

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-070883-2021 **APPLICATION DATE:** 11/18/2021 **BLDG. PERMIT#:** RBPR-071820-2021
PIN: 0890240860 **RECORDED:** Yes
TOWNSHIP: 02 - Bartons Creek **JURISDICTION:** Wake County **ZONING:** R-80W
APPLICANT: Raleigh Custom Homes Inc
Kyle Johnson
7708 Harps Mill RD **BUSINESS PHONE:** (919) 847-2664
HOME PHONE:
MOBILE PHONE: (918) 530-0197
HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE **EXISTING USE:**
SITE ADDRESS: 1608 ESTATE VALLEY LN
SUBDIVISION: SOUTHERN HILLS ESTATES **LOT:** 12 **ACRES:** 1.01
DIRECTIONS: Lot 12

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: BRANTLEY, CORY - 1036 - IV

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

SYSTEM TYPE INSTALLED: III B

OPERATION PERMIT: **STATUS:** Issued

ISSUED BY: Alexander Merrell

ISSUED DATE: 07/28/2022

SEPTIC TANK: David Brantley & Sons - STB-323 - 1250 gallons **DATE OF MANUFACTURE:** 03/29/2022 **FILTER:** Other

GREASE TRAP: **DATE OF MANUFACTURE:** **FILTER:**

DOSING PUMP TANK: Brantley - PT-2124 - 1312 gal - 21.5 gal/in **DATE OF MANUFACTURE:** 05/10/2022 **FILTER:**

CC1: 999,815 **ETM1:** 0 **CC2:** **ETM2:**

RECIRCULATION TANK: **DATE OF MANUFACTURE:**

CC1: **ETM1:** **CC2:** **ETM2:**

SEPTIC TANK ELEVATION: 4.25

GREASE TRAP ELEVATION:

DOSING PUMP TANK ELEVATION: 4.58

RECIRCULATION TANK ELEVATION:

DISTRIBUTION DEVICE ELEVATION: 6

INSTALLED TRENCH DEPTH	INSTALLED AGGREGATE DEPTH	INSTALLED TRENCH LENGTH	INSTALLED TRENCH BOTTOM ELEVATION
30	12	100	7.4166
30	12	90	6.9166
30	12	80	6.5833
30	12	80	6.1667
30	12	75	6.25

ACTUAL PRESSURE HEAD: 2

ACTUAL FLOW RATE: 43

ACTUAL DOSE VOLUME: 210

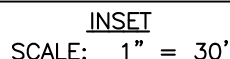
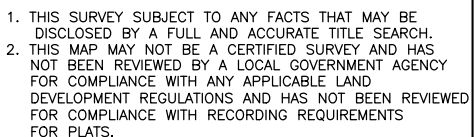
SPECIFIC OPERATION REQUIREMENTS:

- 4 bedroom single family residence
- 480 GPD design flow
- Champion 55 pump installed
- Watercore C4CBF filter installed in septic tank
- Site is serviced by a community well
- Laser moved between manifold/drainline elevations and tank elevations.

ISSUED BY:



DATE: 07/28/2022



PLOT PLAN
PRELIMINARY PLAT- NOT FOR RECORDATION,
CONVEYANCE OR SALES

REV CODE: 1.FLIP, 2.PLAN, 3.ROTATE, 4.MOVE, 5.SS
6.SEVERAL OF ABOVE, 7.LAND FEATURE, 8. OTHER

REV1: OCT. 29, 2021(8)
DATE: OCT. 26, 2021

F.B.

RWK, PA
ENGINEERING ~ SURVEYING
CORPORATE LICENSE: C-1771
101 W. MAIN ST., SUITE 202
GARNER, NC 27529
PHONE (919) 779-4854
FAX (919) 779-4056



TEL 919 856 7400
FAX 919 856 7407

Environmental Services

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

12/22/2021

REQUIREMENTS TO COMPLETE YOUR PRESSURE MANIFOLD SYSTEM

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.

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) 842-7142 or email at Gary.Morehouse@wakegov.com if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary Morehouse".

Gary Morehouse, LSS, REHSI
Environmental Consultant

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

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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
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CONSTRUCTION AUTHORIZATION PERMIT

PERMIT # WRP-070883-2021 **APPLICATION DATE:** 11/18/2021 **BLDG. PERMIT#:** RBPR-071820-2021

PIN: 0890240860 **RECORDED:** Yes

TOWNSHIP: 02 - Bartons Creek **JURISDICTION:** Wake County **ZONING:** R-80W

APPLICANT: RALEIGH CUSTOM HOMES
7708 Harps Mill RD
RALEIGH, NC 27615

BUSINESS PHONE: (919) 847-2664

HOME PHONE:

MOBILE PHONE: (919) 395-1529

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE **EXISTING USE:**

SITE ADDRESS: 1608 ESTATE VALLEY LN

SUBDIVISION: SOUTHERN HILLS ESTATES **LOT:** 12 **ACRES:** 1.01

DIRECTIONS: Lot 12

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:** Gary Morehouse **DATE:** 12/22/2021

CA VALID FOR: Five Years **DESIGN FLOW:** 480 GALLONS **BASEMENT:** No **BASEMENT FIXTURES:** No

SEPTIC TANK: 1200 GALLONS

SEPTIC TANK FILTER: Yes

DOSING PUMP TANK: 1200 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: 1,275

AGGREGATE DEPTH: 12

MAX. TRENCH DEPTH: 30 INCHES

DISTRIBUTION DEVICE: PM - Pressure Manifold

TRENCH #: 5 **TRENCH LENGTH:** 75, 80, 80, **TRENCH WIDTH:** 36 INCHES **TOTAL TRENCH LENGTH:** 425 FEET
90, 100 FEET

CENTER SPACING: 9 FEET

MINIMUM SOIL COVER: 6 INCHES

PRETREATMENT:
SUBFIELDS #:
PUMP TDH: 23 FEET

APPROVAL #:
PUMP DESIGN FLOW: 38.54
ZONE VALVE: No

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

LINE OF CREDIT REQUIRED: No

OPERATOR REQUIRED: No

TRIPARTY AGREEMENT REQUIRED: No

SPECIFIC CONSTRUCTION AUTHORIZATION REQUIREMENTS:

ACCEPTED STATUS SYSTEM REDUCTION HAS BEEN TAKEN FOR THE DESIGN OF THE INITIAL AND REPAIR SYSTEM FOR THIS 4 BEDROOM DWELLING. INITIAL SYSTEM IS A PRESSURE MANIFOLD SYSTEM PUMPING TO 5 UNEQUAL DRAINLINES WITH 30" TRENCH BOTTOM. REPAIR SYSTEM IS A SPLIT PRESSURE MANIFOLD SYSTEM PUMPING TO 5 UNEQUAL DRAINLINES WITH 18" TRENCH BOTTOM. 1200 GALLON SEPTIC TANK AND 1200 GALLON PUMP TANKS ARE PROPOSED. PARTIAL 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.

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. GARY MOREHOUSE 919-842-7142

Issued By:



Date: 12/22/2021

CA PART A-E

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	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation.
	1-3 years	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	Maintain vegetative cover (mow grass and remove weeds and brush).
	6-12 months	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.

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.

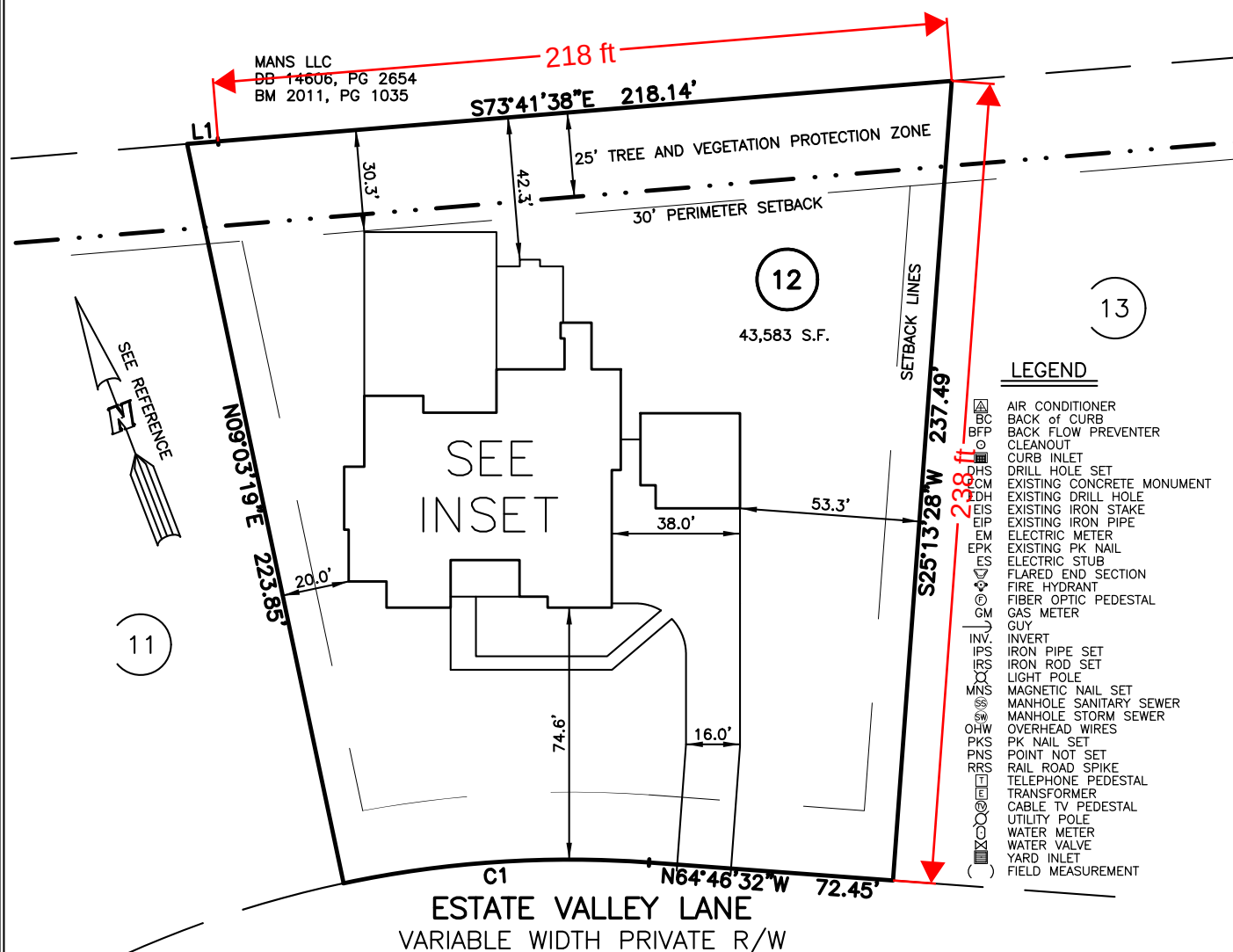
PROHIBITED ACTIVITIES (NOT ASSOCIATED WITH THE INSTALLATION OF THE WASTEWATER DISPOSAL SYSTEM) INCLUDE BUT MAY NOT BE LIMITED TO:

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

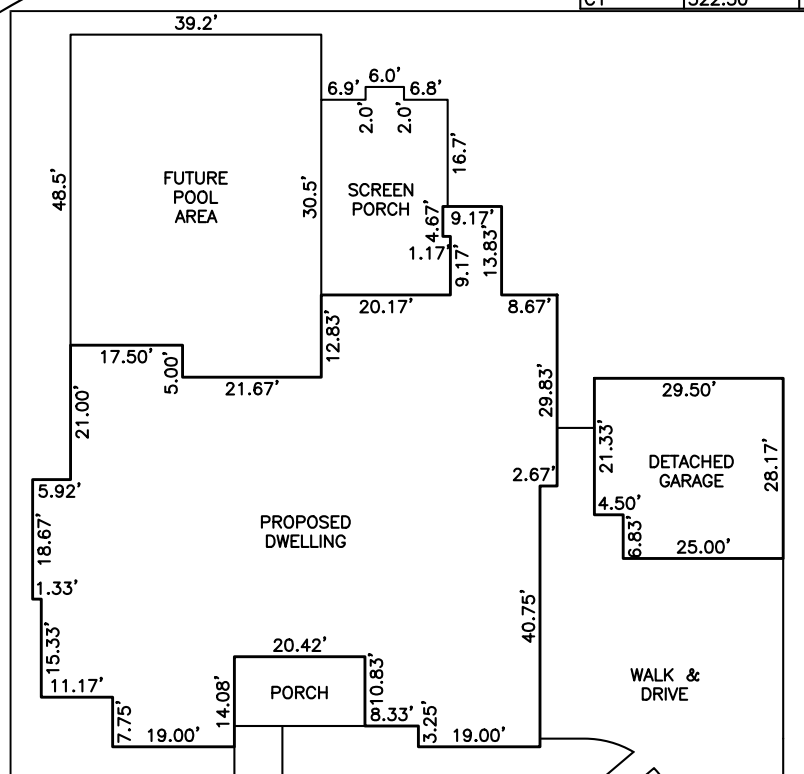
THE PERMITTEE IS ADVISED TO CLEARLY FLAG OR FENCE THESE AREAS DURING CONSTRUCTION TO PREVENT UNAUTHORIZED ACTIVITIES.

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	RADIUS	DELTA	ARC	CHORD BRG	CHORD
C1	322.50'	16°10'09"	91.01'	S72°51'37"E	90.71'



INSET

SCALE: 1" = 30'

LINE	BEARING	DISTANCE
L1	N73°42'45"W	9.21'

IMPERVIOUS SURFACES	
HOUSE	4,780 S.F.
WALK & DRIVE	2,960 S.F.
PORCHES	840 S.F.
GARAGE	800 S.F.
TOTAL	9,380 S.F.
MAX. IMPERVIOUS	12,500 S.F.



071820-2021

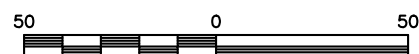
SETBACK INFO

R-80W

FRONT:	20'
REAR:	15'
SIDES:	10'
CORNER SIDE:	20'

REFERENCES:

B.M. 2018. PG. 372-377



SCALE: 1" = 50'

NOTES

1. THIS SURVEY SUBJECT TO ANY FACTS THAT MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.
2. THIS MAP MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVIEWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS.

PLOT PLAN
PRELIMINARY PLAT- NOT FOR RECORDATION,
CONVEYANCE OR SALES

REV CODE: 1.FLIP, 2.PLAN, 3.ROTATE, 4.MOVE, 5.SS
6.SEVERAL OF ABOVE, 7.LAND FEATURE, 8. OTHER

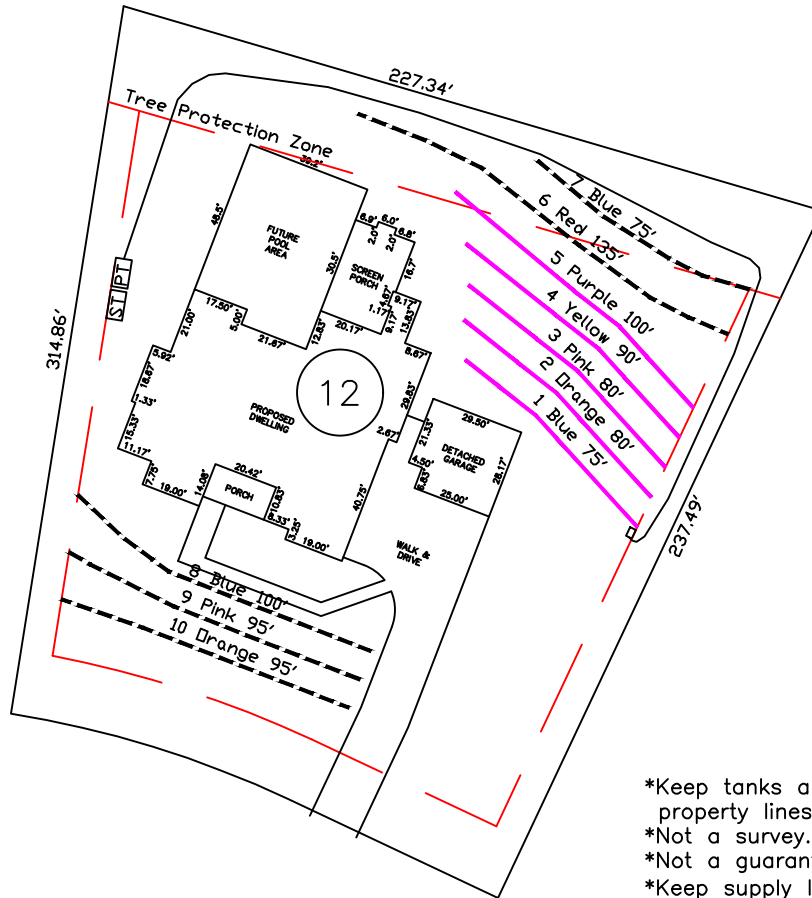
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CA PART B

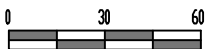
System: ———
Repair: - - - -



- *Keep tanks and drain lines 10' from property lines.
- *Not a survey.
- *Not a guarantee of a septic permit.
- *Keep supply lines >5' from property lines.
- *Some lines are flagged longer in the field than lengths indicate.
- *No grading septic area.

System: Pressure Manifold
Lines: 1-5, (425')
Accepted Status System
0.3 Soil LTAR

Repair: Dual Pressure Manifold
Lines: 6-10, (500')
Accepted Status System
0.3 Soil LTAR



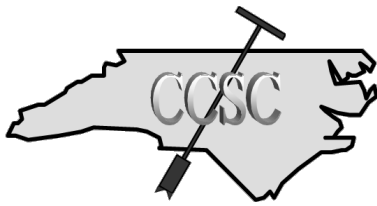
SCALE:
1" = 60 ft.



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

4 BEDROOM SEPTIC LAYOUT
Lot 12 Southern Hills Subdivision
Raleigh, Wake County, North Carolina

Job# : 4038
Drawn By : AH
Date : 11/17/2021
Revision:



CA PART C

Central Carolina Soil Consulting, PLLC

1900 South Main Street

Suite 110

Wake Forest, NC 27587

919-569-6704

December 20, 2021

Project # 4038

Wake Co. Department of Environmental Services

Attention: Geoffrey Pearson

PO Box 550

Raleigh, NC 27602

RE: Proposed use of on-site sewage disposal systems in the 25' Tree and Vegetative Protection Zones on lot 12 Southern Hills.

Dear Mr. Pearson:

This letter is reference to Wake County's Unified Development Code (16-10-J (1)) to substantiate that the location of the proposed primary wastewater drain field and/or components on lot 12 Southern Hills in the 25' Tree and Vegetative Protection Zone(s) is required. Due to the provisionally suitable soil areas, size of proposed houses (4-Bedroom) and topography the location of the wastewater systems are required in the Tree Protection zones to meet the minimum available space required for subsurface septic systems.

Please give me a call if you have any other questions regarding the septic system locations on this lot.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Hall", written in a cursive style.

Jason Hall

NC Licensed Soil Scientist # 1248



Encl: Site Plans



Environmental Services

TEL 919 856 7400
FAX 919 856 7407

Water Quality Division
336 Fayetteville St. • P.O. Box 550 • Raleigh, NC 27602
www.wakegov.com/water/

Foundation Drain Request Form

Wastewater Permit: WRP-070883-2021 Building Permit: RBPR-071820-2021

Parcel PIN: 0890240860

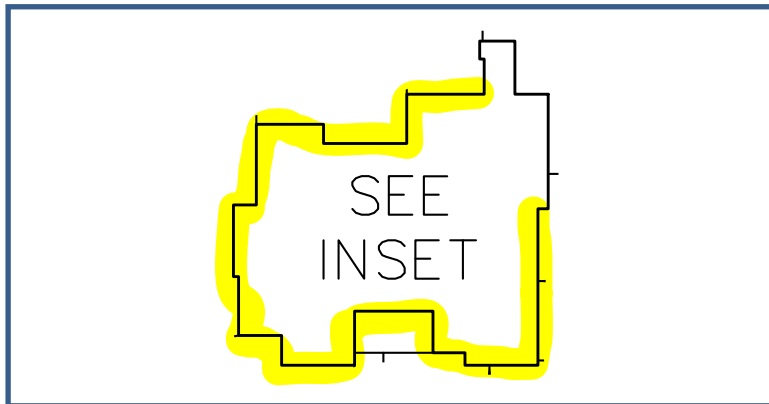
Project (Site) Address: 1608 ESTATE VALLEY LANE - LOT 12

PLEASE CIRCLE:

Foundation Drain? YES NO **PARTIAL (demonstrate below)**

If PARTIAL FOUNDATION DRAIN is circled, please demonstrate where the foundations drain will be located on the diagram below, (add decks, patios, etc. as needed)

Rear



Front

Applicant Signature: KJ Date: 12-13-21



Department of Environmental Services
Wake County

Approved by

A handwritten signature in black ink, appearing to read "Kary Miller".

Date: 12/22/2021

Review of this document has been made only for conformance with the design concept of the project and approval shall not relieve the designer and/or contractor from responsibility for any errors therein or for furnishing the materials, and equipment of proper dimension, size, quantity, quality and all performance characteristics to meet the requirements and intent of the contract documents.

Pressure Manifold Septic System Design

for

Southern Hills S/D Lot 12
Raleigh, North Carolina

Designed by:

Aaron Holder
Central Carolina Soil Consulting, PLLC
Wake Forest, North Carolina

12/17/2021

Southern Hills S/D Lot 12
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Southern Hills S/D Lot 12
Contact Information

Client:
Attn:
Street Address:

Phone:
Email:

Designer: Central Carolina Soils Consulting
Attn: Jason Hall
Street Address: 1900 Main Street Suite 110
Wake Forest, NC 27587
Phone: 919-569-6704
Cell: 919-422-2827

Southern Hills S/D Lot 12
Layout/Design Specifications

Facility Type:	Single Family Home
# of Bedrooms:	4
Daily Flow:	480 gal/day
L.T.A.R.:	0.30 gal/day/sq.ft
Trench Depth:	per WCDES in
Trench Width:	36 in
Stone Depth:	Ezflow in
Manifold Length:	48 in
Manifold Diameter:	4 in sch 80pvc
Supply Line Length:	347 ft
Supply Line Diameter:	2 in sch 40pvc
Total Supply Line Volume:	60.38 gallons
Friction Loss + Fitting Loss:	14.80 ft includes 70' for fittings in tank and 25% for line fittings
Design Head:	2 ft
Elevation Head:	6.20 ft
Total Head:	23.00 ft
Dose Volume:	207.44 gals
% of Pipe Vol.	.75
Drawdown:	10.6 in @ 19.65 gal/in
Pump Run Time:	5.4 Mins
Control Panel:	SJE Rhombus Model112 control panel (or approved equivalent)
Pump:	Zoeller 140 Flow-Mate (or approved equivalent)
Septic Tank Effluent Filter:	Zoeller 170-0144 residential effluent filter (or approved equivalent)
Septic Tank:	Brantley 1,250 Gallon ST 323
Pump Tank:	Brantley 1,200 Gallon PT 463

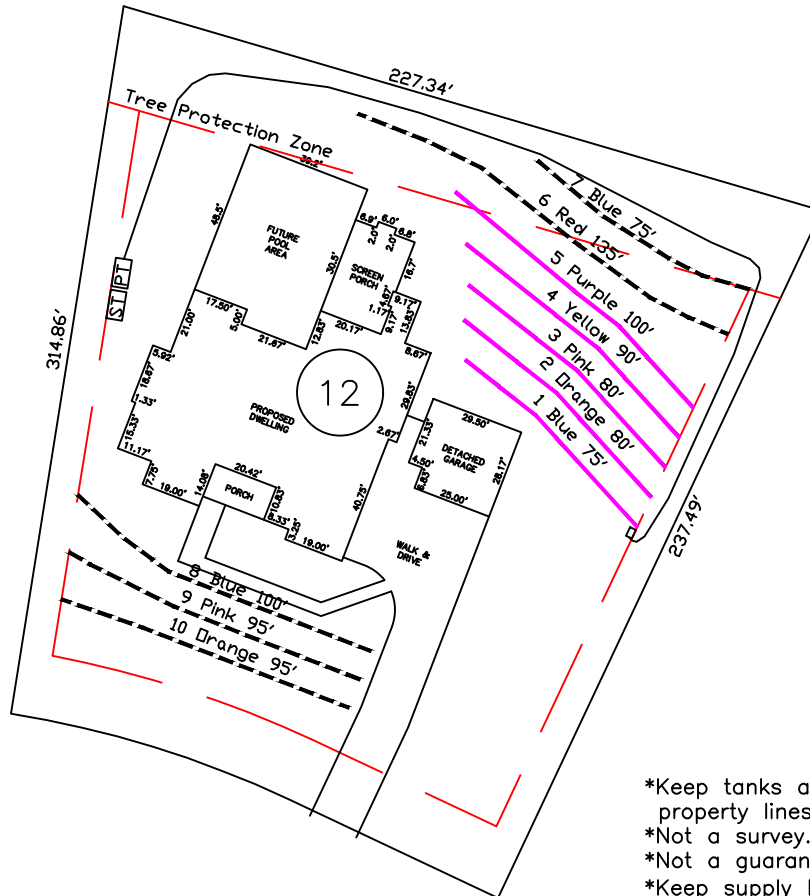
Southern Hills S/D Lot 12 TAP CHART

Bench Mark		Elevation Head							6.20
Pump tank elev.		3	97.00 <th>Pump elev.</th> <td>91.60</td> <th colspan="3">Manifold elev.</th> <td>97.80</td>	Pump elev.	91.60	Manifold elev.			97.80
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1	Blue	3.20	96.80	75	1/2in SCH 40	7.11	88.55	225	0.3936
2	Orange	3.40	96.60	80	1/2in SCH 40	7.11	88.55	240	0.3690
3	Pink	3.70	96.30	80	1/2in SCH 40	7.11	88.55	240	0.3690
4	Yellow	4.00	96.00	90	1/2in SCH 40	7.11	88.55	270	0.3280
5	Purple	4.50	95.50	100	3/4in SCH 80	10.1	125.79	300	0.4193
		total	feet =	425	gal/min =	38.54	<u>LTAR =</u>		0.3000
							<u>LTAR + %5</u>		0.3150
% of Dose Vol.		75	<u>Des. Flow</u>		480	(ltar W/ INOV)		0.4000	
Dose Volume		207.44	Pump Run=		12.45	(ltar W/ INOV + 5%)		0.4200	
Dose Pump Time		5.40	Tank Gal/IN		19.65				
Drawdown in Inches		10.60							

Southern Hills S/D Lot 12 Repair TAP CHART

Bench Mark		Elevation Head							5.40
Pump tank elev.		3	97.00	Pump elev.	91.60	Manifold elev.			95.50
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
6	Red	5.50	94.50	135	3/4in SCH 40	12.5	120.22	405	0.2968
7	Blue	6.20	93.80	75	1/2in SCH 40	7.11	68.38	225	0.3039
8	Blue	5.10	94.90	100	3/4in SCH 80	10.1	97.13	300	0.3238
9	Pink	6.00	94.00	95	3/4in SCH 80	10.1	97.13	285	0.3408
10	Orange	6.80	93.20	95	3/4in SCH 80	10.1	97.13	285	0.3408
		total	feet =	500	gal/min =	49.91	LTAR =		0.3000
							LTAR + %5		0.3150
% of Dose Vol.		75	Des. Flow		480	(ltar W/ INOV)		0.4000	
Dose Volume		243.75	Pump Run=		9.62	(ltar W/ INOV + 5%)		0.4200	
Dose Pump Time		4.88	Tank Gal/IN		19.65				
Drawdown in Inches		12.40							

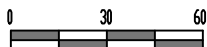
System: ———
 Repair: - - - -



- *Keep tanks and drain lines 10' from property lines.
- *Not a survey.
- *Not a guarantee of a septic permit.
- *Keep supply lines >5' from property lines.
- *Some lines are flagged longer in the field than lengths indicate.
- *No grading septic area.

System: Pressure Manifold
 Lines: 1-5, (425')
 Accepted Status System
 0.3 Soil LTAR

Repair: Dual Pressure Manifold
 Lines: 6-10, (500')
 Accepted Status System
 0.3 Soil LTAR



SCALE:
 1" = 60 ft.



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

4 BEDROOM SEPTIC LAYOUT
 Lot 12 Southern Hills Subdivision
 Raleigh, Wake County, North Carolina

Job# : 4038
Drawn By : AH
Date : 11/17/2021
Revision:

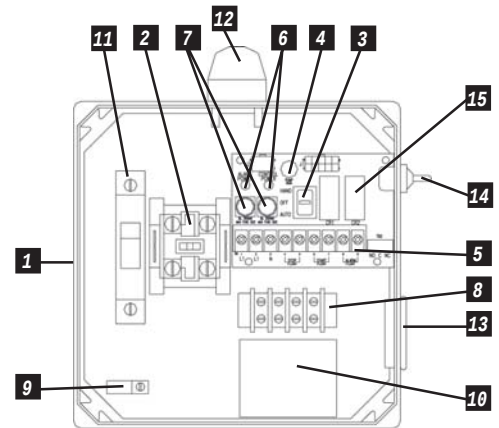
MODEL 112 Control Panel

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: 2.20.045

FM1502

0701

Supersedes

1200

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COMPARE THESE FEATURES

- Durable Cast Iron construction.
- Non-Clogging bronze vortex impeller design, passes 1/2" solids.
- Oil-filled hermetically sealed 1 HP, single phase, 3480 RPM motor, with thermal over load protection.
- Available in both single or double shaft seal designs.
- Carbon/Ceramic seals.
- Assembled with Stainless Steel bolts.
- Oil lubricated bearings.
- 15' UL Listed Neoprene cord with molded plug cap and ground wire.
- 1 1/2" NPT vertical discharge.
- Stainless steel lifting handle.
- BN and BE models include a variable level float switch and 1 1/2" X 2" PVC adapter fitting.
- Operates at temperatures to 130°F - 54°C in effluent or dewatering applications.
- Corrosion resistant powder coated epoxy finish.

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

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Manufacturers of . . .

"QUALITY PUMPS SINCE 1939"

140 / 4140 Cast Iron Series

(For Pump Prefix Identification see News & Views 0052)

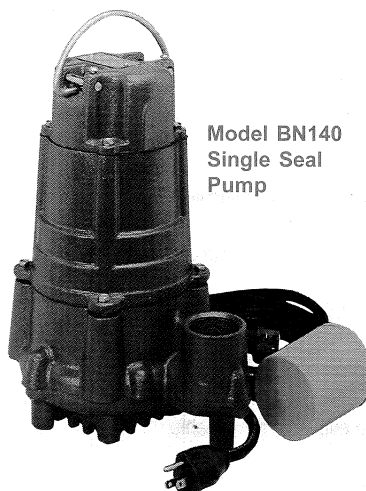
"FLOW-MATE"

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

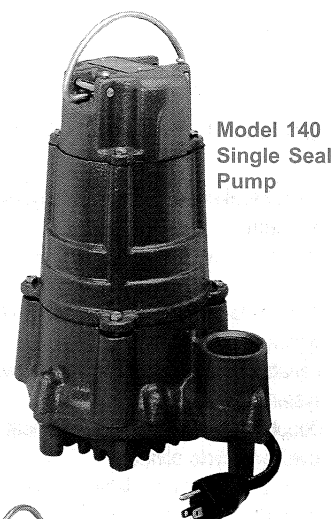
EFFLUENT

OR DEWATERING PUMPS
SUBMERSIBLE

1 1/2" NPT DISCHARGE



Model BN140
Single Seal
Pump



Model 140
Single Seal
Pump

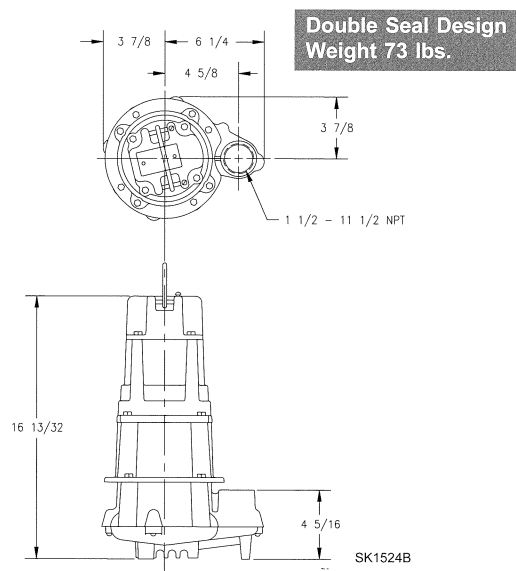
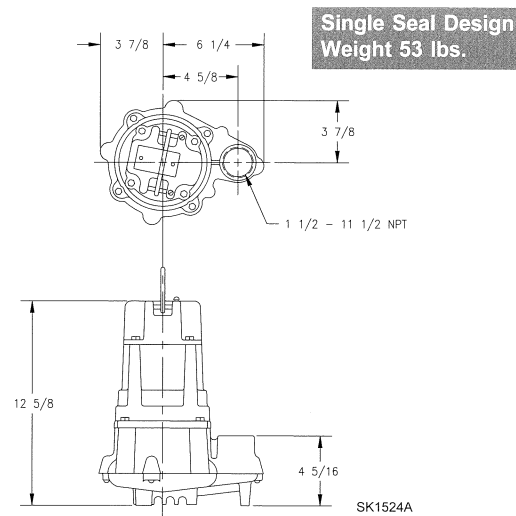
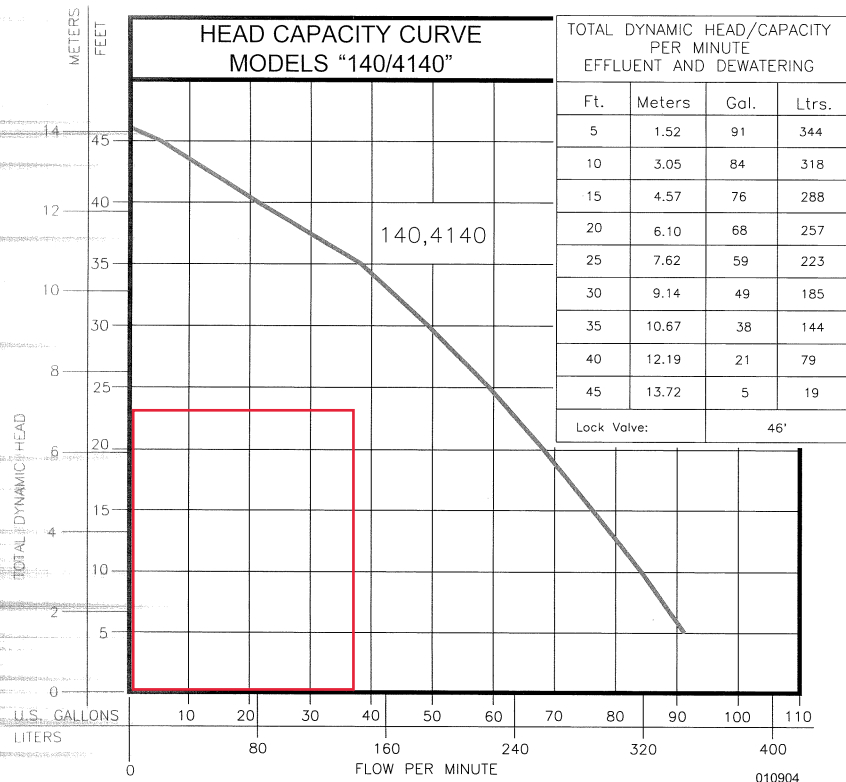


Model 4140
Double Seal
Pump



MODELS AVAILABLE

- Nonautomatic
- 1 HP, 1Ph 115V or 230V



CONSULT FACTORY FOR SPECIAL APPLICATIONS

- Electrical alternators, for duplex systems, are available and supplied with an alarm.
- Mechanical alternators, for duplex systems, are available with or without alarms.
- Control alarm systems are available for 1 phase pumps used in simplex system. See FM0732.
- Variable level control switches are available for controlling single phase systems.
- Double piggyback variable level float switches are available for variable level long cycle controls.
- Sealed Qwik-Box available for outdoor installations. See FM1420.
- Over 130°F. (54°C.) special quotation required.
- Refer to FM0806 for 200° F. applications.

140 Series - 53 lbs. 4140 Series - 73 lbs.

140/4140*** MODELS						Control Selection	
Model	Model	Volts-Ph	Mode	Amps		Simplex	Duplex
N140	N4140	115	1	Non	15.0	1 or 1 & 5	2 or 3 & 4
E140	E4140	230	1	Non	7.5	1 or 1 & 5	2 or 3 & 4
BN140	BN4140	115	1	Non	15.5	1 or 1 & 5	2 or 3 & 4
BE140	BE4140	230	1	Non	7.5	1 or 1 & 5	2 or 3 & 4

SELECTION GUIDE

1. Single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
2. Mechanical alternator M-Pak 10-0072 or 10-0075.
3. See FM0712 for correct model of Electrical Alternator E-Pak.
4. Variable level control switch 10-0225 used as a control activator, specify 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).

RESERVE POWERED DESIGN

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



<http://www.zoeller.com>

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Manufacturers of . .

"QUALITY PUMPS SINCE 1939"

"QUALITY PUMPS SINCE 1939"

SECTION: 3.20.065

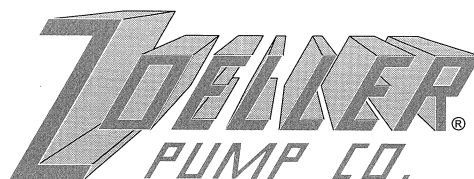
FM1775

1101

Supersedes

0501

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



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ZOELLER ON-SITE WASTEWATER PRODUCTS

INTRODUCING ZOELLER SEPTIC SYSTEM FILTERS



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

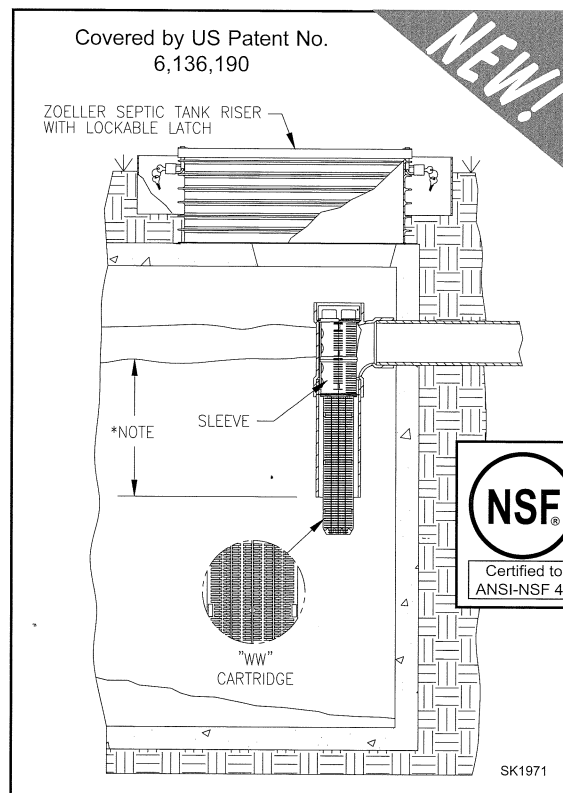
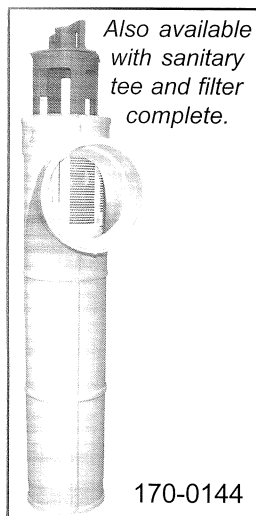
The Zoeller "WW" residential filter gives your septic system protection like no other. Zoeller Company's patented design keeps your lateral fields safe with twice the filtration area of most residential filters. All of the filtration area is submerged, making the filter 100% effective. The best feature 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 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.

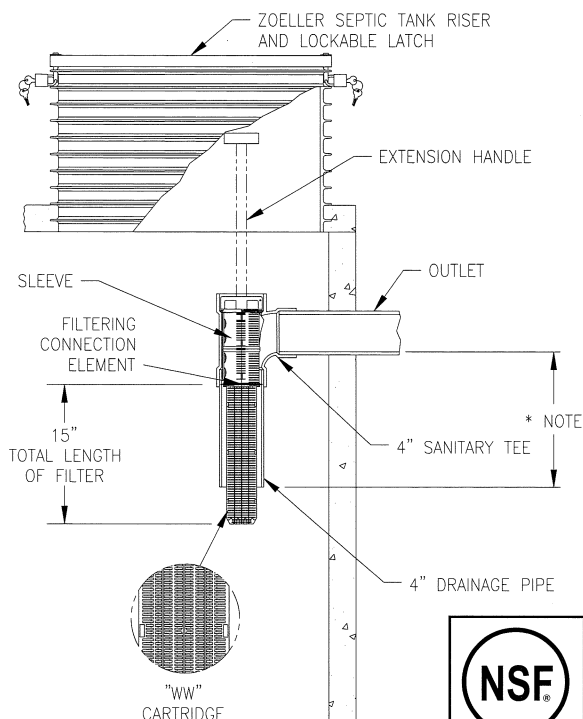
Easy to maintain: The filter cartridge can be maintained by rotating the cartridge counterclockwise and removing for cleaning. The sleeve should remain in the sanitary tee while cleaning the cartridge. To clean the cartridge, hold cartridge over septic tank opening and thoroughly rinse with hose until 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.

Covered by US Patent No.
6,136,190



SK1972



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



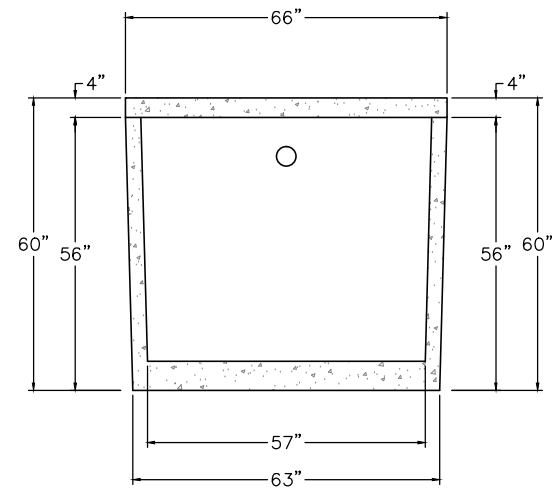
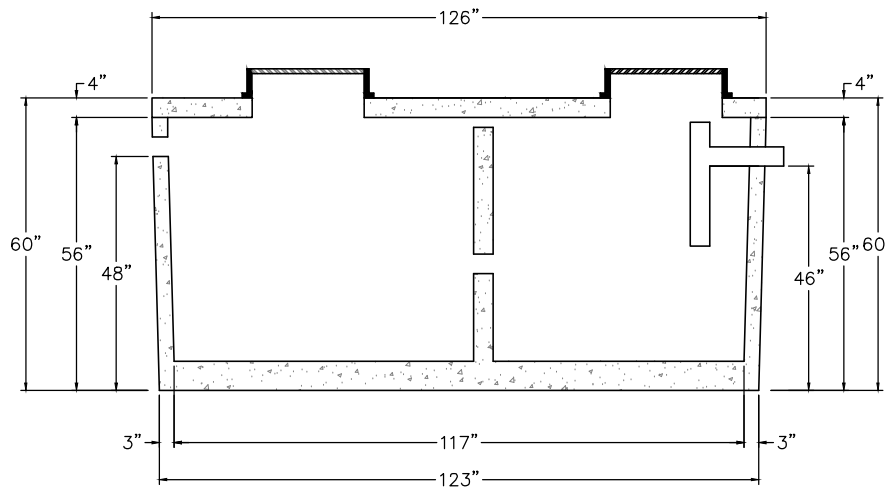
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FAX (502) 774-3624

Manufacturers of . . .

"QUALITY PUMPS SINCE 1939"



1,250 ST 323
NTS

NON TRAFFIC BEARING

DAVID BRANTLEY & SONS
37 Pine Ridge Rd.
Zebulon, NC 27597
Office 252-478-3721
Fax 919-573-0443
1nsta11er@gmail.com

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

DATE : April 11, 2014

CONTACT:
CORY BRANTLEY

REVISION NO.
Original Submitted

Revision 1

Revision 2

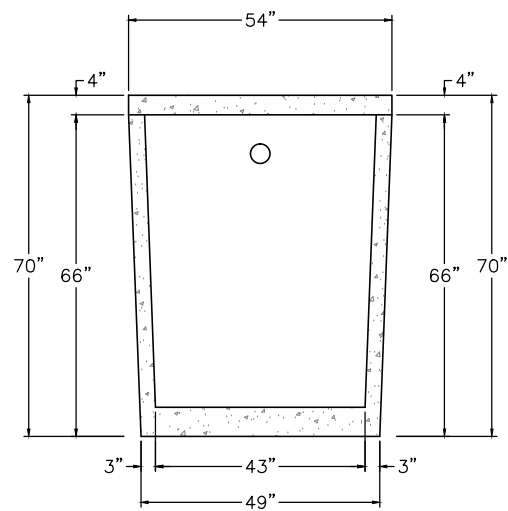
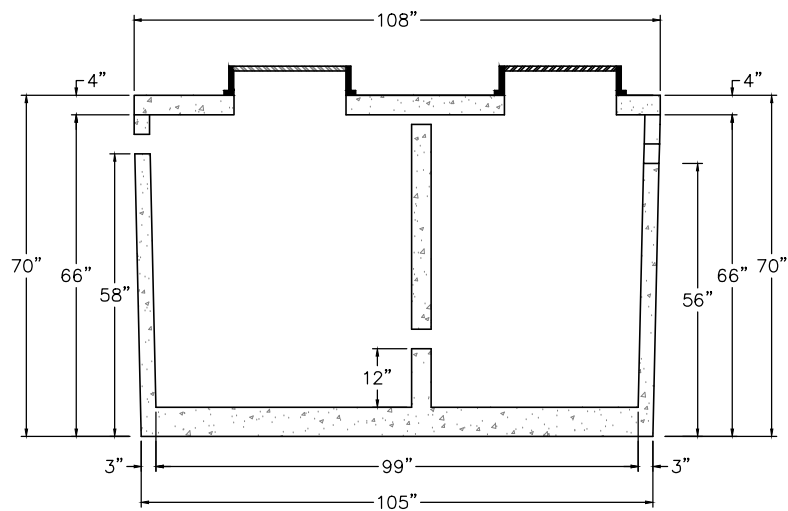
Revision 3

Master Set

DATE
April 11, 2014

BRANTLEY TASK MODEL
1,250 ST 323

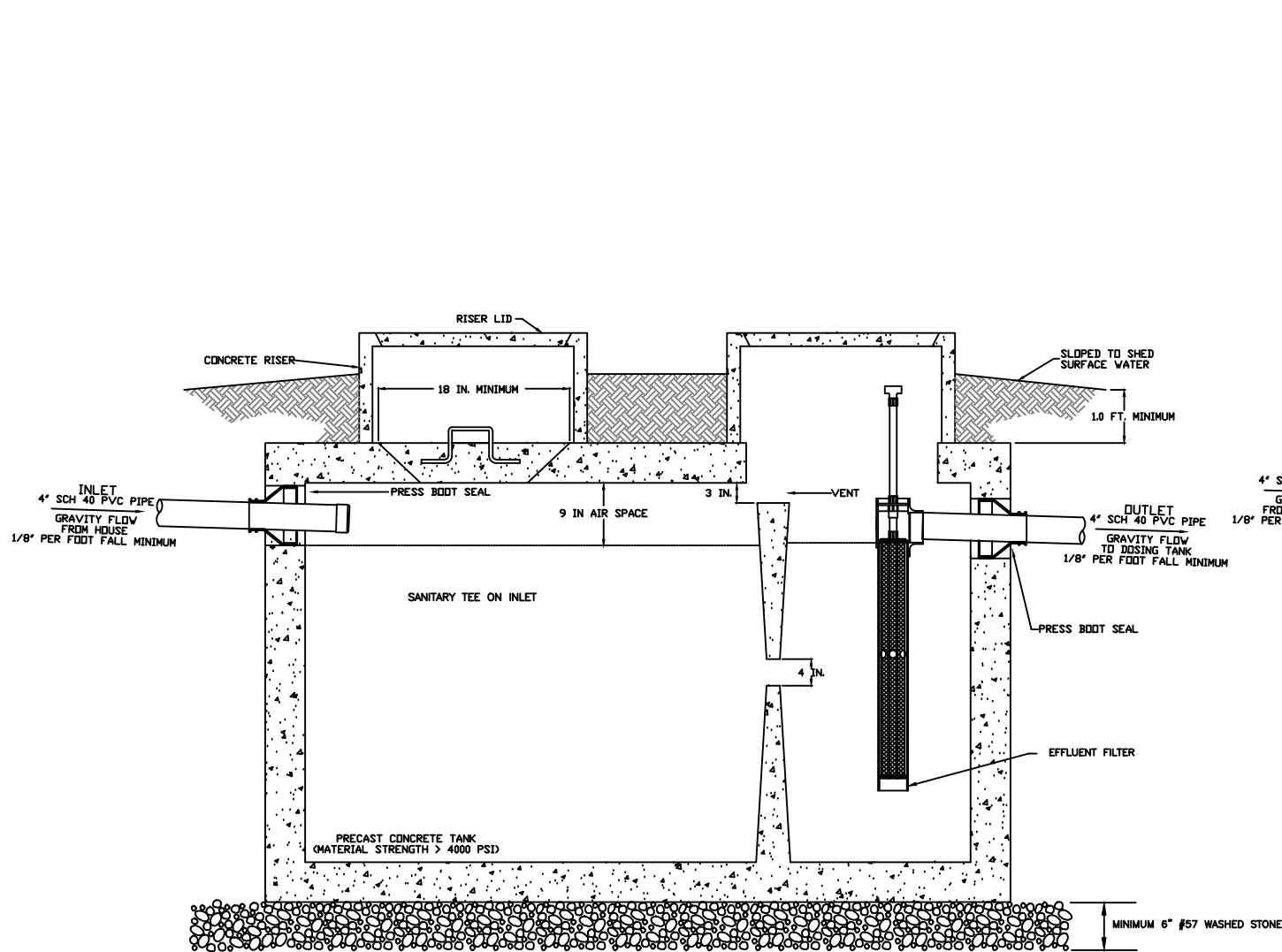
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1 of 1



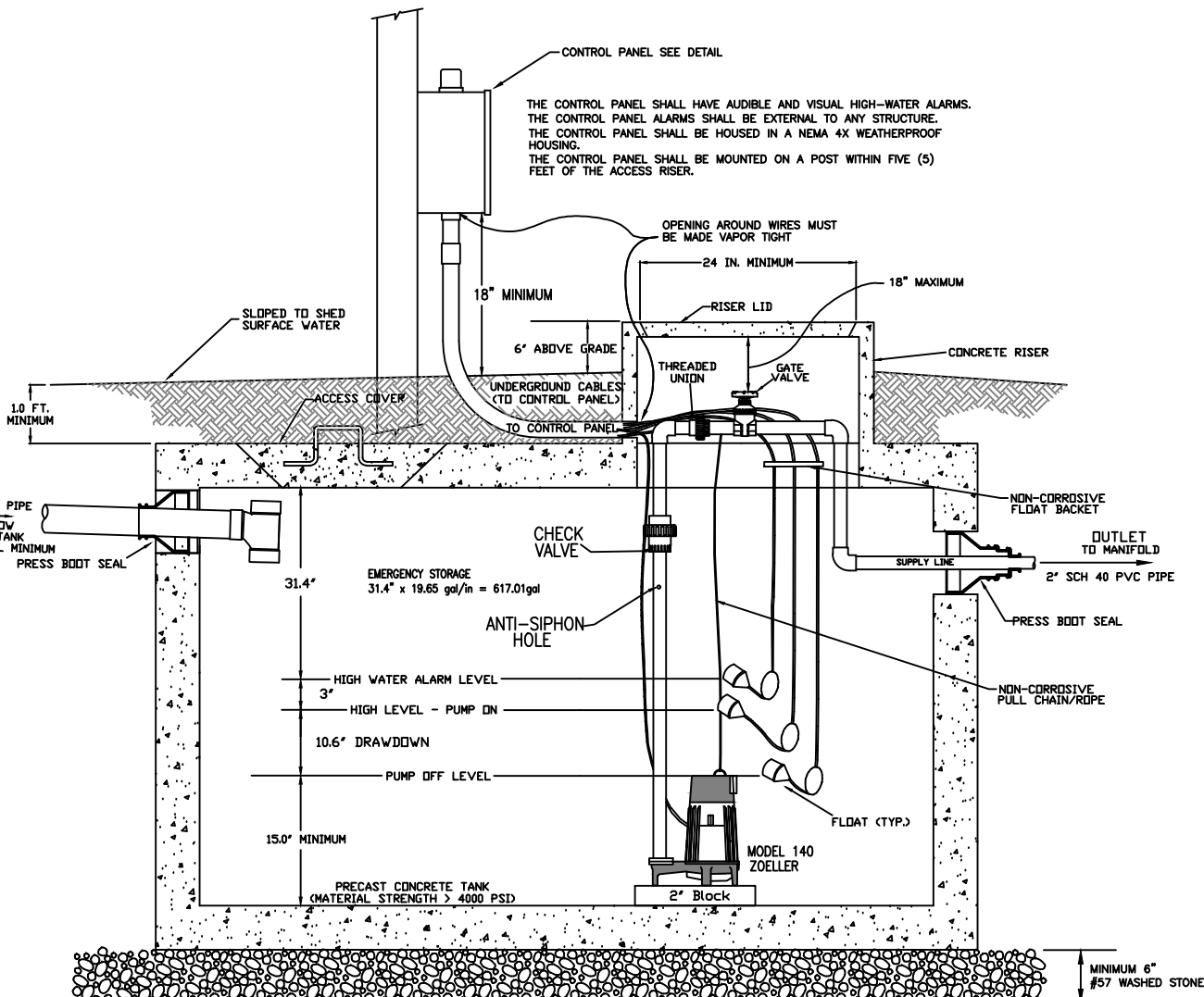
1,200 PT 463
NTS

NON TRAFFIC BEARING

BRANTLEY TASK MODEL 1,200 PT 463		DATE April 11, 2014
SHEET NUMBER 1 of 1		
PREPARED FOR : David Brantley & Sons 37 Pine Ridge Rd. Zebulon, NC 27597 DATE : April 11, 2014 CONTACT: CORY BRANTLEY	REVISION NO. Original Submitted	
	Revision 1	
	Revision 2	
	Revision 3	
	Master Set	
DAVID BRANTLEY & SONS 37 Pine Ridge Rd. Zebulon, NC 27597 Office 252-478-3721 Fax 919-573-0443 1n1staller@gmail.com		



1250 GAL SEPTIC TANK SCHEMATIC
NOT TO SCALE



1200 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.

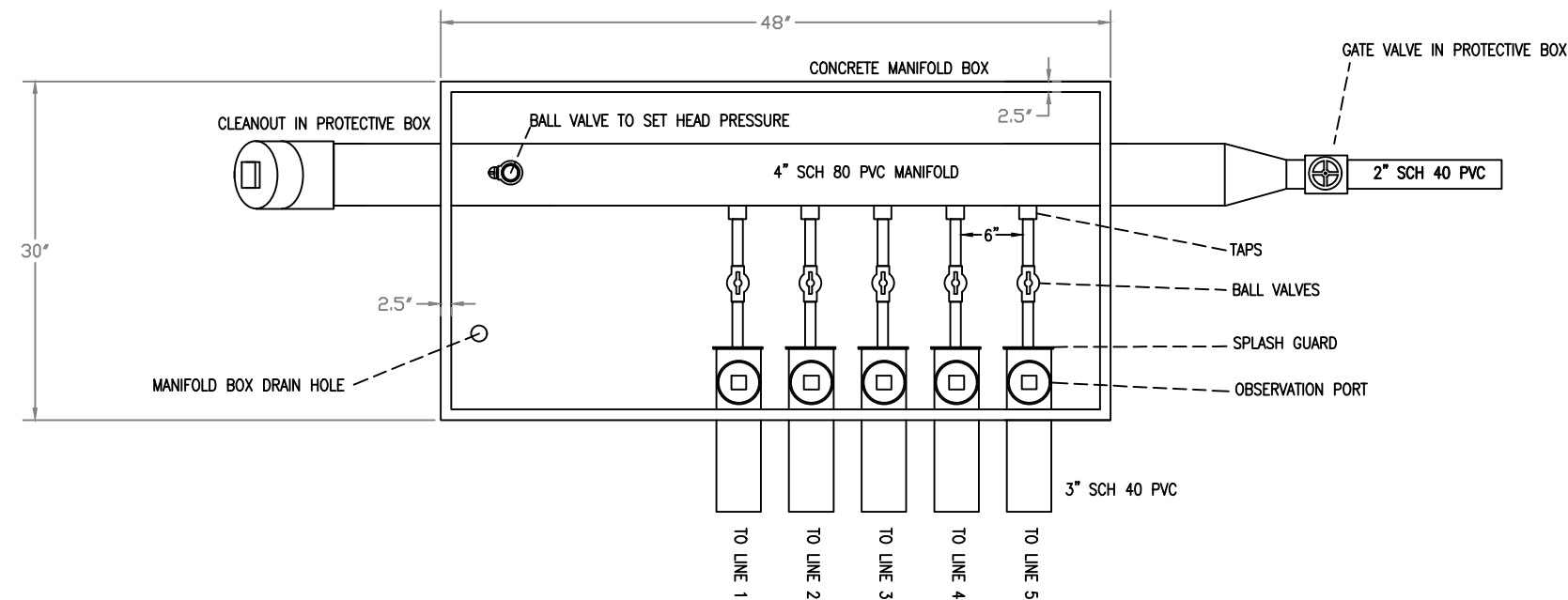


Central Carolina Soil Consulting, PLLC
1900 South Main Street, Suite 110
Wake Forest, North Carolina 27587
Phone (919)569-6704 Fax (919)569-6703

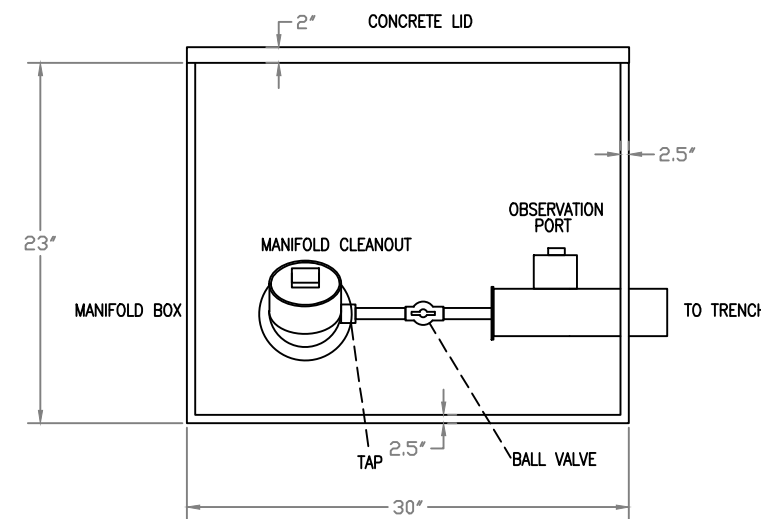
Septic and Pump Tank Details
Southern Hills S/D Lot 12
Wake County, North Carolina

Job# : 4038
Drawn By : AH
Date : 12/17/2021
Revision : 00/00/0000

PRESSURE MANIFOLD DETAILS TOP VIEW



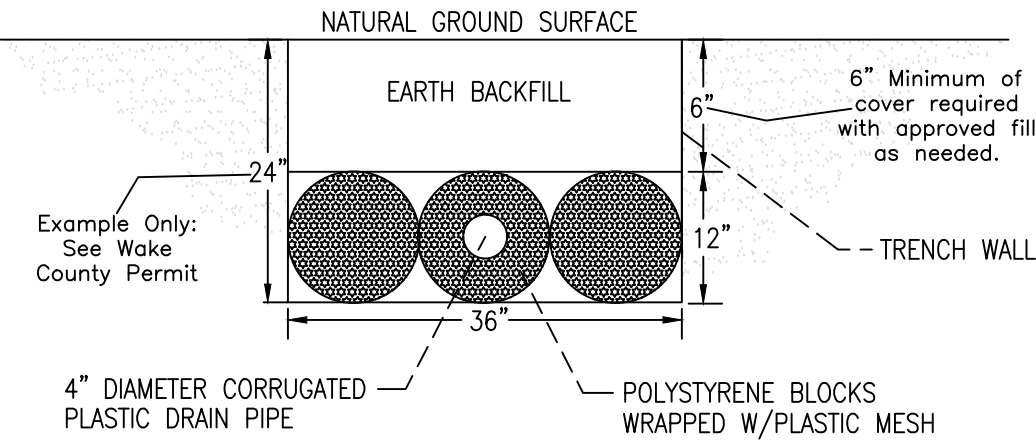
PRESSURE MANIFOLD DETAILS END VIEW



TAP SCHEDULE	
LINE #	TAP
1	1/2" SCH 40
2	1/2" SCH 40
3	1/2" SCH 40
4	1/2" SCH 40
5	3/4" 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.

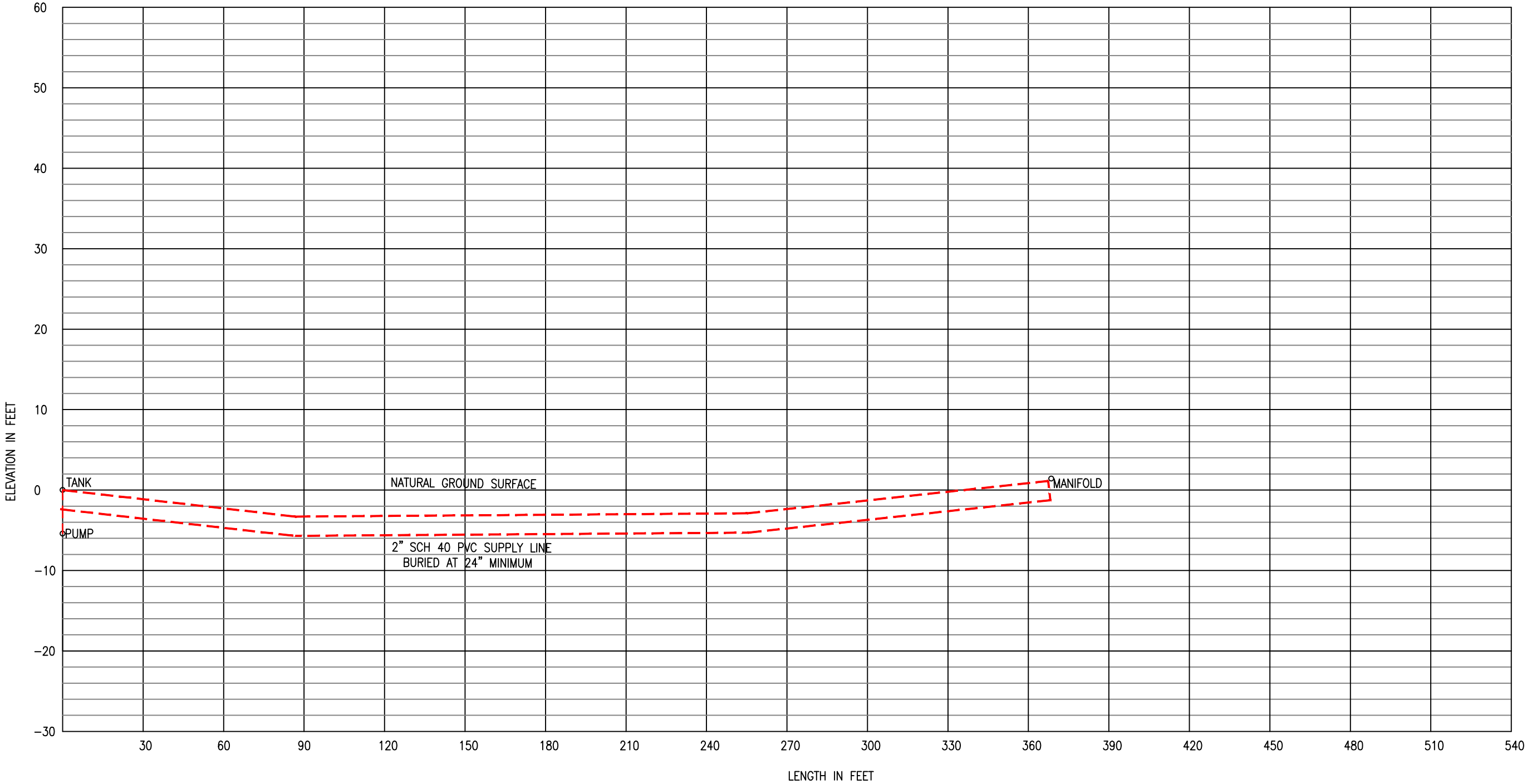


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Manifold and Trench Details
Southern Hills S/D Lot 12
Wake County, North Carolina

Job# : 4038
Drawn By : AH
Date : 12/17/2021
Revision : 00/00/0000

SUPPLY LINE
HYDRAULIC PROFILE

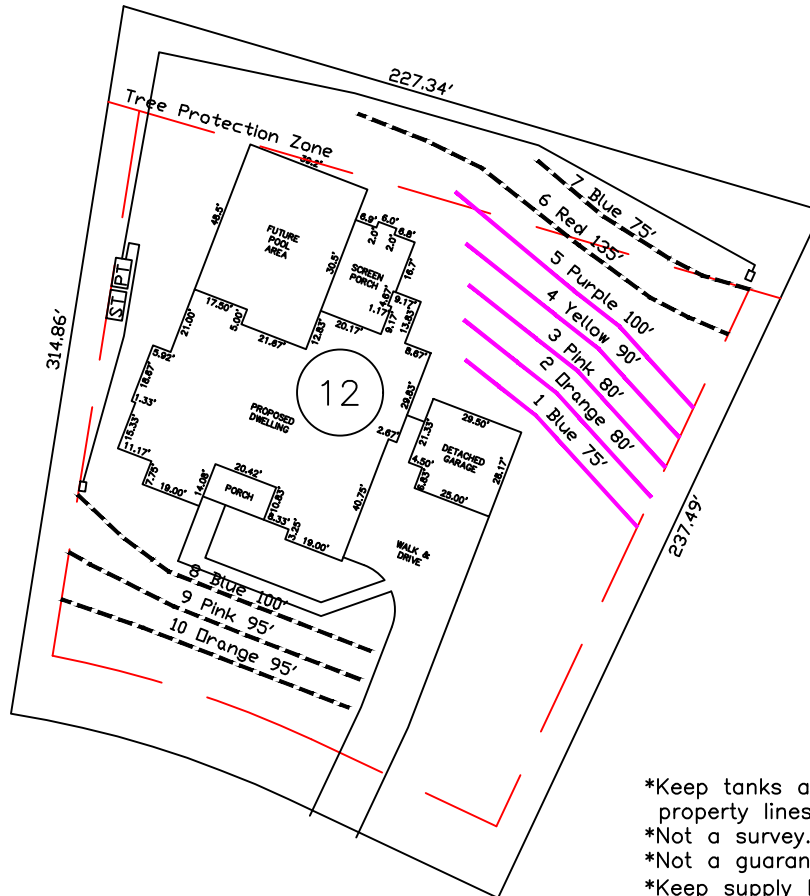


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Hydraulic Profile
Southern Hills S/D, Lot 12
Wake County, North Carolina

Job# : 4038
Drawn By : AH
Date : 12/17/2021
Revision : 00/00/0000

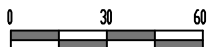
System: ———
 Repair: - - - -



- *Keep tanks and drain lines 10' from property lines.
- *Not a survey.
- *Not a guarantee of a septic permit.
- *Keep supply lines >5' from property lines.
- *Some lines are flagged longer in the field than lengths indicate.
- *No grading septic area.

System: Pressure Manifold
 Lines: 1-5, (425')
 Accepted Status System
 0.3 Soil LTAR

Repair: Dual Pressure Manifold
 Lines: 6-10, (500')
 Accepted Status System
 0.3 Soil LTAR



SCALE:
 1" = 60 ft.



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 Wake Forest, North Carolina 27587
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4 BEDROOM SEPTIC LAYOUT
 Lot 12 Southern Hills Subdivision
 Raleigh, Wake County, North Carolina

Job# : 4038
Drawn By : AH
Date : 11/17/2021
Revision:

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-070883-2021

APPLICATION DATE: 11/18/2021

BLDG. PERMIT #: RBPR-071820-2021

PIN: 0890240860

RECORDED: Yes

TOWNSHIP: 02 - Bartons Creek

JURISDICTION: Wake County

ZONING: R-80W

APPLICANT: RALEIGH CUSTOM HOMES
7708 Harps Mill RD

BUSINESS PHONE: (919) 847-2664

HOME PHONE:

MOBILE PHONE: (919) 395-1529

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 1608 ESTATE VALLEY LN

SUBDIVISION: SOUTHERN HILLS ESTATES

LOT: 12

ACRES: 1.01

DIRECTIONS: Lot 12

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: CCSC

SYSTEM LAYOUT: Private Sector

SITE CLASSIFICATION: Provisionally Suitable

IP STATUS: Issued

BY: Michael Seewald

DATE: 12/20/2021

NUMBER OF BEDROOMS: 4

OR TOTAL NUMBER OF OCCUPANTS: 8

PERMITTED DESIGN FLOW: 480 GPD

BASEMENT: No

BASEMENT PLUMBING: No

WASTEWATER STRENGTH: Domestic

SYSTEM TYPE: III B

LTAR: 0.300

EXISTING SYSTEM UTILIZED:

PRETREATMENT STRENGTH REQUIRED: None

EASEMENT FOR WW SYSTEM ASSOCIATED WITH PARCEL: No

MAXIMUM TRENCH DEPTH: 30 INCHES

PUMP REQUIRED: Yes

SPECIFIC SYSTEM REQUIREMENTS: - System designed for 4 bedroom home, having 480 GPD (DESIGN FLOW).

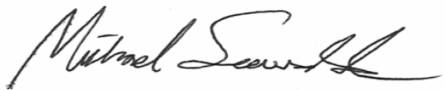
- Future Repair is a Type III B system with a Max Trench depth of 18" and a 0.30 LTAR.

- Site serviced by MUNICIPAL water.

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

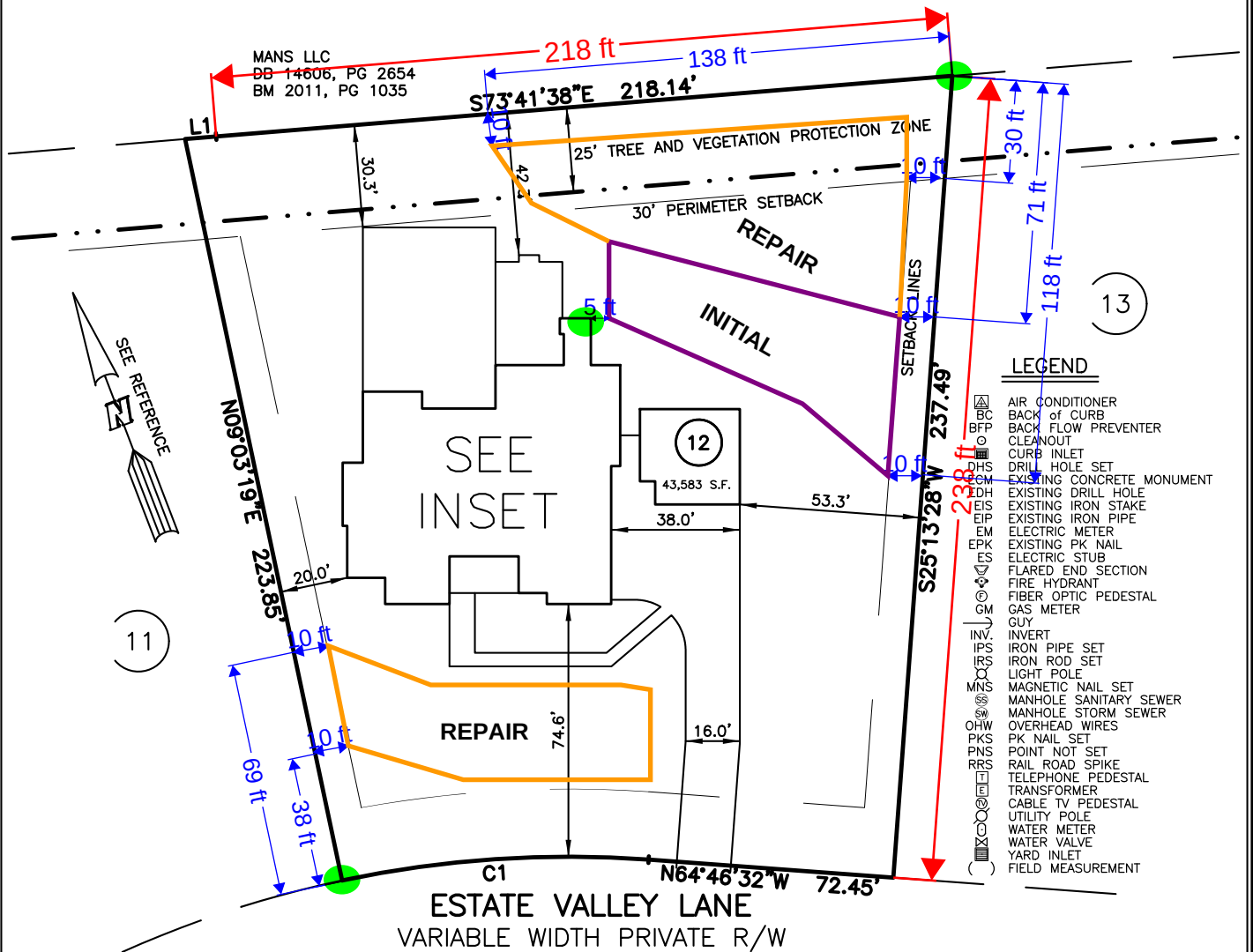
- Maintain all required setbacks.

ISSUED BY:

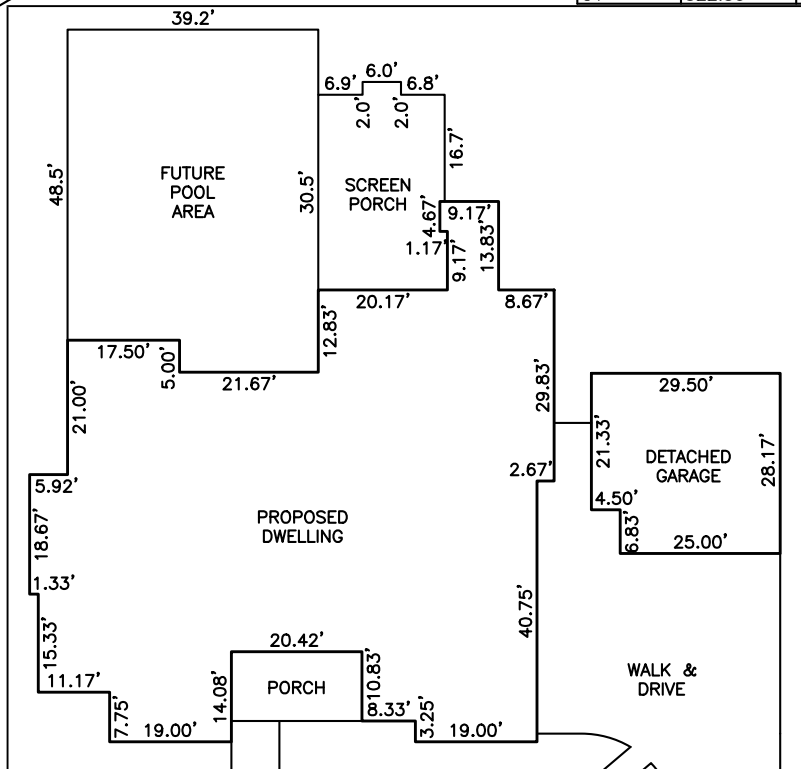
A handwritten signature in black ink, appearing to read "Michael Smith". The signature is fluid and cursive, with the first name "Michael" written in a larger, more prominent script than the last name "Smith".

DATE: 12/20/2021

PLOT PLAN FOR
RALEIGH CUSTOM HOMES
1608 ESTATE VALLEY LANE
LOT 12, SOUTHERN HILLS ESTATES
NEW LIGHT TOWNSHIP, WAKE COUNTY, NORTH CAROLINA



CURVE	RADIUS	DELTA	ARC	CHORD BRG	CHORD
C1	322.50'	16°10'09"	91.01'	S72°51'37"E	90.71'



INSET
SCALE: 1" = 30'

LINE	BEARING	DISTANCE
L1	N73°42'45"W	9.21'

IMPERVIOUS SURFACES	
HOUSE	4,780 S.F.
WALK & DRIVE	2,960 S.F.
PORCHES	840 S.F.
GARAGE	800 S.F.
TOTAL	9,380 S.F.
MAX. IMPERVIOUS	12,500 S.F.



071820-2021

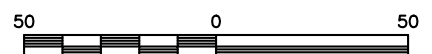
SETBACK INFO

R-80W

FRONT:	20'
REAR:	15'
SIDES:	10'
CORNER SIDE:	20'

REFERENCES:

B.M. 2018, PG. 372-377



SCALE: 1" = 50'

NOTES

- THIS SURVEY SUBJECT TO ANY FACTS THAT MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.
- THIS MAP MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVIEWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS.

PLOT PLAN
PRELIMINARY PLAT- NOT FOR RECORDATION,
CONVEYANCE OR SALES

REV CODE: 1.FLIP, 2.PLAN, 3.ROTATE, 4.MOVE, 5.SS
6.SEVERAL OF ABOVE, 7.LAND FEATURE, 8. OTHER

REV1: OCT. 29, 2021(8)
DATE: OCT. 26, 2021

F.B. _____

RWK, PA
ENGINEERING ~ SURVEYING
CORPORATE LICENSE: C-1771
101 W. MAIN ST., SUITE 202
GARNER, NC 27529
PHONE (919) 779-4854
FAX (919) 779-4056

O:\Southern Hills\Estate Valley 1608\1608 Estate Valley.dwg