



Swimming Pool Electrical Requirements*

Now let's get started so we can go swimming

- A GFCI convenience receptacle is required. It must be placed 6' to 20' away from the pool and be attached to a 4x4, pressure treated post or similar. This 15 or 20 Amp receptacle cannot share the same circuit as the pump; it must be tamper resistant (TR) and weather resistant (WR) and will be marked on the receptacle from the factory. It must have an in-use cover also known as a bubble cover. An in-use cover is a large dome type cover that when closed prevents wetness from getting into the receptacle when the plug is inserted and cover closed. The conduit or approved direct burial cable (UF) for this receptacle must be placed minimum 18" below grade.
- Another receptacle is needed for the pump. This receptacle must be a twist lock type and be placed 6'-10" away from the pool. It must be on its own GFCI-20 amp circuit breaker, 12 awg. **It cannot be shared with any other device!** The twist lock receptacle must be used for the pumps plug and its cord cannot be longer than 3'. An in-use cover (bubble type) is also required for this receptacle.
- The wiring for the pump must be placed in ½" minimum conduit and be buried 18" below the top of the conduit. 3 single insulated conductors are required: one white, one black and one green and all must be rated 12 AWG, THHN/THWN.
No UF Cable (underground feeder cable) allowed! An underground feeder cable will be gray in color and contains all 3 conductors inside of it. The reason you may not use this is because the grounding wire is not insulated as the other 2 are. This copper wire is not insulated; it has no GREEN covering on it, only brown paper!
- The circuit breaker for the pump receptacle will need to be rated 20Amp- GFCI.
For inspection purposes, please let 3 areas exposed to check for the depth and conduit.

***Note:** GFCI and Non-GFCI circuits cannot be in the same conduit and all underground wiring must be buried at least 5' away from the pool.

The pool will need to have a # 8 bare solid copper wire placed around the perimeter of the pool and this is called bonding. The following information will guide you through this process.

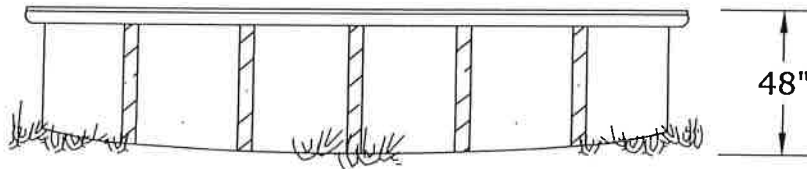
- At the pump you will find a lug attachment; connect a #8 bare solid copper wire to the lug and continue laying the copper wire around the perimeter of the pool placing it 18"- 24" away. This wire will need to be buried 4-6" below grade. Any metal within 5' of the pool must be connected to this ring and any metal on the pool as well. Don't forget the required **water bonder**; you will need to connect that too. When you reach the point where you started, you will now clamp the end wire to it and this will complete this bond.
- This copper bonding wire shall be covered 4-6" below grade When it is inspected you shall have the finished grade complete and only have 4 small expose openings around the pool so it can be verified.
- What's a water bonder? Go to internet site: <http://waterbonder.com>
{This is only one example of a water bonder and all water bonders must be listed and labeled for this use.}
- Note:** Bonding connectors shall be made of brass, stainless steel, copper or copper alloy.
- A timer is required that can automatically turn off the pump per a preset time.
- Electrical service drops above and within 10' of the pool must have a minimum clearance of 22.5 feet in any direction from water.

If you have any questions please call our office at 610-398-0904

*The above information is for guidance only.

The 2009 International Residential Code applies and supersedes any information provided above. It is the responsibility of the owner or authorized agent to abide by the codes of the 2009 IRC.

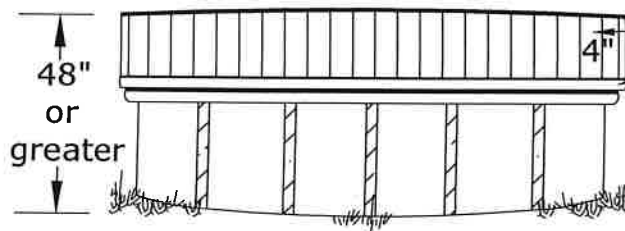
Barrier requirements



If pool is not at least 48" above grade at all locations a barrier must be used.

- The pool must be 48" high from the finished grade level to the top of the pool ledge at all points around the pool, if not a barrier must be erected.
- This barrier must be measured on the outside (side facing away from the pool.)
- The maximum opening space between the ground level and the bottom of the barrier can be 2" max.

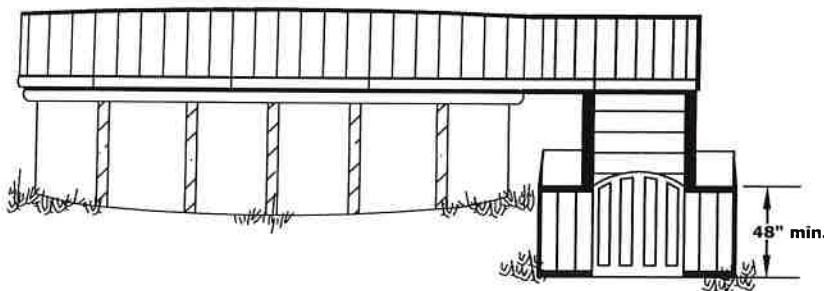
If the barrier is mounted on top of the pool structure the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall not exceed 4". Many of the pools are purchased with this feature that attaches the barrier on top of the shelf around the pool but remember that the opening may not allow passage of a 4" sphere at both sides of the ladder, deck or between the balusters!



Openings shall not allow passage of a 4" sphere between the barriers and between the pool ledge and bottom rail.

Ladder requirements

- A ladder or steps shall be capable of being secured, locked or removed when not in use to prevent access.
- If permanent steps are installed as shown below then a gate with barriers are required at the bottom of the staircase. The gate must open away from the steps and follow all barrier requirement on the following pages.



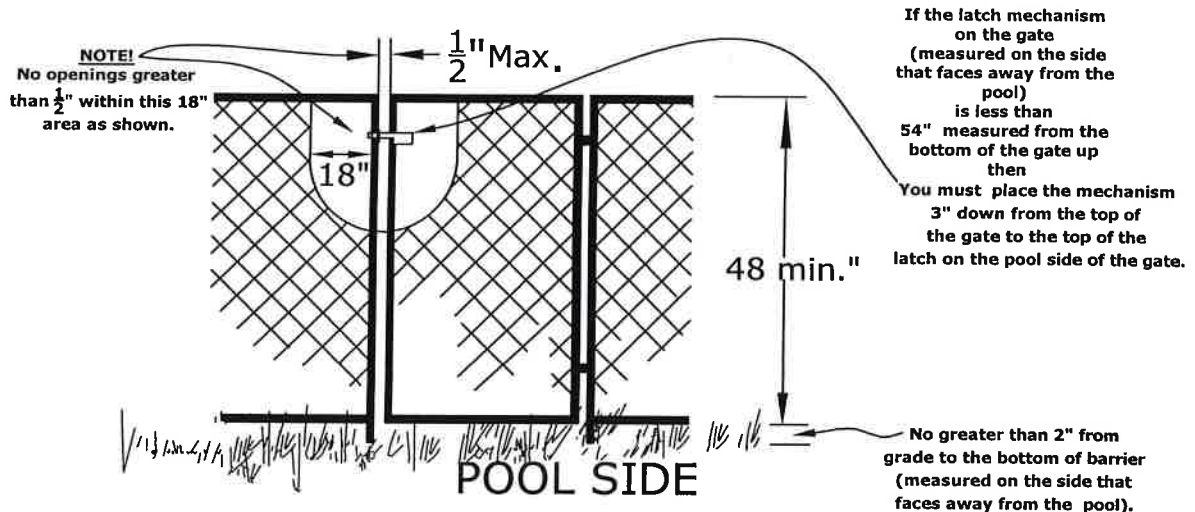
The latch must be placed on the inside of this gate.
See the following pages for requirements.

Pedestrian gates (Pool access)

- Gates shall open outward away from the pool.
- Gates shall be self-closing and self-latching.
- Gates shall be equipped to accommodate a locking device
- Where the release mechanism of the latch is located less than 54" from the bottom of the gate, the mechanism and opening shall have the following and illustrated below:
 - The latch shall be located on the pool side 3" below the top of the gate.
 - No openings larger than $\frac{1}{2}$ " within 18" of the release latch.

Gates other than pedestrian access (Equipment access)

- Gates shall be self latching
- Gates shall be equipped to accommodate a locking device.
- Where the release mechanism of the latch is located less than 54" from the bottom of the gate measured up, the mechanism and opening shall have the following as illustrated below:
 - The latch shall be located on the pool side 3" below the top of the gate.
 - No openings larger than $\frac{1}{2}$ " within 18" of the release latch.



Dwelling serves as part of the barrier

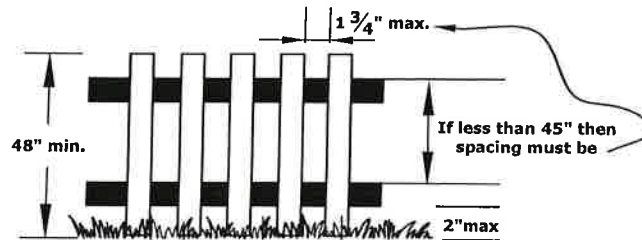
All doors from the house with direct access to the pool shall have an a listed and labeled alarm. The alarm is an audible warning when the door and/or its screen, if present, are opened. The following requirements must be followed.

- Listed and labeled in accordance with UL 2017
- The deactivation switch shall be located at least 54" above the threshold of the door.
- Other means like self-closing doors with self latching devices must be approved by the Building Code Official.

Different types of barriers

Vertical and Horizontal (Ladder Effect)

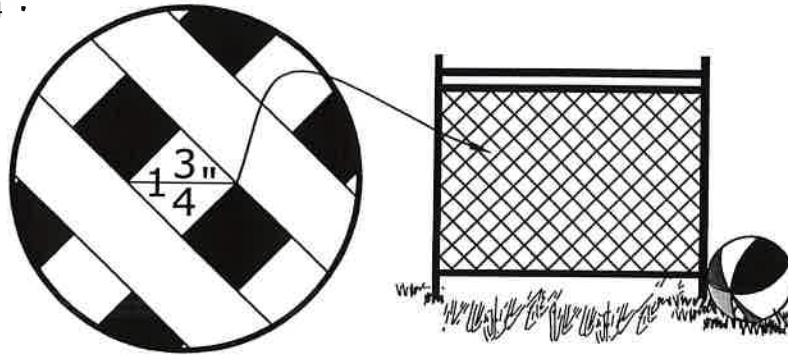
- If the barrier is made up of vertical and horizontal members and the space between the horizontals are less than 45" then the horizontal members must be constructed on the pool side. Spacing between the vertical members shall not be greater than $1\frac{3}{4}$ ". If the horizontal members are more than 45" then the horizontal members can be on the outside of the pool and the vertical spacing can be increased to 4"max.



This reason for this restriction is that a child can climb on the horizontal railing and get to the other side.

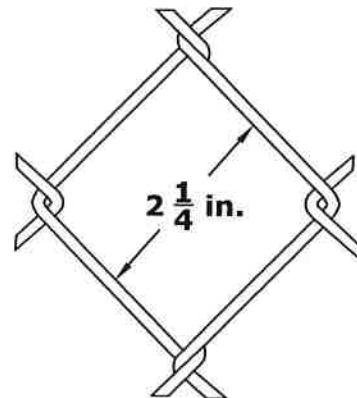
Diagonal (Lattice type)

- Maximum opening formed by the diagonal members shall not be more than $1\frac{3}{4}$ ".



Chain Link

- Maximum mesh size opening shall not be greater than $2\frac{1}{4}$ " square unless the fence has slats fastened at the top or bottom which reduces the openings to $1\frac{3}{4}$ ".



Above Ground Swimming Pools Deck Information



To construct the deck please go to link below:

<http://www.awc.org/Publications/DCA/DCA6/DCA6-09.pdf>

In most cases your deck will be free standing. All the information provided in this booklet must be followed.

Spacing from the tops of the horizontal members must be 45" or more apart or be located on the inside of the gate.

If the horizontal framing members are located on the outside of the gate and are less than 45" apart (measured from the tops of both) then the horizontals must be placed on the inside and have no opening greater than 1-3/4".

- The gate must be 48" high measured from the grade up and must not be able to get a foothold on the first step when gate is closed.
- The gate must swing out and be self-closing and self-latching.
- The latch must be 54" high measured from the grade up to the top of the latching mechanism or be placed on the inside of the gate 3" down from the top.
- Have no openings greater than 1/2" within 18" of the latch and this includes the side barrier as well.
- The steps riser height must not be greater than 8-1/4" high and tread not less than 9"
- A graspable handrail is required on one side and must have the ends returned in (90) at the top and bottom or return into the post.
- The handrail height must be placed 34" to 38" high measured above the front nosing of the tread. The side barriers must also be placed 34" to 38" high.
- The top of the deck barriers must be at least 36" high measured from the deck floor up and must not allow the passage of a 4" sphere between the balusters as well as underneath them. Please see additional information in the booklet (link listed above).

The information provided is only intended to be general guidance. It is not intended to take the place of either the written code or regulations.

WEISENBERG TOWNSHIP POOL REGULATIONS (FROM ZONING ORDINANCE)

1217.16 Swimming Pool, Private

- a. A private swimming pool shall not be located, constructed or maintained on any lot or land area, except in conformity with the requirements of these regulations.
- b. A permit shall be required to locate, construct, or maintain a private swimming pool.
- c. Such pool shall be not less than 20 feet from side and rear lot lines.
 - 1. Every private swimming pool located on a lot of two acres or more shall not be located closer than 40 feet from side or rear lot lines.
- d. Such pool shall be located at least 50 feet from any street right-of-way line.
- e. Such pool shall not occupy more than 25 percent of the rear and side yard areas, including all accessory structures.
- f. No more than 1500 gallons of water can be drawn from private wells to fill a swimming pool.
- g. No loud speaker or amplifying device shall be permitted which will project sound beyond the bounds of the property or lot where such pool is located.
- h. No lighting or spot lighting shall be permitted which will shine directly beyond the bounds of the property or lot where such pool is located.
- i. Any dam, pond, or water reservoir constructed for agricultural uses on a working farm provided it is within all yard requirements, is not subject to the private swimming pool regulations.

LOWHILL TOWNSHIP POOL REGULATIONS (FROM ZONING ORDINANCE)

925 Private Swimming Pool (Non-Commercial)

925.01 A private swimming pool shall not be located, constructed or maintained on any lot or land area, except in conformity with the requirements of these regulations.

925.02 A permit shall be required to locate, construct, or maintain a private swimming pool.

925.03 Such pool shall not be less than twenty (20) feet from side and rear lot lines.

925.031 Every private swimming pool located on a lot of two acres or more shall not be located closer than forty (40) feet from side or rear lot lines.

925.04 Such pool shall be located at least fifty (50) feet from any street right-of-way line.

925.05 Such pool shall not occupy more than twenty-five percent (25%) of the rear and side yard areas including all accessory structures.

925.06 No more than one thousand five hundred (1500) gallons of water per calendar year can be drawn from private wells to fill a swimming pool.

925.07 No lighting or spot lighting shall be permitted which will shine directly beyond the bounds of the property or lot where such pool is located.

925.08 Any dam, pond, or water reservoir constructed for agricultural uses on a working farm, provided it is within all yard requirements, is not subject to the private swimming pool regulations.