

Environmental Services - Water Quality
Onsite Wastewater Scan Data Entry Form

PERMIT #: **D 0 5 6 9 3 6**

PIN #: **0 7 9 9 4 1 8 9 6 0**

OP DATE: **0 1 / 2 5 / 2 0 1 8**

SYSTEM USE:

- ☒ House
☐ Mobile Home
☐ Business
☐ Other

SEWAGE TYPE:

- ☒ Domestic
☐ Industrial

PUMP/SIPHON?:

- ☒ Yes
☐ No

PRESSURE MANIFOLD:

- ☒ Yes
☐ No

SYSTEM TYPE:

- ☐ I
☐ II
☒ III
☐ IV
☐ V
☐ VI
☐ Other

SUB TYPE:

- ☐ A
☒ B
☐ C
☐ D
☐ E
☐ F
☐ G

NBR BEDROOMS:

- ☐ 1
☐ 2
☐ 3
☒ 4
☐ 5
☐ 6
☐ Other

MAINT. SCHEDULE:

- ☐ Yes
☒ No

CERT. OPERATOR

- ☐ Yes
☒ No

GT	ST	PT	SIZE
☐	☐		750
☐	☐	☐	900
☐	☐	☐	1,000
☐	☒	☒	1,200
☐	☐	☐	1,500
☐	☐	☐	1,800
☐	☐	☐	2,100
☐	☐	☐	2,500
☐	☐	☐	3,000
☐	☐	☐	4,000
☐	☐	☐	5,000
☐	☐	☐	8,000
☐	☐	☐	10,000
☐	☐	☐	Other
☒		☐	None/NA GT or PT

DRAINFIELD SIZE(SQ. FT.)

0 1 2 1 5

DRAIN TYPE:

- ☐ Stone
☒ EZ Flow
☐ Infiltrator
☐ Biodiffuser
☐ Cultec
☐ Drip
☐ Hancor
☐ Large Dia. Pipe
☐ Multi-Pipe
☐ Other

MAX DEPTH (IN.):

- ☐ 12 in. or less
☐ 18 in. or less
☐ 24 in. or less
☐ 26 in. or less
☒ 28 in. or less
☐ 30 in. or less
☐ 32 in. or less
☐ 36 in. or less
☐ Other

STONE DEPTH (IN.):

- ☐ 8 in. or less
☒ 12 in. or less
☐ 18 in. or less
☐ 24 in. or less
☐ Other

TRENCHES:

- ☒ Individual
☐ Bed

TRENCH WIDTH (IN.):

- ☐ 12 in. or less
☐ 18 in.
☐ 24 in.
☒ 36 in.
☐ 6 ft. or less
☐ 9 ft. or less
☐ Other

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WELL AND SEWAGE SITE LOCATION PERMIT

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

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

PERMIT#: **D056936** STATUS: **A** APP. DATE: **03/06/2017** BLDG. PERMIT#: **0172679**
PIN: **0799 41 8960 000** TAX MAP: **0** RECORDED: **Y** ORIG. PERMIT#: _____
TOWNSHIP: **02 BARTON'S CREEK** JURISDICTION: **WC** ZONING: **R40W** SW DEVICE: **N S#:**
APPLICANT: **SHAIL CONSTRUCTION** (919) 728 - 4801
114 TEALIGHT LANE CARY, NC 27513
USE: HD USE: **101A CONVENTIONAL ONE-FAMILY HOUSE** EXIST USE: _____
LTAR: **0.30 0.30** BEDROOMS: **4** BASEMENT: **N** #EMPLOYEES: **0**
SITE: ADDRESS: **5112 BELLA RIDGE DR**
SUBDIVISION: **BELLA VISTA** LOT: **28** ACRES: **0.73** EASEMENT: **N** LOC: **SYS:**
DIRECTION: **50 NORTH GO PASSED 540 1ST S/D ON R**

Well System: WATER: COMMUNITY - TYPE:

WELL LOG INFORMATION: DEPTH: _____ CASING DEPTH: _____ YIELD: _____ STATIC LEVEL: _____
WELL CONTRACTOR: _____ REG.# _____ PUMP CONTRACTOR: _____ REG.# _____
Construction Compliance GROUT APPROVED ☐ DATE _____ EHS _____
WELLHEAD APPROVED ☐ DATE _____ EHS _____
SYSTEM FINALIZED ☐ DATE _____ EHS _____

COMMENTS: **COMMUNITY WATER**

(109%) Operation Permit

DESIGN FLOW: 26.13 gal./min. ACTUAL FLOW: 28.58 gal./min. DOSE VOLUME: _____ gal. INNOVATIVE LETTER: _____

INSTALLED BY: Arturo Gardenas INSTALLATION APPROVED BY: [Signature]
PROPRIETARY SYSTEM: EZFLOW TYPE SYSTEM: **III B**

COMMENTS:

OPERATIONS PERMIT ISSUED? ☒ OP DATE: 11/25/18 BY: [Signature]

Systems defined as either a Type IIIb, IIIg 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 and Dispersal Systems in Wake County", require Wake County Environmental Services to conduct periodic inspections on this type system, 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 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 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.

As Built Information:

Date: 10/24/17 Benchmark: TOT Rod reading: 4'3" Distance to Structure: 9'
ST: 1250 gals ID#: ST-381 D.O.M.: 814 Elev.: 4'3" Distance to Well: n/a
PT: 1250 gals ID#: PT-364 D.O.M.: 8122 Elev.: 4'6" Distance to P/L: 10+
GT: _____ gals ID#: _____ D.O.M.: _____ Elev.: _____ Pretreatment: n/a
D-box/FD/PM elev.: 5'5" Supply Line: _____ ft. Pump/Ctrl Panel: _____ Filter: yellow sim
Line 1: 6'5" Date: _____ Line 6: _____ Date: _____
Line 2: 7'3" Date: 10/24 Line 7: _____ Date: _____
Line 3: 7'11" Date: _____ Line 8: _____ Date: _____
Line 4: _____ Date: _____ Line 9: _____ Date: _____
Line 5: _____ Date: _____ Line 10: _____ Date: _____
ETM1: 110 CC1: cccc25 ETM2: _____ CC2: _____ OR: _____ AC: _____ WM: _____
Notes: needs PF, Jeff did tanks 10/23

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PERMIT#: D056936 STATUS: A APP. DATE: 03/06/2017 BLDG. PERMIT#: 0172679
PIN: 0799 41 8960 000 TAX MAP: 0 RECORDED: Y ORIG. PERMIT#:
TOWNSHIP: 02 BARTON'S CREEK JURISDICTION: WC ZONING: R40W SW DEVICE: N S#:
APPLICANT: SHAIL CONSTRUCTION (919) 728 - 4801
114 TEALIGHT LANE CARY, NC 27513
HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE EXIST USE: DESIGN FEE REQ?: N PAID?:
LTAR: 0.30 0.30 BEDROOMS: 4 BASEMENT: N #EMPLOYEES: 0 FOUNDATION DRAIN: P
SITE: ADDRESS: 5112 BELLA RIDGE DR
SUBDIVISION: BELLA VISTA LOT: 28 ACRES: 0.73 EASEMENT: N LOC: SYS:
DIRECTION: 50 NORTH GO PASSED 540 1ST S/D ON R

IMPROVEMENT PERMIT

[] As per GS 130A-335 (f), Improvement Permit is based on a Site Plan and is void Sixty (60) months from date of issuance.

[X] As per GS 130A-335 (f), Improvement Permit is based on a Plat and is valid without expiration.

Permit is subject to revocation if the site plan or plat, whichever is applicable, or the intended use changes.

TANK SIZE: 1200 gal. PUMP Tank: 1200 gal. GREASE TRAP: gal. SQ FT: 1200 ACCEPTED STATUS MAX DEPTH LINE: 28 in.
WASTEWATER: INDIVIDUAL SEWAGE: DOMESTIC TYPE SYSTEM: III B PUMP: Y P/M: N LP: N TD:
DAILY FLOW: 480 gal/day WATER: COMMUNITY PRETREATMENT: NA FILL: N DAF: PB DEEP: N REDUCE35%: N
COMMENTS:

IP ISSUED? Y DATE: 03/30/2017 BY: (ADA)  PHONE#: (919)-594-8528

AUTHORIZATION FOR WASTEWATER/WATER SYSTEM CONSTRUCTION
VALIDITY CONCURRENT WITH THE IMPROVEMENT PERMIT

AUTHORIZATION CONDITIONS:

Contractors shall install system on contours, see attached site plan for wastewater system design and well location. No underground utilities, water lines or sprinkler systems may be located in the original system or repair areas. A septic tank filter with a riser 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 an Operation 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 is 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 nitrification 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.

OTHER CONDITIONS: SYSTEM IS DESIGNED FOR PUMP TO MANITEE AND THREE (3'X135') DRAINLINES OF ACCEPTED STATUS PRODUCT, NO FURTHER REDUCTION. MAINTAIN ALL SETBACKS. DO NOT DISTURB SEPTIC AREA PRIOR TO INSTALLATION. CALL OFFICE WITH ANY QUESTIONS. NO FOUNDATION DRAINS ON LEFT SIDE OF HOUSE AND PART OF THE FRONT OF THE HOUSE. REFER TO CA SITE PLAN PART A OR B.

TANK SIZE: 1200 gal. PUMP TANK: 1200 gal. GREASE TRAP: gal. SQ FT: 1200 ACCEPTED STATUS MAX DEPTH LINE: 28 in.
MAINT: N OPER: N L/O: Y TRENCH#: 3 LENGTH: 135 ft. WIDTH: 36 in. DESIGNER:
SUBFIELDS: _ DESIGN HEAD PRESSURE: _ DESIGN FLOW: _____ gal/min DOSE VOLUME: _____ gal. PRETREATMENT: NA

CA ISSUED? Y DATE: 03/30/2017 BY: (ADA)  PHONE#: (919)-594-8528

SHAIL CONSTRUCTION

ZONED R-40W



Approve _____
 Revise _____
 Reject _____
 Front _____
 Side _____
 Comments: _____

29

 $L = 11.68'$

BELLA RIDGE DRIVE
50' PUBLIC R/W

25' TREE &
VEGETATION
PROTECTION ZONE

62.83'

30' PERIMETER
BUILDING SETBACK

31,598 sq.ft.
0.725 AC.

DECK

PROPOSED
FOUNDATION

PROPOSED
DRIVEWAY

31.0'

20' PUBLIC DRAINAGE
EASEMENT PER
B.M. 2015 PG. 1783

27)

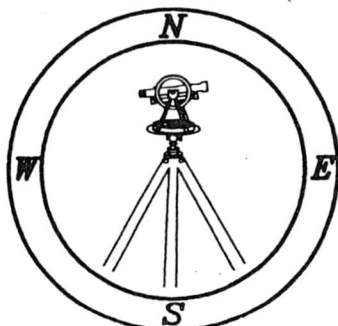
$\rho_{12}^{\#}$

0799418960
PERMIT #
0172679
D056936

IMPERVIOUS SURFACE TABLE

HOUSE	4,338 S.F.
DECK (NOT COUNTED)	
DRIVEWAY	1,051 S.F.
SIDEWALKS	211 S.F.
POOL APRON	650 S.F.
AC UNITS	18 S.F.
TOTAL IMPERVIOUS AREA	6,258 S.F.
IMPERVIOUS AREA ALLOWED	9,956 S.F.

THIS SURVEYOR DOES NOT
WARRANTY THE ACCURACY
OF ARCHITECTURAL DIMENSIONS.
THEY ARE TO BE VERIFIED BY
THE CONTRACTOR.



CAWTHORNE, MOSS
& PANCIERA, P.C.

Professional Land Surveyors
C-1525

333 S. White Street
Post Office Box 1253
Wake Forest, N.C. 27588
(919)556-3148

NOTES:

NOTES:
-THIS PLAN DOES NOT REFLECT AN ACTUAL SURVEY. IT IS A PRELIMINARY PLAN AND SHOULD BE USED FOR ITS INTENDED PURPOSE ONLY.

INTENDED FOR USE ONLY:
-NOT FOR RECORDATION, CONVEYANCES
OR SALES.

CA Part A of C

PRELIMINARY PLOT PLAN FOR

See Part B for details

SHAIL CONSTRUCTION

LOT 28, BELLA VISTA, PH. I

5112 BELLA RIDGE DRIVE

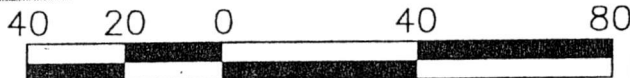
REF: B.M. 2015, PAGE 1777-1785

BARTON'S CREEK TOWNSHIP

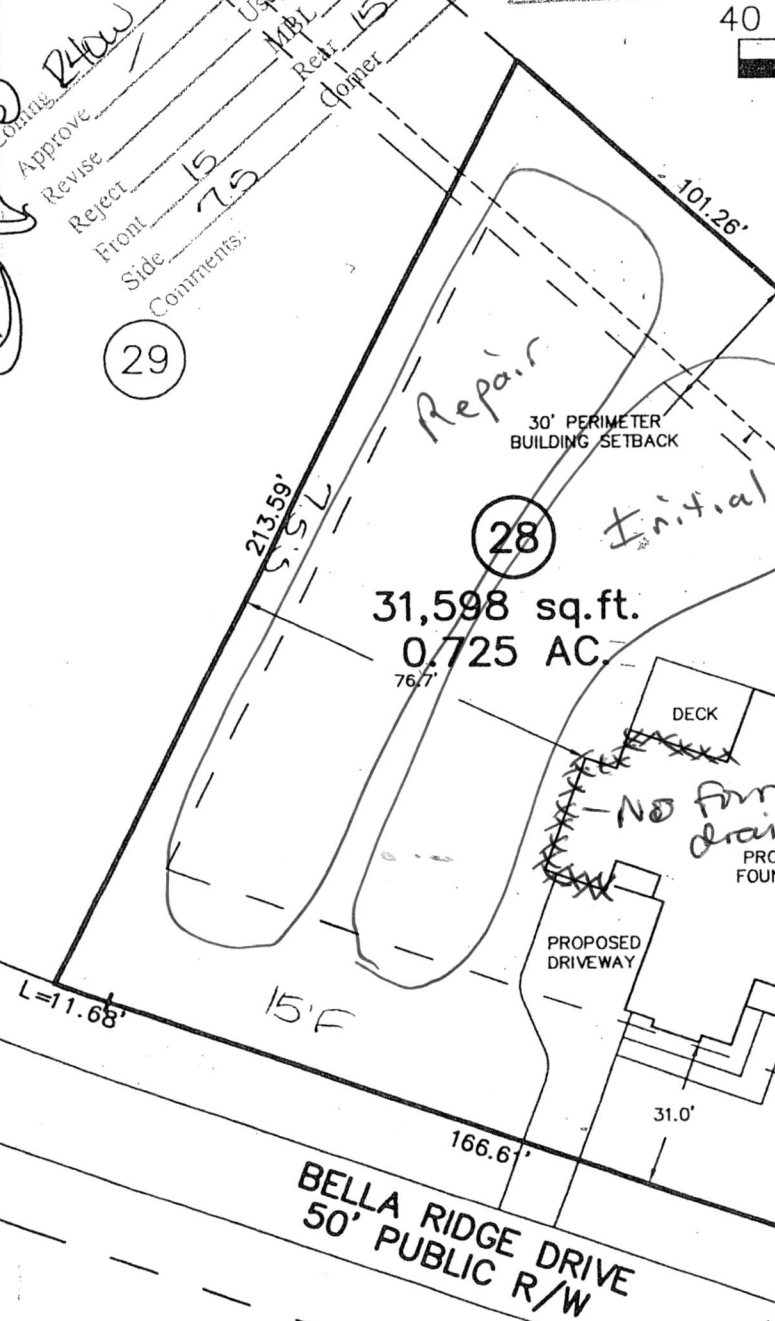
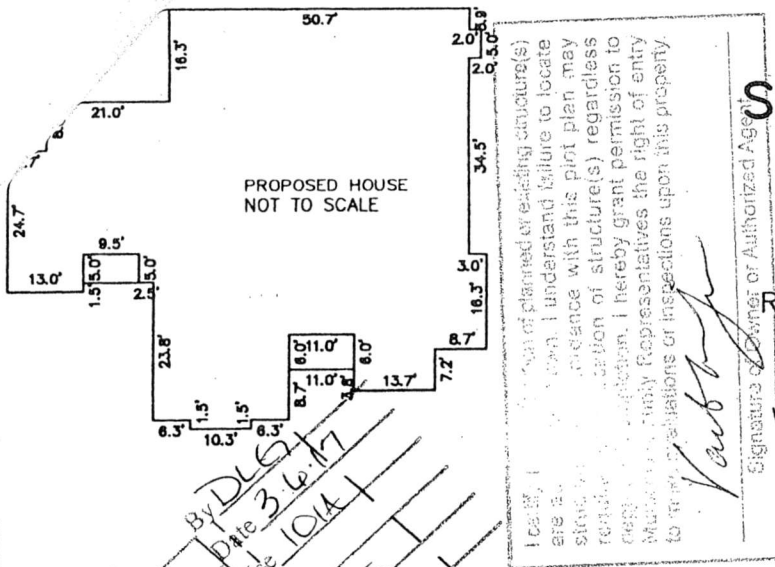
WAKE COUNTY, NORTH CAROLINA

FEBRUARY 8, 2017

ZONED R-40W



SCALE 1"=40'



29

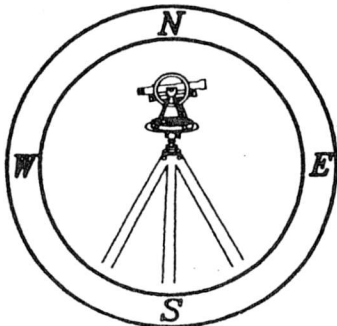
28

27

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C A Part B of C

LINE SCHEDULE SYSTEM

	COLOR	FIELD ELEVATION	LENGTH	DESIGN LENGTH
	YELLOW	0.90	100	
	BLUE	1.80	180	
3	PINK	3.00	175	
4	RED	4.00	172	135
5	YELLOW	4.90	168	135
6	BLUE	5.50	138	135

LOT 28 BELLA VISTA S/D

4-BEDROOM PUMP TO MANI-TEE SYSTEM
LINES 4-6
ACCEPTED (EZ-FLOW)
LTAR 0.3

4-BEDROOM PRESSURE MANIFOLD REPAIR
LINES 1-3
ACCEPTED (EZ-FLOW)
LTAR 0.3

FOR GENERAL USE NOT A SURVEY
PRELIMINARY NOT FOR CONSTRUCTION

- 1200 gal S.T. and P.T.

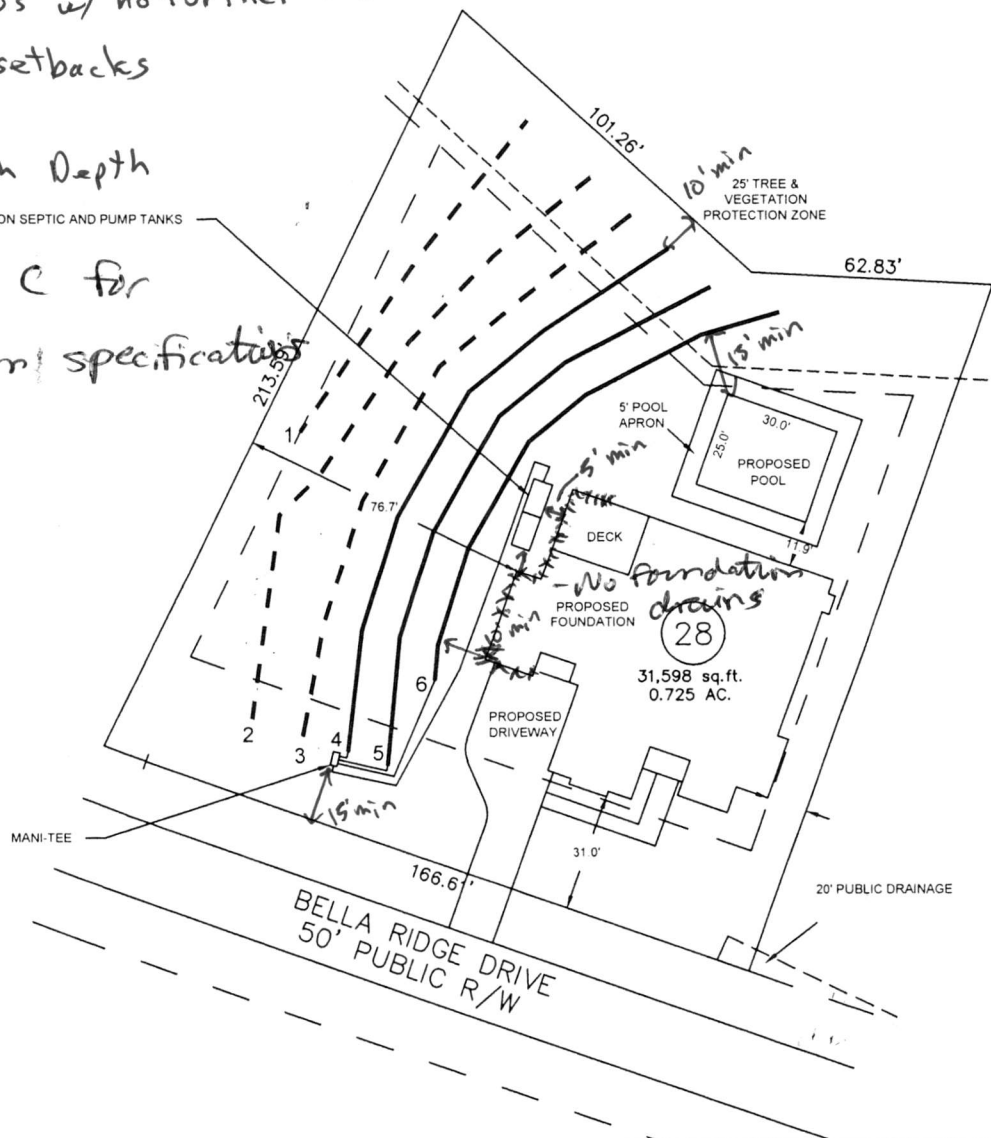
- 3 (3' x 135') drainlines, accepted status w/ no further reduction.

- maintain all setbacks

- 28" Max Trench Depth

1200 GALLON SEPTIC AND PUMP TANKS

- Refer to part C for pump system specifications



0 25 50
SCALE:
1" = 50 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

Shail Construction
Septic System Layout
Lot 28 Bella Vista Subdivision
Raleigh, Wake County, North Carolina

Job# : 2147
Drawn By : TMB
Date : 02/21/2017
Revision:

CA Part C of C

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES

3 TAP PRESSURE MANI-TEE DESIGN

Name: Shail Construction P.I.N. #: 0799418960 D#: 56936

Address: 5112 Bella Ridge Subdiv: Bella Vista Lot#: 28

of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.30 gal/day/sq.ft

Septic Tank: 1200 gals Pump Tank: 1200 gals Sq. Foot: 1215 Stone Depth: as

Number of Taps: 3 Length of Trenches: 405 ft(See Tap Chart for Details)

Depth of Trenches: 28 in Manifold Length: 36 in

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

Supply Line: length: 0 ft Diameter: 2 in sch 40pvc

Friction Loss + Fitting Loss: 1.13 ft(supply line length + 70' for fittings in pump tank)

Design Head: 3 ft Elevation Head: 5.10 ft

Total Head: 9.23 ft Pump to Deliver: 26.13 gals/min at 9.23 ft head

Dosing Volume: 197 gals,

Drawdown: 197 gals divided by 20 gals/in = 9.9 inches

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

TAP CHART

Bench Mark	is = 100.00	set at					Design Head:	3	
Pump tank elev.			100.00	Pump elev.	95.00		Manifold elev.	100.10	
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1	Y	0.9	99.10	135	1/2in SCH 40	8.71	160.00	405	0.395
2	B	1.8	98.20	135	1/2in SCH 40	8.71	160.00	405	0.395
3	Pi	3.0	97.00	135	1/2in SCH 40	8.71	160.00	405	0.395
		total	feet =	405	gal/min =	26.13		LTAR =	0.30
% of Dose Vol.		75		Des. Flow	480			(ltar + 5%)	0.32
Dose Volume		197		Pump Run=	18.37			(ltar W/ INOV)	0.40
Dose Pump Time		7.56		Tank Gal/IN	20			(ltar + 5%)	0.42
Drawdown in Inches		9.9		Elev. Head	5.10				
Supply Line Length									
Comments:									

Hydraulic Profile

Manifold Elevation	100.10	0
Pump tank elev.	100.00	2
Pump elev.	95.00	0

Tap Chart

TAP CHART

Bench Mark 5.75		is = 100.00 set at		Septic Tank					
Pump tank elev.				Pump elev.		Manifold elev.			
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1			105.75	100	1/2in SCH 40	7.11	106.28	300	0.354
2			105.75	180	1/2in SCH 80	12.5	186.86	540	0.346
3			105.75	175	1/2in SCH 80	12.5	186.86	525	0.356
4			105.75		NA		0.00	0	#DIV/0!
5			105.75		NA		0.00	0	#DIV/0!
6			105.75		NA		0.00	0	#DIV/0!
7			105.75		NA		0.00	0	#DIV/0!
8			105.75		NA		0.00	0	#DIV/0!
9			105.75		NA		0.00	0	#DIV/0!
10			105.75		NA		0.00	0	#DIV/0!
11			105.75		NA		0.00	0	#DIV/0!
12			105.75		NA		0.00	0	#DIV/0!
		total	feet =	455	gal/min =	32.11	<u>LTAR =</u>		0.300
% of Dose Vol.		70	<u>Des. Flow</u>		480	(ltar + 5%)			0.32
Dose Volume		207.03	Pump Run=		14.95	(ltar W/ INOV)			0.40
Dose Pump Time		6.45	Tank Gal/IN		25	(ltar + 5%)			0.420
Drawdown in Inches		8.28	Elevation Head		0.00				