

Permit Number:

280984



**APPLICATION - PERMIT
ON-SITE WASTEWATER SYSTEM**



(Please Type or Print Legibly)

OWNER'S NAME: Key Properties Group, LLC

PHONE: (302) 218-2141

ADDRESS: 610 Marshall Street, Milford, DE 19963

PROJECT LOCATION: Lot #26, Majestic Meadows (Regal Drive, Milton, DE)

TAX/MAP #: 235-22.00-1360.00

APPLICATION

DNREC

PREPARER: Roger A. Gross, P.E.

LICENSE #: 2122

PREPARER'S ADDRESS: Merestone Consultants, Inc.
33516 Crossing Avenue, Unit 1
Lewes, DE 19958

PHONE: (302) 226-5880

I hereby affirm that the information provided on this document is accurate and complete.

Preparer's Signature: [Signature]

06/04/2025

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06/10/2025

Division of Water

(Please check all boxes that apply)

System Type: (CF = Cap & Fill / FD = Full Depth)

☐ Low Pressure Pipe (FD)

☒ Low Pressure Pipe (CF)

☐ Elevated Sand Mound

☐ Wisconsin At-Grade

☐ Pressure Dose (FD)

☐ Pressure Dose (CF)

☐ Holding Tank

☐ Subsurface Micro Irrigation

☐ Gravity (FD)

☐ Gravity (CF)

☐ Std. Pressure Dose (FD)

☐ Other Flow Equalization

☐ Std. Pressure Dose (CF)

☐ Bed or ☒ Trench

☐ Gravelless Chamber or ☒ Stone/Gravel

Sand-lined ☐ Yes ☒ No

Existing System Malfunctioning ☐ Yes ☐ No ☒ N/A

Pre-Treatment Units

☒ Septic Tank ☐

☐ Other _____

Type of Construction:

☐ Replacement

☒ New Construction

☐ Component Replacement

☐ Repair to Existing System

Reason: _____

☐ Authorization to Use Existing System

Permit #: _____

Present Condition: _____

Structure to be connected: _____

of Bedrooms: 4

Avg. Percolation Rate: 100 mpi

Gallons Per Day Flow: 480 gpd

Minimum Sq. Ft. Req'd: 6116 SF

Sq. Ft. Proposed: 6120 SF

Central Water Available ☐ Yes ☒ No

(If yes, please state Utility Name: _____)

PAID

GENERAL NOTES

1. The septic design is based on conditions stated in the Site Evaluation report. No liability will be assumed for malfunctioning septic system components due to a variation in the water table, unapproved field changes, faulty installation, lack of maintenance or failure to comply with conditions in the approved permit. It shall be the responsibility of the installer to notify the designer of field conditions that require changes to the individual septic system design.
2. The Site Evaluation report is an integral part of this design. It shall be the responsibility of the installer to obtain and familiarize himself with the specific requirements.
3. The septic disposal area(s) shall be fenced off prior to any activity on the lot to preserve the integrity of subsurface soil conditions and shall not be used for storage of any materials, stockpiling of topsoil, parking of any vehicles, etc.
4. The sides and bottom of the trenches shall be thoroughly scarified prior to the installation of the stone.
5. Lawn sprinkler systems shall not be installed in the vicinity of the septic disposal field.
6. The septic disposal field shall be required to maintain a minimum of 100 feet from all adjacent domestic wells and 150 feet from all public wells. **The Department may reduce the well isolation distance from 100 feet to a minimum of 50 Feet (maximizing the distance) if advanced treatment is incorporated.**
7. **The replacement disposal system shall be dependent upon the condition of the post-construction lot and the location of improvements. either a replacement will require a new soil-septic evaluation or if their is sufficient area of undisturbed soil within the approved area, a new system located adjacent to the initial system or a sand-lined upgrade of the initial disposal area can be used subject to the conditions of the approved soil-septic evaluation.**
8. All trees and shrubs within 10' of the tanks and disposal fields shall be removed prior to installation.
9. It shall be the responsibility of the builder to insure that the building elevations are set properly for adequate fall from the sewer outfall to the septic tank. Coordinate with septic installer as required.
10. The septic system installer shall not place any part of the system within 10 feet of any property line.
11. All piping shall be pressure rated Schedule 40 PVC, properly fitted and welded.
12. The contractor is responsible for field verifying all isolation distances prior to initiating construction of system. If discrepancies are noted, the contractor shall contact the designer prior to commencing construction.
13. **Any changes in specified equipment, including but not limited to, pumps, alarms, timers, etc., shall be approved by the designer/engineer prior to initiating construction.**
14. **Any changes made to the system location, tank placement, etc. deemed necessary by the installer or the owner, shall be first noted to the designer/engineer for approval prior to initiating the changes.**
15. The system shall not be installed during inclement weather conditions (saturated, frozen and/or dessicated soil conditions, etc.) that would create compaction, smearing or destruction of the soil structure in the disposal area.
16. **Any change requiring "As-Built" drawings that do not affect the engineering integrity of the design shall be the sole responsibility of the installer and shall be submitted to DNREC within ten (10) days of the system inspection completion.**
17. Allow 2' of excavation clearance around tanks for settling and backfilling. Fill and hand tamp in 8" lifts.
18. All electrical connections on the interior of any septic or dosing tank shall be waterproof, corrosion resistant and explosion proof. The exterior connections on any septic or dosing tank shall be waterproof and corrosion resistant.

19. The installing contractor shall be responsible for insuring electrical connections and power and control wiring conform to all state, local and NEC codes.
20. The installing contractor shall be responsible to fill and grade over septic tanks, dosing tanks, transmission line, lateral trenches and any other below grade fixtures installed as part of this project.
21. The installing contractor shall verify the location of all wells within 150' of the disposal area.
22. The installing contractor shall provide the owner with all operating and maintenance manuals for all equipment installed as part of this project and advise the owner of proper care and operation of same.
23. The interior and exterior of the tanks shall be free of cracks, voids and other defects. Two-piece tanks shall have the joint properly sealed before joining.
24. The building sewer line to all septic tanks shall be a minimum 4" Schedule 40 PVC pipe.
25. Each compartment of the septic tank and pump chamber shall have a minimum 20-inch diameter or square watertight access manhole extended to grade.
26. The septic tank shall be fitted with a D.N.R.E.C. approved effluent filter.

PARCEL NO.

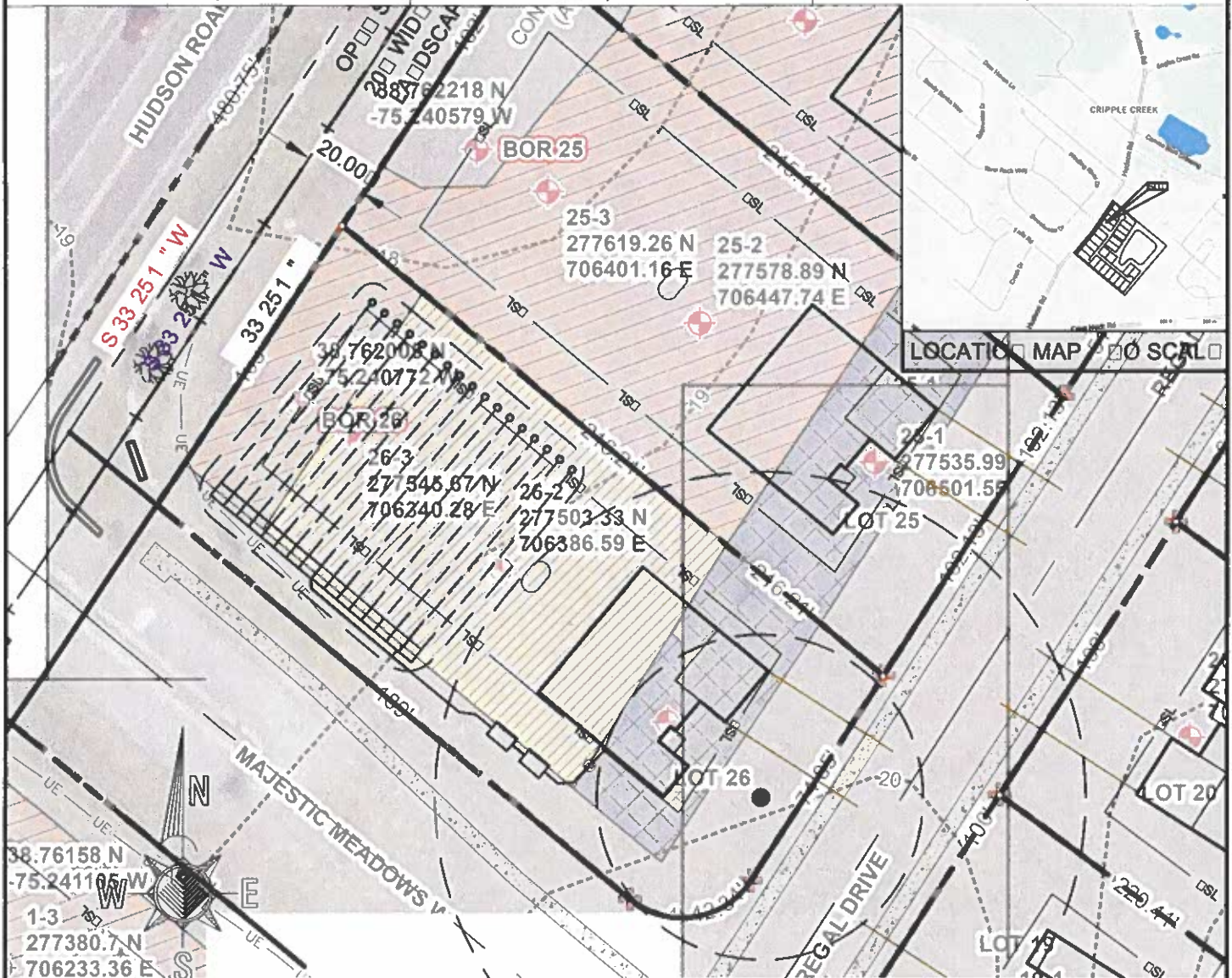
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RECORD PLAT

P 208, PG 1

DOOD R00:

D 3400, PG 201



OVERALL SITE PLAN

FOR PROPERT OF AS:

LOT 2 MAJESTIC MEADOWS

ALSO OF AS:

REGAL DRIVE

SIT AT:

ROAD AND SSS CO

STATE OF COLORADO

TA PARCEL 235-22.00-13.00.00

SCALE 1"=50'

06/04/2025

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PROSSOR

DAT

OWNER/AG

DAT



M E R E S T O N E
CONSULTANTS, INC.

ENGINEERS - PLANNERS - SURVEYORS

5215 WEST WOODMILL DRIVE
WILMINGTON, DE 19808
PHONE: 302-992-9900

3351 CROSSING AVE, SUITE 1
LOWES, DE 19958
PHONE: 302-220-5880

PARCEL NO.

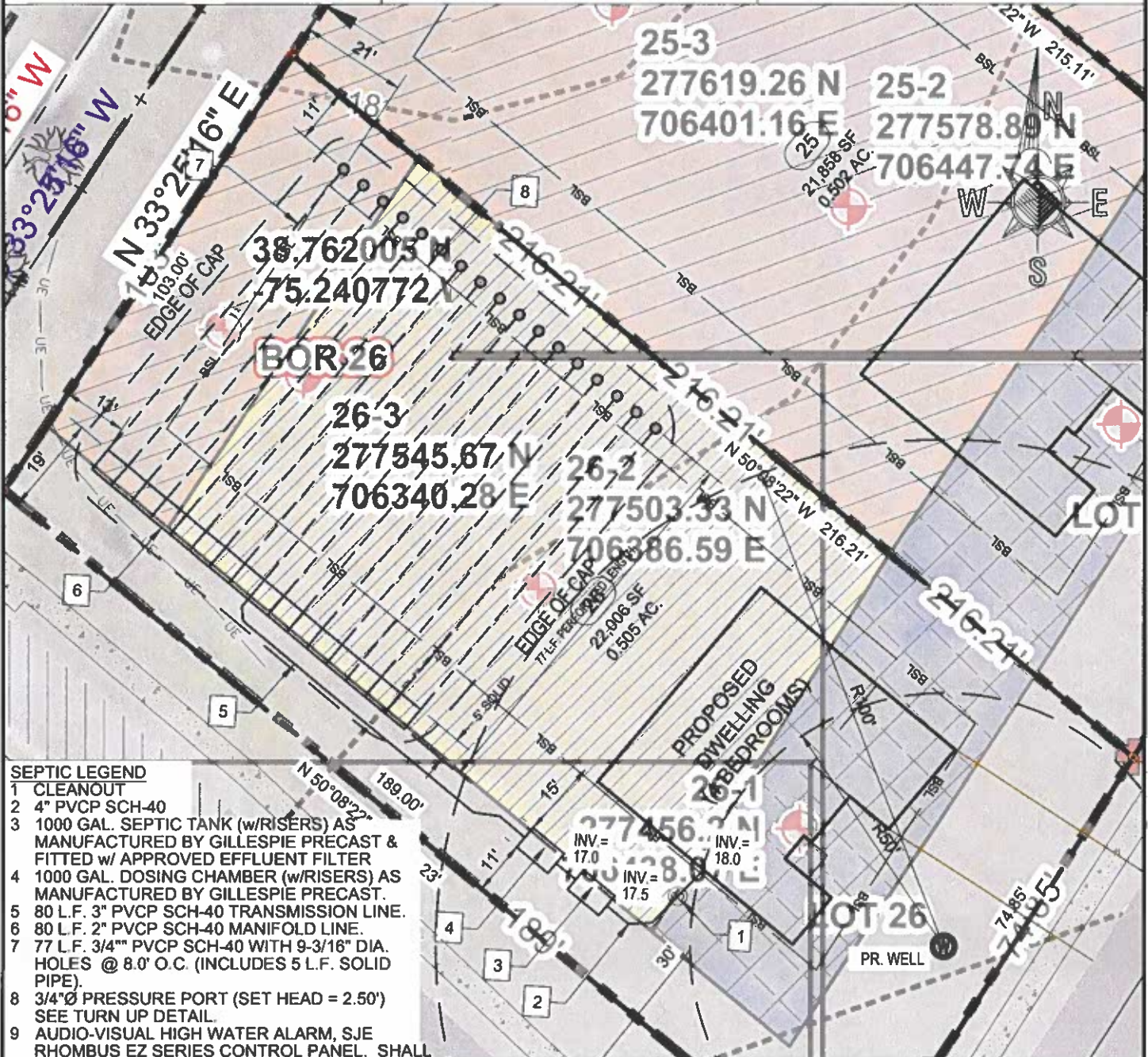
235-22.00-1360.00

RECORD PLAN:

PB 278, PG 1

DEED REF:

DB 3400, PG 261



ONSITE WASTEWATER DIPOSAI SYSTEM PLAN

FOR PROPERTY KNOWN AS:

LOT #26 * MAJESTIC MEADOWS

ALSO KNOWN AS:

REGAL DRIVE

SITUATE IN
BROADLANDS SUSSEX COUNTY
STATE OF DELAWARE

TAX PARCEL # 235-22.00-1360.00

SCALE: N=30' 42"

06/04/2025

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PROFESSIONAL ENGINEER

DATE

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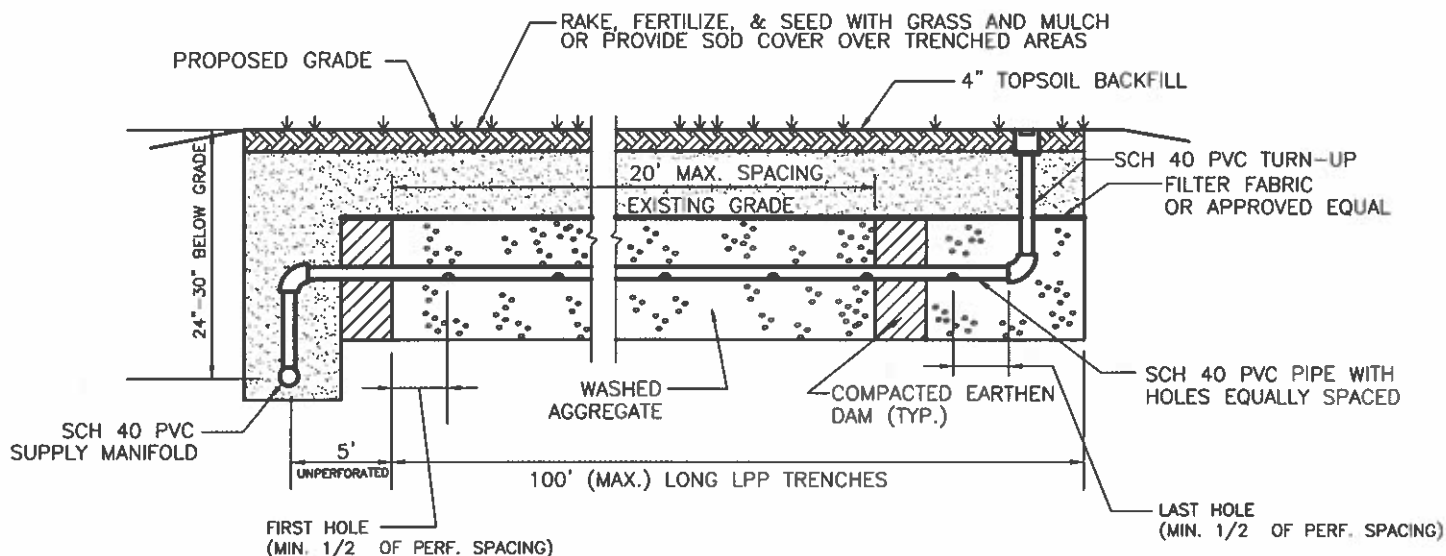
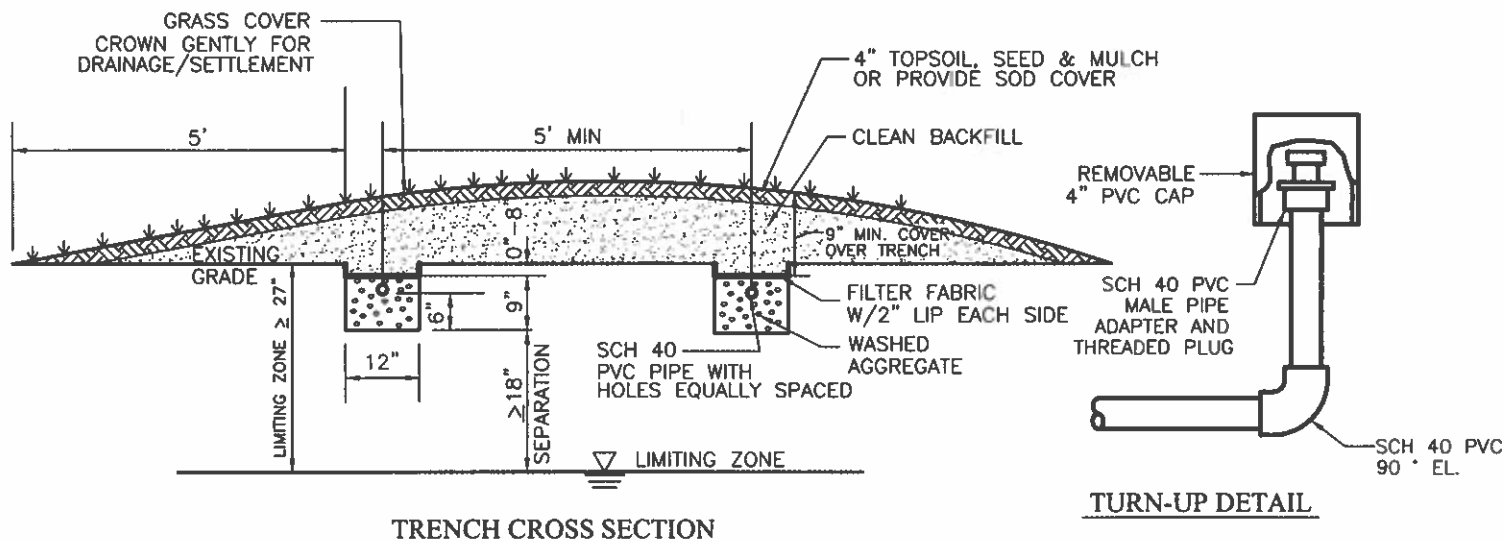
**MERESTONE
CONSULTANTS, INC.**

ENGINEERS - PLANNERS - SURVEYORS

5215 WEST WOODMILL DRIVE
WILMINGTON, DE 19808
PHONE: 302-992-7900

33516 CROSSING AVENUE, UNIT 1
LEWES, DE 19958
PHONE: 302-226-5880

Page 2 of 24
PLAN #: 25961L-3



DISPOSAL FIELD DETAILS PLAN

FOR PROPERTY KNOWN AS:

LOT #26 * MAJESTIC MEADOWS

ALSO KNOWN AS:

REGAL DRIVE

SITUATE IN:

BROADKILL * SUSSEX COUNTY

STATE OF DELAWARE

TAX PARCEL #: 235-22.00-1360.00

SCALE: 1"=NO SCALE



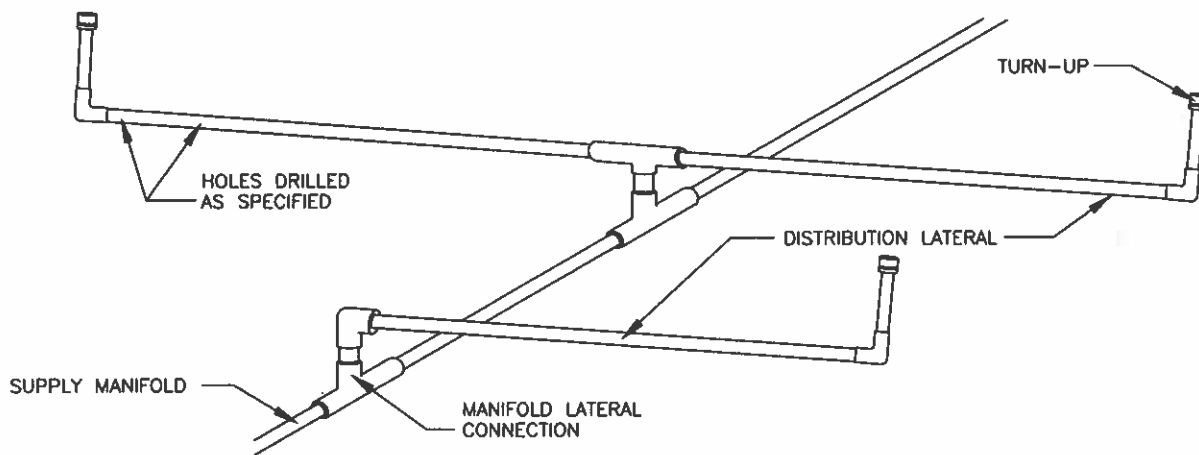
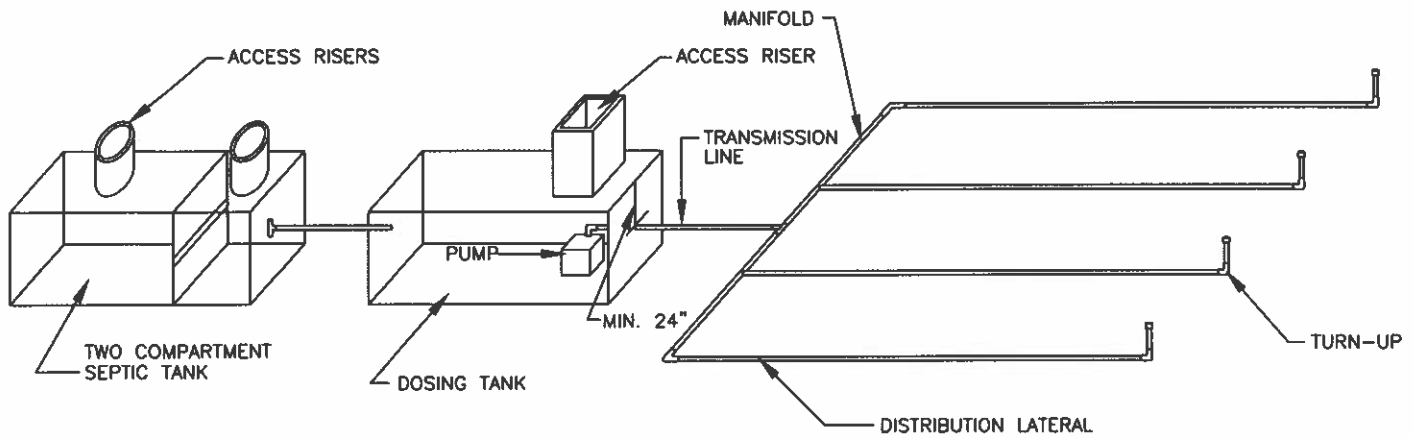
STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL

**TYPICAL CAPPING FILL
LOW PRESSURE PIPE DESIGN**
(NOT TO SCALE)

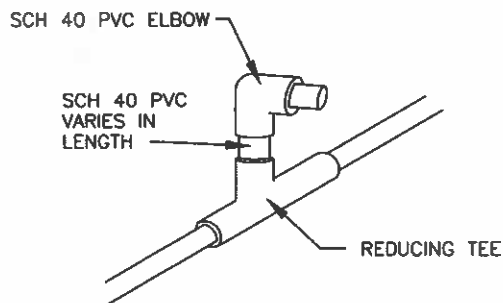
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REVISED: JANUARY 2014

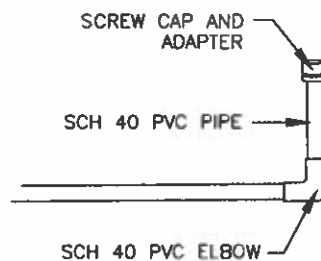
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(Sheet 2 of 3)
Page 16 of 24



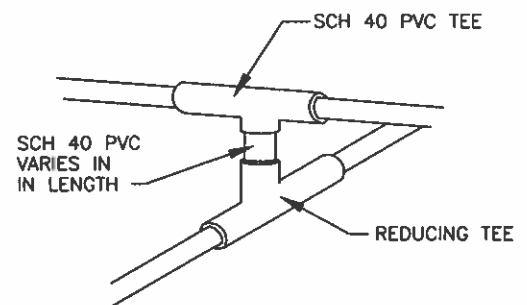
DISTRIBUTION SYSTEM



SIDE MANIFOLD LATERAL CONNECTION



TURN-UP



CENTER MANIFOLD LATERAL CONNECTION

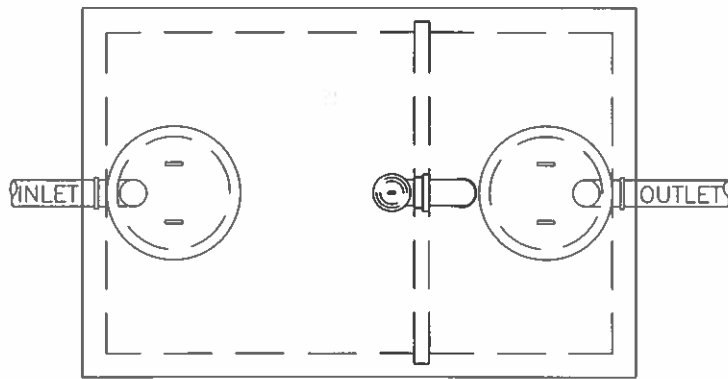


STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL

**TYPICAL DISTRIBUTION
NETWORK FOR A
LOW PRESSURE PIPE DESIGN
(NOT TO SCALE)**

ISSUED: JANUARY 1985
REVISED: JANUARY 2014

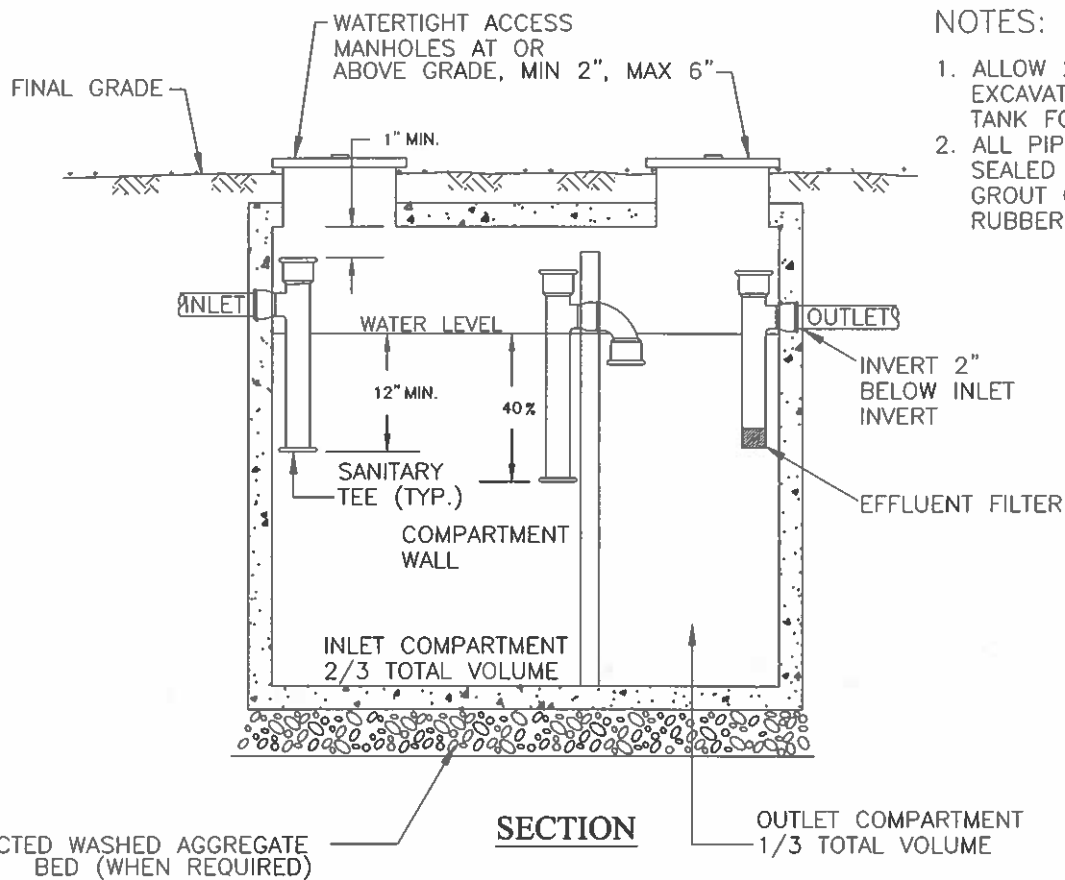
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Sheet 2 of 3



PLAN

NOTES:

1. ALLOW 2' CLEARANCE IN EXCAVATION AROUND TANK FOR TAMPING.
2. ALL PIPE CUTOUTS TO BE SEALED WITH WATERTIGHT GROUT OR APPROVED RUBBER GASKET.



SECTION

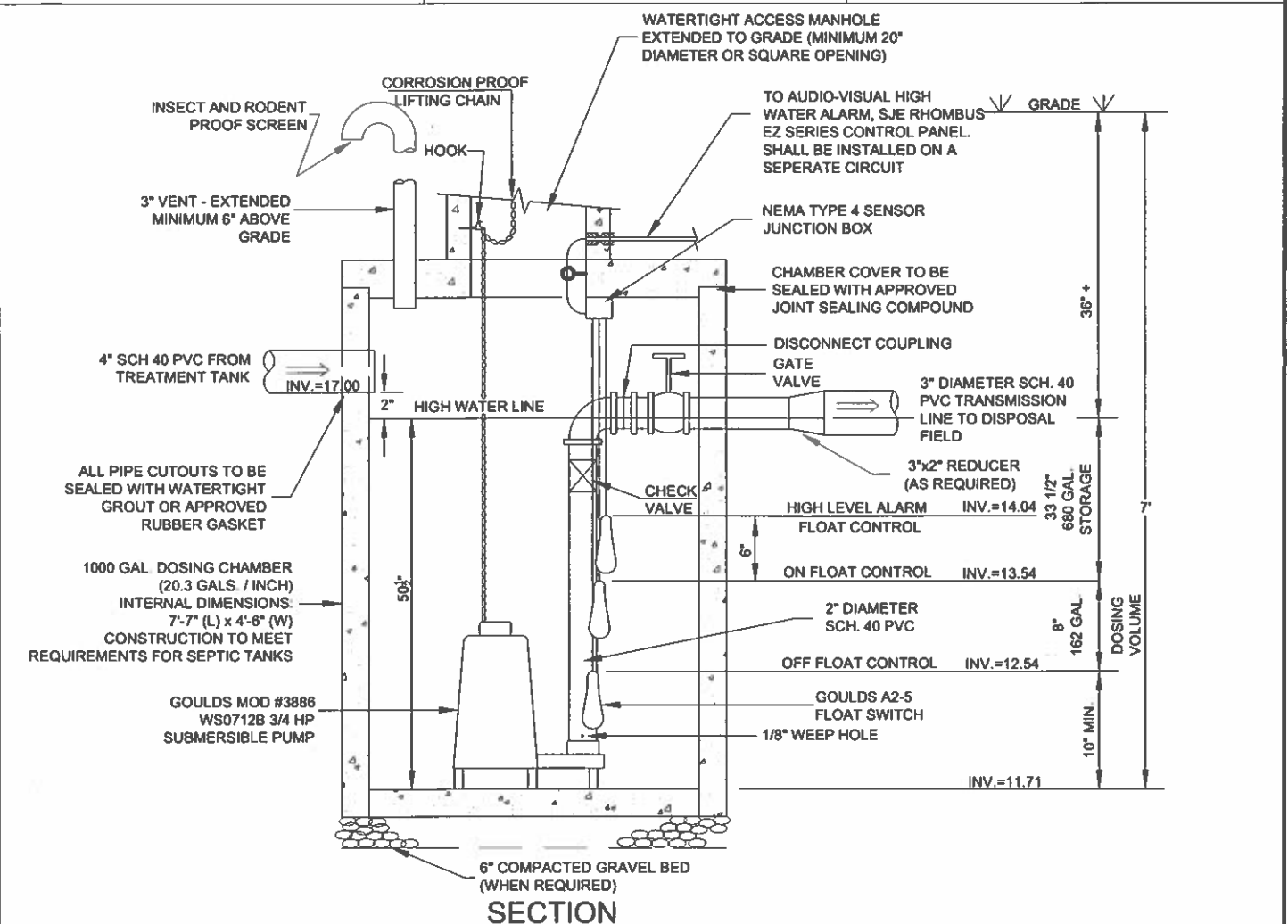


STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL

**TYPICAL TWO-COMPARTMENT
SEPTIC TANK**

ISSUED: JANUARY 1985
REVISED: JANUARY 2014

EXHIBIT - G
Page 12 of 24



NOTES: DOSING CHAMBER

- MAXIMUM DEPTH FROM GRADE TO INVERT OF DOSING CHAMBER TO BE 9'-0"
- EXCAVATION LIMITS SHALL EXTEND AT LEAST 2 FEET BEYOND TANK PERIMETER.
- ALL PIPE TO BE PVC SCHEDULE 40 OR SDR 26.
- CHAMBER TO BE SIZED ACCORDING TO REQUIREMENTS OF DOSING VOLUME AND STORAGE (SEE EXHIBIT).
- ALL DOSING CHAMBER COMPONENTS SHALL BE FIELD TESTED TO INSURE ACCURACY, WATERTIGHTNESS AND PROPER OPERATION OF ALL PUMPS AND ALARM CONTROLS.
- ALL ELECTRICAL CONNECTIONS SHALL BE WATERPROOF, CORROSION RESISTANT AND EXPLOSION PROOF.

DOSING CHAMBER DETAIL
 FOR PROPERTY KNOWN AS:
LOT #26 * MAJESTIC MEADOWS
 ALSO KNOWN AS:
REGAL DRIVE

SITUATION:
 BROADKIP, SUSSEX COUNTY
 STATE OF DELAWARE
 TAX PARCEL # 235-22.00-1360.00
 SCALE: 1" = 10' NO SCALE

06/04/2025

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PROFESSIONAL ENGINEER

DATE



M E R E S T O N E
CONSULTANTS, INC.

ENGINEERS - PLANNERS - SURVEYORS

5215 WEST WOODMILL DRIVE
 WILMINGTON, DE 19808
 PHONE: 302-992-7900

33516 CROSSING AVENUE, UNIT 1
 LEWES, DE 19958
 PHONE: 302-226-5880



WS_B Series

Model 3886

SUBMERSIBLE SEWAGE PUMP



Wastewater

FEATURES

Impeller: Cast iron, semi-open, dynamically balanced, non-clog with pump out vanes for mechanical seal protection. Optional Silicon bronze impeller available.

Casing: Cast iron volute type for maximum efficiency. Designed for easy installation on A10-20 guide rail or base elbow rail systems.

Mechanical Seal: SILICON CARBIDE VS. SILICON CARBIDE sealing faces for superior abrasive resistance, stainless steel metal parts, BUNA-N elastomers.

Shaft: Corrosion-resistant stainless steel. Threaded design. Locknut on all models to guard against component damage on accidental reverse rotation.

Fasteners: 300 series stainless steel.

Capable of running dry without damage to components.

Designed for continuous operation when fully submerged.

EXTENDED WARRANTY AVAILABLE FOR RESIDENTIAL APPLICATIONS.

AGENCY LISTINGS



Tested to UL 778 and CSA 22.2 108 Standards
By Canadian Standards Association
File #LR38549

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Sewage systems
- Dewatering/Effluent
- Water transfer

SPECIFICATIONS

Pump

- Solids handling capabilities: 2" maximum
- Discharge size: 2" NPT
- Capacities: up to 185 GPM
- Total heads: up to 38 feet TDH
- Temperature: 104°F (40°C) continuous, 140°F (60°C) intermittent

MOTORS

- Fully submerged in high grade turbine oil for lubrication and efficient heat transfer. All ratings are within the working limits of the motor.
- Class B insulation

Single phase (60 Hz):

- All single phase models feature capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.
- SJTOW or STOW severe duty oil and water resistant power cords.
- ½ - 1 HP models have NEMA three prong grounding plugs.

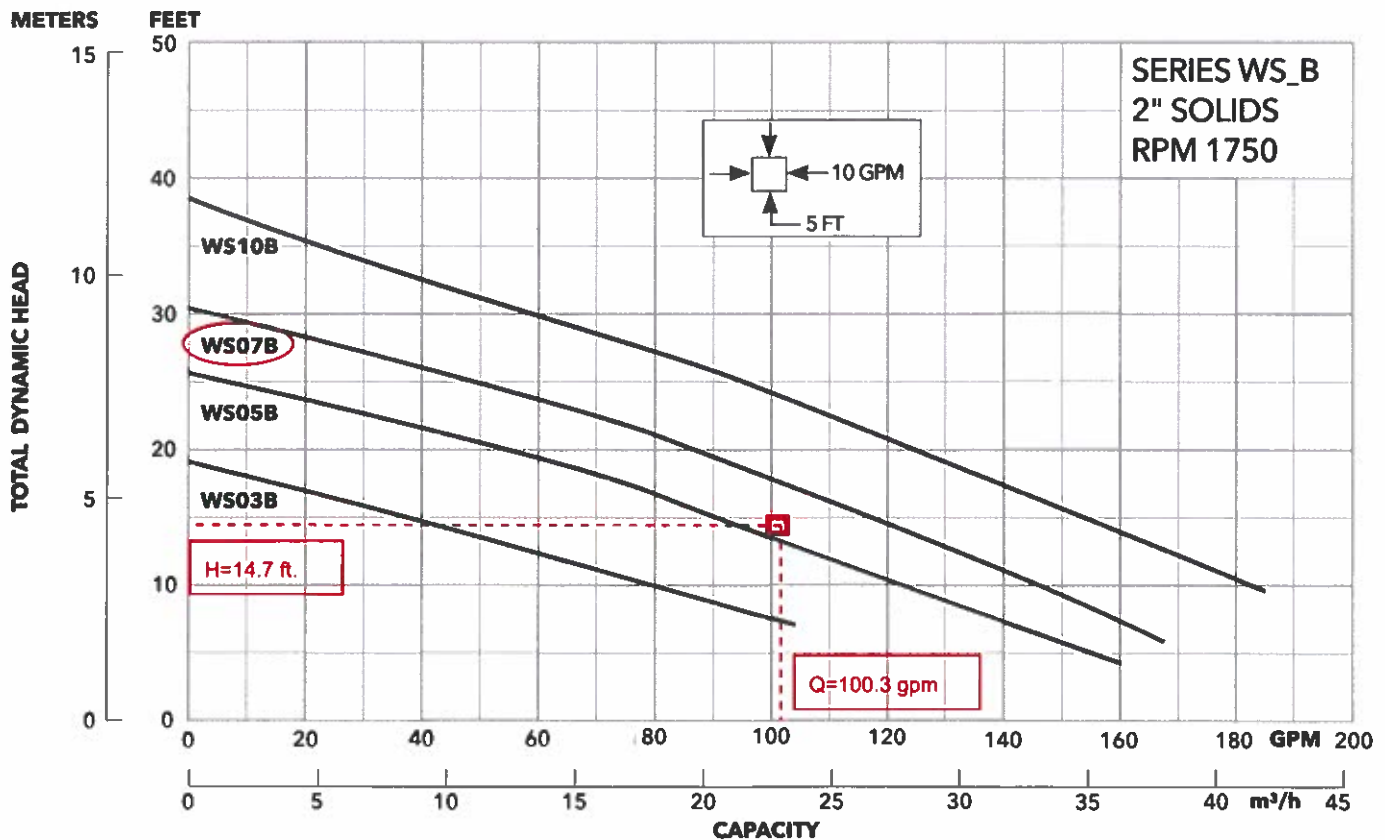
Three phase (60 Hz):

- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.
- Bearings: Upper and lower heavy duty ball bearing construction.
- Designed for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
- Power Cable: Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.
- Motor Cover O-ring: Assures positive sealing against contaminants and oil leakage.

Wastewater

MODELS

Order Number	HP	Phase	Volts	RPM	Impeller Diameter (in.)	Maximum Amps	Locked Rotor Amps	KVA Code	Full Load Efficiency	Resistance		Weight (lbs.)
										Start	Line-Line	
WS0311B	0.33	1	115	1750	4.69	10.7	30.0	M	54	11.9	1.7	63
WS0318B			208			6.8	19.5	K	51	9.1	4.2	
WS0312B			230			4.9	14.1	L	53	14.5	8.0	
WS0511B	0.5	1	115		5.00	14.5	31.1	J	55	9.3	1.4	65
WS0518B			208			8.0	19.5	K	51	9.1	4.2	
WS0512B			230			7.3	16.5	J	54	11.7	5.6	
WS0538B		3	200			3.8	12.3	K	75	NA	6.7	
WS0532B			230			3.3	9.7	K	75	NA	9.9	
WS0534B			460			1.7	4.9	K	75	NA	39.4	
WS0537B	0.75	1	575		5.38	1.4	4.3	K	68	NA	47.8	85
WS0718B			208			11.0	39.0	K	65	2.6	1.4	
WS0712B			230			9.4	24.8	J	57	4.8	2.3	
WS0738B		3	200			4.1	21.2	H	74	NA	4.3	
WS0732B			230			3.6	17.3	J	76	NA	5.6	
WS0734B			460			1.8	8.9	J	76	NA	22.4	
WS0737B		1	575		5.75	1.5	7.3	J	71	NA	29.2	
WS1018B			208			14.0	39.0	K	65	2.6	1.4	
WS1012B			230			12.3	30.5	H	60	4.3	1.8	
WS1038B			200			6.0	21.2	H	74	NA	4.3	
WS1032B			230			5.8	17.3	J	76	NA	5.6	
WS1034B			460			2.9	8.9	J	76	NA	22.4	
WS1037B			575			2.4	7.3	J	71	NA	29.2	

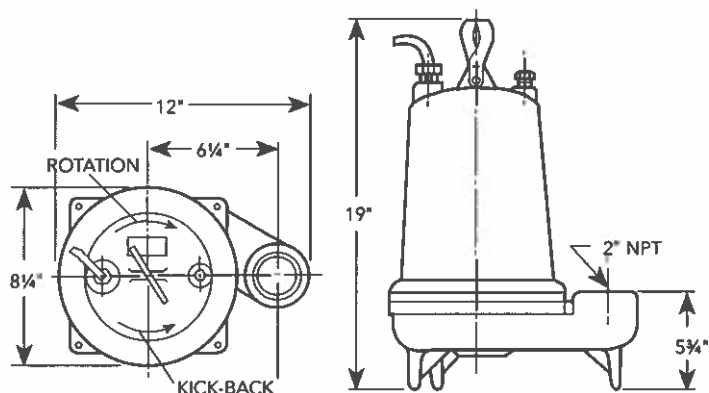


PERFORMANCE RATINGS (gallons per minute)

Order No.	WS03B	WS05B	WS07B	WS10B
HP ▶	½	½	¾	1
RPM ▶	1750	1750	1750	1750
Total Head Feet of Water	10 ▶	80	122	145
	15	36	90	116
	20	-	50	86
	25	-	-	48
	30	-	-	-
	35	-	-	-

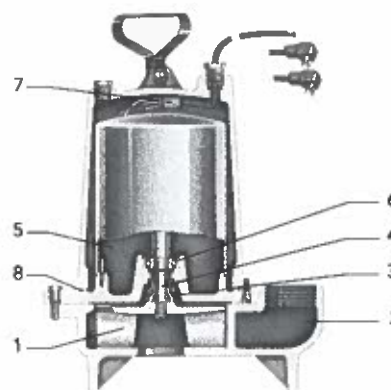
DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



COMPONENTS (for reference only)

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casing O-Ring



NOTE: For specific parts breakdown, see repair parts.

xylem
Let's Solve Water

Xylem Inc.
2881 East Bayard Street Ext., Suite A
Seneca Falls, NY 13148
Phone: (866) 325-4210
Fax: (888) 322-5877
www.gouldswatertechnology.com

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EZ Series® - Single Phase Simplex

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

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.

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

The optional post models include an access door. The post can be mounted in the ground directly, over a 4X4, or conduit. The panel is also available with optional duo alarm to meet the needs of various applications.

PANEL COMPONENTS

1. **Enclosure base** measures 10 X 8 X 6 inches (25.4 X 20.32 X 15.24 cm). NEMA 4X (ultraviolet stabilized thermoplastic with removable mounting feet for outdoor or indoor use). Includes locking latch as standard. **Note:** Options, voltage, and amp range selected may change enclosure size and component layout.
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. **Circuit Breaker** provides pump power disconnect and branch circuit protection.
5. **Circuit Breaker** provides control/alarm power disconnect.
6. **Power Relay** controls pump by switching electrical lines.
7. **Float Connection Terminal Block**
8. **Incoming Control/Alarm Power & Pump Power Terminal Block**
9. **Control Power Indicator** indicator light illuminates if control power is present in panel.
10. **Alarm Power Indicator** indicator light illuminates if alarm power is present in panel.
11. **Pump Run Indicator** will illuminate when pump is called to run.
12. **Backlit LCD Display** shows system information including: pump elapsed time (hh:mm), pump events (cycles), and alarm condition (counts).
13. **Menu/Enter Button** used for viewing panel settings.
14. **Set/Change Button** used for programming panel settings.
15. **Pump Push To Run Momentary Switch** - Pump activates when pressed
16. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating). (Located inside panel on cover, not shown)
17. **Control and Alarm Power** - shorted condition indicators.

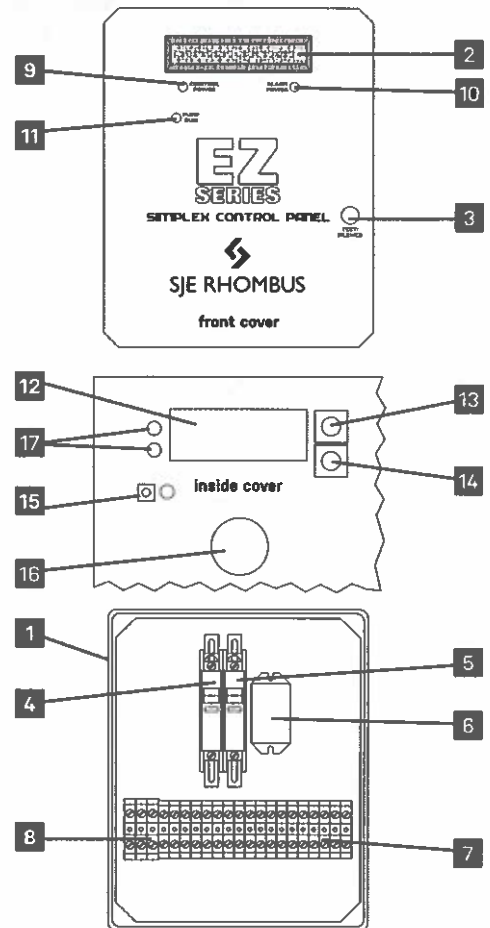
NOTE: Schematic/Wiring Diagram and Pump Specification Label are located inside the panel.

Dosing Sequence:

3 Doses Per Day @ 1 min 33 sec

"On" Cycles: 8:00:00, 14:00:00 & 22:00:00

"Off" Cycles: 8:01:33, 14:01:33 & 22:01:33



**Model Shown EZS21W914X6A8AC10E15A
(inside view)**

Reg. Cdn Pat. & TM Off

FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes:
 - Demand Dose** - three control switches
 - Timed Dose** - two control switches
- Available with EZconnex® float system
- Complete with step-by-step installation instructions
- Five-year limited warranty



SJE RHOMBUS.

1-888-DIAL-SJE • 1-218-847-1317

1-218-847-4617 Fax

email: customer.service@seinc.com

www.sjerhombus.com

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

SEE REVERSE SIDE FOR ORDERING INFORMATION.

SEE PRICE BOOK FOR LIST PRICE.

EZS**1****1****W****1****1****4****H****3A 6A 8AC 10E 15A****MODEL EZS****MODEL TYPE**

1 = SPLX TIMED DOSE

2 = SPLX DEMAND DOSE

ALARM PACKAGE

1 = alarm package (includes test/normal/silence switch, fuse, red light & horn)

ENCLOSURE RATING

W = NEMA 4X

STARTING DEVICE

1 = 120/208/240 VAC

9 = 120 VAC

PUMP FULL LOAD AMPS

0 = 0-7 FLA

1 = 7-15 FLA

2 = 15-20 FLA

PUMP DISCONNECTS

4 = circuit breaker(s)

120 VAC (must select starting device option 9)

120/208/240 VAC (must select starting device option 1)

SWITCH APPLICATIONS

H = floats (Timed dose = timer enable and alarm / Demand dose = stop, start, and alarm) (select 17 option)

E = EZconnex® float switch system (select 33,35 or 36 option)

(Timed dose)

(Demand dose)

X = no float

(Timed dose)

(Demand dose)

Note: Pump down applications only.**OPTIONS** *Listed below***CODE DESCRIPTION**

- ☐ 1J Duo alarm inputs
- ☒ 3A Alarm Flasher (included as standard)
- ☐ 4A Redundant off (timed dose float panel only)
(select 4D if floats are required)
- ☐ 4D Redundant off float
(must select 4A option) (must select 17 option)
- ☒ 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' (per float)
- ☐ 16B 15' cord in lieu of 20' (per float)
- ☐ 16C 30' cord in lieu of 20' (per float)
- ☐ 16D 40' cord in lieu of 20' (per float)
- ☐ 17C Sensor Float* / internally weighted ▲ (per float)
- ☐ 17D Sensor Float* / externally weighted ▲ (per float)
- ☐ 17G MilliAmpMaster™ / pipe clamp ● (per float)
- ☐ 17H MilliAmpMaster™ / externally weighted ● (per float)
- ☐ 17J Sensor Float* / pipe clamp ▲ (per float)

CODE 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', w/10' floats (3) /pipe clamp *
- ☐ 33E EZconnex® 3-Port, 50', w/10' floats (3) /pipe clamp *
- ☐ 33G EZconnex® 3-Port, 25', w/20' floats (3) /pipe clamp *
- ☐ 33H EZconnex® 3-Port, 50', w/20' floats (3) /pipe clamp *
- ☐ 35D EZconnex® 4-Port, 25', w/10' floats (4) /pipe clamp *
(timed dose only)
- ☐ 35E EZconnex® 4-Port, 50', w/10' floats (4) /pipe clamp *
(timed dose only)
- ☐ 35G EZconnex® 4-Port, 25', w/20' floats (4) /pipe clamp *
(timed dose only)
- ☐ 35H EZconnex® 4-Port, 50', w/20' floats (4) /pipe clamp *
(timed dose only)
- ☐ 36D EZconnex® 3-Port, 25', w/10' floats (2) /pipe clamp, sealing plug *
- ☐ 36E EZconnex® 3-Port, 50', w/10' floats (2) /pipe clamp, sealing plug *
- ☐ 36G EZconnex® 3-Port, 25', w/20' floats (2) /pipe clamp, sealing plug *
- ☐ 36H EZconnex® 3-Port, 50', w/20' floats (2) /pipe clamp, sealing plug *

● Mechanically-activated ▲ Mercury-activated

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

PL-122 Filter

The PL-122 was the original Polylok filter. It was the first filter on the market with an automatic shut-off ball installed with every filter. When the filter is removed for regular servicing, the ball will float up and prevent any solids from leaving the tank. Our patented design cannot be duplicated.

Features:

- Offers 122 linear feet of 1/16" filter slots, which significantly extends time between cleaning.
- Has a flow control ball that shuts off the flow of effluent when the filter is removed for cleaning.
- Has its own gas deflector ball which deflects solids away.
- Installs easily in new tanks, or retrofits in existing systems.
- Comes complete with its own housing. No gluing of tees or pipe, no extra parts to buy.
- Has a modular design, allowing for increased filtration.

PL-122 Installation:

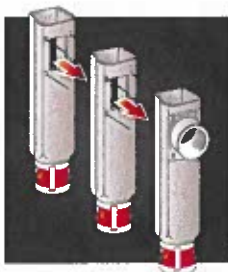
Ideal for residential waste flows up to 3,000 gallons per day (GPD). Easily installs in any new or existing 4" outlet tee.

1. Locate the outlet of the septic tank.
2. Remove the tank cover and pump tank if necessary.
3. Glue the filter housing to the outlet pipe, or use a Polylok Extend & Lok if not enough pipe exists.
4. Insert the PL-122 filter into tee.
5. Replace and secure the septic tank cover.

PL-122 Maintenance:

The PL-122 Effluent Filter will operate efficiently for several years under normal conditions before requiring cleaning. It is recommended that the filter be cleaned every time the tank is pumped, or at least every three years.

1. Do not use plumbing when filter is removed.
2. Pull PL-122 cartridge out of the tee.
3. Hose off filter over the septic tank. Make sure all solids fall back into septic tank.
4. Insert filter back into tee/housing.



Polylok offers the only filter on the market where you can get more GPD by simply snapping our filters together!

Patent Numbers
6,015,488 & 5,871,640



1/16" Filtration Slots

3,000 GPD



Gas Deflector
Automatic Shut-Off Ball



Filter Ready Adapter
Connects to Septic Tank Wall



Outdoor SmartFilter® Alarm
Polylok, Zabel & Best filters accept the SmartFilter® switch and alarm.

Frictional Loss Tabulation

for

3.0 Inch Diameter Transmission Line

Transmission Length = 80 Feet

C = 150

Segment		Length	Pipe Dia.	Flow	H L/100	H L/Seg.
#		(FT.)	(IN.)	(GPM)	(FT.)	(FT.)
1	PIPE	80.0	3.00	100.27	2.355	1.884
Total			(Plus 20% For Fitting Losses)			2.261

Frictional Loss Tabulation

for

2.0 Inch Diameter Manifold Line

Manifold Length = 80 Feet

C = 150

Segment	Fitting	Length	Pipe Dia.	Flow	H L/100	H L/Seg.
#		(FT.)	(IN.)	(GPM)	(FT.)	(FT.)
1	PIPE	5.0	2.00	5.90	0.089	0.004
2		5.0	2.00	11.80	0.322	0.016
3		5.0	2.00	17.69	0.683	0.034
4		5.0	2.00	23.59	1.164	0.058
5		5.0	2.00	29.49	1.759	0.088
6		5.0	2.00	35.39	2.466	0.123
7		5.0	2.00	41.29	3.281	0.164
8		2.5	2.00	47.19	4.201	0.105
9						
10						
Total			(Plus 20% For Fitting Losses)			0.586

Frictional Loss Tabulation

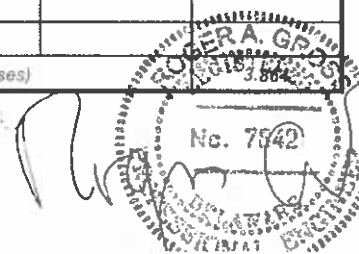
0.75 Inch Diameter Laterals

Head to Be Maintained = 2.50 Feet

Hole Diameter = 0.1875 Inches

C = 150

Segment		Length	Pipe Dia.	Flow	H L/100	H L/Seg.
#		(FT.)	(IN.)	(GPM)	(FT.)	(FT.)
1		8.00	0.75	0.66	0.181	0.014
2		8.00	0.75	1.31	0.654	0.052
3		8.00	0.75	1.97	1.386	0.111
4		8.00	0.75	2.62	2.361	0.189
5		8.00	0.75	3.28	3.569	0.286
6		8.00	0.75	3.93	5.002	0.400
7		8.00	0.75	4.59	6.655	0.532
8		8.00	0.75	5.24	8.522	0.682
9		9.00	0.75	5.90	10.600	0.954
10						
11						
Total			(Plus 20% For Fitting Losses)			3.864



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Lateral Discharge Table

NOTE: LATERAL LENGTHS DENOTE PERFORATED LENGTH FOR HOLE SPACING CALCS.

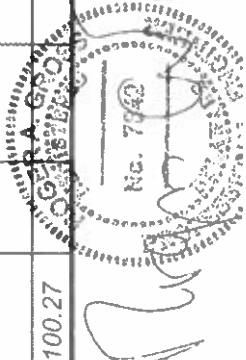
DESIGN FLOW Q = 480 c.f.s. PERFORATION DIA. = 0.1875 INCHES

TRENCH WIDTH = 1 ft

HEAD TO BE MAINTAINED = 2.5 ft

LATERAL DIA. = 0.75 Inches

LAT. NO.	INV. ELEV. (ft)	TRENCH LENGTH (ft)	TRENCH WIDTH (ft)	LOADING RATE (gpd/sq/ft)	TRENCH LOADING (gpd)	% LOAD -ING TOTAL	IN-LINE PRESSURE (ft)	PERFORATION DIAMETER (inches)	PERFORATION DISCHARGE RATE(gpm)	LATERAL DISCHARGE RATE(gpm)	NO. PERF.	PERF. SPACING (ft)(3' min.)	LATERAL LENGTH (ft)	LAT. DIA. (in)
1	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
2	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
3	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
4	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
5	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
6	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
7	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
8	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
9	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
10	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
11	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
12	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
13	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
14	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
15	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
16	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
17	18.00	72.00	1	0.392	28.24	5.9%	2.50	0.1875	0.66	5.90	9	8.00	72.00	0.75
TOT.		1224			480.00	100.0%				100.27				



PLANNING & ZONING
Jamie Whitehouse, AICP, MRTPI
Director
(302) 855-7878 T
(302) 854-5079 F



Sussex County
DELAWARE
sussexcountype.gov

Sussex County Zoning Verification

This form is to provide the current zoning for the following parcel of land located within Sussex County. This form does not grant approval for any current or future use of the property.

Tax Parcel Number: 235-22.00-1360.00

Location: Regal Drive, Majestic Meadows, Milton

Current Zoning: AR-1

Owner: (from assessment records):

Key Properties Group, LLC

Owner Mailing Address (from assessment records):

Key Properties Group, LLC

610 Marshall Street

Milford, DE 19963

The zoning for this property has been confirmed from the Official Sussex County Zoning Map by:

Marina Truitt

A handwritten signature in cursive script, appearing to read "M. Truitt", is written over the printed name "Marina Truitt".

Sussex County Planning & Zoning Staff Member

July 24, 2024

Date



COUNTY ADMINISTRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE 19947

Last Updated 3-12-20
Page 24 of 24



**PERMIT
280984**



Tax Parcel Number: 2-35-22.00-1360.00 Lot Number: 26

Site Evaluation Number: 567188

Pursuant to provisions of Title 7, Delaware Code, Chapter 60, permission is hereby granted to:

Key Properties Group, LLC

610 Marshall Street, Milford, DE 19963 Country?

to construct, operate and maintain an onsite wastewater system.

Construction must be completed on or before 07/24/2027 , two years from permit issuance date. Construction must be performed by a person duly licensed by Delaware DNREC for such activity.

All current regulations governing wastewater system installation shall be followed.

All attached permit conditions shall be complied with.

The applicant is responsible for obtaining all additionally required permits and approvals.

DNREC APPROVED

7/24/2025

AUTHORIZED SIGNATURE

Date



PERMIT 280984



Tax Parcel Number: 2-35-22.00-1360.00 Lot Number: 26

Site Evaluation Number: 567188

Conditions for both Owner and Contractor

§ 5 Connections and/or additions to the system other than what are proposed on the approved plot plan (s) are prohibited without prior approval from the Ground Water Discharges Section (GWDS).

§ 6 Roof downspouts, foundation drains, storm sewers, combined sewers or appurtenances thereto, or any sewer or device carrying or discharging either storm, surface, ground or cooling water, oil or water softener discharge shall not be connected to the system.

§ 20 The average daily discharge of this system is restricted to 480 gallons per day. Changes to permitted system flow must be pre-approved by the GWDS and may require a new permit(s) to be issued.

§ 23 A Certificate of Satisfactory Completion must be issued by the GWDS for this system prior to its use. The system is NOT approved for operation and maintenance until the required certificate has been issued.

§ 90 It is the responsibility of the Class E System Contractor, with cooperation of the property owner, to establish and make visible all property corners that define the property boundaries prior to system installation/inspection. Failure to comply with this condition may necessitate additional Inspection(s) and delay subsequent site approval.

§ 1 This system MUST be installed/repared by a licensed Class E System Contractor. The Contractor must call the Ground Water Discharges Section (GWDS) at (302) 739-9947 in Kent and New Castle Counties and (302) 856-4561 in Sussex County for system construction start-up authorization. The Contractor must call the GWDS for this authorization 24 hours prior to system construction start for Standard and I/A Systems and 72 hrs. prior for Large Systems. The Contractor must have an DNREC-approved permit copy on site during construction of this system.

§ 94 The proposed/existing septic tank(s) must be upgraded with risers(2) for each compartment finished to above grade and a GWDS-approved outlet filter. The above-grade access covers shall be watertight and secure from vandalism. The outlet filter should be removed, inspected, cleaned and replaced per manufacturer's recommendations.

Conditions for Contractor

§ 12 There shall be no soil disturbance within the primary and spare absorption areas except the minimum required for system/component installation and/or repair.

§ 24 It is the responsibility of the Class E System Contractor to verify that ALL isolation distances, as noted and approved in the permit, can be maintained. Furthermore, the contractor shall notify the Class B or C Designer/Engineer AND the GWDS if field conditions exist that prohibit the ability to maintain the approved isolation distances and/or requirements of the Regulations.

§ 48 Final Site Restoration must comply with Section 5.4.5.5 of the Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems.



PERMIT 280984



Tax Parcel Number: **2-35-22.00-1360.00 Lot Number: 26**

Site Evaluation Number: **567188**

§ 66 A construction report must be prepared by the Class E System Contractor and submitted to the GWDS within ten (10) days of system completion. This is to include any changes that require a post-construction "As-Built" drawing. "As-Built drawings detailing changes to engineered (pressurized) systems must be submitted by the Class C Engineer.

§ 77 The Class E System Contractor shall comply with all Occupational Safety and Health Act (OSHA) regulations. OSHA regulations can be found at the website www.osha.gov or by contacting the U.S. Department of Labor.

§ 91 All proposed changes to permit design MUST be submitted and approved in the form of a preconstruction "as-built" drawing prior to system installation. Contact the GWDS for guidance. Post-construction "as-built" drawings are subject to GWDS approval and MUST be submitted to the GWDS within ten (10) calendar days of system completion. All "as-built" drawings (pre or post) detailing changes to engineered systems MUST be generated by the Class C Design Engineer.

§ 3 The Class E System Contractor shall notify the Class C Design Engineer for an inspection prior to covering the installation. Approval to cover must be given by the Engineer/Authorized Designee. The Engineer shall provide As-Built drawings within ten (10) days after system inspection (if required).

§ 7 The drainfield area, either above or below grade, must be installed according to the cross section in the permit design plan(s). Any changes to system depth/height will require pre-approval from the Class D Soil Scientist, the Class C Design Engineer (if applicable) and the GWDS.

§ 10 All electrical connections shall be waterproof, corrosion-resistant and explosion proof where applicable. All electrical connections and components utilized in an OWTDS, at a minimum, must comply with all National and Delaware Electrical Codes (Admin Code, Title 24, §1400) per Section 5.4.6.2.1.5 of the regulations.

§ 13 The existing sewage disposal system drainfield and/or components shall be abandoned as required in Section 5.4.8 of the Regulations. Unless the existing tank(s), septic, dosing and/or lift, are incorporated into a replacement system design any tank(s), all cesspool(s)/seepage pit(s) and/or disposal areas as shown or indicated on the permit plot plan shall be located, pumped and either filled or removed/backfilled and an Abandonment Report (exhibit "Z") submitted.

§ 33 This system must be pressure-tested by a Class C Engineer/Authorized Designee.

§ 92 This system type is classified as "mound" or "capping fill" and thus requires a second inspection to ensure sufficient soil "cap" or cover over the drainfield. The Class E System Contractor is to call the licensed Class C Engineer for a "cap" inspection within ten (10) calendar days after receiving a satisfactory pre-cover inspection, weather permitting.

Conditions for Owner

§ 17 The property owner shall connect to the county or municipal sewer system if and when such services become available and shall be in accordance with County and/or Municipal rules and regulations. At time of connection the existing septic disposal system shall be abandoned per DNREC Regulations and permit voided unless the GWDS approves continued operation.

§ 18 This system shall be maintained in such a manner as to prevent abnormal odors or surfacing, pooling and/or discharging of wastewater onto any surface waters.



**PERMIT
280984**



Tax Parcel Number: **2-35-22.00-1360.00 Lot Number: 26**

Site Evaluation Number: **567188**

§ 19 The sites of the initial and replacement absorption facilities shall not be covered by asphalt or concrete or subject to vehicular traffic or any activity or similar loadings that would adversely affect the soils. These sites shall be maintained so that they are free from encroachments by ancillary buildings and additions to main structures.

§ 21 The septic tank must be pumped by a licensed Class F Liquid Waste Hauler at a minimum of once every three (3) years. Septic tanks constructed of non-masonry materials should be pumped only when the seasonal water table is low to minimize possible flotation risk and must be immediately refilled by the owner.

§ 76 The effluent filter, proposed or existing in either the outlet baffle of the septic tank, distribution box, septic tank lift station (Exhibit "V") or separate lift station vault, shall be cleaned and maintained as necessary to prevent clogging of the disposal system and can be performed by the property owner.

§ 93 The site evaluation supporting this permit will expire five(5) years after site evaluation approval date. System replacement after this date will require a new site evaluation and subsequent GWDS approval.

Total Dynamic Head Calculation

Flow	Orifice	Static	Frictional Head (FT.)			TDH (FT.)
(GPM)	Head (FT.)	Head (FT.)	Lateral	Manifold	Trans.	
100.27	2.50	5.46	3.86	0.59	2.26	14.67

Hf Total : 6.71

Pump Selected : Goulds Mod # 3886 - Ser # WS0712B - 3/4 HP

Allowable Friction Head = 18.00 - 7.96
 (@ Design G.P.M.) = 10.04 Ft.

Within 33.16% of Allowable

INVERT @ TANK 17.00
 INVERT @ LAT 18.00 PUMP "OFF" INVERT 12.54
 STATIC HEAD 5.46

Dosing Volume Calculation

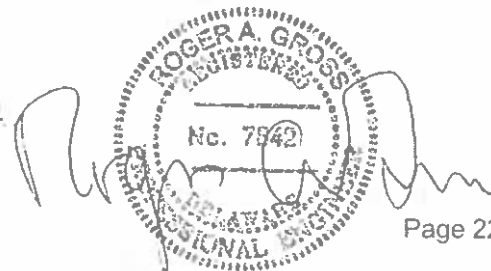
	Pipe Dia.	Area	Vol./Foot	Length	Total Vol.
	(IN.)	(FT ²)	(GAL./FT.)	(FT.)	(GAL.)
Laterals	0.75	0.0031	0.0229	1309.00	30.039
Manifold	2	0.0218	0.1632	80.00	13.055
Trans.	3	0.0491	0.3672	80.00	29.374

Minimum Dosing Vol. = 5 x 30.04

= 150.20 Gal.
 Prescribed Dose Vol. 162.40 Gal. 8.00 Dose(in.)

Dose Cycle = 480 Gal. / 162.40 Gal.
 = 3.0

Time Dose Sequence: 1.62 min.



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