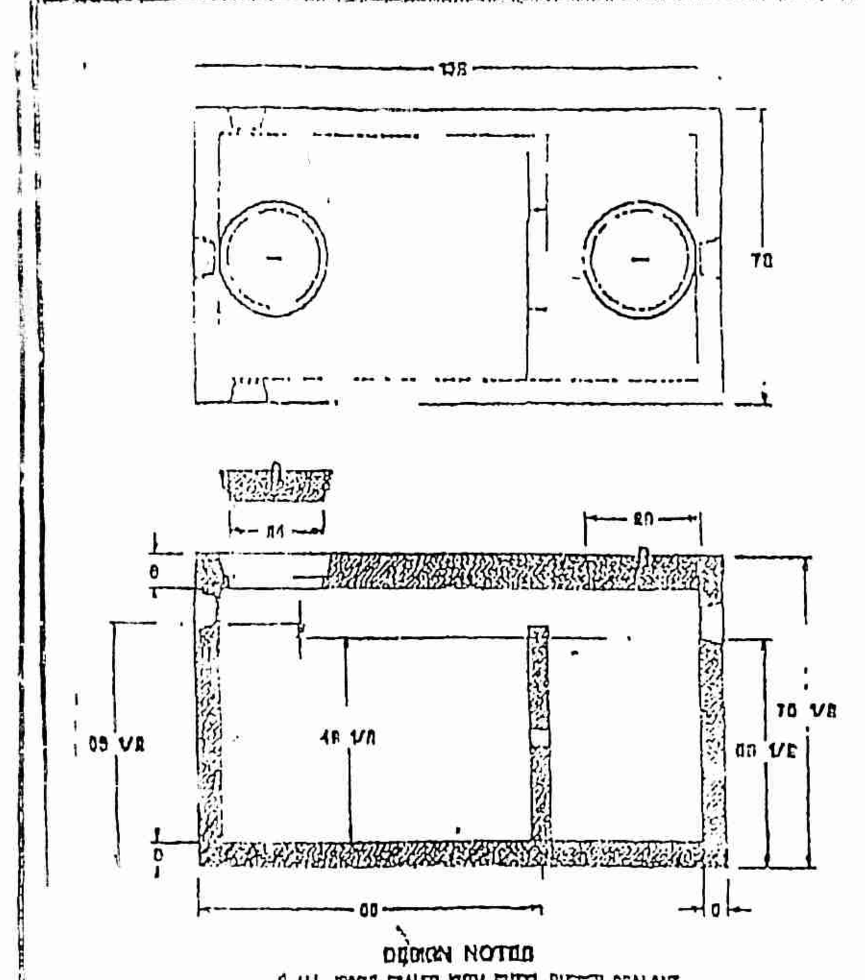
Precast Septic Tank, 1500 Gallon Monolithic-2 Compartment (6.1 Tons)
JOLLEY PRECAST OR EQUAL



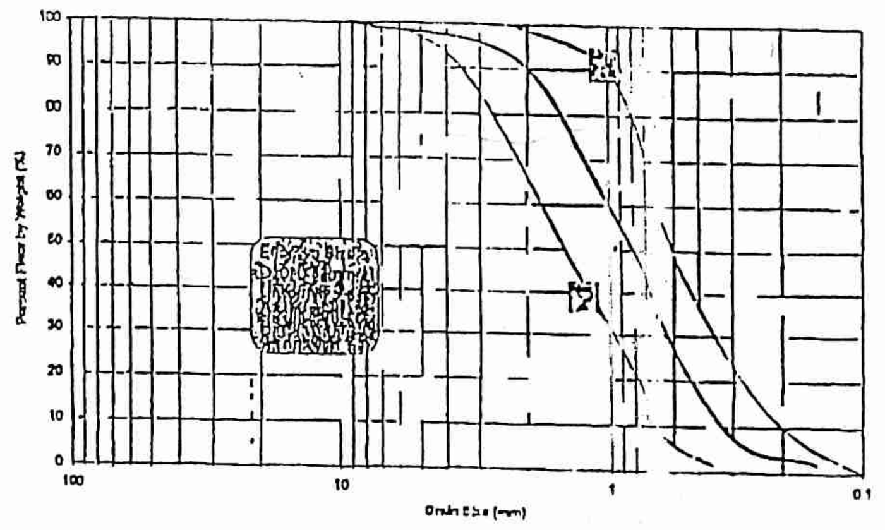
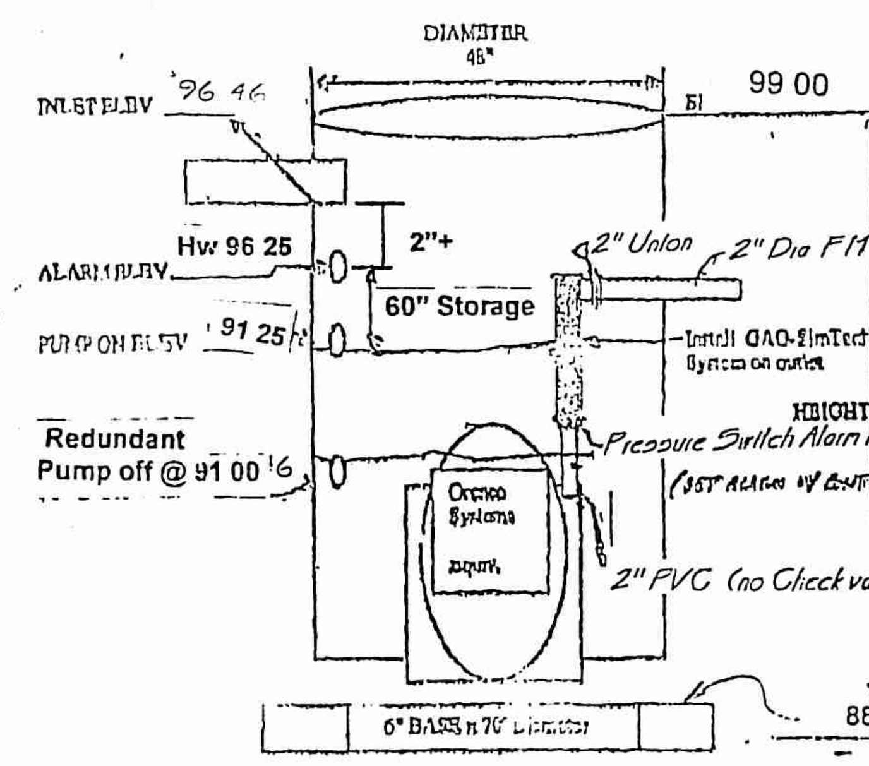


Figure 9. Bottomless Sand Filter Media Specifications

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF GROUNDWATER & ISDS
ISDS SECTION
PLAN # 9831-1517 DATE 7/12/05
APPROVED
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE KEPT AT CONSTRUCTION SITE

"Copy of permit and Operation Maintenance contract must be filed in land evidence records prior to conformance".



Pump Chamber

Note Mount pump Control Panel on wall of dwelling next to FAST Controls

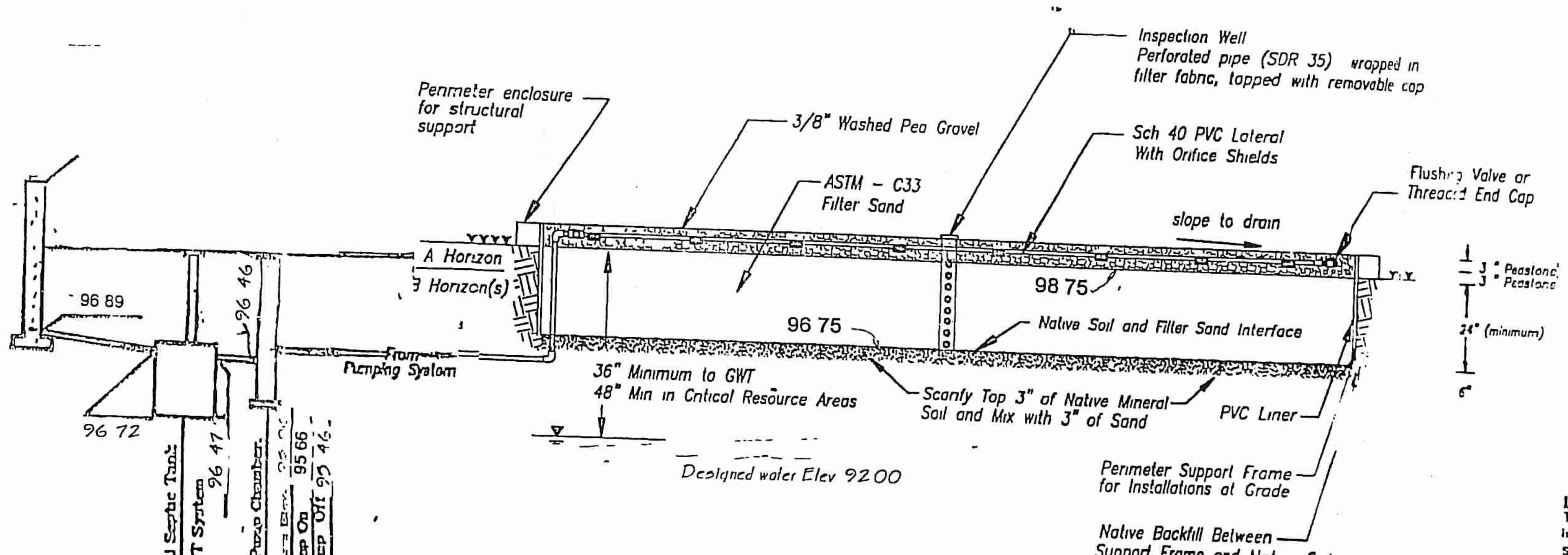
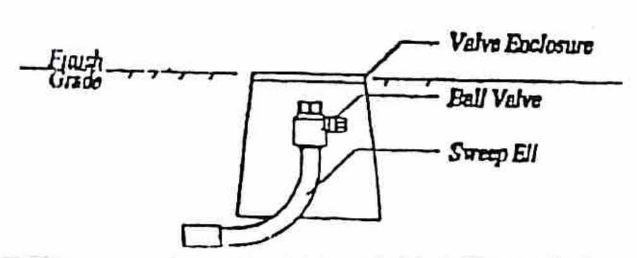


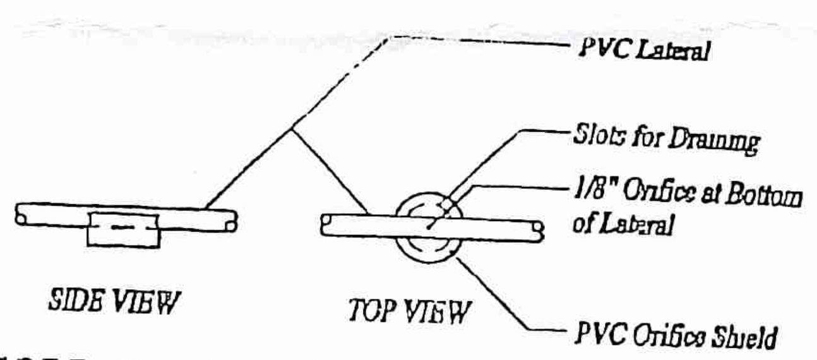
Figure 5: Bottomless Sand Filter Installed Above Grade (Cross Section)



FLUSHING VALVE DETAIL

Float Control Data

Top of Chamber	99 00
Inv Elev.	96 46
HWA	96.25
Normal Liquid Level	91 25



COLD WEATHER ORIFICE SHIELD DETAIL

Construction Notes

1 Clear all trees and stumps within 10' of system
2 Proposed well to be installed 100' minimum from any leaching field
3 Install 4" Schedule 40 PVC pipe or equal from foundation to septic tank all other piping to be schedule 35 PVC.
4 Proposed top of foundation elevation is directly related to proper installation and functioning of leach field and should not be changed without consulting designer.
5 No subsurface drainage to be installed within 25' of system.
6 This designer accepts no responsibility for future possibility of flooding in the basement area.
7 Contractor to verify invert elevation before start of work and report findings to designer.

Design Calculations

Design Flow 2 Bedrooms X 150 Gallons ? Bedroom = 300 Gal

Design Ground WAter Table 9200

Depth to Impervious 8'

Minimum Leaching Area
300 Gal/ Day
20 min Assigned Perc. Rate
20 Gal/ Sf/day Hydraulic Design Rate

Sand Filter Area Provided 150 SF

TIMER Settings

PS 3gal @ 11 7 Ft TDH
Dose 12 5 Gal ea Hr
Pump on 28 5sec
Pump off 59min 31 5 sec
Rate of Dose =12 5gal
96 orifices 12 5/96 = 0 13 gal/orifice/ dose
0 13< 0 25 dose Use Orenco Pump PEF 405 or Equal

Site Data

Soil Evaulation # #9831 - 1517
Date Excavated 8/29 03
Assigned Perc Rate 20
Ground Water Elevation 920

Specifications For MicroFAST 0.5 Wastewater Treatment System

1. GENERAL
The contractor shall furnish and install (1) MicroFAST 0 5 treatment system as manufactured by Bio-Microbics, Inc The tretment system shall be complete with all needed equipment as shown on the drawings and specified herein

The principal items of equipment shall include FAST System Insert, Insert lid (or leg extensions if that option is chosen), blower assembly, blower controls and alarms The MicroFAST 0 5 unit shall be situated within a 800 Gallon (3028 L) minimum tank, as shown on the plans Tank(s) must conform to local, state, and all other applicable codes The contractor shall provide coordination 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 5 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 persons and up to 500 US Gallons per day (1893 LPD)

3. MEDIA
The FAST media shall be manufactured of rigid PVC or polyethylene and it shall be supported by the polyethylene insert The media shall be of such a design that bacterial growth is uniform over all media surfaces 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 immediatetly descend through the media to the bottom of the septic tank.

4. BLOWER
The MicroFAST 0 5 unit shall come equipped with a regenerative type blower capable of delivering 11-25 CFM The blower assembly shall include an inlet filter with metal filter element

5. REMOTE MOUNTED BLOWER
The blower shall be mounted remote, up to 100 feet (30 5 M) maximum, from the MicroFAST unit on a contractor supplied concrete base The blower elevation must be higher than the normal flood level A one-piece, rectangular housing shall be provided with tamper-proof screws The discharge air line from the blower to the MicroFAST shall be provided and installed by the contractor

6. ELECTRICAL
The treatment system shall be designed to operate on standard current The input power required for the blower is 115/230 Volts, Single Phase, 60/50 Hertz, 38/19 Full Load Amps (Locked Rotor Amps are 18 6/9 3). All conduit and wiring between the electrical control panel, the power supply, and the blower shall be furnished and installed by the contractor.

7. ALARMS
The alarm system shall consist of a visual and audible alarm to indicate failure of the blower The alarm shall be located as shown on the plans. A manual silence switch is included

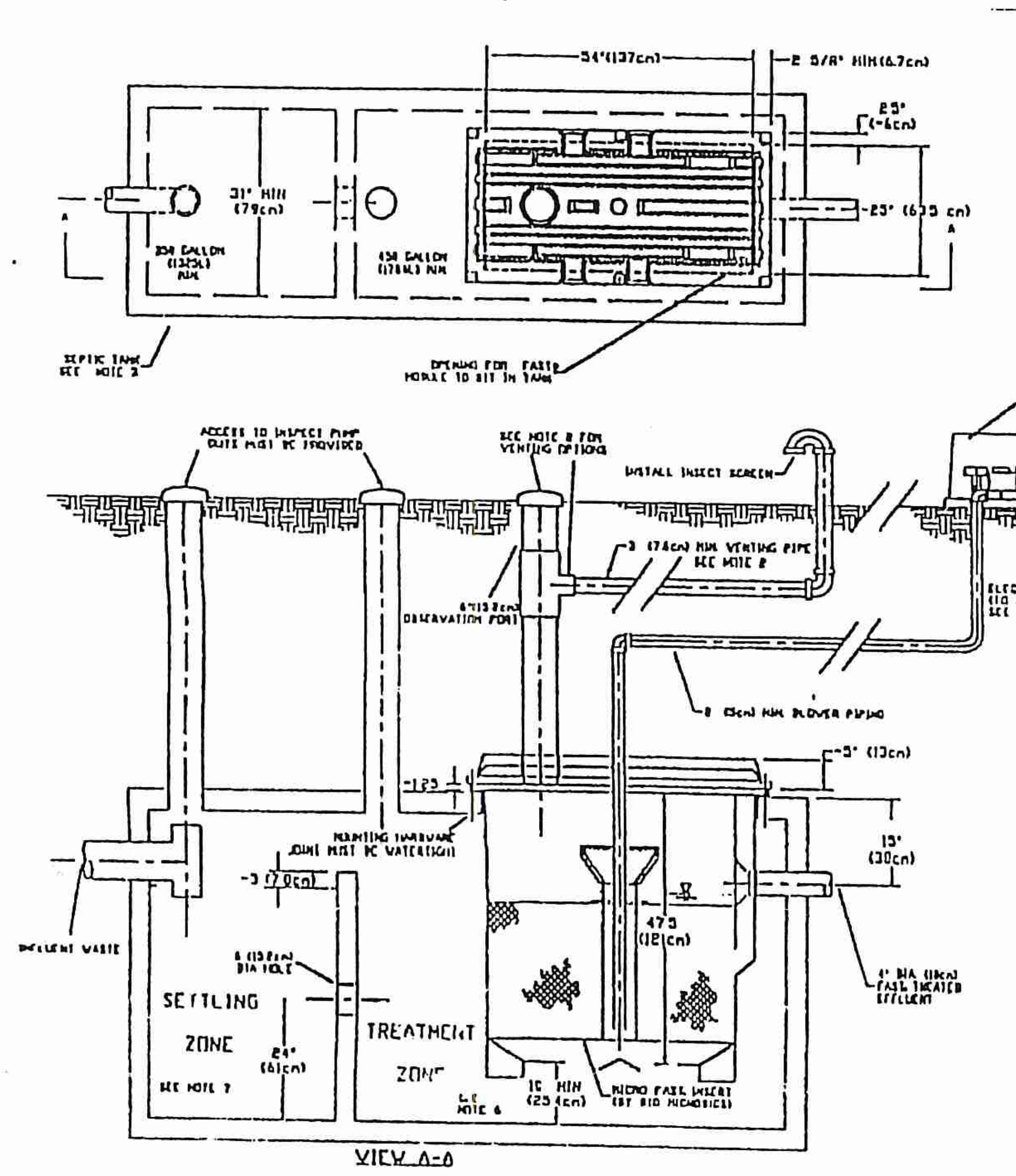
8. INSTALLATION AND OPERATING INSTRUCTIONS
Installation of the MicroFAST 0.5 shall be done in accordance with the written instructions provided by the manufacturer Operation manuals shall be furnished which will include a description of installation, operation, and system maintenance procedures There shall be a separate manual for the installer, service provider, and owner, tailored to each

9. WARRANTY
The manufacturer of the MicroFAST 0 5 treatment system shall warrant for three years from the date of shipment or two years form the date of start-up, whichever occurs first, that the equipment they provide will be free from defects in material and workmanship

In the event a component fails to perform as specified or is proven defective in service during the warranty period, the manufacturer shall repair or replace such defective parts (Cost of labor on repair/replacement is not covered under this warranty) The replacement or repair of those items normally consumed in service such as air filter, etc, shall be considered as part of routine maintenance and upkeep

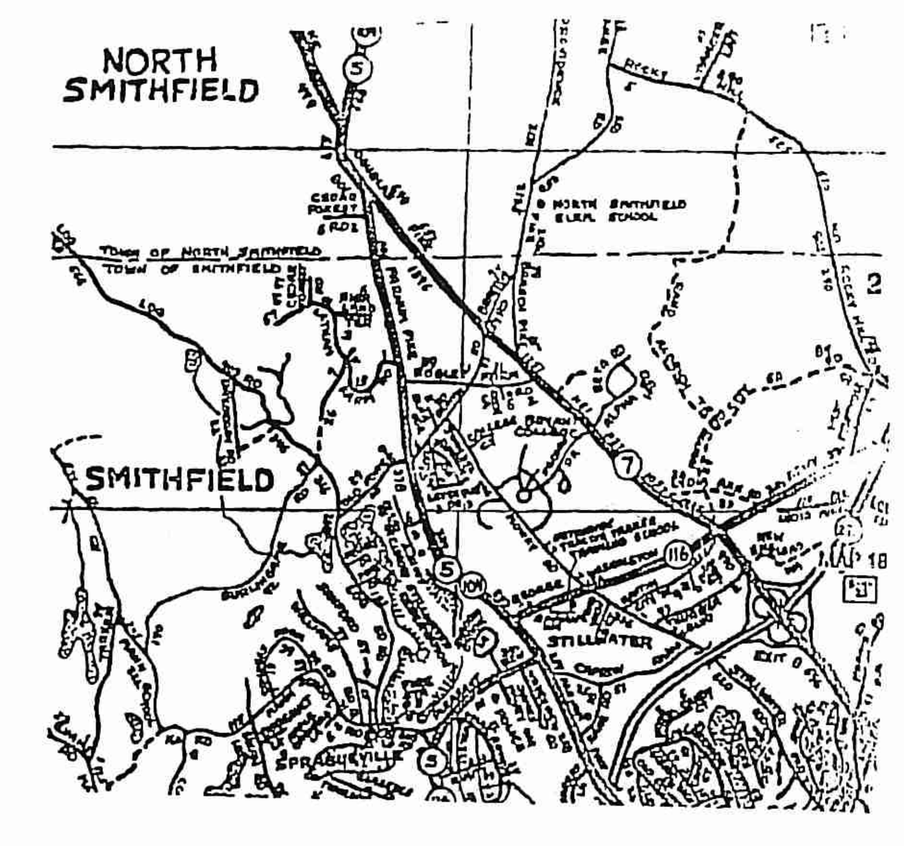
It is not intended that the manufacturer assume responsibility for contingent liabilities or consequential damages of any nature resulting from defects in design, material, workmanship, or delay in delivery, replacement, or otherwise.

Date 7-11-00	MicroFAST.0.5 Specifications
BIO-MICROBICS INCORPORATED	



NOTES
1 BLOWER MUST BE WITHIN 100 FEET (30 5M) OF FAST UNIT FOR DISTANCES GREATER THAN 100 FEET -- CONSULT FACTORY BLOWER BASE MUST BE LOCATED ABOVE NORMAL FLOOD LEVELS
2 RUN VENT TO DESIRED LOCATION AND COVER OPENING WITH INSECT SCREEN. NOTE: ODORS MAY BE PRESENT -- SEE MANUAL
OR:
CAP PIPES WITH 6" CLEANOUT DRILL 8-12 HOLES IN 6" PIPE JUST UNDER PVC PIPE CAP SEE ADDITIONAL VIEWS
3 ALL APPURTENANCES TO FAST® (e g SEPTIC TANK, PUMPOUTS, ETC) MUST CONFORM TO ALL COUNTRY, STATE, PROVINCE, AND LOCAL CODES
4 BLOWER CONTROL SYSTEM BY BIO-MICROBICS, INC
5 COPYRIGHT (C) 2000, BIO-MICROBICS, INC
6 MUST INCREASE TANK SIZE BY 20% IF MINIMUM OF 10 INCHES IS USED BETWEEN THE UNIT AND THE BASE OF TANK CONSULT FACTORY FOR APPROVAL
7 THE PRIMARY COMPARTMENT MAY BE A SEPARATE TANK.
8 FOUR LEG EXTENSIONS MAY BE USED TO STAND UNIT IN TANK ELIMINATING NEED FOR LID SEE ADDITIONAL VIEWS AND REFER TO INSTALLATION MANUAL FOR MORE DETAILS

Date 7-12-00	MicroFAST.0.5
BIO-MICROBICS INCORPORATED	



LOCUS

General Notes

1 Construction shall conform to the Rhode Island Specifications set forth in the Department of Environmental Management Rules and Regulations relating to location ,design ,construction and maintenance of individual sewage disposal systems Rev. 6/92 , in addition to the minimum standards called for in the regulations,the following standards shall also apply

A All stone shall be double washed if double washed stone is not available the contractor shall be allowed to wash the stone on site once in no case shall stone delivered to the site not be washed at least once by the processor, and in no case shall the stone installed not be double washed

B The fill around the system shall be coarse sand ,or bank run gravel it should contain no more then 5% fines and preferably no more than 2% fines Fines are any particles which pass through the # 200 sieve. Where fill is used, a perc test shall be done in the fill material after placement and compaction. if the perc rate is less than 2 min /1 inch, The material shall be removed

2 No drains or waterlines to be installed within 25 ft.of leaching field

3 No garbage grinders shall be installed

4 There are no existing or proposed wells 200' of the proposed system

5 There are no know existing or proposed drains within 200'of the proposed system than shown

6 There are no existing or proposed within 100 ft of a proposed or existing well

7 There are no existing or proposed public wells within 500ft of the proposed system

8 Installer to strip topsoil and subsoil of leaching area down to substrata ft. on all sides an additional 6 inches may need to be removed if fines are present in the substrata as determined by the designer or D E. M.

9 Installer to remove all trees and shrubs from leaching area and 10 ft on all sides

10 Building sewer pipe to be a minimum 4 inch SCH 40 PVC. all septic system piping to be minimum 1 inch SDR 35

11 Septic Tank manhole to be at finish grade as per 1992 DEM regulations

12 Limit of RIDEM Wetlands reviewed under application #

13 Installer to maintain invert Elev. for 25 ft. perimeter.

14 Property boundary line survey by David M. Garrigan P L S and to be considered approximate at this time.

15 Based upon inspection of the flood insurance rate map (firm) for the town of dated this site is/not within any flood hazard zone Panel #

16 David M Garrigan P L S certifies to the soil conditions and perc rate only in area tested Installer to notify designer if soil conditions are found different than stated on septic application

17 Contractor to ensure all sections of R I D E M. ISDS division applications are adhered to

18 Bench mark set within 150 ft. of proposed system prior to construction Bench Mark Elev

19 This plan is substantantially correct in accordance with a class IV standard as adopted by the Rhode Island Board of Registration for Professional Land Surveyors This plan is not to be construed as an accurate survey and may be subject to such changes as an accurate boundary survey may disclose

20 All stages of the I S D S installation must be supervised by a R I D E M licensed class 2 or 3 Designer

DAVID M. GARRIGAN No. 1580 PROFESSIONAL LAND SURVEYOR

Revisions
10/25/04
3/2/05
4/25/05
6/16/05
6/26/14

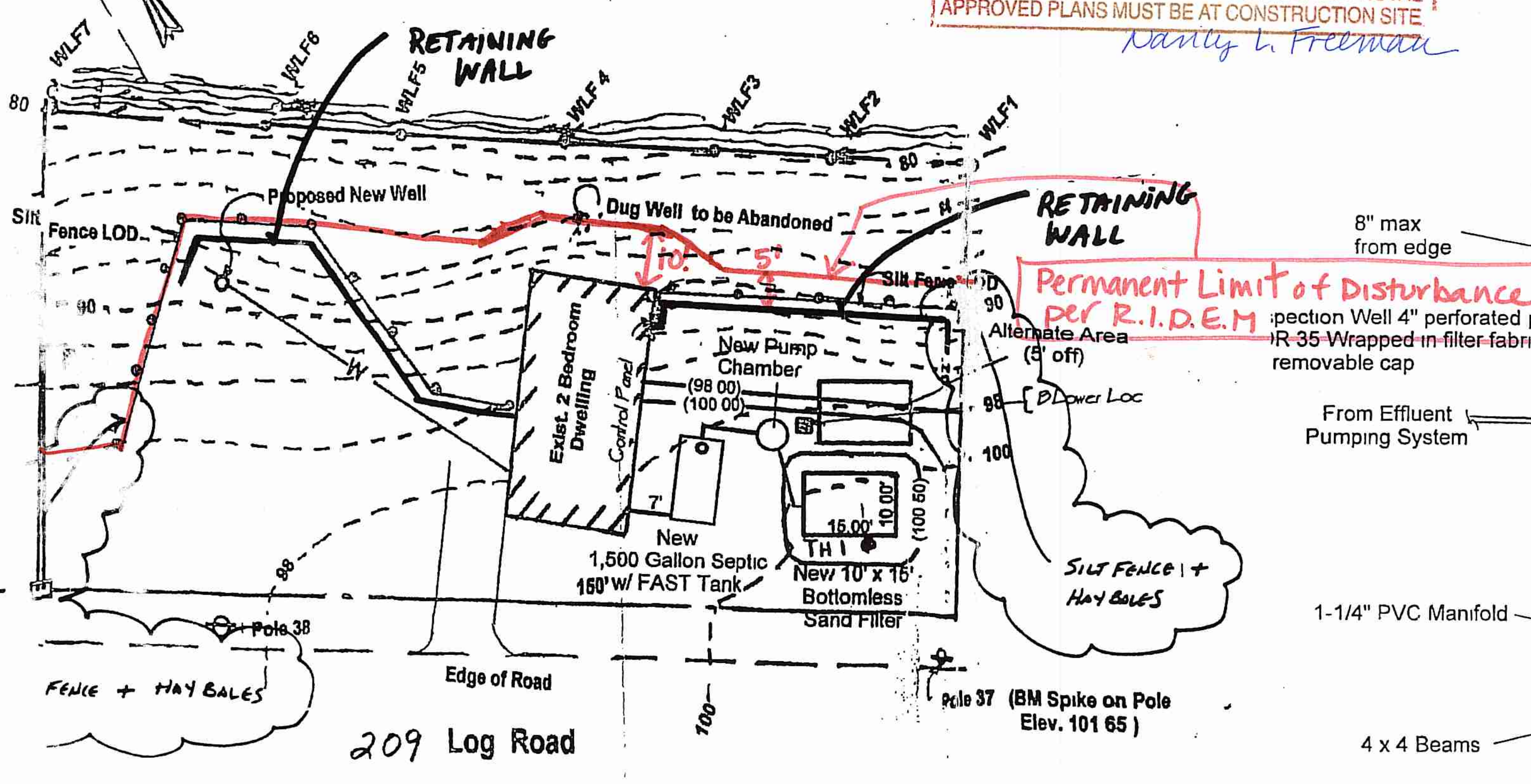
Indivisual Sewage Disposal System Design
A.P. 38 Lot 19 Smithfield, Rhode Island
For: Patrick Whipple & Katelin Parenteau
209 Log Road, Smithfield, RI
David M. Garrigan PLS 1580 Cumberland,RI

Date	8/1...
Scale	1" = 20'
Drawn	
Job	
Sheet	
Of	

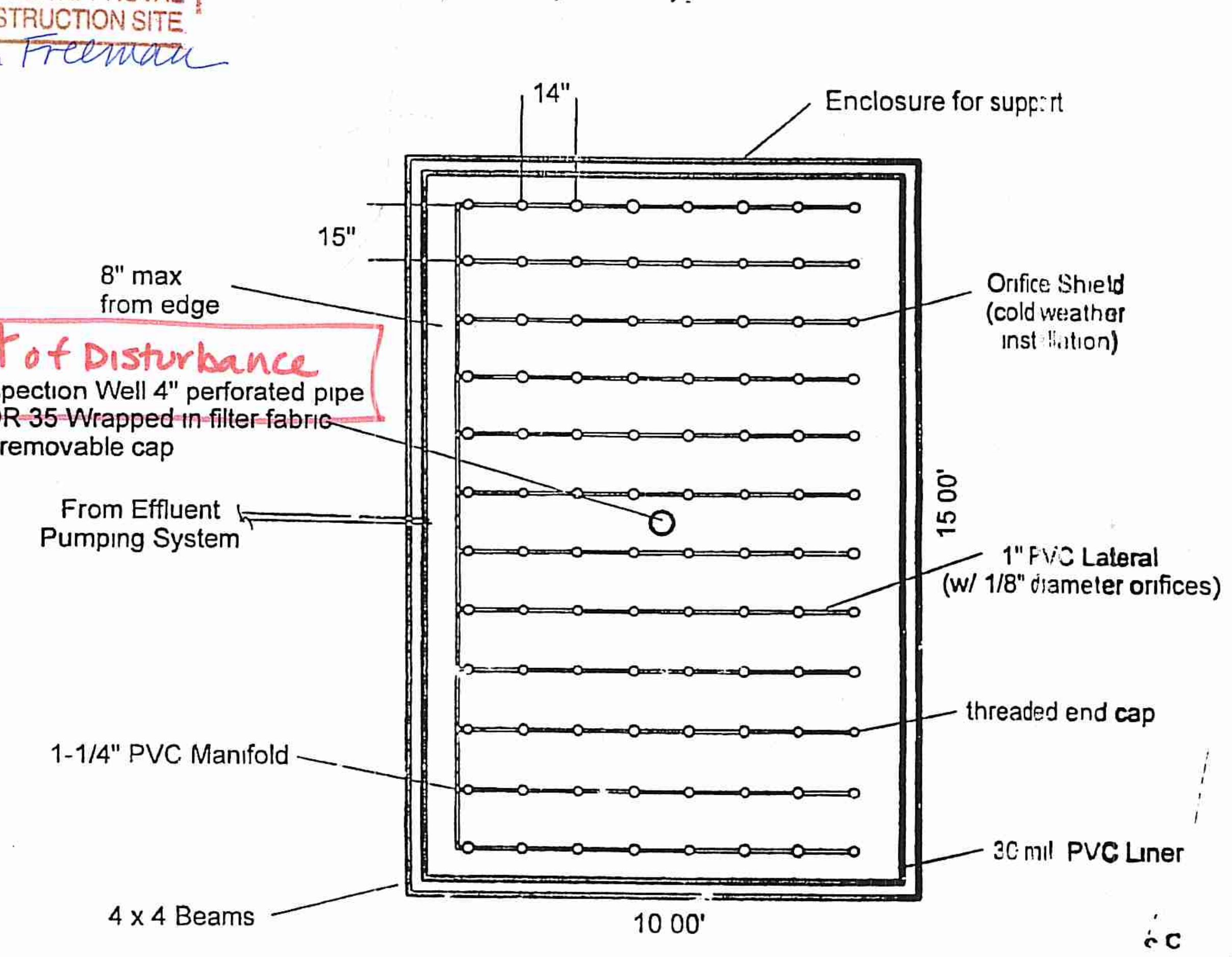
Environmental Management JUL 1 0 2014

Woonasquatuck Reservoir
A. P. 38 Lot 19

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 22 2014 FILE # 14-0119
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman



209 Log Road
1" = 20'



10' x 15' SAND FILTER