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 #: 8863R Permit #: 5747 Tax Parcel #: 139-276-45

Property Owner: True Homes

Job Location Address: 10812 Flintshire Rd

City: Charlotte State: NC Zip Code: 28227

Operation Permit Issuance Date: 5/9/14 Contractor Name: Stevens Septic

Permitted Design Flow: 480 GPD

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: 1000 gallons

Effluent Pump Model: LES1M 1/2horse

Drainfield Installation ☐ N/A

Trench Depth: Max 33 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 267 feet

# of Lines: 4 @ 70 feet

Depth of Media: 22 inches (Type) IVppbps

Depth of Cover: 12+ inches

Distribution Device: Gate Valve

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

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Depth of Cover: _____ inches

Distribution Device: _____

Water Supply Source

☐ Municipal ☒ Private Well ☐ Community Well

☐ Other _____

System Installation Setbacks

Distance from Building Foundation: >5 feet

Distance from Property Line: >10 feet

Distance from Water Supply Source: 90 feet

Inspection Dates

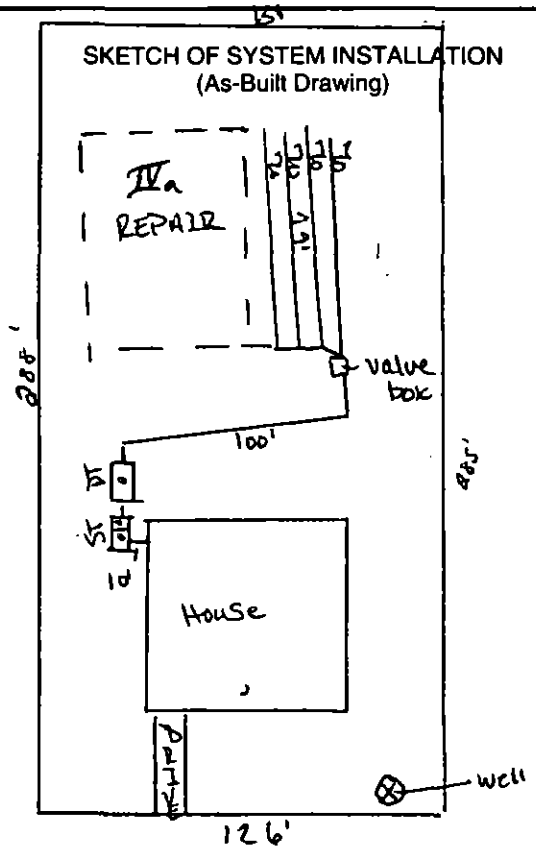
PT-27 2/28/14 1000 gal

Tank(s) Inspected: 4/14/14 STB-338 2/16/14 1500 gal

Excavation Inspected: 4/28/14

Pump & Controls Inspected: 4/29/14

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 ppbps1p/na/na

DENR Authorized Agent: _____ 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 #: 8163B Permit #: 8747 Tax Parcel #: 139-276-45

Property Owner: Tree Homes

Job Location Address: 10812 Flintshire Rd

City: Charlotte State: NC Zip Code: 28227

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: IVa

*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: 5/9/14

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

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

File #: 85638 Permit #: 30005747 Tax Parcel #: 139-276-45

Property Owner: True Homes

Job Location Address: 10812 Flintshire Rd

City: Mint Hill State: NC Zip Code: 28227

Installation Approval Issuance Date: 04/14/14

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: 480 GPD Site LTAR: 0.3 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: Max 33 inches
Trench Width: 3 feet
Line Spacing: 9 feet (O.C.)
Total line length: 267 feet
# of Lines: _____ @ _____ feet
Depth of Media: 22 inches (Type) _____
Distribution Device: pressure manifold

Bed Design *(For Repair Installations ONLY.)* ☒ N/A
Bed Depth: _____ inches
Bed Width: _____ feet
Total line length: _____ feet
# of Lines: _____ @ _____ feet
Depth of Media: _____ inches (Type) _____
Distribution Device: _____

Water Supply Source
☐ Municipal ☒ Private Well ☐ Community Well
☐ Other _____

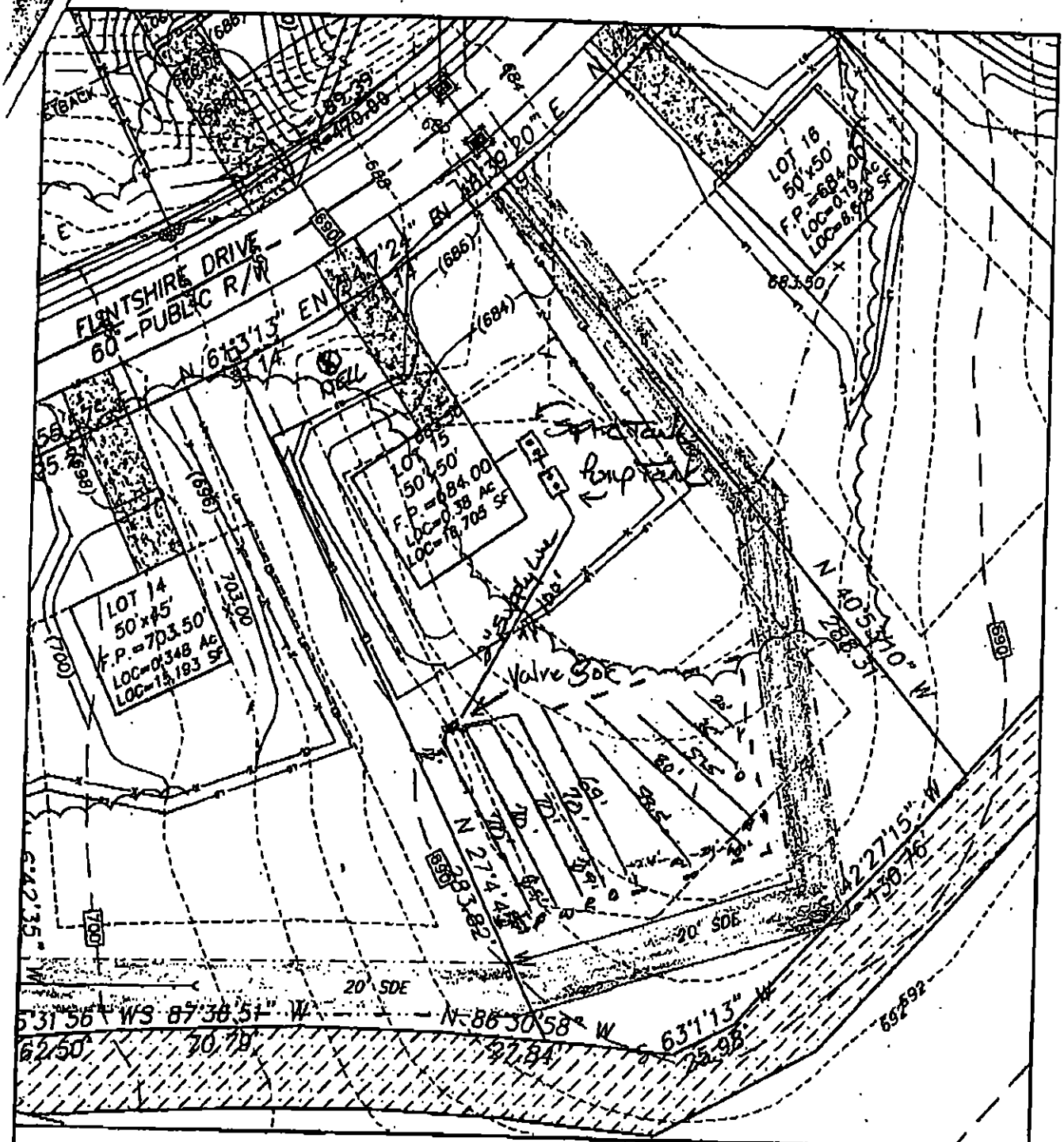
Minimum System Setbacks
Distance from Building Foundation: 5 feet minimum
Distance from Property Line: 10 feet minimum
Distance from Water Supply Source: 100 feet (50' Min)

SKETCH OF SYSTEM LAYOUT
(Proposed Layout)

* Install as per design consultant
* Do not alter without prior approval from consultant and MCHD

Comments: System Classification & Type: IV a

DENR Authorized Agent: Shelby Ledford Signature: Shelby Ledford
Bradley W. Holloman



LOT GRADING PLAN
LOT 15
SHERWOOD FOREST SUBDIVISION
MINT HILL, NORTH CAROLINA
CAROLINA DEVELOPMENT SOLUTIONS, LLC
1932 CLARK ELLIOT STREET
FORT MILL, SOUTH CAROLINA 29708
SCALE 1"=50'

GRAPHIC SCALE
50 25 0 50

summit
landservices

Mecklenburg County

Lot 15 SWF

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: $ 2 (* 150 required inspections)
$____ (required labs)
$300 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 29th day of April, 2014 by and between Stevens Septic Service, 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 15 Sherwood Forest Mint Hill 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

Title: [signature]

License numbers: 996735

_____

_____

GWS Septic System Design Review

GWS File #: 8563B Approved ☐ Disapproved ☐

Design Review: ☒

Field Review: ☑

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

Residential Subsurface Wastewater Treatment and Disposal System Proposal

for

Sherwood Forest – Lot 15
Mint Hill, North Carolina

Tax Parcel # 13927645
MCGWS File # 8563B
December 17, 2012

Prepared for:

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

LICENSED SOIL SCIENTIST
LARRY B. THOMPSON JR.
1287
STATE OF NORTH CAROLINA

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

NORTH CAROLINA REGISTERED ENVIRONMENTAL HEALTH SPECIALIST SEAL 1208 LARRY B. THOMPSON JR.

cc: Mr. Philo Walker, REHS
Mecklenburg County Environmental Health

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 4-bedroom single family residence served by a private well to be located at Lot 15 in the Sherwood Forest 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 a pressure-dosed prefabricated porous block panel system (PPBPS) as well.

True Homes requests that Mecklenburg County Groundwater and Wastewater Services (MCGWS) consider issuing an Improvement Permit and Construction Authorization for a 4-bedroom residence to be located on Lot 15 based upon the following proposal.

Location

The subject property is located at 7202 Will Scarlet Court in Mint Hill, North Carolina. From downtown Charlotte, travel east on US 74 and continue on to NC 27 approximately 9.1 miles. Turn right onto Cabarrus Road, right onto Ferguson Road and right onto Brief Road. Take the second right onto Friar Tuck Lane and right onto Flintshire Drive. Lot 15 is the second lot on the right.

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.

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 70 feet in length.
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 **33 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.

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 100 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 four (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.

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 GPD – 4 bedroom house
Septic Tank Size:	1500 gallons (2 compartments)
Pump Tank Size:	1000 gallons
Effluent Loading Rate:	0.3 GPD per sq. ft. (50 % reduction for the PPBPS)
Supply Length and Diameter:	Approx. 100 ft. of 2 in. SCH 40
Number of Laterals:	(4) 3 feet wide x 70 feet long
Total Length of Drainline:	280 Feet
Number of Panels:	64
Maximum Trench Depth:	33 inches
Distribution Method:	LPP
Flow Rate Through System:	26.24 gallons per minute
Elevation/Friction Head:	11 feet
Pressure Head:	2 feet
Pump Requirements:	26.24 GPM at 13 Feet TDH
Recommended Pump:	Goulds WEO3L or equivalent
Dose Volume:	230.40 gallons
Depth of Water Pumped:	Approximately 11.52 inches
Check Valve:	Yes
Repair System:	Pressure-Dosed PPBPS
Proposed Repair LTAR:	0.3 GPD per sq. ft.
Required Repair Drainline Length:	267 Linear Feet

46 3/4
46.75 53.75

Lb 51 1/2 hp

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

SHEET 1 OF 1

COUNTY: Mecklenburg
TAX ID: 139-276-45

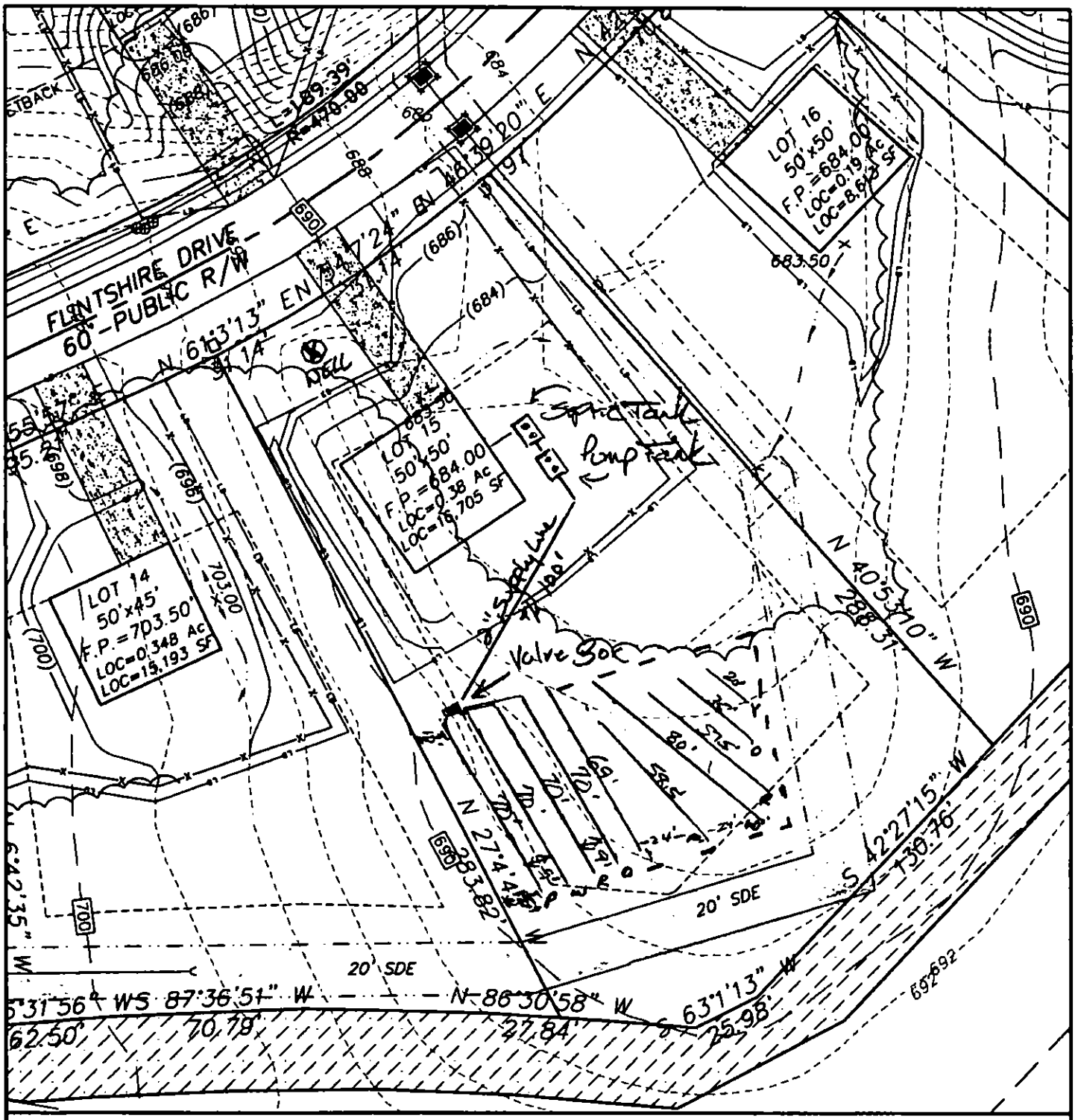
OWNER: True Homes
LOCATION: Lot 15 - Sherwood Forest

DATE: December 15, 2012

PROFILES		SB-1	SB-2	SB-3	SB-4						
LANDSCAPE POSITION	.1940	ls	ls	ls	ls						
SLOPE (%)	.1940	6%	6%	6%	6%						
HORIZON 1 DEPTH	.1943	0-8	0-14	0-12	0-10						
TEXTURE	.1941 (a)(1)	cl	cl	cl	cl						
CONSISTENCE	.1941	fr	fr	fr	fr						
STRUCTURE	.1941 (a)(2)	sbk	sbk	sbk	sbk						
CLAY MINERALOGY	.1941 (a)(3)	se	se	se	se						
HORIZON 2 DEPTH	.1943	8-48	14-48	12-48	10-48						
TEXTURE	.1941 (a)(1)	c	c	c	c						
CONSISTENCE	.1941	fi	fi	fi	fi						
STRUCTURE	.1941 (a)(2)	sbk	sbk	sbk	sbk						
CLAY MINERALOGY	.1941 (a)(3)	se	se	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	ps	ps	ps	ps						
L.T.A.R. (gpd/ft^2)	.1955	0.3	0.3	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:



LOT GRADING PLAN
LOT 15
SHERWOOD FOREST SUBDIVISION
MINT HILL, NORTH CAROLINA
CAROLINA DEVELOPMENT SOLUTIONS, LLC
1932 CLARK ELLIOT STREET
FORT MILL, SOUTH CAROLINA 29708
SCALE 1"=50'

GRAPHIC SCALE

50 25 0 50

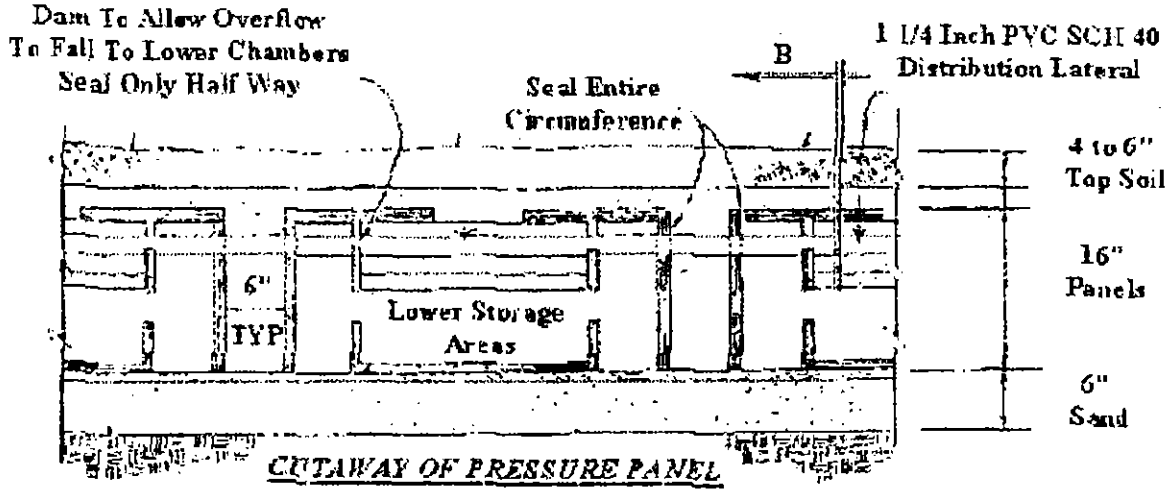
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P.O. BOX 7442
CHARLOTTE, NC 28241
OFFICE: 704.806.0334
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WWW.SUMMIT-COMPANIES.COM

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Midland, NC 28107-0541

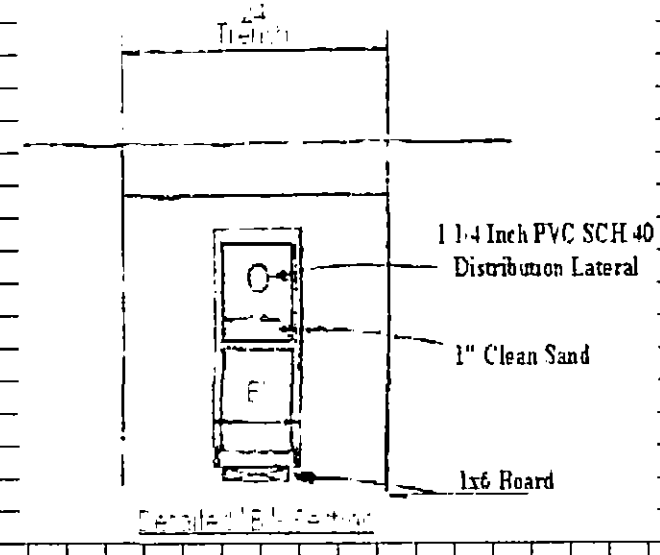
Tax ID Number: 13927645

Location: Sherwood Forest – Lot 15

Date: December 17, 2012



CUTAWAY OF PRESSURE PANEL



PPBPS Design Worksheet							File #:	8563B		
							Tax #:	13927665		
System Requirements							Address:	Sherwood Forest - Lot 15		
Design Flow	480	gpd						Charlotte, NC		
LTAR	0.300	gpd/ft.^2					Consultant:	Larry Thompson		
Linear footage	533	ft. (conventional)					Phone:	704-301-4881		
Linear footage	267	ft. (50% Reduction)								
							Reviewed By:			
Design Layout							Date:			
Laterals	Length (ft)	# Panels								
Line # 1	70	16								
Line # 2	70	16								
Line # 3	70	16								
Line # 4	70	16								
Totals	280	64								
Absorption Area										
Length (ft)	Width (ft)	Area (ft^2)								
280	3	840								
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	26.24	gpm	Total number of panels required multiplied by the orifice flow rate							
System Dose Volume	230.40	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	11.52	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

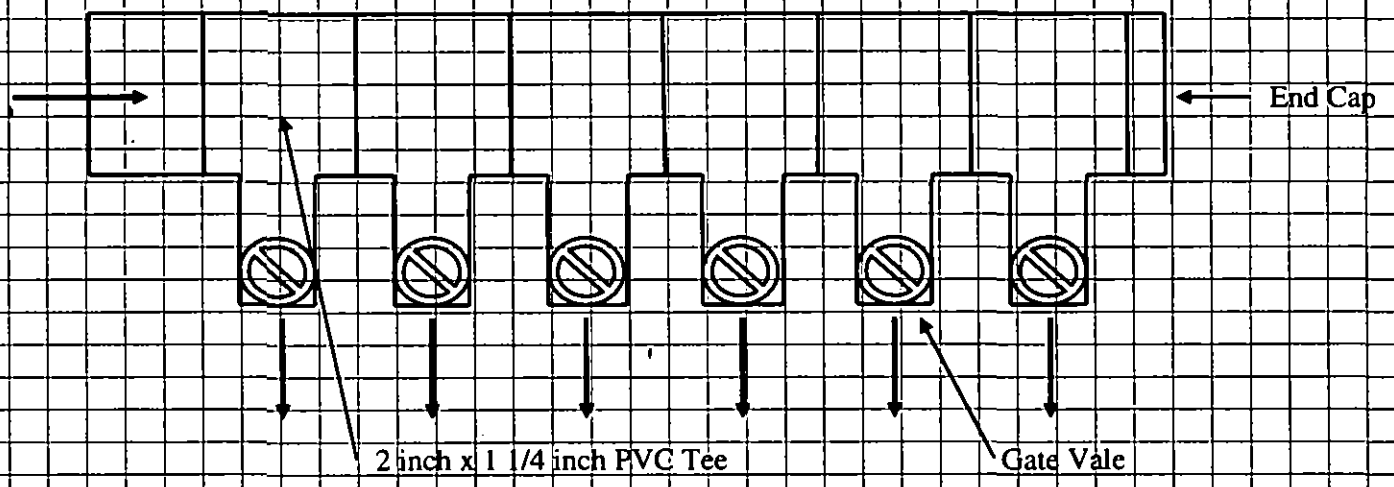
Thompson Environmental Consulting
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 13927645

Location: Sherwood Forest – Lot 15

Date: December 17, 2012

Recommended PPBPS Manifold Setup

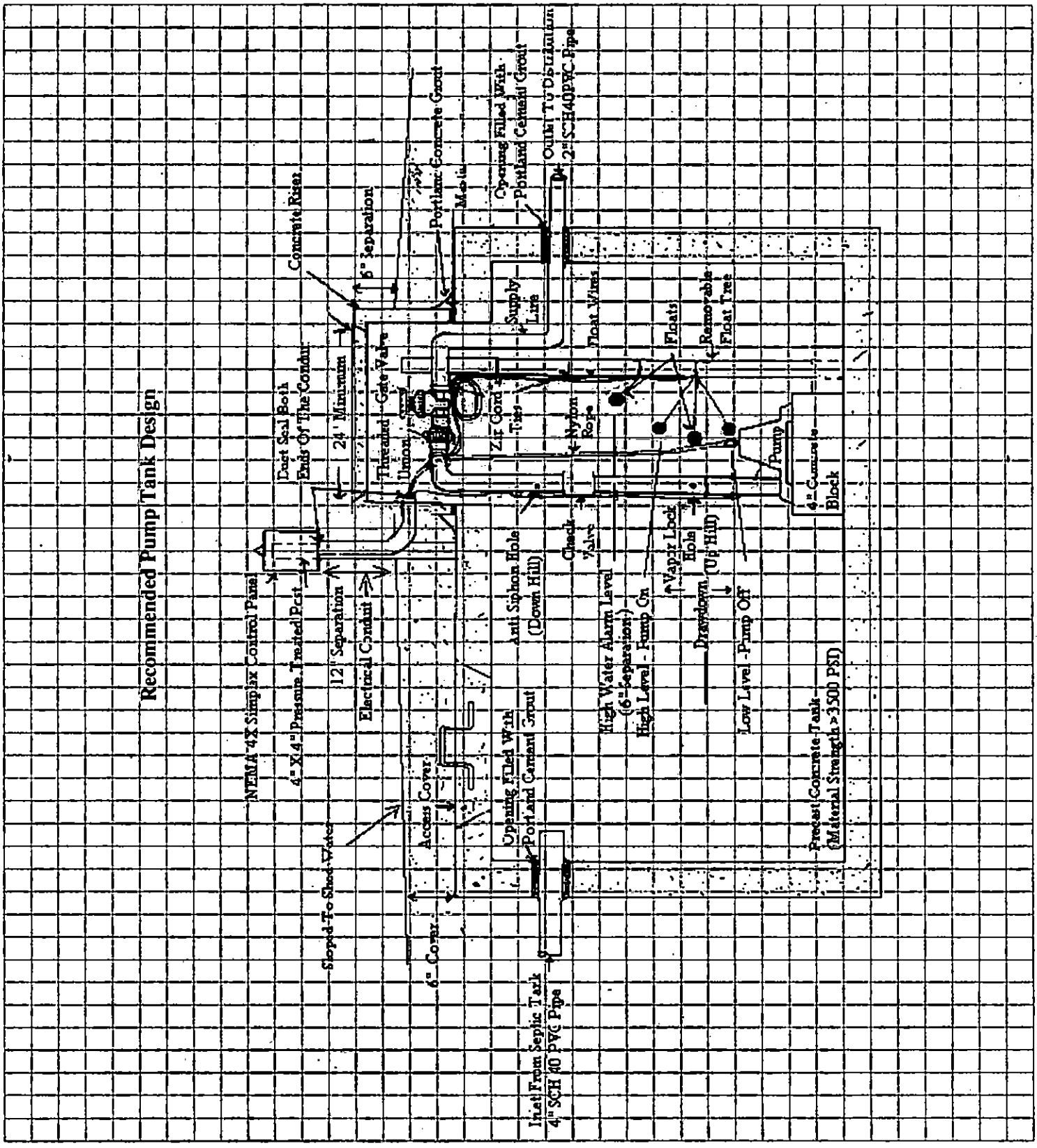


Thompson Environmental Consulting
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 13927645

Location: Sherwood Forest – Lot 15

Date: December 17, 2012



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.

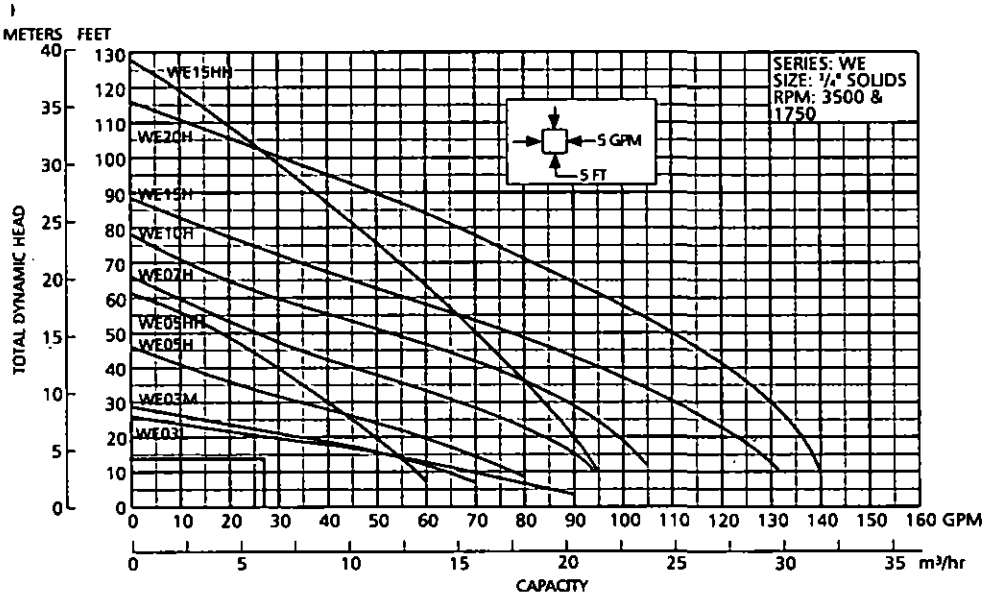
■ **Power Cable:** Severe duty *rated, oil and water resistant.* Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.

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

AGENCY LISTINGS

C SP 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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B3885

GOULDS PUMPS

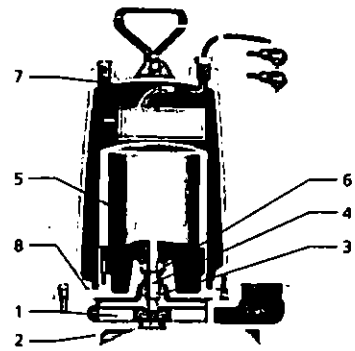
Submersible Effluent Pump

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

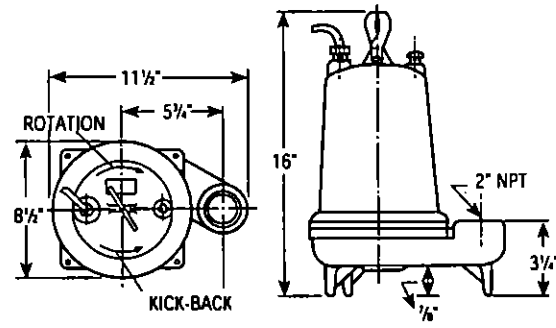
Order No.	HP	Volts	Phase	Max. Amp.	RPM	Solids	Wt. (lbs.)
WE0311L	⅓	115	1	10.7	1750	¾"	56
WE0318L		208		6.8			
WE0312L		230		4.9			
WE0311M		115		10.7			
WE0318M		208		6.8			
WE0312M		230		4.9			
WE0511H	½	115	1	14.5	3500	¾"	60
WE0518H		208		8.1			
WE0512H		230		7.3			
WE0538H		200	3	4.9			
WE0532H		230		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
	HP	⅓	⅓	½	¾	1	1½	½	1½	2
	RPM	1750	1750	3500	3500	3500	3500	3500	3500	3500
Total Head Feet of Water	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.)



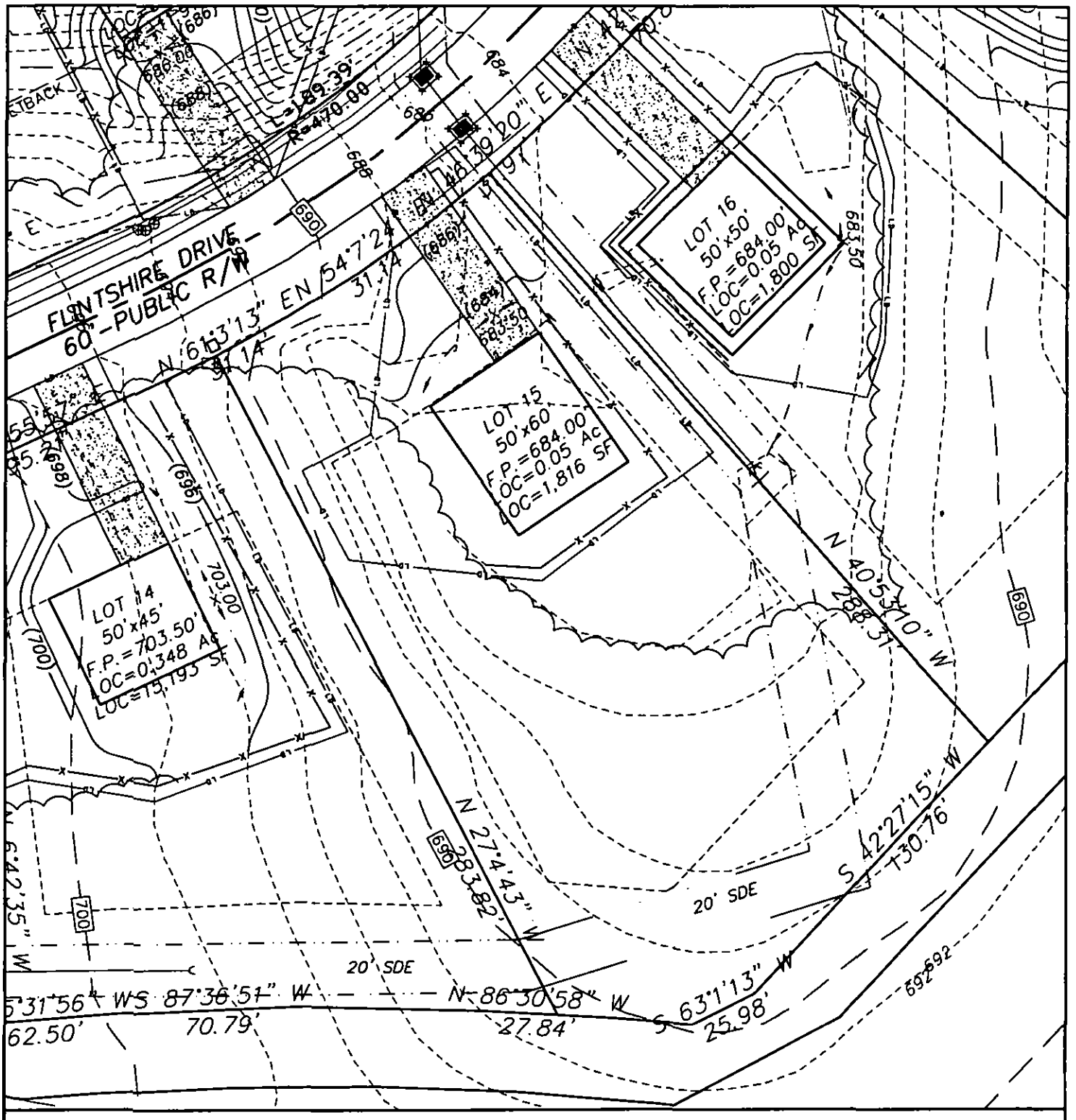
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SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Goulds Pumps

ITT Industries

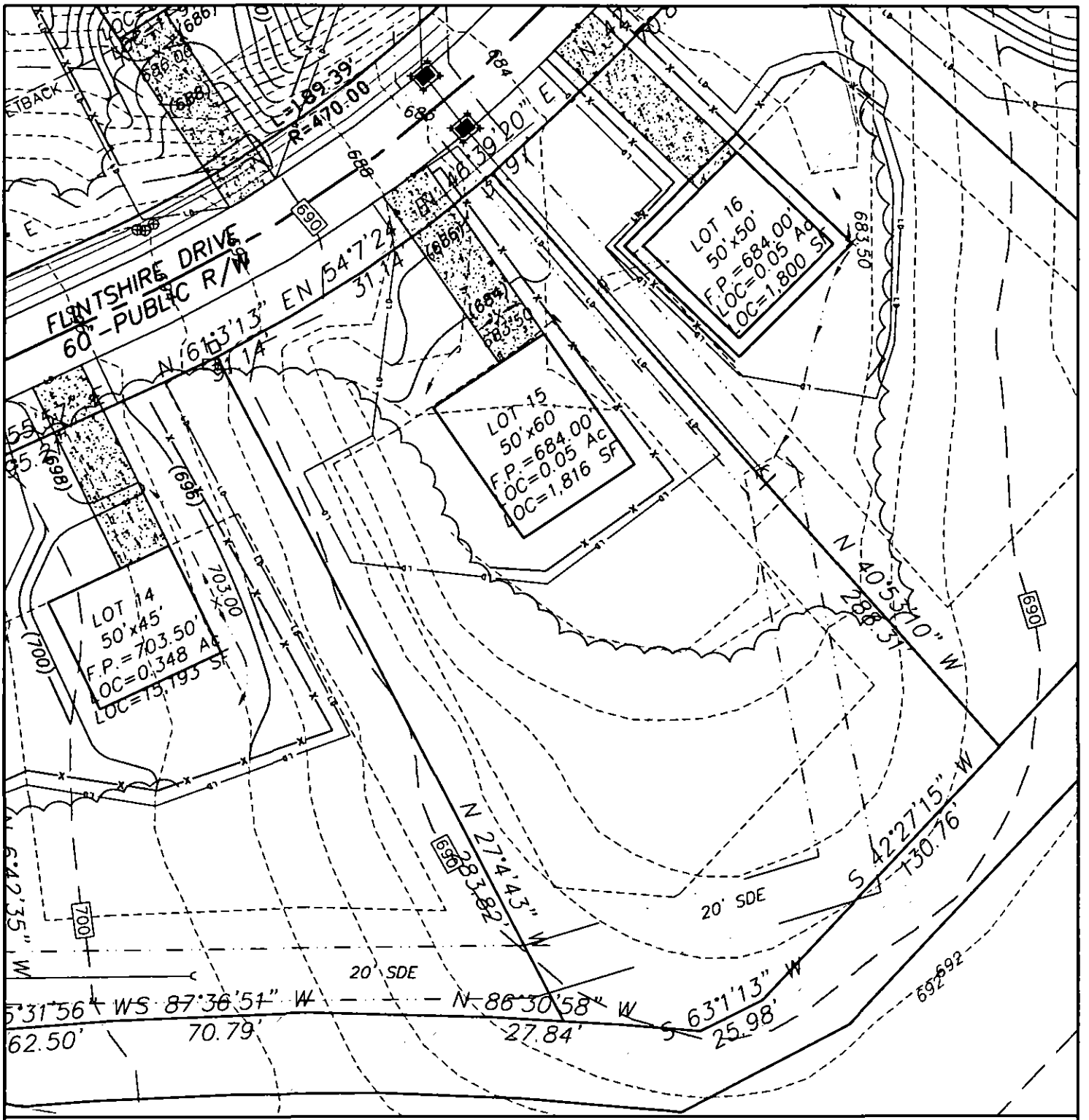


LOT GRADING PLAN
LOT 15
SHERWOOD FOREST SUBDIVISION
MINT HILL, NORTH CAROLINA
CAROLINA DEVELOPMENT SOLUTIONS, LLC
1932 CLARK ELLIOT STREET
FORT MILL, SOUTH CAROLINA 29708
SCALE 1"=50'

GRAPHIC SCALE

50 25 0 50

summit
landservices
P.O. BOX 7442
CHARLOTTE, NC 28241
OFFICE: 704.508.0554
FAX: 704.504.1125
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WWW.SUMMIT-COMPANIES.COM

FEE: 200.00
DATE: 2/5/2014

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

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 8563B

PERMIT NUMBER: 30005747

PARCEL NUMBER: 13927645

JOB LOCATION INFORMATION

ADDRESS: 10812 FLINTSHIRE RD

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

ISSUED TO: True Homes

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 1/2/2013

CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30005747, 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: 1/2/2018

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 #: 30006747 GWS File #: 8563B Tax Parcel #: 139-276-45

- 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): 1/2/2018
Type of Installation: Residential - New System Lot Number: 16
Structure Type: HOUSE Size (ft^2): 0 # Bedrooms: 4 # Occupants: 5
Building Foundation: Concrete Slab Water Supply: Private Well

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

Initial System Specifications:
Design Flow (gpd): 480 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): 801 Total Trench Length (ft): 267
Maximum Trench Depth (in): 33 Depth of Media (in): 22 Distribution Device: Pressure Manifold

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

Repair System Specifications:
Design Flow (gpd): 480 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): 800 Total Trench Length (ft): 267
Maximum Trench Depth (in): 33 Depth of Media (in): 22 Distribution Device: Pressure Manifold

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: Tyler Ashe Owner/Legal Agent: Michelle Sturdivant
Print Name
Signature: Tyler Ashe EHS Signature: Michelle Sturdivant
Date Issued: 1/2/2013

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-5594

NC DENR
Division of Environmental Health
On-Site Wastewater Section

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

Permit #: 30005747 GWS File #: 8663B

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.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All components of the septic system must be located at least 100 ft. (50 ft. minimum) from all private wells.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- Upon completion of the project the system designer shall provide Groundwater & Wastewater Services with a letter certifying that the system was installed in accordance with the approved design.
- The system must be water tested during the final inspection to verify proper operation and set system pressure.
- Maintain drainlines 15ft off the edge of 20ft drainage easement as shown in the consultants plans.

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: Tyler Ashe
Signature: REHS
Date Issued: 1/2/2013

Owner/Legal Agent: Michelle Sturdivant
Print Name
Signature: Michelle Sturdivant

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 #: **30005747** GWS File #: **8563B** Tax Parcel #: **139-276-45**

- 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):** 1/2/2018

Type of Installation: Residential - New System Lot Number: 15

Structure Type: HOUSE Size (ft^2): 0 # Bedrooms: 4 # Occupants: 5

Building Foundation: Concrete Slab Water Supply: Private Well

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

Initial System Specifications:

Design Flow (gpd): 480 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): 801 Total Trench Length (ft): 267

Maximum Trench Depth (in): 33 Depth of Media (in): 22 Distribution Device: Pressure Manifold

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

Repair System Specifications:

Design Flow (gpd): 480 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): 800 Total Trench Length (ft): 267

Maximum Trench Depth (in): 33 Depth of Media (in): 22 Distribution Device: Pressure Manifold

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

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DENR Authorized Agent: Tyler Ashe Owner/Legal Agent: _____
Print Name

Signature: _____ REHS Signature: _____

Date Issued: 1/2/2013

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700 N. Tryon St, Suite 211 Charlotte, NC 28202
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On-Site Wastewater Section

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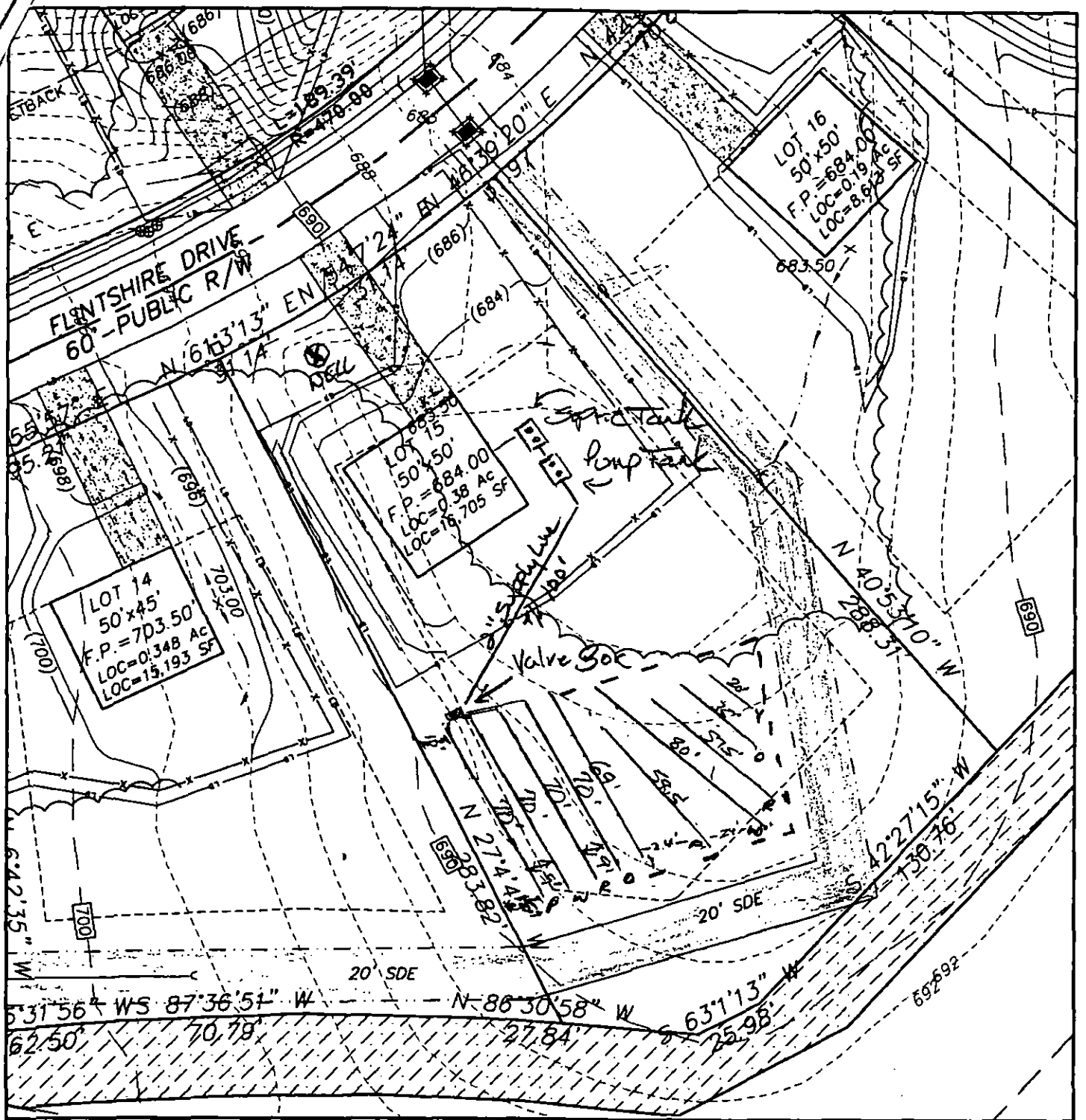
DENR Authorized Agent: Tyler Ashe

Signature: REHS

Date Issued: 1/2/2013

Owner/Legal Agent: _____
Print Name

Signature: _____



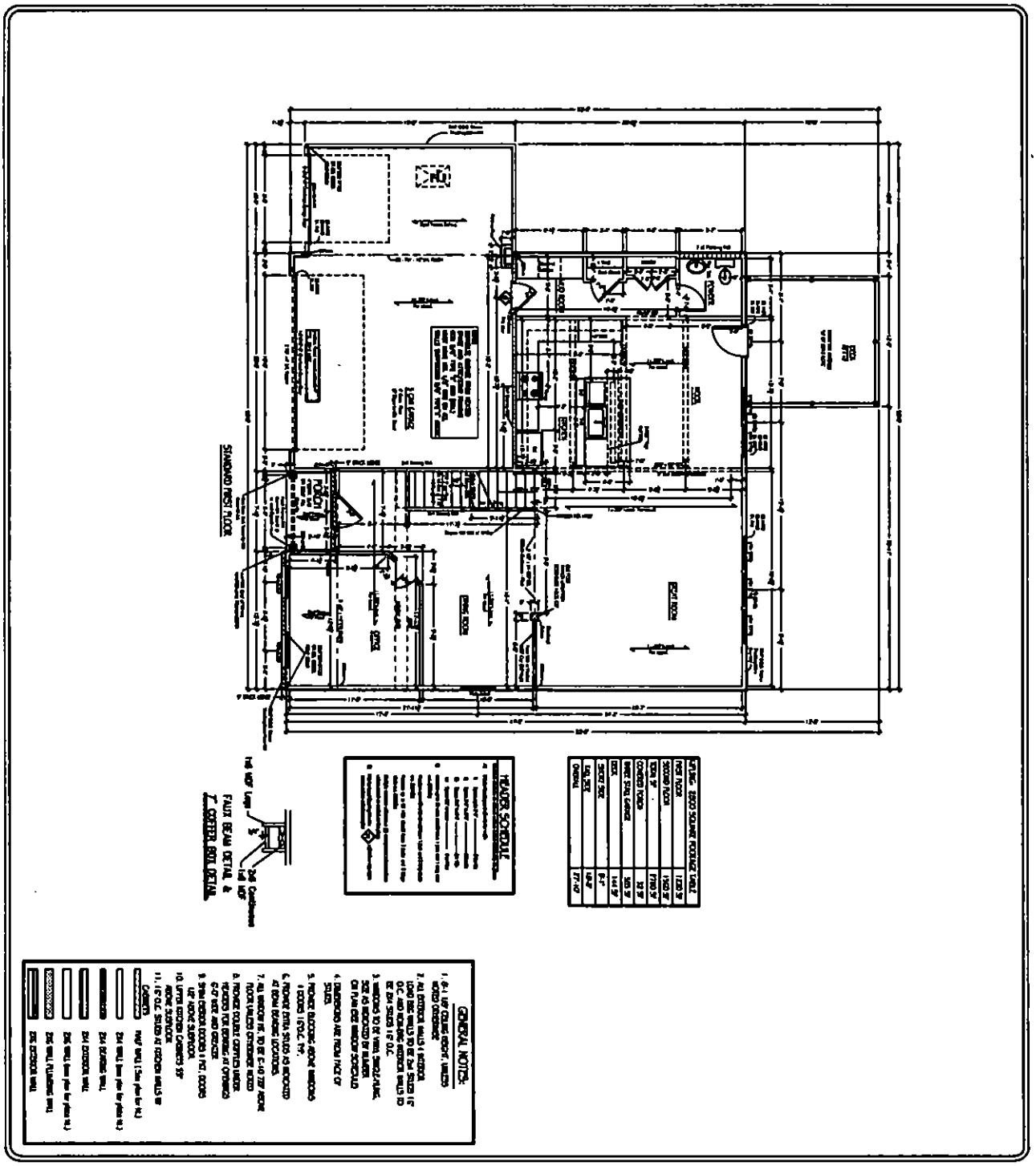
LOT GRADING PLAN
LOT 15
SHERWOOD FOREST SUBDIVISION
MINT HILL, NORTH CAROLINA
CAROLINA DEVELOPMENT SOLUTIONS, LLC
1932 CLARK ELLIOT STREET
FORT MILL, SOUTH CAROLINA 29708
SCALE 1"=50'

GRAPHIC SCALE
50 25 0 50

summit
landservices
P.O. BOX 7443
CHARLOTTE, NC 28241
OFFICE: 704.508.0534
FAX: 704.504.1125
WWW.SUMMIT-COMPANIES.COM

10812 Flintshire Rd, Lot 15

File # 8563B



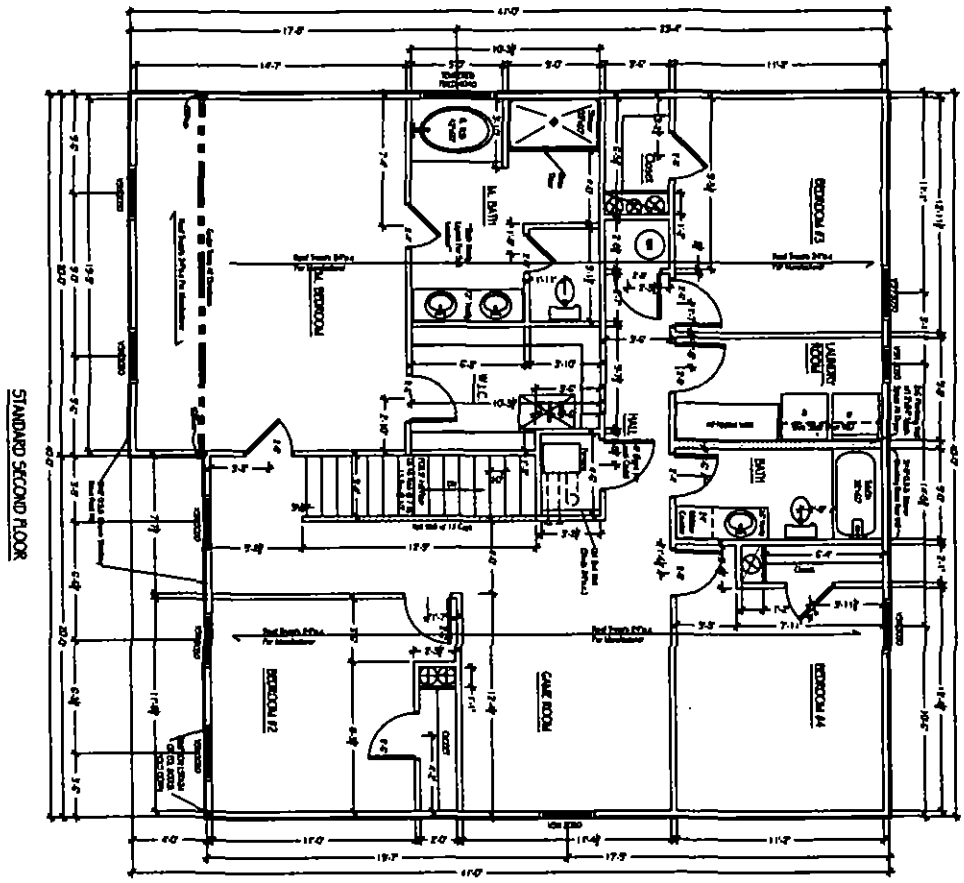
4 / 9	SHEET
	KEY
	SCALE
	DATE
	DRAWN BY
	CHECKED BY

FIRST FLOOR PLAN

2780 - KIPLING

SHERWOOD FOREST
Lot #15

TRUE HOMES L.L.C.
2649 Brekon Ridge Centre Dr.
Suite 104
Monroe, N.C. 28110
704-226-9486



HEADER SCHEDULE

GENERAL NOTES

SECOND FLOOR PLAN

2780 - KIPLING

SHERWOOD FOREST
Lot #15

TRUE HOMES L.L.C.
2649 Brekon Ridge Centre Dr.
Suite 104
Monroe, N.C. 28110
704-226-9486

SCALE: 1/8"=1'-0"

DRAWN BY: DPS

DATE: 1.30.14

REVISED: RD

JOB: Aqua Blanca

SHEET: 5 of 9

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

Sheet: 1 of 2
Property ID: 13927645
Lot #: 15
File #: 8563B
AppID: 5747

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: True Homes
Applicant: True Homes
Address: 2649 Brekonridge Centre Dr. Monroe, NC 28110
Date Evaluated: 9/1/2012
Proposed Facility: Residence
Design Flow (.1949) 480 GPD
Property Size: 1
Location of Site: 10812 Flintshire Road Charlotte, NC 28227 Sherwood Forest lot 15
Property Recorded:
Water Supply: [ ] Public [ ] Individual [X] Well [ ] Spring [ ] Other
Evaluation Method: [X] Auger Boring [X] Pit [ ] Cut
Type of Wastewater: [X] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.1941 Consistence Mineralogy	b PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
Pit 1	HS	0-32	wfsbk CL	ss sp fr sexp	>48	48	NA	PS	PS IV
	6%	32-48	mmsbk C	ss sp fi sexp					0.3
Pit 2	HS	0-7	Compacted		>48	48	NA	PS	PS IV
	4%	7-16	wfsbk CL	ss sp fr sexp					0.3
		16-48	mfsbk C	ss sp fi sexp					
Bor 3	LS	0-30	wfsbkCl	ss sp fr sexp	>48	48	NA	PS	PS IV
	5%	30-48	wfsbk C	s sp fi sexp					0.3
Pit 4	HS	0-7	Compacted			42	NA	PS	PS IV
	7%	7-15	wfsbk Cl	ss sp fr sexp	Yellow Mottles				0.3
		15-42	mfsbk C	ss sp fi sexp	34"-42"				
Bor 5	LS	Fill							US
	4%								
					Fill Material				

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	IVa	IVa
Site LTAR	0.3	0.3

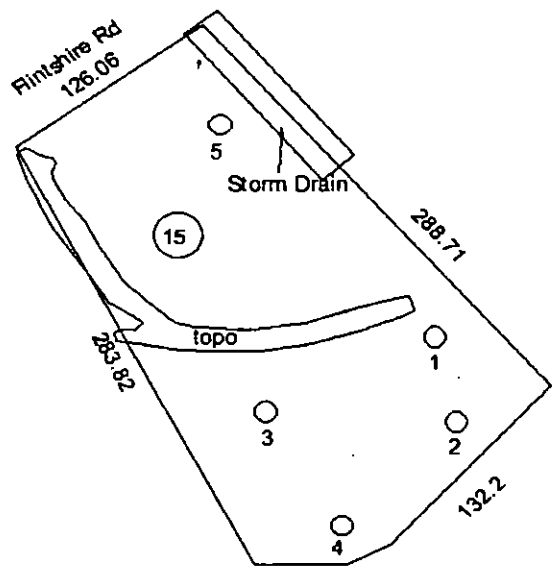
Other Factors (.1946):
Soil Evaluation By: Eric Bailey LSS Eric Bailey
Others Present: Jacob Presley LSS
Site Classification (.1948): PS
Site Evaluation By: Tyler Ashe (12/20/12 + 1/2/13)
Others Present: Eric Bailey (12/20/12) Eric Bailey

COMMENTS: Due to landscape position site should utilize a subsurface drain.

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		M-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		
D-Drainage Way		SCL-Sandy Clay Loam		
		SiL- (Silt Loam)		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SiC-Silty Clay		
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	NS-Non-Sticky	NEXP-(Non-expansive)
FR-Friable	SS-Slightly Sticky	SEXP-Slightly Expansive
FI-Firm	S-Sticky	EXP-Expansive
VFI-Very Firm	VS-Very Sticky	
EFI-Extremely Firm	NP-Non-Plastic	
	SP-Slightly Plastic	
	P-Plastic	
	VP-Very Plastic	

Sketch of Soil Evaluation Locations



○ = auger boring and pit