



Bureau of Environmental Health
 8930 Stanford Boulevard, Columbia, MD 21045
 Main: 410-313-2640 | Fax: 410-313-2648
 TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
 Facebook: www.facebook.com/hocohealth

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 11/13/14

ONSITE SEWAGE DISPOSAL SYSTEM

P 55515

INSTALLATION APPROVAL DATE: 3-19-15

**PERMIT
CONSTRUCTION**

A _____

PROPERTY ADDRESS: 1615 Route 32

SUBDIVISION: Shipleys Lodge

LOT: 1

TAX ID: _____

CONTRACTOR: Fogle's Septic Clean Inc

EMAIL: _____

CONTRACTOR ADDRESS: 580 Obrecht Road, Sykesville, MD 21784

PHONE: 410-795-5670

PROPERTY OWNER: Steve and Janet Boyce

EMAIL: _____

OWNER ADDRESS: 1615 Route 32, Sykesville, MD 21784

PHONE: _____

BAT UNIT MODEL: Ecopod E-75-N

PUMP SIZE: _____

PUMP TANK CAPACITY: _____

DISTRIBUTION SYSTEM: GRAVITY LOW PRESSURE DOSED

NUMBER OF BEDROOMS: 5

TRENCHES:	LINEAR FEET REQUIRED: <u>292</u> <u>156'</u>	INLET DEPTH: <u>SEE BAT PLAN</u> <u>3.5'</u>
	TRENCH WIDTH: <u>SEE BAT PLAN</u> <u>2'</u>	MAXIMUM BOTTOM DEPTH: <u>SEE BAT PLAN</u> <u>6.5'</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>SEE BAT PLAN</u> <u>10'</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>SEE BAT PLAN</u>
	LOCATION: PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	<u>2x78'</u>	

ISSUED BY: Robert Bricker

ISSUE DATE: 12/2/14

EXPIRATION DATE: 12/2/15

- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS
- NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM
- NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.
- NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.

PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.

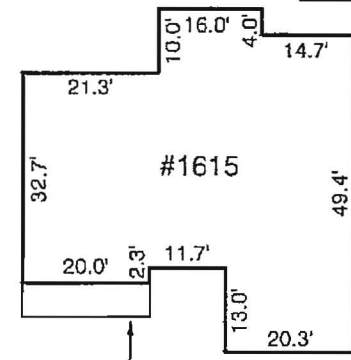
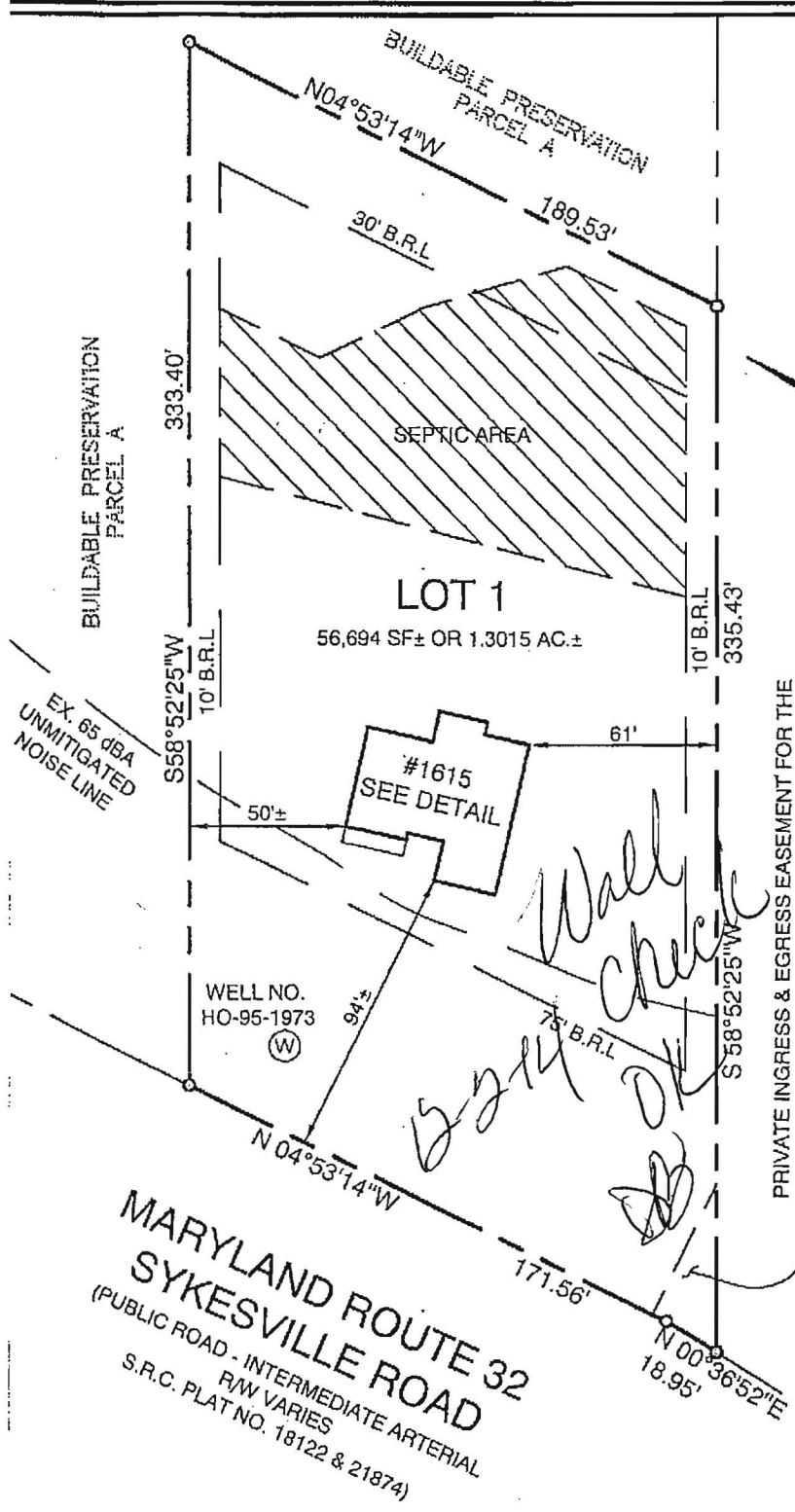
CALL 410-313-1771 TO SCHEDULE INSPECTIONS.

NOTES:

1. THIS PLAT IS A BENEFIT TO THE CONSUMER ONLY INsofar AS IT IS REQUIRED BY A LENDER OR A TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH CONTEMPLATED TRANSFER, FINANCING OR REFINANCING PURPOSES. THIS PLAT IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATION OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE STRUCTURES. THIS PLAT DOES NOT PROVIDE FOR THE ACCURATE IDENTIFICATION OF PROPERTY BOUNDARY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR FOR SECURING FINANCING OR REFINANCING.
2. THE \rightarrow SETBACK ACCURACY IS 1 FOOT.
3. THIS PLAN OR PLAT IS NOT INTENDED TO SHOW ALL MATTERS RELATED TO THE PROPERTY SHOWN HEREON.
4. IF IT APPEARS ENCROACHMENTS MAY EXIST, A BOUNDARY SURVEY IS RECOMMENDED TO DETERMINE THE EXACT LOCATION OF THE PROPERTY BOUNDARY LINES AND IMPROVEMENTS.
5. THE LOCATION OF FENCE LINES, IF SHOWN, ARE APPROXIMATE.
6. B.R.L. = BUILDING RESTRICTION LINE

THIS LOT DOES NOT APPEAR TO LIE WITHIN THE 100 YEAR FLOOD PLAIN AS SHOWN ON THE F.E.M.A. FLOOD HAZARD MAP 240015-0150-B AS REVISED AUGUST 7, 1981.

WALL CHECK: 9-17-2014
TOP OF WALL LEVEL. = 636.0'



DETAIL
SCALE: 1"=30'

LOCATION DRAWING
1615 SYKESVILLE ROAD
LOT 1

SHIPLEY'S LODGE
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND

PARCEL 23
N/F WILBUR S. ZEPP & LILLIE MAE ZEPP
LIBER 5731 FOLIO 42-4

PRIVATE INGRESS & EGRESS EASEMENT FOR THE
USE & BENEFIT OF PARCEL 23 EXCLUDING ANY FUTURE
SUBDIVISION

CERTIFICATION
I HEREBY CERTIFY THAT I AM A RESPONSIBLE CHARGE OVER THE PREPARATION OF THIS LOCATION DRAWING AND THE SURVEY WORK BEING PERFORMED IS IN COMPLIANCE WITH REQUIREMENTS SET FORTH IN THE CODE OF MARYLAND TITLE 9, SUBTITLE 23, CHAPTER 26, REGULATION 12, AND THE POSITION OF EXISTING IMPROVEMENTS AS SHOWN HEREON, ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

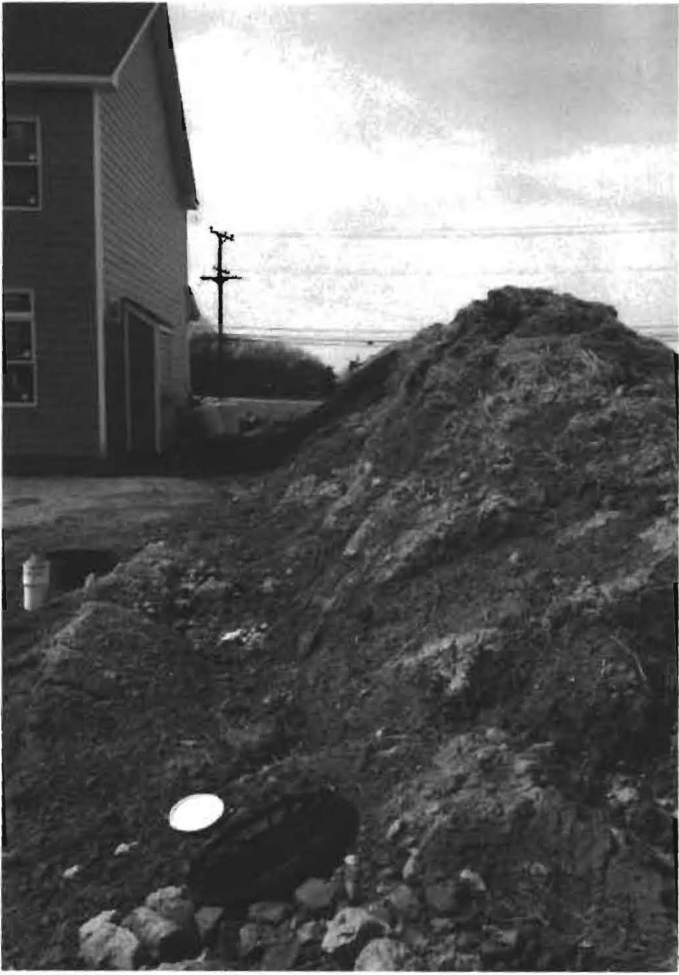
MICHAEL D. ADCOCK
PROFESSIONAL LAND SURVEYOR
NO. 21257, EXPIRATION DATE 06/30/15

Adcock & Associates · LLC

Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: mick@saaland.com

REFERENCE:	PLAT NO. 21817
DATE:	SEPTEMBER 17, 2014
SCALE:	1"=60'
FILE NO.:	13-120





MEMBER N. C. B. V. A.

MEMBER P. C. B. V. A.



Burial Vaults - Septic Tanks

PHONE: 410-848-0393
 FAX: 410-848-3551

925 WAKEFIELD VALLEY ROAD
 NEW WINDSOR, MD 21776

Five Year Initial Service Policy
 On Site Wastewater Treatment System

Brand Name: <u>Ecopod</u>	Model Number: <u>Ecopod 75</u>
Purchase Date: <u>2-10-15</u>	Serial Number: <u>E75N-011270A</u>

INITIAL POLICY:

A five (5) year service policy shall be furnished to the user by the Installer.

This policy is included in the original purchase price and shall provide the following.

1. An inspection/service call every six months which includes inspections, adjustment and servicing of the mechanical and electrical component parts as necessary to ensure proper function for the first year. And once a year there after.
2. An effluent quality inspection every six months consisting of a visual check for color, turbidity, scum overflow, and an examination for odors for the first year. And then once a year there after.
3. A sample shall be pulled from the aeration tank once a year as described in the "Solids Removal" Section to determine if there is an excess of solids in the treatment plant. If the test results determine if there is an excess of solids in the treatment plant. If the test results determine a need for solids removal, the user will bear the cost and responsibility for doing so.
4. If any improper operation is observed which cannot be corrected at that time, the user shall be notified immediately in writing of the conditions and the estimated date of correction.

Violations of Warranty including shutting off the electric current to the system for more than 24 hours, disconnecting the alarm system restricting ventilation to the aerator, overloading the system above its rated capacity, or introducing excessive amounts of harmful matter into the system, or any other form of unusual abuse.

**THIS POLICY DOES NOT INCLUDE PUMPING
 SLUDGE FROM UNIT IF NECESSARY**

PERMITTING AUTHORITY:

SYSTEM OWNER:

INSTALLATION LOCATION:

1615 Route 32
Sykesville, MD 21784

DISTRIBUTOR:

Babylon Vault Company Inc.
925 Wakefield Valley Rd
New Windsor, MD 21776

INSTALLER:

Eagles Septic
580 O'Brecht Rd.
Sykesville, MD 21784

SERVICE COMPANY:

Babylon Vault Co. Inc.

 Service Operators License Number: _____

I agree to abide by the service policy as stated above: _____

Witness:

e3 Environmental LLC

302-725-0706 www.e3onsite.com

ECOPOD-N Completion Statement

Installation Information

Owners Name	Steve Boyce	# of Bedrooms / GPD	750
Street	1615 Route 32	Repair	<input type="checkbox"/>
City	Sykesville	New Construction	<input checked="" type="checkbox"/>
State	MD		
Zip	21784		

Installation Company

Company	Fogles Septic	Installed Date	2/6/15
Certified Installer		Startup Date	6/24/15
Street	580 O'Brecht Rd.		
City	Sykesville		
State	MD		
Zip	21791		

ECOPOD-N

Model #	Serial #
E50	
E60	
E75	E75N-01127CA
E100	
E150	

Blower Voltage	Good
Blower Running Amps	Good
Inches of water over media with blower turned off	2 inches
Vent Installed	yes
Tanks and Risers Water tight	yes
Alarm Functional	yes

I hereby certify that the ECOPOD-N wastewater treatment system has been installed and started up in accordance with the construction permit and is in compliance with the manufacturers recommendations

Company Babylon Vault Co Inc.
Signature Steven R. Keontz
Printed Name Steven R. Keontz

Date 6/24/15

1615 Rt. 32

Clerk of the Circuit Court for
Howard County
Land Records/Licensing

The Thomas Dorsey Building
9250 Bendix Road
Columbia, MD 21045
410-313-5850

=====
LR - Agreement Recording Fee
1x 20.00 20.00

Grantor/Grantee Name: Boyce
Reference/Control #: 102

LR - Agreement Surcharge
1x 40.00 40.00

=====
SubTotal: 60.00
Total: 60.00

=====
REV-Check-BOA 60.00
Number : 11658

07/10/2015 14:07 CC13-DS
#4519314 /1246/109
~ Thank you for visiting us today ~



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

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Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

**OPERATION AND MAINTENANCE AGREEMENT
FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM
HAVING AN ADVANCED PRE-TREATMENT SYSTEM**

THIS AGREEMENT is made this 10 day of July, among Steve J. Janet Boyce, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 1615 Route 32 Sykesville, MD 21794, in the 3rd Election District of Howard County, Maryland, and the deed to same is recorded or shall be recorded among the Land Records of Howard County, Maryland in Liber 15232 Folio 268.

WHEREAS, The Lot is suitable for the installation of a conventional on-site sewage disposal system with an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, in accordance with the Code of Maryland Regulations 26.04.02.07, effective January 1, 2013. The pre-treatment device being installed is Eco Pod E75.

NOW, THEREFORE, the parties hereto agree as follows:

A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County to develop accurate and thorough test results.

B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.

C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.

D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.

E. This agreement shall run with the land and upon Owner's taking title to the Lot shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Lot that the system shall require

maintenance or other attention. Upon taking title to the Lot, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

Michael J Davis 7/10/15
Howard County Health Department

Daniel Moore 7/10/15
Owner #1 Signature Date

Daniel Moore
Owner #1 Print Name

Owner #2 Signature Date

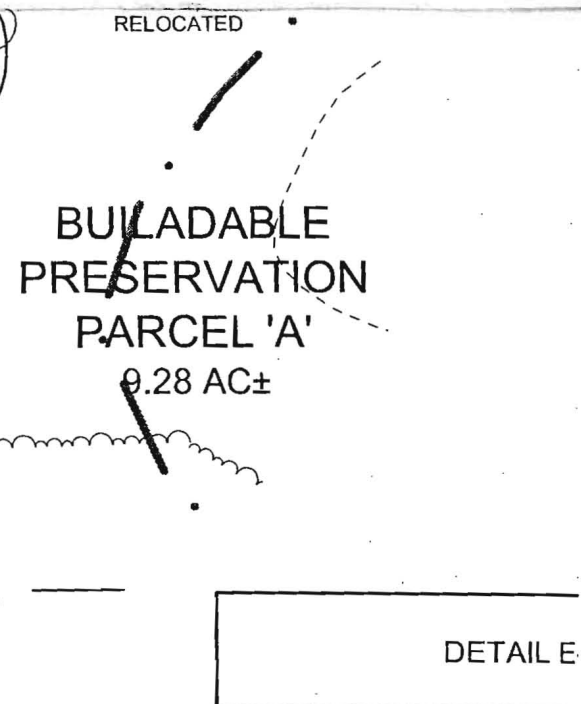
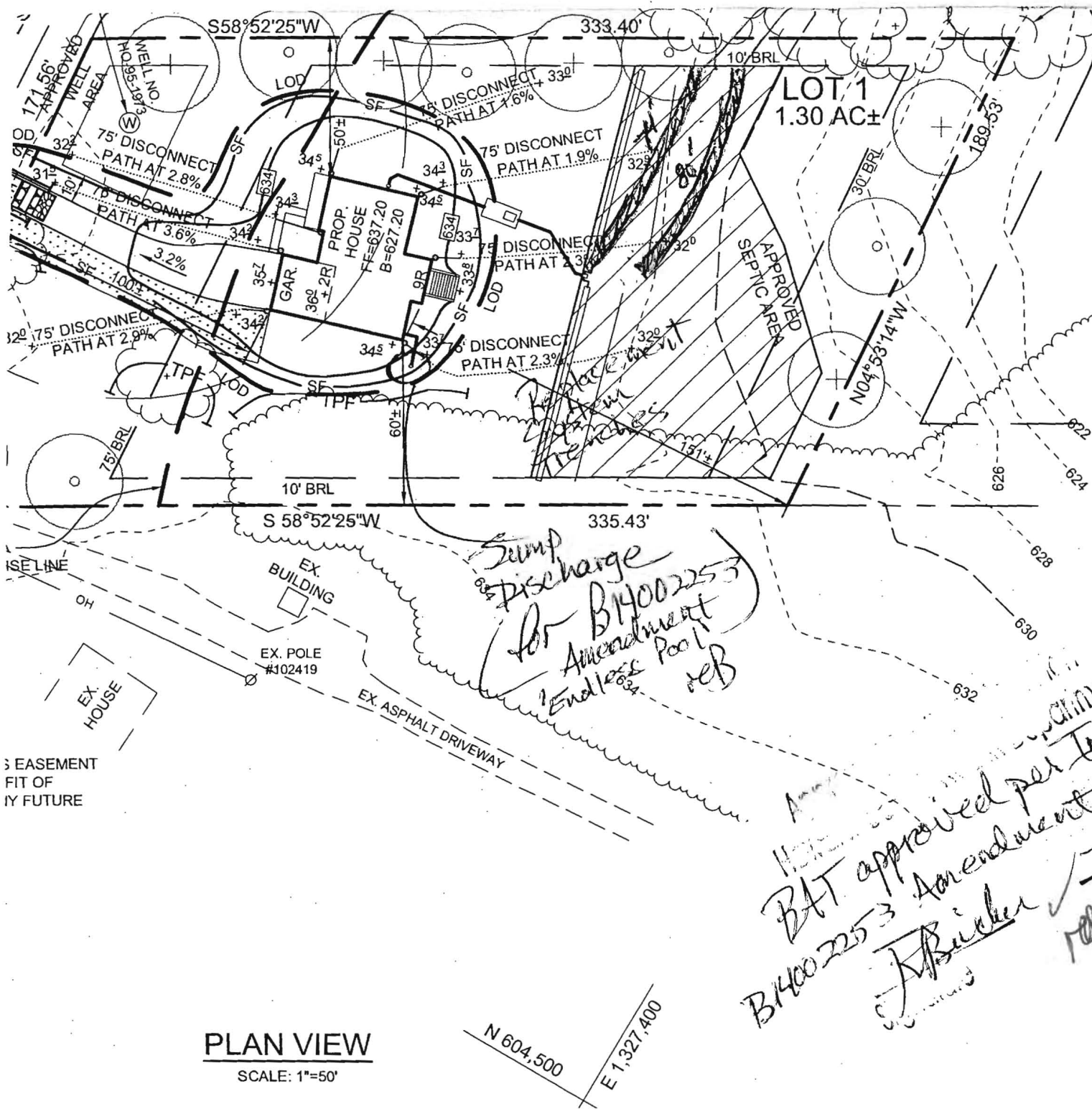
Owner #2 Print Name

Daniel Moore 7/10/15
Buyer #1 Signature Date

Daniel Moore
Buyer #1 Print Name

Buyer #2 Signature Date

Buyer #2 Print Name



*Sump
discharge
for B14002253
Amendment
Endless Pool
reB*

*Amendment
B14002253 approved per Installation
J. Bucher ✓ 7/2/2015
reB*

PLAN VIEW
SCALE: 1"=50'

EMBED GEO1
MIN. OF 8 IN VERTICALI
THE GROUND. BACKFI
COMPACT THE SOIL OI
SIDES OF GEOT

Name: Viking Development Corporation
 Street Address: 1615 Rt 32
 City, State, Zip: Sykesville MD 21784
 Date: 2-9-15

Amendment, Permit # B1400253

Ms. Debbie Whalen
 Division of Plan Review
 Department of Inspections, Licenses and Permits
 Howard County Government
 3430 Court House Dr
 Ellicott City, MD 21043

RECEIVED

FEB 9 2015

LICENSES & PERMITS
 DIVISION

Dear Ms. Whalen:

I am requesting to amend Permit # B1400253 at
1615 Rt 32, Sykesville MD 21784 to
put in a swimming machine, in the basement.
The model is a express Pools swimming Machine,
The manual is attached

Enclosed: Cash pd
invoice # 390612

- Fee: 82500
- Plot Plans
- Sets of Construction Drawings
- Other: _____

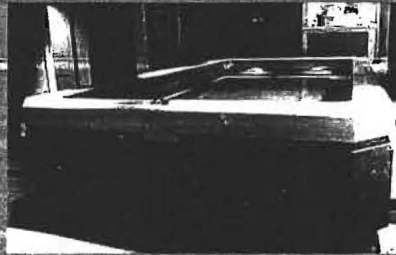
If there is anything we can do to assist you, please let me know.

Sincerely,

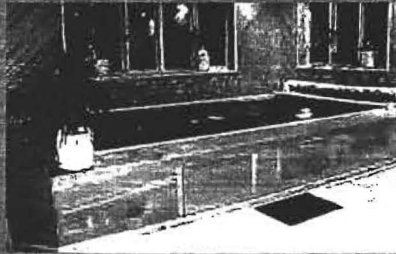
Name: Cary Cumberland
 Title: President
 Phone: 410 977 2188
 Email: Cary@VikingCustomHomes.com

cc: ALTA

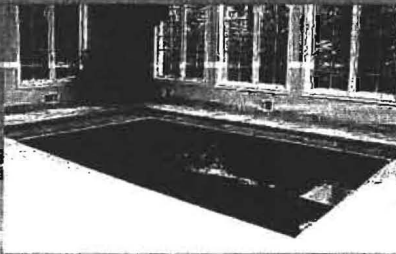
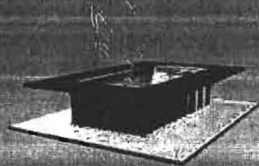
INSTALLATION AND OPERATIONS MANUAL



Fully Aboveground Installations



Partially In-Ground Installations



Fully In-Ground Installations

Original Endless Pool



NO DIVING **DANGER: DIVING MAY RESULT IN SERIOUS INJURY OR DEATH.** 

IMPORTANT SAFETY INFORMATION

**IMPORTANT SAFETY INFORMATION
SAVE THESE INSTRUCTIONS**

⚠ WARNING **BEFORE INSTALLING OR USING THIS PRODUCT, READ AND FOLLOW ALL SAFETY INSTRUCTIONS. FAILURE TO DO SO CAN RESULT IN PROPERTY DAMAGE, INJURY, OR DEATH**

⚠ WARNING **SERIOUS BODILY INJURY OR DEATH CAN RESULT IF THIS PRODUCT IS NOT INSTALLED OR USED CORRECTLY**

⚠ WARNING **CHILDREN SHOULD NEVER SWIM UNSUPERVISED**

⚠ WARNING **RISK OF ELECTRICAL SHOCK-**

- All electrical connections should be made by a licensed electrician in accordance with the all applicable National and local code and ordinances.
- This product must not be installed within 5 feet (1,5m) of any metal surface, unless the surface has been properly bonded and/or grounded in accordance with any applicable national or local electrical code.
- Improper installation will create a hazardous situation that can result in property damage, injury, or death.

⚠ WARNING This product must be installed in accordance with any applicable state and local code. Consult your local building and health code for more information.

IT IS THE RESPONSIBILITY OF THE END USER TO ENSURE THAT ANYONE WHO USES THIS PRODUCT IS PROPERLY INFORMED OF ALL SAFETY PRECAUTIONS.

ALL SAFETY SIGNS PROVIDED WITH THIS PRODUCT SHOULD BE PERMANENTLY INSTALLED SO THAT THEY ARE VISIBLE TO ALL OCCUPANTS. SHOULD YOU REQUIRE ADDITIONAL SIGNS OR REPLACEMENTS, CONTACT CUSTOMER SERVICE.

NO DIVING **DANGER: DIVING MAY RESULT IN SERIOUS INJURY OR DEATH.** 

⚠ DANGER

RISK OF ELECTRICAL SHOCK

A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) OR RESIDUAL CURRENT DEVICE (RCD) is required for this product. The Ground Fault Circuit Interrupter (GFCI) or Residual Current Device (RCD) is NOT provided with this product. One must be sourced locally and installed into the panel box by a licensed electrician when making the electrical connections to the spa equipment.

Test the Ground Fault Circuit Interrupter (GFCI) or Residual Current Device (RCD) prior to each use to ensure that it works properly.

DO NOT permit any electrical equipment appliance such as lights, radio, television, or telephone within 5 feet (1,5m) of this product. DO NOT operate any such product while in this product or while you are wet.

Electrical power should be shut off to this product prior to any service being performed.

⚠ WARNING

GROUND ALL METAL EQUIPMENT

A green colored terminal labeled G is found inside the heater-controller. Inside both the optional hydraulic power unit and inside the load center box there are terminal bus bars used exclusively for grounding purposes. These terminals must be connected to the grounding means provided in the electrical supply panel, using a continuous copper wire equivalent in size to the circuit conductors supplying this equipment.

The electrical components inside the spa cabinet will have means to connect the local common bonding grid. Connect these components to the bonding grid using an insulated or bare copper conductor not smaller than a No. 6 AWG.

All field installed metal components (ladders, handrails, etc.) or metal surfaces must be connected to the local bonding grid.

⚠ WARNING

TO REDUCE THE RISK OF ACCIDENTAL DROWNING

Children should never be allowed to use this product without adult supervision.

Children should never have unsupervised access to this product.

⚠ WARNING

TO AVOID THE RISK OF INJURY

Pregnant women (or possibly pregnant women should consult a physician prior to using this product. High water temperatures have a high potential for causing damage to the fetus in the early stages of pregnancy.

Anyone taking medication should consult a physician prior to using this product.

Anyone under the influence of drugs or alcohol should not use this product.

Anyone with an infectious disease or with an open wound or sore should not use this product.

Anyone who has a history of heart disease, high or low blood pressure, circulatory system problems, diabetes, or someone who is battling obesity should consult a physician prior to using this product.

 **DANGER**

TO REDUCE THE RISK OF DROWNING

Prolonged immersion in high temperature water can cause hyperthermia. Hyperthermia occurs when the internal temperature of the body is several degrees higher than the normal 98.6°F (37°C). The symptoms of hyperthermia include dizziness, lethargy, drowsiness, and fainting. The effects of hyperthermia include:

1. Failure to perceive heat
2. Failure to recognize the need to exit the water
3. Unawareness of a hazardous situation
4. Fetal damage in pregnant women
5. Physical inability to exit the water
6. Unconsciousness- which can lead to drowning

Keep hair and body parts away from suction fittings. Long hair should not be allowed to float freely in the water. Hair should be tied up or placed under a bathing cap.

 **WARNING**

RISK OF INJURY

Do not remove or tamper with any suction fitting. NEVER operate this product if a suction cover is missing or damaged.

All suction fittings in this product are sized to match the flow rate. Always use compatible suction fittings should they need to be replaced.

NEVER replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.

Never use this product alone.

Always completely remove the cover prior to using this product.

Water will splash out of this product. The finish surface immediately surrounding this product should be a non-slip material.

 **DANGER**

TO REDUCE RISK OF DROWNING

The water in this product must never exceed 104°F (40°C).

Safe water temperature for Aquatic Exercise is approximately 80°F (27°C).

 **WARNING**

TO AVOID INJURY

DO NOT use this product alone.

Remove all jewelry, watches, etc. prior to using this product.

Use caution when entering and exiting this product as wet surfaces can be slippery.

 **WARNING**

RISK OF INJURY

Keep all breakables, especially glass, away from this product.

Never insert any objects into any openings.

 **WARNING**

TO AVOID RISK OF INJURY

Keep all chemicals away from children and pets.

DO NOT stack chemicals on top of one another.

NEVER MIX CHEMICALS.

Sanitizing chemicals must be stored separately from balancing chemicals.

OPTIONAL TREADMILL SAFETY INFORMATION



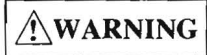
Consult a physician before you start an exercise program. Stop exercising if you feel pain or tightness in your chest, become short of breath, or feel faint. Contact your doctor before you use the machine again.



This machine contains moving parts. Do not wear loose clothing or jewelry.



Do not put fingers or other objects into moving parts of the exercise equipment.



Use caution while participating in other activities while walking on your treadmill; such as watching television, reading, etc. These distractions may cause you to lose balance or stray from walking in the center of the belt; which may result in serious injury.

WARNING: TO AVOID THE RISK OF INJURY

Pregnant women should always consult a physician prior to starting an exercise program.

NEVER operate this treadmill without reading and completely understanding the results of any operational change you request from the controller.

Treadmill must be installed on a smooth and level surface.

NEVER leave an operating treadmill unattended.

NEVER mount or dismount the treadmill while the belt is moving.

Hydraulic treadmills start at a very low speed and it is unnecessary to straddle the belt during startup. Simply standing on the belt during this slow acceleration is the proper way to start using this product.

Always hold on to a handrail or grab bar while making control changes.

Never drop or insert any object into any openings.

Children must be supervised while using this machine.

The moving parts and other features of the machine can be dangerous to children.

Before each use, examine this machine for damage or signs of wear. Do not use this product if found in this condition. Call Customer Service for repair information.

Installation Instruction Booklet Information

The entire Endless Pool system is ETL listed, Ref. #2001779 and conforms to UL Standard #1563. Individually, all electrical components of the Endless Pool are UL and/or CSA approved. As defined by the International Residential Code (IRC), the Endless Pool is considered an aboveground or an in-ground pool depending on the installation. That is to say, customers can install our Endless Pool Kit above-ground on a garage or basement floor or in the backyard or they can sink it partially or fully in-ground. The unit is completely self-supporting. As required by the IRC the Endless Pool meets all the following standards: ANSI/NSPI Standards #3 (Permanently Installed Residential Spas), #4 (Aboveground/On-ground Residential Swimming Pools), #5 (Residential In-ground Swimming Pools), and #6 (Portable Spas). The appropriate governing standard is dependent on the installation method and the requirements and definitions used by the local governing bodies.

All electrical connections should be made by a licensed electrician in accordance with the current national and local electrical codes.

All pool equipment including the 4 kW electric heater, circulating pump and 5 HP hydraulic power unit runs off one 30 amp, single phase, GFCI (RCD) protected, 220 volt service. A minimum of 10AWG wire should be used for all field wiring. We recommend you install a shut off within 5' of where you intend to place your power unit.

Please read this Owner's Manual and all associated Supplemental Guides prior to beginning your project.

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1. Pool Arrival and Inspection

The Standard Endless Pool® arrives in three packages: a skid of pool panels weighing approximately 850 lbs. (385,5 kg), a 4' x 8' x 4' (1,22m x 2,44m x 1,22m) high crate weighing about 1,150 lbs (522 kg) and a pair of 6-5/8" (16,6cm) wide steel reinforcing channels. Most shipping companies will lower the containers to the ground with a hydraulic lift gate on their truck. The pool can remain in the containers until you are ready to begin installation. Please contact our shipping department prior to shipment to answer any questions you may have. Since every delivery is slightly different, and depends to a large extent on site conditions, it is important to speak with our shipping department well in advance to reduce the chance of surprises.

Upon arrival, the packages should be inspected for external damage. Should there be visible damage, you must complete a damage-claim report provided by the truck driver. Please call the Endless Pools shipping department immediately at (800) 732-8660. The pool components are not damaged by freezing conditions and may be stored outside under a tarp for an extended period prior to installation.

To begin installation, or to move pool components, begin unpacking the pool. Using a hacksaw or tin snips, remove the steel packing straps encircling the pool panel skid. The wooden top and sides of the crate may be removed with a phillips-head screwdriver.

2. Site Preparation

It is important that your Endless Pool® be installed over a smooth, level concrete slab that is capable of supporting 260 pounds per square foot (11kg/m²). The thickness and the quality of the concrete slab will affect the anchoring method.

If you are using the anchor bolt kit or you are installing a Custom Deeper Pool, then the floor must contain no voids or bumps and shall be relatively smooth and level. For custom deeper pools, the walls of the deeper section must also contain no voids or bumps. The corners at the depth change should be eased slightly (approx 1/4" [6mm]). Custom deeper pools must use the Anchor Bolt Kit. Anchoring the pool is discussed in more detail later in these instructions as well as in a Supplemental Guide. An optional Tension Strap and Floor Leveling Kit is available for out-of-level or non-smooth sites.

If a new slab is poured, consult your local electrical codes regarding grounding and bonding. Many areas require a bonding wire to be attached to the reinforcing bar that is buried in the concrete.

Drainage should be provided at the pool. It is ideal to install a floor drain in the area just outside of the front pool panel, but not directly under the panel or pool itself. In installations where this is not possible, installation of a secondary containment system to help divert water to a more desirable location is recommended. Please call the Customer Service Department if you need any assistance in the design of a containment system.

It is extremely important to ensure that any water that may reach the bottom flange of the pool panel, by splashing, run off, or accidental leakage, be drained away immediately. The bottom of the pool panel will corrode, compromising its structural integrity if standing water is not removed.

Ideally, the bottom 6" of the panel is treated with a rust-inhibiting primer prior to assembly. This will further ensure the the panels are protected from corrosion. Every face of the panel (below 6"), including the bottom face of the bottom flange, for this treatment to be effective.

It is worth the time and effort now to install a drainage system rather than be unprepared in the event of a mishap.

3. Assembly of Pool Panels

Provided with this Installation and User's Manual will be the appropriate panel assembly Supplemental Guide for the Swim Current that has been chosen.

This Guide will take you through assembling the panels, anchoring the panels, and drilling the appropriate holes into the panels. It is critical that this Guide be referenced at this point. Any required hole must be drilled before proceeding with the installation.

4. Options

An Endless Pool® is usually customized to meet the needs of the end user. Pools of different lengths and widths are selected as well as deeper pools. Naturally, the installation will vary depending on the options selected so it is important to understand exactly what has been supplied. On the day your pool ships, you will receive an email with a customized owner's manual containing the appropriate Supplemental Guides for the options that were purchased. A hard copy of that same owner's manual will be packaged in the pool crate. Please review all appropriate Supplemental Guide before proceeding with the installation to ensure that selected options have been considered.

Additionally, the placement of the Water Quality System keypad needs to be considered. The majority of our customer's place the keypad in the coping of the pool. However the keypad can be mounted in the skirting or on a nearby wall as an alternative. Please refer to the Keypad Section of these installation instructions for a more detailed description.

5. Automatic Retractable Security Cover

If you have purchased a Below Deck Automatic Retractable Security Cover (BDARSC) then the installation must begin at this time. The cover mechanism and bracket will be attached directly to the pool panels.

The BDARSC must be mounted at the front of the pool. A minimum of 24" (61cm) horizontal clearance is required at the front of the pool for the Drive Mechanism. The combination in-wall cover track and liner hanger will raise the coping off the reinforcing channel by 2-1/8" (5,40cm). The coping or other finish material covering the front edge of the pool must be constructed so to not interfere with the operation of the cover. At a minimum, access must be maintained in the finished work for the track end guides at the front corners of the pool. Ideally, there should be access to the entire cover mechanism.

For more detailed information on the assembly and installation of this option, please refer to the Below Deck Automatic Retractable Security Cover Supplemental Guide.

6. Optional Insulation (by others)

To conserve heat and reduce operating costs we strongly recommend that the Endless Pool be insulated with rigid foam. Simple 2" (5cm) thick rigid foam insulation boards are usually adequate and are available from any building supply house. Check with your supplier for a recommended adhesive appropriate for the type of rigid insulation that they supply. Be sure to leave access to all of the panel cutouts when you are installing the insulation. Be sure to consider the danger of freezing for any pipes running outside the insulation.

Refer to the appropriate Supplemental Guide if you purchased one of our optional Skirting Kits (Fig 6), prior to installing the insulation.

If you have selected the hydrotherapy jet option and your pool is exposed to freezing conditions, please refer to Hydrotherapy Jet Supplemental Guide for additional insulating measures.

7. Liner Hanger

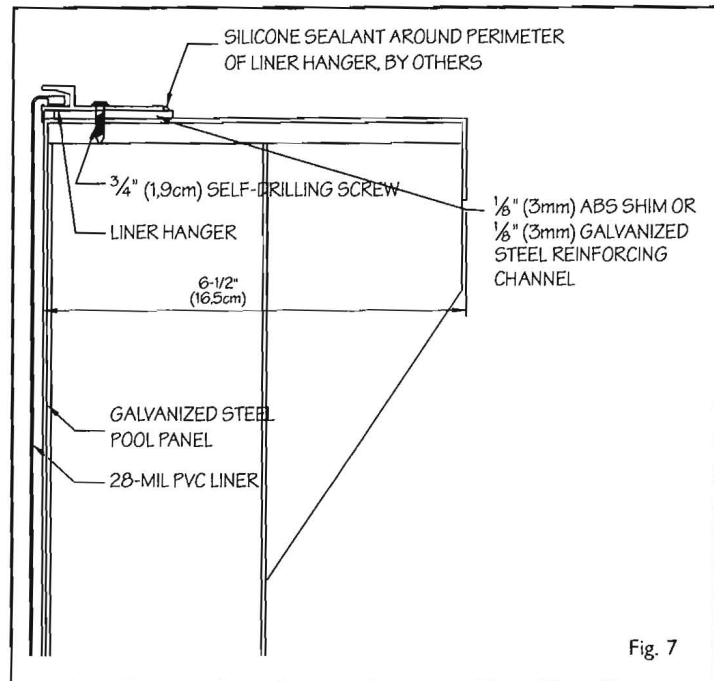
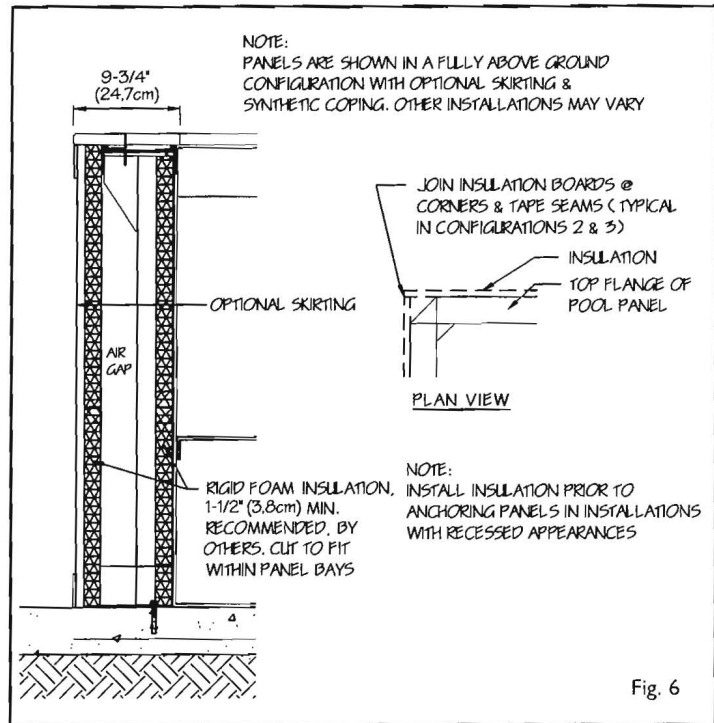
The aluminum liner hanger installs around the perimeter of the pool panel enclosure. The liner hangs from this extrusion using a bead that is heat welded into the top edge of the liner. The liner hanger system is packaged in the pool. Self-drilling fasteners are included in the kit along with a nut driver attachment for your drill (Fig 7).

Because the height of the 2 steel reinforcing channels is slightly higher than the surrounding top flange, we provide PVC shims inside the kit to place under the liner hanger and to shim the hanger up to the level of the channels to keep the whole system level. The shims can be cut with a hacksaw or scored with a utility knife and snapped to fit the size of the pool. Over the channels, the fasteners should be drilled through the channel and the flange. You may use a pilot hole if you wish. Elsewhere, the fasteners must be drilled through the shims and the panel flange.

Take the four 8' (2,44m) lengths of liner hanger that have been notched in the center, and bend these pieces so that they will fit and be secured in each corner. Measure to ensure the corner piece is centered in the corner. Use two self drilling fasteners and PVC shims to secure the small corner length first, by drilling through the back corner of the liner hanger flange, then secure the rest of the hanger to the end and side panels, using shims when not securing through the channel. The hanger pieces should be flush with the inside of the reinforcing channel and will protrude into the pool the thickness of the channel everywhere else.

Once the corner lengths are secured, install the remaining two lengths of liner hanger along the side of the pool. These pieces vary in length, depending upon your pool size, so they may need to be trimmed. It is important that the gap at any joint between two liner hanger pieces be no greater than 1/8" (3mm).

Silicone the gap between the liner hanger and the panel to ensure that no water falling on the top flange of the pool panel can work its way down behind the liner. (With the same objective in mind, later silicone the joint between the top of the liner hanger and the coping that you install over the entire top flange of the pool.)

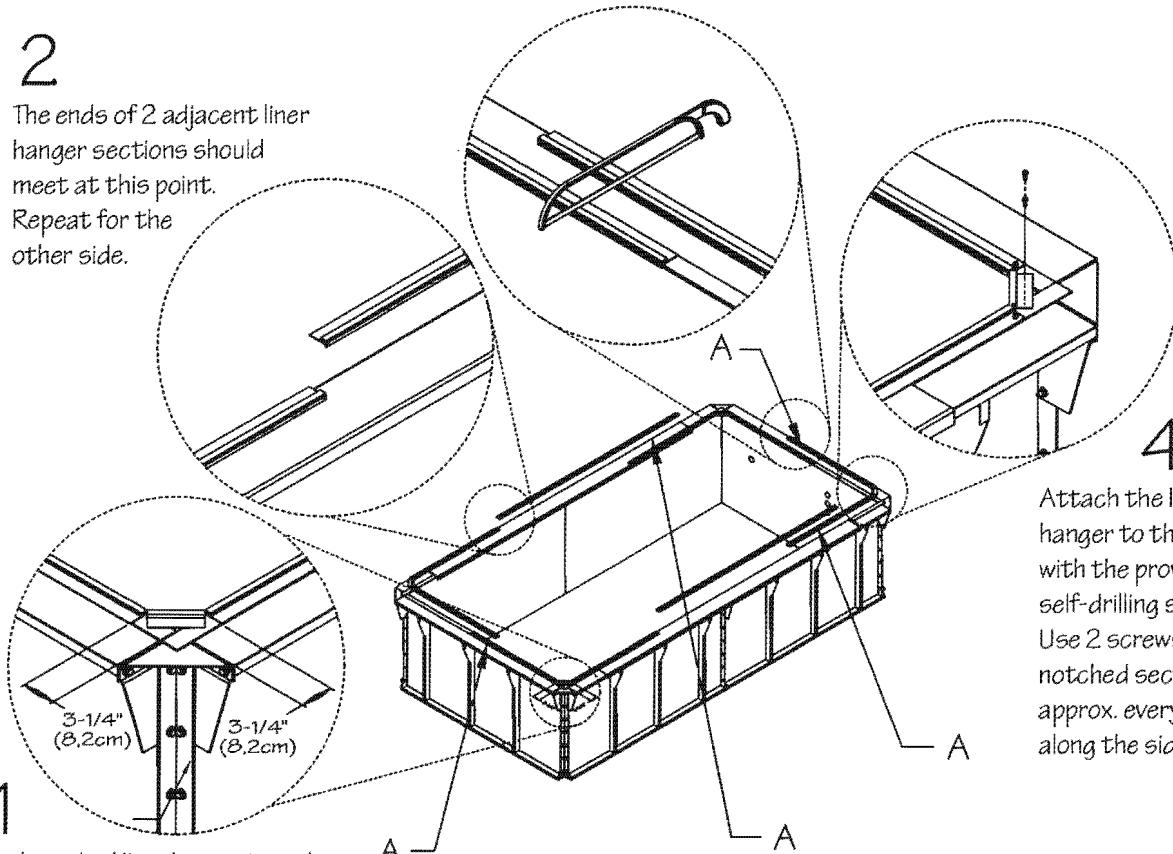


7. Liner Hanger

3 Cut the liner hanger with a hacksaw at the point where 2 sections overlap. Repeat at every point labeled "A."

2

The ends of 2 adjacent liner hanger sections should meet at this point. Repeat for the other side.



4

Attach the liner hanger to the panel with the provided self-drilling screws. Use 2 screws per notched section and approx. every 18" (45,7cm) along the sides.

1

Bend notched liner hanger into place as shown. Repeat for all 4 corners.

Fig. 8

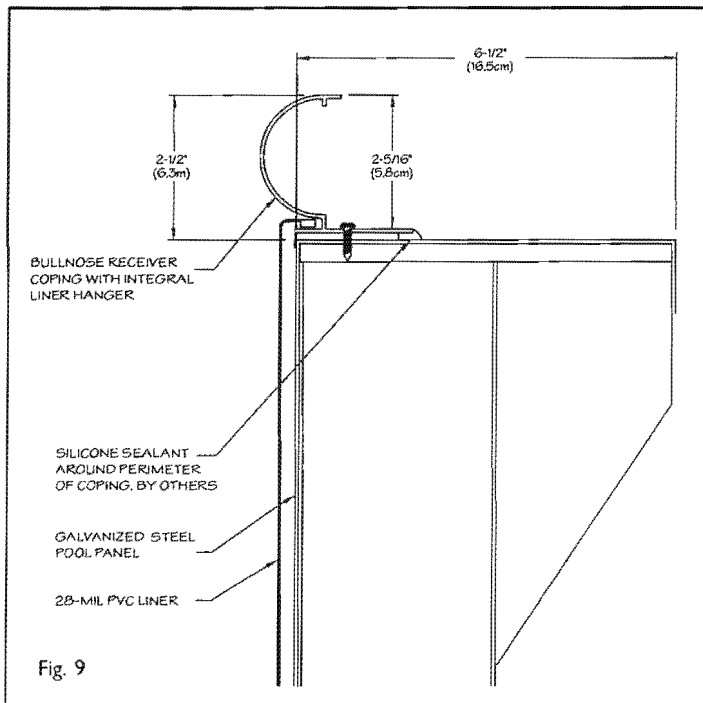


Fig. 9

8. Optional Liner Hangers

Optional Bullnose Coping System

Typically used when the pool is installed fully in-ground, the Optional Bullnose Coping System allows the installer to finish with concrete and/or tile right up to the water's edge. The aluminum bullnose coping system acts as both a liner hanger and a finished edge. Endless Pools, Inc. supplies pre-cut pieces to fit the specific pool size ordered. Included in the kit are radius corners and straight pieces to provide a finished look. These extrusions are fastened down to the top flange of the pool panels through the PVC shims and the reinforcing channels in the same fashion as the regular liner hanger system. The installer is responsible for building a proper perimeter substrate for the concrete or tile (Fig 9).

Optional Wood Receiver Coping System

Typically used when the pool is installed fully in-ground, the Optional Wood Receiver Coping System allows the installer to finish with wood or synthetic decking right up to the water's edge. The aluminum Wood Receiver Coping System acts as both a liner hanger and a finished edge, which can easily accept 2" (5cm) wood coping. Endless Pools, Inc. supplies pre-cut pieces to fit the specific pool size ordered. Included in the kit are mitered corners and straight pieces to

provide a finished look. These extrusions are fastened down to the top flange of the pool panels through the PVC shims and the reinforcing channels in the same fashion as the regular liner hanger system. The installer is responsible for building a proper perimeter substrate for the decking material (Fig 10).

Optional Aluminum Coping System

The Endless Pools Aluminum Coping Option offers a convenient method to finish off the top edge of your Endless Pool, either indoors or out. The coping, which also acts as a liner hanger, is 1-3/8" (3,5cm) thick and comes in a sand textured white finish. The pieces are pre-cut to fit your pool size and fit securely over the steel channel. The coping system is delivered with your pool. It may be ordered later and shipped by UPS ground for an additional shipping charge. The kit's weight depends on the pool size and comes in 5 boxes (Fig 11).

Each coping kit contains pre-fabricated corners and straight aluminum pieces cut to match your pool size. These corners are either square or mitered based on your order. The 8" (20,3cm) wide profile of the coping makes it ideally suited for pools that are freestanding or partially recessed. The coping is secured to the top of the wall panel with tek screws, which are concealed beneath the aluminum snap strip of the same finish as the coping. As an alternative the 6-3/8" (16,2cm) snap strip can be eliminated and a 6" (15,2cm) accent tile can be installed. Joints between the adjacent coping pieces are covered with an aluminum cover strip with the same finish as the coping.

The front panel will need to be extended or packed out with customer supplied finished materials to extend beyond the equipment mounted on the front panel.

9. Liner Underlayment

If it is possible, finish the rest of the pool area, especially the ceiling over the pool, before proceeding. This will help ensure that the liner is not damaged, and also keep the pool water, skimmer, and filter free of construction debris.

Vacuum the pool floor carefully, and make sure there are no sharp bumps that might damage the liner. Take special care to remove any metal chips that may have fallen on the floor.

If you have purchased the Anchor Bolt Kit, then that will come with a roll of closed cell foam. Install the protective foam underlayment on the floor of the pool. The foam kit comes in a box with the four foam corners and a can of spray adhesive. The foam is 3'6" x 32' (1m x 97m). For wider pools cut pieces as appropriate to cover the floor of the pool. Place seams near the walls of the pool, so that they will be covered by the Water Return Channels. Secure the foam to the floor with the spray adhesive provided. With deeper pool installations and larger pools, a second and sometimes even a third box of foam has been provided. Secure the foam to the bottom and walls of the deeper area as well as to the floor of the pool.

If you have purchased the Floor Leveling Kit, then that will come with loose fill vermiculite and sheets of plastic flooring. The vermiculite will be used to level the floor filling in

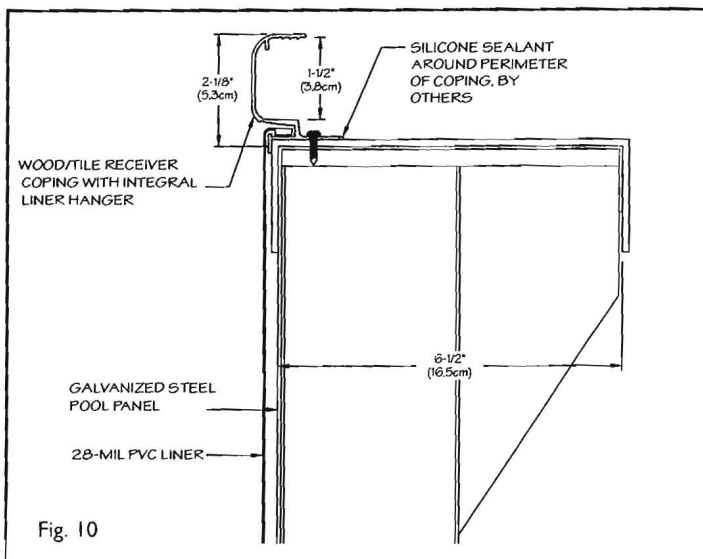


Fig. 10

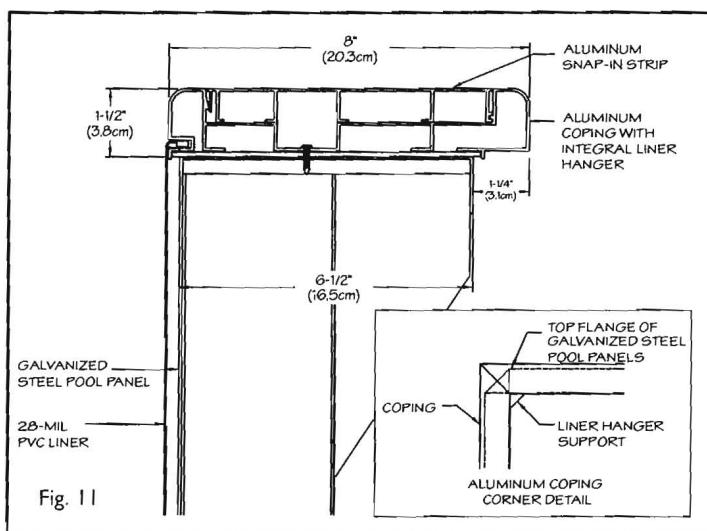


Fig. 11

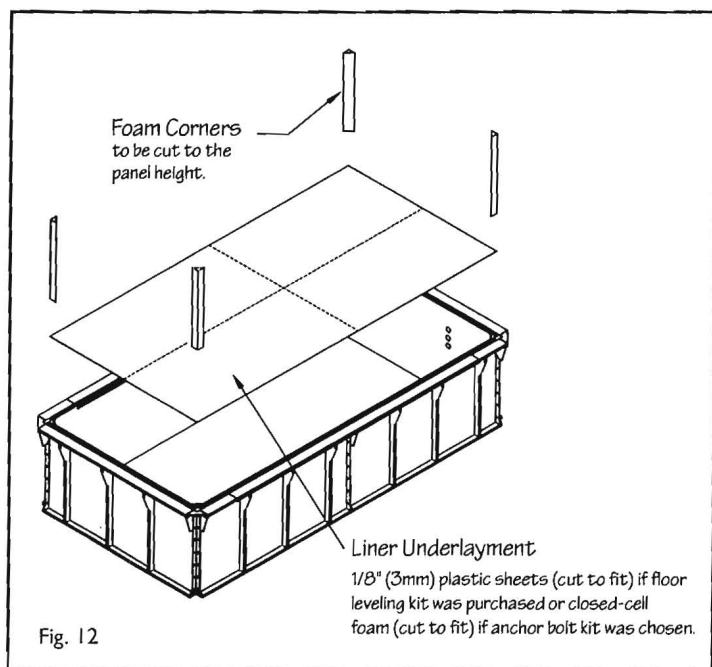
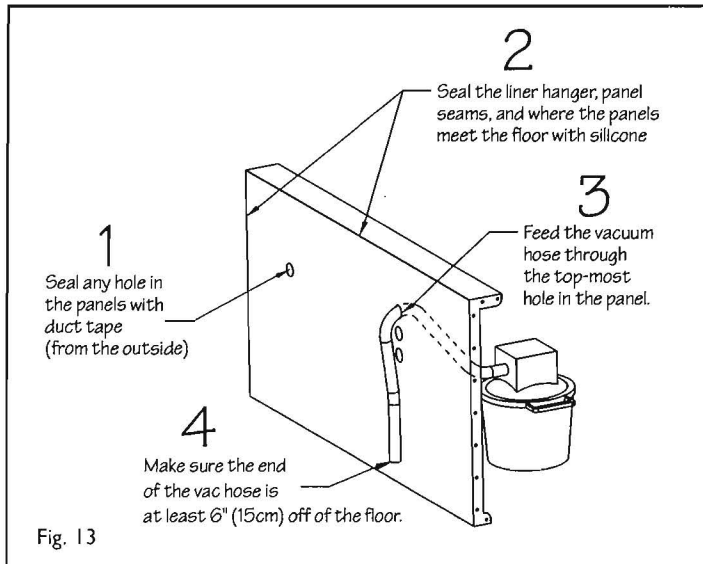


Fig. 12

voids or covering bumps. The plastic floor will be cut to fit and placed over the vermiculite and will be taped to themselves and to the base of the panels.

Do not attach foam to the steel walls of the pool. Secure the foam inserts in the 4 corners at the bottom. Foam corners are not installed in the 4 corners of the deeper section of a custom deep-end pool (Fig 12).

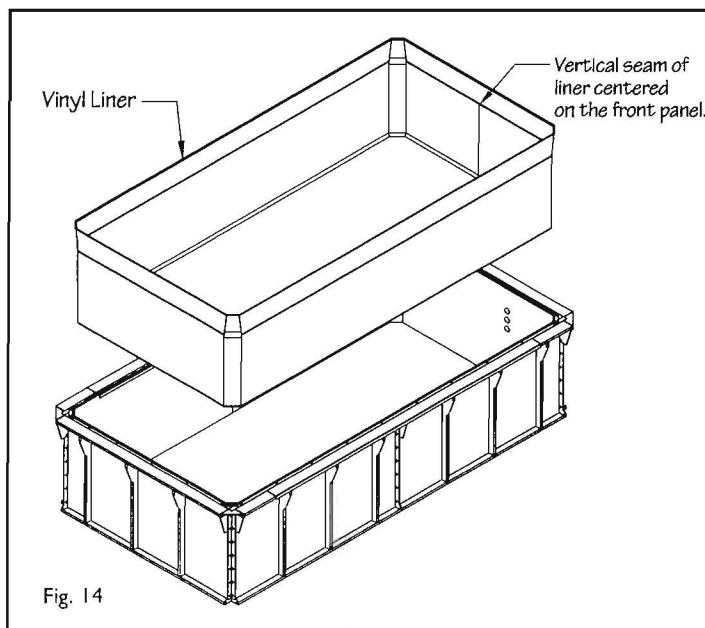


10. Liner

Standard flat bottom pool liners are usually packaged in a cardboard box in the pool crate. Liners for deeper pools and custom-sized pools are sent separately by UPS Ground. Check to see if your liner was backordered at the time of shipment. If you have any questions call Customer Service about the status of your liner.

All work around your pool should be completed before you install your liner. Take a moment to be sure you have all necessary work completed. Prepare for the liner installation. Be sure that the liner hanger, corners, panel joints and panel to base material are sealed with silicone. Tape off all holes in the pool wall (lights, jets and front panel holes) from the outside. Place a vacuum hose through the highest thru-wall cutout or leave a small section of liner bead out of the liner hanger and insert the vacuum hose down from the top. Make sure that the vacuum hose opening is sealed with duct tape. The hose should be 6" (15cm) off of the bottom of the pool floor foam (Fig 13).

Install the liner by starting at the center of the front panel. Spread the liner in the pool enclosure. Shoes should be removed for this and all future work in the pool to avoid damaging the liner. Find the vertical seam in the liner and center it at the front of the pool. Place the four bottom corners of the liner in the four corners of the pool. While standing in one corner, fit the top bead of the liner into the slot in the liner hanger. For easiest install, fit the liner bead at both corners of an end of the pool, then fit the other two corners at the opposite end. Work your way around the pool, fitting the bead evenly into the hanger. We recommend not ending in a corner. Smooth the liner on the floor, pushing any wrinkles toward the walls (Fig 14).



After verifying that the vacuum hose is off of the bottom, turn the vacuum on. When the liner is drawn back, check to see that the corners are positioned properly. If not, turn the vacuum off and reposition the liner. With the vacuum running, smooth out all of the wrinkles. When you are satisfied with the placement of the liner, start to fill with water.

Keep the vacuum running until there is about 3" (7,62cm) of water in the shallowest portion of the pool. Turn the vacuum off and remove all tape and the vacuum hose. Keep filling until there is 6" (15cm) in the shallowest portion of the pool. Do not fill beyond 6" (15cm) at this time.

Included in the box with the liner are No Diving signs. Please post these in prominent locations around the pool. The Endless Pool is shallow and must never be used for diving. Diving into the pool is a very serious hazard and these stickers are intended to warn children of the risks. Naturally, adult supervision is also critical whenever children use the pool.

11. Thru-Wall Connections (Part 1)

This step only should only be followed if the Optional Hydraulic Treadmill or Optional Hydrotherapy Jets is being installed. Otherwise, proceed to the next section.

Hydraulic Treadmill:

If you are installing a hydraulic treadmill then the thru-wall fittings for that option will have to be installed at this time. Use a sharp utility knife to cut a round hole in the liner, using the hole in the panel as a template. Install the thru-wall fitting as shown in Fig 15.

Proceed to next section.

Hydrotherapy Jets:

If you have purchased the hydrotherapy jet option and you have cut the holes in the panel for the jet suction in the "Ideal" location 10" (25,4cm) up from base of the panel), then they have to be installed at this time as well. Use a sharp utility knife to cut a round hole in the liner, using the hole in the panel as a template. Install the suction thru-wall fitting as shown in Fig 16. Repeat this process for the remaining jet suction fitting.

The plumbing between the suction fittings and the jet pump should be completed prior to starting to fill again as detailed in the Jet Supplemental Guide. Once this is completed, close the ball valve. This will allow you to continue filling the pool without having to plug the suction fittings from inside the pool.

Once this is completed, proceed to the next section.

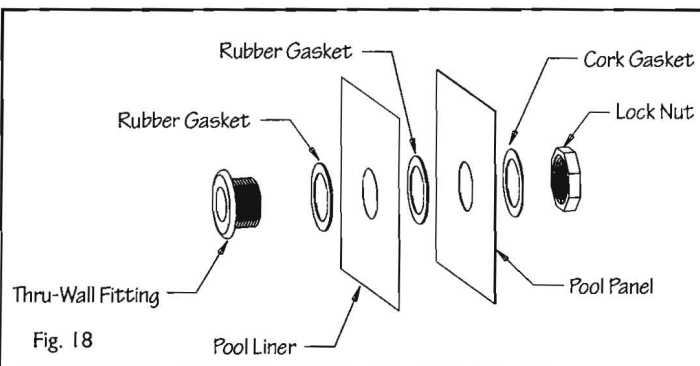
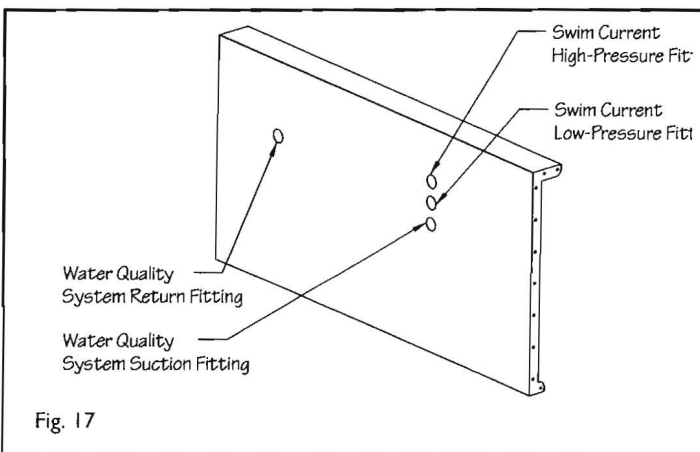
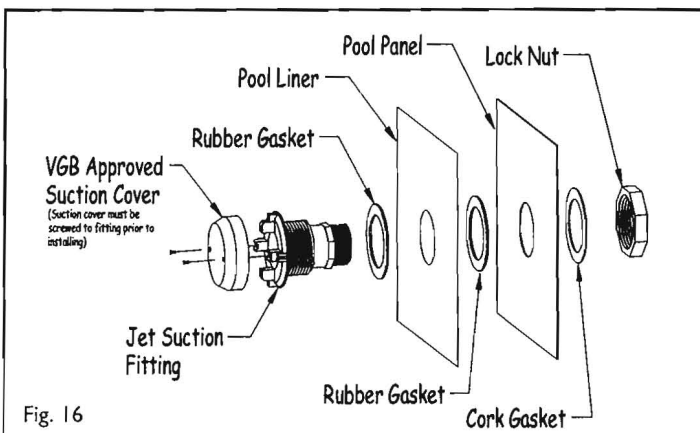
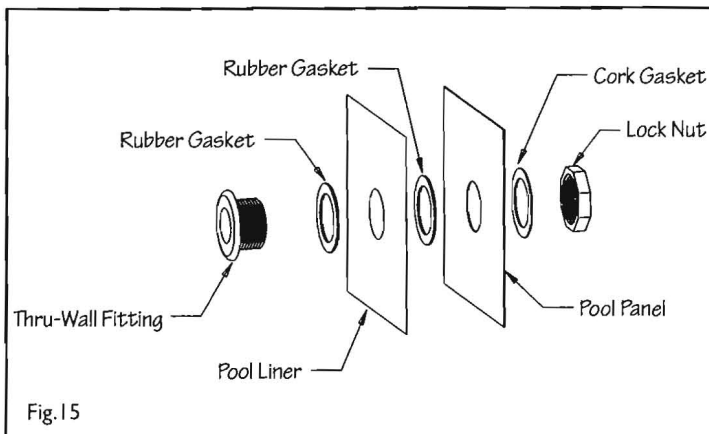
12. Swim Current Component Assembly

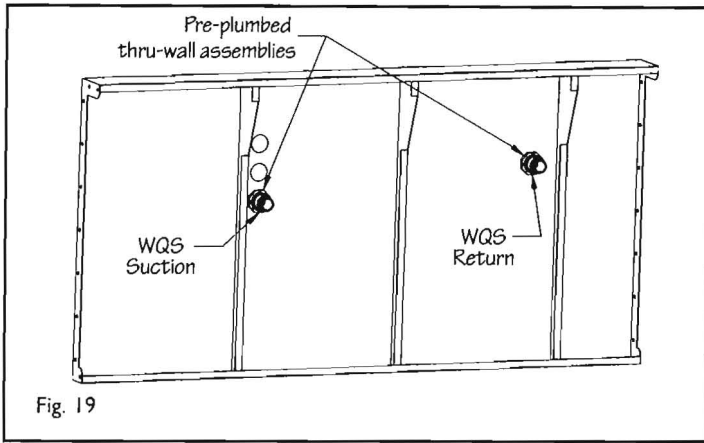
Provided with this Installation and User's Manual will be the appropriate Supplemental Guide for the type of Swim Current that has been purchased.

This guide will take you through the assembly of the primary internal components of the pool. Additional Supplemental Guides will be provided, and will have to be referenced, should any optional internal components (eg hydraulic treadmill, corner steps, bench seats, etc.) have been purchased.

13. Thru-Wall Connections (Part 2)

Once the water level is three inches below the next lowest thru-wall (above the benches), stop filling the pool so that the remaining holes in the liner can be cut. At a minimum there are four holes to be cut; the Water Quality System suction & return and the Swim Current high & low-pressure hydraulic lines. Note: if you are installing an Elite or Dual Propulsion Endless Pool, then there will be two sets (total of 4) hydraulic lines. Use a sharp utility knife to cut a round in the liner, using the hole in the panel as a template. Install the thru-wall fitting as shown in Fig 18.



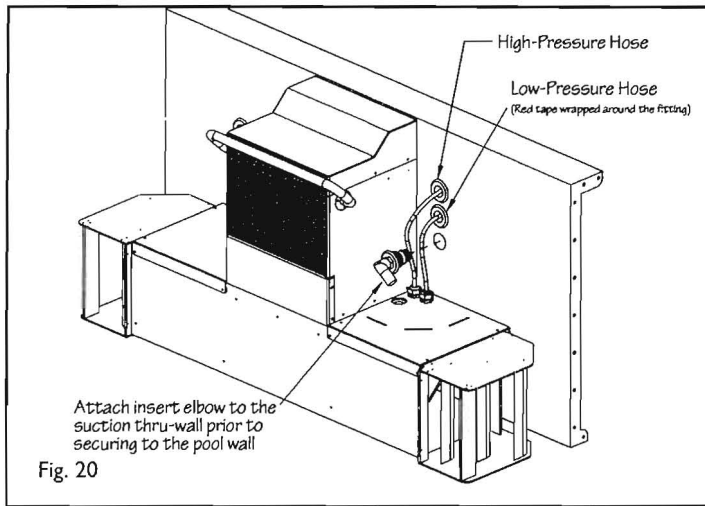


The hose with the red tape wrapped around the fitting is the low-pressure hose and should be inserted into the lower of the two swim current thru-walls. The high-pressure hose is to be inserted into the higher fitting.

Install the Water Quality System pre-plumbed thru-wall assemblies as shown in Fig 19. Make sure to secure one of the insert elbows into the Water Quality Suction fitting. The elbow must be facing down and away from the propulsion housing (Fig 20).

Optional Underwater LED Lights

If the optional underwater LED lights have been purchased, then the lens barrel should be installed at this time as well. Use a sharp utility knife to cut a round in the liner, using the hole in the panel as a template. Install the lens barrel as shown in Fig 21.



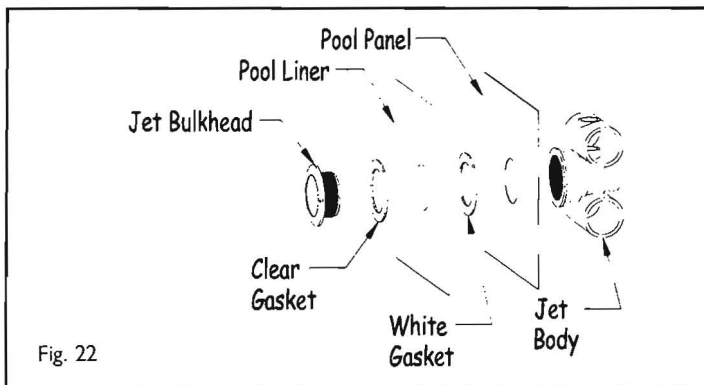
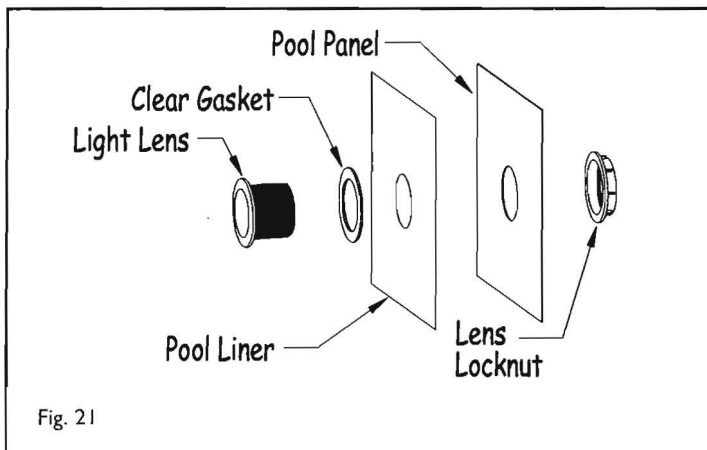
Optional Hydrotherapy Jets

If the jet suction holes in the panel have been cut the panel in the "Alternate" position (above the benches) then install that fitting at this time. Use a sharp utility knife to cut a round in the liner, using the hole in the panel as a template. Install the thru-wall fitting as shown in Fig 16.

The plumbing between the suction fittings and the jet pump should be completed prior to starting to fill again as detailed in the Jet Supplemental Guide. Once this is completed, close the ball valve. This will allow you to continue filling the pool without having to plug the suction fittings from inside the pool.

The four jet fittings can now be installed as well. Use a sharp utility knife to cut a round in the liner, using the hole in the panel as a template. Install the thru-wall fitting as shown in Fig 22.

Before installing the four jets, refer to the Endless Pool Jet Hydrotherapy Supplemental Guide. The 1/2" (12mm) venturi piping will need to be secured to the jet body prior to permanently installing them.



14. Water Quality System

Note: If you have purchased the Optional UV Sanitizer, Optional Gas Heater or Remote Water Quality System, then refer to those Supplemental Guides at this time as these instructions will have been modified to accept this option.

The Water Quality thru-wall assemblies should be installed by this point. Attach the pre-plumbed suction assembly to the suction thru-wall. Make sure to wrap Teflon tape around the threads of the adapter that is glued into the thru-wall. The union of the pre-plumbed suction can be taken apart to make this step easier (Fig 23).

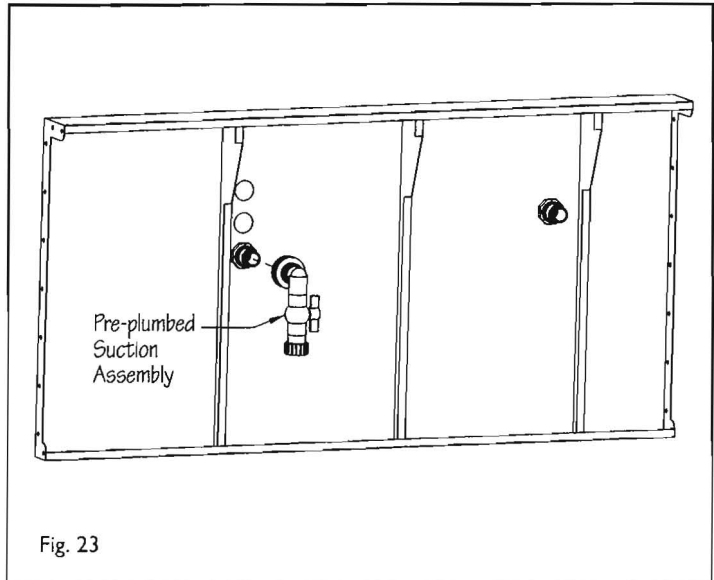


Fig. 23

Attach the circulating pump to the bottom of the pre-plumbed suction assembly. Make sure that the pump union o-ring is seated properly prior to installing (Fig 24).

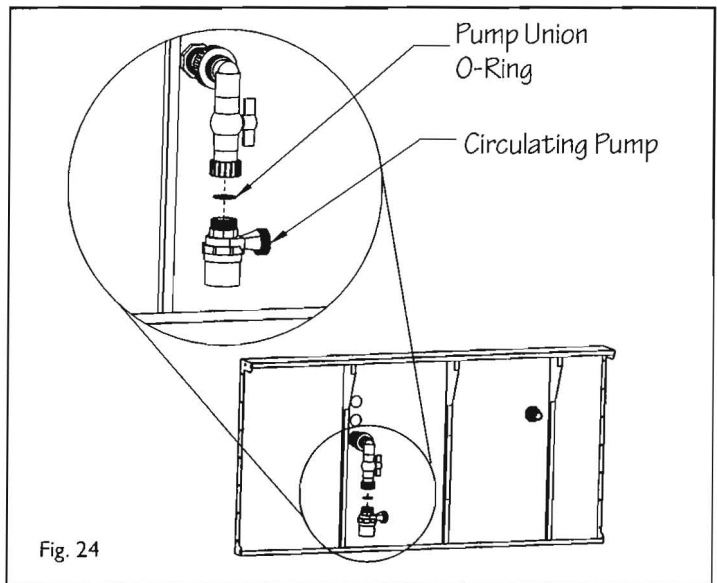


Fig. 24

Next attach the pump-to-heater pre-plumbed assembly to the pump as shown. Again, make sure that the pump union o-ring is seated properly prior to installing (Fig 25).

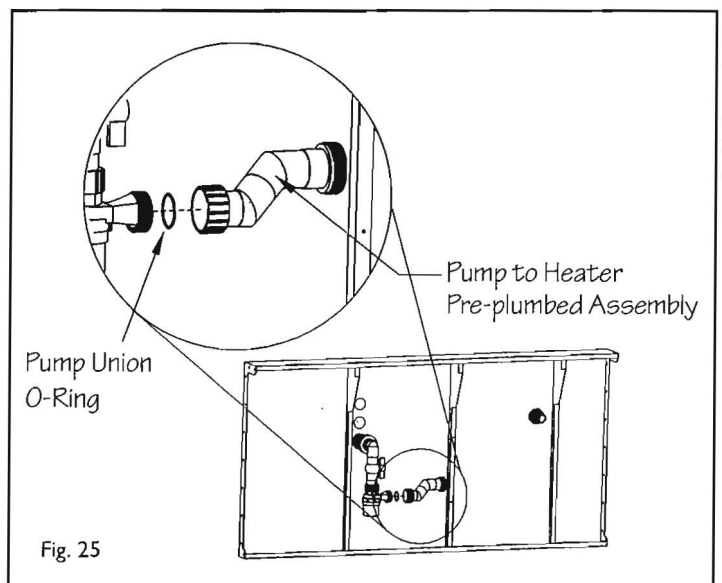


Fig. 25

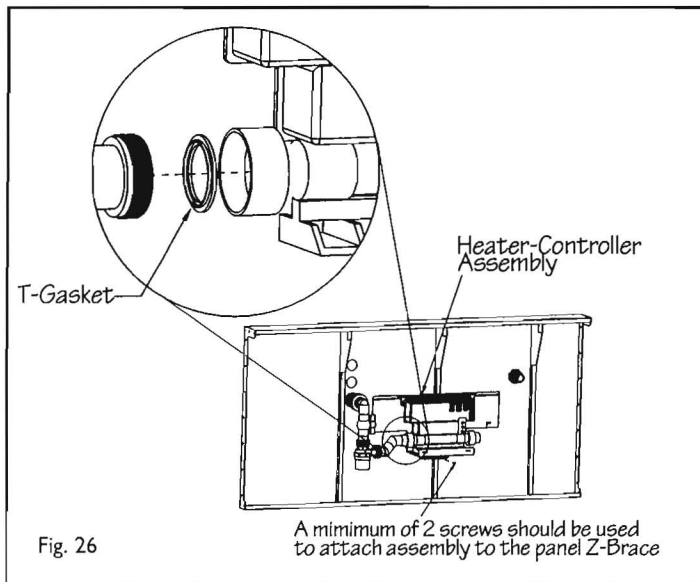


Fig. 26

A minimum of 2 screws should be used to attach assembly to the panel Z-Brace

This next step is best done with a helper. Align the heater-controller with the pump-to-heater pre-plumbed assembly. Make sure the T-gasket is seated properly prior to tightening the heater-controller union nut. The raised section of the T-gasket will sit in the groove of the tailpiece. Once the heater-controller is securely attached to the plumbing, make sure that it is level. Use the provided self-drilling screws to attach the mounting board to the Z-brace (panel stiffener). Use a minimum of 2 screws. When the mounting board hits more than one Z-brace, attach with two screws along the top. In the instances when it lands on only one Z-brace, attach with one screw along the top and one screw through the bottom slotted tab as shown in Figure 26.

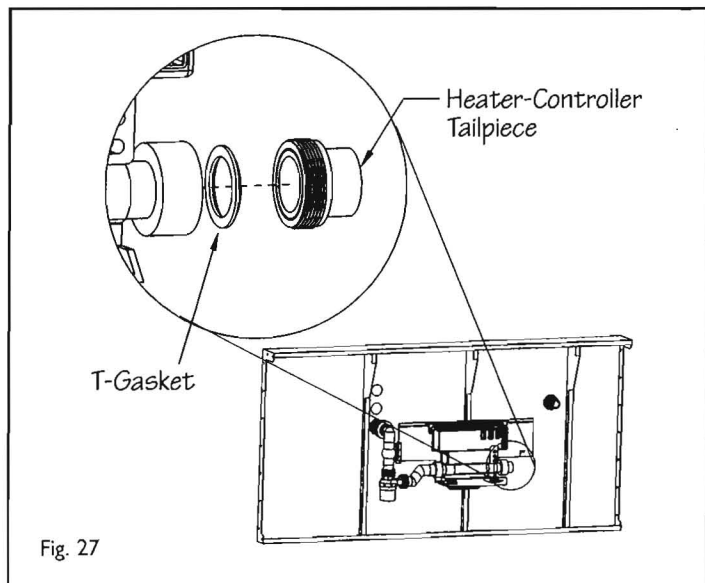


Fig. 27

At the outlet of the heater-controller attach the single heater-controller tailpiece. Again, make sure the T-gasket is seated properly prior to tightening the heater-controller union nut (Fig 27).

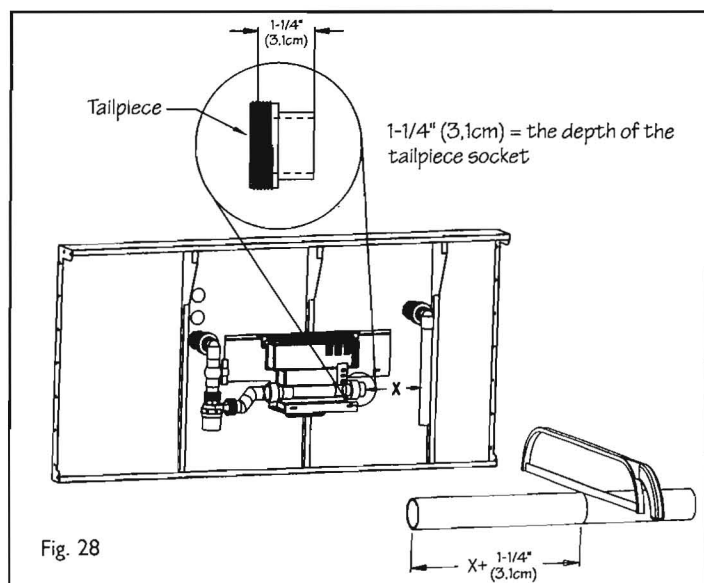


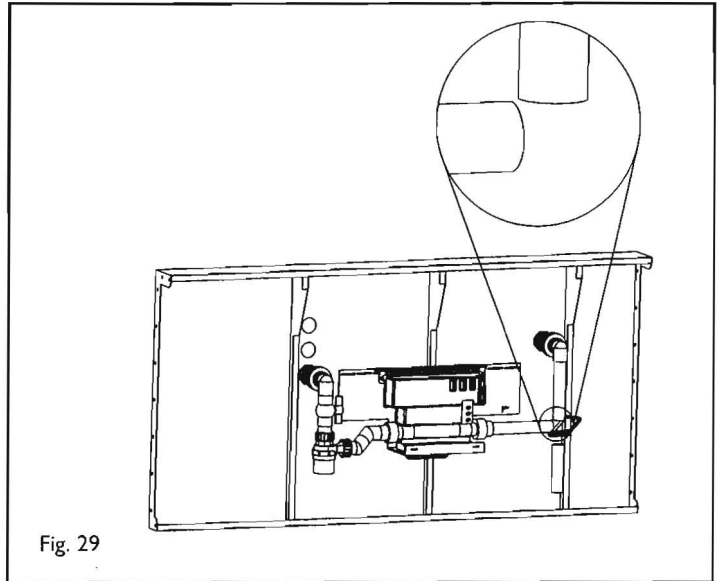
Fig. 28

Attach the pre-plumbed return assembly to the Water Quality System thru-wall. Make sure to wrap Teflon tape around the threads of the adapter that is glued into the thru-wall. The union of the pre-plumbed return can be taken apart to make this step easier.

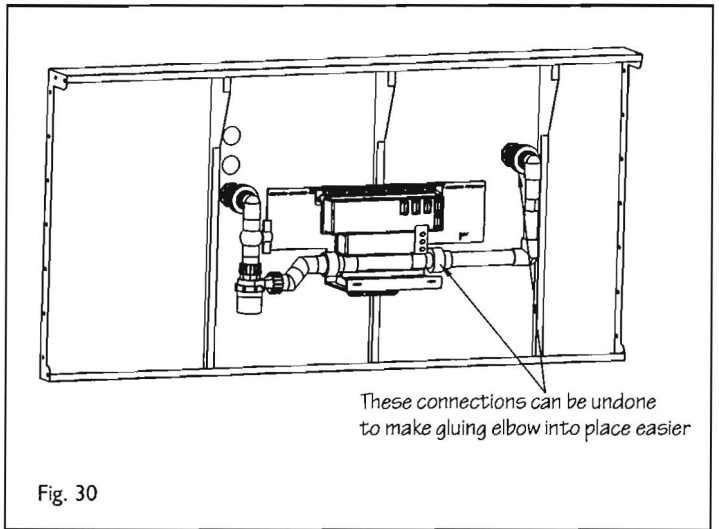
Take a measurement from the edge of the heater-controller tailpiece to the vertical pipe of the pre-plumbed return assembly. Add 1-1/4" (3.1cm) to that dimension (the 1-1/4" (3.1cm) is the depth of the tailpiece socket). Transfer this total dimension onto the provided flexible PVC and cut it to that length. Use the provided PVC cleaner and cement to glue the cut pipe into the tailpiece socket. Make sure to apply cleaner then cement to both faces of the glue joint.

14. Water Quality System (cont.)

Cut the excess pipe off of the pre-plumbed return assembly so that the end of the vertical pipe is just above the top most edge of the horizontal pipe (Fig 29).

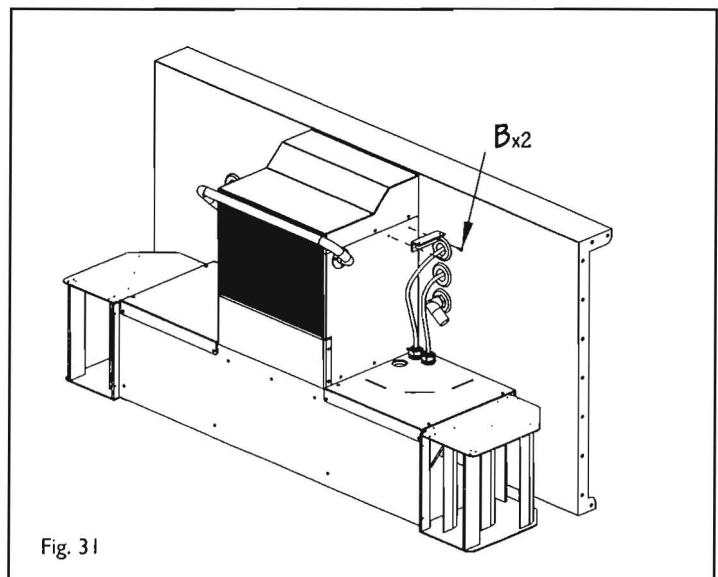


Finally, glue the slip x slip elbow onto both the vertical and horizontal pipe. Make sure to apply PVC cleaner then cement to both faces of each glue joint. Either the heater-controller union or pre-plumbed return assembly union can be broken to make this step easier (Fig 30).



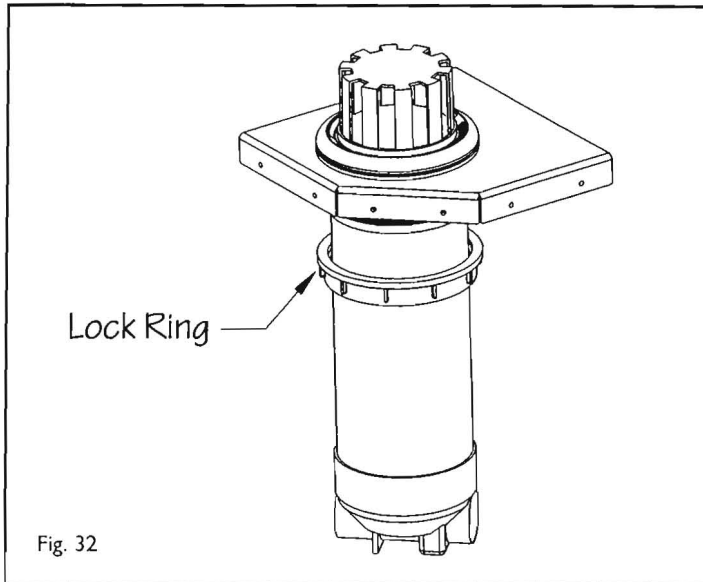
15. Skimmer-Filter Installation

If not done so already, attach the PVC angle bracket to the right side of the propulsion housing with the provided screws (Fig 31).

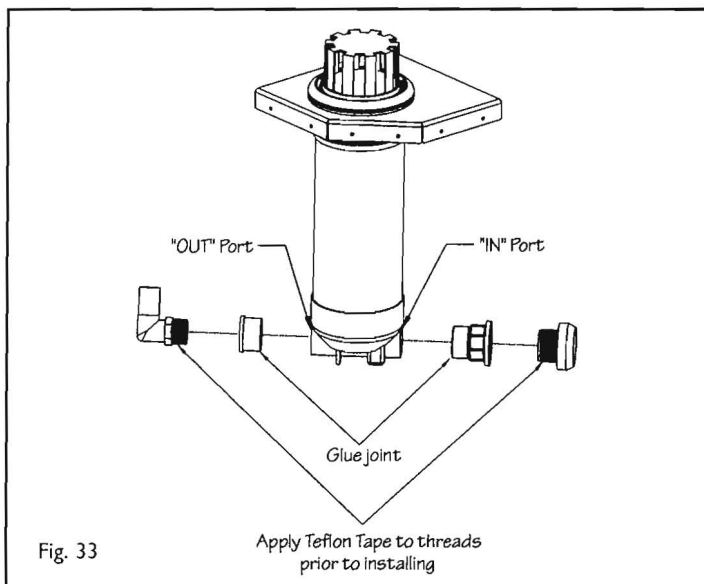


15. Skimmer-Filter Installation (cont.)

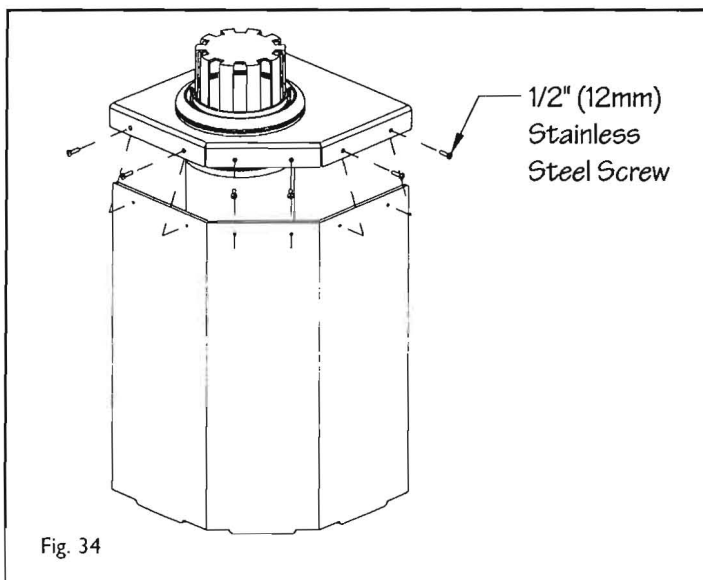
Remove the lock ring from the filter body. Loosely place the skimmer body into the shroud top. Re-install the lock ring. The lock ring should be tightened to the point where the skimmer body is seated firmly against the shroud top, but loose enough so that the skimmer body can rotate (Fig 32).



Glue the PVC straight nut into the "IN" port at the bottom of the skimmer body. Glue the 1-1/2" (3,8cm) slip x 1-1/2" (3,8cm) female pipe thread adapter into the "OUT" port. Then thread the suction fitting into the straight nut and thread the insert elbow into the adapter (Fig 33).



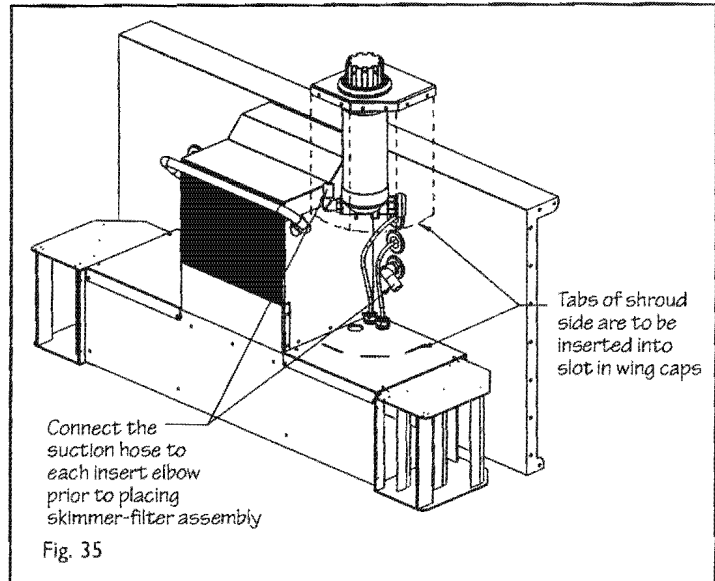
Attach the skimmer-filter shroud side to the shroud top with the provided screws as shown. The elbow attached to the bottom of the skimmer is to be closer to the housing. Spin the shroud top (pre-attached to the skimmer-filter) as necessary (Fig 34).



15. Skimmer-Filter Installation (cont.)

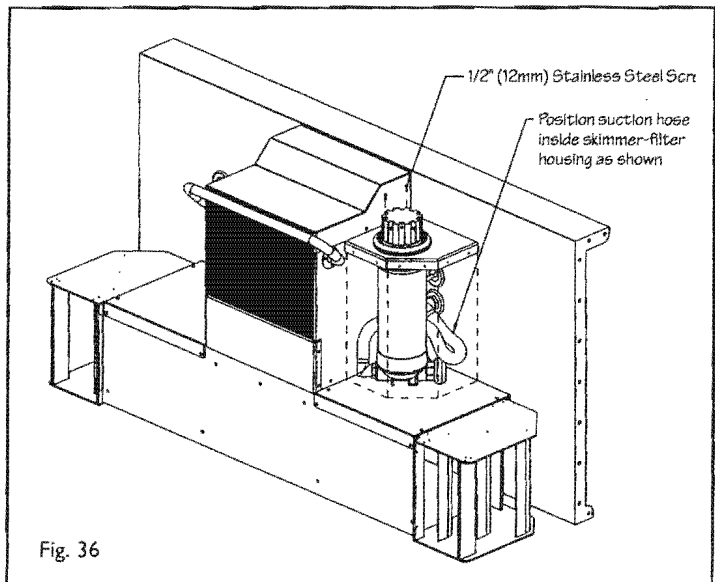
Connect the provided suction hose to the two insert elbows (1 attached to the skimmer-filter and 1 attached to the thru-wall fitting). Secure the hose with the provided plastic hose clamps (Fig 35).

Note: If installing into a Dual Propulsion Pool, then the skimmer-filter assembly will be attached to the right propulsion housing.



Next, insert each of the tabs in the bottom of the shroud into its corresponding slot in the wing cap. The excess hose should be placed behind and to the right of the skimmer-filter body.

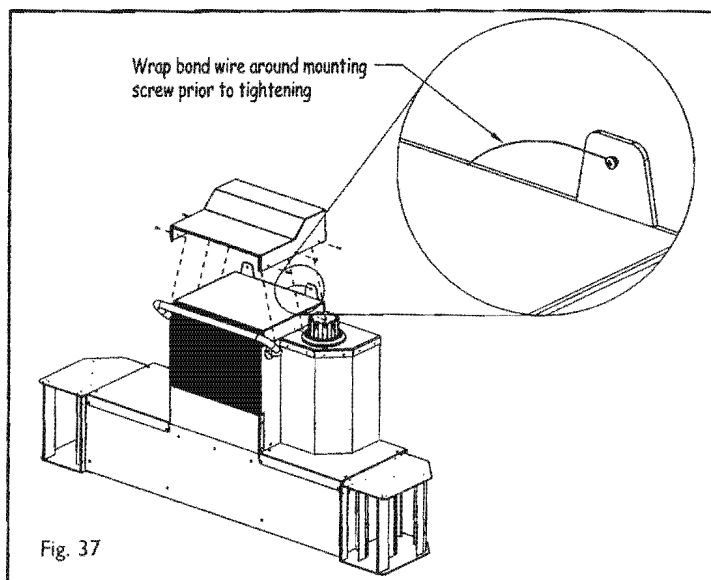
Secure the shroud top to the PVC angle bracket with the provided 1/2" (12,7mm) stainless steel screws (Fig 36).



Restart filling the pool. Once the water level is just below the Housing Lid, temporarily remove the Housing Lid. Use the provided 1" (2,5cm) self-drilling screw to attach the housing to the pool wall. Make sure to wrap the bond wire (exiting the top of the housing) around one of the screws prior to tightening (Fig 37). Continue filling the pool until the top row of the honeycomb grill (of the propulsion housing) has been covered.

16. Keypad

The keypad for the water quality system needs to be installed. The ideal place is the coping at the front of the pool. The keypad can be installed anywhere in the coping or outside vertical finish of the pool. The only constraint is the length of the keypad cord, which is 10' (3m). The keypad must plug into the heater-controller, which is most-often installed on the backside of the front panel.



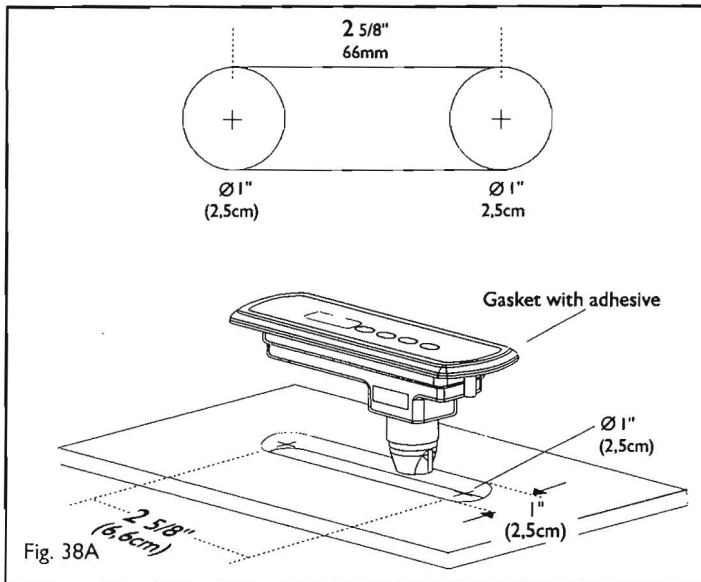


Fig. 38A

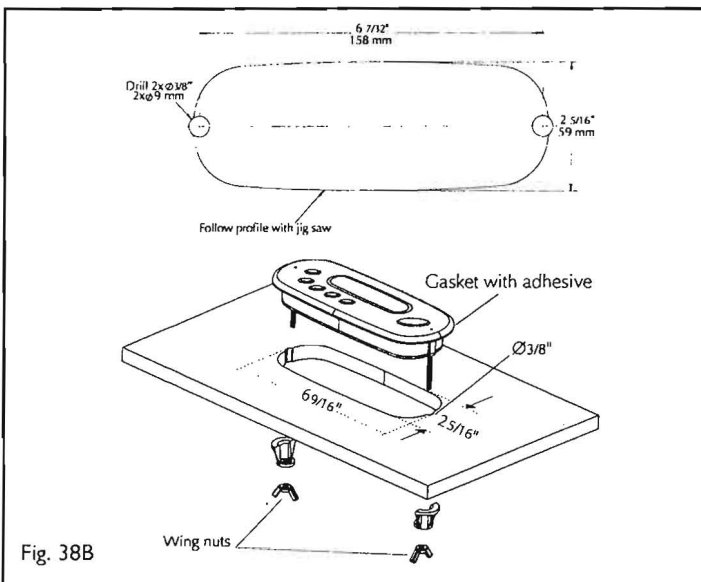


Fig. 38B

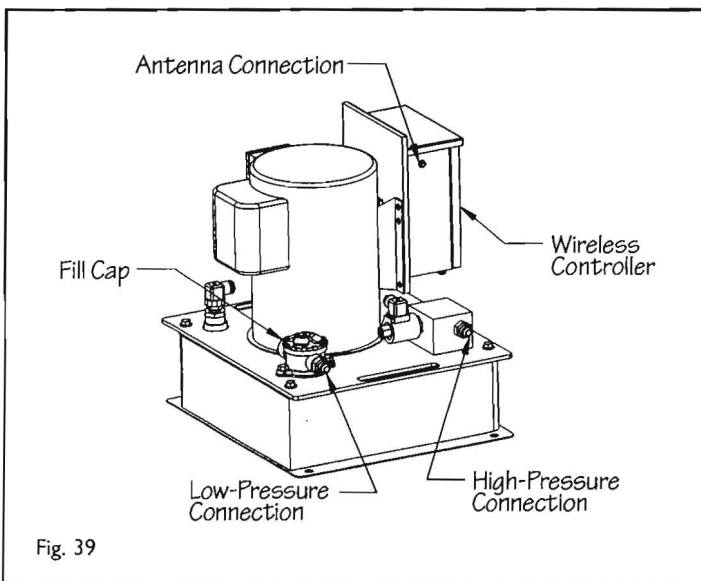


Fig. 39

4-Button Keypad Installation

Drill two 1" (2,5cm) diameter holes at 2-5/8" (6,6cm) from center to center. Then, with the appropriate saw, cut out the section between the two holes that were just drilled.

Peel the adhesive film off of the backside of the keypad. Insert the cord into the opening that was just cut out. Clean the surface and firmly press the keypad into place. Install the bracket onto the threaded studs on the back of the keypad. Secure the keypad into place with the provided wing nuts. If the surface (and sub-surface) is deeper than the threaded studs of the keypad, then the adhesive film will be sufficient securing the keypad in place (Fig 38A).

7-Button Keypad Installation

Place the provided template overtop of where the keypad is to be located. Drill two 3/8" (9mm) holes at 6-7/32" (15,8cm) from center to center, in the exact position according to the template. Cut out and remove the material between the two holes following the profile of the template.

Peel the adhesive film off of the backside of the keypad. Insert the cord into the opening that was just cut out. Clean the surface and firmly press the keypad into place. Install the bracket onto the threaded studs on the back of the keypad. Secure the keypad into place with the provided wing nuts. If the surface (and sub-surface) is deeper than the threaded studs of the keypad, then the adhesive film will be sufficient securing the keypad in place (Fig 38B).

17. Power Unit

The power unit should be placed on flat and level surface. If the power unit is to be placed outside, we recommend selecting our Outdoor Power Unit with Weather Guard to protect it against everyday elements. Whether placed indoors or outdoors, this is an air-cooled unit and must have ample ventilation. Therefore, a minimum of 12" (30,5cm) of air spaced must be provided on all sides of the power unit. In addition, the power unit needs to be checked periodically for maintenance and should be accessible.

The power unit is heavy; take care when placing the power unit.

Once the power unit is in place, connect the run hoses. The low-pressure hose, lowest hydraulic hose on the front panel, gets connected to the connection on the black fill cap. The high-pressure hose gets connected to the fitting on the high-pressure manifold (Fig 39).

Endless Pools, Inc. supplies a special vegetable-based hydraulic fluid created for this application and this equipment. Do not use a substitute hydraulic fluid. Extra hydraulic fluid is provided for longer hose runs. Any excess fluid should be retained for future use.

Make sure that the power is turned off to the power unit. Remove the fill black fill cap and remove the oil filter by lifting it out of fill opening. Use the provided paper funnels and fill the reservoir to within 2" (5cm) of the top. Once filled, replace the oil filter and ensure that it is seated properly before putting the fill cap back on. If you have selected a longer run hose, we have provided extra fluid. In this case, turn the unit on and let it run for one minute to fill the run hoses. Turn the power off, remove the fill cap and oil filter, and add fluid as needed. Again, you want to fill the reservoir to within 2" (5cm) of the top.

The power unit controller comes equipped with an automatic timer shutting off the system 30 minutes after receiving its last command. Because the controller "remembers" the last speed at which is turned off, it will return to that same pace when it is turned back on.

18. Electrical Wiring Connections - 60hz

The following is for the U.S. and countries with a similar power supply.

Refer to the chart on the next page for the electrical requirements for the product chosen. When wired as recommended, the system will redistribute power as needed so that the Water Quality System and Swim Current systems will not consume more amperage than the breaker will allow.

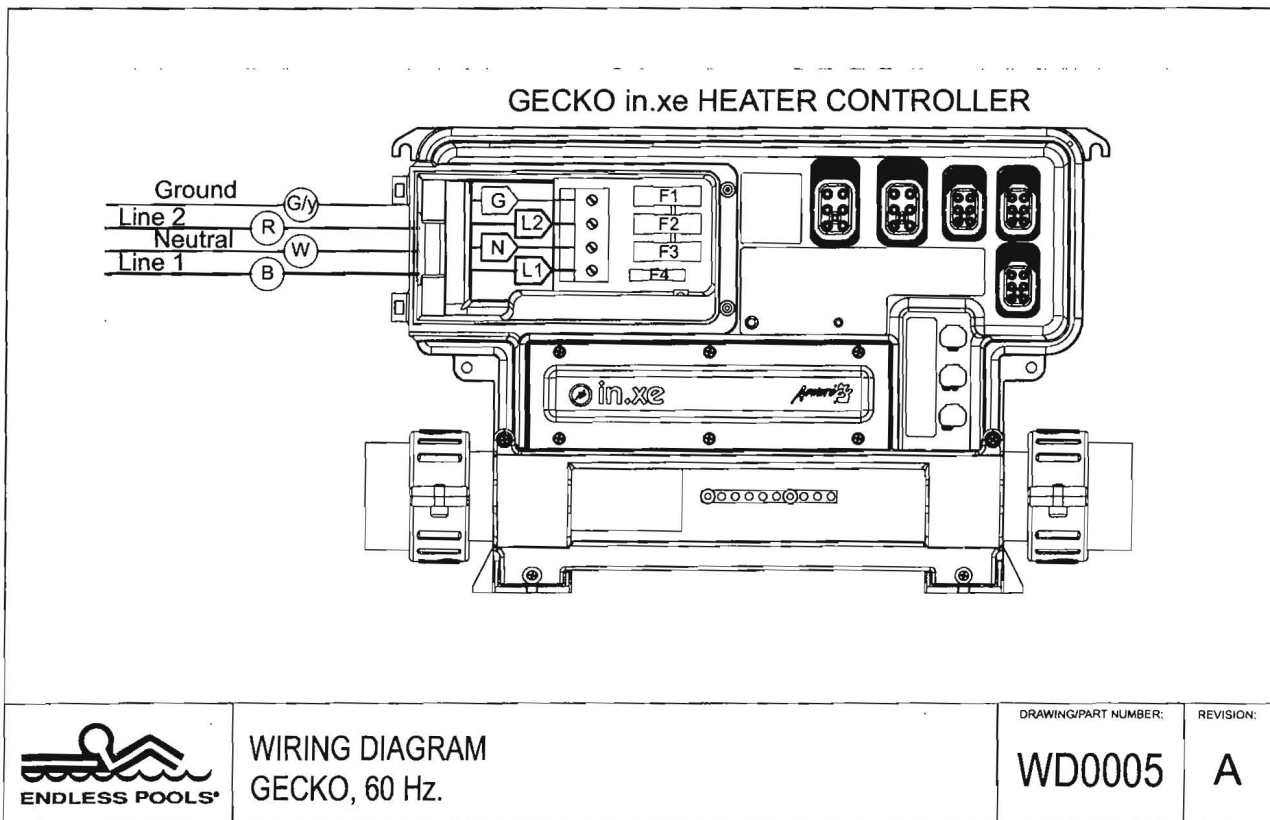
It is critical that wires be secured tightly under the set-screw terminals of the contactor inside the Hydraulic Power Unit controller as well as the Water Quality System heater-controller. Any gap between the wires and/or terminals can cause arcing. Arcing is an unsafe condition that can cause property damage, injury, or death.

Refer to the chart on the next page for the minimum gauge wire needed for the product chosen. All connections should be made by a licensed electrician. An electrical whip (containing 4 wires) will be provided to supply power from the Hydraulic Power Unit controller to the Water Quality System heater-controller (attached to the front panel). The length of this whip is based on the length of your hydraulic hose specified in your order.

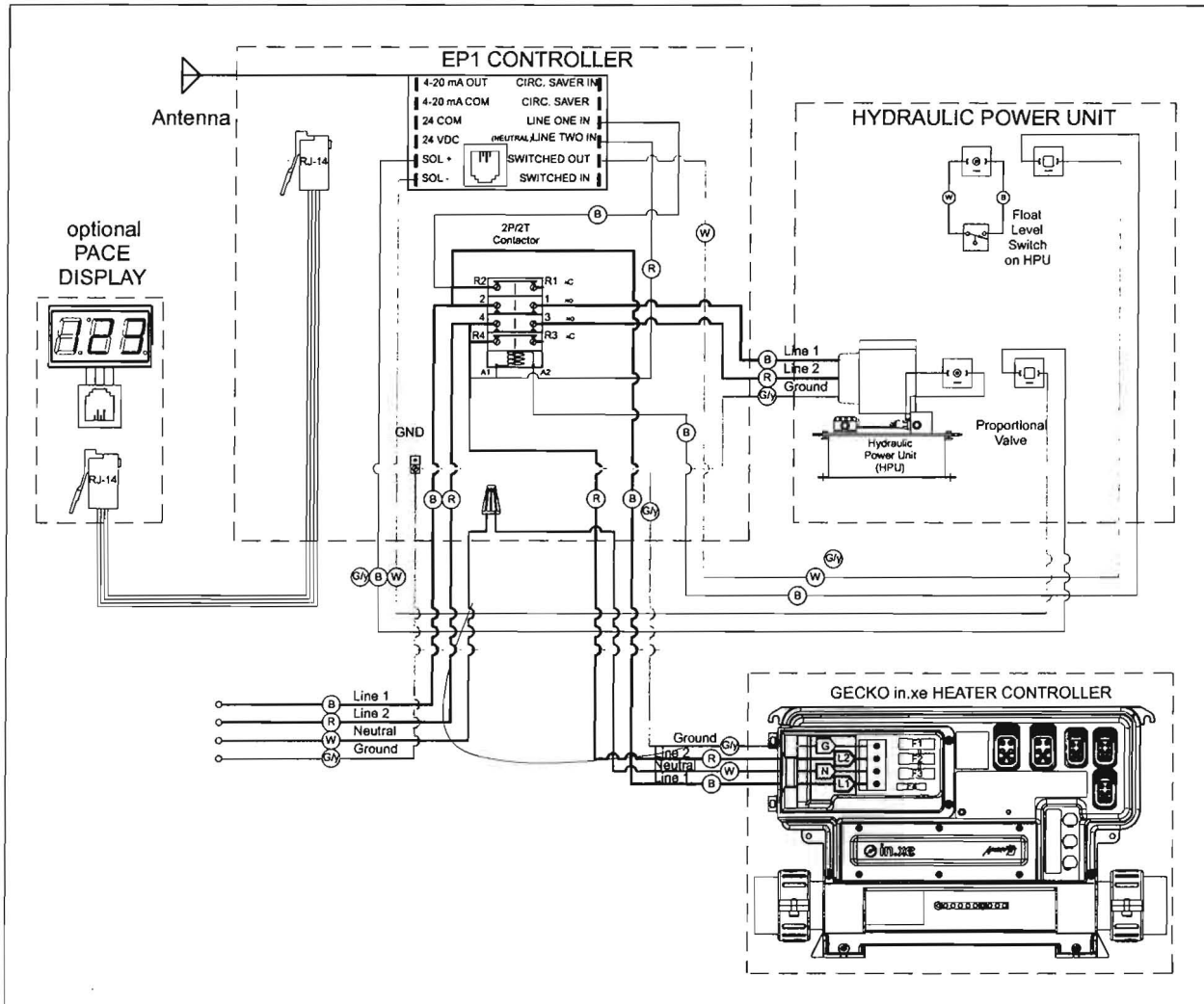
We recommend that you have your electrician install a shut off within 5' of where you intend to place your power unit. You can have your electrician install this prior to your pool being delivered.

Connect the provided whip to the Hydraulic Power Unit Controller first. Remove one of the unused knockouts in the bottom of the enclosure. Secure the whip end to this open knockout. Connect the black wire to the R2 terminal (top left) of the contactor. Connect the red wire to the R3 terminal (bottom right) of the contactor. Connect the white wire to white wire in the incoming power whip (the white wire in the incoming power whip should be connected to the load neutral of the GFCI breaker). Connect the green wire to the ground/earth terminal at the base of the enclosure.

Run the opposite end of the whip to the heater-controller poolside. Connect the whip to the opening in the heater controller. Connect the black wire to the L1 terminal (bottom) inside the heater controller. Connect the red wire to the L2 terminal (second from the top) inside the heater controller. Connect the white wire to the N terminal (second from the bottom inside the heater-controller). Connect the green wire to the G terminal (top) inside the heater controller.



Electrical Wiring Connections - 60hz



WIRING DIAGRAM
5 & 7.5 HP, 60 Hz. EP-1 CONTROLLER with CIRCUIT SAVER

DRAWING/PART NUMBER: **WD0001** REVISION: **A**

Standard Endless Pool	220v 30amp GFCI Protected	10AWG
Performance Endless Pool	220v 30amp GFCI Protected	10AWG
High-Performance Endless Pool	220v 50amp GFCI Protected	6 AWG
Elite Endless Pool	220v 50amp GFCI Protected	6 AWG
Dual Propulsion Endless Pool	(Two) 220v 30amp GFCI Protected	10AWG
Optional Hydraulic Treadmill	220v 30amp GFCI Protected	10AWG

19. Electrical Wiring Connections - 50hz

The following is for the U.K. and countries with a similar power supply.

A Ground Fault Circuit Interrupter (GFCI) or Residual Current Device (RCD) is a device that shuts off an electrical circuit when it detects that electricity is flowing along an unintended path. The path could be through a person or water. The purpose of this device is to reduce the chance of electrical shock. All components should be GFCI or RCD protected. When wired as recommended, the system will redistribute power as needed so that the Water Quality System and Swim Current systems will not consume more amperage than the breaker will allow. Important Note: the maximum amp draw of the pool when wired in this configuration is 28 amps. The size of the breaker should be dictated by local electrical code.

[REDACTED]

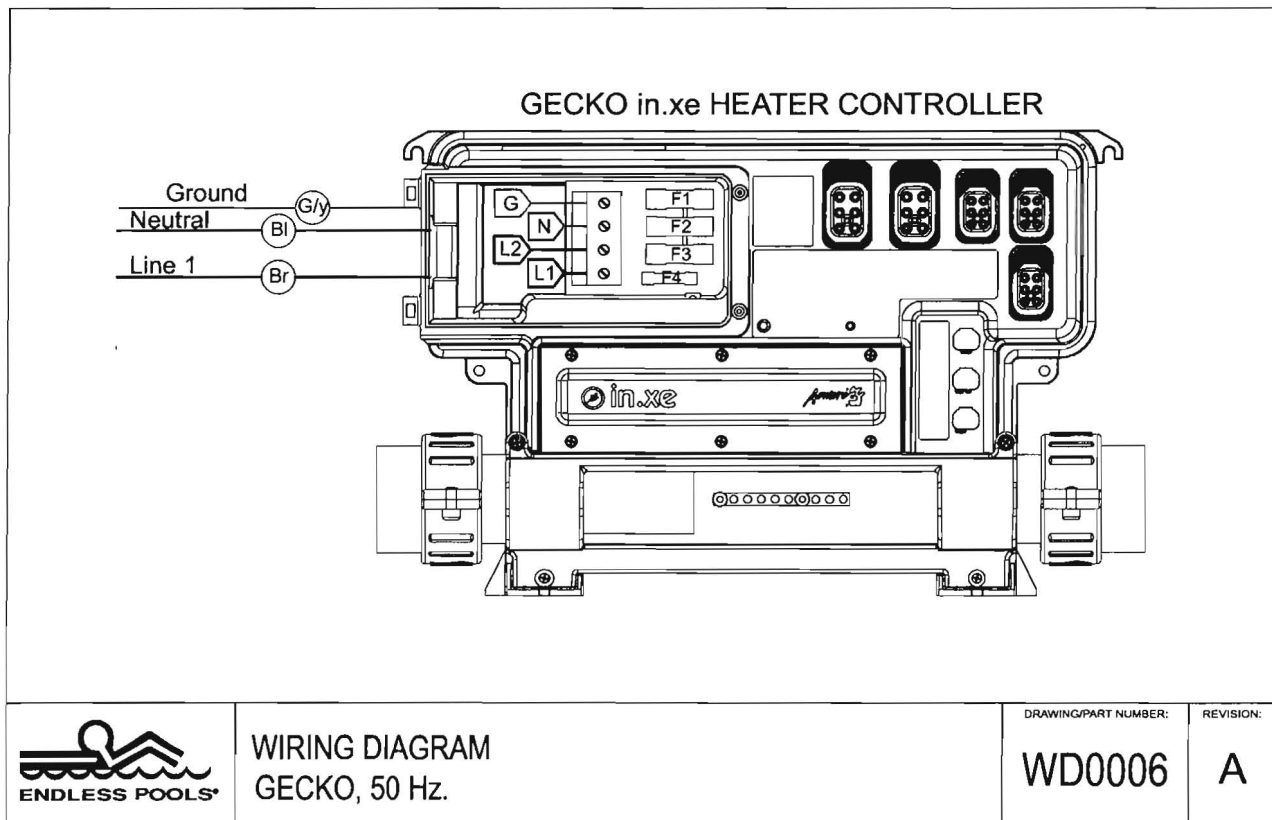
It is critical that wires be secured tightly under the set-screw terminals of the contactor inside the Hydraulic Power Unit controller as well as the Water Quality System heater-controller. Any gap between the wires and/or terminals can cause arcing. Arcing is an unsafe condition that can cause property damage, injury, or death.

Refer to the chart on the next page for the minimum gauge wire needed for the product chosen. All connections should be made by a licensed electrician. An electrical whip (containing 4 wires) will be provided to supply power from the Hydraulic Power Unit controller to the Water Quality System heater-controller (attached to the front panel). The length of this whip is based on the length of your hydraulic hose specified in your order.

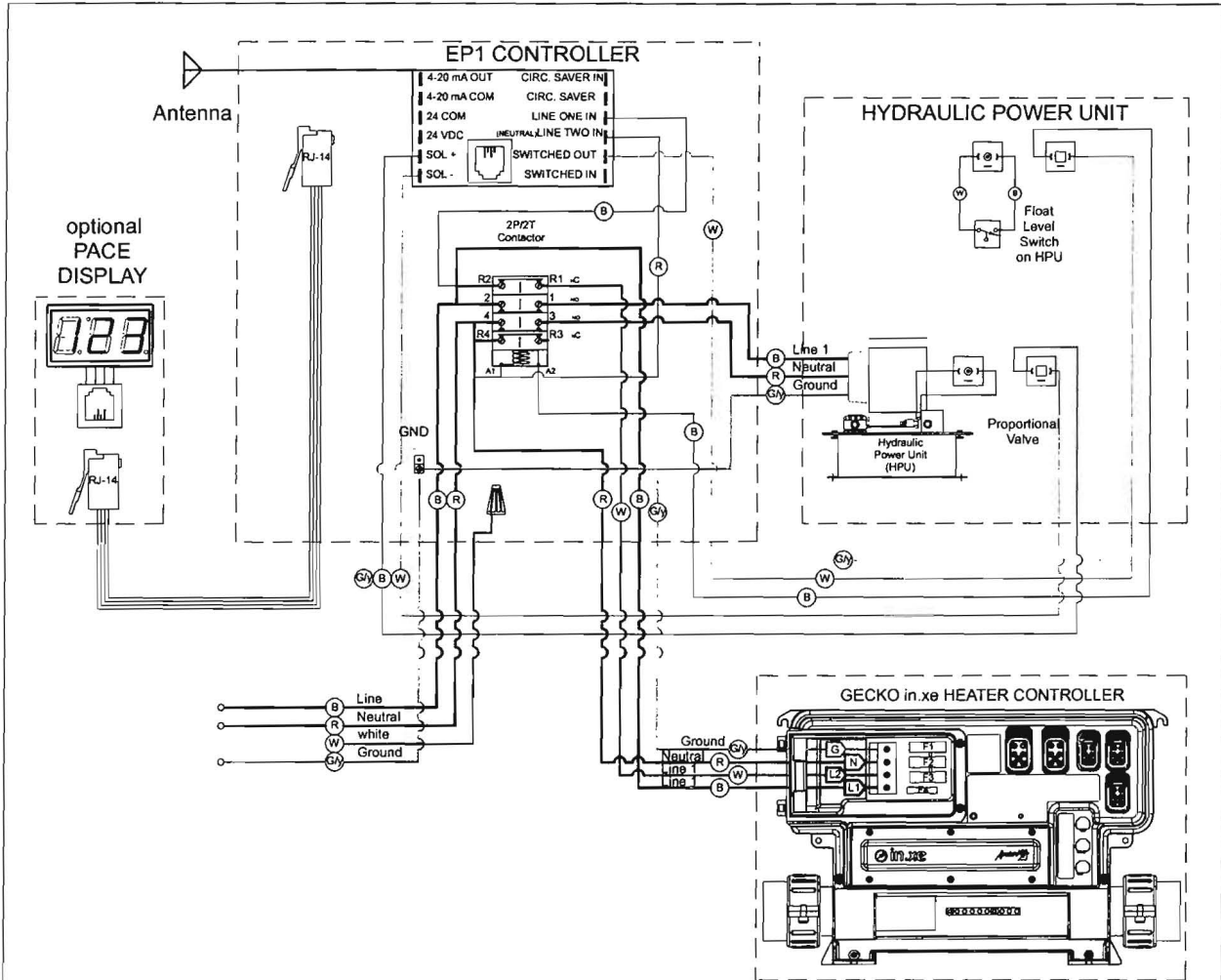
We recommend that you have your electrician install a shut off within 5' of where you intend to place your power unit. You can have your electrician install this prior to your pool being delivered.

Connect the provided whip to the Hydraulic Power Unit Controller first. Remove one of the unused knockouts in the bottom of the enclosure. Secure the whip end to this open knockout. Connect the black wire to the R2 terminal (top left) of the contactor. Connect the red wire to the R4 terminal (bottom left) of the contactor. Connect the white wire to the R1 terminal (top right) of the contactor. Connect the green wire to the ground/earth terminal at the base of the enclosure.

Run the opposite end of the whip to the heater-controller poolside. Connect the whip to the opening in the heater controller. Remove the copper jumper that is connected to terminal L1 and L2. Connect the black wire to the L1 terminal (bottom) inside the heater controller. Connect the red wire to the N terminal (second from the top) inside the heater controller. Connect the white wire to the L2 terminal (second from the bottom) inside the heater-controller. Connect the green wire to the G terminal (top) inside the heater-controller.



Electrical Wiring Connections - 50hz



	TITLE:	DRAWING/PART NUMBER:	REVISION:
	WIRING DIAGRAM 5 & 7.5 HP, 50 Hz. EP-1 CONTROLLER with CIRCUIT SAVER	WD0002	A

Standard Endless Pool	220v 32amp RCD Protected	6mm ²
Performance Endless Pool	220v 32amp RCD Protected	6mm ²
High-Performance Endless Pool	220v 50amp RCD Protected	10mm ²
Elite Endless Pool	220v 50amp RCD Protected	10mm ²
Dual Propulsion Endless Pool	(Two) 220v 32amp RCD Protected	6mm ²
Optional Hydraulic Treadmill	220v 32amp RCD Protected	6mm ²

* Cross section area.

20. Bonding and Grounding

All of the electrical equipment that we supply is UL or CSA approved and must be installed in accordance with local electric codes by a licensed local electrician. Bonding and Grounding is an important part of that process. All electrical components have bonding lugs and should be bonded together and to the steel pool panels. A bonding conductor shall be solid copper not smaller than 8 AWG and may be insulated, covered or bare. If new construction is involved where reinforcing rods are installed in the concrete under or adjacent to the pool this should be included in the bonding circuit. Each of the pieces of equipment should be separately grounded.

A #8AWG bare copper wire and bonding kit will be provided in the hydraulic hose/electrical whip box. This wire will be the same length as your electrical whip. Connect this wire to your power unit and run it, with your hydraulic hose and whip, to the front of the pool. Inside the bonding kit there will be a machine screw and nut, a bonding lug, and a drill bit. Attach the bonding lug to the Z brace just under the heater controller. Feed the bonding wire through the bonding lug on the Z brace, through the opening in the heater controller mounting board, and connect it to the bonding bar on the heater controller.

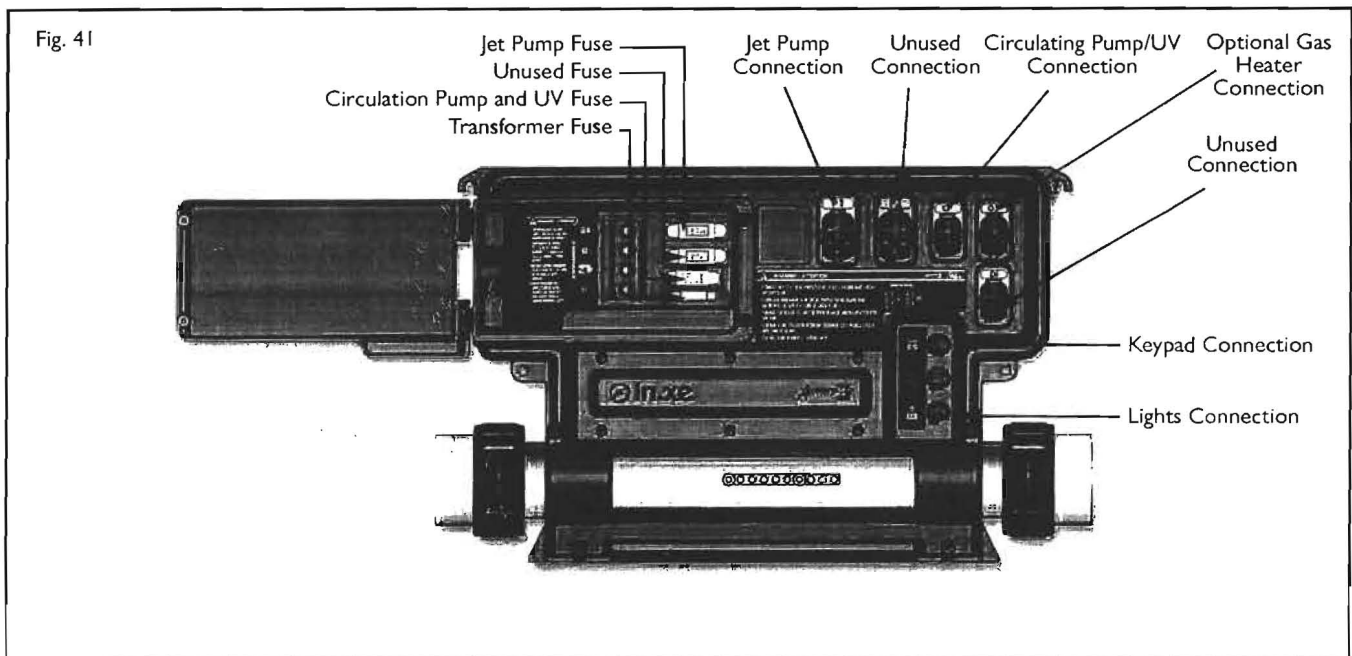
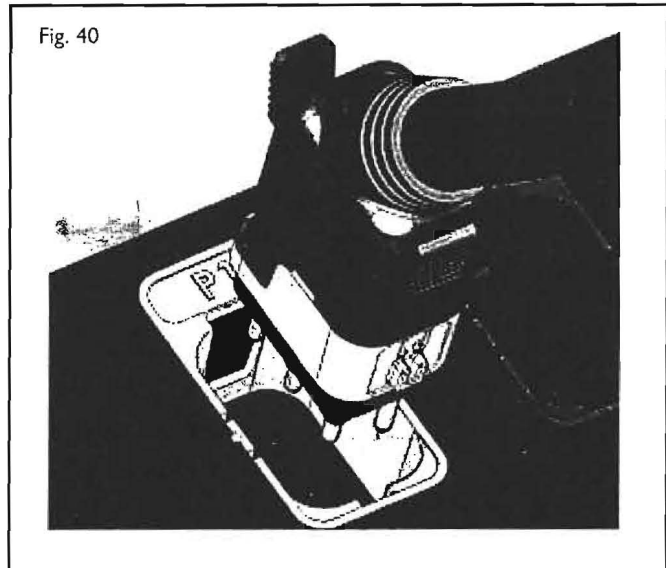
21. Heater-Controller Plug-In Connections

The Heater-Controller (In.xe) features in.link connectors with colored and tagged polarizers. This plug and connector technology has been specifically designed for easy and safe assembly. The tags are interchangeable depending on the output; the polarizers are designed to avoid misconnections.

In.link connectors are easily and conveniently accessible from the front of the Heater-Controller offering a wide range of possible connection configurations. In.link connectors come in 3 sizes (HC, LC and low voltage) for all types of inputs and output devices.

They all include an integrated latch that keeps them safely in place and provides audible and tactile feedback when properly connected.

Finally, colored and tagged polarizers provide a definite advantage in easily configuring output devices. Refer to Figure 41 for specific connections for the provided equipment.



22. Water Quality System Isolation Cover

Now that the Water Quality System has been installed and your electrician has completed the wiring, you should install the Water Quality System Cover. Place the cover over the entire water quality system. Use the provided 1/2" (12mm) screws to attach the isolation cover to the heater controller mounting board (Fig 42).

23. Hydraulic Hose Connections

Install the long hydraulic hoses between the Power Unit and hydraulic hoses at the front of the pool. These hoses are supplied by Endless Pools, Inc. to the length specified. Often they are not shipped with the pool as the exact length is unknown at the time of shipment. Please order these hoses a week before they are needed to allow shipment by UPS ground. Two hoses up to 25 feet (7,6m) in length are supplied at no additional charge. It is best to use hoses close to the length you need rather than simply going with the standard 25 (7,6m) feet. There is an additional charge for lengths in excess of 25 (7,6m) feet.

Remove the protective plugs and connect the 2 hydraulic hoses to the 2 ports on the Power Unit and tighten firmly. Do not over-tighten. The hose connecting to the fill cap on the Power Unit is the return (low pressure) hose, which gets connected to the lowest hydraulic hose at the front panel. The high-pressure hose, which is connected to the fitting on blue high pressure manifold, connects to the higher hose at the front of the pool*. Adapters have been provided in the hydraulic hose/electrical whip box to connect the hydraulic run hose to the hoses penetrating the front panel. The hoses that go through the panels are a smaller diameter than your run hose, you will find adapters in the Electrical Whip box to make these connections. If the hoses you ordered are too short and you need longer hoses, call Customer Service. Extra care should be taken that these hoses are cushioned when they pass by anything that could reverberate. This will ensure a quieter installation. Use simple pipe insulation and clips for this purpose.

*See Figure 34 on page 16.

24. Optional Antenna Extension

Your swim current remote operates by radio waves. Should the power unit be placed far away from your pool, the remote control may not operate efficiently. In order to correct this, you should install the Antenna Extension Kit.

If your antenna has already been installed, disconnect it from the side of control box. Install the antenna extension wire finger tight onto the control box connection. Once the antenna has been positioned closer to the pool, connect the other end of the extension wire to the antenna. Should you need a longer wire than what was provided, you can purchase coaxial cable locally.

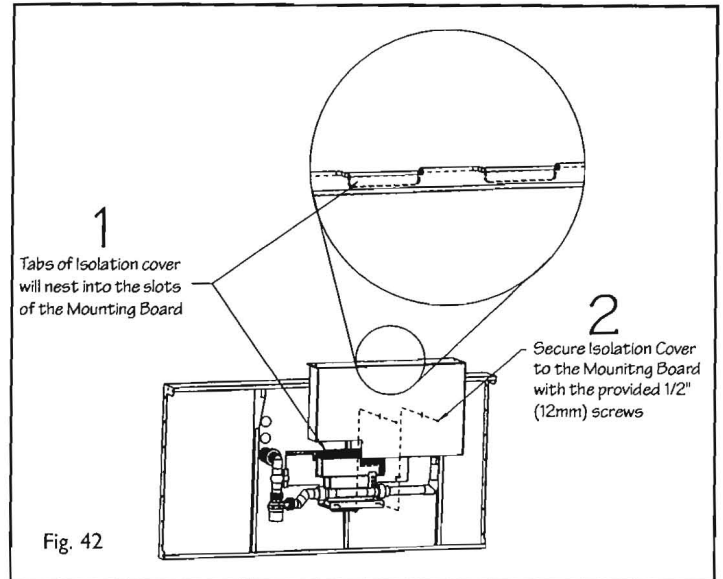


Fig. 42

25. Optional Retractable Security Cover Systems

Our most popular option and strongly recommended, the Retractable Security Cover system protects children and pets from the pool while keeping in temperature and humidity. With some installations, suitable access for this roll-up cover system is complex and should be discussed with an Endless Pool design professional during the planning stage. The Supplemental Guide describes the cover installation more fully. If your pool is to be outside, we can provide you with a cover pump to remove any rain water that may accumulate.

The most popular configuration for this system is to have the cover roll off the rear of the pool. Other alternatives are possible if space is limited. These are discussed in more detail in the Supplemental Guide. The kit includes the roller mechanism for the width of pool purchased, appropriate lengths of track, an aluminum leading edge, and the rugged fabric which floats on the water surface suspended between the parallel tracks. Two steel brackets to mount the roller mechanism at one end of the pool are available.

The optional Retractable Security Cover system is manually powered. We believe that this system is optimal for our compact pool and when installed correctly provides a simple means of covering the pool.

The aluminum track on either side of the pool is a requirement of the retractable security cover option. Covering this track is possible but increases complexity and will add to the cost of installation.

Optional Automatic Retractable Security Cover System

Offered in two versions, the Automatic Retractable Security Cover System is rapidly becoming one of our most popular options. Operated with the turn of the key, the cover retracts easily making it ideal for people who want the convenience of automation or lack the strength to operate one manually.

The Below Deck version can be fully integrated into any custom finish. The cover mechanism must be mounted at the front of the pool. Please refer to the Supplemental Guide for more information on this option.

The Above Deck can be mounted at either the front or the back of the pool and is compatible with any of our coping options. The Above Deck version comes with a convenient bench cover offered in a variety of colors to complement any decor. Please refer to the Supplemental Guide for more information on this option.

Optional Solar Blanket Roll Up System

Endless Pools, Inc. supplies a Solar Blanket for all Endless Pool sizes, if the Retractable Security Cover has not been chosen. For those who wish it to serve as a permanent cover, a simple PVC pipe may be used to roll up the blanket for storage when the pool is in use. For this purpose, we supply PVC clips and PVC pipe long enough for your pool width. Depending on the width of the pool the PVC pipe will come in one or two pieces with a coupling attached to one end of the one piece of pipe. Using the PVC cleaner and PVC cement you received in your plumbing kit, glue the second piece of pipe into the open end of the coupling. Alternatively, the roller mechanism from the retractable security cover may be used in conjunction with a length of 3" (7,6cm) diameter PVC pipe to roll up the blanket. This optional solar blanket roll up system is available from the Endless Pools, Inc. Customer Service Department.

26. Optional UV Sanitizer

Ultra-violet water purifiers provide a chemical-free method of maintaining your pool by destroying organic pollutants as the water passes through the treatment chamber. This reduces the need for chemical sanitizers such as chlorine. Our UV system is particularly suitable for users who are sensitive to the usual swimming pool disinfectants, heavy metals from ionic purifiers or allergic to chlorine.

UV still needs to be used in conjunction with a sanitizer to "burn off" the dead organic matter killed by the UV system. We recommend simply using trace amounts (0.5 - 1 ppm) of regular household bleach, such as Clorox or other generic brands. This level is lower than the EPA recommended chlorine level for drinking water.

27. Optional Treadmill (Manual or Hydraulically Driven)

Turn your Endless Pool into a complete home gym with the addition of an Aquatic Treadmill.

Use the treadmill with the current on or off to vary the intensity of your walk or jog. Take it to the next step and use the aquatic treadmill to cross-train in the Endless Pool. Alternate between swimming and walking or jogging to get a full body workout! Our new Aquatic Treadmills offer a spacious 20" (50cm) wide belt for walking or running. Both manual and hydraulically powered versions are available. Our underwater treadmills are typically installed in pools with deeper panels.

28. Optional Hydrotherapy Jets System

By providing a supplementary pump that is operated by the heater controller and using the secondary suction and four venturi-type jets through the wall of an Endless Pool, the user can enjoy the therapy benefits of jets in addition to the variable speed swim current. Installation is relatively straightforward but roughly doubles the plumbing work required. The kit provided by Endless Pools Inc, includes everything necessary with the exception of the 1-1/2" (3,8cm) schedule 40 PVC pipe. Detailed instructions are included in the Supplemental Guide along with a typical layout drawing. When jets are installed it is important to leave access to the outside of the pool panel for service. The holes for the jets should be cut before installing the liner. If the pool is located outdoors where freezing is an issue, care must be taken with the jet system plumbing. Additional insulation should be considered under these conditions. Call Customer Service with any questions about this limitation.

29. Optional Underwater Lights System

Underwater Lights are an important aesthetic option. Typically located on either the side or the end wall of the pool, these two lights thread into niches that are installed after the liner is in place. The holes for these niches are cut using the holesaw provided before the foam and the liner are installed. Directions come with the lights which are packaged in the pool crate. These directions are also found in the Supplemental Guide. Each light consists of a dry niche which serves as a porthole. The low-voltage light threads into this porthole outside the pool. For outdoor installations a weather resistant can is provided for added protection. A 22' (6,7m) cord connects these lights and plugs directly into the heater controller. The lights are then operated by the pool-side controls.

30. Optional Corner Step

To assist with access to the Endless Pool, optional Corner Steps are available inside the Endless Pool in any of the four corners. For a more complete discussion about access to an Endless Pool please refer to the Planning Guide. These optional steps are approximately 11" (28cm) high and are secured to the internal Water Return Channel. They are easily installed using a phillips screwdriver. If you wish to order them after the pool has shipped, contact the Customer Service Department and they will ship one to the address provided. The optional Corner Step is described more fully in the Supplemental Guide.

31. Optional Interior Stair

For those needing an easier route into the pool our Optional Interior Stair provides easy access. Typically installed with fully in-ground Endless Pools, the Interior Stair allows the user to gradually enter the water from deck height. Interior stair configurations depend on the panel height purchased. Optional Interior Stairs are described more fully in the appropriate Supplemental Guides. The Interior Stairs should be ordered with the pool to avoid substantial additional freight charges due to the size and weight of the box needed to ship the steps.

32. Optional Swim Mirror

The Swim Mirror helps with stroke technique and makes your swimming workout fun. The Swim Mirror, described more fully in the Supplemental Guide, is made from durable stainless steel and is attached with three stainless steel screws which are already attached to the housing just below the swim propulsion housing. When a deeper pool is selected, make sure that the shallower area extends at least 13" (33cm) beyond the front Water Return Channel to accommodate the Swim Mirror. Swim Mirrors are easily sent by UPS ground and may be ordered later.

33. Optional Synthetic Coping System

An ideal solution for indoor installations, the Synthetic Coping System finishes off an Endless Pool quickly and easily. Typically used when the pool is installed partially or fully aboveground,

the Optional Synthetic Coping System provides a finished 9-3/4" wide waterproof edge to your pool. Made of synthetic boards and corner pieces with shiplapped joints, the system comes in a variety of colors. Please refer to Supplemental Guide for additional installation information.

The following information is a brief introduction into using and maintaining your Endless Pool.

It goes over filling your pool, starting up your Water Quality System, and balancing the water chemistry.

Two additional User's Guides will be provided with your pool; the Water Quality System User's Guide and the Swim Current User's Guide. The Water Quality System User's Guide will provide a more detailed description of how your Water Quality System functions and how to provide the proper maintenance for your pool. The Swim Current User's Guide will explain how to operate and control your swim current.

The following information is intended to compliment the User's Guide. It is critical that these guides be referenced on a regular basis.

Included with your Endless Pool and packaged with your Water Quality System (WQS) are products to help with start-up and on-going maintenance. These include:

- (1) Container calcium hardness increaser
- (1) Container water clarifier
- (1) Container pH decreaser
- (1) Container pH increaser
- (1) Container total alkalinity increaser
- (1) Container vinyl cleaner
- (1) Pool patch kit "wet"
- (1) Container stabilized chlorine (outdoor pools)
- (1) Nature 2 cartridge
- (1) Spa Wand
- (1) Test kit

Your Pool Water

As with any swimming pool, an Endless Pool requires water chemistry monitoring. The water quality system, which includes automated recirculating, heating, filtration and purification, does most of the work for you. However, balancing and maintaining your pool water is essential to the life and health of your equipment.

Your Source of Water

Endless Pools, Inc. recommends testing a sample of water before you begin to fill the pool. Doing so will give you an idea of how suitable your water source is for swimming pool use. Testing the water can be done by using your Taylor test kit. A local swimming pool supply store can also test your water at a minimal charge.

Well Water

Certain geographic areas are high in mineral content. For pools where well water is to be the water source, strong consideration should be given to having water tanked in. Well water often has high iron, calcium, and mineral content which is not ideal for your swimming pool. If well water is the only available source, please call our Customer Service Department, or seek advice from a local pool store.

“Hard” Water and Water Softeners

The phrase “hard” water refers to having high levels of calcium in the water. Many homes that have “hard” water will often have a water softener installed in their homes that lowers the level of calcium in the water. For ideal water conditions in a vinyl liner pool, the calcium hardness level should be between 180-250 ppm. Please call us to discuss your options if you have a water softener and/or high calcium in your water supply.

Nature 2

Sanitation of your pool water is partly accomplished by placing one Nature2 purifier into the filter-cartridge at the front of your pool. The Nature 2 system included in your pool kit significantly reduces the amount of chlorine you’ll need to use by adding silver and copper to the pool, which will kill bacteria and algae in the water. This cartridge should be replaced about every four months.

Oxidation and Chlorine Requirements

Nature2 works well as a pool sanitizer, however it does not oxidize or “burn-up” small particles of debris in the pool. Maintaining a minimum level of 0.5 ppm free chlorine in your pool at all times is necessary. Adding 1/2 cup of Clorox a day will add about 0.5 ppm of free chlorine to a standard sized pool. How quickly that chlorine is consumed depends upon water temperature, bather load, and the amount of direct sunlight the pool receives.

Chlorine Stabilizer and Outdoor Pools

Your Taylor test kit comes equipped with testing procedures for cyanuric acid. Cyanuric acid is a chlorine stabilizer, meaning it protects chlorine from getting broken down by sunlight. If your pool is located outdoors, we recommend using the granular form of stabilized chlorine (Should have an active ingredient of sodium dichlor) instead of Clorox. Another option would be to supplement Clorox by adding cyanuric acid. Either method will necessitate testing for cyanuric acid every two weeks. These chemicals are readily available at any pool supply store.

Chlorine Stabilizer and Indoor Pools

Many customers are sold a stabilized chlorine product for use in their indoor Endless Pool. Endless Pools would not recommend this practice, as Clorox bleach is ideal for this setting. Using a stabilized chlorine source is more expensive, and it also requires the periodic testing for cyanuric acid levels. If the level gets too high, it can render the chlorine ineffective, and it may necessitate the partial draining of the pool in order to lower the levels.

Alternatives to Chlorine and Nature2

Although some alternative Sanitization systems can be used with an Endless Pool, the following precautions must be followed:

- Under NO circumstances can salt chlorine-generating systems be used in an Endless Pool.
- Bacquacil systems damage clear plastic products. Light lenses and pump strainer lids will crack.
- Bromine can be used, but not in conjunction with Nature2.
- Please call Customer Service with any questions about alternate systems.

The pool is full when the water level completely covers the honeycomb grills where the current is produced. A water level 1/2" (12mm) or more lower than this can cause air to get pulled through the skimmer-filter and into the WQS plumbing lines. This can lead to problems with the filter, and can also cause your heater to work intermittently. A water level 1" (2,5cm) or more higher than the top of the grills can lead to water getting splashed out of the pool.

Once the pool is full and all connections are made, the water quality system can be started. Verify that the Nature 2 cartridge is installed inside the skimmer-filter cartridge.

When power is first introduced to the system, the heater-controller will go through a boot-up cycle (which can last 2-5 minutes). During this boot-up cycle it is important that no buttons on the keypad are pushed. At the end of the boot up cycle the keypad should display the temperature of the water.

If the keypad is flashing, “FLO” then air may need to be bled out of the system. Turn the power off and slowly unthread one of the pump unions, allowing any air to escape the system. When bleeding the system you will lose some water so it is important to take this into account. Once the air has been bled out, retighten the union.

After the system is turned on and the heater-controller has verified proper water flow (to avoid heater activation in dry conditions), the heater will automatically turn on to reach and maintain the water temperature set point.

Your heater-controller has been programmed to run your circulating pump continuously, meaning that your pool is receiving automated circulation and filtration (through the skimmer/filter) 24 hours a day. The temperature of your pool is controlled by the up and down keys on your keypad (Refer to the following section for more information on the heater-controller features).

Floating Thermal Cover

Endless Pools, Inc. provides a lightweight cover for the Endless Pool, if a retractable security cover has not been purchased. This cover floats on the water surface, insulating the pool while preventing evaporation. Consistent use of this cover will keep the water cleaner, save energy, and help control humidity. The cover should be completely removed from the water before the machine is used. With standard width Endless Pools (7' [2,13m] inside dimension) the cover is shipped in a box with clips along with a 1-1/4" (3,8cm) PVC pipe. Replacement covers are available from our Customer Service Department. The cover, once cut to size and installed on the PVC pipe, rolls out onto the water surface.

Test your pool water now with the kit provided and/or take a sample of water to a local pool professional for testing. The test kit provided by Endless Pools tests for chlorine, pH, total alkalinity, calcium hardness and cyanuric acid. While the test kit may first seem intimidating, simply follow the instructions on the underside of the test kit lid. These instructions walk you through each of the tests step by step, and they are color coded with the appropriate reagent bottles to use for that test.

The level of chlorine inside the pool, as long as it is not above 5ppm, will not significantly affect the following tests and procedures used to balance the pool water. Therefore, if there is no chlorine in the pool at this time, add some. Add 1-2 cups of liquid bleach (any brand is fine as long as it does not have an added scent to it) to an indoor pool. If you have an outdoor pool, add the appropriate amount of granules out of the bag of “stabilized” chlorine. Test for chlorine in a day or two and add more if necessary.

1) Balance Total Alkalinity (TA)

Ideal reading: 100ppm

Acceptable range: 80-120ppm

Raise with: Sodium Bicarbonate (TA increaser)

Lower with: Sodium Bisulfate (pH decreaser)

Method of chemical application:

- Adjusting the level of TA in the pool requires that the chemical be “slugged” i.e. pour chemical in four different spots around the pool with the water calm. Do not turn the swim current on for 4-6 hours.
- Retest TA and adjust again if necessary.
- Add less chemical than you think is necessary to effect the desired change. Keep track of how much chemical it took to make that change.

Notes:

Once the TA is within a tolerable range, move on to adjusting the pH in the pool. You should find that the TA will be slow to change—for this reason, test for it once a week as detailed in the “Maintenance and Use of your Endless Pool” instructions found later in this guide.

2) Balance pH

Ideal reading: 7.5

Acceptable range: 7.4-7.8

Raise with: sodium carbonate (pH increaser)

Lower with: sodium bisulfate (pH decreaser)

Method of chemical application:

- Measure out and pour your dosage of chemical directly into the swim current. Afterwards, make sure you wash some water on the propulsion housing to ensure that no granules are resting on the benches. Test and apply more chemical as necessary.

Notes:

The pH will change slowly over the course of a week or two. The number of bathers and the type of chlorine used are just two factors that will cause the pH to change. For this reason, pH should be tested three times a week and adjusted as needed. See the “Maintenance and Use of your Endless Pool” instructions found later in this guide for further details.

Once the pH is within range, move on to adjusting the calcium hardness.

3) Balance Calcium Hardness (CH)

Ideal reading: 180ppm

Acceptable range: 175-250ppm

Raise with: calcium chloride (calcium hardness increaser)

Lower with: water containing less calcium (softened water)

Method of chemical application:

- Fill a clean, five gallon bucket with pool water and dissolve the dosage of calcium into this water. Do not mix this solution with your hands. Pour the solution in to the swim current, and let the current circulate the water in the pool for a few minutes. Wait a few hours, test again, and add more calcium if necessary. Once again, always add less chemical than you think will be necessary to effect the desired change.

Notes:

Calcium hardness will tend to slowly increase over time as water evaporates from the pool and leaves its calcium behind. Periodic testing of CH is detailed in the “Maintenance and Use of your Endless Pool” instructions below.

- 1) Disconnect electrical power to all pool equipment.
- 2) Begin to drain down pool water by placing a suitable sump pump in the pool, or by setting up a siphon using a garden hose. If using a siphon, two or more hoses may be used simultaneously in order to expedite the process.
- 3) If you have full depth stairs, they should be unfastened from the panel and shifted away from the corner enough to a) remove the corner cover underneath, and b) allow the liner to pull in toward the pool a little bit. If you have a corner step, remove the step as the water level lowers to the top of that step. Once the water is within an inch or two from the top of the benches, remove the (4) corner covers located in the corners of the pool. These covers should be removed by unscrewing the (4) machine screws found on the tops of all the covers.
- 4) Continue draining pool until 6" (15cm) of water is remaining in the standard depth portion of the pool, i.e. the water is half way up the benches. Do not drain further than this as the liner needs this much water in order to be held stretched out and in place. If you are leaving the water like this for an extended period of time, add chlorine and possibly an algacide in order to minimize the clean-up required before refilling the pool.
- 5) When you are ready, refill the pool using a garden hose with a “bobby filter” on the end to screen out debris and fine sediment. If you do not have one of these filters, contact Endless Pools Customer Service. If you have high calcium content and/or high metal content in you area, you should also add some “sequestering agent” to the pool water to help prevent scaling/staining. You may also be able to find both of these items at a local pool store.
- 6) When the water has risen to the top of the benches, reinstall the four corner covers. Be careful not to push the covers against the liner or hit the liner with the edges of the corner covers. Doing so may cause a leak.
- 7) The pool is full when the water completely covers the grill at the front of the pool. Reestablish electrical power to the pool equipment, and start balancing the pool water. Shock the pool to 3.0 ppm free chlorine. Turn on your WQS in order to get your new body of water filtered, circulated, and heated.

An Endless Pool may be used year round, even in colder climates. If you will not be using the pool during the winter in an area where freezing is a problem, special consideration must be taken to protect the pool and ancillary equipment if either is located outside. If you have any questions regarding precautions to take against freezing, please call our Customer Service Department at (800) 910-2714.

ENDLESS POOL® LIMITED WARRANTY

FITNESS MACHINES, LLC WARRANTS TO THE ORIGINAL PURCHASER OF THE ENDLESS POOL MANUFACTURED BY US TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP UNDER NORMAL USE FOR TWO YEARS FROM PURCHASE.

Our obligation under the warranty shall be limited to the repair or exchange (at our option) of any part or parts which may thus prove defective under normal use within two years from date of purchase by the original purchaser, and which our examination shall disclose to our satisfaction to be thus defective. All labor costs for removal and re-installation of the defective part and all freight charges shall be paid by the purchaser and will not be reimbursed by Fitness Machines, LLC. This warranty is expressly in lieu of all other warranties expressed or implied including the warranties of merchantability and fitness for use and of all other obligations or liabilities for all damages direct or consequential to person, property or business whether or not occasioned by our negligence, and we neither assume for us any other liability in connection with the sale of this Endless Pool.

IN ADDITION, FITNESS MACHINES, LLC OFFERS A TEN-YEAR STRUCTURAL WARRANTY ON THE STEEL WALL PANEL SYSTEM. If a panel should deteriorate beyond structural use in this ten-year period, we will repair or replace the panel at our option after receipt and inspection of the defective panel. The structural warranty is voided when suitable drainage is not provided, and/or panels are not properly bonded, as stipulated in the installation instructions.

THIS WARRANTY SHALL NOT APPLY TO THIS ENDLESS POOL OR ANY PART THEREOF, WHICH HAS BEEN SUBJECT TO SALT CHLORINE GENERATORS, ACCIDENT, NEGLIGENCE, FREEZING, IMPROPER INSTALLATION OR OPERATION, ALTERATION, ABUSE OR MISUSE. THIS INCLUDES, BUT IS NOT LIMITED TO, FLOW RESTRICTIONS OR OBSTRUCTIONS ON ALL WATER AND HYDRAULIC SYSTEMS AND NOT MAINTAINING PROPER WATER CHEMISTRY (pH level must be maintained between 7.4 and 7.8 and total alkalinity between 80 and 120 ppm. Total dissolved solids (TDS) must be no greater than 3,000 ppm).

All orders are FOB Aston, PA. We will NOT be liable for any costs or losses due to changes in shipping schedules, or delivery times. It is the responsibility of the Customer to supply safe and proper site preparation, installation and operation for all Endless Pool Swimming Machines. This includes, but is not limited to, adequate drainage at any pool and/or equipment site, to control humidity, to post necessary safety signage and to ensure safe and proper use of all Endless Pool Swimming Machines. Customer shall be responsible for any and all building permits, fees, licenses, and authorizations necessary to comply with local building codes or requirements. Customer takes all responsibility for site preparation including, but not limited to, any slab or foundation. Any Endless Pool product installed above grade must be placed on a properly engineered structure, which is the responsibility of the customer.

We make no warranty whatsoever in respect to accessories or parts not supplied by Fitness Machines, LLC directly. The term "original purchaser", as used in this warranty, shall be deemed to mean the person for whom the Endless Pool was originally installed. We DO NOT warrant this machine to meet requirements of any safety code of any state, municipality, or other jurisdiction. Purchaser assumes all risk and liability whatsoever resulting from the use thereof.

In order to claim this warrant, original purchaser must promptly notify our Customer Service Department in writing, at the address shown below, of the existence of the claim and then follow our written instructions regarding the procedures for remedying the defect. Fitness Machines, LLC shall not be responsible for cartage, transportation, removal and/or reinstallation labor or any other such costs relating to performance of the warranty. In the event any portion of this warranty shall be deemed unenforceable by a court of law, the remainder of this warranty shall remain in full force and effect as if the voided portion were never included.

Prepaid returns of all Endless Pool products are accepted less a 10% restocking fee, up to 30 days from the date of purchase if undamaged and in its original shipping containers. Accessories, options and equipment that have been used are non-refundable. All product returns require proper pre-authorization from our Customer Service Department and must be shipped to the address shown below.

Fitness Machines, LLC, 15 Milton Drive, Aston, PA 19014 800-910-2714

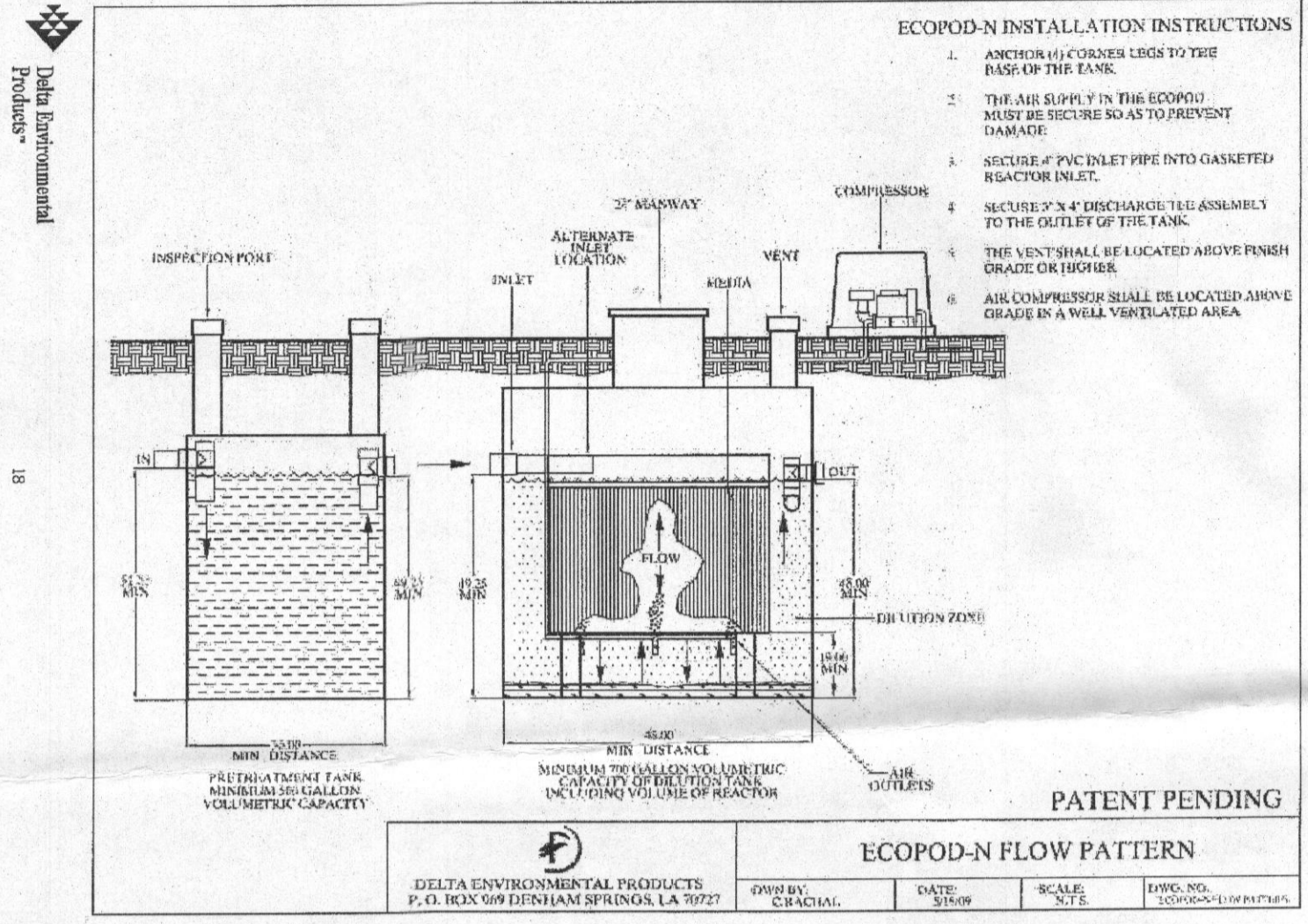


Fitness Machines, LLC • 1601 Dutton Mill Rd • Aston, PA 19014-2931
800-910-2714 • 610-497-8693 fax • www.myendlesspool.com



2008 VGB Compliant

D40073 1214
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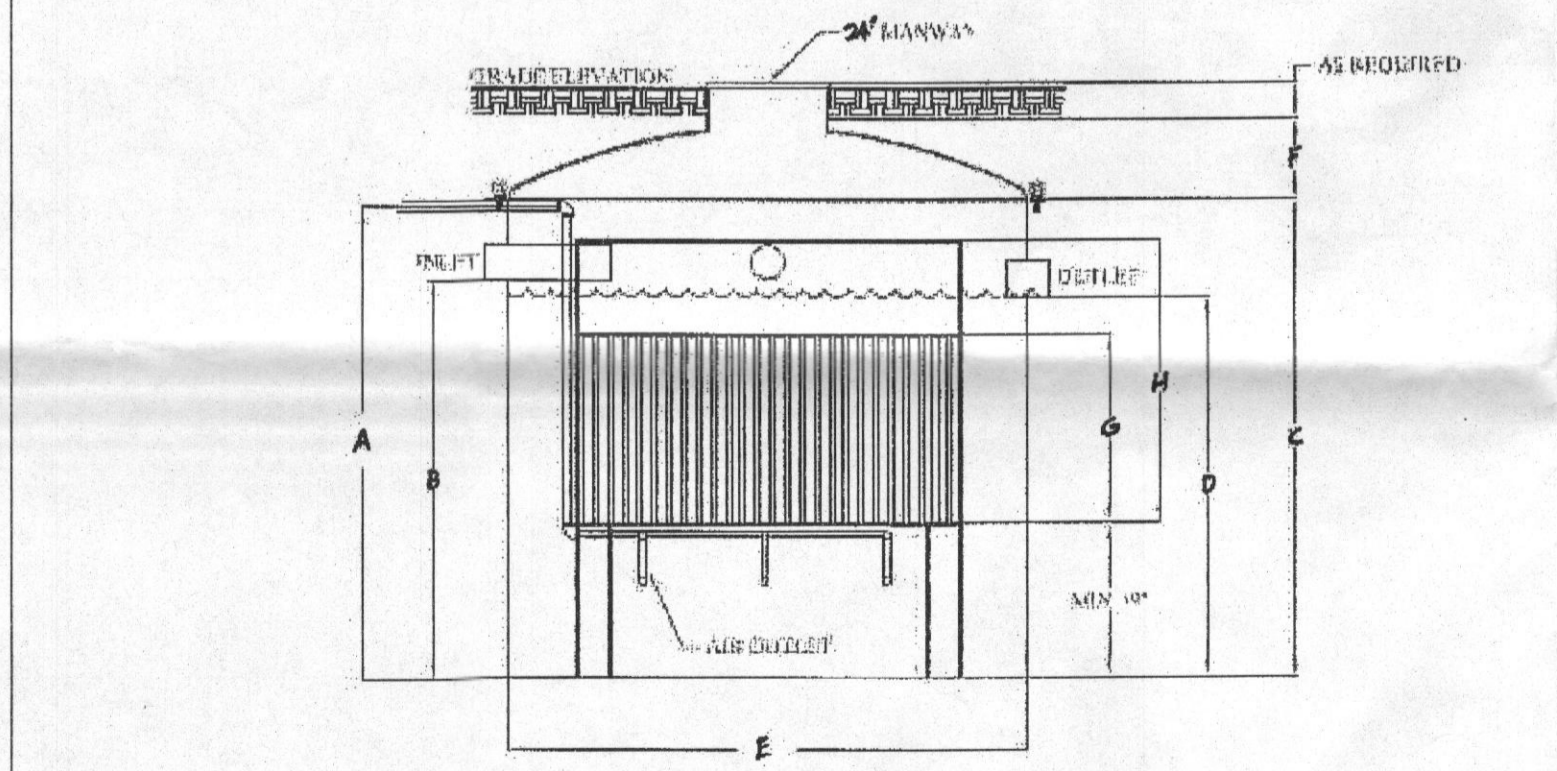
Electrical Requirements

Model	Compressor	Max. Gross Area	Measured Operating Watt	Electrical Requirements
E50-N	Delta Model E50	3.5	185	115 volt - single phase
E60-N	Delta Model E60	4.7	280	115 volt - single phase
E75-N	Delta Model E75	4.7	280	115 volt - single phase
E100-N	Delta Model E100	7.1	475	115 volt - single phase
E150-N	Delta Model E150	7.1	475	115 volt - single phase

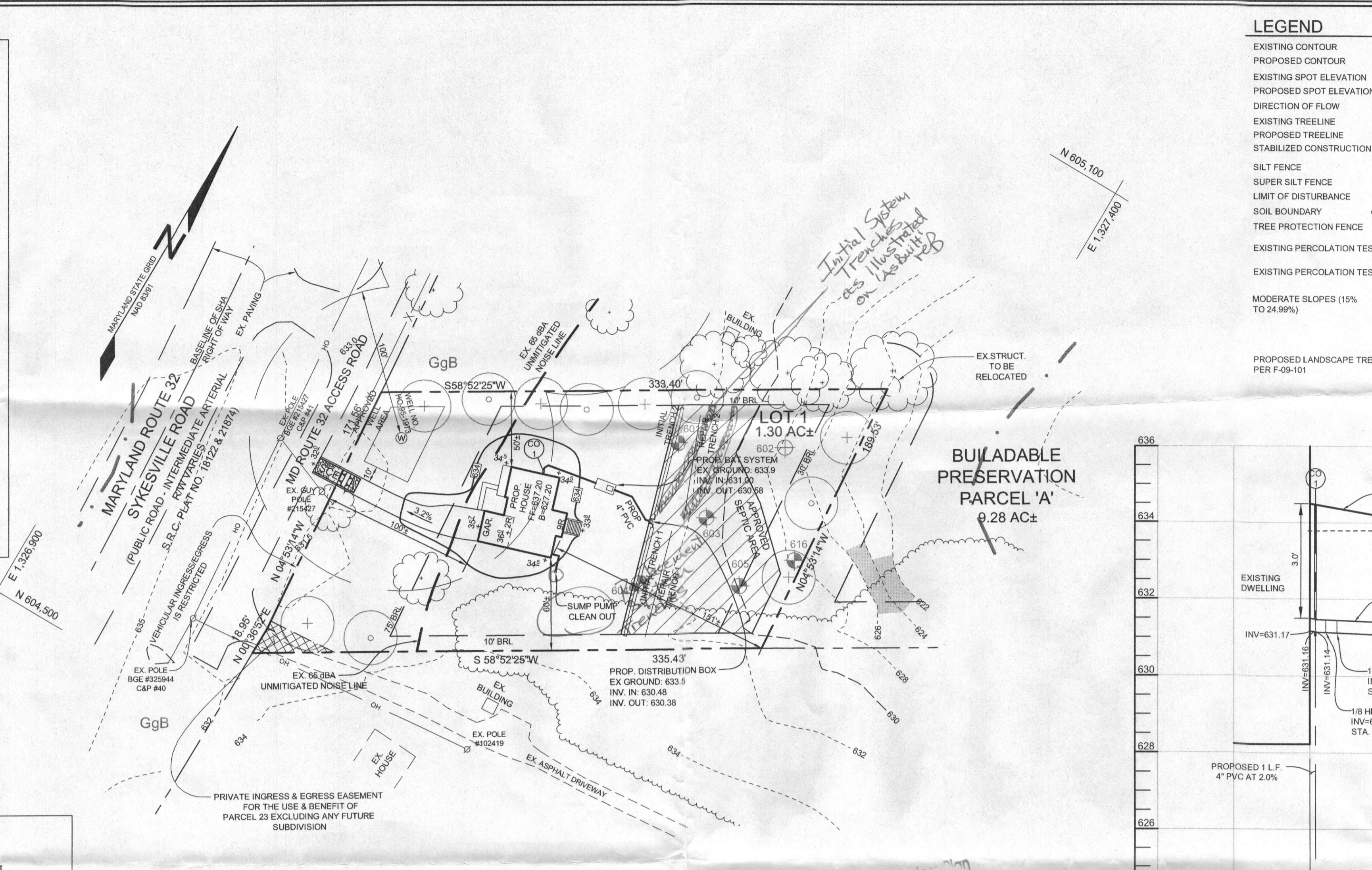
Dimensions

Trenchment (Feet)	A	B	C	D	E	F	G	H
E50-N	4'-11 3/4"	4'-2"	6'-0"	4"	5'-0"	10'	2"	3"
E60-N	5'-7 1/2"	4'-6"	6'-3"	4'-4"	5'-0"	11 1/2"	2"	3"
E75-N	6'-0"	4'-11"	6'-9"	4'-9"	5'-9"	11 1/2"	2"	3"
E100-N	6'-9 3/4"	5'-5"	7'-6"	5'-4"	6'-2"	1'-0"	2"	3"
E150-N	8'-3 3/4"	5'-9"	8"	5'-8"	6'-4"	1'-3/4"	2"	3"

REFER TO TREATMENT PLANT DRAWINGS ON THE ABOVE DIMENSIONS.
NOTE: For special cargo or container shipments 12 inches must be added to the diameters of all fiberglass units (due to the fiberglass flange and lifting lugs).



NOTE:
• SEE THE DETAIL ON PAGE 17 OF ECOPOD DESIGN MANUAL
• <http://www.deltainvironmental.com/pdfs/ECOPODNIH4508.pdf>
• THE PROPOSED HOUSE CONTAINS 5 BEDROOMS, SO ECOPOD MODEL E75-N WILL BE UTILIZED ON THIS SITE.



SEPTIC TRENCH DESIGN (INITIAL SYSTEM)

- INITIAL SYSTEM:
 - APPLICATION RATE: 0.8
 - EFFECTIVE AREA BEGINNING DEPTH: 3'
 - BOTTOM MAXIMUM DEPTH: 8'
- DESIGN FLOW:
 - 5 BEDROOMS AT 150 GPD
 - 5x150 GPD = 750 GPD
- SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (750 GPD) / APPLICATION RATE (0.8) = 937.5
- SIDEWALL REDUCTION CREDIT:
 - TRENCH WIDTH (W) = 2'
 - TRENCH DEPTH (D) = 5'
 - (W+2) / (W+1+2D) x 100 = 31%
- LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (937.5) x SIDEWALL REDUCTION PERCENTAGE (31%) / TRENCH WIDTH (2) = 145.31'
- LINEAR LENGTH OF TRENCH PROVIDED = 146'

INITIAL SEPTIC TRENCH CHART

TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	633.0	630.0	626.0	145.31'	2'
2	632.0	629.5	624.5	145.31'	2'

per As Built

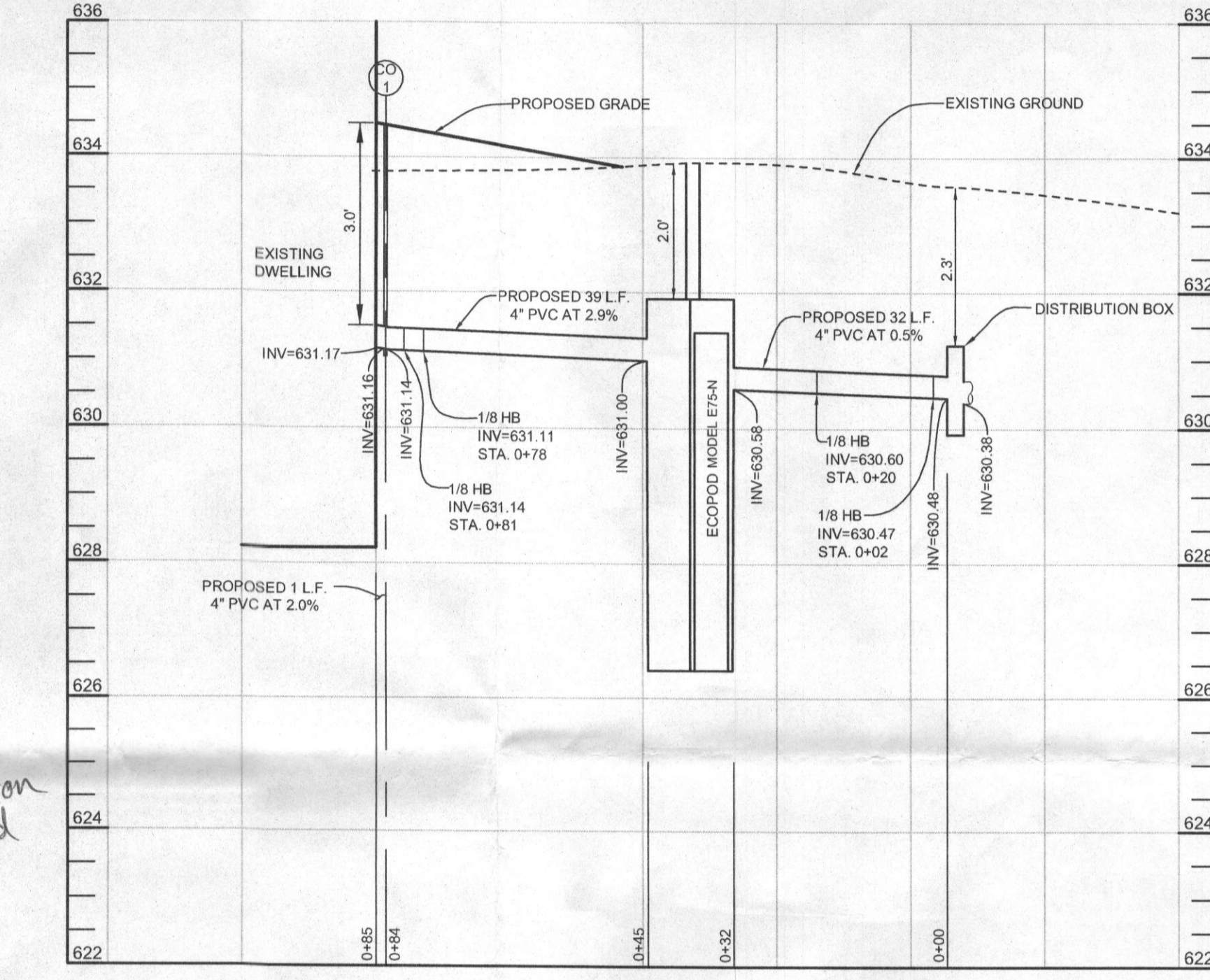
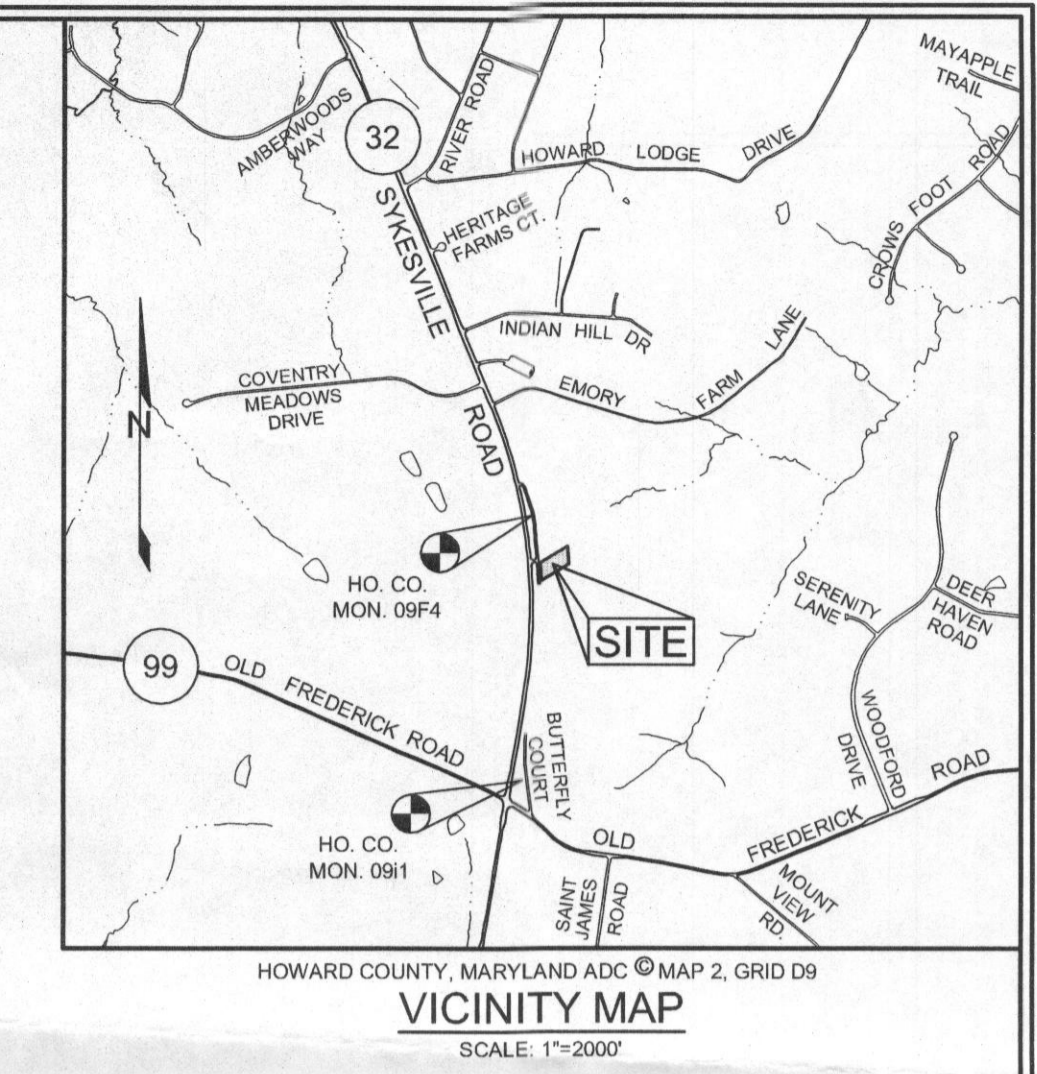
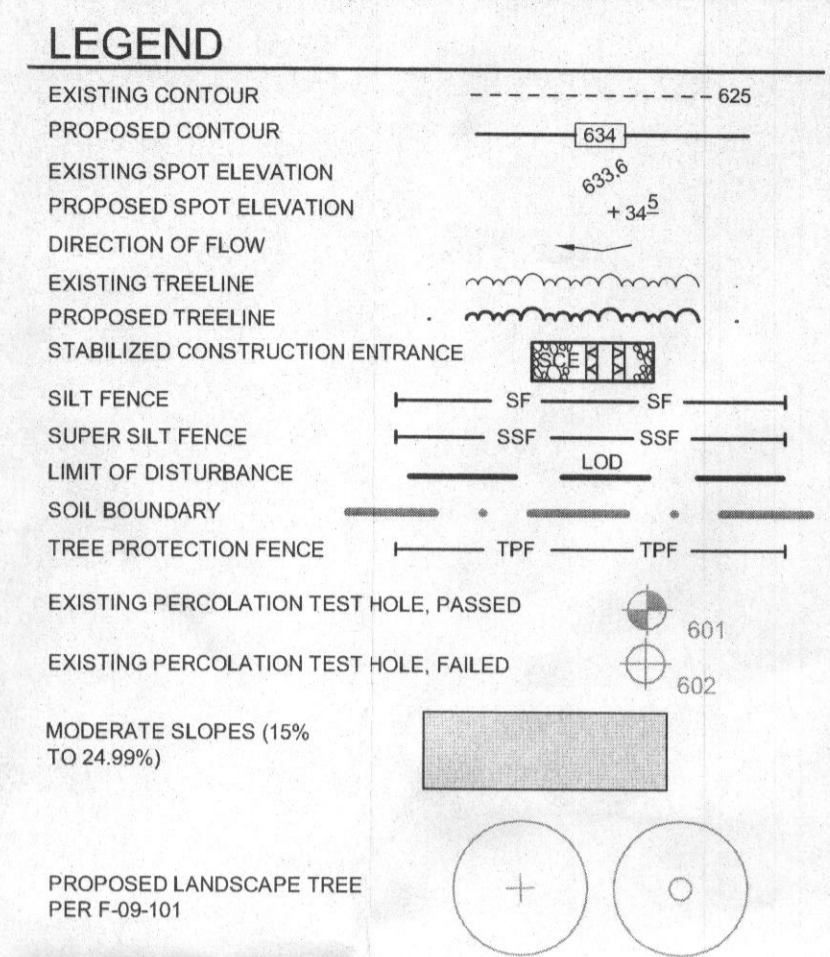
SEPTIC TRENCH DESIGN (REPLACEMENT SYSTEM)

- REPLACEMENT SYSTEM:
 - APPLICATION RATE: 0.8
 - EFFECTIVE AREA BEGINNING DEPTH: 4.5'
 - BOTTOM MAXIMUM DEPTH: 8'
- DESIGN FLOW:
 - 5 BEDROOMS AT 150 GPD
 - 5x150 GPD = 750 GPD
- SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (750 GPD) / APPLICATION RATE (0.8) = 937.5
- SIDEWALL REDUCTION CREDIT:
 - TRENCH WIDTH (W) = 3'
 - TRENCH DEPTH (D) = 3.5'
 - (W+2) / (W+1+2D) x 100 = 45%
- LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (937.5) x SIDEWALL REDUCTION PERCENTAGE (45%) / TRENCH WIDTH (3) = 140.63'
- LINEAR LENGTH OF TRENCH PROVIDED = 142'

REPLACEMENT SEPTIC TRENCH CHART

TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	632.5	628.5	624.5	71'	3'
2	632.0	628.0	624.0	71'	3'

to be determined

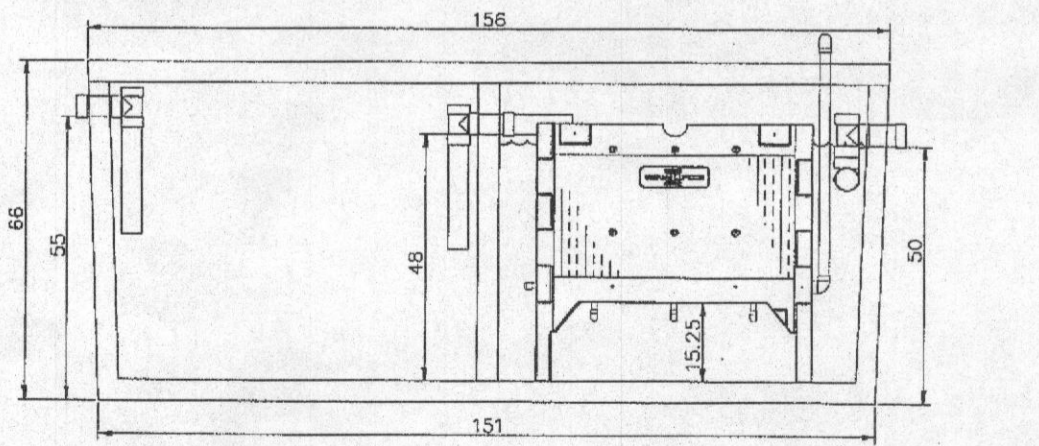
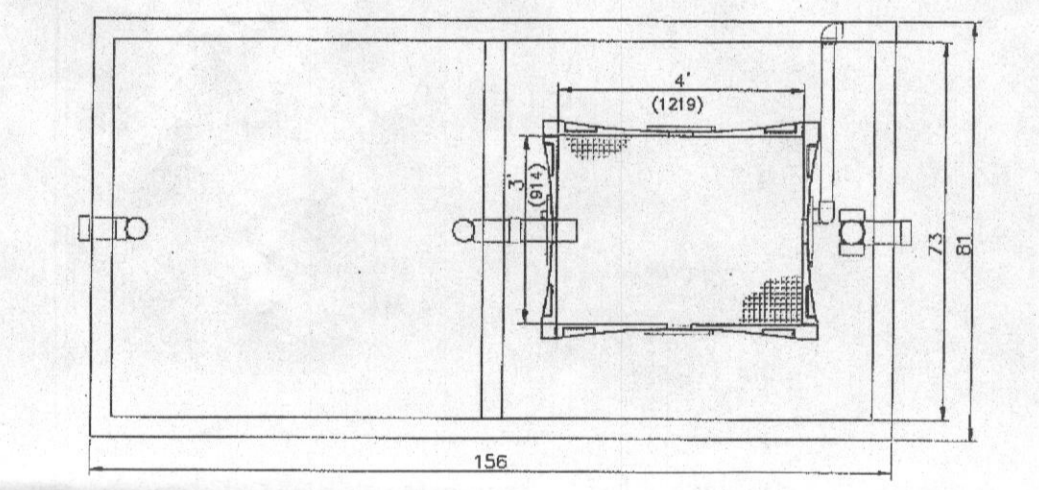


BAT PROFILE VIEW

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=2'

BAT NOTES

- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 5'.
- THE BLOWER MAY NOT BE LOCATED MORE THAN 50' FROM THE TANK BASED ON THE MANUFACTURER'S SPECIFICATIONS.
- THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
- THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
- WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF SYSTEM INSTALLED.
- ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY.
- THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
- THE PROPOSED HOUSE CONTAINS 5 BEDROOMS, SO ECOPOD MODEL E75-N WILL BE UTILIZED ON THIS SITE.



OWNER
JANET LYNN BOYCE
STEVEN TODD BOYCE
1615 ROUTE 32
SYKESVILLE, MARYLAND 21784-5437

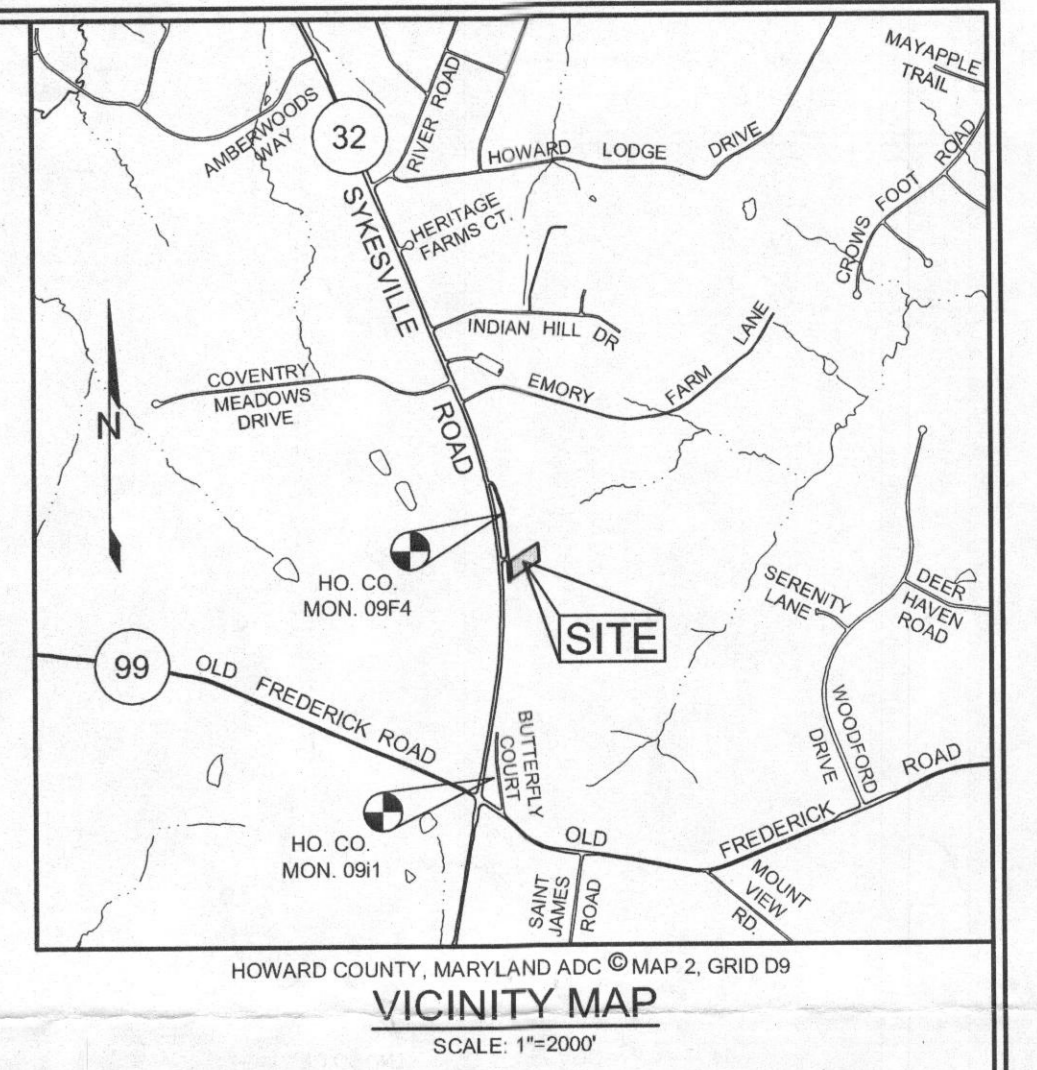
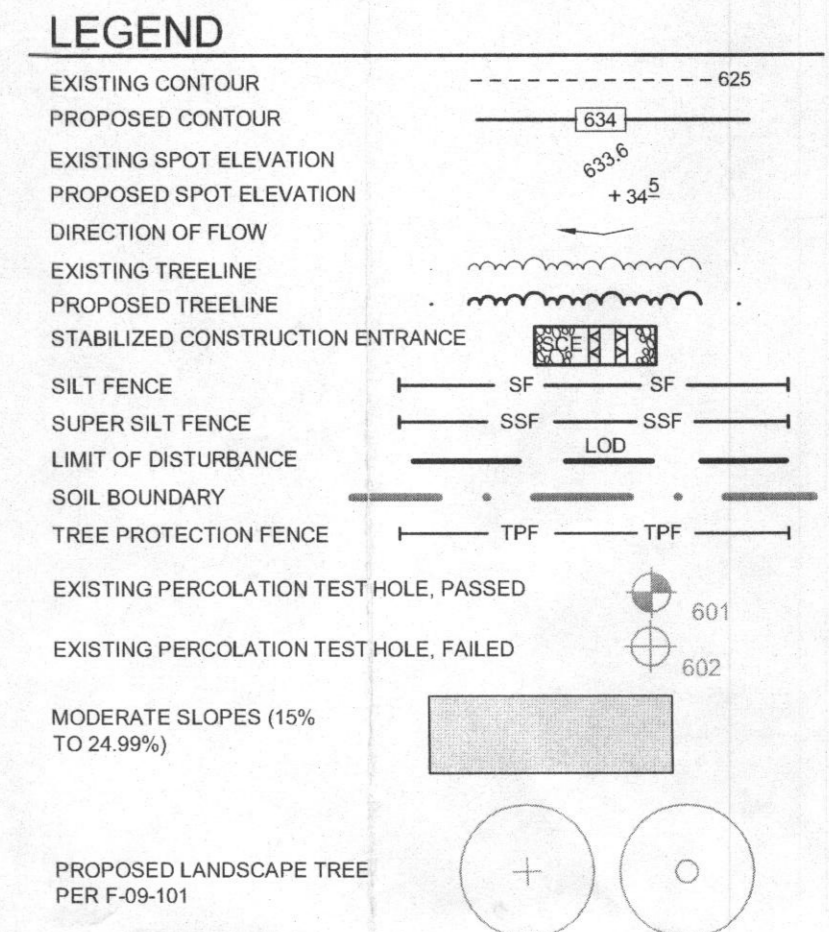
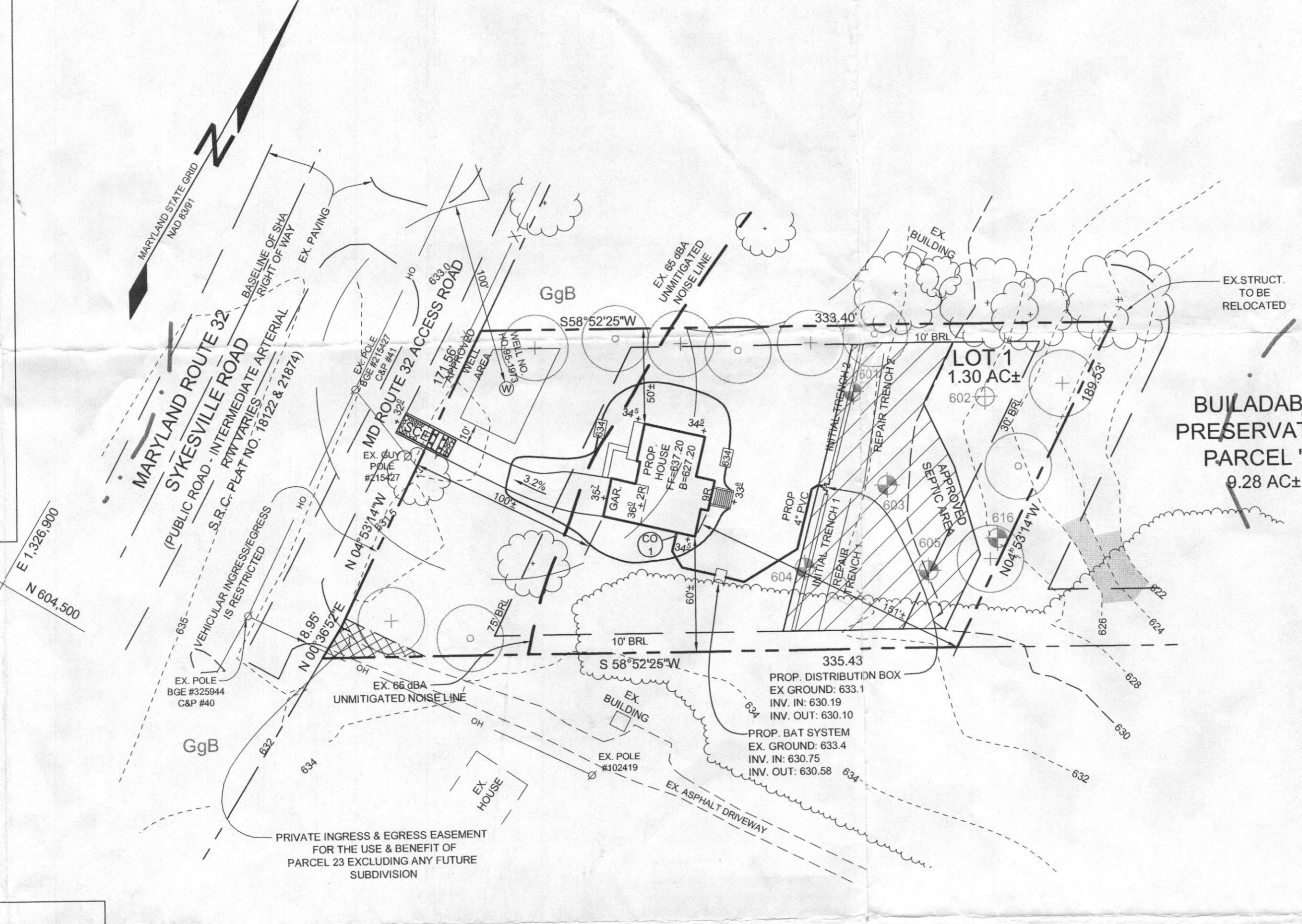
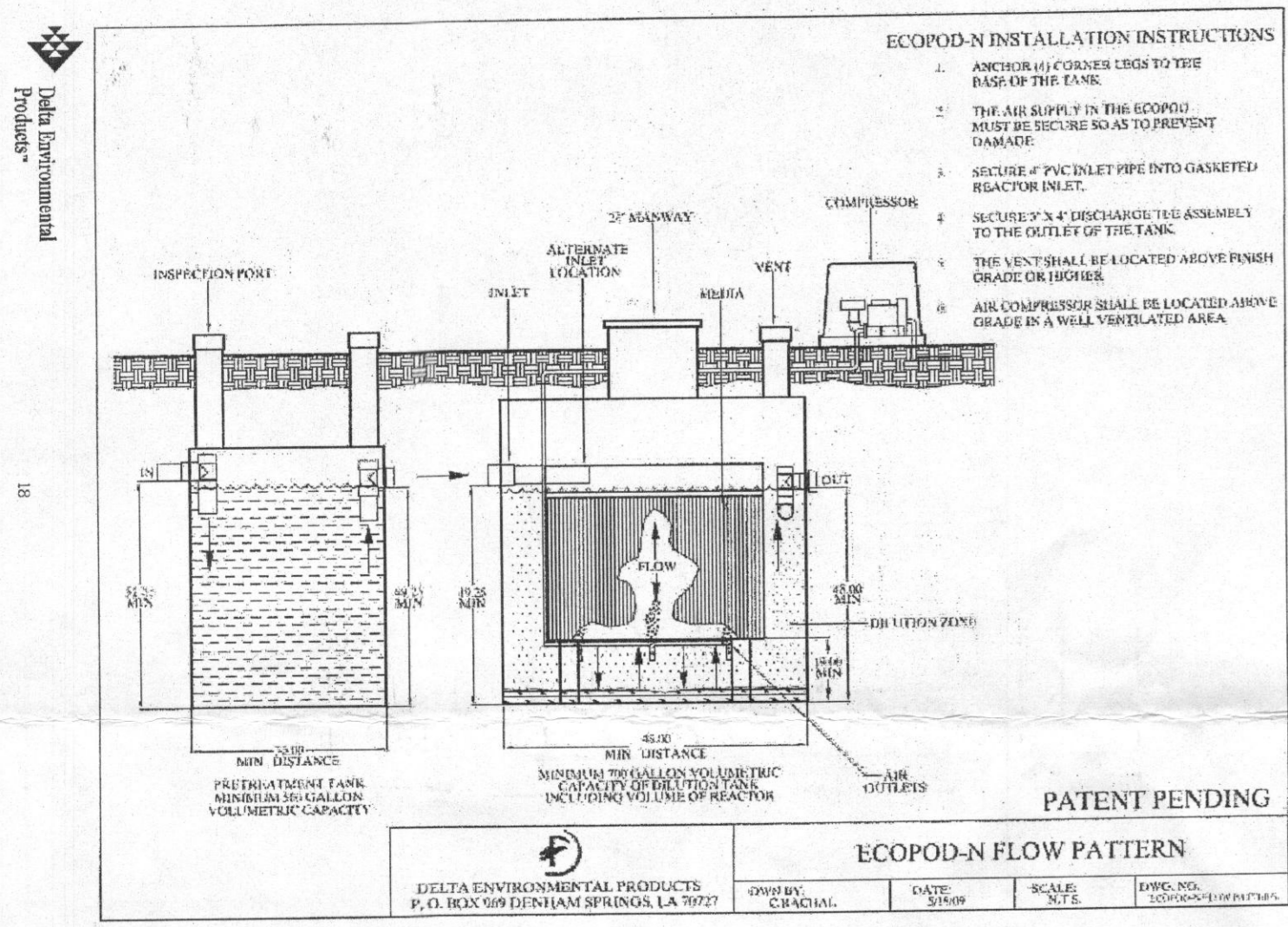
DEVELOPER
Viking Development Corporation
C/O CARY CUMBERLAND
815 WINDRIVER DRIVE
SYKESVILLE, MD 21784
410-977-2188

SITE PLAN FOR BAT INSTALLATION
SHIPLEY'S LODGE
LOT 1
ZONED: RR-DEO
TAX MAP 9 GRID 17
3RD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
PARCEL 91

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@saaland.com

DESIGN BY: PS
DRAWN BY: JT
CHECKED BY: PS
SCALE: AS SHOWN
DATE: JUNE 30, 2015
PROJECT #: 13-120
SHEET #: 2 of 2

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2015



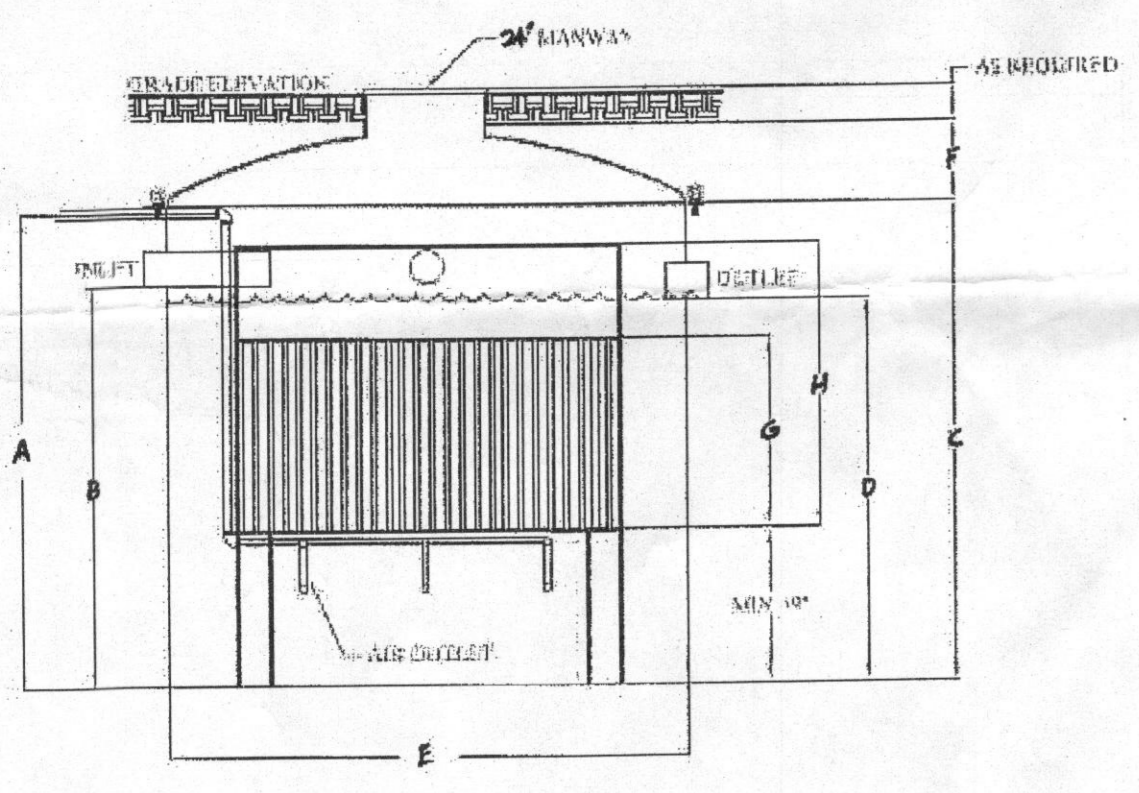
Electrical Requirements

Model	Delta Model	Max. Length (ft)	Max. Depth (ft)	Electrical Requirements
E50-N	Delta Model E50	3.5	1.85	115 volt - single phase
E60-N	Delta Model E60	4.7	2.80	115 volt - single phase
E75-N	Delta Model E75	4.7	2.80	115 volt - single phase
E100-N	Delta Model E100	7.1	4.75	115 volt - single phase
E150-N	Delta Model E150	7.1	4.75	115 volt - single phase

Dimensions

Treatment Plant	4'-11 1/2"	4'-2"	6'-0"	4"	5'-0"	10"	2"	3"
E50-N	4'-11 1/2"	4'-2"	6'-0"	4"	5'-0"	10"	2"	3"
E60-N	5'-7 1/2"	4'-6"	6'-3"	4'-4"	5'-0"	11 1/2"	2"	3"
E75-N	6'-0 1/2"	4'-11"	6'-9"	4'-9"	5'-9"	11 1/2"	2"	3"
E100-N	6'-5 1/2"	5'-5"	7'-6"	5'-4"	6'-2"	1'-0"	2"	3"
E150-N	8'-3 1/2"	5'-9"	8"	5'-8"	6'-4"	1'-3 1/2"	2"	3"

REFER TO TREATMENT PLANT DRAWINGS ON THE ABOVE DIMENSIONS.
NOTE: For special cargo or container shipments 12 inches must be added to the diameters of all fiberglass units (due to the fiberglass flange and lifting lugs).



NOTE:
• SEE THE DETAIL ON PAGE 17 OF ECOPOD DESIGN MANUAL
http://www.deltainvironmental.com/pdf/ECOPODnir4508.pdf
• THE PROPOSED HOUSE CONTAINS 5 BEDROOMS, SO ECOPOD MODEL E75-N WILL BE UTILIZED ON THIS SITE.

SEPTIC TRENCH DESIGN (INITIAL SYSTEM)

- INITIAL SYSTEM:
 - APPLICATION RATE: 0.8
 - EFFECTIVE AREA BEGINNING DEPTH: 3'
 - BOTTOM MAXIMUM DEPTH: 8'
- DESIGN FLOW:
 - 5 BEDROOMS AT 150 GPD
 - 5x150 GPD = 750 GPD
- SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (750 GPD) / APPLICATION RATE (0.8) = 937.5
- SIDEWALL REDUCTION CREDIT:
 - TRENCH WIDTH (W) = 2'
 - TRENCH DEPTH (D) = 5'
 - (W+2) / (W+1+2D) x 100 = 31%
- LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (937.5) x SIDEWALL REDUCTION PERCENTAGE (31%) / TRENCH WIDTH (2) = 145.31'
- LINEAR LENGTH OF TRENCH PROVIDED = 145'

INITIAL SEPTIC TRENCH CHART

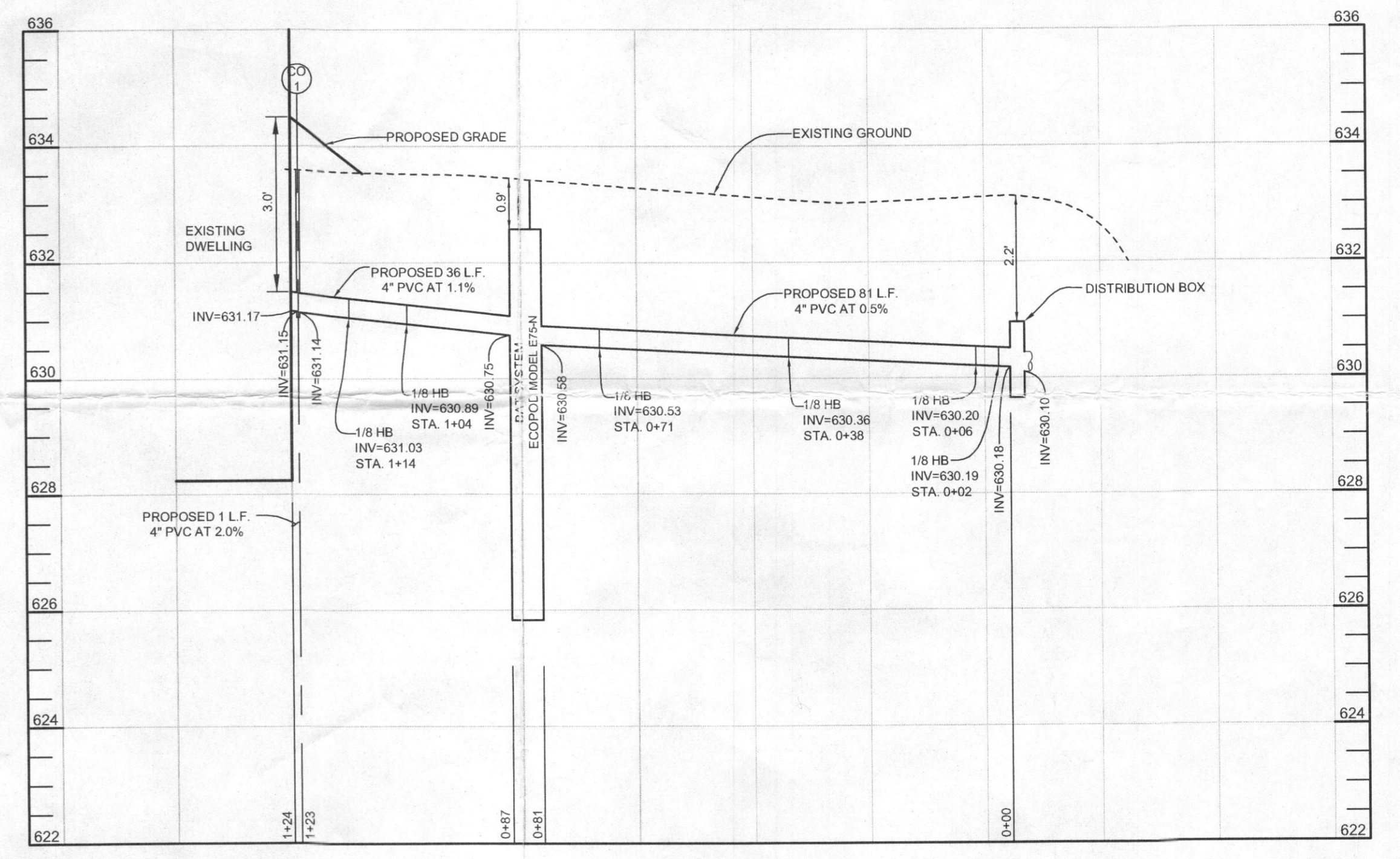
TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	633.0	630.0	625.0	73'	2'
2	632.9	629.9	624.9	73'	2'

SEPTIC TRENCH DESIGN (REPLACEMENT SYSTEM)

- REPLACEMENT SYSTEM:
 - APPLICATION RATE: 0.8
 - EFFECTIVE AREA BEGINNING DEPTH: 4.5'
 - BOTTOM MAXIMUM DEPTH: 8'
- DESIGN FLOW:
 - 5 BEDROOMS AT 150 GPD
 - 5x150 GPD = 750 GPD
- SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (750 GPD) / APPLICATION RATE (0.8) = 937.5
- SIDEWALL REDUCTION CREDIT:
 - TRENCH WIDTH (W) = 3'
 - TRENCH DEPTH (D) = 3.5'
 - (W+2) / (W+1+2D) x 100 = 45%
- LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (937.5) x SIDEWALL REDUCTION PERCENTAGE (45%) / TRENCH WIDTH (3) = 140.63'
- LINEAR LENGTH OF TRENCH PROVIDED = 142'

REPLACEMENT SEPTIC TRENCH CHART

TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	632.5	628.5	624.5	71'	3'
2	632.0	628.0	624.0	71'	3'



Approved Septic System Plan
Howard County Health Department
1615 Rte 32 (access road)
ECOPOD E-75-N w/ Trenches 2x146

Approved Signature
Howard County Health Department

Signature: B. Buckner
Date: 8/12/2014

Signature: B1400 2253

- BAT NOTES**
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 - THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 5'.
 - THE BLOWER MAY NOT BE LOCATED MORE THAN 50' FROM THE TANK BASED ON THE MANUFACTURER'S SPECIFICATIONS.
 - THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
 - THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
 - WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF SYSTEM INSTALLED.
 - ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 - AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY.
 - THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
 - THE PROPOSED HOUSE CONTAINS 5 BEDROOMS, SO ECOPOD MODEL E75-N WILL BE UTILIZED ON THIS SITE.

SITE PLAN FOR BAT INSTALLATION

SHIPLEY'S LODGE

LOT 1
ZONED: RR-DEO

TAX MAP 9 GRID 17
3RD ELECTION DISTRICT

PARCEL 91
HOWARD COUNTY, MARYLAND

OWNER: JANET LYNN BOYCE, STEVEN TODD BOYCE, 1615 ROUTE 32, SYKESVILLE, MARYLAND 21784-5437

DEVELOPER: VIKING DEVELOPMENT CORPORATION, C/O GARY CUMBERLAND, 815 WINDRIVER DRIVE, SYKESVILLE, MD 21784, 410.977.2188

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
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Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@saalmd.com

DESIGN BY: PS
DRAWN BY: JT
CHECKED BY: PS
SCALE: AS SHOWN
DATE: AUGUST 8, 2014
PROJECT #: 13-120
SHEET #: 2 of 2

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 30, 2015.