ROLLANS SOIL & ENVIRONMENTAL SERVICES

PO Box 832 Mooresville, NC 28115
Phone: (704) 278-0989 Fax: (704) 278-0989

Ashley Rollans, NC Licensed Soil Scientist
Mobile: (704) 746-5046
E-mail: rollans.ashley@yahoo.com

Name and Location of System	Date of Inspection	April 9, 2015
140 Timberside Dr	County	IREDELL
Lot 114 Anniston Subdivision	System Classification	III B

(S=Satisfactory M=Marginal U=Unsatisfactory N=Not Evaluated NA=Not Applicable)

SEPTIC AND PUMP TANKS

S Risers accessible
S Signs of infiltration
S Structurally sound
S Access structurally sound
S Landscape position
S Filter cleaned

PUMP STATION

S Pump present and operating
S High water alarm operating properly
S Floats, pipes, valves and disconnects in good condition/functioning properly
S Control panel in good condition
S Float tree and straps in good condition/present
S Effluent free and clear of solids

DRAINFIELD

Is effluent surfacing? No

S Surface water diverted
S Line cover and vegetation maintained properly
S Protected from traffic
S Distribution devices functioning properly
S Repair area reserved/maintained if required
S Turn-ups/Clean-outs/Valves accessible and protected
S Laterals free of excess solids

Laterals Flushed? Yes if type IV
Designed Number of Bedrooms: 4
Location of Septic Alarm: On Control Panel

LOT 114 ANNISTON

PRESSURE HEADS
(Line 1 refers to upper line)

	Design Head	*Adjusted Head*
Line 1	2'	2'
Line 2		
Line 3		
Line 4		
Line 5		
Line 6		
Line 7		
Line 8		
Line 9		
Line 10		

Design gallons per minute	28.44
Observed gallons per minute	18.75
Percent Efficiency	66%

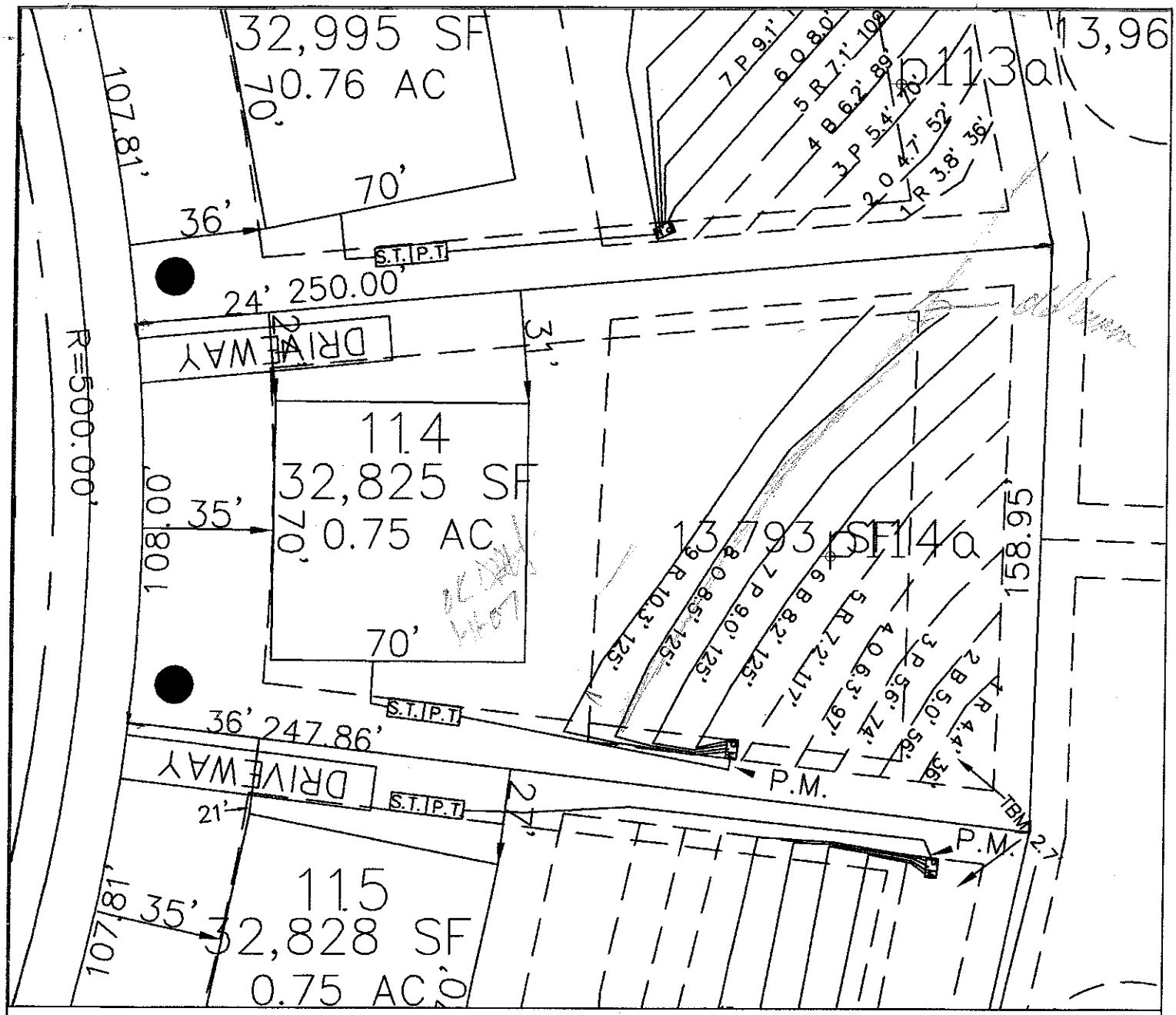
Comments:
The pump's efficiency has dropped since last insepction. Not sure why this is at this time. We will keep an eye on this in future inspections.

Recommendations:
For our record keeping purposes, please email us at rollans.ashley@yahoo.com with the approximate date your septic tank was pumped. In the email please provide your Lot #. This is so we can apply this information to your system's maintenance history.

For Any Questions Please Call Ashley Rollans.

Compliant X Non-Compliant

Ashley Rollans
Certified Operator: License # 996136



LEGEND

- Areas contain soils with 24 inches or more of useable material and have potential for conventional, modified conventional and low-pressure pipe (lpp) septic systems.
- House Footprint (All 70' x 70')
- System lines.
- Repair lines.
- TBM.
- (25) RS&ES Pit Location.
- Well Location.
- [28] Health Dept. Pit Location.

GRAPHIC SCALE
1" = 40'

40 0 40 80

FOR PRELIMINARY PLANNING PURPOSES ONLY. ALL LOTS WILL REQUIRE FINAL APPROVAL BY THE COUNTY HEALTH DEPARTMENT ON A LOT BY LOT BASIS. THIS MAP SHOULD BY USED AS A GENERAL GUIDE, SOME ADJUSTMENTS WILL BE NECESSARY IN THE FIELD DUE TO SOIL VARIABILITY AND COMPLEX TOPOGRAPHIC FEATURES.
THIS MAP ONLY REFLECTS EXISTING SOIL SUITABILITY FOR ON-SITE SEPTIC TANK SYSTEMS.

PLEASE REFER TO ATTACHED SOIL REPORT FOR ADDITIONAL SITE SPECIFIC INFORMATION

ROLLANS SOIL & ENVIRONMENTAL SERVICES
2120 GRAHAM ROAD
MOUNT ULLA, NC 28125
PHONE/FAX: (704) 278-0989
ASHLEY ROLLANS, NC LICENSED SOIL SCIENTIST
MOBILE: (704) 746-5046
EMAIL: ROLLANSFORTCJ@AOL.COM

MAP TITLE: SITE PLAN & DRAINFIELD AREAS

PROJECT NAME: ANNISTON, LLC. / ANNISTON PHASE II

LOCATION/DATE: SHERRER CHAPEL ROAD, IREDELL COUNTY, NORTH CAROLINA, JULY 2008

JOB # :	01-1005
FILE:	C:\JOBS\01-1005
PROJECT MGR.:	S.A.R.
FIELD WORK:	S.A.R.
DRAWN BY:	S.A.R.

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

Sheet 1 of 1
PROPERTY ID #: Lot# 114
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

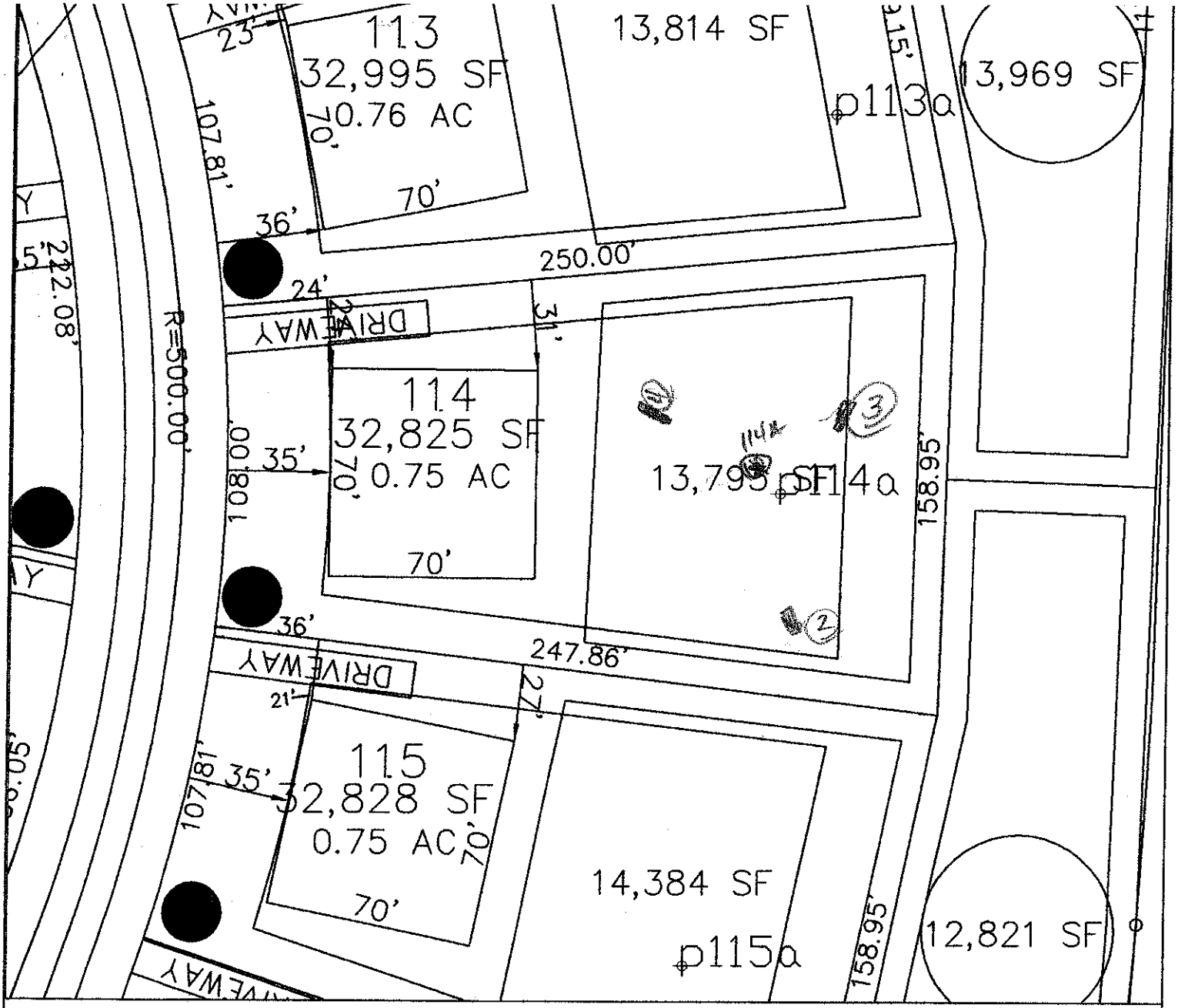
OWNER: Anniston, LLC
ADDRESS: Anniston Phase 3
APPLICATION DATE 10/6/06
DATE EVALUATED: 8/06
PROPOSED FACILITY: 5-bedroom
PROPOSED DESIGN FLOW (.1949): 600gpd
PROPERTY SIZE: ac
LOCATION OF SITE: Shearer's Road, Lt. on Anniston Way, Lt. Timberside Dr.
PROPERTY RECORDED:
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☐ Auger Boring ☐ Pit ☐ Cut
TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON 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
P 114A	LSS 0-5%	0-24	RBC MSBK	FR SS, SP SEXP	—	43"	PS	—	PS 0.3-0.35
		24-43	R CL WSBK	FR SS, SP SEXP	Common Sap				
		43-55	Very LSap Mass	FR SS, SP SEXP	few clay lin				
②	11-8-06	0-22	m-wk sbk C	fr sssp sexp					.3
		22-46	wk sbk cl	fr sssp	common sap lin				
		46-59	massive LSap	fr sssp	few cl lin				
③		0-24	m-wk sbk	heavy CL fr sssp	sexp				.3
		24-49	wk msbk cl	fr sssp	w/ few common sap				
		49-60	massive LSap	fr sssp	few cl lin.				
④	8% L	0-38	m-wk msbk	CL fr sssp	sexp		L		.3
		38-52	wk sbk cl	sap fr sssp					
		52-63	massive LSap	fr sssp	few cl lin.				

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		
System Type(s)		
Site LTAR		

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Samuel Rollans & Brady Freeman
OTHER(S) PRESENT:

COMMENTS:



LEGEND

- Areas contain soils with 24 inches or more of useable material and have potential for conventional, modified conventional and low-pressure pipe (lpp) septic systems.
- House Footprint (All 70' x 70')
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- Repair lines.
- TBM.
- (25) RS&ES Pit Location.
- Well Location.
- [28] Health Dept. Pit Location.

GRAPHIC SCALE
1" = 50'

50 0 50 100

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FIELD WORK:	S.A.R.
DRAWN BY:	S.A.R.

ROLLANS ***Soil & Environmental Services***

2120 Graham Road, Mount Ulla, NC 28125 *Phone/Fax (704) 278 – 0989*

Ashley Rollans, NC Licensed Soil Scientist
(704) 746-5046
Rollansfortcj@aol.com

Brady Freeman, Registered Sanitarian
(704) 746-6497
bfree209@yahoo.com

Attached is a proposed design for an Accepted (25% reduction) Septic System with Pressure Manifold distribution for a 5 bedroom single family residence on Lot #114 Anniston Subdivision, Iredell County, North Carolina.

Contents: **Page**

Information for the Installer---------- 1

Design Information
- Design Specifications---------- 2-3
- Layout Specifications---------- 4
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- Pressure Manifold Diagram---------- 6

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December 27, 2006
Project #: 01-1005
Design By: Rollans Soil and Environmental Services

PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner: Annistion LLC

Address: 17824 Statesville Rd STE 112
Conover, NC 28031
Phone:
County: Iredell
Location: Anniston Subdivision Lot 114

Source of Wastewater Flow: 5 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 600
System Flow: 28.44

Design Specifications

Drainfield Size: 500
Loading Rate: 0.3 gpd/ft.^{2}
Depth of Gravel in Trench: NA (25% reduction)
Gravel Size: NA (25% reduction)
Trench Depth: 36 in.
Trench Width: 36 in.
Septic Tank Size: 1500 gal.
Pump Tank Size: 1500 gal.

Estimated Supply Line Length: 72
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 12.53
Dosing Volume: 228.55
Supply Manifold: 4 in. SCH 80 PVC
Supply Manifold Length: 4 ft. (minimum)
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: 1.28
Elevation Head: 8.80
Total Dynamic Head: 13.89

Threaded Union: In Tank
Gate Valves: 1 in Tank
1 at Pressure Manifold
Check Valves: In Tank
Anti-Siphon Hole: NA
Additional Comments: Soil suitability was performed by Rollans Soil & Environmental Services.

Anniston Subdivision Lot 114
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	600
SOIL APPLICATION RATE:	0.3
TOTAL AREA TRENCH BOTTOM:	1500
TOTAL LATERAL LENGTH:	500
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	500
SUPPLY LINE LENGTH:	72
TOTAL DYNAMIC HEAD:	13.89
MANIFOLD SIZE:	4 in.SCH 80 PVC
DOSING VOLUME:	228.55
PUMP TANK DRAW DOWN*:	7.4
SEPTIC TANK SIZE:	1500 gal.
PUMP TANK SIZE:	1500 gal.

**Pump tank draw down based on a volume basis of 31 gallons per inch. Draw down may vary among pump tank manufacturers.*

ANNISTON LOT #114

Project #: 01-1005

LAYOUT FOR 5 BEDROOM HOME — December 27, 2006

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		2.7			100.00		
TANK		12.00	90.70				
HOUSE		11.10	91.60				
INSTR. 1			102.70				
1	RED			4.40	98.30	36	36
2	BLUE			5.00	97.70	56	56
3	PINK			5.60	97.10	74	74
4	ORANGE			6.30	96.40	97	97
5	RED			7.20	95.50	117	117
6	***BLUE***			***8.20***	***94.50***	***130***	***125***
7	***PINK***			***9.00***	***93.70***	***149***	***125***
8	***ORANGE***			***8.50***	***94.20***	***147***	***125***
9	***RED***			***10.30***	***92.40***	***143***	***125***
					Total	**949**	**880**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
**** System***	***500***	***0.30***	***ACCEPT.***	.3	***25% RED.***	**PRESSURE**
Repair	380	0.30	*MOD.*	.3	PPBPS	**MANIFOLD** LOW PRESSURE

Notes:

** TBM located at top of ground. (see site plan)

**TBM is assumed to be 100'

**All measures in feet

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

**BS, HI, and FS indicate rod readings

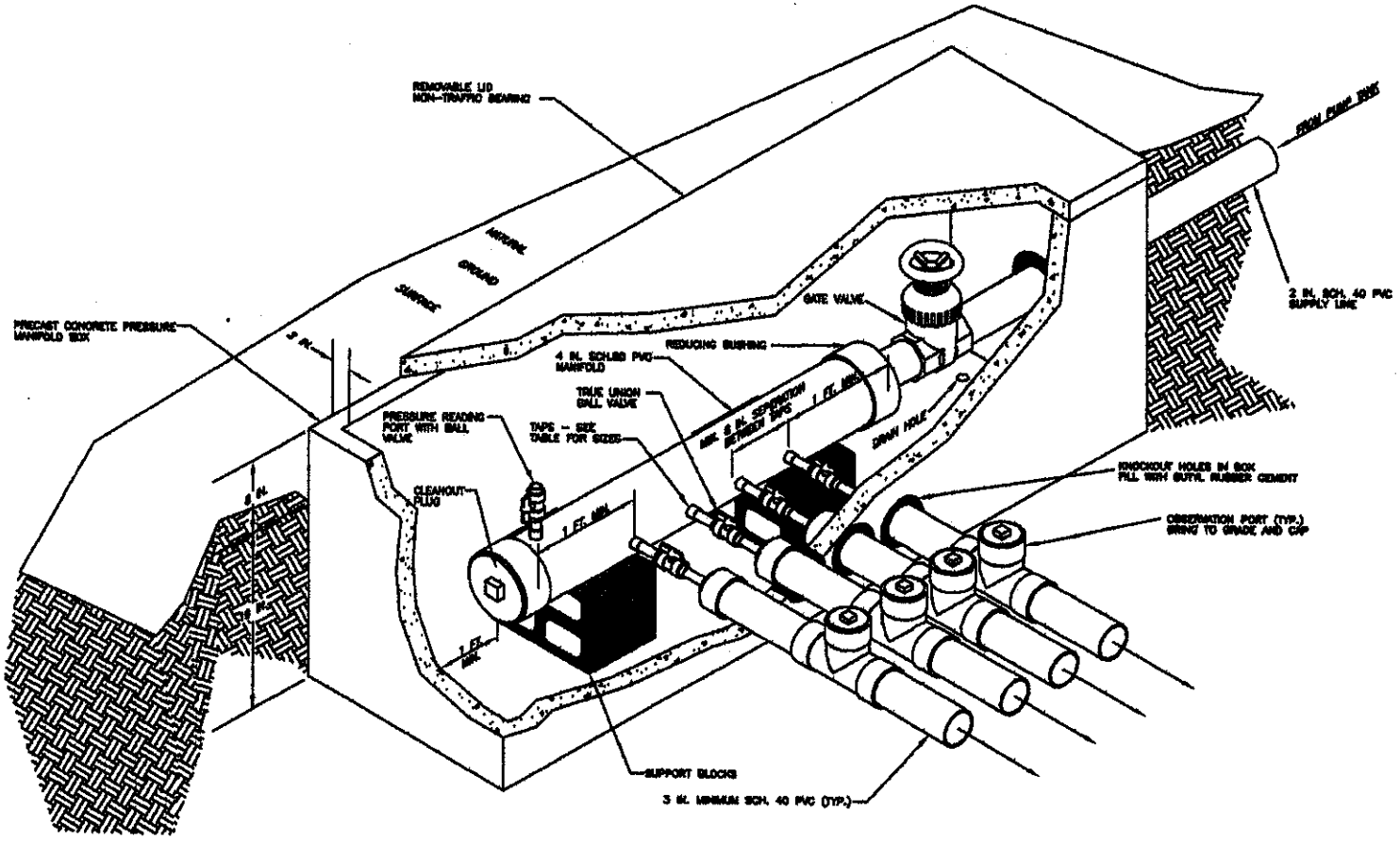
PRESSURE MANIFOLD TAPSHEET - ANNISTON LOT#114

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	Trench Area
6	*BLUE*	94.5	*125*	SCH 40 1/2	7.11	375
7	*PINK*	93.7	*125*	SCH 40 1/2	7.11	375
8	*ORANGE*	94.2	*125*	SCH 40 1/2	7.11	375
9	*RED*	92.4	*125*	SCH 40 1/2	7.11	375

	total	**feet =**	**500**	**gal/min =**	**28.44**	
			Des. Flow	**600**		
			Pump Run=	**8.04**		
			soil LTAR	**0.3**		
			LTAR +5%	**0.315**		
			LTAR with ACCEPTED	**0.33075**		
			LTAR with ACCEPTED + 5%	**0.3472875**		

TYPICAL PRESSURE MANIFOLD DETAIL



CALCULATIONS

Location ANNISTON SUBDIVISION

Project Number 01-1005

Lot No: Lot 114

No. of Bedrooms	5	
Design Flow	600	$^{gal}/_{day}$
LTAR	0.3	$^{gpd/ft^2}$
25% RED.? (YES OR NO)	YES	
Supply Line Length	72	ft.
Supply Line Volume	12.528	gal.
Required Feet of Line	500	ft.
Amount of Line from Layout	500	ft.
Gallons per Minute	28.44	$^{gal}/_{min}$
Required Septic Tank Capacity	1500	gal.
Minimum Standard Tank Size	1500 gal.	
Lateral Line Volume	326.5	gal.
Dosing Volume	228.55	gal.
	Note:	*Dosing Volume based on70% of lateral line volume*
Tank Draw Down	7.4	*Generic Draw Down of 31 gal.per in.*
Pump Run Time	8.04	minutes
Elevation Head	8.8	ft.
Pressure Head	2	ft.
Friction Factor	1.78	ft./100 ft. *(From the interpolater.)*
Friction Head	1.28	ft.
Total Dynamic Head (+15%)	13.89	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