

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-086840-2022

APPLICATION DATE: 08/11/2022

BLDG. PERMIT#: RBPR-086739-2022

PIN: 0781049024

RECORDED: Yes

TOWNSHIP: 18 - Swift Creek

JURISDICTION: Wake County

ZONING: R-40W

APPLICANT: Halcyon Homes, LLC
Austin Robertson
PO Box 33578

BUSINESS PHONE: (919) 337-5245

HOME PHONE:

MOBILE PHONE: (919) 337-5245

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 2721 SANCTUARY WOODS LN

SUBDIVISION: SANCTUARY AT YATES MILL PH 2

LOT: 80

ACRES: 0.70

DIRECTIONS: From Raleigh going towards Cary on Hwy 1/440 going South get off on Jones Franklin Road and T/L.

Take Jones Franklin Road to Tryon Road and T/L on Tryon Road

Take Tryon Road and T/R on Yates Mill Pond Road

Take Yates Mill Pond Road and T/R on Theys Road.

Take Theys Road & T/R on Wheeler Bluff Drive.

Take Wheeler Bluff Drive & T/L on Sanctuary Woods Lane & the lot will down on the left side of the road.

Lot#80 Sanctuary at Yates Mill
2721 Sanctuary Woods Lane
Raleigh NC 27606

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: Andrew Thore

ISSUED DATE: 05/16/2023

SEPTIC TANK: David Brantley & Sons - STB-323 - **DATE OF MANUFACTURE:** 01/06/2023 **FILTER:** Other
1250 gallons

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

DOSING PUMP TANK: Brantley - PT-2124 - 1312 **DATE OF MANUFACTURE:** 10/21/2022 **FILTER:**

gal - 21.5 gal/in

CC1: 999,813 **ETM1:** 21 **CC2:** **ETM2:**

RECIRCULATION TANK: **DATE OF MANUFACTURE:**

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

SEPTIC TANK ELEVATION: 7.30

GREASE TRAP ELEVATION:

DOSING PUMP TANK ELEVATION: 7.50

RECIRCULATION TANK ELEVATION:

DISTRIBUTION DEVICE ELEVATION: 3

INSTALLED TRENCH DEPTH	INSTALLED AGGREGATE DEPTH	INSTALLED TRENCH LENGTH	INSTALLED TRENCH BOTTOM ELEVATION
26	12	85	6.4
26	12	110	7.3
26	12	125	8
26	12	55	8.7
26	12	30	9.6

ACTUAL PRESSURE HEAD: 2

ACTUAL FLOW RATE: 26

ACTUAL DOSE VOLUME: 172

SPECIFIC OPERATION REQUIREMENTS:

- System designed for 4 bedroom home, having 480 gallons per day.
- Site serviced by community well water.
- Filter used is a Watercore.

ISSUED BY:

Andrew Thore

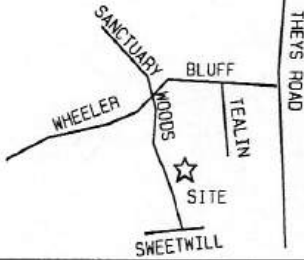
DATE: 05/16/2023

YATES MILL POND RD

CURVE	ARC	RADIUS	CHORD LENGTH	CHORD BEARING
C1	89.41	295.00	89.07	N 29° 24' 54" E

LINE	BEARING	DISTANCE
L1	S 78° 40' 17" E	78.68
L2	N 38° 05' 53" E	65.72

LINE	DISTANCE
L3	16.84
L4	2.00



VICINITY MAP NOT TO SCALE

GENERAL NOTES:

1. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES MEASURED IN U.S. SURVEY FEET.
2. AREAS COMPUTED BY COORDINATE METHOD.
3. THIS SURVEY DONE WITHOUT THE BENEFIT OF A TITLE SEARCH.
4. ALL IRONS FOUND ARE FLUSH WITH GROUND UNLESS OTHERWISE NOTED.
5. ANY DRAINAGEWAYS SHOWN HEREON AND/OR ADJACENT TO THIS SITE MAY CREATE ADDITIONAL BUFFERS CLAIMED BY THE STATE OF NORTH CAROLINA OR OTHER REGULATORY AGENCY.



RBPR 086739-2022

WAKE COUNTY N.C. P.D.I.
AS-BUILT SURVEY REQUIRED

OPEN
SPACE

Required Setbacks

Front	15
Side	7.5
Rear	15
Corner	

PRELIMINARY

NOT FOR CONVEYANCE OR SALES

SCALE: 1" = 40'

2721 SANCTUARY WOODS LANE

revised: 16 june 2022

revised: 15 march 2022

PROPOSED IMPERVIOUS AREA	
HOUSE	+/- 3492 SF
DRIVE/WALK	+/- 3019 SF
HVAC PADS	+/- 18 SF
TOTAL	+/- 6529 SF
	OR 21.49%
LOT TOTAL	30388 SF
MAX. ALLOWABLE	9352 SF

GENERAL NOTES:

1. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
2. AREA COMPUTED BY COORDINATE METHOD.
3. ANY DRAINAGEWAYS SHOWN HEREON AND/OR ADJACENT TO THIS SITE MAY CREATE ADDITIONAL BUFFERS CLAIMED BY THE STATE OF NORTH CAROLINA OR OTHER REGULATORY AGENCY.
4. HALCYON HOMES LLC ACCEPTS LIABILITY FOR SETBACK VIOLATIONS.
5. BUILDER MUST VERIFY SETBACKS PRIOR TO FIELD STAKING.



Environmental Services

TEL 919 856 7400
FAX 919 856 7407

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

May 2, 2023

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) 480-9998 or email at CORY.LARSEN@wake.gov if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Cory Larsen".

CORY LARSEN, PE
Environmental Engineer

*** CA PART A - D ***

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-086840-2022

APPLICATION DATE: 08/11/2022

BLDG. PERMIT#: RBPR-086739-2022

PIN: 0781049024

RECORDED: Yes

TOWNSHIP: 18 - Swift Creek

JURISDICTION: Wake County

ZONING: R-40W

APPLICANT: Halcyon Homes, LLC
PO Box 33578
Raleigh, NC 27636

BUSINESS PHONE: (919) 337-5245

HOME PHONE:

MOBILE PHONE: (919) 337-5245

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 2721 SANCTUARY WOODS LN

SUBDIVISION: SANCTUARY AT YATES MILL PH 2 **LOT:** 80

ACRES: 0.70

DIRECTIONS: From Raleigh going towards Cary on Hwy 1/440 going South get off on Jones Franklin Road and T/L.

Take Jones Franklin Road to Tryon Road and T/L on Tryon Road

Take Tryon Road and T/R on Yates Mill Pond Road

Take Yates Mill Pond Road and T/R on Theys Road.

Take Theys Road & T/R on Wheeler Bluff Drive.

Take Wheeler Bluff Drive & T/L on Sanctuary Woods Lane & the lot will down on the left side of the road.

Lot#80 Sanctuary at Yates Mill
2721 Sanctuary Woods Lane
Raleigh NC 27606

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: Cory Larsen

DATE: 05/02/2023

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

SEPTIC TANK: 1200 GALLONS
DOSING PUMP TANK: 1200 GALLONS
GREASE TRAP:
RECIRCULATION PUMP TANK:

SEPTIC TANK FILTER: Yes
DOSING PUMP TANK FILTER:
GREASE TRAP FILTER:
RECIRCULATION PUMP TANK FILTER:

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

EXISTING SYSTEM:

DRAINFIELD SQ. FT: 1,215

AGGREGATE DEPTH: 12

MAX. TRENCH DEPTH: 28 INCHES

DISTRIBUTION DEVICE: PM - Pressure Manifold

TRENCH #: 4 **TRENCH LENGTH:** 85, 110, 125, **TRENCH WIDTH:** 36 INCHES **TOTAL TRENCH LENGTH:** 405 FEET
85 FEET

CENTER SPACING: 9 FEET

MINIMUM SOIL COVER: 6 INCHES

PRETREATMENT:

APPROVAL #:

SUBFIELDS #:

PUMP DESIGN FLOW: 25.18

PUMP TDH: 11.43 FEET

ZONE VALVE: No

ASDMS REQUIRED: No

LINE OF CREDIT REQUIRED: No

OPERATOR REQUIRED: No

P.E. SIGN OFF/ASBUILT REQUIRED: No

TRIPARTY AGREEMENT REQUIRED: No

SPECIFIC CONSTRUCTION AUTHORIZATION REQUIREMENTS:

ALLOWED 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 4 UNEQUAL DRAINLINES WITH 28" TRENCH BOTTOM. REPAIR SYSTEM IS A PRESSURE MANIFOLD SYSTEM PUMPING TO 4 UNEQUAL DRAINLINES [50% REDUCTION PPBPS PRODUCT – HORIZONTAL INSTALLATION] WITH 28" 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.

Issued By:



Date: 05/02/2023

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

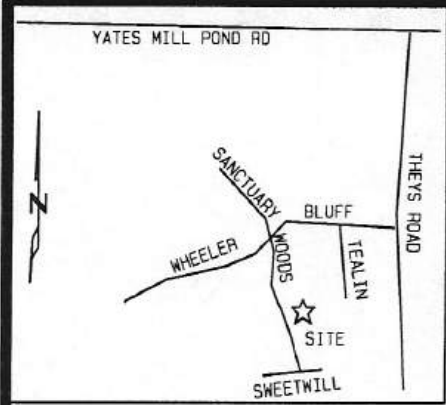
PRESSURE MANIFOLD SYSTEMS

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 been demonstrated</u> 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.



CURVE	ARC	RADIUS	CHORD LENGTH	CHORD BEARING
C1	89.41	295.00	89.07	N 29° 24' 54" E

LINE	BEARING	DISTANCE
L1	S 78° 40' 17" E	78.68
L2	N 38° 05' 53" E	65.72

LINE	DISTANCE
L3	16.84
L4	2.00

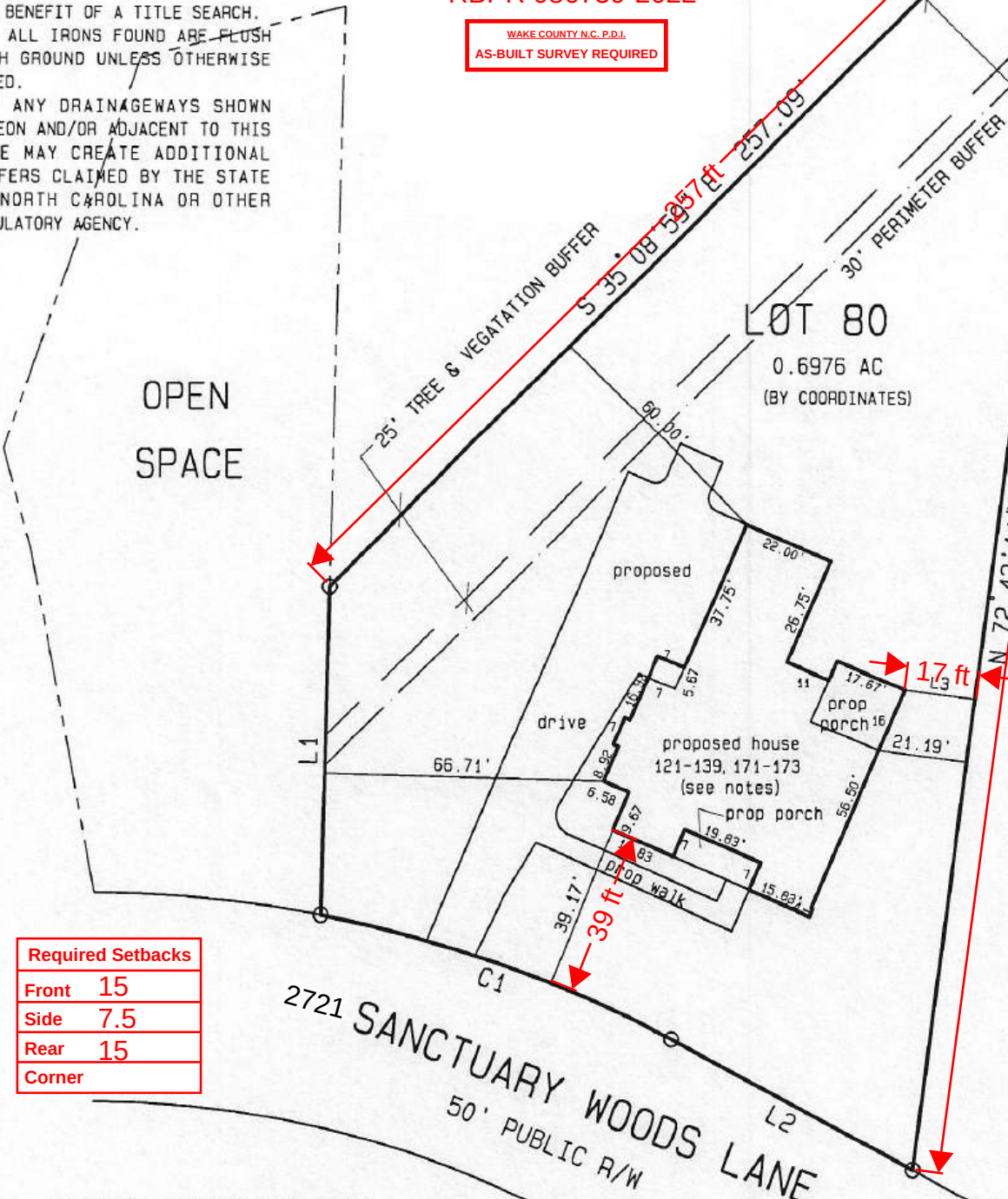
VICINITY MAP
NOT TO SCALE

GENERAL NOTES:
1. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES MEASURED IN U.S. SURVEY FEET.
2. AREAS COMPUTED BY COORDINATE METHOD.
3. THIS SURVEY DONE WITHOUT THE BENEFIT OF A TITLE SEARCH.
4. ALL IRONS FOUND ARE FLUSH WITH GROUND UNLESS OTHERWISE NOTED.
5. ANY DRAINAGEWAYS SHOWN HEREON AND/OR ADJACENT TO THIS SITE MAY CREATE ADDITIONAL BUFFERS CLAIMED BY THE STATE OF NORTH CAROLINA OR OTHER REGULATORY AGENCY.



RBPR 086739-2022

WAKE COUNTY N.C. P.D.I.
AS-BUILT SURVEY REQUIRED



Required Setbacks	
Front	15
Side	7.5
Rear	15
Corner	

PROPOSED IMPERVIOUS AREA	
HOUSE	+/- 3492 SF
DRIVE/WALK	+/- 3019 SF
HVAC PADS	+/- 18 SF
TOTAL	+/- 6529 SF OR 21.49%
LOT TOTAL 30388 SF	
MAX. ALLOWABLE 9352 SF	

GENERAL NOTES:
1. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
2. AREA COMPUTED BY COORDINATE METHOD.
3. ANY DRAINAGEWAYS SHOWN HEREON AND/OR ADJACENT TO THIS SITE MAY CREATE ADDITIONAL BUFFERS CLAIMED BY THE STATE OF NORTH CAROLINA OR OTHER REGULATORY AGENCY.
4. HALCYON HOMES LLC ACCEPTS LIABILITY FOR SETBACK VIOLATIONS.
5. BUILDER MUST VERIFY SETBACKS PRIOR TO FIELD STAKING.

PRELIMINARY

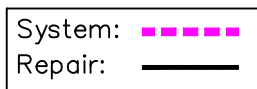
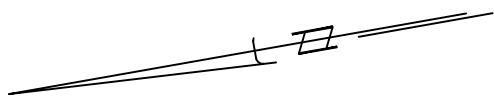
NOT FOR CONVEYANCE OR SALES

SCALE: 1" = 40'

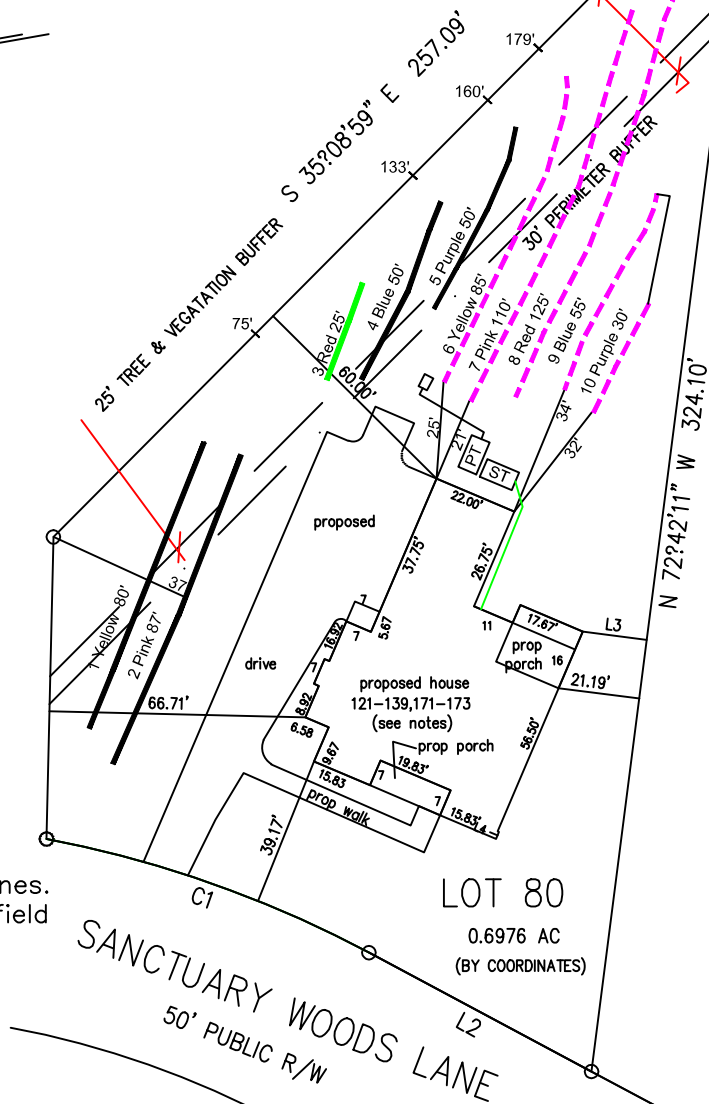
2721 SANCTUARY WOODS LANE

revised: 16 june 2022
revised: 15 march 2022

CA PART B



- *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: 6–10, (405')
Accepted Status System
0.3 Soil LTAR

Repair: Pressure Manifold
Lines: 1-2, 4-5 (267')
Panel Block
0.3 Soil LTAR

GRAPHIC SCALE
1" = 50'



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 80, Sanctuary Subdivision
Wake County, North Carolina

Job# : 4274

Drawn By : JH

Date : 08/18/2022

Revision: 11/7/22

Environmental Services

Rear

CA PART D



Pressure Manifold Septic System Design

for

Sanctuary S/D, Lot 80
Wake County, North Carolina

Designed by:

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

04/28/2023

Sanctuary S/D, Lot 80
Table of Contents

Cover Sheet	1
Table of Contents	2
Contact Information	3
Specifications (system)	4
Tap Charts (System and Repair)	5
Site Plan (System and Repair).....	6
Control Panel Specifications	7-8
Pump Specifications	9-10
Effluent Filter Specifications	11-13
Brantley 1,250 Gallon ST 323 Diagram.....	14
Brantley 1,200 Gallon PT 463 Diagram.....	15
Septic and Pump Tank Details.....	16
Pressure Manifold and Trench Details.....	17
Supply Line Hydraulic Profile	18

Sanctuary S/D, Lot 80
Contact Information

Client:
Attn:
Street Address:

Phone:
Fax:

Designer: Central Carolina Soil Consulting, PLLC
Attn: Jason Hall
Designed By: James Rice
Street Address: 1900 South 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

Sanctuary S/D, Lot 80
Layout/Design Specifications

Facility Type:	Single Family Home
# of Bedrooms:	4
Daily Flow:	480 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:	42 in
Manifold Diameter:	4 in sch 80pvc
Supply Line Length:	25 ft
Supply Line Diameter:	2 in sch 40pvc
Supply Line Volume:	4.35 gallons
Friction Loss + Fitting Loss:	1.43 ft(supply line length + 70' for fittings in pump tank)
Design Head:	2 ft
Elevation Head:	8.00 ft
Total Head:	11.43 ft
Dose Volume:	173.75 gals
% of Pipe Vol.	0.66
Drawdown:	8.84 in @ 19.65 gal/in
Pump Run Time:	6.90 Mins
Control Panel:	SJE Rhombus Model112 control panel (or approved equivalent)
Pump:	Zoeller M98 Flow-Mate (or approved equivalent)
Septic Tank Effluent Filter:	Zoeller 170-0078 residential effluent filter (or approved equivalent)
Septic Tank:	Brantley 1,250 Gallon ST 323
Pump Tank:	Brantley 1,200 Gallon PT 463

Sanctuary, Lot 80 Initial TAP CHART

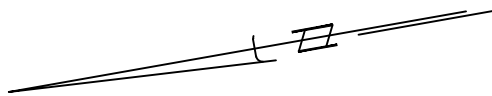
Bench Mark	is = 100.00 Location of BM							Elevation Head	8.00
Pump tank elev.	7.4	92.60	Pump elev.	87.20	Manifold elev.				95.20
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
6	Yellow	5.80	94.20	85	1/2in SCH 80	5.48	104.46	255	0.4097
7	Pink	6.80	93.20	110	1/2in SCH 40	7.11	135.54	330	0.4107
8	Red	7.60	92.40	125	1/2in SCH 40	7.11	135.54	375	0.3614
9 & 10	Blue/Purp	8.50	91.50	85	1/2in SCH 80	5.48	104.46	255	0.4097

	total	feet =	405	gal/min =	25.18	<u>LTAR =</u>	0.3000
						<u>LTAR + %5</u>	0.3150
% of Dose Vol.	66		<u>Des. Flow</u>	480		(ltar W/ INOV)	0.4000
Dose Volume	173.75		Pump Run=	19.06		(ltar W/ INOV + 5%)	0.4200
Dose Pump Time	6.90		Tank Gal/IN	19.65			
Drawdown in Inches	8.84						

Sanctuary lot 80 T&J Panel Block Repair, TAP CHART

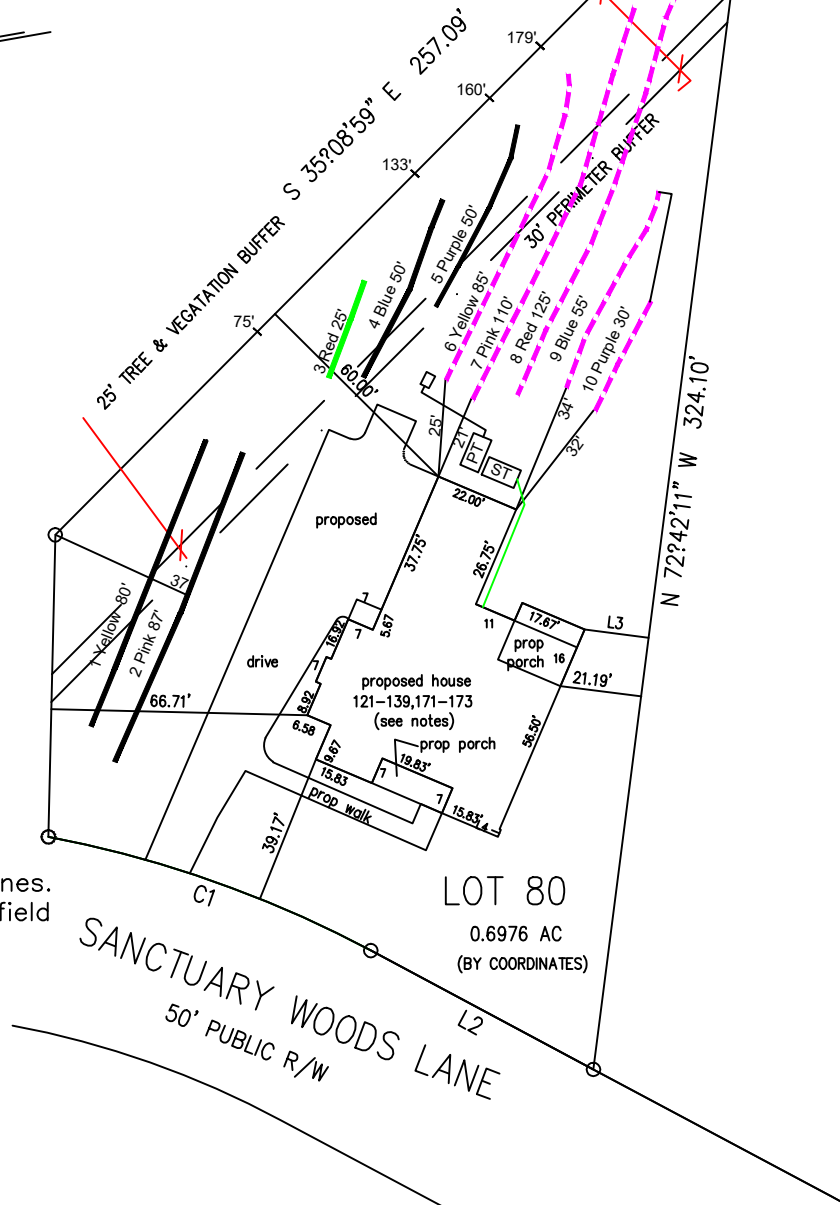
Bench Mark		is = 100.00 Location of BM					Elevation Head		12.50		
Pump tank elev.		7.4	92.60	Pump elev.	87.20	Manifold elev.		99.70		Spacing of	
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	# of Panels	Panels (in)
1	Yellow	1.30	98.70	80	3/4in SCH 80	10.1	131.67	240	0.5486	18	6.9
2	Pink	2.70	97.30	87	3/4in SCH 40	12.5	162.95	261	0.6243	20	5.9
4	Blue	4.40	95.60	50	1/2in SCH 40	7.11	92.69	150	0.6179	12	3.7
5	Purple	4.80	95.20	50	1/2in SCH 40	7.11	92.69	150	0.6179	12	3.7

								T&J Panel Block orientation:	Horizontal
								Total Number of Panels:	62
	total	feet =	267	gal/min =	36.82	<u>LTAR =</u>	0.3000		
						<u>LTAR + %5</u>	0.3150		
% of Dose Vol.	0		<u>Des. Flow</u>	480		(ltar W/ INOV)	0.6000		
Dose Volume	310.00		Pump Run=	13.04		(ltar W/ INOV + 5%)	0.6300		
Dose Pump Time	8.42		Tank Gal/IN	19.65					
Drawdown in Inches	15.78								



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: 6-10, (405')
Accepted Status System
0.3 Soil LTAR

Repair: Pressure Manifold
Lines: 1-2, 4-5 (267')
Panel Block
0.3 Soil LTAR

GRAPHIC SCALE
1" = 50'



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 80, Sanctuary Subdivision
Wake County, North Carolina

Job# : 4274
Drawn By : JH
Date : 08/18/2022
Revision: 11/7/22

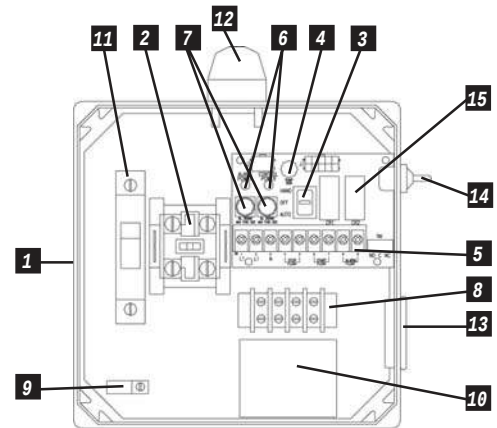
MODEL 112 Control Panel

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



Model 98

Sump Pump

Professional Series Sump Pump Model 98 Features:

- 3-year warranty
- 2-pole mechanical switch
- 1/2 HP 115 V sump pump
- Performance up to 23' (7 m) TDH
- Flows up to 72 GPM (273 LPM)
- Cast iron switch case, motor and pump housing
- Corrosion-resistant, powder coated epoxy paint

100% factory tested



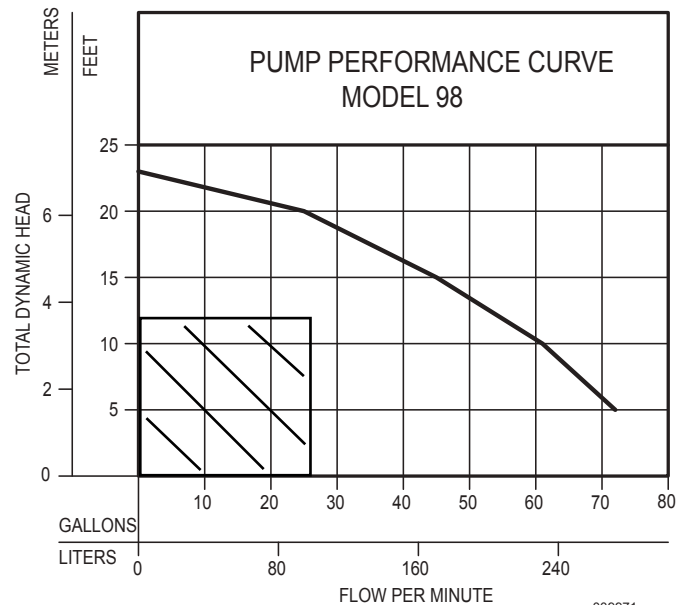
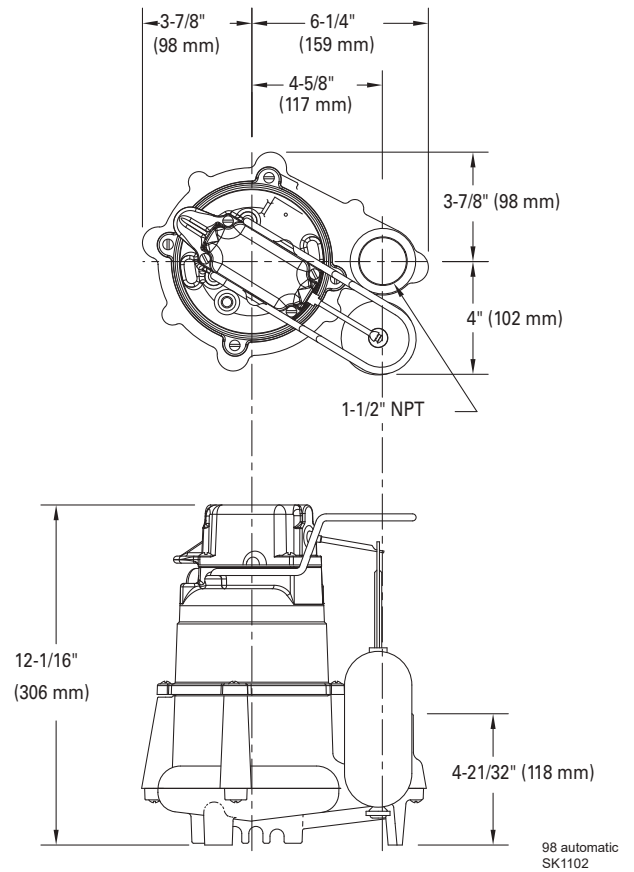
Trusted. Tested. Tough.®

zoellerpumps.com 800-928-7867
3649 Cane Run Road, Louisville, KY 40211 USA

FM3012
0520
Supersedes
0117

PRODUCT SPECIFICATIONS

MOTOR	Horse Power	1/2
	Voltage	115 or 230
	Phase	1 Ph
	Hertz	60 Hz
	RPM	1725
	Type	Permanent split capacitor
	Insulation	Class B
	Amps	4.7 - 9.4
PUMP	Operation	Automatic or nonautomatic
	Auto On/Off Points	9-1/2" (24 cm) / 3" (7.6 cm)
	Discharge Size	1-1/2" NPT
	Solids Handling	1/2" (13 mm) spherical solids
	Cord Length	15' (5 m) standard
	Cord Type	UL listed
	Max. Head	23' (7 m)
	Max. Flow Rate	72 GPM (273 LPM)
	Max. Operating Temp.	130° F (54° C)
	Cooling	Oil filled
	Motor Protection	Auto reset thermal overload
MATERIALS	Cap	Cast iron
	Motor Housing	Cast iron
	Pump Housing	Cast iron
	Base	Engineered thermoplastic
	Upper Bearing	Oil-fed cast iron
	Lower Bearing	Oil-fed cast iron
	Mechanical Seals	Carbon and ceramic
	Impeller Type	Non-clogging vortex
	Impeller	Engineered plastic
	Hardware	Stainless steel
	Motor Shaft	AISI 1215 cold rolled steel
	Gasket	Neoprene





 Tested to Standard UL778 and

 Certified to CSA

 Standard C22.2 No. 108



 SSPMA



© Copyright 2020 Zoeller® Co. All rights reserved.

502-778-2731 | 800-928-7867 | 3649 Cane Run Road | Louisville, KY 40211-1961 | zoellerpumps.com

009971

Trusted. Tested. Tough.®

SECTION: C2.10.130

CL0040

0421

Supersedes

0318

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



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

Visit our website:
zoellerpumps.com

Register your
Zoeller Pump Company Product
on our website:
<http://reg.zoellerpumps.com/>

WW1 Effluent Filter, P/N 170-0078

OWNER'S MANUAL

Application: Single family homes.

Filter Area: 132 Linear Feet of 1/16" filtration.

Flow Rate: 1,500 GPD. Two or more filters may be connected with a manifold for higher flow applications.

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

Easy To Install Or Retrofit: The WW1 Filter fits inside any 4" sanitary tee. To install, slide the cartridge into the sleeve and rotate clockwise to lock. Insert the assembled cartridge and sleeve into the sanitary tee at the tank's outlet. Ensure the white vertical locking tab is pointing toward the outlet of the septic tank before installation. Firmly press the filter down into the sanitary tee until the vertical locking tab snaps into place, then rotate clockwise until the bypass screen no longer rotates. When installed correctly, the cartridge should be capable of rotating within the sleeve to the locked and unlocked position. If the cartridge hangs or will not rotate to the unlocked position, check to make sure the sleeve is installed with the vertical locking tab extending freely into the septic tank's outlet pipe. For an optional high water alarm assembly, order the high water alarm bracket (5090-0014), an alarm box (10-3067) and a float switch (sold separately).

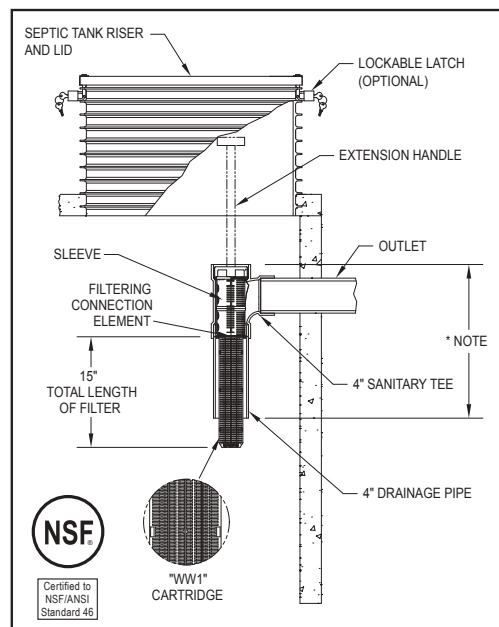
Adding An Extension Handle: A 1/2" PVC pipe can be attached to the top of the filter with a stainless steel screw. Cut off to appropriate length below the lid.

Easy To Maintain: The cartridge can be removed for maintenance by rotating the handle counterclockwise and then pulling the unit up out of the sleeve. The sleeve should remain in the sanitary tee while cleaning the cartridge. To clean, hold cartridge over septic tank opening and rinse with tap water until clean, washing filtered solids back into the septic tank. In addition, spray off any solids that have accumulated on the inside of the sleeve. The WW1 Filter should be cleaned each time the septic tank is pumped or when the need is indicated by a high water level in the tank or slow flows from the house. The secondary filter sleeve should be cleaned whenever the tank is pumped. For installations that exceed the design flow rate of the filter or in applications where the septic tank is undersized, more frequent cleanings may be required. It is recommended that the filter be inspected and serviced as part of a regular septic tank maintenance routine.

Troubleshooting, repair, and replacement: Follow the installation and maintenance instructions above. For replacement components, call 1-800-928-7867.

Lifetime Warranty: Every Zoeller Pump Company 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.

ALL ZOELLER PUMP COMPANY PRODUCTS MUST BE INSTALLED IN ACCORDANCE WITH PLUMBING AND HEALTH DEPARTMENT CODES.



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.

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

WW1 Effluent Filter

Protects Drainfield Components By Screening
Effluent In Residential Applications With Flows Up
To 1,500 Gpd (5.7 M³/Day)



Help prolong the life of an onsite system in residential applications. The deep pleated filter design offers highly effective screening and solids retention.

Features

- Rated for flows up to 1,500 gpd (5.7 m³/day)
- 132 linear feet of 1/16" filtration
- Fits 4" sanitary tees or DWV Tees
- Easy to install and maintain
- Integral bypass protection screen
- High water alarm bracket available
- Lifetime warranty

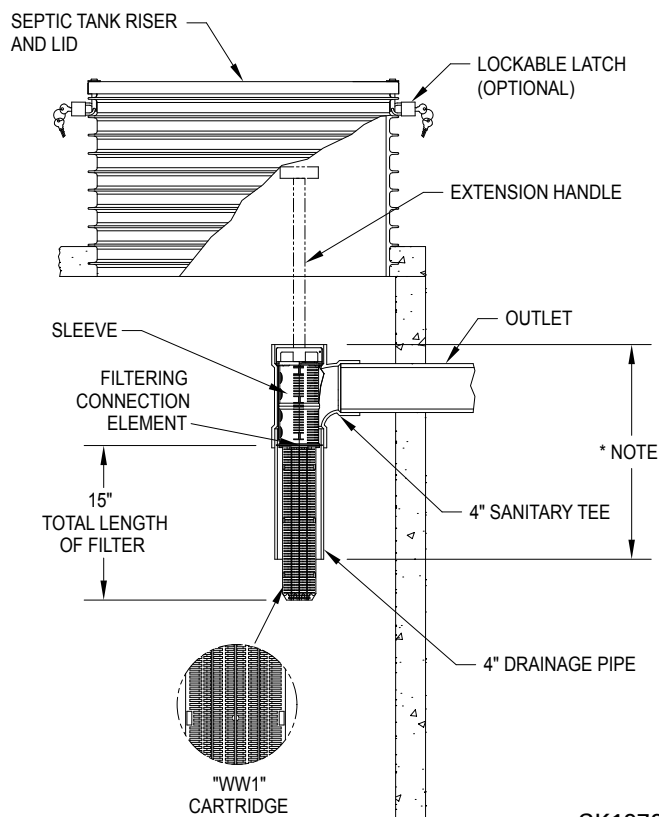
Alarm bracket sold separately
Float switch sold separately



Trusted. Tested. Tough.®

zoellerpumps.com 800-928-7867
3649 Cane Run Road, Louisville, KY 40211 USA

3.20.052
CL0038
0121
Supersedes
0119

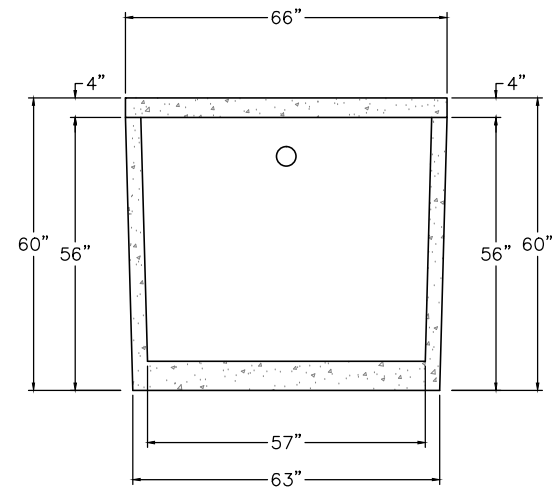
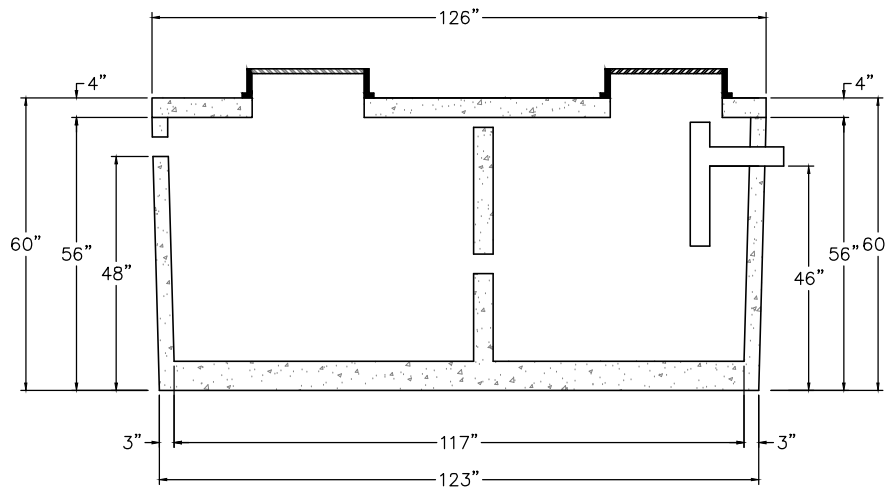


Zoeller Pump Company septic tank effluent filters are designed to protect all downstream components from solids. Every filter comes standard with bypass protection which keeps the filter working, even during cleaning!

SK1972

WW1 Effluent Filter (1,500 GPD)	
Part Number	Description
170-0078	WW1 Effluent Filter
170-0079	WW1 Effluent Filter (10 pk)
170-0144	WW1 Effluent Filter with 4" sanitary tee
170-0145	WW1 Effluent Filter with 4" sanitary tee (10 pk)
5090-0014	Alarm bracket assembly
10-3067	C-Pak Alarm, touch pad without float
013216	Replacement filter cartridge (without bypass screen)
013218	Rubber alignment gasket
Container Assembly	
Part Number	Description
31-1473	12" Riser extension with hardware and gasket
31-1476	6" Riser extension with hardware and gasket
170-0078	WW1 Effluent Filter
170-0144	WW1 Effluent Filter with 4" sanitary tee
5090-0001	Container assembly with 12" riser and lid





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
1nsta1ler@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

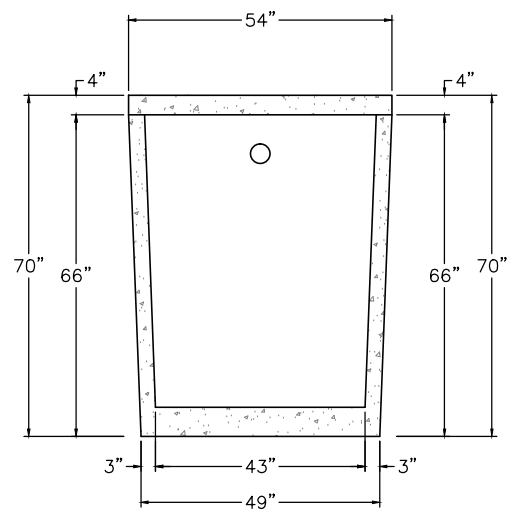
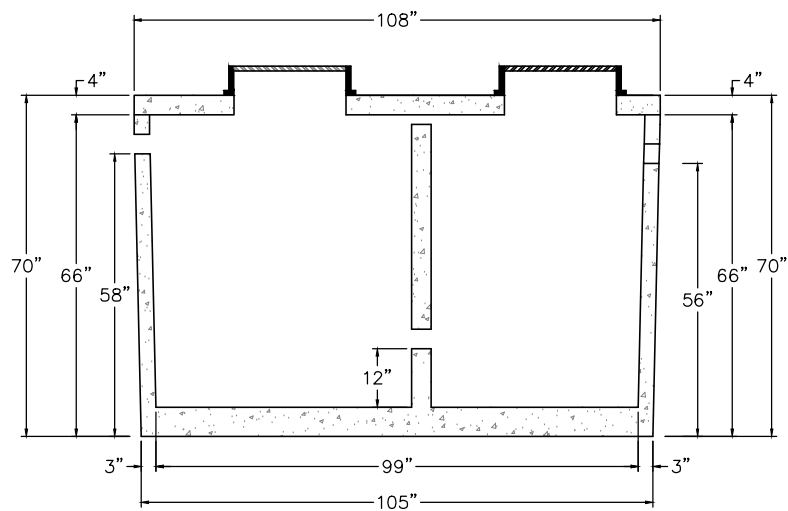
Master Set

DATE
April 11, 2014

BRANTLEY TASK MODEL
1,250 ST 323

SHEET NUMBER

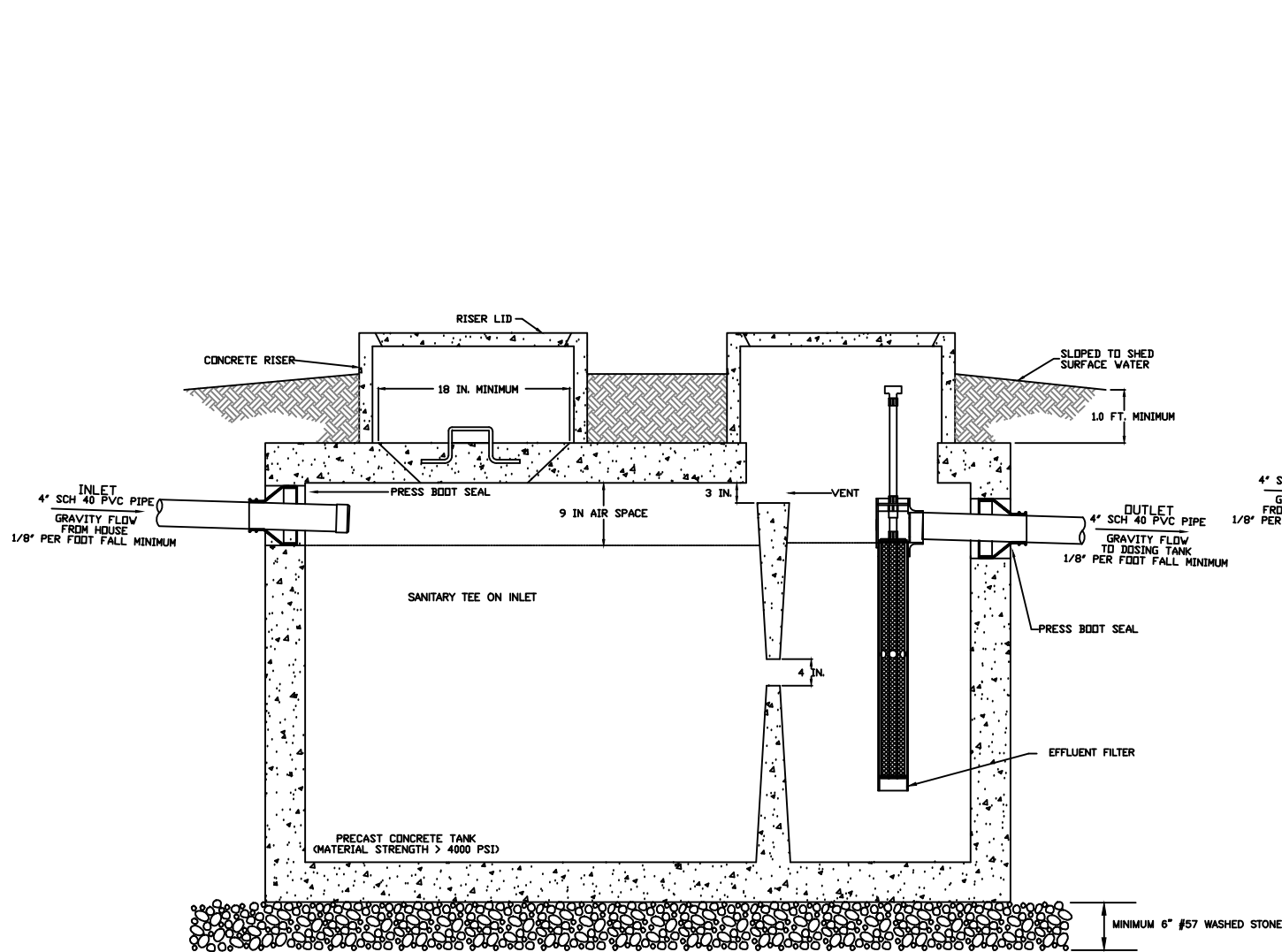
1 of 1



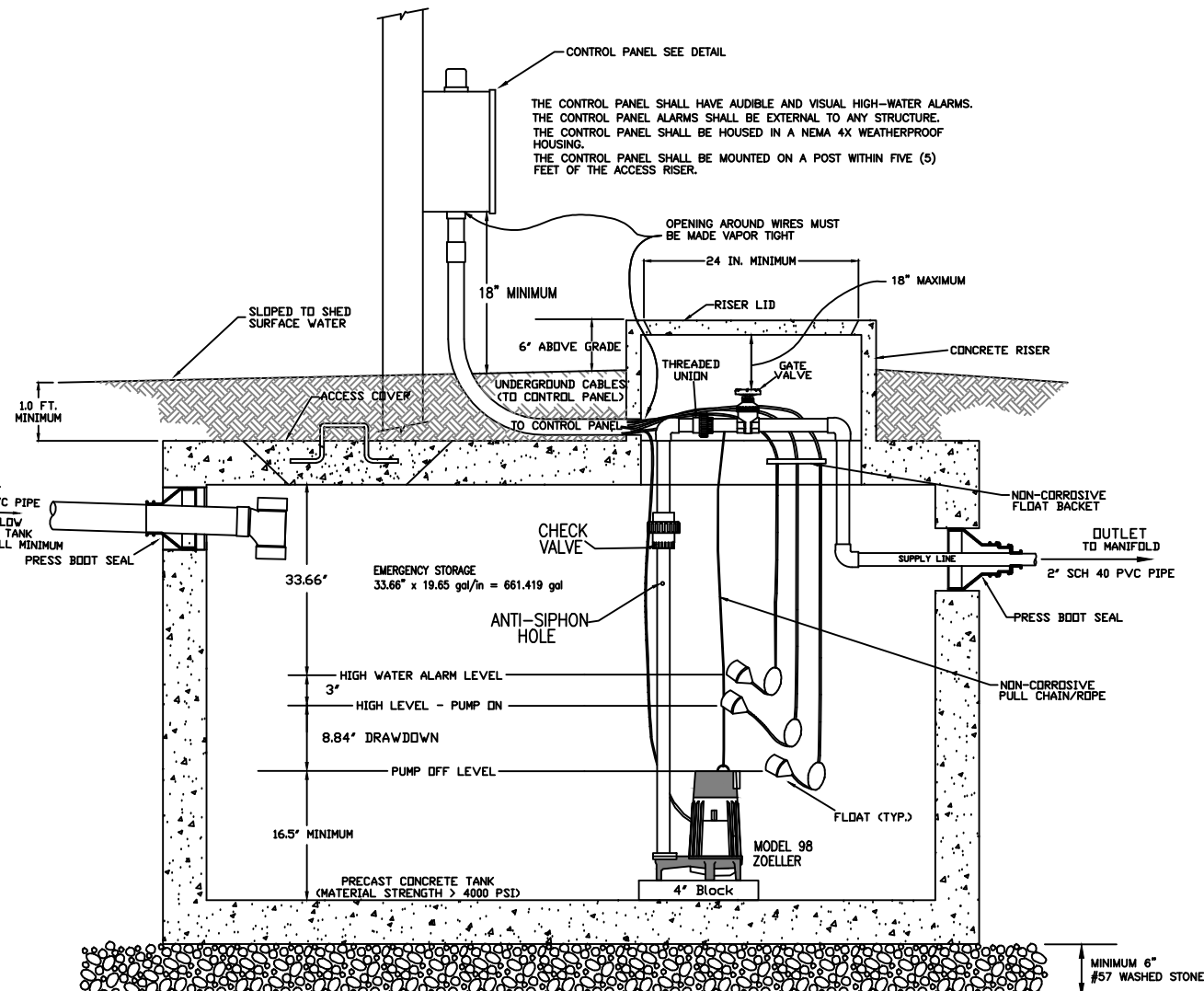
1,200 PT 463
NTS

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.

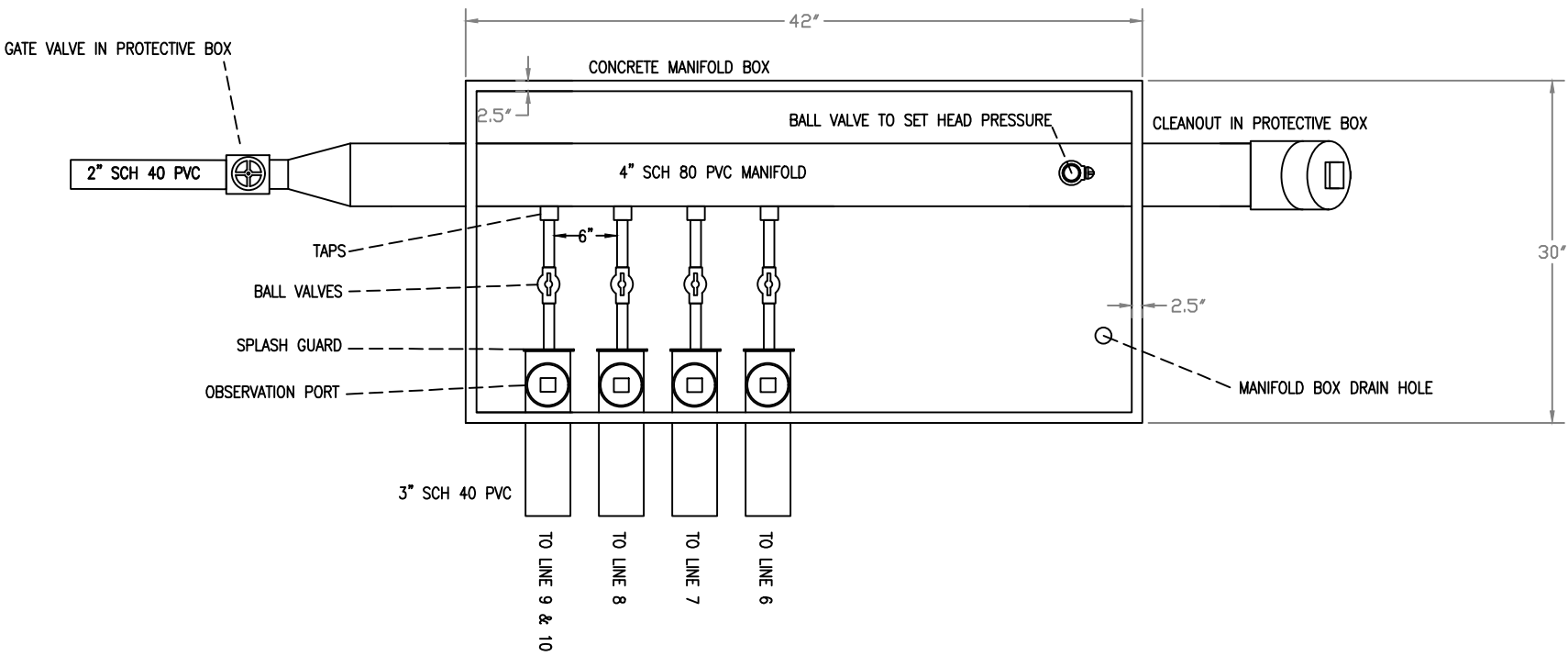


Central Carolina Soil Consulting, PLLC
1900 South Main Street, Suite 110
Wake Forest, North Carolina 27587
Phone (919)569-6704 Fax (919)569-6703

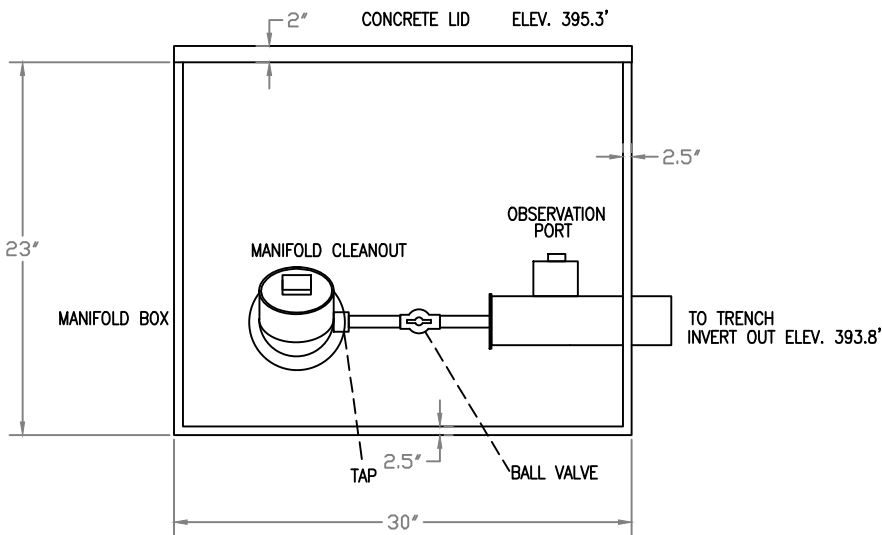
Septic and Pump Tank Details
Sanctuary S/D, Lot 80
Wake County, North Carolina

Job# : 4274
Drawn By : JR
Date : 04/28/2023
Revision : 00/00/0000

PRESSURE MANIFOLD DETAILS
 TOP VIEW



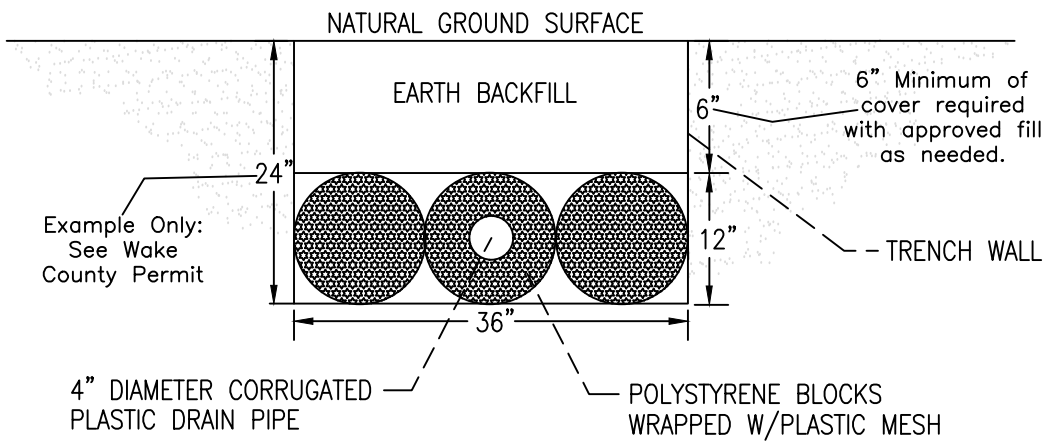
PRESSURE MANIFOLD DETAILS
 END VIEW



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

EZ-FLOW DETAILS

Example only: Installed trench bottom should match design.



NOTE :

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

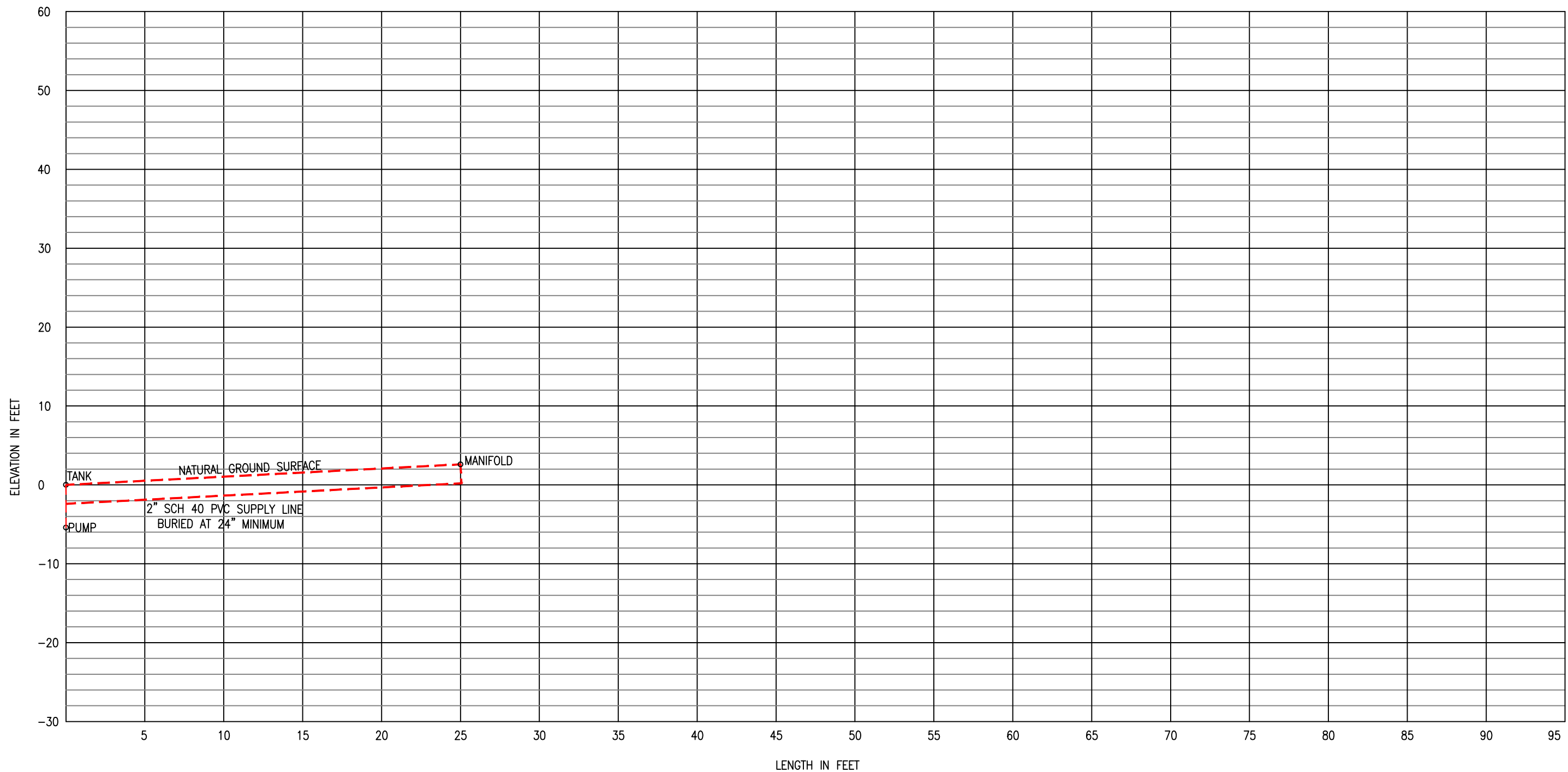


Central Carolina Soil Consulting, PLLC
 1900 South Main Street, Suite 110
 Wake Forest, North Carolina 27587
 Phone (919)569-6704 Fax (919)569-6703

Manifold and Trench Details
 Sanctuary S/D, Lot 80
 Wake County, North Carolina

Job# : 4274
Drawn By : JR
Date : 04/28/2023
Revision : 00/00/0000

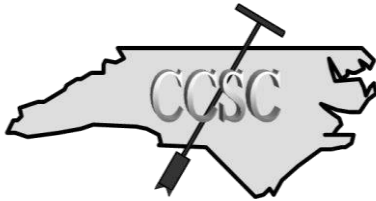
SUPPLY LINE
HYDRAULIC PROFILE



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
Sanctuary S/D, Lot 80
Wake County, North Carolina

Job# : 4274
Drawn By : JR
Date : 04/28/2023
Revision : 00/00/0000



Central Carolina Soil Consulting, PLLC

1900 South Main Street
Suite 110
Wake Forest, NC 27587
919-569-6704

August 18, 2022

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 at 2721 Sanctuary Woods.

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 at 2721 Sanctuary Woods 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,

Jason Hall
NC Licensed Soil Scientist # 1248

Encl: Site Plans



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-086840-2022

APPLICATION DATE: 08/11/2022

BLDG. PERMIT #: RBPR-086739-2022

PIN: 0781049024

RECORDED: Yes

TOWNSHIP: 18 - Swift Creek

JURISDICTION: Wake County

ZONING: R-40W

APPLICANT: Halcyon Homes, LLC
PO Box 33578

BUSINESS PHONE: (919) 337-5245

HOME PHONE:

MOBILE PHONE: (919) 337-5245

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 2721 SANCTUARY WOODS LN

SUBDIVISION: SANCTUARY AT YATES MILL PH 2 **LOT:** 80

ACRES: 0.70

DIRECTIONS: From Raleigh going towards Cary on Hwy 1/440 going South get off on Jones Franklin Road and T/L.

Take Jones Franklin Road to Tryon Road and T/L on Tryon Road

Take Tryon Road and T/R on Yates Mill Pond Road

Take Yates Mill Pond Road and T/R on Theys Road.

Take Theys Road & T/R on Wheeler Bluff Drive.

Take Wheeler Bluff Drive & T/L on Sanctuary Woods Lane & the lot will down on the left side of the road.

Lot#80 Sanctuary at Yates Mill
2721 Sanctuary Woods Lane
Raleigh NC 27606

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: Kristi Marks

DATE: 05/01/2023

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 G

LTAR: 0.300

EXISTING SYSTEM UTILIZED:

PRETREATMENT STRENGTH REQUIRED:

EASEMENT FOR WW SYSTEM ASSOCIATED WITH PARCEL:

MAXIMUM TRENCH DEPTH: 28 INCHES

PUMP REQUIRED: No

SPECIFIC SYSTEM REQUIREMENTS: -System designed for 4 bedroom residence, having 480 gals/day.

-Site serviced by community water.

-Future Repair is a IIIB 50% reduction system PPBPS – horizontal type system with a max trench depth of 28” and a 0.3LTAR.

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

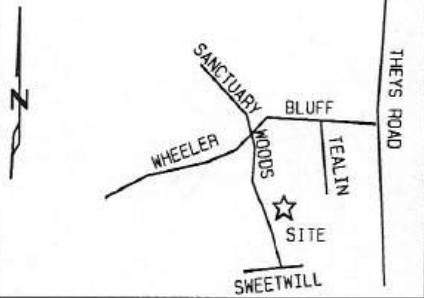
-Maintain all required setbacks.

ISSUED BY:

A handwritten signature in dark ink, reading "Kristina Marks". The signature is written in a cursive, flowing style. The first name "Kristina" is written in a larger, more prominent script, and the last name "Marks" is written in a slightly smaller, more compact script. The signature is positioned to the right of the "ISSUED BY:" label.

DATE: 05/01/2023

YATES MILL POND RD



CURVE	ARC	RADIUS	CHORD LENGTH	CHORD BEARING
C1	89.41	295.00	89.07	N 29° 24' 54" E

LINE	BEARING	DISTANCE
L1	S 78° 40' 17" E	78.68
L2	N 38° 05' 53" E	65.72

LINE	DISTANCE
L3	16.84
L4	2.00

IP SITE PLAN

VICINITY MAP NOT TO SCALE

GENERAL NOTES:

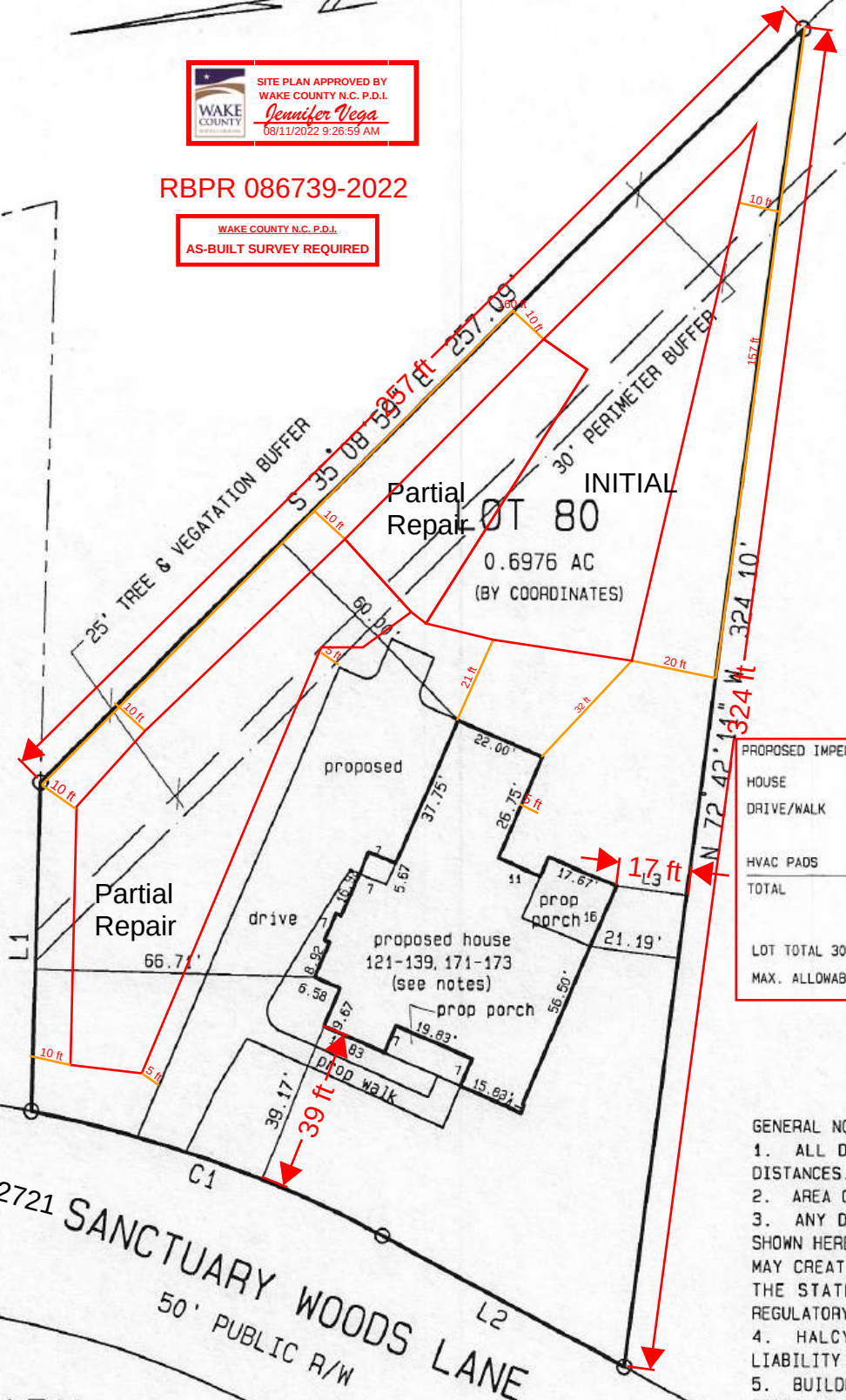
1. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES MEASURED IN U.S. SURVEY FEET.
2. AREAS COMPUTED BY COORDINATE METHOD.
3. THIS SURVEY DONE WITHOUT THE BENEFIT OF A TITLE SEARCH.
4. ALL IRONS FOUND ARE FLUSH WITH GROUND UNLESS OTHERWISE NOTED.
5. ANY DRAINAGEWAYS SHOWN HEREON AND/OR ADJACENT TO THIS SITE MAY CREATE ADDITIONAL BUFFERS CLAIMED BY THE STATE OF NORTH CAROLINA OR OTHER REGULATORY AGENCY.



RBPR 086739-2022

WAKE COUNTY N.C. P.D.I.
AS-BUILT SURVEY REQUIRED

OPEN
SPACE



PROPOSED IMPERVIOUS AREA	
HOUSE	+/- 3492 SF
DRIVE/WALK	+/- 3019 SF
HVAC PADS	+/- 18 SF
TOTAL	+/- 6529 SF
	OR 21.49%
LOT TOTAL	30388 SF
MAX. ALLOWABLE	9352 SF

Required Setbacks

Front	15
Side	7.5
Rear	15
Corner	

GENERAL NOTES:

1. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
2. AREA COMPUTED BY COORDINATE METHOD.
3. ANY DRAINAGEWAYS SHOWN HEREON AND/OR ADJACENT TO THIS SITE MAY CREATE ADDITIONAL BUFFERS CLAIMED BY THE STATE OF NORTH CAROLINA OR OTHER REGULATORY AGENCY.
4. HALCYON HOMES LLC ACCEPTS LIABILITY FOR SETBACK VIOLATIONS.
5. BUILDER MUST VERIFY SETBACKS PRIOR TO FIELD STAKING.

PRELIMINARY

NOT FOR CONVEYANCE OR SALES

SCALE: 1" = 40'

2721 SANCTUARY WOODS LANE

revised: 16 june 2022

revised: 15 march 2022