for each line. This is the height above the lateral liquid should be in the temporary "test tube".

11. Final Landscaping: After the LPP is installed, the following should be checked to insure that the system will not be overloaded with excess rain water and run off:

    a. The distribution field is shaped to shed rainwater and is free of low area.
    b. Curtain drains, grassy swales or ditches for diverting ground and surface water are properly installed.
    c. Gutter and downspout drains are directed away from the system.

12. Any problems should be corrected before approving the system.

13. Finally, the entire area should be planted with grass according to specifications.

OPERATION AND MAINTENANCE PROCEDURE:

The system is classified as a Type IV. The Regulations require that a person be certified by the N.C. Department of Environmental Health to operate this type of system. Operation, Maintenance and Inspection procedures shall be submitted to the County Health Department for approval. Procedures shall include but not be limited to the following:

- Minimum inspection/maintenance frequency shall be 2 times/year, with reporting frequency of 1 time/year to the local Health Department.
- Septic system shall be pumped every 4 years or when solids accumulate to ⅓ the volume of the tank.
- On a scheduled basis, clean and inspect Biofilter in the septic tank and the sock filter in the pump tank. When washing the filter, debris must be sprayed directly back into the septic tank and not onto the lawn.
- The LPP system should be observed by the regulatory agency one, three, six and nine months after initial installation, and then every 3 years. An inspection report should be completed and filed each time the system is checked.
- All laterals shall be pressure flushed annually with clean water.
- Pressure head for laterals should be checked and adjusted one month after installation and annually thereafter.
- All piping, fittings turn-ups and valve boxes shall be checked annually for damage and/or proper operation and corrections made immediately.
- The property should be inspected to insure all surface water is deflected away from the fields and tank. Any ponding of surface water should be corrected.
- Grasses shall be mowed and maintained and any erosion shall be corrected promptly.
- The nitrification field area shall be checked for leakages, blowouts or malfunction, indications of damp or mushy areas compared to surrounding area or evidence of noticeable odor of sewage. Repairs shall be made immediately.
- The pump electrical should be checked to insure tight, clean connections with no corrosion and proper operation.
- Pump switches shall be checked for free operation and proper level set.
- Pump draw down depth and delivery rate shall be checked twice a year.
- Check septic tank and pump tank for evidence of damage or leakage. Check the quality of effluent including grease and sludge accumulation.

The management entity in conjunction with the local Health Department shall establish an operation and maintenance program and procedure based on experience obtained from similar installations.

DESIGN SPECIFICATIONS - LOW PRESSURE PIPING SYSTEM

James Herring

Lot 20 Westmoreland Farm Road

Davidson (Mecklenburg. County), NC

March 8, 2001

Daily design waste flow: (2-bedroom)	480 gpd
Septic tank size:	1500 ~~1,000~~ gal. (2 compartment)
Pumping tank size:	1,000 gal.
Effluent Filters (2):	Effluent Filter Zabel A1800 w/ 1/16" openings in septic tank and GAG Sim/Tech Filter at dosing pump.
Effluent loading rate:	0.15 gpd/sf
Total absorption areas:	3,200 sf active; 3,200 sf repair
Number and length of laterals:	8 laterals @ 80 = 640 LF of 1¼" dia. PR160 PVC Inside 4" corrugated perforated pipe
Force Main	3" diameter SCH 40 – 1720 LF
Total length and diameter of supply manifold:	20' lf - 2" dia. SCH 40 PVC
Manifold placement:	See plan
Hole size:	5/32"
Hole spacing:	Varies, see chart
Total number of holes:	104
Flow rate through the system:	45.8 gpm
Elevation head (pump to end of manifold):	50.0'
Pressure head:	2.0'
Friction head:	11.56'
Total head:	63.56'
Pump requirements:	45.8 gpm @ at 63.56', use Myers ME100, 1hp, 230v/1ph
Dosing volume:	380 gal.
Depth of water pumped per dose:	15"
Pump run per dose:	8.3 min.
Check valve:	yes
Syphon break hole:	yes

SEEDING SPECIFICATIONS

SLOPES 3:1 or FLATTER

1. Apply agricultural lime at the rate of 90 lb/1000 sf.
2. Apply 10-10-10 commercial fertilizer at the rate of 20 lb/1000 sf.
3. Seed in accordance with the following schedule and application rate:

DATE	TYPE	PLANTING RATE
Aug 15 - Nov 1	Tall Fescue	200 lb/ac or 7 lb/1000 sf
Nov 1 - Mar 1*	Tall Fescue and	200 lb/ac or 7 lb/1000 sf
	Abruzzi Rye	25 lb/ac or ½ lb/1000 sf
Mar 1 - Apr 15	Tall Fescue	200 lb/ac or 7 lb/1000 sf
Apr 15 - Jul 30	Hulled Common or Bermuda	30 lb/ac or 1 lb/1000 sf
Jul 15 - Aug 15	Tall Fescue and	200 lb/ac or 7 lb/1000 sf
	Brown Millet or	35 lb/ac or ⅞ lb/1000 sf
	Sorghum-Sudan Hybrids	30 lb/ac or ¾ lb/1000 sf

4. Mulch with straw applied at the rate of 75-100 lb/1000 sf.

* Heavily mulched during January - March period.

SLOPES GREATER THAN 3:1 TO 2:1

1. Apply agricultural lime at the rate of 90 lb/1000 sf.
2. Apply 10-10-10 commercial fertilizer at the rate of 20 lb/1000 sf.
3. Seed in accordance with the following schedule and application rate.

DATE	TYPE	PLANTING RATE
Mar 1 - Jun 1	Sericea Lespedeza (scarified) &	50 lb/ac or 11 lb/1000 sf
Mar - Apr	Add Tall Fescue or	150 lb/ac or 3½ lb/1000 sf
Mar - Jun	Add Weeping Love grass	5 lb/ac or ⅛ lb/1000 sf
Jun - Sep 1**	Tall Fescue and	60 lb/ac or 1½ lb/1000 sf
	Brown Top Millet	35 lb/ac or ⅞ lb/1000 sf
	Sorghum Sudan Hybrids	30 lb/ac or ¾ lb/1000 sf
Sep - Mar 1	Sericea Lespedeza (unhulled unscarified)	70 lb/ac or 1¾ lb/1000 sf
	Tall Fescue	150 lb/ac or 3½ lb/1000 sf
	Millet or Sudan	20 lb/ac or ½ lb/1000 sf

** Temporary - Reseed September 1 at recommended rates.

4. Mulch with 3" straw applied at the rate of 50-90 lb/1000 sf and anchor with asphalt emulsion tack coat applied at the rate of 5-7 gal/1000 sf or 200-300 gal/ac.

5-1-01

LOT 20 WESTMORELAND FARMS

4 BEDROOM RESIDENCE @ 120 G/BR = 480 GAL/D.

LTAR · 0.15 G/SF/D

$\frac{480\ G/D}{0.15\ G/D/SF} = 3200\ SF / 5' = 640\ LF$ LPP LINE

USE: 4 – 160' LPP LINES W/ MANIFOLD IN MIDDLE

FLOW THRU SYSTEM (SEE CHART) — 45.8 GPM

ELEV HD: 132' – 82' = ——— 50'

OPERATING HD ——— 2.0'

[FRICTION (3" PVC @ GPM] = $1.72 \left(\frac{.56}{100}\right) 1.2$ — 11.56 (V = 2.04 ft/sec)

TDH 63.56'

PUMP REQ'D 45.8 GPM @ 63.56' TDH

USE MYERS ME 100 1HP 208V/1PH

DOSE VOL: LATERALS $(8 \times 80)\left(\frac{9.0}{100}\right)(5) = 288$ GAL

3" SUPPLY: CK VALVE @ PUMP.

ASSUME 250' FLOW TO FIELD (HI POINT TO FLD)

REMAINDER STAYS IN PIPE

∴ STORAGE IN 250' OF 3" LINE = 2.5 × 36.7 = 91.75 GAL

DOSE VOL = — 379.75 GAL

SAY 380 GAL

DRAW DOWN PER DOSE: 1000 GAL TANK

$\frac{60" \times 98" \times 1'}{1728\ CI/CF} \times 7.48\ G/CF = 25.45\ G/IN$

$\frac{380\ GAL}{25.45\ G/IN} = 14.93"$ SAY 15" DRAWDOWN

PUMP RUN TIME: $\frac{380\ GAL}{45.8\ G/M} = 8.3$ MIN

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

AMPAD 22-141 50 SHEETS 22-142 100 SHEETS 22-144 200 SHEETS

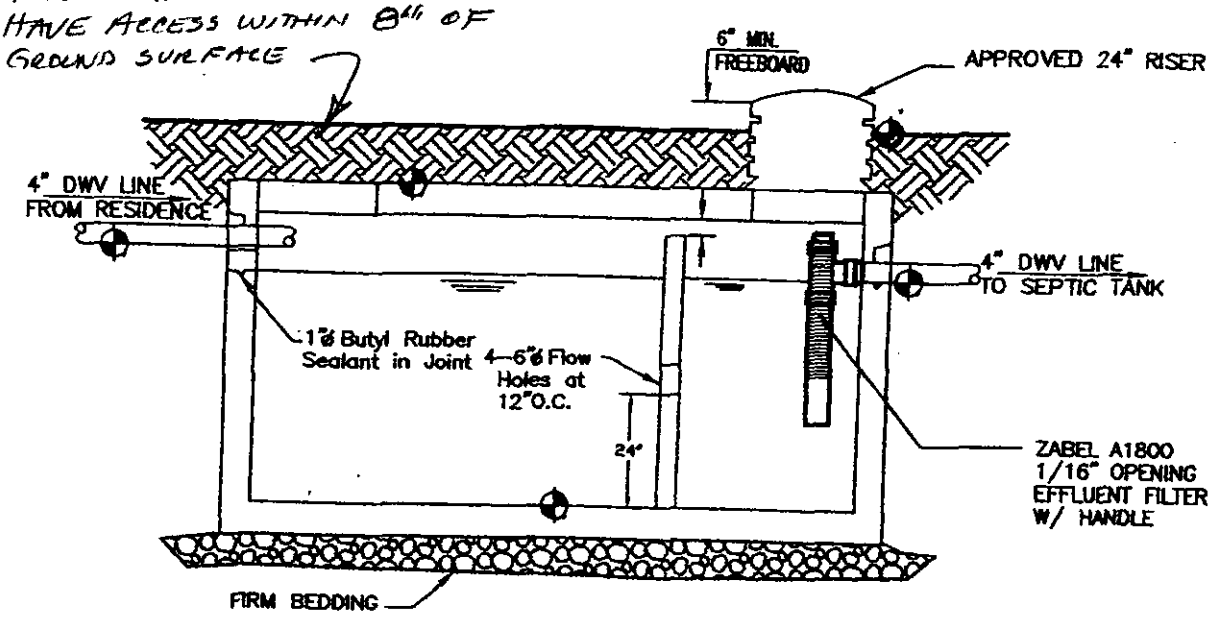
LOT 20 WESTMORELAND FARMS

3-7-01

LATERAL	LENGTH	ELEV	REL HEAD (H)	ORIFICE	.29√H GPM/ ORIFICE	NO ORIFICE	GPM/ LINE	ORIFICE SPACING	MANIFOLD TO 1ST HOLE	LAST HOLE TO CLEANOUT	
A	80'	130.25	2.0	5/32"	0.41	16	6.56	5'-0"	2'-0"	3'-0"	
B	80'	130.25	2.0		0.41	16	6.56	5'-0"	3'-0"	2'-0"	
C	80'	130.0	2.25		0.43	14	6.02	5'-9"	4'-0"	1'-3"	
D	80'	130.0	2.25		0.43	14	6.02	5'-9"	1'-6"	3'-9"	
E	80'	129.75	2.5		0.46	12	5.52	6'-6"	2'-0"	6'-6"	
F	80'	129.75	2.5		0.46	12	5.52	6'-6"	4'-0"	4'-6"	
G	80'	129.5	2.75		0.48	10	4.8	8'-0"	5'-0"	3'-0"	
H	80'	129.5	2.75		0.48	10	4.8	8'-0"	3'-0"	5'-0"	

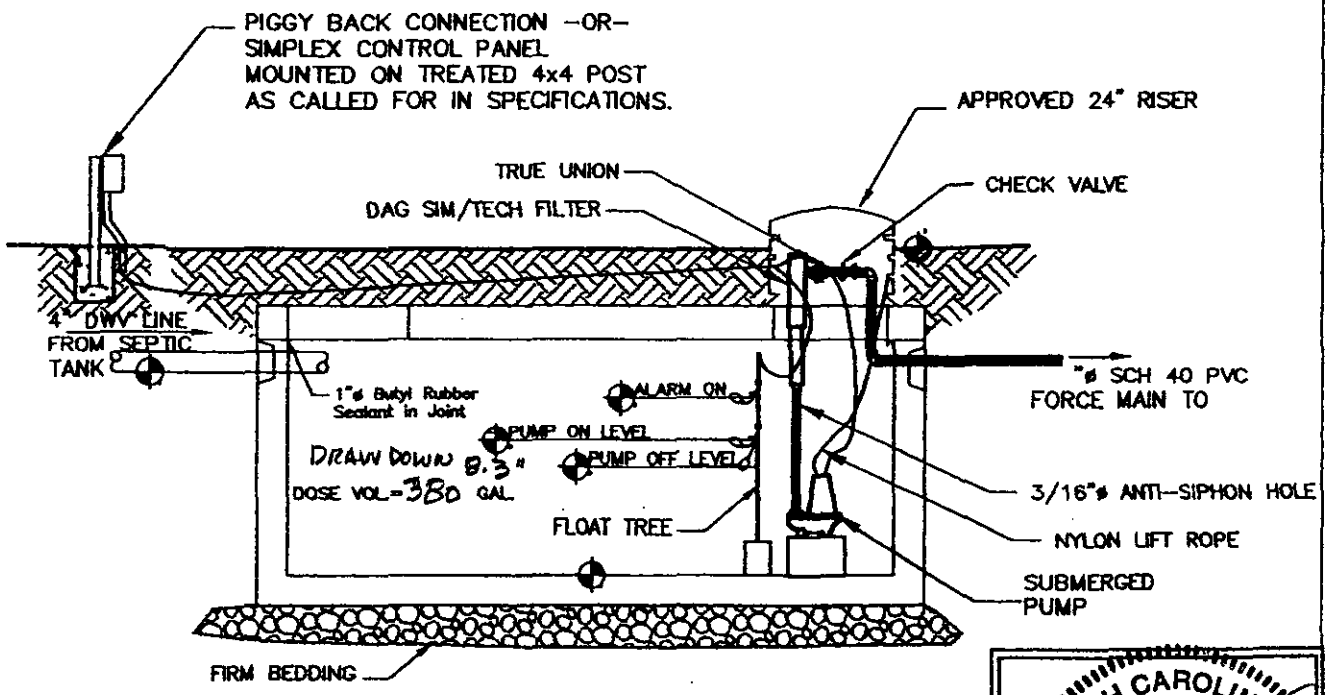
104 45.8 GPM

FIRST CHAMBER ACCESS SHALL HAVE ACCESS WITHIN 8" OF GROUND SURFACE



1/8 N.T.S. SECTION VIEW- DEH APPROVED 1000 GAL SEPTIC TANK

1/8 N.T.S.



1/8 N.T.S. SECTION VIEW- DEH APPROVED 1000 GAL PUMP TANK

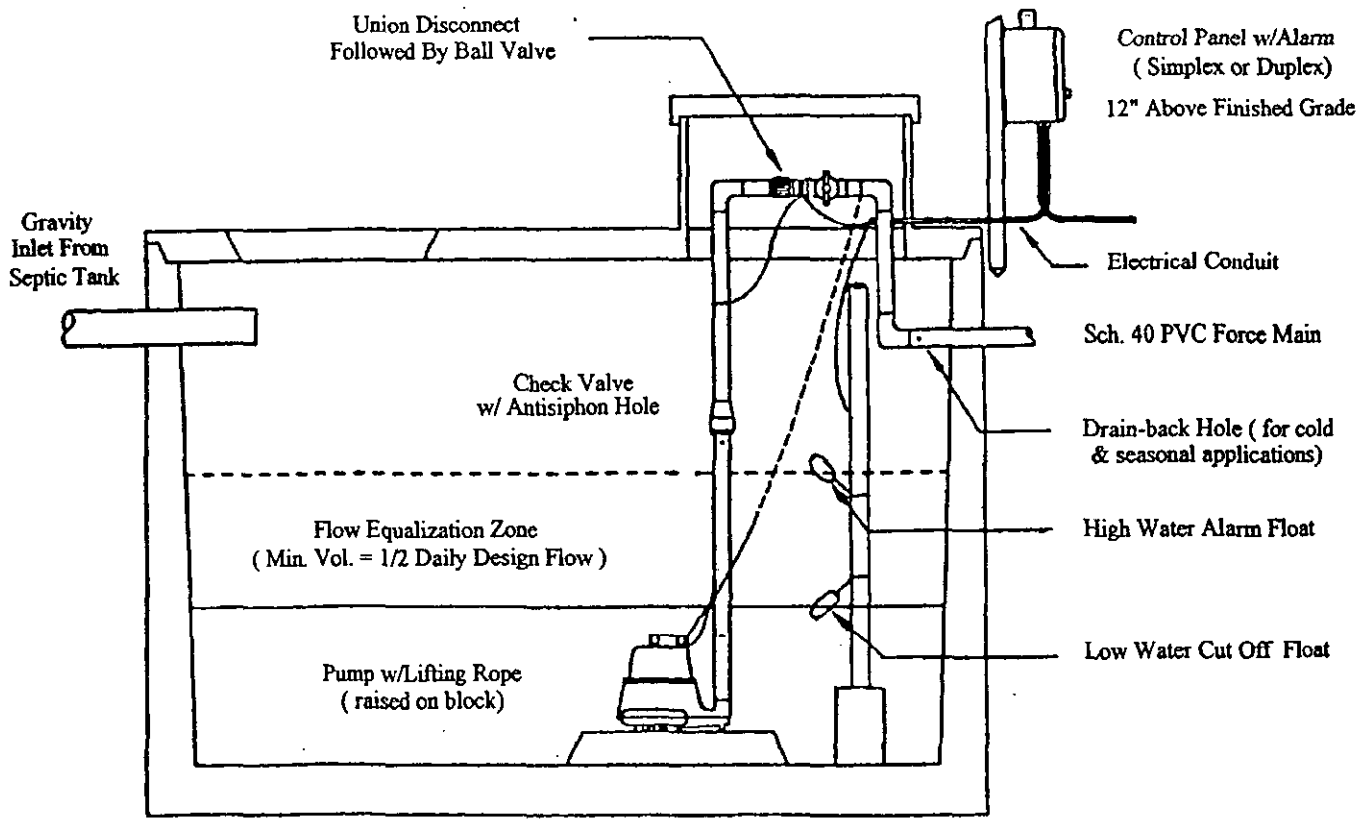
NORTH CAROLINA PROFESSIONAL SEAL 3370 ENGINEER B.K. BARRINGER, JR.

Publication or reuse of this drawing must be with the written consent of the Architect/ Engineer

SCALE: DATE: / / DRAWN BY: JSI CHK'D. BY: BKB DATE OF ISSUE:	LOT 20 WESTMORELAND FARM 1000 GAL SEPTIC TANK & 1000 GAL PUMP TANK Co., North Carolina	B.K. BARRINGER & ASSOCIATES, P.A. ARCHITECTURE/PLANNING/ENGINEERING SUITE 104 WESTFIELD CENTER 125 EAST PLAZA DRIVE MOORESVILLE, NC 28115 PH:704-664-7888 FAX:664-1778	REVISIONS

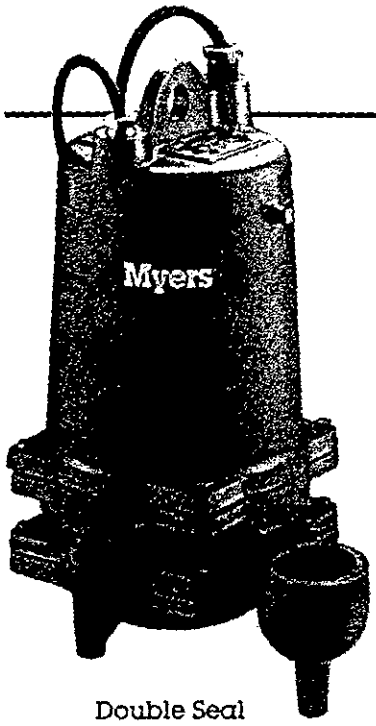
TYPICAL PUMP TANK DETAIL

1. Pump tank shall have an access manhole extending at least 6 inches above finished grade.
2. Pump and control circuits shall be provided with manual circuit disconnects within a watertight, corrosion-resistant, outside enclosure (NEMA 4X or equivalent) adjacent to the pump tank, securely mounted at least 12 inches above finished grade. The pump(s) shall be manually operable without requiring the use of special tools or entrance into the tank for testing purposes. Conductors shall be conveyed to the disconnect enclosure through waterproof, gasproof, and corrosion-resistant conduits, with no splices or junction boxes provided inside the tank. Wire grips, duct seal, or other suitable material shall be used to seal around wire and wire conduit openings inside the pump tank and disconnect enclosure.
3. The pump tank shall have a properly functioning high-water alarm. The alarm circuit shall be supplied ahead of any pump overload and short circuit protective devices. The alarm shall be audible and visible by system users and included in the pump and control enclosure (Simplex or Duplex Control Panel).
4. Float switch for the high water alarm shall be set no more than 3 inches above the high water level of pump cycle.
5. Pump floats should be set so that level of water at end of pump cycle is above the top of the pump.
6. Float switch tie downs to be made of corrosion resistant material, no tape or metal hose clamps.
7. Pump discharge shall have a check valve.
8. Anti-siphon hole (three-sixteenth inch) is required between the pump and the check valve.
9. Watertight testing will be required on two piece pump tanks.



ME SERIES

1/3 through 1-1/2 HP
Effluent Pumps



Double Seal



Single Seal

THE MYERS ME SERIES EFFLUENT PUMPS ARE DESIGNED SPECIFICALLY FOR TODAY'S EFFLUENT PRESSURE DISTRIBUTION MOUNDS, TRENCHES AND HIGH FLOW DRAINAGE APPLICATIONS. The ME Series effluent pumps with their efficient two vane, enclosed impellers, provide the ideal performance for optimum dosing. ME Series pumps are constructed of only corrosion resistant materials like cast iron, stainless steel and thermoplastics to assure that they will perform for years to come in the harsh effluent environment and drainage applications. For more information, call your Myers distributor today or the Myers Ashland, Ohio sales office at 419/289-1144.

ADVANTAGES BY DESIGN

IDEAL FOR USE IN MOUND AND TRENCH PRESSURE DISTRIBUTION SYSTEMS

- High efficiency, two vane, enclosed impeller provides ideal performance for most efficient dosing.
- Impeller passes full ¾ inch solids.
- Enclosed impeller design eliminates possibility of jamming or corrosion between impeller and volute.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- High torque, permanent split capacitor (PSC), single phase motors. No starting switches or relays to wear out.
- Optional seal leak probe warns of seal leak condition. (Dual seal motors only.) Helps prevent costly motor damage.
- Motors have on winding current and temperature sensitive overload. (Single phase only.)

THE ME SERIES EFFLUENT PUMPS ARE DESIGNED FOR YEARS OF MAINTENANCE FREE OPERATION

- Volute seal ring is replaceable. Restores pump to original performance if wear should occur.
- Motor is held in place by 4 screws. Easily removed if service is ever needed.

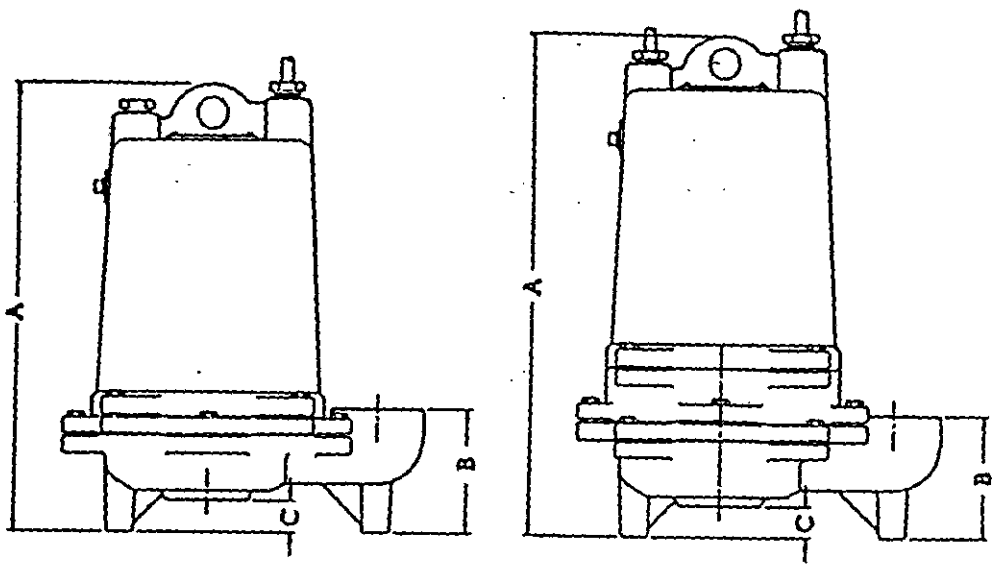
PRODUCT CAPABILITIES

Capacities To	120 GPM	454 LPM
Heads To	98 ft.	29.8 m
Max. Spherical Solids	¾ in.	19 mm
Liquids Handling	domestic effluent & drain water	
Intermittent Liquid Temp.	up to 140° F	up to 60° C
Motor Electrical Data	1/3 & 1/2 HP, 115 volts, 1 ph 1/3 to 1-1/2 HP, 230 volts, 1 ph 208, 230, 460, 575 volts, 3 ph oil-filled, permanent split capacitor type, 1 ph, 3450 rpm, 60 Hz	
Motor Insulation	Class B (105°C)	
Third Party Approvals	Pending	
Acceptable pH Range	6-9	
Specific Gravity	.9-1.1	
Viscosity	28-35 SSU	
Discharge, NPT	2 in.	50.8 mm
Min. Sump Dia. Simplex Duplex	24 in. 36 in.	61 cm 91.4 cm

Construction Materials	
Motor Housing, Volute	cast iron, Class 30, ASTM A48-76
Enclosed Two Vane Impeller Standard Optional	10% glass-filled polycarbonate bronze
Impeller Wear Ring	304 SST
Volute Sealing Ring	Buna-N
Shaft	416 SST
Power Cord 1/3 & 1/2 HP, 1 Ph 3/4 - 1-1/2 HP, 1 Ph All 3 Ph	 20 ft. 16/3 SJOW/SJOW-A 20 ft. 14/3 SJOW/SJOW-A 20 ft. 14/4 SOW/SOW-A
Shaft Seals Standard Optional Opt. Lower	single carbon & ceramic tandem carbon & ceramic tungsten carbide
Fasteners	300 Series SST

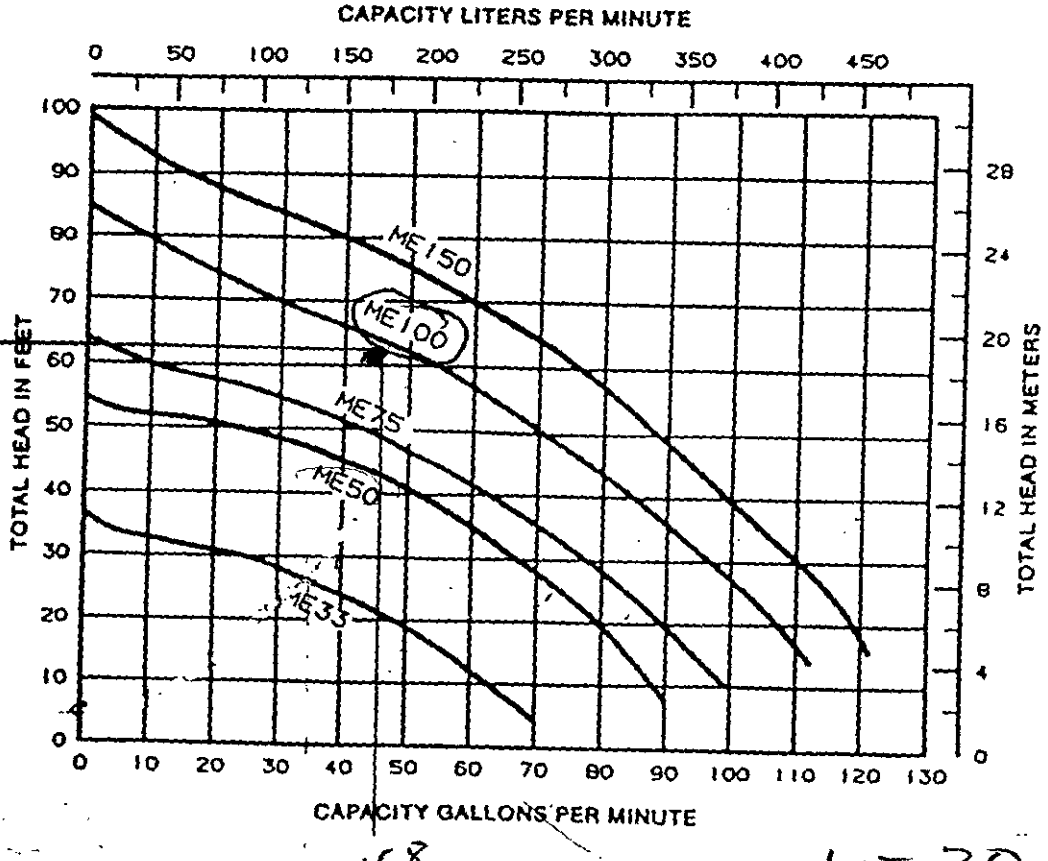
WHERE INNOVATION MEETS TRADITION

Myers®



Model Series	Inches (millimeters)			
	A	B	C	F
ME33S & ME50S	14.7 (373)	4.09 (104)	1.03 (26)	12.13 (308)
ME33D & ME50D	16.5 (419)	4.09 (104)	1.03 (26)	12.13 (308)
ME75S, ME100S, ME150S	16.8 (427)	4.0 (102)	1.06 (27)	12.5 (318)
ME75D, ME100D, ME150D	18.6 (472)	4.0 (102)	1.06 (27)	12.5 (318)

FORMANCE CURVE



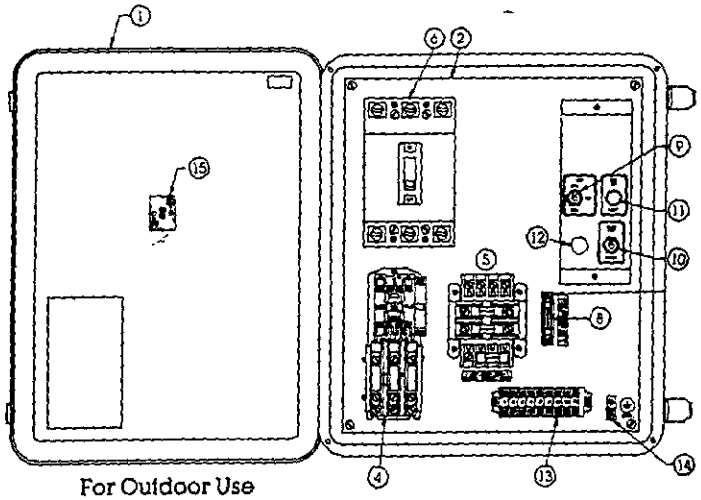
63.5 TDH

468

LOT 20
WESTMORELAND FARM

CE Simplex Electrical Control Panels

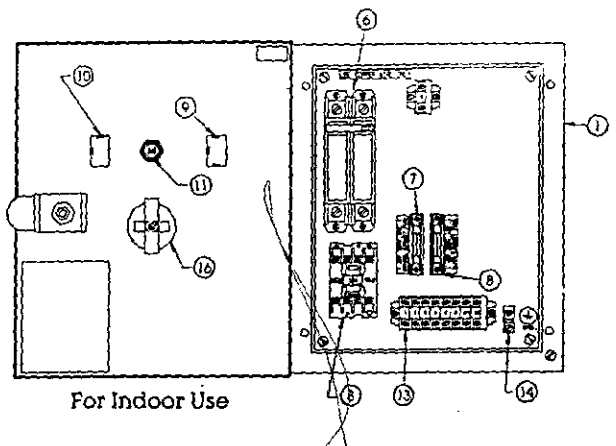
For 1/4-2 HP S, SS, SR, WHV-5, WHR, WHRE, WHRH, ME, E Pumps



For Outdoor Use

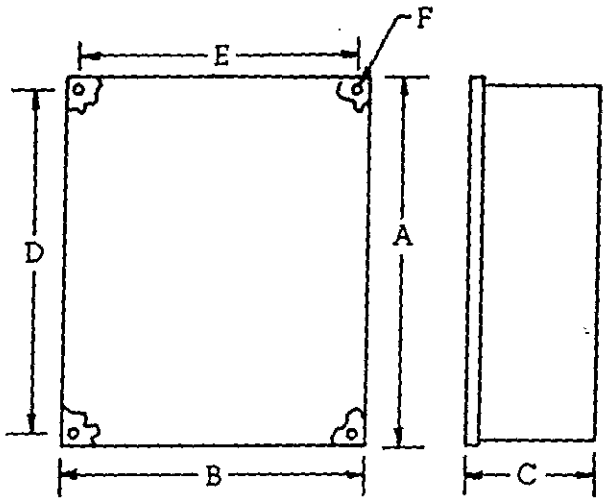
STANDARD PANEL FEATURES

1. **CORROSION-RESISTANT ENCLOSURE** NEMA 4X fiberglass (outdoor). NEMA 1 steel (indoor)
2. **ALUMINUM BACK PANEL** NEMA 4X only
3. **IEC CONTACTOR** Silver cadmium oxide contacts
4. **IEC MOTOR STARTER** 3-pole bi-metal overload relay
5. **100VA CONTROL CIRCUIT TRANSFORMER** Primary fusing on 3Ø
6. **MAIN CIRCUIT BREAKER**
7. **CONTROL CIRCUIT FUSE** 1 amp
8. **ALARM CIRCUIT FUSE** 1 amp
9. **HAND-OFF-AUTO SWITCH** Momentary in-hand position
10. **ALARM TEST SWITCH**
11. **PUMP RUN LIGHT** Amber
12. **SEAL LEAK LIGHT** Red. Use with double seal pumps only
13. **TERMINAL BLOCKS** For pump and float connections
14. **GROUND LUG**
15. **ALARM LIGHT** Nameplate mounted through enclosure front (NEMA 4X)
16. **ALARM BUZZER** 86 db at 10 ft. (NEMA 1)



For Indoor Use

ENCLOSURE DIMENSIONS



Panel	NEMA 1 1Ø	NEMA 1 3Ø	NEMA 4X 1Ø	NEMA 4X 3Ø
MAT'L	Steel	Steel	Fiberglass	Fiberglass
A	12-1/4	16-1/4	13-9/16	17-1/2
B	10-1/4	12-1/4	11-7/16	15-7/16
C	6	6	6-9/16	7-11/16
D	9	13	12-3/4	16-3/4
E	9	11	8	12
F	9/32	9/32	5/16	5/16

OPTIONAL PANEL FEATURES

- Elapsed time meter
- Alarm bell or horn
- Alarm bell or horn with silence switch
- Auxiliary contacts
- Condensation heater
- Convenience outlet
- Intrinsically safe relays
- Lightning arrestor
- Full inner door
- Cycle counter
- 24 volt control circuitry
- Transfer switch/generator receptacle
- Pump delay circuitry
- Low level cut-off and alarm
- Phase loss circuitry
- Low voltage circuitry

Other options also available

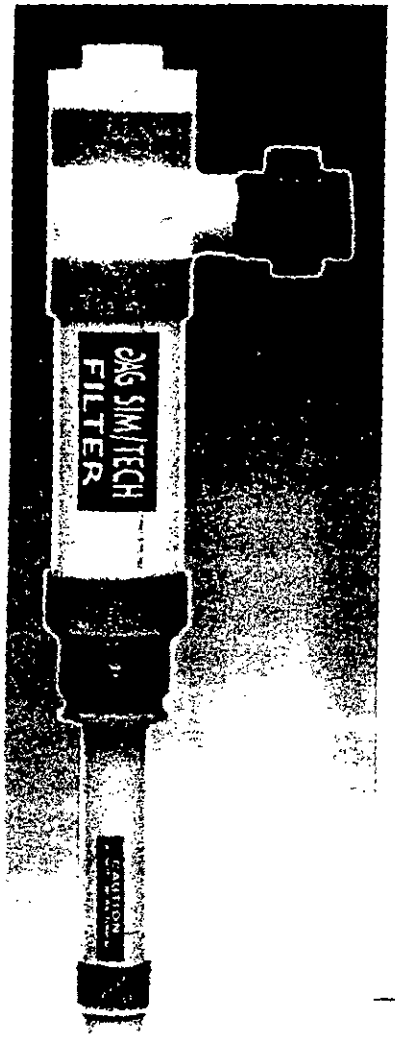
NOTE: Some options may increase enclosure size.

Myers®

F. E. Myers, A Pentair Company
1101 Myers Parkway
Ashland, Ohio 44805-1923

419/289-1144
FAX: 419/289-6658, TLX: 98-7443

K3194 8/91
Printed in U.S.A.





The Sim/Tech Filter, with its unique design and mounting location, allows the filtering screen to be scrubbed while in operation providing maximum maintenance intervals with unmatched performance capabilities.

The filter screen is a type 304 S.S. with .062 diameter holes. It is 3 inches in diameter and 18 inches long with a 69.52 square inch open area. This large 41% open area allows the filter to pass 83.8 gallons per minute at 1 psi. With features like these even a partially clogged screen will keep the system well protected and working properly.

This performance product assures quality effluent with lower BOD and TSS, not directly but indirectly, by assuring your pressurized system functions at 100% efficiency.

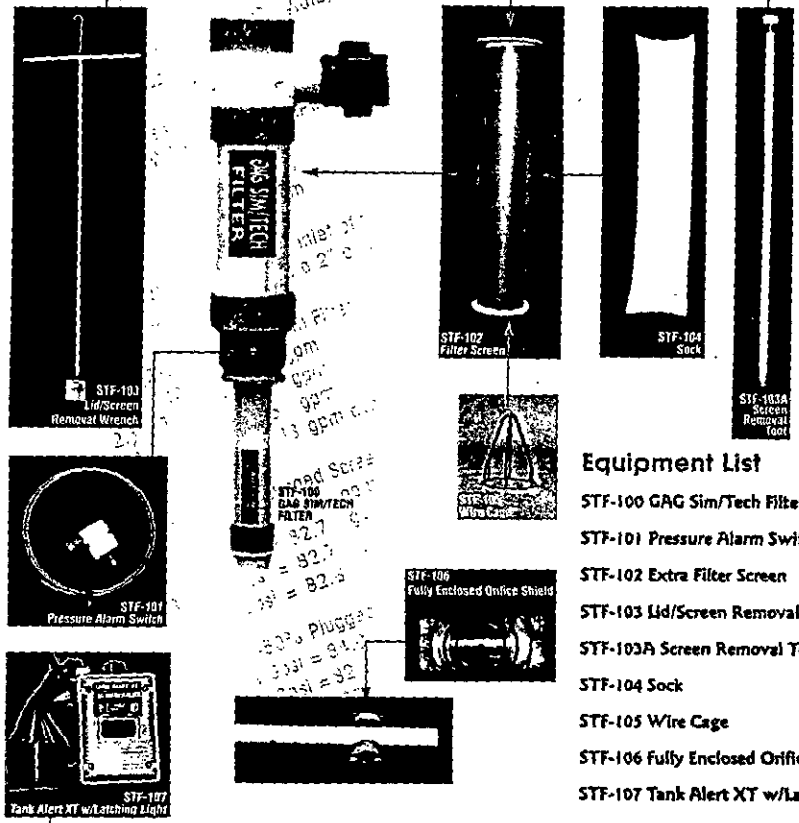
Engineers and designers now have the opportunity to offer a simple safeguard to meet performance standards now and in the future.

- **Easy installation**
- **Low maintenance**
- **Economical**
- **Extends life of drainfield**
- **Improves effluent quality by assuring even distribution**
- **Ideal for effluent submersible pumps**
- **Can be used in both residential and commercial applications**

An Innovative **Solution**

Engineered *For Performance*





Equipment List

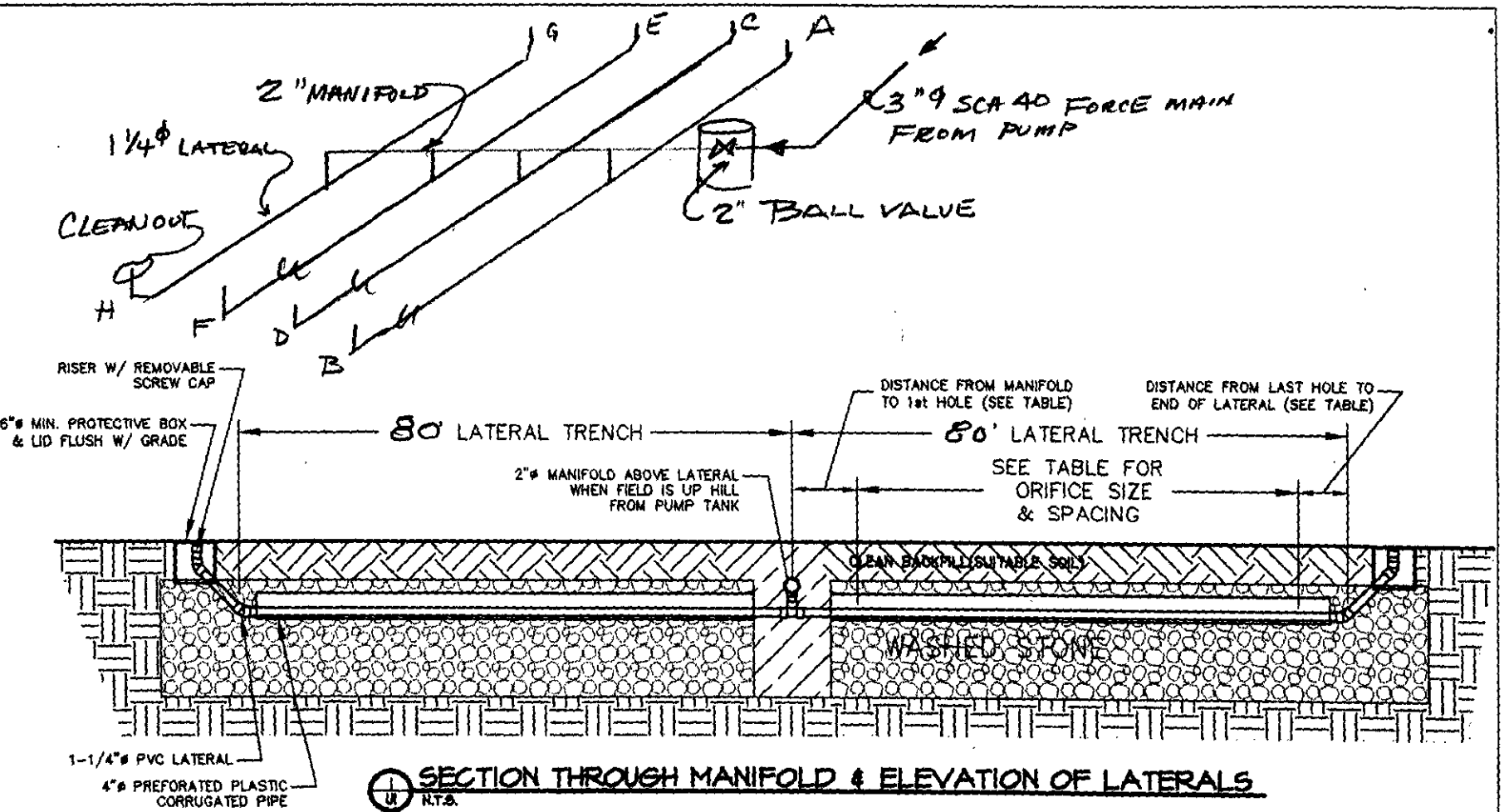
- STF-100 GAG Sim/Tech Filter
- STF-101 Pressure Alarm Switch
- STF-102 Extra Filter Screen
- STF-103 Lid/Screen Removal Wrench
- STF-103A Screen Removal Tool
- STF-104 Sock
- STF-105 Wire Cage
- STF-106 Fully Enclosed Orifice Shield
- STF-107 Tank Alert XT w/Latching Light

Restrictions and Specifications

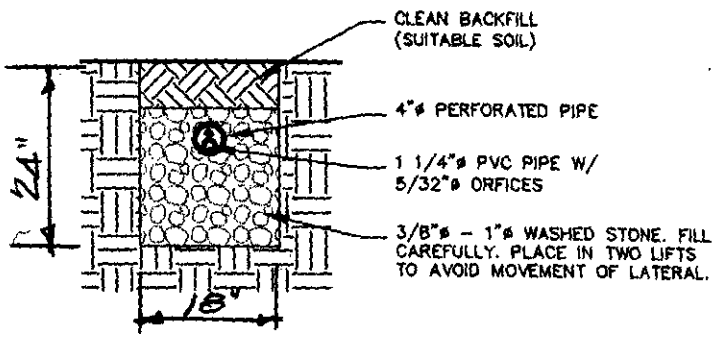
Total Head Loss .5002ft. or .21psi
Flow Rate with a Clean Screen = 120,672 GPD at 1psi
Flow Rate with a 95% Plugged Screen = 114,912 GPD at 1.8psi

Pump chamber detailed drawings and/or CAD disks for the Sim/Tech Filter are available upon request, at no cost, to help aid in your blueprint and drafting needs.





1 SECTION THROUGH MANIFOLD & ELEVATION OF LATERALS
N.T.S.



2 SECTION THROUGH LATERAL TRENCH
N.T.S.

Publication or reuse of this drawing must be with the written consent of the Architect/ Engineer

LPP FIELD DETAILS

LOT 20
WESTMORELAND FARM
MECK Co., North Carolina

SCALE:
DATE:
DRAWN BY: JSI
CHK'D. BY: BKB
DATE OF ISSUE:
TANKS.DWG (PP1)

B.K. BARRINGER & ASSOCIATES, P.A.
ARCHITECTURE/PLANNING/ENGINEERING
SUITE 104 WESTFIELD CENTER
125 EAST PLAZA DRIVE
MOORESVILLE, NC 28115
PH:704-664-7888 FAX:664-1778

REVISIONS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 8570 B. K. BARRINGER, JR.

AE: 100
DATE: 8/16/96
CR# 06790

INDIVIDUAL WATER AND WASTEWATER SYSTEMS PROGRAM
APPLICATION FOR IMPROVEMENT PERMIT FOR RESIDENTIAL SITE

20 I CRT

TYPE APPLICATION: X NEW SYSTEM ___ EXPANSION OF EXISTING SYSTEM ___ REPAIR OF EXISTING SYSTEM

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

FILE #: 1544B

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 007-422-17

STREET ADDRESS: Westmoreland Farm Road

SUBDIVISION OR MOBILE HOME PARK NAME: Westmoreland Farm

LOT NUMBER: 7

TYPE OF BUILDING: (CHECK ONE)

___ SINGLE MOBILE HOME(S)
___ DOUBLE WIDE (D)
X HOUSE (H)
___ MODULAR HOME (M)
___ MULTIPLE FAMILY (U)
___ OTHER (O)

TOWNSHIP (CHECK ONE):

___ 0 MECKLENBURG
___ 1 CHARLOTTE
X 2 DAVIDSON
___ 3 CORNELIUS
___ 4 PINEVILLE
___ 5 MATTHEWS
___ 6 HUNTERSVILLE
___ 7 MINT HILL

HEATED SQUARE FOOTAGE:

NUMBER OF BEDROOMS: 4 NUMBER OF OCCUPANTS:

FOUNDATION FOR RESIDENCE:

___ WITHOUT BASEMENT ON SLAB
X CRAWL SPACE
___ WITH BASEMENT /PLUMBING
___ WITH BASEMENT /NO PLUMBING

IF EXPANSION OF EXISTING SYSTEM, DESCRIBE THE PROPOSED ADDITION:

WILL THERE BE A HOME BUSINESS IN THE RESIDENCE: ___ YES ___ NO TYPE: _____

WATER SUPPLY (CHECK ONE): ___ COMMUNITY (C) X MUNICIPAL (M) ___ PRIVATE WELL (P) ___ SHARED WELL (S) ___ OTHER 'SPRINGS' (O)

IF ANY OF THE FOLLOWING ARE LOCATED ON THE PROPERTY, PLEASE SHOW LOCATION ON PLAT:

BURIED CABLES, LANDFILLS, STUMPHOLES ___ YES X NO
EXISTING WASTE WATER SYSTEMS ___ YES X NO
EASEMENTS OR RIGHT-OF-WAYS X YES ___ NO
WELL SPRINGS OR WATERLINES ___ YES X NO
DESIGNATED WETLANDS ___ YES X NO

PROPERTY OWNER:

NAME: Herring (LAST) James (FIRST) W (MI)

ADDRESS: 605 Greene Street

CITY: Charlotte STATE: N.C. ZIP: 29020

DAYTIME PHONE: (803) 432- 0239

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: (LAST) (FIRST) (MI)

DAYTIME PHONE: ( ) -

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? December 6, 1994

THE UNDERSIGNED, OWNER, OR LEGAL AGENT FOR THE OWNER, OF THE PROPERTY DESCRIBED ABOVE AS THE "JOB LOCATION" HAS READ THE FOREGOING APPLICATION, ACKNOWLEDGES THAT THE CONTENTS OF SAME ARE TRUE, AND AUTHORIZES AGENTS OF THE MECKLENBURG COUNTY HEALTH DEPARTMENT TO ENTER ONTO THE PROPERTY FOR THE PURPOSE OF PROCESSING THIS REQUEST.

SIGNED: James Herring DATE: July 23 1996

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR., SUITE 211, 700 N. TRYON ST., CHARLOTTE, N.C. 28202, (704) 336-5102

**An IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change.

X Now 20

#1 Bldg. Recs.

EPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
IVISION OF ENVIRONMENTAL HEALTH
N-SITE WASTEWATER SECTION

Sheet: _____
Property ID: 002-422-17
Lot #: 7 NOW LOT 20
File #: 15422

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

WNER: Donald S. Jenkins APPLICANT: _____
DDRESS: 12921 Walnuthurst Farm Rd, Davidson DATE EVALUATED: 12-18-88
ROPOSED FACILITY: residence PROPOSED DESIGN FLOW (.1949) 480GPD/PROPERTY SIZE: 1.68
OCATION OF SITE: Lot 12921 Walnuthurst PROPERTY RECORDED: _____
/ATER SUPPLY: ☐Private ☒Public ☐Well ☐Spring ☐Other _____
VALUATION METHOD: ☒Augur Boring ☐Pit ☐Cut
YPE OF WASTEWATER: ☒Sewage ☐Industrial Process ☐Mixed

PROFILE #	1940 Landscape Position/ Slope %	Horizon Depth (IN.)	SOIL MORPHOLOGY (.1941) 1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) 1941 CONSISTENCE MINERALOGY	OTHER PROFILE FACTORS 1942 SOIL WETNESS COLOR	OTHER PROFILE FACTORS 1943 SOIL DEPTH	OTHER PROFILE FACTORS 1956 SAPRO CLASS	OTHER PROFILE FACTORS 1944 RESTR HORIZ	PROFILE CLASS &LTAR
1	LS	0-3"	gr l sc l	F/S EXP/SS/SP	739" TO soil WETNESS	39"	N/A	None	PS .39 (F) LL
		3-22"	SAKI C	F/S EXP/SS/SP					
		22-39"	SAKICL	F/S EXP/SS/SP					
2	LS	0-2"	gr/sc l	F/S EXP/SS/SP	726" TO soil WETNESS	26"	N/A	None	LS .15 (F) LL (LPP)
		2-16"	SAMIC	F/S EXP/SS/SP					
		16-26"	SAMI CL	F/S EXP/SS/SP					
3	LS	0-3"	gr l sc l	F/S EXP/SS/SP	727" TO soil WETNESS	27"	N/A	None	LS .15 (F) (LPP) LL
		3-18"	SAMI C	F/S EXP/SS/SP					
		18-27"	SAKI CL	F/S EXP/SS/SP					
4	LS	0-2"	gr/sc l	F/S EXP/SS/SP	748" TO soil WETNESS	48"	N/A	None	PS .39 (F) LL
		2-21"	SAKI C	F/S EXP/SS/SP					
		21-48"	SAMICL	F/S EXP/SS/SP					
5	LS	0-9"	F.I.L		724" TO soil WETNESS	24"	N/A	None	LS
		9-12"	gr/sl	F/S EXP/SS/SP					
		12-24"	SAMI SCL	F/S EXP/SS/SP					
6	LS	0-3"	gr/sc l	F/S EXP/SS/SP	716" TO soil WETNESS	16"	N/A	None	LS
		3-16"	SA MI SCL	F.I Mixed/ Vy					
7	LS	0-2"	gr/sc l	F/S EXP/SS/SP	712" TO soil WETNESS	12"	N/A	None	LS
		2-12"	SAMI SC	V.F.I Mixed/ Vy					
8	LS	0-3"	gr/sc l	F/S EXP/SS/SP	713" TO soil WETNESS	13"	N/A	None	LS
		3-13"	SAMI SC	V.F.I Mixed/ Vy					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	LS	LS
System Type(s)		
Site LTAR	.15 (F)	.15 (F)

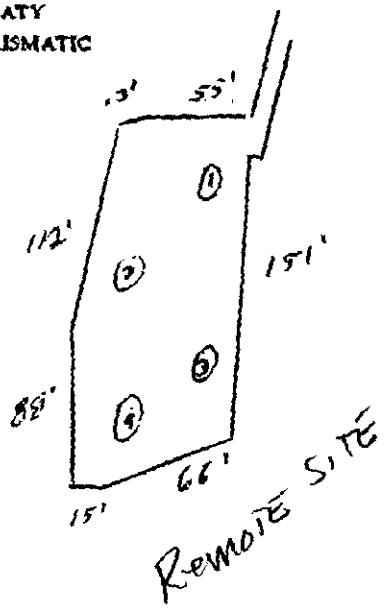
OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): Recommended
EVALUATED BY: M. R. Meade LHS 12-19-88
OTHER(S) PRESENT: _____

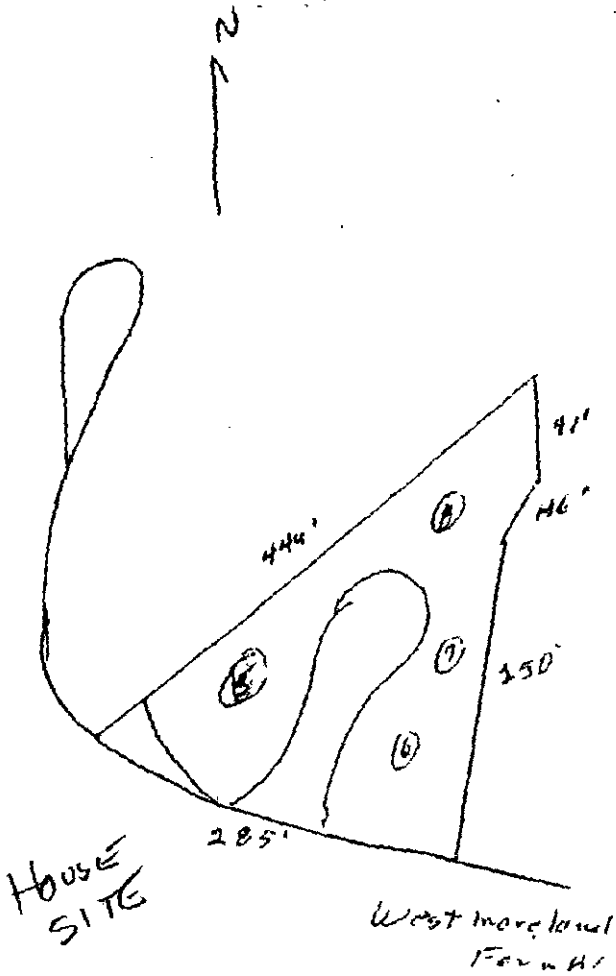
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COMMENTS 1062, Not Applicable for Drainfield

LANDSCAPE POSITION	GROUP	TEXTURE	.1955 LTAR	CONSISTENCE MOIST	CONSISTENCE WET
R-RIDGE	I	S-SAND	1.2-0.8		
S-SHOULDER SLOPE		LS-LOAMY SAND		VFR-VERY FRIABLE	NS-NON-STICKY
L-LINEAR SLOPE				FR-FRIABLE	SS-SLIGHTLYSTICKY
FS-FOOT SLOPE	II	SL-SANDY LOAM	0.8-0.6	FI-FIRM	S-STICKY
N-NOSE SLOPE		L-LOAM		VFI-VERY FIRM	VS-VERY STICKY
H-HEAD SLOPE				EFI-EXTREMELY FIRM	NP-NON-PLASTIC
CC-CONCLAVE SLOPE	III	SI-SILT	0.6-0.3		SP-SLIGHTLYSTICKY
CV-CONVEX SLOPE		SICL-SILTY CLAY LOAM			P-PLASTIC
T-TERRACE		CL-CLAY LOAM			VP-VERY PLASTIC
FP-FLOOD PLAIN		SCL-SANDY CLAY LOAM			
	IV	SC-SANDY CLAY	0.4-0.1		
		SIC-SILTY CLAY			
		O-ORGANIC			

STRUCTURE	MINERALOGY
SG-SINGLE GRAIN	SLIGHTLY EXPANSIVE
M-MASSIVE	
CR-CRUMB	EXPANSIVE
GR-GRANULAR	
SBK-SUBANGULAR BLOCKY	
ABK-ANGULAR BLOCKY	
PL-PLATY	
PR-PRISMATIC	





Mecklenburg County Environmental Health
Subsurface Wastewater System Review Checklist

Application Information

- ☐ Application for Improvement Permit has been submitted to Mecklenburg County Health Department
- ☐ Property has been shown on plat or boundary survey, and MCHD file number have been provided
- ☐ Name, address, phone, fax, e-mail information for owner, agent, engineer, soils consultant are attached
- ☐ Project proposed is described, including whether new, repair, expansion, replacement, modification of existing, or combination
- ☐ Water supplies (existing and proposed) and surface waters have been described and locations shown
- ☐ Facilities are described and located (existing and proposed) which are to be served by proposed system, including occupancy and projected use patterns
- ☐ Wastewater system components are described and located (existing and proposed)

Plans and Specifications for Specific System Components

- ☐ Tanks located accessible to pumpers and maintenance vehicles with all setbacks shown
- ☐ Plans show tank dimensions and nominal capacities
- ☐ Plans show pertinent elevations in pump tanks (i.e., float activation levels) or siphon tanks (i.e., siphon-trip and alarm elevations)
- ☐ Access risers, manholes, sanitary tee and effluent filter details shown
- ☐ For grease traps, design and construction specifications are provided in accordance with Rule .1955(k)
- ☐ Tank installation (e.g.: bedding, method of sealing tank and riser, pipe connections, surface water diversion) and water tightness testing procedures are provided
- ☐ Plans show pumps, discharging piping, and all related appurtenances
- ☐ Calculations provided for system total dynamic head, pump is specified, pump curve(s) provided, and expected operating conditions specified
- ☐ Plans show accessible pump removal system and accessible float support system, float switches and float settings
- ☐ Plans show simplex or duplex Nema 4X rated pump control panel with high water alarm components

Ground Absorption Fields

- ☐ Final layout, existing and finished ground elevations are shown on the plans
- ☐ All lines have been staked in the field as needed to verify layout, relative elevations and distribution system design
- ☐ Trench and lateral distribution system plan and profile details and invert elevations for each lateral are shown on the plans
- ☐ Manifold and supply line and interconnection details and invert elevations are shown on the plans
- ☐ Flow distribution device design, construction detail, location, and invert elevations shown on the plans
- ☐ Drainage system locations, discharge points and design details are shown on the plans
- ☐ Site preparation procedures have been specified
- ☐ Construction phasing and phased system testing has been specified
- ☐ Final landscaping provisions have been specified, including compliance with erosion control requirements

Applicant's Soil Scientist Field Evaluations

- ☐ For sites originally classified unsuitable, written documentation indicating that the proposed system can reasonably be expected to function satisfactorily, in accordance with Rule .1948(d)
- ☐ Recommended LTAR (if not provided) for conventional, LPP, or other proposed system with justifying references
- ☐ In-situ hydraulic conductivity measurements in the most restrictive horizon within two feet of the trench bottom to support selected LTAR
- ☐ Logs from deep borings or pits identifying restrictive layers, relevant changes in texture and density

FEE: 100.00
DATE: 8/16/96
CK # 06670

INDIVIDUAL WATER AND WASTEWATER SYSTEMS PROGRAM
APPLICATION FOR IMPROVEMENT PERMIT FOR RESIDENTIAL SITE

| | CRT

TYPE APPLICATION: X NEW SYSTEM ___ EXPANSION OF EXISTING SYSTEM ___ REPAIR OF EXISTING SYSTEM

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

FILE #: 1544B

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 007-422-17

STREET ADDRESS: Westmoreland Farm Road

SUBDIVISION OR MOBILE HOME PARK NAME: Westmoreland Farm

LOT NUMBER: 7

TYPE OF BUILDING, (CHECK ONE)

___ SINGLE MOBILE HOME(S)
___ DOUBLE WIDE (D)
X HOUSE (H)
___ MODULAR HOME (M)
___ MULTIPLE FAMILY (U)
___ OTHER (O)

TOWNSHIP (CHECK ONE):

___ 0 MECKLENBURG
___ 1 CHARLOTTE
X 2 DAVIDSON
___ 3 CORNELIUS
___ 4 PINEVILLE
___ 5 MATTHEWS
___ 6 HUNTERSVILLE
___ 7 MINT HILL

HEATED SQUARE FOOTAGE:

NUMBER OF BEDROOMS: 4

NUMBER OF OCCUPANTS:

FOUNDATION FOR RESIDENCE:

___ WITHOUT BASEMENT
___ ON SLAB
X CRAWL SPACE
___ WITH BASEMENT /PLUMBING
___ WITH BASEMENT /NO PLUMBING

IF EXPANSION OF EXISTING SYSTEM, DESCRIBE THE PROPOSED ADDITION:

WILL THERE BE A HOME BUSINESS IN THE RESIDENCE: ___ YES ___ NO TYPE: _____

WATER SUPPLY (CHECK ONE):

___ COMMUNITY (C)
___ SHARED WELL (S)
X MUNICIPAL (M)
___ OTHER 'SPRINGS' (O)
___ PRIVATE WELL (P)

IF ANY OF THE FOLLOWING ARE LOCATED ON THE PROPERTY, PLEASE SHOW LOCATION ON PLAT:

BURIED CABLES, LANDFILLS, STUMPHOLES ___ YES X NO
EXISTING WASTE WATER SYSTEMS ___ YES X NO
EASEMENTS OR RIGHT-OF-WAYS X YES ___ NO
WELL SPRINGS OR WATERLINES ___ YES X NO
DESIGNATED WETLANDS ___ YES X NO

PROPERTY OWNER:

NAME: Herring (LAST) James (FIRST) W (MI)

ADDRESS: 605 Greene Street

CITY: Charlotte STATE: N.C. ZIP: 29020

DAYTIME PHONE: (803) 432-0239

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: (LAST) (FIRST) (MI)

DAYTIME PHONE: ( ) —

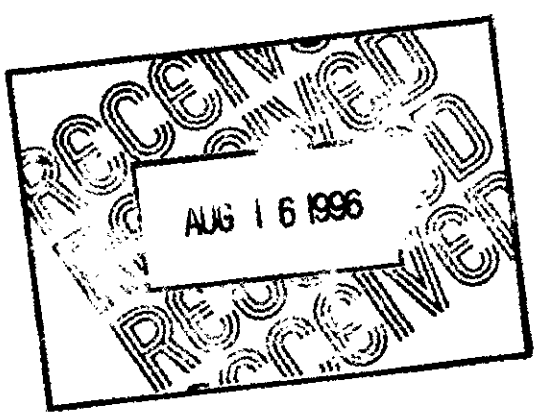
WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? December 6, 1994

THE UNDERSIGNED, OWNER, OR LEGAL AGENT FOR THE OWNER, OF THE PROPERTY DESCRIBED ABOVE AS THE "JOB LOCATION" HAS READ THE FOREGOING APPLICATION, ACKNOWLEDGES THAT THE CONTENTS OF SAME ARE TRUE, AND AUTHORIZES AGENTS OF THE MECKLENBURG COUNTY HEALTH DEPARTMENT TO ENTER ONTO THE PROPERTY FOR THE PURPOSE OF PROCESSING THIS REQUEST.

SIGNED: James Herring DATE: July 23 1996

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR., SUITE 211, 700 N. TRYON ST., CHARLOTTE, N.C. 28202., (704) 336-5102

**An IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change.


RECEIVED
AUG 16 1996
RECEIVED

DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

#7 BBB Nes.

Sheet: _____
Property ID: 007-422-17
Lot #: 7
File #: 1544A

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Donald S. Jenner APPLICANT: _____
ADDRESS: 12921 Westmoreland Farm Rd, Davidson DATE EVALUATED: 12-18-00
PROPOSED FACILITY: residence PROPOSED DESIGN FLOW (.1949) 480gpd PROPERTY SIZE: 1.66
LOCATION OF SITE: ~~lot~~ 12921 Westmoreland PROPERTY RECORDED: _____
WATER SUPPLY: ☐Private ☑Public ☐Well ☐Spring ☐Other _____
EVALUATION METHOD: ☑Augur Boring ☐Pit ☐Cut
TYPE OF WASTEWATER: ☑Sewage ☐Industrial Process ☐Mixed

PROFILE #	2-17-0 .1940 Landscape Position/ Slope %	Horizon Depth (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS &LTAR
1	LS	0-3"	gr/sl	Fr/SE/Pl/SS/SP	>37" To soil wetness	37"	N/A	None	PS .39/F2 IV
		3-22"	SBKl C	F:/SE/Pl/S/P					
		22-37"	SBK/Cl	Fr/SE/Pl/SS/SP					
2	LS	0-2"	gr/sl	Fr/SE/Pl/SS/SP	>26" To soil wetness	26"	N/A	None	LS .39/F2 IV (LPP)
		2-16"	SBK/C	F:/SE/Pl/S/P					
		16-26"	SBK/Cl	Fr/SE/Pl/SS/SP					
3	LS	0-3"	gr/sl	Fr/SE/Pl/SS/SP	>27" To soil wetness	27"	N/A	None	LS .15/F2 (LPP) IV
		3-18"	SBK/C	F:/SE/Pl/S/P					
		18-27"	SBK/Cl	Fr/SE/Pl/SS/SP					
4	LS	0-2"	gr/sl	Fr/SE/Pl/SS/SP	>48" To soil wetness	48"	N/A	None	PS .39/F2 IV
		2-21"	SBK/C	F:/SE/Pl/S/P					
		21-48"	SBK/Cl	Fr/SE/P/SS/SP					
5	LS	0-9"	Fill		>24" To soil wetness	24"	N/A	None	US
		9-12"	gr/sl	Fr/SE/Pl/NS/NP					
		12-24"	SBK/sl	Fr/SE/Pl/SS/SP					
6	LS	0-3"	gr/sl	Fr/SE/Pl/SS/SP	>16" To soil wetness	16"	N/A	None	US
		3-16"	SBK/sl	F:/Mixed/vfr/VP					
7	LS	0-2"	gr/sl	Fr/SE/Pl/SS/SP	>12" To soil wetness	12"	N/A	None	US
		2-12"	SBK/sl	vF:/Mixed/vfr/VP					
8	LS	0-3"	gr/sl	Fr/SE/Pl/SS/SP	>13" To soil wetness	13"	N/A	None	US
		3-13"	SBK/sl	vF:/Mixed/vfr/VP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	US	US
System Type(s)		
Site LTAR	.15/F2	.15/F2

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): Unsuitable
EVALUATED BY: M. A. Martin LSS 12-19-00
OTHER(S) PRESENT: _____

FILE # 1544B

COMMENTS 100% , Not applicable for Dumpfield

LANDSCAPE POSITION	GROUP	TEXTURE	.1955 LTAR
R-RIDGE	I	S-SAND	1.2-0.8
S-SHOULDER SLOPE		LS-LOAMY SAND	
L-LINEAR SLOPE			
FS-FOOT SLOPE	II	SL-SANDY LOAM	0.8-0.6
N-NOSE SLOPE		L-LOAM	
H-HEAD SLOPE			
CC-CONCLAVE SLOPE	III	SI-SILT	0.6-0.3
CV-CONVEX SLOPE		SICL-SILTY CLAY LOAM	
T-TERRACE		CL-CLAY LOAM	
FP-FLOOD PLAIN		SCL-SANDY CLAY LOAM	
	IV	SC-SANDY CLAY	0.4-0.1
		SIC-SILTY CLAY	
		O-ORGANIC	

CONSISTENCE MOIST	CONSISTENCE WET
VFR-VERY FRIABLE	NS-NON-STICKY
FR-FRIABLE	SS-SLIGHTLYSTICKY
FI-FIRM	S-STICKY
VFI-VERY FIRM	VS-VERY STICKY
EFI-EXTREMELY FIRM	NP-NON-PLASTIC
	SP-SLIGHTLYSTICKY
	P-PLASTIC
	VP-VERY PLASTIC

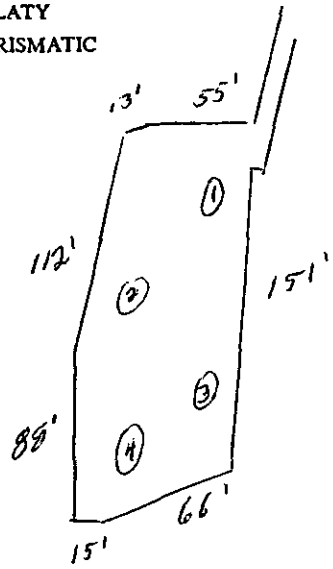
STRUCTURE

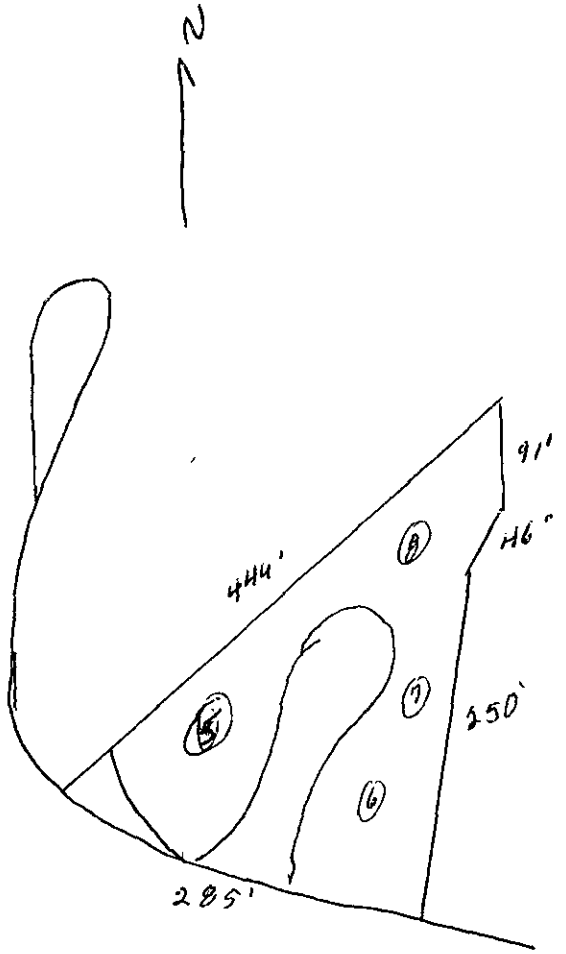
SG-SINGLE GRAIN
M-MASSIVE
CR-CRUMB
GR-GRANULAR
SBK-SUBANGULAR BLOCKY
ABK-ANGULAR BLOCKY
PL-PLATY
PR-PRISMATIC

MINERALOGY

SLIGHTLY EXPANSIVE

EXPANSIVE





West moreland
Formal

PROPOSED PLOT PLAN

2 of #7

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 1544B

TC: _____

Draw in and name all roads adjoining the property. Draw in and accurately dimension the lot concerned. Accurately indicate property boundaries proposed and/or existing structures and driveways, underground utilities, and wells and springs within 100 feet of the proposed building or drainfield.

SEE Attached

APPROVAL DATE _____

OWNER/AGENT SIGNATURE

DATE

White - Health Department's Copy Canary - E.H.S. Copy Pink - Owner's Copy