



**BERKELEY COUNTY ENGINEERING AND  
BUILDING INSPECTIONS**

400 West Stephen Street - Suite 202, Martinsburg, WV 25401

Telephone: 304-264-1966 Fax: 304-262-3128

Web Page: [www.berkeleywv.org](http://www.berkeleywv.org)

**SWIMMING POOL REQUIREMENTS AND CHECKLIST TO OBTAIN PERMIT**

ALL REQUIREMENTS SUBJECT TO CHANGE

EFFECTIVE August 1, 2016

**THE FOLLOWING ITEMS ARE REQUIRED:**

1. Completed application to include Assessors/Planning Commission approval, Signed & Notarized owner affidavit (if applicant is not the owner).
2. Construction drawings, drawn to scale and of sufficient clarity to show location, nature and extent of work proposed and to show in detail that the work conforms to the provisions of the code. Show location of pool, fence/gates, and distance from property lines and building restriction lines.
3. **Above ground pools only** – Installation manual from manufacturer
4. **In-ground pools** – Plans signed and sealed by WV Registered Professional to include the following information: reinforcement size and spacing, thickness of walls and type of concrete, depth limits, details of built in steps, footings on decks of pools and hot tubs. Detailed drawings shall include a plan view and cross sections.
5. **Bottom drain and In-ground pools** - Piping detail for drains, suction inlet locations, skimmers and re-circulation lines. (Example for a bottom drain pool – Kayak)
6. **Bottom drain and In-ground pools** - Manufacturers specs for the entrapment protection device (drain cover)
7. **Bottom drain and In-ground pools** - Method of back-up vacuum relief device
  - a. Approved vacuum release system (manufacturer and model)
  - b. Approved vent piping
  - c. Other approved devices
8. **Bottom drain and In-ground pools** - Licensed pool installer is required to supply flow calculations per ANSI/APSP-7

**THE FOLLOWING INSPECTIONS ARE REQUIRED:**

**Inground Swimming Pools:**

1. Excavation
2. Electrical Bonding, if applicable
3. In-ground Panel Inspection (before concrete is poured)
4. Final Electrical (to be completed by same inspector as rough)
5. Final

**Above Ground Swimming Pools:**

1. Final Electrical (see list below for approved inspectors)
2. Final

**\*\*NOTE\*\* If you will be building a deck for pool, you will need to include it with this application, including a detailed drawing. (Additional fee of .14/sq. ft.)**  
**Deck inspections:** 1. Footing before pour 2. Post-pour

**SCHEDULING INSPECTIONS:**

To schedule an inspection, please call: 304-264-1966. Be prepared to provide the following:

1. Permit Number
2. Type of inspection \*Inspections will not be scheduled without Permit Number
3. Requested inspection date
4. Name of person requesting inspection

Note: Inspections will be completed in a timely manner, although no appointments are possible. The earliest date available will be given when scheduled.

**APPROVED ELECTRICAL INSPECTORS: Rev: 8/4/2016**

Middle Department Inspection Agency, Inc. .... Wes Clark, Inspector-----1-800-248-6342  
 Shenandoah Valley Electrical Inspections ..... John Elder, Inspector-----304-261-0243  
 Megco Inspections, Inc. (RESIDENTIAL ONLY) ..... Harry Blanco, Inspector-----304-790-1839  
 Megco Inspections, Inc. .... Clifton Bennett, Inspector-----304-788-9101  
 On Point Electrical Inspections LLC-----John Talbott, Inspector-----304-886-3229  
 Baker Electrical Inspection -----Christopher Baker, Inspector--304-671-4622  
 Megco Inspections, Inc.-----Jennings (Jay) Smith, Inspector---304-249-5172

**I HAVE READ AND UNDERSTAND THE ABOVE INFORMATION**

\_\_\_\_\_  
 (Name) (Date)

Above Ground Pool ....	18' Round=\$76.61
\$41.00 base plus 0.14 sq. ft	24' Round=\$104.30
In-ground Pool .....	28' Round=\$127.16
\$41.00 base plus 0.14 sq. ft	

**BARRIERS**

**Section 305 2015 ISPSC**

305.2.1 An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be provided with a barrier, which shall comply with the following:

1. The top of the barrier shall be at least 48 inches above *grade* measured on the side of the barrier, which faces away from the swimming pool or spa. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches measured on the side of the barrier which faces away from the swimming pool or spa. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall not exceed 4 inches.
2. Openings in the barrier shall not allow passage of a 4-inch diameter sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1 ¾ inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ inches in width.
5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ inches in width.
6. Maximum mesh size for chain link fences shall be 2 ¼ inch square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1 ¾ inches.
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1 ¾ inches. The angle of the diagonal members shall not be greater than 45 degrees from the vertical.
8. Access gates shall comply with the requirements of Section 305.3.1 through 305.3.3, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches from grade, the release mechanism and openings shall comply with the following:

- 8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches below the top of the gate; and
- 8.2. The gate and barrier shall have no opening larger than ½ inch within 18 inches of the release mechanism
9. Where a wall of a *dwelling* or structure serves as part of the barrier and where doors or windows provide direct access to the pool through the wall, one of the following conditions shall be met:
  - 10.
  - 10.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346;  
or
  - 10.2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. The deactivation switch(es) shall be located at least 54 inches above the threshold of the door;  
or
  - 10.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable as long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.
11. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps:
  - 11.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or
  - 11.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section 305.2. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4- inch diameter sphere.
12. All walls surrounding an indoor swimming pool shall comply with Item 9.
13. Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.
14. Swimming Pools with a powered safety cover which complies with ASTM F 1346, as listed in Section 305, shall be exempt from these requirements.
15. Spas and hot tubs shall have a lockable safety cover that complies with ASTM F1346.

#### **INSPECTIONS**

**Please note that the primary purpose of the pool inspection process is to assure that safety requirements have been met, including verifying that the electrical installation has been completed, inspected and approved, and that the swimming pool barrier requirements of the code have also been satisfied by a permanent pool barrier.**

**Swimming pools shall not be used until all required inspections of the pool including pool barrier and its associated electrical equipment have been approved.**

Rev: 7/29/16, 9/1/16



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### **CERTIFICATE OF COMPLIANCE**

The undersigned certifies that all construction involving the installation of the residential swimming pool will be in full compliance of the Berkeley County Swimming Pool Packet.

The undersigned further certifies that all necessary inspections will be scheduled in accordance with the schedule set forth in the booklet and that the Department of Building Inspections will be notified to perform the final inspection prior to the use of the pool. Failure to contact this office for any inspections within six (6) months of permit issuance or prior inspections will result in the permit being voided and an unsafe structure sign being placed on work already completed. This sign will not be removed until a new permit has been issued. The undersigned also certifies that the swimming pool will not be used or occupied until a final inspection has been approved. If the pool is occupied prior to all the required inspections, an unsafe structure sign will be placed on the structure until the final inspection is approved. Such unsafe structure signs are not to be removed by anyone other than Berkeley County Engineering staff. The undersigned acknowledges that appropriate legal action can be taken. Please note that once a criminal warrant has been filed by our office, we will be unable to drop said charges.

**OWNER:**

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Property Owner's Name (Please Print)

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Property Owner's Signature

Rev: 10/24/12



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**Certificate of Occupancy**

\_\_\_\_\_ Fax Certificate of Occupancy \$30.00

Fax Number \_\_\_\_\_

Will be issued once all paper work is completed including final electric.

\_\_\_\_\_ Expedited Certificate of Occupancy \$89.00

Phone Number \_\_\_\_\_

Will be issued once all paper work is completed including final electric.

All other Certificate of Occupancies will be mailed.

\_\_\_\_\_ No Certificate of Occupancy required for non habitable spaces such as decks, storage buildings, pools, etc.

No change in options after Permit is issued.

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

**DIRECTIONS**

**(TO BE FILLED IN COMPLETELY BEFORE PERMIT WILL BE ISSUED)**

**LAST NAME OF OWNER:** \_\_\_\_\_

**LOCATION OF PROJECT:**      **SUBDIVISION NAME:** \_\_\_\_\_

**LOT NUMBER:** \_\_\_\_\_

**DIRECTIONS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**(Please note - Inspectors cannot inspect what they cannot find, please make directions clear)**

**Floodplain**

**Any structure located within the floodplain, that is to be constructed, added to, altered or otherwise changed requires a WV design professional.**

**Refund Policy**

Voided Application .....Lose Base Fee + grading fee + plan review if already been reviewed.

Voided Permit .....Lose Base Fee + grading fee + % lost will depend on inspections already completed + .06/sq ft for plan review  
.09/sq ft for commercial plan review

Application or Permit will be voided if no activity for 180 days no refund will be made.

\_\_\_\_\_

\_\_\_\_\_

Signature

Date

**Berkeley County Engineering And  
Building Inspections  
400 W. Stephen St., Suite 202  
Martinsburg, WV 25401  
304-264-1966**

ASSESSORS STATEMENT

I, \_\_\_\_\_, am applying for a building permit and need the following information to accommodate the application being submitted to Berkeley County Engineering:

Property Owner as of \_\_\_\_\_ TY: \_\_\_\_\_

Property Use:    Residential        Commercial        Agriculture

District: \_\_\_\_\_, Tax Map: \_\_\_\_\_, Parcel Number: \_\_\_\_\_

Lot #: \_\_\_\_\_ Subdivision Name: \_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
(Assessors Office Representative)

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PLANNING COMMISSION STATEMENT

***\*\*The Berkeley County Planning Commission must approve all structures PRIOR to submitting an application for a building permit to ensure compliance with the Berkeley County Subdivision Regulations.***

\_\_\_\_\_ Structure complies with Berkeley County Subdivision Regulations

\_\_\_\_\_ Structure to be regulated by height/noise ordinance    Yes    or    No (Circle One)

\_\_\_\_\_ Is Structure in floodplain?    Yes    or    No (Circle One)

The Berkeley County Planning Commission has reviewed and approved the above listed property and has no objections to the issuance of a building permit for said property.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
(Planning Commission Representative)



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### OWNER AFFIDAVIT

I, \_\_\_\_\_ understanding the importance and solemnity of the oath, do hereby swear and affirm that I am the current legal title owner of the property for which this permit is requested or that I am legally appointed agent or power of attorney for such owner.

Accordingly, I give my permission for \_\_\_\_\_ to obtain the needed permit(s).

\_\_\_\_\_  
Owner Signature

\_\_\_\_\_  
Owner Signature

\_\_\_\_\_  
Date

### **MUST BE NOTARIZED**

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

I hereby certify that on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, before the subscribed, a Notary Public of the State of \_\_\_\_\_, and for the County of \_\_\_\_\_, \_\_\_\_\_ for the owners (Name)

did acknowledge the foregoing instrument to be his/her Act.

In testimony whereof,

I have affixed my official seal.

\_\_\_\_\_ My Commission Expires: \_\_\_\_\_

NOTARY PUBLIC

SEAL:





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**SWIMMING POOL APPLICATION**

**Applicant Information:**

Is owner applicant? \_\_\_\_\_

**NOTE: If applicant is not the property owner, the property owner must complete attached affidavit**

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
 (Street # and Name or P.O. Box #)

\_\_\_\_\_  
 (City) (State) (Zip code)

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_ Email address: \_\_\_\_\_

**Property Owner Information:**

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
 (Street # and Name or P.O. Box #)

\_\_\_\_\_  
 (City) (State) (Zip code)

Phone Number: \_\_\_\_\_

**Pool Information:**

Physical Address: \_\_\_\_\_

Size of Pool: \_\_\_\_\_ Sq. Ft.: \_\_\_\_\_ Pool: \_\_\_ Inground or \_\_\_ above ground

If pool is above ground; What is height of pool walls? \_\_\_\_\_ Are there bottom drains: \_\_\_\_\_

Year of Pool: \_\_\_\_\_ Make & Model: \_\_\_\_\_ Estimated Value: \_\_\_\_\_

Will you be building a deck for pool? \_\_\_\_\_ Size of deck: \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_  
 (Length) (Width) (Square Feet)

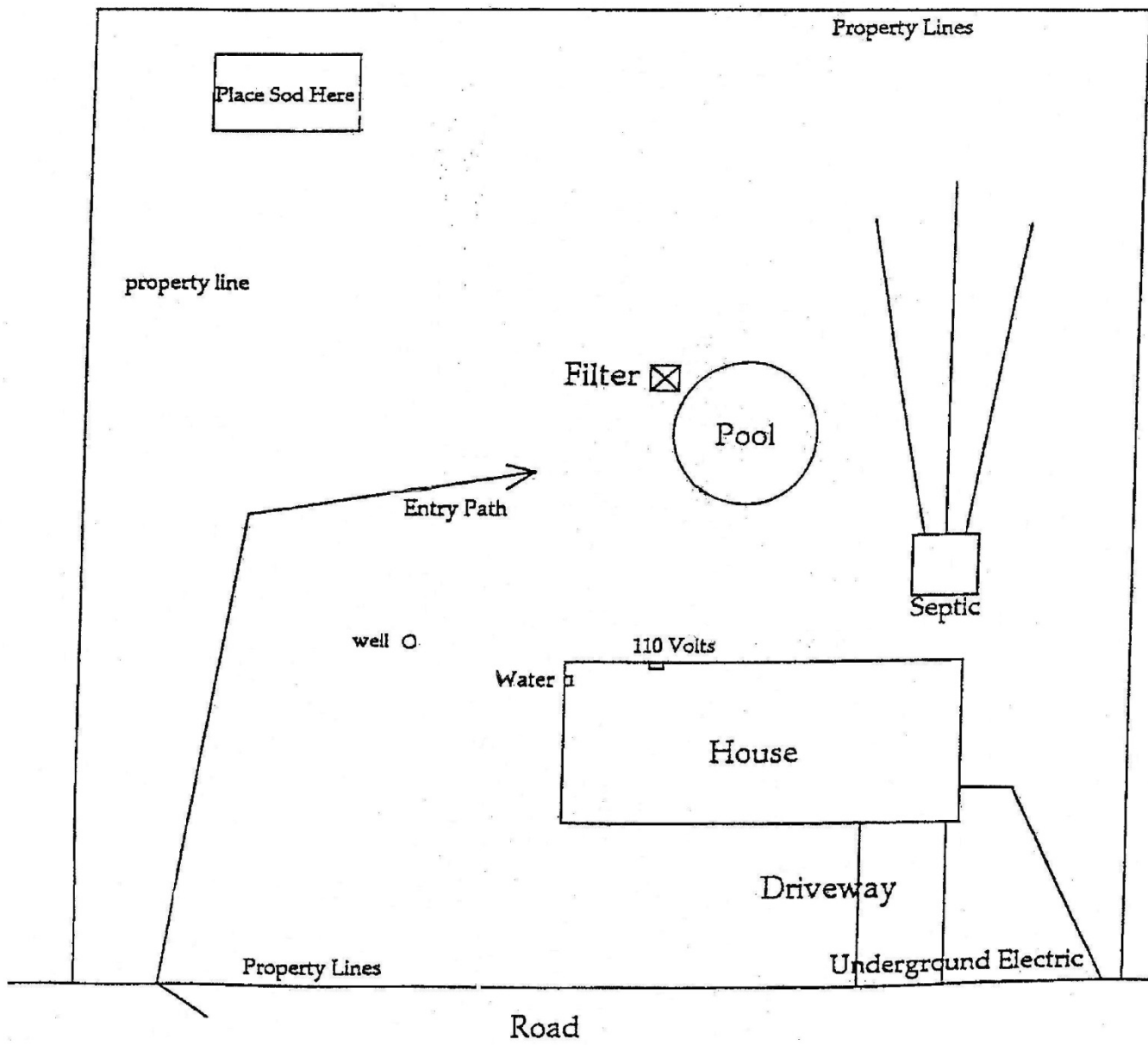
Electrical Inspector: \_\_\_\_\_ Pool Installers Name: \_\_\_\_\_ WV Contractors License # \_\_\_\_\_

**I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE INFORMATION ON THIS APPLICATION IS TRUE AND CORRECT.**

\_\_\_\_\_  
**Applicant Signature**

\_\_\_\_\_  
**Date**

# Location Of Pool (Example)



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**NOTE TO OWNERS OF PROPERTY WITH  
RESTRICTIVE COVENANTS:**

Your property may be subject to certain restrictive or private covenants especially if you reside in a subdivision. If so, be advised that the offices of Berkeley County do not have jurisdiction over the provisions of those covenants. They are enforced only by the Homeowners' Association. The county enforces only its own rules and regulations.

ANSI/ASP-7 2006 Specifies three methods for determining the maximum system flow rate. The following simplified TDH calculation is one of the methods specified.

### Simplified Total Dynamic Head (TDH) Calculation Worksheet

**TDH Calculation Options**  
 For each pump  
 Check One.  
 **Simplified Total Dynamic Head (STDH)**  
 Complete STDH Worksheet – Fill in all blanks  
 **Total Dynamic Head (TDH)**  
 Complete Program or other calcs. Fill in required blanks on worksheet & attach calculations.

**Determine Maximum System Flow Rate:**  
 Minimum Flow Rate Required: 35 gpm Per Skimmer

- Calculate Pool Volume:  $\frac{\text{Surf. Area}}{\text{Avg. Depth}} \times 7.48 \text{ (gal./cubic foot)} = \frac{\text{Vol. in gal.}}{\text{Vol. in gal.}}$
  - Determine preferred Turnover Time in hours:  $\frac{\text{Hours}}{\text{Turnover in Min.}} \times 60 \text{ (min./hr.)} = \frac{\text{Turnover in Min.}}{\text{Turnover in Min.}}$
  - Determine Max Flow Rate:  $\frac{\text{Vol. in gal.}}{\text{Turnover Mins.}} = \frac{\text{Pool Flow Rate}}{\text{Pool Flow Rate}} + \frac{\text{Feature Flow Rate}}{\text{Feature Flow Rate}} = \frac{\text{System Flow Rate}}{\text{System Flow Rate}}$
  - Spa Jets:  $\frac{\text{No. of Jets}}{\text{Jet Flow}} \times \text{gpm per jet} = \frac{\text{Total Jet Flow Rate}}{\text{Total Jet Flow Rate}}$  flow rate.
- (For single pump pool/spa combo, use the higher of No. 3 or No. 4 in the following calculations for the pool & spa)

**Determine Pipe Sizes:**

Branch Piping to be \_\_\_\_\_ inch to keep velocity @ 6 fps max. at \_\_\_\_\_ gpm Maximum System Flow Rate.  
 Trunk Piping to be \_\_\_\_\_ inch to keep velocity @ 8 fps max. at \_\_\_\_\_ gpm Maximum System Flow Rate.  
 Return Piping to be \_\_\_\_\_ inch to keep velocity @ 10 fps max. at \_\_\_\_\_ gpm Maximum System Flow Rate.

**Determine Simplified TDH:**

- Distance from pool to pump in feet: \_\_\_\_\_
- Friction loss (in suction pipe) in \_\_\_\_\_ inch pipe per 1 ft. @ \_\_\_\_\_ gpm = \_\_\_\_\_ (from pipe flow/friction loss chart)
- Friction loss (in return pipe) in \_\_\_\_\_ inch pipe per 1 ft. @ \_\_\_\_\_ gpm = \_\_\_\_\_ (from pipe flow/friction loss chart)
- $\frac{\text{Length of Suct. Pipe}}{\text{Length of Suct. Pipe}} \times \frac{\text{Ft of head/ 1 ft of Pipe}}{\text{Ft of head/ 1 ft of Pipe}} = \frac{\text{TDH Suct. Pipe}}{\text{TDH Suct. Pipe}}$
- $\frac{\text{Length of Return Pipe}}{\text{Length of Return Pipe}} \times \frac{\text{Ft of head/ 1 ft of Pipe}}{\text{Ft of head/ 1 ft of Pipe}} = \frac{\text{TDH Return Pipe}}{\text{TDH Return Pipe}}$

Flow and Friction Loss Per Foot					
Schedule 40 PVC Pipe					
Pipe Size	Velocity – Feet Per Second				
	6 fps		8 fps		10 fps
1"	16gpm	0.14'	21gpm	0.23'	26gpm 0.35'
1.5"	37gpm	0.08'	50gpm	0.14'	62gpm 0.21'
2"	62gpm	0.06'	82gpm	0.10'	103gpm 0.16'
2.5"	88gpm	0.05'	117gpm	0.09'	146gpm 0.13'
3"	138gpm	0.04'	181gpm	0.07'	227gpm 0.10'
4"	234gpm	0.03'	313gpm	0.05'	392gpm 0.07'
6"	534gpm	0.02'	712gpm	0.03'	

TDH in Piping: \_\_\_\_\_  
 Filter loss in TDH (from filter data sheet): \_\_\_\_\_  
 Heater loss in TDH (from heater data sheet): \_\_\_\_\_  
 Total all other loss: \_\_\_\_\_  
 Total Simplified TDH: \_\_\_\_\_

**Selected Pump and Main Drain Cover:**

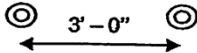

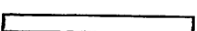

Pump selection \_\_\_\_\_ using pump curve for Simplified TDH & System Flow Rate.  
(Pump Model and Size in Horsepower)

Main Drain Cover \_\_\_\_\_ (System Flow Rate must not exceed approved cover flow rate)  
(Make and Model)

Notes: Minimum system flow based on min. flow per skimmer of 35 gpm.

**Determine the Number and Type of Required In-Floor Suction Outlets:**

Check all that apply.

-  2 \_\_\_\_\_ suction outlets @ \_\_\_\_\_ gpm max. flow (see note 2).
-  3 \_\_\_\_\_ suction outlets @ \_\_\_\_\_ gpm max. flow (see note 3).
-  Channel Drain @ 316 gpm max. flow rate.
-  Channel Drain @ 217 gpm w/ 2 ports & 278 gpm w/ 3 ports (see note 4).

**Notes:**

1. If a variable speed pump is used, use the max. pump flow in calculations.
2. For side wall drains, use appropriate side wall drain flow as published by manufacturer.
3. Insert manufacturer's name and approved maximum flow.
4. See installation instructions for number of ports to be used.
5. In-Floor suction outlet cover/grate must conform to most recent edition of ASME/ANSI A112.19.8 and be embossed with that edition approval.
6. Pump & Filter make, model and location cannot change without submitting a revised plan and TDH worksheet.

\_\_\_\_\_  
Contractor Name

\_\_\_\_\_  
Contractor Signature

\_\_\_\_\_  
Contractor License Number

\_\_\_\_\_  
Date

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Email Address