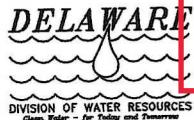


Permit Number:
282092

APPLICATION - PERMIT
ON-SITE WASTEWATER SYSTEM



RECEIVED

DELAWARE DEPARTMENT OF
NATURAL RESOURCES

12/19/25

GROUNDWATER

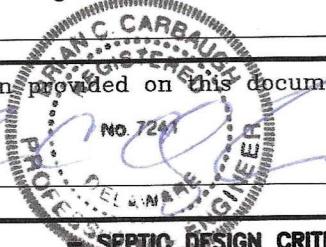
AND ENVIRONMENTAL CONTROL

Owner's Name: Lawrence Stanley Sr. Phone: (302) 359-1967
Address: 1982 Halltown Rd, Hartly, DE 19953
Project Location: 9585 S Dupont Hwy, Felton, DE 19943 Tax Map #: 8 00 12901 01 3700 000

Application Preparer: Brian C. Carbaugh, P.E. DNREC License #: 2043
Preparer's Address: c/o Apple-Designs, 689 Gallo Road, Harrington, DE 19952
Phone: (302) 398-4951

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

Preparer's Signature



12/7/2025

Date

SEPTIC DESIGN CRITERIA - SITE EVAL.

REF# 573869

CF=Cap & Fill / FD=Full Depth

(Please check all boxes that apply)

Type of Construction:

Replacement
 New Construction
 Component Replacement
 Repair to Existing System
 Authorization to Use Existing System
 Other: _____

System Type:

Low Pressure Pipe (FD)
 Elevated Sand Mound
 Pressure Dose (FD)
 Holding Tank
 Gravity (FD)

Low Pressure Pipe (CF)
 Wisconsin At-Grade
 Pressure Dose (CF)
 Subsurface Micro Irrigation
 Gravity (CF)
 Other _____

Bed or Trench

Gravelless Chamber or Stone/Gravel

Sand-lined Yes No

Existing System Malfunctioning Yes No N/A

CHP# 6558
PERMIT(S) # 5M54389

161783

192007

231972

Pre-Treatment Units

Bio-Clear Klarester
 Septic Tank Recirculating Sand Filter
 Other: _____

of Bedrooms: 6 MOTEL RM, 1 EMPLOYEE

Average Percolation Rate: 30 MPI

Gallon Per Day Flow: 620 GPD

Minimum Square Ft. Required: 1,426 Sq. Ft.

Square Ft. Proposed: 2,450 Sq. Ft.

Central Water Available Yes No

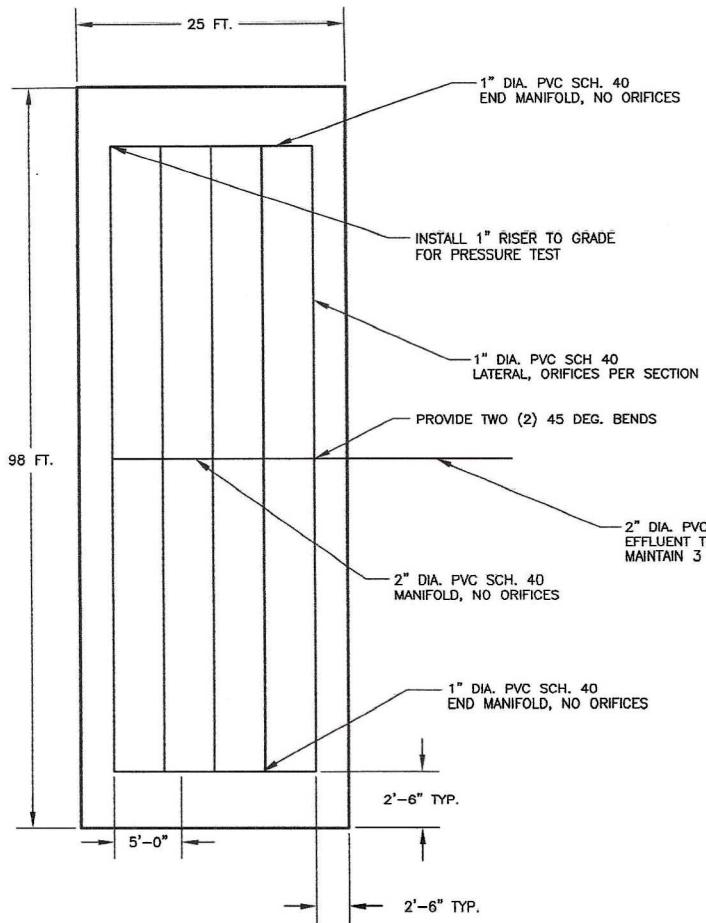
(If yes, please state Utility Name: _____)

PAID

\$ 325.00 12/22/2025

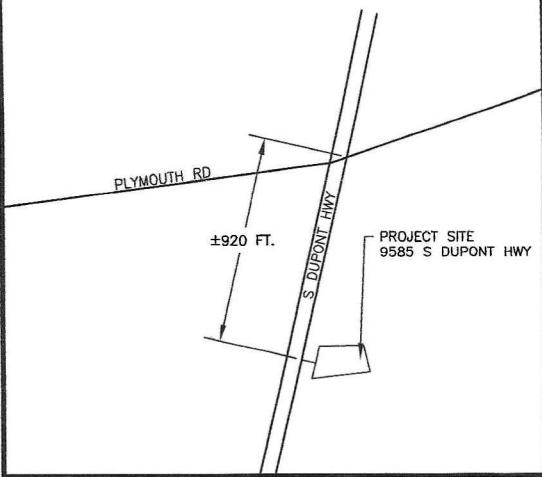
ADX/689

- CROSS SECTION -

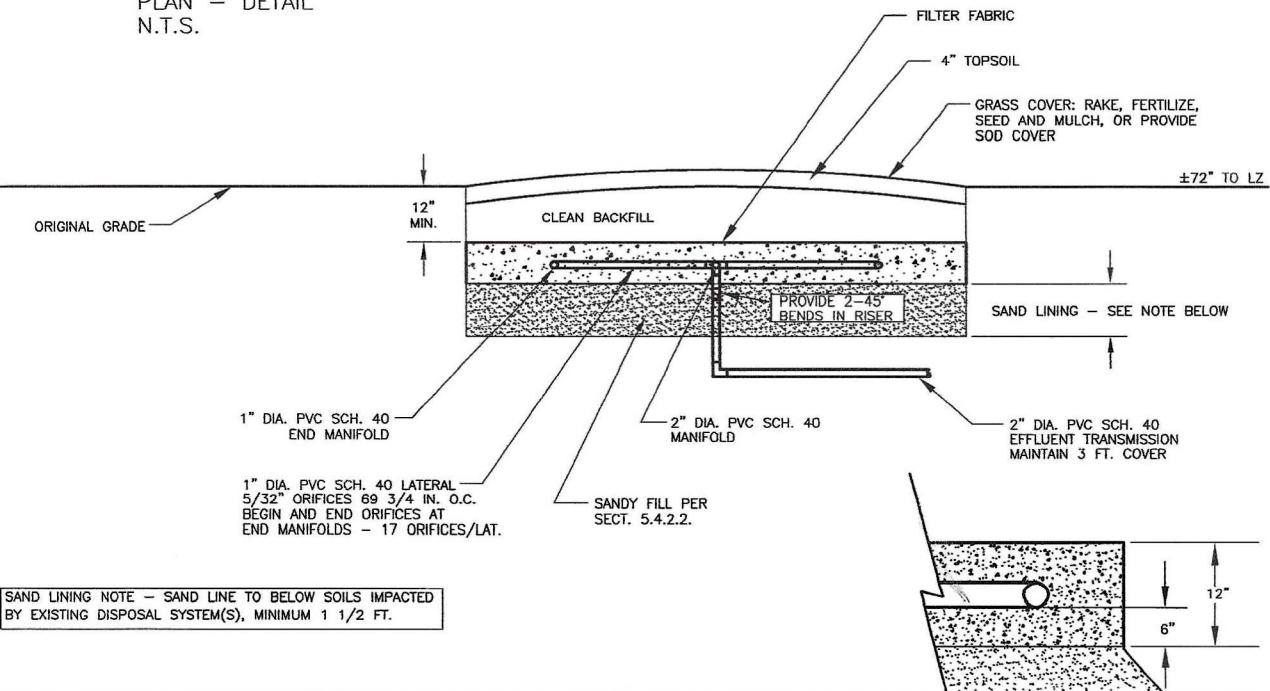


DISPOSAL BED
PLAN - DETAIL
N.T.S.

Draw a general location map of project location and give distance to nearest road junction.



12/7/2025



- SITE PLAN -

PORTIONS OF THE PROPOSED DISPOSAL AREA MAY BE WOODED. CLEARING TO BE PERFORMED IN ACCORDANCE WITH DNREC REQUIREMENTS. NO TREES WITHIN 10 FT. OF DISPOSAL AREA.



REPLACEMENT DISPOSAL SYSTEM SAND DISPOSAL SYSTEM IN THE SAME OR ADJACENT AREA.

Scale: 1" = 50 ft.

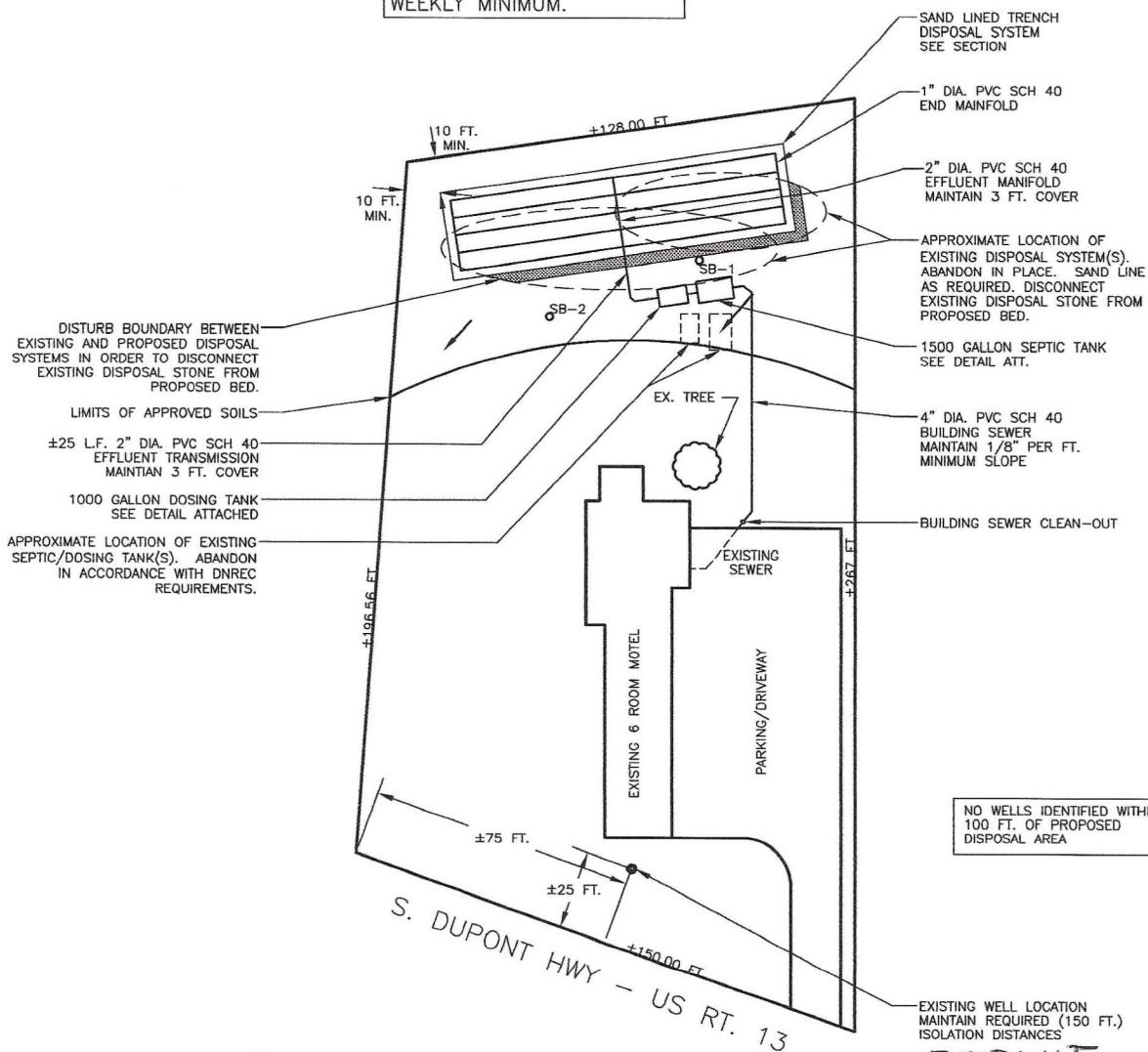
Indicate North:



THIS DRAWING IS NOT THE RESULT OF A FORMAL SITE SURVEY, BUT IS THE BASED ON INFORMATION PROVIDED BY OTHERS.

12/7/2025

WATER METER TO BE INSTALLED ON WELL SUPPLY LINE TO VERIFY WATER USE. READINGS TO BE OBTAINED WEEKLY MINIMUM.



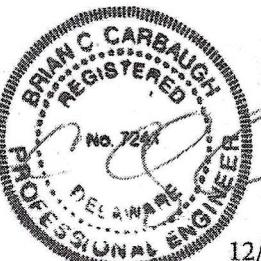
Owner's/Authorized Agent Signature _____ Date: _____

* A copy of this page must be submitted with both the on-site wastewater system and well construction report(s).

- SITE PLAN -

PORTIONS OF THE PROPOSED DISPOSAL AREA MAY BE WOODED. CLEARING TO BE PERFORMED IN ACCORDANCE WITH DNREC REQUIREMENTS. NO TREES WITHIN 10 FT. OF DISPOSAL AREA.

REPLACEMENT DISPOSAL SYSTEM AND DISPOSAL SYSTEM IN THE SAME OR ADJACENT AREA.



Scale: 1" = 50 ft.

Indicate North:

THIS DRAWING IS NOT THE RESULT OF A FORMAL SITE SURVEY, BUT IS THE BASED ON INFORMATION PROVIDED BY OTHERS.

12/7/2025

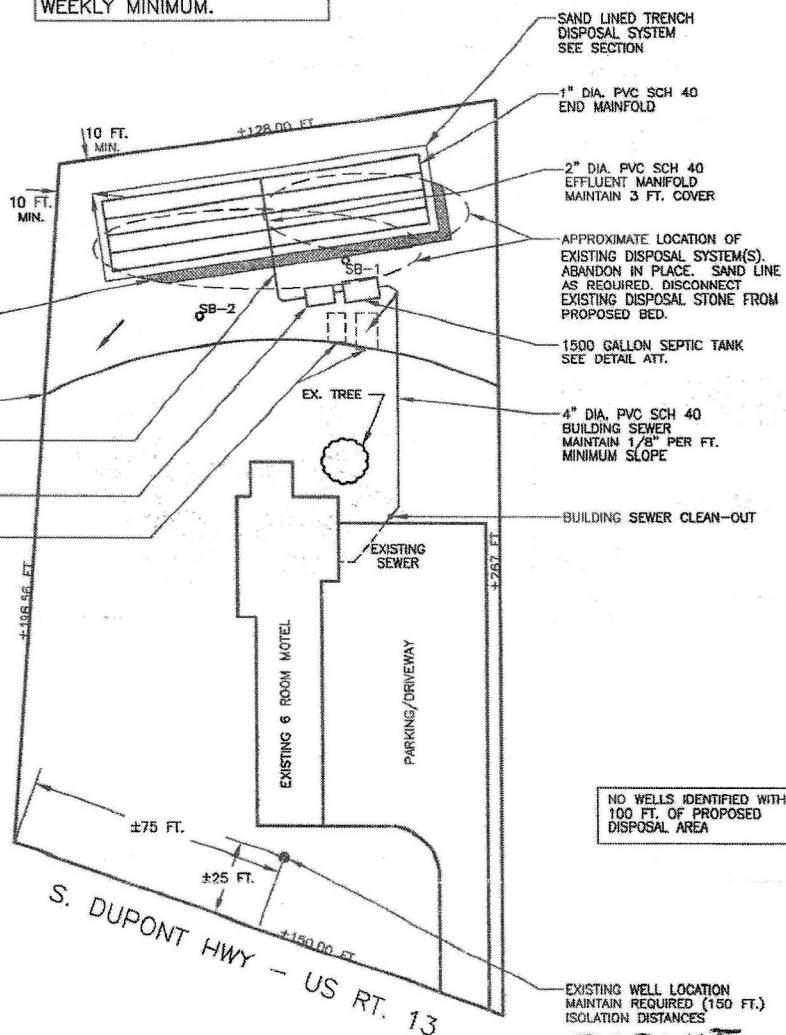
WATER METER TO BE INSTALLED ON WELL SUPPLY LINE TO VERIFY WATER USE. READINGS TO BE OBTAINED WEEKLY MINIMUM.

DISTURB BOUNDARY BETWEEN EXISTING AND PROPOSED DISPOSAL SYSTEMS IN ORDER TO DISCONNECT EXISTING DISPOSAL STONE FROM PROPOSED BED.

LIMITS OF APPROVED SOILS
±25 LF. 2" DIA. PVC SCH 40 EFFLUENT TRANSMISSION MAINTAIN 3 FT. COVER

1000 GALLON DOSING TANK SEE DETAIL ATTACHED

APPROXIMATE LOCATION OF EXISTING SEPTIC/DOSING TANK(S). ABANDON IN ACCORDANCE WITH DNREC REQUIREMENTS.

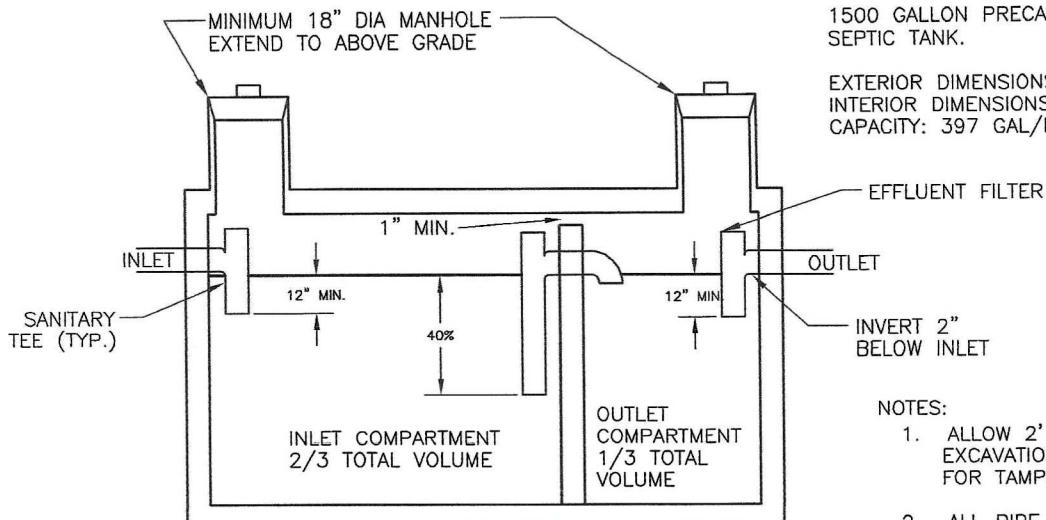


PERMIT
79781

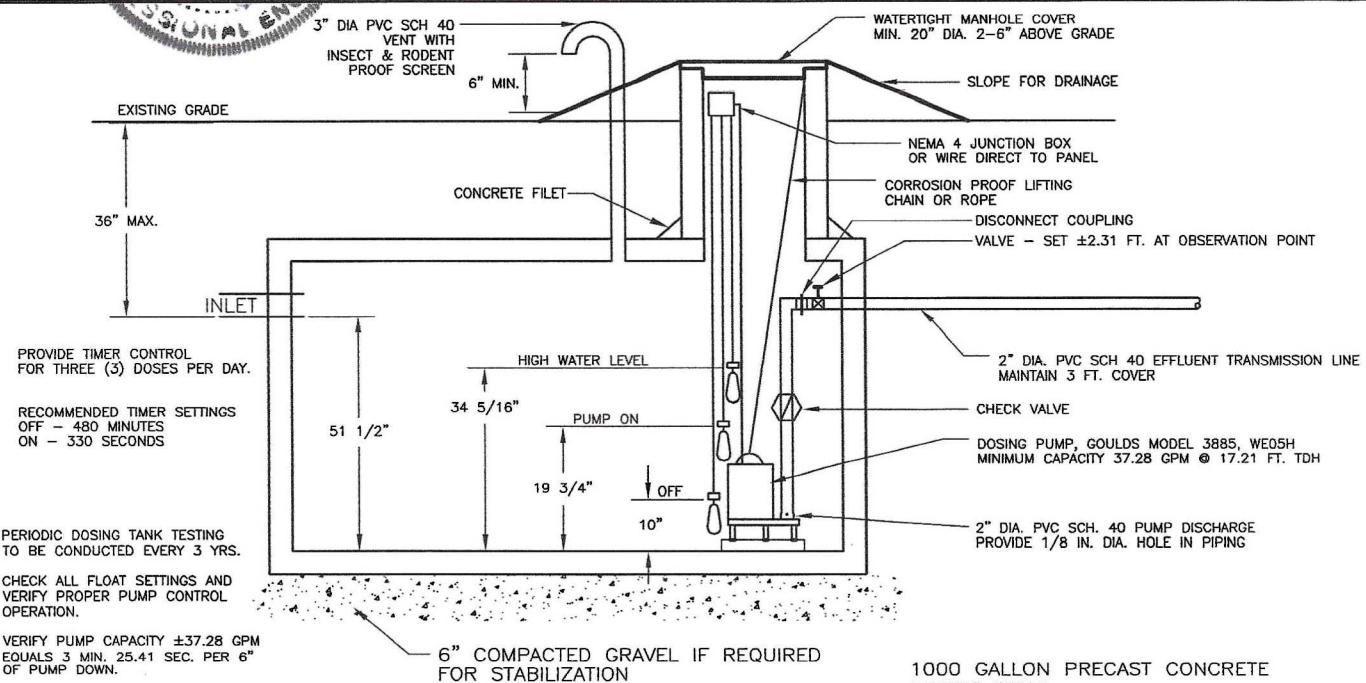
Owner's/Authorized Agent Signature

Date: 11 Dec '25

* A copy of this page must be submitted with both the on-site wastewater system and well construction report(s).



12/7/2025



1. PROVIDE SIMPLEX PROGRAMMABLE TIMED DOSING CONTROL PANEL WITH AUDIO/VISUAL ALARM ON SEPARATE CIRCUIT. INSTALL PANEL WITHIN SIGHT OF DOSING TANK.
2. ALL ELECTRICAL CONNECTIONS TO BE WATERPROOF, CORROSION RESISTANT AND EXPLOSION PROOF.
3. ALL PIPE PENETRATIONS AND TANK JOINTS TO BE SEALED WATERPROOF.
4. ALLOW 2' CLEARANCE IN EXCAVATION AROUND TANK FOR TAMING.

- DOSING TANK -
- SECTION -
NOT TO SCALE

EXTERIOR DIMENSIONS: 98"X61"X66"D
INTERIOR DIMENSIONS: 91"X54"X51 1/2"D
CAPACITY: 255 GAL/FT.

Brian C. Carbaugh PE
Consulting Engineer

On-Site Sewage Disposal System - Lawrence Stanley Sr.
Tax Parcel No. 8 00 12901 01 3700 000

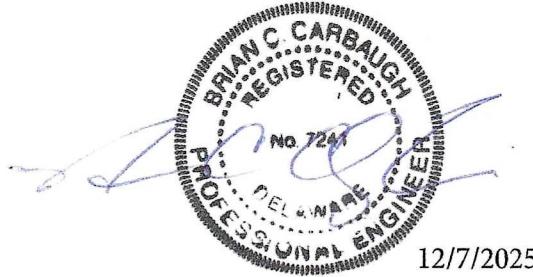
ATTACHMENT 1 - SEPTIC TANK AND DOSING TANK DETAILS

ONSITE SEWAGE DISPOSAL SYSTEM CALCULATIONS

PROJECT NUMBER- ADX689
 OWNER - Lawrence Stanley Sr.
 PARCEL NUMBER - 8 00 12901 01 3700 000

FLOW

6 = MOTEL ROOMS (NO KITCHEN)
 1 = NUMBER OF EMPLOYEES
 620 = DESIGN FLOW (GPD)



DISPOSAL AREA

30 = PERCOLATION RATE, ASSIGNED (MPI)
 BED = SYSTEM TYPE (TRENCH, BED, LPP)
 1426 = DISPOSAL AREA REQUIRED (SQ. FT.)

2450 = DISPOSAL AREA PROVIDED (SQ. FT.)

SEPTIC TANK

1500 = MINIMUM SEPTIC TANK SIZE (GAL.)

1500 = SEPTIC TANK SIZE PROVIDED (GAL.)
 OK

DOSE VOLUME

207 = MINIMUM 3 DOSES/DAY (GAL.)
 PIPING NOT FLOODED

PIPING SYSTEM	FLOODED?	DIA. (IN)	L.F.	VOL. (GAL)
EFFL. TRANS.	YES			N/A
MANIFOLD	NO	2	20	3.3
LATERALS	NO	1	465	19.0
END MANIFOLD	NO	1	40	1.6
TOTAL VOLUME				23.9
5*TOTAL VOL.				119.3

207 = DOSE VOLUME PROVIDED (GAL.)
 OK

DOSING CHAMBER/FLOAT SETTINGS

91 = DOSING TANK INTERIOR LENGTH (IN.)
 54 = DOSING TANK INTERIOR WIDTH (IN.)
 51.5 = DOSING TANK INTERIOR DEPTH (IN.)

255 = DOSING TANK VOL. (GAL./FT.)

10 = OFF FLOAT SETTING (IN.)
 19.72 = ON FLOAT SETTING (IN.)
 34.29 = HWL FLOAT SETTING (IN.) - 1/2 DAILY FLOW

827 = MINIMUM LIQUID CAPACITY (GAL.)

1095 = LIQUID CAPACITY PROVIDED (GAL)
 OK

ONSITE SEWAGE DISPOSAL SYSTEM CALCULATIONS

ORIFICE FLOW

2.31 = MINIMUM ORIFICE HEAD (FT.)
0.15625 = ORIFICE DIA. (IN)

LATERAL	GROUND EL.	LENGTH (FT.)	ORIFICE HEAD	ORIFICE FLOW	# OF ORIFICES	TOTAL GPM	GPM PER L.F.	BALANCE CHECK	MANIFOLD FLOW
1	50.00	93	2.31	0.44	17	7.46	0.0802	0.0000	1.00
2	50.00	93	2.31	0.44	17	7.46	0.0802	0.0000	0.80
3	50.00	93	2.31	0.44	17	7.46	0.0802	0.0000	0.60
4	50.00	93	2.31	0.44	17	7.46	0.0802	0.0000	0.40
5	50.00	93	2.31	0.44	17	7.46	0.0802	0.0000	0.20
TOTAL GPM						37.28			

TRANSMISSION LINE VELOCITY

2 = TRANSMISSION LINE SIZE (IN.)

OK
3.81 = VELOCITY AT DESIGN FLOW (FPS) - 2 FPS MIN

ORIFICE SPACING

LATERAL	MAX ALLOWED - DECIMAL SPACING	72 WHOLE IN.	16THS.	OK
1	69.75	69	12	OK
2	69.75	69	12	OK
3	69.75	69	12	OK
4	69.75	69	12	OK
5	69.75	69	12	OK
AVERAGE =	69.75			
OK				

TIMER SETTINGS

480 = OFF TIME (MIN.)
330 = ON TIME (SEC.) ROUNDED TO NEAREST 10 SEC

CALIBRATION PUMP DOWN RATE

MIN. SEC.
3 25.41 = PUMP DOWN RATE FOR CALIBRATION (MIN/6")

HEAD CALCULATIONS

50.00 = GROUND SURFACE AT DOSING TANK
43.38 = PUMP OFF WATER LEVEL ELEVATION

53.00 = MAX. GROUND EL. AT SYSTEM
22.00 = DEPTH/HEIGHT TO LATERAL (IN.)
54.83 = MAXIMUM LATERAL ELEVATION

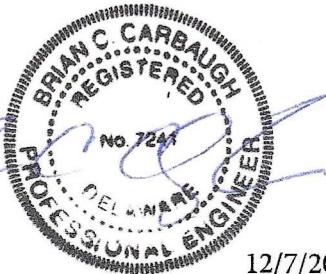
13.77 = STATIC HEAD (FT.)

MINIMUM OPERATING POINT

37.28 = DESIGN FLOW (GPM)

17.21 = TDH AT DESIGN FLOW

SEE ATTACHED TOTAL DYNAMIC HEAD LOSS CALCULATIONS



12/7/2025

ONSITE SEWAGE DISPOSAL SYSTEM CALCULATIONS

13.77 = STATIC HEAD

MINIMUM OPERATING POINT

37.28 = DESIGN FLOW (GPM)

17.21 = TDH AT DESIGN FLOW

SYSTEM CURVE

0 = STARTING FLOW (GPM)

10 = FLOW STEP (GPM)



12/7/2025

RUN	PUMP	EFFL.		MANIFOLD				LATERAL
		TRANS.	1	1	2	2	2	
DIA.		2	2	2	2	2	2	1
EQ. FT.		26	46	12	12	12	17	23
"C"		130	130	130	131	131	130	130
MULT.		1	1	0.800	0.600	0.400	0.200	0.100

FLOW DYN. HD. TDH

0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.77
10	0.081	0.143	0.024	0.014	0.007	0.003	0.030	14.07
20	0.294	0.517	0.086	0.050	0.024	0.009	0.107	14.85
30	0.622	1.095	0.182	0.106	0.050	0.020	0.226	16.07
40	1.060	1.865	0.311	0.180	0.085	0.034	0.385	17.69
50	1.602	2.819	0.470	0.272	0.128	0.051	0.582	19.69
60	2.246	3.952	0.658	0.381	0.180	0.072	0.815	22.07
70	2.988	5.258	0.876	0.507	0.239	0.096	1.085	24.82
80	3.827	6.733	1.121	0.649	0.306	0.123	1.389	27.92
90	4.759	8.374	1.395	0.807	0.381	0.153	1.728	31.36
100	5.785	10.178	1.695	0.981	0.463	0.186	2.100	35.16
37.28	0.930	1.637	0.273	0.158	0.074	0.030	0.338	17.21

SUMMARY

LENGTH	10	25	5	5	5	5	23.25
90'S	1	2				1	
45'S		2					
T RUN		2	2	2	2	1	
T BRANCH							
VALVE	1						
CHK VALV	1						
REDUCER						1	

EQ. LENGTH

LENGTH	10.0	25.0	5.0	5.0	5.0	5.0	23.3	0.0
90'S	5.0	10.0	0.0	0.0	0.0	5.0	0.0	0.0
45'S	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
T RUN	0.0	6.7	6.7	6.7	6.7	3.3	0.0	0.0
T BRANCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VALVE	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHK VALV	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REDUCER	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
TOTAL	26.3	46.3	11.7	11.7	11.7	16.7	23.3	0.0



Submersible Effluent Pump

MODEL 3885

WE Series

PROSURANCE AVAILABLE FOR RESIDENTIAL APPLICATIONS.

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Farms
- Trailer courts
- Motels
- Schools
- Hospitals
- Industry
- Effluent systems

SPECIFICATIONS

Pump

- Solids handling capabilities: $\frac{3}{4}$ " maximum.
- Discharge size: 2" NPT.
- Capacities: up to 140 GPM.
- Total heads: up to 128 feet TDH.
- Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent.
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

FEATURES

- **Impeller:** Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.
- **Casing:** Cast iron volute type for maximum efficiency. 2" NPT discharge.
- **Mechanical Seal:** SILICON CARBIDE VS. SILICON CARBIDE sealing faces. 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.

MOTORS

■ Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.

■ Class B insulation on $\frac{1}{2}$ - $\frac{1}{2}$ HP models.

■ Class F insulation on 2 HP models.

Single phase (60 Hz):

- Capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.
- SJTOW or STOW severe duty oil and water resistant power cords.
- $\frac{1}{2}$ - 1 HP models have NEMA three prong grounding plugs.
- 1 $\frac{1}{2}$ HP and larger units have bare lead cord ends.

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.

■ **Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits,

can be operated continuously without damage when fully submerged.

■ **Bearings:** Upper and lower heavy duty ball bearing construction.

■ **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.

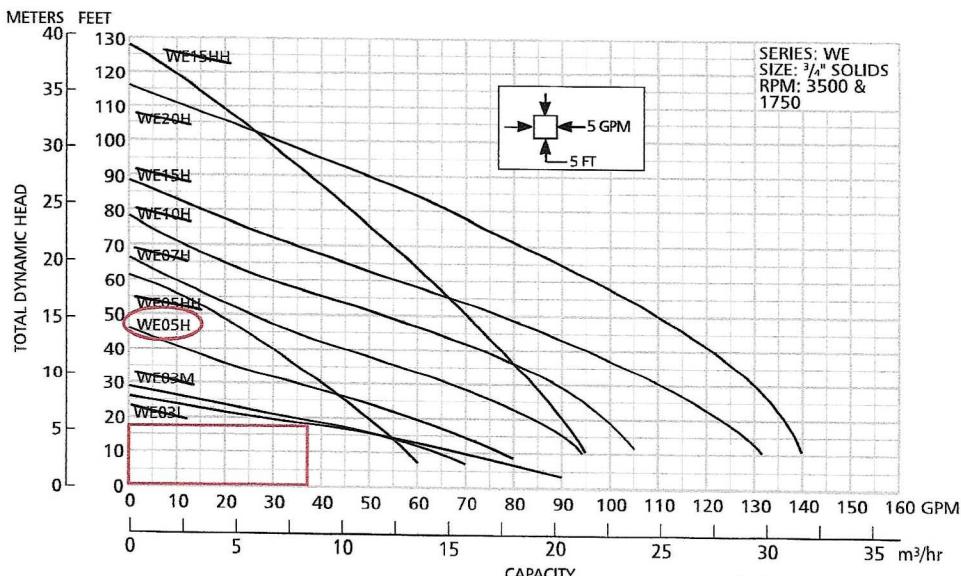
■ **O-ring:** Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS



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

Goulds Pumps is ISO 9001 Registered.



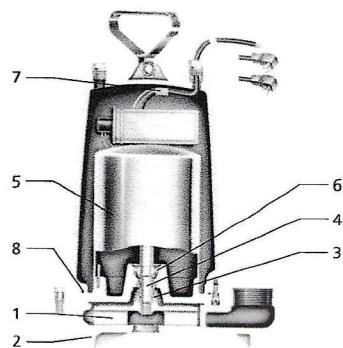
Goulds Pumps

ITT Industries



COMPONENTS

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



Submersible Effluent Pump

MODEL 3885

WE Series

MODELS

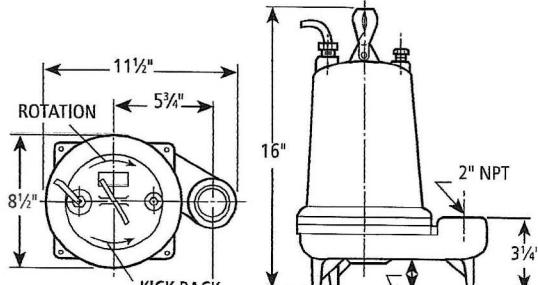
Order No.	HP	Volts	Phase	Max. Amp.	RPM	Solids	Wt. (lbs.)
WE0311L	1/2	115	1	10.7	1750	56	
WE0318L		208		6.8			
WE0312L		230		4.9			
WE0311M		115		10.7			
WE0318M		208		6.8			
WE0312M		230		4.9			
WE0511H		115		14.5			
WE0518H		208		8.1			
WE0512H		230		7.3			
WE0538H		200	3	4.9			
WE0532H		230		3.3			
WE0534H		460		1.7			
WE0537H		575		1.4			
WE0511HH		115	1	14.5		60	
WE0518HH		208		8.1			
WE0512HH		230		7.3			
WE0538HH		200		4.9			
WE0532HH		230		3.6			
WE0534HH		460		1.8			
WE0537HH		575		1.5			
WE0718H		208	3	11.0		70	
WE0712H		230		10.0			
WE0738H		200		6.2			
WE0732H		230		5.4			
WE0734H		460		2.7			
WE0737H		575		2.2			
WE1018H	1	208	1	14.0	3500	80	
WE1012H		230		12.5			
WE1038H		200		8.1			
WE1032H		230		7.0			
WE1034H		460		3.5			
WE1037H		575		2.8			
WE1518H		208	3	17.5			
WE1512H		230		15.7			
WE1538H		200		10.6			
WE1532H		230		9.2			
WE1534H		460		4.6			
WE1537H		575		3.7			
WE1518HH	1 1/2	208	1	17.5	3500	83	
WE1512HH		230		15.7			
WE1538HH		200		10.6			
WE1532HH		230	3	9.2			
WE1534HH		460		4.6			
WE1537HH		575		3.7			
WE2012H		230		18.0			
WE2038H	2	200	3	12.0			
WE2032H		230		11.6			
WE2034H		460		5.8			
WE2037H		575		4.7			

PERFORMANCE RATINGS (gallons per minute)

Order No.	WE03L	WE03M	WE05H	WE07H	WE10H	WE15H	WE05HH	WE15HH	WE20H
HP	1/3	1/3	1/2	3/4	1	1 1/2	1/2	1 1/2	2
RPM	1750	1750	3500	3500	3500	3500	3500	3500	3500
5	86	—	—	—	—	—	—	—	—
10	70	63	78	94	—	—	58	95	—
15	52	52	70	90	103	128	53	93	138
20	27	35	60	83	98	123	49	90	136
25	—	—	48	76	94	117	45	87	133
30	—	—	35	67	88	110	40	83	130
35	—	—	22	57	82	103	35	80	126
40	—	—	—	45	74	95	30	77	121
45	—	—	—	35	64	86	25	74	116
50	—	—	—	25	53	77	—	70	110
55	—	—	—	—	40	67	—	66	103
60	—	—	—	—	30	56	—	63	96
65	—	—	—	—	20	45	—	58	89
70	—	—	—	—	—	35	—	55	81
75	—	—	—	—	—	25	—	51	74
80	—	—	—	—	—	—	—	47	66
90	—	—	—	—	—	—	—	37	49
100	—	—	—	—	—	—	—	28	30

DIMENSIONS

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



Goulds Pumps is a brand of ITT Water Technology, Inc. – a subsidiary of ITT Industries, Inc.

Goulds Pumps and the ITT Engineered Blocks Symbol are registered trademarks and tradenames of ITT Industries.

Goulds Pumps

 ITT Industries

MODEL TD Control Panel

Single phase, simplex timed dosing pump control.

The Model TD control panel provides a reliable means of controlling one single phase pump in onsite septic installations. A programmable timer activates a magnetic motor contactor to turn the pump on and off. A low level cutout float overrides the timer to prevent the pump from running dry. An alarm float activates the audio/visual alarm system indicating a high liquid level. Common applications include sand filter systems, pressure distribution systems, mound systems, or any application requiring a timed dose.

PANEL COMPONENTS

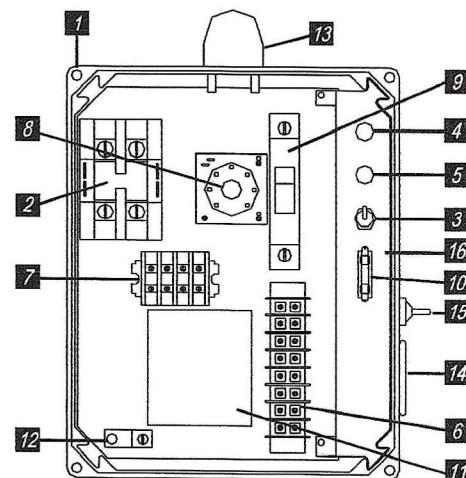
1. **Enclosure** measures 10 x 8 x 4 inches (25.40 x 20.32 x 10.16 cm) NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use).
2. **Magnetic Motor Contactor** controls pump by switching electrical lines.
3. **HOA Switch** for manual pump control.
4. **Control Fuse**
5. **Alarm Fuse**
6. **Float Switch Terminal Block**
7. **Incoming Power Terminal Block**
8. **Programmable Timer** with separate variable controls allows for setting the on and off times from .05 seconds to 30 hours.
9. **Circuit Breaker** provides pump disconnect and branch circuit protection.
10. **Spare Fuse**
11. **Backplate Label** includes diagram of float, pump, and power connections.
12. **Ground Lug**

NOTE: Timer Installation Label and Pump/Float Switch Installation Specification Label are located inside the panel on enclosure cover.

STANDARD ALARM PACKAGE

13. **Red Alarm Beacon** provides 360° visual check of alarm condition.
14. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
15. **Exterior Alarm Test/Normal/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.
16. **Horn Silence Relay** (mounted under bracket).

NOTE: other options available.



Model Shown TD1W914X

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 one 20' SJE PumpMaster® pump switch and one 20' Sensor Float® control switch
- Complete with step-by-step installation instructions
- Three-year limited warranty



SJE
Rhombus
CONTROLS

PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE • 1-218-847-1317

1-218-847-4617 Fax

email: sje@sjerhombus.com

Property Information - 9585 S DUPONT HWY, FELTON - (8 00 12901 01 3700 000)

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Parcel Information
Map Number: 8 00 12901 01 3700 000

Tax Account ID: 41441

Location ID/User Account#: 41441

GIS Coord: E-459012 N-376108

Property Type: C

Deed BVP: D 7987/158

Account Type:
Plat Book: 00000

Lot#:
Acres: 0.71

Subdivision: ORCHARD ACRES

Total Commercial SQFT: 1504 SQFT

Legal Description:

E SD RT 13 0.714 AC 9585 SOUTH DUPONT HWY

District Information
Levy Court District: 6TH

[\(https://www.kentcountyde.gov/Elected-Officials/Sixth-District-Commissioner\)](https://www.kentcountyde.gov/Elected-Officials/Sixth-District-Commissioner)
Fire: 48_F Felton Community

Sewer:
School District: SC22 LAKE FOREST

Trash:
Ambulance: 48_A Felton Community

Light:
Storm Water Management:
Tax Ditch:
Owner
Name:

STANLEY LAWRENCE SR.

Owners Mailing Address:

 1982 HALLTOWN RD
 HARTLY, DE 19953

Location Information
Location Addresses:

9585 S DUPONT HWY, FELTON, DE 19943

Zoning Information
Zone:

RMH - Residential Manf/Home

Assessed Values
Land : \$137,000

Buildings: \$105,600

Total: \$242,600

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