

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NO PERMIT(S) FOR CONSTRUCTION, LOCATION OR RELOCATION ACTIVITY SHALL BE ISSUED UNTIL AN AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION AUTHORIZATION HAS BEEN ISSUED

PERMIT VOID IF NOT IN COMPLIANCE WITH ZONING REGULATIONS AND/OR IF SITE IS ALTERED OR INTENDED USE CHANGED

OPERATIONS PERMIT

PERMIT # WRP-053651-2021

APPLICATION DATE: 02/11/2021

BLDG. PERMIT#: RABS-054216-2021

PIN: 0890134767

RECORDED: Yes

TOWNSHIP: 02 - Bartons Creek

JURISDICTION: Wake County

ZONING: R-40W

APPLICANT: Samuel St clair
1619 Oberlin RD

BUSINESS PHONE: (919) 559-2071

HOME PHONE:

MOBILE PHONE:

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 1425 SKY VISTA WAY

SUBDIVISION: SOUTHERN HILLS ESTATES

LOT: 32

ACRES: 1.03

DIRECTIONS: Lot 32 southern hills. Gate code is #9239. Offsite septic is behind lot 34

Systems defined as either type III-b, III-g with a pump, IV, V or VI, in accordance with the North Carolina administrative code 15A NCAC 18a .1961, table V as adopted by reference in the "Regulations Governing Wastewater Treatment Dispersal Systems in Wake County", requires Wake County Environmental Services to conduct periodic inspections of the system type pursuant to 15A NCAC 18a. 1961 (j). Fees for these inspections will be charged as per the approved Fee Schedule. In addition, all systems are to be operated and maintained as specified in 15A NCAC 18A .1961. This permit is based in part on information provided by the homeowner and/or his/her representative in the application submitted for this permit. The Environmental Health Specialist is not responsible for false or misleading information contained in the application. The environmental health specialist is also not responsible for concealed conditions on the property or for statements in this report that may have resulted from false or misleading statements provided to him/her in the application. Neither Wake County nor the Environmental Health Specialist warrants that the septic tank system will continue to function satisfactorily in the future or that the water supply will remain potable.

OPERATION PERMIT VALID FOR: No Expiration

INSTALLED BY: GULLEY, JAMES C - 1081 - IV

PROPRIETARY SYSTEM: EZ1203HG - EZFlow EZ 1203H Geo **PRETREATMENT SYSTEM:**

SYSTEM TYPE INSTALLED: III B

OPERATION PERMIT: **STATUS:** Issued

ISSUED BY: Casey Fulghum

ISSUED DATE: 09/29/2022

SEPTIC TANK: Blackwelder - STB-272 - 1570
gallons

DATE OF MANUFACTURE: 12/17/2020 **FILTER:** Polylok - PL-68

GREASE TRAP:

DATE OF MANUFACTURE: **FILTER:**

DOSING PUMP TANK: Blackwelder - PT-312 -
1500 gal - 27.78 gal/in

DATE OF MANUFACTURE: 12/17/2020 **FILTER:**

CC1: 999,815

ETM1: 1

CC2:

ETM2:

RECIRCULATION TANK:

DATE OF MANUFACTURE:

CC1:

ETM1:

CC2:

ETM2:

SEPTIC TANK ELEVATION: 4.04

GREASE TRAP ELEVATION:

DOSING PUMP TANK ELEVATION: 4.66

RECIRCULATION TANK ELEVATION:

DISTRIBUTION DEVICE ELEVATION: 1

INSTALLED TRENCH DEPTH	INSTALLED AGGREGATE DEPTH	INSTALLED TRENCH LENGTH	INSTALLED TRENCH BOTTOM ELEVATION
22	12	140	4.6
22	12	145	4.5
22	12	135	5.3
22	12	80	5.7
22	12	50	6.9

ACTUAL PRESSURE HEAD: 2

ACTUAL FLOW RATE: 45

ACTUAL DOSE VOLUME: 256

SPECIFIC OPERATION REQUIREMENTS:

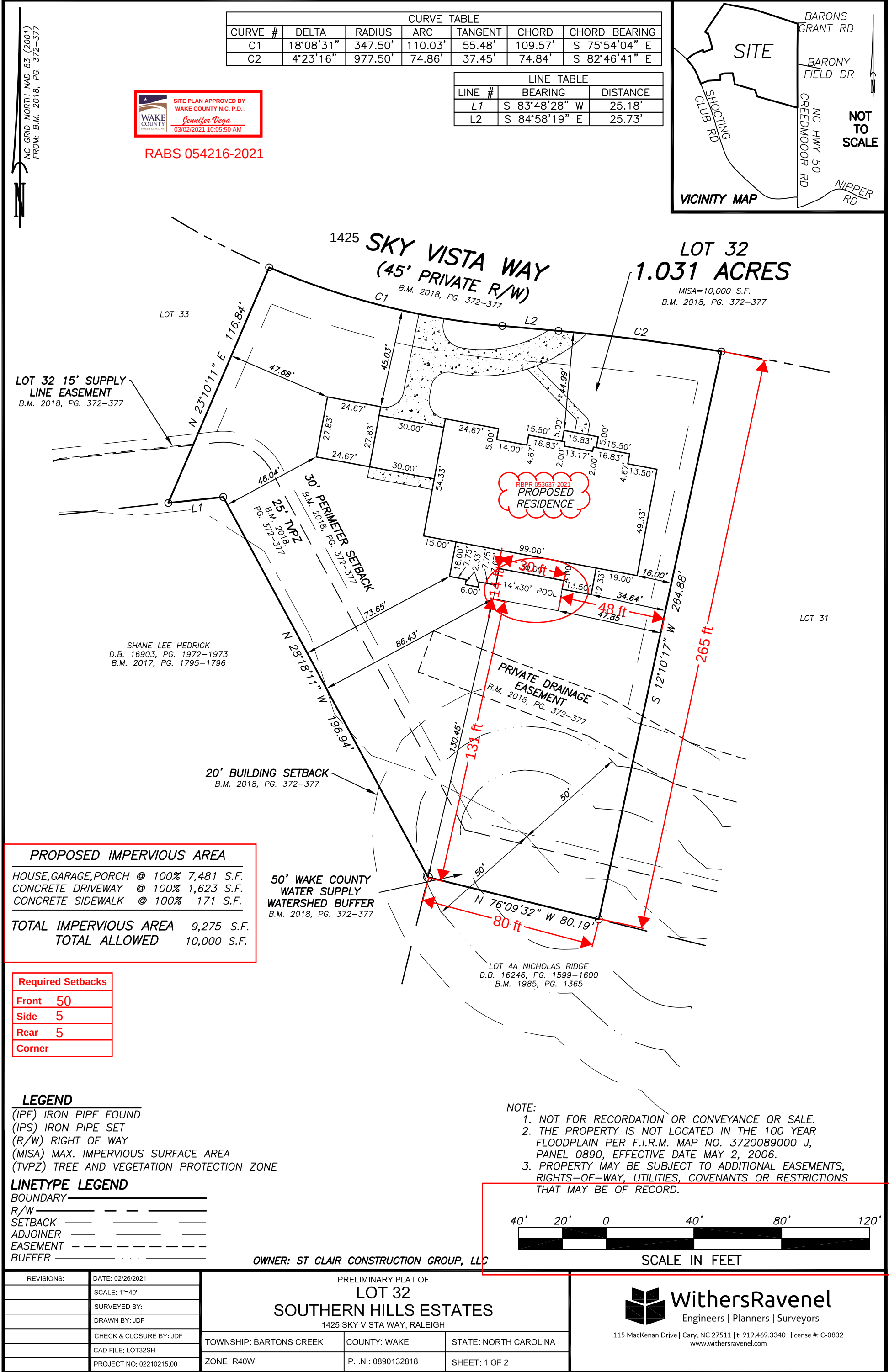
- System designed for 5 bedroom home, having 600 gallons per day.
- Site serviced by community well water.
- Zoeller 186 pump used

ASDMS: Book- 19159 Page- 02619

ISSUED BY:



DATE: 09/29/2022



1. NOT FOR RECORDATION OR CONVEYANCE OR SALE.
2. THE PROPERTY IS NOT LOCATED IN THE 100 YEAR FLOODPLAIN PER F.I.R.M. MAP NO. 3720089000 J, PANEL 0890, EFFECTIVE DATE MAY 2, 2006.
3. PROPERTY MAY BE SUBJECT TO ADDITIONAL EASEMENTS, RIGHTS-OF-WAY, UTILITIES, COVENANTS OR RESTRICTIONS THAT MAY BE OF RECORD.



The image shows the WithersRavenel logo, which consists of a stylized black cube icon to the left of the company name "WithersRavenel" in a large, bold, black sans-serif font. Below the company name, the text "Engineers | Planners | Surveyors" is written in a smaller, black sans-serif font. At the bottom of the image, the contact information "115 MacKenan Drive | Cary, NC 27511 | t: 919.469.3340 | license #: C-0832" and the website "www.withersravenel.com" are displayed in a black sans-serif font.

BK019159PG02619
1619 oberlin Road
Raleigh NC 27608

WAKE COUNTY, NC 15
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
09/29/2022 09:35:09

BOOK:019159 PAGE:02619 - 02620

OFF-SITE EASEMENT SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE
To Be Recorded In The Register Of Deed's Office In Wake County.
Owner/Grantor St. Clair Construction Group LLC Deedbook and Page 18264-2506
PIN No. 0890134767 Date Installed 1/5/2022
Subdivision Name Southern Hills estate Lot No. 32
System Designed by Central Carolina Soil Consulting Installer Gulleys Buckhoe Services

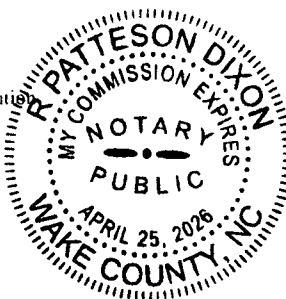
AN ALTERNATIVE OR NON-TRADITIONAL SEWAGE DISPOSAL SYSTEM HAS BEEN INSTALLED ON THIS PROPERTY.
The design specifications and locations for alternative sewage disposal systems are specified or authorized in Regulations Governing Wastewater Treatment and Dispersal Systems in Wake County effective November 21, 1988, amended effective October 27, 2011, amended June 25, 2020.
As A Condition Of Issuance Of This Improvements/Operation Permit, The Property Owner Hereby Grants The Wake County Department Of Environmental Services A Right Of Access To The System During Regular Working Hours For Purposes Of Monitoring Compliance With State And Local Regulations, Recorded Maintenance Agreements And Certified Operator Compliance.
Experience and study have shown that sewage disposal systems located in offsite easement areas require routine maintenance in order to function satisfactorily. In as much as each system must be individually designed and sited, special maintenance requirements may apply to a specific installation; however, the following maintenance schedule is applicable to most systems. For additional information, technical assistance or if a malfunction of the system occurs, contact the Wake County Department of Environmental Services, Telephone: 919-856-7400.

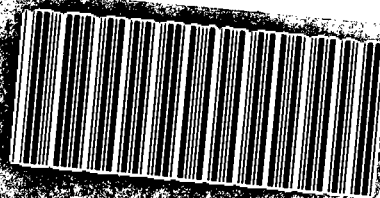
System Component	Frequency	Maintenance
1. Septic Tank	12 months 1-3 years	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump seepage.
2. Pump/Dosing Tank	12 months	Check riser conditions (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Wash (hose) sludge accumulation from pump housing.
3. Supply lines	12 months	Check for settling, pipe exposure, and leakage, including all easement areas.
4. Drain Field(s)	1-4 weeks 12 months	Maintain vegetative cover (mow grass and remove weeds and brush). Check for settling, erosion and surfacing of effluent. Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.
5. Pressure Manifold/ Distribution Box	12 months	Check and reset pressure head. flush sludge from pressure manifold (any discharge sludge and effluent is to be treated with a chlorine solution or lime). Check D-Box level.
6. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage(gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce waste water load on system. Do not permit entry of grease and non-domestic waste to system. Use of a garbage disposal is <u>prohibited</u> . Addition of chemical or biological additives has <u>not</u> been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained.

A certified operator is required for the life of the system.

[Signature]
Signature of Property Owner
9/28/2022
Date

NORTH CAROLINA Wake County, I, a Notary Public of the County and State aforesaid, certify that Samuel Keith St. Clair II Owner, Personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this 28 day of September 2022.
My commission expires April 25, 2026 Notary Public [Signature]
WWDS 1/29/16





BOOK:019159 PAGE:02619 - 02620

Please retain yellow trailer page

It is part of the recorded document and must be submitted with the original for re-recording.

Tammy L. Brunner
Register of Deeds

Wake County Justice Center
300 South Salisbury Street, Suite 1700
Raleigh, NC 27601

☐ New Time Stamp

☐ \$25 Non-Standard Fee

☐ Additional Document Fee

☐ Additional Reference Fee

This Customer Group

_____ # of Excessive Entities

_____ # of Time Stamps Needed

This Document

2 # of Pages *SA*

**Pressure Manifold-Gravity-Drip-Spray-Pump
System Maintenance Agreement**

THIS AGREEMENT is made on the date of September 28, 2022
Between Morgan & Damon Oney and David Brantley &
Sons Inc.

The Contractors Obligation: The Contractor shall perform the following services
on the system located at 1425 Sky Vista Way Raleigh, NC 27613.

- a. The Contractor shall inspect the system 1 time (s) per year.
- b. The Contractor shall perform the following routine maintenance
procedures in accordance with recommendation by Local County Health
Department.
 1. Check sludge level in all tanks & notify owner if pumping is needed
 2. Clean filter in septic tank
 3. Inspect drain field for problems
 4. Inspect the following:
 - a) Both On& Off float switches-Prevents the pump from
burning up if switch fails.
 - b) Alarm float switch
 - c) Check dosing rate
 5. Run flow numbers to look for problems

The Contractor shall report the results of the inspection to the homeowner.

- c. The Contractor shall notify the Owner of needed repairs within 24 hours,
which are outside the scope of routine maintenance described above. The
Contractor shall perform the necessary repairs to the system at the request
of the Owner only and shall be entitled to payment at the Contractor's
normal charge for service and materials.

- d. The Contractor shall respond to a request for non scheduled service or maintenance call within 72 hours after receipt of such request.

The Owners Obligation:

- a. The Owner shall pay the Contractor the sum of \$175.00 per year for periodic inspections, routine maintenance procedures and periodic reports.
- b. The Owner shall provide the Contractor free access to the system as is necessary for the Contractor to comply with the terms of this agreement.

Terms:

- a. This agreement shall remain in effect until the Homeowner or Contractor cancels. The Homeowner must cancel agreement at least 30 days in advance of due inspection.

THE OWNER: Morgan & Damon Oney
1425 Sky Vista Way
Raleigh, NC 27613

Home: _____ Work: _____ Mobile: 919-257-9516
Email: Carolinagirl2398@aol.com
Gate code: #9239

THE CONTRACTOR: David Brantley & Sons Inc
37 Pine Ridge Rd
Zebulon, NC 27597
Office: 888-817-1904 Email: brantleyoffice@gmail.com

OWNER: _____ CONTRACTOR: Cory Brantley



Environmental Services

TEL 919 856 7400
FAX 919 856 7407

Water Quality Division
336 Fayetteville St. • P.O. Box 550 • Raleigh, NC 27602

8/13/2021

REQUIREMENTS TO COMPLETE YOUR PRESSURE MANIFOLD SYSTEM

NAME: Samuel St Clair
ADDRESS: 1619 Oberlin Rd. Raleigh, NC 27608
Re: Pressure Manifold Wastewater Dispersal System
SEPTIC PERMIT: WRP-053651-2021
PIN: 890 13 4767
Building Permit: RBPR-053637-2021
Property Description: Southern Hills Estates Lot 32, 1.03 Ac.

Dear Sir/Madam:

Enclosed is your approved pressure manifold installation plan and the "Pressure Manifold Sewage Disposal System Maintenance Information Sheet".

To complete your permit:

- **System Installation** - A contractor **CERTIFIED** by the State of North Carolina to at least a **LEVEL II** certification, and **REGISTERED** in Wake County, must be used to install your system.
- **Alternative Sewage Disposal System Maintenance Schedule** – this document must be signed, notarized, and recorded at the Wake County Register of Deeds Office. A copy of the recorded document must be submitted to Wake County before your permit can be finalized.

A copy of the "Pressure Manifold Sewage Disposal System Maintenance Information Sheet" and a copy of the "Wake County Well and Septic System Owner's Guide", which contain information essential to the long-term performance of this wastewater disposal system, must be forwarded to the owner or user of the system, if other than yourself.

ANY PROPOSED MODIFICATION TO THE APPROVED PLANS MUST BE COORDINATED WITH YOUR SYSTEM DESIGNER

Please call (919) 868-2560 or email at Alan.Alcock@wakegov.com if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Alan Alcock".

Alan Alcock, REHS
Environmental Health Manager

See CA Parts A-C

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NO PERMIT(S) FOR CONSTRUCTION, LOCATION OR RELOCATION ACTIVITY SHALL BE ISSUED UNTIL AN AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION AUTHORIZATION HAS BEEN ISSUED

PERMIT VOID IF NOT IN COMPLIANCE WITH ZONING REGULATIONS AND/OR IF SITE IS ALTERED OR INTENDED USE CHANGED

CONSTRUCTION AUTHORIZATION PERMIT

PERMIT # WRP-053651-2021

APPLICATION DATE: 02/11/2021

BLDG. PERMIT#: RBPR-053637-2021

PIN: 0890134767

RECORDED: Yes

TOWNSHIP: 02 - Bartons Creek

JURISDICTION: Wake County

ZONING: R-40W

APPLICANT: Samuel St clair
1619 Oberlin RD
Raleigh, NC 27608

BUSINESS PHONE: (919) 559-2071

HOME PHONE:

MOBILE PHONE:

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 1425 SKY VISTA WAY

SUBDIVISION: SOUTHERN HILLS ESTATES

LOT: 32

ACRES: 1.03

DIRECTIONS: Lot 32 southern hills. Gate code is #9239. Offsite septic is behind lot 34

Contractors shall install system on contour. See attached SITE PLAN for wastewater system design and well location. No underground utilities, water lines or sprinklers systems may be located in the original system, or permit areas. A septic tank filter with two risers for access is required. The wastewater system shall not be covered or placed into use until inspected by the Wake County Department of Environmental Services and Operations Permit issued. An Accepted Status System may be used in place of conventional system, if it can be placed in the permitted/authorized trench footprint (except reduction in line length and/or number as allowed for in approval) and the installation in accordance with the accepted system approval, without unauthorized product alteration. If permit required use of an Accepted Status System, substitution with another accepted status system may be made, as long as no changes are necessary in the location of each nitrifications line (including any increase in line length), trench depth or effluent distribution method. If changes are necessary, prior approval by this office is required before system installation. Maximum depth of line is calculated using the downhill side of the trench and includes slope correction.

CONSTRUCTION AUTHORIZATION PERMIT VALID FOR: Five Years

CONSTRUCTION AUTHORIZATION PERMIT: CA STATUS: Issued

BY: Alan Alcock

DATE: 08/13/2021

CA VALID FOR: Five Years

DESIGN FLOW: 600 GALLONS

BASEMENT: No

BASEMENT FIXTURES: No

SEPTIC TANK: 1500 GALLONS

SEPTIC TANK FILTER: Yes

DOSING PUMP TANK: 1500 GALLONS

DOSING PUMP TANK FILTER:

GREASE TRAP:

GREASE TRAP FILTER:

RECIRCULATION PUMP TANK:

RECIRCULATION PUMP TANK FILTER:

PROPOSED SYSTEM: 0.25 - 25% Reduction (Innovative or Accepted)

EXISTING SYSTEM:

DRAINFIELD SQ. FT: 1,605

AGGREGATE DEPTH: 12

MAX. TRENCH DEPTH: 22 INCHES

DISTRIBUTION DEVICE: PM - Pressure Manifold

TRENCH #: 5

TRENCH LENGTH:

TRENCH WIDTH: 36 INCHES

TOTAL TRENCH LENGTH: 535 FEET

140,145,130,70,50 FEET

CENTER SPACING: 9 FEET

MINIMUM SOIL COVER: 6 INCHES

PRETREATMENT:
SUBFIELDS #:
PUMP TDH: 73.83 FEET

APPROVAL #:
PUMP DESIGN FLOW: 53.53
ZONE VALVE: No

ASDMS REQUIRED: Yes
P.E. SIGN OFF/ASBUILT REQUIRED: No

LINE OF CREDIT REQUIRED: No

OPERATOR REQUIRED: Yes

TRIPARTY AGREEMENT REQUIRED: No

SPECIFIC CONSTRUCTION AUTHORIZATION REQUIREMENTS:

ACCEPTED STATUS SYSTEM REDUCTION HAS BEEN TAKEN FOR THE DESIGN OF THE INITIAL AND REPAIR FOR THIS 5 BEDROOM DWELLING. INITIAL SYSTEM IS A PRESSURE MANIFOLD SYSTEM PUMPING TO 5 UNEQUAL OFF-SITE DRAINLINES WITH 22" TRENCH BOTTOM. REPAIR SYSTEM IS A PRESSURE MANIFOLD SYSTEM PUMPING TO 5 UNEQUAL OFF-SITE DRAINLINES WITH 22" TRENCH BOTTOM. 1500 GALLON SEPTIC TANK AND 1500 GALLON PUMP TANK ARE REQUIRED. OFF-SITE SUPPLY LINE IS ALREADY INSTALLED AND ENGINEER CERTIFIED PER CA PERMIT D058938. FOUNDATION DRAIN ALLOWED. WHEN INSTALLING SYSTEM, MAINTAIN ALL REQUIRED SETBACKS. DO NOT DISTURB OR REMOVE ANY SOIL IN INITIAL OR REPAIR AREAS. MUST MAINTAIN REQUIRED EMERGENCY STORAGE IN THE PUMP TANK. A NEMA 4X CONTROL PANEL WITH TWO BREAKERS, TWO POWER SUPPLIES, ELAPSED TIME METER AND CYCLE COUNTER ARE REQUIRED. IF FLAGS ARE MISSING, CALL DESIGNER TO RE-FLAG.

ALTERNATIVE SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE MUST BE SIGNED, NOTARIZED AND RECORDED AT THE WAKE COUNTY REGISTER OF DEEDS OFFICE. A CERTIFIED OPERATOR IS REQUIRED FOR THE LIFE OF THE SYSTEM. A COPY OF THE RECORDED CONTRACT WITH A CERTIFIED OPERATOR MUST BE PROVIDED TO WAKE COUNTY ENVIRONMENTAL SERVICES PRIOR TO THE OPERATIONS PERMIT ISSUANCE.

THIS SYSTEM IS DESIGNED BY A CONSULTANT AND MUST BE INSTALLED PER THE APPROVED DESIGN, PLAN AND SPECIFICATIONS. ANY DEVIATION MUST BE APPROVED BY THE DESIGNER AND WAKE COUNTY ENVIRONMENTAL SERVICES PRIOR TO SYSTEM INSTALLATION. PLEASE CONTACT ENVIRONMENTAL SERVICES IF ANY QUESTIONS OR PROBLEMS ARISE PRIOR TO INSTALLATION.

Issued By:



Date: 08/13/2021

HOMEOWNER GUIDE FOR UTILIZATION AND MAINTENANCE OF ON-SITE WASTEWATER DISPOSAL SYSTEMS

What is an On-site Wastewater Disposal System?

There are a number of different types of on-site wastewater disposal systems each designed for a specific set of site conditions. However, there are several system components that are common to most systems. These include the following:

1. A septic tank - a concrete tank that is designed to receive wastewater from the house and to provide a degree of pretreatment for the waste, chiefly through removal of some of the solids in the waste. Note that these solids accumulate over time and necessitate periodic pumping of the septic tank. Currently septic tanks are equipped with two access risers (normally constructed of concrete), which are designed to be at least 6 inches above the ground surface to prevent surface and shallow groundwater from entering the septic tank and to provide access for maintenance. **Care must be taken not to damage or cover these risers so that water inflow / infiltration can be prevented and the tank can be accessed for maintenance.**
2. In some installations, a pump tank - a concrete tank, very similar to the septic tank, which contains a pump along with the associated controls / componentry. The pump tank and pump is designed to receive effluent from the septic tank, and pump the effluent to a disposal field located at a higher elevation and/or to a pressurized distribution network in the disposal field. **The pump tank also has an access riser which must be protected in a similar manner to that indicated for the septic tank.** Servicing of the pump tank components often necessitates the assistance of a professional such as a septic tank installer or Certified Subsurface System Operator. The latter is required for operation and maintenance of certain types of systems.
3. A disposal field - a series of subsurface trenches and lines that are designed to distribute the effluent into the soil and provide for the ultimate treatment and disposal of the effluent. There are numerous variations on the design of the disposal field, related chiefly to the type of system chosen, site constraints, etc. Dependent on the type of disposal system, you may have to maintain a contract with a Certified Subsurface System Operator for operation and maintenance of your wastewater disposal system.

Utilization of Your Wastewater Disposal System

In order to obtain the maximum efficiency and life expectancy from your system, the following simple procedures must be adhered to:

1. **Practice water conservation.** This can include many practical considerations such as not leaving the water running while you brush your teeth, not overfilling the tub, limiting time in the shower, not replacing low flow fixtures with those of higher flows, over rinsing dishes (allow the dishwasher to do its job), immediate repair of any leaking fixtures, running washing machines and dishwashers only when full, etc.

NOTE: Washing machines generate significant volumes of wastewater. As a result, laundry activities should be spread over the week as opposed to accumulating all of laundry until the weekend.

2. **Do not utilize your wastewater disposal system as a trash can by dumping nondegradables down your drains or toilet.** These include cigarette butts, sanitary products, grease, plastics, disposable diapers, etc. Avoid use of garbage disposals. Do not retrofit garbage disposals unless the system is specifically permitted for their use. Also, do not dump harmful chemicals down the drain. These include petroleum products, paint, paint thinner, pesticides, antifreeze, etc.

Maintenance of Your Wastewater Disposal System

Every wastewater disposal system requires maintenance in order to function properly. The specific maintenance required is related to the type of system. The following are general considerations that apply to all systems.

1. **Protect your wastewater disposal system components including the tanks, access risers, disposal field and associated components.** Do not drive or park on any portion of the system. The area over the disposal field should be left undisturbed with the grass cover being maintained as you would your lawn. Location of trees and shrubs on or in close proximity to the disposal field is not recommended since roots may clog or damage your drain lines. Additionally, great care must be exercised when considering the addition of any structure(s) to the site. The location of any appurtenances cannot encroach on the installation or repair areas for your system. It is not recommended that irrigation systems be located in proximity to the disposal system since their construction can cause system damage and/or result in additional hydraulic load on the disposal field.
2. **Protect the system from excess surface and shallow groundwater.** The land surface on and around the wastewater disposal system should be landscaped to shed rainfall and runoff and prevent ponding. Be sure that foundation drains, runoff from roofs and drives, etc. are diverted away from the disposal system.
3. **Regularly have the septic tank / pump tank pumped and cleaned by a permitted septage hauler.** Although the necessary frequency of pumping varies with the household and system, most tanks need **pumping at a frequency of 3-5 years** and at any time solids occupy one-fourth to one-third of the septic tank liquid depth.

Note that all septic tanks being currently installed incorporate an effluent filter within the outlet compartment of the septic tank. This filter is to be cleaned anytime the septic tank is pumped. If plumbing becomes sluggish, this filter should be checked. If filter service is found to be necessary, the tank is to be pumped, the filter cleaned and the filter reinstalled.

4. **Be alert to warning signs that your system may not be functioning properly.**
These include sewage surfacing over the disposal system, sewage backups / slow draining in the house, lush growth over the disposal system, sewage odors, etc.
5. **Do not make or allow repairs to your system unless all necessary permits are obtained from Wake County Department of Environmental Services.**
6. **Commercial additives for septic tank systems** - It has generally not been demonstrated that these additives enhance the function of septic systems or reduce the need for tank pumping and other necessary maintenance.
7. **Special maintenance considerations** - As already alluded to, some of the more complex wastewater disposal systems require that you retain / maintain the services of a Certified Wastewater System Operator in order to comply with Laws and Rules and maintain a valid operation permit for your system. In Wake County this maintenance requirement should be recorded with Register of Deeds if applicable.

Where Do I Obtain Information and Assistance?

If you are purchasing a new home, you should request a copy of your wastewater system permit from the builder / seller along with information regarding any special maintenance requirements. You may also obtain information and assistance from the **Wake County Department of Environmental Services**, 336 Fayetteville Street Mall, Raleigh, NC, Telephone (919) 856-7400. Additional information is also available on Wake County's [Septic and Wastewater Management](#) webpage.

BSM 3/9/21



Environmental Services

TEL 919 856 7400
FAX 919 743 4772

Water Quality Division
336 Fayetteville Street • Raleigh, NC 27602
www.wakegov.com

PRESSURE MANIFOLD SYSTEMS

A Pressure Manifold System is one of several types of septic systems approved for use in Wake County. The Pressure Manifold System, while somewhat more expensive to install, is a flexible and high-quality method of wastewater disposal. A pump doses a pressure distribution manifold that disperses the effluent evenly to each trench. Dosed systems are more common for larger flows. The manifold can be constructed with different size taps to accommodate different trench lengths. This allows for better utilization of the area on the lot. The pressure manifold can include valves or plugs that permit more control over trench loading or trench resting.

Experience and study have shown that pressure manifold systems require routine maintenance in order to function properly. Items 1, 4 and 6 are also recommended for conventional septic systems. The maintenance schedule frequency is as follows:

<u>System Component</u>	<u>Frequency</u>	<u>Maintenance</u>
1. Septic Tank	6-12 months 1-3 years	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Check and clean septic tank filter. Pump septage when 1/3 to 1/4 of the liquid capacity of the tank is occupied by solids.
2. Pump or Dosing Tank	6-12 months	Check riser conditions (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Wash (hose) sludge accumulation from pump housing.
3. Supply lines (Manifold)	6-12 months	Check for settling, pipe exposure and leakage.
4. Ground Absorption Field	1-4 weeks 6-12 months	Maintain vegetative cover (mow grass and remove weeds and brush). Check for settling, erosion and surfacing of effluent. Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.
5. Pressure Manifold	6-12 months	Flush sludge from pressure manifold (any discharge sludge and effluent is to be treated with a chlorine solution). Check and reset pressure head.
6. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage (gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce wastewater load on system. Do not permit entry of grease and non-domestic waste to system. Use of a garbage disposal is <u>prohibited</u> . Addition of chemical or biological additives has <u>not</u> been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained.

A certified operator may be required.

OFF-SITE EASEMENT SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE
To Be Recorded In The Register Of Deed’s Office In Wake County.

Owner/Grantor _____ Deedbook and Page _____
PIN No. _____ Date Installed _____
Subdivision Name _____ Lot No. _____
System Designed by _____ Installer _____

AN ALTERNATIVE OR NON-TRADITIONAL SEWAGE DISPOSAL SYSTEM HAS BEEN INSTALLED ON THIS PROPERTY. The design specifications and locations for alternative sewage disposal systems are specified or authorized in Regulations Governing Wastewater Treatment and Dispersal Systems in Wake County effective November 21, 1988, amended effective October 27, 2011, amended June 25, 2020. As A Condition Of Issuance Of This Improvements/Operation Permit, The Property Owner Hereby Grants The Wake County Department Of Environmental Services A Right Of Access To The System During Regular Working Hours For Purposes Of Monitoring Compliance With State And Local Regulations, Recorded Maintenance Agreements And Certified Operator Compliance. Experience and study have shown that sewage disposal systems located in **offsite easement areas** require routine maintenance in order to function satisfactorily. In as much as each system must be individually designed and sited, special maintenance requirements may apply to a specific installation; however, the following maintenance schedule is applicable to most systems. For additional information, technical assistance or if a malfunction of the system occurs, contact the Wake County Department of Environmental Services, Telephone: 919-856-7400.

<u>System Component</u>	<u>Frequency</u>	<u>Maintenance</u>
1. Septic Tank	12 months 1-3 years	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump septage.
2. Pump/Dosing Tank	12 months	Check riser conditions (must be accessible from ground surface),excess in/exfiltration, entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Wash (hose) sludge accumulation from pump housing.
3. Supply lines	12 months	Check for settling, pipe exposure, and leakage, including all easement areas .
4. Drain Field(s)	1-4 weeks 12 months	Maintain vegetative cover (mow grass and remove weeds and brush). Check for settling, erosion and surfacing of effluent. Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.
5. Pressure Manifold/ Distribution Box	12 months	Check and reset pressure head, flush sludge from pressure manifold (any discharg sludge and effluent is to be treated with a chlorine solution or lime). Check D-Box level.
6. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage(gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce waste water load on system. Do no permit entry of grease and non-domestic waste to system. Use of a garbage disposal is <u>prohibited</u> . Addition of chemical or biological additives has <u>not</u> been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained.

A certified operator is required for the life of the system.

Signature of Property Owner

Date

NORTH CAROLINA _____ County. I, a Notary Public of the County and State aforesaid, certify that _____ Owner, Personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this ____day of _____ 20____.

My commission expires _____ Notary Public _____
WWDS 1/29/16

NOTICE

PROTECTION OF WASTEWATER DISPOSAL AREAS

AREAS DESIGNATED FOR INSTALLATION AND REPAIR OF WASTEWATER DISPOSAL SYSTEMS ON WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES PERMITS MUST BE PROTECTED FROM ALL LAND DISTURBING ACTIVITIES.

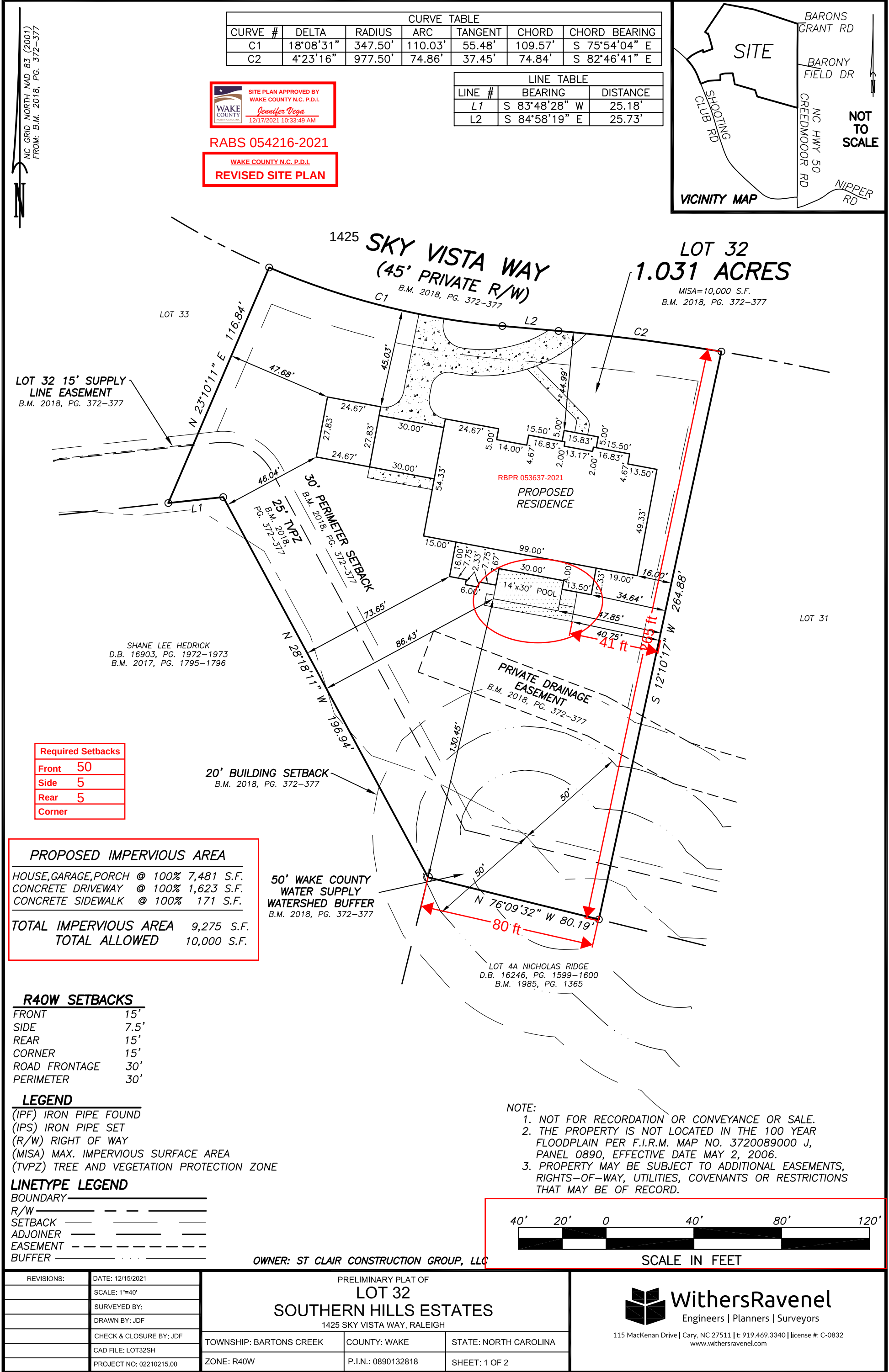
PROHIBITED ACTIVITIES (NOT ASSOCIATED WITH THE INSTALLATION OF THE WASTEWATER DISPOSAL SYSTEM) INCLUDE BUT MAY NOT BE LIMITED TO:

- **CLEARING**
- **EXCAVATION**
- **FILLING**
- **GRADING**
- **STORAGE OF BUILDING MATERIALS**
- **VEHICLE OR EQUIPMENT TRAFFIC**

THE PERMITTEE IS ADVISED TO CLEARLY FLAG OR FENCE THESE AREAS DURING CONSTRUCTION TO PREVENT UNAUTHORIZED ACTIVITIES.

FAILURE TO PROTECT WASTEWATER DISPOSAL AREAS WILL LIKELY RESULT IN VOIDING OF PERMITS AND LOSS OF ABILITY TO UTILIZE THE SITE FOR THE DESIRED PURPOSE.

IF YOU HAVE A QUESTION REGARDING ANY OF THE AFOREMENTIONED ACTIVITIES, CALL WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES (856-7400) BEFORE YOU ACT.



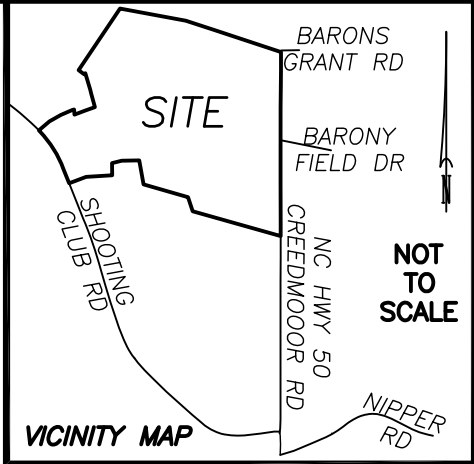
CURVE TABLE						
CURVE #	DELTA	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C1	18°08'31"	347.50'	110.03'	55.48'	109.57'	S 75°54'04" E
C2	4°23'16"	977.50'	74.86'	37.45'	74.84'	S 82°46'41" E



RABS 054216-2021

WAKE COUNTY N.C. P.D.I.
REVISED SITE PLAN

LINE TABLE		
LINE #	BEARING	DISTANCE
L1	S 83°48'28" W	25.18'
L2	S 84°58'19" E	25.73'



NC GRID NORTH NAD 83 (2001)
FROM: B.M. 2018, PG. 372-377

- NOTE:
1. NOT FOR RECORDATION OR CONVEYANCE OR SALE.
 2. THE PROPERTY IS NOT LOCATED IN THE 100 YEAR FLOODPLAIN PER F.I.R.M. MAP NO. 3720089000 J, PANEL 0890, EFFECTIVE DATE MAY 2, 2006.
 3. PROPERTY MAY BE SUBJECT TO ADDITIONAL EASEMENTS, RIGHTS-OF-WAY, UTILITIES, COVENANTS OR RESTRICTIONS THAT MAY BE OF RECORD.

LINE/TYPE LEGEND

BOUNDARY	---
R/W	---
SETBACK	---
ADJOINER	---
EASEMENT	---
BUFFER	---



SCALE IN FEET

SHOOTING CLUB ROAD
(SR 1842) (45' PRIVATE R/W)
TAKEN FROM: B.M. 2018, PG. 372-377

SHANE LEE HEDRICK
D.B. 16903, PG. 1972-1973
B.M. 2017, PG. 1795-1796

LOT 4A NICHOLAS RIDGE
D.B. 16246, PG. 1599-1600
B.M. 1985, PG. 1365

SKY VISTA WAY
(45' PRIVATE R/W)
B.M. 2018, PG. 372-377

NC GRID NORTH NAD 83 (2001)
FROM: B.M. 2018, PG. 372-377

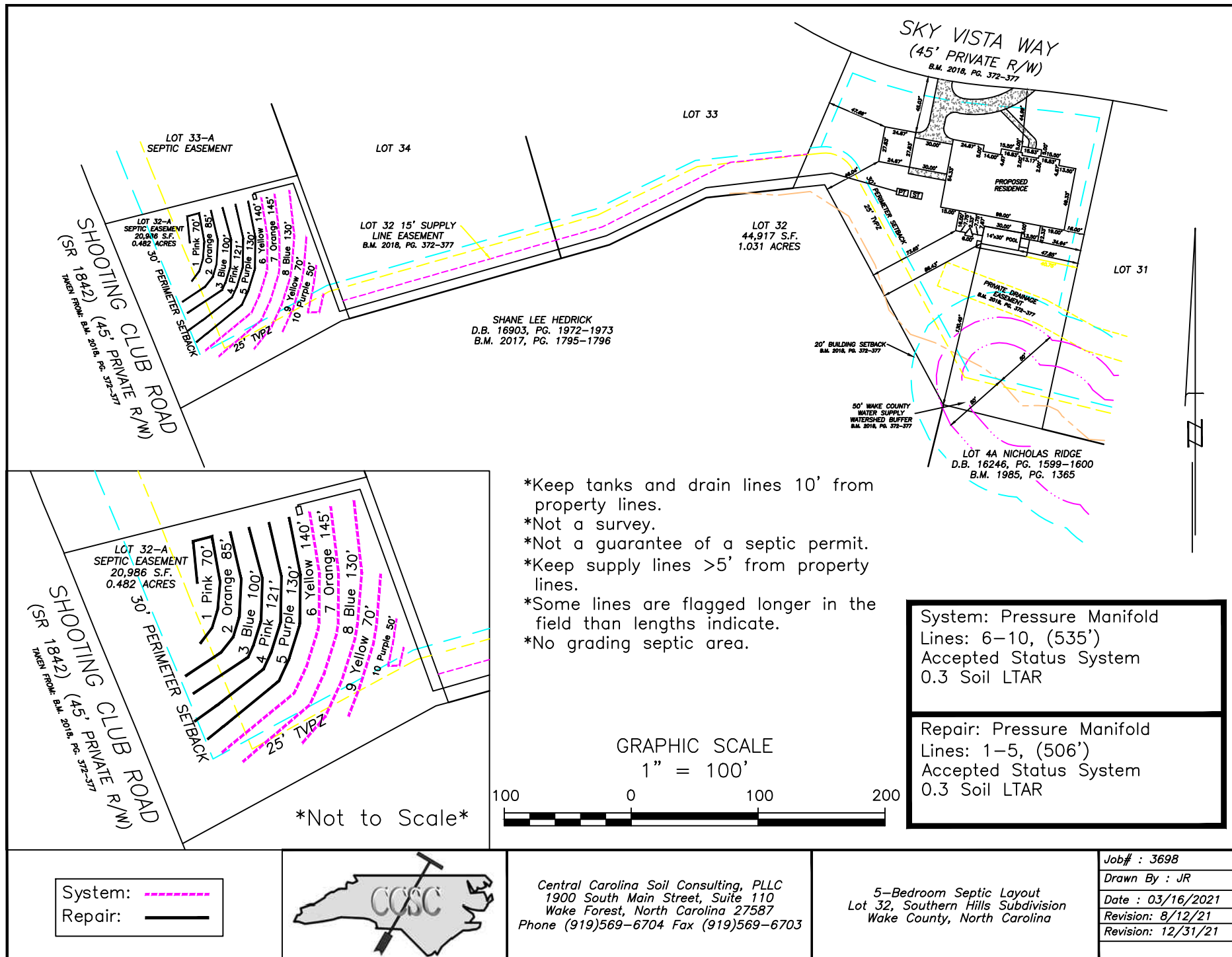
REVISIONS:	DATE: 02/26/2021
	SCALE: 1"=60'
	SURVEYED BY:
	DRAWN BY: JDF
	CHECK & CLOSURE BY: JDF
	CAD FILE: LOT32SH
	PROJECT NO: 02210215.00

PRELIMINARY PLAT OF LOT 32 SOUTHERN HILLS ESTATES SEPTIC EASEMENT/OPEN SPACE 1 1645 ESTATE VALLEY LANE, RALEIGH		
TOWNSHIP: BARTONS CREEK	COUNTY: WAKE	STATE: NORTH CAROLINA
ZONE: R40W	P.I.N.:	SHEET: 2 OF 2



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www.withersravenel.com





Pressure Manifold Septic System Design

for

Southern Hills S/D, Lot 32
Wake County, North Carolina

Designed by:

James Rice
Central Carolina Soil Consulting, PLLC
Wake Forest, North Carolina

03/24/2021

Southern Hills S/D, Lot 32
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Southern Hills S/D, Lot 32
Contact Information

Client:
Attn:
Street Address:

Phone:
Fax:

Designer: Central Carolina Soil Consulting, PLLC
Attn: Jason Hall
Designed By: James Rice
Street Address: 1900 Main Street Suite 110
Wake Forest, NC 27587
Office Phone: 919-569-6704
Cell Phone: 910-740-3226
Fax: 919-569-5703
Email: jrice@centralcarolinasoil.com

Southern Hills S/D, Lot 32
Layout/Design Specifications

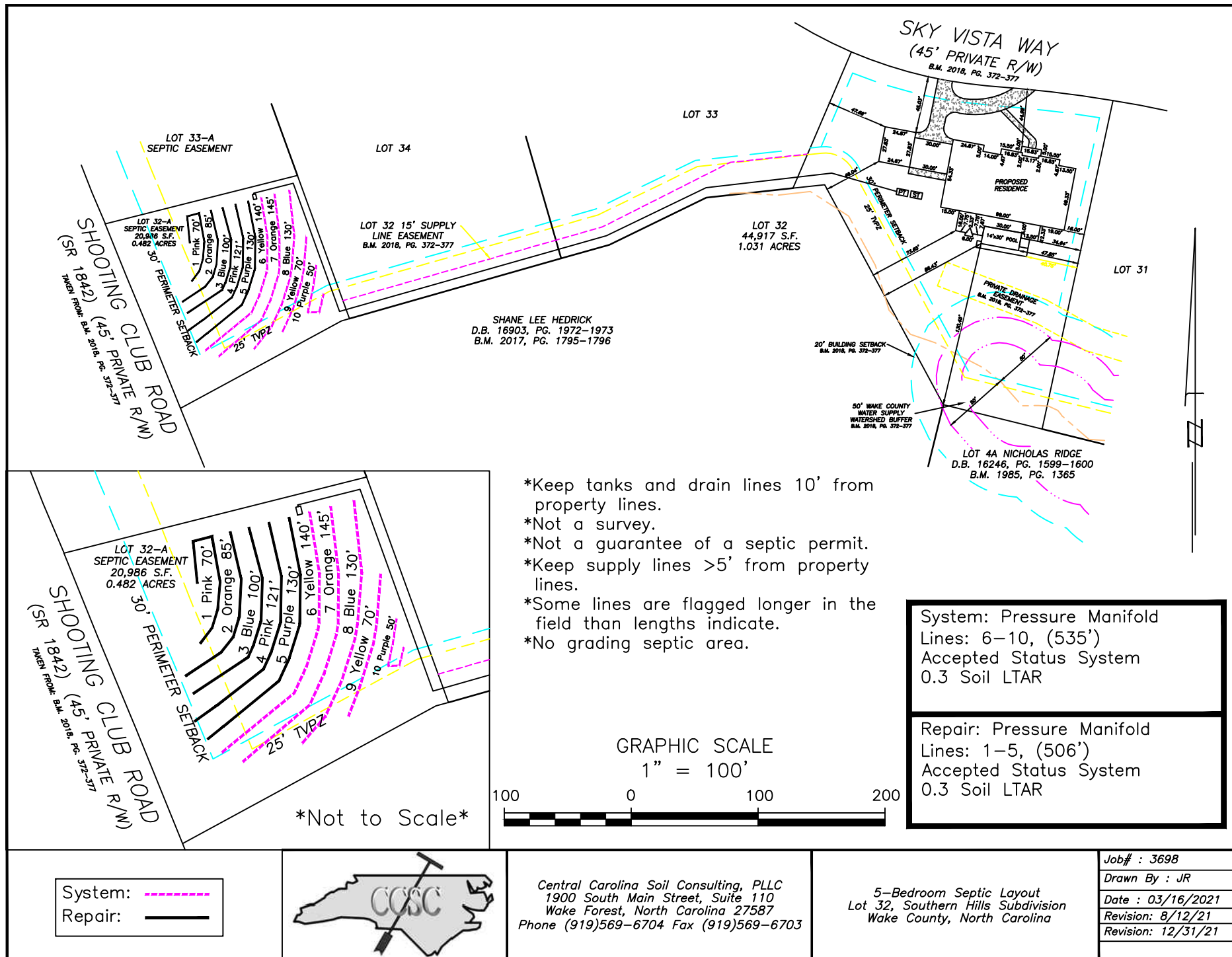
Facility Type:	Single Family Home
# of Bedrooms:	5
Daily Flow:	600 gal/day
L.T.A.R.:	0.3 gal/day/sq.ft
Trench Depth:	per WCDES in
Trench Width:	36 in
Stone Depth:	EZ-FLOW in
Manifold Length:	60 in
Manifold Diameter:	4 in sch 80pvc
Supply Line Length:	598 ft
Supply Line Diameter:	2 in sch 40pvc
Supply Line Volume:	104.05 gallons
Friction Loss + Fitting Loss:	40.43 ft(supply line length + 70' for fittings in pump tank)
Design Head:	2 ft
Elevation Head:	31.40 ft
Total Head:	73.83 ft
Dose Volume:	268.13 gals
% of Pipe Vol.	.75
Drawdown:	8.75 in @ 19.65 gal/in
Pump Run Time:	5.03 Mins
Control Panel:	SJE Rhombus Model112 control panel (or approved equivalent)
Pump:	Zoeller M189 Flow-Mate (or approved equivalent)
Septic Tank Effluent Filter:	Zoeller 170-0078 residential effluent filter (or approved equivalent)
Septic Tank:	Brantley 1,500 Gallon ST 322
Pump Tank:	Brantley 1,500 Gallon PT 293

Southern Hills, Lot 32 System

Bench Mark		is = 100.00		Location of BM		Elevation Head			31.40
Pump tank elev.		29.4	70.60	Pump elev.		65.20	Manifold elev.		96.60
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
6	Yellow	4.40	95.60	140	(2) 1/2in SCH 40	14.22	159.39	420	0.3795
7	Orange	4.70	95.30	145	(2) 1/2in SCH 40	14.22	159.39	435	0.3664
8	Blue	5.40	94.60	130	3/4in SCH 40	12.5	140.11	390	0.3593
9	Yellow	5.70	94.30	70	1/2in SCH 40	7.11	79.69	210	0.3795
10	Purple	6.20	93.80	50	1/2in SCH 80	5.48	61.42	150	0.4095
		total	feet =	535	gal/min =	53.53	LTAR =		0.3000
							LTAR + %5		0.3150
% of Dose Vol.		75	Des. Flow		600	(ltar W/ INOV)		0.4000	
Dose Volume		260.81	Pump Run=		11.21	(ltar W/ INOV + 5%		0.4200	
Dose Pump Time		4.87	Tank Gal/IN		30.65				
Drawdown in Inches		8.51							

Southern Hills, Lot 32 Repair

Bench Mark		is = 100.00		Location of BM		Elevation Head			33.00
Pump tank elev.		29.4	70.60	Pump elev.		65.20	Manifold elev.		98.20
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1	Pink	2.80	97.20	70	1/2in SCH 40	7.11	86.50	210	0.4119
2	Orange	3.30	96.70	85	1/2in SCH 40	7.11	86.50	255	0.3392
3	Blue	3.40	96.60	100	3/4in SCH 80	10.1	122.87	300	0.4096
4	Pink	3.80	96.20	121	3/4in SCH 40	12.5	152.07	363	0.4189
5	Purple	4.10	95.90	130	3/4in SCH 40	12.5	152.07	390	0.3899
		total	feet =	506	gal/min =	49.32	<u>LTAR =</u>		0.3000
							<u>LTAR + %5</u>		0.3150
% of Dose Vol.		75	<u>Des. Flow</u>		600	(ltar W/ INOV)		0.4000	
Dose Volume		246.68	Pump Run=		12.17	(ltar W/ INOV + 5%		0.4200	
Dose Pump Time		5.00	Tank Gal/IN		30.65				
Drawdown in Inches		8.05							



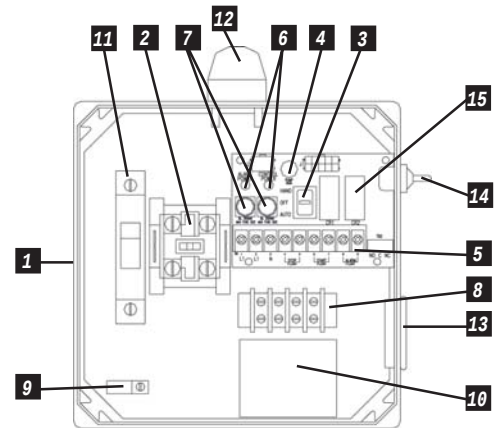
MODEL 112 Control Panel

Single phase, simplex motor contactor control.

The Model 112 control panel provides a reliable means of controlling one 120, 208, or 240 VAC single phase pump in pump chambers, sump pump basins, irrigation systems and lift stations. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system.

PANEL COMPONENTS

1. **Enclosure** measures 8 x 8 x 4 inches (20.32 X 20.32 X 10.16 cm). Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use).
* Options selected may increase enclosure size and change component layout.
2. **Magnetic Motor Contactor** controls pump by switching electrical lines.
3. **HOA Switch** for manual pump control (mounted on circuit board).
4. **Green Pump Run Indicator Light** (mounted on circuit board).
5. **Float Switch Terminal Block** (mounted on circuit board).
6. **Alarm and Control Fuses** (mounted on circuit board).
7. **Alarm and Control Power Indicators** (mounted on circuit board).
8. **Pump Input Power and Pump Connection Terminal Block**
9. **Ground Lug**
10. **Terminal Block Installation Label**
11. **Circuit Breaker** (optional) provides pump disconnect and branch circuit protection.



Model Shown 1121W914X

STANDARD ALARM PACKAGE

12. **Red Alarm Beacon** provides 360° visual check of alarm condition.
Note: NEMA 1 style utilizes a door mounted indicator in lieu of a beacon.
13. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
Note: NEMA 1 style utilizes an internally mounted buzzer in lieu of horn.
14. **Exterior Alarm Test/Normal/Silence Switch** allows horn and light to be tested and horn to be silenced in an alarm condition. Alarm automatically resets once alarm condition has been cleared.
15. **Horn Silence Relay** (mounted on circuit board).

NOTE: other options available.

FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes three 20' Sensor Float® control switches
- Complete with step-by-step installation instructions
- Three-year limited warranty



SJE
Rhombus
CONTROLS

PO Box 1708, Detroit Lakes, MN 56502

1-888-DIAL-SJE • 1-218-847-1317

1-218-847-4617 Fax

email: sje@sjerhombus.com

www.sjerhombus.com

SEE BACKSIDE FOR COMPLETE LISTING OF AVAILABLE OPTIONS.

112**1****W****1****2****4****H****3A, 8A, 8C, 15A****MODEL 112****ALARMPACKAGE**

0 = select options or no alarm package

1 = alarm package (includes test/normal/silence switch, fuse, red light, horn & float)

ENCLOSURE RATING

I = Indoor, NEMA 1 (metal)

W = Weatherproof, NEMA 4X (engineered thermoplastic)

STARTING DEVICE

1 = magnetic motor contactor 120/208/240V

9 = magnetic motor contactor 120V only

PUMP FULL LOAD AMPS

0 = 0-7 FLA

1 = 7-15 FLA

2 = 15-20 FLA

3 = 20-30 FLA

PUMP DISCONNECTS

0 = no pump disconnect

1 = pull-out with safety deadfront in a 10"x8" enclosure

4 = circuit breaker 120V (select STARTING DEVICE option 9 above)

120/208/240V (select STARTING DEVICE option 1 above)

FLOAT SWITCH APPLICATION

H or L = pump down or pump up

X = no floats

WITH alarm package

WITHOUT alarm package

OPTIONS *Listed below*

ENCLOSURE UPSIZE - If you selected 3 or more of the ★ options, or one ★★ option, a one-time enclosure upsize fee would apply.

If additional features are required, call the factory for a quote on either a SJE-Rhombus Pro-Line or Engineered Custom control panel.**CODE DESCRIPTION**

- ☐ 1A Red beacon only / no audio
(must select 1E if floats included)
- ☐ 1C Horn only / no visual
(must select 1E if floats included)
- ☐ 1E Alarm float
- ☒ 3A Alarm flasher
- ☐ ★ 3B Manual alarm reset
- ☐ ★ 4A Low level cutout
(select option 4D if floats included)
- ☐ ★ 4B Red low-level indicator & alarm
(must select 4A also)
- ☐ 4D Low-level float
- ☐ ★ 5A Thermal cutout/heat sensor auto
reset (for pumps w/thermal switch leads)
- ☐ ★★ 5E Seal failure circuit & red indicator (2 wire)
- ☐ 6A Auxiliary alarm contact, form C type
- ☒ ★ 8A Elapsed time meter
- ☒ ★ 8C Event (cycle) counter
- ☐ ★★ 9_A Pump overload
specify amperage after number 9 followed by letter "A".
Example: 912A = 12 amp pump.
- ★★ ☐ 0-25 FLA
- ★★ ☐ 25-30 FLA
- ☐ 10E Lockable latch - NEMA 4X
- ☐ 10E Lockable latch - NEMA 1
- ☐ ★ 10F Lightning arrester
- ☐ ★ 10K Anti-condensation heater

CODE DESCRIPTION

- ☐ 11C NEMA 1 alarm panel *must select option 6A*
- ☐ 11D NEMA 4X alarm panel *must select option 6A*
- ☐ ★★ 14B Main disconnect (rotary style, mounted through door)
non-fused
- ★★ ☐ 0-20 FLA (total of both pumps)
- ★★ ☐ 20-30 FLA (total of both pumps)
- ☒ 15A Control / alarm circuit breaker
Does not include the circuit board as in standard.
- ☐ 16A 10' cord in lieu of 20' (per float)
- ☐ 16B 15' cord in lieu of 20' (per float)
- ☐ 16C 30' cord in lieu of 20' (per float)
- ☐ 16D 40' cord in lieu of 20' (per float)
- ☐ 17A SJE SignalMaster® / mounting strap ● (per float)
- ☐ 17B SJE SignalMaster® / externally weighted ● (per float)
- ☐ 17C Sensor Float® / internally weighted ▲ (per float)
- ☐ 17D Sensor Float® / externally weighted ▲ (per float)
- ☐ 17E Sensor Float® Mini / pipe clamp ▲ (per float)
- ☐ 17F Sensor Float® Mini / externally weighted ▲ (per float)
- ☐ 19T TOA (Test/Off/Automatic) switch and pump run light through
door mounted
- ☐ 19U HOA (Hand/Off/Automatic) switch and pump run light through
door mounted
- ☐ 19X Door mounted pump run indicator
- ☐ 21A SJE PumpMaster® in lieu of on/off switches ●
- ☐ 21B SJE PumpMaster® Plus in lieu of on/off switches ●
- ☐ 21C Super Single® in lieu of on/off switches ▲
- ☐ 21D Double Float® in lieu of on/off switches ▲
- Mechanically-activated ▲ Mercury-activated

SAMPLE**MODEL****112****1****W****9****1****4****H****3A 8A**

Alarm Package

Enclosure Rating

Starting Device

Pump Full Load Amps

Pump Disconnect

Float Switch Application

Options: Flasher, Elapsed Time Meter

"QUALITY PUMPS SINCE 1939"

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



ZOELLER
PUMP CO.



SECTION: 2.20.060

FM0659

1299

Supersedes

1297

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

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

COMPARE THESE FEATURES

- Non-clogging vortex impeller design bronze class 88-8-0-4 (180 Series).
- Enclosed impeller design (191 Series).
- Float operated, submersible (NEMA 6) 2-pole mechanical switch.
- Durable cast construction. Cast iron switch case, base, motor and pump housing. No sheet metal parts to rust or corrode.
- Stainless steel screws, bolts, float rod, handle, guard, arm and seal assembly.
- 20' UL-listed 3-wire neoprene cord and plug. Extra cord lengths available in 25-35-50 foot length only.
- Motor - 60 cycle, 3450 RPM, oil-filled, hermetically sealed, automatic reset, thermal overload protected (1 PH only).
- Maximum temperature for effluent or dewatering 130° F. 54° C, WD189 120° F (49° C).
- Variable level control systems available.
- Square Ring & Gasket - Neoprene.
- Shaft Seal - Stainless steel carbon & ceramic rotary.
- Upper sleeve bearing and lower ball bearing running in bath of oil.
- All 180/4180 series pass 3/4-inch solids (sphere). Model 191 pump passes 5/8-inch solids (sphere).
- On point 14 3/4" • Off point 5" (automatic units).
- Major width 12 3/4" • Height 18 7/16". (Single seal pumps)
- 1 1/2" NPT discharge with 2" or 3" flange available. (Model 191 is not available with 3" flange)
- Corrosion resistant powder coated epoxy finish.

MODELS 4185-4186-4188-4189

DOUBLE SEAL PUMPS (Nonauto only)

- Protects motor from seal leaks.
- Improved bearing lubrication.
- Helps eliminate seal and bearing damage from dry runs.
- Major width 12 3/4". Height 20 7/16".

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

AUTOMATIC UNITS NOT RECOMMENDED FOR USE IN EFFLUENT SYSTEMS

*NOTE: No UL Listing for 200/208 1 Phase Pumps, Model 186 & 191, or Double Seal Series. See Back Page for UL & CSA Listings

Nonautomatic Model for variable level systems

185 - 186 - 188 - 189 Single Seal Series 4185 - 4186 - 4188 - 4189 Double Seal Series 191 Single Seal Drip Pump

(For Pump Prefix Identification see News & Views 0052)



HIGH HEAD "FLOW-MATE"

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

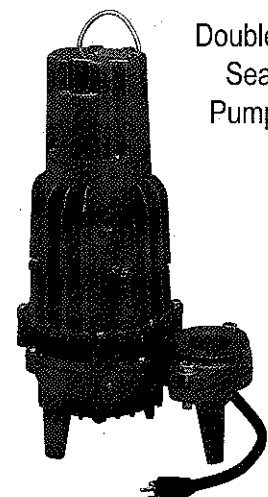
EFFLUENT

OR DEWATERING PUMP • SUBMERSIBLE

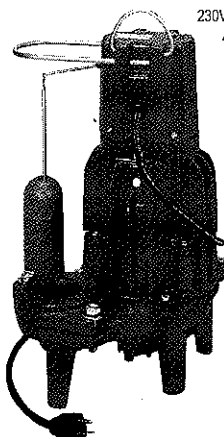
1 1/2" NPT DISCHARGE STANDARD • 2" or 3" FLANGE AVAILABLE



230V Automatic
Controlled by variable
level float switch
integral to the pump in
WD189/WD4189
Series only.

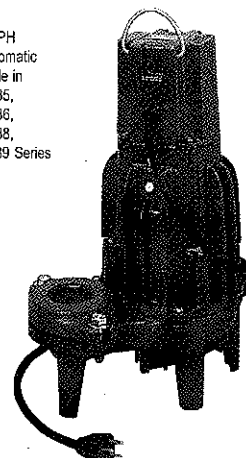


Double
Seal
Pump

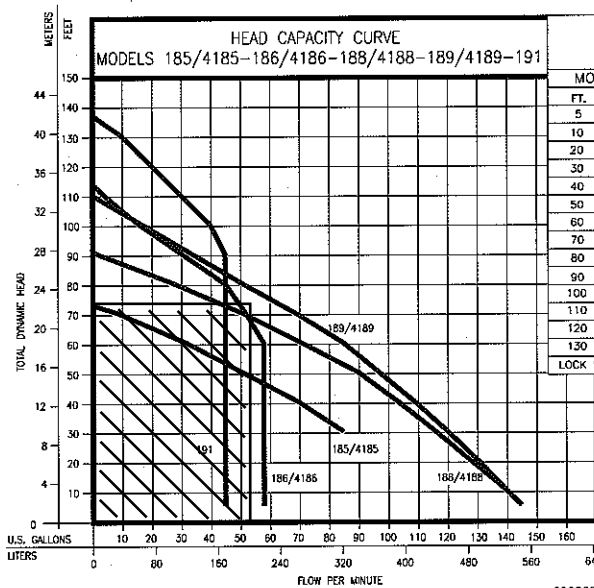


230V/1PH Automatic
Available in 185,
186, 188,
189 Series

230V/1PH
Nonautomatic
Available in
185/4185,
186/4186,
188/4188,
189/4189 Series



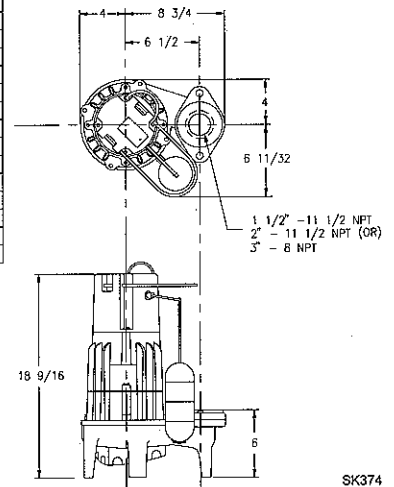
POWDER
COATED
TOUGH™



TOTAL DYNAMIC HEAD/ FLOW PER MINUTE EFFLUENT AND DEWATERING							
MODEL		185/4185	186/4186	188/4188	189/4189	191	
FT.	M.	GAL. LTRS.	GAL. LTRS.	GAL. LTRS.	GAL. LTRS.	GAL. LTRS.	GAL. LTRS.
5	1.52		58 220	145 549	145 549	45 170	45 170
10	3.05		58 220	140 530	140 530	45 170	45 170
20	6.10		58 220	128 484	130.5 494	45 170	45 170
30	9.14	85 322	58 220	116 439	120 454	45 170	45 170
40	12.19	70 265	58 220	103.5 392	109 413	45 170	45 170
50	15.24	51 183	58 220	90 341	97 367	45 170	45 170
60	18.29	32 121	58 220	71 269	85 322	45 170	45 170
70	21.34	9 34	52 197	51 193	69 261	45 170	45 170
80	24.38		45 170	28 106	51 193	45 170	45 170
90	27.43		30.5 115	2 8	34 129	45 170	45 170
100	30.48		16 60		17 64	40 151	40 151
110	32.00		4 15			30 114	30 114
120	36.58					20 75	20 75
130	39.62					10 38	10 38
LOCK VALVE:		73'	114'	91'	110'	137'	

WARNING: Model 185 should not be subjected to heads less than 30 feet TDH.

Single Seal-180 Series Automatic Design Weight 82-89 lbs.



SK374

185 MODELS	4185 MODELS	Standard all models - 20 ft. cord - 1 H.P.				Control Selection		Listings	
Single Seal	Double Seal	Volts - Ph	Mode	Amps		Simplex	Duplex	CSA	UL
D185	---	230	1 Auto	9.8		1 or 1 & 8		Y	Y
E185	E4185	230	1 Non	9.8		2 or 2 & 7	3 or 5 & 6	Y ⁽²⁾	Y
* H185	---	200-208	1 Auto	11.5		1 & 8		N	N
* I185	* I4185	200-208	1 Non	11.5		2 & 7	3 or 5 & 6	N	N
* F185	* F4185	230	3 Non	7.4		4 & 6	3 & 4 or 5 & 6	Y	Y
* J185	* J4185	200-208	3 Non	7.5		4 & 6	3 & 4 or 5 & 6	Y	Y
* G185	* G4185	460	3 Non	3.7		4 & 6	3 & 4 or 5 & 6	Y	Y
* BA185	---	575	3 Non	3.3		4 & 6	3 & 4 or 5 & 6	Y	N

186 MODELS	4186 MODELS	Standard all models - 20 ft. cord - 1 1/2 H.P.				Control Selection		Listings	
Single Seal	Double Seal	Volts - Ph	Mode	Amps		Simplex	Duplex	CSA	UL
D186	---	230	1 Auto	13.7		1 or 1 & 8		N	N
E186	E4186	230	1 Non	13.7		2 or 2 & 7	3 or 5 & 6	N	N
* F186	* F4186	230	3 Non	9.2		4 & 6	3 & 4 or 5 & 6	N	N
* G186	* G4186	460	3 Non	4.6		4 & 6	3 & 4 or 5 & 6	N	N

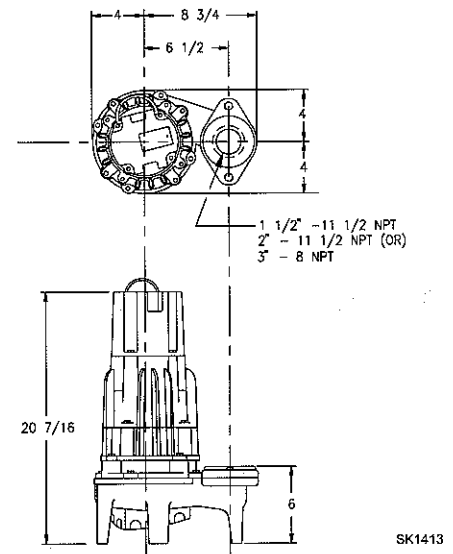
188 MODELS	4188 MODELS	Standard all models - 20 ft. cord - 1 1/2 H.P.				Control Selection		Listings	
Single Seal	Double Seal	Volts - Ph	Mode	Amps		Simplex	Duplex	CSA	UL
D188	---	230	1 Auto	13.3		1 or 1 & 8		N	Y ⁽¹⁾
E188	E4188	230	1 Non	13.3		2 or 2 & 7	3 or 5 & 6	Y ⁽²⁾	Y ⁽¹⁾
* H188	---	200-208	1 Auto	16.8		1 & 8		N	N
* I188	* I4188	200-208	1 Non	16.8		2 & 7	3 or 5 & 6	N	N
* F188	* F4188	230	3 Non	8.9		4 & 6	3 & 4 or 5 & 6	Y	Y
* J188	* J4188	200-208	3 Non	10.3		4 & 6	3 & 4 or 5 & 6	Y	Y
* G188	* G4188	460	3 Non	4.6		4 & 6	3 & 4 or 5 & 6	Y	Y
* BA188	---	575	3 Non	3.5		4 & 6	3 & 4 or 5 & 6	Y	N

189 MODELS	4189 MODELS	Standard all models - 20 ft. cord - 2 H.P.				Control Selection		Listings	
Single Seal	Double Seal	Volts - Ph	Mode	Amps		Simplex	Duplex	CSA	UL
D189	---	230	1 Auto	17.1		1 or 1 & 8		N	Y ⁽¹⁾
E189	E4189	230	1 Non	17.1		2 & 7	3 or 5 & 6	Y ⁽²⁾	Y ⁽¹⁾
* H189	---	200-208	1 Auto	20.5		1 & 8		N	N
* I189	* I4189	200-208	1 Non	20.5		2 & 7	3 or 5 & 6	N	N
* F189	* F4189	230	3 Non	11.2		4 & 6	3 & 4 or 5 & 6	Y	Y
* J189	* J4189	200-208	3 Non	13.2		4 & 6	3 & 4 or 5 & 6	Y	Y
* G189	* G4189	460	3 Non	6.0		4 & 6	3 & 4 or 5 & 6	Y	Y
* BA189	---	575	3 Non	5.8		4 & 6	3 & 4 or 5 & 6	Y	N
* WD189	* WD4189	230	1 Auto	17.1		2 or 2 & 8		N	N

191 MODEL	Standard all models - 20 ft. cord - 2 H.P.				Control Selection		Listings	
Single Seal	Double Seal	Volts - Ph	Mode	Amps	Simplex	Duplex	CSA	UL
E191	---	230	1 Non	14.5	2 or 2 & 7	3 or 5 & 6	N	N

- * No Molded Plug
(1) UL Listed unit available with 20 Amp Plug.
(2) CSA Approval without plug cap.
(3) 20 Amp Outlet, P/N 10-0060 must be used.

Double Seal-4180 Series / Weight 89-94 lbs.



SK1413

SELECTION GUIDE

1. Integral float operated 2-pole mechanical switch, no external control required.
2. Single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
3. Mechanical alternator M-Pak 10-0072 or 10-0075. Refer to FM0495
4. Simplex three phase control panel. Refer to FM1228.
5. See FM0712 for correct model of Electrical Alternator.
6. Variable level control switch 10-0225 used as control activator, specify simplex (3) float or duplex (3) or (4) float system.

CAUTION

All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electric Code (NEC) and the Occupational Safety and Health Act (OSHA).

For information on additional Zoeller products refer to catalog on Piggyback Variable Level Float Switches, FM0477; Electrical Alternator, FM0486; Mechanical Alternator, FM0495; Sump/Sewage Basins, FM0487; Simplex Pump Control, FM1596; Alarm Systems, FM0732; and Disconnect/Rail Systems, FM0787.

RESERVE POWERED DESIGN

For unusual conditions a reserve safety factor is engineered into the design of every Zoeller pump.

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"QUALITY PUMPS SINCE 1939"

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



ZOELLER
PUMP CO.



SECTION: 3.20.065

FM1775

1101

Supersedes

0501

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

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

ZOELLER ON-SITE WASTEWATER PRODUCTS

INTRODUCING ZOELLER SEPTIC SYSTEM FILTERS



Zoeller "WW" Residential Effluent Filter P/N 170-0078

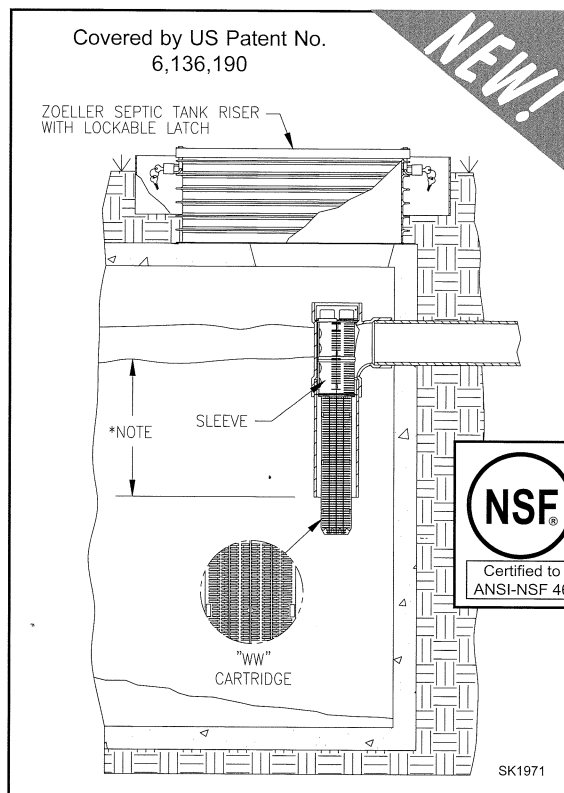
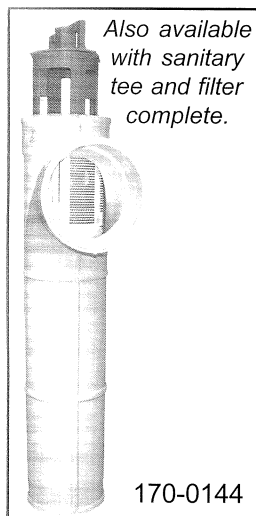
The Zoeller "WW" residential filter gives your septic system protection like no other. Zoeller Company's patented design keeps your lateral fields safe with twice the filtration area of most residential filters. All of the filtration area is submerged, making the filter 100% effective. The best feature of the WW filter is that the sleeve section of the filter remains in the outlet tee when the main filter is removed for servicing. This will guarantee no solids larger than 1/16" reach the lateral fields during servicing. The Zoeller "WW" filter is ultimate protection.

Improve the performance of your septic system: The number one reason that septic systems fail is because the lateral field becomes clogged. By preventing solids larger than 1/16" from exiting to your drain field, the lifetime of your system can be greatly increased.

Allows only the clearest effluent to leave the tank: Located in the sanitary tee, this filter extends beneath the scum layer, above the sludge layer, and withdraws effluent from the clear water zone of the tank.

Lowers maintenance costs: The filter must be serviced on a periodic basis to maintain peak performance. Under normal circumstances, the filter requires servicing when the septic tank is pumped. However, site specific circumstances may require more frequent service. A Zoeller Riser & Lid will make septic tank and filter maintenance an easy task.

Allows any responsible management entity to monitor the condition of the tank: During routine maintenance, the tank should be inspected to be sure unnecessary particulate is not getting into your tank (i.e. fruit peelings, cigarette filters, feminine hygiene materials, etc.). Check your local plumbing codes to determine how often your tank should be pumped. If sludge buildup becomes apparent on the bottom of your tank, then a more frequent pumping interval is suggested.



*NOTE: State and local plumbing codes may require a specific liquid penetration. For example, 25% - 45% into the liquid depth or 9" off the tank bottom.

Distributed by:

ZOELLER
PUMP CO.

Zoeller Residential Septic Tank Effluent Filter Specifications

Application: Single family homes.

Filter Area: 122 Linear Feet of 1/16" filtration.

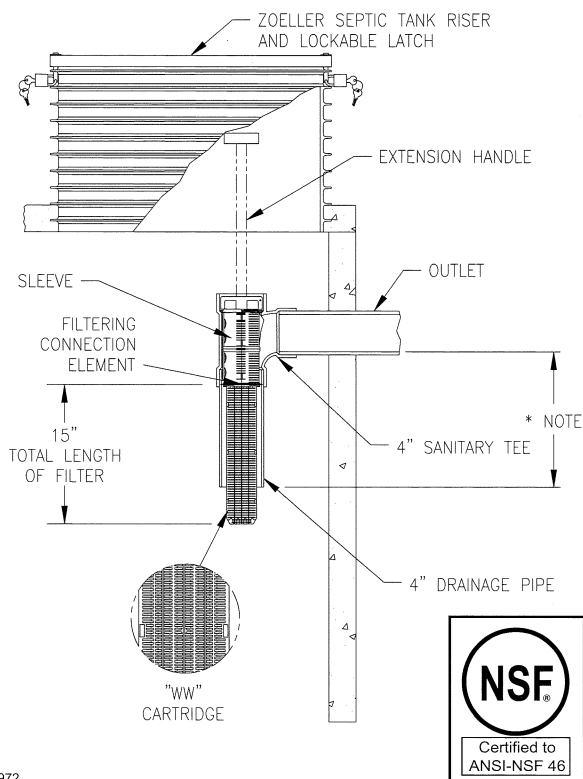
Flow Rate: 1000 gpd.

Material: All materials are noncorrosive in the septic tank environment. Sleeve is PVC, primary filter is polypropylene, and filter connection element is neoprene.

Easy to install or retrofit: The Zoeller Septic System Filter fits inside any 4" sanitary tee. Slide the filter cartridge into the filter sleeve. Lock the cartridge and sleeve together by holding the sleeve stationary and rotating the cartridge clockwise. Slide the assembled cartridge and sleeve into the sanitary tee at the tank's outlet. Ensure the sleeve latch is pointing toward the outlet of the septic tank before filter placement into the tee. The drain field is now protected from solids greater than 1/16".

Adding an extension handle: Zoeller's effluent filter can be easily retrofitted with an extension handle. Attach a 1/2" PVC pipe to the top of the filter with properly installed stainless steel screws. Cut off to appropriate length below the lid. A 1/2" PVC Tee can be added to the pipe for added leverage and control.

Covered by US Patent No.
6,136,190



Easy to maintain: The filter cartridge can be maintained by rotating the cartridge counterclockwise and removing for cleaning. The sleeve should remain in the sanitary tee while cleaning the cartridge. To clean the cartridge, hold cartridge over septic tank opening and thoroughly rinse with hose until clean, washing filtered trash back into septic tank. After cleaning the cartridge, it is imperative that the sleeve be cleaned inside and out, by reinserting the cartridge; turning it clockwise in the sleeve and removing the sleeve from the sanitary tee. The Zoeller filter should be cleaned each time the septic tank is pumped or when the need is indicated by slow flows from the house. More frequent cleanings will not hurt the filter and could even improve the performance of your septic tank. For installations that exceed the design flow rate of the filter, more frequent cleanings may be required or manifold more than one sanitary tee to accept more than one filter.

Trouble shooting, repair, and replacement: Follow the install and maintenance instructions above. For replacement components, call 1-800-928-PUMP.

Lifetime Warranty: Every Zoeller filter is guaranteed to be free from defects in materials and workmanship for the lifetime of the homeowner/purchaser. Free repair or replacement, excluding labor, will be made on return of the filter prepaid to the factory. This warranty is limited to product proven to be free from abuse or improper installation.

***NOTE:** State and local plumbing codes may require a specific liquid penetration. For example, 25% - 45% into the liquid depth or 9" off the tank bottom.

ALL ZOELLER ON-SITE WASTEWATER PRODUCTS MUST BE INSTALLED IN ACCORDANCE WITH LOCAL AND/OR STATE PLUMBING AND/OR HEALTH DEPARTMENT CODES.



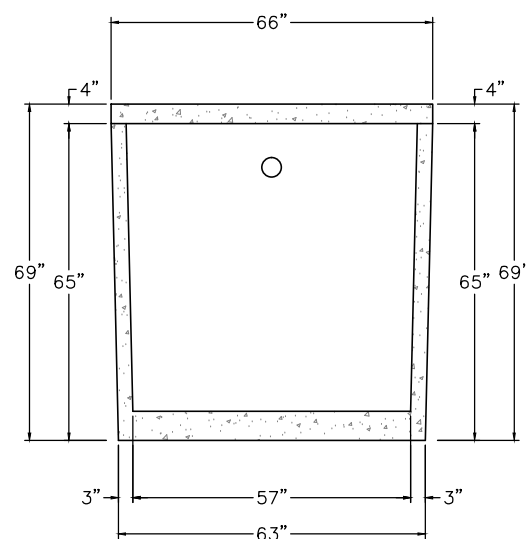
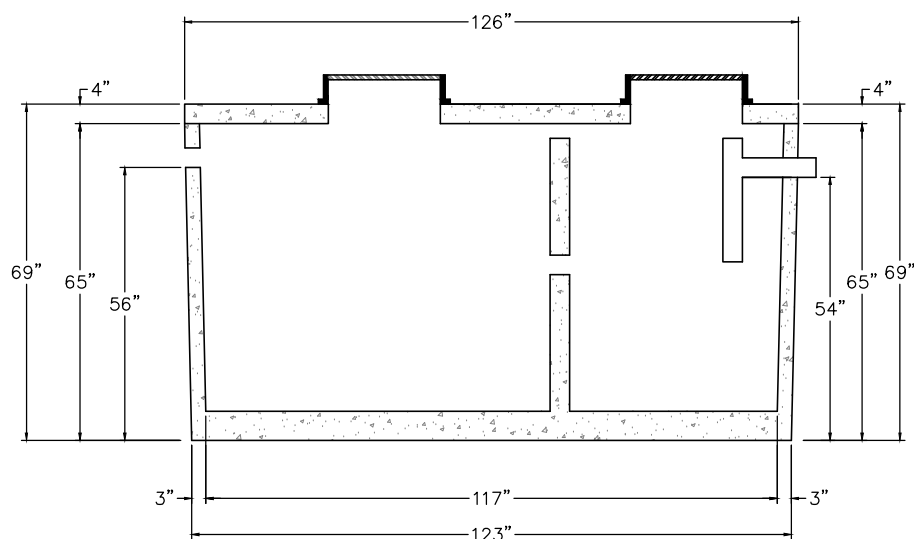
<http://www.zoeller.com>

ZOELLER
PUMP CO.

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Louisville, KY 40256-0347
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Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP
FAX (502) 774-3624

Manufacturers of . . .

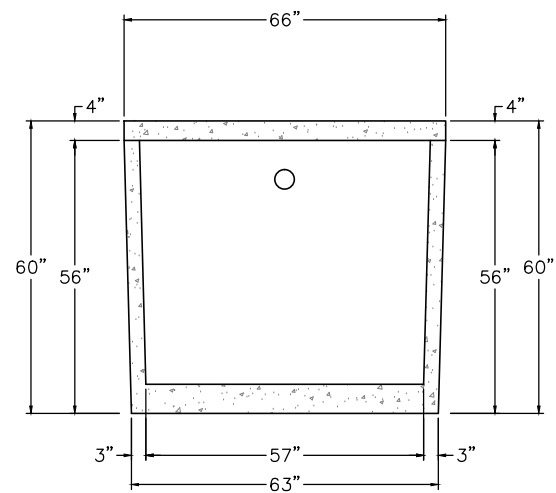
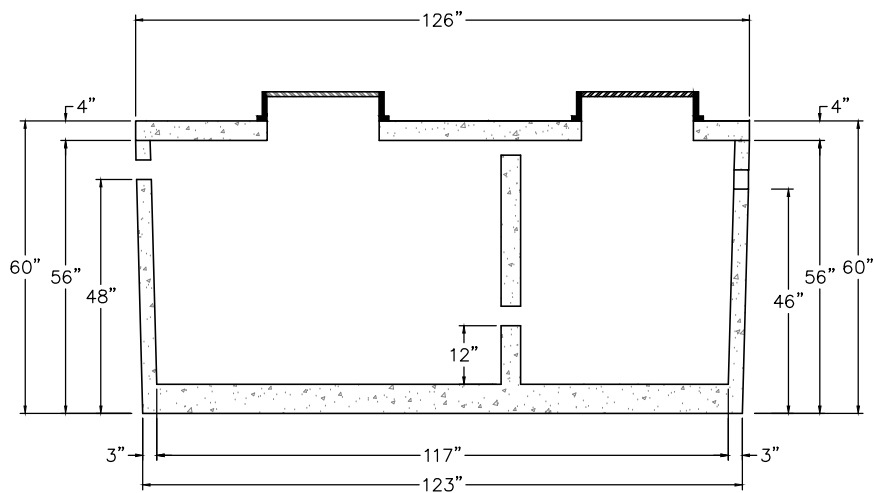
"QUALITY PUMPS SINCE 1939"



1,500 ST-322
NTS

NON TRAFFIC BEARING

DAVID BRANTLEY & SONS 37 Pine Ridge Rd. Zebulon, NC 27597 Office 252-478-3721 Fax 919-573-0443 1nstaller@gmail.com		PREPARED FOR : David Brantley & Sons 37 Pine Ridge Rd. Zebulon, NC 27597	REVISION NO. Original Submitted Revision 1 Revision 2 Revision 3 Master Set	DATE April 11, 2014	BRANTLEY TASK MODEL 1,500 ST 322
		DATE : April 11, 2014 CONTACT: CORY BRANTLEY			SHEET NUMBER 1 of 1



1,500 PT 293
NTS

NON TRAFFIC BEARING

DAVID BRANTLEY & SONS
37 Pine Ridge Rd.
Zebulon, NC 27597
Office 252-478-3721
Fax 919-573-0443
1nsta1ler@gmail.com

PREPARED FOR : David Brantley & Sons
37 Pine Ridge Rd.
Zebulon, NC 27597

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CONTACT: CORY BRANTLEY

REVISION NO.
Original Submitted

Revision 1

Revision 2

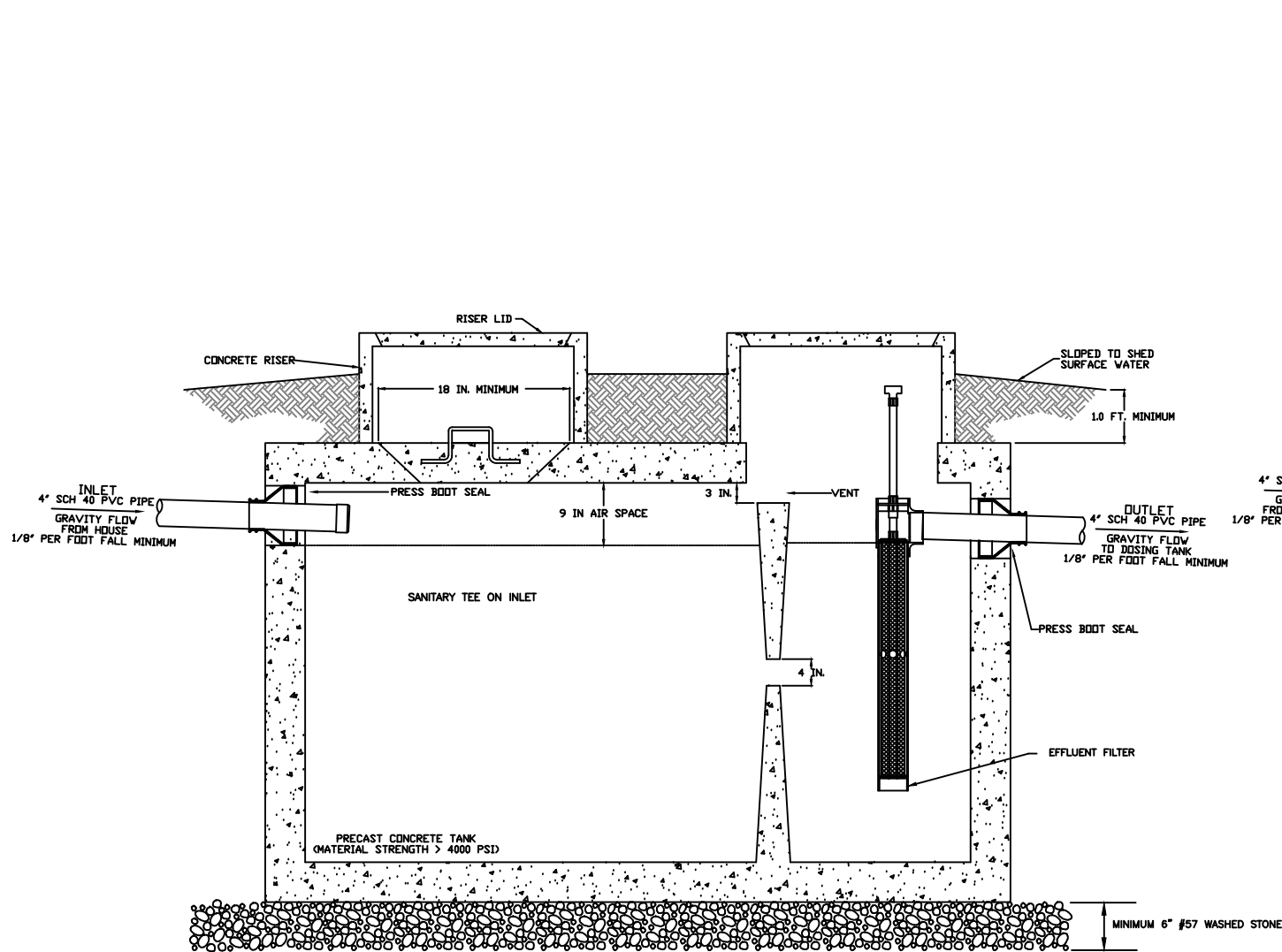
Revision 3

Master Set

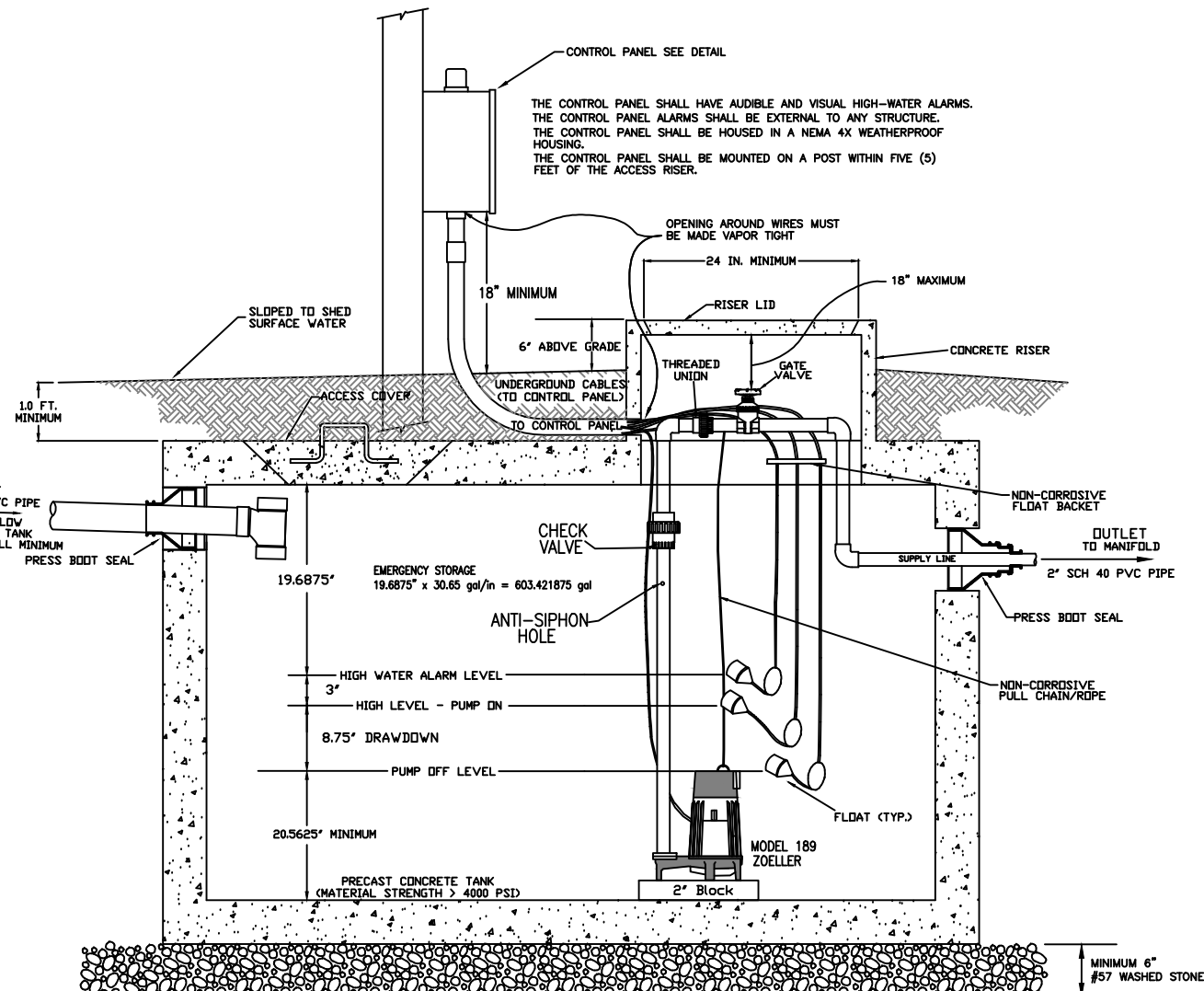
DATE
April 11, 2014

BRANTLEY TASK MODEL
1,500 PT 293

SHEET NUMBER
1 of 1



1500 GAL SEPTIC TANK SCHEMATIC
NOT TO SCALE



1500 GAL PUMP TANK SCHEMATIC
NOT TO SCALE

NOTES

1. ALL TANKS SHALL BE LEAK TESTED SUCH THAT EXFILTRATION OCCURS AT A RATE WHICH DOES NOT EXCEED TEN GALLONS PER TWENTY-FOUR HOURS PER 1,000 GALLONS OF TANK CAPACITY
2. ALL TANKS SHALL REST ON A BED OF #57 WASHED GRAVEL. THE MINIMUM THICKNESS OF THE GRAVEL BED IS 6 INCHES.
3. ALL TANKS MUST BE APPROVED FOR USE BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL HEALTH (DEH).
4. INVERTS SHOWN ARE APPROXIMATE. THE INSTALLER SHALL FIELD CONFIRM PRIOR TO CONSTRUCTION.
5. ALL HARDWARE INSTALLED INSIDE OF TANKS SHALL BE OF STAINLESS STEEL.
6. TANK DIMENSIONS VARY BY MANUFACTURER.
7. DRAWDOWN WILL VARY WITH TANK DIMENSIONS.
8. NO ELECTRICAL SPLICES SHALL BE MADE INSIDE THE PUMP TANK.

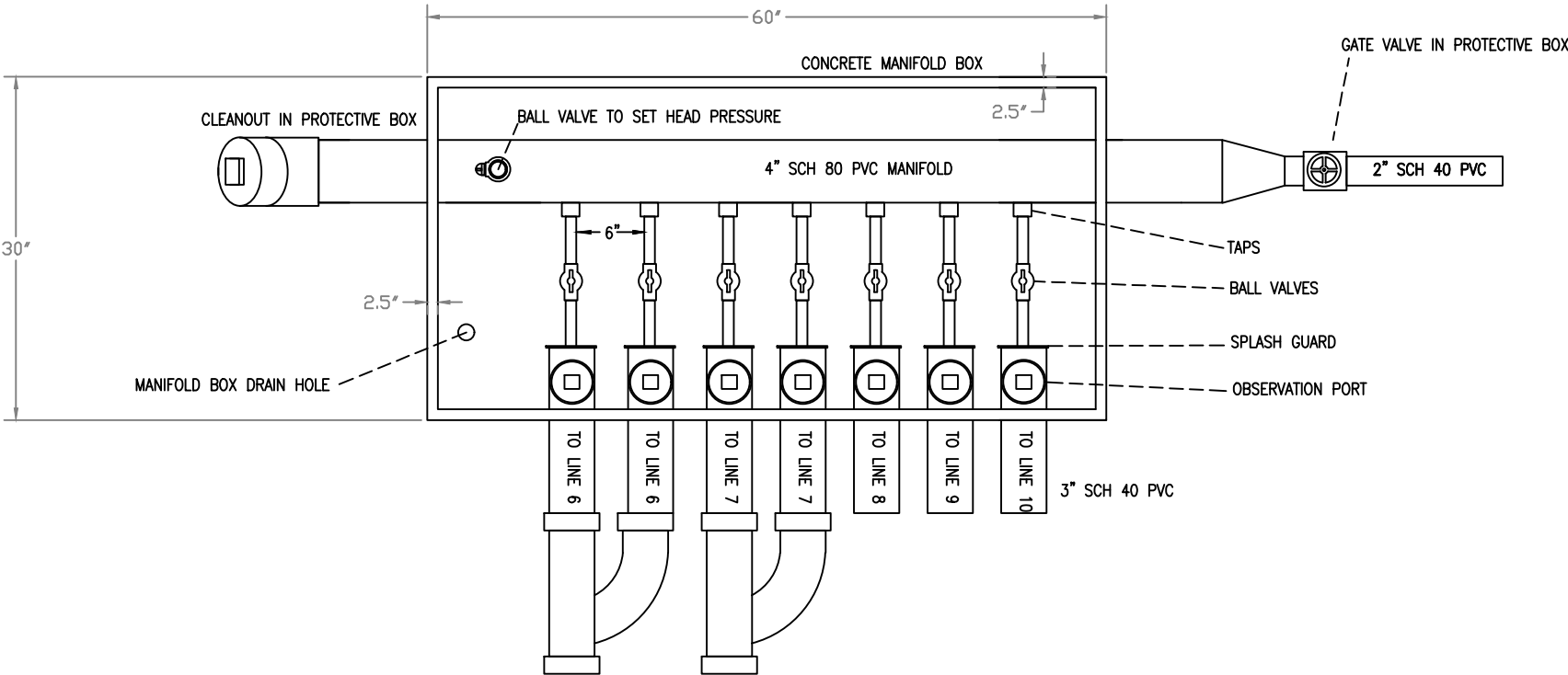


Central Carolina Soil Consulting, PLLC
1900 South Main Street, Suite 110
Wake Forest, North Carolina 27587
Phone (919)569-6704 Fax (919)569-6703

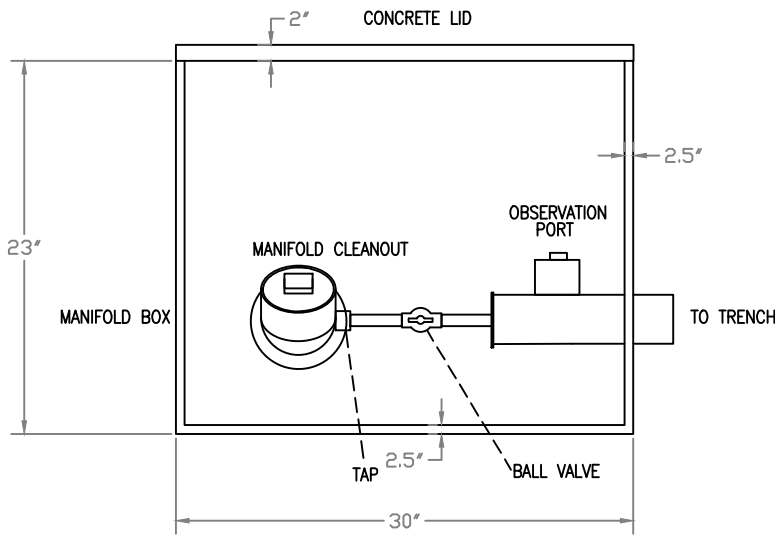
Septic and Pump Tank Details
Southern Hills S/D, Lot 32
Wake County, North Carolina

Job# : 3698
Drawn By : JR
Date : 03/24/2021
Revision : 00/00/0000

PRESSURE MANIFOLD DETAILS TOP VIEW



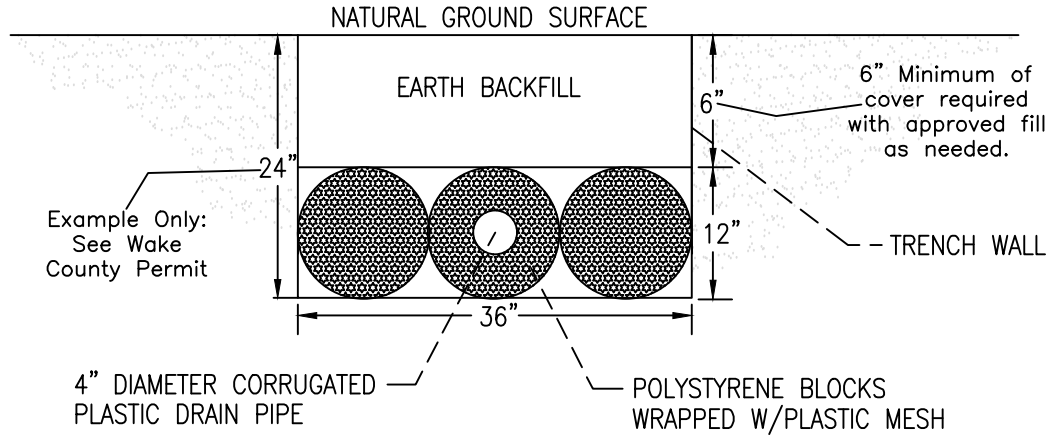
PRESSURE MANIFOLD DETAILS END VIEW



TAP SCHEDULE	
LINE #	TAP
6	1/2" SCH 40
6	1/2" SCH 40
7	1/2" SCH 40
7	1/2" SCH 40
8	3/4" SCH 40
9	1/2" SCH 40
10	1/2" SCH 80

EZ-FLOW DETAILS

Example only: Installed trench bottom should match design.



NOTE :

1. EZ-FLOW INSTALLATION SHALL MEET THE REQUIREMENTS INCLUDED IN ITS INNOVATIVE APPROVAL
2. TRENCH BOTTOM SHALL BE AT LEAST 12" FROM ANY RESTRICTIVE SOIL LAYER
3. END CAP SHALL BE PROVIDED AT END OF ALL CORRUGATED PLASTIC PIPE LINES AND TRENCH BOTTOMS SHALL BE LEVEL
4. THIS IS A GENERIC TRENCH PROFILE SEE COUNTY PERMIT FOR TRENCH DEPTH.

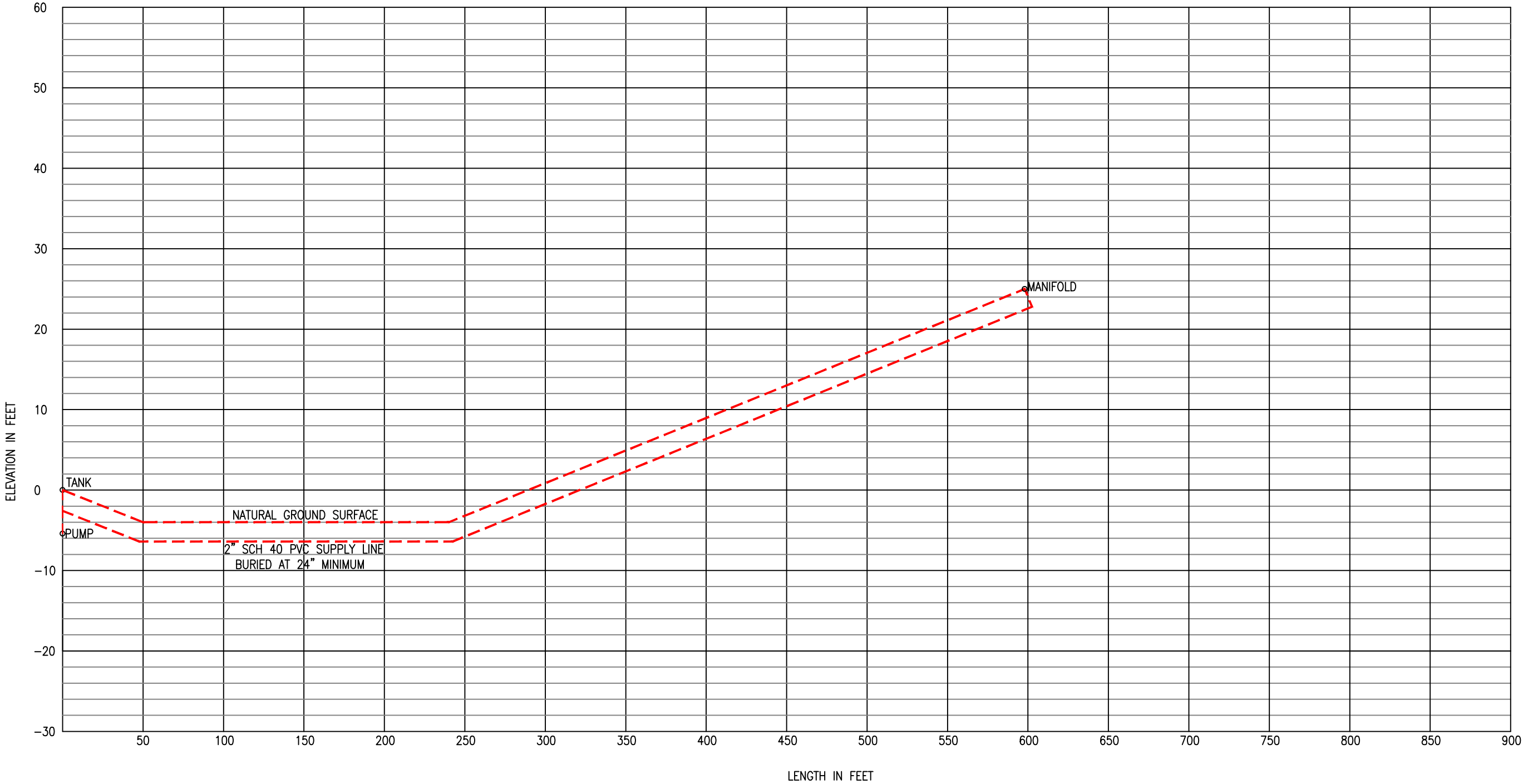


Central Carolina Soil Consulting, PLLC
1900 South Main Street, Suite 110
Wake Forest, North Carolina 27587
Phone (919)569-6704 Fax (919)569-6703

Manifold and Trench Details
Southern Hills S/D, Lot 32
Wake County, North Carolina

Job# : 3698
Drawn By : JR
Date : 03/24/2021
Revision : 00/00/0000

SUPPLY LINE
HYDRAULIC PROFILE



Central Carolina Soil Consulting, PLLC
1900 South Main Street, Suite 110
Wake Forest, North Carolina 27587
Phone (919)569-6704 Fax (919)569-6703

Hydraulic Profile
Southern Hills S/D, Lot 32
Wake County, North Carolina

Job# : 3698
Drawn By : JR
Date : 03/24/2021
Revision : 00/00/0000

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NO PERMIT(S) FOR CONSTRUCTION, LOCATION OR RELOCATION ACTIVITY SHALL BE ISSUED UNTIL AN AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION AUTHORIZATION HAS BEEN ISSUED

PERMIT VOID IF NOT IN COMPLIANCE WITH ZONING REGULATIONS AND/OR IF SITE IS ALTERED OR INTENDED USE CHANGED

IMPROVEMENT PERMIT

PERMIT #: WRP-053651-2021

APPLICATION DATE: 02/11/2021

BLDG. PERMIT #: RBPR-053637-2021

PIN: 0890134767

RECORDED: Yes

TOWNSHIP: 02 - Bartons Creek

JURISDICTION: Wake County

ZONING: R-40W

APPLICANT: Samuel St clair
1619 Oberlin RD

BUSINESS PHONE: (919) 559-2071

HOME PHONE:

MOBILE PHONE:

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 1425 SKY VISTA WAY

SUBDIVISION: SOUTHERN HILLS ESTATES

LOT: 32

ACRES: 1.03

DIRECTIONS: Lot 32 southern hills. Gate code is #9239. Offsite septic is behind lot 34

Permit is subject to revocation if the Site Plan or Plat changes or the intended use changes.

*Maximum depth of line is calculated using the downhill side of the trench and includes slope correction.

IP VALID FOR: Five Years AS PER GS 130A-335 (f)

DESIGNED BY: Bobby Weaver

SYSTEM LAYOUT: Private Sector

SITE CLASSIFICATION: Provisionally Suitable

IP STATUS: Issued

BY: Bobby Weaver

DATE: 03/25/2021

NUMBER OF BEDROOMS: 5

OR TOTAL NUMBER OF OCCUPANTS: 10

PERMITTED DESIGN FLOW: 600 GPD

BASEMENT: No

BASEMENT PLUMBING: No

WASTEWATER STRENGTH: Domestic

SYSTEM TYPE: III B

LTAR: 0.300

EXISTING SYSTEM UTILIZED:

PRETREATMENT STRENGTH REQUIRED:

EASEMENT FOR WW SYSTEM ASSOCIATED WITH PARCEL:

MAXIMUM TRENCH DEPTH: 22 INCHES

PUMP REQUIRED: Yes

SPECIFIC SYSTEM REQUIREMENTS: System Designed for a 5 bedroom home, with 600 gals per day

Future Repair is a type IIIB system with a trench depth of 22" and a .3 LTAR

Site serviced by a community well

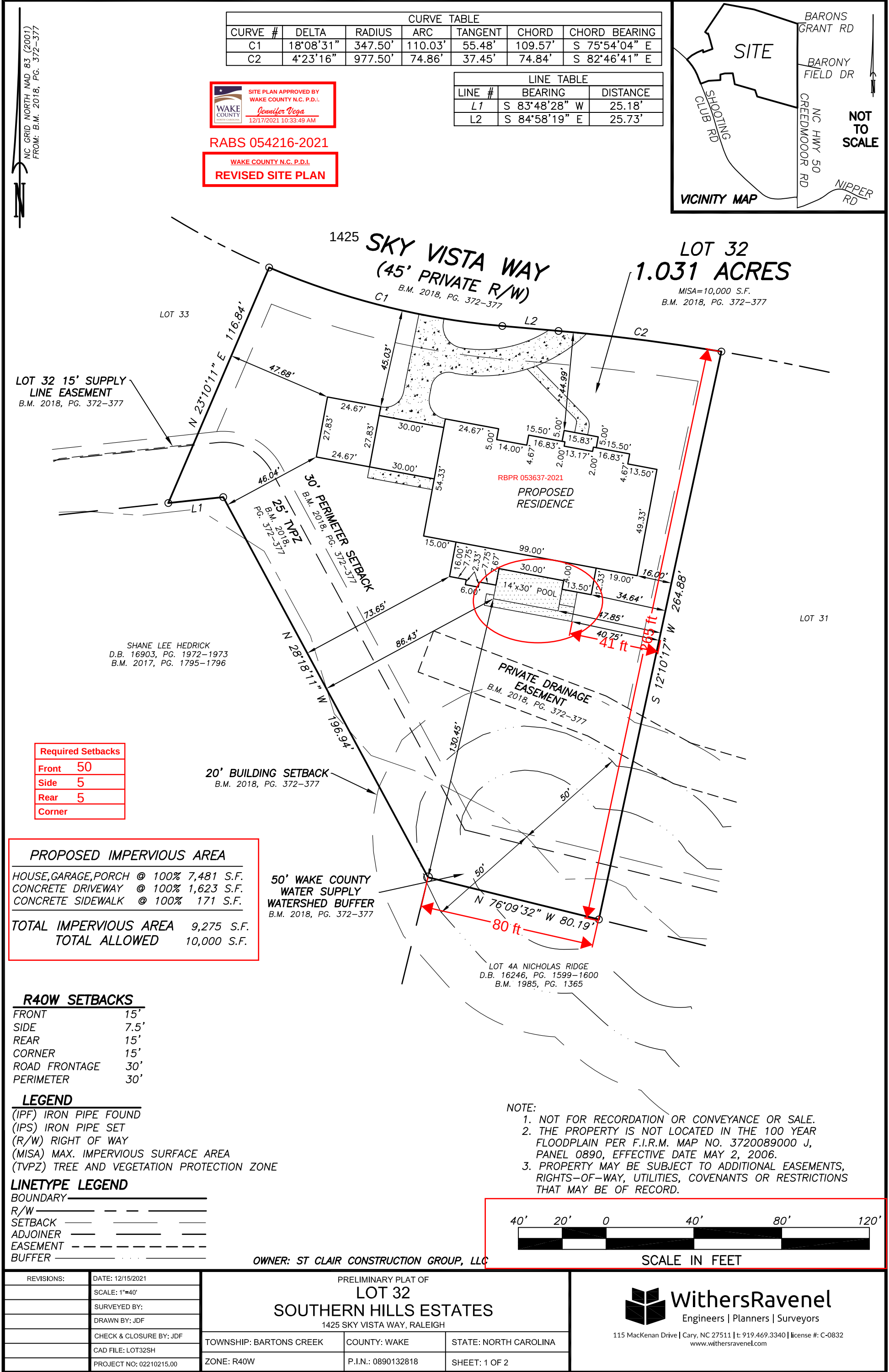
No cutting, grading, alterations, or utilities in septic area.

Maintain all setbacks

ISSUED BY:

Robert Weaver

DATE: 03/25/2021



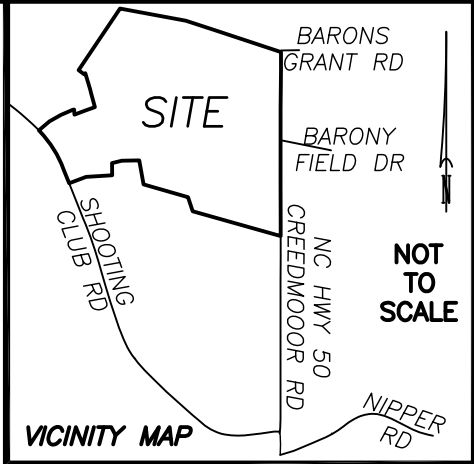
CURVE TABLE						
CURVE #	DELTA	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C1	18°08'31"	347.50'	110.03'	55.48'	109.57'	S 75°54'04" E
C2	4°23'16"	977.50'	74.86'	37.45'	74.84'	S 82°46'41" E



RABS 054216-2021

WAKE COUNTY N.C. P.D.I.
REVISED SITE PLAN

LINE TABLE		
LINE #	BEARING	DISTANCE
L1	S 83°48'28" W	25.18'
L2	S 84°58'19" E	25.73'



Required Setbacks	
Front	50
Side	5
Rear	5
Corner	

PROPOSED IMPERVIOUS AREA

HOUSE, GARAGE, PORCH @ 100%	7,481 S.F.
CONCRETE DRIVEWAY @ 100%	1,623 S.F.
CONCRETE SIDEWALK @ 100%	171 S.F.

TOTAL IMPERVIOUS AREA	9,275 S.F.
TOTAL ALLOWED	10,000 S.F.

R40W SETBACKS

FRONT	15'
SIDE	7.5'
REAR	15'
CORNER	15'
ROAD FRONTAGE	30'
PERIMETER	30'

LEGEND

(IPF) IRON PIPE FOUND
(IPS) IRON PIPE SET
(R/W) RIGHT OF WAY
(MISA) MAX. IMPERVIOUS SURFACE AREA
(TYPZ) TREE AND VEGETATION PROTECTION ZONE

LINETYPE LEGEND

BOUNDARY	_____
R/W	_____
SETBACK	_____
ADJOINER	_____
EASEMENT	_____
BUFFER	_____

- NOTE:
- NOT FOR RECORDATION OR CONVEYANCE OR SALE.
 - THE PROPERTY IS NOT LOCATED IN THE 100 YEAR FLOODPLAIN PER F.I.R.M. MAP NO. 3720089000 J, PANEL 0890, EFFECTIVE DATE MAY 2, 2006.
 - PROPERTY MAY BE SUBJECT TO ADDITIONAL EASEMENTS, RIGHTS-OF-WAY, UTILITIES, COVENANTS OR RESTRICTIONS THAT MAY BE OF RECORD.



SCALE IN FEET

REVISIONS:		DATE: 12/15/2021	
		SCALE: 1"=40'	
		SURVEYED BY:	
		DRAWN BY: JDF	
		CHECK & CLOSURE BY: JDF	
		CAD FILE: LOT32SH	
		PROJECT NO: 02210215.00	
PRELIMINARY PLAT OF LOT 32 SOUTHERN HILLS ESTATES 1425 SKY VISTA WAY, RALEIGH			
TOWNSHIP: BARTONS CREEK		COUNTY: WAKE	STATE: NORTH CAROLINA
ZONE: R40W		P.I.N.: 0890132818	SHEET: 1 OF 2

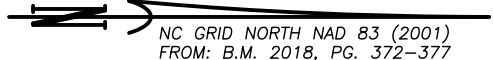
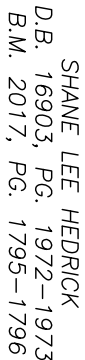


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