

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-070649-2021****APPLICATION DATE:** 11/13/2021**BLDG. PERMIT#: RBPR-070648-2021****PIN:** 1812255084**RECORDED:** Yes**TOWNSHIP:** 14 - New Light**JURISDICTION:** Wake County**ZONING:** R-80W

APPLICANT: CANTIERE HOMES INC., CANTIERE DEVELOPMENTS LLC
8505 ALDEN LN
WAKE FOREST, NC 27587

BUSINESS PHONE: (919) 285-8986**HOME PHONE:****MOBILE PHONE:** (919) 285-8986**HD USE:** 101A CONVENTIONAL ONE-FAMILY HOUSE**EXISTING USE:****SITE ADDRESS:** 8616 BISHOP PINE LN**SUBDIVISION:** Trinity Forest**LOT:** 8**ACRES:** 1.49

DIRECTIONS: CAPITAL BLVD NORTH TO PURNELL RD TURN LEFT ON PURNELL RD TRAVEL TO BISHOP PINE LN, TRINITY
FOREST SUBDIVISION, TURN LEFT, LOT IS FIRST ON LEFT

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:** Noah Greenway**DATE:** 12/16/2021**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:** No**GREASE TRAP:****GREASE TRAP FILTER:** No**RECIRCULATION PUMP TANK:****RECIRCULATION PUMP TANK FILTER:** No**PROPOSED SYSTEM:** 0.25 - 25% Reduction (Innovative or Accepted)**EXISTING SYSTEM:** No**DRAINFIELD SQ. FT:** 1,200**AGGREGATE DEPTH:** 12**MAX. TRENCH DEPTH:** 30 INCHES**DISTRIBUTION DEVICE:** PM - Pressure Manifold**TRENCH #:** 2**TRENCH LENGTH:** 200 200
FEET**TRENCH WIDTH:** 36 INCHES**TOTAL TRENCH LENGTH:** 400 FEET

CENTER SPACING: 9 FEET
PRETREATMENT:
SUBFIELDS #: 1
PUMP TDH: 15.48 FEET

MINIMUM SOIL COVER: 6 INCHES
APPROVAL #:
PUMP DESIGN FLOW: 25.00
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

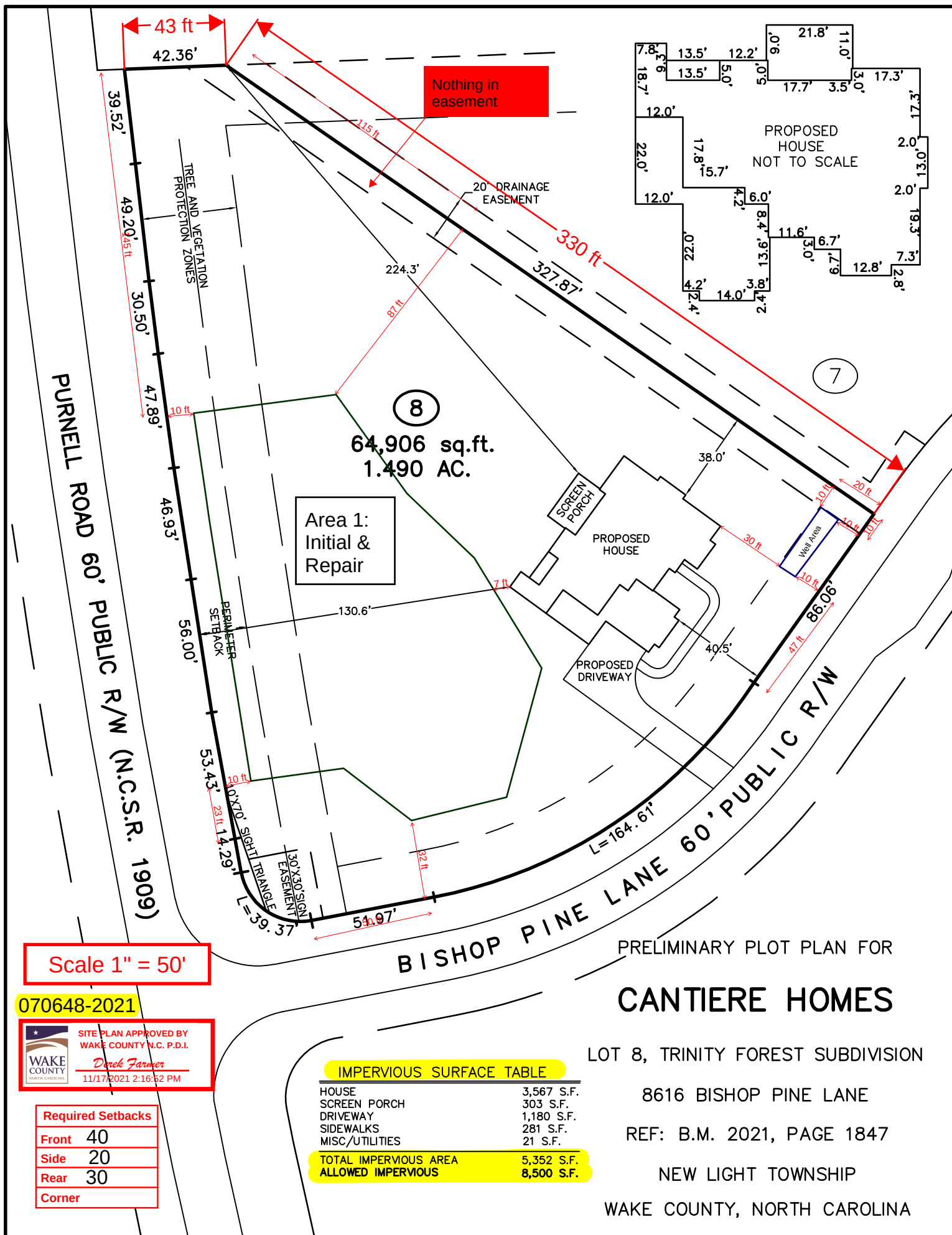
SPECIFIC CONSTRUCTION AUTHORIZATION REQUIREMENTS:

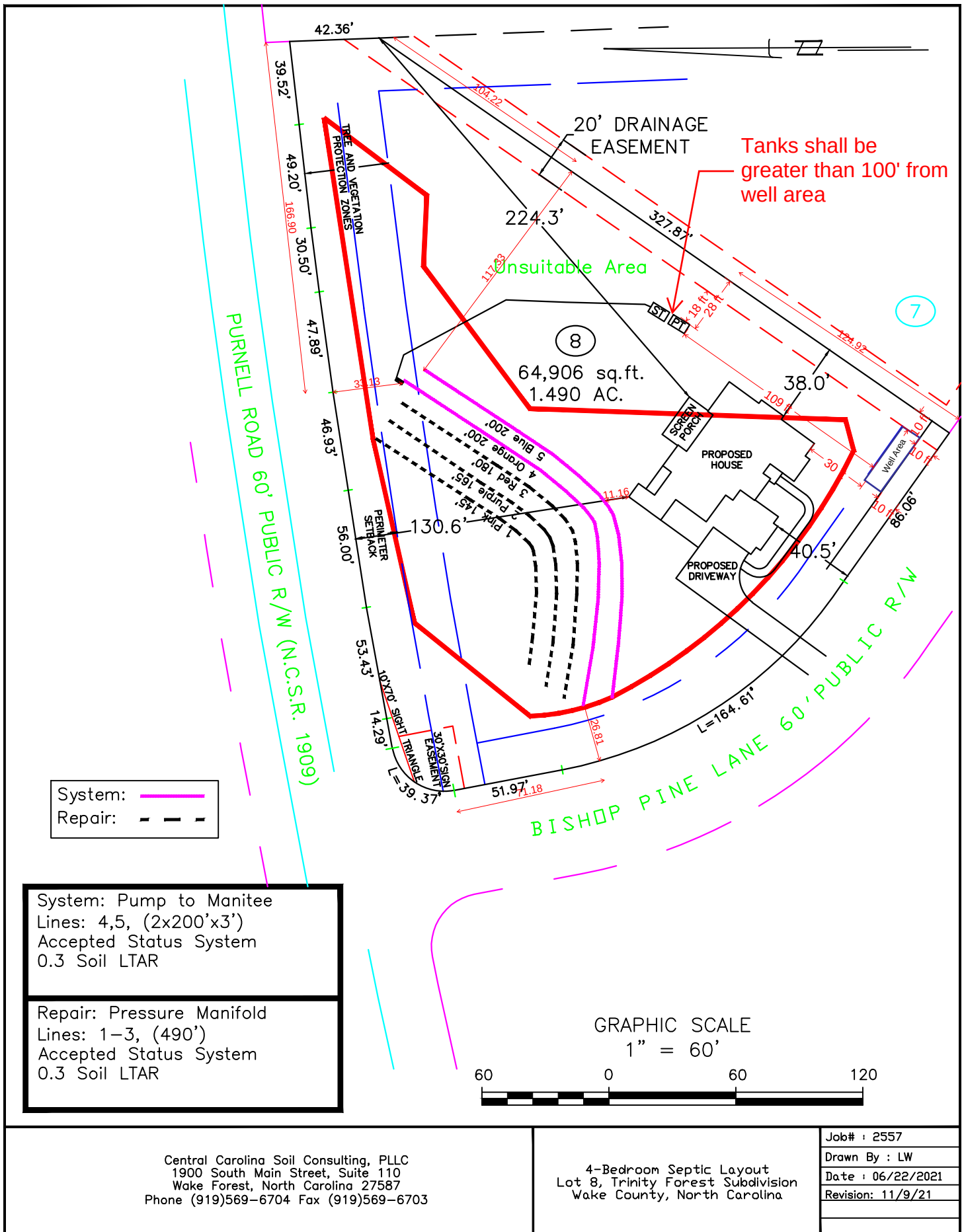
- System designed for 4 bedroom home, having 480 gals per day (Design Flow)
- Both Initial and/or Future Repair are designed as Sapro-lite systems. All portions of the wastewater system shall maintain a minimum 100' setback to the well area shown on the approved site plan.
- Future Repair is a IIIB type system, 50% reduction system PPBPS-Vertical with a Max Trench depth of 30" and a 0.3 LTAR.
- Site serviced by Private Well water.
- Any deviation from accepted design must be approved by the Consultant (CCSC) and Wake County ES prior to system installation.
- If drain line flags removed contact your consultant to reflag.
- House has a partial foundation drain.
- Maintain all required setbacks.
- All property lines must be fully marked at time of install or reinspection required.
- Please contact (Noah Greenway - (919) 868-2564)) with any questions prior or during install.

Issued By:



Date: 12/16/2021







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-070649-2021 Building Permit: RBPR-070648-2021

Parcel PIN: 1812255084

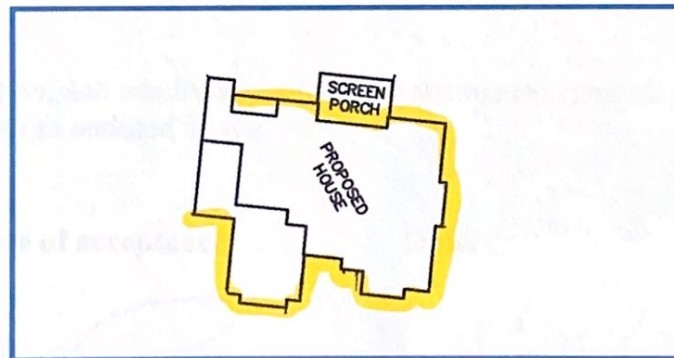
Project (Site) Address: 8616 BISHOP PINE LN WAKE FOREST, 27587

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: Stacey Dwyer Date: 12/1/21

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES

2 TAP PRESSURE MANI-TEE DESIGN

Name: Stacey Distefano P.I.N. #: 1812255084 Permit #: WRP-070649-2021

Address: 8616 Bishop Pine Ln Subdiv: Trinity Forest Lot#: 8

of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.25 gal/day/sq.ft

Septic Tank: 1200 gals Pump Tank: 1200 gals Sq. Foot: 1200 Aggregate Depth: 12

Number of Taps: 2 Length of Trenches: 400 ft(See Tap Chart for Details)

Depth of Trenches: 30 in Manifold Length: 30 in

Manifold Diameter: 2in sch 40pvc Mani-Tee Tap Configuration: 6 in spacing 1 side(s) of manifold

Supply Line: length: 160 ft Diameter: 2 in sch 40pvc

Friction Loss + Fitting Loss: 3.43 ft(supply line length + 70' for fittings in pump tank)

Design Head: 2 ft Elevation Head: 7.10 ft

Total Head: 12.53 ft Pump to Deliver: 25.00 gals/min at 12.53 ft head

Dosing Volume: 172 gals,

Drawdown: 172 gals divided by 20 gals/in = 8.6 inches

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats configuration to be determined by pump tank used. A septic tank filter is required.

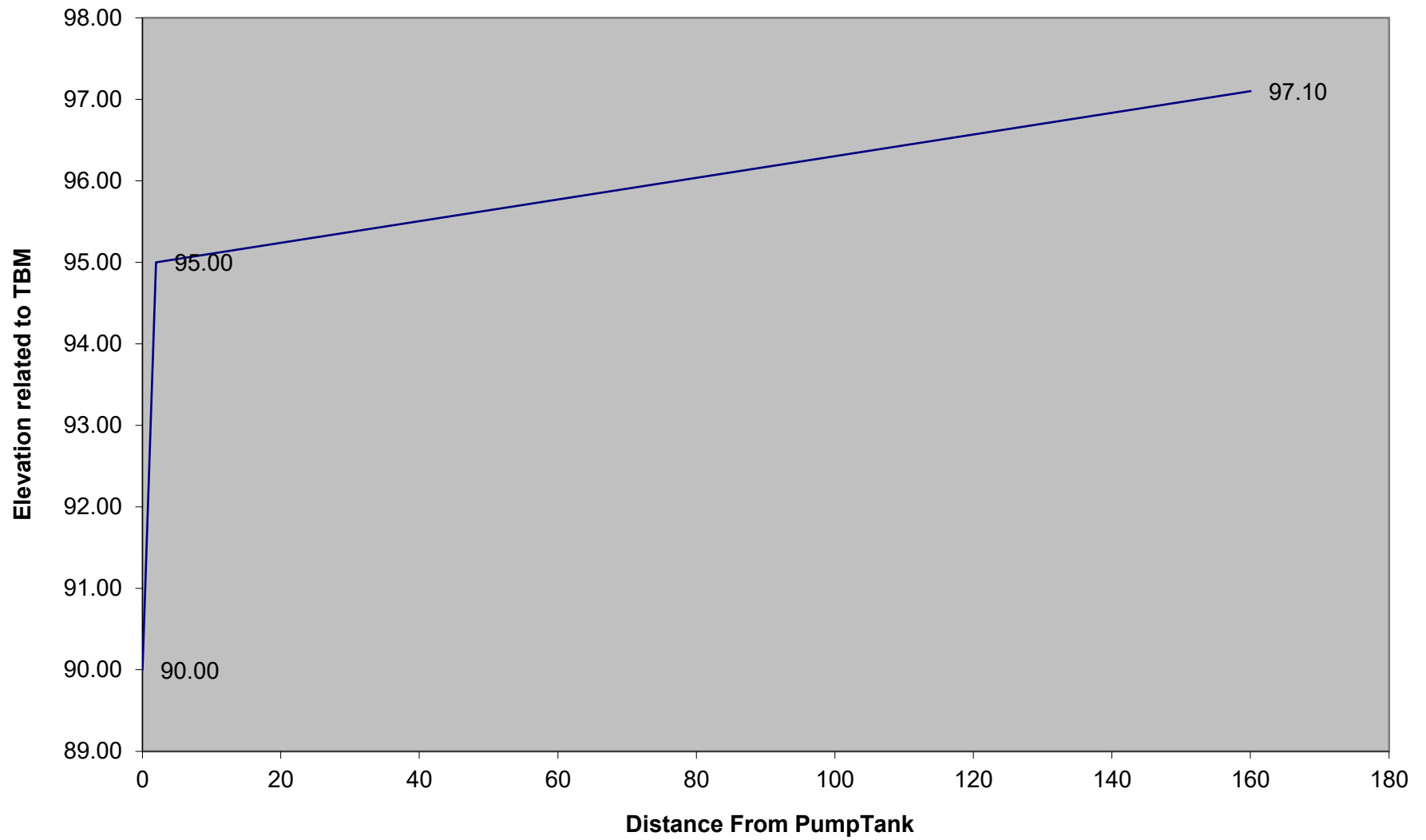
TAP CHART

Bench Mark		is = 100.00	set at				Design Head:	2		
Pump tank elev.		5	95.00	Pump elev.	90.00		Manifold elev.	97.10		
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE	LTAR
1	orange	3.9	96.10	200	3/4in SCH 40	12.5	240.00	600		0.400
2	blue	4.7	95.30	200	3/4in SCH 40	12.5	240.00	600		0.400
		total	feet =	400	gal/min =	25		LTAR =		0.25
% of Dose Vol.		66		Des. Flow	480			(ltar + 5%)		0.26
Dose Volume		172		Pump Run=	19.20			(ltar W/ INOV)		0.33
Dose Pump Time		6.86		Tank Gal/IN	20			(ltar + 5%)		0.35
Drawdown in Inches		8.6		Elev. Head	7.10					
Supply Line Length		160								
Comments:										

Hydraulic Profile

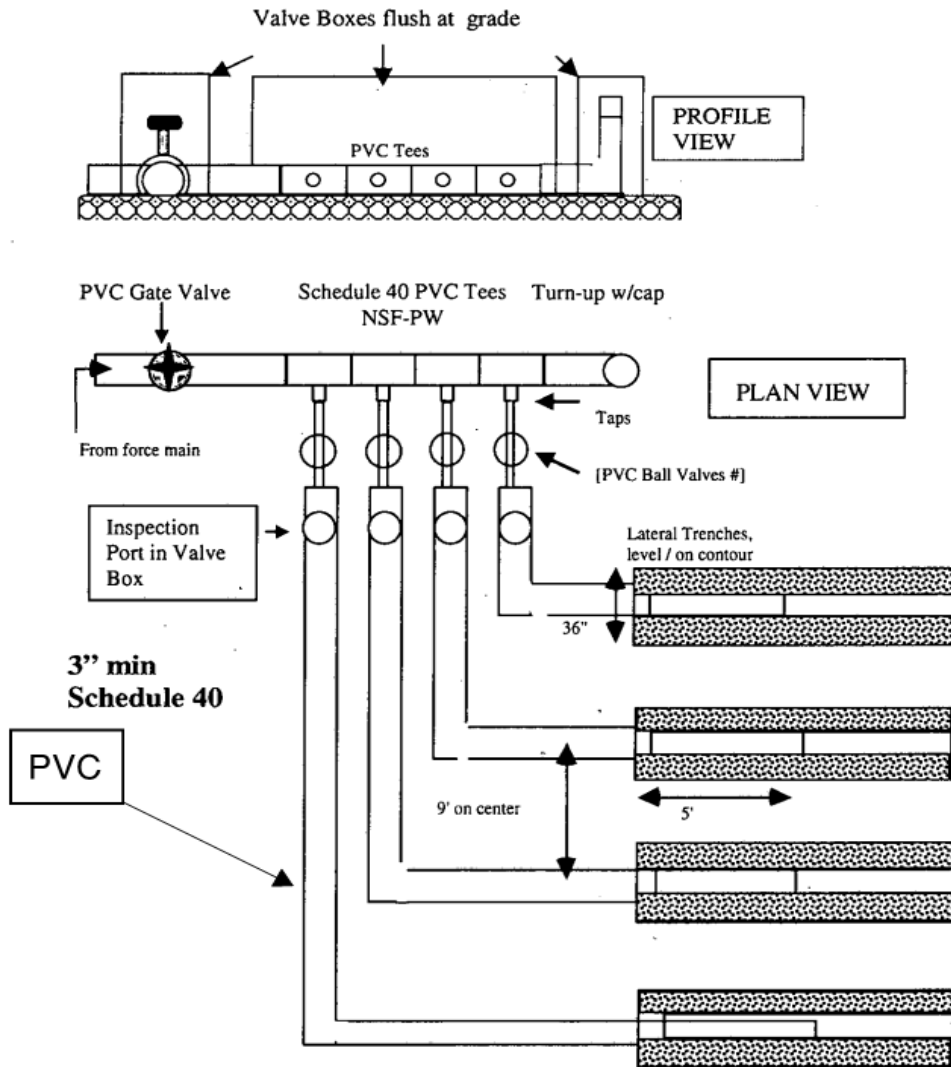
Manifold Elevation	97.10	160
Pump tank elev.	95.00	2
Pump elev.	90.00	0

Hydraulic Profile



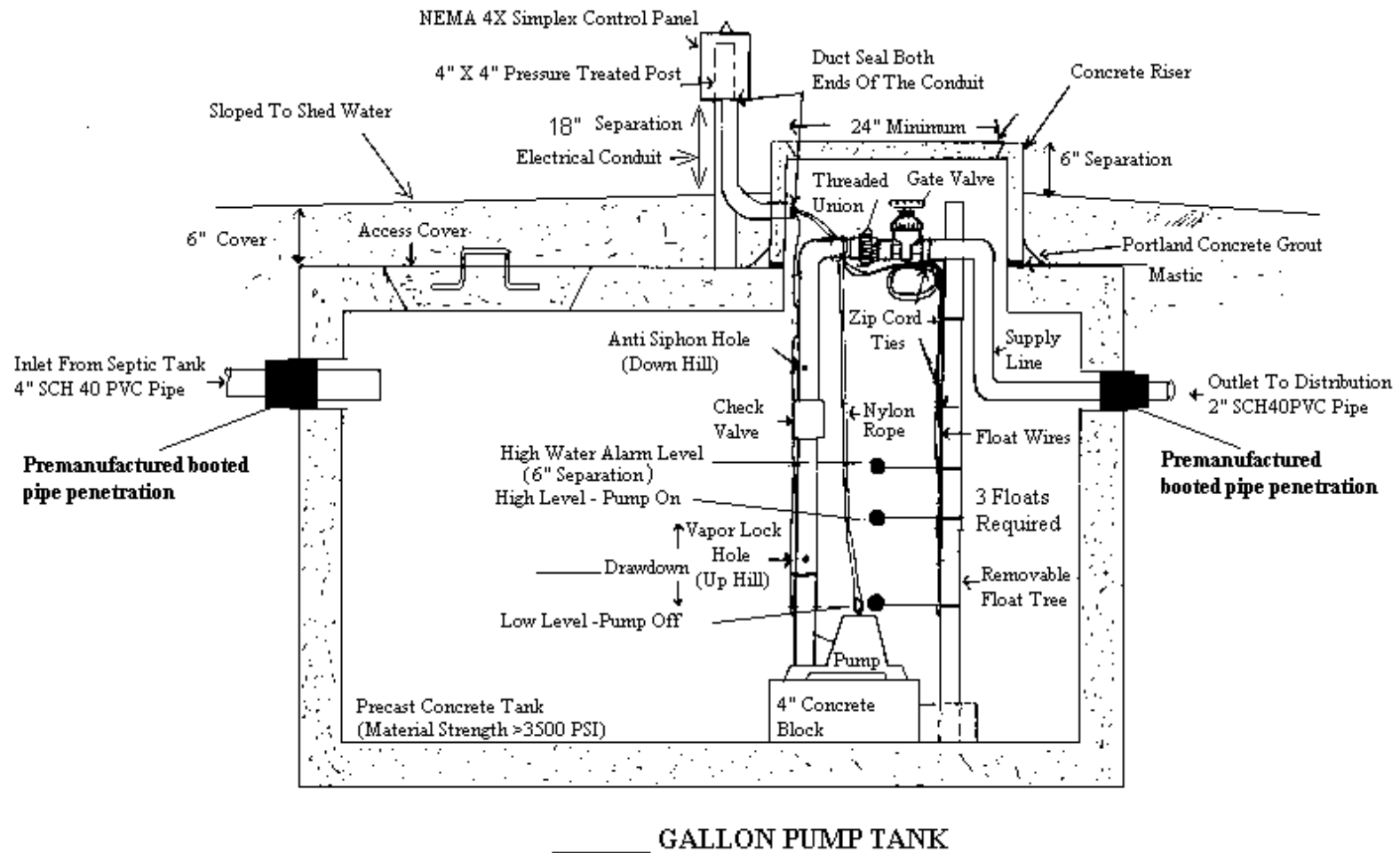
	Line 1	Line 2
Taps	3/4in SCH 40	3/4in SCH 40
Flow	12.5	12.5

Wake County Mani-Tee Design



*** Manifold sizing may need to be altered after installer layout. The installer must layout the system prior to the pre-construction conference ***

Wake County Department Of Environmental Services



1200 Gals Pump Tank

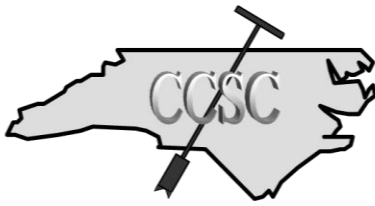
Minimum Panel Requirements

The following items will be considered the minimum for all pump systems:

1. It must be a NEMA 4X Box.
2. It must use a HOA (Hand, Off, Auto) switch to control the pump. No more use of piggyback plugs!
3. It must have a motor contactor to prevent high voltage electricity in the water at all times.
4. It must have an audible and visual alarm.
5. **All Pressure Manifold and LPP Systems must have an elapsed time meter and cycle counter installed in the panel.**
6. It must have 2 separate power supplies, wired from the fuse panel at the house.
7. All panels must have 2 circuit breakers installed in the panel to allow for disconnecting of power, so that the pump or switches maybe serviced.
8. Panels and pumps are to be wired at the time of our inspection. Power must be supplied by use of generators or from the house temporary meter, if the builder applied for it and has had all required inspections and the temporary meter has been set. **We will no longer inspect any system that has been hot wired from the temporary power pole or jumped through the house wiring without a meter being set.**

Pressure Manifolds

1. A float tree or hanging floats must be used.
2. A Simplex Control Panel with a Hand - Off - Auto switch and alarm in a NEMA - 4X box is required. See the plans or CA comments for further details on the panel.
3. 2 separate power supplies are needed. Try to look and make sure they have not used a 120V only panel with a 240V pump.
4. The taps and pipes for the taps must be of the same material! If it is a sch80 tap (usually gray plastic) then the tap, pipe and valve (the valve can be sch40pvc if there is an adequate amount of sch80 pipe used) must be constructed of sch80pvc. The same goes for sch40 taps, you cannot use sch80 pieces with the sch40.
5. The taps must go directly to the 3" pipe; no elbows can be used in the tap connections.
6. All of the tap must be the same size or larger. 3/4" pipe cannot have a 1/2" valve, but a 1/2" pipe could have a 3/4" valve, if at there is at least 6" total 1/2" pipe used.
7. Should the wrong size or material be used in the tap itself, the flow to the line can be corrected by using an adequate amount of the proper pipe material and size. The amount of pipe needed to control the flow is dependent on the size pipe/tap. If 1/2" pipe is needed, then at least 6" of total pipe is needed. A 3/4" size requires at least 9" of pipe to be used. A 1" size needs 12" of total pipe length to control the flow.



Central Carolina Soil Consulting, PLLC

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

December 09, 2021
Project #2557

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 50' Tree and Vegetative Protection Zones on lot 8 at Trinity Forest.

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 8 in the 50' 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

