5190B

Supervisor/Administrative Professional Checklist

New Septic ☑ **New Well** ☐ **Use Existing** ☐ **Alteration** ☐ **Modified Plot Plan** ☐

New Septic Fees Paid:

IP ($250.00) Dwo 4/13/15 Initials/Date

CA ($200.00) BA 3/13/15 Initials/Date

OP ($200.00) BA 3/13/15 Initials/Date

(CA and OP fees need to be paid before a building permit can be issued)

New Well Fee Paid: $550.00 _____ Initials/Date

Use Existing Fee Paid: $100.00 _____ Initials/Date

Alteration Fee Paid: $300.00 (Total) $200 (If use existing was paid)_____ Initials/Date

Modified Plot Plan Fee Paid: $100.00 _____ Initials/Date

Floor plans need to be submitted and reviewed before CA can be issued. ☐ Reviewed ☑ SAM 3/4/15

generate CA form in WASP & put in file.

This site is served by septic and well. Verify each is complete before final hold is released. ☑

Septic file completed. ☐ _____ Well file completed. ☐ _____

Send permit for signature. ☑ Signature received. ☐ _____

This septic system requires a certified operator contract before final hold is released. ☑

Certified operator contract is on file. ☐ _____

FEE: 200.00
DATE:3/18/2015

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 5190B

PERMIT NUMBER: 30007252

PARCEL NUMBER: 01132105

JOB LOCATION INFORMATION

ADDRESS: 15640 HUNTINGTOWNE VILLAGE RD

CITY: HUNTERSVILLE **STATE: NC** **ZIP:** 28078

ISSUED TO: Joey Karafla

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 3/18/2015

CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30007252, 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 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 THE 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 CONSTRUCTION AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. THIS CONSTRUCTION AUTHORIZATION AS PROVIDED IN G.S. 130A-335(f) AND G.S. 130A-336(b) SHALL BE VALID FOR A PERIOD EQUAL TO THE VALIDITY OF THE IMPROVEMENT PERMIT, NOT TO EXCEED 60 MONTHS.
   *CONSTRUCTION AUTHORIZATION EXPIRATION DATE: 3/4/2020

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St. Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-5994

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: 20007352 GWS File #: 5190R Tax Parcel #: 011-321-03

- This IMPROVEMENT PERMIT is subject to revocation if the 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 receiving a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

I. This Improvement Permit Shall Expire In Five (5) Years. Expiration Date (If Applicable): 3/4/2020
Type of Installation: Residential - New System
Lot Number: 0
Structure Type: HOUSE Size (ft²): 12000 # Bedrooms: 5 # Occupants: 10
Building Foundation: Water Supply: Private Well

II. Initial System Type: Low Pressure Pipe (LPP) System Classification: Va
Initial System Specifications:
Design Flow (gpd): 600 LTAR (gpd/ft²): 0.33 Septic Tank Size (gal): 1500 Pump Tank Size (gal): 1500
Trench Width (ft): 3 Trench Spacing (ft): 9 Absorption Area (ft²): 2400 Total Trench Length (ft): 800
Maximum Trench Depth (in): 48 Depth of Media (in): 36 Distribution Device: Manifold (LPP Dist)

III. Repair System Type: Low Pressure Pipe (LPP) System Classification: Va
Repair System Specifications:
Design Flow (gpd): 600 LTAR (gpd/ft²): 0.25 Septic Tank Size (gal): 1500 Pump Tank Size (gal): 1500
Trench Width (ft): 3 Trench Spacing (ft): 9 Absorption Area (ft²): 2400 Total Trench Length (ft): 800
Maximum Trench Depth (in): 48 Depth of Media (in): 36 Distribution Device: Manifold (LPP Dist)

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the Laws and Rules For Sewage Treatment and Disposal Systems and is subject to the following provisions:

- No work shall be conducted on the septic system until an INSTALLATION APPROVAL is granted by the Department.
- The septic system installer shall be a registered septic contractor with Mecklenburg County Health Department.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Kim Garrett
Signature:
Date Issued: 3/4/2019

Owner/Legal Agent: Tessy Eshelby
Print Name
Signature:

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 214 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-5934

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: 20007252 GW5 File #: 5190R

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every year by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- This type of septic system requires a Certified Operator to maintain the system. A system maintenance contract with a Certified Operator must be on file prior to issuance of an Operation Permit.
- All drainage improvements (curtain, interceptor drains, etc.) noted on the plot plan must be inspected and approved prior to issuance of an Operation Permit.
- Proper well abandonment is required prior to receiving an Installation Approval from our office to install the septic system.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All components of the septic system must be located at least 100 ft. from all private wells (separate system).
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- Upon completion of the project the system designer shall provide Groundwater & Wastewater Services with a letter certifying that the system was installed in accordance with the approved design.
- The system must be water tested during the final inspection to verify proper operation and soil system pressure.

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules for Sewage Treatment and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until an INSTALLATION APPROVAL is granted by the Department.
- The septic system installer shall be a registered septic contractor with Mecklenburg County Health Department.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Kim Garrett

Signature: Kimberly M Garrett

Date Issued: 3/4/2015

Owner/Legal Agent: Patrick Tipton

Print Name

Signature: Patrick Tipton 4-22

A DEEP SAND LINED TRENCH LOW PRESSURE PIPE DISTRIBUTION SEPTIC SYSTEM IN SUITABLE SAPROLITE BELOW MIXED MINERALOGY CLAY FOR SUBSURFACE WASTEWATER DISPOSAL

15640 Huntingtowne Village Road
Huntersville, North Carolina 28078

PIN # 011-321-05
MCHD FILE # 5190B

Prepared for:
Joey and Rosemarie Karaffa
14920 Old Vermillion Drive
Huntersville, NC 28078

Prepared by:
Toney C. Jacobs, LSS
Jacobs On-Site Development, Inc.
168 Broadbill Drive
Mooresville, NC 28117
704-582-9219

February 15, 2015

Toney C. Jacobs, LSS

Copy: Jacob Presley, REHS, LSS (980 721-2060)
Kim Garrett, REHS (980-721-2054)
Mecklenburg County Health Dept.-IWWS
700 N. Tryon Street
Charlotte, N.C. 28202

Ken Wrench (704-201-4460)
August Homes
10602B Bailey Rd.
Cornelius, NC 28031

List of Attachments

1. Overall site plan with topo (1" = 100') Pit locations by Jacob Presley (MCHD)

1(b)Full site plan

2. System site plan 1" = 50'
3. Typical trench profile
4. Schematic distribution of system
5. Table 1 showing line data
6. Pump curve

BACKGROUND

This system is a LPP distribution with sand lined trench design criteria using gravel or tire chips as drainfield media without a reduction in lineal footage. The 14.1 acre site has a ridge (Fig. 1) running diagonally from the right front to near the middle. The site has an expansive clay layer on top with PS saprolite at varying depths. Below the clay is a varying depth C horizon with a coarse texture suitable saprolite. Designing at 3' of head allows pressure adjustments with water levels above the surface for easy management.

The soils were evaluated on January 26, 2015 by Jacob Presley of the Mecklenburg County Health Department (MCHD). Based on this evaluation, only a deep sand lined trench, with an LPP system distribution in saprolite was considered for the proposed 5-bedroom house. The main soil limitation was the unsuitable mineralogy layer. Jacobs On-Site (JOS) flagged the proposed system on January 28, 2015. At a conservative 0.25 LTAR there is a high expectation for the success of the system.

The proposed system will be a type V with IV(a) distribution and will require a maintenance contract with a certified operator. Two additional site meetings are required by this plan, and as a condition of the Improvement permit and Authorization to construct. No time limit is set for these, but one will be a pre-installation meeting to review each aspect of the plan, expectations of the Health Department, and requirements of the installer. The second meeting (final inspection) will be to certify that all design criteria are met. JOS and the Health Department want all systems to function properly, and because of the soil and site limitations present, this extra effort is included. There will be additional billing at the current rate by JOS for meeting the final inspection.

Because of the design parameters of this plan, it must be reviewed by a professional engineer. A letter from Piedmont Design Associates accompanies this work.

APPLICATION INFORMATION

1. Owner: Joey and Rosemarie Karaffa
   14920 Vermillion Drive
   Huntersville, NC 28078

   Soil Scientist
   and Designer: Toney Jacobs, LSS
   Jacobs On-Site Development, Inc.
   168 Broadbill Drive
   Mooresville, NC 28117

2. Water supply is provided by private well.
3. Facility to be served by the proposed system is a 5-bedroom single family residence.

LOCATION

The property is located on the right side of Huntingtowne Village Road, approximately ¼ mile off Hiwassee Road.

REFERENCES

1. Design and Installation of Low Pressure Pipe Waste Treatment Systems by: Craig Cogger, Bobby L. Carlile, Dennis Osborne, Ed Holland; published by UNC Sea Grant College Pub. UNC-SC-82-03, May 1982.

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

PLANS AND SPECIFICATIONS FOR SPECIFIC SYSTEM COMPONENTS

Septic Tank

1. The septic tank receives wastewater directly from the house.
2. A septic tank shall be watertight, structurally sound, and not subject to excessive corrosion or decay.
3. The septic tank must be of two-compartment design for maximum solids retention. The inlet compartment of two-compartment tank shall hold between two-thirds and three-fourths of the total tank capacity.
4. Effluent from the two-compartment septic tank flows by gravity through a State approved effluent filter and a four-inch solid PVC pipe to the pumping tank.
5. 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.
6. When prefabricated concrete tanks or tanks of other material are used, they shall be constructed in accordance with the plans which have been approved by the State and shall comply with all requirements of Section .1953 of 15A NCAC 18A.
7. On the outlet tee of the septic tank an effluent filter must be installed. This filter should be a State approved unit supplied by the tank manufacturer.

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. 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 house) 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. Alternative electronics may be used.
11. Approved pressure bell may be used with compatible panel, substituting for #s 8,9 & 10 above
12. Watertight testing per .1900 rules shall be required on two piece pump tanks.
13. Wiring between the pumping tank and the house should meet State and local code requirements.

Sand Lined Trench

Follow all rules of 15A NCAC 18A .1956(7) all. Trenches on contour, forty-eight inches deep with 24" of sand backfill. See Figure 3.

15A NCAC 18A.1956(7)

(i) Filter media used in the sand lined portion of the trench is sand or loamy sand in texture. If required by the local health department in the Construction Authorization, the installer shall provide written laboratory verification of the media textural classification and quality prior to the sand lined trench being installed. When laboratory analysis is required, the material shall be determined to be a clean, uncoated fine, medium, or coarse sand with at least 90 percent in sizes ranging from 0.1 to 1.0 millimeters, with no more than one percent smaller than 0.002 millimeters.

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. The proposed system uses 3 laterals center-fed and 3 gate valves at the valve box for each of the three lines.
6. Lateral lines are made of 1 ½ inch SCH 40 PVC. Holes in laterals are drilled on up side of pipes and enclosed in 4" corrugated drain tile.
7. The end of each lateral is equipped with a capped "turn-up" that provides above ground access for clean-out or back flushing of the laterals. Using (2) 45-degree elbows rather than a 90-degree elbow for the turn-ups will make clean-out easier.

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 designated and flagged, **it should be barricaded off and protected from construction traffic**. No site preparation or construction work should be required. **Do Not Grade!**
3. An upslope 60" deep French drain is required and shown on plan. All house drainage must be diverted away from the system.
4. No clearing is necessary on site and reflagging should not be necessary.

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

1. The supply manifold conveys effluent from the manifold to the distribution laterals.
2. Design of the manifold is shown in Figure 4.
3. The 6" supply manifold joins each lateral through a valve and pipe connected by a reducing tee on the manifold to a 1½ inch pipe to the lateral.
4. After the supply manifold has been placed in its trench and lateral lines connected, it should be backfilled with tightly tamped soil. The supply manifold trench must not be backfilled with gravel or the trench may become a conduit for downslope flow effluent from the laterals.

Low Pressure Pipe Lateral Lines

1. Lateral lines shall be constructed from 1½" SCH 40 PVC and placed 4" drain line with stone or tire chips.
2. Trenches shall be 36" wide and 9' minimum on center, "level" from end to end and 48" deep from the original soil surface (see Fig. 4).
3. Holes drilled in the laterals shall be 5/32 inch with the holes pointed up and 8' on center.
4. A turn-up with a capped end is at the end of each lateral (Fig. 5). The capped end must be brought up above or flush with the final grade. Using two 45-degree elbows for constructing cleanouts is required. A larger diameter sleeve with cap or approved box with lid shall be placed over the turn-up.

Trench backfill

1. Figure 3 illustrates the 48" ditch and fill.
2. From 0-12" there should be a mix of excavated material. This should be a blended mixture of surface soil, massive clay, and clay loam from above the loam material.
3. During excavation the top soil, clay, and clay loam should be placed on the opposite side of the trench from the loam to facilitate trench backfilling.

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 turned-up elbow when the pump is running. To set or check the pressure head:

    - Glue a four-foot length of pipe (preferable clear) to a threaded adapter that will screw onto the turn-ups at the end of each lateral.
    - Replace each turn-up cap with the pipe and adapter.
    - Turn the power on to allow liquid to rise in the pipe.
    - Adjust the gate valves until the effluent reaches the desired height in the pipe. Remember to include the distance below the ground surface to the lateral line when measuring the height.

FINAL LANDSCAPING

After the system is installed, the following should be checked to ensure that the system will not be overloaded with excess rainwater and runoff:

1. The distribution field should be 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 mulched.

QUALITY ASSURANCE REQUIREMENTS

The system must be installed by a qualified, contractor that is on the Mecklenburg County list of competent contractors (review introduction about installer). 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. Backfill material around the chambers.
5. Final landscaping, operation and pressure head check.

The system design is based on a maximum waste flow of 600 gallons per day. The homeowner 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 V with IV(a) distribution and DOES require a maintenance contract** with a certified operator. The contract shall be executed between the system owner and a management entity prior to the issuance of an Operation Permit. The contract shall include the specific requirements for maintenance and operation, responsibilities of the owner and system operator, and provisions that the contract shall be in effect for as long as the system in use.

Operating, Maintenance and Inspection procedures shall include, but not be limited to the following:

- Minimum inspection/maintenance frequency shall be 2 times per year, with reporting frequency every 6 months to the local health department.
- 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.
- All laterals shall be checked and if necessary, flushed annually with clean water.
- Pressure head for laterals should be checked and adjusted one month after installation and semi-annually thereafter.

- All piping and fittings shall be checked semi-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.

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

OWNER SUGGESTIONS

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 owner 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 and a high BOD 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 and toilets to reduce the rate at which the water flows from the fixture.
7. 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.
8. Roof drains, foundation drains, and other such drains should not empty into or onto the surface above the on-site system. These drains should be directed to another part of the lot away from the treatment and disposal field.
9. Dishwashers and washing machines should only be run with full loads.

DESIGN SPECIFICATIONS FOR PRIMARY AND REPAIR SYSTEMS
15649 Huntingtowne Road - Huntersville NC

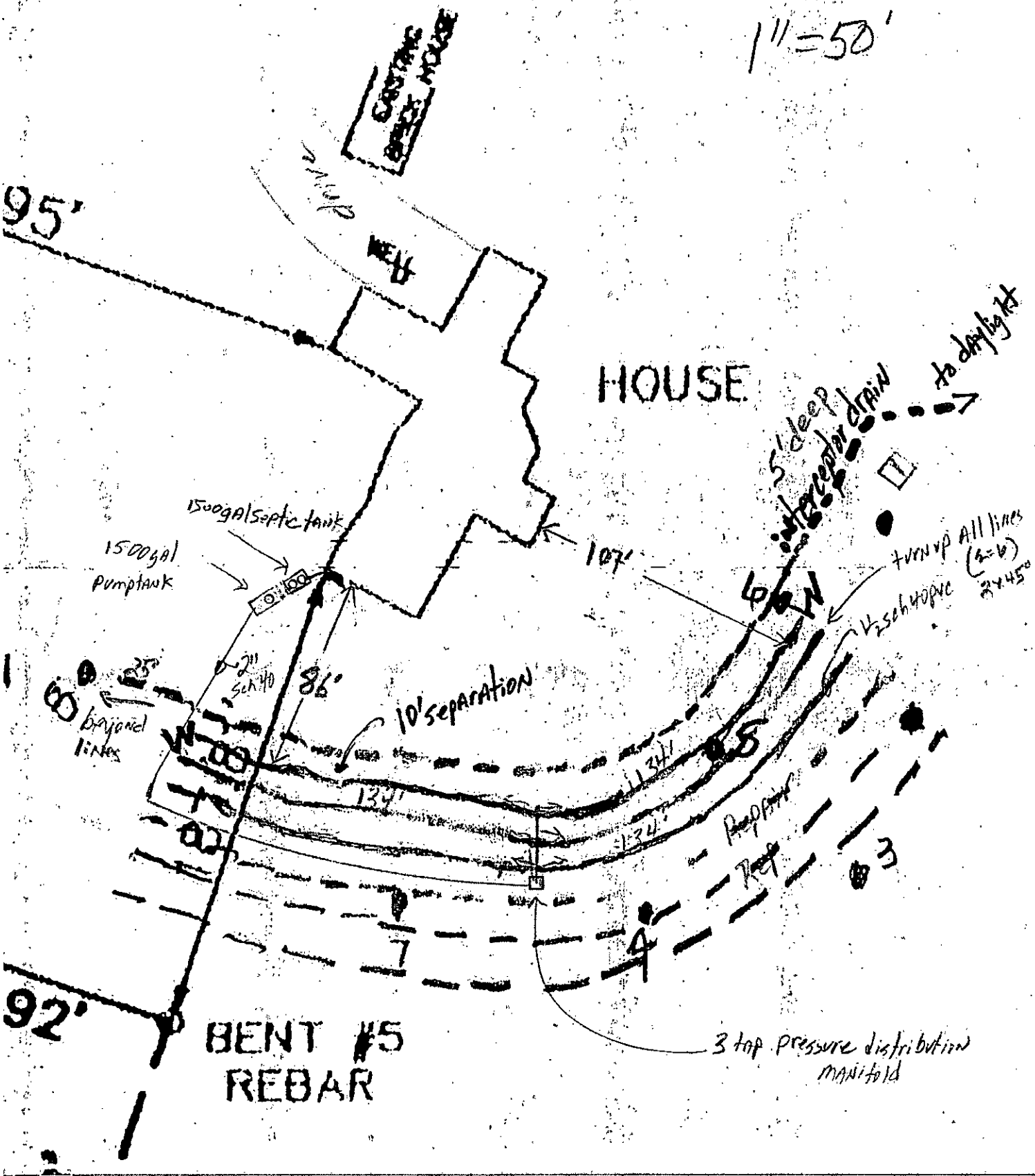
Daily design flow:	600 gal. (5-bedroom)
Septic tank size:	1500 gal. (2 compartments)
Pumping tank size:	1500 gal.
Trench width:	36"
Trench depth:	48" low side (24" sand, 12"aggregate, 12" cover)
Effluent loading rate:	0.25gpd/ft^2 primary & repair
Total length and diameter of supply pipe:	approx. 250' of 2" SCH 40 PVC
Number and length of laterals:	3 @ 268 center-fed' see table (1½" SCH 40 PVC) with LPP distribution (134' each way from tee)
Hole size:	5/32"
Hole spacing:	8' – 16 one direction, 17 other direction from tee
Total number of holes:	33 per line – 99 total
Flow rate through the system:	49.5 gpm
Elevation head:	approx. 8' *
Pressure head:	3.0'
Friction head	approx.16'
20% contingency:	5.4'
Total head:	32.4'
Pump requirements:	49.5 gpm at 32.4' of head; use Gould's WE07H pump or equivalent with compatible electrical
Dosing volume:	412 gal.- 1.5 dose/day at design flow per zone
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. 8.3 min
Check valve:	no
Siphon break hole:	yes
Repair	same loading but will require 2.5' of sand

* to be verified by installer

LID 20421-119
PIN 011-321-05

Site Plan Fig 2

1"=50'



LOCATION

The property is located on the right side of Huntingtowne Village Road, approximately ¼ mile off Hiwassee Road.

REFERENCES

1. Design and Installation of Low Pressure Pipe Waste Treatment Systems by: Craig Cogger, Bobby L. Carlile, Dennis Osborne, Ed Holland; published by UNC Sea Grant College Pub. UNC-SC-82-03, May 1982.

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

PLANS AND SPECIFICATIONS FOR SPECIFIC SYSTEM COMPONENTS

Septic Tank

1. The septic tank receives wastewater directly from the house.
2. A septic tank shall be watertight, structurally sound, and not subject to excessive corrosion or decay.
3. The septic tank must be of two-compartment design for maximum solids retention. The inlet compartment of two-compartment tank shall hold between two-thirds and three-fourths of the total tank capacity.
4. Effluent from the two-compartment septic tank flows by gravity through a State approved effluent filter and a four-inch solid PVC pipe to the pumping tank.
5. 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.
6. When prefabricated concrete tanks or tanks of other material are used, they shall be constructed in accordance with the plans which have been approved by the State and shall comply with all requirements of Section .1953 of 15A NCAC 18A.
7. On the outlet tee of the septic tank an effluent filter must be installed. This filter should be a State approved unit supplied by the tank manufacturer.

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.

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. The proposed system uses 3 laterals center-fed and 3 gate valves at the valve box for each of the three lines.
6. Lateral lines are made of 1 ½ inch SCH 40 PVC. Holes in laterals are drilled on up side of pipes and enclosed in 4" corrugated drain tile.
7. The end of each lateral is equipped with a capped "turn-up" that provides above ground access for clean-out or back flushing of the laterals. Using (2) 45-degree elbows rather than a 90-degree elbow for the turn-ups will make clean-out easier.

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 designated and flagged, **it should be barricaded off and protected from construction traffic**. No site preparation or construction work should be required. **Do Not Grade!**
3. An upslope 60" deep French drain is required and shown on plan. All house drainage must be diverted away from the system.
4. No clearing is necessary on site and reflagging should not be necessary.

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

1. The supply manifold conveys effluent from the manifold to the distribution laterals.
2. Design of the manifold is shown in Figure 4.
3. The 6" supply manifold joins each lateral through a valve and pipe connected by a reducing tee on the manifold to a 1½ inch pipe to the lateral.
4. After the supply manifold has been placed in its trench and lateral lines connected, it should be backfilled with tightly tamped soil. The supply manifold trench must not be backfilled with gravel or the trench may become a conduit for downslope flow effluent from the laterals.

FINAL LANDSCAPING

After the system is installed, the following should be checked to ensure that the system will not be overloaded with excess rainwater and runoff:

1. The distribution field should be 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 mulched.

QUALITY ASSURANCE REQUIREMENTS

The system must be installed by a qualified, contractor that is on the Mecklenburg County list of competent contractors (review introduction about installer). 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. Backfill material around the chambers.
5. Final landscaping, operation and pressure head check.

The system design is based on a maximum waste flow of 600 gallons per day. The homeowner 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 V with IV(a) distribution and DOES require a maintenance contract** with a certified operator. The contract shall be executed between the system owner and a management entity prior to the issuance of an Operation Permit. The contract shall include the specific requirements for maintenance and operation, responsibilities of the owner and system operator, and provisions that the contract shall be in effect for as long as the system in use.

Operating, Maintenance and Inspection procedures shall include, but not be limited to the following:

- Minimum inspection/maintenance frequency shall be 2 times per year, with reporting frequency every 6 months to the local health department.
- 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.
- All laterals shall be checked and if necessary, flushed annually with clean water.
- Pressure head for laterals should be checked and adjusted one month after installation and semi-annually thereafter.

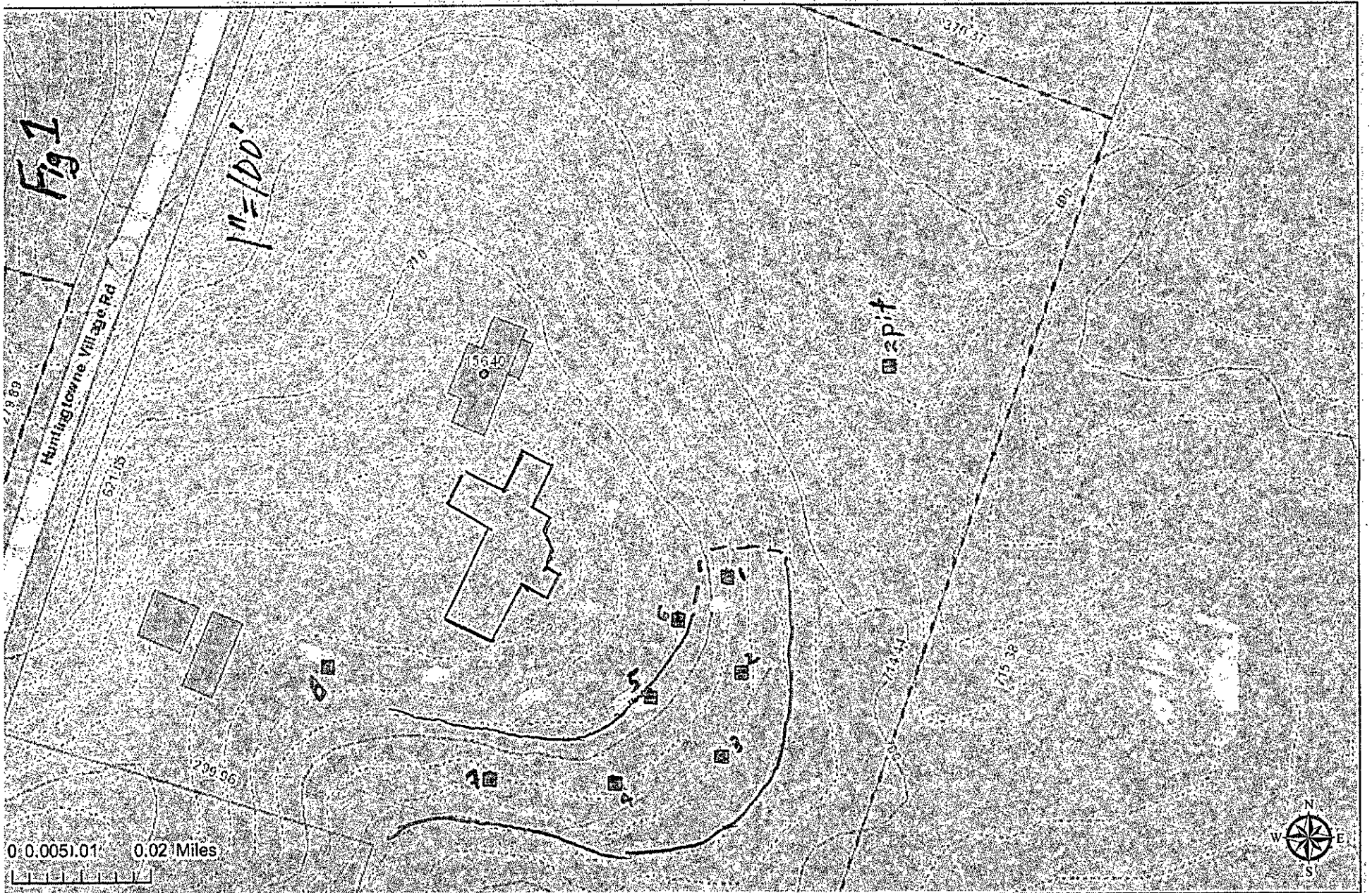
DESIGN SPECIFICATIONS FOR PRIMARY AND REPAIR SYSTEMS
15649 Huntingtowne Road - Huntersville NC

Daily design flow:	600 gal. (5-bedroom)
Septic tank size:	1500 gal. (2 compartments)
Pumping tank size:	1500 gal.
Trench width:	36"
Trench depth:	48" low side (24" sand, 12"aggregate, 12" cover)
Effluent loading rate:	0.25gpd/ft^2 primary & repair
Total length and diameter of supply pipe:	approx. 250' of 2" SCH 40 PVC
Number and length of laterals:	3 @ 268 center-fed' see table (1½" SCH 40 PVC) with LPP distribution (134' each way from tee)
Hole size:	5/32"
Hole spacing:	8' – 16 one direction, 17 other direction from tee
Total number of holes:	33 per line – 99 total
Flow rate through the system:	49.5 gpm
Elevation head:	approx. 8' *
Pressure head:	3.0'
Friction head	approx.16'
20% contingency:	5.4'
Total head:	32.4'
Pump requirements:	49.5 gpm at 32.4' of head; use Gould's WE07H pump or equivalent with compatible electrical
Dosing volume:	412 gal.- 1.5 dose/day at design flow per zone
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. 8.3 min
Check valve:	no
Siphon break hole:	yes
Repair	same loading but will require 2.5' of sand

* to be verified by installer

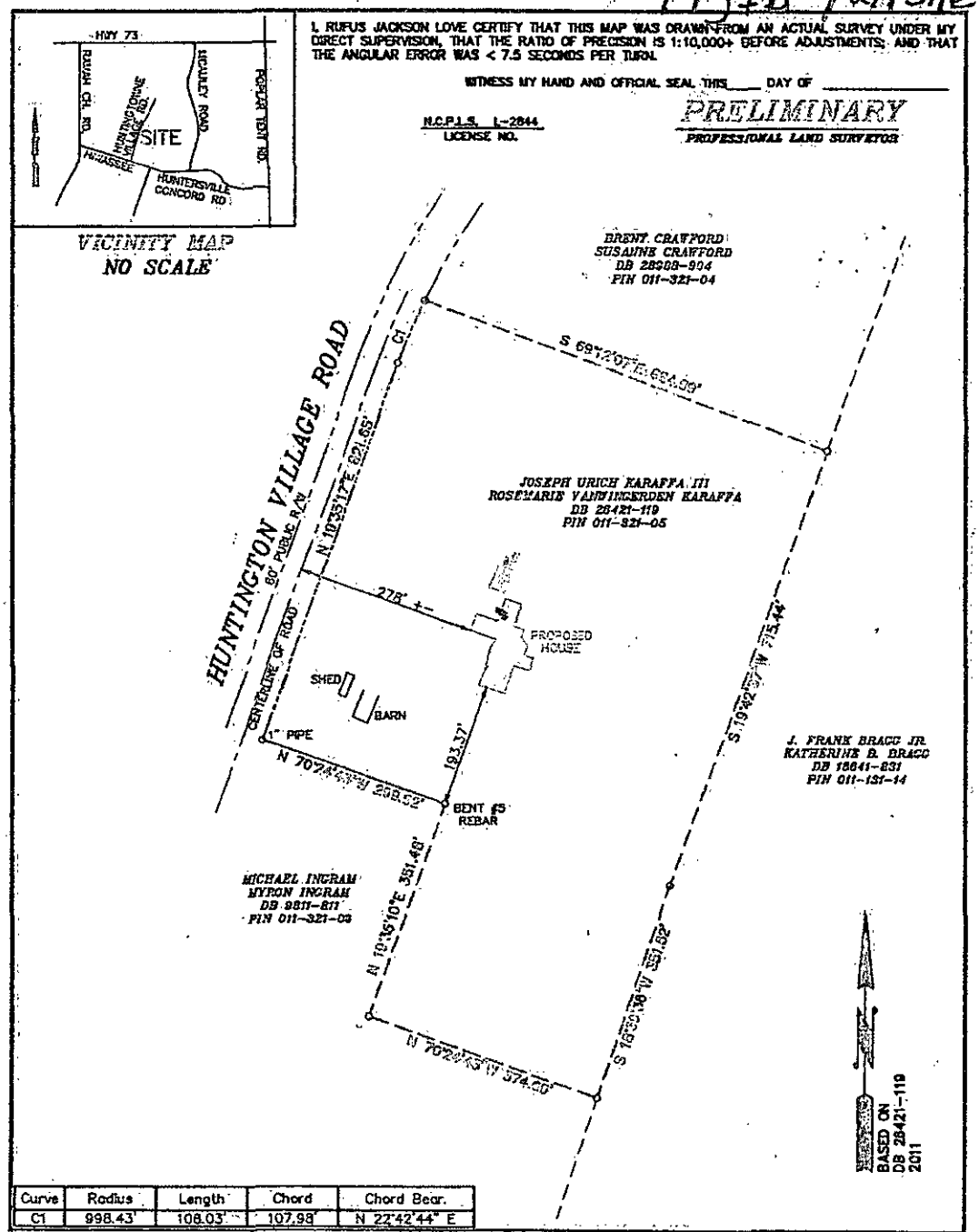
Polaris 3G Map – Mecklenburg County, North Carolina

Date Printed: 1/13/2015 8:56:54 AM



his map or report 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. sers of this map or report are hereby notified that the aforementioned public primary information sources should be consulted for verification. Mecklenburg County and its mapping contractors assume no legal sponsibility for the information contained herein.

Fig 1b Full Site Plan



Curve	Radius	Length	Chord	Chord Bear.
C1	998.43'	108.03'	107.98'	N 22°42'44" E

PLOT PLAN

FOR AUGUSTA HOMES

PROPERTY OF JOSEPH URICH KARAFFA III
& wf. ROSEMARIE VANWINGERDEN KARAFFA
15640 HUNTINGTOWNE VILLAGE ROAD
DEED BOOK 26421-119, PIN 011-321-05
HUNTERSVILLE TOWNSHIP, MECKLENBURG COUNTY
HUNTERSVILLE, NORTH CAROLINA
DECEMBER 31, 2014

FILE NAME: AUG-133

200 0 200 400 600

GRAPHIC SCALE — FEET Scale 1" = 200'

NOTES:

1. THIS PROPERTY IS NOT LOCATED IN A DESIGNATED FLOOD ZONE.
2. AREA DETERMINED BY COORDINATE COMPUTATION.
3. CP DENOTES COMPUTED POINT, NO MONUMENT FOUND OR SET.
4. UNDERGROUND UTILITIES NOT LOCATED AS OF THIS DATE.
5. NO NCGS GRID MONUMENTS WITHIN 2000' OF SUBJECT PROPERTY.
6. ALL MONUMENTS ARE EXISTING UNLESS OTHERWISE NOTED.

LEGEND:

- PROPERTY LINE
- TIE LINE
- UNSURVEYED LINE
- BACK OF CURB/EDGE OF PVMT.
- SETBACK LINE
- CP COMPUTED POINT
- PP POWER POLE

PYRAMID LAND SURVEYING PA C-1341
P.O. BOX 11 DAVIDSON, NORTH CAROLINA
(704)655-4049 RUFUS JACKSON LOVE L-2844

Fig 3

Trench detail

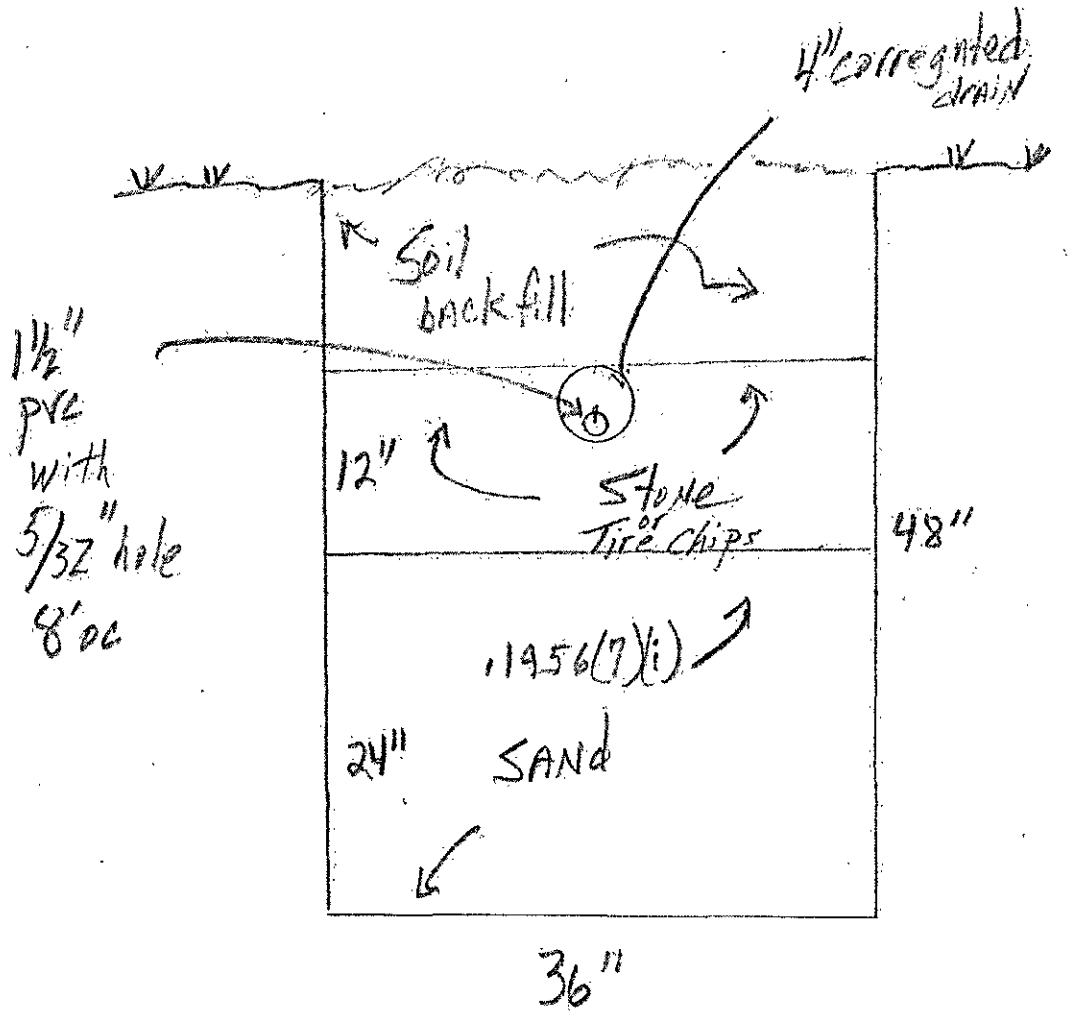


Fig. 4

Schematic of System

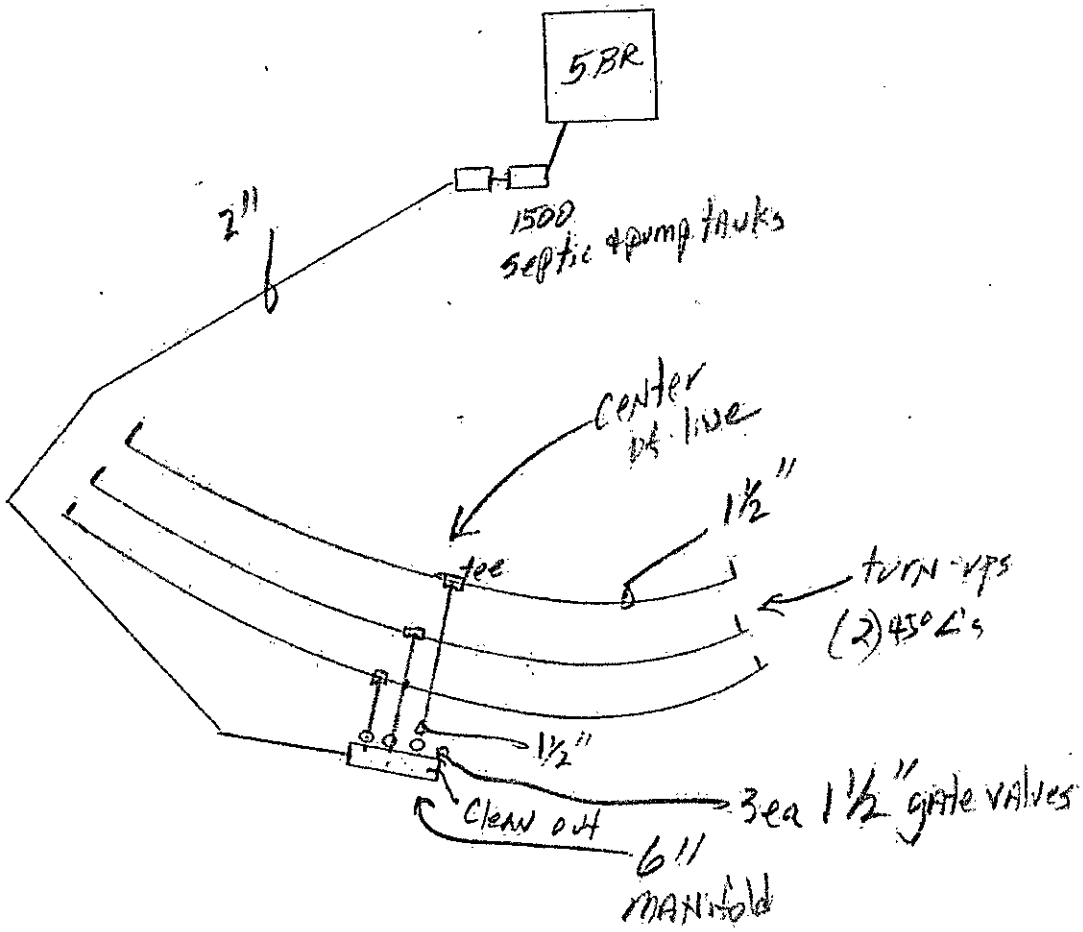
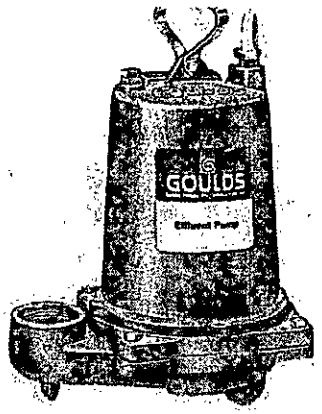


Table 1: Summary of Primary and Repair Nitrification Line Specifications
15640 Huntingtowne Village Road

Line No.	*Use*	*Line Color*	*System Type*	*Line Length (ft)*	*Elevation Approx.(ft)*
1	system	white	LPP in aggregate	268	709
2	system	pink	LPP in aggregate	268	708
3	system	orange	LPP in aggregate	268	707
4	repair		LPP in aggregate	268	706
5	repair		LPP in aggregate	268	705
6	repair	blue	LPP in aggregate	268	704
				Total system: 804'	
				Total repair: 804'	

tank		1500 gal. (2 compartment)	
pump tank		1500 gal.	approx. 709'
manifold			approx. 706'

Manifold Information	
Tap size (inches)	1½
Tap material	SCH 40 PVC
No. taps	3
Barrel size (inches)	6
Barrel material	SCH 80 PVC
Flow (gpm) tap	16.5



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.

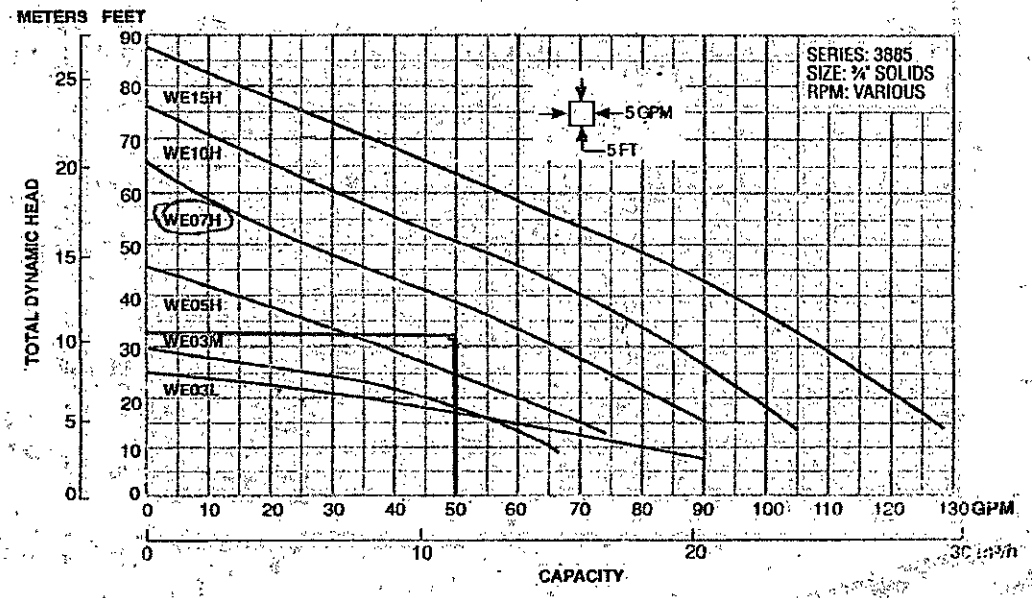
■ **Power Cable:** Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking.

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

AGENCY LISTINGS

CSA Canadian Standards Association

UL Underwriters Laboratories



© 1995 Goulds Pumps

Effective May, 1995
3885

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: 5190B WASPS App #: 7252

Primary ES assigned to project: Kim Garrett

Secondary ES assigned to project:

Project Type: New System ☐ Alteration ☐ Repair ☐ Modified Plot Plan ☐

I. File Review:

Rule or Law	Permit Application			
.1937(d)	Is the Application complete	Yes ☑	No ☐	N/A ☐
.1937(d)	Is there a Site plan/Plat with application	Yes ☑	No ☐	N/A ☐
.1937(d)	Is the Facility shown?	Yes ☑	No ☐	N/A ☐
.1937(d)	Are appurtenances shown	Yes ☑	No ☐	N/A ☐
	Site Evaluation Information			
.1939 (a)(1)	Topography and Landscape Position Recorded?	Yes ☑	No ☐	N/A ☐
.1940 (a-g)	Slope % Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Texture Class Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Structure type Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Consistence Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Mineralogy Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(3)	Soil Wetness Condition Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(4)	Soil Depth to Rock or Parent Material Recorded When Encountered	Yes ☑	No ☐	N/A ☐
.1939 (a)(5)	Depth to Restrictive Horizons Recorded When Encountered?	Yes ☑	No ☐	N/A ☐
.1939 (a)(6)	Sufficient Available Space Recorded?	Yes ☑	No ☐	N/A ☐
.1937(m)	Are the Profile Locations Shown?			
.1939(a)	Are the S/PS Profiles in system & in repair area?	Yes ☑	No ☐	N/A ☐
& .1945(b)	Number of auger borings made: 8			
	Were sufficient auger borings made?	Yes ☑	No ☐	N/A ☐
.1939(d), .1955, .1956, .1957	LTAR 0.25	Yes ☑	No ☐	N/A ☐
	Improvement Permit/Construction Authorization			
.1937(g) 130A-336(a)	Proposed System Type stated-Initial	Yes ☑	No ☐	N/A ☐
.1945(b)	Proposed System Type stated-Repair	Yes ☑	No ☐	N/A ☐
130A-336 (a)(3)	System location identifiable by setbacks - Initial	Yes ☑	No ☐	N/A ☐
.1937(g) .1945(b)	System components shown – Initial	Yes ☑	No ☐	N/A ☐
.1945(b)	Repair area shown	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Does System design match facility, flow & WWcharacteristics?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is System design consistent with soil/site conditions?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is the System located in the approved area?	Yes ☑	No ☐	N/A ☐
130A-336(a)	Is the Design flow (gpd) indicated?	Yes ☑	No ☐	N/A ☐

130A-336(a)	Number of Bedrooms, employees, seats, etc. indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench depth indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench width indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench length indicated?	Yes ☑	No ☐	N/A ☐
130A-336(a)(1)	Proposed/existing well shown?	Yes ☑	No ☐	N/A ☐
130A-336(a)(1)	Property line lengths shown?	Yes ☑	No ☐	N/A ☐
130A-336(a)	Facility/appurtenance setbacks shown from fixed points?	Yes ☑	No ☐	N/A ☐
	Operation Permit			
.1937(i)	System type as described in table V(a) of rule .1961	Yes ☐	No ☐	N/A ☐
.1937(i)	Conditions for system performance, operation, maintenance, monitoring and reporting.	Yes ☐	No ☐	N/A ☐

II. WASPS Review:

Construction authorization issued	Yes ☐	No ☐	N/A ☐
Installation approval issued	Yes ☐	No ☐	N/A ☐
Operation permit issued	Yes ☐	No ☐	N/A ☐
Other related documentation	Yes ☐	No ☐	N/A ☐

Items requiring correction/modification: _____

Comments:

_____

_____

_____

_____

_____

IA issued date: _____

OP issued date: _____

Review performed by: JAM Date performed: 3/6/15

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30007252** GWS File #: **5190B** Tax Parcel #: **011-321-05**

- This 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.

I. This Improvement Permit Shall: Expire in Five (5) Years **Expiration Date (If Applicable):** 3/4/2020

Type of Installation: Residential - New System Lot Number: 0

Structure Type: HOUSE Size (ft^2): 12000 # Bedrooms: 5 # Occupants: 10

Building Foundation: Water Supply: Private Well

II. Initial System Type: Low Pressure Pipe (LPP) **System Classification:** Va

Initial System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft^2):	0.25	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1500
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	2400	Total Trench Length (ft):	800
Maximum Trench Depth (in):	48	Depth of Media (in):	36	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: Low Pressure Pipe (LPP) **System Classification:** Va

Repair System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft^2):	0.25	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1500
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	2400	Total Trench Length (ft):	800
Maximum Trench Depth (in):	48	Depth of Media (in):	36	Distribution Device:	Manifold (LPP Distri		

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment, and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until an INSTALLATION APPROVAL is granted by the Department.
- The septic system installer shall be a registered septic contractor with Mecklenburg County Health Department.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Kim Garrett Owner/Legal Agent: _____
Print Name

Signature: Kim Garrett Signature: _____

Date Issued: 3/4/2015

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30007252** GWS File #: **5190B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every year by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- This type of septic system requires a Certified Operator to maintain the system. A system maintenance contract with a Certified Operator must be on file prior to issuance of an Operation Permit.
- All drainage improvements (swales, interceptor drains, etc.) noted on the plot plan must be inspected and approved prior to issuance of an Operation Permit.
- Proper well abandonment is required prior to receiving an Installation Approval from our office to install the septic system.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All components of the septic system must be located at least 100 ft. from all private wells (saprolite system).
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- Upon completion of the project the system designer shall provide Groundwater & Wastewater Services with a letter certifying that the system was installed in accordance with the approved design.
- The system must be water tested during the final inspection to verify proper operation and set system pressure.

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment and Disposal Systems* and is subject to the following provisions:

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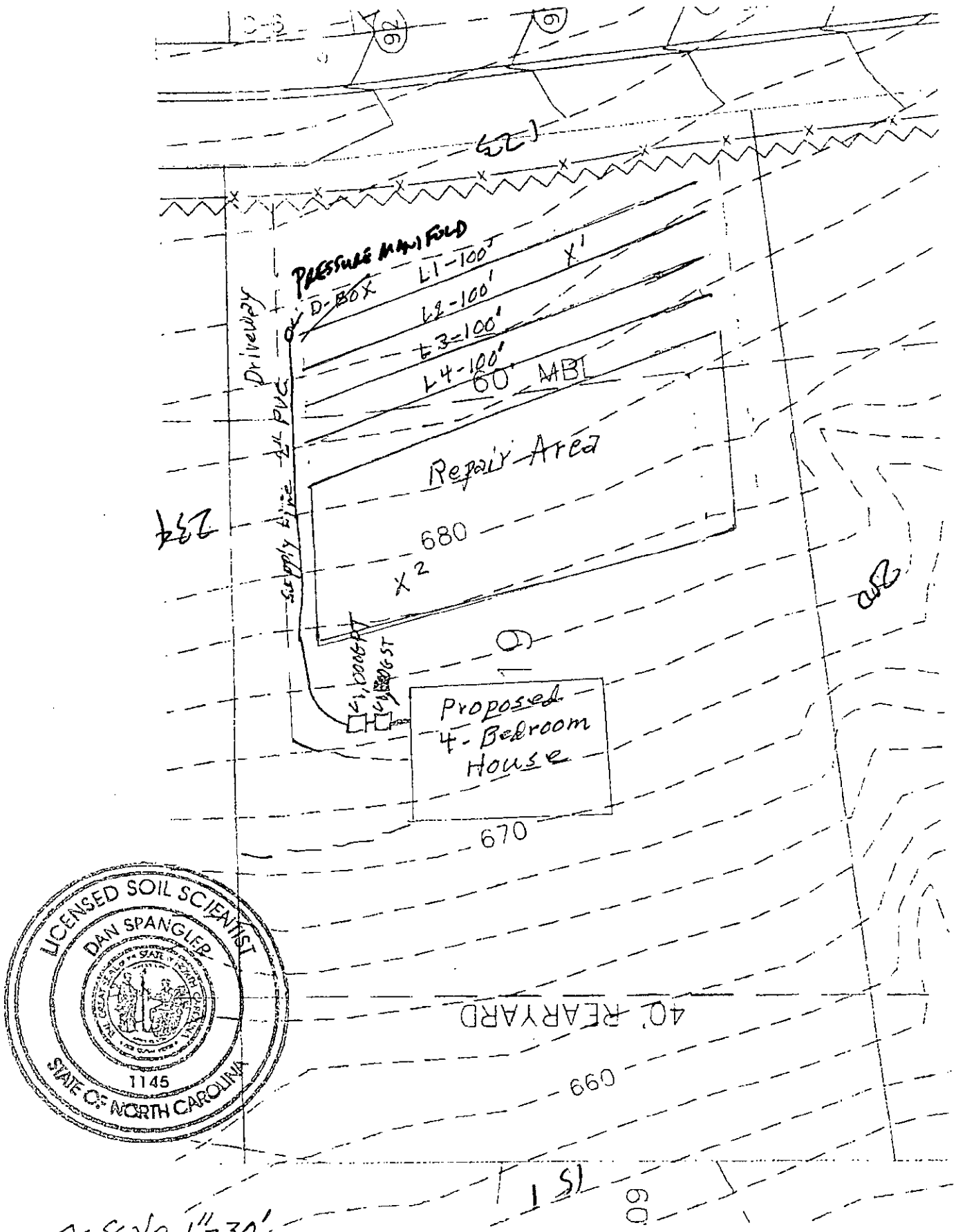
DENR Authorized Agent: Kim Garrett

Signature: Kim Garrett REHS

Date Issued: 3/4/2015

Owner/Legal Agent: _____
Print Name

Signature: _____



~ Scale 1"=30'
X - Soil Boring Location

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

Sheet: 1 of 3
Property ID: 011-321-05
Lot #: NA
File #: 5190B
AppID: 7252

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Property Owner: Joey Karaffa
Applicant: Toney Jacobs, LSS
Address: 14920 Old Vermillion Dr, Huntersville, NC 28078
Date Evaluated: 1/26/2015
Proposed Facility: 5 Bedroom House
Design Flow (.1949): 600 GPD
Property Size: 14.1 ac
Location: 15640 Huntingtowne Village Rd, Huntersville, NC 28078
Property Recorded: Unknown
Water Supply: [ ] Public [X] Individual [X] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [X] Pit [ ] Cut
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	b PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN:)	.1956 Sapro Class	.1944 Restr Horiz	General Comments	Profile Class & LTAR	Maximum Trench Bottom Depth for 3' Wide Conventional Trench
Pit	NS	0 - 5	Fill							PS IV	Trench
#1	11%	5 - 17	wfsbk C	S VP VFI EXP	2 chroma	17	US	NA	water seeping	for sand	bottom must
		17 - 35	mass SCL	S P FI SEXP	10 - 34"		17 - 35		into pit	lined	be between
		35 - 84	mass SL	SS SP FI SEXP			PS		Need curtain drain	trench @	39 - 60"
							35 - 84			0.25 LPP	
Pit	NS	0 - 9	gr SCL	SS SP FR SEXP						PS IV	Trench
#2	9%	9 - 37	wfsbk C	S VP VFI EXP	2 chroma	37	US	NA	water seeping	for sand	bottom must
		37 - 43	mass CL	S P FI SEXP	12 - 46"		37 - 46		into pit	lined	be between
		43 - 84	mass L	SS SP FI SEXP			PS		Need curtain drain	trench @	46 - 60"
							46 - 84			0.25 LPP	
Pit	NS	0 - 3	Fill							PS IV	Trench
#3	8%	3 - 10	gr SCL	SS SP FR SEXP	2 chroma	32	US	NA	water seeping	for sand	bottom must
		10 - 32	wfsbk C	S VP VFI EXP	12 - 56"		32 - 56		into pit	lined	be between
		32 - 56	mass CL	S P FI SEXP			PS		Need curtain drain	trench @	59 - 60"
		56 - 84	mass L	SS SP FI SEXP			56 - 84			0.25 LPP	
Pit	NS	0 - 8	gr SCL	SS SP FR SEXP						PS IV	Trench
#4	9%	8 - 18	wfsbk C	S VP VFI EXP		37	US	NA		for sand	bottom must
		18 - 26	mass SCL	S P FI SEXP	>84"		18 - 26			lined	be between
		26 - 37	mass L	SS SP FI SEXP			PS			trench @	29 - 60"
		37 - 84	mass LS	SS SP FI SEXP			26 - 84			0.25 LPP	

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	V	V
Site LTAR (gpd/sq ft)	**0.25***	**0.25***

***LTAR only valid using a LPP Sand Lined Trench System**
[15A NCAC 18A.1956 (7)]

Other Factors (.1946):
Soil Evaluation By: Jacob Presley, REHS, LSS
Others Present: Toney Jacobs, LSS
Site Classification (.1948): PS
Site Evaluation By: Kim Hancock REHS
Others Present: Toney Jacobs, LSS

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
CONTINUED

PROFILE #	1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY 1941 Structure/ Texture	SOIL MORPHOLOGY 1941 Consistence Mineralogy	b PROFILE FACTORS 1942 Soil Wetness/ Color	1943 Soil Depth (IN.)	1956 Sapro Class	1944 Restr Horiz	General Comments	Profile Class & LTAR	Maximum Trench Bottom Depth for 3' Wide Conventional Trench
Pit #5	NS 9%	0 - 3	Fill		>84"	20	US 20 - 31 PS 31 - 84	NA		PS IV for sand lined trench @ 0.25 LPP	Trench bottom must be between 34 - 60"
		3 - 12	gr SL	S SP FR SEXP							
		12 - 20	wmsbk C	S VP VFI EXP							
		20 - 31	mass SCL	S P FI SEXP							
		31 - 84	mass SL	SS SP FI SEXP							
Pit #6	NS 9%	0 - 18	Fill		2 chroma 18 - 36"	26	US 26 - 36 PS 36 - 84	NA	water seeping into pit Need curtain drain	PS IV for sand lined trench @ 0.25 LPP	Trench bottom must be between 38 - 60"
		18 - 26	wfsbk SCL	S P FR SEXP							
		26 - 34	mass SCL	S P FI SEXP							
		34 - 84	mass SL	SS SP FI SEXP							
Pit #7	LS 11%	0 - 36	Fill		>84"	0	PS 36 - 84	NA	water seeping into pit Need curtain drain	PS IV for sand lined trench @ 0.25 LPP	Trench bottom must be between 40 - 60"
		36 - 84	mass SL	SS SP FI SEXP							
Pit #8	LS 5%	0 - 9	gr SCL	SS SP FR SEXP	2 chroma 8 - 36"	36	PS 36 - 84	NA		PS IV for sand lined trench @ 0.25 LPP	Trench bottom must be between 36 - 60"
		8 - 36	wfsbk C	VS VP VFI EXP							
		36 - 84	mass SL	SS SP FI SEXP							

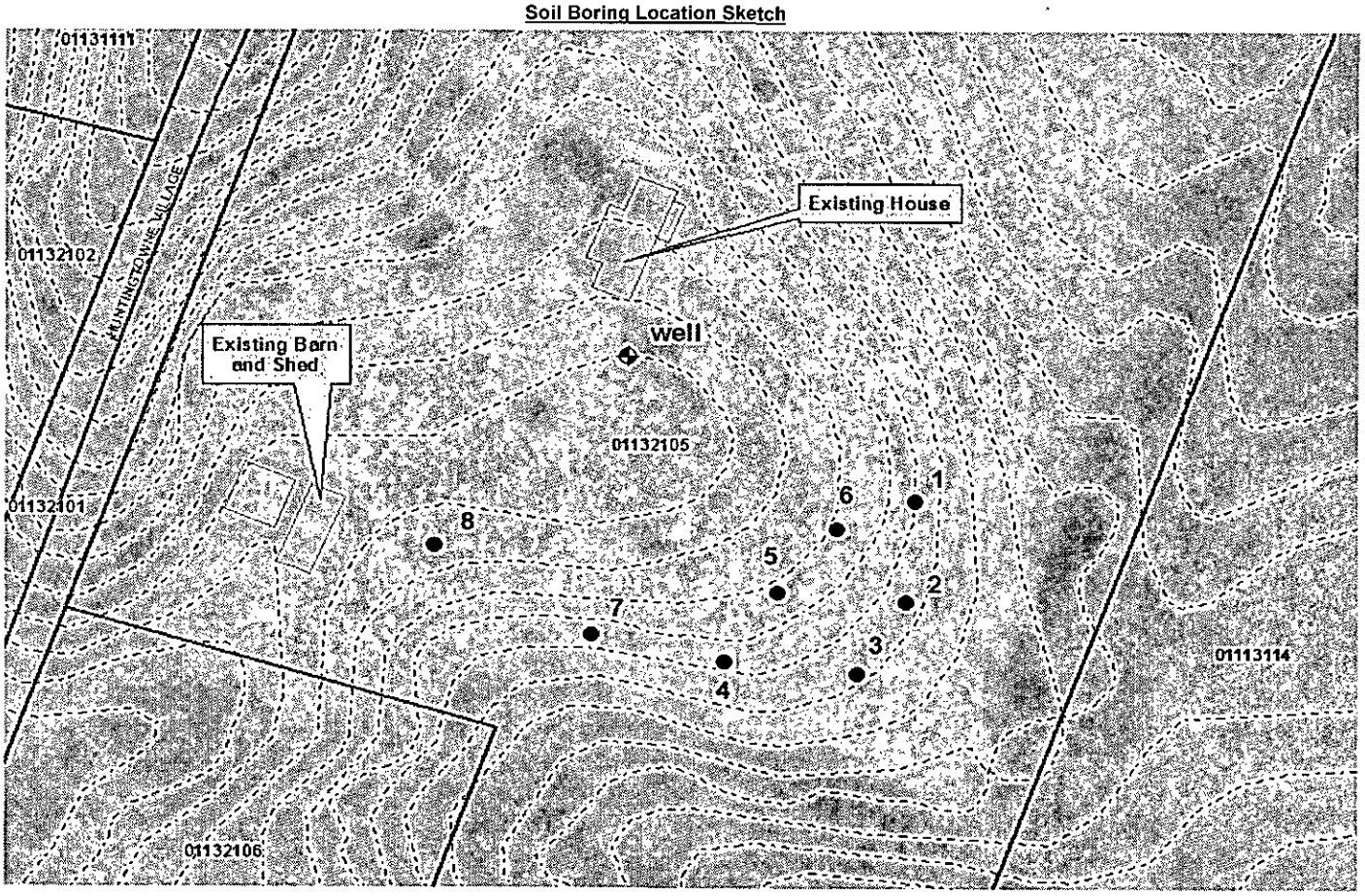
COMMENTS:

Sheet: 3 of 3
File #: 5190B
AppID: 7252

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	sg-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		mass-Massive
LS-Linear Slope				cr-Crumb
FS-Foot Slope	II	SL-Sandy Loam	0.8 - 0.6	gr-Granular
NS-Nose Slope		L-Loam		sbk-Subangular Blocky
HS-Head Slope				abk-Angular Blocky
CC-Concave Slope	III	Si-Silt	0.6 - 0.3	pl-Platy
CV-Convex Slope		SiCL-Silty Clay Loam		pr-Prismatic
T-Terrace		CL-Clay Loam		Sap-Saprolite
FP-Flood Plain		SCL-Sandy Clay Loam		**Structure Prefixes**
D-Drainage Way		SiL-Silt Loam		w-weak
				m-moderate
				s-strong
				f-fine
	IV	SC-Sandy Clay	0.4 - 0.1	m-medium
		SiC-Silty Clay		c-coarse
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	SS-Slightly Sticky	SEXP-Slightly Expansive
FR-Friable	S-Sticky	EXP-Expansive
FI-Firm	VS-Very Sticky	
VFI-Very Firm	NP-Non-Plastic	**Classification**
EFI-Extremely Firm	SP-Slightly Plastic	US-Unsuitable
	P-Plastic	PS-Provisionally Suitable
	VP-Very Plastic	S-Suitable
		NA-Not Applicable

Soil Boring Location Sketch



PIEDMONT DESIGN ASSOCIATES, P.A.
125 East Plaza Drive, Suite #101
Mooresville, NC 28115
Phone: 704-664-7888 Fax: 704-664-1778
Email: dmunday@pdapa.com

Engineering
Surveying
Planning

February 27, 2015

Mr. Toney C. Jacobs, LSS
Jacobs On-Site Development, Inc.
168 Broadbill Drive
Mooresville, NC 28117

Re: SFR Low Pressure Pipe, Sand-Lined Trench Distribution Septic System
15640 Huntingtowne Village Road
Huntersville, Mecklenburg County, NC

Dear Mr. Jacobs,

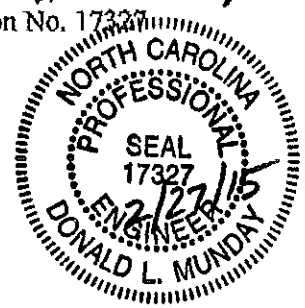
At your request we have reviewed the design calculations for the proposed single family low pressure pipe, sand-lined trench distribution septic system intended to serve the above residence. This review was conducted to comply with the North Carolina Board of Examiners for Engineers and Surveyors policy number BP-1007-1 with regards to on-site wastewater system design. We have found that the system is designed correctly and should function as intended.

These comments and recommendations are based on observations made at the time of this review (February 27, 2015) and are limited to that discussed in this letter. Any conditions that may come forth and are different from that discussed herein should be reported to the Engineer for further evaluation. Any questions regarding the recommendations should be addressed to the Engineer for elaboration. Thank you for allowing us to provide this service to you.

Yours truly,

Piedmont Design Associates, P. A.

Donald L. Munday, P.E.
NC Registration No. 17327
President



GWS Septic System Design Review

GWS File #: 5190B	Approved	Disapproved
Design Review:	☑	☐
Field Review:	☑	☐

*Projects are not considered "APPROVED" until both sections above are completed and indicate an APPROVED status.

PIEDMONT DESIGN ASSOCIATES, P.A.
125 East Plaza Drive, Suite #101
Mooresville, NC 28115
Phone: 704-664-7888 Fax: 704-664-1778
Email: dmunday@pdapa.com

Engineering
Surveying
Planning

February 27, 2015

Mr. Toney C. Jacobs, LSS
Jacobs On-Site Development, Inc.
168 Broadbill Drive
Mooresville, NC 28117

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15640 Huntingtowne Village Road
Huntersville, Mecklenburg County, NC

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Yours truly,

Piedmont Design Associates, P. A.

Donald L. Munday, P.E.
NC Registration No. 17327
President

GWS Septic System Design Review

GWS File #: 5190B	**Approved**	**Disapproved**
Design Review: DLM	☑	☐
Field Review: Kim Sawyer	☑	☐

***Projects are not considered "APPROVED" until both sections above are completed and indicate an APPROVED status.**

CWS Septic System Design Review

CWS File #: _____

Approved Disapp

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	01/13/15	**Amount:**	250.00
Receipt #:	92197	**Tendered:**	250.00
Check / Auth #:	CHECK 266	**Returned:**	0.00
Received By:	SADERLW		

Account Information

Account #: 200000
Contractor: JACOBS ON-SITE DEVELOPMENT IN
Attn:
Address: 168 BROADBILL DR
Address:
City/State/Zip: MOORESVILLE, NC 28117

Item	Description	Permit#	Quantity	Unit Price	Total Price
0701	Improvment Permit App-Residen 15640 HUNTINGTOWN VILLAGE RD		1	250.00	250.00

Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
	10.00				

5190B

MECKLENBURG COUNTY
HEALTH DEPARTMENT

App # 7252

APPLICATION FOR A RESIDENTIAL SITE IMPROVEMENT PERMIT/ CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER SYSTEM, NEW WELL INSTALLATION, OR REPAIR OF EXISTING WELL

1. **SEPTIC / TYPE APPLICATION:** ○ N/A ⊘ NEW SYSTEM ○ ALTERATION ○ REPAIR ○ MODIFIED PLOT PLAN

2. **WELL / TYPE APPLICATION:** ○ N/A ○ NEW WELL ○ MAJOR REPAIR ○ ABANDONMENT

3. **JOB LOCATION INFORMATION:**

TAX PARCEL NUMBER: 011-321-05

STREET ADDRESS: ~~14920 Old Vermillion Dr~~ 15640 Hunting Towne Village Rd.

CITY: Huntersville

STATE: NC ZIP: 28078

SUBDIVISION NAME: _____

LOT #: _____ LOT SIZE (acres): 14.1

TOWNSHIP:

○ MECKLENBURG ○ CORNELIUS ⊘ HUNTERSVILLE
○ DAVIDSON ○ CHARLOTTE ○ PINEVILLE
○ MATTHEWS ○ MINT HILL

4. **BUILDING INFORMATION:**

BUILDING TYPE:

○ SINGLE MOBILE HOME ○ MODULAR HOME
○ DOUBLE WIDE ○ MULTIPLE FAMILY
⊘ HOUSE ○ OTHER _____

HEATED SQUARE FOOTAGE: ~12000

NUMBER OF BEDROOMS: 5

NUMBER OF OCCUPANTS: 10

FOUNDATION TYPE:

○ CONCRETE SLAB ○ BASEMENT WITH PLUMBING
○ CRAWL SPACE ○ BASEMENT WITH NO PLUMBING

5. **IF PLANNING TO EXPAND OR ALTER THE EXISTING SEPTIC SYSTEM PLEASE COMPLETE THE FOLLOWING SECTION:** ☐ N/A

NUMBER OF BEDROOMS TO BE ADDED: _____ NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: _____

6. **WATER SUPPLY:** ○ MUNICIPAL ⊘ PRIVATE WELL ○ PUBLIC WELL ○ SHARED WELL ○ OTHER _____

7. **PROPOSED USE OF WELL:** ○ N/A ○ IRRIGATION ○ POTABLE (DRINKING WATER) ○ OTHER _____

8. **PLEASE INDICATE AND RANK DESIRED SEPTIC SYSTEM TYPE(S) IN ORDER OF PREFERENCE** *(1-MOST DESIRED 5-LEAST DESIRED):*

☐ N/A ☐ ANY TYPE ☐ CONVENTIONAL ☑ ACCEPTED ☐ INNOVATIVE ☐ ALTERNATIVE ☐ OTHER ETS

8A. **RANK:** ___ ___ ___ ___ ___

9. **DO ANY OF THE FOLLOWING APPLY TO THE PROPERTY IN QUESTION? IF "YES" PLEASE ATTACH SUPPORTING DOCUMENTATION.**

BURIED CABLES, LANDFILLS, STUMPHOLES	○ YES ⊘ NO	GRADING/SOIL REMOVAL PERFORMED	○ YES ⊘ NO
EXISTING WASTEWATER (SEPTIC) SYSTEMS	○ YES ⊘ NO	JURISDICTIONAL WETLANDS	○ YES ⊘ NO
WELLS, SPRINGS, OR WATER LINES	○ YES ⊘ NO	APPROVAL REQUIRED BY ANY OTHER PUBLIC AGENCY	○ YES ⊘ NO
EASEMENTS OR RIGHT-OF-WAYS	○ YES ⊘ NO	WASTEWATER OTHER THAN DOMESTIC SEWAGE	○ YES ⊘ NO
CHEMICAL/PETROLEUM STORAGE TANKS	○ YES ⊘ NO	KNOWN UNDERGROUND CONTAMINATION	○ YES ⊘ NO
WASTE STORAGE	○ YES ⊘ NO	GROUNDWATER USE RESTRICTIONS/VARIANCES	○ YES ⊘ NO

10. **WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED?** _____ ☐ UNKNOWN

11. **WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY?** _____ ☐ N/A

12. **PROPERTY OWNER:**

NAME: Joey Karaffa
ADDRESS: 14920 Old Vermillion Dr
CITY: Huntersville
STATE: NC ZIP: 28078
WORK PHONE: _____
MOBILE PHONE: 980-422-0259
FAX: _____
E-MAIL: NA

13. **OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:**

NAME: Tonya Jacobs
ADDRESS: 108 Bramblehill Dr
CITY: Mooresville
STATE: NC ZIP: 28117
WORK PHONE: 704 662 9345
MOBILE PHONE: 552-9219
FAX: _____
E-MAIL: tonyajacobs@gmail.com

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 704-336-5103, FAX: 704-336-6894

Revised on: 12/15/10

14. SEPTIC SYSTEM PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Improvement Permit and Authorization to Construct shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for either sixty (60) months or is non-expiring depending upon the documentation submitted: complete site plan = 60 months, complete plat = non-expiring.

_____ (Initial here for septic system applications)

15. WELL PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Well Permit shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for a period of twelve (12) months from the date of issuance.

_____ (Initial here for well applications)

16. APPLICATION SIGNATURE SECTION:

ONLY COMPLETE APPLICATIONS WILL BE PROCESSED. A proper signature is required in order to process your application. Please review the application carefully and sign in the space provided below. A PROPOSED PLOT PLAN is required to be submitted with each application.

_____ Property Owner's or Owner's Legal Representative Signature

1/13/15 Date

OFFICE USE ONLY

O SURVEY PLAT TO SCALE SUBMITTED O SCALED SITE PLAN SUBMITTED O UN-SCALED SITE PLAN SUBMITTED

SEPTIC APPLICATION FEE RECEIVED: $ 250 DATE FEE RECEIVED: 1/13/15

WELL APPLICATION FEE RECEIVED: $ _____ DATE FEE RECEIVED: _____

APPLICATION PROCESSED BY: Qws

GWS FILE NUMBER ASSIGNED: 51903

APPLICATION ID NUMBER ASSIGNED: 7252

COMMENTS:

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 704-336-5103, FAX: 704-336-6894

Revised on: 12/15/10

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	03/13/15	**Amount:**	200.00
Receipt #:	93943	**Tendered:**	200.00
Check / Auth #:	CHECK 272	**Returned:**	0.00
Received By:	ATKINBB		

Account Information

Account #: 200000
Contractor: JACOBS ON-SITE DEVELOPMENT
Attn: JACOBS C. TONEY
Address:
Address: 168 BROADBILL DRIVE
City/State/Zip: MOORESVILLE, NC 28117

Item	Description	Permit#	Quantity	Unit Price	Total Price
0703	Septic Operational Permit 15640 HUNTINGTOWNE VILLAGE RD		1	200.00	200.00

----------Outstanding Balances----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	03/13/15	**Amount:**	200.00
Receipt #:	93944	**Tendered:**	200.00
Check / Auth #:	CHECK 272	**Returned:**	0.00
Received By:	ATKINBB		

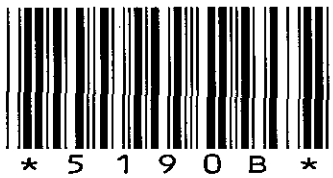
Account Information

Account #: 200000
Contractor: JACOBS ON-SITE DEVELOPMENT IN
Attn: JACOBS C. TONEY
Address:
Address: 168 BROADBILL DRIVE
City/State/Zip: MOORESVILLE, NC 28117

Item	Description	Permit#	Quantity	Unit Price	Total Price
0734	Septic Construction Authorizat 15640 HUNTINGTONTOWNE VILLAGE RD		1	200.00	200.00

----------Outstanding Balances----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance



VOID

former
13406 HIWASSEE RD

01132105

1/8/2008

duponbj

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: 5190B WASPS App #: _____

Primary ES assigned to project: YSW

Secondary ES assigned to project: _____

Project Type: New System ☐ Alteration ☐ Repair ☑ Modified Plot Plan ☐

I. File Review:

Rule or Law	Permit Application			
.1937(d)	Is the Application complete	Yes ☑	No ☐	N/A ☐
.1937(d)	Is there a Site plan/Plat with application	Yes ☐	No ☑	N/A ☐
.1937(d)	Is the Facility shown?	Yes ☐	No ☐	N/A ☐
.1937(d)	Are appurtenances shown	Yes ☐	No ☐	N/A ☐
	Site Evaluation Information			
.1939 (a)(1)	Topography and Landscape Position Recorded?	Yes ☐	No ☐	N/A ☐
.1940 (a-g)	Slope % Recorded?	Yes ☐	No ☐	N/A ☐
.1939 (a)(2)	Texture Class Recorded?	Yes ☐	No ☐	N/A ☐
.1939 (a)(2)	Structure type Recorded?	Yes ☐	No ☐	N/A ☐
.1939 (a)(2)	Consistence Recorded?	Yes ☐	No ☐	N/A ☐
.1939 (a)(2)	Mineralogy Recorded?	Yes ☐	No ☐	N/A ☐
.1939 (a)(3)	Soil Wetness Condition Recorded?	Yes ☐	No ☐	N/A ☐
.1939 (a)(4)	Soil Depth to Rock or Parent Material Recorded When Encountered	Yes ☐	No ☐	N/A ☐
.1939 (a)(5)	Depth to Restrictive Horizons Recorded When Encountered?	Yes ☐	No ☐	N/A ☐
.1939 (a)(6)	Sufficient Available Space Recorded?	Yes ☐	No ☐	N/A ☐
.1937(m)	Are the Profile Locations Shown?			
.1939(a)	Are the S/PS Profiles in system & in repair area?	Yes ☐	No ☐	N/A ☐
& .1945(b)	Number of auger borings made: _____			
	Were sufficient auger borings made?	Yes ☐	No ☐	N/A ☐
.1939(d), .1955, .1956, .1957	LTAR	Yes ☐	No ☐	N/A ☐
	Improvement Permit/Construction Authorization			
.1937(g) 130A-336(a)	Proposed System Type stated-Initial	Yes ☐	No ☐	N/A ☐
.1945(b) 130A-336 (a)(3)	Proposed System Type stated-Repair System location identifiable by setbacks - Initial	Yes ☐ Yes ☐	No ☐ No ☐	N/A ☐ N/A ☐
.1937(g) .1945(b)	System components shown – Initial	Yes ☐	No ☐	N/A ☐
.1945(b)	Repair area shown	Yes ☐	No ☐	N/A ☐
.1937 (f)(g)	Does System design match facility, flow & WWcharacteristics?	Yes ☐	No ☐	N/A ☐
.1937 (f)(g)	Is System design consistent with soil/site conditions?	Yes ☐	No ☐	N/A ☐
.1937 (f)(g)	Is the System located in the approved area?	Yes ☐	No ☐	N/A ☐
130A-336(a)	Is the Design flow (gpd) indicated?	Yes ☐	No ☐	N/A ☐

.130A-336(a)	Number of Bedrooms, employees, seats, etc. indicated?	Yes ☐	No ☐	N/A ☐
.1937(g)	Trench depth indicated?	Yes ☐	No ☐	N/A ☐
.1937(g)	Trench width indicated?	Yes ☐	No ☐	N/A ☐
.1937(g)	Trench length indicated?	Yes ☐	No ☐	N/A ☐
130A-336(a)(1)	Proposed/existing well shown?	Yes ☐	No ☐	N/A ☐
130A-336(a)(1)	Property line lengths shown?	Yes ☐	No ☐	N/A ☐
130A-336(a)	Facility/appurtenance setbacks shown from fixed points?	Yes ☐	No ☐	N/A ☐
	Operation Permit			
.1937(i)	System type as described in table V(a) of rule .1961	Yes ☐	No ☐	N/A ☐
.1937(i)	Conditions for system performance, operation, maintenance, monitoring and reporting.	Yes ☐	No ☐	N/A ☐

II. WASPS Review:

Construction authorization issued	Yes ☐	No ☐	N/A ☐
Installation approval issued	Yes ☑	No ☐	N/A ☐
Operation permit issued	Yes ☐	No ☐	N/A ☐
Other related documentation	Yes ☐	No ☐	N/A ☐

Items requiring correction/modification: _____

Comments: Repair to Existing System

IA issued date: 4/23/08

OP issued date: _____

Review performed by: [signature] Date performed: 5/15/08

P Walker

GWS - RES. APP 12/04

5/22/08

PERMIT APPLICATION FOR A RESIDENTIAL SITE
IMPROVEMENT PERMIT / CONSTRUCTION AUTHORIZATION
FOR ON-SITE WASTEWATER SYSTEM
NEW WELL INSTALLATION OR REPAIR OF EXISTING WELL
MECKLENBURG COUNTY GROUNDWATER & WASTEWATER SERVICES

FILE # 5190B

SEPTIC / TYPE APPLICATION: ☐ NONE ☐ NEW SYSTEM EXISTING SYSTEM: ☐ EXPANSION/ALTERATION ☒ REPAIR

WELL / TYPE APPLICATION: ☐ NONE ☐ NEW WELL ☐ MAJOR REPAIR ☐ ABANDONMENT

JOB LOCATION INFORMATION:

TAX/PARCEL #: 011-321-05
STREET ADDRESS: 13906 Hiwassee Road
CITY: Huntersville
STATE: NC ZIP: 28078
SUBDIVISION OR MOBILE HOME PARK NAME:
LOT #:
TOWNSHIP: Huntersville

☐ 0-MECKLENBURG ☐ 4-PINEVILLE
☐ 1-CHARLOTTE ☐ 5-MATTHEWS
☐ 2-DAVIDSON ☒ 6-HUNTERSVILLE
☐ 3-CORNELIUS ☐ 7-MINT HILL

BUILDING INFORMATION:

TYPE OF BUILDING:

☐ SINGLE MOBILE HOME (S) ☐ MODULAR HOME (M)
☐ DOUBLE WIDE (D) ☐ MULTIPLE FAMILY (U)
☒ HOUSE (H) ☐ OTHER
HEATED SQUARE FOOTAGE:
NUMBER OF BEDROOMS:
NUMBER OF OCCUPANTS:

FOUNDATION FOR RESIDENCE:

☐ CONCRETE SLAB ☐ BASEMENT WITH PLUMBING
☐ CRAWLSPACE ☐ BASEMENT WITH NO PLUMBING

IF PLANNING TO EXPAND/ALTER THE EXISTING SYSTEM INDICATE THE FOLLOWING CHANGES:

NUMBER OF BEDROOMS TO BE ADDED: 3 NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: 3

WILL THERE BE A HOME BUSINESS IN THE RESIDENCE? ☐ YES ☒ NO TYPE:

WATER SUPPLY:

☐ MUNICIPAL (M) ☐ PUBLIC (C) ☒ PRIVATE WELL (P) ☐ SHARED WELL (S) ☐ OTHER SPRINGS (O)

PROPOSED USE OF WELL: ☐ N/A ☐ IRRIGATION ☒ POTABLE ☐ GEOTHERMAL ☐ OTHER

ARE ANY OF THE FOLLOWING LOCATED ON THE PROPERTY? IF SO, PLEASE SHOW LOCATION ON SITE PLAN/PLAT.

BURIED CABLES, LANDFILLS, STUMPHOLES	☐ YES	☒ NO	WELLS, SPRINGS, OR WATER LINES	☐ YES	☒ NO
EXISTING WASTEWATER SYSTEMS	☐ YES	☒ NO	DESIGNATED WETLANDS	☐ YES	☒ NO
EASEMENTS OR RIGHT-OF-WAYS	☐ YES	☒ NO	GRADING/SOIL REMOVAL PERFORMED	☐ YES	☒ NO

PROPERTY OWNER:

NAME: Steven L. Mullis
ADDRESS: 13906 Hiwassee Road
CITY: Huntersville
STATE: NC ZIP: 28078
HOME PHONE: 704 875 5932 WORK PHONE:
MOBILE PHONE: 704 307 1462 FAX:

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME:
ADDRESS: Same
CITY:
STATE: ZIP:
HOME PHONE: WORK PHONE:
MOBILE PHONE: FAX:

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 1996

WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY?

*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 the Mecklenburg County Health Department to come onto the property for the purpose of processing this request.

S L Mullis 5-22-08
Owner's/Agent's Signature Date

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

*A Well 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 the Mecklenburg County Health Department to come onto the property for the purpose of processing this request.

Owner's/Agent's Signature Date

MECKLENBURG COUNTY HEALTH DEPARTMENT
GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202
704-336-5103 / FAX: 704-336-6894

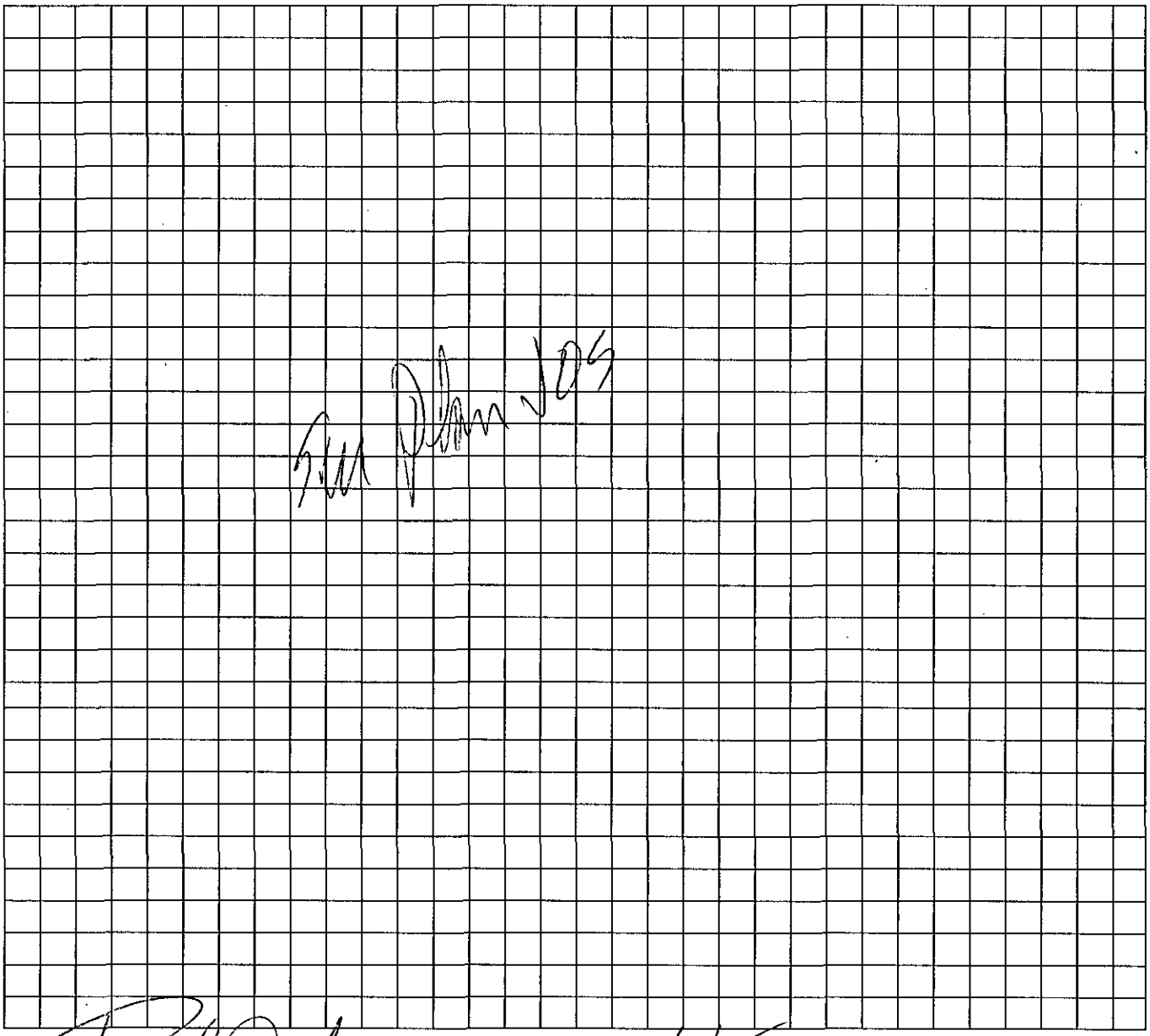
File #: _____

PROPOSED PLOT PLAN

A drawing showing the locations of the following items is required: existing and proposed property lines with dimensions, easements or right-of-ways, proposed building pad(s) or existing building footprint(s), all appurtenances (garage, driveway, deck, pool, etc.), location of existing or proposed well(s), location of existing or proposed sewer lines and sewage disposal systems, surface water bodies, and any aboveground or underground storage tanks. Provide names for all roads that adjoin the property.

Street Address: 15640 Huntingtown Village Rd Tax Parcel #: 011-321-05

Subdivision Name: _____ Lot #: _____



Property Owner's or Owner's Legal Representative Signature

1/13/15
Date

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 704-336-5103, FAX: 704-336-6894

Revised on: 12/15/10

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

OPERATION PERMIT for an
ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 5190B Permit #: _____ Tax Parcel #: 011 321 05

Property Owner: Steven L. Mullis

Job Location Address: 13406 Hiwassee Rd

City: Huntersville State: NC Zip Code: 28078

Operation Permit Issuance Date: 6/17/08 Contractor Name: Orbison

Permitted Design Flow: 360 GPD

Liquid Capacity of Septic Tank: existing gallons

Liquid Capacity of Dosing Tank: NA gallons

Effluent Pump Model: NA

Drainfield Installation ☐ N/A

Trench Depth: 48 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 456 feet

# of Lines: 6 @ 75 feet

Depth of Media: 12 inches (Type): Gravel

Depth of Cover: 36 inches

Distribution Device: existing DI Box

Inspection Dates

Tank(s) Inspected: Existing

Excavation Inspected: 6/17/08

Pump & Controls Inspected: NA

SKETCH OF SYSTEM INSTALLATION
(As-Built Drawing)

see installation approval

Bed Installation *(For Repair Installations ONLY.)* ☒ N/A

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Depth of Cover: _____ inches

Distribution Device: _____

Water Supply Source

☐ Municipal ☒ Private Well ☐ Community Well

☐ Other _____

System Installation Setbacks

Distance from Building Foundation: 5 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: >100 feet

The undersigned has inspected the Septic Tank System described above, and certifies it has been ☐ installed ☐ altered ☒ repaired ☐ as detailed in the plot above ☒ in accordance with the permit issued 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. The issuance of this 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. 1900 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 or Revocation of this permit.

Comments: System Classification & Type: Type IIa Repair to Existing System, GTR, G

DENR Authorized Agent: Philo S. Walker RS Signature: Philo S. Walker RS

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

OPERATION PERMIT for an
ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 5190B Permit #: _____ Tax Parcel #: 011 321 05

Property Owner: Steven L Mullis

Job Location Address: 13406 Hiwassee Rd

City: Huntersville State: NC Zip Code: 28078

OPERATION PERMIT CONDITIONS:

I. Performance: System shall perform in accordance with 15A NCAC 18A .1961.

II. Monitoring: System shall be monitored as required by 15A NCAC 18A .1961.

III. Maintenance: Ground absorption sewage treatment and disposal systems shall be checked, and the contents of the septic tank removed, periodically from all compartments, to ensure proper operation of the system. The contents shall be pumped whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment.

IV. Operation: System shall be operated in accordance with 15A NCAC 18A .1961.

System Classification: IIa

*Operation Permits for Type V and VI systems expire five (5) years from the date of issuance (in accordance with Table V(a)). The system owner must contact GWS six (6) months prior to expiration for permit renewal.

Subsurface system operator required: Yes ☐ No ☒

☐ This type of system requires the system owner to maintain a contract with a certified operator to perform system inspection, maintenance, and reporting as required in 15A NCAC 18A .1961. and Table V(a). The system owner is responsible for all fees associated with these services.

☐ System does not require inspection by GWS on a routine frequency.

☐ System requires inspection by GWS once every five (5) years. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every three (3) years. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every twelve (12) months. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every six (6) months. The system owner is responsible for all fees associated with the inspection.

V. Other: Type IIa

DENR Authorized Agent: Philo S. Walker Date: 6/17/08

Signature: Philo S. Walker RS

SEPTIC FEE:
DATE: 5-22-08
CRT [ ]

PERMIT APPLICATION FOR A RESIDENTIAL SITE IMPROVEMENT PERMIT / CONSTRUCTION AUTHORIZATION FOR ON-SITE WASTEWATER SYSTEM NEW WELL INSTALLATION OR REPAIR OF EXISTING WELL MECKLENBURG COUNTY GROUNDWATER & WASTEWATER SERVICES

WELL FEE:
DATE:
CRT [ ]

FILE # 5190B

SEPTIC / TYPE APPLICATION: ☐ NONE ☐ NEW SYSTEM EXISTING SYSTEM: ☐ EXPANSION/ALTERATION ☒ REPAIR

WELL / TYPE APPLICATION: ☐ NONE ☐ NEW WELL ☐ MAJOR REPAIR ☐ ABANDONMENT

JOB LOCATION INFORMATION:

TAX/PARCEL #:
STREET ADDRESS: 13406 Hiwassee Road
CITY: Huntersville
STATE: NC ZIP: 28078
SUBDIVISION OR MOBILE HOME PARK NAME:
LOT #:
TOWNSHIP: Huntersville

☐ 0-MECKLENBURG ☐ 4-PINEVILLE
☐ 1-CHARLOTTE ☐ 5-MATTHEWS
☐ 2-DAVIDSON ☒ 6-HUNTERSVILLE
☐ 3-CORNELIUS ☐ 7-MINT HILL

BUILDING INFORMATION:

TYPE OF BUILDING:
☐ SINGLE MOBILE HOME (S) ☐ MODULAR HOME (M)
☐ DOUBLE WIDE (D) ☐ MULTIPLE FAMILY (U)
☒ HOUSE (H) ☐ OTHER
HEATED SQUARE FOOTAGE:
NUMBER OF BEDROOMS:
NUMBER OF OCCUPANTS:

FOUNDATION FOR RESIDENCE:
☐ CONCRETE SLAB ☐ BASEMENT WITH PLUMBING
☐ CRAWLSPACE ☐ BASEMENT WITH NO PLUMBING

IF PLANNING TO EXPAND/ALTER THE EXISTING SYSTEM INDICATE THE FOLLOWING CHANGES:
NUMBER OF BEDROOMS TO BE ADDED: 3 NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: 3
WILL THERE BE A HOME BUSINESS IN THE RESIDENCE? ☐ YES ☒ NO TYPE:

WATER SUPPLY:

☐ MUNICIPAL (M) ☐ PUBLIC (C) ☒ PRIVATE WELL (P) ☐ SHARED WELL (S) ☐ OTHER 'SPRINGS' (O)

PROPOSED USE OF WELL: ☐ N/A ☐ IRRIGATION ☒ POTABLE ☐ GEOTHERMAL ☐ OTHER

ARE ANY OF THE FOLLOWING LOCATED ON THE PROPERTY? IF SO, PLEASE SHOW LOCATION ON SITE PLAN/PLAT.

BURIED CABLES, LANDFILLS, STUMPHOLES	☐ YES	☐ NO	WELLS, SPRINGS, OR WATER LINES	☐ YES	☐ NO
EXISTING WASTEWATER SYSTEMS	☐ YES	☐ NO	DESIGNATED WETLANDS	☐ YES	☐ NO
EASEMENTS OR RIGHT-OF-WAYS	☐ YES	☐ NO	GRADING/SOIL REMOVAL PERFORMED	☐ YES	☐ NO

PROPERTY OWNER:

NAME: Steven L. Mullis
ADDRESS: 13406 Hiwassee Road
CITY: Huntersville
STATE: NC ZIP: 28078
HOME PHONE: 7048753932 WORK PHONE:
MOBILE PHONE: 704 3071462 FAX:

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME:
ADDRESS: Same
CITY:
STATE: ZIP:
HOME PHONE: WORK PHONE:
MOBILE PHONE: FAX:

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 1990
WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY?

*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 the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

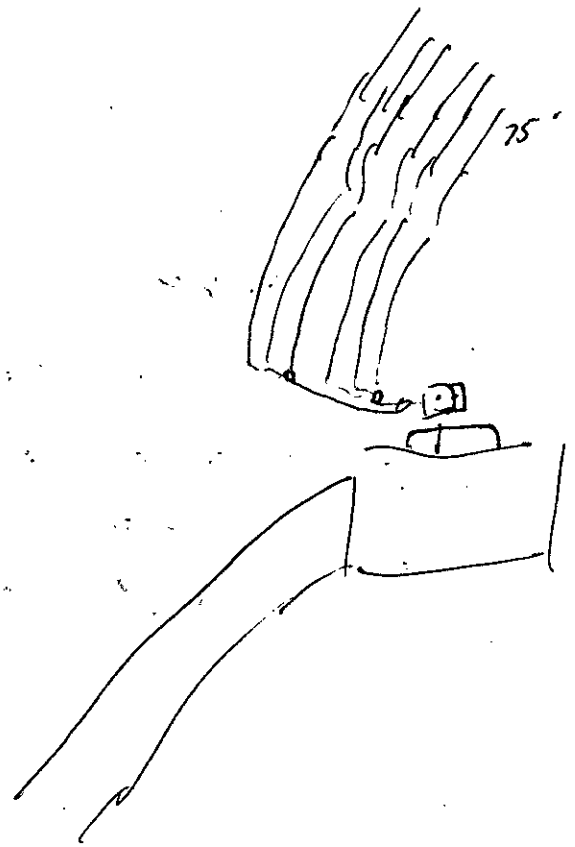
Owner's/Agent's Signature Date

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

*A Well 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 the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

Owner's/Agent's Signature Date

MECKLENBURG COUNTY HEALTH DEPARTMENT
GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202
704-336-5103 / FAX: 704-336-6894



75' 6 lanes @ 75' long

Wayne Orhesan
Fax 704 662 8795

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

INSTALLATION APPROVAL for an ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 5190B Permit #: _____ Tax Parcel #: 011 321 05

Property Owner: Steven L. Mullis

Job Location Address: 13406 Hiwassee Road

City: Huntersville State: NC Zip Code: 28078

Installation Approval Issuance Date: 4/23/08

Permission is hereby given to ☐ install ☐ alter ☒ repair an on-site wastewater treatment & and disposal system, with subsurface soil absorption and effluent discharge, as specified herein at the described location. This approval is granted based upon the application information submitted to our office. All work shall be completed on or before 5/28/08, after which date this approval 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 granting this approval. 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 of hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

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

Permitted Design Flow: 360 GPD

Site LTAR: Existing GPD/ft² (For new installations only.)

Liquid Capacity of Septic Tank: Existing gallons

Liquid Capacity of Dosing Tank: N/A gallons

Drainfield Design ☐ N/A

Trench Depth: 36 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 450 feet

# of Lines: 6 @ 75 feet

Depth of Media: 12 inches (Type) Gravel

Distribution Device: Existing D-Boxes

Bed Design *(For Repair Installations ONLY.)* ☒ N/A

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Distribution Device: _____

Water Supply Source

☐ Municipal ☐ Private Well ☐ Community Well

☐ Other _____

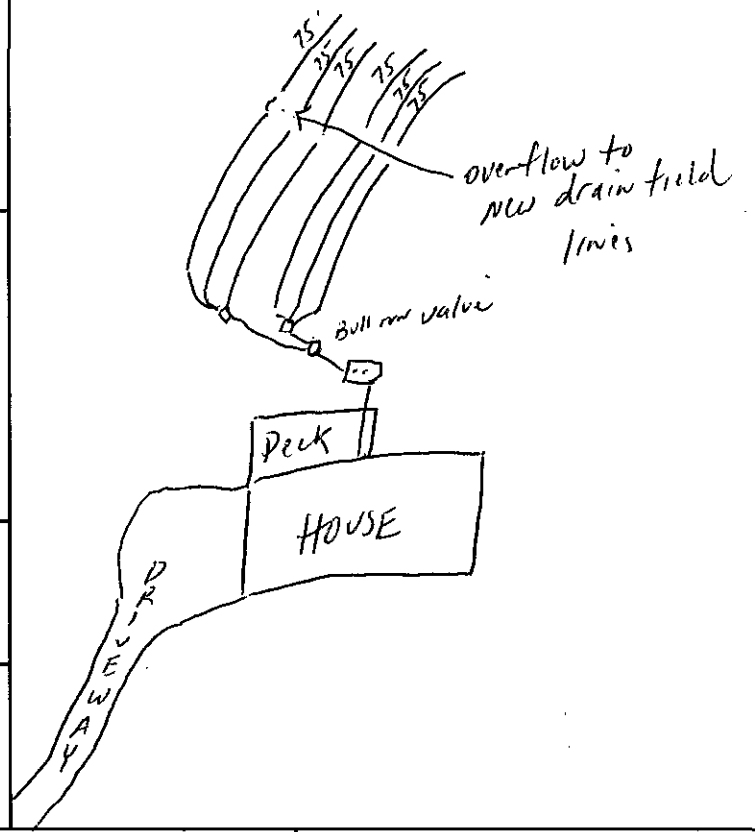
Minimum System Setbacks

Distance from Building Foundation: 5 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: >100 feet

SKETCH OF SYSTEM LAYOUT
(Proposed Layout)



Comments: System Classification & Type: Type IIa Repair / Gravity gravel system overflow to new lines

DENR Authorized Agent: Philo Walker Signature: Philo Walker RS

Jeremy

INDIVIDUAL WATER AND WASTEWATER SYSTEMS PROGRAM
APPLICATION FOR SERVICES

AC 4 100 CASH 3/14/03 JAG CRT

Mecklenburg County Health Dept.
Environmental Health Division
c/o Hal Marshall Ctr., Suite 211
700 N. Tryon St.
Charlotte, NC 28202

(704)336-5102 5190B

PERSON FILING APPLICATION:

NAME: Mullis (last) Steven (first) L (mi)

ADDRESS: 13406 Hiwassee PHONE: 704 8753932

CITY: Huntersville STATE: NC ZIPCODE: 28078

Date: 3-14-03

PROPERTY OWNER:

NAME: Same As Above (last) (first) (mi)

ADDRESS: _____ PHONE: (___) _____

CITY: STATE: ZIPCODE:

PROPERTY INFORMATION (FROM ENGINEERING FORM):

TAX/PARCEL NUMBER: 01132105

STREET ADDRESS: 13406 Hiwassee

ZONING: Rural

Township (check one):
[X] 0 Mecklenburg County [] 2 Davidson [] 4 Pineville [] 6 Huntersville
[] 1 Charlotte [] 3 Cornelius [] 5 Matthews [] 7 Mint Hill

SUBDIVISION OR MOBILE HOME PARK NAME:

TYPE APPLICATION (check one):

LOT NUMBER: LOT SIZE (in acres): 14

[redacted] 1990

[] EXCHANGE MOBILE HOME - SAME # BEDROOMS (Y)
[] ADDITION - INCREASE ROOMS/OCCUPANCY/MOBILE HOME SIZE (A or M)
[] COMMERCIAL OR INDUSTRIAL (N)

[redacted]

[X] ADDITION - GARAGE OR RENOVATION/NO MAJOR CHANGES (X)

[redacted]

RESIDENTIAL PROPERTY (Type Building, check one):
[] SINGLE MOBILE HOME (S) [X] HOUSE (H) [] MULTIPLE FAMILY (U)
[] DOUBLE WIDE (D) [] MODULAR HOME (M) [] OTHER _____ (O)

NUMBER BEDROOMS: 3 NUMBER OCCUPANTS: 2

SYSTEM CLASSIFICATION:

COMMERCIAL/INDUSTRIAL PROPERTY:
Type Business _____ # Employees ___ Per Shift ___ ___ ___
Industrial Wastes (Y/N) ___
Underground Storage Tanks On Property (Y/N) ___ Type _____

WATER SUPPLY (check one):
[] Community (C) [] Shared Well (S)
[] Municipal (M) [] Other 'spring' (O)
[X] Private Well (P)

FUTURE ADDITIONS - ALL PLANNED ADDITIONS MUST BE ENTERED (check all that apply):
[] Swimming Pool [] Jacuzzi [] Stable/Barn [] Workshop [] None
[] Garage [] Storage Building [X] Deck/Patio [] Bedrooms [] Other

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: S. L Mullis Date: 3-14-03

NOTICE:

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the the Request for the Job Location contained in this document. This approval is granted in accordance with the provisions of Laws And Rules For Sanitary Sewage Collection, 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 permit is not transferable.

... O.K. to use existing system for a deck addition (12'x25')

[] IMPROVEMENT PERMIT - VALID 60 MONTHS FROM ISSUANCE
[] MOBILE HOME EXCHANGE APPROVAL - VALID 6 MONTHS FROM ISSUANCE
[X] ADDITION/RENOVATION APPROVAL - VALID 1 YEAR FROM ISSUANCE

Jimmy Mullis R.S. 3/17/05
Environmentalist Date

WATER : 122791

31744

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

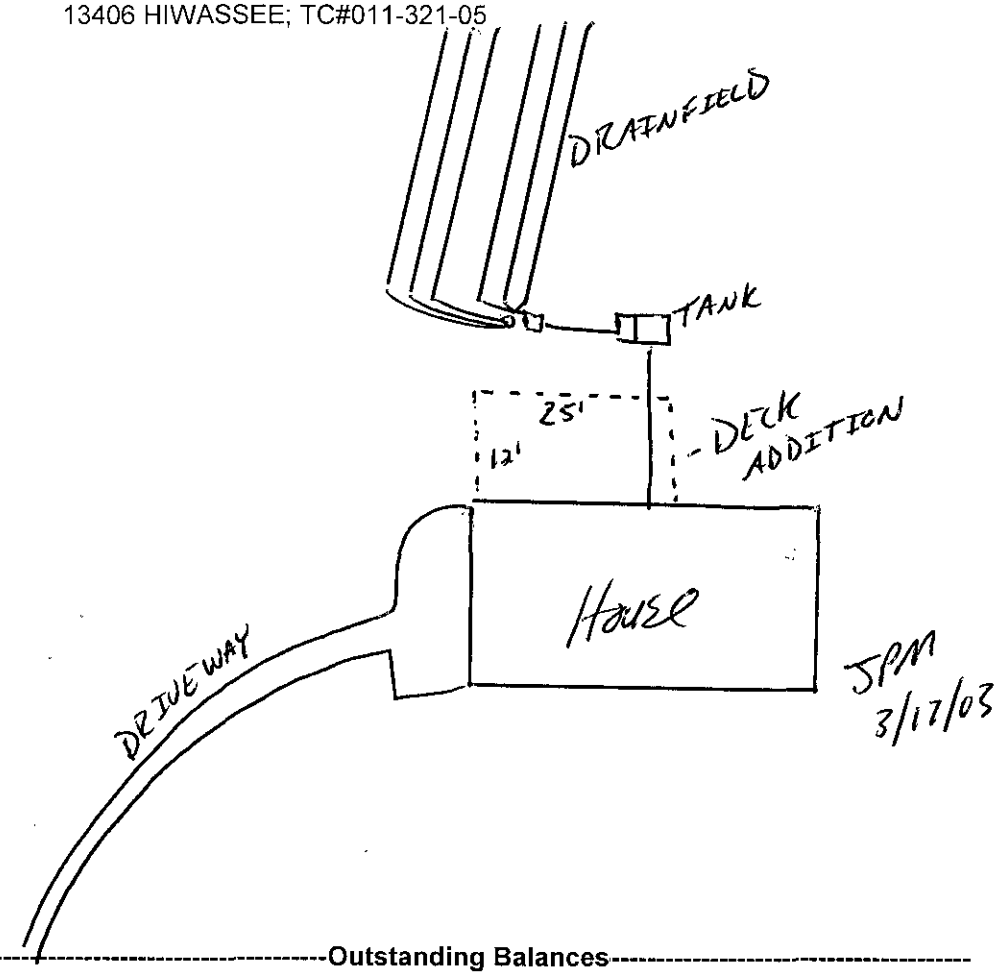
Receipt Information

Date:	03/14/03	**Amount:**	100.00
Receipt #:	15264	**Tendered:**	100.00
Check / Auth #:	CASH	**Returned:**	0.00
Received By:	JONESNY		

Account Information

Account #: 200000
Contractor: MULLIS, STEVEN L.
Attn:
Address: 13406 HIAWASSEE
Address:
City/State/Zip: HUNTERSVILLE, NC

Item	Description	Permit#	Quantity	Unit Price	Total Price
0705	MH Exc/Add/Repl w/o System Mod 13406 HIWASSEE; TC#011-321-05		1	100.00	100.00



Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance