

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY  
NOTICE OF INTENT  
INDIVIDUAL TREATMENT FACILITIES  
NPDES GENERAL PERMIT ARG550000**

Application Type: New ☒ Renewal ☐ (Permit # ARG55 \_\_\_\_\_)

**I. PERMITTEE/OPERATOR INFORMATION**

Permittee (Legal Name): John Provan Operator Type:  
Permittee Mailing Address: 3055 Redrock Road ☐ State ☐ Partnership  
Permittee City: Little Rock ☐ Federal ☐ Corporation\*  
Permittee State: AR Zip: 72210 ☒ Sole Proprietorship/Private  
Permittee Telephone Number: (630) 631-2102 \*State of Incorporation: \_\_\_\_\_  
Permittee Fax Number: \_\_\_\_\_ The legal name of the Permittee must be  
Permittee E-mail Address: john.provan@gmail.com identical to the name listed with the  
Arkansas Secretary of State.

**II. INVOICE MAILING INFORMATION (Home owners are exempt.)**

Invoice Contact Person: N/A City: \_\_\_\_\_  
Invoice Mailing Company: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Invoice Mailing Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

**III. FACILITY INFORMATION**

Facility Name: Provan Residence Facility Contact Person: John Provan  
Facility Address: 3055 Redrock Road Telephone Number: (630) 631-2102  
Facility County: Saline Facility City, State & Zip: Little Rock, AR 72210  
Facility Latitude: 34 Deg 45 Min 14.18 Sec Facility Longitude: -92 Deg 36 Min 15.89 Sec  
Datum: \_\_\_\_\_  
Accuracy: \_\_\_\_\_ Method: \_\_\_\_\_ Scale: \_\_\_\_\_ Description: \_\_\_\_\_

**IV. DISCHARGE INFORMATION**

Outfall Number: 001 Flow: 450 gpd (Gallons per Day)  
Stream Segment: 2C Hydrologic Basin Code: 8040203  
Outfall Latitude: 34 Deg 45 Min 10.51 Sec Outfall Longitude: -92 Deg 36 Min 16.79 Sec  
Datum: \_\_\_\_\_  
Accuracy: \_\_\_\_\_ Method: \_\_\_\_\_ Scale: \_\_\_\_\_ Description: \_\_\_\_\_  
Type of Treatment: Bio Microbics Microfast 0.5 with UV and Post Aeration  
Receiving Stream: Ouachita River

**V. FACILITY PERMIT INFORMATION**

NPDES Individual Permit Number (If Applicable): AR00  
NPDES General Permit Number (If Applicable): ARG  
State Construction Permit Number: \_\_\_\_\_  
NPDES General Construction Stormwater Permit Number (If Applicable): ARR15

WATER DIVISION  
5301 NORTSHORE DRIVE / NORTH LITTLE ROCK, ARKANSAS 72118  
PHONE 501-682-0623 / FAX 501-682-0880  
www.adeq.state.ar.us

**VI. OTHER INFORMATION:**

Operator Name: David Meints  
Operator License Number: 009055  
License Class: III  
Consultant Contact Name: David Meints  
Consultant Email Address: david@meincowastewater.com  
Consultant Address: PO Box 1001 City: Bryant State: AR Zip: 72089  
Consultant Phone Number: 501-804-0837 Consultant Fax Number: 501-821-4048

Has this treatment system been approved by AHD? Yes ☒ No ☐

**Disclosure Statements:**

Arkansas Code Annotated Section 8-1-106 requires that all applicants for the issuance or transfer of any permit, license, certification or operational authority issued by the Arkansas Department of Environmental Quality (ADEQ) file a disclosure statement with their applications. The filing of a disclosure statement is mandatory. No application can be considered complete without one. You must submit a new disclosure statement even if you have one on file with the Department. The form may be obtained from ADEQ web site at: [http://www.adeq.state.ar.us/disclosure\\_stmt.pdf](http://www.adeq.state.ar.us/disclosure_stmt.pdf).

**VII. CERTIFICATION OF OPERATOR**

DM (Initial) "I certify that, if this facility is a corporation, it is registered with the Secretary of the State of Arkansas."  
DM (Initial) "I certify that the cognizant official designated in this Application is qualified to act as a duly authorized representative under the provisions of 40 CFR 122.22(b). If no cognizant official has been designated, I understand that the Department will accept reports signed only by the Applicant."  
DM (Initial) "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Responsible Official Printed Name: John Provan Title: Owner  
Responsible Official Signature: [Signature] Date: 7/6/22  
Responsible Official Email: John.provan@gmail.com  
Cognizant Official Printed Name: David Meints Title: Class III Operator  
Cognizant Official Signature: [Signature] Telephone: 501-804-0837  
Cognizant Official Email: david@meincowastewater.com

**X. PERMIT REQUIREMENT VERIFICATION**

Please check the following to verify completion of permit requirements.

	Yes	No	* If No is answered for any of the questions, then a permit can not be issued!
Submittal of Complete NOI?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Submittal of Required Permit Fee?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Check Number: _____
Submittal of AHD Form EHP-19?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Submittal of Site Map?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Submittal of Disclosure Statement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

WATER DIVISION  
5301 NORTHSORE DRIVE / NORTH LITTLE ROCK, ARKANSAS 72118  
PHONE 501-682-0623 / FAX 501-682-0880  
[www.adeq.state.ar.us](http://www.adeq.state.ar.us)



Arkansas Department of Health  
Environmental Health Protection

RECEIVED  
FEB 05 2018

Receipt Number  
22022241

Individual Onsite Wastewater System Permit Application

Permit Type ☒ New Installation  
☐ Alteration / Repair

DR Environmental ID #

7 6 0 2 1 3 2 0 9 0

Fee Schedule for Structures		✓
Structures 1500 sq ft or less	\$ 30.00	<input type="checkbox"/>
Structures more than 1500 sq ft and up to 2000 sq ft	\$ 45.00	<input type="checkbox"/>
Structures more than 2000 sq ft and up to 3000 sq ft	\$ 90.00	<input type="checkbox"/>
Structures more than 3000 sq ft and up to 4000 sq ft	\$120.00	<input checked="" type="checkbox"/>
Structures more than 4000 sq ft	\$150.00	<input type="checkbox"/>
Alteration and Repair	\$ 30.00	<input type="checkbox"/>

Part 1 Application

Treatment Type (check one)

- ☐ STD = Standard Septic Tank  
☐ ISF = Intermittent Sand Filter  
☐ PMF = Proprietary Media Filter  
☐ OTH = Other (Describe)
- ☒ ATU = Aerobic Treatment Plant  
☐ RSF = Re-circulating Sand Filter  
☐ RGF = Re-circulating Gravel Filter  
☐ HLD = Holding Tank

Disposal Method (check one)

- ☐ STD = Standard Absorption Field  
☒ SUR = Surface Discharge  
☐ CPF = Capping Fill  
☐ OTH = Other
- ☐ LPD = Low Pressure Distribution  
☐ HLD = Holding Tank  
☐ SRL = Serial Distribution  
☐ DRP = Drip Irrigation

1. Owner's/Applicant's Name

Mark Shepard

3. Mailing Address

P.O. Box 1114 Benton, Ar. 72018

2. Phone Number

501-317-6602

4. County

Saline

5. Address of Proposed System (If a 911 address is not available, attach detailed directions or map)

Lot # 202 Redrock Little Rock, AR. 72002

6. Subdivision Name

Westcliffe VII

7. Approval Date

2016

8. Date Recorded

2016

9. Lot Number

202

10. Lot Dimensions

See Plat

11. Total Area (Acres)

3.5

12. # Bedrooms # People

4

13. Daily Flow (GPD)

450

14. Brief Legal Description of Property (Attach a separate sheet of paper, if necessary)

S-4 T-1-N R-15-W

15. Water Supply (Specify supplier, if Public Water)

Saline

16. GPS Coordinates

34.7557219 - 92.5942451

17. Loading Rates

(gpd/ft<sup>2</sup>)

18. System Specifications

Primary Area

N/A

a. Size of Septic Tank

1250

gal

f. Trench Depth

N/A

inches

Secondary Area

N/A

b. Size of Dose Tank

250

gal

g. Trench Spacing

N/A

feet

Percolation Test

(min/in)

c. Absorption Area

N/A

ft<sup>2</sup>

h. Trench Media (List Below)

i. Trench Width

Primary Area Avg

X

d. Number of Field Lines

N/A

ft

Secondary Area

X

e. Length of Field Lines

N/A

ft

in

in

TO THE OWNER

The permit for construction may be deemed invalid by the local Environmental Health Specialist before the start of construction, if the site and/or soil conditions have changed after approval of this permit, or if the information within this permit is inaccurate or has been found to be misrepresented. Approval for operation does not constitute a guarantee that the system will function properly. The approval states that the system was designed and installed according to the Arkansas Department of Health, Rules and Regulations Pertaining to Onsite Wastewater Systems, unless there are exceptions or deviations noted in the comments. A Permit for Construction is valid for one (1) year from the date of approval. The authorized agent must revalidate a permit more than one (1) year old prior to the start of any construction.

19. Utilization Verification

I hereby attest that item 12, the number of bedrooms (number of persons for commercial) and square footage of the structure that will utilize the designed individual onsite wastewater system in this permit application, is accurate. I have reviewed the permit application and understand the layout, installation, maintenance, operation and expense(s) that may be associated with this system.

Owner/Applicant Signature

See Atch

Date

20. I certify that I have conducted the above tests and that the above listed information is in accordance with the latest requirements of the Arkansas Department of Health Rules and Regulations Pertaining to Onsite Wastewater Systems.

Designated Representative Signature

KEVIN CASTLEBERRY

Print Name

D.R.

Title

Soil Certified

☒ Yes ☐ No

870-692-5742

Phone Number

21. Approval of Health Authority

The information and specifications in the application has been reviewed and found to meet the requirements of the Arkansas Department of Health Rules and Regulations Pertaining To Onsite Wastewater Systems. A PERMIT FOR CONSTRUCTION is hereby issued.

Environmental Specialist Signature

700

EHS Number

2-23-18

Date

# Individual Onsite Wastewater System Permit Application

Receipt Number

Continue Part 1

22. Soil Criteria (Primary Area)		Indicate the depth to items a-f, if observed in the soil (designate in inches)					
a. Bedrock	b. BSWT	c. MSWT	d. LSWT	e. Adj. MSWT	f. Adj. LSWT	g. H.C./Depth	h. Loading Rate (gpd/ft <sup>2</sup> )
X	Surface	12	24	8	14	Low 24"	N/A

23. Soil Criteria (Secondary Area)		Indicate the depth to items a-f, if observed in the soil (designate in inches)					
a. Bedrock	b. BSWT	c. MSWT	d. LSWT	e. Adj. MSWT	f. Adj. LSWT	g. H.C./Depth	h. Loading Rate (gpd/ft <sup>2</sup> )
X	"	"	"	"	"	"	N/A

24. Seasonal Water Table (SWT) Classes Detail		List Redoximorphic Features and/or Clay Content Restrictions	
Primary Area			
Brief	0 in	25% 5/8	
Moderate	12 in	" " 10% 6/2	
Long	24 in	>50% 10% 6/2	
Secondary Area		List Redoximorphic Features and/or Clay Content Restrictions	
Brief	in	SAME	
Moderate	in		
Long	in		

Comments

## Part 2 Installation Inspection

Septic tank manufacturer	Pump information
Septic tank material	Trench media and width
Dose tank manufacturer	Depth of interceptor drain
Dose tank material	Depth of settled fill
Name of Installer	License Number
Installation Inspected by <input type="checkbox"/> Environmental Health Specialist <input type="checkbox"/> Designated Representative (check one or installer signs System Installation Verification below)	
Signature	EHS / License Number Date
System Installation Verification I have installed this system as designed and in compliance with all Rules and Regulations Pertaining to Onsite Wastewater Systems.	
Installer Signature	License Number Date

## Part 3 Permit for Operation

The information contained in Part 1 and 2 of this form has been reviewed and found to meet the requirements of the Arkansas Department of Health. THE PERMIT FOR OPERATION of this system is hereby issued.

Environmental Health Specialist \_\_\_\_\_ Signature \_\_\_\_\_ EHS Number \_\_\_\_\_ Date \_\_\_\_\_

Comments

Site Revalidation conducted by ☐ Environmental Health Specialist ☐ Designated Representative  
 (check one)

Signature \_\_\_\_\_ EHS / License Number \_\_\_\_\_ Date \_\_\_\_\_



\* Optional System Utilization Verification Form



**Arkansas Department of Health**  
Environmental Health Protection

Receipt Number

**Individual Onsite Wastewater System Permit Application**

Permit Type

- ☒ New Installation  
☐ Alteration / Repair

DR Environmental ID #

7602132090

☐ Homeowner

☒ Builder/Developer

Fee Schedule for Structures	✓
Structures 1500 sq ft or less \$ 30.00	<input type="checkbox"/>
Structures more than 1500 sq ft and up to 2000 sq ft \$ 45.00	<input type="checkbox"/>
Structures more than 2000 sq ft and up to 3000 sq ft \$ 90.00	<input type="checkbox"/>
Structures more than 3000 sq ft and up to 4000 sq ft \$120.00	<input type="checkbox"/>
Structures more than 4000 sq ft \$150.00	<input type="checkbox"/>
Alteration and Repair \$ 30.00	<input type="checkbox"/>

TO THE PROPERTY OWNER

Onsite Wastewater System Utilization Verification

Property location: Lot 202 Westcliffe Phase VII  
(Address of Proposed System, City, State, Zip)

I hereby attest there are 4 bedrooms (\_\_\_ number of persons for commercial) and the square footage of the structure that will utilize the designed onsite wastewater system in this permit application is accurate. I have reviewed the permit application and understand the layout, installation, maintenance, operation and expense(s) that may be associated with this system.

As Developer/Builder, I hereby attest that the above information is correct and prior to the sale of the property, I will convey, to the buyer, all information associated with this system.

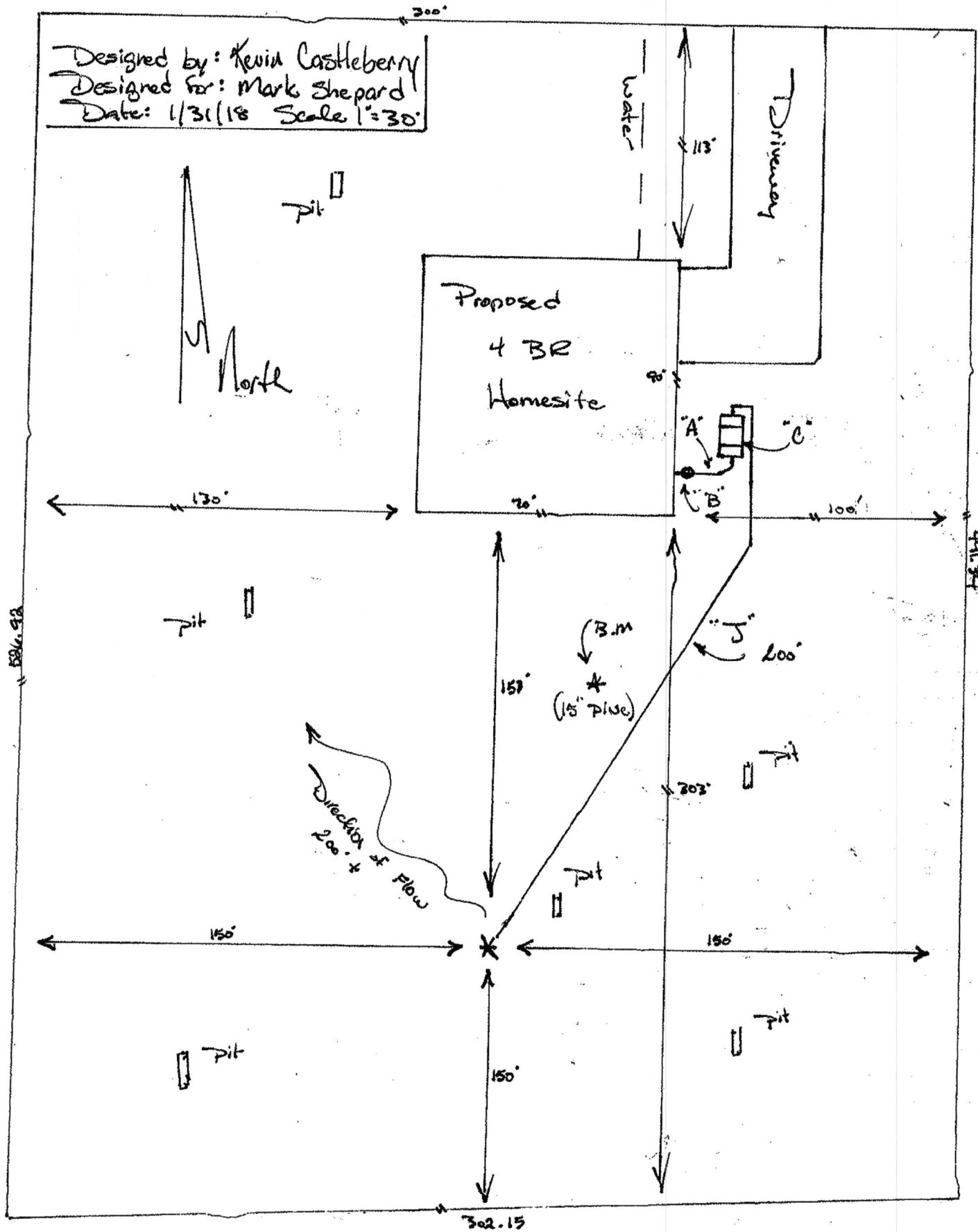
Owner/Applicant Signature

Date 1-30-2018

*This document must be submitted with the permit application, if the Owner/Applicant Signature Section (number 19 on the EHP-19) is not signed.*

Lot 202 Redrock Westcliffe Phase VII

Designed by: Kevin Castleberry  
Designed for: Mark Shepard  
Date: 1/31/18 Scale 1"=30'





Arkansas Department of Health  
Environmental Health Protection

ONSITE WASTEWATER PROGRAM WAIVER REQUEST

Part 1: To be completed by the Environmental Specialist Requesting the waiver (Please Print or Type)		
Name of Permit Applicant Mark Shepard		Permit Receipt Number 22022241
Address of Property Lot#202 Redrock Westcliffe VII	City Little Rock	County Saline
Environmental Specialist Requesting the Waiver Robbie Crocker	Regional Environmental Leader Tamara Almand	
Justification (Must reference applicable Section of Act 402 or Onsite Wastewater Rules and Regulations) System does not meet setbacks for alternate systems as stated in section 10.5.7 of Rules and Regulations Pertaining to Onsite Wastewater Systems. This is new construction in which they have evidently granted waivers before due to lot design. The request is to waive the setback from the neighbors house, the discharge point is about 250 feet from the residence but will flow away from the residence.		
Attach a copy of the permit application, plat drawing and vicinity map.		

Part 2: To be completed by the Environmental Section Staff Member reviewing the waiver request	
Disposition	Waiver Granted <input checked="" type="checkbox"/> Waiver Not Granted <input type="checkbox"/>
Justification No Ham within 300ft Direction of Flow	
Director, Onsite Wastewater Section	Date 2-23-18

### Elevations:

B.M.	11.2'	
	<u>G.E.</u>	<u>F.L.</u>
Stub out	15.8	16.8
Clean out	15.8	16.8
Tank In	15.2	17.0
Tank Out	16.2	17.3
Discharge Pt:	5.8	

### Notes:

- Install Bio Microbes 0.5 FAST Unit in a 1500 gallon 3. Compartment tank.
- Install Saleor U.V. disinfection Unit Model 3 G inside pump chamber of tank.
- Install Zoeller BV 57 pump along with Zoeller 10-0623 outdoor highwater alarm in pump chamber.
- Pump Treated effluent to discharge point.



ENVIRONMENTAL

Zoeller Family of Water Solutions

# Zoeller Company

## System Head Curve and Pump Selection Tool



PUMP COMPANY

Zoeller Family of Water Solutions

<b>Static Head Information</b>	
Static Head - elevation difference from low water to outfall	13.0 feet
System high point above outfall?	No

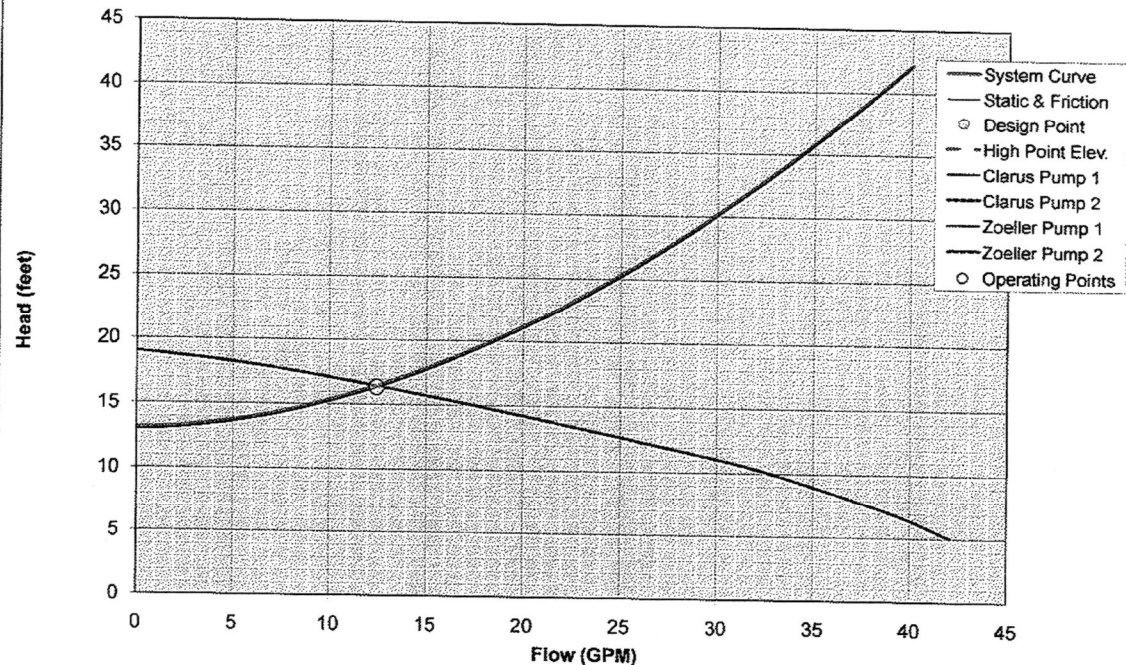
<b>Friction Head Information</b>	
Pipe	
How many different pipes in the system (not counting laterals)?	1
Pipe 1 Length	200 feet
Pipe 1 Size	1 1/2 inches
Pipe 1 Class	SCH 40
Pipe 2 Length	
Pipe 2 Size	
Pipe 2 Class	
Pipe 3 Length	
Pipe 3 Size	
Pipe 3 Class	
Pressurized Laterals?	
How many are closed at once?	No
Length of one lateral	
Size of lateral	
Class of lateral	

<b>Fittings &amp; Discharge Assemblies</b>		
Type	Size	Quantity
Check Valve	1 1/2 inches	1
Gate Valve (full open)	1 1/2 inches	1
90 Elbow	1 1/2 inches	1
Special Friction Considerations		
Weep Hole	Yes	3/16"
Add-In Friction	15 % of Pipe Loss	
Automatic Multizone Valve?	No	
Pressure Filter?	No	

<b>Operating Head Information</b>		Specify Flow Requirement?
System Type	Non-Pressurized	No
Required Pressure		
Number of Orifices		
Size of Orifice		
Spider Valve Orifice Size		
(Data originates from Spider Valve Sizing Tab)		

<b>Factors and Coefficients</b>	
Hazen-Williams C Factor	130
Discharge Coefficient (Cd)	0.61
Lateral Design Mode	Off

System / Pump Interaction Curves



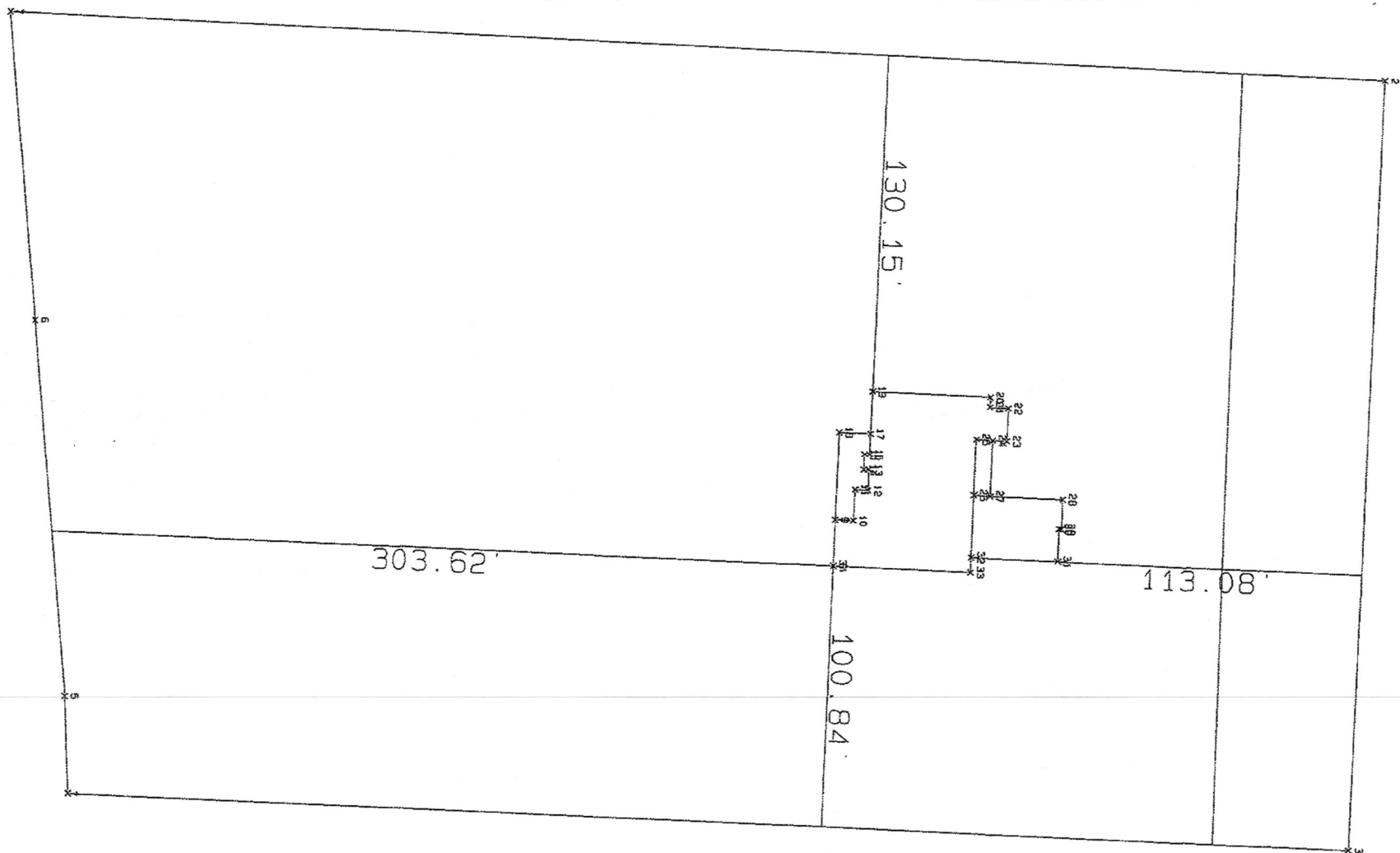
NOTE: THE DISPLAYED PUMP CURVES HAVE BEEN ADJUSTED TO ACCOUNT FOR THE EFFECT OF THE WEEP HOLE

<b>Pump Selection</b>	60 Hz	Frequency
<b>Clarus Environmental Pumps</b>		
Clarus Pump 1		
Flow Control Orifice		
Clarus Pump 2		
Flow Control Orifice		
<b>Zoeller Pump Company Pumps</b>		
Zoeller Pump 1	53/55/57/59, 0.3hp, 60Hz	12.4 GPM @ 16.4'
Zoeller Pump 2		

Curve Zoom Range 40 GPM

<b>Project Data</b>		Notes:
Project Name:	Bogard	
Project Address		
Contact Info:		





**Castleberry Septic Systems**  
**SEPTIC SYSTEM MONITORING AND SERVICE AGREEMENT**

Liberty Construction ("Customer") agrees to contract with Castleberry Septic Systems ("Company"), who will provide specific management and related services that are defined within the scope of services for the septic and/or onsite wastewater treatment system owned by Liberty Construction and located at Lot 202 Westcliffe Phase VII, (Redrock rd.) ("Property").

This agreement is for a period of two (2) years, beginning on Move In Date and ending on (24 months later) with the option to extend at the end of this agreement.

1. It is understood, and agreed to by both parties, that any other services or obligations that are not expressly stated within either of these documents are excluded from the stated terms of this Agreement.
2. Additional services not identified or defined within this Agreement or the Scope of Services, to be performed by the "Company," will be produced in an amended document to the original Scope of Services by the "Company," reviewed, and signed by both parties.
3. The "Customer" agrees to pay the "Company" Castleberry Septic Systems for septic system service and maintenance, specifically work performed every three months (quarterly) and described more specifically below.
4. If another agreement exists in writing between "Company" and "Customer" covering such services at the time in which the new agreement is prepared, then the most recent agreement shall be considered the valid document.

**5. Validation of Property Ownership.**

- a. In signing this Agreement, the "Customer" does validate ownership to the Property, or responsibility for the management of the Property, as well as the septic or onsite wastewater treatment system that is subject of this Agreement.
- b. Further, the "Customer" agrees to defend, indemnify and hold the "Company" harmless from and against any and all demands, actions, claims and damages, including without limitation the reimbursement of the Company's reasonable attorneys' fees, arising out of or relating to Customer's breach of its representation and warranty of ownership of the Property.

**6. Term and Termination.**

- a. The term of this Agreement shall commence on the date of the Initial Inspection, and continue in full force and effect for a period of 2 year(s) (the "Initial Term").
- b. The Agreement shall renew automatically for successive 2 year periods without further action by the parties ("Renewal Term"), unless either party sends written notice to the other party not less than 90 days prior to the expiration of the Initial Term or any Renewal Term.
- c. The "Company" may also terminate this Agreement, upon 30 days notice to the "Customer," for any of the following reasons.
  - (i) The "Customer" fails to pay any service fees or other charges due identified within this Agreement in a timely manner.
  - (ii) Any breach by the "Customer" of any of the provisions contained in this Agreement and the Contract Documents.
  - (iii) The "Customer" fails to follow any of the recommendations made by the "Company" regarding the management, repair, maintenance, or replacement of the septic or onsite wastewater treatment system, or its components.
- d. In the event either the "Customer" or the "Company" terminates this Agreement, the "Company" has the right to remove any and all equipment or other materials then located at the Property owned by the Company.
- e. Within a reasonable time after receipt or delivery of the notice of termination, the "Customer" agrees to provide the "Company" with access to the Property to remove such equipment or other materials.

**Excluded Services.**

- a. The services contained in this agreement shall **NOT** include:
  - i. an initial inspection, review or analysis of the physical or structural condition of the septic or onsite wastewater treatment system or its component parts; and/or
  - ii. any inspection, analysis, review, recommendation, or opinion relative to, or in connection with, the sale or transfer of the Property to any third party to this Agreement.
- b. The Customer recognizes and agrees that any third party has no right or obligation to rely upon the services performed by the Company pursuant to this Agreement.

**Customer Obligation and Responsibility.**

In signing this Agreement, the "Customer" acknowledges that they are obligated to responsibly operate the system according to instructions,

The "Customer" agrees to have the "Company" provide the services as agreed upon and in conjunction with the Scope of Services:

- a. To have the system serviced on a regular schedule,
- b. To perform all maintenance, repairs, replacements,
- c. To obtain other services deemed necessary for the proper operation and management of the septic or onsite wastewater treatment system.

Specifically, and without limitation, the "Customer" understands and agrees that the septic or onsite wastewater treatment system is designed and constructed to treat only a specified volume of water per day, and that an increase in the volume of water used by the system can cause damage to or failure of the system.

The "Customer" must operate and maintain the system in a manner consistent with the recommendations of the manufacturer, the original designer/contractor, and/or the "Company," including not to exceed the design specifications of the system as directed by these entities.

The "Customer" also understands that the discharging of chemicals (drain cleaners, anti-bacterial soaps, bleach, etc.) or other foreign material (tampons, feminine napkins, paper towels, plastics, or other non-biodegradable material) into the system which kill bacteria and cause premature system failure, will be paid for on a time and material basis.

***Company Obligation and Responsibility.***

- a) Service calls meet BIO-MICROBICS 0.5 specifications and regulations.
- b) Four service calls (one each quarter).
- c) Completion of onsite maintenance program profile form EHP-71, where applicable.
- d) All samples will be retrieved and tested by an approved lab as a part of this agreement. In such event, "Company" shall submit to "Customer" a laboratory fee of \_\_\_\_\_ which the "Customer" will promptly pay.
- e) Sludge build up in the treatment plant will be monitored during the service calls. Homeowner will be advised when sludge reaches maximum levels for safe and/or efficient operation of the system. (See part (a) under Customer Obligations and Responsibilities)
- f) Customer will be advised if there are any parts of the system that need to be replaced/repared and the cost of said parts/labor prior to the replacement/repair of the parts. Any repairs outside of the regular maintenance or warranty will be billed to the end user. \*note: warranties do not cover labor charges outside of one year from date of installation (if installed by Custom Septic Installation Services LLC)

This Agreement does not require the "Company," to, and expressly excludes, any repair and/or replacement of any component part of the septic or onsite wastewater treatment system that is under guarantee by the manufacturer. In the event the "Company" identifies a defect or other problem in the septic, or onsite wastewater treatment system, or otherwise recommends the performance of repairs, maintenance or any other work associated with the septic or onsite wastewater treatment system, the "Company" shall not be required to perform any such additional work, repair or maintenance unless, and until a separate written agreement is prepared.

The separate agreement will identify the specific work tasks to be completed, and additional compensation to be paid to the "Company," and signed by authorized representatives of the "Customer" and the "Company."

***Disclaimer of Warranties and Limitation of Liability.*** CUSTOMER UNDERSTANDS AND AGREES THAT NEITHER THIS AGREEMENT, NOR ANY INSPECTIONS, REPORTS, OR RECOMMENDATIONS PROVIDED BY THE COMPANY, ARE A GUARANTEE OR WARRANTY OF ANY KIND REGARDING THE SEPTIC SYSTEM, ONSITE WASTEWATER SYSTEM, OR THEIR COMPONENTS, AND ANY SUCH WARRANTIES, EXPRESS OR IMPLIED, ARE HEREBY DISCLAIMED BY THE COMPANY.

THE CUSTOMER UNDERSTANDS AND AGREES THAT TRUCKS AND EQUIPMENT HAVE TO ACCESS THE PROPERTY TO MAINTAIN THE ONSITE WASTEWATER TREATMENT SYSTEM. THE COMPANY WILL NOT BE HELD RESPONSIBLE FOR THE DRIVEWAY OR APRON SHOULD ANY DAMAGE OCCUR.

CUSTOMER SPECIFICALLY UNDERSTANDS AND AGREES THAT THE COMPANY WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR REPAIR, MAINTENANCE, OR REPLACEMENT OF THE SEPTIC OR ONSITE WASTEWATER TREATMENT SYSTEM, OR ANY OF ITS COMPONENTS, DIMINUTION IN VALUE OF THE PROPERTY, OR ANY OTHER CONSEQUENTIAL, INCIDENTAL, PROPERTY OR ECONOMIC DAMAGES ARISING OUT OF OR RELATING TO ANY SERVICES PERFORMED BY THE COMPANY PURSUANT TO THIS AGREEMENT, INCLUDING WITHOUT LIMITATION, THE COMPANY'S FAILURE TO INSPECT, IMPROPER INSPECTION, FAILURE TO REPORT, OR IMPROPER REPORTING. THE DAMAGES AND CLAIMS FOR WHICH THE COMPANY SHALL NOT BE LIABLE INCLUDE, BUT ARE NOT LIMITED TO, FAILURE OF THE SEPTIC OR ONSITE WASTEWATER TREATMENT SYSTEM OF ANY KIND.

CUSTOMER AGREES TO DEFEND, INDEMNIFY AND HOLD THE COMPANY HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS, DAMAGES, LOSSES, COSTS, LIABILITIES OR EXPENSES ASSERTED BY ANY THIRD PARTIES TO

THIS AGREEMENT RELATING TO ANY WORK, RECOMMENDATIONS OR OTHER SERVICES FURNISHED BY THE COMPANY PURSUANT TO THIS AGREEMENT.

CUSTOMER FURTHER AGREES THAT THE MAXIMUM LIABILITY OF THE COMPANY ARISING OUT OF THIS AGREEMENT, THE SERVICES PERFORMED BY THE COMPANY, OR THE RECOMMENDATIONS MADE BY THE COMPANY, SHALL BE EQUAL TO THE ANNUAL FEE SET FORTH IN THE CONTRACT DOCUMENTS, OR \$500, WHICHEVER IS GREATER. A HIGHER LIMIT OF LIABILITY IS AVAILABLE ONLY WITH AN EXPRESS AGREEMENT IN WRITING AND THE PAYMENT OF AN ADDITIONAL FEE BY THE CUSTOMER.

***Integrated Agreement.***

This Agreement constitutes the entire arrangement between the parties, and there are no Agreements, understandings, restrictions, warranties or representations between the parties other than those set forth herein or herein provided for. All prior or contemporaneous negotiations, Agreements, understandings, statements, representations and warranties are merged into the terms hereof and are superseded hereby.

***Choice of Law.***

The interpretation and enforcement of this Agreement shall be governed by the laws within the State of AR.

***Amendment, Modification and Waiver.***

This Agreement may be modified or amended only in writing signed by the "Company" and the "Customer."

***Third Party Beneficiaries.***

The rights, responsibilities, and obligations of this Agreement are personal and specific to each of the parties, and shall not be binding upon or inure to the benefit of any third party. The "Customer" and "Company" agree that they do not intend, by their performance of this Agreement, to confer any benefit, right, or entitlement upon any third party. The "Company" assumes no responsibility for any third party's reliance on any of the services, analysis, review, or recommendations provided by the "Company" pursuant to this Agreement.

***Mediation and Arbitration.***

The "Customer" and "Company" agree that, at the sole option of the "Company" any claims or controversies, demands or causes of action of any kind or description arising under or relating to this Agreement, or relating to the interpretation of this Agreement, shall be resolved through mediation and then, if necessary, binding arbitration in accordance with the Construction Industry Rules of the American Arbitration Association.

Upon signing this agreement, the parties hereto have caused this instrument to be signed and sealed on the day and date written below and at the address first written above:

Date 1/31/18

Company  
By: [Signature]

Date \* 1-30-2018

Customer  
By: \* [Signature]

**PUMPS THE  
PROS USE™**



**ZOELLER On Line**  
PUMP CO.



Zoeller Corp.  
Home Page

Company Profile

Service Stations

Comments

What's New

Products

Related Links

Contact Info

Extended Warranty

Order Info

Technical Briefs

Pump Sizing Program

Literature Index

Technical Support

## Technical Briefs by Zoeller Professionals




### The Do's and Don'ts of Submersible Pump Applications . . .

1. Do thoroughly read all installation material provided with the pump.
2. Do inspect pump for any visible damage caused by shipping. Contact dealer if pump appears to be damaged.
3. Do clean all built up debris in sewage pit if debris can obstruct the pumps initial start up. Be sure that the pump will have a hard, flat surface beneath it.
4. Do be sure that the pit is large enough to allow proper clearance for the pumps float switch.
5. Do **Always Disconnect Pump From Power Source Before Handling.**
6. Do always connect to a separately protected and properly grounded circuit.
7. **Don't** ever cut, splice or damage the power cord.
8. **Don't** carry or lift the pump by its power cord.
9. **Don't** use an extension cord with a sewage pump.
10. Do install a check valve and a union in the discharge line.
11. **Don't** use a discharge pipe smaller than the pumps discharge size.
12. Do drill a 3/16" weep hole between the check valve and the pump housing.
13. Do review all applicable local and national codes and verify that the installation conforms to each of them.
14. Do consult manufacturer for clarifications or questions.
15. Do consider a Two Pump System with an alarm where an installation may become overloaded or primary pump failure would result in property damage.
16. **Don't** flush any items that are not biodegradable such as paper towels, feminine hygiene products, condoms, or other items that could jam the pump impeller. A moderate amount of tissue paper in a system is acceptable.
17. **Don't** pour chemicals into the pump system such as acid's, floor wax, paints, or any degreasing chemicals. Common household soaps and detergents are acceptable. Contact the manufacturer with any chemical questions.
18. Do keep all warranty information, installation instructions, and receipts for future use.
19. Do size the pump to the proper capacity of the home. In a two-pump system each pump should be sized to meet the homes pumping requirements.
20. Do verify that the sewage pit is gas tight and well vented to prevent odors.

**"QUALITY PUMPS SINCE 1939"**

Top of Page | Zoeller Corporate Home Page | Zoeller Pump Co. Home Page | Company Profile  
What's New at Zoeller | Zoeller Pump Co. Products | Tech. Briefs | Contact Info | Extended Warranty  
Comments | Related Links | Service Station Listings | Technical Support | Order Info | Literature Index  
| Pump Sizing Program | 2006 Recall Info

Web pages created and maintained by Zoeller Company  
© 2009 Zoeller Company. All rights reserved.

Send information regarding this web site to webmaster  zoeller.com





ARKANSAS DEPARTMENT OF

# Health

*Keeping Your Hometown Healthy*

## Basic Electrical Information for Septic Systems Using Pumps, Floats, and Warning Alarms or Control Panels

\*ALL Aspects of the wiring and electrical system must meet the current National Electrical Code\*.

- All components of a pumped septic system including: pump vaults, pump chambers, tank draw-downs, pumps, floats and alarms, controls, wiring, conduit, all electrical connections and breakers must be specified with examples included in the design by Designated Representative.
- All septic system electrical work must be performed by an Arkansas licensed Septic System Installer, or an Arkansas licensed Master Electrician.
- Any electrical work inside a building must be performed by the property owner, or an Arkansas licensed Master Electrician.
- All enclosures, panels, breaker boxes or other housings must be NEMA-4X rated with gas-proof and waterproof gaskets and seal offs.
- No exposed plug-in electrical cords are allowed, they must be entirely sealed in a NEMA-4X enclosure to be both gas resistant and water resistant.
- All wire splices and connections must be made with heat shrink-butt connectors, or silicone encapsulated wire nuts.
- All conduit opening s into control boxes, splice boxes, or alarm and breaker boxes must have gel-filled seal off kits or plugs.
- All power cable or wire must be UF (underground rated) and of correct gauge for the total amperage and total length of run.
- Any power cable or wire buried 12-inches or less deep must be entirely inside UF (underground rated) conduit of correct size to allow for heat dispersal of the wire.
- The pump must have an individual breaker of correct amperage in line of site to its location.
- The float/alarm set up must have an individual breaker of correct amperage in line of site to its location.
- The main breaker for the entire septic system set up must have amperage at least equal to pump, alarm, or control breakers coming to the main breaker. This main breaker must be labeled and its location noted on the septic system permit/design.
- No deviations from the approved design may be made without prior approval of Designated Representative and Environmental Health Specialist.



ARKANSAS DEPARTMENT OF

# Health

*Keeping Your Hometown Healthy*

## Wire Gauge Calculation Chart

- Indicates wire is insufficient to carry load

\*Information provided by  
Whelen Engineering, Inc.

### Maximum Current Draw

	5 Amps	10 Amps	15 Amps	20 Amps	25 Amps	30 Amps	35 Amps	40 Amps	45 Amps	50 Amps
22 AWG	6	3								
20 AWG	9.5	5	3							
18 AWG	15	7.5	5	4	3					
16 AWG	24.5	12	8	6	5	4	3.5	3		
14 AWG	39	19.5	13	9.5	8	6.5	5.5	5	4.5	4
12 AWG	62	31	20.5	15.5	12.5	10.5	9	7.5	7	6
10 AWG	98	49	32.5	24.5	19.5	16.5	14	12.5	11	10
8 AWG	156	78	52	39	31	26	22.5	19.5	17.5	15.5
6 AWG	248.5	124	82.5	62	49.5	41.5	35.5	31	27.5	25
4 AWG	395	197.5	131	98.5	79	66	56.5	49.5	44	39.5
2 AWG	629	314	209	157	125.5	104.5	89.5	78.5	69.5	63

Maximum wire length - measured in feet.

	55 Amps	60 Amps	65 Amps	70 Amps	75 Amps	80 Amps	85 Amps	90 Amps	95 Amps	100 Amps
22 AWG										
20 AWG										
18 AWG										
16 AWG										
14 AWG	3.5	3	3	3						
12 AWG	5.5	5	5	4.5	4	4	3.5	3.5	3.5	3
10 AWG	9	8	7.5	7	6.5	6	6	5.5	5	5
8 AWG	14	13	12	11	10.5	10	9	8.5	8	8
6 AWG	22.5	20.5	19	17.5	16.5	15.5	14.5	14	13	12.5
4 AWG	36	33	30.5	28	26.5	24.5	23	22	21	19.5
2 AWG	57	52.5	48.5	45	42	39	37	35	33	31.5

## American Wire Gauge (AWG) - diameter in inches

Gauge	Diameter
000000	0.5800
00000	0.5165
0000	0.4600
000	0.4096
00	0.3648
0	0.3249
1	0.2893

Gauge	Diameter
7	0.1443
8	0.1285
9	0.1144
10	0.1019
11	0.0907
12	0.0808
13	0.0710

Gauge	Diameter
19	0.0359
20	0.0319
21	0.0285
22	0.0253
23	0.0226
24	0.0201
25	0.0178

Gauge	Diameter
31	0.0089
32	0.0079
33	0.0071
34	0.0063
35	0.0056
36	0.0050
37	0.0045

"QUALITY PUMPS SINCE 1939"

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

**ZOELLER**  
PUMP CO.



MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347  
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961  
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

SECTION: 4.10.110

FM0732

0706

Supersedes

0705

visit our web site:  
[www.zoeller.com](http://www.zoeller.com)

## A-PAK - ALARM SYSTEMS

### INDOOR/OUTDOOR ALARM SYSTEM FEATURES

- Indoor & Outdoor use per UL 864.
- UL Listed and CSA Certified.
- Alarm system (horn & light) operates to warn of a high water condition.
- Horn is rated 82 decibels at 10'.
- Alarm Test and Horn Silence Switch with auto reset.
- Terminal connections for a pump & float switch.

Standard Model (P/N 10-0623) Includes:

- 15 ft. float switch.

Deluxe Model (P/N 10-0682) Includes:

- 20 ft. float switch.
- 6 ft. power cord plugs into 115V outlet.
- Watertight cord connectors.



### "A-PAK" ALARM SYSTEM FEATURES

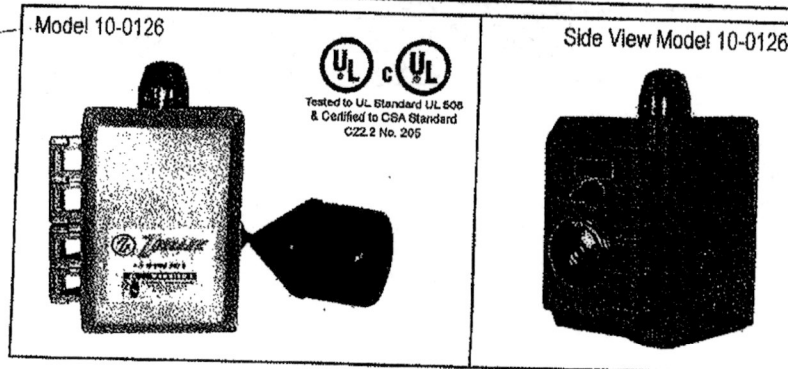
10-1494 (115V/1Ph/9V DC)

- Auto reset solid state alarm.
- 9 Volt battery back-up (battery not included).
- NEMA 1 non-corrosive enclosure for indoor use.
- Manual shut off.
- Float operates on 12 VAC.
- Float switch with 15' cable included.
- 6 ft. power cord plugs into 115V outlet.
- Horn is rated at 86 decibels at 10'.

### "A-PAK II" ALARM SYSTEM FEATURES

10-0126 (115V/1Ph)

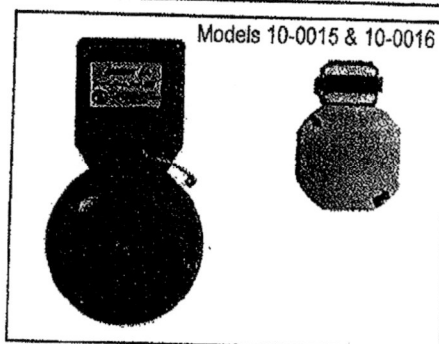
- NEMA 4X thermoplastic alarm panel.
- Horn & light warn of high liquid levels.
- Test and silence switch.
- Auxiliary dry high level alarm contacts - 5 amps.
- Operates on separate circuit from pump 115 VAC.
- UL Listed for US & Canada.
- Float switch with 15 ft. cable included.
- Can be used with liquids to 140°F (60°C).
- Horn is rated at 88 decibels at 10'.



10-0015 (115V) / 10-0016 (230V)

- Non-enclosed model.
- 6" magnetic bell with transformer.
- Mount on standard utility box (not included).
- Operates with 10-0743 float switch or mechanical alternator (not included).

Note: All variable level float switches in this section are mechanically activated and do not contain mercury.





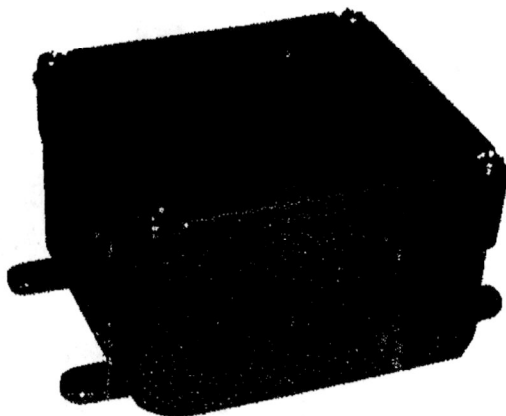
**ENVIRONMENTAL**

*Zoeller Family of Water Solutions™*

3649 Cane Run Road Louisville, KY 40211-1961  
phone: 1-800-928-7867 fax: 1-502-774-3624  
www.clarusenvironmental.com  
*Your Peace of Mind is Our Top Priority®*

CL0121  
Updated 1111  
Supersedes 0210

## Junction Boxes



UL listed and CSA certified high impact, corrosion resistant, weatherproof thermoplastic enclosure with flexible PVC gasket and brass screws. Presassembled at the factory for convenience and ease of installation.



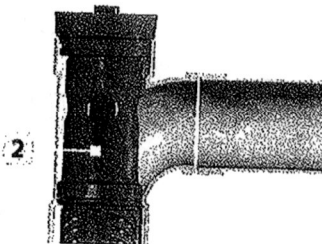
Junction Boxes CL0625	
Part Number	Description
10-1398	4"x4"x4" J-Box w/ 0.75" hub, 4 small cord grips, 1 plug
10-1399	4"x4"x4" J-Box w/ 1.5" hub, 4 small cord grips, 1 plug
10-1402	6"x6"x4" J-Box w/ 1.5" hub, 4 small cord grips, 1 plug
10-1403	6"x6"x4" J-Box w/ 2.0" hub, 5 small cord grips, 1 plug
10-1710	6"x6"x4" J-Box w/ 2.0" hub, 6 small cord grips, 1 plug

# SaniTEE<sup>®</sup>

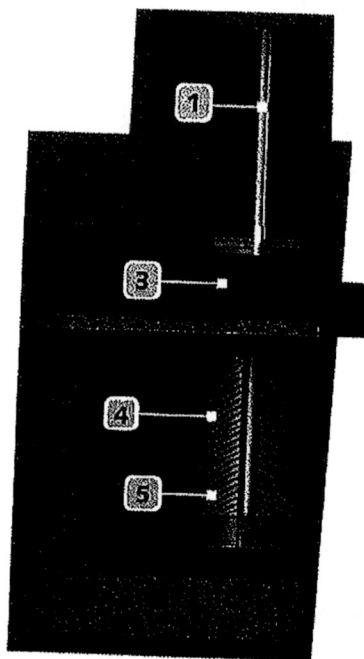
wastewater screens

## Unique Design Characteristics

- 1 Self-Cleaning Screen and Swab Feature** - The smooth exterior surface of the SaniTEE<sup>®</sup> promotes the deflection of solids back into the septic tank. Any solids that become trapped in the angled slots can be easily dislodged with a simple swab of the screen.
- 2 Keyhole Weirs** - Surge flows are common in normal residential applications due to simultaneous discharge from many fixtures in the home (i.e. laundry day). The patented keyhole weirs provide flow attenuation to dampen these surge flows that otherwise may scour solids out of the septic tank with the effluent.
- 3 Custom Diverter** - Used in 8" and 16" SaniTEE applications, the diverter acts as a custom-engineered outlet tee to prevent scum and gas-lifted solids from being discharged into the drainfield. Once the custom diverter is secured to the tank wall and connected to the outlet pipe, the SaniTEE screen easily slips into the diverter like a sword in a sheath.
- 4 Angled Slots** - Angled slots, similar to those used in industrial well screens, are used because they resist blinding (clogging) better than mesh-type screening devices. The appropriate slot width does not allow nuisance solids to be discharged. Additionally, it has been found that most solids suspended in a tank float horizontally, like a leaf at the water surface. Therefore, the angled orientation of the slots is most likely to block the entrance of most solids.
- 5 Gas-lifted Solids Deflection** - It is well known that solids are lifted by various gasses present in septic tanks. These gas-lifted solids often rise into the end of the outlet tee and are discharged with the effluent. When SaniTEE is utilized, flow must enter from the side, not the bottom, so the escape of gas-lifted solids is virtually eliminated.



In the interest of technological progress, all products are subject to design change without notice.



## SaniTEE<sup>®</sup> Specifications

Model Sizes	Screen Diameter	Screening Level	Flow Range
SNT416	4 inch	1/16 inch	Up to 1000 GPD
SNT418	4 inch	1/8 inch	Up to 2000 GPD
SNT818	8 inch	1/8 inch	Up to 6000 GPD
SNT838	8 inch	3/8 inch	Up to 10,000 GPD
SNT1618	16 inch	1/8 inch	Up to 10,000 GPD
SNT1638	16 inch	3/8 inch	Up to 20,000 GPD

## Simple Installation and Maintenance

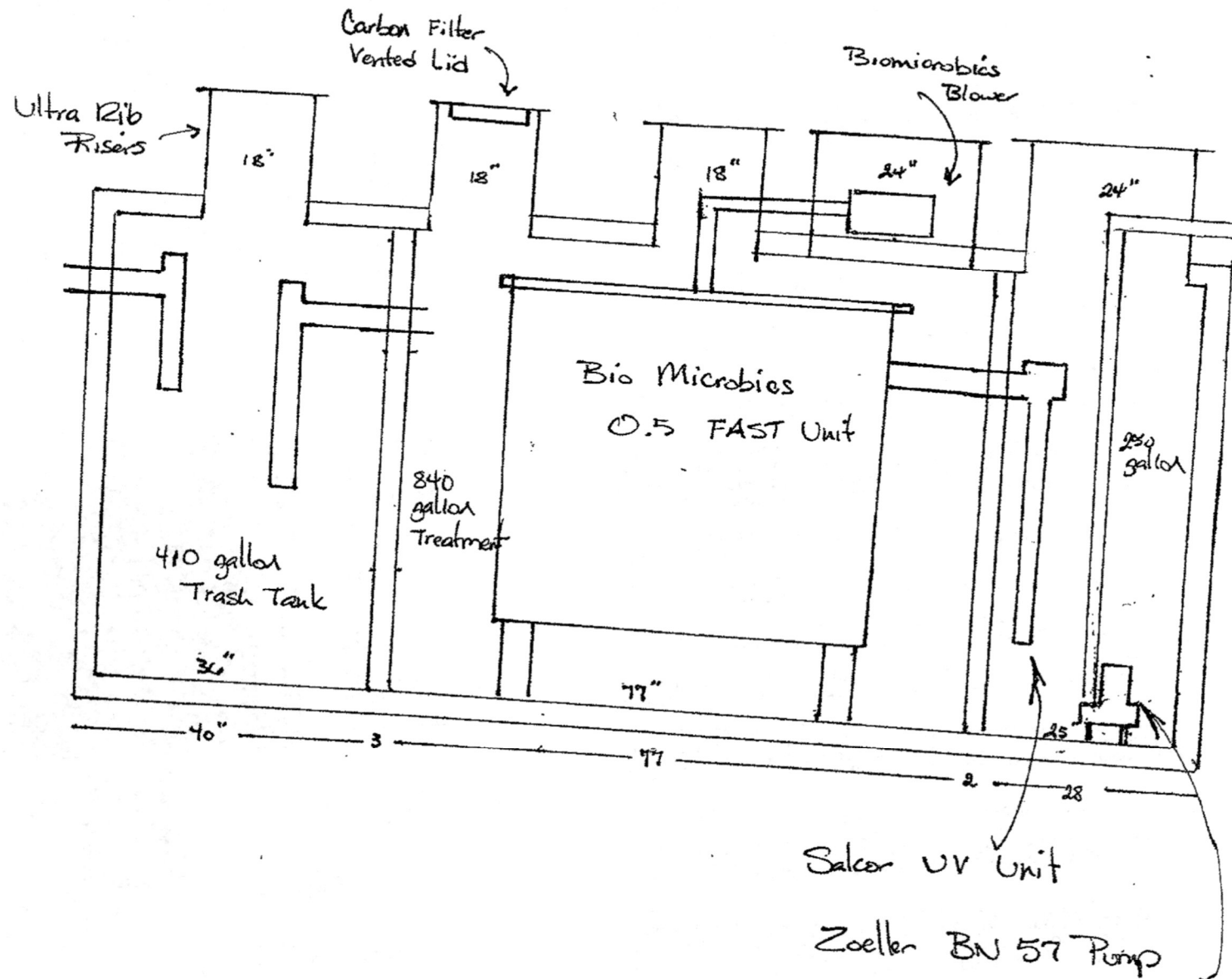
The installation of SaniTEE consists of dropping it inside a standard septic tank outlet tee or custom diverter. When cleaning the SaniTEE, simply move the swab handles forcefully up and down to pass the swab through the center or exterior of the screen. This swabbing action will dislodge any debris that might be trapped in the angled slots. If inspection is required, SaniTEE can be removed easily by simply lifting the screen out of the outlet tee or diverter.

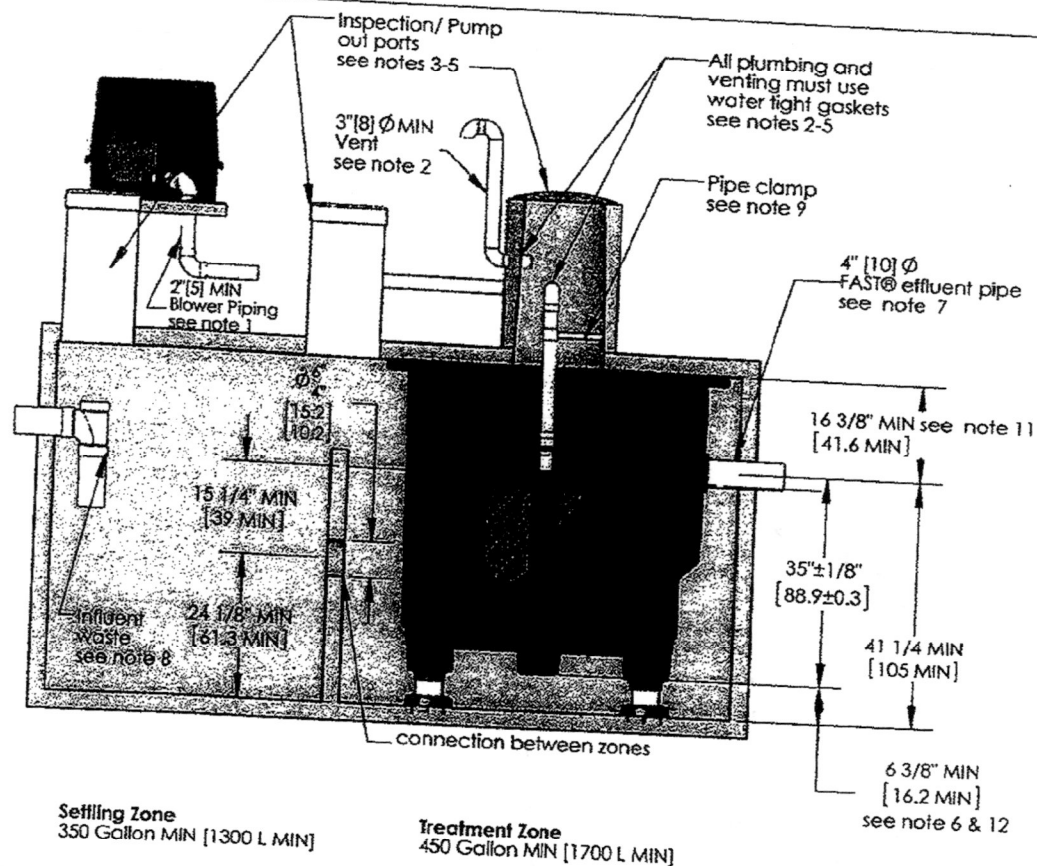
**BIO-MICROBICS<sup>®</sup>**  
INCORPORATED  
**Better Water. Better World.**



NOTE: NOT ALL DIMENSIONS TO SCALE

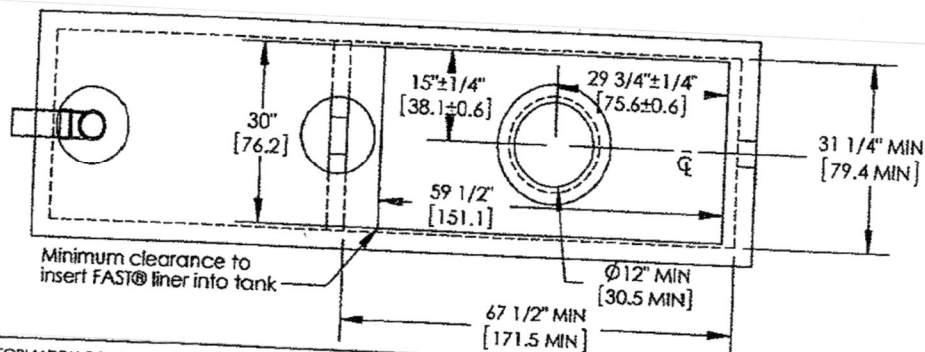
1500 gallon 3 compartment FAST unit





#### NOTES

1. Airline piping to FAST® may not exceed 100 FT [30m] total length and have a maximum of 4 elbows in the piping system. For distances greater than 100 FT [30m] consult factory. Blower must be located above flood levels on a concrete base 26" X 20" X 2" [65 X 50 X 5cm] min.
2. Vent to desired location and cover opening with a vent grate with at least 7 sq in. [45 sq. cm] open surface area. Secure with stainless steel screws. Vent piping must not allow condensate build up or create back pressure. Vent must be above finished grade or higher (see sheet 4 of 4).
3. All appurtenances to FAST® (e.g. tanks, access ports, electrical, etc.) must conform to all applicable country, state, province, and local plumbing and electrical codes. Pump out access shall be adequate to thoroughly clean out both zones.
4. All inspection, viewing and pump out ports must be secured to prevent accidental or unauthorized access.
5. Tank, piping, conduit, etc. are provided by others. Blower control system by Bio-Microbics, inc. See installation Manual.
6. If less than the specified minimums are considered necessary, consult factory for guidance.
7. All piping and ancillary equipment installed after FAST must not impede or restrict free flow of effluent.
8. The tank(s) shall be designed to prevent air passage between the settling zone/tank and the treatment zone and preventing an air lock. Examples include a baffle wall sealed to the lid or treatment zone inlet line with a pipe cap. Consult factory for guidance.
9. The air supply line into the FAST® unit must be secured to prevent vibration induced damage. The air supply line should be secured with a non-corrosive clamp every 2' min [60 cm]. See alternate air supply option on sheet 4 of 4.
10. Specialized treatment levels may require specific features to be incorporated into the design. Consult factory for guidance.
11. Min. height may be reduced, consult factor and reference "Low Profile Module Procedure.pdf"
12. Refer to sheet 4 of 4 for leg extensions requirements.



INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS INC. IS PROHIBITED. DESIGN AND INVENTION RIGHTS ARE RESERVED. IN THE EVENT OF TECHNOLOGICAL ADVANCEMENT, ALL PRODUCTS ARE SUBJECT TO DESIGN AND OR MATERIAL CHANGE WITHOUT NOTICE.

BIO-MICROBICS © 2014

DO NOT SCALE UNLESS NOTED DIMENSIONS ARE IN INCHES [CENTIMETERS] TOLERANCES ± 0.02 IN/IN [± 0.05 CM/CM]		<b>BIO MICROBICS</b> BETTER WATER BETTER WORLD MicroFAST 0.50 FAST Unit	
WEIGHT	lb	SIZE	DRAWING NUMBER
NAME	DATE	A	MicroFAST® 0.50 with feet
DRAWN	CIC 12/18/2006		
CHECKED	PF 9/18/2013		
		REVISED 9/18/2013	REV. INI-05-V
			SHEET 2 OF 4

# Specifications for MicroFAST 0.50 Wastewater Treatment System

## 1. GENERAL

The contractor shall furnish and install (1) MicroFAST® 0.50 treatment system as manufactured by Bio-Microbics, Inc. The treatment system shall be complete with all needed equipment as shown on the drawings and specified herein.

The principal items of equipment shall include the FAST® system insert, blower assembly, blower controls and leg extensions or lid. All other items will be provided by others. The MicroFAST 0.50 unit shall be situated within a 450 Gallon [1700L] minimum compartment as shown on the drawings. Suggested maximum settling zone is (1) X the daily flow. Tank must provide adequate pump out access and conform to local, state, and all other applicable codes. The contractor shall coordinate the proper fabrication of the tank between the FAST system and tank supplier with regard to fabrication of the tank, installation of the FAST unit, and delivery to the job site.

## 2. OPERATING CONDITIONS

The MicroFAST 0.50 treatment system shall be capable of treating the wastewater produced by typical family activities (bath, laundry, kitchen, etc.) ranging from (1) one to (8) eight people and not to exceed 500 US Gallons per day (1800 LPD) provided the waste contains nothing that will interfere with biological treatment. The FAST system is a biological treatment system not meant for non-biodegradable or industrial wastewater.

## 3. MEDIA

The FAST® media shall be manufactured of rigid PVC, polyethylene, or polypropylene and it shall be supported by the polyethylene insert. The media shall be fixed in position and contain no moving or wearing parts and shall not corrode. The media shall be designed and installed to ensure that sloughed solids descend through the media to the bottom of the septic tank.

## 4. BLOWER

The MicroFAST 0.50 unit shall come equipped with a regenerative type blower capable of delivering 17-25 CFM [31-46 m3/hr]. The blower assembly shall include an inlet filter with metal filter element. The blower shall be mounted outside the tank on a contractor supplied concrete base. Blower piping to the tank shall use non-corrosive material (PVC, Galvanized, or stainless Steel). Do not run galvanized pipe inside the treatment tank. Refer to Installation Manual for further details.

## 5. REMOTE MOUNTED BLOWER

The blower shall be placed on a contractor supplied concrete base. The blower must not sit in standing water and its elevation must be higher than the tank and normal flood level. A two-piece, rectangular housing shall be provided. The discharge air line from the blower to the MicroFAST® System shall be provided and installed by the contractor.

## 6. ELECTRICAL

The electrical source should be within 150 feet [45 meters] of the blower consult local codes for longer wiring distances. All wiring must conform to all applicable codes (IEC, NEC, etc.). Wiring distances must prevent significant voltage loss. Input power on 60Hz electrical systems 110/220VAC, 1Ø, 3.5/1.7 FLA, on 50 Hz electrical systems 220VAC, 1Ø, 1.9 FLA. Other voltages and phase are also available. Actual power consumption varies with site conditions. All conduit and wiring shall be supplied by contractor.

## 7. CONTROLS

The control panel provides power to the blower and contains an alarm system consisting of a visual and audible alarm capable of signaling blower circuit failure and high water conditions. The control panel is equipped with SFR® (Sequencing Fixed Reactor) timed control feature. A manual alarm silence button is included.

## 8. INSTALLATION AND OPERATING INSTRUCTIONS

All work must be done in accordance with local codes and regulations. Installation of the FAST 0.50 shall be done in accordance with the written instructions provided by the manufacturer. Manuals shall be furnished, which will include a description of system installation, operation, and maintenance procedures.

## 9. FLOW AND DOSING

FAST® systems have been successfully designed, tested and certified receiving gravity, demand-based influent flow. When influent flow is controlled by pump or other means to help with highly variable flow conditions, then multiple dosing events should be used to maximize performance. The flow rate shall not exceed 5 gpm (19 Lpm) with a maximum hourly flow not to exceed 10% of the design daily flow (50 gph [190 LPH]).

## 10. WARRANTY


Bio-Microbics, Inc. warrants all new residential FAST® models (MicroFAST® 0.50, 0.625, 0.75, 0.90, and 1.5) against defects in materials and workmanship for a period of two years after installation or three years from date of shipment which ever occurs first. All other FAST® system models are warranted for a period of one year after installation or eighteen months from date of shipment, whichever occurs first. All are subject to the following terms and conditions below:

During the warranty period, if any part is defective or fails to perform as specified when operating at design conditions, and if the equipment has been installed and is being operated and maintained in accordance with the written instructions provided by Bio-Microbics, Inc., Bio-Microbics, Inc. will repair or replace at its discretion such defective parts free of charge. Defective parts must be returned by owner to Bio-Microbics, Inc.'s factory postage paid, if so requested. The cost of labor and all other expenses resulting from replacement of the defective parts and from installation of parts furnished under this warranty and regular maintenance items such as filters or bulbs shall be borne by the owner. This warranty does not cover general system misuse, aerator components which have been damaged by flooding or any components that have been disassembled by unauthorized persons, improperly installed or damaged due to altered or improper wiring or overflow protection. This warranty applies only to the treatment plant and does not include any of the structure wiring, plumbing, drainage, septic tank or disposal system. Bio-Microbics, Inc. reserves the right to revise, change or modify the construction and/or design of the FAST system, or any component part or parts thereof, without incurring any obligation to make such changes or modifications in present equipment. Bio-Microbics, Inc. is not responsible for consequential or incidental damages of any nature resulting from such things as, but not limited to, defect in design, material, or workmanship, or delays in delivery, replacements or repairs.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. BIO-MICROBICS SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO REPRESENTATIVE OR PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTY OR TO ASSUME FOR BIO-MICROBICS, INC., ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF ITS PRODUCTS. Contact your local distributor for parts and service.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS INC. IS PROHIBITED. DESIGN AND INVENTION RIGHTS ARE RESERVED. IN THE INTEREST OF TECHNOLOGICAL ADVANCEMENT, ALL PRODUCTS ARE SUBJECT TO DESIGN AND OR MATERIAL CHANGE WITHOUT NOTICE.

BIO-MICROBICS © 2014

DO NOT SCALE		 BFTTER WATER BETTER WORLD®	
UNLESS NOTED DIMENSIONS ARE IN INCHES [CENTIMETERS] TOLERANCES ± 0.02 IN/IN [± 0.05 CM/CM]			
MicroFAST 0.50 FAST Unit			
WEIGHT	lb	SIZE	DRAWING NUMBER
		A	MicroFAST® 0.50 Specifications
DRAWN	CTC	12/18/2006	
CHECKED	PF	9/18/2013	
		REVISED 9/18/2013	REV. INI-QS-V
			SHEET 3 OF 4





Map data ©2018 Google 500 ft



Arkansas Department of Health  
4815 West Markham, Slot 46  
Little Rock, Arkansas 72205-3867

## MEMORANDUM OF AGREEMENT

### SUBJECT: ONSITE WASTEWATER SYSTEM APPLICATION

This is an agreement that the onsite wastewater system installed on this property has been permitted under authority of Act 402 of 1977 and by the Arkansas Department of Health with the understanding that the following provisions are met:

1. Onsite Wastewater Systems requiring a Monitoring Contract with a Certified Monitoring Personnel are Holding Tanks, Experimental Systems (i.e. Reduced Absorption Areas, \*ABGs), and Drip Dispersal Systems. \*Aerobic Biological Generators – Commercial applications only, residential applications must follow manufacturers' service contract requirements.
2. The property owner assumes all responsibility for the proper operation of the onsite wastewater system.
3. The property owner must maintain a monitoring contract with a licensed Certified Monitoring Personnel for the life of the system and retain Onsite Wastewater System Assessments (EHP-71), on file, for at least five (5) years.
4. The Arkansas Department of Health has no responsibility in the operation and maintenance of such systems.
5. That the Arkansas Department of Health may monitor the system as to its operation capabilities.
6. That the Arkansas Department of Health is granted permission to make such inspections as deemed necessary.
7. Subsurface systems with flows  $\geq 3000$  gpd and all surface discharging systems require the owner to file an additional permit application with the Arkansas Department of Environmental Quality (ADEQ).
8. That, on the sale of the property, the owner of the property must disclose to the perspective buyer notice of this agreement and any permit requirements. The buyer is to sign memoranda, contracts or permit name change forms and submit these documents to the appropriate regulatory agency.

SIGNED: \*

(Property Owner)

SIGNED:

(Health Department)

DATE: \*

2-26-18

DATE:

3-2-18



Arkansas Department of Health  
Environmental Health Protection

## ONSITE WASTEWATER PROGRAM WAIVER REQUEST

Part 1: To be completed by the Environmental Specialist Requesting the waiver (Please Print or Type)		
Name of Permit Applicant Mark Shepard		Permit Receipt Number 22022241
Address of Property Lot#202 Redrock Westcliffe VII	City Little Rock	County Saline
Environmental Specialist Requesting the Waiver Robbie Crocker	Regional Environmental Leader Tamara Almand	
Justification (Must reference applicable Section of Act 402 or Onsite Wastewater Rules and Regulations) System does not meet setbacks for alternate systems as stated in section 10.5.7 of Rules and Regulations Pertaining to Onsite Wastewater Systems. This is new construction in which they have evidently granted waivers before due to lot design. The request is to waive the setback from the neighbors house, the discharge point is about 250 feet from the residence but will flow away from the residence.		
Attach a copy of the permit application, plat drawing and vicinity map.		

Part 2: To be completed by the Environmental Section Staff Member reviewing the waiver request	
Disposition	Waiver Granted <input checked="" type="checkbox"/> Waiver Not Granted <input type="checkbox"/>
Justification No Home within 300ft Direction of Flow	
Director, Onsite Wastewater Section	Date 2-23-18



PO Box 1001 \* Bryant, AR 72089



1000



72118

U.S. POSTAGE PAID  
FCM LG ENV  
BRYANT, AR  
72089  
JUL 08, 22  
AMOUNT

**\$1.76**

R2305K132425-15

ADEQ  
WATER PERMITS  
5301 Northshore Dr  
North Little Rock, AR  
72118