

House

* Alarms on Doors & Windows
Leading into Fenced Area *

Electric
Outlet

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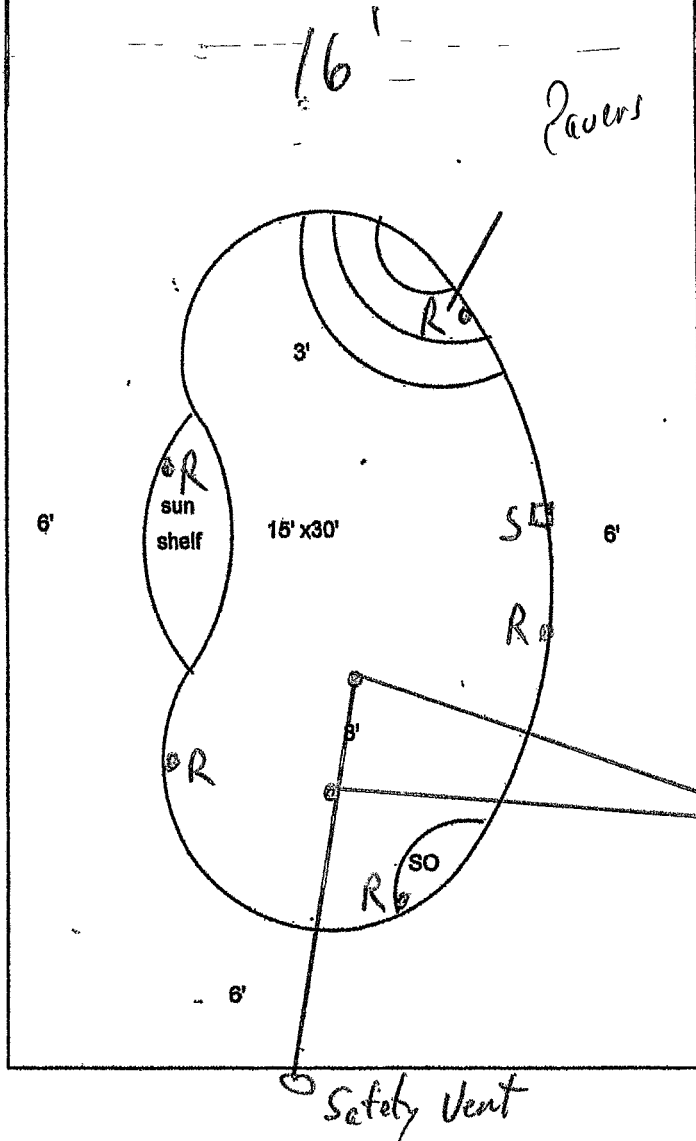
3/4 HP Tri
Star Motor
with Cartridge
Filter
2" Sched 40
plumbing

Drains
CMP 25514 000000
VGB Main Drain
Assembly with
an VTK CUR

8' x 8" Footer
with 2 #3's

Dual Drains
3' Apart

Fence
Around Pool



Fiesta Pools
2217 N. Pine Ave.
Ocala, FL 34478

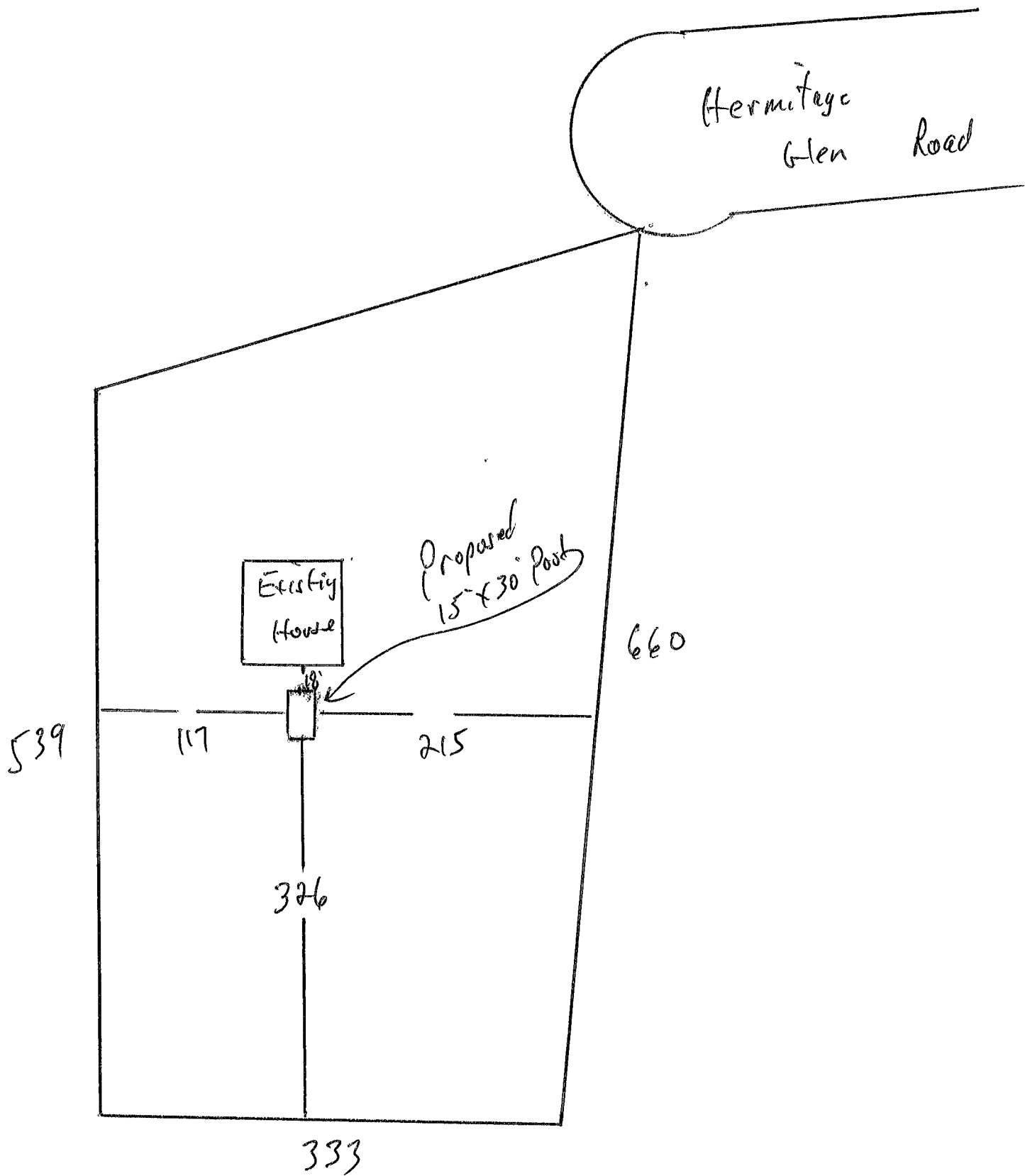
Phone: 352 239 5355
Fax: 352 622 0147

Designed by:
Stu Bell
4/2/2014

Designed
for:

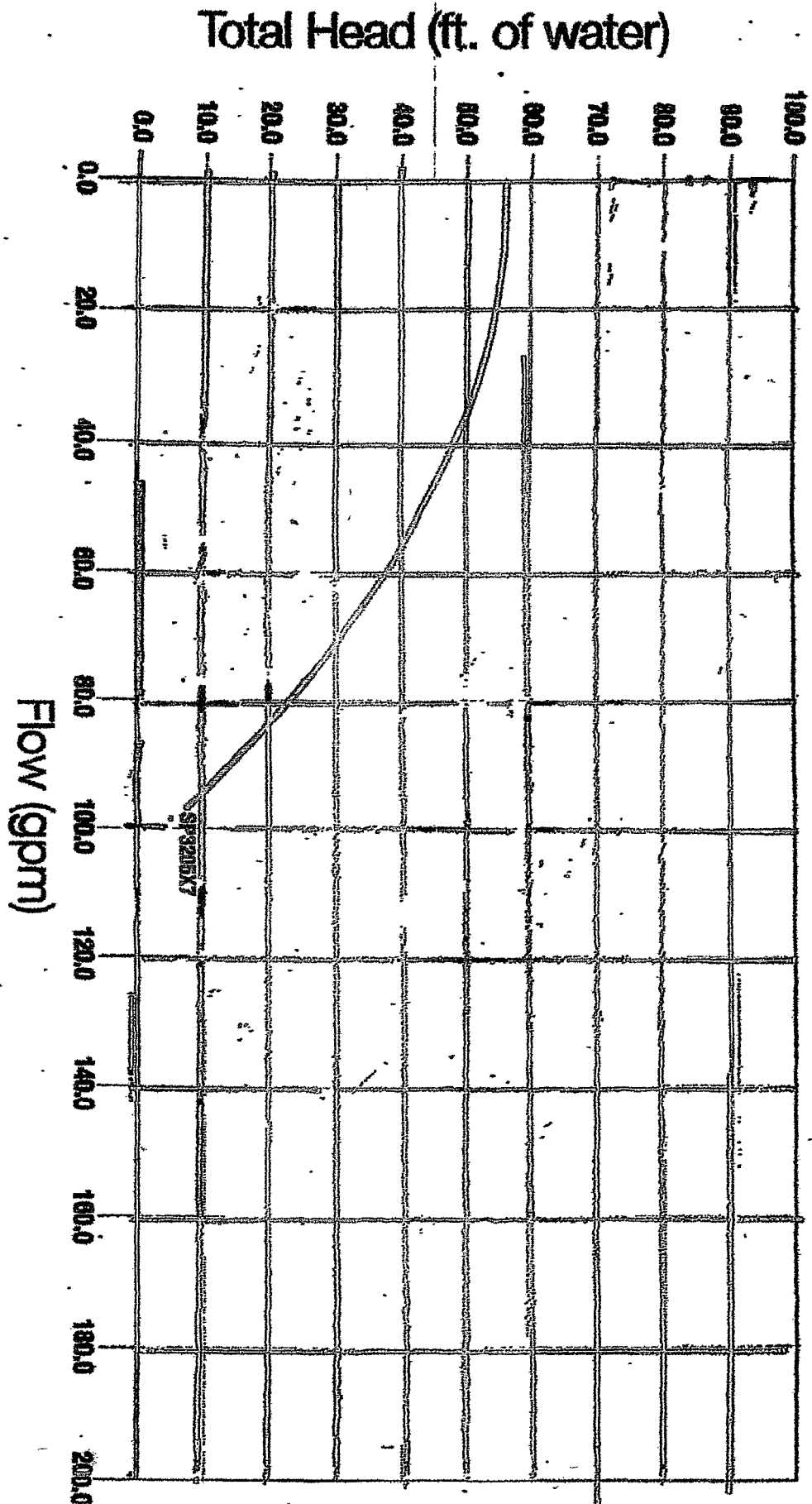
21-75-17-10039-103

1" = 100'



MAX RATE MODELS	TOTAL HP	MAX RATE HP	SERVICE FACTORY	VOLTAGE	PIPE SIZE	DIMENSION
SP3205X7	0.94	0.75	1.25	115/230	2 x 2 1/2"	13" 3/8"

TriStar Standard Efficient Flow vs. Total Head



ANSI/ASSE-7 2008 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

Determine Maximum System Flow Rate:

Minimum Flow Rate Required: 35 gpm Per Siphonier (Required: 1 siphonier per 800 sq ft of surf. area)

1. Calculate Pool Volume: $450' \times 5.5' \times 7.48 \text{ (gal./cubic foot)} = 18,513 \text{ (gal.)}$

2. Determine predicted Turnover Time in hours: $\frac{18,513}{350} \times 60 \text{ (min./hr.)} = 3,200 \text{ (min.)}$

3. Determine Max Flow Rate: $\frac{18,513}{3,200} = 5.8 \text{ (gpm.)}$

4. Spot check: $\frac{18,513}{350} = 53.2 \text{ (gpm.)}$ (For single pump pool/spa combo, use the higher of No. 3 or No. 4 in the following calculations for the pool & spa)

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 2" inch to keep velocity @ 5 fps max. at 63 gpm Maximum System Flow Rate.

Trunk Piping to be 2" inch to keep velocity @ 8 fps max. at 63 gpm Maximum System Flow Rate.

Return Piping to be 2" inch to keep velocity @ 10 fps max. at 63 gpm Maximum System Flow Rate.

Determine Simplified TDH:

1. Distance from pool to pump in feet: 140'

2. Friction loss (in suction pipe) in 2" inch pipe per 1 ft. @ 63 gpm = 0.06 (from pipe flow/friction loss chart)

3. Friction loss (in return pipe) in 2" inch pipe per 1 ft. @ 63 gpm = 0.06 (from pipe flow/friction loss chart)

4. $\frac{140' \times 0.06}{1} = 8.4$

5. $\frac{140' \times 0.06}{1} = 8.4$

(Length of Return Pipe) (ft or 1 inch) (ft or 1 inch)

Filter loss in TDH (from filter data sheet): 28

Header loss in TDH (from header data sheet): —

Total w/ other loss: —

Total Dynamic Head (TDH): 32.8

Select Pump and Main Drain Cover:

Pump selection: Hanover SP3207 using pump curve for TDH & System Flow Rate

Main Drain Cover: W61048E (System Flow Rate must not exceed approved cover flow rates)

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

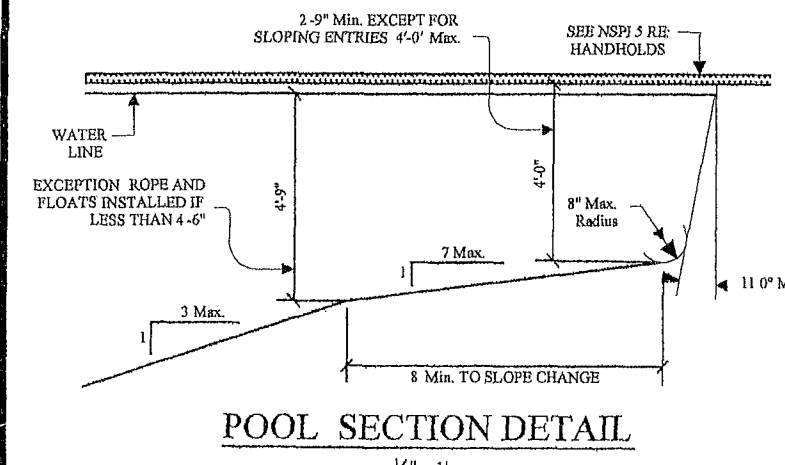
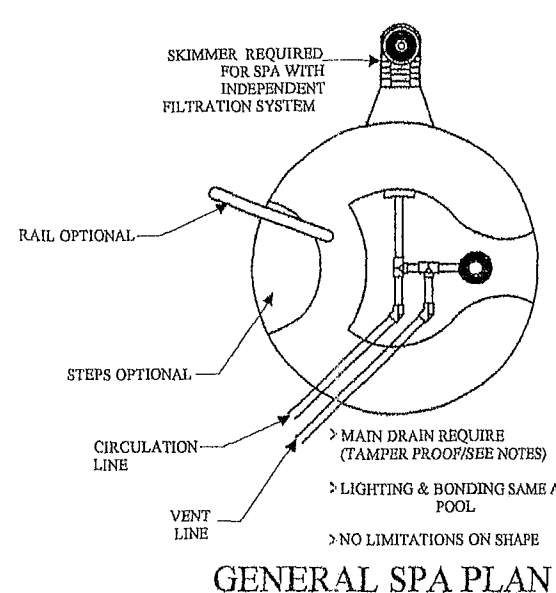
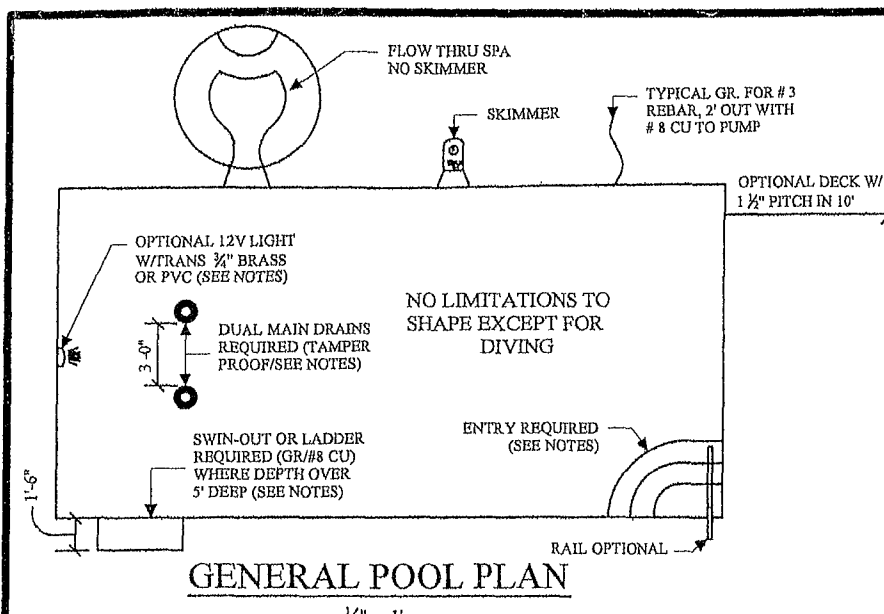
Determine the Number and Type of Required In-Floor Suction Outlets:

Check all that apply:

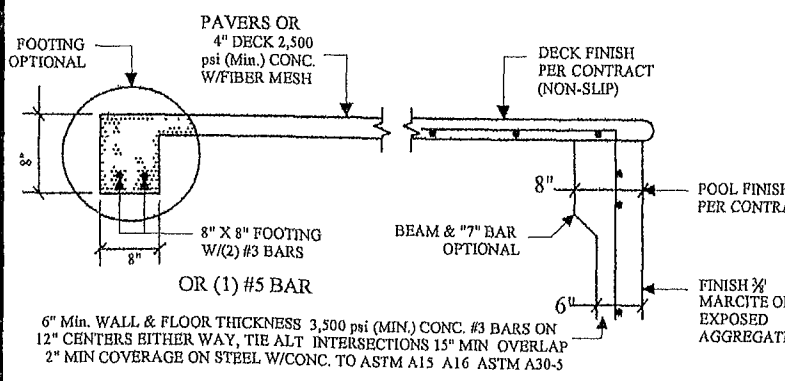
☒ 3-0" ☐ suction outlets @ 76 gpm max. flow (see note 2).

☐ suction outlets @ — gpm max. flow (see note 3).

☐ channel drain @ — gpm w/ — ports (see note 4).



SB2836, 6-20-07
 FOR BONDING AND GROUNDING SYSTEMS FOR SWIMMING POOLS, THE USE OF AN UNDERGROUND BONDING CONDUCTOR MADE OF #8 AWG. BARE SOLID COPPER WIRE BURIED TO A MINIMUM DEPTH OF 4 INCHES TO 6 INCHES BELOW SUBGRADE, AND 18 TO 24 INCHES FROM INSIDE WALL OF A SWIMMING POOL OR SPA, IS DEEMED A PERMISSIBLE ALTERNATIVE OR EQUIVALENT TO COMPLIANCE WITH s. 680.26(c) OF THE NATIONAL ELECTRICAL CODE.



Structural subject to suitable soil conditions.
POOL/SPA, DECK, BEAM, WALL, FLOOR
 1/2" = 1"

SAMPLE ONLY EACH APPLICATION FOR PERMIT SHALL BE BASED ON A TOTAL DYNAMIC HEAD OF 60 ft.

Determine System Flow Rate.
 Minimum Flow Rate Required: 35gpm per skimmer (Required 1 Skimmer per 800 sf)
 Pool Volume: _____ sq ft x _____ ave depth x 7.481 gal/cf = _____ gallons
 Turnover Time in Hours: _____ hours x 60 min/hr = _____ minutes
 Flow Rate: _____ gallons / _____ minutes = _____ gpm

PIPE SIZING CHART (MAXIMUM)

PIPE	SUCTION	PRESSURE
1 1/2"	35 GPM	65 GPM
2"	60	105
2 1/2"	90	147
3"	135	230
4"	235	396

FOR POOLS WITH VOLUME = 15,000 GALS.
 PUMP: HAYWARD SP3010X152AZ, (POOL)
 HAYWARD SP3015X202AZ (SPA)
 DUAL SPEED PUMPS
 TURNOVER RATE = 6 HOURS = 360 MINS.

VARIABLE OR DUAL SPEED PUMPS ARE REQUIRED IF THE PUMP EXCEEDS 1 HP PLUMBING WILL BE DESIGN FOR THE MAX FLOW OF THE PUMP REFER TO TDH CALCULATIONS FOR VARIABLE OR DUAL SPEED DESIGNS.

FILTER: HAYWARD C1200, 120 GPM CAPACITY OR HAYWARD C1750, 175 GPM

MAIN DRAIN: CUSTOM MOLDED 25507 100-010

CLEANER: HAYWARD VAC LOC

VENT SCREEN: WATERWAY 640-231XV

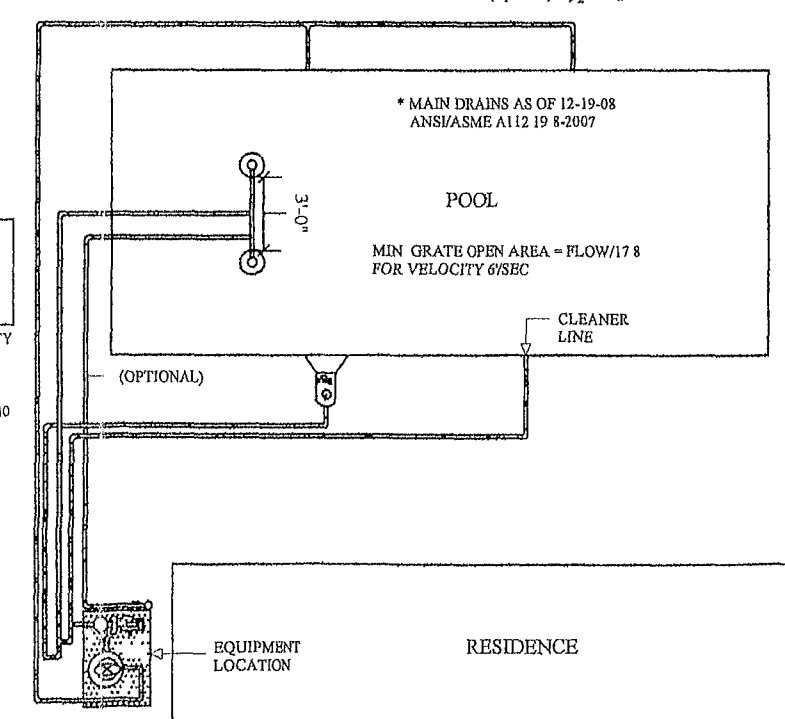
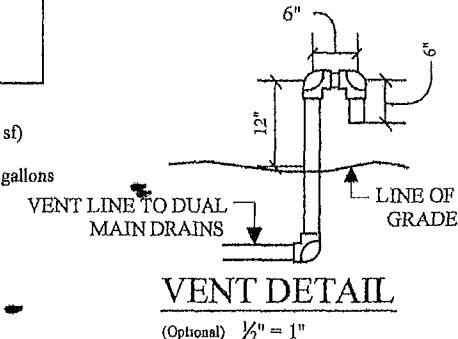
MAIN SUCTION PIPE SIZE _____

SKIMMER SUCTION PIPE SIZE _____

CLEANER/VAC PIPE SIZE _____

RETURN SUCTION PIPE SIZE _____

- GENERAL DESIGN REQUIREMENTS**
- DESIGN, CONSTRUCTION AND WORKMANSHIP SHALL BE IN CONFORMITY WITH THE REQUIREMENTS OF ANSI/NSPI 3, ANSI/NSPI 4, ANSI/NSPI 5, AND ANSI/NSPI 6, ANSI/APSP 7 AND ANSI/APSP 15 BASED ON THE POOL TYPE.
 - SEE NSPI FOR DIVING WATER ENVELOPES
 - SLIDES SHALL MEET THE MANUFACTURE'S INSTALLATION REQUIREMENTS
 - ENTRY/EXIT: REQUIRED AT THE SHALLOW END AND DEEP END IF OVER 5 FEET DEEP. ACCEPTABLE ARE STAIRS (10" MIN TREAD WITH 240 SQUARE INCH MIN AREA, 12" MAX. RISER WITH INTERMEDIATE TREADS AND RISERS UNIFORM) LADDERS, UNDERWATER SEATS, AND SWIM OUTS (MAX. 20" BELOW WATER)
 - CIRCULATION SYSTEMS, COMPONENTS AND EQUIPMENT SHALL COMPLY WITH NSF 50
 - THE MAXIMUM TURNOVER RATE IS 12 HOURS
 - FILTERS SHALL HAVE AN AIR RELEASE AND PRESSURE GAGE.
 - PUMPS 3 HP AND LESS SHALL MEET ANSI/UL1081 CORROSION RESISTANT WITH STRAINER AND MEET THE REQUIRED FLOW
 - SURFACE SKIMMERS SHALL MEET NSF 50 AND THERE SHALL BE ONE FOR EVERY 800 SQUARE FEET OF SURFACE AREA.
 - RETURN INLETS SHALL BE A MINIMUM OF ONE FOR EVERY 300 SQUARE FEET
 - HEATER SHALL MEET ANSI-Z21.56 OR UL 1261 OR UL 559
 - DISINFECTANT EQUIPMENT SHALL COMPLY WITH NSF 50.
 - PRESSURE TEST PIPING AT 35 PSI FOR 15 MINUTES OR MEET LOCAL CODE IF GREATER.



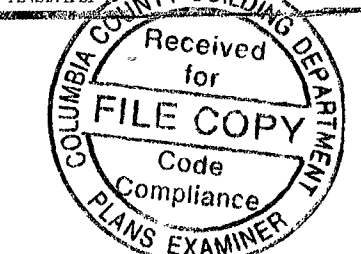
- SPECIAL SPA REQUIREMENTS**
- MAXIMUM WATER DEPTH 4', MAXIMUM SEAT DEPTH 28", MAX
 - FLOOR SLOPE 1:12
 - STEPS: MIN TREAD 10" X 12", 7" MIN RISER, 12" MAX. RISER EXCEPT THE BOTTOM STEP MAY BE 14" IF IT IS THE SEAT. INTERMEDIATE TREADS AND RISERS TO BE UNIFORM. IF THE SPA IS OPERATED INTERMITTENTLY IT SHALL HAVE A ONE HOUR TURNOVER, IF CONTINUOUS A SIX HOUR TURNOVER. MAXIMUM TEMPERATURE 104 DEGREES.
 - MEET ANSI/NSPI ARTICLE XVII, SAFETY INSTRUCTION/SAFETY SIGNS.
 - PRESSURE TEST PIPING AT 35 PSI FOR 15 MINUTES OR MEET LOCAL CODE IF GREATER.

- ELECTRICAL REQUIREMENTS**
- WIRING AND BONDING AND ALL ELECTRICAL TO COMPLY WITH CHAPTER 27, FLORIDA BUILDING CODE 2010 AND NEC 2008
 - NO OUTLET OR OVERHEAD POWER WITHIN 10' IF WITHIN 15' PROTECT BY GFI, TRANSFORMER MIN 10' FROM POOL, 8" ABOVE WATER, J BOX 4' FROM POOL, BRASS TO J BOX OR TRANSFORMER WHICH EVER IS FIRST EXCEPT WHERE PVC IS APPROVED.

FLORIDA BUILDING CODE R4101

THE POOL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL DETAIL DESIGN REQUIREMENTS FOR EACH INDIVIDUAL POOL IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, AND ALL CONSTRUCTION SHALL MEET ALL APPLICABLE CODES INCLUDING PLUMBING, ELECTRICAL AND GAS. PIPING SHALL BE SCH. 40 PVC, NSFpw, MAX. PRESSURE VELOCITY 10 FPS, SUCTION 6 FPS. THE POOL PLAN SHALL SHOW THE DESIGN PLUMBING AS PER THE SAMPLE WITH THE INFORMATION REQUIRED SHOWN. MAIN DRAIN PLUMBING SHALL BE TWO DRAINS SEPARATED BY 3' WITH APPROVED ANSI/ASME A112.19.8.2007 COVERS. AS AN ALTERNATE THE APPROVED DRAINS MAY BE PLACED ON DIFFERENT PLANES. THE TWO DRAINS SHALL HAVE A COMMON SUCTION LINE. SUCTION GRATES MAY BE USED IF APPROVED AT A MAXIMUM OF 1 1/2 FPS AND THE SUCTION PIPING IS RECESSED FROM THE GRATE THE DISTANCE EQUAL TO THE SUCTION PIPE SIZE. IN ADDITION A SAFETY VACUUM RELEASE SYSTEM MAY BE INSTALLED. THIS MAY CONSIST OF AN AIR RELEASE SYSTEM. THE VENT PIPE SHALL BE TIED TO THE MAIN DRAIN LINES, SIZED THE SAME AS THE MAIN DRAIN SUCTION LINE WITH A MAXIMUM LENGTH OF VENT PIPING TO BE 30'. THE VENT PIPE WILL BE ELBOWED UP AND OVER WITH A GRATE FOR PROTECTION AND LABELED "SAFETY VENT" AND/OR "SAFETY VENT LINE". SKIMMERS DO NOT REQUIRE PROTECTION AND MUST BE DESIGNED FOR A MINIMUM 25 gpm. THE FOLLOWING SHALL BE LABELED WITH LABEL MARKER TAPE AT THE FILTER LOCATION: PIPES, VALVES, PUMP(S) OFF SWITCH.

IT HAS BEEN CERTIFIED THAT THESE DESIGN REQUIREMENTS ARE IN COMPLIANCE WITH THE FLORIDA BUILDING CODE R4101, 424.2-2010, ANSI/NSPI 3, ANSI/NSPI 4, ANSI/NSPI 5, ANSI/NSPI 6, ANSI/APSP 7 AND ANSI/APSP 15.



FIESTA POOLS OF OCALA

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 gcollins@verizon.net

Standard Residential
 Pool and / or Spa
 Design

DD A Let 2/13