

MICHAEL ATHANAS & ASSOCIATES, INC.
LICENSED SOIL SCIENTIST
1999 CANDLEWICK DRIVE
FORT MILL, SC 29715
803-802-4403 (office)
803-802-4402 (fax)

Reference: Data Sheet for 1221 Mt. Ulla Hwy
House Footprint: 60' x 60'
Building Setback: 35' front, 15' side, 50' lake
Water Source: Well
Number of Bedrooms: 3/360gpd
Proposed LTAR: 0.11 gpd/ft2
Suggested system type: LPP (initial), Pretreatment Drip Distribution (repair)
Distribution: Low Pressure
Septic/ Pump tank size: 1000 gallons
Proposed Trench Bottom: 12"

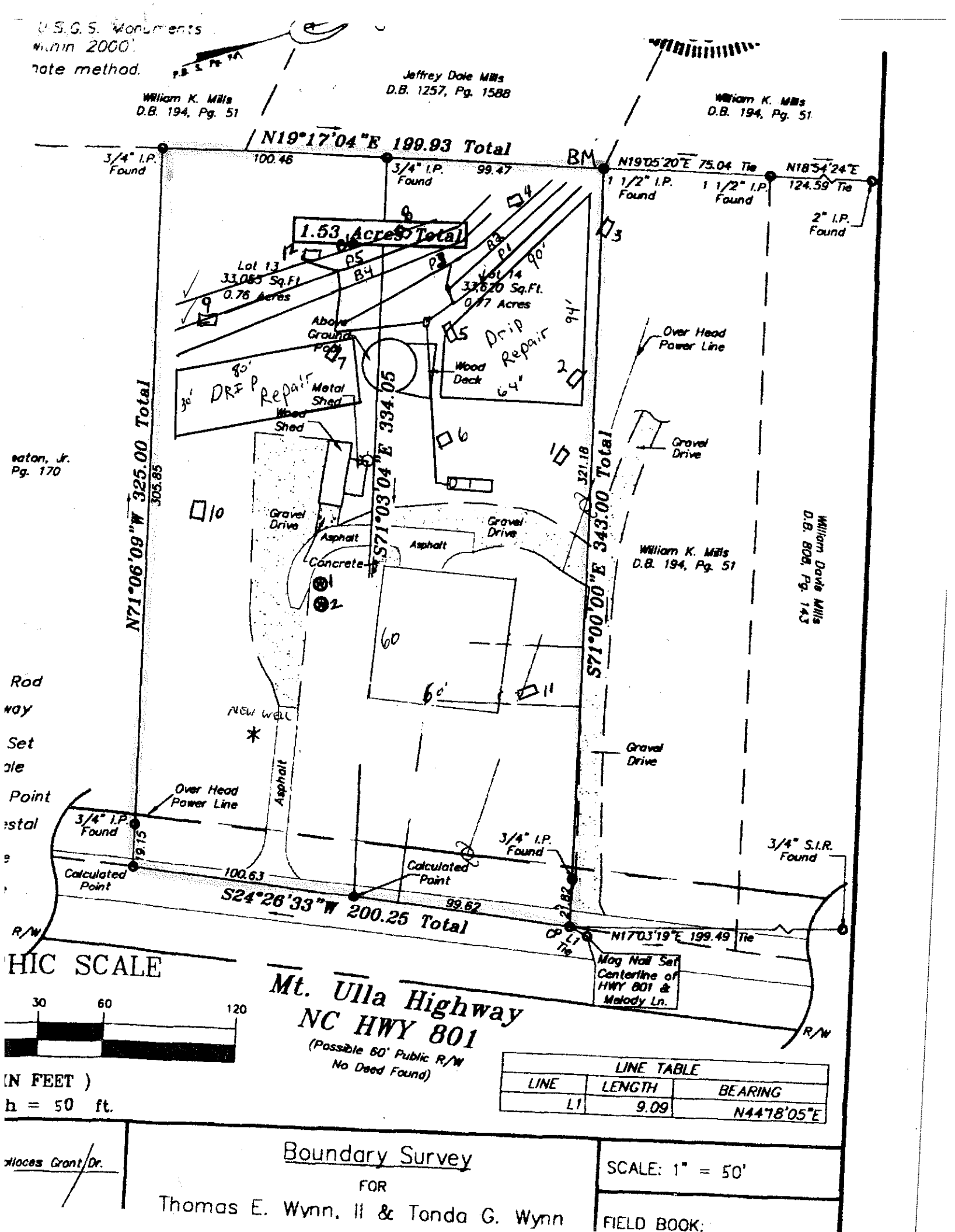
Line	Design Length	Actual Length	Elevation
Pink 1	**60'**	**60'**	**3.4'**
Blue 2	**70'**	**72'**	**3.9'**
Pink 3 ✓ 2/17	**55/55'**	**115'**	**4.3'**
Blue 4 ✓	**75/75'**	**183'**	**4.8'**
Pink 5 ✓ 2/13	**75/75'**	**170'**	**5.4'**
Blue 6 ✓	**60/60'**	**125'**	**5.9'**

The drip repair area is divided into two sections with an approximate area of 6200 ft2.

Initial System: 660' ***Repair system:*** *3600 ft2*

Pump tank: 5.3' **Benchmark:** 4.1'

Comments: There are two wells on the property. Well 1 is a bored well that must be properly abandoned. Well 2 is a 2" well that could be used as long as the septic and pump tanks are 50' away. If a new well is drilled, it should be placed at the site marked on the map. The above ground pool will be removed. This property is lots 13 and 14 of the attached plat.


U.S.G.S. Monuments
within 2000'
nate method.
P.B. 5 Pg. 14
William K. Mills
D.B. 194, Pg. 51
Jeffrey Dale Mills
D.B. 1257, Pg. 1588
William K. Mills
D.B. 194, Pg. 51
N19°17'04"E 199.93 Total
3/4" I.P. Found
100.46
3/4" I.P. Found
99.47
BM
N19°05'20"E 75.04 Tie
1 1/2" I.P. Found
1 1/2" I.P. Found
N18°54'24"E
124.59 Tie
2" I.P. Found
1.53 Acres Total
Lot 13
33,065 Sq.Ft.
0.76 Acres
Lot 14
33,620 Sq.Ft.
0.77 Acres
90'
94'
Above Ground Pool
Drip Repair
Over Head Power Line
Wood Deck
64'
80'
30' DRIP Repair
Metal Shed
Wood Shed
N71°06'09"W 325.00 Total
305.85
S71°03'04"E 334.05
321.18
S71°00'00"E 343.00 Total
Gravel Drive
Gravel Drive
Asphalt
Asphalt
Concrete
Gravel Drive
William K. Mills
D.B. 194, Pg. 51
William Davis Mills
D.B. 808, Pg. 143
60
60'
New well
Gravel Drive
Asphalt
Over Head Power Line
3/4" I.P. Found
9.15
Calculated Point
100.63
3/4" I.P. Found
Calculated Point
99.62
S24°26'33"W 200.25 Total
2.82
POL1 Tie
N17°03'19"E 199.49 Tie
3/4" S.I.R. Found
Mag Nail Set Centerline of HWY 801 & Melody Ln.
R/W
R/W
Mt. Ulla Highway
NC HWY 801
(Possible 60' Public R/W
No Deed Found)
HIC SCALE
30
60
120
(N FEET)
h = 50 ft.
LINE TABLE
LINE | LENGTH | BEARING
L1 | 9.09 | N44°18'05"E
Boundary Survey
FOR
Thomas E. Wynn, II & Tonda G. Wynn
SCALE: 1" = 50'
FIELD BOOK:

DENR/DEH

ON-SITE WASTEWATER SECTION

Sheet ___ of ___
PROPERTY ID #: ___
COUNTY: ___

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: ___
ADDRESS: ___
PROPOSED FACILITY: 3 bedroom — PROPOSED DESIGN FLOW (.1949): 360 gpd — APPLICATION DATE ___
LOCATION OF SITE: 1221 Mt Ulla Hwy — DATE EVALUATED: ___
WATER SUPPLY: • X Private • Public • X Well • Spring • Other ___ — PROPERTY SIZE: ___
EVALUATION METHOD: • Auger Boring • X Pit • Cut — PROPERTY RECORDED: ___
TYPE OF WASTEWATER: X 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	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	LS 0-2%	0-15	Br scl wsbk	Fr sss p	common YB's	18"	–	–	US / Drip 0.1
		15-18	YR c wsbk	Fr s p					
		18"	chr 2						
2	LS 0-2%	0-10	Br scl wsbk	Fr ss sp	YB's	24"	–	–	LPP 0.1-0.075
		10-24	YR c wsbk	F-Fr s p					
		24"	chr 2						
3	LS 3%	0-7	Br scl wsbk	Fr ss sp	common YB's	27"	–	–	LPP 0.15
		7-15	RBr cl sbk	Fr ss sp					
		15-27	R scl wsbk	Fr ss sp					
		27"	chr 2						
4	LS 3%	0-7	Br scl wsbk	Fr sss p	YB's	27"	–	–	LPP 0.15
		7-13	RBr cl wsbk	Fr sss p					
		13-27	R scl wsbk	Fr ss sp					
		27"	chr 2						

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

OTHER FACTORS (.1946): ___
SITE CLASSIFICATION (.1948): ___
EVALUATED BY: ___
OTHER(S) PRESENT: ___

COMMENTS: ___

SOIL/SITE EVALUATION

(Continuation Sheet)

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Sheet ____ of ____

PROPERTY ID #: _____
DATE OF EVALUATION: _____
COUNTY: _____

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	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
#5	LS 2%	0-7	YBr sc/ws6k	Fr ss sp	Common YBs	16"	—		US / Drip 0.1
		7-16	RBr sc/ws6k	Fr sss p					
		16"	chr. 2						
#6	LS 0-2%	0-12	YBr sc/ws6k	Fr sss p	Common YBs	17"	—	—	US / Drip 0.1
		12-17	YBr c ws6k/abk	Fr sss p					
		17"	chr. 2						
#7	LS 2%	0-6	Br sc/ws6k	Fr ss sp	Common YBs	20"	—	—	US / Drip
		6-20	RBr c abk	Fr ss sp					
		20"	chr 2						
#8	LS 6%	0-10	Br sc/ws6k	Fr sss p	Few YBs	26"	—	—	LPP 0.1 – 0.15
		10-26	RY sc/sc ws6k	Fr ss sp					
		26"	Chr 2						
#9	LS 2%	0-6	Br sc/ws6k	Fr sss p	Common YBs	27"	—	—	LPP 0.1 – 0.125
		6-27	Rsc ws6k	Fr ss sp					
		27"	Chr 2						

COMMENTS: _____

SOIL/SITE EVALUATION

(Continuation Sheet)

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Sheet ___ of ___

PROPERTY ID #: _____
DATE OF EVALUATION: _____
COUNTY: _____

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
# 10	LS 0-2%	0-16	Br scl wsbk	Fr ss sp	common YB's	21"	–	–	US / Dr:P 0.1
		16-21	YBr sc/c wsbk	Fr s p					
		21"	chr 2						
# 11	LS 0-2%	0-14	Br scl wsbk	Fr ss sp		14"	–	–	US
		14"	chr 2						
# 12	LS 6%	0-12	Br scl wsbk	Fr ss sp	Few YB's	28"	–	–	LAP 0.1 – 0.12
		12-21	R sc sbk	Fr ss sp					
		21-28	R scl wsbk	Fr ss sp					
		28"	common chr 3	Few chr 2					

COMMENTS: _____

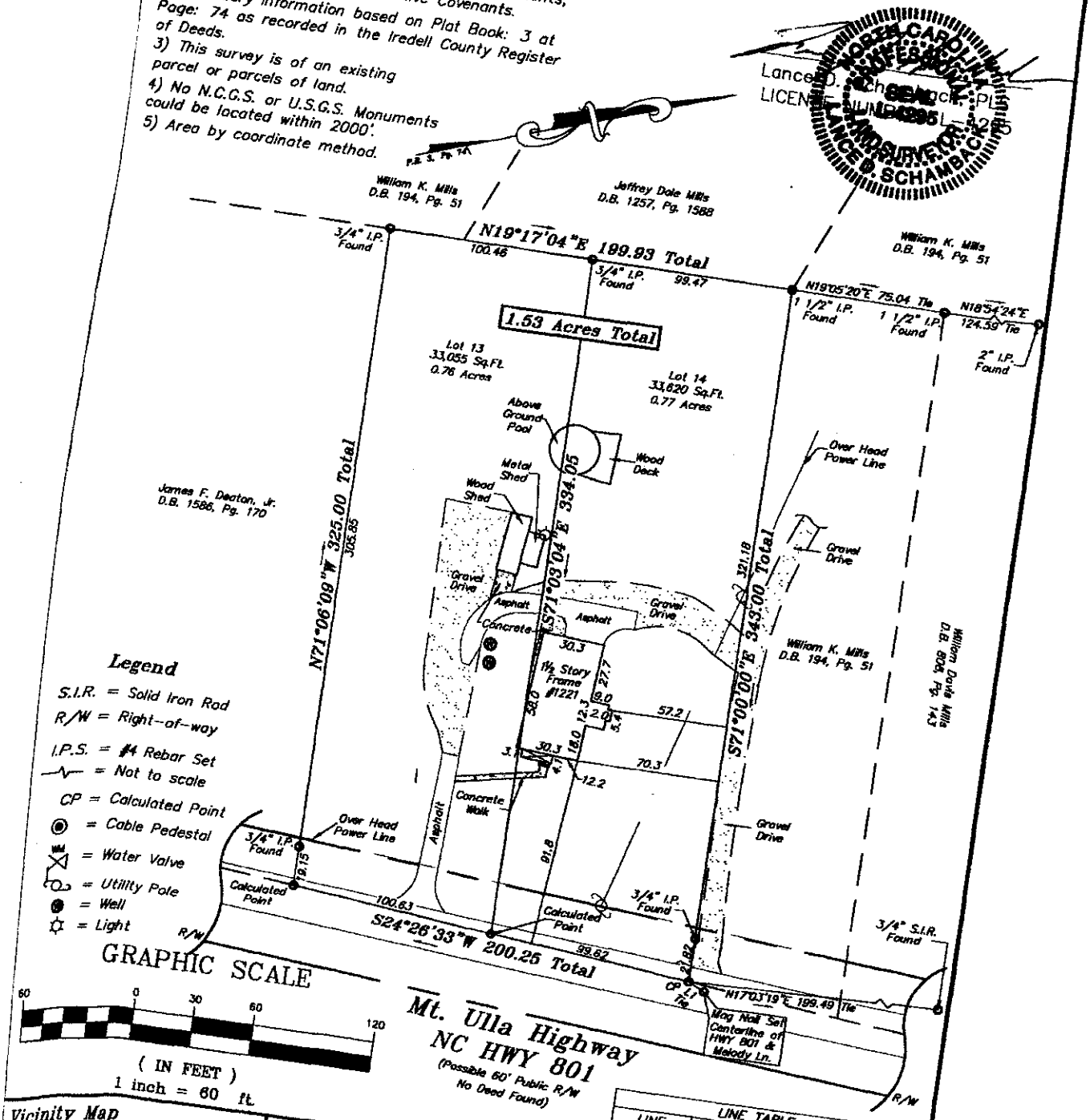
I Lance D. Schamback, certify that this plat was drawn under my supervision from an actual survey made under my supervision (deed description and/or Map Book: 3, Page 74) That the boundaries not surveyed are clearly indicated as drawn from information as shown survey; that the ratio of precision as calculated is 1: 10,000+ that this plat was prepared in accordance with G.S. 89-C as amended. Witness my original signature, registration number and seal this 31 day of March, A.D. 2008.

Notes:

1) This property may be subject to any Easements, Rights-of-way, and/or Restrictive Covenants.
2) Boundary information based on Plat Book: 3 at Page: 74 as recorded in the Iredell County Register of Deeds.
3) This survey is of an existing parcel or parcels of land.
4) No N.C.G.S. or U.S.G.S. Monuments could be located within 2000'.
5) Area by coordinate method.

NORTH CAROLINA PROFESSIONAL LAND SURVEYOR SEAL L-4295 LANCE D. SCHAMBACK

Lance D. Schamback, PLS
LICENSE NUMBER L-4295



Legend

S.I.R. = Solid Iron Rod
R/W = Right-of-way
I.P.S. = #4 Rebar Set
= Not to scale
CP = Calculated Point
= Cable Pedestal
= Water Valve
= Utility Pole
= Well
= Light

GRAPHIC SCALE

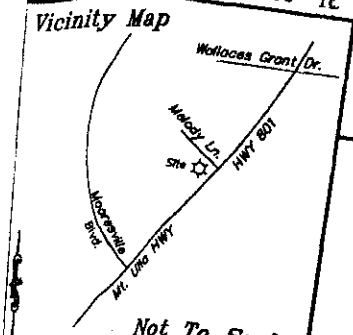
60 0 30 60 120

(IN FEET)
1 inch = 60 ft.

Mt. Ulla Highway
NC HWY 801
(Possible 60' Public R/W No Deed Found)

LINE TABLE		
LINE	LENGTH	BEARING
L1	9.09	N44°18'05"E

Vicinity Map



Not To Scale

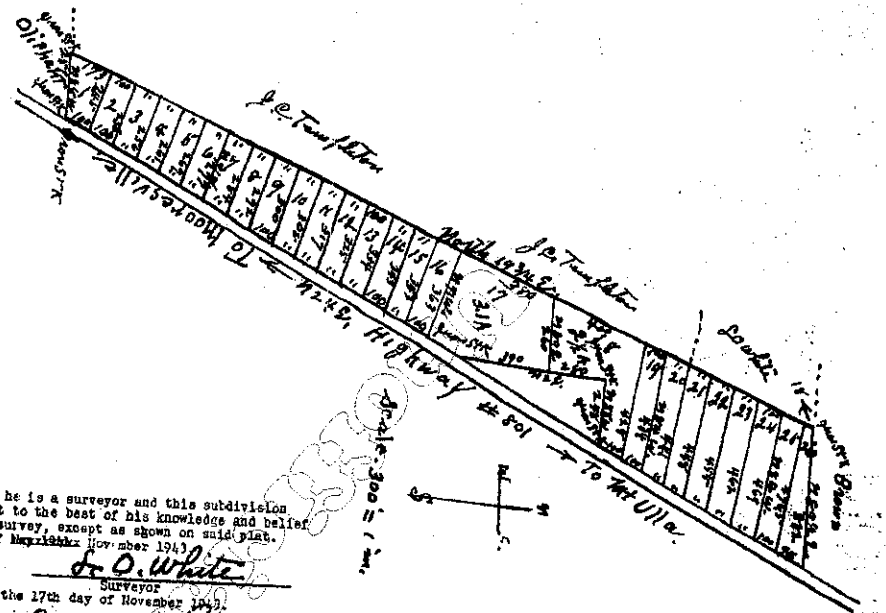
Boundary Survey
FOR
Thomas E. Wynn, II & Tonda G. Wynn

PROPERTY DESCRIPTION
Lots 13 & 14,
B. A. Troutman, Subdivision
P.B. 3, Pg. 74
Barringer Township
Iredell County, NC

SCALE: 1" = 60'
FIELD BOOK:
FILE: 2008-29
TAX MAP NO:

Lance D. Schamback
Post Office Box 4143
Mooresville, NC 28117

PLAT. B. A. TROUTMAN, SUBDIVISION,
4 MILES EAST MOORESVILLE , N.C.
ON HIGHWAY # 801.



NORTH CAROLINA
IREDELL COUNTY

L.O. White being duly sworn says that he is a surveyor and this subdivision hereto attached is accurate and correct to the best of his knowledge and belief as was prepared by him from an actual survey, except as shown on said plat. The survey was made during the month of ~~September~~ November 1943.

L. O. White
Surveyor

Sworn to and subscribed before me this the 17th day of November 1943.

Miguel Peterson
Clerk of Superior Court

NORTH CAROLINA
IREDELL COUNTY.

The foregoing proof of the correctness of the attached map or plat, is adjudged to be in due form and according to law. Therefore let said map with this certificate be registered. Witness my hand this 17th day of November, A.D. 1943.

Miguel Peterson
Clerk of Superior Court

Filed for registration the 18 day of November, A.D. 1943, at 5 P.M.

L.F. Irvin, L. F. Irvin
Register of Deeds.

Book:3,Page: 74

DESIGN CONSIDERATIONS AND RECOMMENDATIONS:

The Owner proposes to construct a 3-bedroom residence which will be served by private water well.

Soils investigation by Michael Athanas, LSS reveals limited area suitable for a nitrification field.

Due to limited available space with only provisionally suitable soil, a LPP distribution system is proposed.

The design is based on an LTAR if 0.11 G/SF/D. 100% repair is available using pretreatment and sub-surface drip irrigation and area is shown on the plan.

REFERENCE MATERIAL:

- 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.
- 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.
- 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.

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 Local County Health Department.
- 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 facility to minimize the volume of waste water entering the disposal system, including, but not limited to, the following precautions:
- Provide water conserving plumbing fixtures within the facility; including toilets with flush volume not exceeding 1.6 gallons/flush.
- Develop conservative water use habits;
- Monitor and maintain the system as necessary for proper operation;
- Check and pump the septic tank sludge on a regular basis or approximately every three years, otherwise as required by the regulations.
- Make rapid repairs to leaking plumbing fixtures and faucets.
- Avoid excessive watering of the lawn in the vicinity of the disposal field and prevent the growth of weeds.
- Check system filters and clean initially after one month of operation, and; thereafter, as determined by the system operator.

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 degrees 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 degrees centers.

- 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 12" deep, except as approved by the Local County Health Department.
- 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. All joints in lateral and the manifold piping shall be water tight 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.
- Leave absorption area with a raked surface, ready for grassing.
- Carefully backfill manifold trenches to finish grade with clean debris free earth (no stone).
- 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 of 2/3" 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 called for herein. Locate the septic tank at such height as to provide approximately 8" of cover soil over top of the tank. Provide an approved access port over the effluent filter.
- The riser shall be furnished by the tank manufacturer shall extend a minimum of 6" above finish grade.
- Ground surface shall be graded to divert surface water away from the access ports.
- Tank and riser shall conform to paragraph .1952 of the regulations.
- **Effluent Filter**: A Zabel A-1800 micro-filter or other state approved effluent filter, with 1/32" infiltration shall be installed in 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.
- The dosing tank shall consist of a 1,000 gallon capacity, reinforced, precast concrete tank without baffle. Provide access for entry into the tank directly over the pump location, and extending 6" above final grade. The tank shall be supplied by a manufacturer approved by DHS and bear the manufacturer's serial number. Use 30" diameter approved concrete or corrugated plastic, access riser with bolted on or lockable lid extending a minimum of 6" above grade. In addition to the pump, the tank shall have a pressure filter with float controls and alarm floats as detailed.
- Force Main shall be 2-inch Schedule 40 PVC. All lateral piping shall be SCH 40 PVC. Glue for all PVC pipe joints shall be as recommended by the pipe manufacturer.
- **Pump**: The submerged pump shall be Zoeller Model 140 manufactured by Zoeller Pump Company., or equal, 1 hp, 230v/1ph; capable of pumping 47.6 gallons per minute at a 17.9' head. Pump shall be

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".

- 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:
    - The distribution field is shaped to shed rain water and is free of low area.
    - Curtain drains, grassy swales or ditches for diverting ground and surface water are properly installed.
    - Gutter and downspout drains are directed away from the system.
- Any problems should be corrected before approving the system.
- Finally, the entire area should be planted with grass according to specifications.

DESIGN SPECIFICATIONS - LOW PRESSURE PIPING SYSTEM

Wynn Property

Iredell County, NC

April 25, 2008

- Daily design waste flow: (3-bedroom) 360 gpd
- Septic tank size: 1,000 gal. (2 compartment)
- Pumping tank size: 1,000 gal.
- Effluent Filters (2): Effluent Filter Zabel A1800 w/ 1/32" openings in septic tank and GAG Sim/Tech Filter at dosing pump.
- Effluent loading rate: 0.11 GPD/SF
- Number of laterals: 6 laterals
- Force Main Inside 4" corrugated perforated pipe
- Total length and diameter of supply manifold: 2" diameter SCH 40
- Manifold placement: 100 LF 2" dia. SCH 40 PVC
- Hole size: Above Lateral (See Detail)
- Hole spacing: 5/32"
- Total number of holes: Varies, see chart & diagram
- Flow rate through the system: 105
- Elevation head (pump to end of manifold): 47.6 gpm
- Pressure head: 12.7'
- Friction head: 2.0'
- Total head: 5.2'
- Pump requirements: 17.9'
- Dosing volume: 47.6 gpm @ 17.9', use Zoeller 140, 1 hp, 230v/1ph
- Pump run per dose: 275 gal.
- Check valve: 5.78 min.
- Siphon break hole: yes

yes

DOWN SLOPE MANIFOLD
PINK 1
BLUE 2
PINK 3
BLUE 4
PINK 5
BLUE 6

"Quality Pumps Since 1939"

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER PUMP CO.

MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

SECTION: 2.20.045
FM1502
0104
Supersedes
0403

visit our web site:
http://www.zoeller.com

COMPARE THESE FEATURES

- Durable Cast Iron construction.
- Non-Clogging engineered thermoplastic vortex impeller design, passes ½" spherical solids.
- Motor - 60 Hz, 3450 RPM, oil-filled, hermetically sealed, automatic reset, thermal overload protected.
- Available in both single or double shaft seal designs.
- Carbon/Ceramic seals.
- Assembled with Stainless Steel bolts.
- Upper sleeve and lower ball bearing running in bath of oil.
- 15 ft. UL Listed Neoprene cord with molded plug cap and ground wire.
- 1½" NPT vertical discharge.
- Stainless steel lifting handle.
- BN and BE models include a variable level float switch and 1½" X 2" PVC adapter fitting.
- Operates at temperatures to 130°F (54°C) in effluent or dewatering applications.
- Corrosion resistant powder coated epoxy finish.

Note: The sizing of effluent systems normally requires variable level float(s) controls and properly sized basins to achieve required pumping cycles or dosing timers with nonautomatic pumps.

140 / 4140 Cast Iron Series

(For Pump Prefix Identification see News & Views 0052)

"FLOW-MATE"

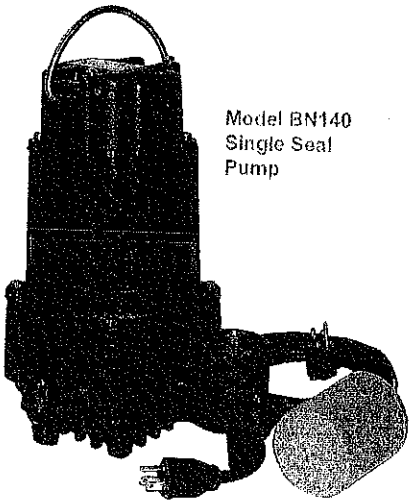
FOR SEPTIC TANK - LOW PRESSURE PIPE (LPP)
AND ENHANCED FLOW STEP SYSTEMS

EFFLUENT

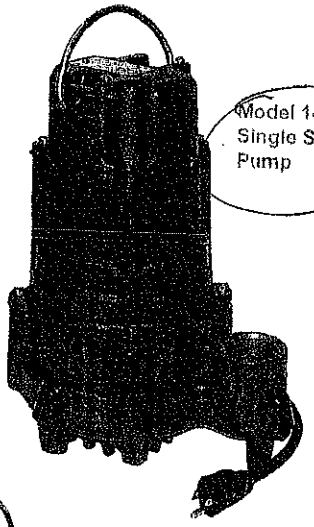
OR DEWATERING PUMPS
SUBMERSIBLE
1½" NPT DISCHARGE

SSPMA MEMBER
SUMP AND SEWAGE PUMP MFRS. ASSN.

QUALITY MADE IN AMERICA BY U.S. CRAFTSMEN



Model BN140
Single Seal
Pump



Model 140
Single Seal
Pump

C SA US
Tested to UL Standard UL778
and Certified to CSA
Standard C22.2 No. 108

POWDER COATED **TOUGH™**



Model 4140
Double Seal
Pump

MODELS AVAILABLE
- Nonautomatic
- 1 HP, 1Ph 115V or 230V

ZOELLER PUMP CO.

MAIL TO: P.O. BOX 16347
Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road
Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP
FAX (502) 774-3624

Manufacturers of . . .

"Quality Pumps Since 1939"

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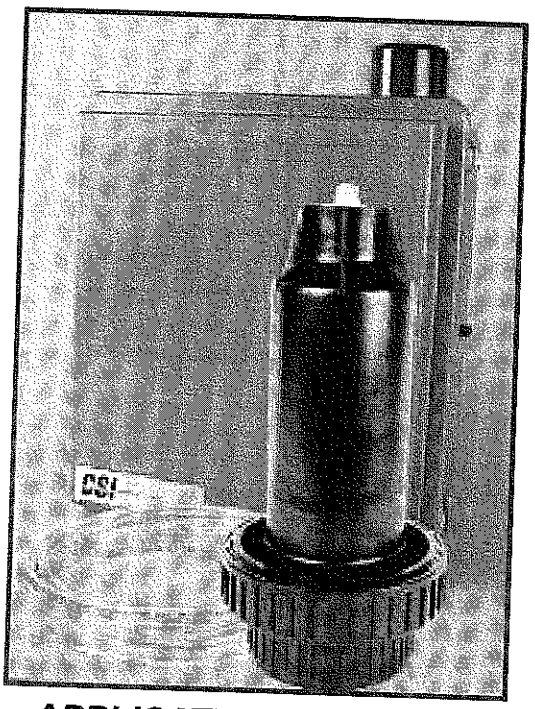
CSI Titan Series TSP203 Simplex Pressure

CONTROLS

FEATURES:

- Flashing Red Alarm Light
- Run Light
- High Decibel Audible (optional)
- NEMA 4X Fiberglass Enclosure
- Stainless Piano Hinged Door
- Stainless Door Latches w/Padlock Hasp
- External Mounting Feet
- 3 Pole, Non-Reversing Contactors
- Adjustable Overload Relay
- Hand Run Pushbutton
- Alarm Test/Silence Pushbutton
- Field Wiring Terminal Strips
- Motor Circuit Breaker
- Control Circuit Transformer - Primary Fusing & Breaker
- Individual Control/Alarm Circuit Fuses
- UL 508A Listing (optional)
- One Year Limited Warranty

See Page 16 to learn about the Advantages of the Titan Pressure System!



APPLICATIONS INCLUDE:

Starting & Stopping Pump for:
Sump & Sewage Basins
Septic Tanks & Aeration Systems
Cisterns & Atmospheric Storage Tanks
Chemical Solution Tanks
And Many More...

AVAILABLE OPTIONS:

Piezo Buzzer
(Automatic reset silence circuit included with all audibles)
Digital Display Center
UL 508A Listing

No Motor Heat Sensor or Seal Fail Probes

Specifications

Model	Location Use	Max Full Load Amps	Enclosure Type	Enclosure Material	Input Power VAC -Ph	Audible Included	Alarm Fuse	Control Fuse	Approx Ship Weight	List Price Panel *Only*(**)(*)
TSP203	Outdoor	18	NEMA 4X	Fiberglass	208-3	---	3 Amp	3 Amp	13 lbs	$1,161.00
TSP203P	Outdoor	18	NEMA 4X	Fiberglass	208-3	Piezo	3 Amp	3 Amp	13 lbs	$1,235.00

***Add Suffix* For FLA Requirement (See table below)
**Add Suffix - "MB"* to Model # If Ordering Pressure Bell Mounting Bracket ($45 list) or "TK" for a Tether Kit ($55 list)
The system comes standard with a pressure bell and 50ft of tubing. More tubing is available ($.70 per foot list).
To include elapsed time meter, cycle counter, and level read out a digital display may also be added ($85 list)

****Important****

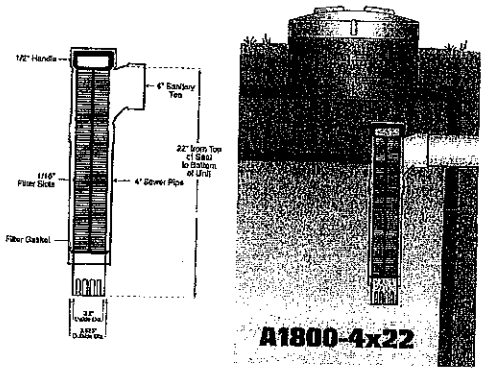
This Titan Series panel is for small effluent type pumps only. No provisions for motor heat sensors or seal probes are provided. When ordering any of the above panels, match the full-load-amperes (FLA), of the pump(s) you are using to the chart to the right and add the proper suffix to the model number. EXAMPLE: You need a simplex control panel with alarm light and Piezo - your pump is 208 V with FLA rating of 5 - Order Model #TSP203P-10 for panel only or Model #TSP203P-10-MB if you want the mounting bracket included

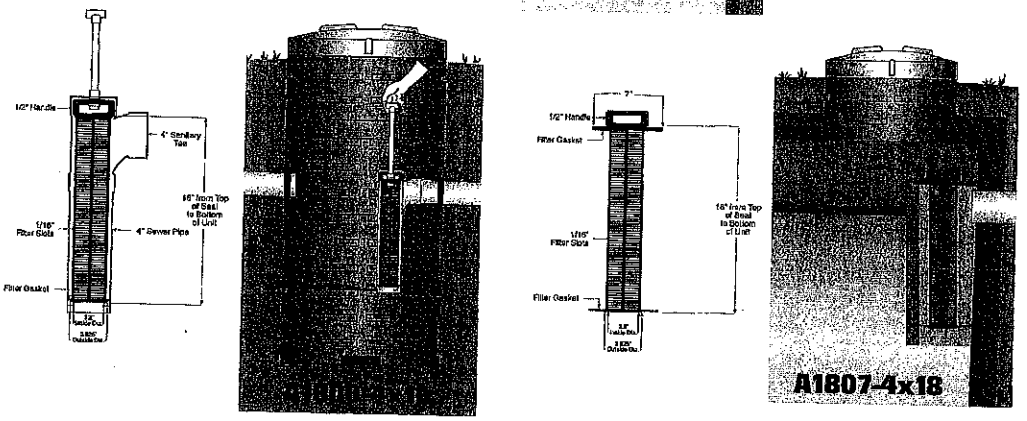
****FLA Rating Table**

FLA	Suffix	FLA	Suffix
.063-1.0	-05	5.5 - 8	-12
1.0 - 1.7	-06	7 - 10	-14
1.6 - 2.5	-07	9 - 13	-16
2.5 - 4	-08	12 - 18	-21
4 - 6	-10		

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Zabel™ A1800 Series Residential Wastewater Effluent Filter
Product Specification





1. Application: Single family homes no more than four bedrooms. **Zabel's™ New Residential High Performance Filter** is designed to provide extra protection for homes with garbage disposals and still sloughs the solids back into the tank.

2. Performance Specification
   2.1. Multiple Filters may be installed in manifolds to handle larger flows.
   2.2. TSS: Average reduction in TSS within 6 months of installation - 40 percent in typical residential wastewater.

3. Materials: All materials are non-corrosive ABS

4. Service Frequency: The filter should be cleaned when the septic tank is normally inspected and pumped as required by local regulation. The A1800's are designed to slough most normal solids off the inside of the vertical walls and back into the tank when the effluent flow is in a resting state. Installation of an effluent filter may increase the frequency of service if the homeowner discharges materials that are harmful to the system

5. Warranty: The A1800's are warranted to be free from defects in material and workmanship for the life of the original purchaser. Zabel's liability is limited to repair or replacement of the part and in no event shall Zabel be liable for any consequential damages of any kind.

6. Dimensions:

Model	Diameter	Height	Filtration	GPD	Total Filter Surface	Lineal Feet of Weir
A1801-4x18	4"	18"	1/16"	800	158.4 in²	61
A1801-4x22	4"	22"	1/2"-1/16"	800	*158.4 in²	*61
A1807-4x18	4"	18"	1/16"	800	158.4 in²	61

*Calculations are for the 1/16" area only.

The product(s) shown are covered by the following patents:
U.S. 5,382,357, 5,482,621,5,683,577, 5,736,035, 5,779,896,
Australia: 134440, Canadian: 2,135,937,Israel: 111574, New Zealand: 264824, Other Patents Pending

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