

16413 SHALLOW POND RD

21724130

8/12/08

marliwr

Groundwater and Wastewater Services File Imaging Project
May 2007
Barcode Font = IDAutomationHC39M

CERTIFICATE OF COMPLETION/OPERATION PERMIT

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 16724 DATE: 11/24/03

TC: 217-241-30 ☒ L ☐ CRT

SERIAL 19389

Name of Owner STEVEN LONG Juris.:

Address of Property 16413 SHALLOW POND

Inspection Data:

Tank Material EXISTING PCC

Total Length of Drainfield 350'

Number of Lines 5 @ 70'

Cover Depth 18"

Water Supply Source WELL

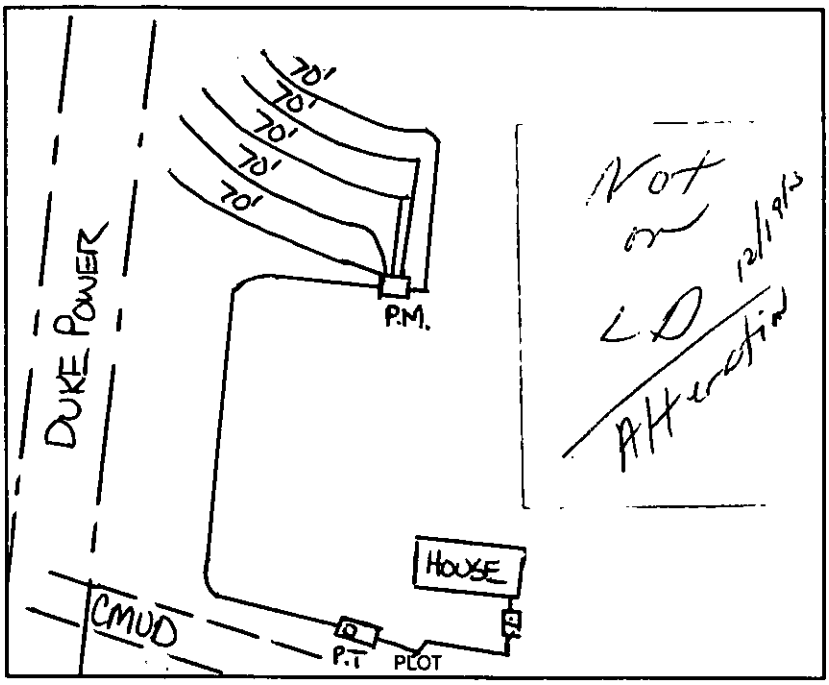
Distance to Water Source 750'

Excavation Inspected 11/21/03

Tank(s) Inspected 11/24/03

Wash Line Inspected N/A

High Water Alarm Inspected 11/24/03



Design 2003, EXISTING 5T, 1000 DT, PI, INNE-Z-FLOW, 1050 SF, T CTR# STANLEY

The undersigned has inspected the Septic Tank System described above, and certifies it has been

☒ installed or constructed ☐ altered or repaired

☐ in accordance with the permit issued ☒ as detailed in the plot above

and meets the provisions of 15A NCAC 18A. 1900, "Laws And Rules For Sewage Treatment and Disposal Systems" in effect on the date of issuance of the permit. This issuance of this

☐ Certificate of Completion ☒ Operation Permit

does not in any way guarantee that the system will operate properly or relieve any person now or hereafter owning, controlling, or using such system from any liability resulting from the failure of the system to operate properly. This document is issued subject to those restrictions and conditions shown on the permit(s) and the provisions of 15A NCAC 18A. 1990 in addition to those listed below under "COMMENTS." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Notice: Disturbance of the designated repair area may result in the suspension/revocation of this permit.

COMMENTS: 25% REDUCTION, 350 LF, E-Z-FLOW, EXISTING 5T, 1000 DT, 5 X 70' DRAINLINES, PUMP TO DRAINFIELD THROUGH WOODS, BESIDE DUKE POWER LINES.

RS

Environmental Health Specialist

Mecklenburg County services are available without regard to ethnic origin, sex, or disability.

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HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: [redacted] DATE: 11/24/03

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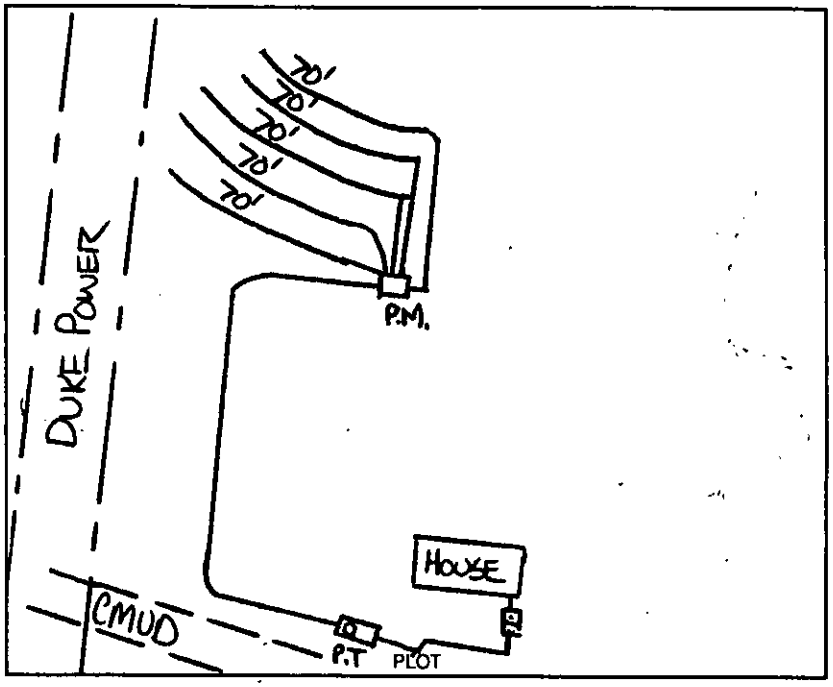
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INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR APPROVAL

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 16124 DATE: 11/24/03

TC: 217-241-30 ☒ L

SERIAL : 19563

Permission is hereby given to _____ (Install) or Construct, _____ Alter or Repair the individual septic tank wastewater treatment system with subsurface, soil absorption, effluent discharge as specified herein at the described location. This permit is granted based upon the information supplied in the application dated 9/9/03. All work shall be completed on or before 11/24/03, after which date this permit shall be null and void. The system shall meet all of the construction requirements of 15A NCAC 18A. 1900 which are in effect on the date of the granting of this permit. A Certificate of Completion or an Operation Permit must be obtained from the Mecklenburg County Health Department before any system can be covered up or placed into service. The issuance of this permit does not in any way guarantee that the system anticipated to be constructed will operate properly, or relieve any person now or hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

INSTALL ACCORDING TO PLANS
SUBMITTED BY TONEY JACOBS & ASSOC.

PLOT OF SYSTEM

Liquid Capacity of Septic Tank EXISTING gallons

Liquid Capacity of Dosing Tank 1000 gallons

Tank Construction PCC

Trench Depth 24"

Absorption and/or Nitrification Lines:

Trench Width 3 feet

Trench Walls Scored and Porous Y

Total Line Length 350 feet

Number of Lines 5@70'

Depth of Stone N/A inches

Distance from House 75 feet

Distance from Property Line 10 feet

Distance from Well 750 feet

NOTICE: This system shall not be installed while soils are in a wet condition.

NAME OF OWNER STEVEN LONG

LOCATION OF PROPERTY 16413 SHALLOW POND RD.

Comments: 25% REDUCTION, 350 TLF, E-Z FLOW, EXISTING ST, 1000 DT
(5) X 3' X 70' DRAINLINES, PRESSURE MANIFOLD

Environmental Health Specialist

WHITE - HEALTH DEPARTMENT's COPY • CANARY - E.H.S. COPY • PINK - OWNER OR AGENT's COPY

ACS

FEE: _____ **AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION**
DATE: _____ **VOID SIXTY (60) MONTHS FROM DATE OF ISSUANCE**

DATE: 11/12/03 PERMIT NO: 16724
PARCEL NO: 217-241-30

JOB LOCATION ADDRESS: 16413 SHALLOW POND
PROPERTY OWNER: STEVE LONG
BUILDING CONTRACTOR: _____
SUBDIVISION NAME: _____
AUTHORIZATION ISSUED BY: DAVID CORNELIUS DATE: 11/12/03
DEHNR AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NO. 16724, 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: INSTALL ACCORDING TO PLANS SUBMITTED BY TONEY JACOBS & ASSOCIATES.

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.

Tony C. Jacobs CPSS 11/12/03
SIGNATURE OF OWNER/OWNER'S REPRESENTATIVE DATE

CONDITIONS OF IMPROVEMENT PERMIT

it Number: 16724

Tax Number: 217-241-30

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.

Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

Basement	___ Yes	X 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	X Innovative or Experimental: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1

0.35 Long-term acceptance rate	480 Max gallons/day wastewater flow	1029 Absorption Area (sq ft)	9' Trench spacing (min. on centers)
Y Serviced by private well	1500 Gallon septic tank	343' Total trench length (ft)	24" Maximum trench depth (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions)
4 Bedrooms in residence	1000 Gallon pump tank	N/A Depth of stone	

Any surface waters present: Type: Minimum separation distance:

Site modifications required:

Additional Conditions: INSTALL ACCORDING TO PLANS SUBMITTED BY TONEY JACOBS & ASSOCIATES.

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	X Innovative or Experimental: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1

1029 Absorption Area (Sq ft) 343' Total Trench Length (Ft)	N/A Depth of Stone Trench	9' Trench spacing (min. on centers)	24" Maximum Trench Depth

For existing system, enter the year originally installed:

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

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

... This Improvement permit is transferable.

DEHNR Authorized Agent — Date 11/12/03

(Owner/Agent Signature) — Date 11/12/03

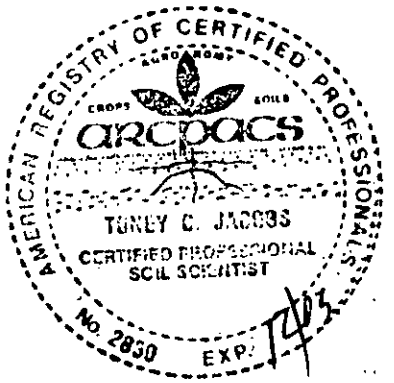
MECKLENBURG COUNTY
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR.
SUITE 211
700 N. TRYON ST.
CHARLOTTE, N.C. 28202.
(704) 336-5102

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

RESIDENTIAL 25% REDUCTION SEPTIC SYSTEM WITH PRESSURE MANIFOLD DOSING FOR SUBSURFACE WASTEWATER DISPOSAL 16413 SHALLOW POND ROAD CHARLOTTE, NORTH CAROLINA 28278

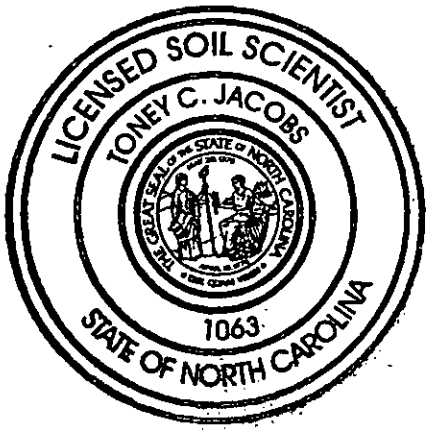
MCHD FILE # 16724

Prepared for:
Mr. Keith Shirley
Charlotte Mecklenburg Utilities
5100 Brookshire Blvd.
Charlotte, North Carolina



Prepared by:
Toney C. Jacobs & Associates, Inc.
168 Broadbill Drive
Mooresville, North Carolina 28117
office (704) 663-6905
fax (704) 662-9845
e-mail jacobs@i-america.net

October 29, 2003



Copy: David Cornelius R.S.
Mecklenburg County Health Dept.-IWWS
700 N. Tryon Street
Charlotte, N.C. 28202

Steve and Lorraine Long
16413 Shallow Pond Rd.
Charlotte, NC 28278

Ms. Agnela M. Berry
Brown and Caldwell
109 E. Morehead St.
Charlotte, NC 28202

Toney C. Jacobs, LSS

BACKGROUND

Replacement of working existing system because of CMU sewer line encroachment. The system was originally installed as a 3-bedroom. The replacement of field is for a 4-bedroom per owner interpretation of house.

APPLICATION INFORMATION

1. Owner: Steven F. and Lorraine Long
   16413 Shallow Pond Road
   Charlotte, NC 28278

   Soil Scientists
   and Designers: Toney C. Jacobs, LSS
   Toney C. Jacobs & Associates, Inc.
   168 Broadbill Drive
   Mooresville, NC 28117
   (704) 663-6905 (Office)
   (704) 662-9845 (fax)
   E-mail jacobs@i-america.net

2. Water supply is provided by a private well.
3. Facility to be served is an existing 3-bedroom single family residence.

LOCATION

The property is located off Youngblood Road.

REFERENCES

Law and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment Health and Natural Resources, April 17, 2002.

PLANS AND SPECIFICATIONS FOR SPECIFIC SYSTEM COMPONENTS

Septic Tank

1. The septic tank system will use the existing tank. Tank to be pumped.
2. Both the septic tank and pumping tank must be provided with above ground approved manhole risers to provide easy access for clean-out and pump service.
3. On the outlet tee of the septic tank an effluent filter must be installed.

Pumping Tank

1. The pumping tank shall have an access manhole extending at least 6 inches above finished grade.
2. A septic tank effluent pump that will not be corroded by sewage shall be used in the pumping tank.
3. The pump must be placed on two concrete blocks set next to each other on the bottom of the tank. This prevents the pumping of any solid particles that can clog the system.
4. 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.
5. The lower level control or "pump-off" must be positioned above the pump, so that the pump remains submerged at all time.
6. The pump outlet pipe should be connected to the supply manifold with a threaded PVC union to allow quick removal
7. Pump and Simplex control circuits shall be provided with manual circuit disconnects within a watertight, corrosion-resistant, outside enclosure (NEMA 4X or equivalent) adjacent to the pump tank, securely mounted at least 12 inches above finished grade. Pump control (Simplex) may be mounted on side of house if long cord pump is used. The pump shall be manually operable without requiring the use of special tools or entrance into the tank for testing purposes. Conductors shall be conveyed to the disconnect enclosure through water proof, gas proof, and corrosion-resistant conduits, with no splices or junction boxes provided inside the tank. Wire grips, duct seal or other suitable material shall be used to seal around wire and wire conduit openings inside the pump tank and disconnect enclosure. There shall be two electric circuits for controls: one for pump power, one for the alarm. These will require 2 circuit breakers.
8. The pump tank shall have a properly functioning high-water alarm. The alarm circuit shall be supplied ahead of any pump overload and short circuit protective devices. It should be on a separate electrical circuit from the pump power line. The alarm shall be audible and visible by system users and included in the pump and control enclosure (Simplex Panel). The alarm is activated if the water level in the pump tank rises above the "pump-on" float control. The tank provides at least one day or more of excess storage capacity (depending on water use in the home) during which time the system must be repaired.
9. Float switch for the high water alarm shall be set no more than 3 inches above the high water level of pump cycle.
10. Float switch tie downs to be made of corrosion resistant material, no tape or metal hose clamps. For maintenance flexibility, tree must be used to set floats.
11. Watertight testing per .1900 rules shall be required on two piece pump tanks.
12. Wiring between the pumping tank and the house should meet State and local code requirements.

Pipe and Fittings

1. All pipes and fitting should be made of SCH 40 PVC.
2. All joints must be sealed with appropriate PVC-solvent cement.

3. There should be a threaded PVC union above the pump to allow easy removal or replacement.
4. A gate valve for final pressure adjustment is installed in the supply line inside the pumping tank.
5. Manifold and valve as shown in specifications.

CONSTRUCTION INSTALLATION

Site Preparation

1. One of the most important concerns for an on-site system is to protect the site from soil disturbance by heavy equipment.
2. Now that the absorption area has been designed and flagged, it should be protected from construction traffic. No site preparation is required.
3. After the soil is dry enough, the site should be cleared of brush and trees.
4. After the area has been cleared and shaped, the location of the lateral lines and supply manifold should be accurately re-flagged according to design specifications. Each lateral line must be laid out along a level contour using a transit. This step can be completely avoided if flags are protected during clearing.

Tank Installation

1. The two-compartment septic tank is installed.
2. The pumping tank is installed next to the septic tank.
3. The tanks are connected with an appropriate length of solid, four-inch PVC pipe.

Supply Manifold

Pump existing septic tank and add filter

Lateral Lines

1. Install trenches per manufacturer and State approved guidelines.
2. Trenches shall be 24-36" deep, 36" wide, and 9' minimum on center. Trenches shall be "level" from end to end.

PROPER OPERATION CHECK AND PRESSURE HEAD ADJUSTMENT

1. After all connections have been installed and connected, the system should be checked for proper operation. With electrical power turned off, fill the pump tank with a garden hose until the liquid rises to the level of the high-water alarm float.

2. Turn on the electrical power. 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.
3. The pressure head is measured, as the height liquid will rise above the pressure manifold when the pump is running. To set or check the pressure head:

    - Glue a three-foot length of pipe (preferable clear) to a threaded adapter that will screw into the pressure manifold.
    - Turn the power on to allow liquid to rise in the pipe.
    - Adjust the gate valve until the effluent reaches the desired height in the pipe.

FINAL LANDSCAPING

1. After the system is installed, the following should be checked to ensure that the system will not be overloaded with excess rainwater and runoff:
    - The distribution field is shaped to shed rainwater and is free of low areas.
2. Finally, the entire area should be planted with grass in order to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized before planting. After applying an appropriate grass seed, the area should be heavily mulched with straw or other suitable material.

QUALITY ASSURANCE REQUIREMENTS

The system must be installed by a qualified, contractor that is on the Mecklenburg County list of competent contractors. Critical stages of the installation, which should be checked, are:

1. System layout
2. Septic and pump tank installation prior to backfilling.
3. Manifold and lateral installation prior to backfilling.
4. Final landscaping, operation and pressure head check.

The system design is based on a maximum waste flow of 360 gallons per day. Homeowners should pay particular attention to the section titled Homeowner Suggestions for ways to minimize the burden on the system.

OPERATION AND MAINTENANCE PROCEDURE

The system is classified as Type III and does not require a maintenance contract with a certified operator. The following are operating, maintenance and inspection procedures the homeowner should follow.

- Septic system shall be pumped every 4 years or when solids accumulate to 1/3 the volume of the tank.

- At 6 month intervals inspect the effluent filter. When washing the filter, debris must be sprayed directly back into the septic tank and not onto the lawn.
- Pressure head at manifold should be checked and adjusted one month after installation and annually thereafter.
- All piping and fittings 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 diverted away from the fields and tank. Any ponding of surface water should be corrected.
- Grasses shall be mowed and maintained and any erosion shall be corrected promptly.
- The nitrification field area shall be checked for leakages, blowouts or malfunction, indications of damp or mushy areas compared to surrounding area or evidence of noticeable odor of sewage. Repairs shall be made immediately.
- The pump electrical should be checked to insure tight, clean connections with no corrosion and proper operation.
- Pump switches shall be checked for free operation and proper level set.
- Pump draw down depth and delivery rate shall be checked each year.
- Check septic tank and pump tank for evidence of damage or leakage. Check the quality of effluent including grease and sludge accumulation.

HOMEOWNER SUGGESTION

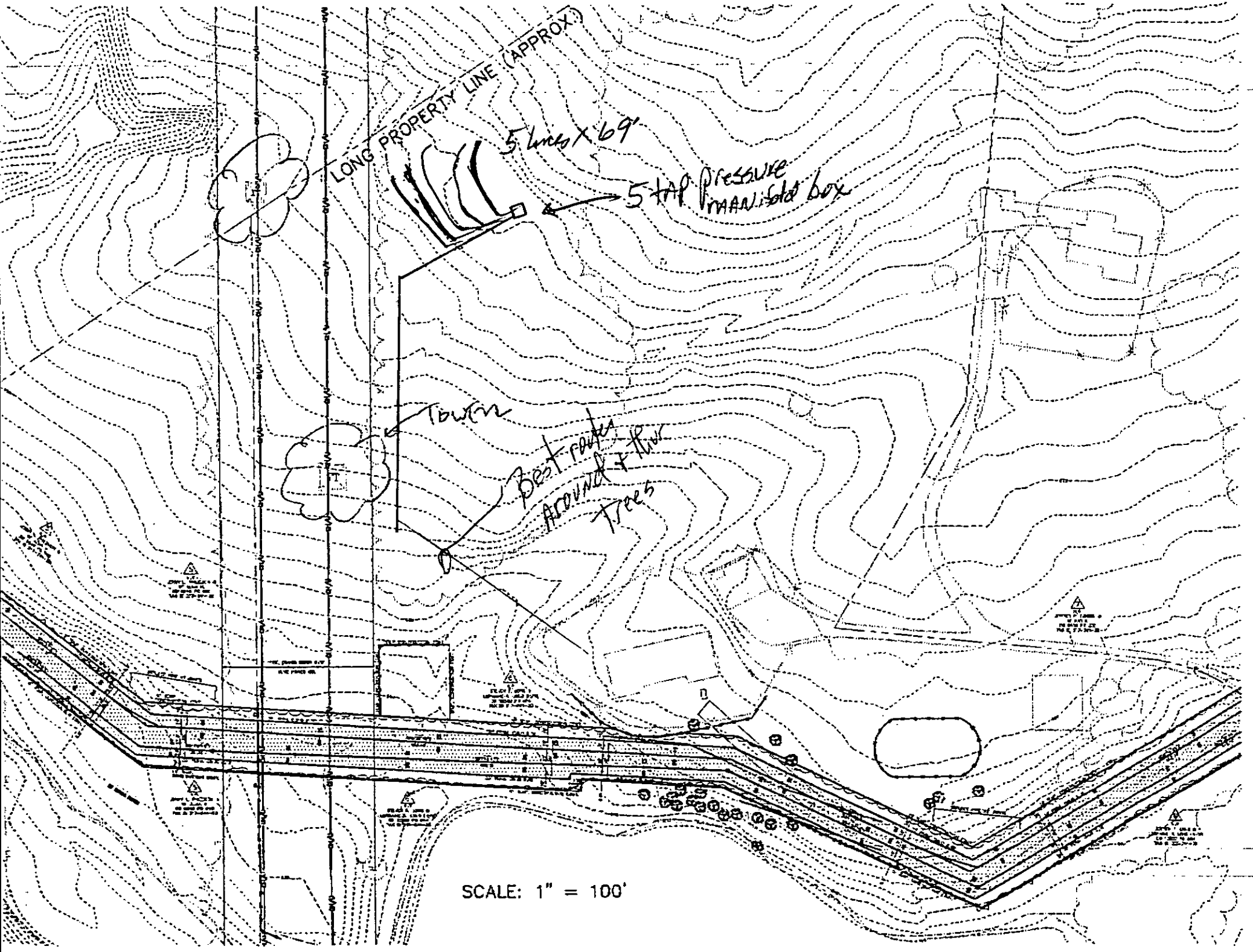
Most systems do not require much effort to operate and maintain. Even though the effort is small, the system must be maintained properly so that it operates reliably and at a minimum cost. Following are suggestions for the homeowner to minimize the burden on the septic system.

1. Garbage disposals should not be used in on-site systems. The ground garbage adds large amounts of solids to a septic tank, causing sludge to build up at a quicker rate than without. If disposal is installed, use should be limited.
2. Grease, cooking oils and coffee grounds should never be put into a septic tank.
3. Items such as disposable diapers, cigarettes, facial tissues and other solid or paper wastes should not be flushed into the on-site system.
4. Used motor oil and other such oily liquids should not be put into a septic tank.
5. Using less water can reduce the amount of water flowing to the treatment and disposal field.
6. Water-saving fixtures and devices can be installed on sinks, toilets and showers to reduce the rate at which the water flows from the fixture.
7. Dishwashers and washing machines should only be run with full loads.
8. Leaky faucets and toilets can add large volumes of water to the daily flow of water into the on-site system. Repair the leaks to save water and give the treatment and disposal field a rest.

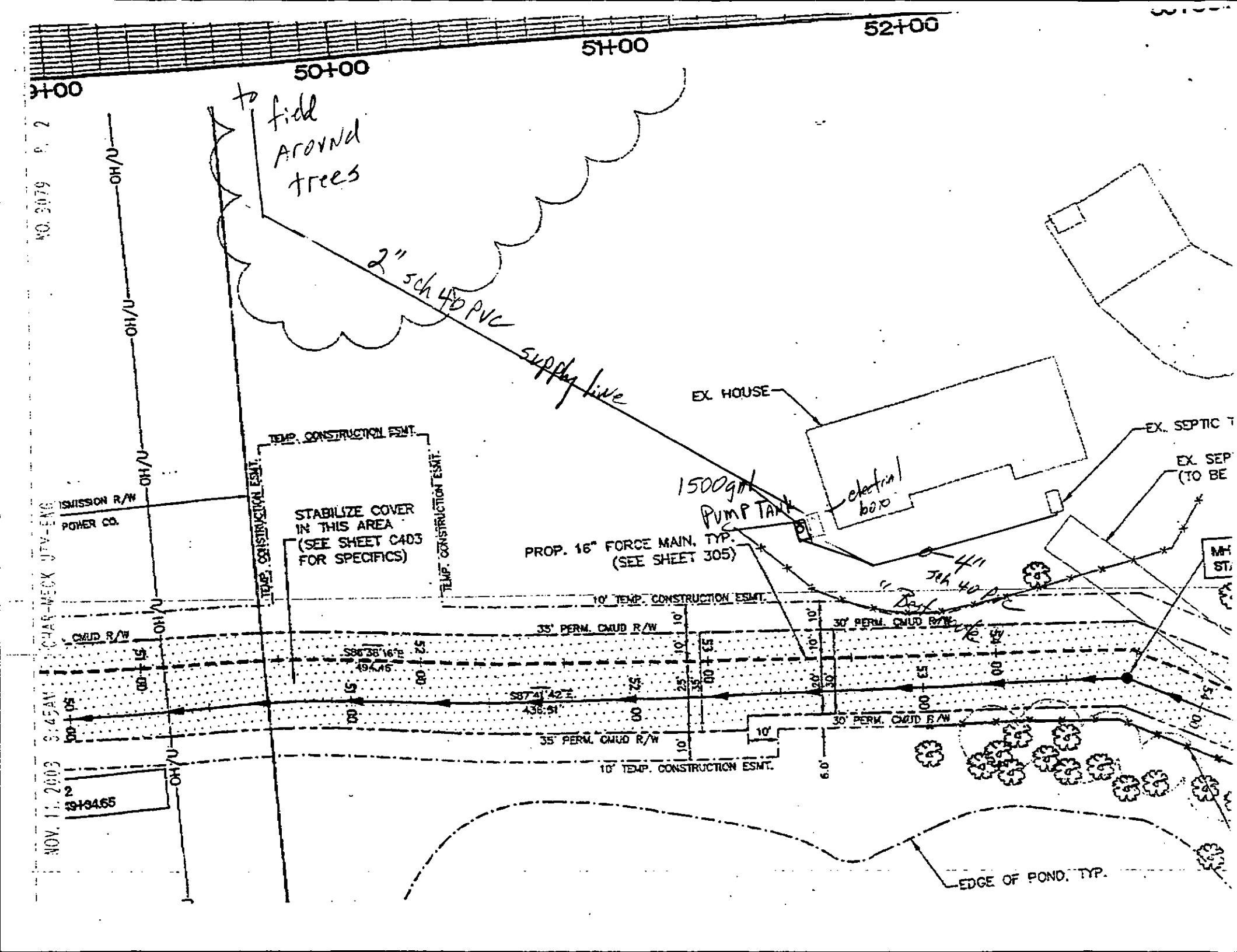
DESIGN SPECIFICATIONS

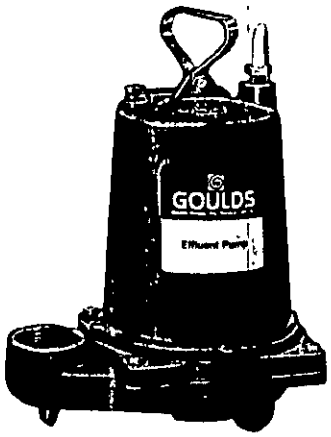
16413 Shallow Pond Road

Daily design flow:	480 gpd.
Septic tank size:	use existing
Pumping tank size:	1500 gal.
Effluent loading rate:	0.35 gpd/ft^2
Total length and diameter of supply pipe:	app. 425' of 2" SCH 40 PVC
Number and length of laterals:	5 @ 69' long
Pressure Manifold:	5 taps at 3/8" (SCH 40 PVC)
Flow rate through the system:	11.7 gpm capability
Elevation head:	Approx. 43'
Pressure head:	2.0'
Friction head:	5.0'
15% contingency	7.5'
Total head:	57.5'
Pump requirements:	11.7 gpm at 57.5' of head; use Goulds WE07H ¾ hp pump or equivalent with compatible electrical
Dosing volume:	240 gal. – 2.0 doses/day at design flow
Depth of water pumped per dose:	calculated to specific tank by measure or dealer engineering specifications (1 cubic ft. of water equals 7.48 gal.)
Pump run per dose:	approx. 20.5 min
Check valve:	yes
Siphon break hole:	no



NOV-11-2003(TUE) 11:58 Lane Design (FAX)7043768235 P.002/002


52+00
51+00
50+00
to field Around trees
2" sch 40 PVC supply line
EX. HOUSE
1500gal PUMP TANK
electrical box
EX. SEPTIC T
EX. SEP (TO BE
PROP. 16" FORCE MAIN, TYP. (SEE SHEET 305)
TEMP. CONSTRUCTION ESMT.
STABILIZE COVER IN THIS AREA (SEE SHEET C403 FOR SPECIFICS)
10' TEMP. CONSTRUCTION ESMT.
35' PERM. CMUD R/W
30' PERM. CMUD R/W
S86°38'16"E 494.46'
S87°41'42"E 436.91'
EDGE OF POND, TYP.
OH/U
NO. 2079 P. 2
NOV. 11. 2003 3:45AM CHAR-MECK UTY-ENG



Goulds

Submersible Effluent Pump

MODEL

3885

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Farms
- Trailer courts
- Motels
- Schools
- Hospitals
- Industry
- Effluent systems

SPECIFICATIONS

Pump

- Solids handling capabilities: ¾" maximum.
- Discharge size: 2" NPT.
- Capacities: up to 128 GPM.
- Total heads: up to 123 feet TDH.
- Mechanical seal: silicon carbide-rotary seat/silicon carbide-stationary seat, 300 series stainless steel metal parts, BUNA-N elastomers.
- Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent.
- Fasteners: 300 series stainless steel.
- Capable of running dry without damage to components.

Motor

Single phase:

- ⅓ HP, 115 V, 200 V, 230 V, 60 Hz, 1750 RPM; ½ HP, 115 V, 60 Hz, 3500 RPM; ½ HP – 1½ HP, 230 V, 60 Hz, 3500 RPM.
- Built-in overload with automatic reset.
- Class B insulation.

Three phase:

- ½ HP – 1½ HP 200/230/460 V, 60 Hz, 3500 RPM.
- Class B insulation.
- Overload protection must be provided in starter unit.
- Shaft: threaded, 400 series stainless steel.
- Bearings: ball bearings upper and lower.
- Power cord: 20 foot standard length (optional lengths available).

Single phase:

- ⅓ and ½ HP – 16/3 SJTO with 115 V or 230 V three prong plug.
- ¾-1½ HP – 14/3 STO with bare leads.

Three phase:

- ½-1½ HP – 14/4 STO with bare leads. On CSA listed models – 20 foot length SJTW and STW are standard.

FEATURES

■ **Impeller:** Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.

■ **Casing:** Cast iron volute type for maximum efficiency. 2" NPT discharge adaptable for slide rail systems.

■ **Mechanical Seal: SILICON CARBIDE VS. SILICON CARBIDE** sealing faces. Stainless steel metal parts, BUNA-N elastomers.

■ **Shaft:** Corrosion-resistant stainless steel. Threaded design. Locknut on three phase models to guard against component damage on accidental reverse rotation.

■ **Motor:** Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.

■ **Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage.

■ **Bearings:** Upper and lower heavy duty ball bearing construction.

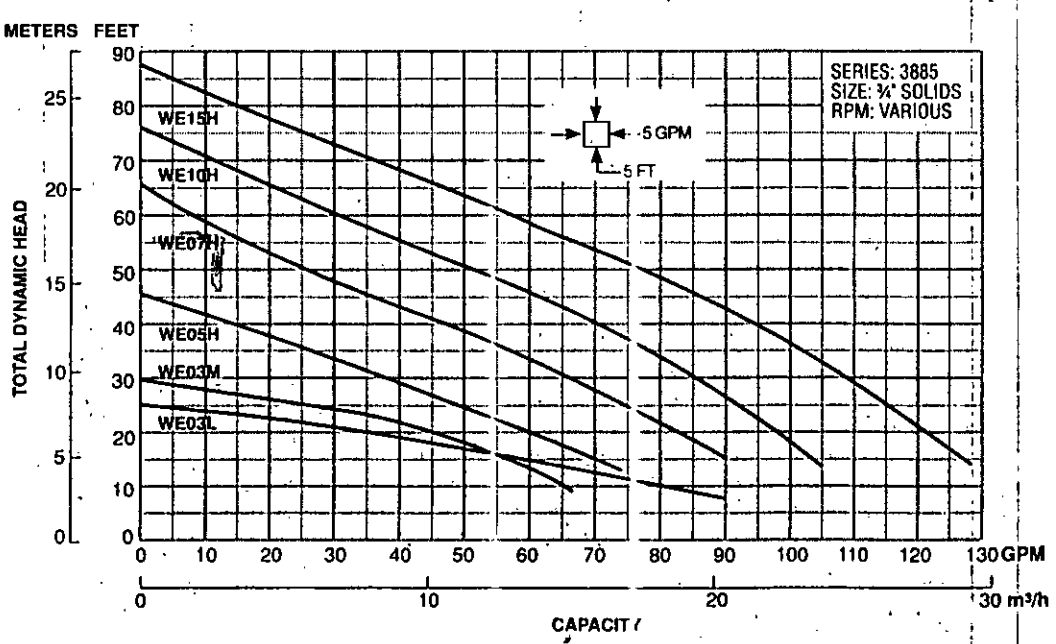
■ **Power Cable:** Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking.

■ **O-ring:** Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS

Canadian Standards Association

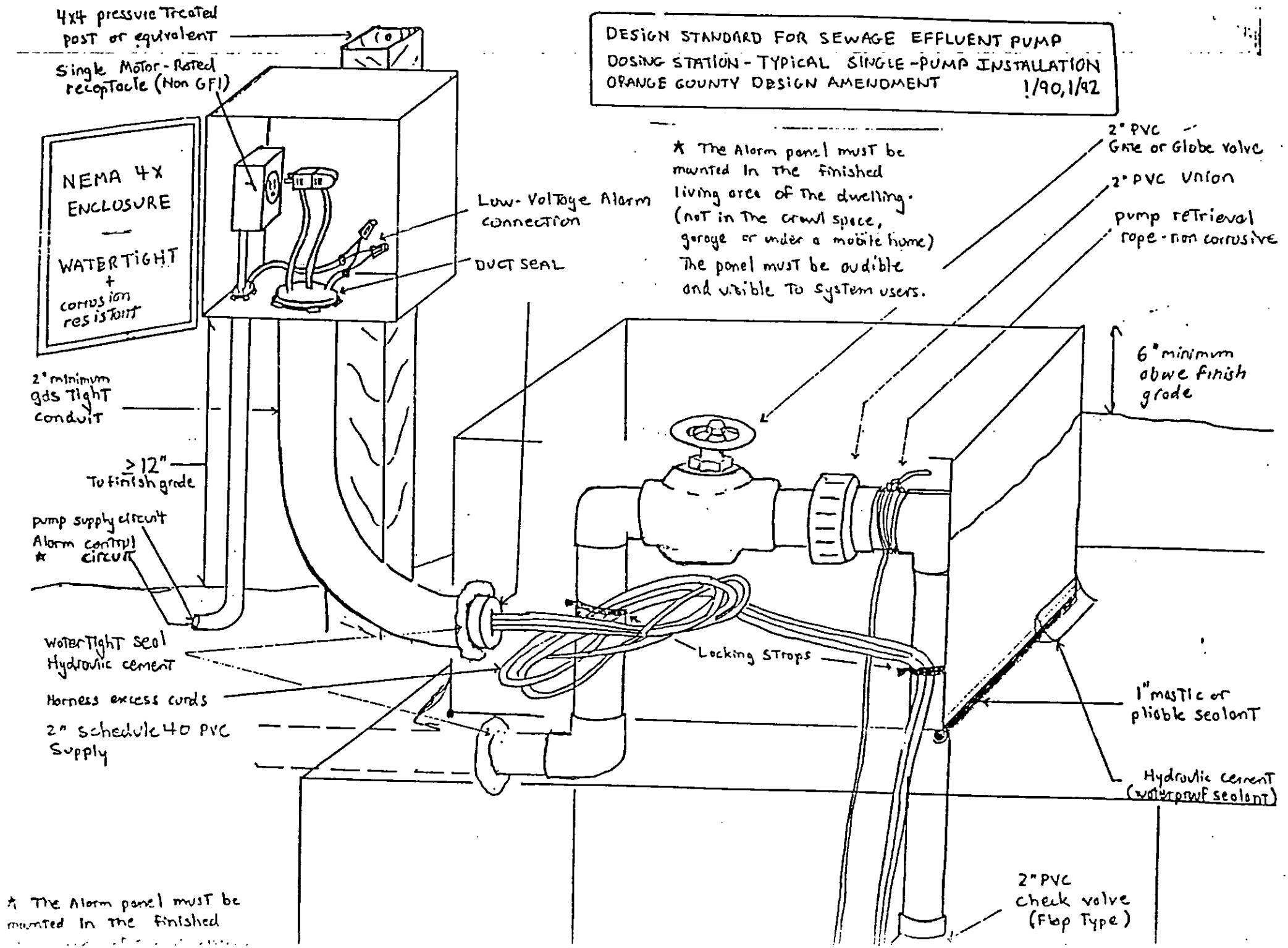
Underwriters Laboratories



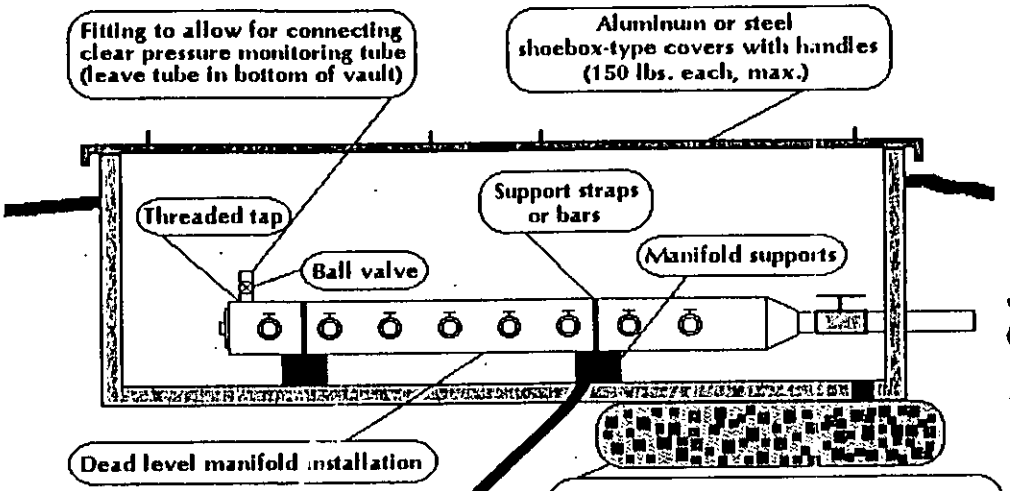
© 1995 Goulds Pumps

Effective May, 1995
B3885

DESIGN STANDARD FOR SEWAGE EFFLUENT PUMP
DOSING STATION - TYPICAL SINGLE-PUMP INSTALLATION
ORANGE COUNTY DESIGN AMENDMENT 1/90, 1/92

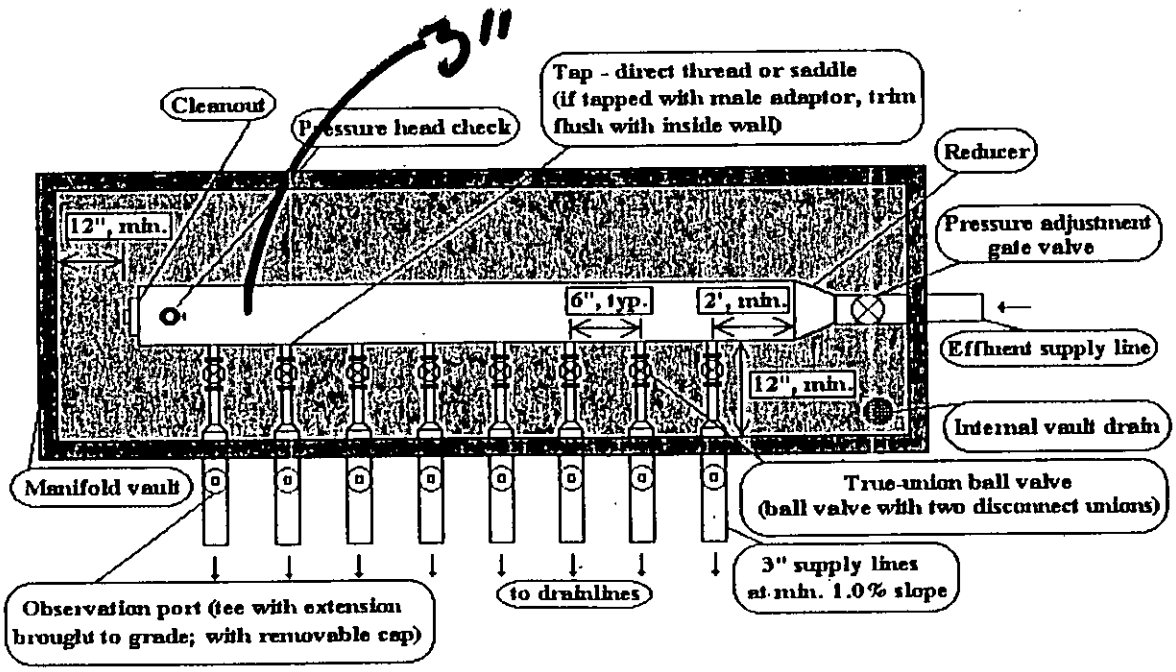


* The Alarm panel must be mounted in the finished



Profile View of Pressure Manifold for Sloping Site Installation

(not to scale)



Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 1
Property ID: 217-241-30
Lot #:
File #: 16724
Code: 1

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Steve F. Long
Applicant: Toney C. Jacobs
Address: 16413 Shallow Pond Road, Charlotte, N. C. 28278
Date Evaluated: 10/02/2003
Proposed Facility: Residence
Design Flow (.1949): 360gpd
Property Size:
Location of Site: 16413 Shallow Pond Road
Property Recorded:
Water Supply: [ ] Public [x] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.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 (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 15	0-3	GR/CL	FR/SEXP/SS/SP	>54" TO SOIL WETNESS	54	N/A	NONE	PS, IV .35GPD/FT^2
		3-21	SBK/C	FI/SEXP/S/P					
		21-54	WKSBK/CL	FR/SEXP/SS/SP					
2	"	0-4	GR/CL	"	>40" TO SOIL WETNESS	40	"	"	PS, III .4GPD/FT^2
		4-25	SBK/SCL	"					
		25-40	WK/SBK/SL	VFR/SEXP/NS/NP					
3	"	0-4	GR/SCL	FR/SEXP/SS/SP	>48" TO SOIL ESS	48	"	"	PS, IV .35GPD/FT^2
		4-26	SBK/C	FI/SEXP/S/P					
		26-48	WKSBK/SCL	FR/SEXP/SS/SP					

Description	Initial System	Repair System
Available Space (.1945)	PS	
System Type(s)		
Site LTAR	.35GPD/FT^2	

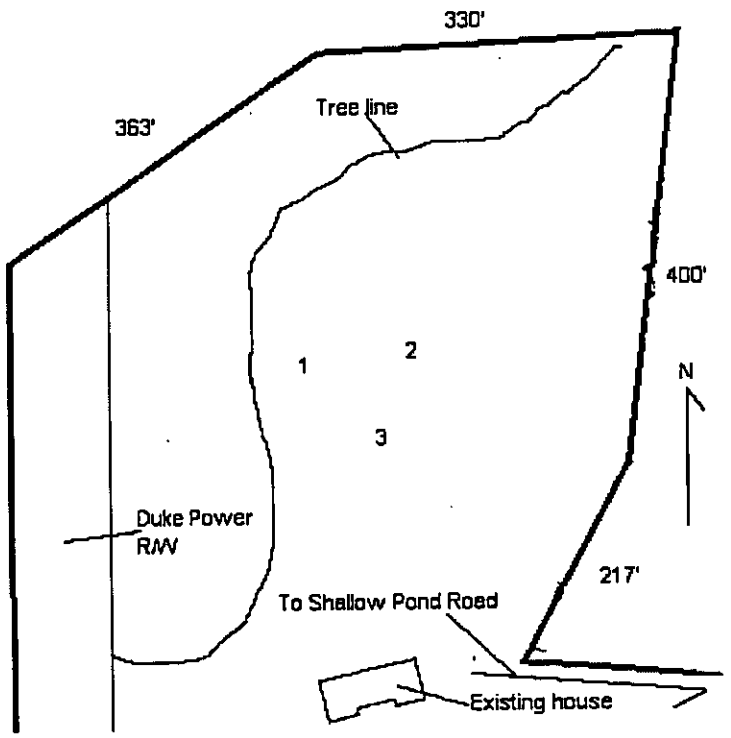
Other Factors (.1946): _____
Site Classification (.1948): PROVISIONALLY SUITABLE
Evaluated By: W. R. Marlin, LSS, 10/6/2003, W. R. Marlin
Others Present: T. Jacobs

FILE # 16724

COMMENTS: Relocating system from sewer R/W, will need pump

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

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



Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

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Property ID: 217-241-30
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ACS

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Description	Initial System	Repair System
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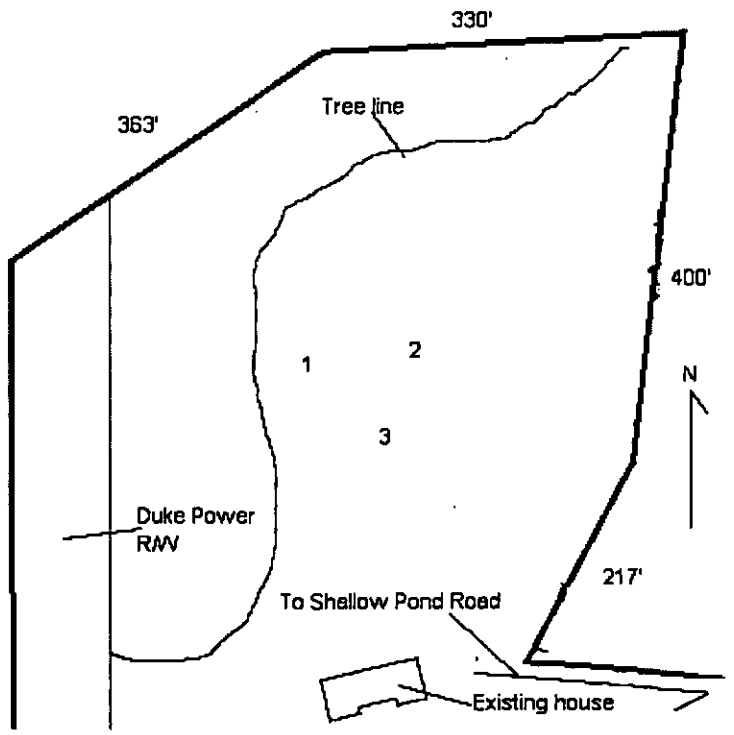
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GR-GRANULAR	
SBK-SUBANGULAR BLOCKY	
ABK-ANGULAR BLOCKY	
PL-PLATY	
PR-PRISMATIC	



FEE: $500.00 Ck # 1954

DATE: 9/9/03 SC

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

[ ] CRT

TYPE APPLICATION: ___ NEW SYSTEM [X] EXPANSION/ ALTERATION OF EXISTING SYSTEM ___ REPAIR OF EXISTING SYSTEM

Druid

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

FILE #: 16724 of 8669

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 217-241-30

STREET ADDRESS: 16413 Shallow Pond

SUBDIVISION OR MOBILE HOME PARK NAME:

LOT NUMBER: 1975

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:

NUMBER OF BEDROOMS:

NUMBER OF OCCUPANTS:

CLOSING DATE_____

FOUNDATION FOR RESIDENCE:

___ WITHOUT BASEMENT
___ ON SLAB
___ CRAWL SPACE
___ WITH BASEMENT /PLUMBING
___ 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)
___ MUNICIPAL (M)
___ PRIVATE WELL (P)
___ SHARED WELL (S)
___ OTHER 'SPRINGS' (O)

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

BURIED CABLES, LANDFILLS, STUMPHOLES ___ YES ___ NO
EXISTING WASTEWATER SYSTEMS ___ YES ___ NO
EASTMENTS OR RIGHT-OF-WAYS ___ YES ___ NO
WELL, SPRINGS OR WATERLINES ___ YES ___ NO
DESIGNATED WETLANDS ___ YES ___ NO

PROPERTY OWNER:

NAME: (LAST) Long (FIRST) Steve (MI) F

ADDRESS: 16413 Shallow Pond Rd

CITY: Charlotte STATE: NC ZIP: 28278

DAYTIME PHONE: (704) 563-6905

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: (LAST) Jacobs (FIRST) Tony (MI) C

DAYTIME PHONE: (704) 582-9219

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? _____

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: Tony C Jacobs COKS DATE: 9/8/03

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

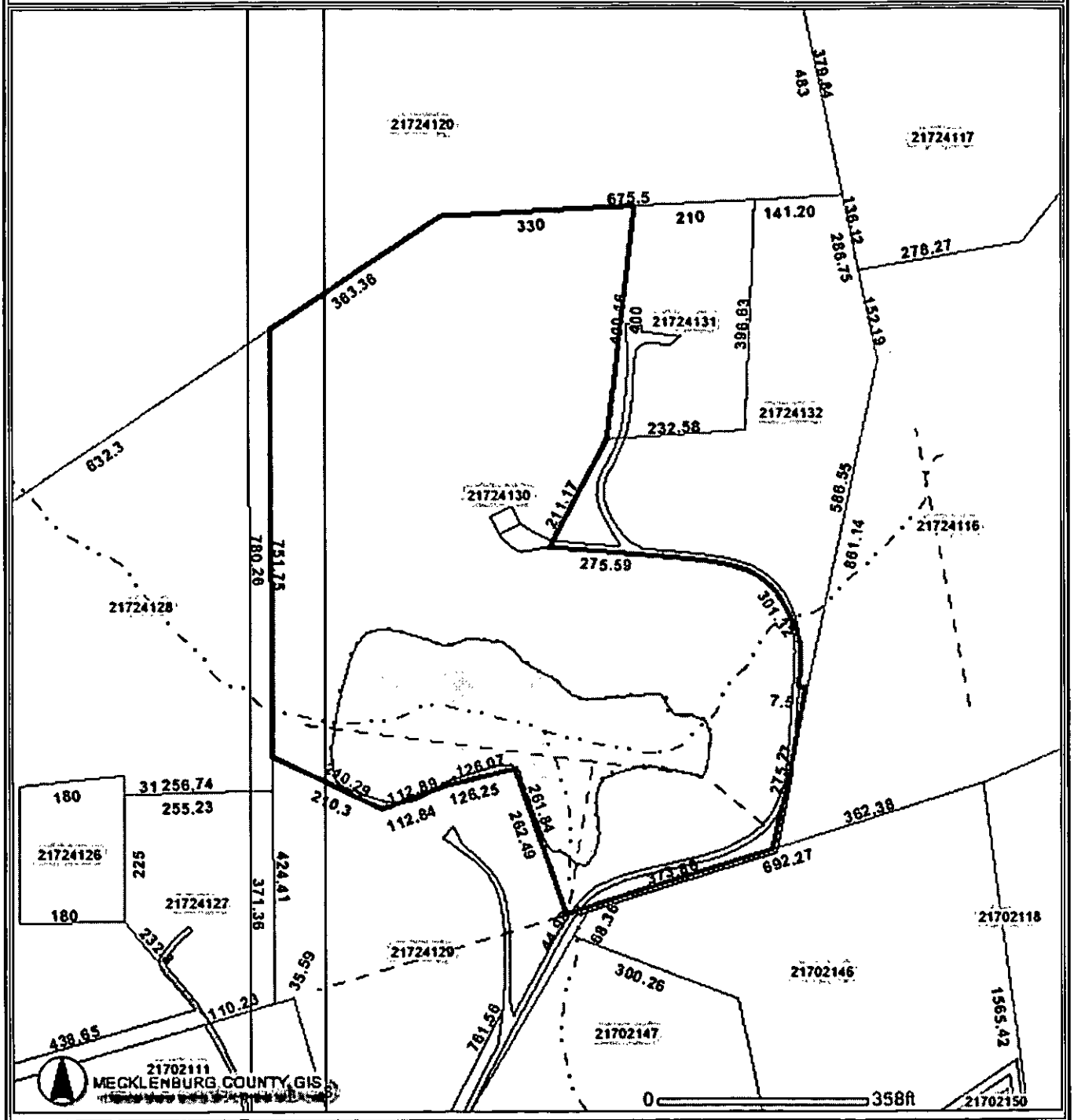
6 of 6

Mecklenburg County, North Carolina

POLARIS

Property Ownership Land Records Information System

Date Printed: Tue Sep 9 11:03:58 EDT 2003



This map is prepared for the inventory of real property within Mecklenburg County and is compiled from recorded deeds, plats, tax maps, surveys, planimetric maps, and other public records and data. Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification. Mecklenburg County and its mapping contractors assume no legal responsibility for the information contained herein.

Mecklenburg County, North Carolina

POLARIS

Property Ownership Land Records Information System

Date Printed: Mon Oct 27 16:18:26 EST 2003



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COPY

PROPERTY LINE, TYP.

7
N/F
JEFFREY P. FANDEL &
WF KAY E.
DB 9668 PG 235
TAX ID 217-24-132

EX. DRIVE, TYP.

PROPERTY LINE, TYP.

EX. HOUSE

EX. SEPTIC TANK

EX. SEPTIC FIELD
(TO BE RELOCATED)

6
N/F
STEVEN F. LONG &
LORRAINE R. LONG (H/W)
DB 12582 PG 864
TAX ID 217-24-130

MAIN, TYP.
SHEET 305)

FENCE, TYP.

MH #23
STA: 53+71.16

PROVIDE TREE PROTECTION

CONSTRUCTION ESMT.

30' PERM. CMUD R/W

10' TEMP. CONSTRUCTION ESMT.

S64°08'16"E
225.10'

S64°08'16"E
224.47'

PROVIDE TREE PROTECTION, TYP.
(SEE EROSION CONTROL PLANS)

EDGE OF POND, TYP.

5' TEMP. CONSTRUCTION ESMT.

MH #24
STA: 56+05.63

N59°36'44"E
416.00'

N59°36'48"E
164.36'

POND

6
N/F
STEVEN F. LONG &
LORRAINE R. LONG (H/W)
DB 12582 PG 864
TAX ID 217-24-130