

NOTES

(1) TREE SPECIES AND DRIP LINES ARE APPROXIMATE AND SHOULD BE VERIFIED BY A CERTIFIED ARBORIST.

ALL PVC IS SCHEDULE 40

TREATMENT AND HEADWORKS DETAIL (1 IN = 4 FT)

Elevations, Pipe Run & Slope

(Features Listed in Order of Gravity Fall)

Feature	Invert Elevation (ft)	Pipe Length to Feature (ft)	Slope of Pipe Run (%)	Burial Depth (To Top of Unit)
Finished Floor	1589.0	—	—	—
Septic Tank Inlet	1587.5	6.0	250	6 inches
Septic Tank Outlet	1587.3	—	—	—
Treatment Inlet	1587.0	3.0	100	Top of Unit 2" ABOVE grade
Treatment Outlet	1585.7	—	—	—
Pump Tank Inlet	1585.6	6.0	2	25 inches

ELECTRICAL BLDG PERMIT REQUIRED

Construction Inspections Required w/ Designer & DEH:
1. Layout Inspection - All components staked or painted
2. Open Trench Inspection - Components in & not covered
3. Pump Test - Verification of pumps and alarms operation
4. Final Inspection - All components covered.

INFILTRATIVE AREA CALCULATIONS & SPECIFICATIONS

TYPE OF SEPTIC SYSTEM: Dual Drip Dispersal with Secondary Treatment
DESIGN CALCULATIONS: (To Serve Proposed 5 BR House)

SEPTIC TANK SIZING:

Peak Flow = 600 gpd (5 BR)
2 x Peak Flow = 1,200 gpd
1,500 gal Septic Tank exceeds 2 x peak flow

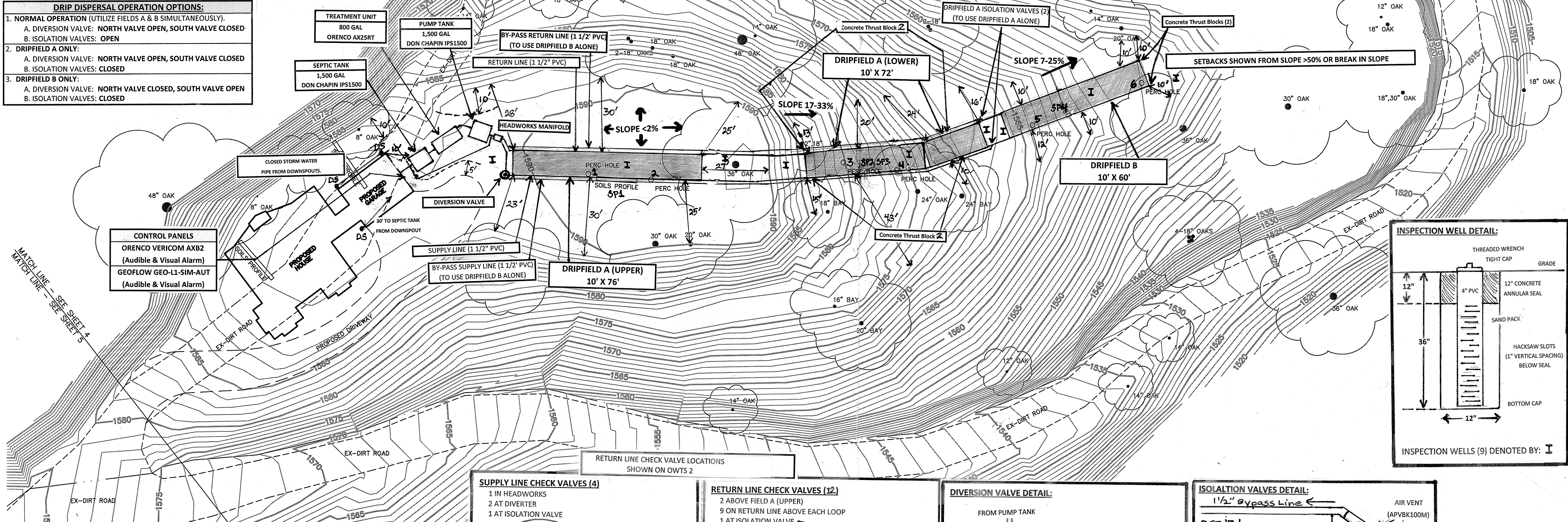
DRIP DISPERSAL SYSTEM A (Upper Area):
Average Percolation Rate (Upper Area): 65 MPI (Test Holes 1 & 2)
Application Rate: 0.2 gal/sq. ft./day (Table DD-1 SCC-OM)
Wastewater Flow: 150 gpd (1 bedroom)
Required Infiltrative Area: 750 sq. ft. (10x76') (150 gpd/0.2 gpd/ft²)
Infiltrative Area per Linear ft. Dripline: 4 sq. ft.
Dripline/Emitter Spacing: 2 ft / 2 ft
Slope in Dispersal Area: Flat (<2%)
Number of Emitters: 190 (760 sq. ft./4 ft² per ft)

DRIP DISPERSAL SYSTEM A (Lower Area):
Average Percolation Rate (Lower Area): 25 MPI (Test Hole 3)
Application Rate: 0.7 gal/sq. ft./day (Table DD-1 SCC-OM)
Wastewater Flow: 500 gpd (4 bedrooms)
Required Infiltrative Area: 714 sq. ft. (10x72') (500 gpd/0.7 gpd/ft²)
Infiltrative Area per Linear ft. Dripline: 4 sq. ft.
Dripline/Emitter Spacing: 2 ft / 2 ft
Slope in Dispersal Area: 17% to 33%
Number of Emitters: 180 (720 sq. ft./4 ft² per ft)

DRIP DISPERSAL SYSTEM B:
Average Percolation Rate: 14 MPI (Test Holes 5 & 6)
Application Rate: 1.0 gal/sq. ft./day (Table DD-1 SCC-OM)
Wastewater Flow: 600 gpd (5 bedrooms)
Required Infiltrative Area: 600 sq. ft. (10x60') (600 gpd/1.0 gpd/ft²)
Infiltrative Area per Linear ft. Dripline: 4 sq. ft.
Dripline/Emitter Spacing: 2 ft / 2 ft
Slope in Dispersal Area: 7% to 25%
Number of Emitters: 150 (600 sq. ft./4 ft² per ft)

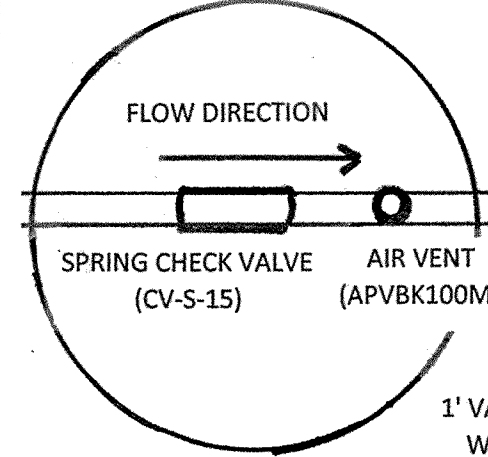
DRIP DISPERSAL OPERATION OPTIONS:

- NORMAL OPERATION (UTILIZE FIELDS A & B SIMULTANEOUSLY).
A. DIVERSION VALVE: NORTH VALVE OPEN, SOUTH VALVE CLOSED.
B. ISOLATION VALVES: OPEN
- DRIPFIELD A ONLY:
A. DIVERSION VALVE: NORTH VALVE OPEN, SOUTH VALVE CLOSED
B. ISOLATION VALVES: CLOSED
- DRIPFIELD B ONLY:
A. DIVERSION VALVE: NORTH VALVE CLOSED, SOUTH VALVE OPEN
B. ISOLATION VALVES: CLOSED



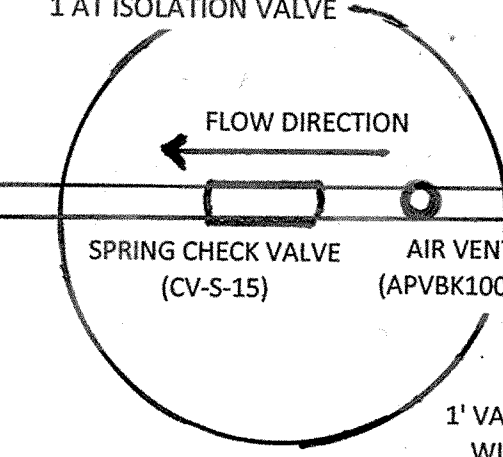
SUPPLY LINE CHECK VALVES (4)

- IN HEADWORKS
- AT DIVERTER
- AT ISOLATION VALVE



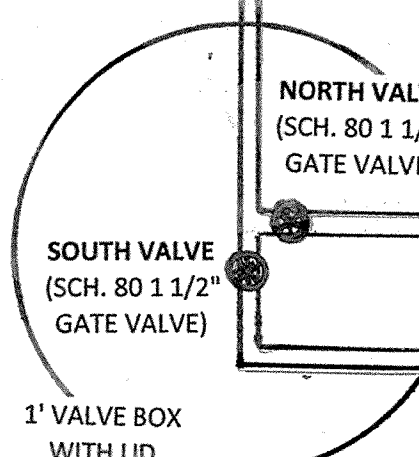
RETURN LINE CHECK VALVES (12)

- 2 ABOVE FIELD A (UPPER)
- 9 ON RETURN LINE ABOVE EACH LOOP
- 1 AT ISOLATION VALVE



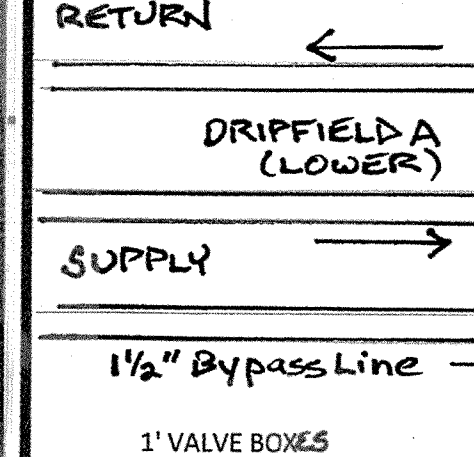
DIVERSION VALVE DETAIL:

- FROM PUMP TANK
- NORTH VALVE (SCH. 80 1 1/2" GATE VALVE)
- SOUTH VALVE (SCH. 80 1 1/2" GATE VALVE)

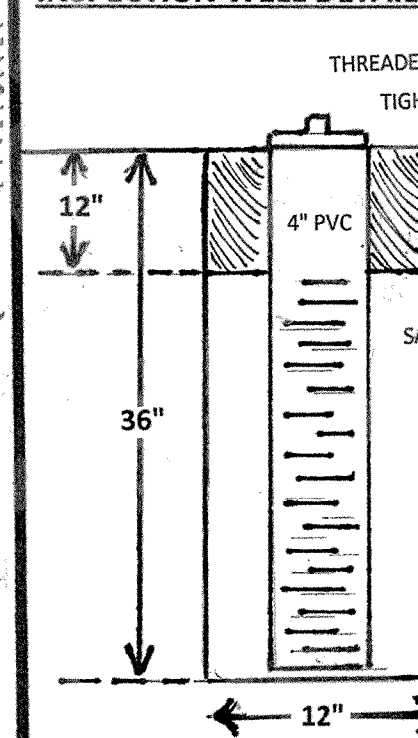


ISOLATION VALVES DETAIL:

- 1 1/2" Bypass Line
- RETURN
- DRIPFIELD A (LOWER)
- SUPPLY
- 1 1/2" Bypass Line



INSPECTION WELL DETAIL:



CARNES & ASSOCIATES

9505 SUGAR BABE DRIVE
GILROY, CALIFORNIA 95020
408-847-2013

TOPOGRAPHIC MAP
CHARLES ARMSTRONG
PARCEL 2, 643 M 2-3
COUNTY OF SANTA CLARA, CA.

DATE: 9-10-16
SCALE: 1" = 20'
DRAWN BY: D.E.
PROJ. MANAGER: G.C.
SHEET: 4 OF 5
Job No. 1616
ARMSTRONG020

Type of System:
Dual Drip Dispersal w/ Treatment

Original: 6/7/2016
Rev. 1
Rev. 2

Plan By: Christopher Day, R.E.H.S.
P.O. Box 26
Redwood City, CA 94063
Tel: 650-253-1005
cday@carnesandassociates.com

Owner: Charles Armstrong
9401 Iron Point Drive, #132
San Jose, CA 95134
Tel: 408-259-2020
charlesarmstrong@gmail.com

22102 Alamos Road
San Jose, CA APN 742-01-039 (SR850386)

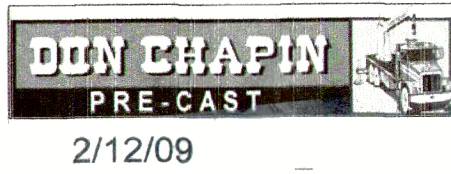
New Septic System to Serve
Proposed 5-Bedroom House

OWTS 1

County of Santa Clara - Department of Environmental Health SOIL PERCOLATION TEST RECORDED MEASUREMENTS											
OWNER/APPLICANT: Charles Armstrong LOCATION: 22102 Alamitos Rd, San Jose, CA CONTACT PERSON: Christopher Day, R.E.H.S.				SR #: SR0850386 REHS: Ross Kakinami PHONE: 650-293-1045				PLN FILE #: DATE: 5/4/2016			
TEST TIME	DEPTH	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	TIME
1:27	1:27	19 14/16	21 3/16	30	1:51	1:58	18 5/16	19 10/16	30	1:27	21
1:57	2:27	15 1/2	18 14/16	30	1:58	2:28	14 1/4	14 14/16	30	5:08	48
2:27	2:57	15 9/16	16 1/2	30	1:16	2:28	14 1/16	14 1/16	30	1:21	60
3:58	3:38	14 15/16	16	30	1:16	2:28	14 1/16	14 1/16	30	7:16	60
3:59	3:59	14 1/4	15 1/16	30	1:15	2:27	13 1/4	13 1/16	30	7:26	60
NOT STABILIZED											
TEST TIME	DEPTH	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	TIME
1:28	1:28	19 9/16	20 9/16	30	1:28	1:28	15 1/16	15 1/16	30	2:16	11
2:08	2:08	17 1/8	19	30	1:28	2:01	14 3/4	14 3/4	30	2:16	11
2:30	2:30	17 9/16	18 5/16	30	1:54	2:30	14 3/4	14 3/4	30	2:16	11
3:00	3:00	17 1/4	18 13/16	30	1:56	3:02	14 1/4	14 1/4	30	2:16	11
3:31	3:31	17 5/16	19 1/16	30	1:54	3:31	14 5/16	14 5/16	30	2:16	11
4:12	4:12	17 5/16	19 1/16	30	1:54	4:12	14 5/16	14 5/16	30	2:16	11
NOT STABILIZED											
TEST TIME	DEPTH	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	TIME	WATER LEVEL	TIME
1:30	1:30	17 9/16	18 5/16	30	1:58	1:30	15 1/16	15 1/16	30	2:16	11
2:01	2:01	17 1/8	19	30	2:01	2:01	14 3/4	14 3/4	30	2:16	11
2:34	2:34	17 1/8	19	30	2:34	2:34	14 3/4	14 3/4	30	2:16	11
3:04	3:04	17 1/8	19	30	2:34	3:04	14 3/4	14 3/4	30	2:16	11
3:37	3:37	17 1/8	19	30	2:34	3:37	14 3/4	14 3/4	30	2:16	11
4:12	4:12	17 1/8	19	30	2:34	4:12	14 3/4	14 3/4	30	2:16	11
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2:01	2:01	17 1/8	19	30	2:01	2:01	14 3/4	14 3/4	30	2:16	11
2:34	2:34	17 1/8	19	30	2:34	2:34	14 3/4	14 3/4	30	2:16	11
3:04	3:04	17 1/8	19	30	2:34	3:04	14 3/4	14 3/4	30	2:16	11
3:37	3:37	17 1/8	19	30	2:34	3:37	14 3/4	14 3/4	30	2:16	11
4:12	4:12	17 1/8	19	30	2:34	4:12	14 3/4	14 3/4	30	2:16	11
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2:01	2:01	17 1/8	19	30	2:01	2:01	14 3/4	14 3/4	30	2:16	11
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3:37	3:37	17 1/8	19	30	2:34	3:37	14 3/4	14 3/4	30	2:16	11
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NOT STABILIZED											
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2:01	2:01	17 1/8	19	30	2:01	2:01	14 3/4	14 3/4	30	2:16	11
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3:04	3:04	17 1/8	19	30	2:34	3:04	14 3/4	14 3/4	30	2:16	11
3:37	3:37	17 1/8	19	30	2:34	3:37	14 3/4	14 3/4	30	2:16	11
4:12	4:12	17 1/8	19	30	2:34	4:12	14 3/4	14 3/4	30	2:16	11
NOT STABILIZED											

THE DON CHAPIN COMPANY
PRE-CAST DIVISION
2735 BOLSA RD.
HOLLISTER, CA 95023
831-630-1042
831-630-5763 FAX

PRE-CAST CONCRETE WATER TIGHT
SEPTIC TANK
CAPACITY 1500 GALLONS
MODEL IPS1500



2/12/09

Soil Analysis Test Data
SR - 0850386 (APN 742-01-039)
Owner: Charles Armstrong

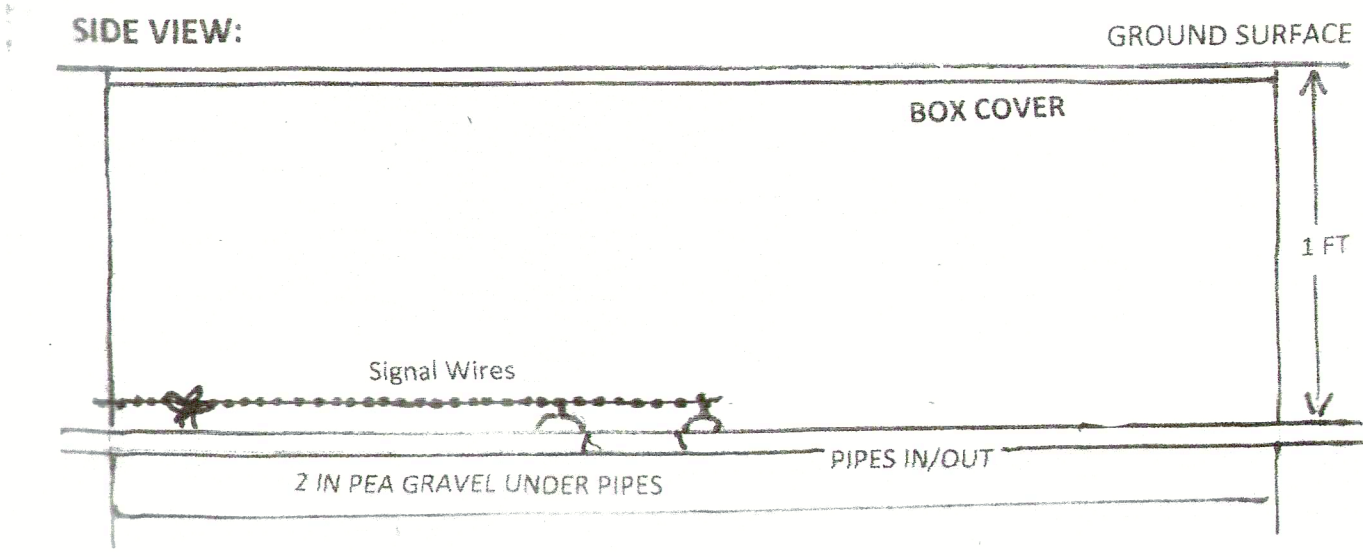
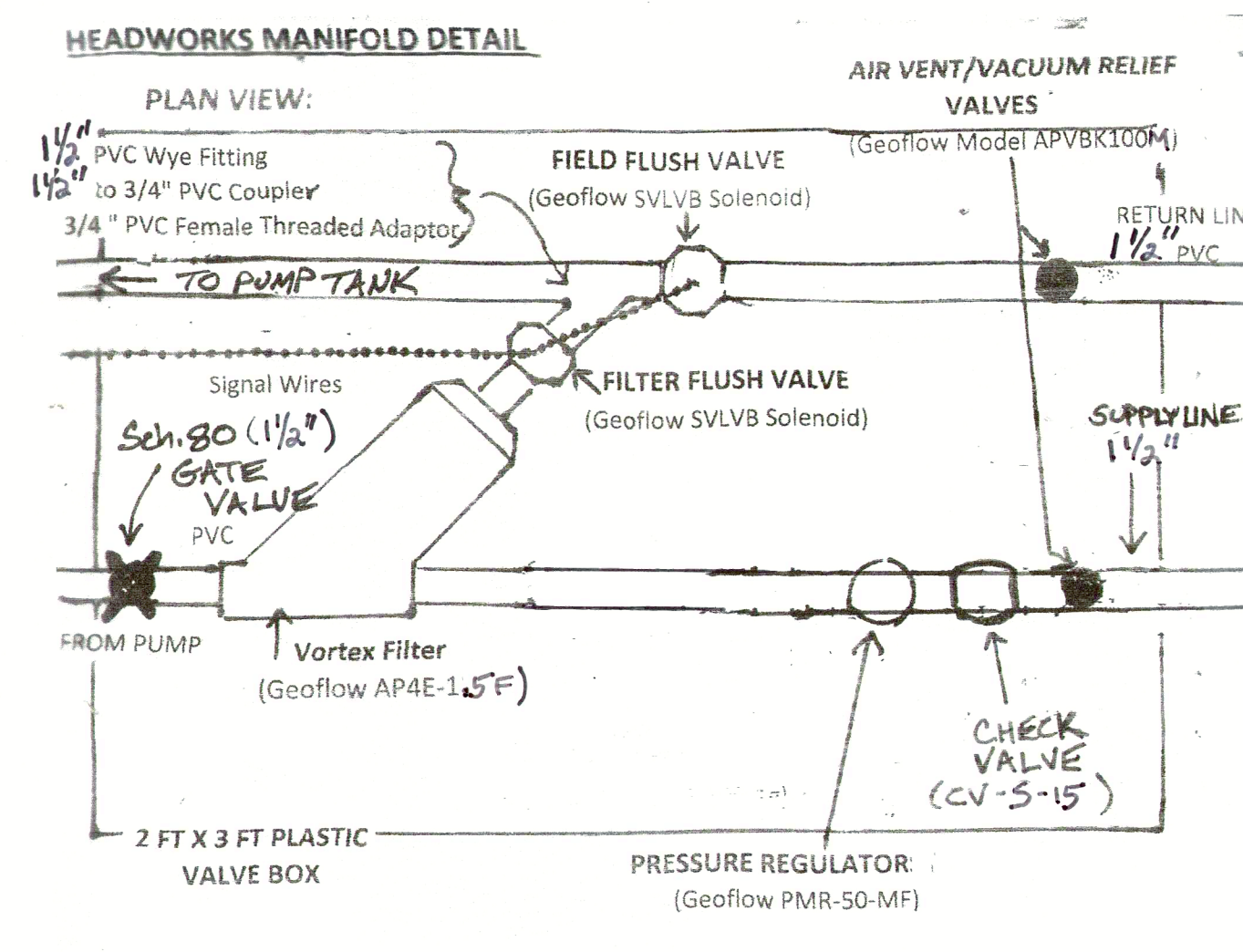
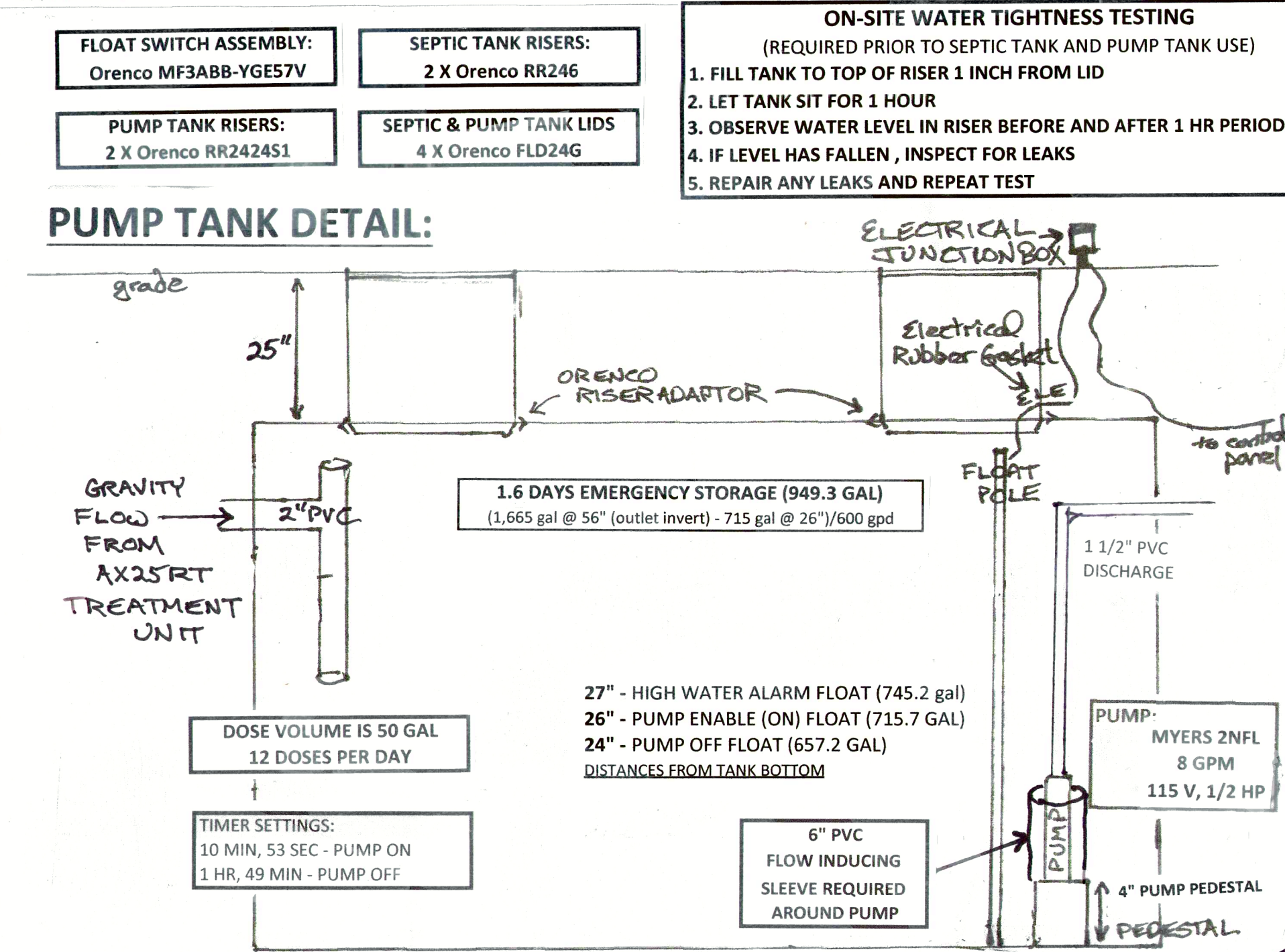
22102 Alamitos Rd, San Jose CA
Test Conducted on 5/3/2016
By Chris Day, R.E.H.S. Tel. 650-293-1045
Witnessed by Ross Kakinami, R.E.H.S.

Soil Profile Test Hole #1	Depth: 4 ft.	
0 to 48"	Clayey Sand and Fractured Greenstone Roots Coarse & Few Pores Coarse & Common Weak Subangular Structure Less Than 15% Rock Dry Condition of Soil Color Medium Brown No Mottling	Not Restrictive
48"	Bedrock & Refusal	Restrictive

Soil Profile Test Hole #2	Depth: 7 ft.	
0 to 3"	Loam Roots Fine & Common Pores Coarse & Common Weak Subangular Structure Less Than 15% Rock Dry Condition of Soil Color Medium Brown No Mottling	Not Restrictive
3" to 84"	Clayey Sand and Fractured Greenstone Roots Coarse & Few Pores Coarse & Common Weak Subangular Structure Less Than 15% Rock Dry Condition of Soil Color Medium Brown No Mottling	Not Restrictive

Soil Profile Test Hole #3	Depth: 7 ft.	
0 to 3"	Loam Roots Fine & Common Pores Coarse & Common Weak Subangular Structure Less Than 15% Rock Dry Condition of Soil Color Medium Brown No Mottling	Not Restrictive
3" to 84"	Sandy Silty Clay Roots Coarse & Medium Pores Medium & Common Weak Subangular Structure Less Than 15% Rock Dry Condition of Soil Color Dark Tan No Mottling	Not Restrictive

Soil Profile Test Hole #4	Depth: 5 ft.	
0 to 3"	Loam Roots Fine & Common Pores Coarse & Common Weak Subangular Structure Less Than 15% Rock Dry Condition of Soil Color Medium Brown No Mottling	Not Restrictive
3" to 60"	Sandy Silty Clay Roots Coarse & Medium Pores Medium & Common Weak Subangular Structure Less Than 15% Rock Dry Condition of Soil Color Dark Tan No Mottling	Not Restrictive



Vortex Screen Filter

Item Number	Size (MPT)	Max. Flow rate (GPM)	Filtration (mesh)	Max. Pressure (psi)	Width (ft.)	Height	Flush Port (MPT)	Area of Filtration (inches²)
AP4E-1.5F	1.5"	45	150	100 231	12"	15.5"	3/4"	60.8

Pressure Regulators

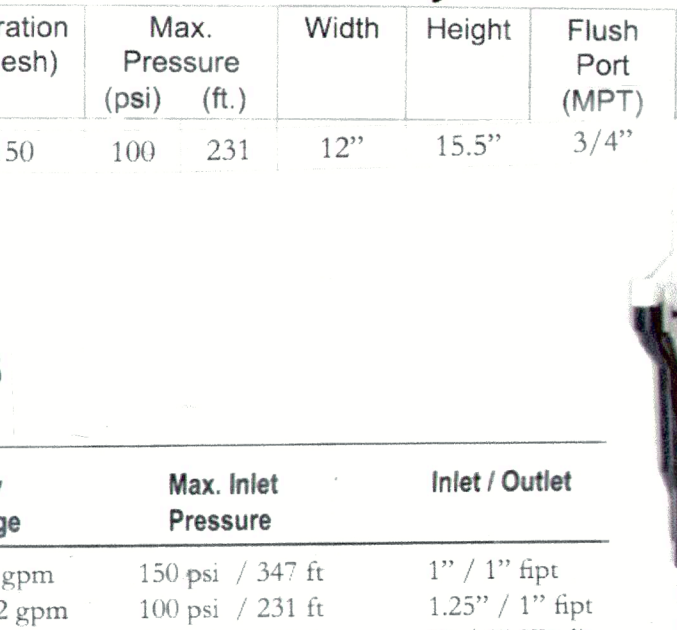
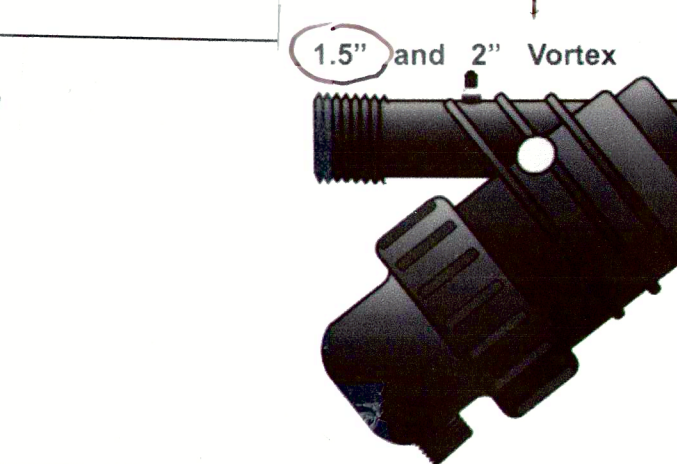
Item No.	Outlet Pressure	Flow Range	Max. Inlet Pressure	Inlet / Outlet
PMR-50-MF	50 psi	2-20 gpm	150 psi / 347 ft	1" / 1" fpt
PMR-50-11F	50 psi	10-32 gpm	100 psi / 231 ft	1.25" / 1" fpt
PMR-50-XF	50 psi	20-90 gpm	125 psi / 289 ft	3" / 3" ID slip

Spring Check

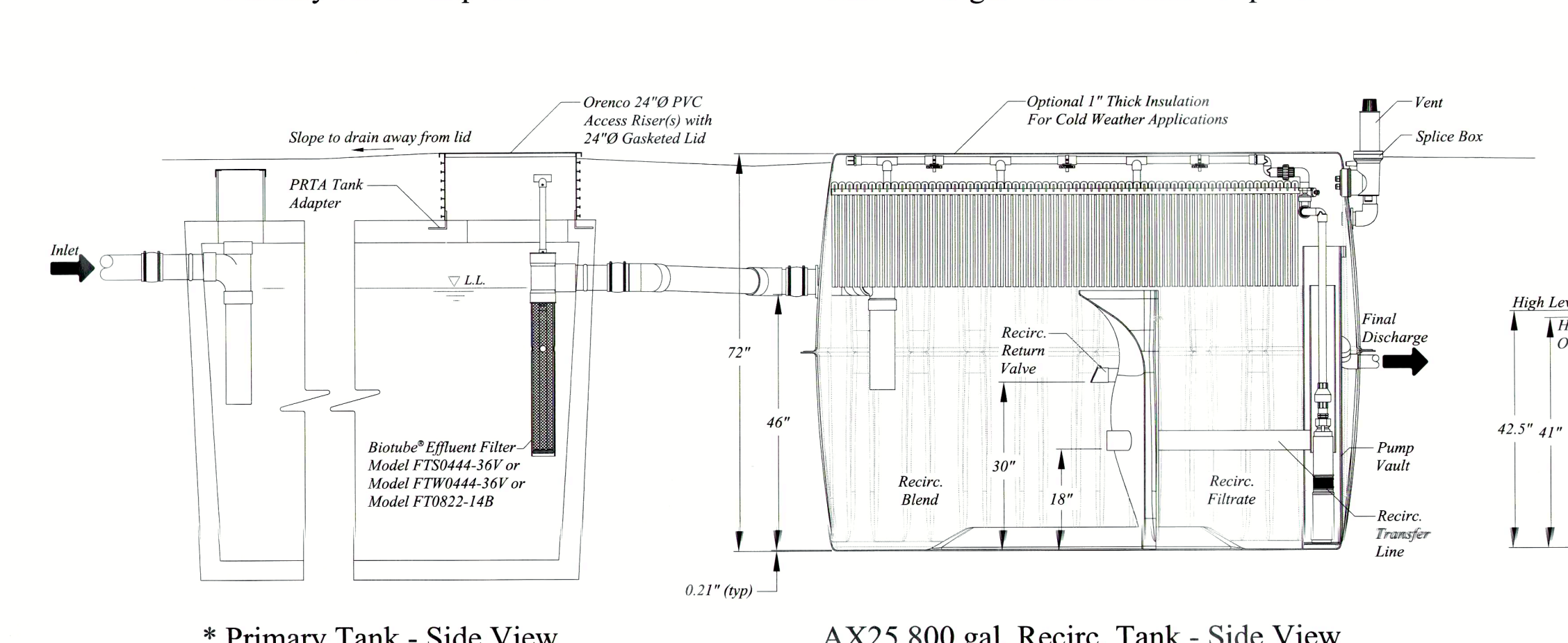
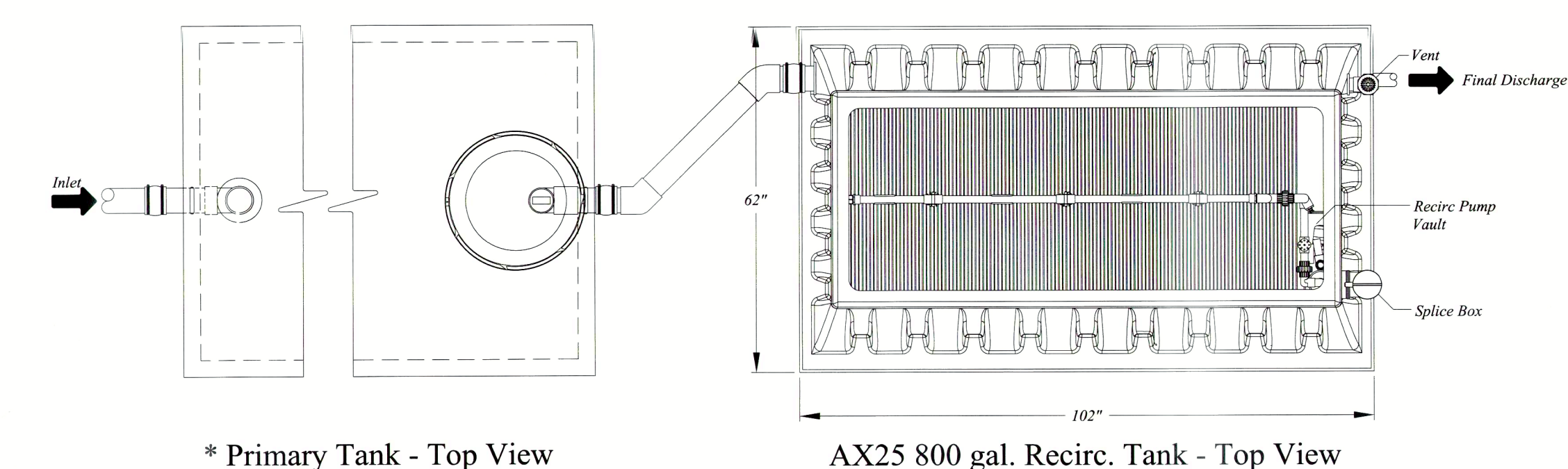
Spring Check Valve Description
The spring check valve is used to prevent backflow and siphoning. The 3/4 pound stainless steel spring maintains a positive seal, even when no back pressure is present. Minimum of 2 psi required to open the valve.

Model No.	Inlet/Outlet (FPT or socket)	Length (inches)	Height (inches)	Max Temp (F)
CV-S-05	0.5"	4.13"	2.22"	140 °
CV-S-10	1.0"	5.25"	2.88"	140 °
CV-S-15	1.5"	5.9"	3.89"	140 °
CV-S-20	2.0"	7.0"	4.29"	140 °

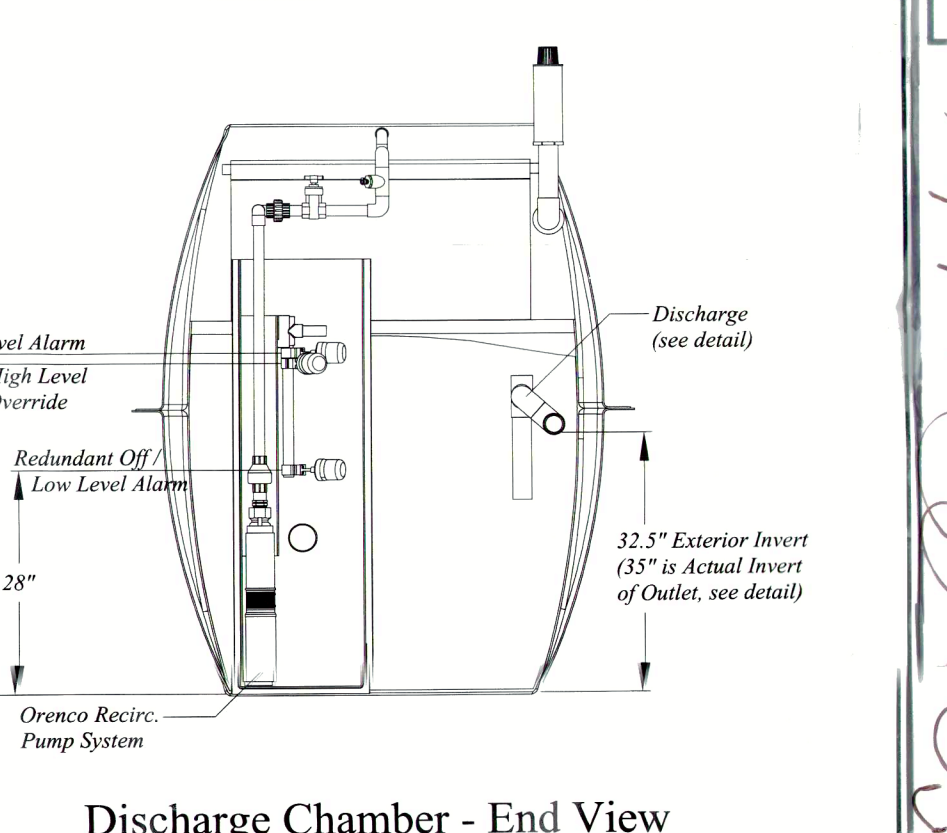
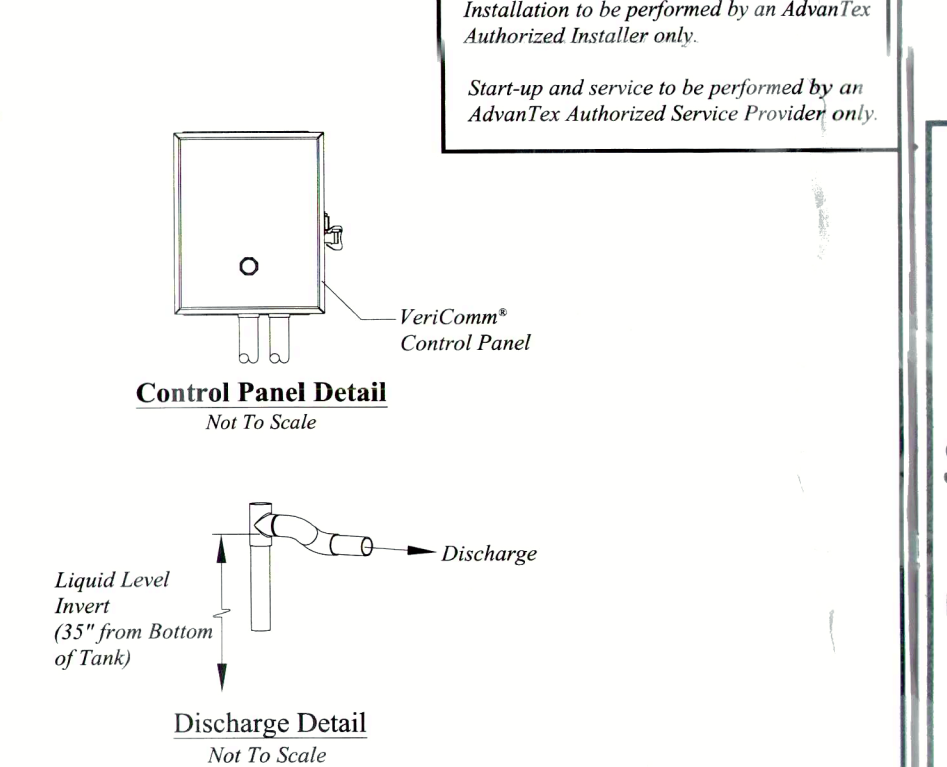
Inlet/Outlet Size (FNPT)	Length (L)	Height (H)	Width (W)	R	Weight	Valve pattern	Operating range	Max pressure	Materials	Body & cover	Metal parts	Diaphragm	Seals
1.5"	6.3"	7.2"	5.0"	1-3/8"	2.2 lbs.	Globe	10 - 150 psi	180 deg F	Nylon reinforced	Stainless steel	Natural rubber	NBR & NR	



AX25RT Treatment System - Gravity Discharge

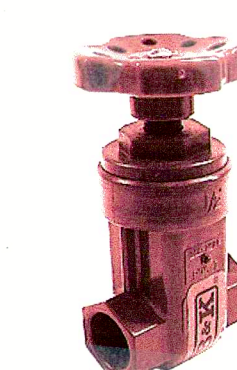


AX25 800 gal. Recirc. Tank - Side View



Discharge Chamber - End View

1-1/2" PVC, Schedule 80
Solvent Gate Valve



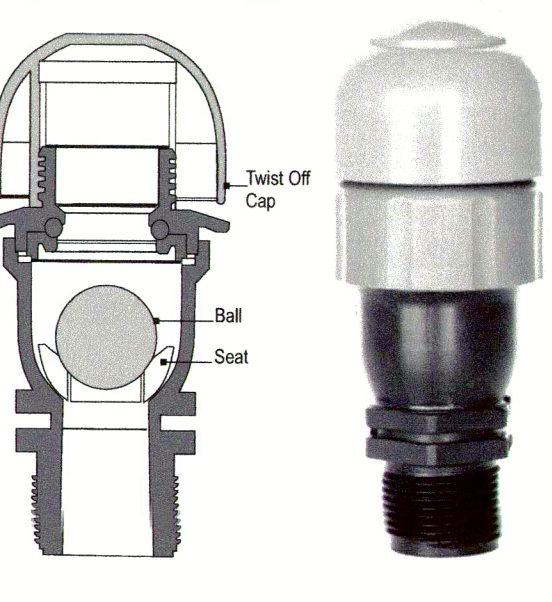
TECHNICAL SPECS

Item	Gate Valve
Class	Class 1504-C
Pipe Size	1-1/2"
Connection Type	Solvent
Body Material	PVC, Schedule 80
Top of Handle to Inlet Center	6-25/64"
Inlet to Outlet Length	3-11/16"
Max. Valve Pressure	150 psi
Max. Fluid Temp.	180 Degrees F
Valve Stem Type	Rising
Stem Material	PVC
Bonnet Style	Screwed
Wedge Material	Polysynthetic
Handle Material	PVC
Handle Type	Hand Wheel
Standards	NSF Approved, ASTM D2564

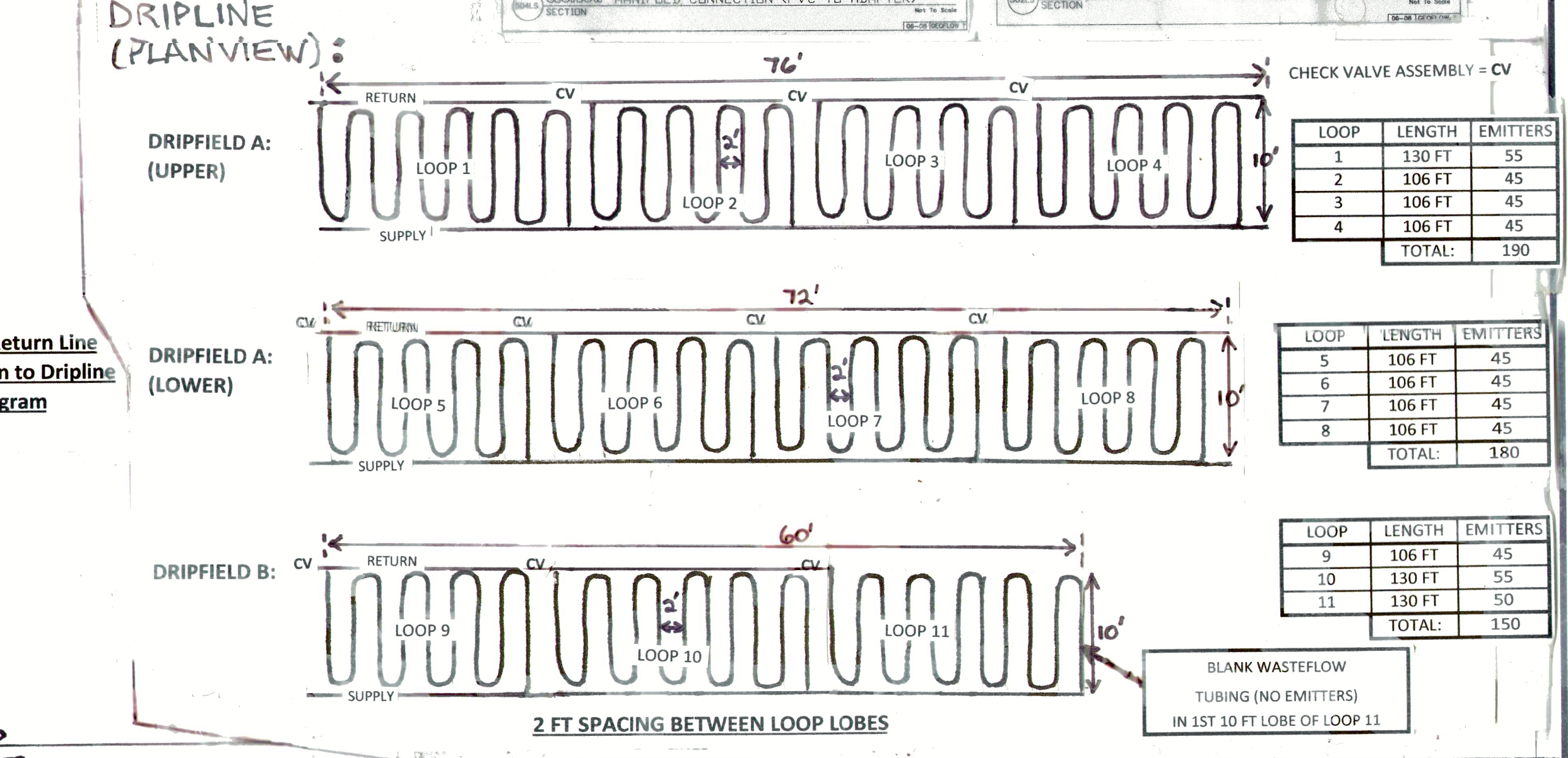
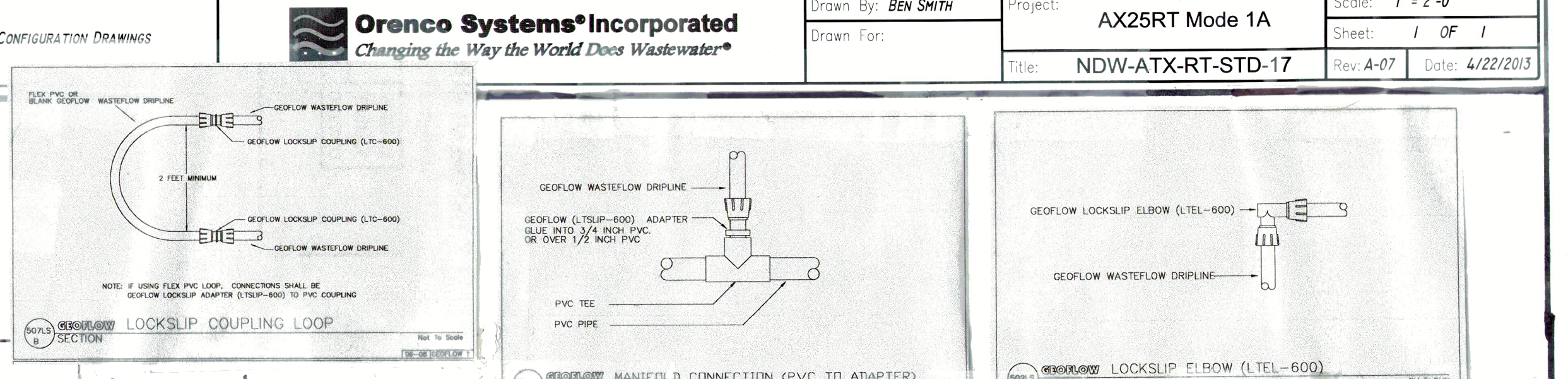
DRIPLINE & DRIP FIELD:

WASTEFLOW PC 1/2 gph
Standard products:
WFPC16-2-24 WASTEFLOW PC 24"/53gph or 2lph

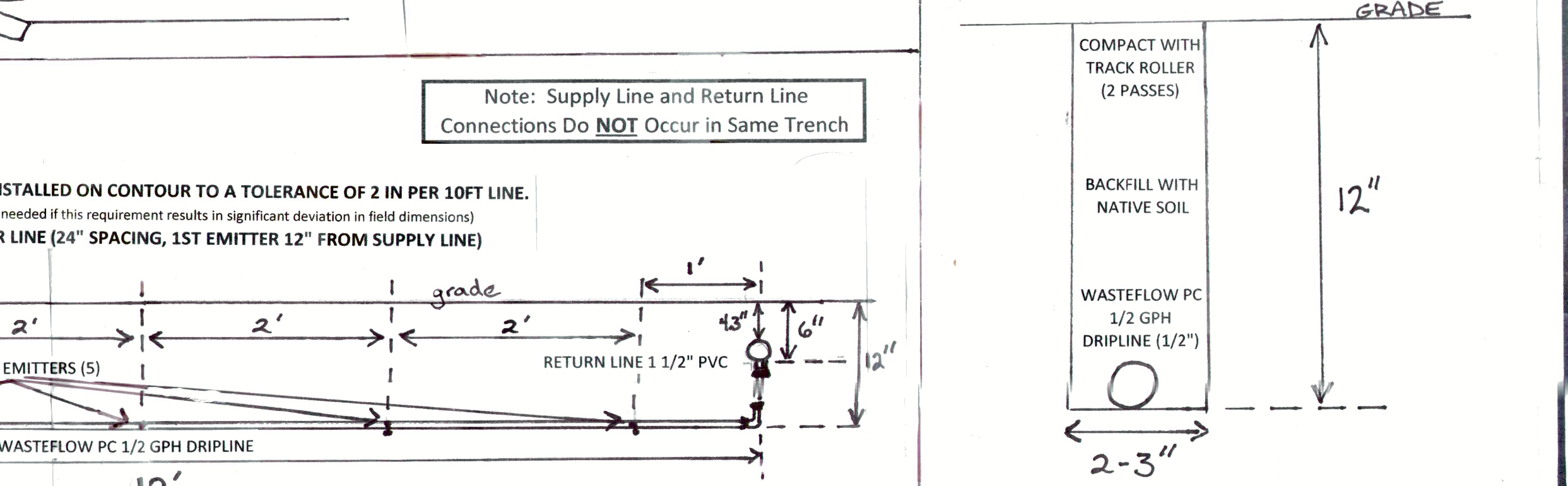
AIR VENTS:



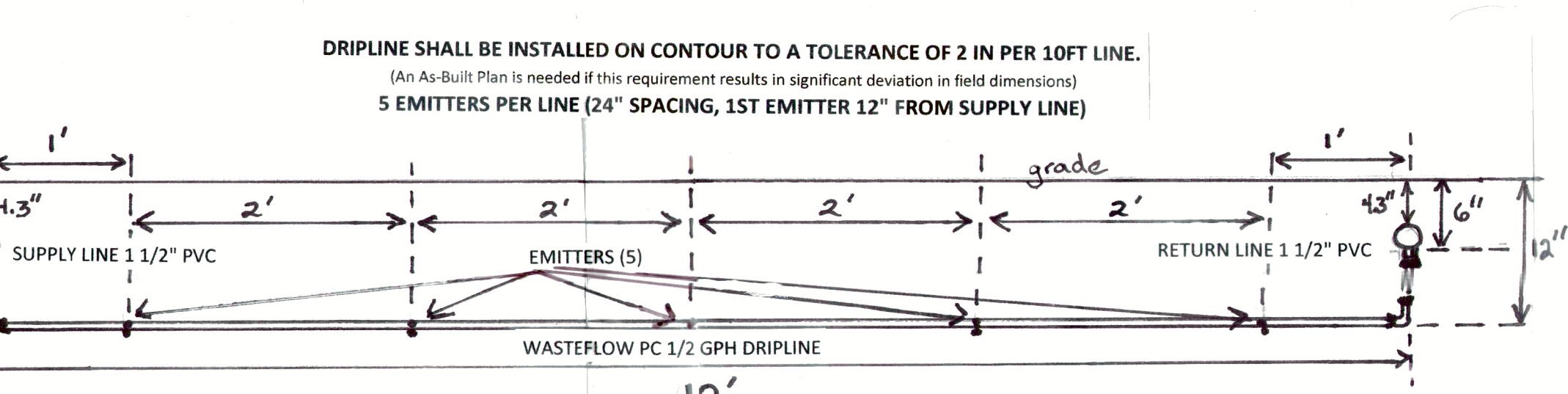
Part No.	APVBK100M
Inlet	1"
Max Pressure	80 psi/185 ft.
Max Temp	140° F
Height	5.5"
Weight	1.2 oz.



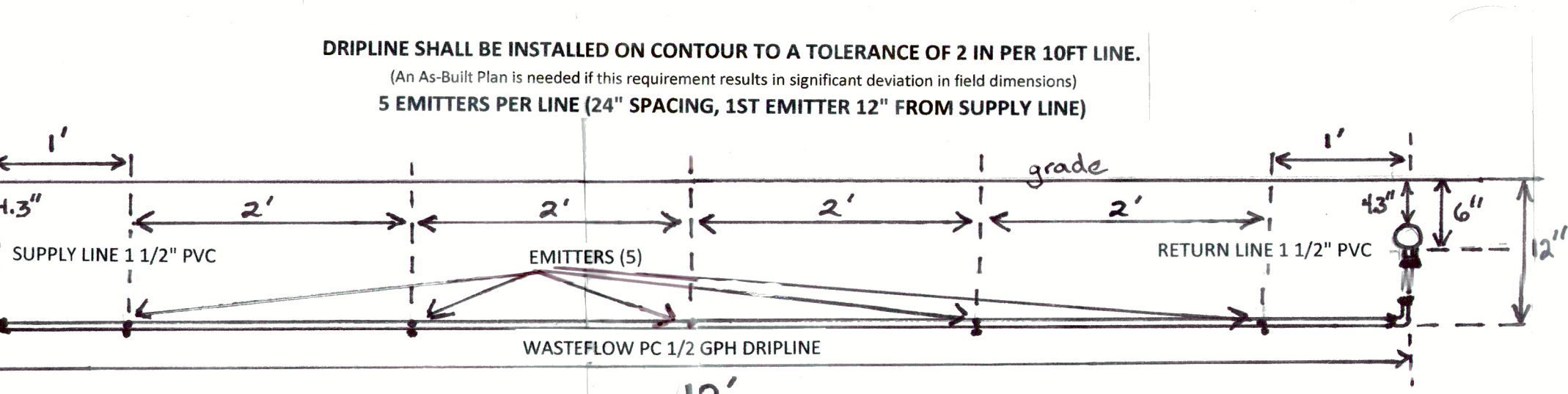
Dripline Trench Cross Section (Not to Scale):



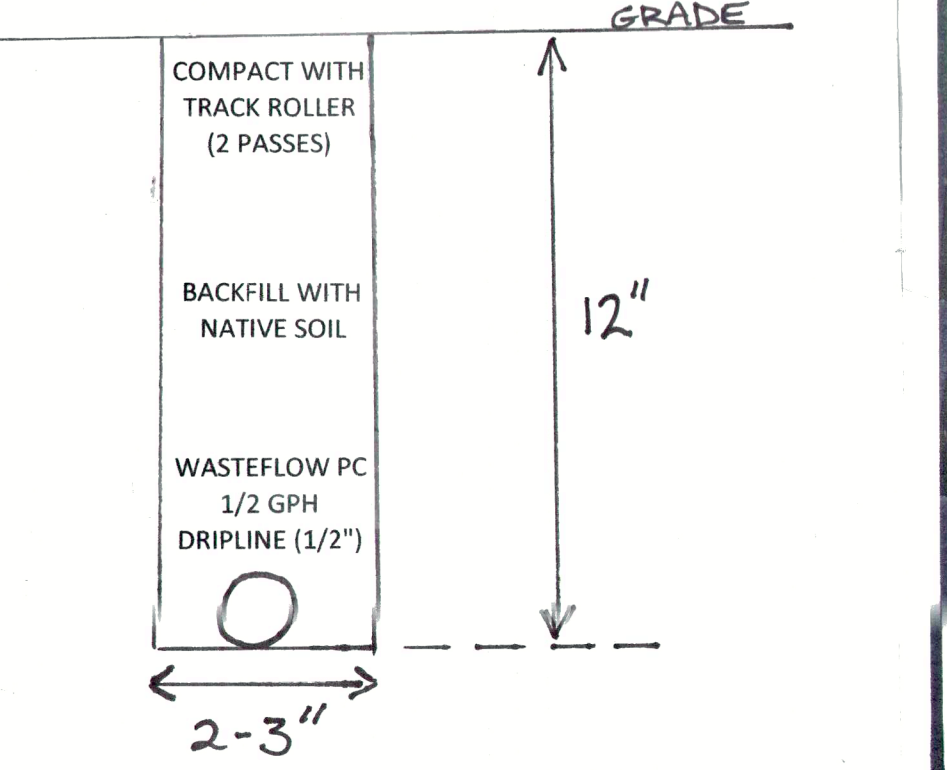
Dripline Trench Front View (1 IN = 1 FT)



Note: Supply Line and Return Line Connections Do NOT Occur in Same Trench



DRIPLINE SHALL BE INSTALLED ON CONTOUR TO A TOLERANCE OF 2 IN PER 10 FT LINE.
(An As-Built Plan is needed if this requirement results in significant deviation in field dimensions)
5 EMITTERS PER LINE (24" SPACING, 1ST EMITTER 12" FROM SUPPLY LINE)



Type of System:
Dual Drip Dispersal w/ Treatment

Original: 6/17/2016
Rev. 1: 8/20/2016
Rev. 2: 8/20/2016

Plan By: Christopher Day, R.E.H.S.
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chris.day@earthlink.net

Owner: Charles Armstrong
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San Jose, CA 95134
Tel. 415-290-1045
charles.armstrong@gmail.com

22102 Alamitos Road
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New Septic System to Serve
Proposed 5-Bedroom House
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