TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

PERMIT FOR CONSTRUCTION OF SUBSURFACE SEWAGE DISPOSAL SYSTEM

Issued to: Humberto Segovia

Location:
County: Marshall
Address: 1974 Fayetteville Hwy
City: Belfast
Subdivision: _____
Lot #: _____

Map: _____ Group: _____ Parcel: _____

Installation:
(**X**) 1. New Installation
( ) 2. Repair to Existing System
( ) 3. System Modification
( ) 4. Large System

Establishment:
(**X**) 1. Residential: # Bedrooms **2**
( ) 2. Other: _____
Gal/Day: _____

Evaluation Based Upon:
(**X**) 1. Soil Typing by Soil Scientist
( ) a. General
( ) b. High Intensity
(**X**) c. Extra High Intensity
( ) 2. Soil Percolation Test
( ) 3. Environmental Scientist
Estimated Absorption Rate: _____ MPI

Type of System:
( ) 1. Conventional
( ) 2. Modified Conventional
( ) 3. Conventional System Substitute
( ) Chamber
( ) Expanded Polystyrene
( ) Large Diameter Gravelless Pipe
Gravel backfill in a 24 in. wide trench required? _____
( ) 4. Low Pressure Pipe
( ) 5. Mound
( ) 6. Lagoon
(**X**) 7. Subsurface Drip System
( ) 8. Other: _____

Approval Based Upon: State No. T.C.A. 68-221-403
( ) (c) Percolation Test
( ) (d) Grandfather Clause - Current standards except those specified
( ) (f) 12" (karst) and 6" (non-karst) buffer required
( ) (m) 3rd Party Permit Package
( ) (i) 9" Buffer required (24"-36" total soil depth)
( ) (k) Grandfather Clause - Meets June 30, 1990, standards (repair only)
(**X**) Current Standards
( ) Other: _____

The system shall consist of a two-compartment septic tank holding _____ (min) gallons, with _____ linear feet in _____ trenches, _____ inches wide and 8 (min) to 8 (max) inches in depth. (Depth of gravel: _____ inches)

SIP Depth (in): _____ **SIP Length (ft):** _____
SIP Comments: Installer per attached engineer design, minimum of 36 inches deep or to rock.

General Comments:
See attached engineer design package. All changes for design must be approved by engineer and TDEC. System design is approved for 2 bedroom, tract #1 on attached soil map.

Also Required:
(**X**) 1. Soil Improvement Practice (SIP)
( ) Curtain Drain
( ) Drawdown Drain
(**X**) Interceptor Drain
( ) 2. Flow Diversion Valve
(**X**) 3. Sewage Pump
Pump Flow Rate (gpm): _____
TDH (ft): _____
(**X**) 4. Single Compartment Pump Tank, Volume (gal): **1,500**
(**X**) 5. Other: Fuji CE-5 Unit

All installers of subsurface sewage disposal systems must hold a valid annual license from the Tennessee Department of Environment and Conservation.

Please see attached drawing and supporting documentation.

The recipient of this permit agrees to construct or have constructed the above-described system in accordance with T.C.A. 68-221-401 et. seq. and The Regulations To Govern Subsurface Sewage Disposal Systems. If any part of the system is covered before inspected and approved, it shall be uncovered by the recipient of the permit at the direction of personnel of the Department of Environment and Conservation. **Any cutting, filling or alterations of the soil conditions on the aforementioned property after this day may render this approval null and void.**

By: Steve Lomax (DWR Staff) **Date:** 02/17/2026 (Date of Issue)

This permit is valid for 3 years from date of issue.
This is a permit to construct and is not intended to imply approval of any work proposed or completed on this lot.

Tract 1, Fayetteville Hwy.
Marshall County

Drip System Design Calculations:

The disposal system will be designed for timed dosing and shall utilize "constant flushing" during dosing periods. Constant flushing shall be controlled by a 1.0" ball valve that is adjusted to supply the drip supply line with ~ 15.6 GPM.

Drip pipe will be Netafim ½" diameter utilizing emitters at 24" spacing (or engineer approved equal), with 0.60 GPH emitters, installed at 24" spacing between lines. Drip supply line shall be 1.5" diameter schedule 40 PVC, and return line shall be 1.25" schedule 40 PVC.

Normal Dose Flow:
Design Flow = 300 GPD
Dose Rate = 0.1 GPD/SF
Line spacing = 2'
Drip area = 3,000 SF
Drip Line Length = 1,500 LF
Emitters = 750
Dose Rate = 7.6 GPM

Flush Flow:
Distal Ends = 5
Flow Flush = 8 GPM

TOTAL Flow Reqd. = 15.6 GPM

HL Calculations:

Minimum at lateral entrance =	54.4'
Supply Line – 500' of 1.5" @ 15.6 GPM =	7.9
Return Line – 527' of 1.25" @ 8 GPM =	5.1
Disc Filter @ 15.6 GPM =	Neg
1.25 Supply Flow Meter @ 15.6 GPM =	4.5'
1" Return Flow Meter @ 8 GPM =	3.7'
1-inch Ball Valve @ 8 GPM =	Neg
Elevation	13'
TOTAL Required Head	89'

Final dose tank shall house one ½ HP STEP20 pump By Pentek (or engineer approved equal).

*INLET PRESSURE = 137.5' - 7.9' - 4.5' - 13' = **112.1' (48.5 PSI)***

Minimum dose time:

1. Supply 10.6 gallon/100/ (53 gallons)
2. Return 7.8 gallon/100' (41 gallons)
3. Drip emitter piping (20 gallons)
4. Misc. (5 gallons)

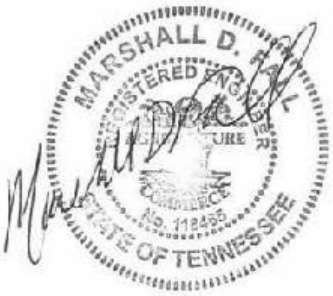
Total line volume to fill = ~ 106.3 Gallons

Fill Time: Supply line (53 gal / 15.6 gpm) + Drip line (20 / 15.6 gpm) + Return line (41/ 8 GPM) + misc. (5/ 8 gpm) = 10.4 minutes

Minimum Dose Time:

Minimum Dose volume= 60 Gallons.

Minimum Dose time= 11 min (Fill time) + 60 Gallons / 7.6 GPM (Dose time) **18 Minutes**



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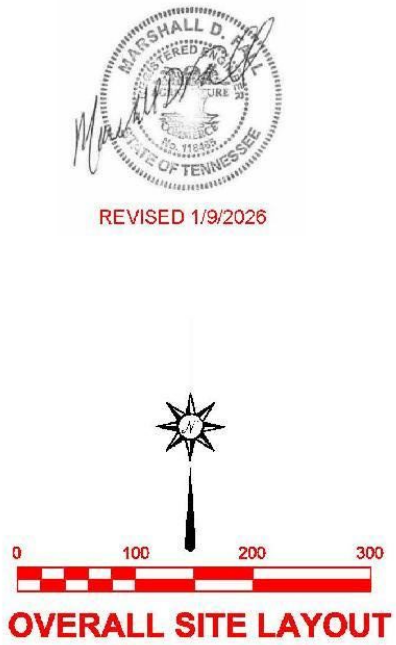
TriState ENVIRONMENTAL
ENGINEERING & CONSULTING



REVISED 1/9/2026

0 100 200 300

OVERALL SITE LAYOUT

TriState ENVIRONMENTAL
ENGINEERING & CONSULTING

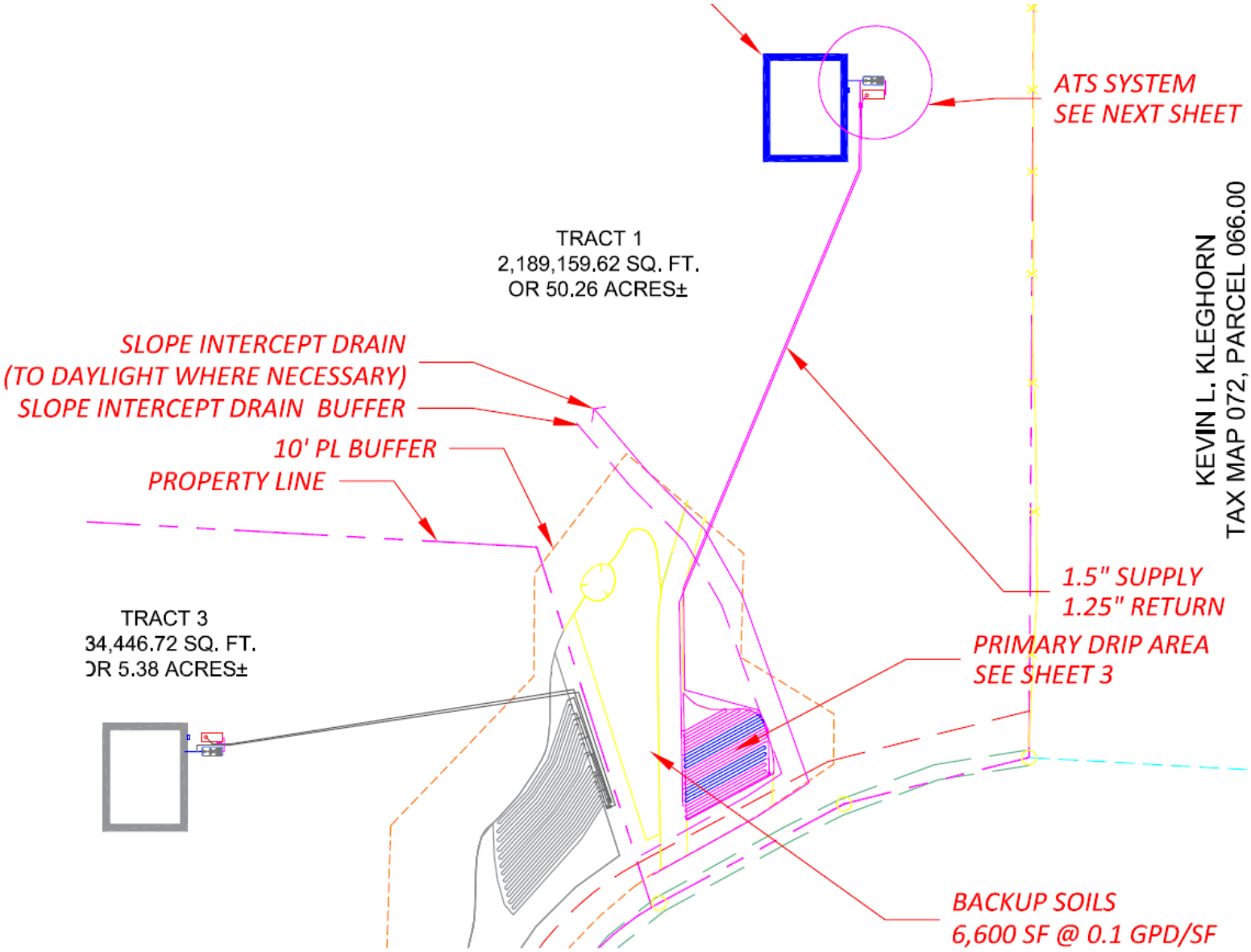
655 Stewart Valley Drive
SMYRNA, TN 37167
P: 615.428.0923

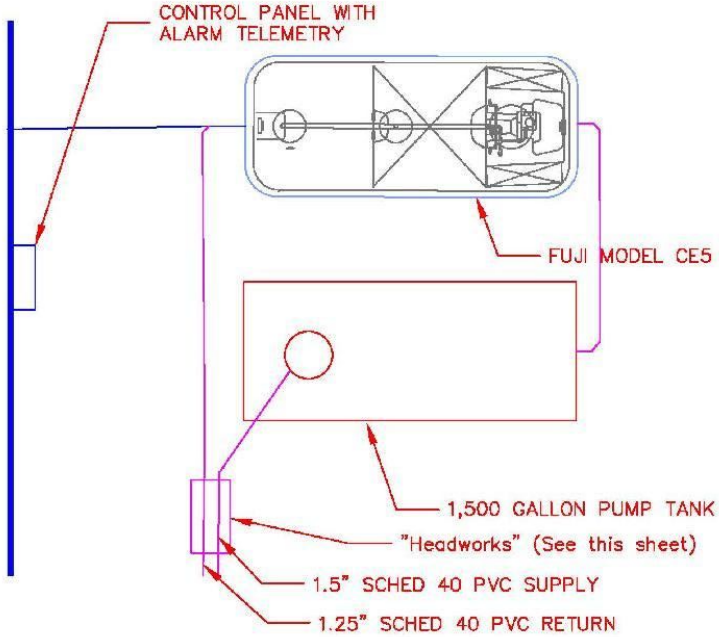
PREPARED FOR:

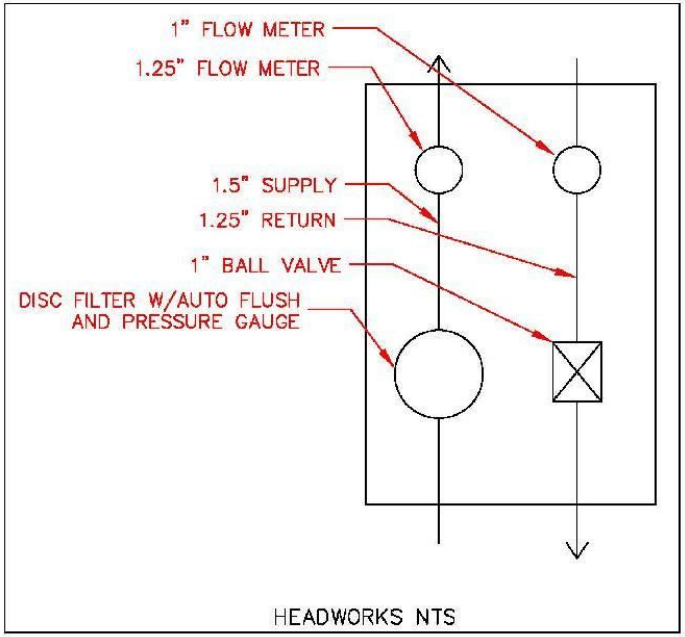
TRACT NO. 1
FAYETTEVILLE HWY, MARSHALL COUNTY
ATS/SSDS SYSTEM DESIGN

COMMENT
REVISED 1/9/2025

SHEET _ OF _


ATS SYSTEM
SEE NEXT SHEET
TRACT 1
2,189,159.62 SQ. FT.
OR 50.26 ACRES±
SLOPE INTERCEPT DRAIN
(TO DAYLIGHT WHERE NECESSARY)
SLOPE INTERCEPT DRAIN BUFFER
10' PL BUFFER
PROPERTY LINE
KEVIN L. KLEGHORN
TAX MAP 072, PARCEL 066.00
1.5" SUPPLY
1.25" RETURN
TRACT 3
34,446.72 SQ. FT.
OR 5.38 ACRES±
PRIMARY DRIP AREA
SEE SHEET 3
BACKUP SOILS
6,600 SF @ 0.1 GPD/SF

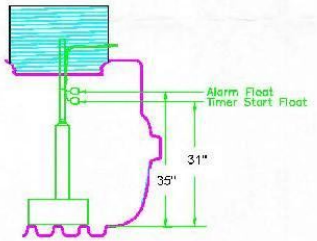




0 5 10 20

ATS LAYOUT

REVISED 1/9/2026



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ATS/SSDS SYSTEM DESIGN

COMMENT
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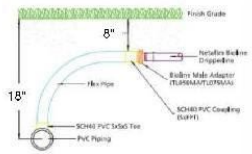
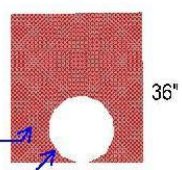
SHEET _ OF _

LINE LENGTHS
LINE 1 = 304
LINE 2 = 304
LINE 3 = 304
LINE 4 = 289
LINE 5 = 300



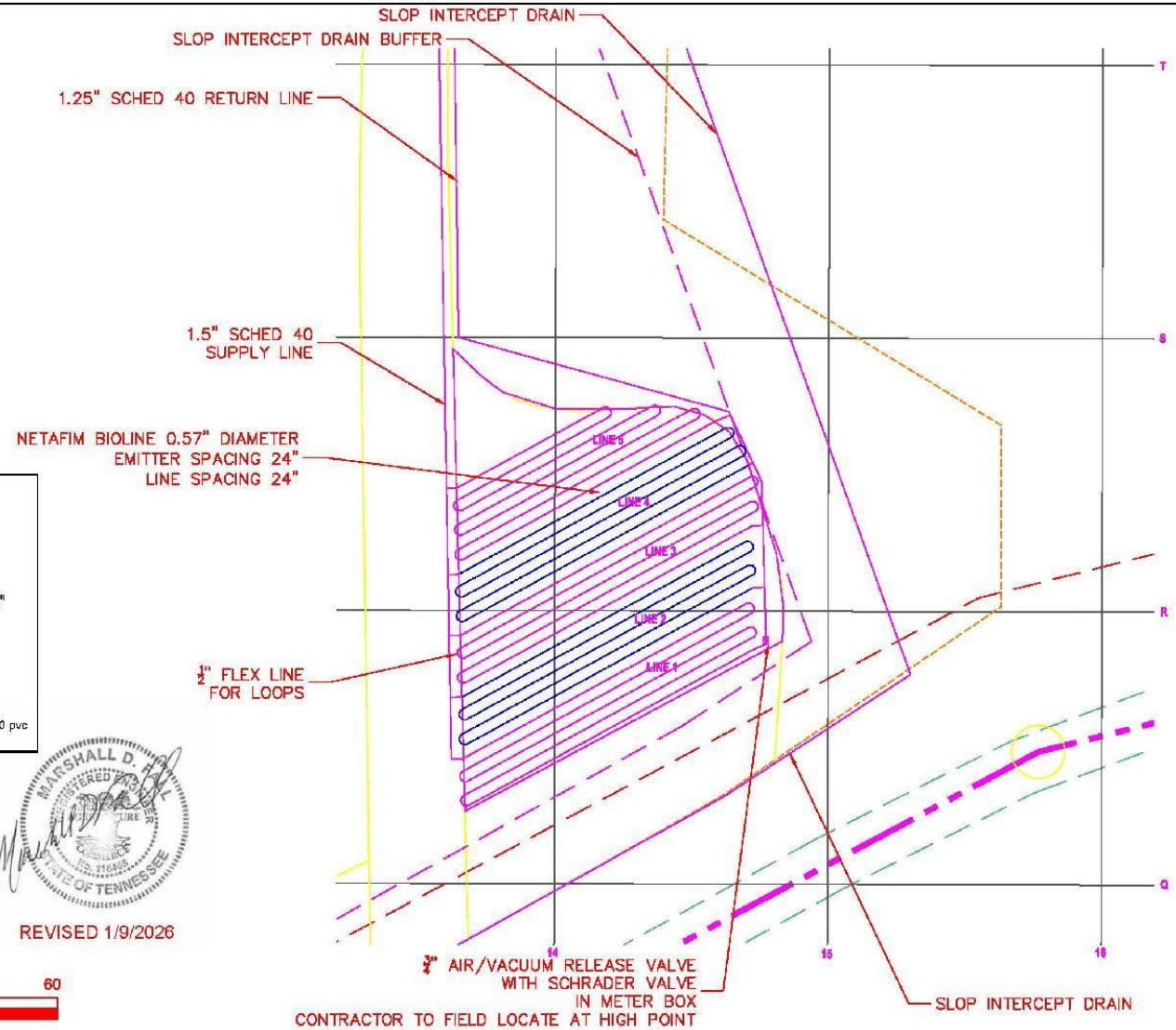
SID (NTS)



Last 10' (minimum) of tightline must be schedule 40 pvc with animal guard in-place

0 20 40 60

REVISED 1/9/2026



DRIP LAYOUT

TriState ENVIRONMENTAL
ENGINEERING & CONSULTING
655 Stewart Valley Drive
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P: 615.428.0923

PREPARED FOR:

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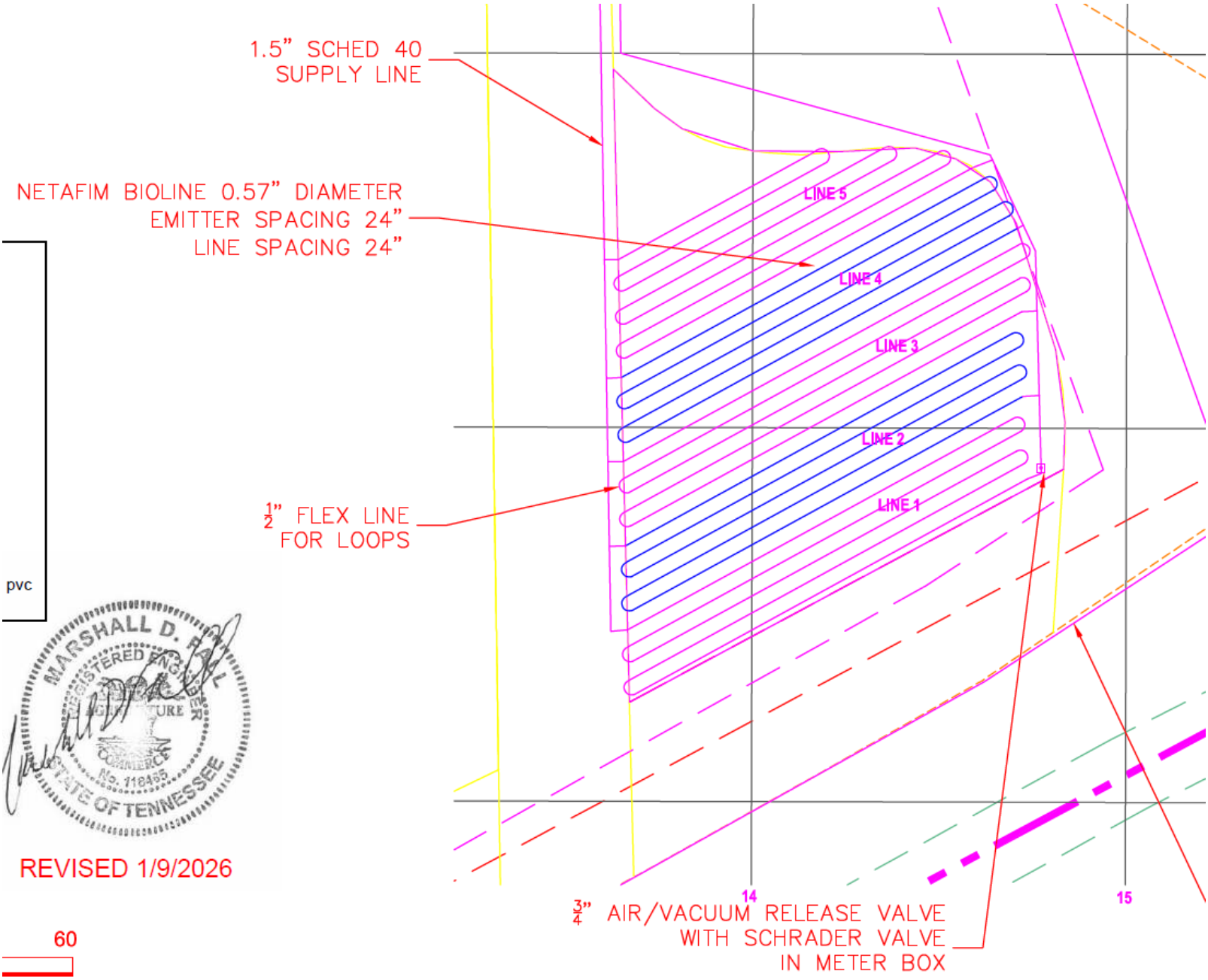
FAYETTEVILLE HWY, MARSHALL COUNTY
ATS/SSDS SYSTEM DESIGN

COMMENT
REVISED 1/9/2025

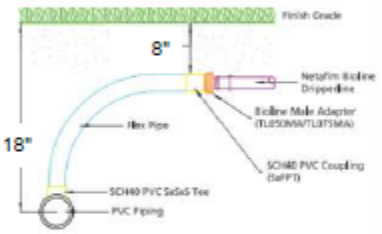
SHEET _ OF _


1.5" SCHED 40
SUPPLY LINE
NETAFIM BIOLINE 0.57" DIAMETER
EMITTER SPACING 24"
LINE SPACING 24"
LINE 5
LINE 4
LINE 3
LINE 2
LINE 1
½" FLEX LINE
FOR LOOPS
pvc
MARSHALL D. PAUL
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 118465
STATE OF TENNESSEE
REVISED 1/9/2026
60
14
15
¾" AIR/VACUUM RELEASE VALVE
WITH SCHRADER VALVE
IN METER BOX

LINE LENGTHS
LINE 1 = 304
LINE 2 = 304
LINE 3 = 304
LINE 4 = 289
LINE 5 = 300

SLO

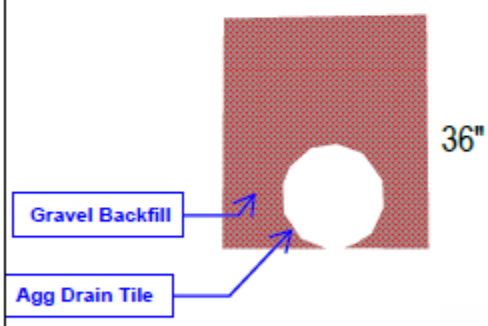
1.25" SCHED 40



1.5

NETAFIM BIOLINE 0.57'
EMITTER SP
LINE SP

SID (NTS)



Last 10' (minimum) of tightline must be schedule 40 pvc with animal guard in-place

1/2

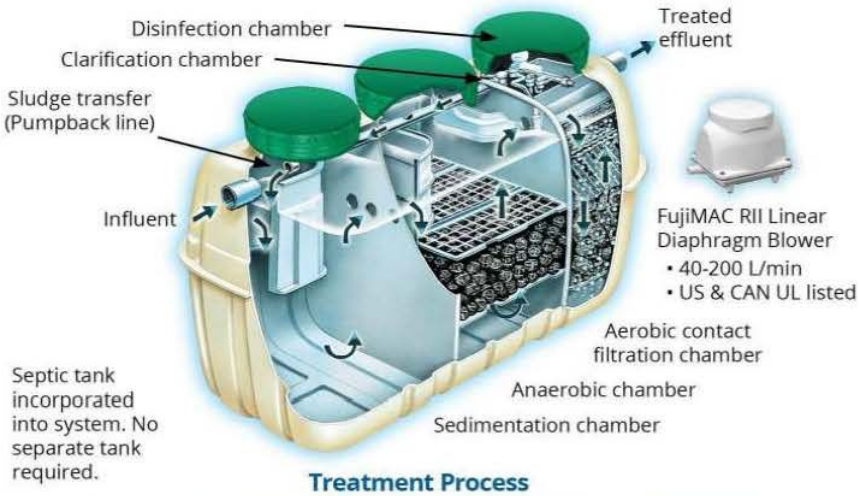
Model CE & CEN Series

Technical Specification Sheet

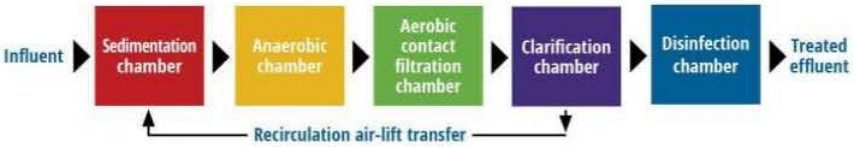
FujiClean USA
Toward Clean Water...

FujiClean advantages:

- RIDEM Category 1 Approved
- Over 2 million installed systems worldwide
- 1-tank system - no septic tank necessary
- No moving parts in tank
- Built-in equalization - levels variable inflow
- NSF 40 and 40/245 certified
- TN removal to 70+% with CEN models
- Smallest footprint vs. competitors
- Lowest power use vs. competitors
- Lightweight tank - easy installation
- Quick and easy O&M - no mess
- Rapid startup and restart for seasonal homes



Treatment Process



Design Specification Table	CE Series BOD, TSS, TN*							CEN Series BOD, TSS, Enhanced TN				
Model:	**CE5**	**CE7**	**CE10**	**CE14**	**CE21**	**CE30**	**CE6KG**	**CEN5**	**CEN7**	**CEN10**	**CEN14**	**CEN21**
Load Hydraulic (GPD)	500	700	1,000	1,350	1,900	2,700	6,000	500	700	1,000	1,350	1,900
Effluent (assumes domestic strength influent):												
BOD – Effluent (mg/L)	! 20	! 20	! 20	! 20	! 20	! 20	! 20	! 10	! 10	! 10	! 10	! 10
BOD (Removal Lbs./Day)	.52	.73	1.04	1.46	2.08	3.12	6.93	.69	.97	1.38	1.86	2.9
TSS (mg/L)	! 20	! 20	! 20	! 20	! 20	! 20	! 20	! 10	! 10	! 10	! 10	! 10
TN (mg/L)	! 20	! 20	! 20	! 20	! 20	! 20	! 20	! 10	! 10	! 10	! 10	! 10
Blower Detail:												
Blower Model	80RII	80RII	100RII	150RII	200RII	150RII (2)	200RII (4)	80RII	100RII	150RII	200RII	150RII (2)
Normal Pressure (kPa)	15	15	18	20	20	20	20	15	18	20	20	20
CFM; L/Min	2.8 CFM 80 L/MIN	2.8 CFM 80 L/MIN	3.5 CFM 100 L/MIN	5.3 CFM 150 L/MIN	7.0 CFM 200 L/MIN	10.6 CFM 300 L/MIN	28.0 CFM 800 L/MIN	2.8 CFM 80 L/MIN	3.5 CFM 100L/MIN	5.3 CFM 150 L/MIN	7.0 CFM 200 L/MIN	10.6 CFM 300 L/MIN
Power Use (kWh/day)	1.2	1.2	1.7	2.7	3.7	5.4	14.8	1.2	1.7	2.7	3.7	5.4
Weight (lbs.)	11	11	11	20	20	20 x 2	20 x 4	11	11	20	20	20 x 2
Outlet Diameter OD-inches)	0.70	0.70	0.70	1.0	1.0	1.0	1.0	0.70	0.70	1.0	1.0	1.0
Tank Detail:												
Material	Fiber-reinforced plastic							Fiber-reinforced plastic				
Height (inches)	61.8	65.4	73.2	77.4	81.3	87.2	87.2	65.4	73.2	77.4	81.3	87.2
Length (inches)	85	95.7	98.8	118.9	152.8	183.7	434.7	95.7	98.8	118.9	152.8	183.7
Width (inches)	43.7	49.2	56.7	68.9	72.4	78.3	115.3	49.2	56.7	68.9	72.4	78.3
Weight (lbs.)	397	463	705	926	1,168	1,543	2,900	463	705	926	1,168	1,543
Inlet Invert (inches)	49	53	61	62	65	71	67	53	61	62	65	71
Outlet Invert (inches)	47	51	59	59.5	63	69	64	51	59	59.5	63	69
Access Ports (number)	3	3	3	3	3	3	7	3	3	3	3	3
Access Port Diameter (inches)	3@20"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	4@24"x24" 3@24"x48"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"
Volume Total (gallons)	545	749	1,069	1,498	2,252	3,199	7,267	749	1,069	1,498	2,252	3,199

** TN removal for CE systems based on field testing. Contact Fuji Clean USA for details.*

| 207-406-2927 | fujicleanusa.com | info@fujicleanusa.com

FujiClean USA™
Toward Clean Water…

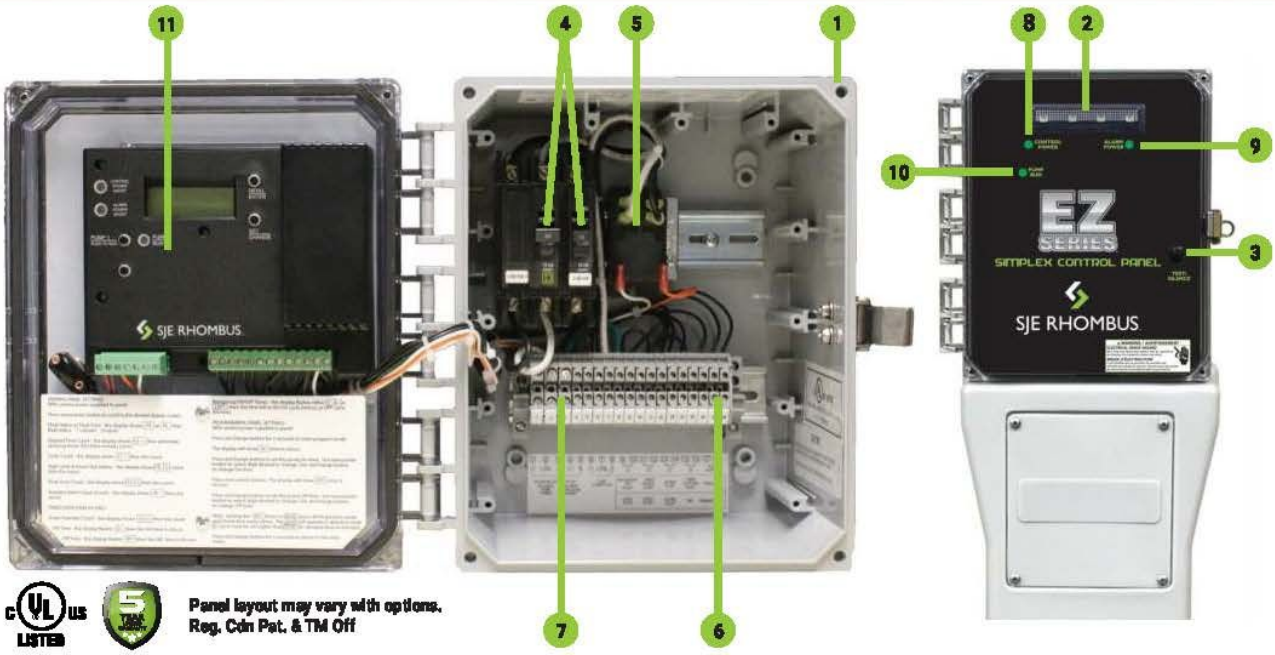
Control Panel Options

FujiClean Model / Features	A	A1	C	X	D	RI	RI2	E	M	KG	Suffolk	AR
Description	**Basic Alarm Panel.** 1. Alarms for high water and blower ort. 2. Pressure switch. 3. deal if blower is relatively dose to panel. 4. Extra breaker to run discharge pump 5. Default panel for al Fuji Clean systems if no panel is specified.	**Basic Alarm Panel w/ Current Sensor** 1. Icentica to Panel "A" but with a current sensor instead of pressure switch. 2. Ideal if blower is relatively far from pane .	**Basic Alarm w/ Comm. Contact & Time Meter** 1. Same features as "A" Panel but with relay (for autodialer, remote alarm etc.) 2. Elapsed time meter for discharge pump showing tota run time. 3. Typical New Jersey panel	**Basic Alarm with 24-Hour Timer (Night Spray)** 1. Same features as "A" Panel but with dose timer (example: to be used with discharge pump to dose field at night). 2. Dual a arm beacons. Red for high water. Amber for blower. 3. Typical Texas panel	**Duplex Time Dosing** 1. Program pump dosing with inexpensive data logging option. Records such items as discharge pump cycles and elapsed run time, alarm frequency etc. 2. Can control up to 2 pumps. 3. Can choose pressure switch or current sensor	**Simplex Time Dosing** 1. Same features as "Duplex" Panel but can control only 1 discharge pump.	**Simple Event Counter** 1. Same features as "A1" but with event counter to "count" discharge pump runtime events. 2. Includes HOA switch for discharge pump testing and calibration. 3. Typica Rhode Island pane .	**Duplex Dosing Control w/ Data Logging** 1. Same features as Panel "D" but with ability to log data and print output reports.	**Basic Alarm Panel for Large Systems** 1. Same features as "A1" Panel but with capacity for 2 blowers.	**Basic Alarm Panel for Model CE6KG** 1. Same features as "A1" Panel but with capacity for 4 blowers.	**Basic Alarm Panel with Current Sensor and Latch** 1. Same features as "A1" Panel but with door latch in addition to screws.	**Basic Alarm Panel with HOA** 1. Same features as "A" Pane but with HOA switch for pump discharge pump testing and calibration. 2. Typica Arkansas panel.
SIE Rhombus Model #	1041972	1070519	1045040	1029522	IFS41W914X6A8AC10E27D	IFS11W114H6A8AC15A17G27D w/current sensor	1070525	IF41W914X6A8AC10E27D	1059296	BP2833	1069483	1069564
NEMA 4X Weather Proof Enclosure	X	X	X	X	X	X	X	X	X	X	X	X
120 Volt AC Breakers (Pump, Air Pump, Alarm)	3	3	3	3	3	3	3	3	4	3	3	3
Alarm/Test/ Normal/Silence Switch	X	X	X	X	X	X	X	X	X	X	X	X
Low Pressure Alarm Switch	X		X	X	X	X*						X
Current Sensor Alarm Switch		X				X*	X	X	X (2)	X(4)	X	
Communication Contacts (Alarm Aux)			X		X	X		X	X			
Elapsed Time Meter			X		X	X		X				
Duplex Pump Demand or Timed Dosing Control					X	X		X				
24-Hour Timer				X	X	X						
Dual Alarm Beacons				X								
Data Logging (Screen Display)					X	X						
Data Logging Panel via USB Port to Flash Drive								X				
UL Listed to Meet and/or Exceed Industry Safety Standards					X	X		X				
Dual Safety Certification for U.S and Canada					X	X		X				

* Can select either pressure switch or current sensor

EZ SERIES® SINGLE PHASE SIMPLEX

Single Phase, Simplex Demand Dose or Timed Dose Float Controlled System for Pump Control and System Monitoring



Panel layout may vary with options.
Reg. Cdn Pat. & TM Off

EZ Series®

The EZ Series® simplex control panel is designed to control one 120, 208, 240 VAC single phase pump in water and sewage installations.

The EZ Series® simplex control panel features a backlit LCD display on the inside of the front cover for programming and system monitoring, including: float status, elapsed time pump run, cycle counter, alarm counts (high water/power fail), float error count, auxiliary alarm counter, timer override count (TD only).

The panel configuration can be easily converted in the field to either a timed dose or demand dose.

Optional mounting post has removable access door for easy wiring. The post can be mounted in the ground directly, over a 4x4, or conduit. This panel is available with optional duo alarm for local code compliance; and optional EZconnex® float connection system.

COMPONENTS

1. Enclosure base measures 10 x 8 x 6 inches (25.4 x 20.32 x 15.24 cm); NEMA 4X enclosure (ultraviolet stabilized thermoplastic with removable mounting feet for outdoor or indoor use) includes locking latch as standard
2. Red alarm beacon provides visual check of alarm condition
3. Exterior Alarm Test/Silence switch allows horn and light to be tested and horn to be silenced in an alarm condition; alarm automatically resets once alarm condition is cleared
4. Two circuit breakers: one for pump power; another for control and alarm power
5. Power relay controls pump by switching electrical lines
6. Float connection terminal block with auxiliary alarm contact
7. Incoming control/alarm power & pump power terminal block
8. Control Power indicator light
9. Alarm Power indicator light
10. Pump Run indicator light
11. Simplex controller (touch safe housing) for pump control:
    a. Backlit LCD display shows system information including: pump elapsed time (hh:mm), pump events (cycles), and alarm condition (counts)
    b. Menu/Enter button used for viewing panel settings
    c. Set/Change button used for programming panel settings
    d. Pump Push To Run momentary switch - pump activates when pressed
    e. Control and Alarm Power - shorted condition indicators
12. Alarm horn provides audio warning of alarm condition (83 to 85 decibel rating - located inside panel on cover, not shown)

Note: Options, voltage, and amp range selected may change enclosure size and component layout.

Note: Schematic/Wiring Diagram and Pump Specification Label are located inside the panel.

SJE RHOMBUS.

9500047K Rev 07/23
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SJE Rhombus is a trademark of SJE, Inc.

EZ Series® - Single phase, simplex demand dose or timed dose float controlled system for pump control and system monitoring.

EZS		1	W			4		3A6A8AC10E15A
CONTROL PANEL	MODEL TYPE	ALARM PACKAGE	ENCLOSURE RATING	STARTING DEVICE	PUMP FULL LOAD AMPS	PUMP DISCONNECTS	FLOAT SWITCH APPLICATION	OPTIONS (LISTED BELOW)

CONTROL PANEL	✓	EZS		
MODEL TYPE		1	Simplex Timed Dose (Includes Options 3A6A8AC10E15A as standard)	
		2	Simplex Demand Dose (Includes Option 3A6A8AC10E15A as standard)	
ALARM PACKAGE	✓	1	Alarm Package (includes test/silence switch, fuse, red light, & horn)	
ENCLOSURE RATING	✓	W	Weatherproof, NEMA 4X (engineered thermoplastic)	
STARTING DEVICE		1	120/208/240V	
		9	120V only	
PUMP FULL LOAD AMPS		0	0 - 7 FLA	
		1	7 - 15 FLA	
		2	15 - 20 FLA	
PUMP DISCONNECTS	✓	4	Circuit Breaker(s) 120V (select STARTING DEVICE Option 9 above)	
			Circuit Breaker(s) 120/208/240V (select STARTING DEVICE Option 1 above)	
FLOAT SWITCH APPLICATION		H	Floats - Pump Down (select Option 17 below) Timed dose = timer enable and alarm / Demand dose = stop, start, and alarm	
		E	EZconnex® Float Switch System (select Option 33, 35 or 36 below)	Timed Dose Demand Dose
		X	No Floats	Timed Dose Demand Dose

PRICING WORKSHEET

EZS Simplex Base Price	
Alarm Package	_____
Enclosure Rating	_____
Starting Device	_____
Pump Full Load Amps	_____
Pump Disconnects	_____
Float Switch Application	_____
Total Options	_____
TOTAL LIST PRICE	_____

	OPTIONS	DESCRIPTION
	1J	Duo Alarm Inputs
✓	3A	**Alarm Flasher (Included as standard)**
	4A	Redundant Off (Timed Dose Float Panel Only) (must also select Option 4D if floats are required)
	4D	Redundant Off Float (must also select Option 4A and Option 17)
✓	6A	**Auxiliary Alarm Contact, Form A (Included as standard)**
✓	8AC	**Display Board - Includes: ETM Counter, Events (Cycles) Counter, Alarm Counter (included as standard)**
✓	10E	**Lockable Latch - NEMA 4X (Included as standard)**
	10P	Mounting Post (Factory installed with 2.5" cord seal)
✓	15A	**Control/Alarm Circuit Breaker (Included as standard)**
	16A	10' Cord in Lieu of 20' Cord (per Float)
	16B	15' Cord in Lieu of 20' Cord (per Float)
	16C	30' Cord in Lieu of 20' Cord (per Float)
	16D	40' Cord in Lieu of 20' Cord (per Float)
	17C	Sensor Float® / Internally Weighted (per Float) - Mercury
	17D	Sensor Float® / Externally Weighted (per Float) - Mercury
	17G	SJE MilliAmpMaster™ / Pipe Clamp (per Float) - Mechanical
	17H	SJE MilliAmpMaster™ / Externally Weighted (per Float) - Mechanical
	17J	Sensor Float® / Pipe Clamp (per Float) - Mercury

OPTIONS	DESCRIPTION
18A	Timer Override Float (Timed Dose Float Panel Only)
22G	2 1/2" Hub Installed with 6 Hole Cord Seal
33D ■	EZconnex® 3-Port, 25', with 10' Floats (3) / Pipe Clamp
33E ■	EZconnex® 3-Port, 50', with 10' Floats (3) / Pipe Clamp
33G ■	EZconnex® 3-Port, 25', with 20' Floats (3) / Pipe Clamp
33H ■	EZconnex® 3-Port, 50', with 20' Floats (3) / Pipe Clamp
35D ■	EZconnex® 4-Port, 25', with 10' Floats (4) / Pipe Clamp (Timed Dose Only)
35E ■	EZconnex® 4-Port, 50', with 10' Floats (4) / Pipe Clamp (Timed Dose Only)
35G ■	EZconnex® 4-Port, 25', with 20' Floats (4) / Pipe Clamp (Timed Dose Only)
35H ■	EZconnex® 4-Port, 50', with 20' Floats (4) / Pipe Clamp (Timed Dose Only)
36D ■	EZconnex® 3-Port, 25', with 10' Floats (2) / Pipe Clamp, Sealing Plug
36E ■	EZconnex® 3-Port, 50', with 10' Floats (2) / Pipe Clamp, Sealing Plug
36G ■	EZconnex® 3-Port, 25', with 20' Floats (2) / Pipe Clamp, Sealing Plug
36H ■	EZconnex® 3-Port, 50', with 20' Floats (2) / Pipe Clamp, Sealing Plug

■ EZconnex® mechanically-activated, narrow angle float switches with quick release connections

Part #	Pre-configured Panels for Easy Ordering
1030771	EZS21W114X3A6A8AC10E15A
1052607	EZS11W114H3A6A8AC10E15A17G

California Prop 65 requires the following: ⚠ WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

STA-RITE® ST.E.P Plus Series

4" high-head multi-stage submersible effluent pumps

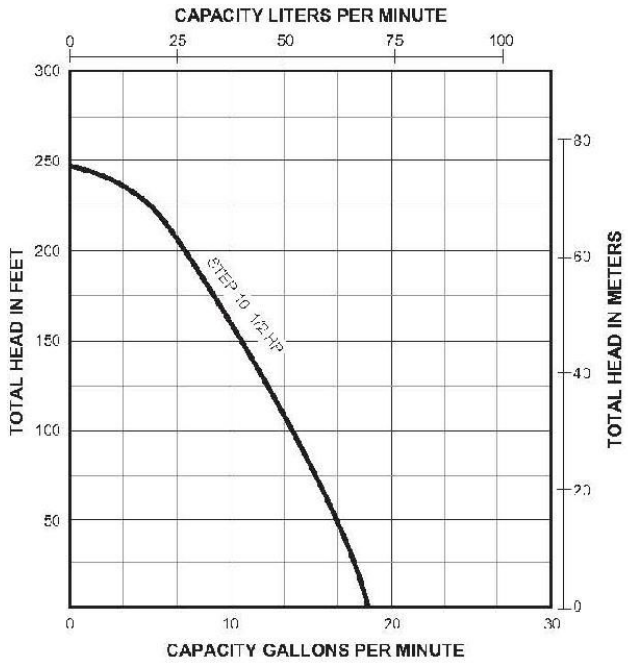
ORDERING INFORMATION

CATALOG NUMBER	HP	STAGES	MAX. LOAD AMPS	VOLTS	PHASE/ CYCLES	CORD LENGTH	PUMP END LENGTH	PUMP + MOTOR LENGTH
STEP10	1/2	7	12.0	115	1/60	10'	13"	21-1/2"
STEP10X100FT-05121	1/2	7	12.0	115	1/60	100'	13"	21-1/2"
STEP10X30FT	1/2	7	12.0	115	1/60	30'	13"	21-1/2"
STEP10X50FT	1/2	7	12.0	115	1/60	50'	13"	21-1/2"
STEP20	1/2	5	12.0	115	1/60	10'	13-1/4"	22-1/4"
STEP20X30FT	1/2	5	12.0	115	1/60	30'	13-1/4"	22-1/4"
STEP20X50FT	1/2	5	12.0	115	1/60	50'	13-1/4"	22-1/4"
STEP30-05121	1/2	3	9.5	115	1/60	10'	11-1/2"	22-1/2"
STEP30X30-05121	1/2	3	12.0	115	1/60	30'	11-1/2"	22-1/2"
STEP30X50-05121	1/2	3	12.0	115	1/60	50'	11-1/2"	22-1/2"
STEP30-05221	1/2	3	4.7	230	1/60	10'	11-1/2"	22-1/2"
STEP30X100-05221	1/2	3	4.7	230	1/60	100'	11-1/2"	22-1/2"
STEP30X30-05221	1/2	3	4.7	230	1/60	30'	11-1/2"	22-1/2"
STEP30X50-05221	1/2	3	4.7	230	1/60	50'	11-1/2"	22-1/2"
STEP30-10221	1	5	9.1	230	1/60	10'	14"	27-1/2"
STEP30X100-10221	1	5	9.1	230	1/60	100'	14"	27-1/2"
STEP30X30-10221	1	5	9.1	230	1/60	30'	14"	27-1/2"
STEP30X50-10221	1	5	9.1	230	1/60	50'	14"	27-1/2"
STEP30-15221	1-1/2	6	11.0	230	1/60	10'	15-1/4"	30-1/4"
STEP30X100-15221	1-1/2	6	11.0	230	1/60	100'	15-1/4"	30-1/4"
STEP30X30-15221	1-1/2	6	11.0	230	1/60	30'	15-1/4"	30-1/4"
STEP30X50-15221	1-1/2	6	11.0	230	1/60	50'	15-1/4"	30-1/4"
STEP50-05121	1/2	2	9.1	115	1/60	10'	11-1/4"	21-1/2"
STEP50-05221	1/2	2	9.1	230	1/60	10'	11-1/4"	21-1/2"
STEP50-10221	1	3	9.1	230	1/60	10'	13-1/4"	26-3/4"
STEP50X100FT-10221	1	3	9.1	230	1/60	100'	13-1/4"	26-3/4"
STEP50X30FT-10221	1	3	9.1	230	1/60	30'	13-1/4"	26-3/4"
STEP50X50FT-10221	1	3	9.1	230	1/60	50'	13-1/4"	26-3/4"
STEP50-15221	1-1/2	4	11.0	230	1/60	10'	15-1/4"	30-1/4"
STEP50X100FT-15221	1-1/2	4	11.0	230	1/60	100'	15-1/4"	30-1/4"
STEP50X30FT-15221	1-1/2	4	11.0	230	1/60	30'	15-1/4"	30-1/4"
STEP50X50FT-15221	1-1/2	4	11.0	230	1/60	50'	15-1/4"	30-1/4"

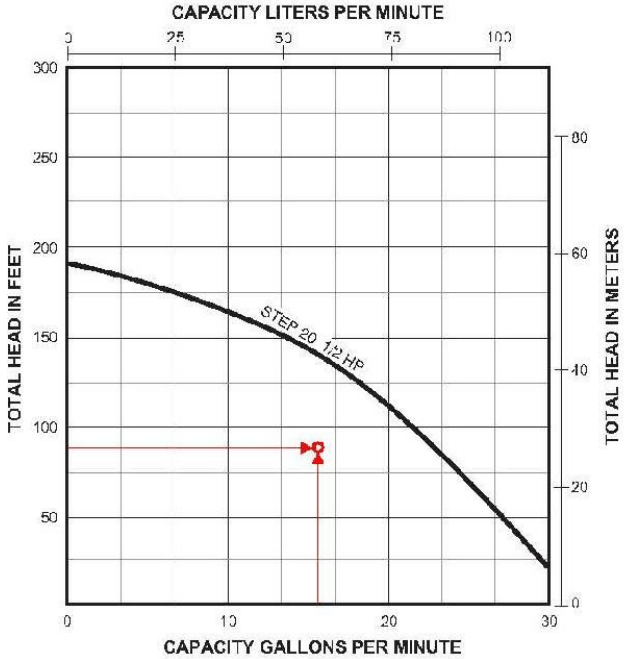
STA-RITE® ST.E.P Plus Series

4" high-head multi-stage submersible effluent pumps

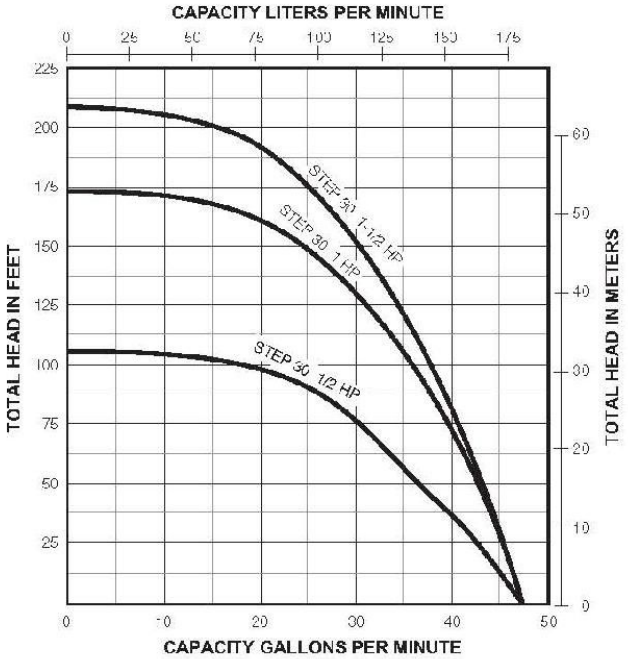
PUMP PERFORMANCE – 10 GPM



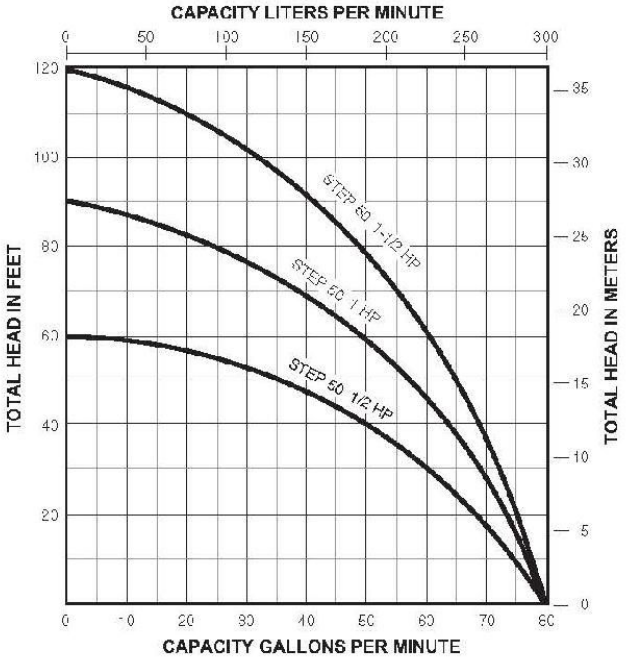
PUMP PERFORMANCE – 20 GPM



PUMP PERFORMANCE – 30 GPM



PUMP PERFORMANCE – 50 GPM



PENTAIR

293 WRIGHT STREET DELAVAN WI 53115 WWW.STA-RITE.COM PH: 888-782-7483 ORDERS FAX: 800-426-9446

Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice.

MANUAL DISC FILTERS

RELIABLE, EFFICIENT PLASTIC DISCS CREATE SUPERIOR FILTRATION

3/4" 1" 2" DUAL LITE

PRODUCT ADVANTAGES

- Highly effective multiple disc ring design captures and holds more debris.
- Greater holding capacity of the rings vs. screen filters mean less frequent cleaning.
- Rings are easily removed for fast cleaning without the need for scrubbing.
- Color-coded disc rings make identification of mesh rating fast and easy.

APPLICATIONS

- Primary irrigation filter for relatively clean or average water quality
- Protection of irrigation systems from clogging and/or abrasion

MESH/MICRON

MESH	MICRON	DISC COLOR
040	400	Blue
080	200	Yellow
120	130	Red
140	115	Black
200	55	Green

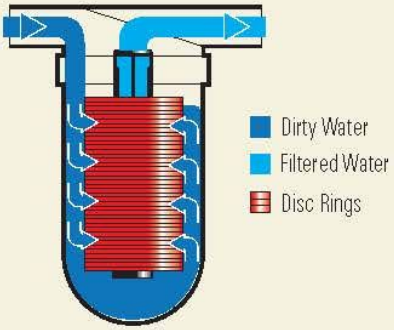
Substitute *** in Model Number for proper mesh.

THE FILTERING PROCESS

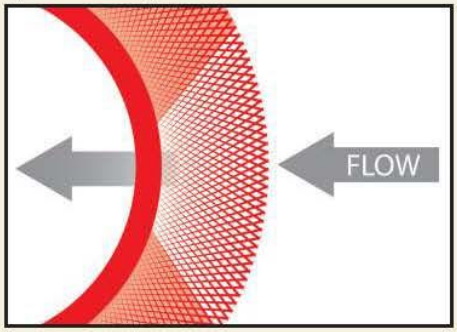
Grooved, compressed plastic disc rings produce a deep filtration process. As dirty water is pumped into the filter and pressure increases on the outside of the filter, the water pressure compresses the rings together tightly.

Grooves in the disc rings crisscross, forming a three dimensional network that traps particles. The number of crisscrossed intersection points on each groove varies, depending on filtration grade. The turbulence in the varying paths and the large number of intersections create an environment where particles are eventually trapped.

This design filters the dirty water thoroughly, not only on the outer surface of the cylindrical disc filter, but through the entire depth of every ring's grooves. The result is a larger, more efficient filtering area (when compared to screen filters) with more debris being captured and cleaner water exiting from the filter.



Top view of disc ring



MANUAL DISC FILTERS

3/4" FILTER	
FLOW RANGE	1 - 12 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	25 sq. in.
FILTERING VOLUME	5.8 cu. in.
LENGTH	5 22/32"
WIDTH	7 15/32"
WEIGHT	.66 lbs.
DISTANCE BETWEEN ENDS	6"
INLET/OUTLET DIAMETER	3/4" Male
MODEL NUMBER	25A45-***

1" FILTER	
FLOW RANGE	5 - 26 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	49 sq. in.
FILTERING VOLUME	27 cu. in.
LENGTH	9 11/32"
WIDTH	6 7/32"
WEIGHT	2.2 lbs.
DISTANCE BETWEEN ENDS	6 7/32"
INLET/OUTLET DIAMETER	1" Male
MODEL NUMBER	25A47-***

1" SUPER FILTER	
FLOW RANGE	10 - 35 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	78 sq. in.
FILTERING VOLUME	36 cu. in.
LENGTH	13 13/32"
WIDTH	6 7/32"
WEIGHT	3.11 lbs.
DISTANCE BETWEEN ENDS	6 7/32"
INLET/OUTLET DIAMETER	1" Male
MODEL NUMBER	25A48-***

2" DUAL LITE FILTER	
FLOW RANGE	40 - 110 GPM
MAXIMUM PRESSURE	115 psi
FILTERING SURFACE AREA	147 sq. in.
FILTERING VOLUME	75.7 cu. in.
LENGTH	16 5/16"
WIDTH	10 1/4"
WEIGHT	6.6 lbs.
DISTANCE BETWEEN ENDS	10 1/4"
INLET/OUTLET DIAMETER	2" Male
MODEL NUMBER	25A2DL-***

3" TWIN LITE FILTER	
FLOW RANGE	80 - 220 GPM
MAXIMUM PRESSURE	115 psi
FILTERING SURFACE AREA	294.5 sq. in.
FILTERING VOLUME	174 cu. in.
LENGTH	28 3/4"
WIDTH	9 14/32"
WEIGHT	17 lbs.
DISTANCE BETWEEN ENDS	12 19/32"
INLET/OUTLET DIAMETER	3" Flanged
MODEL NUMBER	25A3TL-***F

Multi-Jet Water Meters

PRMFiltration

Brass Water Meters for indicating flow totalization of water. Designed for long service life and maintenance-free operation, even under harsh conditions.

Features:

- All Meters have Hydrocarbon Resistant Seals and will not be damaged by dissolved amounts of free product
- Sealed Dry Dial for Clear Readings
- Internal Strainer to Protect Meter from Particulate Damage

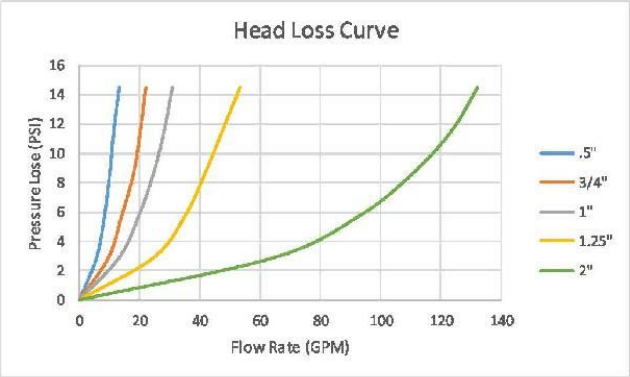
Specifications:

- Class: B
- Accuracy: Transitional Flow: ± 5%
  Nominal Flow: ± 2%
- Maximum Water Temperature: 104°F
- Maximum Water Pressure: 150 psi
- Mounting Orientation:
  1/2" and 3/4" Horizontal or Vertical
  1" to 2" Horizontal Mounting

Materials:

- Body: Brass, polyethylene
- Couplings: Brass
- Measuring Chamber: Polyethylene
- Paint: Epoxy Coated
- Seal: Viton

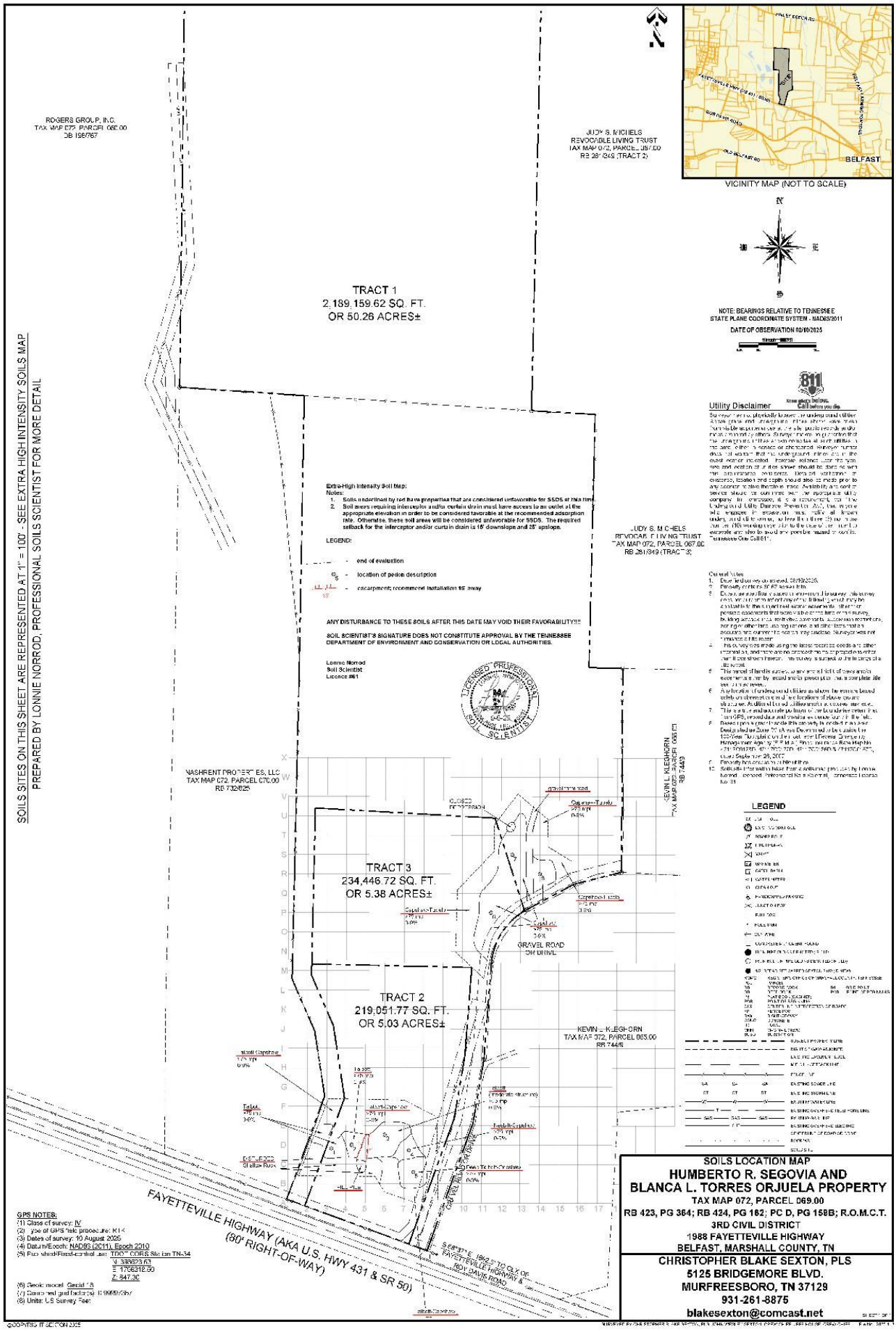
Contains lead, not for use with potable water



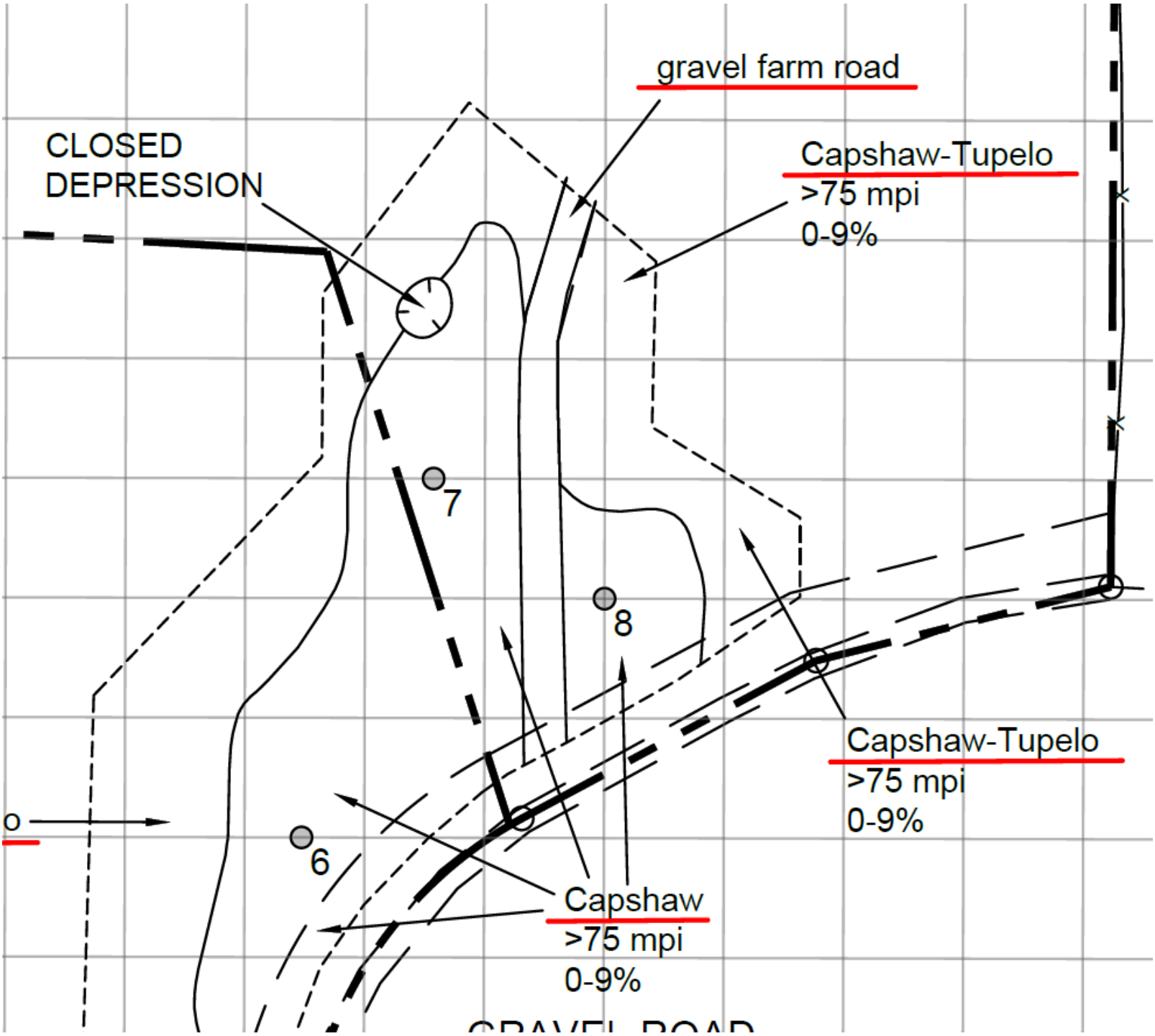
PRM Part Number: Description

WM050VX— 1/2" NPT multi-jet water meter
WM075VX— 3/4" NPT multi-jet water meter
WM100VX— 1" NPT multi-jet water meter
WM125VX— 1-1/4" NPT multi-jet water meter
WM150VX— 1-1/2" NPT multi-jet water meter
WM200VX— 2" NPT multi-jet water meter

(888-TREAT-IT) • www.prmfiltration.com • sales@prmfiltration.com



SOILS SITES ON THIS SHEET ARE REPRESENTED AT 1" = 100' - SEE EXTRA HIGH INTENSITY SOILS MAP
PREPARED BY LONNIE NORROD, PROFESSIONAL SOILS SCIENTIST FOR MORE DETAIL
ROGERS GROUP, INC.
TAX MAP 072, PARCEL 060.00
DB 196/767
JUDY S. MICHELS
REVOCABLE LIVING TRUST
TAX MAP 072, PARCEL 067.00
RB 281/349 (TRACT 2)
TRACT 1
2,189,159.62 SQ. FT.
OR 50.26 ACRES±
JUDY S. MICHELS
REVOCABLE LIVING TRUST
TAX MAP 072, PARCEL 067.00
RB 281/349 (TRACT 3)
NASHRENT PROPERTIES, LLC
TAX MAP 072, PARCEL 070.00
RB 732/825
KEVIN L. KLEGHORN
TAX MAP 072, PARCEL 065.00
RB 744/8
TRACT 3
234,446.72 SQ. FT.
OR 5.38 ACRES±
TRACT 2
219,051.77 SQ. FT.
OR 5.03 ACRES±
GRAVEL ROAD
ON DRIVE
FAYETTEVILLE HIGHWAY (AKA U.S. HWY 431 & SR 50)
(80' RIGHT-OF-WAY)
S 68°37' E 1962.5' TO CLX OF
FAYETTEVILLE HIGHWAY &
ROY DAVIS ROAD
BELFAST
VICINITY MAP (NOT TO SCALE)
NOTE: BEARINGS RELATIVE TO TENNESSEE
STATE PLANE COORDINATE SYSTEM - NAD83/2011
DATE OF OBSERVATION 08/10/2025
Utility Disclaimer
Extra-High Intensity Soil Map:
Notes:
1. Soils underlined by red have properties that are considered unfavorable for SSDS at this time.
2. Soil areas requiring interceptor and/or curtain drain must have access to an outlet at the appropriate elevation in order to be considered favorable at the recommended adsorption rate. Otherwise, these soil areas will be considered unfavorable for SSDS. The required setback for the interceptor and/or curtain drain is 15' downslope and 25' upslope.
LEGEND:
- end of evaluation
- location of pedon description
- escarpment; recommend installation 15' away
ANY DISTURBANCE TO THESE SOILS AFTER THIS DATE MAY VOID THEIR FAVORABILITY!!!
SOIL SCIENTIST'S SIGNATURE DOES NOT CONSTITUTE APPROVAL BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION OR LOCAL AUTHORITIES.
Lonnie Norrod
Soil Scientist
Licence #61
LICENSED PROFESSIONAL SOIL SCIENTIST
LEGEND
GPS NOTES:
(1) Class of survey: IV
(2) Type of GPS field procedure: RTK
(3) Dates of survey: 10 August 2025
(4) Datum/Epoch: NAD83 (2011), Epoch 2010
(5) Fixed/Fixed-control use: TDOT CORS Station TN-34
N 388623.63
E 1706312.50
Z: 847.30
(6) Geoid model: Geoid 18
(7) Combined grid factor(s): 0.9999735
(8) Units: US Survey Feet
SOILS LOCATION MAP
HUMBERTO R. SEGOVIA AND
BLANCA L. TORRES ORJUELA PROPERTY
TAX MAP 072, PARCEL 069.00
RB 423, PG 364; RB 424, PG 182; PC D, PG 158B; R.O.M.C.T.
3RD CIVIL DISTRICT
1988 FAYETTEVILLE HIGHWAY
BELFAST, MARSHALL COUNTY, TN
CHRISTOPHER BLAKE SEXTON, PLS
5125 BRIDGEMORE BLVD.
MURFREESBORO, TN 37129
931-261-8875
blakesexton@comcast.net


gravel farm road
CLOSED
DEPRESSION
Capshaw-Tupelo
>75 mpi
0-9%
7
8
Capshaw-Tupelo
>75 mpi
0-9%
o
6
Capshaw
>75 mpi
0-9%

Extra-High Intensity Soil Map:

Notes:

1. **Soils underlined by red have properties that are considered unfavorable for SSDS at this tim**
2. **Soil areas requiring interceptor and/or curtain drain must have access to an outlet at the appropriate elevation in order to be considered favorable at the recommended adsorption rate. Otherwise, these soil areas will be considered unfavorable for SSDS. The required setback for the interceptor and/or curtain drain is 15' downslope and 25' upslope.**

LEGEND:

- - - - - - **end of evaluation**

5 **location of pedon description**

15' **escarpment; recommend installation 15' away**

ANY DISTURBANCE TO THESE SOILS AFTER THIS DATE MAY VOID THEIR FAVORABILITY!!!!

SOIL SCIENTIST'S SIGNATURE DOES NOT CONSTITUTE APPROVAL BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION OR LOCAL AUTHORITIES.

Lonnie Norrod
Soil Scientist
Licence #61

LICENSED PROFESSIONAL SOIL SCIENTIST
LONNIE NORROD
TENNESSEE LIC. #0061
9-5-25

TDEC - DWR Soil Pedon Description Form

Date: 7-30-25 Described By: Lonnie Norrod QA/QC By:

Property Name: Road Name: Fayetteville Hwy, Belfast County: Marshall

Stop or Pit #: 7 SOP # (office use only):

Soil Series: Capshaw Drainage Class: Moderately

Soil Control Section: Fine Depth to Ground Water or Water Table: none

Parent Material: Loess/ Residuum Erosion: None-Slight

Climate: Thermic Land Cover: Thin mature hardwoods.

Slope of Map Unit: 0-5 Slope of Pit: 1%

Geomorphic Description: Upland Latitude/Longitude:

Physiographic Location: Nashville Basin

Additional Notes:

Soil Pedon Description

Horizon	Depths (inches)	Matrix Color	Redox Color(s) Depletions/Concentrations	Depth to Redox Features Depletions	Soil Texture	Soil Structure			Soil Horizon Notes
						Grade	Size	Type	
Ap1	0-4				SiL	2+3	F+m	gr+sbk	
Ap2	4-12				SiL	2	m	sbk	
Bt1	12-20				SiC	2	m	sbk	0.1
Bt2	20-25				C	2	m	sbk	
Bt3	25-35				C	1	m	Abk	
Bt4	35-40		10YR 7/2		C	1	m	Abk	

TDEC - DWR Soil Pedon Description Form

Date: 7-30-25 Described By: Lonnie Norrod QA/QC By:

Property Name:
Road Name: Fayetteville Hwy, Belfast County: Marshall

Stop or Pit #: 8 SOP # (office use only):

Soil Series: Capshaw Drainage Class: moderately

Soil Control Section: Fine Depth to Ground Water or Water Table: none

Parent Material: loess / residuum Erosion: Moderate

Climate: Thermic Land Cover: Thin Mature hardwoods

Slope of Map Unit: 0-5 Slope of Pit: 1%

Geomorphic Description: Upland Latitude/Longitude:

Physiographic Location: Nashville Basin

Additional Notes:

Soil Pedon Description

Horizon	Depths (inches)	Matrix Color	Redox Color(s) Depletions/Concentrations	Depth to Redox Features Depletions	Soil Texture	Soil Structure			Soil Horizon Notes
						Grade	Size	Type	
A	0-5				SiL	2&3	m&f	grl&sbk	
E	5-9				SiL	2&3	m	sbk	
BE	9-13				SiCL	2	m	sbk	
Bt1	13-19				C	2	m	sbk	
Bt2	19-25				C	2	m	sbk	0.1
Bt3	25-32				C	1	m	sbk	
BC	32-38		10YR 6/2, 5YR 4/6		C	1	m	Abk	

DEED RESTRICTION

Humberto Rodriguez Segovia and Blanca L. Torres Orjuela, (husband and wife, married man, married women, single man, single woman) (herein after referred to as "Property Owners") and currently residing at
1988 Fayetteville Hwy Belfast, TN 37019 Tracts 1, 2 and 3, own property in
Marshall County, Tennessee, (hereinafter referred to as the "Property") and legally described as:

Tract #1 - 1974 Fayetteville Highway Belfast, TN 37019

Tax ID#: 072 069.00
1974 Fayetteville Highway Belfast, TN 37019, Marshall County, Tennessee.

Purpose: The purpose of this Deed Restriction is to ensure that any Advanced Treatment System (ATS) installed on the Property is properly operated and maintained by the current and future Property Owners to assure continuity of operation consistent with the intended purpose of the treatment system; and to provide notice to future owners that such restrictions run with the land.

Description of Restrictions:

1. The Property Owners shall record this Deed Restriction with the Marshall County Register of Deeds and provide proof of recordation to Tennessee Department of Environment and Conservation, Division of Water Resources (herein after "DWR").

2. The Property Owners agree to operate and maintain any ATS installed on the Property as mandated by T.C.A. 68-221-416.

3. The Property Owners agree to maintain an Operation and Maintenance (OM) contract with a maintenance provider as approved by the Manufacturer of the ATS and approved by DWR as mandated by T.C.A. 68-221-417.

4. The Property Owners shall be responsible to obtain/renew an OM contract so there is no disruption of a current contract. If the Property Owners secure an OM contract with a different qualified provider than the provider at the time of filing of this deed restriction, a copy of that agreement must be provided to DWR within 30 days of signing the new contract.

5. If the Property Owners fail to maintain their OM contract with a maintenance provider a Notice of Violation will be issued to the Property Owners. This Notice of Violation

will outline the necessary actions and timeline associated with renewal of their OM contract.

6. If the Property Owners do not renew the OM contract within a period of 30 days from date of Notice of Violation issuance, the system shall be considered in non-compliance. Issues of noncompliance will be forwarded to the district attorney general in whose district the violation occurred (T.C.A. 68-221-413(b).

7. Term: This Deed Restriction is permanent and shall run with the land, and is fully applicable and enforceable upon all future owners of the Property.

8. This deed restriction shall cease and be of no further effect upon recordation of a letter from DWR acknowledging that circumstances have changed so that an ATS is no longer being used on the property.

IN WITNESS WHEREOF this instrument shall take effect upon full execution by the property owners.

PROPERTY OWNERS:

02/06/2026 By: Humberto Rodriguez Segovia Signature
Date (print name)

02/06/2026 By: Blanca L. Torres Orjuela Signature
Date (print name)

SUBSCRIBED AND SWORN before me, a Notary Public, this 6 day of February, 2026
By: Terri L Kornegay

Terri L Kornegay Notary Public

State of Tennessee,
County of Rutherford
Acting in the County of Rutherford

My Commission Expires: 11/21/27

After recording, please return to:
Division of Water Resources/ Land Based Systems Unit
William Snodgrass Tennessee Tower
312 Rosa L. Parks Ave., 11th Floor
Nashville, TN 37243

Drafted by:

TERRI L KORNEGAY
STATE OF TENNESSEE NOTARY PUBLIC
RUTHERFORD COUNTY
MY COMMISSION EXPIRES NOVEMBER 21, 2027

Curtis Johnson, Register
Marshall County Tennessee
Instrument #: 263125
Recorded
2/6/2026 at 12:30 PM
in Record Book
917
PGS 1023-1024

Rec #:	221895
Rec'd:	10.00
State:	0.00
Clerk:	0.00
Other:	2.00
Total:	12.00

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
Land-Based Systems Unit
William R. Snodgrass – Tennessee Tower
312 Rosa L. Parks Ave., 11th Floor
Nashville, TN 37243-110

APPLICATION FOR WATER RESOURCES SERVICES
APPLICANT
COMPLETE QUESTIONS

1. Service Requested (Check Service) **Fees Due**

_____ Septic System Construction Permit
- _____ Dwelling $ _____
- _____ Commercial: gdp $ _____
- _____ System Modification $ _____
- _____ Repair $ _____
- _____ Conventional Construction Inspection $ _____

_____ Inspection Letter $ _____
_____ Certificate of Verification $ _____
_____ Water Sample
- _____ Total Coliform $ _____
- _____ Fecal Coliform $ _____

X Alternative System Permit $ 500.00 PAID
X Alternative Construction Inspection $ 200.00 PAID
_____ Large Conventional System Plan Review $ _____
_____ Large Alternative System Plan Review $ _____
_____ Experimental System Plan Review $ _____
_____ Subdivision Evaluation: Lots: _____ $ _____
_____ Pumping Contractor – Septage Application $ _____

2. LANDOWNER:
Names: Keith Strain
Address: 1535 W Northfield Blvd Suite 17
Murfreesboro, Tennessee 37167
Day Phone: 6154567575
Original Owner:

APPLICANT:
Names: MARSHALL Fall
Address: 655 Stewart Valley Drive
Murfreesboro, Tennessee 37167
Day Phone: 6154280923
Email: mfall@tristate-environmental.com

Site Address:
Adresss: 1988 Fayetteville Hwy Tract 1
Belfast, Tennessee 37019

3. LOCATION OF LOT OR SITE: a) Subdivision Name: _____ Lot # _____

b) In a subdivision? No Give specific directions and address to the lot or site Put in correct address and the gps will take you right to it

c) Tax Map 072 Parcel 069.00

4. FOR SSDS PERMIT ONLY: a) Size of lot b) Number of Bedrooms Bedrooms Added

c) How many occupants? d) Excavated Basement? Yes No

e) Basement Plumbing Fixtures? Yes No

f) Amount of water used monthly (gallons)

g) Water Supply: Public Well Spring

h) Is the lot staked? If not, date it will be staked:

Is the house staked? If not, date it will be staked:

i) Installer, if known:

5. FOR INSPECTION LETTER ONLY AND CERTIFICATE OF VERIFICATION ONLY:

a) Age of house b) Is house vacant? How long?

c) Original sewage system inspected

d) Date of previous repairs Inspected

e) Is wastewater "backing up" into plumbing fixtures? Surfacing on the ground?

f) All wastewater including washing machines routed into septic tank

6. FOR WATER SAMPLE ONLY: a) Source of Supply: Spring Well Other

b) Is there an outside faucet? c) Is the source chlorinated?

d) For Wells: Is the casing 6" above the ground? Is a sanitary seal on the casing?

7. I certify that the above information is true and correct to the best of my knowledge; **I have been authorized by the above name landowner** to submit this application for Environmental Services to the Division of Water Resources.

DATE: Sep 22, 2025 SIGNATURE: Marshall D Fall AMOUNT PAID: 700.00 RECEIPT NUMBER: 3906463173

TO WHOM IT MAY CONCERN WITH DIVISION OF WATER RESOURCES / LAND BASED SYSTEMS UNIT:

I Humberto Rodriguez Segovia and Blanca L. Torres Orjuela understand the reduction of 3 bedroom ATS sites applied for to be reduced to 2 bedroom ATS sites due to the size of the large trees in the drip disposal areas located at (Tract 1) 1974 Fayetteville Highway and (Tract 3) 1988 Fayetteville Highway Belfast, TN 37019.

Kind Regards,

2-6-2026

Humberto Rodriguez Segovia Date

Blanca L Torres O. 2-6-2026

Blanca L. Torres Orjuela Date

Terri L Kornegay

TERRI L. KORNEGAY
STATE OF TENNESSEE NOTARY PUBLIC
RUTHERFORD COUNTY
MY COMMISSION EXPIRES NOVEMBER 21, 2027