THOMPSON ENVIRONMENTAL CONSULTING, INC.
WATER • WASTEWATER • WETLANDS

April 3, 2014

Mr. Bradley Hallman, RS
Mecklenburg County Groundwater and Wastewater Services
700 N. Tryon Street, Suite 211
Charlotte, NC 28202

Dear Mr. Hallman,

The purpose of this letter is to inform you that I have performed an inspection of the wastewater treatment and disposal system installed for Lot 109 in the Fairington Oaks subdivision. I am satisfied that the installation meets the intent of the revised proposal submitted to your office and is depicted in the attached drawing.

Please feel free to call on me if you have any further questions or concerns regarding this project.

Sincerely,

Larry B. Thompson, Jr.

114 ORCHARD RIDGE ROAD• LOCUST, NC • 28097-8748
PHONE: 704-301-4881 • FAX: 704-888-1496
E-MAIL: LARRY@THOMPSONENV.COM
WEB: WWW.THOMPSONENV.COM

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 #: 8680B Permit #: 6058 Tax Parcel #: 195-213-40

Property Owner: True Homes

Job Location Address: 6313 Northern Red Oak Dr Lot 109

City: Mint Hill State: NC Zip Code: _____

Operation Permit Issuance Date: 4/9/14 Contractor Name: Chris Stevens

Permitted Design Flow: 360 GPD

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: 1000 gallons

Effluent Pump Model: _____

STB - 444 1500gal 1/28/14
PT - 27 1000gal 11/8/13

Drainfield Installation ☐ N/A

Trench Depth: 36 inches

Trench Width: 2 feet

Line Spacing: 8 feet (O.C.)

Total line length: 200 feet

# of Lines: 4 @ 50' feet

Depth of Media: N/A inches (Type) IVa PPBPS

Depth of Cover: 12"+ inches

Distribution Device: Manifold LPP Dist

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' min feet

Distance from Property Line: 10' feet

Distance from Water Supply Source: 10' min feet

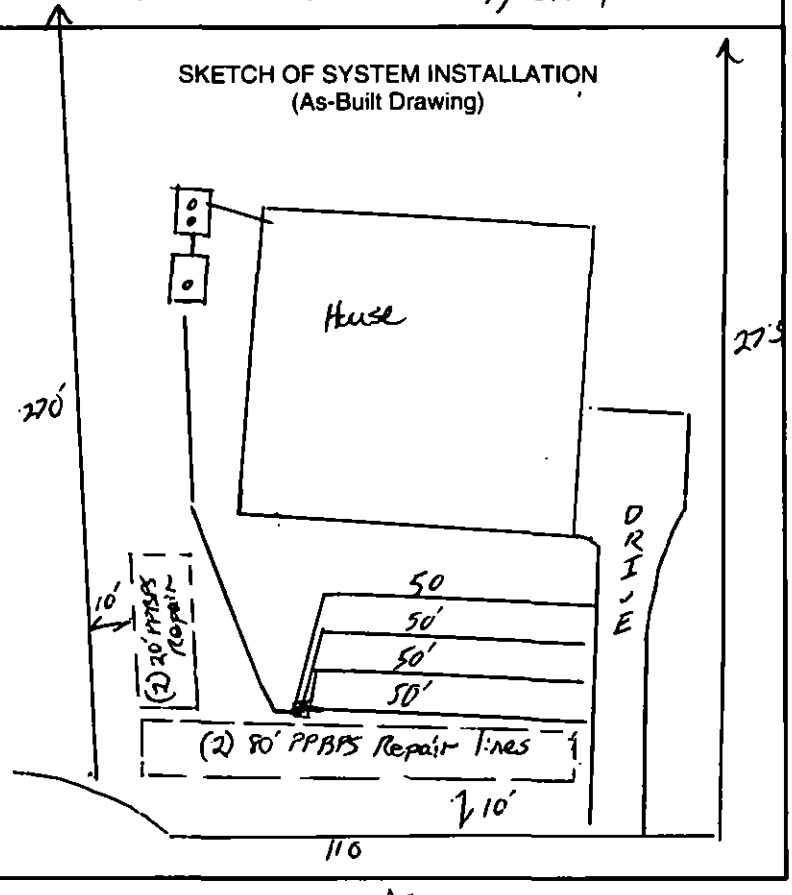
Inspection Dates

Tank(s) Inspected: 3/11/14

Excavation Inspected: 3/25/14

Pump & Controls Inspected: 3/24/14

SKETCH OF SYSTEM INSTALLATION
(As-Built Drawing)



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: IVa PPBPS / P / NA / NA

Draw Down 3.25 @ 3:00 min = 22.75 g/p/in through system

DENR Authorized Agent: Bradley W. Hallman Signature: _____

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NC DENR
Division of Environmental Health
On-Site Wastewater Section

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

File #: 8680 B Permit #: 6058 Tax Parcel #: 195-213-40

Property Owner: True Homes

Job Location Address: 6313 Northon Red Oak

City: Mint Hill State: NC Zip Code: _____

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: IV a PPBPS

*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:

_____

_____

_____

_____

DENR Authorized Agent: Bradley W. Hallman Date: 4/9/14

Signature: _____

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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 #: 86803 Permit #: 6058 Tax Parcel #: 195-213-40

Property Owner: _____

Job Location Address: 6313 Northern Red Oak Dr. Lot 109

City: Mint Hill State: NC Zip Code: _____

Installation Approval Issuance Date: 3/17/14

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* _____, 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: .03 GPD/ft² (For new installations only.)

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: 1000 gallons

Drainfield Design ☐ N/A

Trench Depth: 36" inches

Trench Width: 2 feet

Line Spacing: 9 feet (O.C.)

Total line length: 200 feet

# of Lines: 4 @ 50 feet

Depth of Media: NA inches (Type) IIIa PPBPS

Distribution Device: Press. LPP Dist

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 min feet

Distance from Property Line: 10 feet

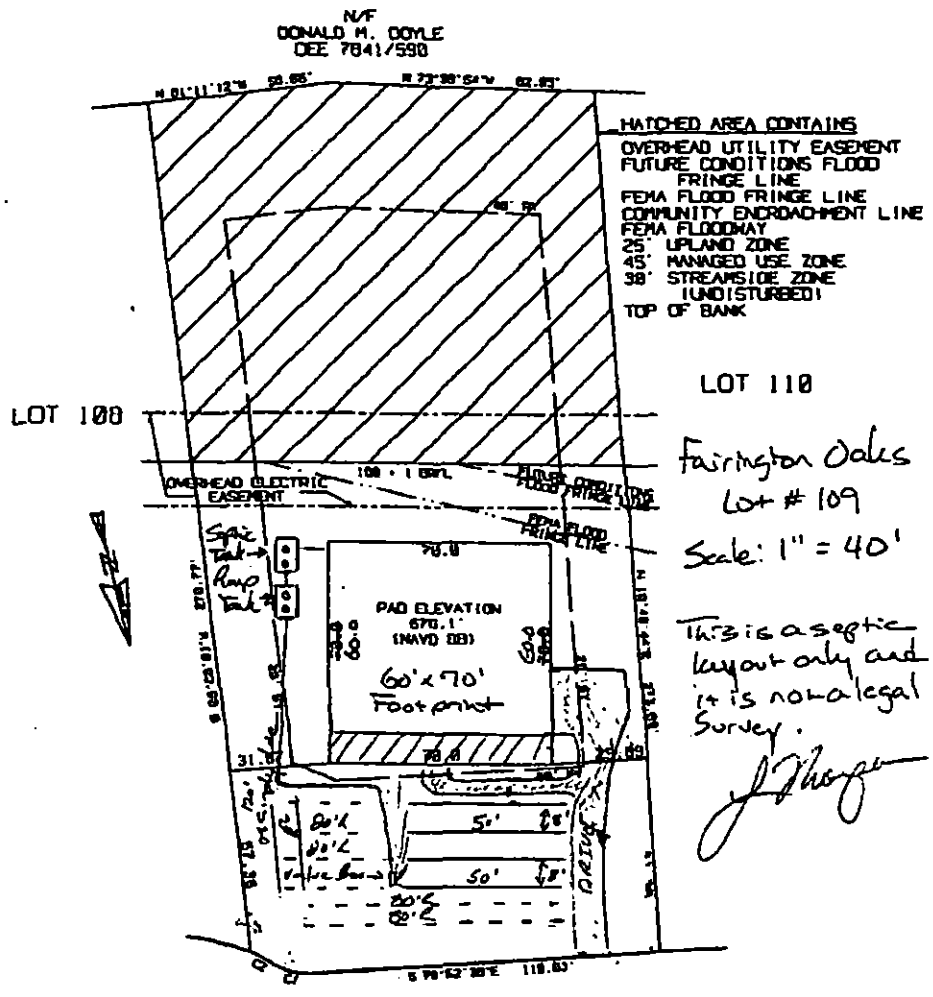
Distance from Water Supply Source: 10' min feet

SKETCH OF SYSTEM LAYOUT
(Proposed Layout)

Install system per consultant design. Do not alter without prior approval from consultants and MCHD

Comments: System Classification & Type: IIIa PPBPS.

DENR Authorized Agent: Bradley W. Hallman Signature: _____



Fairington Oaks
Lot # 109
Scale: 1" = 40'

This is a septic layout only and it is not a legal Survey.

CURVE	DELTA ANGLE	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C1	34°25'03"	20.00'	12.02'	6.29'	11.84'	S 61°33'43"E
C2	7°39'46"	60.00'	8.04'	4.52'	8.03'	S 48°15'32"E

PRELIMINARY 60' FT.
TOTAL SF TO D/C: SF
HOUSE: SF
DRIVE: SF

TRUE HOMES

Lot 109
Fairington Oaks

E.H.

STEVENS

SEPTIC SERVICE

CONTRACT

3317 New Salem Rd.
Monroe N.C. 28110

Work # (704) 289-7637

Cell#(704) 201- 9849

E-mail Address
Stevenstruckin@aol.com

Terry Stevens

Chris Stevens

STEVENS TRUCKING
& SEPTIC TANK SERVICE

MONITORING & INSPECTION PLAN

1. COSTS: INITIAL CONTRACT YEAR: $ 185 (* 2 required inspections)
$_____ (required labs)
$ 250 Total Initial Year

RENEWAL YEARS: $_____ (*one required inspections)
$_____ (required labs)
$_____ Total Renewal Year

A. The above cost will be paid at the time the sum of the first year. Contract is entered for the whole. The Owner shall pay to the ORC the aforementioned sums for each parcel listed above. Annual billings will be made thereafter and payable within 30 days of billing. The annual billings will be made on the anniversary dates. The annual renewal fees may increase no more than 10% per year. The Owner shall pay to the ORC his normal and customary fees for any authorized work performed on the System as a result of nonscheduled service or maintenance calls. These fees are due and payable within 30 days if billing. Payments due to the ORC and unpaid by the Owner after 30 days shall be assesses be late payment fee of $25.00 per month for every month thereafter.

2. PERFORMANCE DUTIES:

- Inspections and services that meet state requirements, i.e., inspections of System using an itemized check list, monitoring "septic tanks" to insure proper operation, and make adjustments of imbalances to systems through the distribution devices.
- Inspections and required lab work performed as per Attachment
- Inspection report copies are sent to the environmental regulatory agency (if applicable) and homeowner
- New Homeowner Package (educational material about their septic system) is provided
- The Owner will be advised of any repairs needed and estimated cost or repairs. Repairs will not be made without Owner authorization.
- The Owner will be advised when pumping is recommended
- To inspect system twice a year
- Inspection of the septic tank for influent and effluent line blockage, tank leakage, and level of solids accumulation on the discharge side.
- Inspection of the pump tank, including visual inspection of the unit and testing of the units pump, float switches, and control panel operations.
- The system shall be manually operated for a complete cycle to verify operation.
- Visual inspection of the area while under a normal dosing cycle, to check for seepage, unusual ground saturation, broken or damaged lines, and pipes. The field shall also be checked for any areas of erosion, proper vegetation cover, protection from traffic, and diversion of surface water.
- Check and set head pressures and flush lines if needed.

STATE OF NORTH CAROLINA
COUNTY OF Mecklenburg

STEVENS TRUCKING
& SEPTIC TANK SERVICE CONTRACT

This Contract is entered into this 4th day of April, 2014 by and between Stevens Septic, a North Carolina Corporation/Company of Union County, North Carolina (hereinafter the "ORC" or Operator in Responsible Charge) and True Homes (hereinafter "The Owner").

Property Address Lot 109 Farmston Dr. Monroe NC

Preamble

The ORC is contracting with The Owner to provide inspection services as described on Page 1 for the fees or charges also shown in Page 1.

The Owner owns or controls the property upon which a ground absorption sewage treatment system ("System") is installed, such System being designated as a type II, III, IV or V system under the Rules for Sanitary Sewage Collection. Treatment and Disposal found at 15A N.C. Admin. Code 18A. 1900 et seq.; and 15A N.C. Admin. Code 18A. 1961 requires that a condition of the Operation Permit for Type IV & V systems be that a properly executed inspection contract between the System Owner and a management entity shall be in effect for as long as the System is in use. The ORC is a management entity which employs certified operators of a type authorized by 15A N.C. Admin. Code 18a. 1961 to manage and inspect type II, III, IV, and V systems.

In consideration of the premises and of the mutual covenants and promises contained in this Agreement, it is hereby agreed by and between the Owner and the ORC as stipulated below.

Conditions of the Contract

A. The ORC, in consideration of the payment by the Owner as set out in the schedule of services and charges in Attachment A, incorporated herein, agrees:

1) To provide the services set out in Page 1 according to the minimum schedule of inspections/services required by regulations for the lots or parcels set above.

2) To report results of the inspections to the local environmental regulatory agency having jurisdiction as required by applicable laws or regulations.

3) If inspections indicated the need for System repairs:

a) To notify the local environmental regulatory agency within 48 hours.
b) To give notice to the "Owner" of needed repairs, and if the necessary repairs are outside the scope of the routine maintenance described in Page 1 then The Owner may request the ORC to provide an estimate. At the authorization of The Owner the ORC will perform the necessary repairs at the ORC's then-prevailing charges for services and materials.

4) If the ORC's services are terminated, the ORC will notify the local environmental regulatory agency within 48 hours.

B. The Owner, in consideration of the services performed, agrees:

1) To pay the ORC for its services according to the schedule of charges as set out in Page 1.

2) Within 30 days of receipt of notice of repairs under A (3) above, the Owner(s) must provide proof that repairs have been performed by a licensed or qualified entity and the System is functioning properly or request and authorize the ORC to complete the needed repairs.

3) To notify the ORC promptly of any emergency or malfunction known to it which may violate environmental, health, or other laws and regulations, and to authorize immediate repair as necessary to restore the System to proper function and operation.

4) To use reasonable efforts to provide and to maintain at all times, such access to the System as is reasonably necessary for the ORC to comply with its obligations under this Agreement.

C. **Terms of the Agreement**

1) This Agreement shall be effective for one year from the date of this contract, and will be automatically renewed from year-to-year thereafter, unless written notice of termination and non-renewal is given to the party not less than 60 days prior to the end of the then current annual contract year.

2) The real property to be serviced under this contract is listed on Page 2.

3) This Agreement automatically terminates if the Operation Permit for the system is revoked and all appeals of the revocation are exhausted or time for making an appeal has passed.

4) The parties may terminate at the end of the then current term by consent of each party or by not less than 60 days written notice to the party prior to the end of the then current contract year, and not less than 30 days written notice to the local environmental regulatory agency.

5) This Agreement may be terminated for cause for breach which remains unremedied after 15 days written notice to the defaulting party.

D. Limited Warranty

THE ORC'S SOLE DUTIES AND RESPONSIBILITIES UNDER THIS AGREEMENT IS TO PROVIDE INSPECTION AND ROUTINE MAINTENANCE ONLY AS SPECIFIED IN THIS AGREEMENT. INSPECTIONS WILL COMPLY WITH APPLICABLE CODES. LAWS. AND REGULATIONS IN FORCE AT THE TIME OF THE INSPECTION AND REPORT. WORK AND MATERIALS USED IN REPAIRS ARE WARRANTED ONLY TO BE OF GOOD WORKMANSHIP. FREE OF DEFECTS. AND CONFORM TO THE SYSTEMS SPECIFICATIONS AND EQUALS TO THE ORIGINAL PARTS AND EQUIPMENT. THE OWNER'S SOLE REMEDY UNDER THIS EXPRESS WARRANTY IS REPAIR OR REPLACEMENT AND CONSEQUENTIAL DAMAGE OR DAMAGES FOR DELAY ARE LIMITED TO TOTAL SUMS PAID THE ORC UNDER THIS AGREEMENT FOR THE PARTICULAR LOT OR PARCEL FOR THE THEN CURRENT YEAR. ALL OTHER WARRANTIES. EXPRESS OR IMPLIED. INCLUDING MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, ARE EXPRESLY AND SPECIFICALLY EXCLUDED. REPAIRS. REPLACEMENTS.ADDITIONS AND CHANGES BY OTHERS TO THE SYSTEMS COVERED BY THIS AGREEMENT WITHOUT PRIOR NOTICE TO THE ORC OR ACCEPTANCE OF THE WORK BY THE ORC DURING THE TERM OF THIS AGREEMENT VOIDS ANY WARRANTY GRANTED HEREIN AS TO THE ORC.

E. Miscellaneous

1) Transfer of rights. responsibilities, and duties under this Agreement by any party shall be valid only on written notice and consent signed by all parties, which consent shall not be unreasonably or arbitrarily withheld.

2) The ORC may perform its duties and responsibilities by subcontract but the ORC will remain directly liable and responsible to the Owner under the terms of this Agreement.

3) Waiver of default or a breach of the Agreement by any party shall not operate nor be construed as a waiver of further or subsequent defaults or breach of this Agreement. Failure to take action in any default or breach does not bear action on such default at any time subsequent to such breach or default.

4) This agreement constitutes the entire agreement of the parties, incorporating, and superseding all prior representations and negotiation and may not be changed or amended except in writing signed by the parties. The Agreement shall be interpreted under North Carolina law. Any part of the Agreement declared void, illegal, or unenforceable will not affect other provisions of the Agreement.

5) Disputes arising under this Agreement shall be determined by any method of Alternative Dispute Resolution the parties choose. including but not limited to, mediation or arbitration. under the Uniform Arbitration Act of North Carolina or its equivalent. or such means or methods as the parties agree to in writing.

Items not covered by this contract include the following:

A. The repair or replacement of any system component after expiration of the stated warranty.
B. Removal of obstructions in sewer pipes. supply . and LPP Laterals.
C. Repair or replacement of any system piping.
D. Repair of replacement of pumps, floats. and control panel components.
E. Laboratory Analysis of effluent samples as required by the State after the first year.
F. Other special requests by the homeowner.

Each party has executed this Agreement with full power, authority, and legal right to enter into; to bind itself to the rights, duties and responsibilities under this Agreement, which is binding on the parties, their successors and assigns, heirs and personal representatives, on the date first above written.

ATTEST:

_____

OWNER:

_____

ATTEST:

_____

Company Name

By: Stevens Septic Service

Title: _____

License numbers: 996735

_____

_____

Residential Subsurface Wastewater Treatment and Disposal System Proposal

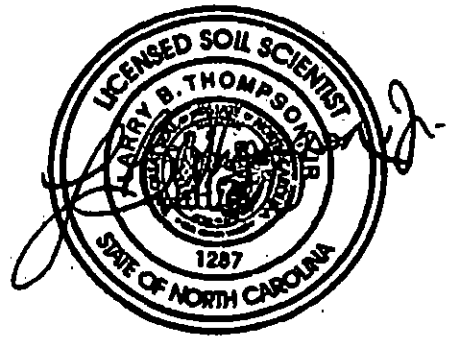
for

Fairington Oaks – Lot 109
Mint Hill, North Carolina

Tax Parcel # 195-213-40
MCGWS File # 8680B
February 6, 2014

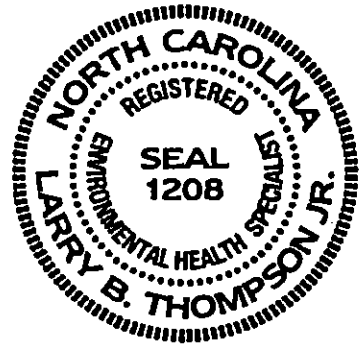
Prepared for:

True Homes
2649 Brekonridge Centre Drive
Monroe, NC 28110
704-238-1229



Prepared by:

Larry Thompson, REHS, PWS, LSS
Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107-0541
Phone: 704-301-4881
Fax: 704-888-6066
larry@thompsonenv.com



cc: Mr. Bradley Hallman, REHS
Mecklenburg County Environmental Health

True Homes must assure that all utilities are routed around the proposed septic drainfield and its repair area. These areas must be protected from traffic and any form of encroachment.

Details

True Homes has contracted with Thompson Environmental Consulting, Inc. (TEC) to develop a proposal for an on-site wastewater treatment and disposal system that would allow for the construction of a 3-bedroom single family residence served by a municipal water supply to be located at Lot 109 in the Fairington Oaks subdivision, Mint Hill, North Carolina.

Based upon an investigation performed by TEC it was determined that a sufficient amount of "Suitable" Group IV soils are available on this property for the installation of a pressure-dosed prefabricated porous block panel system (PPBPS). The proposed repair system would be a low-pressure dosed PPBPS as well.

True Homes requests that Mecklenburg County Groundwater and Wastewater Services (MCGWS) consider issuing an Improvement Permit and Construction Authorization for a 3-bedroom residence to be located on Lot 83 based upon the following revised proposal.

Location

The subject property is located on Fairington Oaks Drive in Mint Hill, North Carolina. From downtown Charlotte, travel east on NC 24-27 approximately 10 miles. Turn left onto NC 51 and take a right onto Matthews-Mint Hill Road. Turn right onto Idlewild Road and left onto Thompson Road. Travel approximately 1.1 miles and turn left onto Fairington Oaks Drive and left. Turn left onto Deer Oak Lane and left onto Northern Red Oak Drive. Lot 107 is located on the right just before the cul-de-sac.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, August 2007.

Onsite Wastewater Treatment and Disposal Systems; EPA 625/R-00/008 Design Manual, February 2002.

Design, Installation and Maintenance of the T & J Panel Wastewater Treatment System; Sixth Edition, published by T & J Panel.

Primary Investigator's Credentials

NC Registered Sanitarian No. 1208
NC Licensed Soil Scientist No. 1287
Professional Wetland Scientist No. 1346

NC Subsurface Septic System Operator No. 22199
NC Grade IV Wastewater System Installer No. 1762
NC Certified Wastewater System Inspector No. 17621

Plans and Specifications

A. Septic Tank

1. The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and 1500 gallons in capacity.
2. The septic tank will be fitted with an approved effluent filter and riser for easy access and periodic maintenance.
3. It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tank has had time to properly cure and is free of cracks or other structural deficiencies.

B. Pump Tank

1. The pump tank shall be State approved, of one-piece construction, watertight, structurally sound and 1000 gallons in capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
2. All pipe penetrations into the tank shall be booted (i.e., C-293 boot with a stainless steel strap).
3. The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
4. Floats, pump and control circuits, and the control panel shall meet the requirements of Rule .1952(c). Panel and control equipment shall include lightning protection, be protected from unauthorized access, and remain accessible at all times to the system operator.
5. The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, Nema 4x rated control panel. The control panel must be securely mounted outside, adjacent to the pump tank riser and at a minimum of 12 inches above finished grade. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
6. Float switch tie downs must be made of a corrosion resistant material (per OWPS, all metal in the tanks shall be stainless steel). Floats should be mounted on a separate "float tree" rather than the pump supply line (see pump tank detail).
7. The pump removal system will be via a pump tether made of nylon rope or its equivalent. The tether material should be resistant to mildew and rot.

Panel Wastewater Treatment System, Patent No. 4013559; telephone: 1-800-222-2577. The installer must follow the manufacturer's guidelines for installing the T&J Panel System and should request an installation manual from the manufacturer prior to beginning construction.

4. The initial drain field consists of four (4) lateral trenches 2 feet wide by 50 feet long.
5. It is essential that the lateral trenches be constructed on contour with the land, with each trench being excavated level from beginning to end. The use of a tripod mounted engineer's level is essential to assure that each trench is constructed as level as possible.
6. The maximum trench depth for this system shall be **36 inches**. Each trench shall be placed on a minimum of 8 foot on centers.
7. Once trenches are dug, the side walls shall be raked and a light dusting of lime applied.
8. Backfill the trench with 6 inches of sand and level to grade. Once leveled, place 1 x 4 or 6 inch boards on top of the sand the entire length of each trench. Once the grade boards have been set, the panels may be set into the trench. The panels should be placed 6 inches apart.
9. Once the panels have been set, line the top chamber of each panel with 10 – 12 pounds of clean particle sand (medium sand blasting sand). Coverage depth should be approximately 1 inch thick. *Please note that this sand is not the same material specified for backfill.*
10. Tar seal rope, or approved foam, should be placed in the "U" outs of each end of the panel to form seals. Once the tar rope is in place, the 1¼ inch Schedule 40 PVC laterals can be added and the seal completed by the addition of more tar rope on the top and sides of the pipe. Now that the connection and seals are complete, a block cap is placed on each end of the panel so that all openings are covered.
11. The end of each lateral should be fitted with a short turn up topped by a threaded female coupling with cap. Each turn up must be fitted with a turf/gate valve box with lid fitted flush to finished grade.
12. Once the lateral has been installed and the panels closed, the trench is ready to be backfilled to the top with the sand used in the trench bottom. At this point, the trenches should be left open for the final inspection by the MCGWS.

G. Proper Operation Check

1. After all components of the waste water disposal system have been installed and connected, the system shall be checked for proper operation.
2. With the electrical power turned off, fill the pump tank with water until the liquid rises to a level high enough to activate the high water alarm float. Turn on the electrical power. The alarm, alarm light and pump should activate at this time. Turn off the electrical power once these checks have been performed and prepare to set the head pressure at the valve box.

H. Pressure Head Adjustment

1. The pressure head must be adjusted to match the design specifications. The pressure head is measured by the height of the liquid coming from the turn ups at the end of each lateral when the pump is running (utilizing stand pipes).
2. Prepare a length of pipe (stand pipe), cut to the desired head pressure height and fitted with a threaded adapter that will screw into the turn up couplings at the end of each lateral. Thread the stand pipes into each lateral and then turn the power on to the pump, allowing the water to rise within the stand pipes. Adjust the gate valves within the supply manifold box to achieve the specified head pressure (liquid height in the stand pipes should equal the design head pressure).
3. Once the pressure head has been adjusted, allow the pump to run through the remainder of the cycle. The pump float switch will automatically turn the pump off if it is operating properly. Make sure that the effluent pump is completely submerged in the remaining water, making adjustments to the float switch(es) as needed. This completes the checks for proper operation of the pump, alarm and float switches.
4. At this point, the standpipes may be removed and replaced with the threaded turn up caps.

1. The minimum inspection/maintenance and reporting frequency for a Type IVa system is twice a year by the Certified Operator. The local health department is required to inspect the system once every three years.
2. The septic and pump tanks shall be pumped out when the solids within the septic tank reach an elevation that is equivalent to 25% of the volume of the tank. In some situations, the tanks may need to be pumped more frequently; for example, if you are using a garbage disposal, it is recommended that the septic and pump tanks be cleaned out annually. Regardless, the Certified Operator will be able to advise when it is necessary to pump out tank solids.
3. Pressure head for laterals should be checked and adjusted semi-annually, flushing with clean water as necessary to remove any accumulated solids.
4. The effluent filters should be inspected semi-annually. When it becomes necessary to clean the effluent filters, the filters should be removed and the accumulated debris washed back into the septic or pump tank – not onto the lawn.
5. All piping and valves should be inspected semi-annually for damage and corrections/repairs made immediately.
6. The pump and float controls/switches should be inspected semi-annually to assure proper operation.
7. The drain field area should be maintained to prevent over growth of vegetation. Any damp areas, leakages or malfunctions should be addressed immediately.
8. Divert gutter downspouts and surface water runoff away from the septic and pump tanks.

L. Suggestions to the Homeowner

1. As previously mentioned, a garbage disposal is not recommended. The ground up garbage adds large amounts of solids into a septic tank that tend to degrade at a very slow rate.
2. Grease, cooking oils, coffee grounds and non-degradable solids (disposable diapers, cigarettes and solid paper wastes) should never be put into a septic tank.
3. Used motor oil or any oily liquids should not be disposed of in a septic tank.
4. Be aware of the amount of water that you are using in your home. Water saving fixtures and devices can be installed on sinks, toilets and showers to reduce the volume of wastewater that you are sending to your drain field.
5. Run dishwashers and washing machines only when you have a full load.
6. Repair leaky faucets and toilets. Small drips equal large volumes of water over time and can over burden your drain field.
7. Do not use chemical additives in your system. Studies have indicated that they do not increase the biological activity that naturally occurs in the septic system and in some cases certain additives have been found to be detrimental to the life of a system.

Design Specifics

Daily Design Flow:	360 GPD – 3 bedroom house
Septic Tank Size:	1500 Gallons
Pump Tank Size:	1000 gallons
Effluent Loading Rate:	Design = 0.3 GPD per sq. ft. (50 % reduction - PPBPS)
Supply Line Length:	Approximately 120 Feet
Number and Size of Drainlines:	(4) 2' Wide x 50' Long
Maximum Trench Depth:	36 Inches Deep
Drainline Spacing:	8 Foot on Centers
Total Length of Drainline:	200 Feet
Total Number of Panels:	44
Lateral Hole Size:	5/32 inch
Hole Spacing:	1 per panel = 44 total
Dosing Volume:	158.40 gallons per dose
Flow Rate Through System:	18.04 gallons per minute
Elevation Head:	18 feet
Pressure Head:	2 feet
Pump Requirements:	18.04 GPM at 20 Feet TDH
Recommended Pump:	Goulds WEO3M or equiv.
Depth of Water Pumped:	7.92" check with individual tank manufacturer (1 cu. Ft. of water equals 7.5 gal.)

Repair Specifics

Effluent Loading Rate For Repair System:	0.3 GPD per sq. ft.
Repair Drainfield Type:	Low-Pressure PPBPS
Number of Drainlines:	6
Drain Lines:	(6) 2' Wide 4 at 30 Feet Long 2 at 40 Feet Long
Maximum Trench Depth:	36 Inches Deep
Drainline Spacing:	8 Foot on Centers
Total Length of Drainline:	200 Feet
Total Number of Panels:	44
Lateral Hole Size:	5/32 inch
Hole Spacing:	1 per panel = 44 total
Dosing Volume:	158.40 gallons per dose
Flow Rate Through System:	18.04 gallons per minute
Elevation Head:	18 feet
Pressure Head:	2 feet
Pump Requirements:	18.04 GPM at 20 Feet TDH
Recommended Pump:	Goulds WEO3M or equiv.
Depth of Water Pumped:	7.92" check with individual tank manufacturer (1 cu. Ft. of water equals 7.5 gal.)

*See septic layout for site locations and additional details.

PPBPS Design Worksheet							File #:	8680B		
							Tax #:	195-213-40		
System Requirements							Address:	Fairington Oaks - Lot 109		
Design Flow	360	gpd						Charlotte, NC		
LTAR	0.250	gpd/ft.^2					Consultant:	Larry Thompson		
Linear footage	480	ft. (conventional)					Phone:	704-301-4881		
Linear footage	240	ft. (50% Reduction)								
							Reviewed By:			
Design Layout							Date:			
Laterals	Length (ft)	# Panels								
Line # 1	50	11								
Line # 2	50	11								
Line # 3	50	11								
Line # 4	50	11								
Totals	**200**	**44**								
Absorption Area										
Length (ft)	Width (ft)	Area (ft^2)								
200	3	600								
System Pressure Head	2	ft.	Value selected by system designer (must be between 2-5 ft.)							
Orifice Diameter	5/32	in.	Size selected by system designer (1/8 in. minimum)							
Flow Rate per Orifice	0.41	gpm	Determined from orifice flow design table (value dependent on pressure head & orifice diameter)							
Total System Flow Rate	18.04	gpm	Total number of panels required multiplied by the orifice flow rate							
System Dose Volume	158.40	gal.	Total number of panels required multiplied by 3.6 gal./panel							
Pump Run Time	8.78	min.	System dose volume divided by the total system flow rate							
Pump Tank Drawdown	7.92	in.								
Comments:										
1. Install system using 3 ft. wide trenches.										
2. Install drainlines on 9 ft. centers, level, and on contour.										
3. System design requires effluent pump for distribution.										
4. 100% repair area required for property.										

T & J Panels	
Linear Feet	# Panels
50	11
60	14
70	16
80	18
90	21
100	23

Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107-0541
704-301-4881

SHEET 1 OF 1

COUNTY: Mecklenburg
TAX ID: *195-213-40*

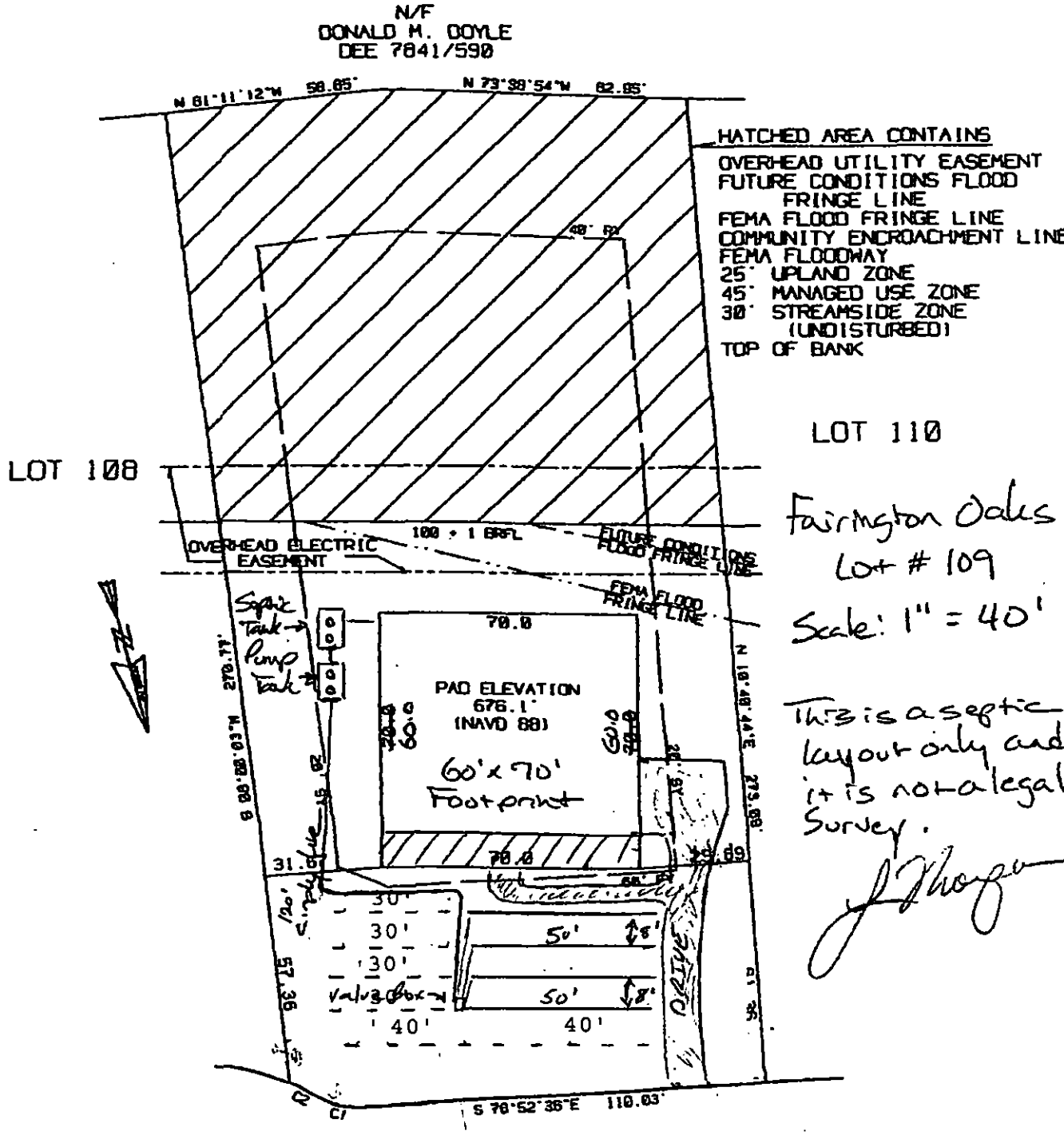
OWNER: True Homes
LOCATION: Fairington Oaks - Lot 109

DATE: April 2, 2013

PROFILES		Pit 1	Pit 2								
LANDSCAPE POSITION	.1940	ls	ls								
SLOPE (%)	.1940	4%	4%								
HORIZON 1 DEPTH	.1943	0-11	0-6								
TEXTURE	.1941 (a)(1)	cl	cl								
CONSISTENCE	.1941	fr	fr								
STRUCTURE	.1941 (a)(2)	sbk	sbk								
CLAY MINERALOGY	.1941 (a)(3)	se	se								
HORIZON 2 DEPTH	.1943	11-50+	6-50+								
TEXTURE	.1941 (a)(1)	c	c								
CONSISTENCE	.1941	fi	fi								
STRUCTURE	.1941 (a)(2)	sbk	sbk								
CLAY MINERALOGY	.1941 (a)(3)	se	se								
HORIZON 3 DEPTH	.1943										
TEXTURE	.1941 (a)(1)										
CONSISTENCE	.1941										
STRUCTURE	.1941 (a)(2)										
CLAY MINERALOGY	.1941 (a)(3)										
HORIZON 4 DEPTH	.1943										
TEXTURE	.1941 (a)(1)										
CONSISTENCE	.1941										
STRUCTURE	.1941 (a)(2)										
CLAY MINERALOGY	.1941 (a)(3)										
SOIL WETNESS	.1942										
RESTRICTIVE HORIZON	.1944										
SAPROLITE	.1943/.1956										
CLASSIFICATION	.1948	s	s								
L.T.A.R. (gpd/ft^2)	.1955	0.3	0.3								

OTHER FACTORS (.1946):		**SITE LTAR (gpd/ft^2):**	**0.3**
AVAILABLE SPACE (.1945):	provisionally suitable		
SITE CLASSIFICATION (.1948):	provisionally suitable	SYSTEM TYPE:	PPBPS
EVALUATED BY:	Larry Thompson	OTHERS PRESENT:	

COMMENTS:



Fairington Oaks
Lot # 109
Scale: 1" = 40'

This is a septic layout only and it is not a legal Survey.

NORTHERN RED OAK DRIVE

60' PUBLIC R/W

CURVE	DELTA ANGLE	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C 1	34°28'03"	28.00'	12.62'	6.28'	11.84'	S 61°39'49"E
C 2	7°38'48"	65.00'	8.64'	4.32'	8.63'	S 48°15'32"E

PRELIMINARY SQ. FT.
TOTAL SF TO B/C: SF
HOUSE: SF
DRIVE: SF HOUSE-R/W
SF R/W-B/C

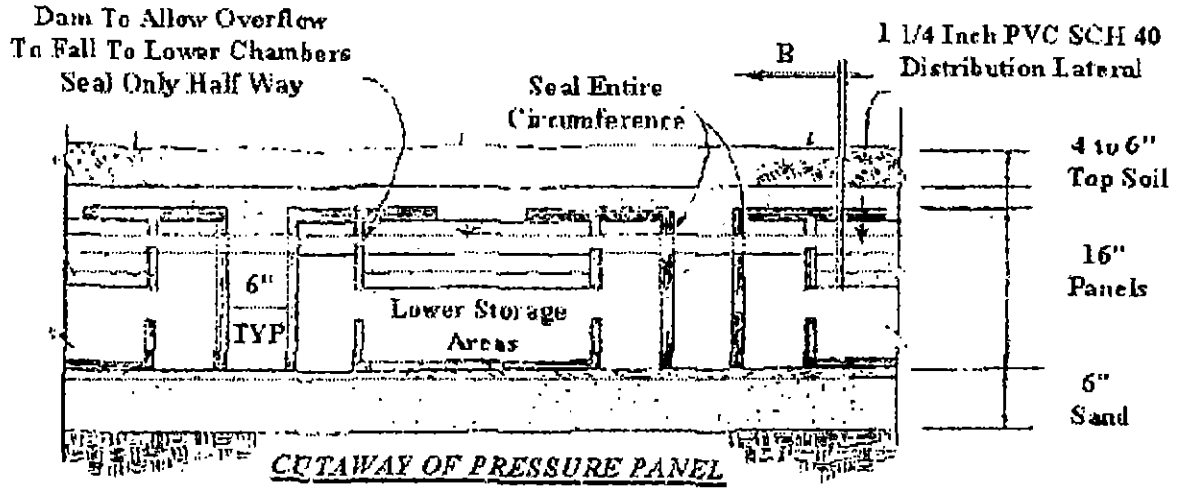
TRUE HOMES

Thompson Environmental Consulting
PO Box 541
Midland, NC 28107-0541

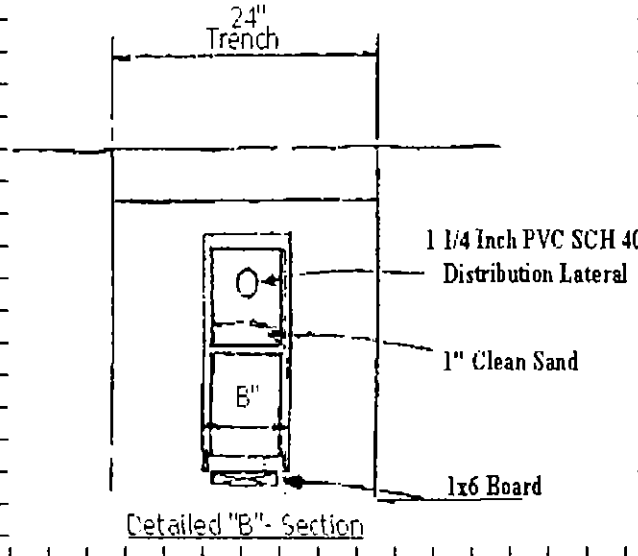
Tax ID Number: 195-213-40

Location: Lot 109 – Fairington Oaks

Date: October 12, 2013



CUTAWAY OF PRESSURE PANEL



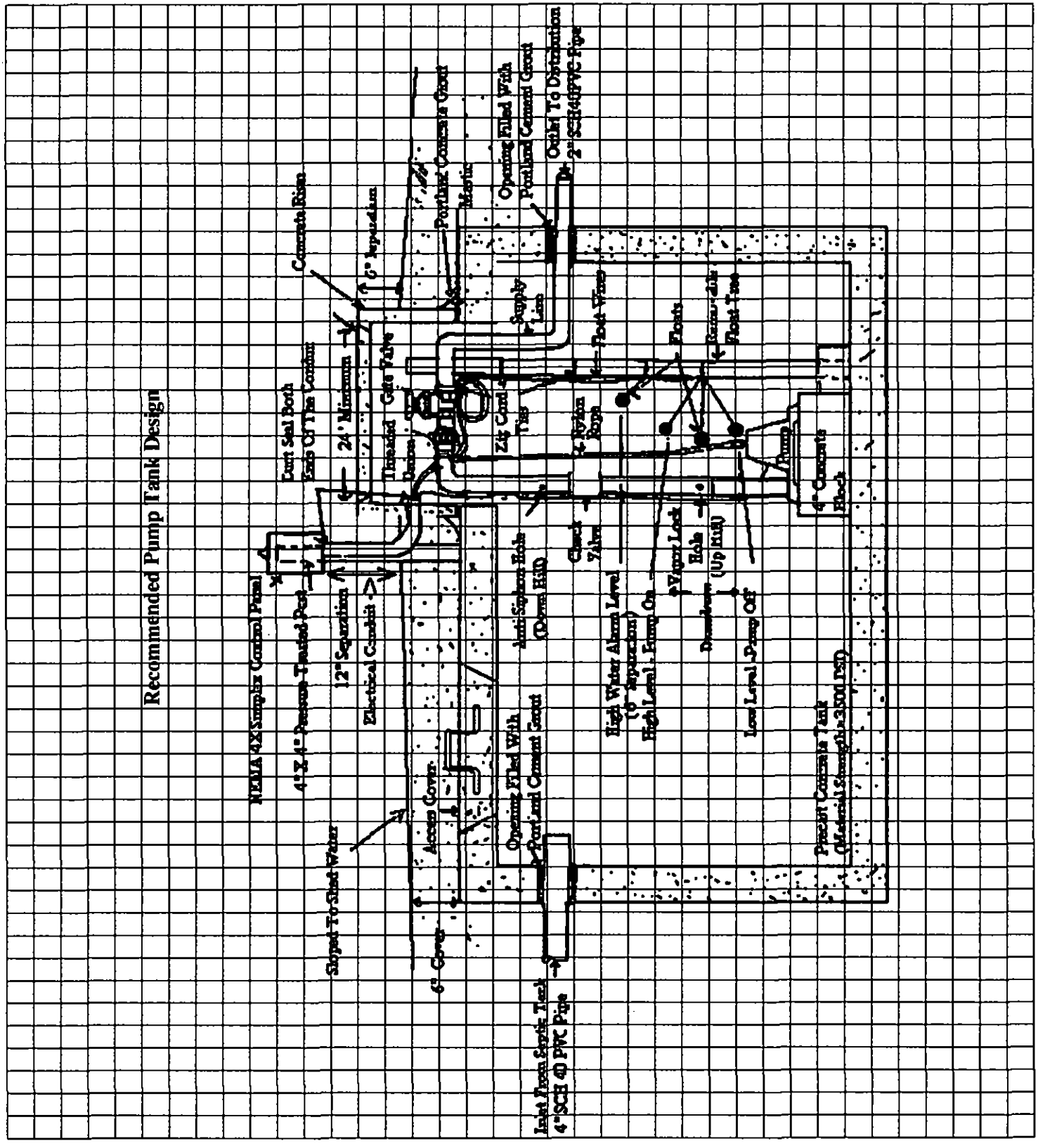
Detailed "B"- Section

Thompson Environmental Consulting
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 195-213-40

Location: Lot 109 – Fairington Oaks

Date: October 12, 2013



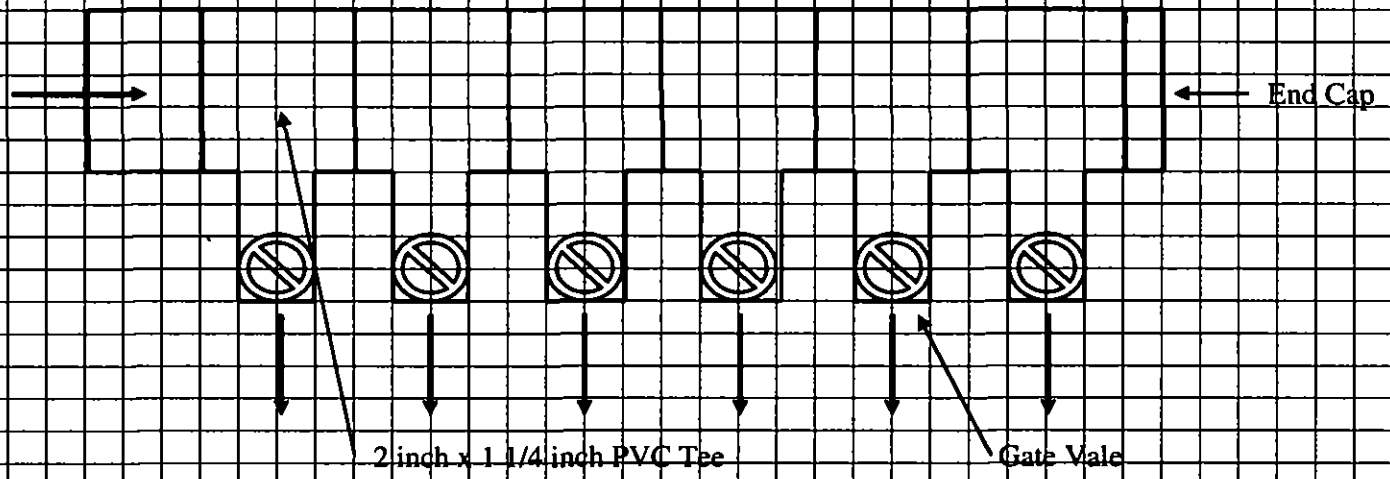
Thompson Environmental Consulting
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 195-213-40

Location: Lot 109 – Fairington Oaks

Date: October 12, 2013

Recommended PPBPS Manifold Setup



GOULDS PUMPS



Submersible Effluent Pump

MODEL 3885

WE Series

PROSURANCE AVAILABLE FOR RESIDENTIAL APPLICATIONS.

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 140 GPM.
- Total heads: up to 128 feet TDH.
- Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent.
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

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.

■ **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 all models to guard against component damage on accidental reverse rotation.

■ **Fasteners:** 300 series stainless steel.

■ Capable of running dry without damage to components.

■ Designed for continuous operation when fully submerged.

MOTORS

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

■ Class B insulation on ⅓-1½ HP models.

■ Class F insulation on 2 HP models.

Single phase (60 Hz):

- Capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.
- SJTOW or STOW severe duty oil and water resistant power cords.
- ⅓ and ½ HP models have NEMA three prong grounding plugs.
- ¾ HP and larger units have bare lead cord ends.

Three phase (60 Hz):

- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.

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

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

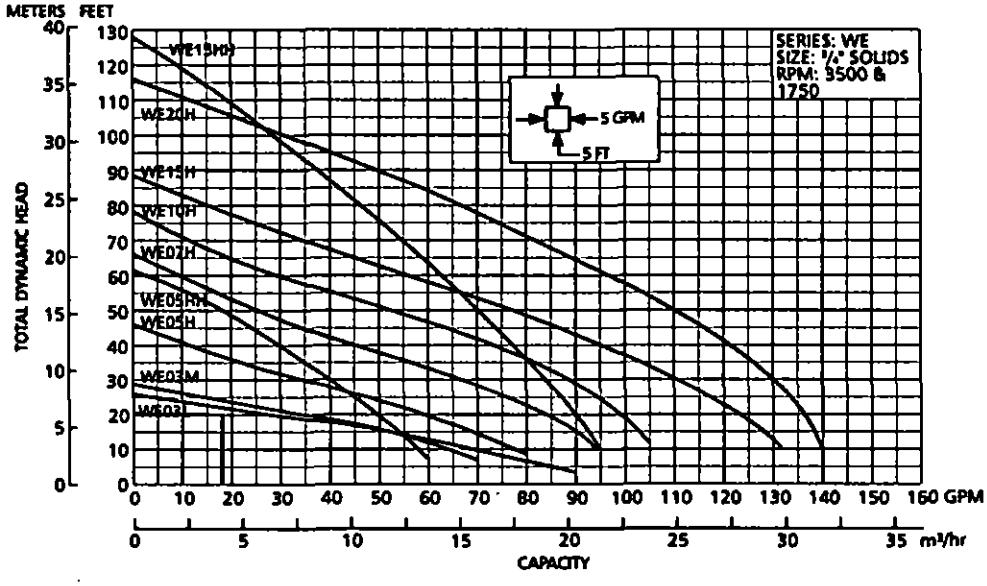
■ **Power Cable:** Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.

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

AGENCY LISTINGS

Tested to UL 778 and CSA 22.2 108 Standards By Canadian Standards Association File #LR38549

Goulds Pumps is ISO 9001 Registered.



Goulds Pumps

ITT Industries

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Effective July, 2003
83885

www.goulds.com

GOULDS PUMPS

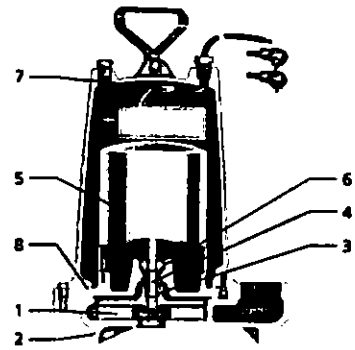
Submersible Effluent Pump

MODEL 3885

WE Series

COMPONENTS

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casing O-Ring



MODELS

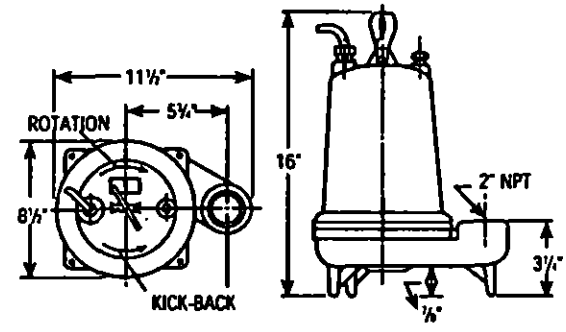
Order No.	HP	Volts	Phase	Max. Amp.	RPM	Solids	Wt. (lbs.)
WE0311L	⅓	115	1	10.7	1750	½"	56
WE0318L		208		6.8			
WE0312L		230		4.9			
WE0311M		115		10.7			
WE0318M		208		6.8			
WE0312M		230		4.9			
WE0511H	½	115	1	14.5	3500		60
WE0518H		208		8.1			
WE0512H		230		7.3			
WE0538H		200	3	4.9			
WE0532H		230		3.3			
WE0534H		460		1.7			
WE0537H		575		1.4			
WE0511HH		115	1	14.5			
WE0518HH		208		8.1			
WE0512HH		230		7.3			
WE0538HH		200	3	4.9			
WE0532HH		230		3.6			
WE0534HH		460		1.8			
WE0537HH		575		1.5			
WE0718H	¾	208	1	11.0			70
WE0712H		230		10.0			
WE0738H		200	3	6.2			
WE0732H		230		5.4			
WE0734H		460		2.7			
WE0737H		575		2.2			
WE1018H	1	208	1	14.0			
WE1012H		230		12.5			
WE1038H		200	3	8.1			
WE1032H		230		7.0			
WE1034H		460		3.5			
WE1037H		575		2.8			
WE1518H	1½	208	1	17.5			80
WE1512H		230		15.7			
WE1538H		200	3	10.6			
WE1532H		230		9.2			
WE1534H		460		4.6			
WE1537H		575		3.7			
WE1518HH		208	1	17.5			
WE1512HH		230		15.7			
WE1538HH		200	3	10.6			
WE1532HH		230		9.2			
WE1534HH		460		4.6			
WE1537HH		575		3.7			
WE2012H	2	230	1	18.0			83
WE2038H		200	3	12.0			
WE2032H		230		11.6			
WE2034H		460		5.8			
WE2037H		575		4.7			

PERFORMANCE RATINGS (gallons per minute)

Total Head Feet of Water	Order No.	WE03L	WE03M	WE05H	WE07H	WE10H	WE15H	WE05HH	WE15HH	WE20H
	HP	⅓	⅓	½	¾	1	1½	½	1½	2
	RPM	1750	1750	3500	3500	3500	3500	3500	3500	3500
	5	86	–	–	–	–	–	–	–	–
	10	70	63	78	–	–	–	58	–	–
	15	52	50	70	80	–	–	53	–	–
	20	27	35	60	83	98	123	49	90	136
	25	–	–	48	76	94	117	45	87	133
	30	–	–	35	67	88	110	40	83	130
	35	–	–	20	57	82	103	35	80	126
	40	–	–	–	45	74	95	30	77	121
	45	–	–	–	35	64	86	25	74	116
	50	–	–	–	25	53	77	–	70	110
	55	–	–	–	–	40	67	–	66	103
	60	–	–	–	–	30	56	–	63	96
	65	–	–	–	–	20	45	–	58	89
	70	–	–	–	–	–	35	–	55	81
	75	–	–	–	–	–	25	–	51	74
	80	–	–	–	–	–	–	–	47	66
	90	–	–	–	–	–	–	–	37	49
	100	–	–	–	–	–	–	–	28	30

DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



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SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Goulds Pumps

ITT Industries

FEE: 200.00
DATE: 4/10/2014

CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 8680B

PERMIT NUMBER: 30006058

PARCEL NUMBER: 19521340

JOB LOCATION INFORMATION

ADDRESS: 6313 NORTHERN RED OAK DR

CITY: CHARLOTTE **STATE: NC** **ZIP:** 28227

ISSUED TO: True Homes

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 10/18/2013

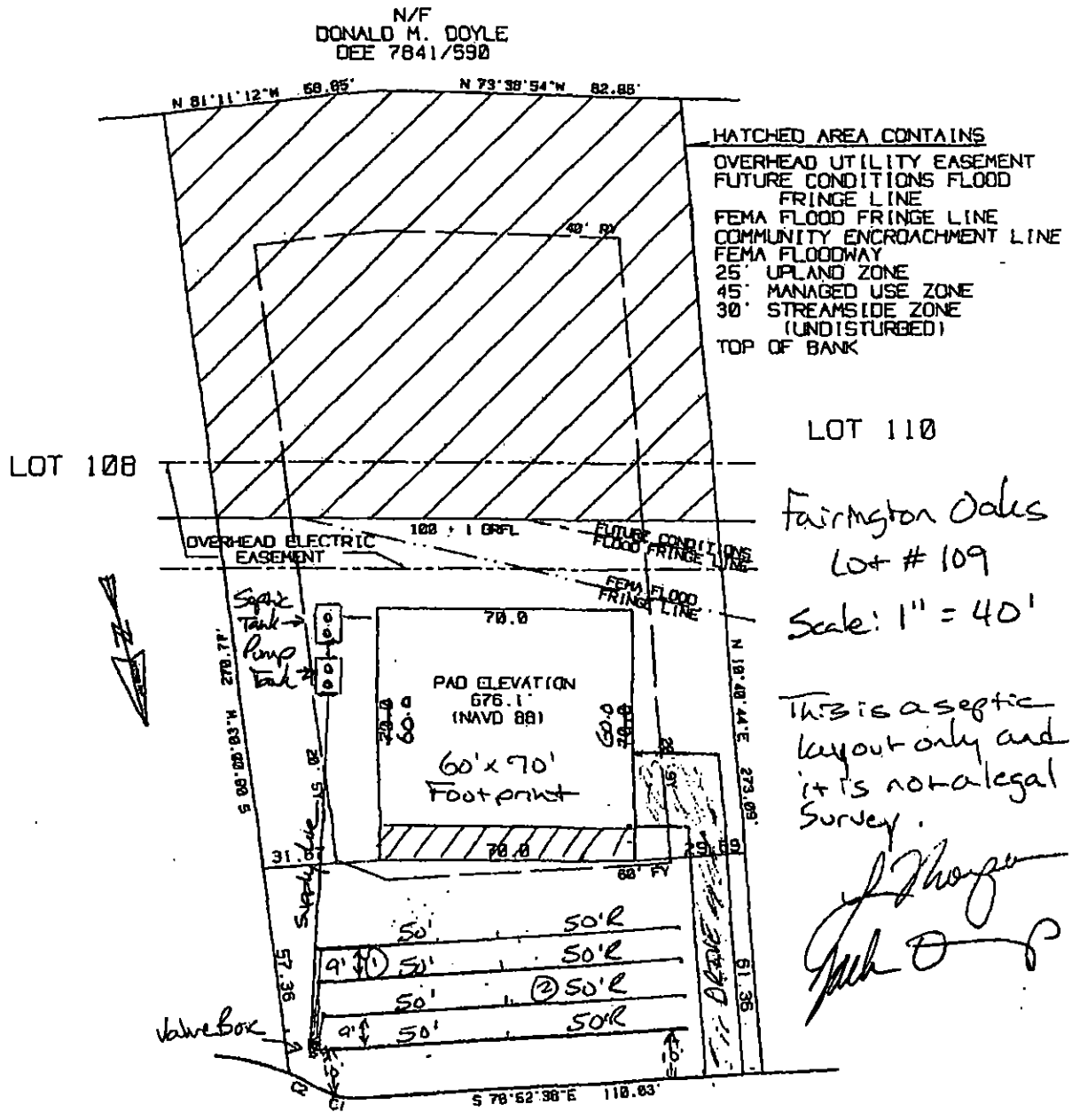
CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30006058, 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: 10/18/2018



NORTHERN RED OAK DRIVE

60' PUBLIC R/W

CURVE	DELTA ANGLE	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C 1	34°28'03"	20.00'	12.02'	6.20'	11.84'	S 61°38'48"E
C 2	7°38'48"	65.00'	8.64'	4.32'	8.69'	S 48°15'32"E

PRELIMINARY 60. FT.
TOTAL SF TO B/C: SF

HOUSE: SF
DRIVE: SF HOUSE-R/W
SF R/W-B/C

TRUE HOMES

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 #: 30006058 GWS File #: 8680B Tax Parcel #: 196-213-40

- 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):** 10/18/2018

Type of Installation: Residential - New System Lot Number: 109

Structure Type: HOUSE Size (ft^2): 3600 # Bedrooms: 3 # Occupants: 6

Building Foundation: Crawl Space Water Supply: Municipal

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: PPBPS (pressurized) **System Classification:** IVa

Repair System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	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: Brad Hallman Owner/Legal Agent: Jackie Draup
Print Name

Signature: Signature:

Date Issued: 10/18/2018

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 #: **30006058** GWS File #: **8680B** Tax Parcel #: **195-213-40**

- 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):** 10/18/2018

Type of Installation: Residential - New System Lot Number: 109

Structure Type: HOUSE Size (ft^2): 3600 # Bedrooms: 3 # Occupants: 6

Building Foundation: Crawl Space Water Supply: Municipal

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	2	Trench Spacing (ft):	9	Absorption Area (ft^2):	400	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: PPBPS (pressurized) **System Classification:** IVa

Repair System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	2	Trench Spacing (ft):	9	Absorption Area (ft^2):	400	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	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: Brad Hallman Owner/Legal Agent: _____
Print Name

Signature: _____ Signature: _____

Date Issued: 10/18/2013

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 #: **30006058** GWS File #: **8680B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 years 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.
- This type of repair system requires the installation of a pump tank and all associated components. This type of system will require routine inspections by our office. The system owner is responsible for all fees associated with these inspections.
- This type of repair system requires the property owner to obtain a contract with a Certified Operator to perform routine inspections and maintenance on the system.
- This type of repair system requires periodic inspections by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- 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.
- Flow from all gutters and downspouts shall be directed not to discharge water onto or across any part of the septic system.
- Foundation drains shall be constructed not to discharge water onto or across any part of the septic system.

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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- 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: Brad Hallman

Signature: _____

Date Issued: 10/18/2013

Owner/Legal Agent: _____
Print Name

Signature: _____

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6884

NC DENR
Division of Environmental Health
On-Site Wastewater Section

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

Permit #: 30006068 *GWS File #:* 8680B

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 years 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.
- This type of repair system requires the installation of a pump tank and all associated components. This type of system will require routine inspections by our office. The system owner is responsible for all fees associated with these inspections.
- This type of repair system requires the property owner to obtain a contract with a Certified Operator to perform routine inspections and maintenance on the system.
- This type of repair system requires periodic inspections by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- 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.
- Flow from all gutters and downspouts shall be directed not to discharge water onto or across any part of the septic system.
- Foundation drains shall be constructed not to discharge water onto or across any part of the septic system.

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: Brad Hallman
Signature:
Date Issued: 10/18/2013

Owner/Legal Agent: Jackie Dracup
Print Name
Signature:

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 #: **30006058** GWS File #: **8680B** Tax Parcel #: **195-213-40**

- 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):** 10/18/2018

Type of Installation: Residential - New System Lot Number: 109

Structure Type: HOUSE Size (ft^2): 3600 # Bedrooms: 3 # Occupants: 6

Building Foundation: Crawl Space Water Supply: Municipal

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: PPBPS (pressurized) **System Classification:** IVa

Repair System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	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: Brad Hallman Owner/Legal Agent: _____
Print Name

Signature: _____ Signature: _____

Date Issued: 10/18/2013

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 #: **30006058** GWS File #: **8680B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 years 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.
- This type of repair system requires the installation of a pump tank and all associated components. This type of system will require routine inspections by our office. The system owner is responsible for all fees associated with these inspections.
- This type of repair system requires the property owner to obtain a contract with a Certified Operator to perform routine inspections and maintenance on the system.
- This type of repair system requires periodic inspections by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- 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.
- Flow from all gutters and downspouts shall be directed not to discharge water onto or across any part of the septic system.
- Foundation drains shall be constructed not to discharge water onto or across any part of the septic system.

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: Brad Hallman

Signature: _____

Date Issued: 10/18/2013

Owner/Legal Agent: _____
Print Name

Signature: _____

Details

True Homes has contracted with Thompson Environmental Consulting, Inc. (TEC) to develop a proposal for an on-site wastewater treatment and disposal system that would allow for the construction of a 3-bedroom single family residence served by a municipal water supply to be located at Lot 109 in the Fairington Oaks subdivision, Mint Hill, North Carolina.

Based upon an investigation performed by TEC it was determined that a sufficient amount of "Suitable" Group IV soils are available on this property for the installation of a pressure-dosed prefabricated porous block panel system (PPBPS). The proposed repair system would be a low-pressure dosed PPBPS as well.

True Homes requests that Mecklenburg County Groundwater and Wastewater Services (MCGWS) consider issuing an Improvement Permit and Construction Authorization for a 3-bedroom residence to be located on Lot 83 based upon the following proposal.

Location

The subject property is located on Fairington Oaks Drive in Mint Hill, North Carolina. From downtown Charlotte, travel east on NC 24-27 approximately 10 miles. Turn left onto NC 51 and take a right onto Matthews-Mint Hill Road. Turn right onto Idlewild Road and left onto Thompson Road. Travel approximately 1.1 miles and turn left onto Fairington Oaks Drive and left. Turn left onto Deer Oak Lane and left onto Northern Red Oak Drive. Lot 107 is located on the right just before the cul-de-sac.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, August 2007.

Onsite Wastewater Treatment and Disposal Systems; EPA 625/R-00/008 Design Manual, February 2002.

Design, Installation and Maintenance of the T & J Panel Wastewater Treatment System; Sixth Edition, published by T & J Panel.

Primary Investigator's Credentials

NC Registered Sanitarian No. 1208
NC Licensed Soil Scientist No. 1287
Professional Wetland Scientist No. 1346
NC Subsurface Septic System Operator No. 22199
NC Grade IV Wastewater System Installer No. 1762
NC Certified Wastewater System Inspector No. 17621

Plans and Specifications

A. Septic Tank

1. The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and 1500 gallons in capacity.
2. The septic tank will be fitted with an approved effluent filter and riser for easy access and periodic maintenance.
3. It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tank has had time to properly cure and is free of cracks or other structural deficiencies.

B. Pump Tank

1. The pump tank shall be State approved, of one-piece construction, watertight, structurally sound and 1000 gallons in capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
2. All pipe penetrations into the tank shall be booted (i.e., C-293 boot with a stainless steel strap).
3. The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
4. Floats, pump and control circuits, and the control panel shall meet the requirements of Rule .1952(c). Panel and control equipment shall include lightning protection, be protected from unauthorized access, and remain accessible at all times to the system operator.
5. The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, Nema 4x rated control panel. The control panel must be securely mounted outside, adjacent to the pump tank riser and at a minimum of 12 inches above finished grade. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
6. Float switch tie downs must be made of a corrosion resistant material (per OWPS, all metal in the tanks shall be stainless steel). Floats should be mounted on a separate "float tree" rather than the pump supply line (see pump tank detail).
7. The pump removal system will be via a pump tether made of nylon rope or its equivalent. The tether material should be resistant to mildew and rot.

C. Pipes and Fittings

1. All discharge piping, connectors and supply lines should be made of SCH 40 PVC.
2. All joints must be properly "welded" utilizing the appropriate PVC cement for each application.
3. The supply line from the pump tank to the pressure manifold shall be 2 inch Schedule 40 PVC (approximate length of supply line is 80 feet).
4. The lateral distribution lines shall be 1¼ inch Schedule 40 PVC. Holes in the laterals should be drilled on site and at the 12 o'clock position (one hole per panel). Lateral hole size is 5/32 of an inch.
5. There shall be a threaded PVC union above each pump to facilitate easy removal of the pumps for maintenance or replacement.
6. The end of each lateral is to be provided with a "turn up", contained within a turf/gate valve box, that provides above ground access for periodic clean out and pressure head adjustment.

D. Valve Box

1. The control valves (gate valves) for each lateral distribution line shall be contained within one manifold box/vault of adequate size. The box should be placed upon a gravel base.
2. The supply manifold conveys effluent from the pump to the lateral distribution lines.
3. The supply manifold should be constructed by connecting a series of (4) 2" x 2" x 1 ¼" tees to the 2 inch supply line.

E. Backfill

1. Backfill sand shall be clean, washed, medium sand that is naturally occurring and falls within the gradation of ASTM C-33 specification (used in the ready mix industry and is readily available).

F. Drainfield Installation

1. The drainfield and the proposed septic tank location have been marked on-site utilizing metal stemmed flags. Once this area has been approved by the county, the property owner/builder should mark this area and isolate it as much as possible from construction traffic. Prior to the system installation, the septic contractor shall contact the county for a preconstruction conference at which time the drainfield area will be re-verified.
2. Under no circumstances shall any construction take place within the drainfield area while the soil is in a wet condition. If the installer has doubts as to whether or not the drain field area is dry enough to begin construction, the environmental health specialist for this area should be contacted for permission to proceed with the installation.

3. The specified system is a Type IV pressure dosed pre-fabricated permeable block panel system – specifically the 16 inch high panel system manufactured by T&J Panel Wastewater Treatment System, Patent No. 4013559; telephone: 1-800-222-2577. The installer must follow the manufacturer's guidelines for installing the T&J Panel System and should request an installation manual from the manufacturer prior to beginning construction.
4. The initial drain field consists of four (4) lateral trenches 3 feet wide by 50 feet long.
5. It is essential that the lateral trenches be constructed on contour with the land, with each trench being excavated level from beginning to end. The use of a tripod mounted engineer's level is essential to assure that each trench is constructed as level as possible.
6. The maximum trench depth for this system shall be **36 inches**. Each trench shall be placed on a minimum of 9 foot on centers.
7. Once trenches are dug, the side walls shall be raked and a light dusting of lime applied.
8. Backfill the trench with 6 inches of sand and level to grade. Once leveled, place 1 x 4 or 6 inch boards on top of the sand the entire length of each trench. Once the grade boards have been set, the panels may be set into the trench. The panels should be placed 6 inches apart.
9. Once the panels have been set, line the top chamber of each panel with 10 – 12 pounds of clean particle sand (medium sand blasting sand). Coverage depth should be approximately 1 inch thick. *Please note that this sand is not the same material specified for backfill.*
10. Tar seal rope, or approved foam, should be placed in the "U" outs of each end of the panel to form seals. Once the tar rope is in place, the 1¼ inch Schedule 40 PVC laterals can be added and the seal completed by the addition of more tar rope on the top and sides of the pipe. Now that the connection and seals are complete, a block cap is placed on each end of the panel so that all openings are covered.
11. The end of each lateral should be fitted with a short turn up topped by a threaded female coupling with cap. Each turn up must be fitted with a turf/gate valve box with lid fitted flush to finished grade.
12. Once the lateral has been installed and the panels closed, the trench is ready to be backfilled to the top with the sand used in the trench bottom. At this point, the trenches should be left open for the final inspection by the MCGWS.

G. Proper Operation Check

1. After all components of the waste water disposal system have been installed and connected, the system shall be checked for proper operation.
2. With the electrical power turned off, fill the pump tank with water until the liquid rises to a level high enough to activate the high water alarm float. Turn on the electrical power. The alarm, alarm light and pump should activate at this time. Turn off the electrical power once these checks have been performed and prepare to set the head pressure at the valve box.

H. Pressure Head Adjustment

1. The pressure head must be adjusted to match the design specifications. The pressure head is measured by the height of the liquid coming from the turn ups at the end of each lateral when the pump is running (utilizing stand pipes).
2. Prepare a length of pipe (stand pipe), cut to the desired head pressure height and fitted with a threaded adapter that will screw into the turn up couplings at the end of each lateral. Thread the stand pipes into each lateral and then turn the power on to the pump, allowing the water to rise within the stand pipes. Adjust the gate valves within the supply manifold box to achieve the specified head pressure (liquid height in the stand pipes should equal the design head pressure).
3. Once the pressure head has been adjusted, allow the pump to run through the remainder of the cycle. The pump float switch will automatically turn the pump off if it is operating properly. Make sure that the effluent pump is completely submerged in the remaining water, making adjustments to the float switch(es) as needed. This completes the checks for proper operation of the pump, alarm and float switches.
4. At this point, the standpipes may be removed and replaced with the threaded turn up caps.

I. Final Landscaping

1. The drainfield shall be shaped to shed rainwater and be free from low spots.
2. The entire area of the drainfield should be planted with grass as soon as possible to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized prior to planting. After applying grass seed, the area should be heavily mulched with straw or other suitable material.

J. Utility Conflicts

1. The builder and property owner must take special care in planning for utilities (water, power, gas, telephone, cable lines, etc.). All utilities shall be kept clear of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage and permit revocation.
2. Water lines must be kept at least ten (10) feet from any portion of the septic system.
3. Irrigation systems should not be placed in the drain field area.

Maintenance

K. Operation and Maintenance

The designed system is classified as a Type IVa wastewater treatment and disposal system and will require ongoing maintenance. State regulations require that a system of this type be managed by a person certified (Certified Subsurface System Operator) by the North Carolina Department of Environment and Natural Resources to operate subsurface

wastewater systems (Section .1961 Maintenance of Sewage Systems). A "Maintenance Contract" between the system owner and a Certified Operator will be required by MCGWS prior to the issuance of a final system approval or Operation Permit.

1. The minimum inspection/maintenance and reporting frequency for a Type IVa system is twice a year by the Certified Operator. The local health department is required to inspect the system once every three years.
2. The septic and pump tanks shall be pumped out when the solids within the septic tank reach an elevation that is equivalent to 25% of the volume of the tank. In some situations, the tanks may need to be pumped more frequently; for example, if you are using a garbage disposal, it is recommended that the septic and pump tanks be cleaned out annually. Regardless, the Certified Operator will be able to advise when it is necessary to pump out tank solids.
3. Pressure head for laterals should be checked and adjusted semi-annually, flushing with clean water as necessary to remove any accumulated solids.
4. The effluent filters should be inspected semi-annually. When it becomes necessary to clean the effluent filters, the filters should be removed and the accumulated debris washed back into the septic or pump tank – not onto the lawn.
5. All piping and valves should be inspected semi-annually for damage and corrections/repairs made immediately.
6. The pump and float controls/switches should be inspected semi-annually to assure proper operation.
7. The drain field area should be maintained to prevent over growth of vegetation. Any damp areas, leakages or malfunctions should be addressed immediately.
8. Divert gutter downspouts and surface water runoff away from the septic and pump tanks.

L. Suggestions to the Homeowner

1. As previously mentioned, a garbage disposal is not recommended. The ground up garbage adds large amounts of solids into a septic tank that tend to degrade at a very slow rate.
2. Grease, cooking oils, coffee grounds and non-degradable solids (disposable diapers, cigarettes and solid paper wastes) should never be put into a septic tank.
3. Used motor oil or any oily liquids should not be disposed of in a septic tank.
4. Be aware of the amount of water that you are using in your home. Water saving fixtures and devices can be installed on sinks, toilets and showers to reduce the volume of wastewater that you are sending to your drain field.
5. Run dishwashers and washing machines only when you have a full load.
6. Use liquid detergents. Powdered detergents have binding agents in them that tend to solidify in the wastewater disposal system.
7. Repair leaky faucets and toilets. Small drips equal large volumes of water over time and can over burden your drain field.
8. Do not use chemical additives in your system. Studies have indicated that they do not increase the biological activity that naturally occurs in the septic system and

in some cases certain additives have been found to be detrimental to the life of a system.

Design Specifics

Daily Design Flow:	~~480~~ 360 GPD – ~~4~~ 3 bedroom house
Septic Tank Size:	1500 Gallons
Pump Tank Size:	1000 gallons
Effluent Loading Rate:	Design = 0.3 GPD per sq. ft. (50 % reduction - PPBPS)
Supply Line Length:	Approximately 80 Feet
Number and Size of Drainlines:	(4) 3' Wide x 50' Long
Maximum Trench Depth:	36 Inches Deep
Drainline Spacing:	9 Foot on Centers
Total Length of Drainline:	200 Feet
Total Number of Panels:	44
Lateral Hole Size:	5/32 inch
Hole Spacing:	1 per panel = 44 total
Dosing Volume:	158.40 gallons per dose
Flow Rate Through System:	18.04 gallons per minute
Elevation Head:	15 feet
Pressure Head:	2 feet
Pump Requirements:	18.04 GPM at 17 Feet TDH
Recommended Pump:	Goulds WEO3M or equiv.
Depth of Water Pumped:	7.92" check with individual tank manufacturer (1 cu. Ft. of water equals 7.5 gal.)

Repair Specifics

Effluent Loading Rate For Repair System:	0.3 GPD per sq. ft.
Repair Drainfield Type:	Low-Pressure PPBPS
Number of Drainlines:	4
Drain Lines:	(4) 3' Wide x 50' Long
Maximum Trench Depth:	36 Inches Deep
Drainline Spacing:	9 Foot on Centers
Total Length of Drainline:	200 Feet
Total Number of Panels:	44
Lateral Hole Size:	5/32 inch
Hole Spacing:	1 per panel = 44 total
Dosing Volume:	158.40 gallons per dose
Flow Rate Through System:	18.04 gallons per minute
Elevation Head:	15 feet
Pressure Head:	2 feet
Pump Requirements:	18.04 GPM at 17 Feet TDH
Recommended Pump:	Goulds WEO3M or equiv.
Depth of Water Pumped:	7.92" check with individual tank manufacturer (1 cu. Ft. of water equals 7.5 gal.)

*See septic layout for site locations and additional details.

Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107-0541
704-301-4881

SHEET 1 OF 1

COUNTY: Mecklenburg
TAX ID: 195-213-40

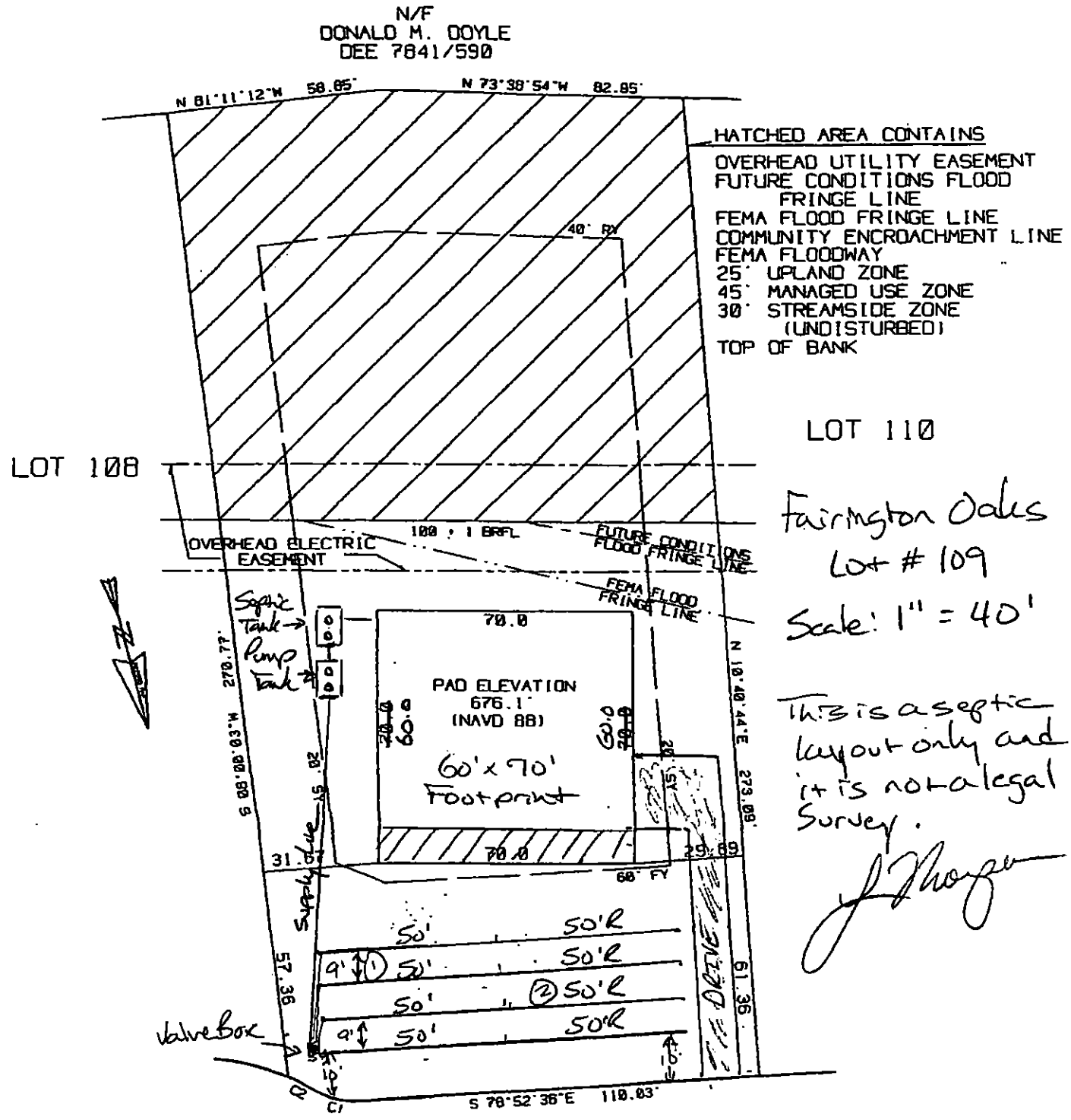
OWNER: True Homes
LOCATION: Fairington Oaks - Lot 109

DATE: April 2, 2013

PROFILES		Pit 1	Pit 2								
LANDSCAPE POSITION	.1940	ls	ls								
SLOPE (%)	.1940	4%	4%								
HORIZON 1 DEPTH	.1943	0-11	0-6								
TEXTURE	.1941 (a)(1)	cl	cl								
CONSISTENCE	.1941	fr	fr								
STRUCTURE	.1941 (a)(2)	sbk	sbk								
CLAY MINERALOGY	.1941 (a)(3)	se	se								
HORIZON 2 DEPTH	.1943	11-50+	6-50+								
TEXTURE	.1941 (a)(1)	c	c								
CONSISTENCE	.1941	fi	fi								
STRUCTURE	.1941 (a)(2)	sbk	sbk								
CLAY MINERALOGY	.1941 (a)(3)	se	se								
HORIZON 3 DEPTH	.1943										
TEXTURE	.1941 (a)(1)										
CONSISTENCE	.1941										
STRUCTURE	.1941 (a)(2)										
CLAY MINERALOGY	.1941 (a)(3)										
HORIZON 4 DEPTH	.1943										
TEXTURE	.1941 (a)(1)										
CONSISTENCE	.1941										
STRUCTURE	.1941 (a)(2)										
CLAY MINERALOGY	.1941 (a)(3)										
SOIL WETNESS	.1942										
RESTRICTIVE HORIZON	.1944										
SAPROLITE	.1943/.1956										
CLASSIFICATION	.1948	s	s								
L.T.A.R. (gpd/ft^2)	.1955	0.3	0.3								

OTHER FACTORS (.1946):		**SITE LTAR (gpd/ft^2):**	**0.3**
AVAILABLE SPACE (.1945):	provisionally suitable		
SITE CLASSIFICATION (.1948):	provisionally suitable	SYSTEM TYPE:	PPBPS
EVALUATED BY:	Larry Thompson	OTHERS PRESENT:	

COMMENTS:



Fairington Oaks
Lot # 109
Scale: 1" = 40'

This is a septic layout only and it is not a legal survey.

NORTHERN RED OAK DRIVE

60' PUBLIC R/W

CURVE	DELTA ANGLE	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C 1	34°26'03"	20.00'	12.02'	6.20'	11.84'	S 61°39'49"E
C 2	7°36'46"	65.00'	8.64'	4.32'	8.63'	S 48°15'32"E

PRELIMINARY SQ. FT.
TOTAL SF TO B/C: SF

HOUSE: SF
DRIVE: SF HOUSE-R/W
SF R/W-B/C

TRUE HOMES

PPBPS Design Worksheet								File #:	8680B		
								Tax #:	195-213-40		
System Requirements								Address:	Fairington Oaks - Lot 109		
Design Flow	360	gpd							Charlotte, NC		
LTAR	0.250	gpd/ft.^2						Consultant:	Larry Thompson		
Linear footage	480	ft. (conventional)						Phone:	704-301-4881		
Linear footage	240	ft. (50% Reduction)									
								Reviewed By:			
Design Layout								Date:			
Laterals	Length (ft)	# Panels									
Line # 1	50	11									
Line # 2	50	11									
Line # 3	50	11									
Line # 4	50	11									
Totals	**200**	**44**									
Absorption Area											
Length (ft)	Width (ft)	Area (ft^2)									
200	3	600									
System Pressure Head	2	ft.	Value selected by system designer (must be between 2-5 ft.)								
Orifice Diameter	5/32	in.	Size selected by system designer (1/8 in. minimum)								
Flow Rate per Orifice	0.41	gpm	Determined from orifice flow design table (value dependent on pressure head & orifice diameter)								
Total System Flow Rate	18.04	gpm	Total number of panels required multiplied by the orifice flow rate								
System Dose Volume	158.40	gal.	Total number of panels required multiplied by 3.6 gal./panel								
Pump Run Time	8.78	min.	System dose volume divided by the total system flow rate								
Pump Tank Drawdown	7.92	in.									
Comments:											
1. Install system using 3 ft. wide trenches.											
2. Install drainlines on 9 ft. centers, level, and on contour.											
3. System design requires effluent pump for distribution.											
4. 100% repair area required for property.											

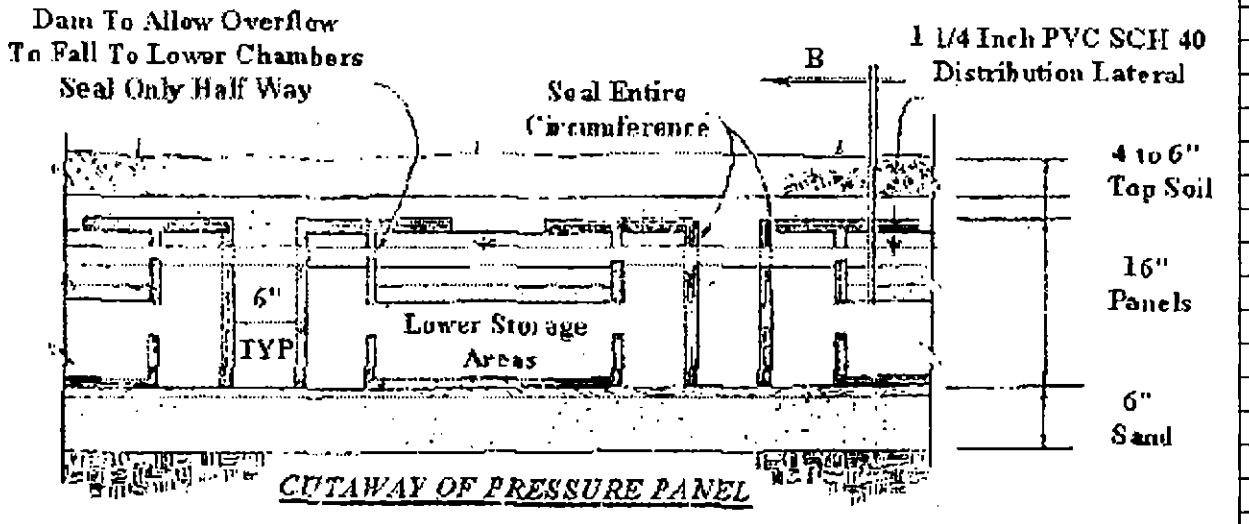
T & J Panels	
Linear Feet	# Panels
50	11
60	14
70	16
80	18
90	21
100	23

Thompson Environmental Consulting
PO Box 541
Midland, NC 28107-0541

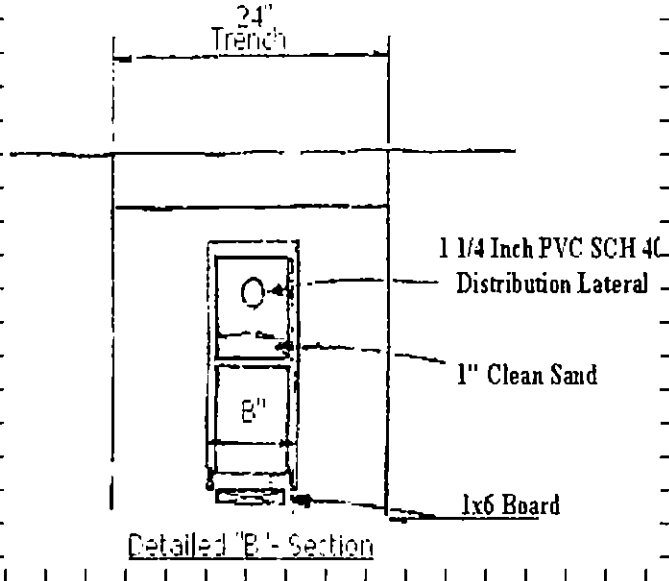
Tax ID Number: 195-213-40

Location: Lot 109 – Fairington Oaks

Date: October 12, 2013



CUTAWAY OF PRESSURE PANEL



Detailed "B" - Section

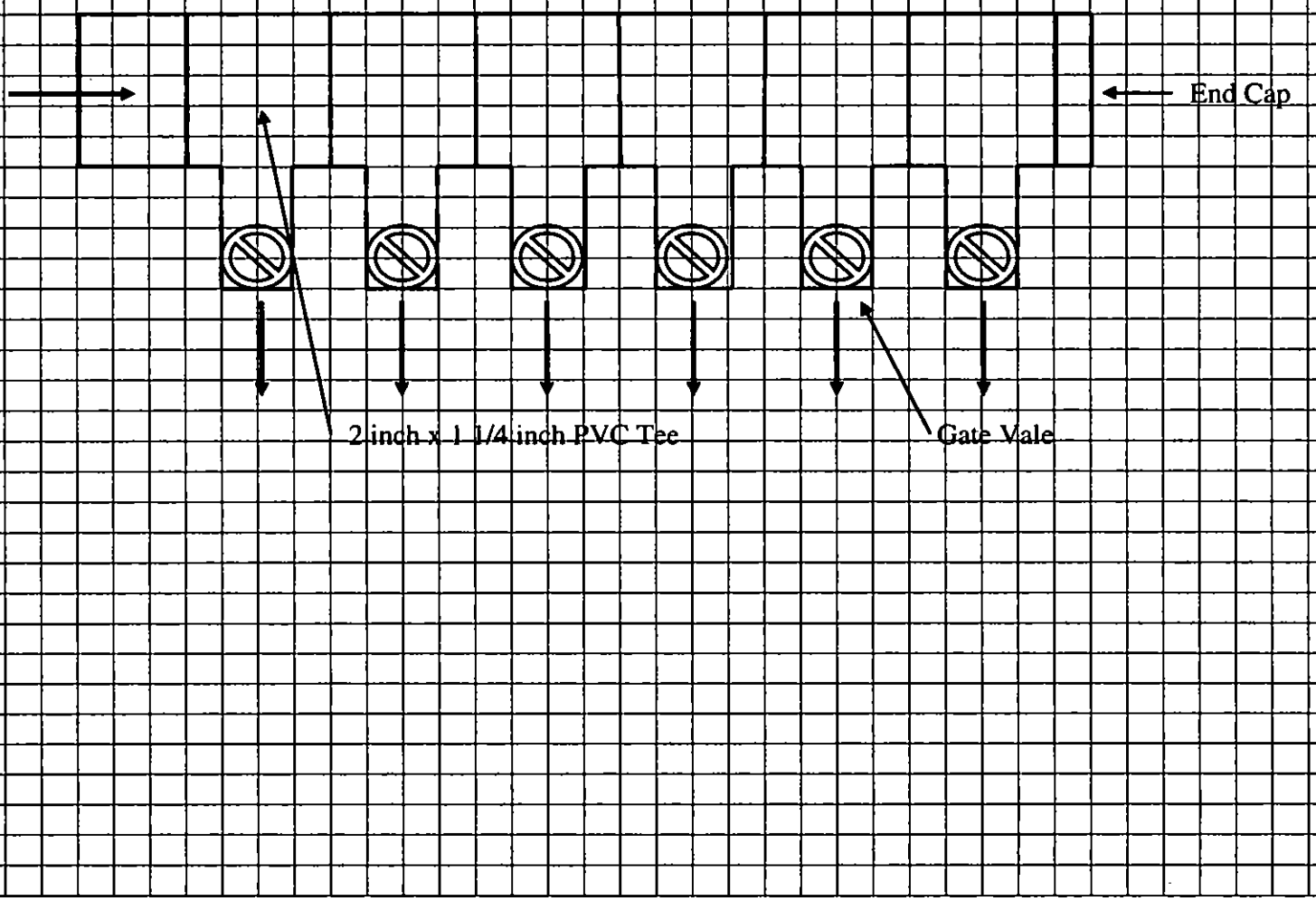
Thompson Environmental Consulting
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 195-213-40

Location: Lot 109 – Fairington Oaks

Date: October 12, 2013

Recommended PPBPS Manifold Setup

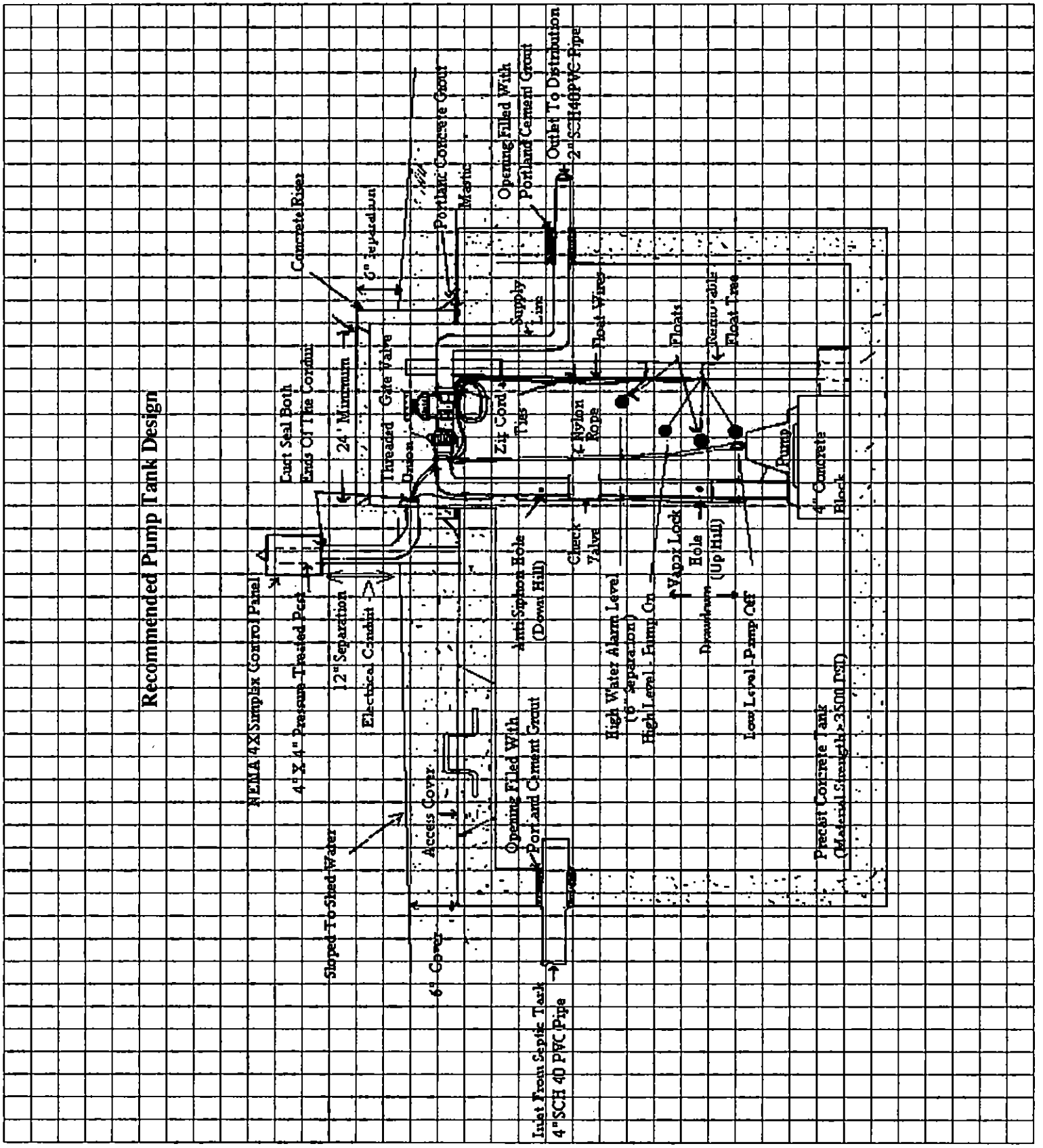


Thompson Environmental Consulting
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 195-213-40

Location: Lot 109 – Fairington Oaks

Date: October 12, 2013



GOULDS PUMPS



Submersible Effluent Pump

MODEL 3885

WE Series

PROSURANCE AVAILABLE FOR RESIDENTIAL APPLICATIONS.

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 140 GPM.
- Total heads: up to 128 feet TDH.
- Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent.
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

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.

■ **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 all models to guard against component damage on accidental reverse rotation.

■ **Fasteners:** 300 series stainless steel.

■ Capable of running dry without damage to components.

■ Designed for continuous operation when fully submerged.

MOTORS

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

■ Class B insulation on ⅓-1½ HP models.

■ Class F insulation on 2 HP models.

Single phase (60 Hz):

- Capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.
- SJTOW or STOW severe duty oil and water resistant power cords.
- ⅓ and ½ HP models have NEMA three prong grounding plugs.
- ¾ HP and larger units have bare lead cord ends.

Three phase (60 Hz):

- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.

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

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

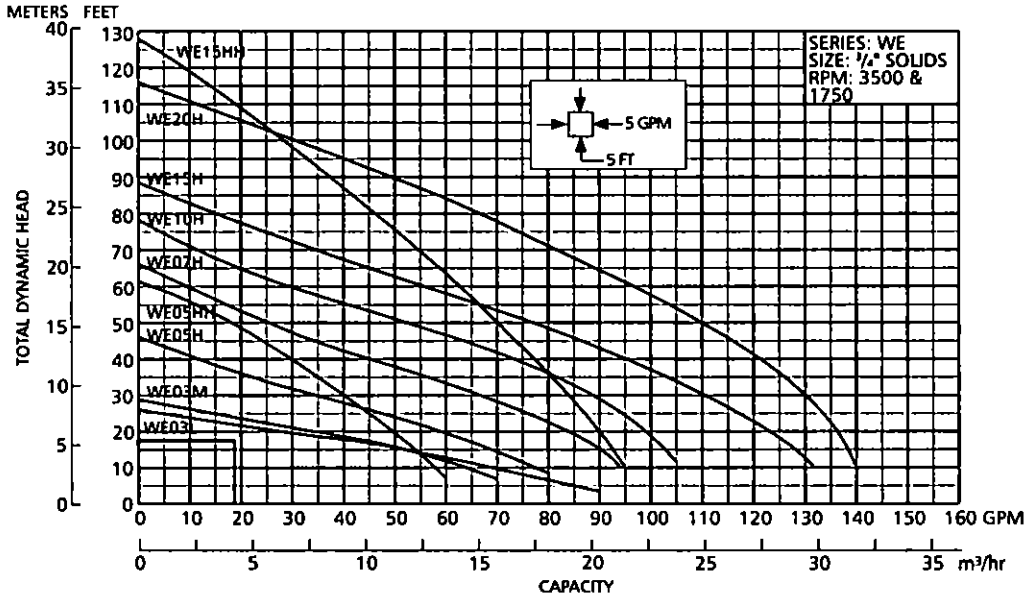
■ **Power Cable:** Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.

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

AGENCY LISTINGS

C SA US — Tested to UL 778 and CSA 22.2 108 Standards By Canadian Standards Association File #LR38549

Goulds Pumps is ISO 9001 Registered.



Goulds Pumps

ITT Industries

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Effective July, 2003
B3885

GOULDS PUMPS

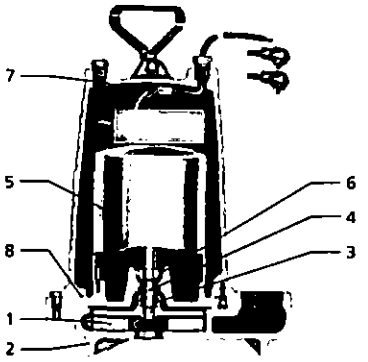
Submersible Effluent Pump

MODEL 3885

WE Series

COMPONENTS

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casing O-Ring



MODELS

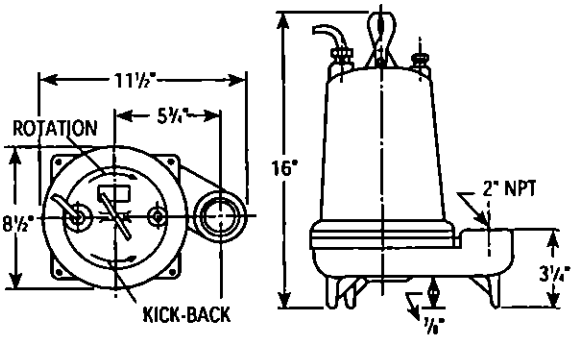
Order No.	HP	Volts	Phase	Max. Amp.	RPM	Solids	Wt. (lbs.)
WE0311L	⅓	115	1	10.7	1750	¾"	56
WE0318L		208		6.8			
WE0312L		230		4.9			
WE0311M		115		10.7			
WE0318M		208		6.8			
WE0312M		230		4.9			
WE0511H	½	115	1	14.5	3500		60
WE0518H		208		8.1			
WE0512H		230		7.3			
WE0538H		200	3	4.9			
WE0532H		230		3.3			
WE0534H		460		1.7			
WE0537H		575		1.4			
WE0511HH		115	1	14.5			
WE0518HH		208		8.1			
WE0512HH		230		7.3			
WE0538HH		200	3	4.9			
WE0532HH		230		3.6			
WE0534HH		460		1.8			
WE0537HH		575		1.5			
WE0718H	¾	208	1	11.0			70
WE0712H		230		10.0			
WE0738H		200	3	6.2			
WE0732H		230		5.4			
WE0734H		460		2.7			
WE0737H		575		2.2			
WE1018H	1	208	1	14.0			
WE1012H		230		12.5			
WE1038H		200	3	8.1			
WE1032H		230		7.0			
WE1034H		460		3.5			
WE1037H		575		2.8			
WE1518H	1½	208	1	17.5			80
WE1512H		230		15.7			
WE1538H		200	3	10.6			
WE1532H		230		9.2			
WE1534H		460		4.6			
WE1537H		575		3.7			
WE1518HH		208	1	17.5			
WE1512HH		230		15.7			
WE1538HH		200	3	10.6			
WE1532HH		230		9.2			
WE1534HH		460		4.6			
WE1537HH		575		3.7			
WE2012H	2	230	1	18.0			83
WE2038H		200	3	12.0			
WE2032H		230		11.6			
WE2034H		460		5.8			
WE2037H		575		4.7			

PERFORMANCE RATINGS (gallons per minute)

Order No.		WE03L	WE03M	WE05H	WE07H	WE10H	WE15H	WE05HH	WE15HH	WE20H
Total Head Feet of Water	HP	⅓	⅓	½	¾	1	1½	½	1½	2
	RPM	1750	1750	3500	3500	3500	3500	3500	3500	3500
	5	86	–	–	–	–	–	–	–	–
	10	70	63	78	–	–	–	58	–	–
	15	52	50	70	90	–	–	53	–	–
	20	27	35	60	83	98	123	49	90	136
	25	–	–	48	76	94	117	45	87	133
	30	–	–	35	67	88	110	40	83	130
	35	–	–	20	57	82	103	35	80	126
	40	–	–	–	45	74	95	30	77	121
	45	–	–	–	35	64	86	25	74	116
	50	–	–	–	25	53	77	–	70	110
	55	–	–	–	–	40	67	–	66	103
	60	–	–	–	–	30	56	–	63	96
	65	–	–	–	–	20	45	–	58	89
	70	–	–	–	–	–	35	–	55	81
	75	–	–	–	–	–	25	–	51	74
	80	–	–	–	–	–	–	–	47	66
	90	–	–	–	–	–	–	–	37	49
	100	–	–	–	–	–	–	–	28	30

DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



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SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Goulds Pumps

ITT Industries

FEE: 200.00
DATE: 4/10/2014

CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 8680B

PERMIT NUMBER: 30006058

PARCEL NUMBER: 19521340

JOB LOCATION INFORMATION

ADDRESS: 6313 NORTHERN RED OAK DR

CITY: CHARLOTTE **STATE: NC** **ZIP:** 28227

ISSUED TO: True Homes

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 10/18/2013

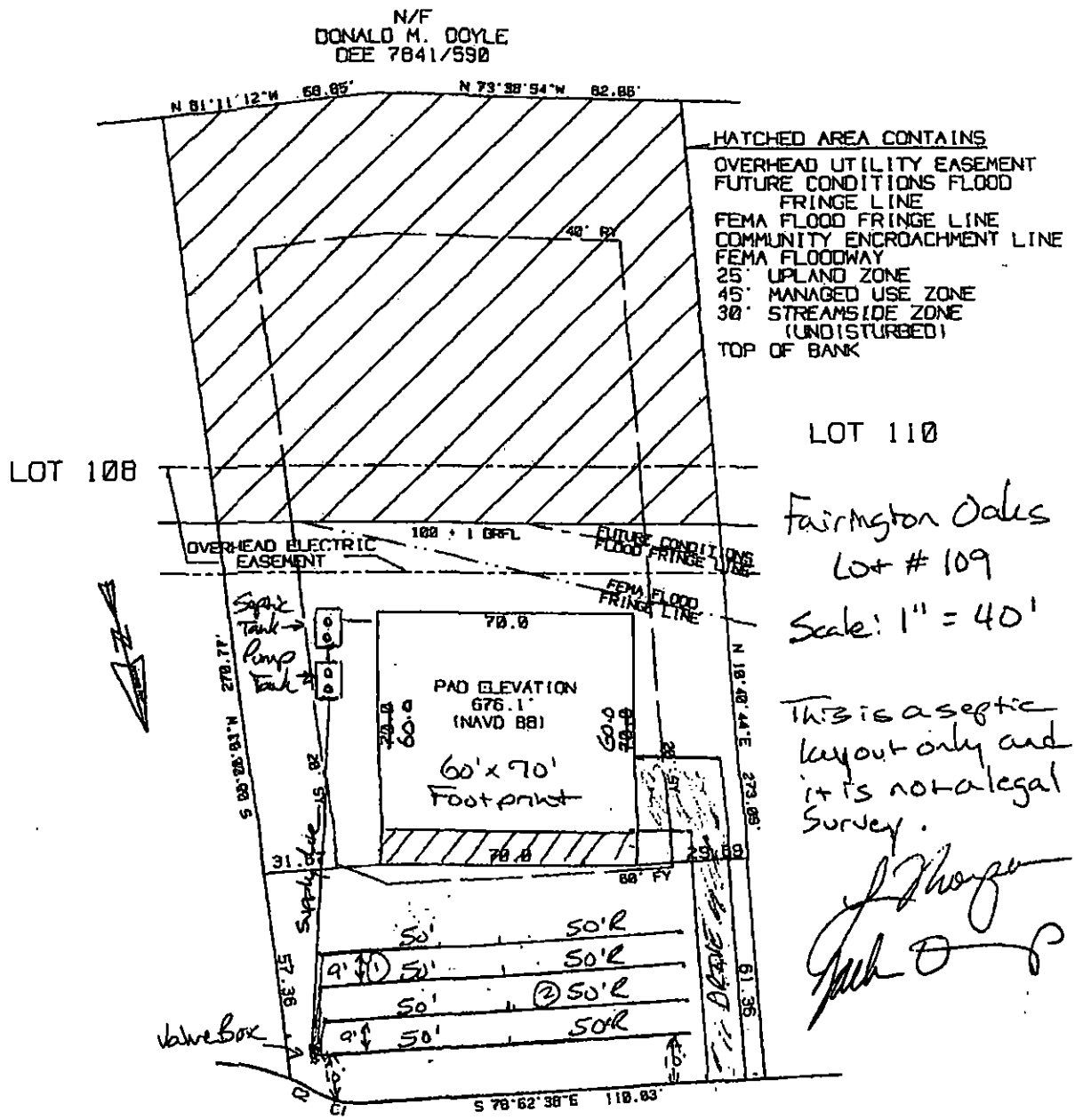
CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30006058, 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: 10/18/2018



Fairington Oaks
Lot # 109
Scale: 1" = 40'

This is a septic layout only and it is not a legal survey.

CURVE	DELTA ANGLE	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C 1	34°26'03"	20.00'	12.02'	6.26'	11.84'	S 61°38'48"E
C 2	7°35'48"	65.00'	8.64'	4.32'	8.69'	S 48°15'32"E

PRELIMINARY SQ. FT.
TOTAL SF TO B/C: SF

HOUSE: SF
DRIVE: SF HOUSE-R/W
SF R/W-B/C

TRUE HOMES

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 #: 30006058 GWS File #: 8680B Tax Parcel #: 195-213-40

- 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):** 10/18/2018

Type of Installation: Residential - New System Lot Number: 109

Structure Type: HOUSE Size (ft^2): 3600 # Bedrooms: 3 # Occupants: 6

Building Foundation: Crawl Space Water Supply: Municipal

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: PPBPS (pressurized) **System Classification:** IVa

Repair System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	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: Brad Hallman Owner/Legal Agent: Jackie Dracup
Print Name

Signature: Signature:

Date Issued: 10/18/2018

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

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Structure Type: HOUSE Size (ft^2): 3600 # Bedrooms: 3 # Occupants: 6

Building Foundation: Crawl Space Water Supply: Municipal

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	2	Trench Spacing (ft):	9	Absorption Area (ft^2):	400	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: PPBPS (pressurized) **System Classification:** IVa

Repair System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
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- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Brad Hallman Owner/Legal Agent: _____
Print Name

Signature: _____ Signature: _____

Date Issued: 10/18/2013

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 #: **30006058** GWS File #: **8680B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 years 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.
- This type of repair system requires the installation of a pump tank and all associated components. This type of system will require routine inspections by our office. The system owner is responsible for all fees associated with these inspections.
- This type of repair system requires the property owner to obtain a contract with a Certified Operator to perform routine inspections and maintenance on the system.
- This type of repair system requires periodic inspections by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- 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.
- Flow from all gutters and downspouts shall be directed not to discharge water onto or across any part of the septic system.
- Foundation drains shall be constructed not to discharge water onto or across any part of the septic system.

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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- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Brad Hallman

Signature: _____

Date Issued: 10/18/2013

Owner/Legal Agent: _____
Print Name

Signature: _____

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 #: 30006058 GWS File #: 8680B

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- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Brad Hellman
Signature:
Date Issued: 10/18/2013

Owner/Legal Agent: Jackie Dracup
Print Name
Signature:

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 #: **30006058** GWS File #: **8680B** Tax Parcel #: **195-213-40**

- 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):** 10/18/2018

Type of Installation: Residential - New System Lot Number: 109

Structure Type: HOUSE Size (ft^2): 3600 # Bedrooms: 3 # Occupants: 6

Building Foundation: Crawl Space Water Supply: Municipal

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: PPBPS (pressurized) **System Classification:** IVa

Repair System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	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: Brad Hallman Owner/Legal Agent: _____
Print Name

Signature: _____ Signature: _____

Date Issued: 10/18/2013

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 #: **30006058** GWS File #: **8680B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 years 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.
- This type of repair system requires the installation of a pump tank and all associated components. This type of system will require routine inspections by our office. The system owner is responsible for all fees associated with these inspections.
- This type of repair system requires the property owner to obtain a contract with a Certified Operator to perform routine inspections and maintenance on the system.
- This type of repair system requires periodic inspections by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- 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.
- Flow from all gutters and downspouts shall be directed not to discharge water onto or across any part of the septic system.
- Foundation drains shall be constructed not to discharge water onto or across any part of the septic system.

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: Brad Hallman

Signature: _____

Date Issued: 10/18/2013

Owner/Legal Agent: _____
Print Name

Signature: _____

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

Sheet: 1 of 2
Property ID: 195-213-40
Lot #: 109
File #: 8680B
AppID: 6058

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: True Homes
Address: 2649 Brekonridge Centre Dr, Monroe, NC 28110
Proposed Facility: 3BR Home
Design Flow (.1949): 360 GPD
Location of Site: 6313 Northern Red Oak Dr, Mint Hill, NC 28227
Water Supply: [X] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [X] Pit [ ] Cut
Type of Wastewater: [X] Sewage [ ] Industrial Process [ ] Mixed

Applicant: True Homes
Date Evaluated: 4/1/2013
Property Size: 37,425 SQ FT
Property Recorded: Unknown

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.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 #1	LS 5%	0 - 12	wfsbk CL	S SP FR SEXP							
		12 - 50	mmsbk CL	S P FR SEXP	>50"	50	NA	S		PS IV 0.3	36"
Pit #2	LS 10%	0 - 12	wfsbk CL	S SP FR SEXP							
		12 - 38	mmsbk CL	S P FR SEXP	10 YR 7/1	50	NA	S	YBR mottles	PS IV	25"
		38 - 50	wmabk C	S P FR SEXP	@ 41"				from 27 - 50"	0.275	
Pit #3	LS 13%	0 - 10	wfsbk CL	S SP FR SEXP							
		10 - 42	mmsbk C	S P FR SEXP	10 YR 7/1	51	NA	S	YBR mottles	PS IV	28"
		42 - 51	wfabk C	S P FR SEXP	@ 45"				from 30 - 51"	0.275	
Pit #4	FS 3%	0 - 16	wfsbk CL	S SP FR SEXP							
		16 - 33	wfsbk C	S P FR SEXP	10 YR 7/2	48	NA	PS	YBR mottles	PS IV	15"
		33 - 48	wfsbk CL	S SP FR SEXP	@ 28"				from 10 - 48"	0.225	(Need Cover)
Pit #5	LS 5%	0 - 5	wfsbk CL	S SP FR SEXP							
		5 - 52	mmsbk C	S P FR SEXP	>52"	52	NA	S		PS IV 0.3	36"

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	Iva	Iva
Site LTAR (gpd/sq ft)	0.3*	0.3*

***Must stay away from Pits #2,3, & 4 for 0.3 LTAR to be applicable.**

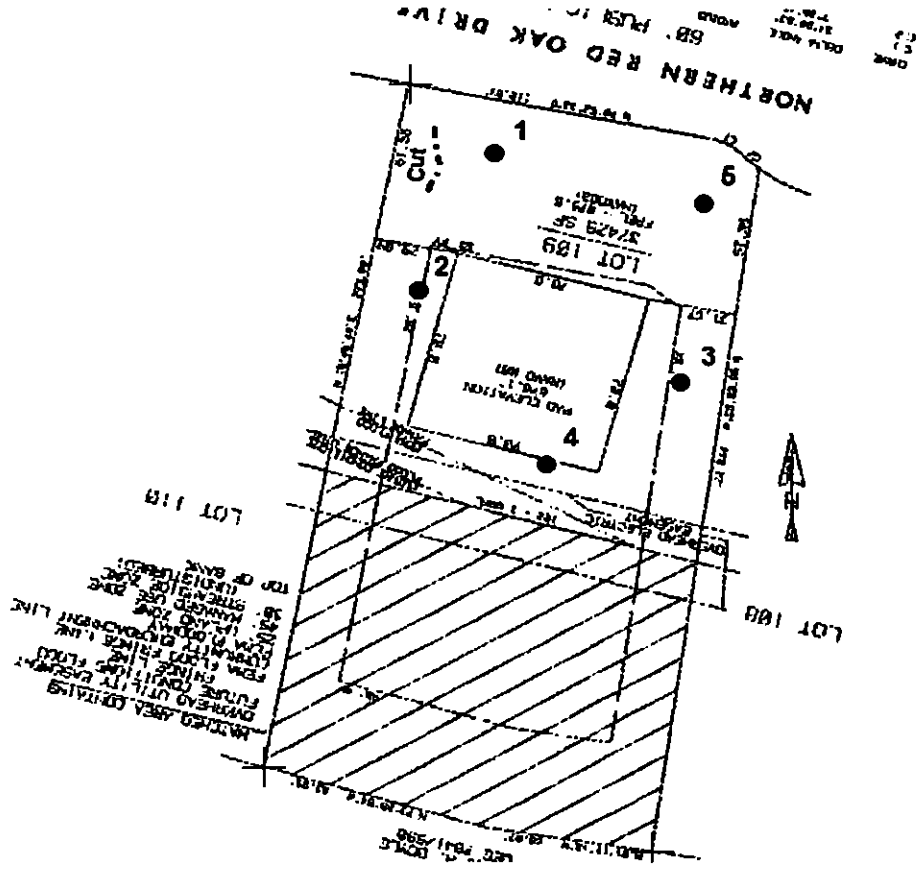
Other Factors (.1946):
Soil Evaluation By: Jacob Presley, LSS
Others Present:
Site Classification (.1948):PS
Site Evaluation By: Bradley W Hallman
Others Present:

COMMENTS:

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				
FP-Flood Plain		CL-Clay Loam		**Structure Prefixes**
D-Drainage Way		SCL-Sandy Clay Loam		w-weak
		SiL-Silt Loam		m-moderate
				s-strong
				f-fine
	IV	SC-Sandy Clay	0.4 - 0.1	m-medium
		SiC-Silty Clay		c-coarse
		C-Clay		

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

Sketch of Soil Evaluation Locations



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

Sheet: 1 of 2
Property ID: 195-213-40
Lot #: 109
File #: 8680B
AppID: 6058

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Description	Initial System	Repair System
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System Type(s)		
Site LTAR (gpd/sq ft)	0.3*	0.3*

***Must stay away from Pits #2,3, & 4 for 0.3 LTAR to be applicable.**

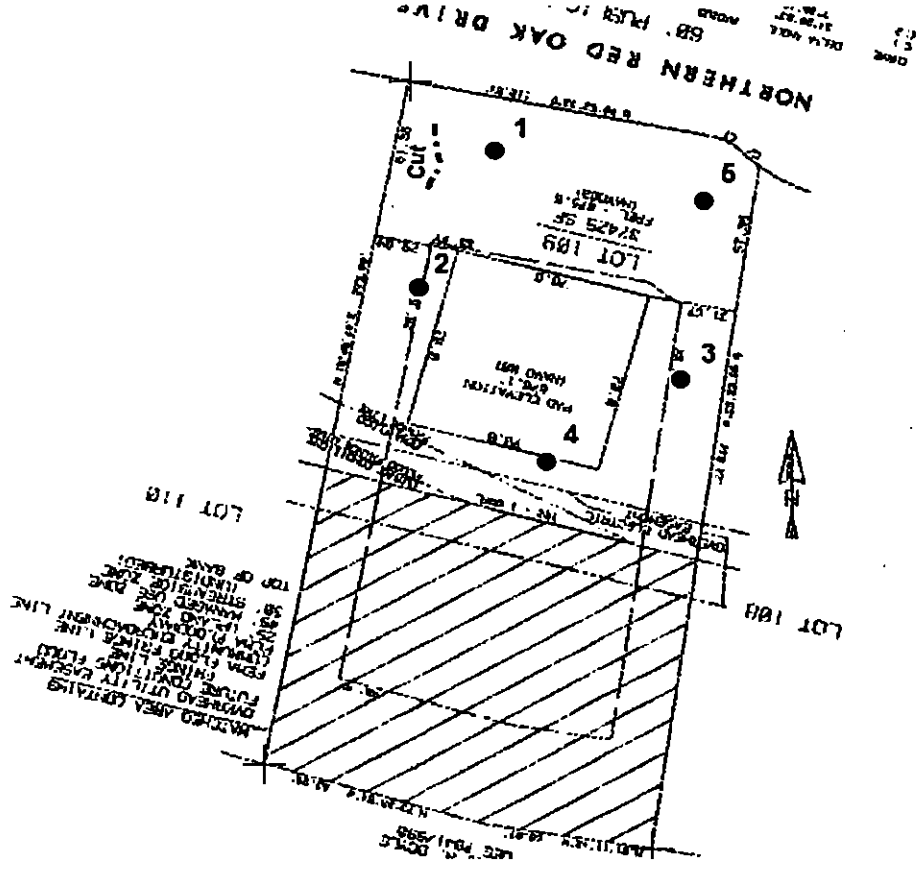
Other Factors (.1946):
Soil Evaluation By: Jacob Presley, LSS
Others Present:
Site Classification (.1948):
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	P-Plastic	S-Suitable
	VP-Very Plastic	NA-Not Applicable

Sketch of Soil Evaluation Locations



Copies

8680B

MECKLENBURG COUNTY
HEALTH DEPARTMENT

Corp #6058

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: 195A340
STREET ADDRESS: 6313 Northern Red Oak Dr.
CITY: Mint Hill
STATE: NC ZIP: 28227
SUBDIVISION NAME: Farrington Oaks
LOT #: 109 LOT SIZE (acres): .37485
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: 3600
NUMBER OF BEDROOMS: 4 3 JD
NUMBER OF OCCUPANTS: 6
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 modified

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 ____

8A. RANK: 1 2 ___ ___ 3

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: True Homes
ADDRESS: 2049 Brehonridge Centre Dr
CITY: Monroe
STATE: NC ZIP: 28110
WORK PHONE: 704-238-1229
MOBILE PHONE: ____
FAX: 910-401-1349
E-MAIL: msturdivant@truehomesusa.com

13. OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:
NAME: ____
ADDRESS: ____
CITY: ____
STATE: ____ ZIP: ____
WORK PHONE: ____
MOBILE PHONE: ____
FAX: ____
E-MAIL: ____

Copy

8680B

MECKLENBURG COUNTY
HEALTH DEPARTMENT

Copy #6058

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: 19528340
STREET ADDRESS: 6313 Northern Red Oak Dr.
CITY: Mint Hill
STATE: NC ZIP: 28227
SUBDIVISION NAME: Farrington Oaks
LOT #: 109 LOT SIZE (acres): 37485

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: 3600
NUMBER OF BEDROOMS: 4
NUMBER OF OCCUPANTS: 6

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 modified

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 _____

8A. RANK: 1 2 ___ ___ 3

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: True Homes
ADDRESS: 2649 Brekonridge Center Dr
CITY: Monroe
STATE: NC ZIP: 28110
WORK PHONE: 704-238-1229
MOBILE PHONE: _____
FAX: 910-401-1349
E-MAIL: MSturdivant@truehomesusa.com

13. OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:

NAME: _____
ADDRESS: _____
CITY: _____
STATE: _____ ZIP: _____
WORK PHONE: _____
MOBILE PHONE: _____
FAX: _____
E-MAIL: _____

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.

MS (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.

Michelle Stutz — 2-28-13

Property Owner's or Owner's Legal Representative Signature — Date

---

OFFICE USE ONLY

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

SEPTIC APPLICATION FEE RECEIVED: $ 250 DATE FEE RECEIVED: 3/5/13

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

APPLICATION PROCESSED BY: lws

GWS FILE NUMBER ASSIGNED: 8680B

APPLICATION ID NUMBER ASSIGNED: 6058

COMMENTS:

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
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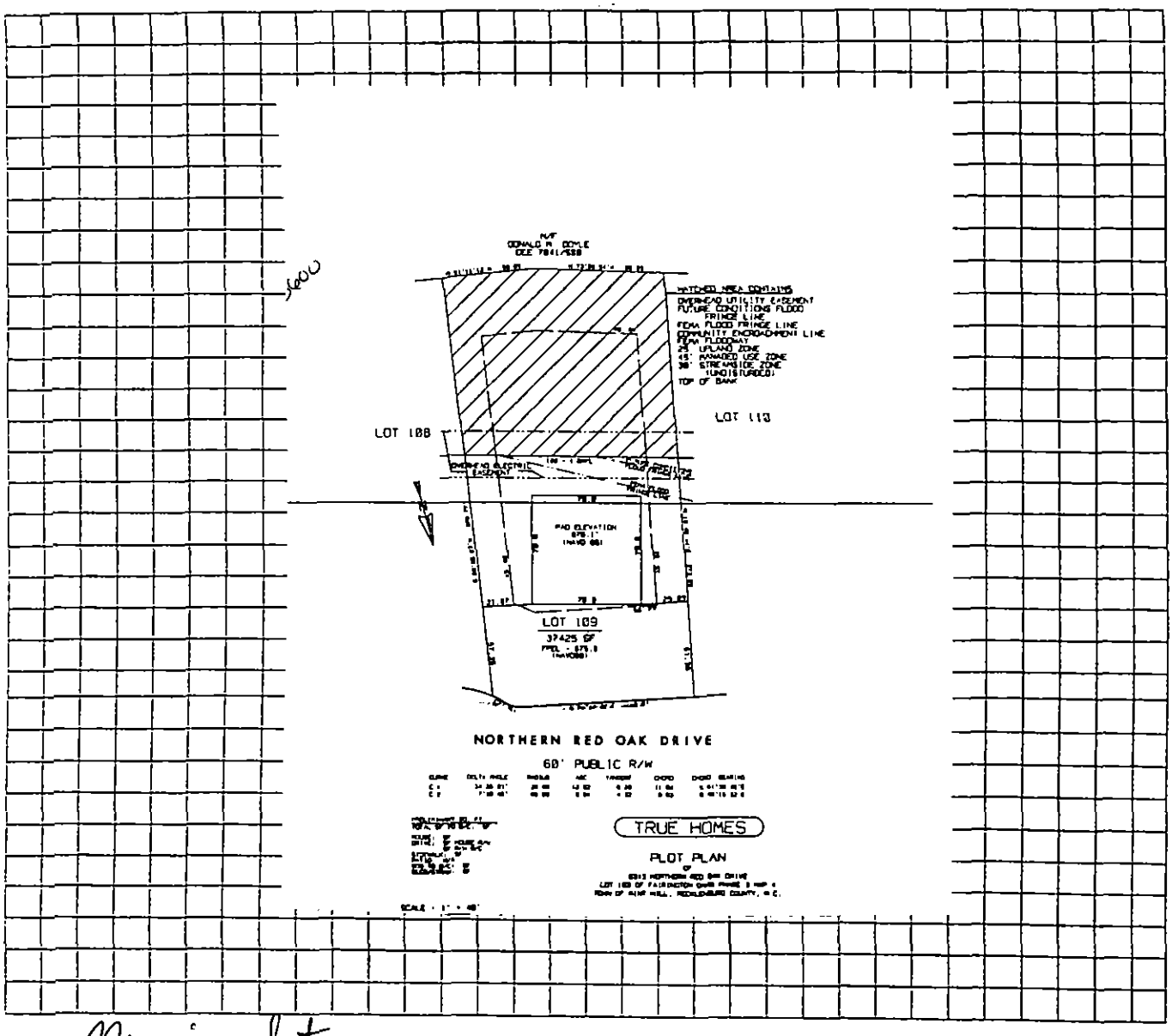
File #: _____

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: 6313 Northern Red Oak Dr. Tax Parcel #: 19521340

Subdivision Name: Farrington Oaks Lot #: 109



Property Owner's or Owner's Legal Representative Signature

2.28.13
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
Health Department

April 15, 2013

True Homes
2649 Brekonridge Centre Dr.
Monroe, NC 28110

Re: Application for improvement permit for:
Property Site: 6313 Northern Red Oak Dr.
Health Department file number: **8680B**

Dear Property Owner or Owner's Agent:

The Mecklenburg County Health Department, Environmental Health Division on April 12, 2013 evaluated the above-referenced property at the site designated on the site plan that accompanied your improvement permit application. According to your application the site is to serve a 4 bedroom, with a daily design flow of 480 gallons per day. The evaluation was done in accordance with the laws and rules governing wastewater systems in North Carolina General Statute 130A-333 and related statutes and Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rule .1900 and related rules.

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

- ☐ Unsuitable soil topography and/or landscape position (Rule .1940)
- ☐ Unsuitable soil characteristics (structure or clay mineralogy) (Rule .1941)
- ☐ Unsuitable soil wetness condition (Rule .1942)
- ☐ Unsuitable soil depth (Rule .1943)
- ☐ Presence of restrictive horizon (Rule .1944)
- ☒ Insufficient space for septic system and repair area (Rule .1945)
- ☐ Unsuitable for meeting required setbacks (Rule .1950)
- ☐ Other (Rule .1946)

These severe soil or site limitations could cause premature system failure, leading to the discharge of untreated sewage on the ground surface, into surface waters, directly to ground water or inside your structure.

The site evaluation included consideration of possible site modifications, and modified, innovative or alternative systems. However, the Health Department has determined that none of the above options will overcome the severe conditions on this site. A possible option might be a system designed to dispose of sewage to another area of suitable soil or off-site to additional property.

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

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

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

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

Please note: If you wish to pursue a formal appeal, you must file the petition form with the Office of Administrative Hearings **WITHIN 30 DAYS OF THE DATE OF THIS LETTER.** The date of this letter is April 15, 2013. Meeting the 30-day deadline is critical to your right to a formal appeal. Beginning a formal appeal within 30 days will not interfere with any informal review that you might request. Do not wait for the outcome of any informal review if you wish to file a formal appeal.

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

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

Sincerely,

Jeremy Michael REHS

Jeremy Michael
Authorized Agent - DENR

Encl: (2)

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

Sheet: 1 of 2
Property ID: 195-213-40
Lot #: 109
File #: 8680B
AppID: 6058

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: True Homes
Address: 2649 Brekonridge Centre Dr, Monroe, NC 28110
Proposed Facility: 4BR Home
Design Flow (.1949): 480 GPD
Location of Site: 6313 Northern Red Oak Dr, Mint Hill, NC 28227
Water Supply: [X] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [X] Pit [ ] Cut
Type of Wastewater: [X] Sewage [ ] Industrial Process [ ] Mixed

Applicant: True Homes
Date Evaluated: 4/1/2013
Property Size: 37,425 SQ FT
Property Recorded: Unknown

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.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 #1	LS 5%	0 - 12	wfsbk CL	S SP FR SEXP							
		12 - 50	mmsbk CL	S P FR SEXP	>50"	50	NA	S		PS IV 0.3	36"
Pit #2	LS 10%	0 - 12	wfsbk CL	S SP FR SEXP							
		12 - 38	mmsbk CL	S P FR SEXP	10 YR 7/1	50	NA	S	YBR mottles	PS IV	25"
		38 - 50	wmabk C	S P FR SEXP	@ 41"				from 27 - 50"	0.275	
Pit #3	LS 13%	0 - 10	wfsbk CL	S SP FR SEXP							
		10 - 42	mmsbk C	S P FR SEXP	10 YR 7/1	51	NA	S	YBR mottles	PS IV	28"
		42 - 51	wfabk C	S P FR SEXP	@ 45"				from 30 - 51"	0.275	
Pit #4	FS 3%	0 - 16	wfsbk CL	S SP FR SEXP							
		16 - 33	wfsbk C	S P FR SEXP	10 YR 7/2	48	NA	PS	YBR mottles	PS IV	15"
		33 - 48	wfsbk CL	S SP FR SEXP	@ 28"				from 10 - 48"	0.225	(Need Cover)
Pit #5	LS 5%	0 - 5	wfsbk CL	S SP FR SEXP							
		5 - 52	mmsbk C	S P FR SEXP	>52"	52	NA	S		PS IV 0.3	36"

Description	Initial System	Repair System
Available Space (.1945)	U	U
System Type(s)		
Site LTAR (gpd/sq ft)	0.275	0.275

Must stay away from Pit #4 for 0.275 LTAR to be applicable.

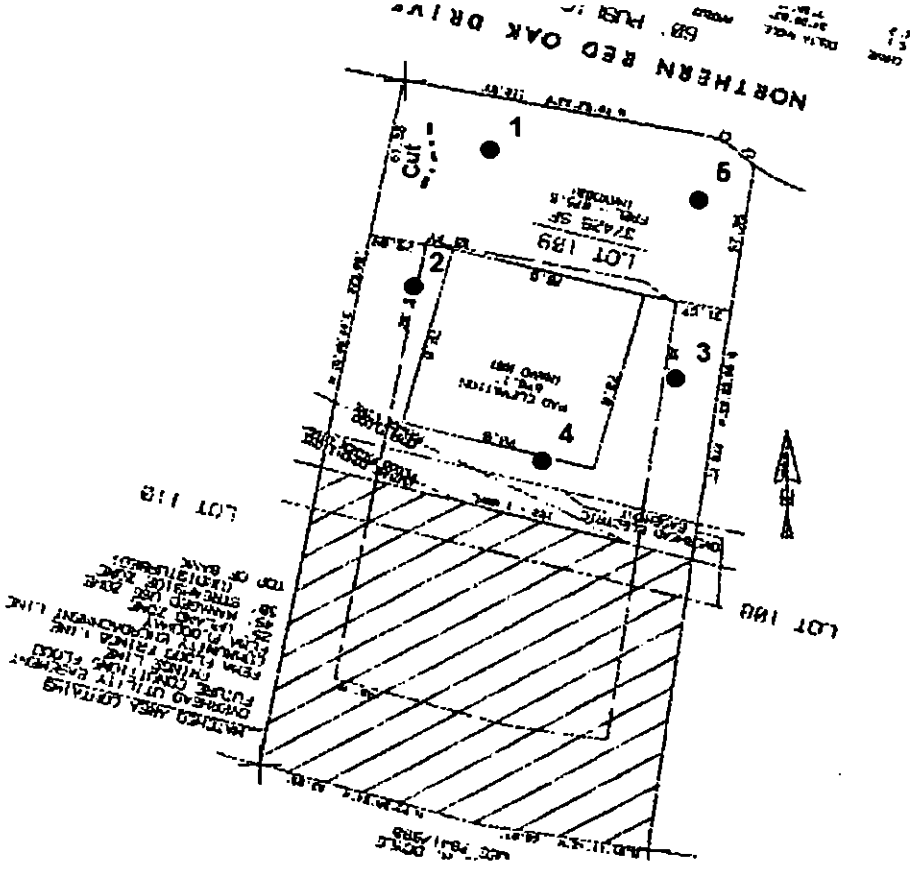
Other Factors (.1946):
Soil Evaluation By: Jacob Presley, LSS
Others Present:
Site Classification (.1948): Unsuitable
Site Evaluation By: Jeremy Michael
Others Present:

COMMENTS:

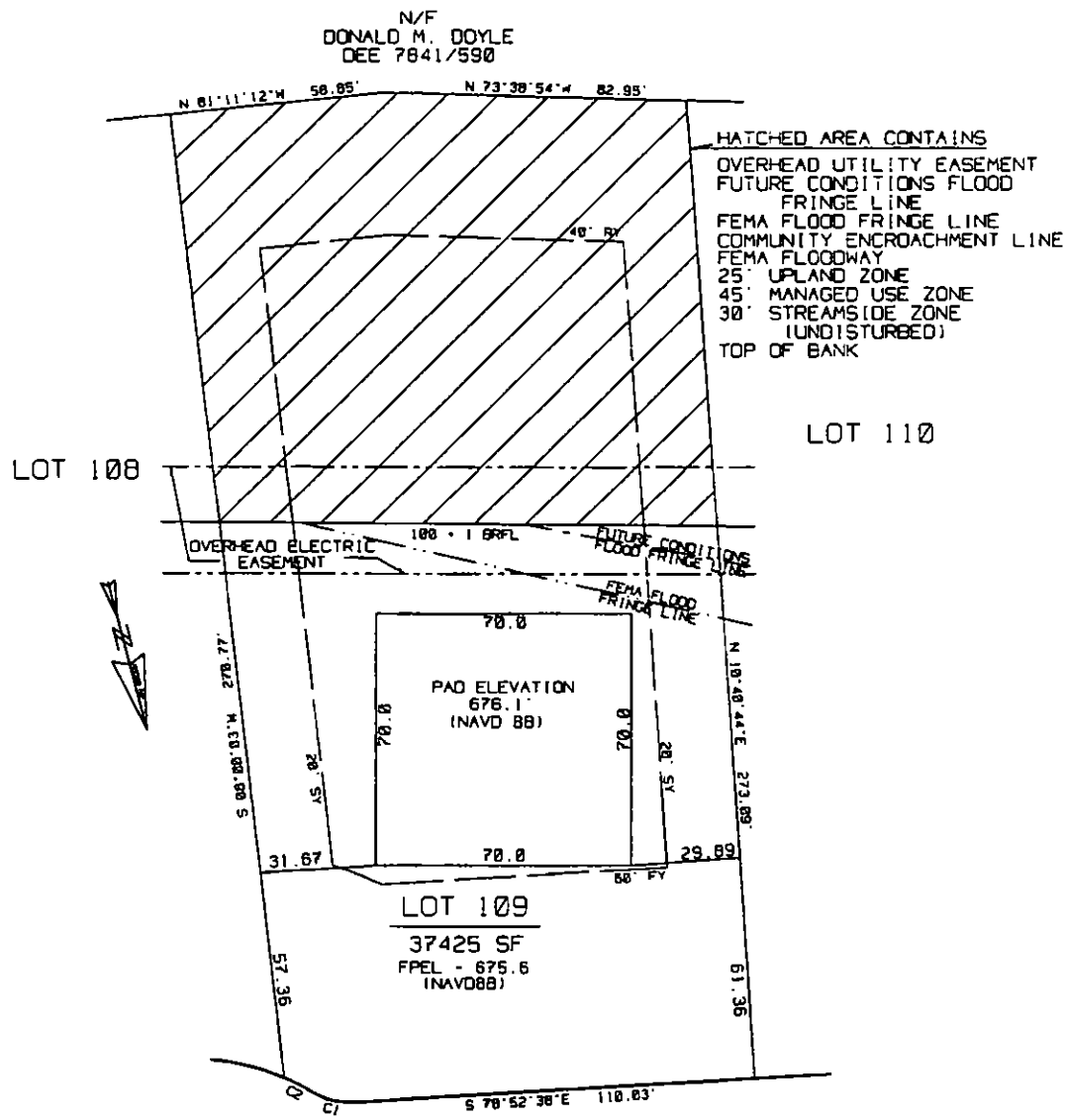
Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	sg-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		mass-Massive
LS-Linear Slope				cr-Crumb
FS-Foot Slope	II	SL-Sandy Loam	0.8 - 0.6	gr-Granular
NS-Nose Slope		L-Loam		sbk-Subangular Blocky
HS-Head Slope				abk-Angular Blocky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

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

Sketch of Soil Evaluation Locations



3600



NORTHERN RED OAK DRIVE

60' PUBLIC R/W

CURVE	DELTA ANGLE	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C 1	34°26'03"	20.03'	12.02'	6.20'	11.84'	S 61°39'49"E
C 2	7°38'48"	65.08'	8.84'	4.32'	8.83'	S 48°15'32"E

PRELIMINARY SQ. FT.
TOTAL SF TO B/C: SF

HOUSE: SF
DRIVE: SF HOUSE-R/W
SF R/W-B/C
SIDEWALK: SF
PATIO: N/A
SOD TO B/C: SF
SEED/STRAW: SF

TRUE HOMES

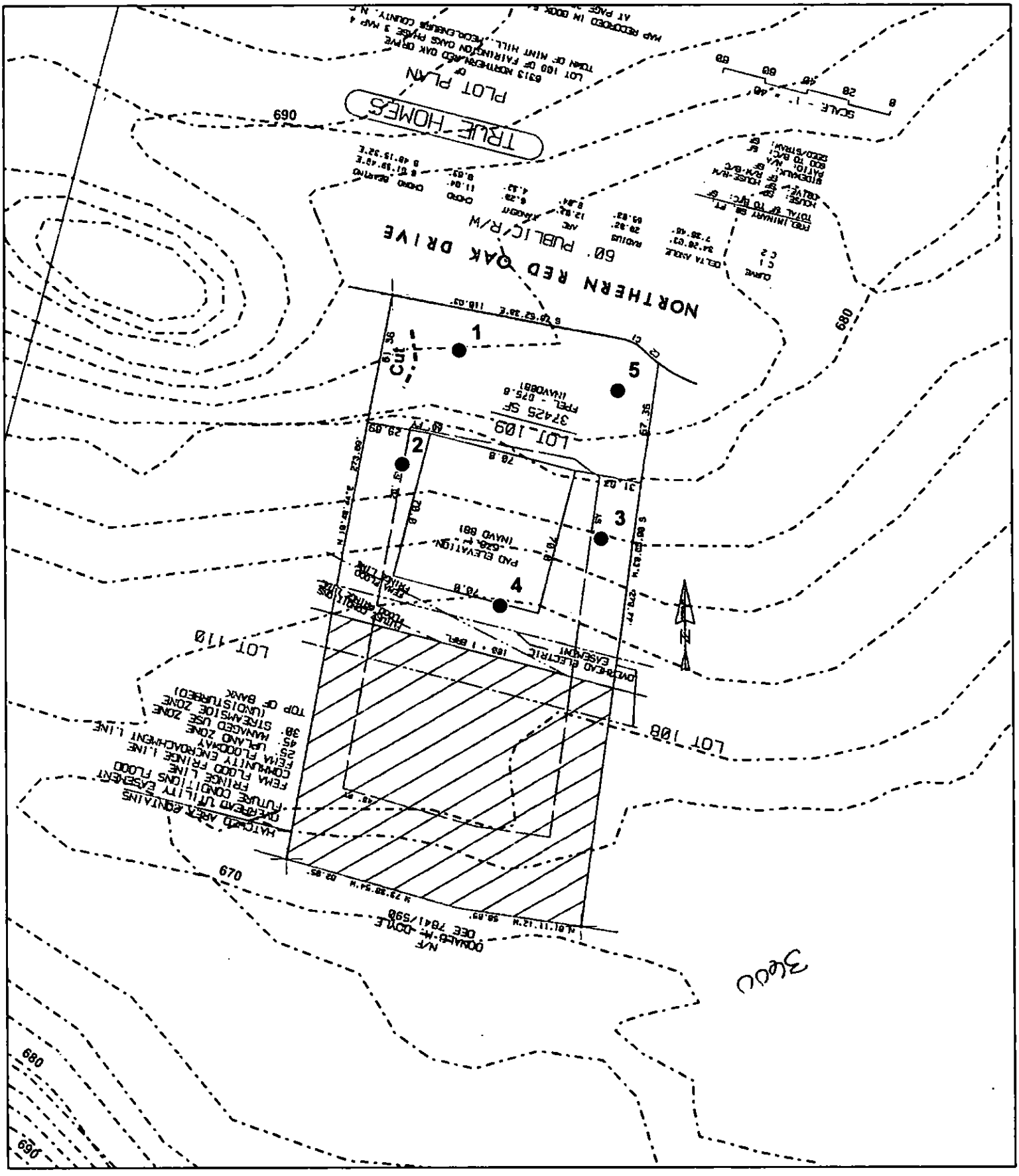
PLOT PLAN
OF
6313 NORTHERN RED OAK DRIVE
LOT 109 OF FAIRINGTON OAKS PHASE 3 MAP 4
TOWN OF MINT HILL, MECKLENBURG COUNTY, N.C.

SCALE - 1" = 40'
0 20 40 60 80

MAP RECORDED IN BOOK 54
AT PAGE 284

CAGED44 FTO109
DATE: 12/19/12
CAGCD91 FTO109
DRAWN BY TAJ

SOIL EVALUATION LOCATIONS FOR
PARCEL #: 195-213-40
WAPSPS APPLICATION #: 6058



Map Created By: J. Presley
Map Created On: 04/2/2013

0 15 30 60
Feet