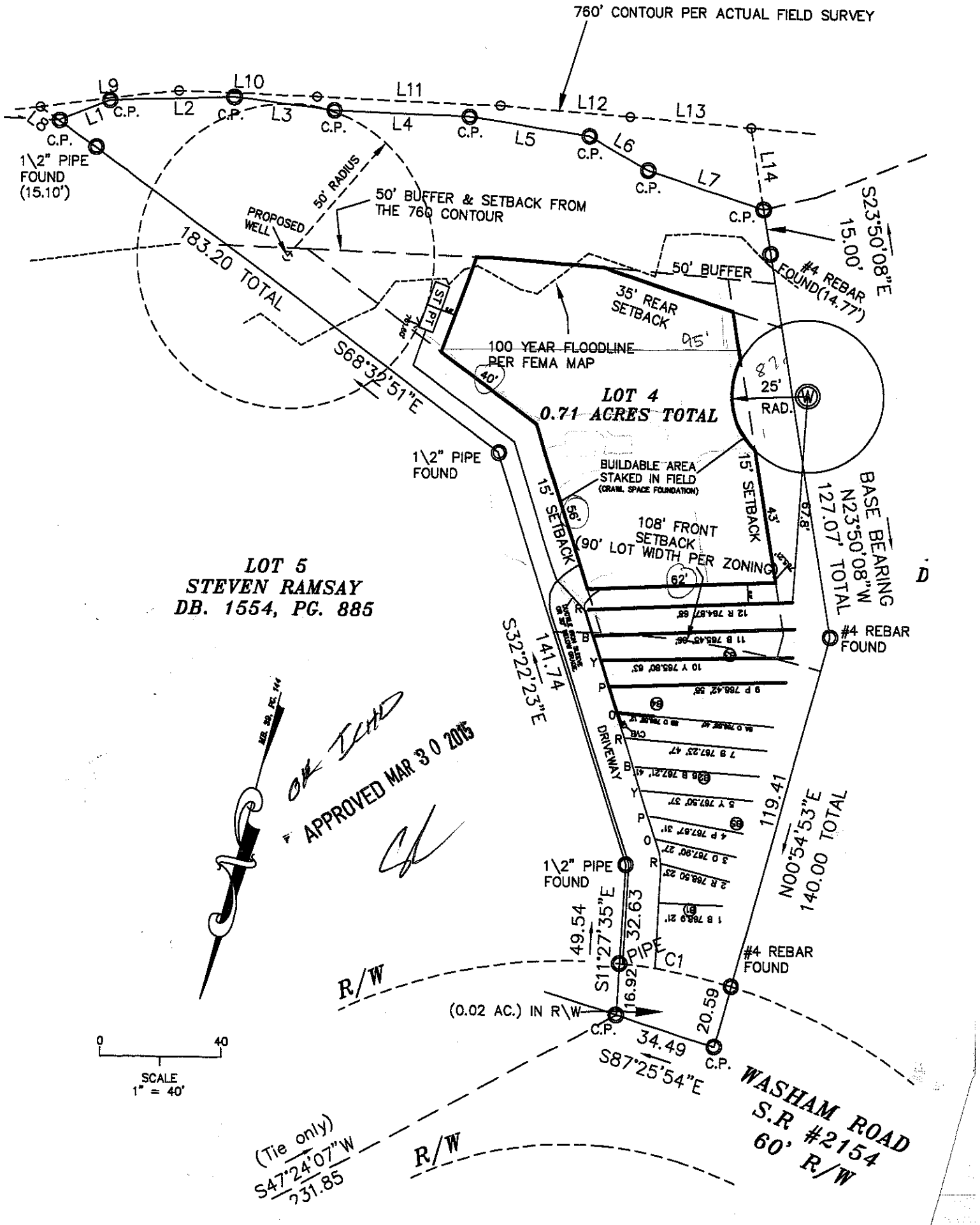

LAKE NORMAN
760' CONTOUR PER ACTUAL FIELD SURVEY
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
L11
L12
L13
L14
C.P.
1\2" PIPE FOUND (15.10')
50' RADIUS
50' BUFFER & SETBACK FROM THE 760 CONTOUR
PROPOSED WELL
183.20 TOTAL
S68°32'51"E
50' BUFFER
#4 REBAR FOUND(14.77')
S23°50'08"E 15.00'
35' REAR SETBACK
100 YEAR FLOODLINE PER FEMA MAP
LOT 4
0.71 ACRES TOTAL
25' RAD.
1\2" PIPE FOUND
BUILDABLE AREA STAKED IN FIELD
(CRAWL SPACE FOUNDATION)
15' SETBACK
108' FRONT SETBACK
(90' LOT WIDTH PER ZONING)
BASE BEARING N23°50'08"W 127.07' TOTAL
#4 REBAR FOUND
LOT 5
STEVEN RAMSAY
DB. 1554, PG. 885
S32°22'23"E 141.74
DRIVEWAY
APPROVED MAR 30 2015
119.41
N00°54'53"E 140.00 TOTAL
1\2" PIPE FOUND
S11°27'35"E 49.54
32.63
PIPE
C1
16.92
20.59
#4 REBAR FOUND
R/W
(0.02 AC.) IN R\W
34.49
S87°25'54"E
WASHAM ROAD
S.R. #2154
60' R/W
(Tie only)
S47°24'07"W
231.85
SCALE
1" = 40'
0
40

LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Applicant:	Ken McLeod
Current Address:	109 Rehoboth Lane Mooresville, NC 28117
Phone:	704.507.0969
County:	Iredell
Location:	SOUTHPOINTE LOT 4 191 WASHAM ROAD, MOORESVILLE, NC 28117
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	25.42

Design Specifications

Drainfield Size:	267
Loading Rate (gpd/ft.^{2}):	0.3
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth:	30 in.
Trench Width:	24 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	156
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	27.14
Dosing Volume:	149.54
Supply Manifold:	N/A
Supply Manifold Length:	N/A
Supply Manifold Volume:	N/A
Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head:	2 ft.
Friction Head:	2.78
Elevation Head:	10.50
Total Dynamic Head:	17.57
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 per lateral
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Additional Comments:	Soil suitability was performed by Rollans Soil & Environmental Services

SOUTHPOINTE LOT 4

LP PPBPS

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	534
TOTAL LATERAL LENGTH:	267
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	266.6666667
SUPPLY LINE LENGTH:	156
TOTAL DYNAMIC HEAD:	17.57
MANIFOLD SIZE:	N/A
DOSING VOLUME:	149.54
PUMP TANK DRAW DOWN*:	7.1
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

SOUTHPOINTE LOT 4

Project #: 01-2091

LAYOUT FOR 4 BEDROOM HOME

March 19, 2015

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM							
INSTR. 1							
HOUSE CNR					765.21		
P. TANK					761.60		
1	BLUE				768.90	21	21
2	RED				768.50	23	23
3	ORANGE				767.90	27	27
4	PINK				767.67	31	31
5	YELLOW				767.50	37	37
6	BLUE				767.21	41	41
7	RED				767.23	47	47
8A	ORANGE				766.58	40	40
8B	***ORANGE***				***766.58***	***12***	***12***
9	***PINK***				***766.42***	***58***	***58***
10	***YELLOW***				***765.80***	***63***	***63***
11	***BLUE***				***765.45***	***66***	***66***
12	***RED***				***764.87***	***68***	***68***
					Total	**534**	**534**

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
****System***	***267***	***0.300***	***MOD.***	***0.300***	***PPBPS***	***LOW PRESSURE***
Repair	267	0.300	MOD.	0.300	PPBPS	LOW PRESSURE

Notes: All septic lines, soil borings, wells and house envelope located via survey

**All measures in feet

**Nitrification lines are demonstrated on contour via colored pin flags

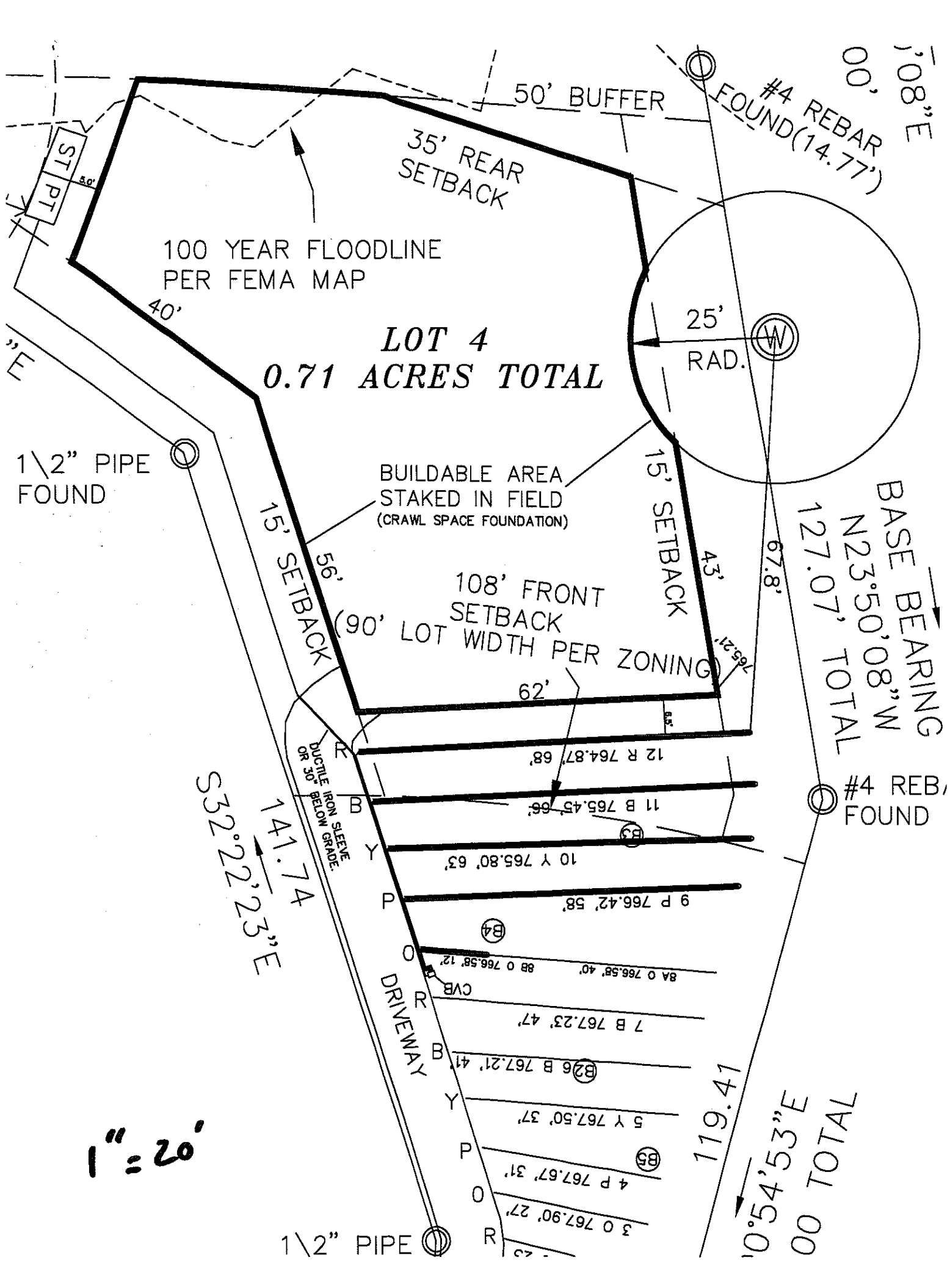
LP PPBPS TAPSHEET -SOUTHPOINTE LOT# 4

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
8B	*ORANGE*	766.58	*12*	0.156	**0.41**	36	3
9	*PINK*	766.42	*58*	0.156	**0.41**	174	13
10	*YELLOW*	765.8	*63*	0.156	**0.41**	189	15
11	*BLUE*	765.45	*66*	0.156	**0.41**	198	15
12	*RED*	764.87	*68*	0.156	**0.41**	204	16
	total	**feet =**	**267**	**gal/min =**	**25.42**		62

Des. Flow	**480**
Pump Run=	**5.88**
soil LTAR	**0.3**
LTAR +5%	**0.315**
LTAR with mod.	**0.6**
LTAR with mod.. + 5%	**0.63**

.156 equals 5/32 inch hole


50' BUFFER
#4 REBAR FOUND(14.77')
35' REAR SETBACK
100 YEAR FLOODLINE PER FEMA MAP
40'
LOT 4
0.71 ACRES TOTAL
25' RAD.
1\2" PIPE FOUND
BUILDABLE AREA STAKED IN FIELD
(CRAWL SPACE FOUNDATION)
15' SETBACK
56'
108' FRONT SETBACK
(90' LOT WIDTH PER ZONING
62'
43'
67.8'
765.21'
BASE BEARING N23°50'08"W 127.07' TOTAL
#4 REBAR FOUND
DUCTILE IRON SLEEVE OR 30" BELOW GRADE.
S32°22'23"E 141.74
DRIVEWAY
119.41
1\2" PIPE
1"=20'

CALCULATIONS

Location SOUTHPOINTE LOT 4
191 WASHAM ROAD, MOORESVILLE, NC 28117
Project Number 01-2091

Lot No:	4	
No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.300	$^{gal}/_{ft^2\,day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	156	ft.
Supply Line Volume	27.144	gal.
Required Feet of Line	266.6667	ft.
Amount of Line from Layout	267	ft.
Gallons per Minute	25.42	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
	1000	gal.
Panel Volume	3.6	gal.
# of Panels	62	
Dosing Volume	149.54	gal.

Note: Dosing Volume based on 67% of # of panels times 3.6 gal/panel

Tank Draw Down	7.1	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	10.5	ft.
Pressure Head	2	ft.
Friction Factor	1.78	ft./100 ft. *(From the interpolater.)*
Friction Head	2.78	ft.
Total Dynamic Head (+15%)	17.57	ft.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
	-2.25
40	3.03
43.07	3.48
45	3.77
48.14	4.28
50	4.58
57.11	5.89
60	6.42

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

Sheet 1 of 1
PROPERTY ID #: 4624396628
COUNTY: IREDELL

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: AMIR + PAM KALDAS
ADDRESS: 4116 CYPRESS GARDEN DR. DAVIDSON 28036
PROPOSED FACILITY: RESIDENCE
LOCATION OF SITE: 191 WASHAM ROAD MOORESVILLE 28117
WATER SUPPLY: ☒ Private ☐ Public ☒ Well ☐ Spring Other
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut

APPLICATION DATE 3/9/15
DATE EVALUATED: 3/4/15
PROPOSED DESIGN FLOW (.1949): 480
PROPERTY SIZE: .71
PROPERTY RECORDED: Y
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
1	L/5%	6-8	RB CL WFSBK	FR SS SP	N/A	48+	N/A		S .3
		8-22	R C WMSABK	FR S SP					
		22-48	R C WMABK	FI SS SP					
2	L/5%	0-35	R C WMSBK	FR S SP	N/A	48+	N/A		S .3
		35-48	R C WMABK	FR SS SP					
3	L/6%	0-8	B SL WFGR	VFR SS SP	N/A	48+	N/A		S .3
		8-36	R C WMABK	FR S SP					
		36 48	R C WMABK	FI SS SP					
4	L/7%	0-8	B SL WFGR	VFR SS SP	N/A	48+	N/A		S .3
		8-14	RB CL WFSBK	FR SS SP					
		14-35	RB C WMSBK	FR SS SP					
		35-48	R C WMABK	FI SS SP					

OK
APPROVED MAR 30 2015
SL

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	267 LF	267 LF
System Type(s)	PPBPS	PP BPS
Site LTAR	0.3	0.3

OTHER FACTORS (.1946): PS
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: OVERCASH
OTHER(S) PRESENT: RICHARDS

COMMENTS:

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

Sheet 2 *of* 2

PROPERTY ID #: 4624339628
DATE OF EVALUATION: 3/10/15
COUNTY: Iredell

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZ ON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
B		0-6	RBCL wfsbk	Fr SS SP					
5	L/5%	6-46	RC wmsbk	Fr SS SP					
		46-48	RCL wfsbk	Fr SS SP		48"			PS .3

MMENTS:

ted February 2014