

B11000396

Building Address: 3318 Secretariat Hwy  
Glennwood MD 21738  
Suite/Apt. #: \_\_\_\_\_ SDP/WP/BA #: \_\_\_\_\_  
Census Tract: \_\_\_\_\_ Subdivision: Deshaunal Property  
Section: \_\_\_\_\_ Area: \_\_\_\_\_  
Tax Map: 21 Parcel: 138 Grid: 5  
Zoning: \_\_\_\_\_ Map Coordinates: \_\_\_\_\_ Lot Size: \_\_\_\_\_

Existing Use: SFO  
Proposed Use: SFO  
Estimated Construction Cost: \$ 8000  
Description of Work: install 1000 Gal  
in ground propane tank  
Occupant or Tenant: \_\_\_\_\_  
Was tenant space previously occupied? ☐ Yes ☐ No  
Contact Name: owner  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Property Owner's Name: NR INC  
Address: 6085 Marshall Dr  
City: Elkridge State: MD Zip Code: 21075  
Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_  
Applicant's Name & Mailing Address, (If other than stated herein):  
Jeremy Clary 701 Marshall Dr  
Elkridge MD 21075  
Phone: 410-340-1229 Fax: \_\_\_\_\_  
Email: AppliedAndApproved@yahoo.com

Contractor Company: Valley National Cranes  
Contact Person: William Criswell  
Address: 7201 Montevideo Rd  
City: Jessup State: MD Zip Code: 20794  
License No.: 67793  
Phone: 410-799-1114 Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Engineer/Architect Company: \_\_\_\_\_  
Responsible Design Prof.: \_\_\_\_\_  
Address: Contractor  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

BUILDING DESCRIPTION - COMMERCIAL

Building Characteristics	Utilities
Height:	<u>Water Supply</u>
No. of stories:	<input type="checkbox"/> Public
Gross area, sq. ft./floor:	<input type="checkbox"/> Private
	<u>Sewage Disposal</u>
Area of construction (sq. ft.):	<input type="checkbox"/> Public
	<input type="checkbox"/> Private
Use group:	Electric: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Gas: <input type="checkbox"/> Yes <input type="checkbox"/> No
<u>Construction type:</u>	<u>Heating System</u>
<input type="checkbox"/> Reinforced Concrete	<input type="checkbox"/> Electric <input type="checkbox"/> Oil
<input type="checkbox"/> Structural Steel	<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas
<input type="checkbox"/> Masonry	<u>Sprinkler System:</u>
<input type="checkbox"/> Wood Frame	<input type="checkbox"/> N/A
<input type="checkbox"/> State Certified Modular	<input type="checkbox"/> Full
<input checked="" type="checkbox"/> Roadside Tree Project Permit	<input type="checkbox"/> Partial
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Other Suppression
Roadside Tree Project Permit #	No. of Heads:

BUILDING DESCRIPTION - RESIDENTIAL

Building Characteristics	Utilities
<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	<u>Water Supply</u>
<u>Depth</u> <u>Width</u>	<input type="checkbox"/> Public
1 <sup>st</sup> floor:	<input checked="" type="checkbox"/> Private
2 <sup>nd</sup> floor:	<u>Sewage Disposal</u>
Basement:	<input type="checkbox"/> Public
<input type="checkbox"/> Finished Basement	<input checked="" type="checkbox"/> Private
<input type="checkbox"/> Unfinished Basement	Electric: <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Crawl Space	Gas: <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Slab on Grade	<u>Heating System</u>
No. of Bedrooms:	<input type="checkbox"/> Electric
<u>Multi-family Dwelling</u>	<input type="checkbox"/> Oil
No. of efficiency units:	<input type="checkbox"/> Natural Gas
No. of 1 BR units:	<input type="checkbox"/> Propane Gas
No. of 2 BR units:	
No. of 3 BR units:	
Other Structure:	
Dimensions:	
Footings:	<input checked="" type="checkbox"/> Roadside Tree Project Permit
Roof:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> State Certified Modular	Roadside Tree Project Permit #
<input type="checkbox"/> Manufactured Home	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature: [Signature]  
Print Name: Jeremy Clary  
Email Address: AppliedAndApproved@yahoo.com  
Title/Company: permits

Print Name: Jeremy Clary  
Date: 2/10/11  
FEB 10 2011

LICENSES & PERMITS  
DIVISION

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

\*\*PLEASE WRITE NEATLY & LEGIBLY\*\*  
-FOR OFFICE USE ONLY-

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA ( Zoning )		
PSZA ( Engineering )		
Health	<u>2-16-11</u>	<u>Bernard</u>
Fire Protection		

Is Sediment Control approval required for issuance? ☐ Yes ☐ No  
☐ CONTINGENCY CONSTRUCTION START  
☐ ONE STOP SHOP

DPZ SETBACK INFORMATION
Front:
Rear:
Side:
Side St.:
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:
SDP/Red-line approval date:

Filing Fee	\$
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$
Add'l per Fee	\$
Total Fees	\$
Sub- Total Paid	\$
Balance Due	\$

CK# 0288

8440 BALTIMORE NATIONAL PKWY A SUITE 418  
ELICOTT CITY, MARYLAND 21043  
phone: 410-405-8108 A fax 410-405-0844  
email: [BOB@a1-phillygroupinc.com](mailto:BOB@a1-phillygroupinc.com)

CP# G 10000191

DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS 3430 COURT HOUSE DRIVE ELLCOTT CITY, MD 21043 PERMITS (410) 313-2455 INSPECTIONS (410) 313-1810 AUTOMATED INFORMATION (410) 313-3800		<b>HOWARD COUNTY PERMIT APPLICATION</b>		PERMIT NUMBER <u>B-10003280</u>	
Building Address <u>3318 Secretariat Way</u> <u>Glenwood, MD 21723</u>			Property Owner's Name <u>Ryan Homes</u> Address <u>6031 University Blvd, Suite 250</u>		
Suite/Apt. #: _____ SDP/WP/Petition #: _____			City <u>Ellicott City</u> State <u>MD</u> Zip Code <u>21043</u>		
Census Tract <u>604002</u> Subdivision <u>Neshawat Property</u>			Phone <u>410.796.0980</u> Phone _____		
Section _____ Area _____ Lot <u>2003</u>			Applicant's Name & Mailing Address, (if other than stated heron):		
Tax Map <u>21</u> Parcel <u>138</u> Grid <u>21-5</u>			Phone _____ Fax _____		
Zoning RR-DEO Map Coordinates _____ Lot size _____			Contractor Company <u>Ryan Homes</u>		
Existing Use <u>Vacant Lot</u>			Contact Person <u>Kevin Bowser</u>		
Proposed Use <u>New - Single Family Home</u>			Address <u>6031 University Blvd, Suite 250</u>		
Estimated Construction Cost <u>\$250,000</u>			City <u>Ellicott City</u> State <u>MD</u> Zip Code <u>21043</u>		
Description of Work <u>Model Victoria Falls w/4 Ft Ext &amp; MornRm</u>			License No. <u>56</u>		
<u>2 Story, Full Bsmt, 10R, 2FB, 1HB</u>			Phone <u>410.796.0980</u> Fax <u>410.796.7094</u>		
<u>&amp; Garage (4-BR) w/opt FP</u>			Engineer or Architect Company <u>Benchmark Engineering</u>		
Occupant or Tenant <u>Ryan Homes</u>			Contact Person <u>John Carney</u>		
Contact Name <u>Kevin Bowser</u>			Address <u>8480 Baltimore National Pike, Suite 418</u>		
Address <u>6031 University Blvd, Suite 250</u>			City <u>Ellicott City</u> State <u>MD</u> Zip Code <u>21043</u>		
City <u>Ellicott City</u> State <u>MD</u> Zip Code <u>21043</u>			Phone <u>410.465.6105</u> Fax <u>410.465.6644</u>		
Phone <u>410.796.0980</u> Fax <u>410.796.7094</u>					
<b>BUILDING DESCRIPTION - <u>COMMERICAL</u></b>			<b>BUILDING DESCRIPTION - <u>RESIDENTIAL</u></b>		
<u>Building Characteristics</u>		<u>Utilities</u>		<u>Building Characteristics</u>	
Height: _____		Water Supply: _____		SF Dwelling <input checked="" type="checkbox"/> SF Townhouse <input type="checkbox"/>	
No. of stories: _____		<input type="checkbox"/> Public		Depth _____ Width _____	
Gross area, sq. ft. per floor: _____		<input type="checkbox"/> Private		1 <sup>st</sup> Floor: 52 50	
Use Group: _____		Sewer Disposal: _____		2 <sup>nd</sup> Floor: 29 50	
Construction Type: _____		<input type="checkbox"/> Public		Basement: 52 50	
<input type="checkbox"/> Reinforced Concrete		<input type="checkbox"/> Private		Finished Basement <input checked="" type="checkbox"/>	
<input type="checkbox"/> Structural Steel		Electric Yes <input type="checkbox"/> No <input type="checkbox"/>		Unfinished Basement <input type="checkbox"/>	
<input type="checkbox"/> Masonry		Gas Yes <input type="checkbox"/> No <input type="checkbox"/>		Crawl space <input type="checkbox"/> Slab on Grade <input type="checkbox"/>	
<input type="checkbox"/> Wood Frame		Heating System: _____		No. of Bedrooms: <u>4</u>	
<input type="checkbox"/> State Certified Modular		Electric <input type="checkbox"/> Oil <input type="checkbox"/>		Height: <u>30</u>	
		Natural Gas <input type="checkbox"/>		Multi-family dwellings:	
		Propane Gas <input type="checkbox"/>		No. of efficiency units: _____	
		Sprinkler System: N/A <input type="checkbox"/>		No. of 1 BR units: _____	
		<input type="checkbox"/> Full		No. of 2 BR units: _____	
		<input type="checkbox"/> Partial		No. of 3 BR units: _____	
		<input type="checkbox"/> Other Suppression		Other Structure: _____	
		# of Heads _____		Dimensions: _____	
				Footings: _____	
				Roof Height: _____	
				<input type="checkbox"/> State Certified Modular	
				<input type="checkbox"/> Manufactured Home	

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Applicant's Signature

Ben Mucci

Print Name

OCT 14 2010

Costing Manager

10/12/2010

Date

Title/Company

Checks payable: **DIRECTOR OF FINANCE OF HOWARD COUNTY**

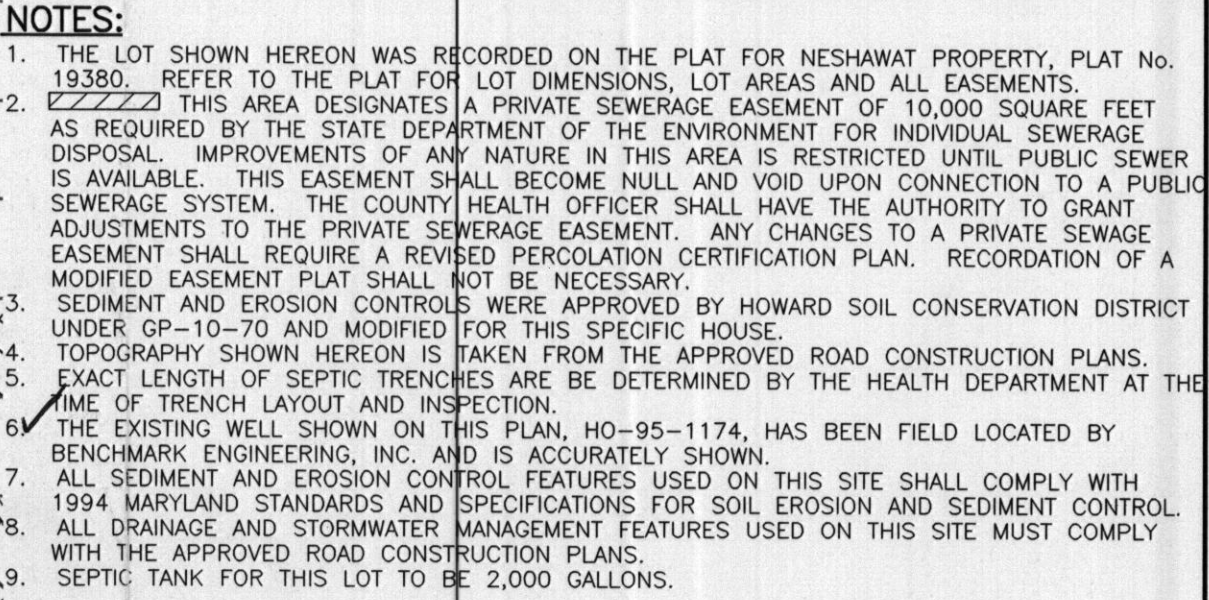
\*\* PLEASE WRITE NEATLY AND LEGIBLY. \*\*

FOR OFFICE USE ONLY

AGENCY	DATE	SIGNATURE	DPZ SETBACK INFORMATION	PROPERTY ID#
APPROVAL			Front: _____	Filing Fee \$ _____
Land Development DPZ			Rear: _____	Permit Fee \$ _____
State Highways			Side: _____	Excise tax \$ _____
Building Official			Side St: _____	Add'l per fee \$ _____
Dev Engineering DPZ			All minimum setbacks met?	TOTAL FEES \$ _____
Health			YES <input type="checkbox"/> NO <input type="checkbox"/>	Sub-total paid \$ _____
Fire Protection			Is Entrance Permit required?	Balance due \$ _____
Is Sediment Control Approval required prior to issuance?			YES <input type="checkbox"/> NO <input type="checkbox"/>	Check # _____
YES <input type="checkbox"/> NO <input type="checkbox"/>			Historic District? YES <input type="checkbox"/> NO <input type="checkbox"/>	Validation # _____
CONTINGENCY CONSTRUCTION START <input type="checkbox"/>			Lot coverage for New Town Zone	Accepted by _____
ONE STOP SHOP: <input type="checkbox"/>			SDP/Red-line approval date _____	
Distribution of Copies - White: Building Official Green: LDD DPZ Yellow: DED DPZ Pink: Health Gold: SHA				
Forms PERMIT.FRM				

Rev 11/04/04





PROPOSED FOREST  
CONSERVATION EASEMENT

EX. SEPTIC AREA

LIMIT OF DISTURBANCE

STABILIZED CONSTRUCTION  
ENTRANCE

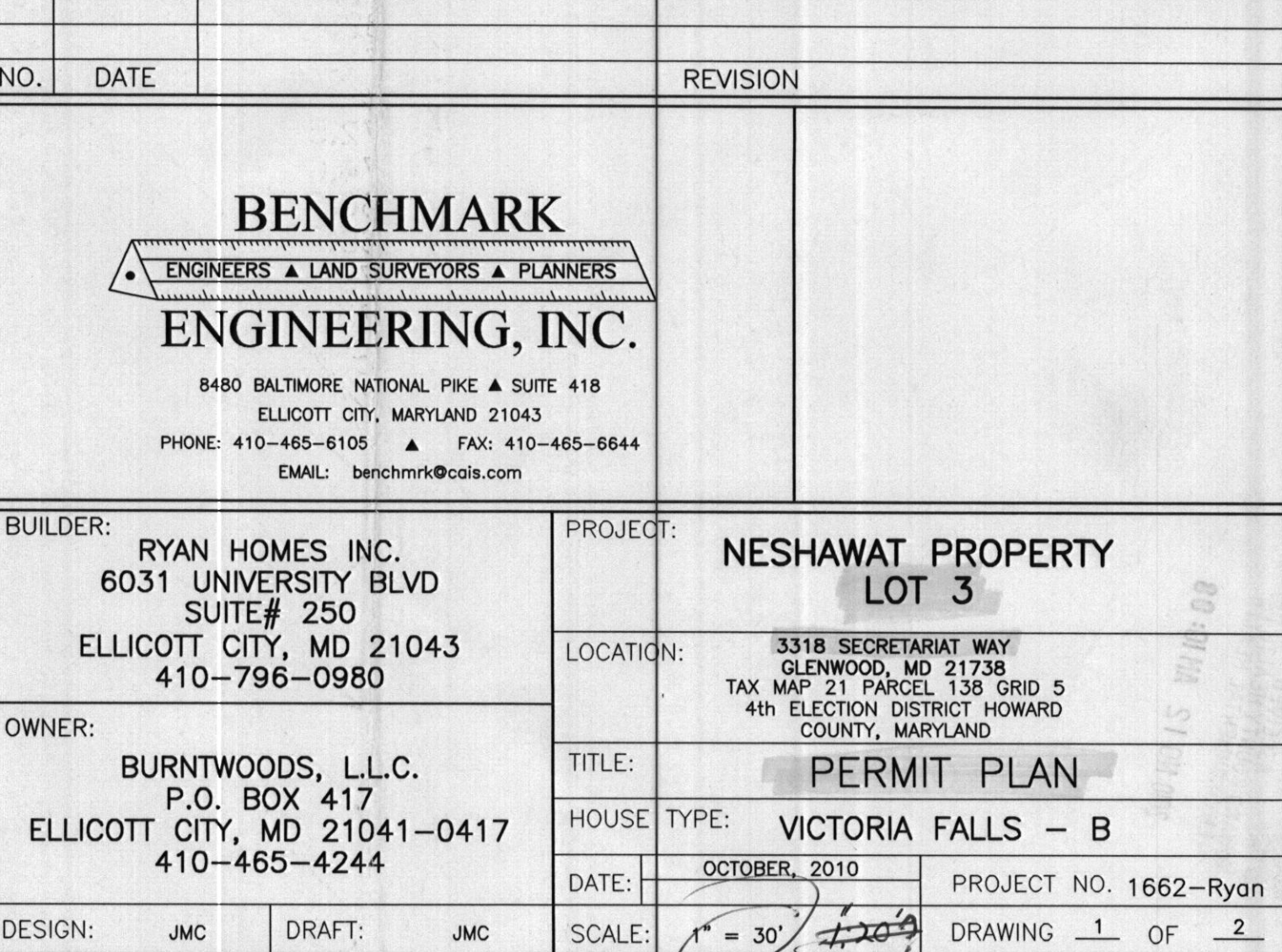
SUPER SILT FENCE

SUPER SILT FENCE

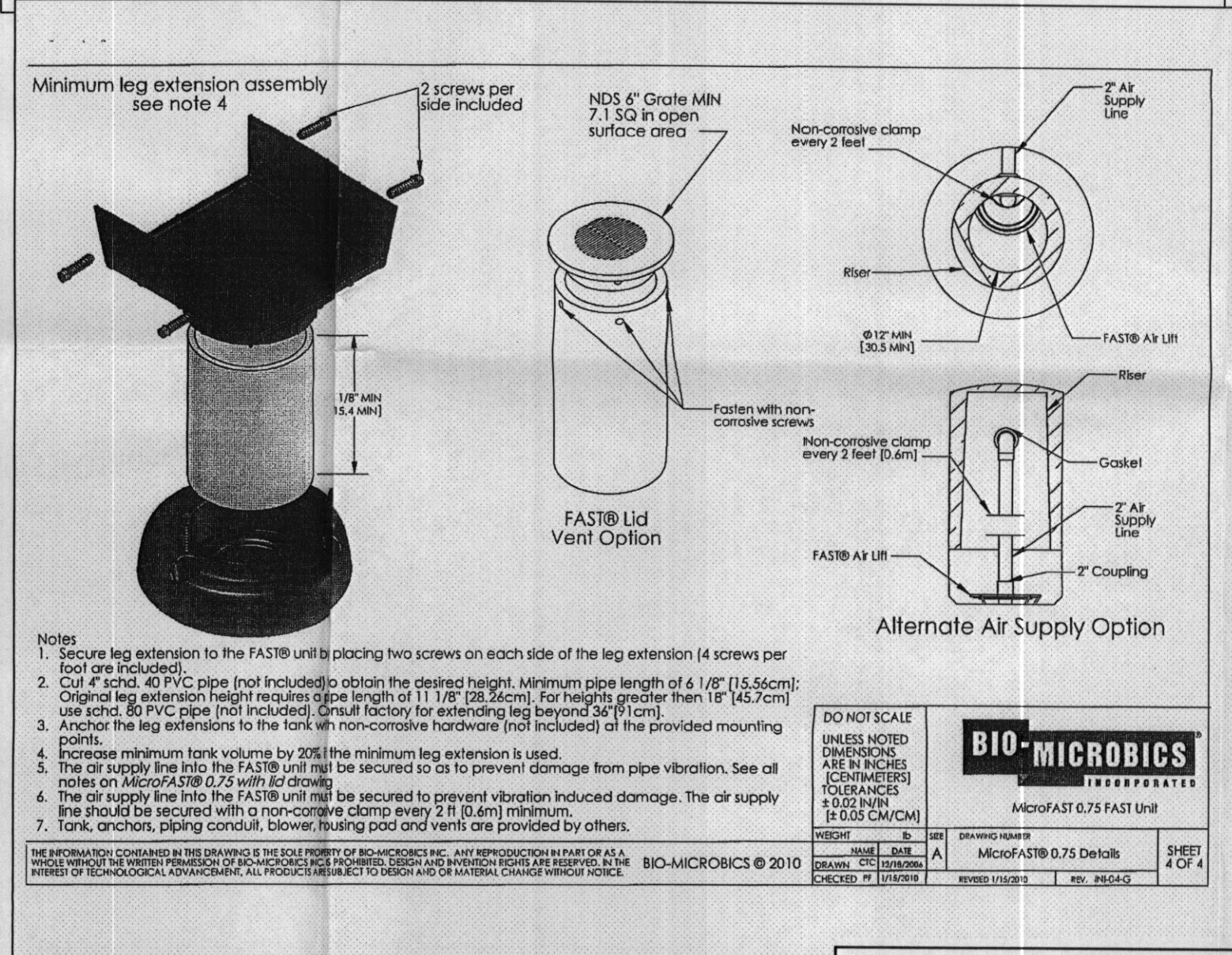
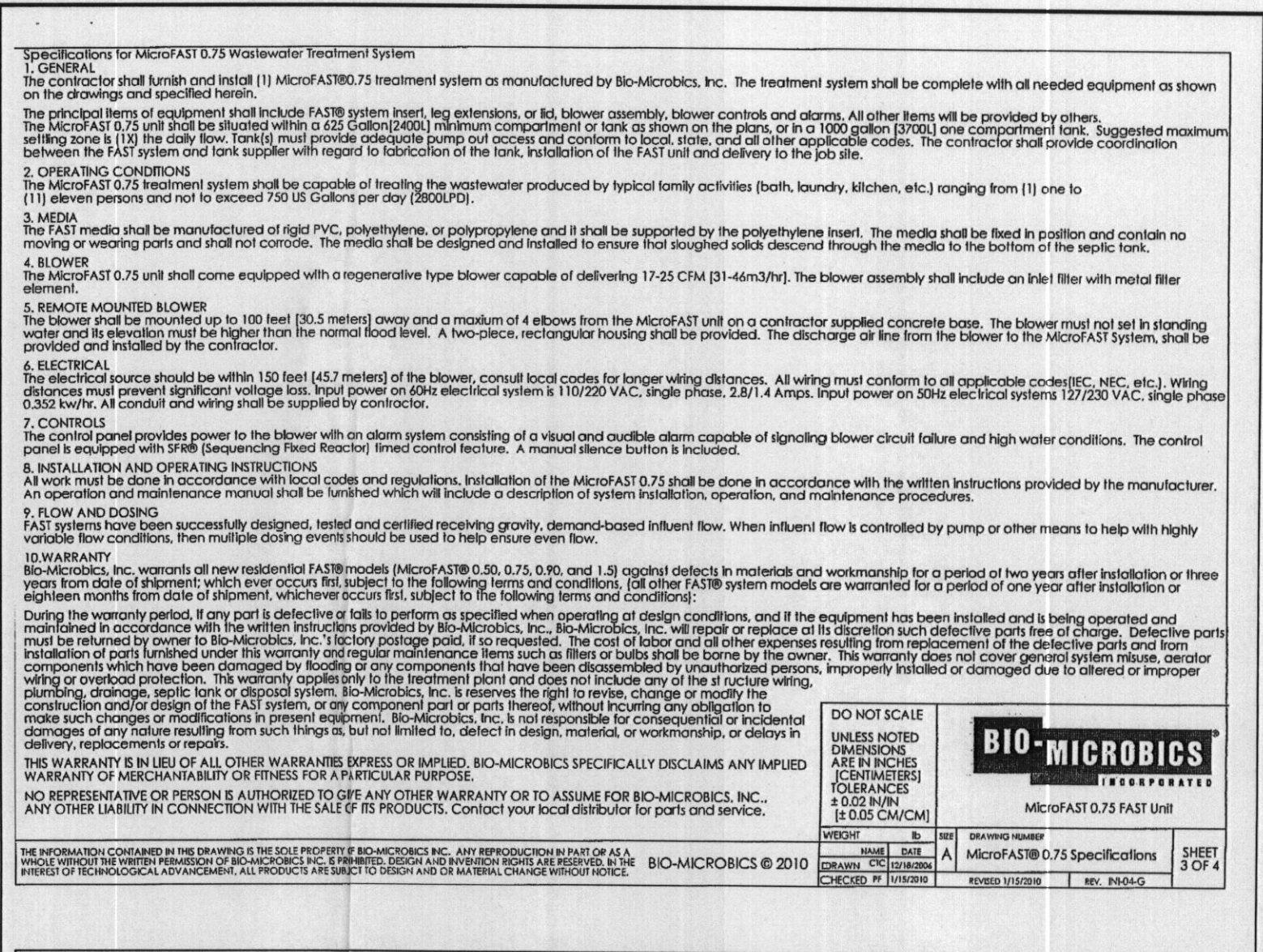
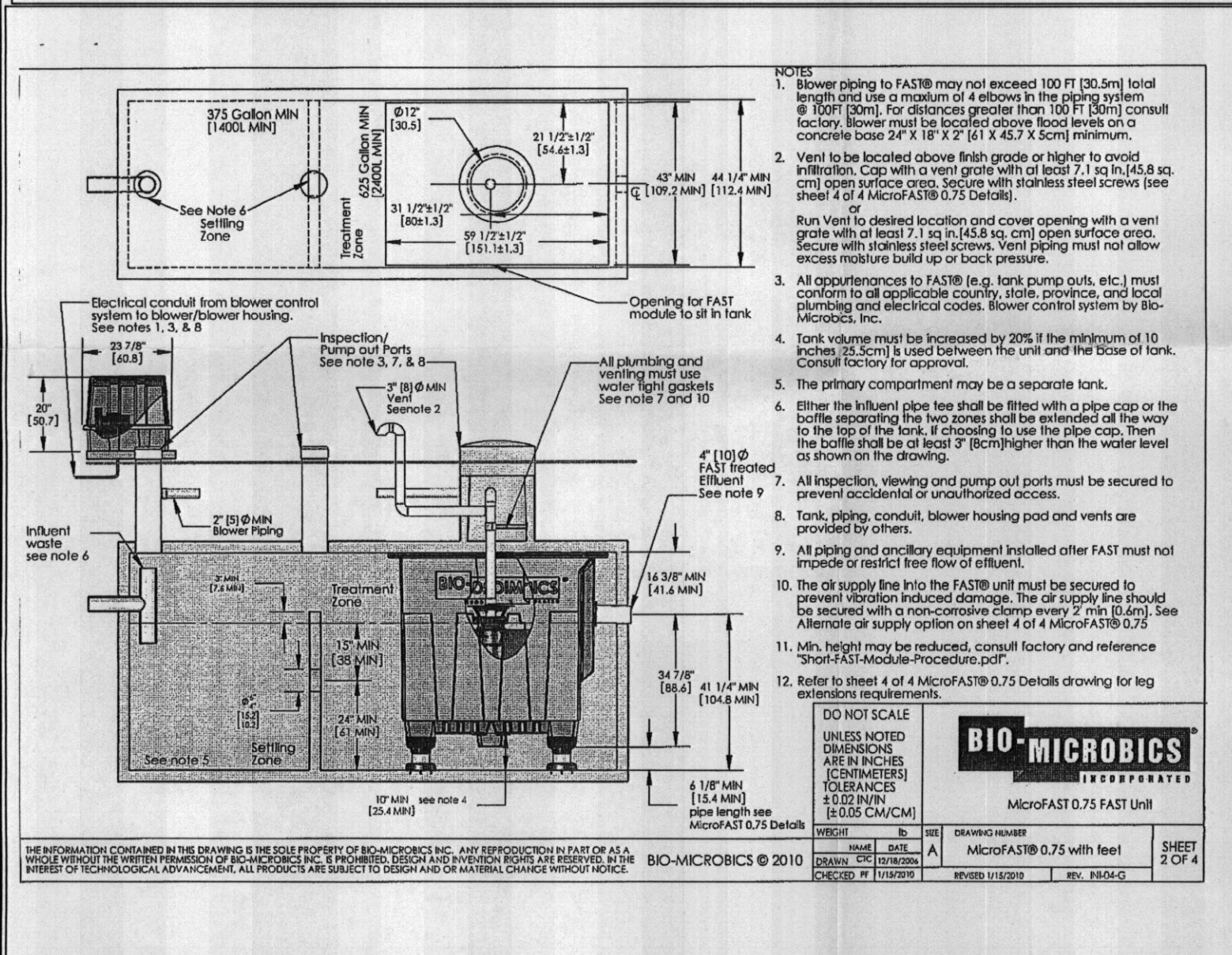
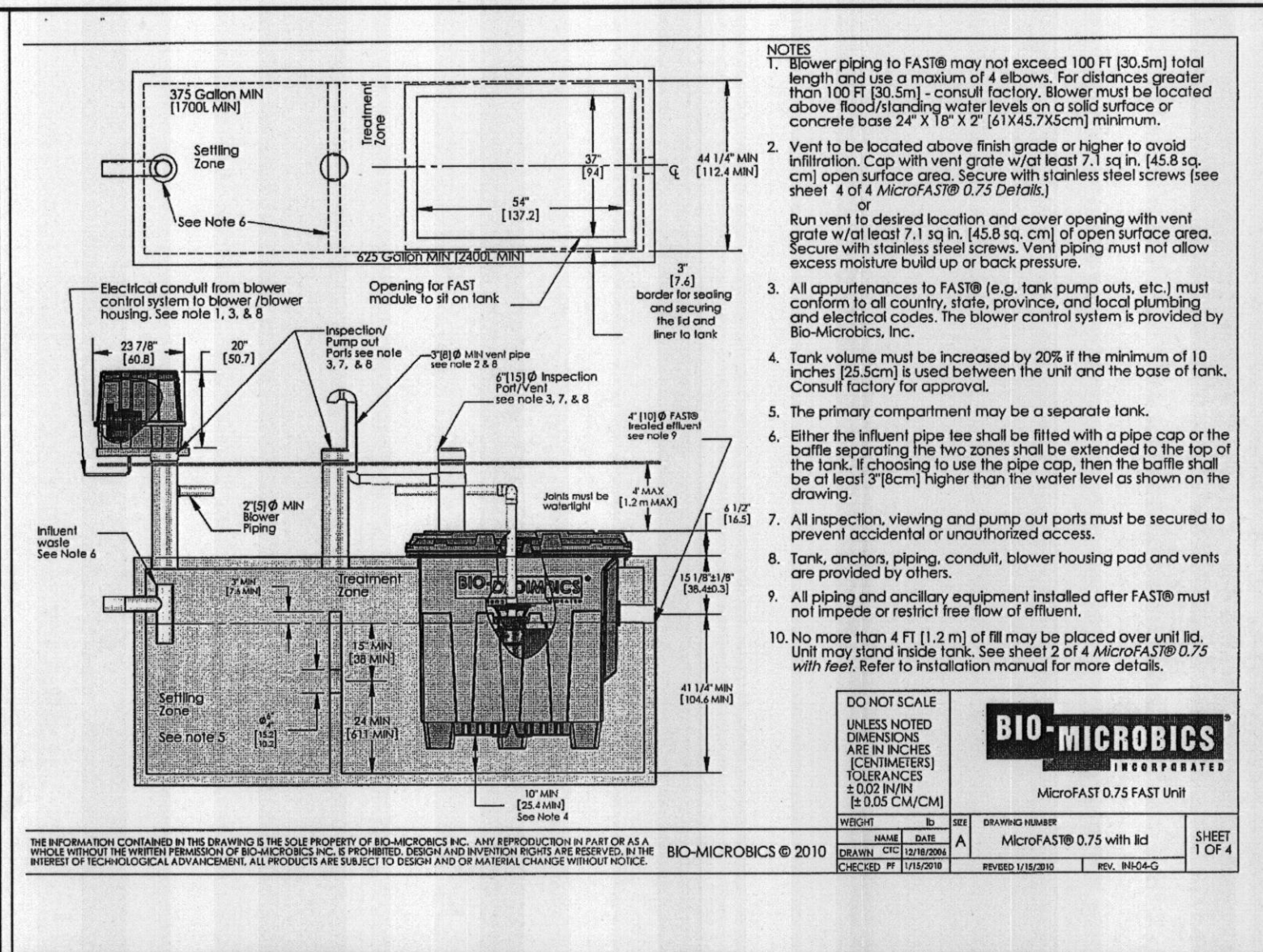
SILT FENCE DIVERSION

The diagram illustrates a construction site layout with the following features and their locations:

- PROPOSED FOREST CONSERVATION EASEMENT:** A large area at the top of the site, bounded by a dashed line.
- EX. SEPTIC AREA:** A rectangular area located below the forest conservation easement.
- LIMIT OF DISTURBANCE:** A horizontal line with a series of black squares below it, indicating the boundary of the construction area.
- STABILIZED CONSTRUCTION ENTRANCE:** A rectangular area with a hatched pattern, labeled "SCE", located below the limit of disturbance.
- SUPER SILT FENCE:** Two horizontal lines, each labeled "SSF", located below the stabilized construction entrance.
- SILT FENCE DIVERSION:** A horizontal line labeled "SFD", located below the super silt fences.
- ROAD:** A horizontal line at the bottom of the site, labeled "ROAD" on the right side.
- CREEK:** A wavy line on the right side of the site, labeled "CREEK" on the right side.







**BENCHMARK**  
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS  
**ENGINEERING, INC.**

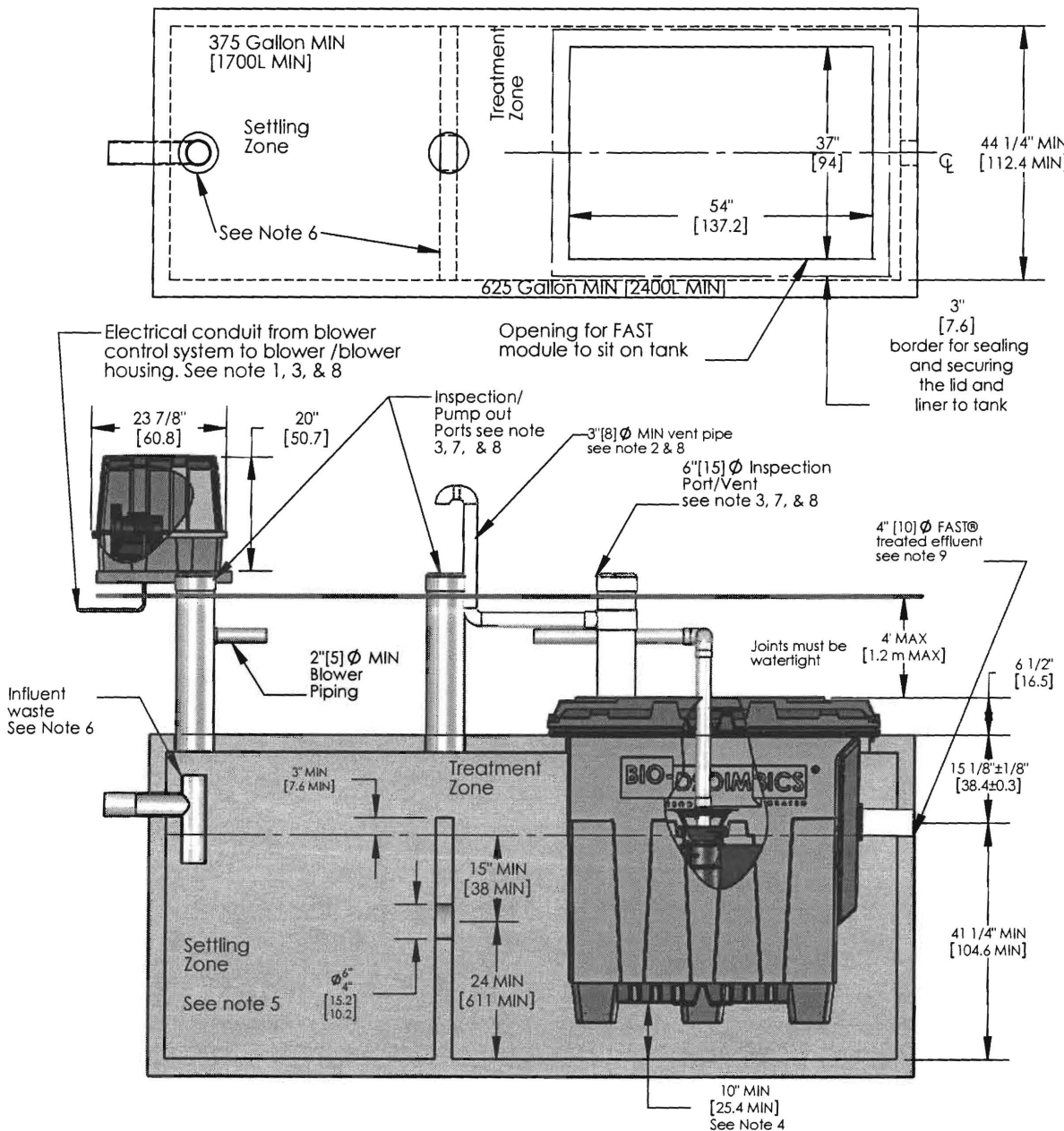
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418  
ELLICOTT CITY, MARYLAND 21043  
PHONE: 410-465-6105 ▲ FAX: 410-465-6644  
EMAIL: bei@bei-civilengineering.com

BUILDER:	RYAN HOMES INC. 6031 UNIVERSITY BLVD SUITE# 250 ELLICOTT CITY, MD 21043 410-796-0980	PROJECT:	NESHAWAT PROPERTY LOT 3
OWNER:	BURNTWOODS, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041-0417 410-465-4244	LOCATION:	3318 SECRETARIAT WAY GLENWOOD, MD 21738 TAX MAP 21 PARCEL 138 GRID 5 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DESIGN:	JMC	DRAFT:	JMC
TITLE:	PERMIT PLAN	HOUSE TYPE:	VICTORIA FALLS - B
DATE:	NOVEMBER, 2010	PROJECT NO.	1662-Ryan
SCALE:	1" = 30'	DRAWING	2 OF 2



**\* KEEP WITH FILE HD COPY \***

*Neshanat Lot 3*



# NOTES

- Blower piping to FAST® may not exceed 100 FT [30.5m] total length and use a maximum of 4 elbows. For distances greater than 100 FT [30.5m] - consult factory. Blower must be located above flood/standing water levels on a solid surface or concrete base 24" X 18" X 2" [61X45.7X5cm] minimum.
- Vent to be located above finish grade or higher to avoid infiltration. Cap with vent grate w/at least 7.1 sq in. [45.8 sq. cm] open surface area. Secure with stainless steel screws (see sheet 4 of 4 *MicroFAST® 0.75 Details*.)  
or  
Run vent to desired location and cover opening with vent grate w/at least 7.1 sq in. [45.8 sq. cm] of open surface area. Secure with stainless steel screws. Vent piping must not allow excess moisture build up or back pressure.
- All appurtenances to FAST® (e.g. tank pump outs, etc.) must conform to all country, state, province, and local plumbing and electrical codes. The blower control system is provided by Bio-Microbics, Inc.
- Tank volume must be increased by 20% if the minimum of 10 inches [25.5cm] is used between the unit and the base of tank. Consult factory for approval.
- The primary compartment may be a separate tank.
- Either the influent pipe tee shall be fitted with a pipe cap or the baffle separating the two zones shall be extended to the top of the tank. If choosing to use the pipe cap, then the baffle shall be at least 3" [8cm] higher than the water level as shown on the drawing.
- All inspection, viewing and pump out ports must be secured to prevent accidental or unauthorized access.
- Tank, anchors, piping, conduit, blower housing pad and vents are provided by others.
- All piping and ancillary equipment installed after FAST® must not impede or restrict free flow of effluent.
- No more than 4 FT [1.2 m] of fill may be placed over unit lid. Unit may stand inside tank. See sheet 2 of 4 *MicroFAST® 0.75 with feet*. Refer to installation manual for more details.

DO NOT SCALE

UNLESS NOTED  
DIMENSIONS  
ARE IN INCHES  
[CENTIMETERS]  
TOLERANCES  
± 0.02 IN/IN  
[± 0.05 CM/CM]

**BIO-MICROBICS**  
INCORPORATED

MicroFAST 0.75 FAST Unit

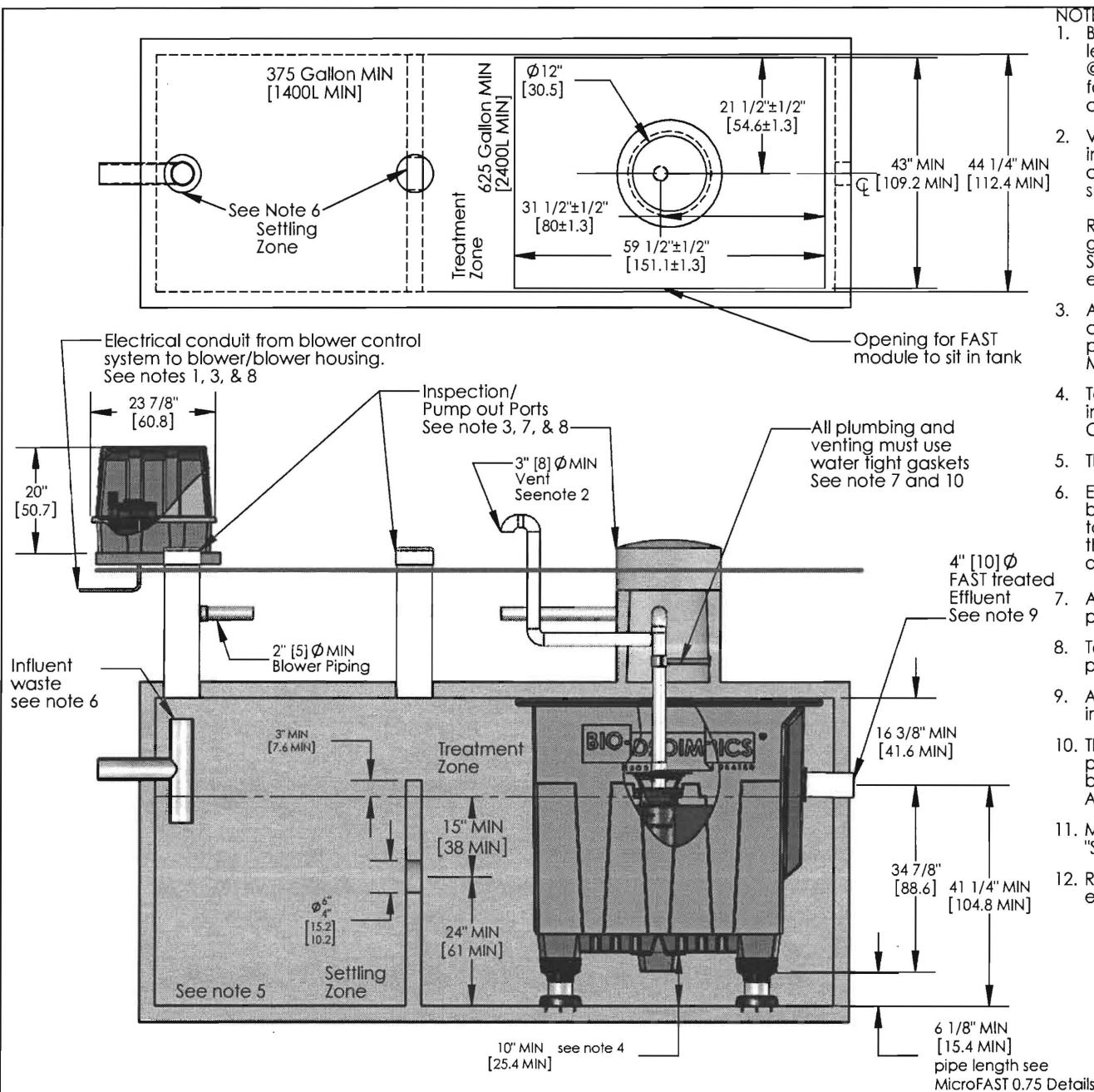
WEIGHT	lb	SIZE	DRAWING NUMBER	SHEET
NAME	DATE	A	MicroFAST® 0.75 with lid	1 OF 4
DRAWN CTC	12/18/2006			
CHECKED PF	1/15/2010		REVISED 1/15/2010	REV. INF-04-G

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 © 2010

*OK for up to 5BR (750 gal)*





# NOTES

- Blower piping to FAST® may not exceed 100 FT [30.5m] total length and use a maximum of 4 elbows in the piping system @ 100FT [30m]. For distances greater than 100 FT [30m] consult factory. Blower must be located above flood levels on a concrete base 24" X 18" X 2" [61 X 45.7 X 5cm] minimum.
- Vent to be located above finish grade or higher to avoid infiltration. Cap with a vent grate with at least 7.1 sq in. [45.8 sq. cm] open surface area. Secure with stainless steel screws (see sheet 4 of 4 MicroFAST® 0.75 Details).  
or  
Run Vent to desired location and cover opening with a vent grate with at least 7.1 sq in. [45.8 sq. cm] open surface area. Secure with stainless steel screws. Vent piping must not allow excess moisture build up or back pressure.
- All appurtenances to FAST® (e.g. tank pump outs, etc.) must conform to all applicable country, state, province, and local plumbing and electrical codes. Blower control system by Bio-Microbics, Inc.
- Tank volume must be increased by 20% if the minimum of 10 inches [25.5cm] is used between the unit and the base of tank. Consult factory for approval.
- The primary compartment may be a separate tank.
- Either the influent pipe tee shall be fitted with a pipe cap or the baffle separating the two zones shall be extended all the way to the top of the tank. If choosing to use the pipe cap, then the baffle shall be at least 3" [8cm] higher than the water level as shown on the drawing.
- All inspection, viewing and pump out ports must be secured to prevent accidental or unauthorized access.
- Tank, piping, conduit, blower housing pad and vents are provided by others.
- All piping and ancillary equipment installed after FAST must not impede or restrict free flow of effluent.
- 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 [0.6m]. See Alternate air supply option on sheet 4 of 4 MicroFAST® 0.75
- Min. height may be reduced, consult factory and reference "Short-FAST-Module-Procedure.pdf".
- Refer to sheet 4 of 4 MicroFAST® 0.75 Details drawing for leg extensions requirements.

DO NOT SCALE

UNLESS NOTED  
DIMENSIONS  
ARE IN INCHES  
[CENTIMETERS]  
TOLERANCES  
± 0.02 IN/IN  
[± 0.05 CM/CM]

**BIO-MICROBICS**  
INCORPORATED

MicroFAST 0.75 FAST Unit

WEIGHT	lb	SIZE	DRAWING NUMBER	SHEET 2 OF 4
NAME	DATE	A	MicroFAST® 0.75 with feet	
DRAWN CTC	12/18/2006			
CHECKED PF	1/15/2010			
		REVISED 1/15/2010	REV. INF-04-G	

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BIO-MICROBICS © 2010



## Specifications for MicroFAST 0.75 Wastewater Treatment System

### 1. GENERAL

The contractor shall furnish and install (1) MicroFAST® 0.75 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 FAST® system insert, leg extensions, or lid, blower assembly, blower controls and alarms. All other items will be provided by others.

The MicroFAST 0.75 unit shall be situated within a 625 Gallon [2400L] minimum compartment or tank as shown on the plans, or in a 1000 gallon [3700L] one compartment tank. Suggested maximum settling zone is (1X) the daily flow. Tank(s) must provide adequate pump out access and 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 0.75 treatment system shall be capable of treating the wastewater produced by typical family activities (bath, laundry, kitchen, etc.) ranging from (1) one to (11) eleven persons and not to exceed 750 US Gallons per day (2800LPD).

### 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 0.75 unit shall come equipped with a regenerative type blower capable of delivering 17-25 CFM [31-46m<sup>3</sup>/hr]. The blower assembly shall include an inlet filter with metal filter element.

### 5. REMOTE MOUNTED BLOWER

The blower shall be mounted up to 100 feet [30.5 meters] away and a maximum of 4 elbows from the MicroFAST unit on a contractor supplied concrete base. The blower must not set in standing water and its elevation must be higher than the 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 [45.7 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 system is 110/220 VAC, single phase, 2.8/1.4 Amps. Input power on 50Hz electrical systems 127/230 VAC, single phase 0.352 kw/hr. All conduit and wiring shall be supplied by contractor.

### 7. CONTROLS

The control panel provides power to the blower with 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 silence button is included.

### 8. INSTALLATION AND OPERATING INSTRUCTIONS

All work must be done in accordance with local codes and regulations. Installation of the MicroFAST 0.75 shall be done in accordance with the written instructions provided by the manufacturer. An operation and maintenance manual 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 help ensure even flow.

### 10. WARRANTY

Bio-Microbics, Inc. warrants all new residential FAST® models (MicroFAST® 0.50, 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; whichever ever occurs first, subject to the following terms and conditions, (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, subject to the following terms and conditions):

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 overload 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.

DO NOT SCALE

UNLESS NOTED  
DIMENSIONS  
ARE IN INCHES  
[CENTIMETERS]  
TOLERANCES  
± 0.02 IN/IN  
[± 0.05 CM/CM]



MicroFAST 0.75 FAST Unit

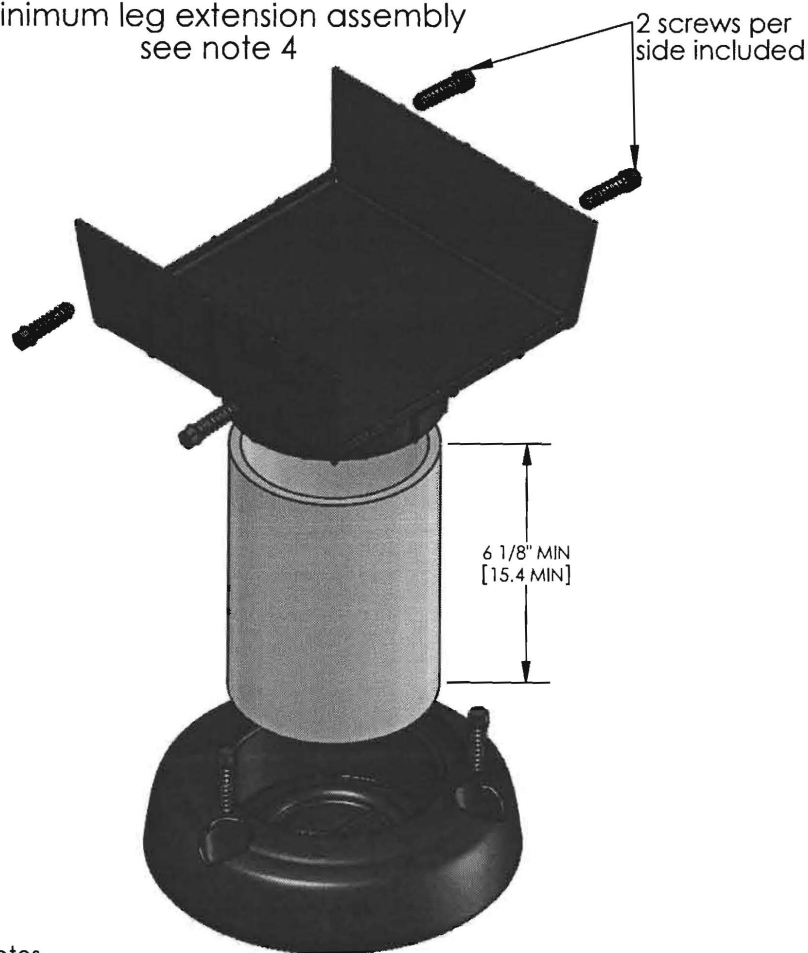
WEIGHT	lb	SIZE	DRAWING NUMBER	SHEET 3 OF 4
NAME	DATE	A	MicroFAST® 0.75 Specifications	
DRAWN CTC	12/18/2006			
CHECKED PF	1/15/2010		REVISED 1/15/2010 REV. INF-04-G	

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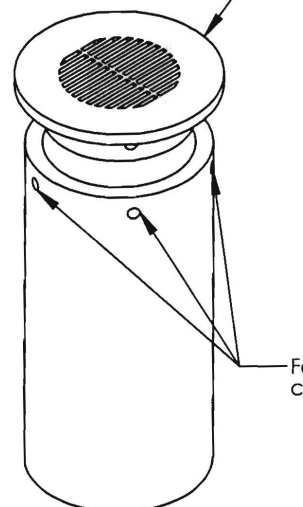
BIO-MICROBICS © 2010



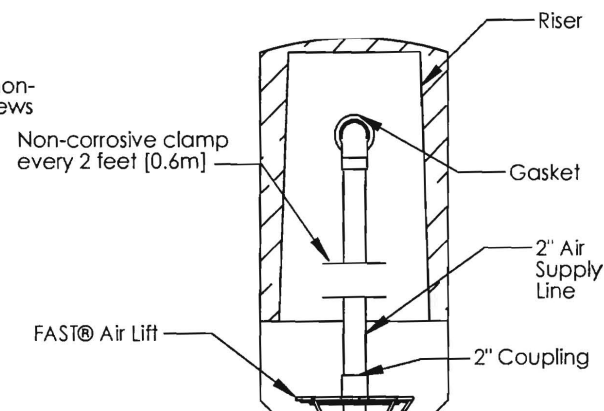
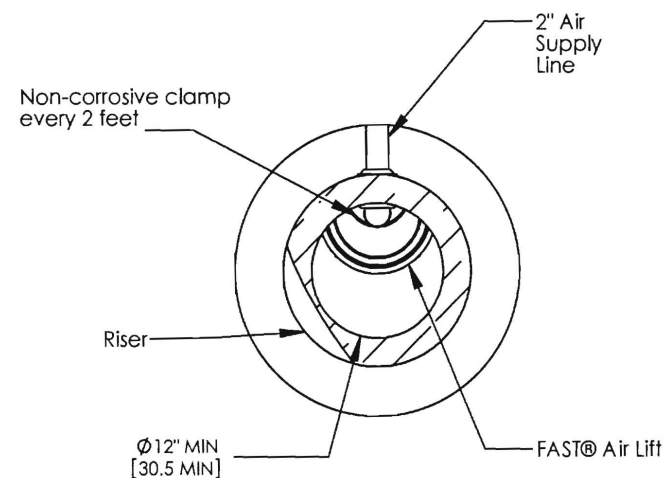
Minimum leg extension assembly  
see note 4



NDS 6" Grate MIN  
7.1 SQ in open  
surface area



FAST@ Lid  
Vent Option



Alternate Air Supply Option

#### Notes

1. Secure leg extension to the FAST@ unit by placing two screws on each side of the leg extension (4 screws per foot are included).
2. Cut 4" schd. 40 PVC pipe (not included) to obtain the desired height. Minimum pipe length of 6 1/8" [15.56cm]; Original leg extension height requires a pipe length of 11 1/8" [28.26cm]. For heights greater than 18" [45.7cm] use schd. 80 PVC pipe (not included). Consult factory for extending leg beyond 36" [91cm].
3. Anchor the leg extensions to the tank with non-corrosive hardware (not included) at the provided mounting points.
4. Increase minimum tank volume by 20% if the minimum leg extension is used.
5. The air supply line into the FAST@ unit must be secured so as to prevent damage from pipe vibration. See all notes on *MicroFAST@ 0.75 with lid* drawing.
6. 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 ft [0.6m] minimum.
7. Tank, anchors, piping conduit, blower, housing pad and vents are provided by others.

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UNLESS NOTED  
DIMENSIONS  
ARE IN INCHES  
[CENTIMETERS]  
TOLERANCES  
± 0.02 IN/IN  
[± 0.05 CM/CM]

**BIO-MICROBICS**  
INCORPORATED

MicroFAST 0.75 FAST Unit

WEIGHT	lb	SIZE	DRAWING NUMBER	SHEET
NAME	DATE	A	MicroFAST@ 0.75 Details	4 OF 4
DRAWN CTC	12/18/2006			
CHECKED PF	1/15/2010		REVISED 1/15/2010	REV. INF-04-G

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