

1/7/2008

duponbj

Groundwater and Wastewater Services File Imaging Project

May 2007

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chk # 4350 ACS

FEE: 300 AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION
DATE: 6/5/01 GC VOID SIXTY (60) MONTHS FROM DATE OF ISSUANCE

DATE: 5/23/01 PERMIT NO: 4559B 20
PARCEL NO: 107-271-~~05~~
JOB LOCATION ADDRESS: East Rocky Road Lot 2
PROPERTY OWNER: Mr Paul Clark
BUILDING CONTRACTOR: -
SUBDIVISION NAME: -
AUTHORIZATION ISSUED BY: Phillip L. 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. 4559B, 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 INSTALLATION, CONSTRUCTION, ALTERATION AND/OR REPAIR APPROVAL MUST BE SECURED **PRIOR** TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A REGISTERED SEPTIC TANK CONTRACTOR WITH MECKLENBURG COUNTY HEALTH DEPARTMENT.

3. ANY ALTERATION IN SITE OR SOIL CONDITIONS (INCLUDING LOCATION OF STRUCTURES AND APPURTENANCES) OR MODIFICATION IN USE, DESIGN WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS AS SPECIFIED IN THE ASSOCIATED IMPROVEMENT PERMIT AND APPLICATION, MAY SUBJECT THIS AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. OTHER CONDITIONS: _____

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.

X Paul B. Clark 6/5/01
SIGNATURE OF OWNER/OWNER'S REPRESENTATIVE DATE

Hold For:

1) Fees
2) certified operator copy of contract before operations permit release.

Permit Number: 4559B

CONDITIONS OF IMPROVEMENT PERMIT

Tax Number: 007-27-~~00~~ 20

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 2

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

.3 Long-term acceptance rate	360 Max gallons/day wastewater flow	600 Absorption Area (sq ft)	8" Trench spacing (min. on centers)
yes Serviced by private well	1500 Gallon septic tank	200' Total trench length (ft)	42" Maximum trench depth (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions)
3 Bedrooms in residence	1000 Gallon pump tank	NA Depth of stone	

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

Site modifications required:

Additional Conditions: Keep the septic system > 50' from any wells, Certified Operator contract shall be on file prior to the operations permit release. Existing septic system on lot to be properly abandoned

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

600 Absorption Area (Sq ft) 200' Total Trench Length (Ft)	NA Depth of Stone Trench	8" Trench spacing (min. on centers)	42" 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.

Phyllis A. Walker RS. 5/23/01
DEHNR Authorized Agent — Date

Owner/Agent Signature — 6-5-01 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

FOR REGISTRATION JUDITH A. GIBSON
REGISTER OF DEEDS
MECKLENBURG COUNTY, NC
2002 FEB 26 09:09 AM
BOOK 13297 PAGE 863-866 FEE $20 00
INSTRUMENT # 2002037642

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

WASTEWATER TREATMENT AND DISPOSAL SYSTEM DESIGN AGREEMENT: 15A NCAC 18A .1948 AND ANY OF THE FOLLOWING RULES: .1956; .1957(a); .1957(b); or .1957(c); OR .1969

FILE # 4418B/4559B
PARCEL # 00727103

The undersigned, PAUL B. CLARK, owner of property located at 14106 EAST ROCKY RIVER RD (the "site") and described in an instrument recorded in Book 1936 at Page 481, Mecklenburg Public Registry, hereby acknowledges that the undersigned applied to the Mecklenburg County Health Department (the "Department") for a permit to install a septic tank sewage disposal system on the site, that the Department evaluated the site for suitability for such a system in accordance with the regulations promulgated by the North Carolina Commission for Health Services as 15A NCAC 18A .1900 et seq.; that the Department originally classified the site as "unsuitable" pursuant to the standards set forth in the regulations; that the undersigned requested that the Department reclassify the site as "provisionally suitable" in light of the particular septic tank system proposed by the undersigned; that the Department considered various studies, data, and other information which indicate to the Department that the septic tank system proposed by the undersigned is allowed by the rules; and that the Department therefore reclassified the site as "provisionally suitable" and issued an appropriate permit for such proposed septic tank system.

The undersigned further acknowledges that the proper design, construction, operation and maintenance of such septic tank system is the responsibility of the designer, owner, developer, installer, or user of the system, as applicable, and that neither the Department nor its officials, employees, or agents warrant or guarantee that the said system installed pursuant to the permit issued by the Department will function in a satisfactory manner for any given period of time or that the Department, its officials, employees or agents assume any liability for any damages of any kind which are caused, or which may be caused, by a malfunction of such system.

The undersigned further acknowledges that the following conditions will apply to the site:

- Any changes on the property may make the Improvement Permit Null and void and may make the Improvement Permit subject to revocation

This instrument was prepared by: PAUL B. CLARK
Mail after recording to: PAUL B. CLARK
120 SPRING ST., DAVIDSON NC 28036

4559B
lot #2

SPECIFICATIONS & SCOPE OF WORK

for an Individual Residence

T & J PANEL

Ground Absorption, Wastewater Disposal System

for

Lot No. 2 @ 14106 East Rocky River Road
Davidson (Mecklenburg County), NC
Property ID: 007-271-~~07~~ 20
File No.: ~~44188~~ 4559B

April 16, 2001

OWNER:

Mr. Paul Clark
120 Spring Street
Davidson, NC 28036
Phone: 704/ 687-4020
Fax: 704/ 687-3353

PREPARED BY:

B. K. Barringer & Associates, PA
Westfield Center Suite 104
125 East Plaza Drive
Mooresville, N. C. 28115
Phone: 704/ 664-7888
Fax: 704/ 664-1778

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

Ground Absorption Wastewater Disposal System
Lot No. 2 @ 14106 East Rocky River Road
Davidson, Mecklenburg County, NC

T & J Panel System

I. NARRATIVE:

The Owner proposes to construct two (2) three-bedroom residences on this property. The subject property is divided into two lots (Lot No.1 and Lot No. 2) with one residence proposed per lot. Each lot will be served by an individual on-site water well. Lot No. 1 has an existing water well which is to be re-used. It will be 50' minimum from any septic system. Lot No. 2 will require a new well, its location being a minimum of 50' from any septic system. The existing well on Lot No. 2 shall be properly abandoned by a licensed well driller and a closure report filed with the Mecklenburg County Health Department (Copy of Closure Report attached).

A pressurized Pre-fabricated Permeable Block Panel System (PPPBPS) is proposed for this residence due to limited available space and soil data. The panel system will function as additional pre-treatment of effluent before entering the soil. Nitrification lines (panels) are to be placed on 8' centers. The field will be dosed by a properly sized pump with float control. These specifications address the Owner's responsibilities as well as installation instructions, components of the proposed system, and testing and operating procedures.

The septic system plan has been prepared locating existing contours, the location of proposed panels, tanks, house and driveway envelopes and repair area.

The Sanitarian has set an LTAR of 0.3 G/SF/D.

II. LOCATION:

The property is located at 14160 East Rocky River Road, approximately 2 miles east of Davidson. The area of the nitrification field has been flagged by the Engineer. The Owner shall baracade this area to prevent access, vehicular traffic, storage or grading.

III. 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 .1956 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.
Paragraph .1956 (a)(ii)(B).

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

IV. OWNERSHIP RESPONSIBILITY FOR A PANEL SYSTEM:

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

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

(a) Provide water conserving plumbing fixtures within the facility. Water closets shall not use more than 1.6 gallons/flush. Shower head shall have a maximum allowable flow of 3.0 gallons/minute. All fixtures shall conform to Table 901.2.2 of the NCBC Volume II, Plumbing;
(b) Develop conservative water use habits;
(c) Monitor and maintain the system as necessary for proper operation;
(d) Check and pump the septic tank sludge on a regular basis of approximately every year if garbage disposal is included in the residence, or approximately every three years otherwise.
(e) Make rapid repairs to leaking plumbing fixtures and faucets.
(f) Avoid excessive watering of the lawn in the vicinity of the disposal field.

V. CERTIFICATION:

The Owner shall employ the Design Engineer to make timely observations of the project during construction. Upon completion of the project, the Contractor shall provide the Engineer an "as built" plan of the project. The Engineer shall certify that the project has been constructed in accordance with the plans and specifications and shall further certify that the various apparatuses including fixtures within the house meet the intent of the specifications. A copy of the "as-built" plan and certification shall be provided to the County Sanitarian.

VI. COMPONENTS OF THE SYSTEM AND CONSTRUCTION SEQUENCE:

Refer to T & J Panel System's manufacturing and installment manual. 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 N. C. Dept. of Environmental Health (NCDEH); the N. C. Building Code, Plumbing Code and Electrical Code; and the National Electric Code. System must be properly installed by a qualified, competent contractor.

COMPONENTS OF SYSTEM:

1. 1,000 gallon two compartment septic tank with effluent filter
2. 1,000 gallon pumping tank with access
3. Submersible effluent pump, filter and float controls
4. Pump Control and high water alarm signals (audible and visible)
5. Supply pipe
6. Ball valves
7. T & J 16" high panels & distribution laterals

CONSTRUCTION SEQUENCE:

(1) Lay out T & J, 16" high, panel system network area with stakes and flagging to ten feet (minimum) beyond the limits of the network. As soon as the absorption area is designated, it shall 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. See site plan for flag locations.

(2) Prior to actually beginning construction of the system, carefully locate, lay out and identify disposal site, manifolds and the lateral panel piping networks, using a tripod mounted engineer's leveling instrument to accurately establish each lateral along a level contour. Note: Lateral panel 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. (The 8' minimum trench separation must be maintained.)

(3) Excavate for and construct curtain drain (if shown on the plan.)

(4) Excavate lateral network trenches 24" wide by 28" deep (see detail). Remove loose soil from bottom of trench.

(5) Install sand in bottom of the lateral trench to the proper depth of approximately 22" below finish ground level.

(6) Follow the manufacturer's guidelines for installing the T & J Panel System.

(7) All joints in lateral and the manifold piping shall be water tight connections to insure that the only source of the water seepage from the system is through the orifices as designed. See layout and details. Carefully install manifold and lateral network according to the attached designed layout. A larger diameter protective sleeve with cap or approved 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.)

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

(9) Leave absorption area with a raked surface, ready for grassing.

(10) The installation contractor shall stabilize the area of construction by planting and seeding with Kentucky 31 tall fescue and shall keep the planted area watered and mulched until such time that a hardy stand of grass is established. (See Seeding Specification.)

(11) SEPTIC TANK 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 outlet of the tank shall have an effluent filter as specified herein. Locate the septic tank at such height as to provide approximately 8" of cover soil over top of the tank. The tank shall have a DHS approved access with lid over the filter.

(12) SLOTTED-FILTER A Zabel A1800 micro-filter, with 1/16" infiltration shall be installed in the outlet tee in the septic tank. The filter shall be manufactured by ZABEL or approved equal, Zabel Environmental Technology, 10409 Watterson Trail, Louisville, KY, 40299, 1-800-221-5742, Fax 502-267-8801 Fax.

(13) 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. Access shall be provided for entry into the tank directly over the pump location, and extending 6" above final grade or as called for on the plan. Use a DHS approved tank riser with approved lid. The tank shall be supplied by a manufacturer approved by DHS and bear the manufacturer's serial number. The tank shall be positioned to allow gravity flow of the effluent from the septic tank. Immediately down stream from the pump shall be an approved effluent filter system.

All 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. Any leaking shall be corrected and the tanks retested.

Once testing of the tank has been completed, the tank 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 shall be installed and grouted water tight and the earth raked smooth for grassing. Grade over the tank shall be sloped to prevent surface water from entering the tank through the access.

(14) PIPING All piping and fittings shall be Schedule 40 PVC except LPP piping in the panels shall be PR160 PVC. Glue for all PVC pipe joints shall be as recommended by the pipe manufacturer.

(15) PUMP The submerged pump shall be Model ME 33 manufactured by F. E. Meyers Co., Ashland, OH, or equal, ⅓ hp, 230v/1ph; capable of pumping 26 gallons per minute at a 18.8' head.

(16) EFFLUENT FILTER The effluent filter shall be connected directly to the pump outlet. The filter shall be equal to the GAG Sim Tech Filter, Boyne City, Michigan, 49712, telephone 1-888-999-3290. The contractor shall furnish the following with the filter: STF 100 Filter, an STF 102 Filter Screen, an STF 103 Wrench, an STF 104 Sock, an STF 101 Pressure Alarm Switch and an STF 107 Tank Alert. Filter can be obtained through Confederate Sales Associates, 8205 Brooknell Terrace, Charlotte, NC 28270, telephone 704/ 364-1372.

(17) PUMP ON-OFF water level control switch shall by Myers, Model MLC-20, mercury switch, connected to the simplex pump control.

(18) HIGH WATER ALARM SWITCH shall be mounted to a float tree and shall be equal to Myers, model FLCA-30, mercury switch, red colored ball with support bracket.

(19) FLOAT TREE The "float tree" can be constructed of an 1-1/2" diameter PVC pipe anchored in a gallon bucket filled with concrete and a 2" diameter PVC sleeve over the 1-1/2" pipe to which the floats are attached. The PVC pipe shall be long enough to reach from about the tank extending into the access riser. The "tree" allows easy and quick access to the float switches for adjustment. Float switches shall be mounted to the tree with non-corrosive clamps furnished by the float manufacturer. Float shall be positioned to not tangle.

(20) PUMP INSTALLATION: Details of pump installation are shown on the plan. The pump must be placed 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.)

The pump outlet pipe should be connected to the supply manifold with a threaded PVC union (or dresser coupling) to allow quick removal. A check valve shall also be installed in the supply line (within the pump - chamber). If effluent will be pumped down hill, a 3/16" 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.

(21) PUMP CONTROL PANEL: The pump shall be powered by a simplex control panel with standard features including: a corrosion resistant enclosure, an aluminum back panel, silver cadmium contacts (IEC Contactor), an IEC motor starter, a 100VA control circuit transformer, a main circuit breaker, a 1 amp control circuit fuse, a 1 amp alarm circuit fuse, a Hand-Off-Auto switch, an alarm test switch, a pump run light, a seal leak light, terminal blocks for pump and float connections, a ground lug, an alarm light and an alarm buzzer. Panel shall be equal to Myers CE 21510 NEMA 4X.

(22) 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 shall extend to a NEMA approved outdoor control panel mounted outside of the pumping chamber. There are to be no junction boxes inside the tank. Power and control conductors shall be conveyed through 2" conduit with Seal-off.

Wiring between the pumping chamber and the house should meet State and local code requirements. Conductors from the tank to the control panel shall be conveyed through 2" conduit with Seal-off.

(23) A "HOME OWNER'S WARNING SIGN" shall be located within the house 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.

(24) 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 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.

(25) 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 ball valve at the head of each lateral 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. The pressure head should be 3' for each line. This is the height above the lateral the liquid should be in the temporary "test tube". Continue to adjust valves until all "test tubes" have an equal amount of liquid.

(26) FINAL LANDSCAPING: After the T & J System 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 rain water and is free of low area.
(b) Gutter and downspout drains are directed away from the system.

Any problems should be corrected before approving the system.
Finally, the entire area should be planted with grass according to specifications.

VII. OPERATION AND MAINTENANCE:

The system is classified as a Type IV e. The Regulations require that the system to be managed by a certified operator. Operating, Maintenance and Inspection procedures shall be conducted by the Operator on a timely basis. Procedures shall include but not be limited to the following:

- Minimum inspection/maintenance frequency shall be conducted on a timely and routine basis.
- Septic system shall be pumped every 4 years or when solids accumulate to a the volume of the tank.
- Effluent filters shall be cleaned on routine basis as required.
- The PPBPS system should be observed by the regulatory agency one, three, six and nine months after initial installation, and every 3 years. An inspection report should be completed and filed each time the system is checked.
- All laterals shall be pressure back-washed annually with clean water.
- Pressure head for upper and lower 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.
- Check septic tank and pump tank for evidence of damage or leakage. Check the quality of effluent including grease and sludge accumulation.
- 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 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 - T & J PANEL SYSTEM
At Lot No.2 @ 14160 East Rock River Road
Davidson (Mecklenburg County), NC

Daily design waste flow:		360 gpd
Septic tank size:	1500	~~1,000~~ gal. (2 compartment)
Septic tank filter:		Zabel A1800 filter
Pumping tank size:		1,000 gal.
Effluent loading rate:		0.3 gpd/sf (50% decrease with PPBPS)
Lateral Pipe:		ft. of 1-1/4" dia. PVC of laterals and T & J 16" high panels (allow 4.5 ft per panel)
Supply manifold:		155 LF – 1-1/2" dia. Schedule 40 PVC
Number and length of laterals:		1 Line(s) with 13 panels = 13 1 Line(s) with 10 panels = 10 1 Line(s) with 5 panels = 5 2 Line(s) with 12 panels = 24 Total Panels: = 52
Number of panels:		52
Repair:		54 Space available for repair
Hole size:		5/32"
Hole spacing:		1 hole per panel
Flow per hole at 3' head		0.50 gpm
Flow rate through the system:		26.0 gpm
Elevation head:		8'
Pressure head:		3'
Friction head:		7.8'
Total head:		18.8'
Pump requirements:		26.0 gpm at 18.8' use Myers ⅓hp ME33 pump
Force main filter:		GAG Sim/Tech Filter w/Sock and Pressure Alarm
Dosing volume:		187 gal.
Depth of water pumped per dose:		9.0"
Pump run per dose:		7.2 min.
Check valve:		yes
Siphon 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 2 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 f lb/1000 sf
	Sorghum-Sudan Hybrids	30 lb/ac or : 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 Lespediza (scarified) &	50 lb/ac or 11 lb/1000 sf
Mar - Apr	Add Tall Fescue or	150 lb/ac or 32 lb/1000 sf
Mar - Jun	Add Weeping Lovegrass	5 lb/ac or c lb/1000 sf
Jun - Sep 1**	Tall Fescue and	60 lb/ac or 12 lb/1000 sf
	Brown Top Millet	35 lb/ac or f lb/1000 sf
	Sorghum Sudan Hybrids	30 lb/ac or : lb/1000 sf
Sep - Mar 1	Sericea Lespediza (unhulled-unscarified)	70 lb/ac or 1: lb/1000 sf
	Tall Fescue	150 lb/ac or 32 lb/1000 sf
	Millet or Sudan	20 lb/ac or 2 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 3-5 gal/1000 sf or 200-300 gal/ac.

PAUL CLARK | 4/12/01 LOT 1 OR LOT 2 | 1410G E ROCK RIVER RD DAVIDSON (MECK Co.)

DESIGN FLOW: 3 BEDROOM @ 120 G/D = 360 G/D

LTAR 0.3 G/SF/D

$\frac{360}{0.3}$ = 1200 SF x .5 = $\frac{600}{3}$ SF = 200 LF

$\frac{200 \text{ LF}}{3.83 \text{ SF/BLOCK}}$ = 52 PANELS

USE: ~~1000~~ 1500 GAL SEPTIC TANK W/ SLOTTED FILTER

USE: 1000 GAL PUMP TANK W/ SIMTEC FILTER

USE: T&J 16" PANEL: 46"/PNL + 6" SPACE = 52"/PNL = 4'4"

PRESSURE DOSE @ 3' HEAD

5/32" ϕ ORFICE (1/PNL) FLOW @ 3' HD = 0.5 G/M

FLOW THRU SYSTEM: 52 PNL @ 0.5 = 26 GPM

	LOT 1	LOT 2
OPERATING HEAD —	3.0'	3.0
FRICTION HD ($1\frac{1}{2}$" ϕ SCH 40) $\frac{3.5}{100}$ (60) 1.2	2.1	7.8
	8.0	8.0
TDH	13.1	18.8

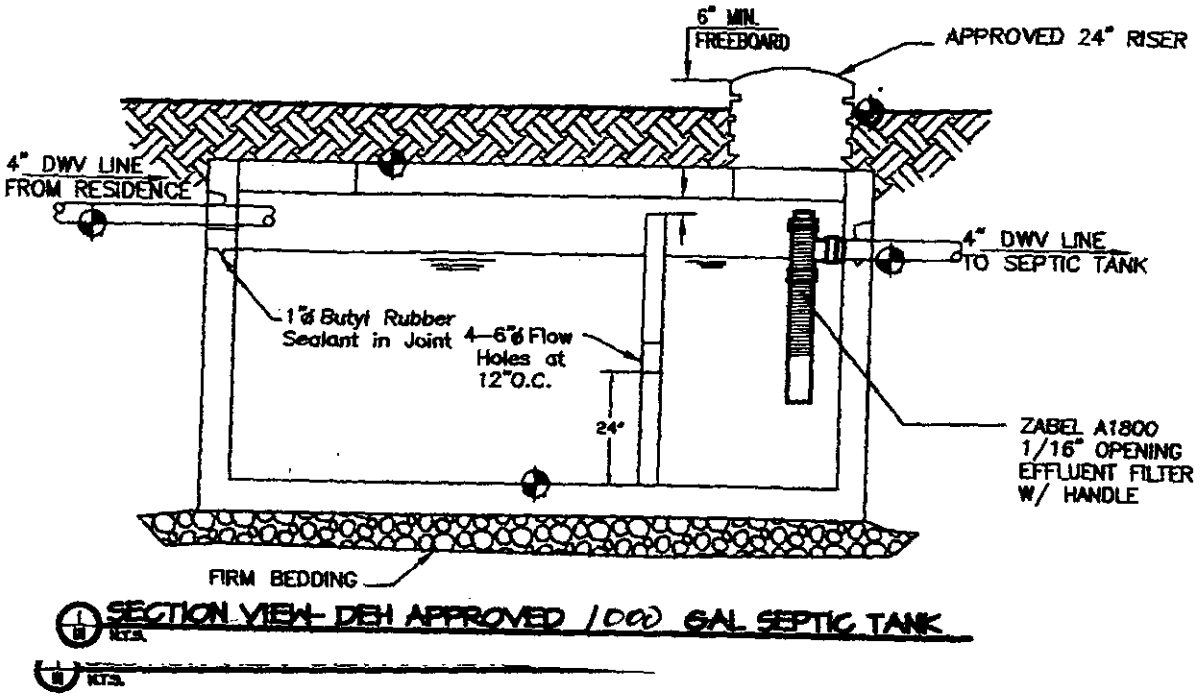
PUMP REQ'D: 26 GPM @ 13.1 TDH (LOT 1)
18.8 TDH (LOT 2)

USE MYERS: MODEL ME-33 1/3HP 208V/1PH

DOSE VOL: 52 PNL @ 3.6 G/P = 187.2 GAL

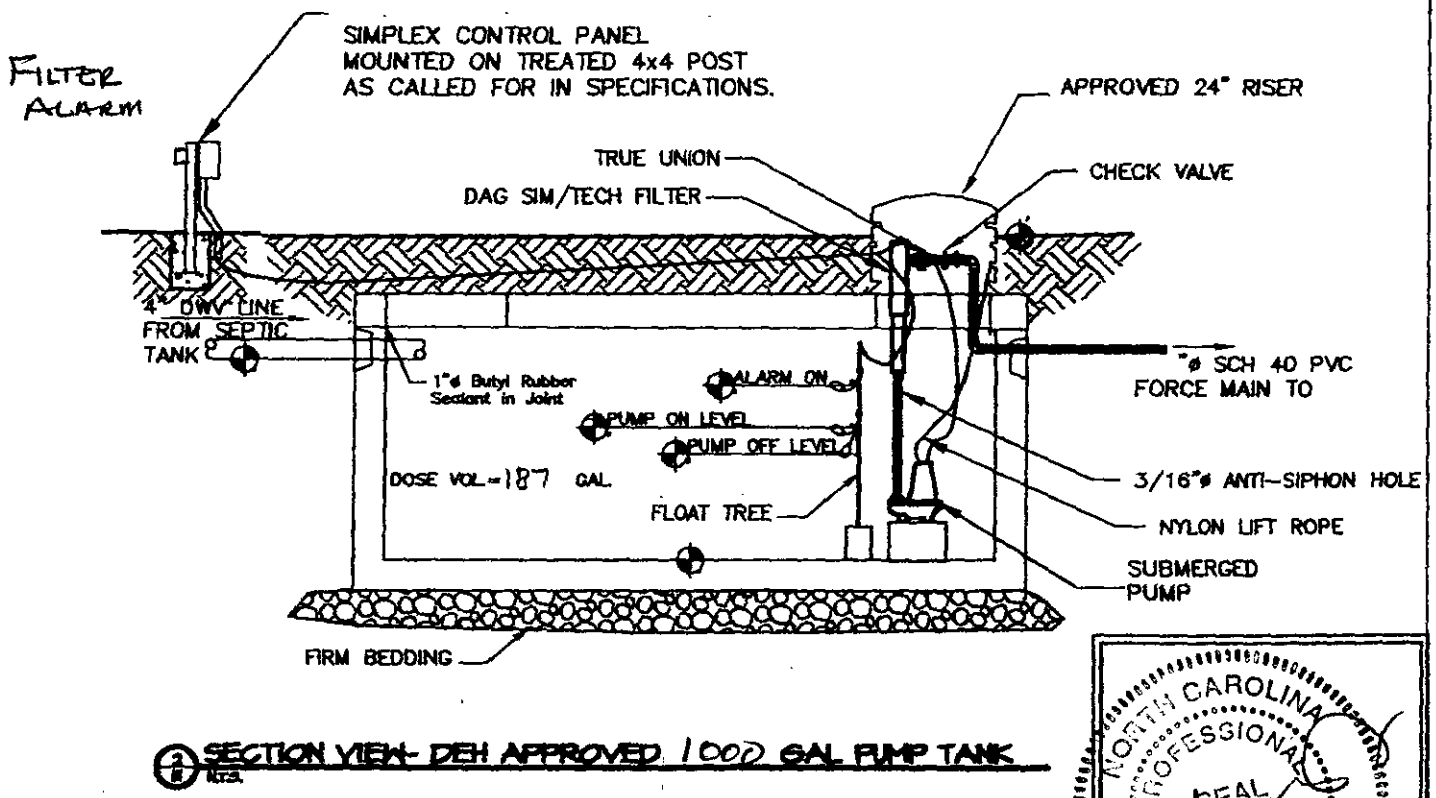
DRAWDOWN: $\frac{187}{1000}(48)$ = 9"

PUMP RUN $\frac{187 \text{ GAL}}{26 \text{ GPM}}$ = 7.2 MIN



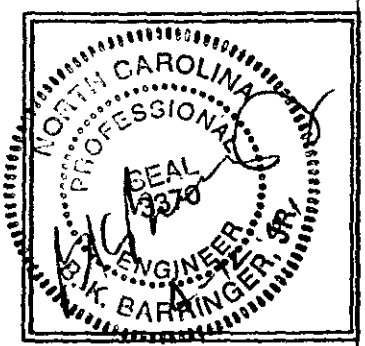
SECTION VIEW- DEH APPROVED 1000 GAL SEPTIC TANK

N.T.S.



SECTION VIEW- DEH APPROVED 1000 GAL PUMP TANK

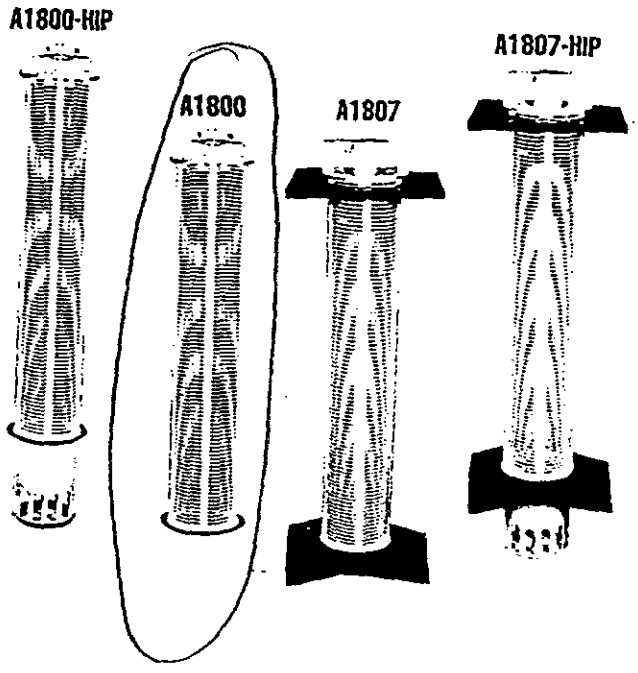
N.T.S.

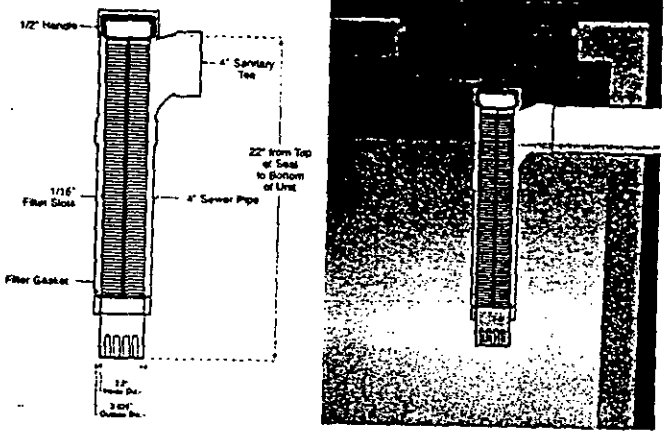


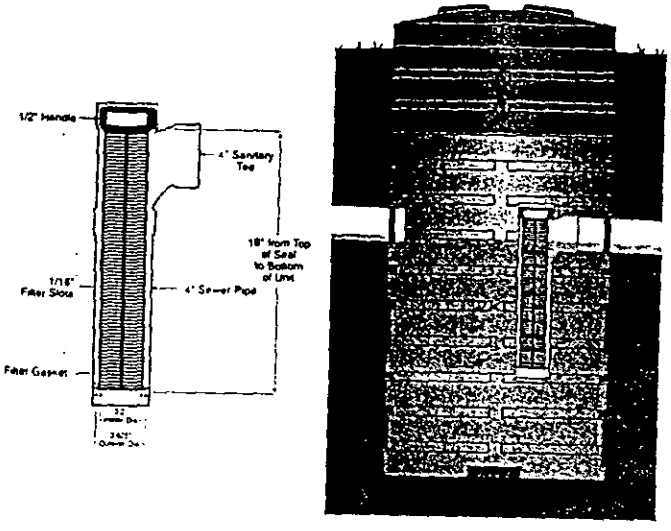
Publication or reuse of this drawing must be with the written consent of the Architect/ Engineer

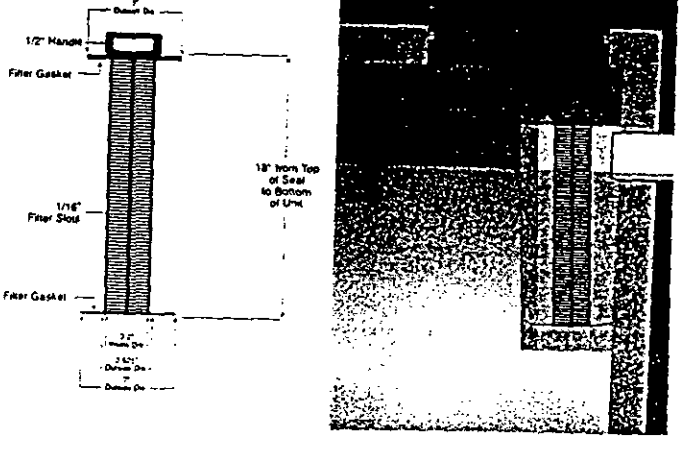
SCALE: DATE: DRAWN BY: JSI CHK'D. BY: BKB DATE OF ISSUE:	1000 GAL SEPTIC TANK & 1000 GAL PUMP TANK MECK Co., North Carolina	B.K. BARRINGER & ASSOCIATES, P.A. ARCHITECTURE/PLANNING/ENGINEERING SUITE 104 WESTFIELD CENTER 125 EAST PLAZA DRIVE MOORESVILLE, NC 28115 PH:704-664-7888 FAX:664-1778	REVISIONS

A1800s







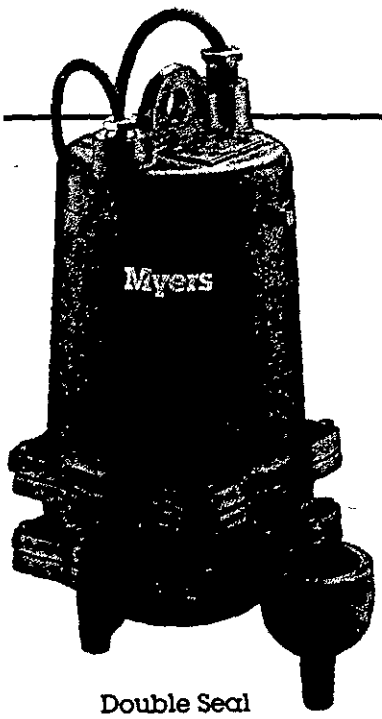


Zabel™ Recommendation: Any configuration of Risers used **should not** exceed 48" in height.

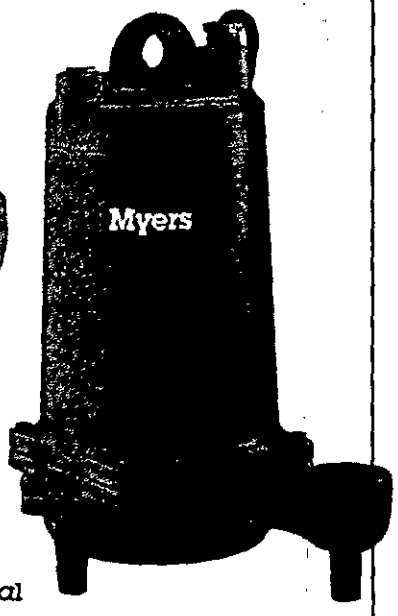
The product(s) shown are covered by one or more of the following patents:
U.S. 5,382,357, 5,482,621, 5,683,577, 5,580,453, 5,582,716, 5,591,331, 4,710,295, 5,593,584, U.S. Des. 386,241,349067, 4605501,5098568, Des. 309007, Canadian: 2,135,937 New Zealand: 264824, Other Patents Pending

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.

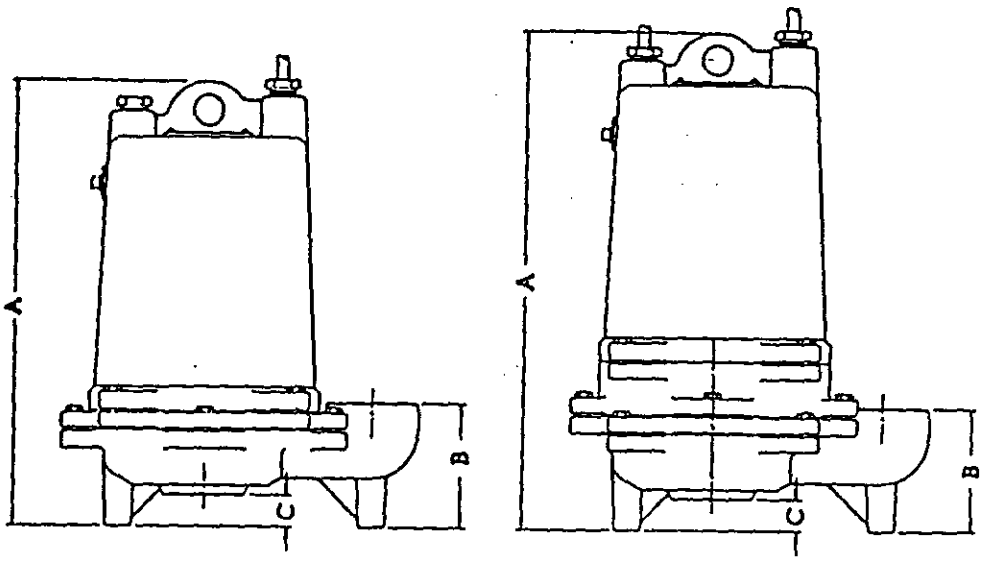
PRODUCT CAPABILITIES

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

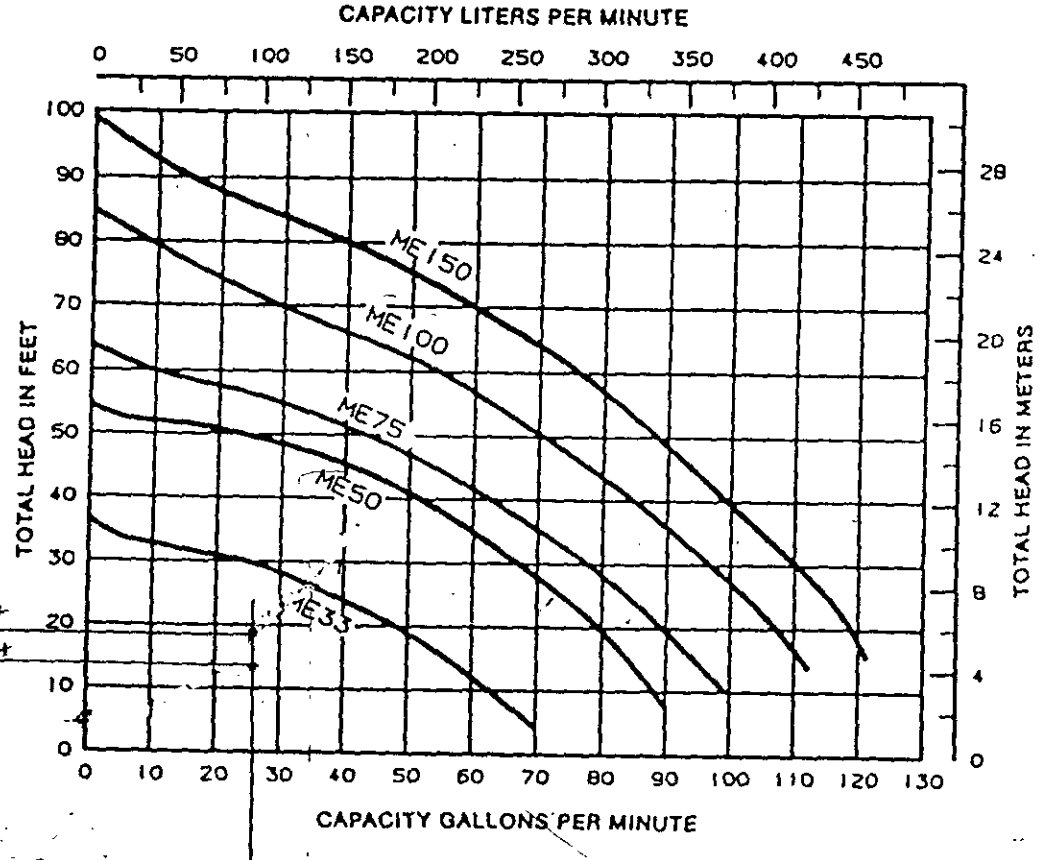
WHERE INNOVATION MEETS TRADITION

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

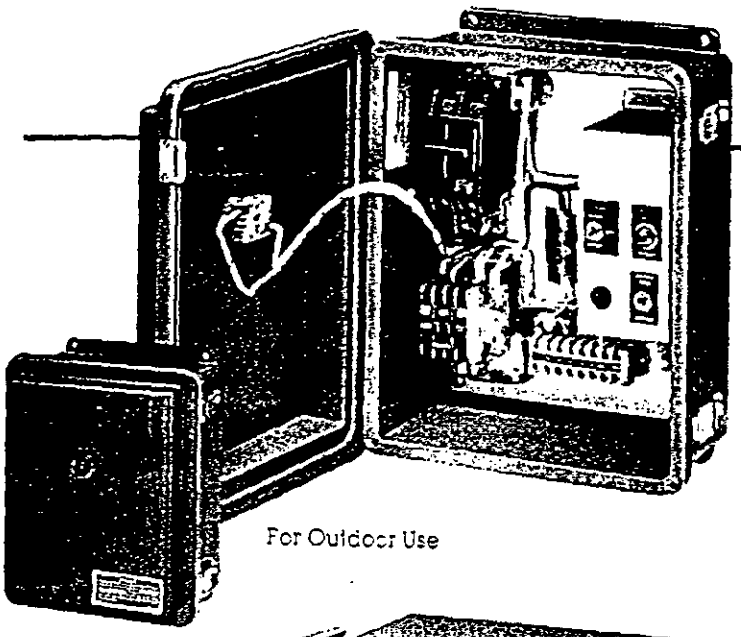


LOT 2 18.8 TDH
LOT 1 13.1 TDH

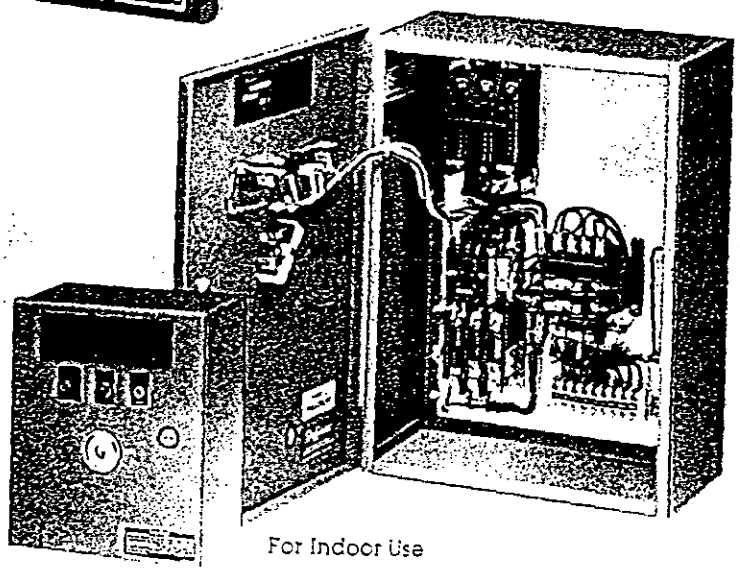
26 GPM

CE Simplex Electrical Control Panels

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



For Outdoor Use



For Indoor Use

MYERS HAS RE-ENGINEERED THE CONTROL PANEL LINE FOR IMPROVED DURABILITY, RELIABILITY AND ECONOMY. CAD flexibility enhances our response time to help us better meet your control panel requirements. Contact your Myers distributor, or the Myers Ohio sales office at 419/289-1144 for more details.

ADVANTAGES BY DESIGN

QUALITY ELECTRICAL COMPONENTS ASSURE RELIABLE, AUTOMATIC PUMP OPERATION

- IEC horsepower-rated contactors (single phase) and motor starters (three phase) rated at over 1 million cycles.
- Three phase starters with ambient-compensated quick-trip overloads for maximum motor protection.
- Designed for use with three standard mercury float switches, off-on-alarm. (Not included with panel, please order separately.)

CORROSION RESISTANT FOR LONG LIFE

- Outdoor panels of weatherlight NEMA 4X fiberglass with aluminum back panel.
- Indoor panels of enamel-coated galvanized steel.

MEETS NEC AND UL STANDARDS FOR SAFETY

- UL-approved panel designs (label installed only on request).
- 100 VA control circuit transformer with primary fusing on 3-phase panels.
- Main circuit breaker.

SIMPLEX PANEL MODELS

WHERE INNOVATION MEETS TRADITION

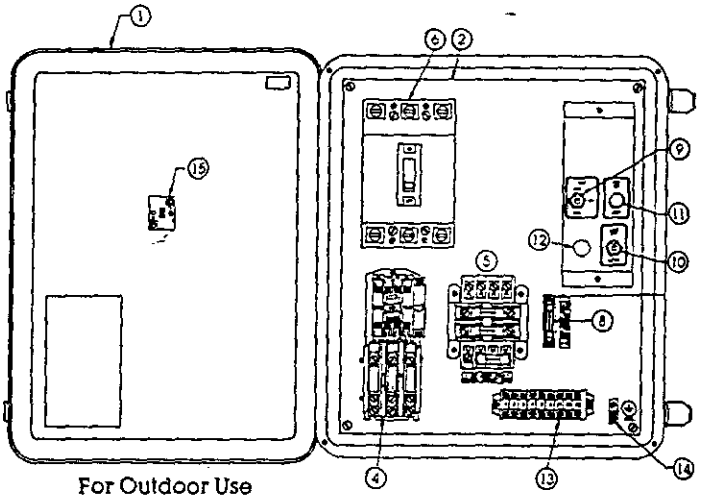
CATALOG NUMBER	ENCLOSURE	HP	PHASE	VOLTAGE	USED WITH PUMP								
					S	SS	SR	WHV-5	WHR	WHRE	WHRH	ME	E
CE-11SW	NEMA 4X	1/4-1/2	1	115	X	X	X	X	X	X	X	X	X
CE(DS)-11SW	NEMA 4X	1/2	1	115					X	X	X	X	
CE-21SW	NEMA 4X	1/2-2	1	230	X	X	X	X	X	X	X	X	X
CE(DS)-21SW	NEMA 4X	1/2-2	1	230					X	X	X	X	
CE-23SW	NEMA 4X	1/2-2	3	208/230					X	X	X	X	
CE-43SW	NEMA 4X	1/2-2	3	460					X	X	X	X	
CE-11S	NEMA 1	1/4-1/2	1	115	X	X	X	X	X	X	X	X	X
CE(DS)-11S	NEMA 1	1/2	1	115					X	X	X	X	
CE-21S	NEMA 1	1/2-2	1	230	X	X	X	X	X	X	X	X	X
CE(DS)-21S	NEMA 1	1/2-2	1	230					X	X	X	X	
CE-23S	NEMA 1	1/2-2	3	208/230					X	X	X	X	
CE-43S	NEMA 1	1/2-2	3	460					X	X	X	X	

NOTE: Catalog Numbers with (DS) are for double seal pump, panel has seal leak light.

Myers®

CE Simplex Electrical Control Panels

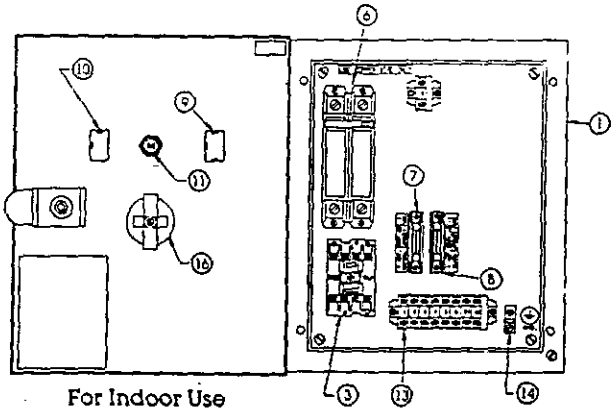
For 1/4-2 HP S, SS, SR, WHV-5, WHR, WHRE, WHRH, ME, E Pumps



For Outdoor Use

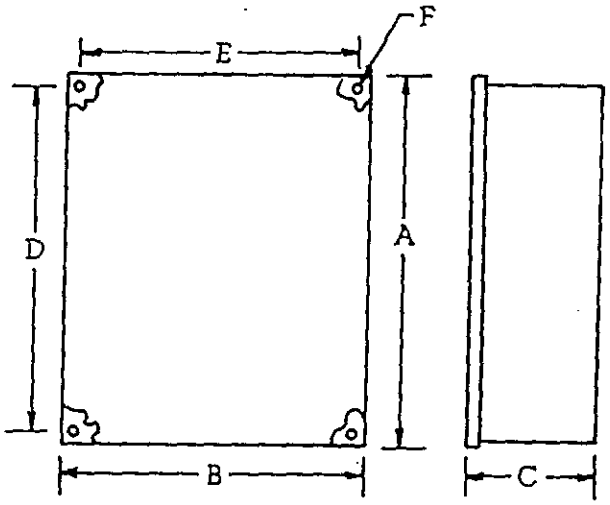
STANDARD PANEL FEATURES

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.

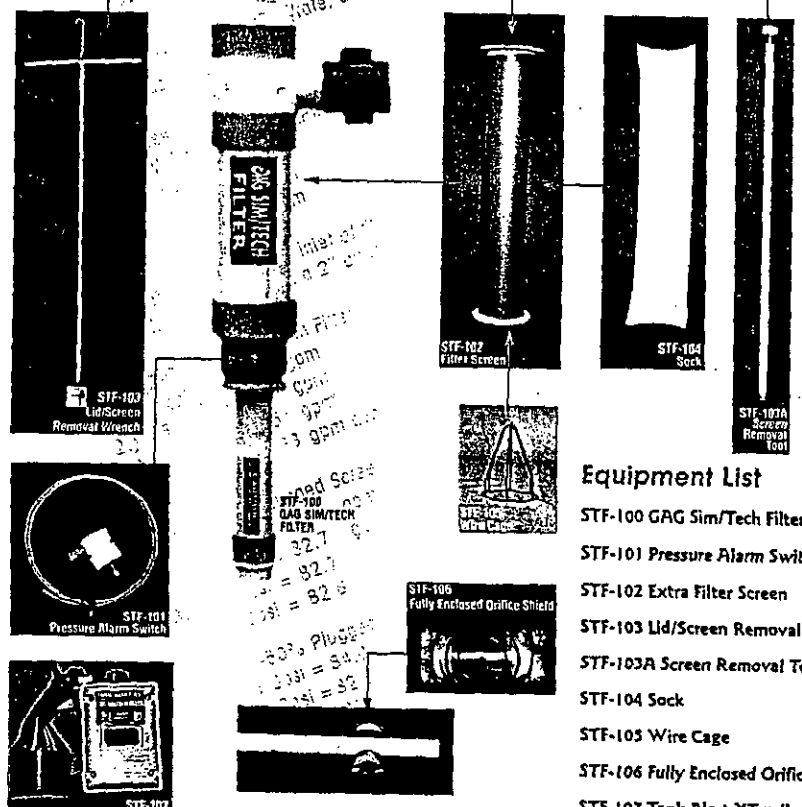
Engineers and designers now have the opportunity to offer a simple safeguard to meet performance standards now and in the future.

- **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

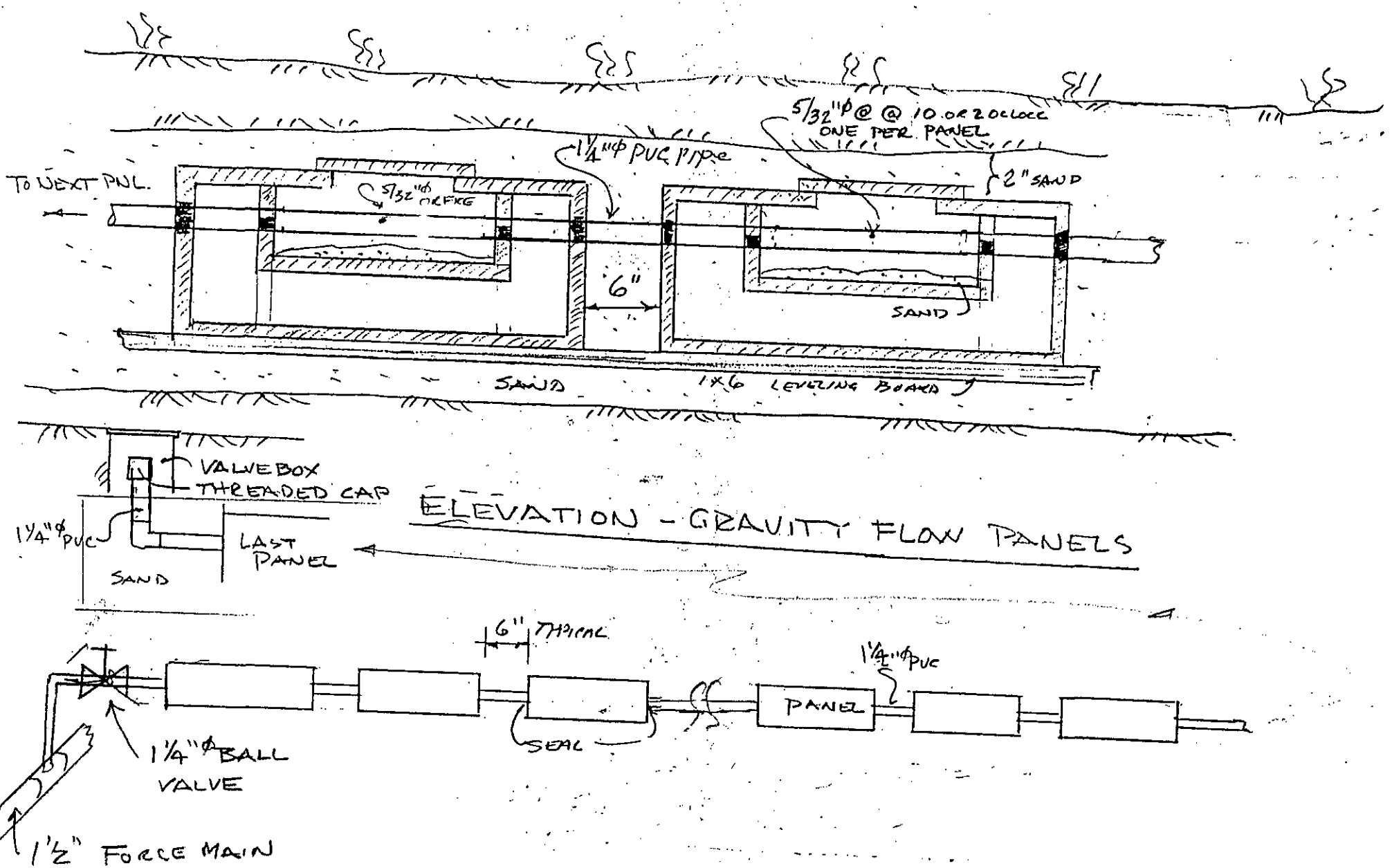
STF-100 GAG Sim/Tech Filter
STF-101 *Pressure Alarm Switch*
STF-102 Extra Filter Screen
STF-103 Lid/Screen Removal Wrench
***STF-103A* Screen Removal Tool**
STF-104 Sock
STF-105 Wire Cage
STF-106 Fully Enclosed Orifice Shield
STF-107 Tank Alert XT w/Latching Light

Restrictions and Specifications

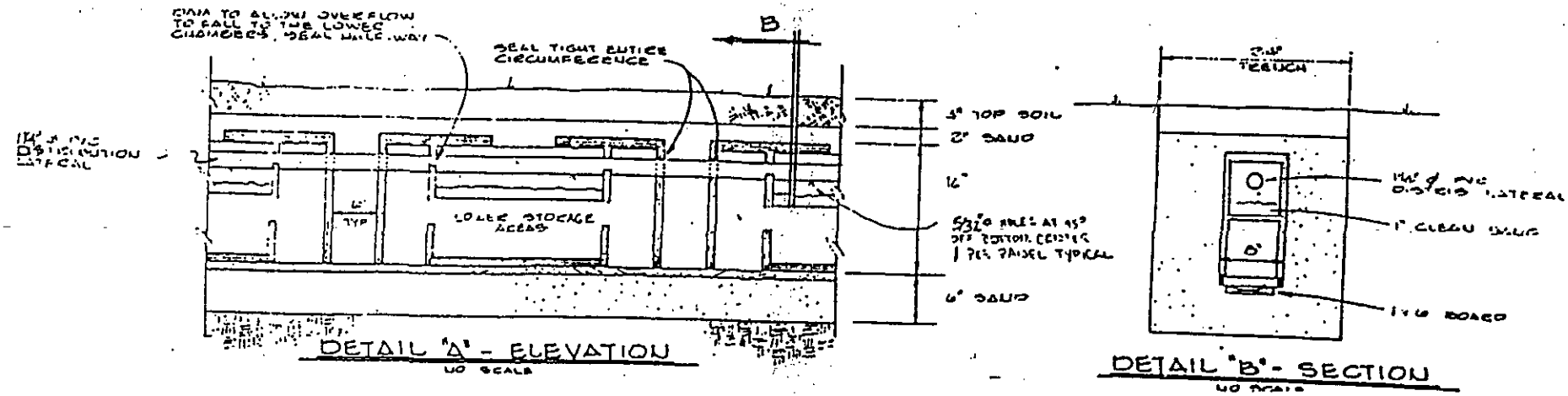
Total Head Loss .5002ft. or .21psi
Flow Rate with a Clean Screen = 120,672 GPD at 1psi
Flow Rate with a 95% Plugged Screen = 114,912 GPD at 1.8psi

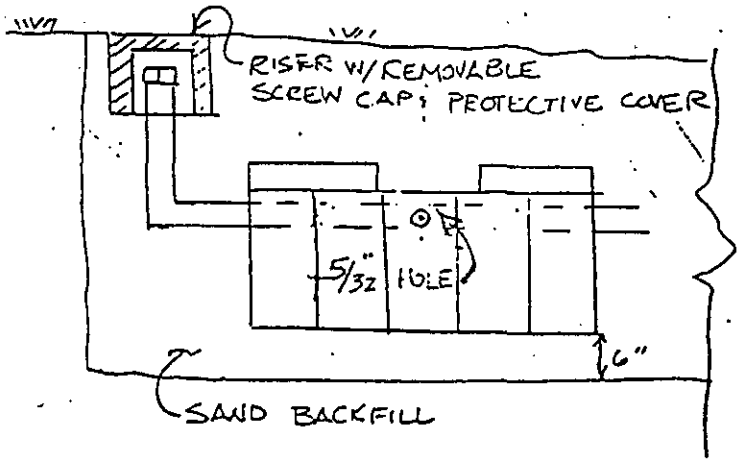
Pump chamber detailed drawings and/or CAD disks for the Sim/Tech Filter are available upon request, at no cost, to help aid in your blueprint and drafting needs.




TO NEXT PNL.
5/32"ϕ ORIFICE
1¼"ϕ PVC PIPE
5/32"ϕ @ @ 10 OR 2 O'CLOCK
ONE PER PANEL
2" SAND
6"
SAND
SAND
1X6 LEVELING BOARD
VALVE BOX
THREADED CAP
1¼"ϕ PVC
LAST PANEL
SAND
ELEVATION - GRAVITY FLOW PANELS
6" TYPICAL
1¼"ϕ PVC
PANEL
SEAL
1¼"ϕ BALL VALVE
1½" FORCE MAIN

T & J PANEL AS MFGD'D BY STATESVILLE CONCRETE PRODUCTS





B.K. Barringer, Jr. P.E.
104 Westfield Center
MOORESVILLE, NORTH CAROLINA 28

[redacted] OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
[redacted] OF ENVIRONMENTAL HEALTH
[redacted] WASTEWATER SECTION

#2

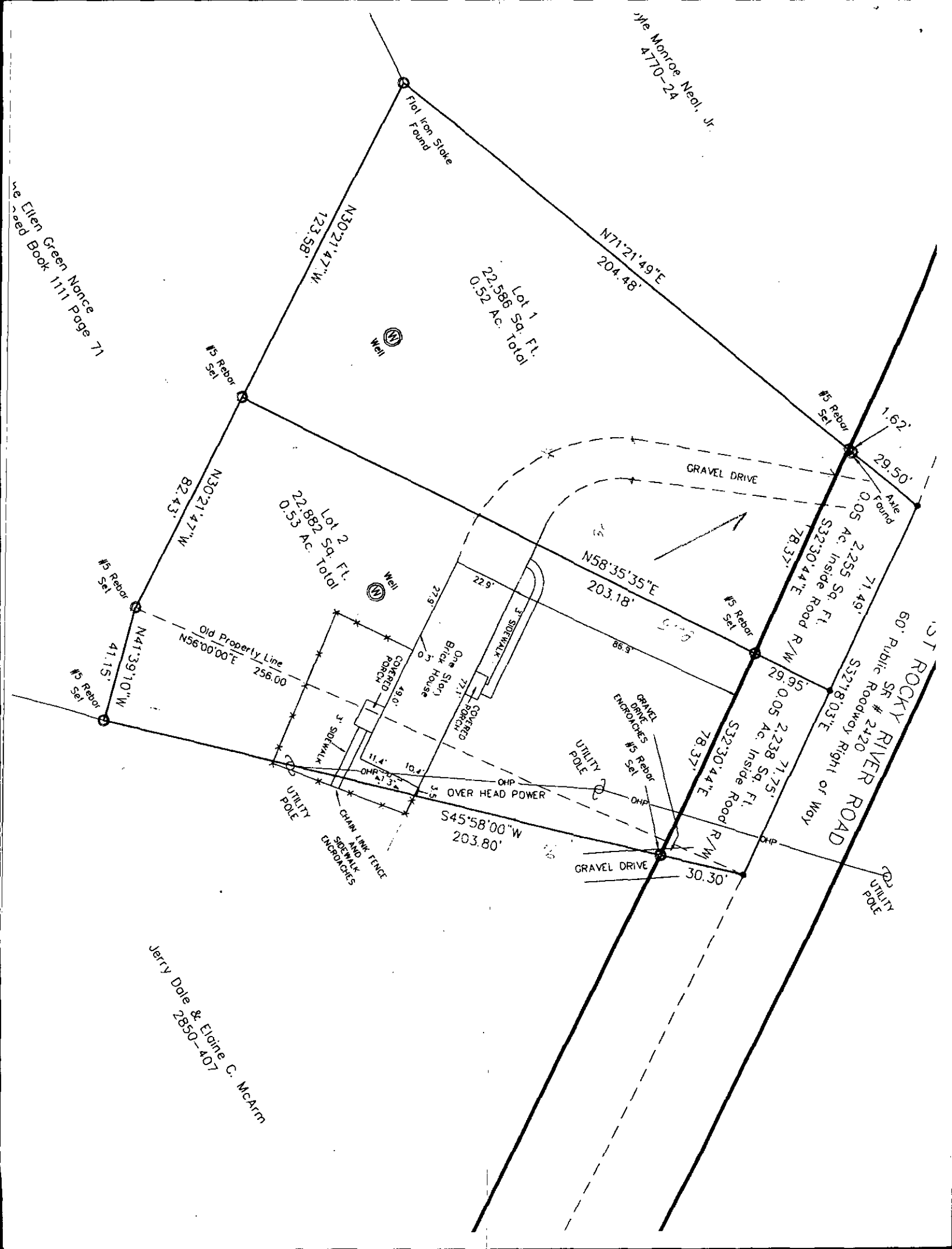
Sheet: ____
Property ID: 007-271-03
Lot #: ____
File #: 44188

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Brenda H. McCrea APPLICANT: Paul Clark
ADDRESS: 14106 E. Rocky River Road, Davidson DATE EVALUATED: 9-12-00
PROPOSED FACILITY: residence PROPOSED DESIGN FLOW (.1949) 360-440 gpd PROPERTY SIZE: 1.11
LOCATION OF SITE: 14106 E. Rocky River Road PROPERTY RECORDED: ____
WATER SUPPLY: ☐Private ☐Public ☒Well ☐Spring ☐Other ____
EVALUATION METHOD: ☒Augur Boring ☐Pit ☐Cut
TYPE OF WASTEWATER: ☐Sewage ☐Industrial Process ☐Mixed

PROFILE #	1940 Landscape Position/ Slope %	Horizon Depth (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE & MINERALOGY	OTHER PROFILE FACTORS: 1942 SOIL WETNESS/ COLOR	1943 SOIL DEPTH	1956 SAPRO CLASS	1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	Slope 5-15%	0-2"	gr/cl	Fr/SE/Pl/ss/sp	>48" to soil wetness	48"+	N/A	None	PS .391 Fz IV
		2-27"	sbk/c	Fi/SE/Pl/s/p					
		27-48"	sbk/cl	Fr/SE/Pl/ss/sp					
2	LS	0-2"	gr/cl	Fr/SE/Pl/ss/sp	>48" to soil wetness	48"+	N/A	None	PS .391 Fz IV
		2-29"	sbk/c	Fi/SE/Pl/s/p					
		29-48"	sbk/cl	Fr/SE/Pl/ss/sp					
3	R	0-2"	gr/cl	Fr/SE/Pl/ss/sp	>48" to soil wetness	48"+	N/A	None	PS .391 Fz IV
		2-41"	sbk/c	Fi/SE/Pl/s/p					
		41-48"	sbk/cl	Fr/SE/Pl/ss/sp					
4	R	0-2"	gr/cl	Fr/SE/Pl/ss/sp	>48" to soil wetness	48"+	N/A	None	PS .391 Fz IV
		2-43"	sbk/c	Fi/SE/Pl/s/p					
		43-48"	sbk/cl	Fr/SE/Pl/ss/sp					
5	LS	0-2"	gr/cl	Fr/SE/Pl/ss/sp	>48" to soil wetness	48"+	N/A	None	PS .391 Fz IV
		2-43"	sbk/c	Fi/SE/Pl/s/p					
		43-48"	sbk/cl	Fr/SE/Pl/ss/sp					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM	
Available Space (.1945)	1,1,5	1,1,5	OTHER FACTORS (.1946)


Kye Monroe Neal, Jr.
4770-24
Flol Iron Stake Found
N30°21'47"W
123.58'
N71°21'49"E
204.48'
Lot 1
22,586 Sq. Ft.
0.52 Ac. Total
Well
#5 Rebar Set
Ne Ellen Green Nance
Deed Book 1111 Page 71
N30°21'47"W
82.43'
Lot 2
22,882 Sq. Ft.
0.53 Ac. Total
Well
#5 Rebar Set
Old Property Line
N56°00'00"E
256.00
N41°39'10"W
41.15'
#5 Rebar Set
GRAVEL DRIVE
N58°35'35"E
203.18'
#5 Rebar Set
#5 Rebar Set
1.62'
29.50'
Axle Found
0.05 Ac. inside R/W
S32°30'44"E
78.37'
2,255 Sq. Ft. inside Road R/W
71.49'
29.95'
S27°18'03"E
60' Public Right of Way
SR # 2420
ROCKY RIVER ROAD
22.9'
27.9'
3' SIDEWALK
One Story Brick House
77.1'
COVERED PORCH
49.0'
86.9'
COVERED PORCH
3' SIDEWALK
11.4'
10.4'
OHP
OVER HEAD POWER
UTILITY POLE
CHAIN LINK FENCE AND SIDEWALK ENCROACHES
S45°58'00"W
203.80'
GRAVEL DRIVE ENCROACHES
#5 Rebar Set
0.05 Ac. inside R/W
S32°30'44"E
78.37'
2,238 Sq. Ft. inside Road R/W
71.75'
GRAVEL DRIVE
30.30'
OHP
UTILITY POLE
Jerry Dale & Elaine C. McArm
2850-407

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

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section - 1636 Mail Service Center - Raleigh, NC 27699-1639 - Phone No. (919) 733-3221

WELL ABANDONMENT RECORD

WELL CONTRACTOR _____

WELL CONTRACTOR CERTIFICATION # _____

1. WELL USE (Check Applicable Box): Residential ☐ Municipal ☐ Industrial ☐ Agricultural ☐ Monitoring ☐ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use: _____

2. WELL LOCATION: (Show a sketch of the location on back of form.)
Nearest Town: _____ County _____

(Road Name and Number, Community, Subdivision , Lot No.) Quadrangle No.

3. OWNER: _____

4. ADDRESS: _____

5. TOPOGRAPHY: draw, slope, hilltop, valley, flat
(circle one)

6. TOTAL DEPTH: _____ DIAMETER _____

7. CASING REMOVED:

feet	diameter
_____	_____
_____	_____

8. DISINFECTION: _____
(Amount of 70% hypochlorite used:)

9. SEALING MATERIAL:

Neat Cement
bags of cement _____
gallons of water _____

Sand Cement
bags of cement _____
gallons of water _____

Other
Type material _____
Amount _____

10. EXPLAIN METHOD EMPLACEMENT OF MATERIAL.
_____
_____
_____

WELL DIAGRAM: Draw a detailed sketch of the well showing total depth, depth and diameter of screens remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED _____

I do hereby certify that this well was abandoned in accordance with 15A NCAC 2C, well construction standards, and that a copy of the record has been provided to the well owner.

Signature of person abandoning the well _____ Date _____

WELL LOCATION: Draw a location sketch on the reverse of this sheet, showing the direction and distance of the well to at least two (2) nearby reference points such as roads, intersections and streams. Identify roads with State Highway road identification numbers.

Submit original to the Division of Water Quality, Groundwater Section, one copy to the owner within 30 days from completion of abandonment.

GW-30 Revised 12/99

FEE: 100 CHK 4068 DATE: 3/7/01 GC

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

[ ] CRT

TYPE APPLICATION: ___ NEW SYSTEM ___ EXPANSION/ ALTERATION 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 #: 45598

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 00727105 20

STREET ADDRESS: ~~14106~~ E. Rocky River Rd.

SUBDIVISION OR MOBILE HOME PARK NAME: NA

LOT NUMBER: #2 (or "B")

TYPE OF BUILDING (CHECK ONE):

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

TOWNSHIP (CHECK ONE):

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

HEATED SQUARE FOOTAGE: ~2600 SF

NUMBER OF BEDROOMS: 3 NUMBER OF OCCUPANTS: 4

CLOSING DATE_____

FOUNDATION FOR RESIDENCE:

___ WITHOUT BASEMENT
___ ON SLAB
___ CRAWL SPACE
~~___~~ WITH BASEMENT
✓ WITH BASEMENT /NO PLUMBING

IF EXPANSION/ALTERATION OF EXISTING SYSTEM, DESCRIBE THE PROPOSED BUILDING ADDITION:

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

WATER SUPPLY (CHECK ONE):

___ COMMUNITY (C)
✓ SHARED WELL (S) Not sure, but will probably need a new well
___ 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 ✓ NO	WELL, SPRINGS OR WATERLINES	✓ YES ___ NO
EXISTING WASTEWATER SYSTEMS	✓ YES ___ NO	DESIGNATED WETLANDS	___ YES ✓ NO
EASTMENTS OR RIGHT-OF-WAYS	✓ YES ___ NO		

PROPERTY OWNER:

NAME: CLARK, PAUL B.
(LAST) (FIRST) (MI)

ADDRESS: 14106 E. Rocky River Rd.

CITY: Davidson STATE: NC ZIP: 28036

DAYTIME PHONE: (704) 655-0081

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME:
(LAST) (FIRST) (MI)

DAYTIME PHONE: ( ) —

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? ~1958

An Improvement Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in this application is falsified or changed. 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: Paul B. Clark 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

Mecklenburg County
Health Department

March 15, 2001

Mr. Paul B. Clark
14106 E. Rocky River Road
Davidson, NC 28036

Re: Application for improvement permit for Paul B. Clark
Property Site: E. Rocky River Road
Health Department file no. 4559B

Dear Property Owner or Owner's Agent:

The Mecklenburg County Health Department, Environmental Health Division on March 09, 2001, evaluated the above-referenced property at the site designated on the plat/site plan that accompanied your improvement permit application. According to your application the site is to serve a 3-bedroom residence, with a design wastewater flow of ___360____gallons per day. The evaluation was done in accordance with the laws and rules governing wastewater systems in North Carolina General Statute 130A-333 and related statutes and Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rule .1900 and related rules.

Based on the criteria set out in Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rules .1940 through .1948, the evaluation indicated that the site is **UNSUITABLE for** a ground absorption sewage system. Therefore, your request for an improvement permit is **DENIED.** A copy of the site evaluation is enclosed. The site is unsuitable based on the following:

_____Unsuitable soil topography and/or landscape position (Rule .1940)
_____Unsuitable soil characteristics (structure or clay mineralogy) (Rule .1941)
_____Unsuitable soil wetness condition (Rule .1942)
_____Unsuitable soil depth (Rule .1943)
_____Presence of restrictive horizon (Rule .1944)
___X___ Insufficient space for septic system and repair area (Rule .1945)
___X___Unsuitable for meeting required setbacks (Rule .1950)
_____Other (Rule .1946)

For the reasons set out above, the property is currently classified **UNSUITABLE,** and an improvement permit shall not be issued for this site in accordance with Rule .1948 (c).

However, the site classified as **UNSUITABLE** may be classified as **PROVISIONALLY SUITABLE** if written documentation is provided that meets the requirements of Rule .1948(d). A copy of this rule is enclosed. You may hire a consultant to assist you if you wish to try to develop a plan under which your site could be reclassified as **PROVISIONALLY SUITABLE.**

You have a right to an informal review of this decision. You may request an informal review by the soil scientist or environmental health supervisor at the local health department. You may also request an informal review by the N. C. Department of Environment and Natural Resources regional soil specialist. A request for informal review must be made in writing to the local health department.

You also have a right to a formal appeal of this decision. To pursue a formal appeal, you must file a petition for a contested case hearing with the Office of Administrative Hearings, 6714 Mail Center, Raleigh, NC 27699-6714. To get a copy of a petition form, you may write the Office of Administrative Hearings or call the office at (919) 733-0926. The petition for a contested case hearing must be filed in accordance with the provision of North Carolina General Statutes 130A-24 and 150B-23 and all other applicable provisions of Chapter 150B. N. C. General Statue 130A-335(g) provides that your hearing would be held in the county where your property is located.

Please note: If you wish to pursue a formal appeal, you must file the petition form with the Office of Administrative Hearings **WITHIN 30 DAYS OF THE DATE OF THIS LETTER.** The date of this letter is March 15, 2001. Meeting the 30-day deadline is critical to your right to a formal appeal. Beginning a formal appeal within 30 days will not interfere with any informal review that you might request. Do no wait for the outcome of any informal review if you wish to file a formal appeal.

If you file a petition for a contested case hearing with the Office of Administrative Hearings, you are required by law (N.C. General Statute 150B-23) to send a copy of your petition to the North Carolina Department of Environment and Natural Resources. Send the copy to: Office of General Counsel, N. C. Department of Environment and Natural Resources, 1601 Mail Service Center, Raleigh, NC. 27699-1601. Do **NOT** send the copy of the petition to your local health department. Sending a copy of your petition to the local health department will **NOT** satisfy the legal requirement in N.C. General Statute 150B-23 that you send a copy to the Office of General Counsel, NCDENR.

You may call or write the local health department if you need any additional information or assistance.

Sincerely,

Kelly Randall, R.S.
Authorized Agent - DENR

Encl: (2)

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

#2 AS

Sheet: _____

Property ID: 007-271-03

Lot #: _____

File #: 44188
45590 for lot B

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Brenda H. McLean APPLICANT: Paul Clark

ADDRESS: 14106 E. Rocky River Road, Cerrelos DATE EVALUATED: 9-12-00

PROPOSED FACILITY: residence PROPOSED DESIGN FLOW (.1949) 360-480 GPD PROPERTY SIZE: 1.11

LOCATION OF SITE: 14106 E. Rocky River Road PROPERTY RECORDED: _____

WATER SUPPLY: ☐Private ☐Public ☒Well ☐Spring ☐Other _____

EVALUATION METHOD: ☒Augur Boring ☐Pit ☐Cut

TYPE OF WASTEWATER: ☐Sewage ☐Industrial Process ☐Mixed

PROFILE #	1940 Landscape Position/ Slope % (Slopes 5-15%)	Horizon Depth (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE MINERALOGY	OTHER PROFILE FACTORS: 1942 SOIL WETNESS/ COLOR	1943 SOIL DEPTH	1956 SAPRO CLASS	1944 RESTR HORIZ	PROFILE CLASS &LTAR
1	LS	0-2"	gr/cl	Fr/SE XP/SS/SP	>48" TO soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-27"	SBK/C	F.I/SE XP/SP					
		27-48"	SBK/cl	Fr/SE XP/SS/SP					
2	LS	0-2"	gr/cl	Fr/SE XP/SS/SP	>48" TO soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-29"	SBK/C	Fr/SE XP/SP					
		29-48"	SBK/cl	Fr/SE XP/SS/SP					
3	~~LS~~ R	0-2"	gr/cl	Fr/SE XP/SS/SP	>48" TO soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-41"	SBK/C	Fr/SE XP/SP					
		41-48"	SBK/cl	Fr/SE XP/SS/SP					
4	~~LS~~ R	0-2"	gr/cl	Fr/SE XP/SS/SP	>48" TO soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-43"	SBK/C	Fr/SE XP/SP					
		43-48"	SBK/cl	Fr/SE XP/SS/SP					
5	LS	0-2"	gr/cl	Fr/SE XP/SS/SP	>48" TO soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-43"	SBK/C	Fr/SE XP/SP					
		43-48"	SBK/cl	Fr/SE XP/SS/SP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	US	US
System Type(s)		
Site LTAR	.391 F2	.391 F2

OTHER FACTORS (.1946): _____

SITE CLASSIFICATION (.1948): Unsuitable

EVALUATED BY: W.A. Marlin LSS 9-12-00

OTHER(S) PRESENT: _____

FILE # 4418 B

COMMENTS 100% Repair if new lot is created - whole tract investigated in case property not subdivided, an additional well is supposed to be behind the house somewhere

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	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

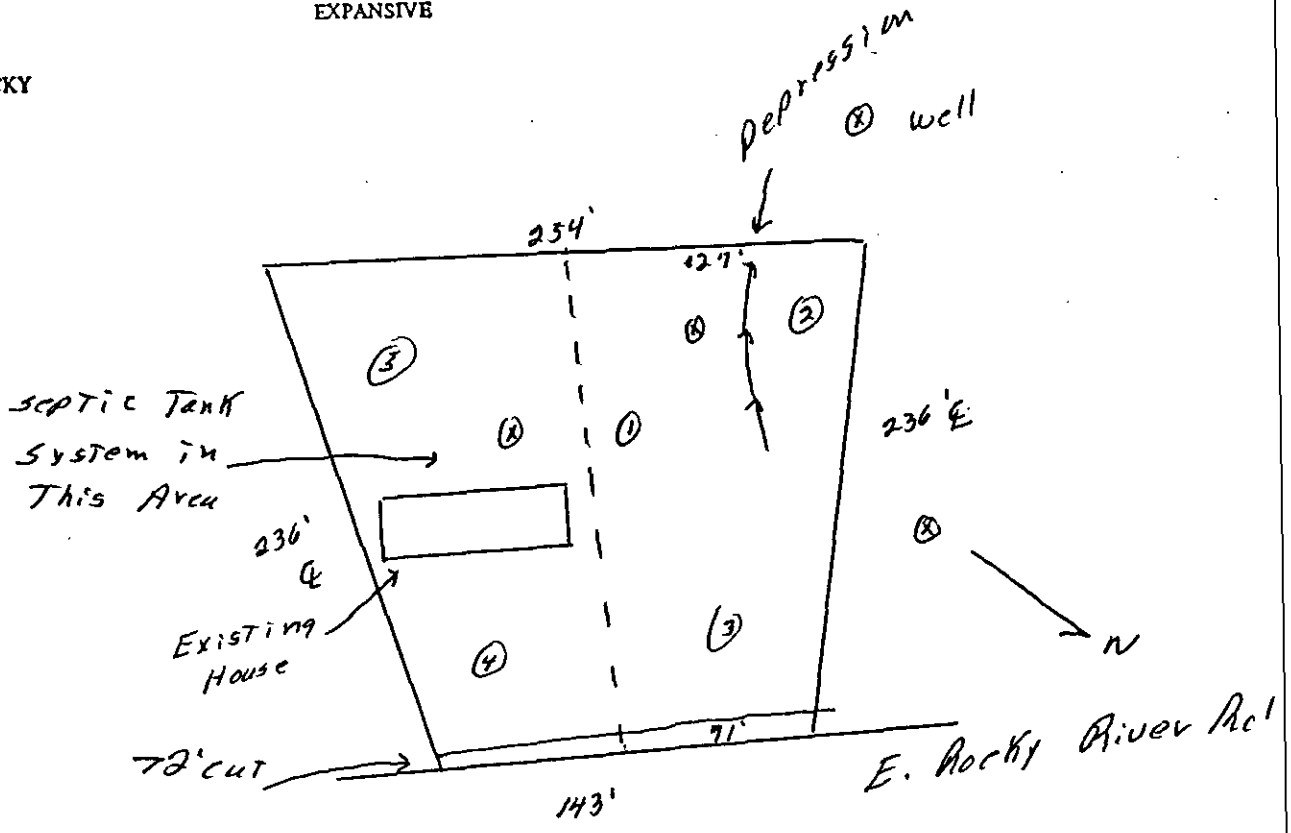
STRUCTURE

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

MINERALOGY

SLIGHTLY EXPANSIVE

EXPANSIVE



FEE: 150 (CHK 4468 Date Updated)
DATE: 3/7/01 (CC)

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

[ ] CRT

TYPE APPLICATION: ___ NEW SYSTEM __ EXPANSION/ ALTERATION 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 #: 45598

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 00727103 RO

STREET ADDRESS: ~~14106~~ E. Rocky River Rd.

SUBDIVISION OR MOBILE HOME PARK NAME: NA

LOT NUMBER: #2 (or "B")

TYPE OF BUILDING (CHECK ONE):

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

HEATED SQUARE FOOTAGE: ~2600 SF

NUMBER OF BEDROOMS: 3

NUMBER OF OCCUPANTS: 4

FOUNDATION FOR RESIDENCE:

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

TOWNSHIP (CHECK ONE):

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

CLOSING DATE_____

IF EXPANSION/ALTERATION OF EXISTING SYSTEM, DESCRIBE THE PROPOSED BUILDING ADDITION:

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

WATER SUPPLY (CHECK ONE):

___ COMMUNITY (C)
✓ SHARED WELL (S)
___ MUNICIPAL (M) Not sure, but will probably need a new well
___ 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 ✓ NO	WELL, SPRINGS OR WATERLINES	✓ YES ___ NO
EXISTING WASTEWATER SYSTEMS	✓ YES ___ NO	DESIGNATED WETLANDS	___ YES ✓ NO
EASTMENTS OR RIGHT-OF-WAYS	✓ YES ___ NO		

PROPERTY OWNER:

NAME: CLARK, PAUL B.
(LAST) (FIRST) (MI)

ADDRESS: 14106 E. Rocky River Rd.

CITY: Davidson STATE: NC ZIP: 28036

DAYTIME PHONE: (704) 655-0081

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME:
(LAST) (FIRST) (MI)

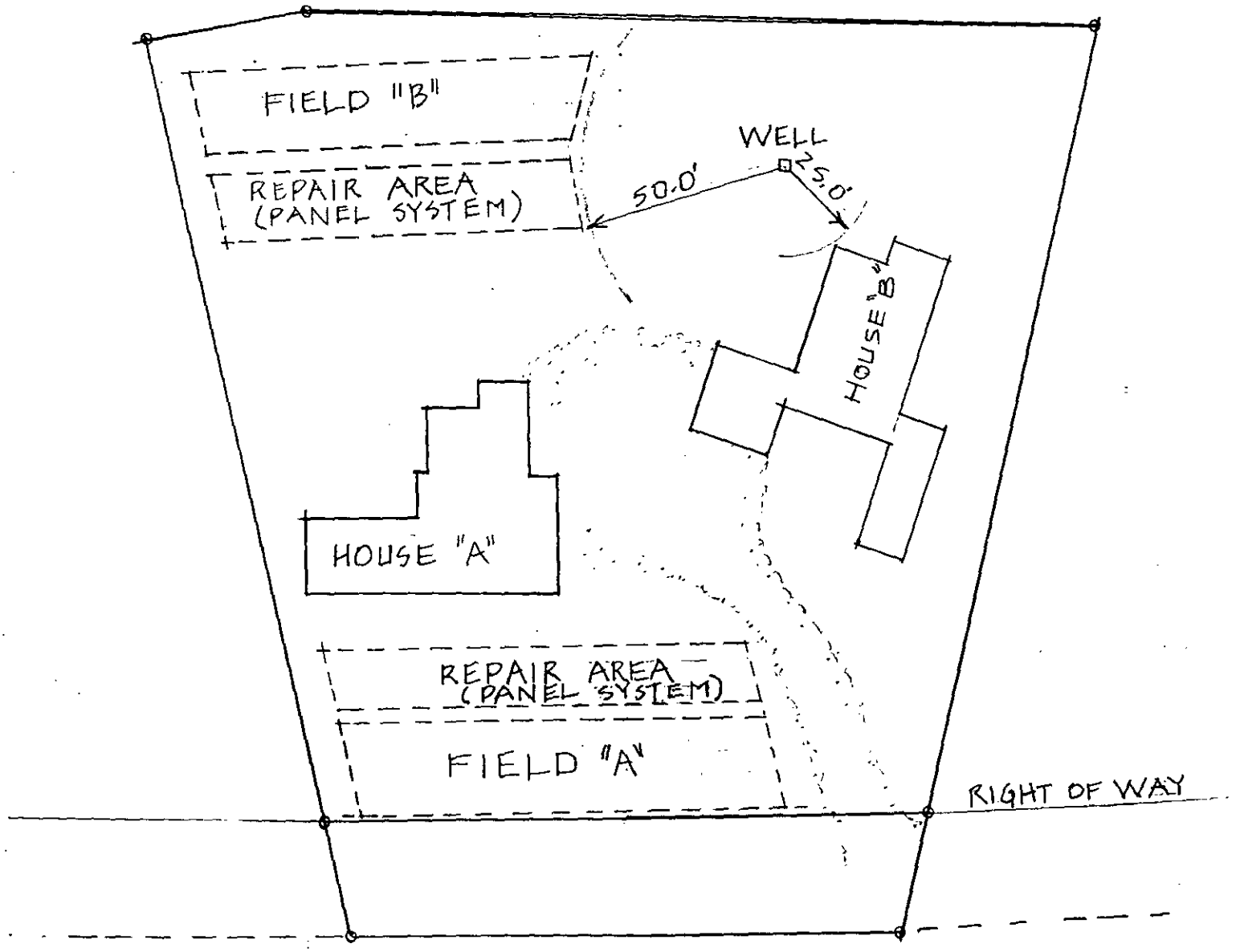
DAYTIME PHONE: ( ) —

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? ~1958

An Improvement Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in this application is falsified or changed. 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: Paul B. Clark 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


FIELD "B"
REPAIR AREA
(PANEL SYSTEM)
WELL
50.0'
50.0'
HOUSE "B"
HOUSE "A"
REPAIR AREA
(PANEL SYSTEM)
FIELD "A"
RIGHT OF WAY
EAST ROCKY RIVER RD.

Paul B. Clyfl

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

#2 AS

Sheet: _____
Property ID: 007-271-03
Lot #: _____
File #: 44188
4459B for lot B

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Brenda H. McLean APPLICANT: Paul Clark
ADDRESS: 14106 E. Rocky River Road, Concord DATE EVALUATED: 9-12-00
PROPOSED FACILITY: residence PROPOSED DESIGN FLOW (.1949) 360-480 gpd PROPERTY SIZE: 1.11
LOCATION OF SITE: 14106 E. Rocky River Road PROPERTY RECORDED: _____
WATER SUPPLY: ☑Private ☐Public ☑Well ☐Spring ☐Other _____
EVALUATION METHOD: ☑Augur Boring ☐Pit ☐Cut
TYPE OF WASTEWATER: ☐Sewage ☐Industrial Process ☐Mixed

PROFILE #	Slopes: 5-15% .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	0-2"	gr l cl	Fr l SE xPl ss l sP	> 48" to soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-27"	sBK l c	F: l SE xPl s l P					
		27-48"	sB Kl cl	Fr l SE xPl ss l sP					
2	LS	0-2"	gr l cl	Fr l SE xPl ss l sP	> 48" to soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-29"	sBK l c	Fr l SE xPl s l P					
		29-48"	sB Pl cl	Fr l SE xPl ss l sP					
3	~~LS~~ R	0-2"	gr l cl	Fr l SE xPl ss l sP	> 48" to soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-41"	sBK l c	F: l SE xPl s l P					
		41-48"	sB K l cl	Fr l SE xPl ss l sP					
4	~~LS~~ R	0-2"	gr l cl	Fr l SE xPl ss l sP	> 48" to soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-43"	sBK l c	F: l SE xPl s l P					
		43-48"	sB K l cl	Fr l SE xPl ss l sP					
5	LS	0-2"	gr l cl	Fr l SE xPl ss l sP	> 48" to soil wetness	48"+	N/A	None	PS .391 F2 IV
		2-43"	sBK l c	F: l SE xPl s l A					
		43-48"	s B K l c l	Fr l SE xPl ss l sP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	US	US
System Type(s)		
Site LTAR	.391 F2	.391 F2

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): Unsuitable
EVALUATED BY: M. A. Marlin LSS 9-12-00
OTHER(S) PRESENT: _____

FILE # 4418 B

COMMENTS 100% Repair if new lot is created - whole tract investigated in case property not subdivided, an additional well is supposed to be behind the house somewhere

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	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

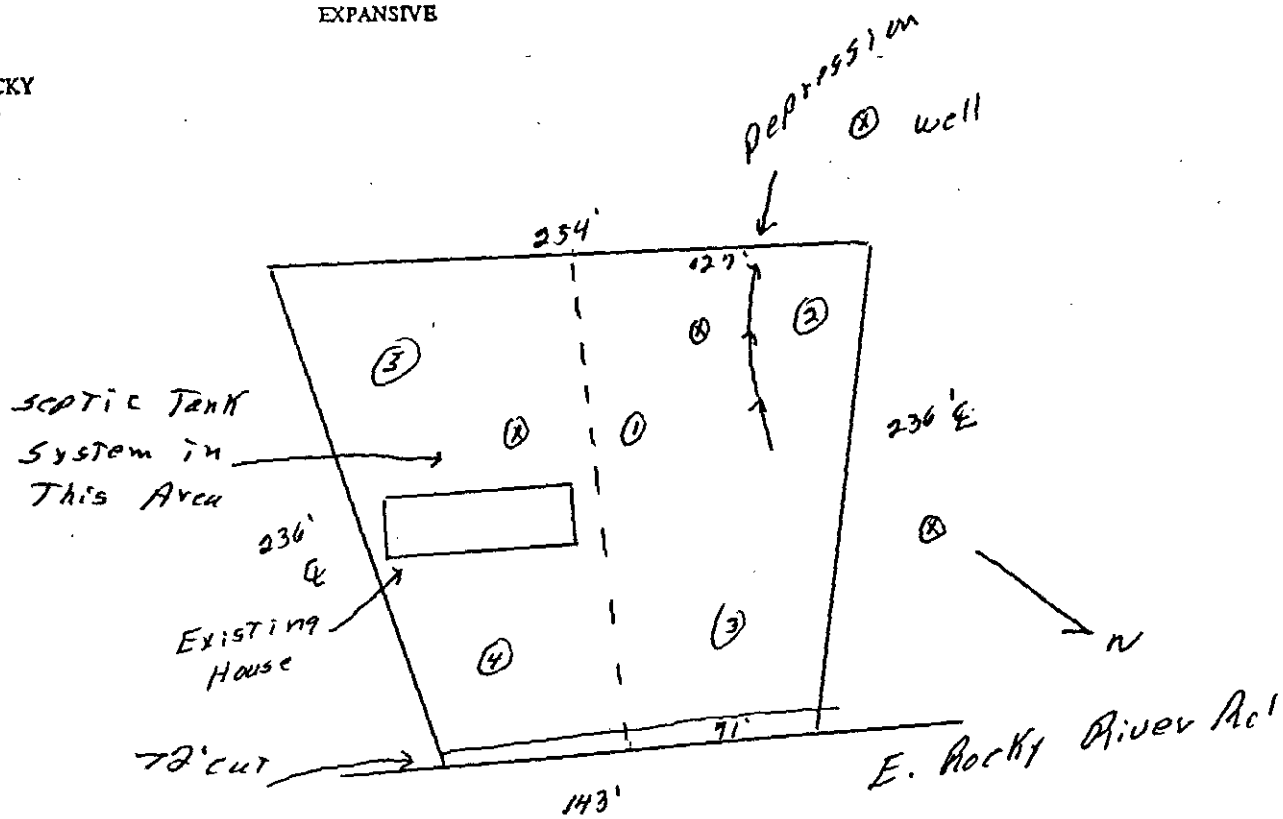
STRUCTURE

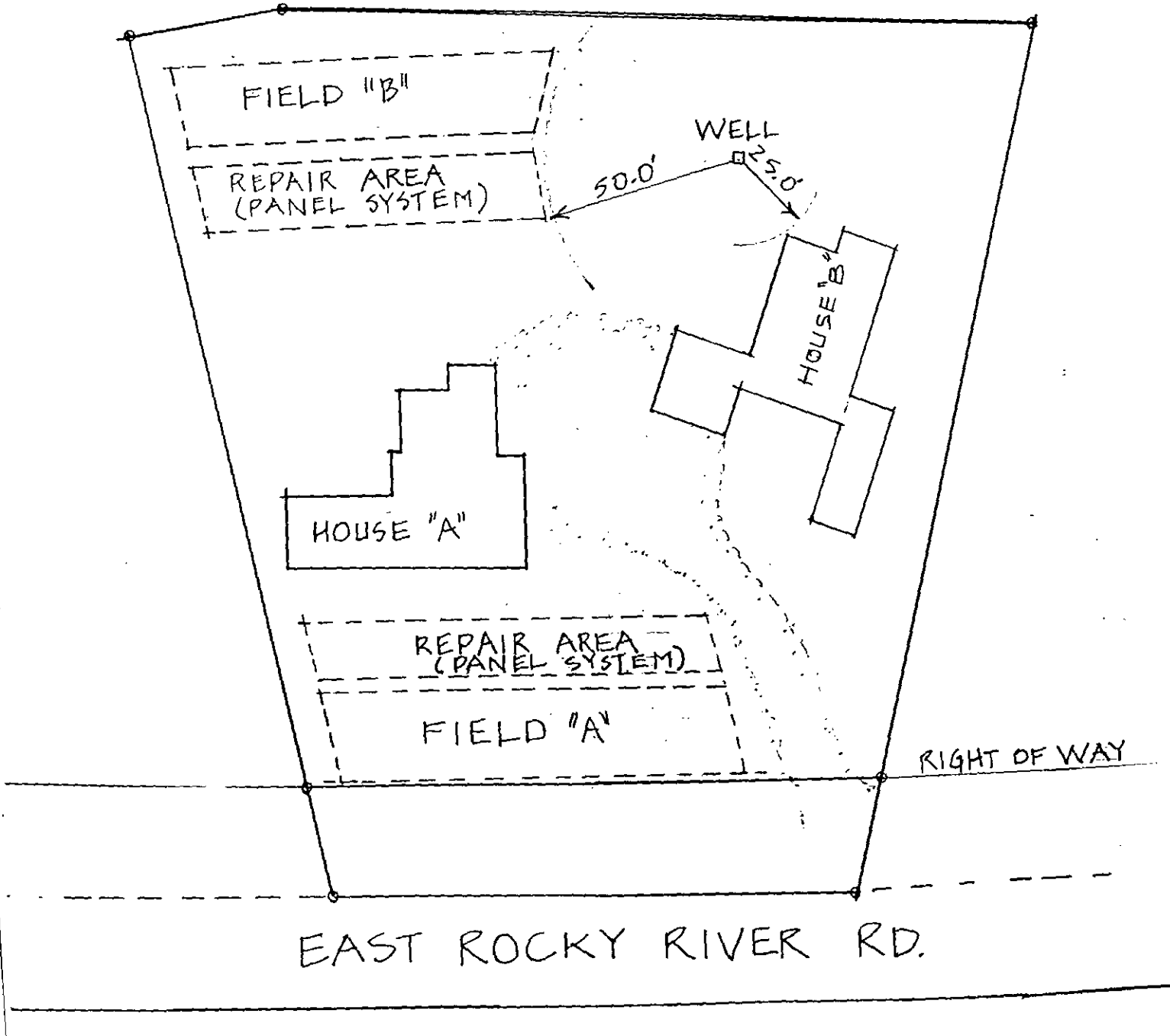
SG-SINGLE GRAIN
M-MASSIVE
CR-CRUMB
GR-GRANULAR
SBK-SUBANGULAR BLOCKY
ABK-ANGULAR BLOCKY
PL-PLATY
PR-PRISMATIC

MINERALOGY

SLIGHTLY EXPANSIVE

EXPANSIVE




FIELD "B"
REPAIR AREA
(PANEL SYSTEM)
WELL
50.0'
5.0'
HOUSE "B"
HOUSE "A"
REPAIR AREA
(PANEL SYSTEM)
FIELD "A"
RIGHT OF WAY
EAST ROCKY RIVER RD.

Paul B. Clyde