Your Peace of Mind Is Our Top Priority®

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER® PUMP COMPANY
Zoeller Family of Water Solutions™

SECTION: 2.15.000
FM2785
0317
Supersedes
0515

TECHNICAL DATA SHEET
HIGH HEAD FLOW-MATE SERIES
Models 161/4161, 163/4163, 165/4165 Submersible Effluent Pumps

PRODUCT SPECIFICATIONS

MOTOR	Horse Power	1/2 (161/4161, 163/4163) or 1 (165/4165)
	Voltage	115 - 575
	Phase	1 or 3 Ph
	Hertz	60 Hz
	RPM	3450
	Type	Permanent split capacitor or 3 Ph
	Insulation	Class B
	Amps	2.4 - 15.5
PUMP	Operation	Automatic or nonautomatic
	Auto On/Off Points	15-3/4" (400 mm) / 5-1/4" (133 mm)
	Discharge Size	1-1/2" NPT (optional 2" or 3" flange)
	Solids Handling	3/4" (19 mm) spherical solids
	Cord Length	20' (6 m) standard
	Cord Type	1 Ph: UL listed 3-wire neoprene cord and plug or 3 Ph: 4-wire with no plug
	Max. Head	86.5' (26 m)
	Max. Flow Rate	100 GPM (379 LPM)
	Max. Operating Temp.	130 °F (54 °C)
	Cooling	Oil filled
	Motor Protection	Auto reset thermal overload (1 Ph)
MATERIALS	Upper Bearing	Ball bearing
	Lower Bearing	Ball bearing
	Mechanical Seals	Carbon and ceramic
	Impeller Type	Non-clogging vortex
	Impeller	Bronze
	Hardware	Stainless steel
	Motor Shaft	SAE 1117 carbon steel or 416 stainless steel*
	Gasket	Neoprene square ring and gasket

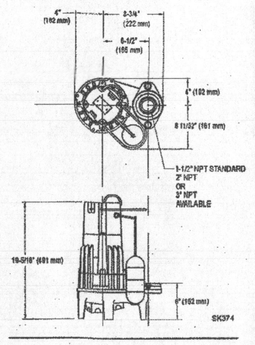
*Single seal models are built with a carbon steel motor shaft, and double seal models are built with a stainless steel motor shaft.

All Class 30 cast iron construction.

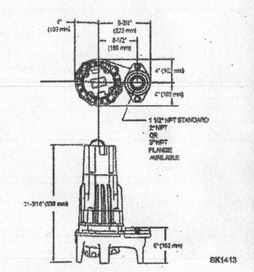
NOTE: The sizing of effluent systems normally requires variable level float(s) controls and properly sized basins to achieve required pumping cycles or dosing timers with nonautomatic pumps.

NOTE: See model comparison chart for specific details.

SINGLE SEAL



DOUBLE SEAL



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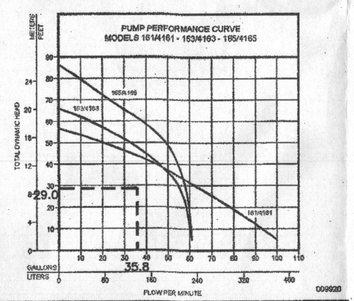
TOTAL DYNAMIC HEAD FLOW PER MINUTE

MODELS	161/4161		163/4163		165/4165	
Feet	Meters	Gal.	Liters	Gal.	Liters	Gal.	Liters
5	1.5	100	379	61	231	61	231
10	3.0	93	352	60	227	60.5	229
15	4.6	86	326	60	227	60.3	228
20	6.1	79	299	59	223	60	227
25	7.6	71	267	57	216	59	223
30	9.1	62	235	55	208	58	220
40	12.2	45	170	46	174	55	208
50	15.2	20	76	33	125	50	189
60	18.3	--	--	15	57	39	148
70	21.3	--	--	--	--	22.5	85
80	24.4	--	--	--	--	10	38
Shut-off Head:		56 ft. (17.1 m)		60 ft. (20.1 m)		86.5 ft. (26.4 m)	



**USE D165 OR EQUIVALENT

Model	MODEL COMPARISON Type	Mfg.	Volts	Ph	Amps	HP	Hertz	RPM	No.	Impeller	Duplex	CERTIFICATIONS
M161	Single	Auto	115	1	15.0	1/2	60	80	36	1	---	UL and cCSAus [2]
N161	Single	Non	115	1	15.0	1/2	60	80	36	2 or 3 & 5	4 & 5	CSA [1]
NA161	Double	Non	115	1	15.5	1/2	60	87	39	3 & 5	4 & 5	UL and cCSAus [2]
** BN161	Single	Auto	115	1	15.0	1/2	60	84	39	---	---	CSA
D161	Single	Auto	230	1	7.5	1/2	60	80	36	1	---	UL and cCSAus
E161 / E4161	Single / Double	Non	230	1	7.5	1/2	60	80 / 87	36 / 39	2 or 3 & 5	4 & 5	UL and cCSAus
* H161	Single	Auto	200	1	8.8	1/2	60	80	36	1	---	cCSAus
* I161 / J4161	Single / Double	Non	200	1	8.8	1/2	60	80 / 87	36 / 39	2 or 3 & 5	4 & 5	cCSAus
* J161 / J4161	Single / Double	Non	200	3	6.4	1/2	60	80 / 87	36 / 39	3 & 5	4 & 5	UL and cCSAus
* F161 / F4161	Single / Double	Non	230	3	5.2	1/2	60	80 / 87	36 / 39	3 & 5	4 & 5	UL and cCSAus
* G161 / G4161	Single / Double	Non	460	3	2.9	1/2	60	80 / 87	36 / 39	3 & 5	4 & 5	UL and cCSAus
* BA161/BA4161	Single / Double	Non	575	3	2.4	1/2	60	80 / 87	36 / 39	3 & 5	4 & 5	cCSAus
BE161	Single	Auto	230	1	7.5	1/2	60	84	39	---	---	UL and cCSAus
M163	Single	Auto	115	1	15.0	1/2	60	80	36	1	---	UL and cCSAus [2]
N163 / N4163	Single / Double	Non	115	1	15.0	1/2	60	80 / 87	36 / 39	2 or 3 & 5	4 & 5	CSA [1]
BN163	Single	Auto	115	1	15.0	1/2	60	84	39	---	---	CSA
D163	Single	Auto	230	1	7.5	1/2	60	80	36	1	---	UL and cCSAus
E163 / E4163	Single / Double	Non	230	1	7.5	1/2	60	80 / 87	36 / 39	2 or 3 & 5	4 & 5	UL and cCSAus
* H163	Single	Auto	200	1	8.5	1/2	60	80	36	1	---	cCSAus
* I163 / J4163	Single / Double	Non	200	1	8.5	1/2	60	80 / 87	36 / 39	2 or 3 & 5	4 & 5	cCSAus
* J163 / J4163	Single / Double	Non	200	3	6.0	1/2	60	80 / 87	36 / 39	3 & 5	4 & 5	UL and cCSAus
* F163 / F4163	Single / Double	Non	230	3	4.8	1/2	60	80 / 87	36 / 39	3 & 5	4 & 5	UL and cCSAus
* G163 / G4163	Single / Double	Non	460	3	2.8	1/2	60	80 / 87	36 / 39	3 & 5	4 & 5	UL and cCSAus
* BA163/BA4163	Single / Double	Non	575	3	2.4	1/2	60	80 / 87	36 / 39	3 & 5	4 & 5	cCSAus
BE163	Single	Auto	230	1	7.5	1/2	60	84	39	---	---	UL and cCSAus
D165	Single	Auto	230	1	10.2	1	60	80	36	1	---	UL and cCSAus
E165 / E4165	Single / Double	Non	230	1	10.2	1	60	80 / 87	36 / 39	2 or 3 & 5	4 & 5	UL and cCSAus
* H165	Single	Auto	200	1	12.6	1	60	80	36	1	---	cCSAus
* I165 / H4165	Single / Double	Non	200	1	12.6	1	60	80 / 87	36 / 39	2 or 3 & 5	4 & 5	cCSAus
* J165 / J4165	Single / Double	Non	200	3	7.5	1	60	80 / 87	36 / 39	3 & 5	4 & 5	UL and cCSAus
* F165 / F4165	Single / Double	Non	230	3	7.4	1	60	80 / 87	36 / 39	3 & 5	4 & 5	UL and cCSAus
* G165 / G4165	Single / Double	Non	460	3	3.7	1	60	80 / 87	36 / 39	3 & 5	4 & 5	UL and cCSAus
* BA165/BA4165	Single / Double	Non	575	3	3.0	1	60	80 / 87	36 / 39	3 & 5	4 & 5	cCSAus
BE165	Single	Auto	230	1	10.2	1	60	84	39	---	---	UL and cCSAus

* no molded plug (1) UL listed unit available with 20 Amp plug. (2) 20 Amp duplex receptacle, P/N 10-0060 available.
Additional cords lengths are available in 25' (8 m), 35' (11 m), and 50' (15 m).

SELECTION GUIDE

1. Integral float operated mechanical switch, no external control required.
2. For automatic use single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
3. See FM1228 for correct model of simplex control panel.
4. See FM0712 for correct model of duplex control panel.
5. Variable level control switch 10-0743 used as a control activator, specify simplex (3) float or duplex (4) float system. Refer to FM0526.

CAUTION All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

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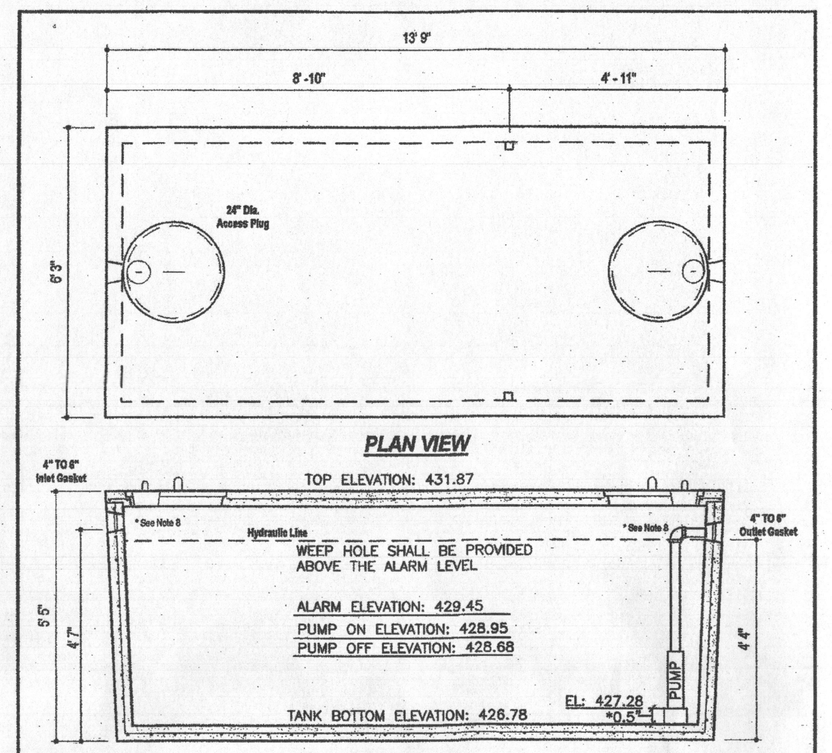


SECTION A-A

*USE BLOCK OR SUPPORT TO RAISE PUMP INLET A MINIMUM OF 0.5' OFF BOTTOM OF TANK

DESIGN DATA & GENERAL NOTES

[1] Concrete strength f'c=4,000 p.s.i. @ 28 days. Density = 150 pcf
[2] Cement - Portland Type III per ASTM C 150-92.
[3] Admixtures & plasticizers per ASTM C 260-88 & C 494-92.
[4] Reinforcing per ASTM A615, Min. 1-1/2" cover.
[5] Top slab sealed with butyl rope mastic.
[6] 4" wall, 4" base, & 6" top thickness.
[7] Max 3' of cover
[8] Depending on use of tank, Inlet & Outlet baffle may be required by code.

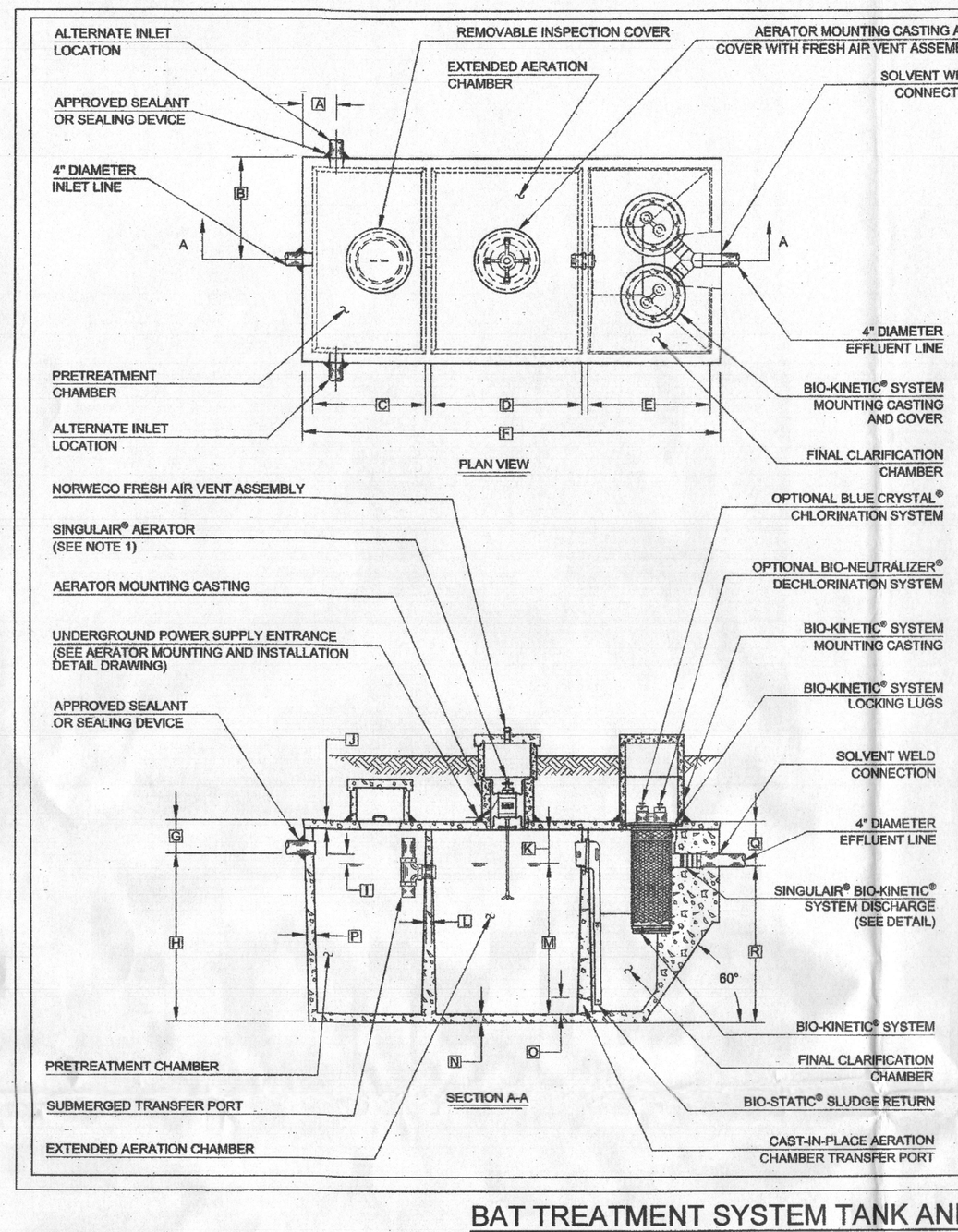
FLOAT TREE:	ELEV.	RELATIVE TO BOTTOM
BOTTOM OF TANK	426.78	
TOP OF PUMP	428.62	1'-10 1/16"
PUMP OFF	428.68	1'-10 3/16"
PUMP ON	428.95	2'-2 3/64"
HIGH ALARM	429.45	2'-8 3/64"

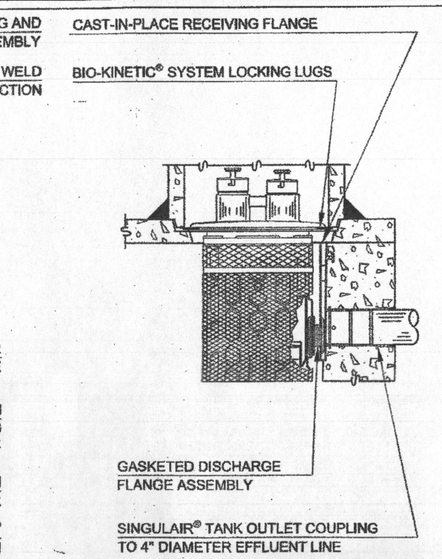
WEIGHT = 19,000 lbs.

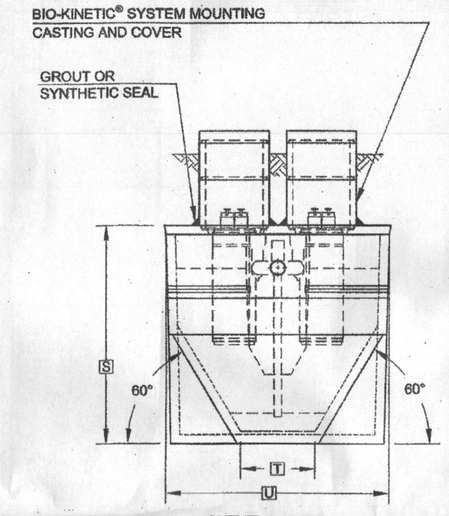
MBI Mayer Bros., Inc.
6364 Race Road
Elkridge, Maryland 21075
Tel. 410.796.1494
Fax. 410.796.1438
www.mayerbrosprecast.com

2,000 GALLON SEPTIC TANK
1-Compartment
Stock Item [Approx. 19,000 lbs]

Dwg. No. 2000-1C	No Scale	Aug. 11, 2009







NOTE: TOTAL SYSTEM CAPACITY: 1,725 GALLONS
RATED CAPACITY: 750/800 GALLONS PER DAY

GENERAL NOTES:

1. SINGULAIR® AERATOR, AS TESTED AND ACCEPTED BY NSF.
2. FALL THROUGH SINGULAIR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
3. ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND AERATOR MOUNTING CASTING AND BIO-KINETIC® SYSTEM MOUNTING CASTING TO GRADE. INSPECTION COVER ON PRETREATMENT CHAMBER MUST BE DEVELOPED TO WITHIN TWELVE INCHES OF GRADE.
4. TANK REINFORCED PER ACI STD. 318.
5. REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
6. CONTACT THE LOCAL, LICENSED SINGULAIR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

PROJECT ENGINEER'S APPROVAL:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.
DATE: _____
NAME: _____

CONTRACTOR'S CERTIFICATION:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.
DATE: _____
NAME: _____

CRITICAL DIMENSIONS

A	1'- 0"	N	0'- 3"
B	3'- 0"	O	0'- 6"
C	3'- 4"	P	0'- 3"
D	4'- 5"	Q	1'- 4"
E	3'- 7"	R	4'- 8"
F	12'-2"	S	6'- 0"
G	1'- 0"	T	2'- 0"
H	5'- 0"	U	6'- 0"
I	0'- 3"	V	
J	0'- 3"	W	
K	1'- 0"	X	
L	0'- 2"	Y	
M	4'- 6"	Z	

U.S. AND FOREIGN PATENTS PENDING

norweco®

MODEL 980LP-750GPD

LOW PROFILE SINGULAIR® BIO-KINETIC® WASTEWATER TREATMENT SYSTEM MODEL 980LP-750GPD

DRAWN BY: MT
APPROVED BY: JMM
DATE: 4-25-2016
SCALE: NTS
PC-5-7157

© MMXVI

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BAT TREATMENT SYSTEM TANK AND PUMP TANK (LOT 3)
N.T.S.

NOTE: RATED CAPACITY: 750 GALLONS PER DAY PER MANUFACTURER.

SEE MANUFACTURES SPECIFICATIONS FOR DETAILS. WWW.NORWECO.COM

Approved Septic System Plan
Howard County Health Department
NORWECO TNT 960 LP
w/ Mayer Bros. 2000-gal Pump Tank
& Zoeller N161 (0.5 hp) Pump
R Bricker 1/12/2018
Signature Date
BAT - LPD system

THE DETAILS SHOWN HEREON ARE BASED ON TYPICAL MANUFACTURES DRAWINGS PROVIDED BY NORWECO, ACTUAL MANUFACTURER MAY DIFFER. CONTRACTOR TO VERIFY THAT ALL DIMENSION ARE IN COMPLIANCE WITH THE HEALTH DEPARTMENT REQUIREMENTS.

BENCHMARK
ENGINEERS LAND SURVEYORS PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577, Expiration Date: 06-08-2018.

STATE OF MARYLAND — LICENSED — No. 45577 — PROFESSIONAL ENGINEER
12/20/17

OWNER/DEVELOPERS:
ELLEN M. VAWTER,
MICHAEL A. VAWTER,
NANCY J. VAWTER,
LAURA J. LEONARD,
DREW B. LEONARD
14170 TRIADELPHIA MILL ROAD
DAYTON, MARYLAND 21036
301-706-8044

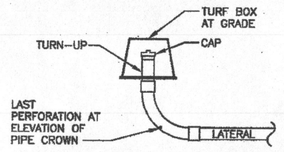
PROJECT:
VAWTER PROPERTY
LOT 3

LOCATION: 14176 TRIADELPHIA MILL ROAD
TAX MAP: 27 -- GRID: 24 -- PARCEL: 68
ZONED: RR-DEO RURAL RESIDENTIAL
ELECTION DISTRICT NO. 5 -- HOWARD COUNTY, MARYLAND

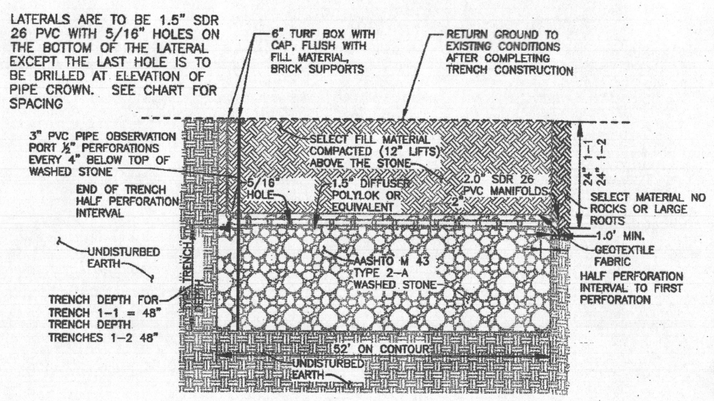
TITLE: SEPTIC SYSTEM DESIGN DETAILS

DESIGN: LDD	DRAFT: LDD	CHECK: AAM	DATE: DECEMBER, 2017	PROJECT NO. 2766
			SCALE: NONE	SHEET 2 OF 3

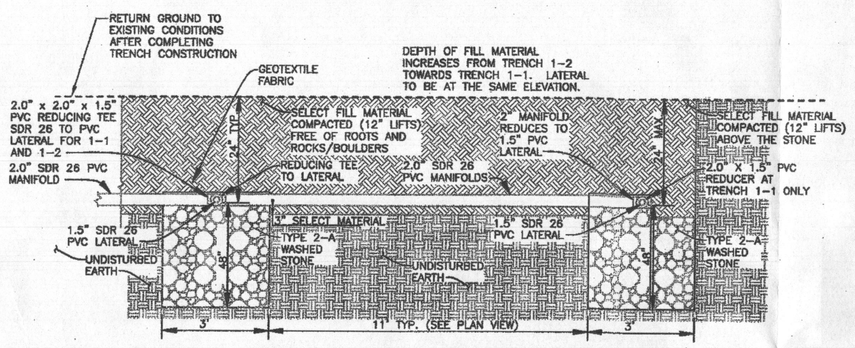
766 VAWTER PROPERTY\dwg\8026 GP.dwg, SEPTIC TANK AND PUMP details lot 3, 12/20/2017 7:53:08 AM, mfigner



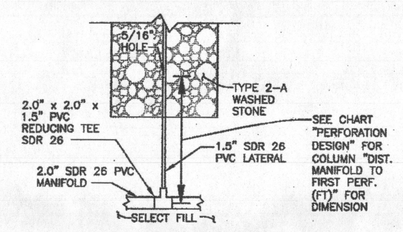
END PERFORATION AND TURN-UP DETAIL



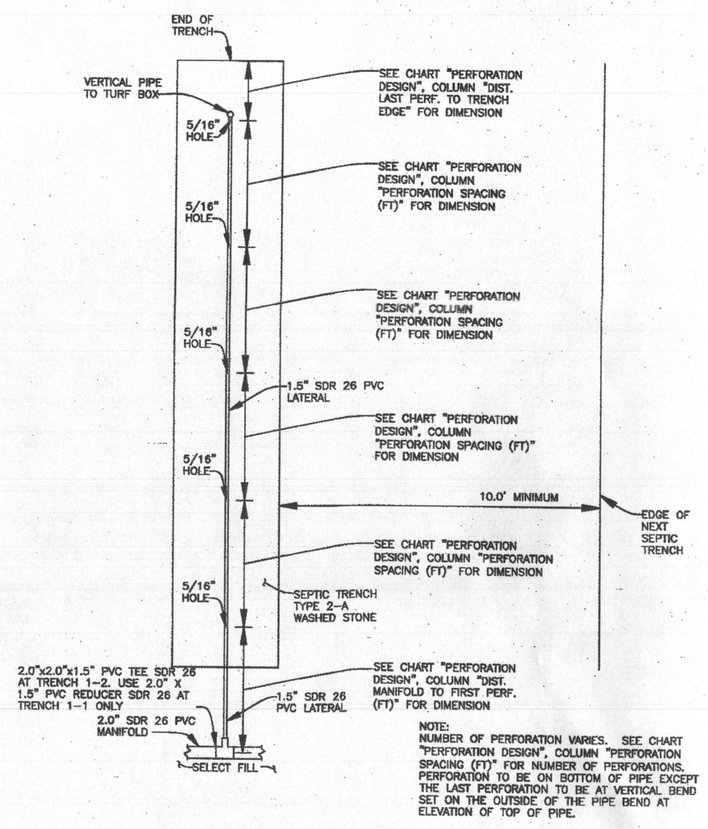
LATERAL AND TRENCH DESIGN



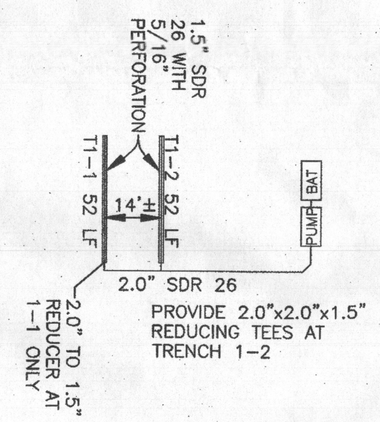
TRENCH AND MANIFOLD SECTION



OVERHEAD VIEW OF MANIFOLD AND LATERAL CONNECTION SECTION



PERFORATION SPACING AND LATERAL LENGTH DIAGRAM



TRENCH SCHEMATIC
NOT TO SCALE

Trench and Lateral Design											
Cell	Trench	Pipe Inv. Elev.	Trench Bottom Elev.	Highest Ground Over	Lowest Ground Over	Total Design Head (ft)	Approx. Lateral Length (ft)	Number of Perforations	Flow per Perforation (gpm)	Flow per Lateral (gpm)	Flow Differential
1	1	450.4	446.4	452.4	452.4	28.2	50.5	11	1.63	17.91	0.0%
	2	450.1	446.1	452.1	452.1	27.8	55.0	10	1.78	17.78	0.7%

Perforation Diameter = 5/16 inches Target Flow = 17.91 gpm

Cell	Flow Rate
1	35.69

	Depth To Effective Sidewall	Deep Trench Depth	Depth to Inlet
Trench 1	5 ft	4 ft	2 ft
Trench 2	5 ft	4 ft	2 ft

Perforation Design								
Cell	Trench	Number of Perforations	Manifold to Trench (ft)	Trench Length (ft)	Perforation Spacing (ft)	Dist. Manifold to First Perf. (ft)	Dist. Last Perf. to Trench Edge (ft)	Lateral Length (ft)
1	1	11	3.2	52	4.73	5.56	2.36	52.84
	2	10	2.5	52	5.20	5.10	2.60	51.90

Lateral Pressure Calculations																		
Cell	Trench	Pipe Elev.	Beginning Manifold Loss	Gate Valve	Manifold Bends 45D	Manifold Length	Manifold velocity	Manifold Thru Tees	Delta Loss Manifold	Total Manifold Loss	Lateral 90 degree side tee loss	Sudden Reduction Loss	Lateral Bends 45 deg. Loss	Lateral Length to first perf. Loss	Lateral Loss Summation	Total Loss to First Perf.	Total Design Head (ft)	Flow per Lateral (gpm)
1	2	450.1	0.00	0	4	188	35.6	0	4.19	4.19	0.06	0.01	0.00	0.10	0.16	4.35	27.77	17.78
1	1	450.4	4.19			14	17.9	1	0.09	4.28	0.06	0.01	0.00	0.09	0.16	4.44	28.16	17.91
Perforation Diameter =			5/16 inches		Distal Head		2 feet											

Friction Head
main

Friction Head = Head loss due to pipe friction
2" pipe = 202 feet

45° bends	4 loss for manifold bend	18.0 feet	per table 4.3	
Str. Coupling	1 loss for straight tee	2.0 feet	per table 4.3	
90 deg. Side tee	1 loss for tee bend	10.0 feet	per table 4.3 for smaller pipe	
Sudden reduction	1 loss for reduction	1.0 feet	per Crane Co. technical paper	
45° bends	1 loss for lateral bend	3.0 feet	per table 4.3	
Gate Valve	0 loss for valve	0.0 feet	per table 4.3	

Equivalent Manifold Length = 220.0 Friction loss = 4.52 feet

1.5" lateral 62.00 feet Friction loss = 1.12 feet

Total Friction Head = 5.63

Design Calculations Lot 3

Design Input:			Calculations:	
Capacity requirements				
number of lots	1		Max. Daily Flow	900 gpd
bedrooms per lot	6		Average Daily Flow	450 gpd
use rate per bedroom	150 gpd		Maximum Daily Flow	0.63 gpm
			Average Daily Flow	0.31 gpm
Drainfield Requirements				
Application Rate	1.2 gpd/sq ft		Standard Trench Length	250 ft
Trench width	3 ft		Deep Trench Conversion Factor	41.67 %
trench gravel depth	4 ft		Deep Trench Length for MDF	104.18 ft
number of trenches	2		total trench length for 100% capacity	104.18 ft
trench spacing center-center	13 ft		individual trench length	52 ft
			Approx. Lateral Length	48.00 ft
Tanks and Capacities				
			minimum req. area	1,250 sf
BAT tank	2,000	gallons	req. capacity (1125+(0.75*MDF))	1,800 gal.
2nd settling tank	NA	gallons	design settling capacity	2,000 gal.
Equalization Tank	NA	gallons		
pump tank size	2,000	gallons	min. pump tank capacity (ADF)	600 gal.
Distribution system				
number of cells	1			
			Total Number of Pumps	1
trenches first system	2		laterals served by pump	2
lateral length per pump	104 ft		Vol./100 ft 1.5" SDR 26	12.6 gal.
ID 1.5" SDR 26 PVC	1.75 inches		Vol. of laterals served	13.1 gal.
Max. Forcemain length	202 ft		Vol./100 ft 2" SDR 26	19.6 gal.
ID 2" SDR 26 PVC	2.17 inches		Max. Main volume	39.6 gal.
Static Hydraulic Profile				
Ground Elev. At BAT tank	434.49 ft		Tank #1 effluent elev	431.16 ft
Tank #1 invert in	431.49 ft			
Cover	2.00 ft			
Tank #1 top	432.49 ft	okay		
Fall in tanks	0.33 ft		Pump Tank effluent elev	431.03 ft
Fall between tanks	0.13 ft		invert of pump tank	426.78 ft
Ground Elev. at pump tank	434.14 ft			
Pump Tank invert in	431.03 ft			
inv. into pump tank to top	0.84 ft		Pump Elevation	427.28 ft
Pump Tank top	431.87 ft	okay	pump intake elev.	428.07 ft
Pump Block Height	0.50 ft			
Height of intake	0.79 ft			
Highest lateral	450.00 ft	Cell 1		
Perforation Design:				
			Distal Pressure =	2.0 ft
Size of Perforation	5/16 inches		Flow	1.63 gpm
Design Separation	4.73 ft		Perforations per Lateral	11.00
Use Perforations	11		Perforation Actual Spacing	4.73 ft
Perforations per field	22		Flow rate	35.82 gpm
Dosing volume, flow rates and Pressures				
lateral flow rate per pump	35.82 gpm		Static Head	21.32 ft Cell 1
Friction (C) for PVC	150		Friction Head	5.63 ft Cell 1
Miscellaneous Losses	0 ft		Distal Head	2 ft
Estimated Run Time	2.00 Min.		Max. Total Dynamic Head	28.95 ft
Cells in simultaneous use	1		Minimum Dose Vol.	150.00 gal.
Pump tank Volume	45.49 Gal/in		Min. Runtime	4.19 min.
			Selected Runtime	5.19
			Selected Dose Volume	150.00 gal.
			Average Dose	3.00 per day

Tank and Float Design:

Ground over Tank =	434.14 ft	Inside Tank Dimenions	
Top of Tank =	431.87 ft	Height =	4.67 ft
Invert of Tank =	426.78 ft	Width =	5.58 ft
Pump Block=	0.50 ft	Length =	13.08 ft
Water End and Motor = per Mayer Brothers Precast	1.34 ft	Number of Tanks =	1
minimum Pump off =	428.62 ft		
Pump Off Float =	428.68 ft		
Area =	20.05 cf		
Area of Pit	72.99 sf	Use one 2,000 gallon pump tank	
Pump on dist. =	0.27 ft		
Pump on Elev. =	428.95 ft		
Distance between Pump on and Highwater Alarm =			0.5 ft
Highwater Alarm Elevation =			429.45 ft
High Water Alarm to Inlet =	1.58		
Volume Above Alarm Float to Inlet =	114.97 cf or		859.99 gallons
One Day Flow =	900.00 gallons	not okay	
90% One Day Flow =	810.00 gallons	okay	

Approved Septic System Plan
Howard County Health Department
NORWECO INT 6/20 LD
w/2000-gal Mayer Bros. Pump Tank
& Zoeller BN161 (0.5hp) Pump
Signature 1/12/2018 Date
BAT-LPD System

Pump Requirements:

Performance = 35.82 gpm
Head of Water = 28.95 feet of head

Pump Selection: Zoeller Pump BN161
1/2 horse power 115 Volts Single Phase

BENCHMARK
ENGINEERS LAND SURVEYORS PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BD-CIVILENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577, Expiration Date: 06-08-2018.

STATE OF MARYLAND JOHN M. CARNEY No. 45577 PROFESSIONAL ENGINEER
12/20/17

OWNER/DEVELOPERS:
ELLEN M. VAWTER,
MICHAEL A. VAWTER,
NANCY J. VAWTER,
LAURA J. LEONARD,
DREW B. LEONARD
14170 TRIADELPHIA MILL ROAD
DAYTON, MARYLAND 21036
301-706-6044

PROJECT:
VAWTER PROPERTY
LOT 3

LOCATION: 14176 TRIADELPHIA MILL ROAD
TAX MAP: 27 - GRID: 24 - PARCEL: 68
ZONED: RR-DEO RURAL RESIDENTIAL
ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND

TITLE: SEPTIC SYSTEM DESIGN DETAILS

DATE: DECEMBER, 2017 PROJECT NO. 2766

DESIGN: LDD DRAFT: LDD CHECK: AAM SCALE: NONE SHEET 3 OF 3

J:\2766 VAWTER PROPERTY\dwg\8026-GP.dwg, TRENCH details and calcs lot 3, 12/20/2017 9:45:14 AM, nfigner

FILE INQUIRY NOTES

14176 TRIADELPHIA MILL

DATE	RESULTS OF REVIEW FOR FILE
11/28/18	EMAILED BUILDER FOR E PERMIT (L)
11/30/18	Plan (OSDS) NEEDS REDLINE PRIOR TO SEPTIC
	Permit FINAL. ~~OK~~ EMAIL SENT. W+S CC'ed. (L) +DB