



PERMANENT POOLS

A pool is any man-made structure, basin, chamber, pond or tank containing or capable of containing an artificial body of water having a depth of 2' or more at any point. A permit is required for all of these structures. Natural occurring bodies of water such as lakes, ponds, rivers, etc. as well as required storm water retention ponds are not considered pools under this definition.

Location

Permanently installed pools must be installed so that any overhead electrical wires are offset 10' horizontally from the edge of the pool or at least 22.5' above the water line of the pool

Pools must be offset 5' from any underground electrical wires

If a 6' high privacy fence does not surround the pool the lot line setbacks are as follows:

- Minimum of 10' from rear lot line
- Minimum of 10' from side lot line
- Not allowed in actual front yard

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If you have a corner lot please contact our inspection staff for specific requirements as they are more complicated.

Protective Enclosures Requirements

Private residential permanently installed pools, whether in ground or above ground types, shall be enclosed by an adequate and secure means. The following are acceptable means:

- A properly installed and secure fence at least 44" high above adjoining grade. These fences must meet the following requirements:
 - Shall be constructed to prohibit the passage of a 4" sphere between fence members
 - Bottom of fence shall be no more than 2" above the existing grade
 - Any gates installed shall be constructed so as to be capable of being locked. These gates shall be closed and secured to prevent unlatching by persons outside the pool area when the pool is not in use.
- For above ground pools, a dome or pool top fencing attached to the pool and extends at least 44" above grade
 - These shall be fixed securely in place at all times when the pool is not in use
- For above ground pools, a pool cover in place capable of supporting 100 pounds per square foot
 - Pool covers shall be fixed securely in place at all times when the pool is not in use
- Above grade pools with self-supporting walls that are at least 44" high at all points
 - Ladders and stairways providing access to these pools must be removed, raised, or gated and secured to prevent entry whenever not in use

- Pools that have platforms and railings that are at least 44" in height above grade
 - Ladders and stairways providing access to these pools must be removed, raised, or gated and secured to prevent entry whenever not in use
- For in-ground pools, an automatic (motorized) pool safety cover may be installed in-lieu of the fencing requirement provided the pool cover is certified by the American Society of Testing and Materials (ASTM).
 - The pool cover shall cover the entire pool when the pool is not in use.
 - The activation switch shall be in a lockable case, require a key to activate or be code operated via a touch pad.
 - The activation switch shall be located a minimum of 60 inches above the pool deck and be placed in an area that has full, unobstructed view of the entire pool area.
 - If a pool cover becomes in-operable, damaged or is removed, the fencing requirement in Sec. 2-39(c) must be met.



A fence is NOT required for this type of swimming pool as long as

- Side walls are a minimum of 44" in height from grade to the top of the wall around the entire pool
- AND a removable or swing-up and locking stairs are used for access
- AND the pool is not connected to a deck



A fence IS REQUIRED for this type of swimming pool

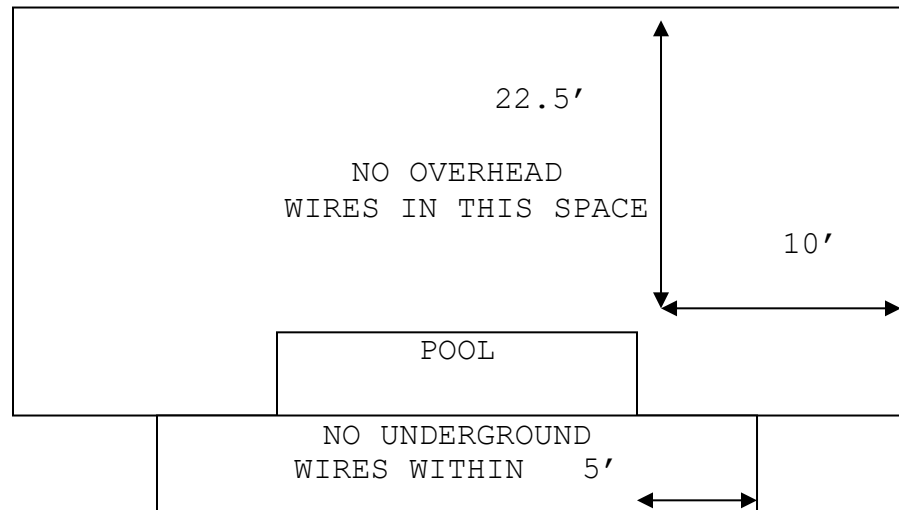
- Regardless of the height of the side walls
- If capable of holding more than 24 inches of water

Electrical Requirements

All electrical installations provided for, installed, and used in connection with permanently installed pools must comply with all applicable codes. The following is a summary of some of the electrical requirements:

- All outlets within 20' of the inside wall of the pool shall be protected by a GFCI (ground fault circuit interrupter).
- Receptacles for loads directly related to circulation or sanitation system shall be at least 6' from inside wall of the pool and shall have GFCI protection and be of the grounding type. .
- Any light or light switch within 5' to 10' feet of the pool must be G.F.C.I. protected.
- At least one general use receptacle outlet shall be installed between 6' and 20' from the inside edge of the pool
- All metallic parts of the pool and any metal equipment or fences within 5 feet of the pool must be bonded together and grounded.

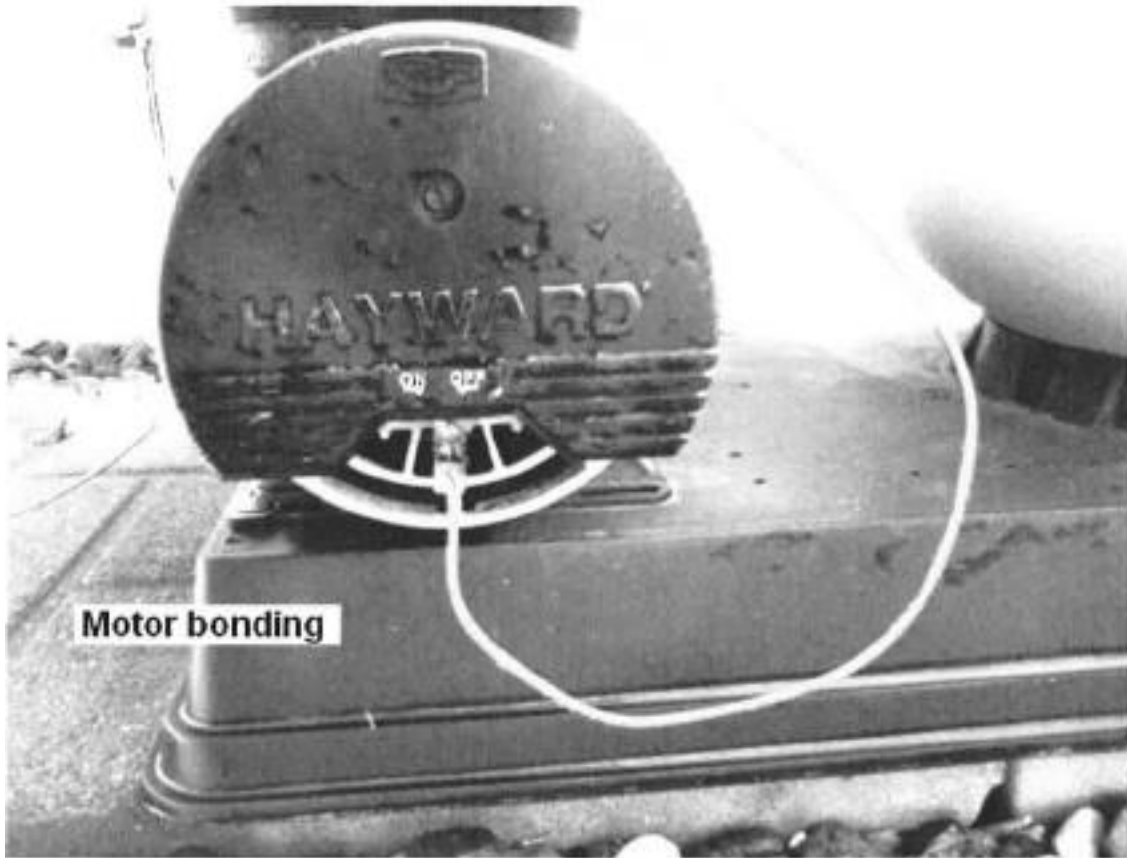
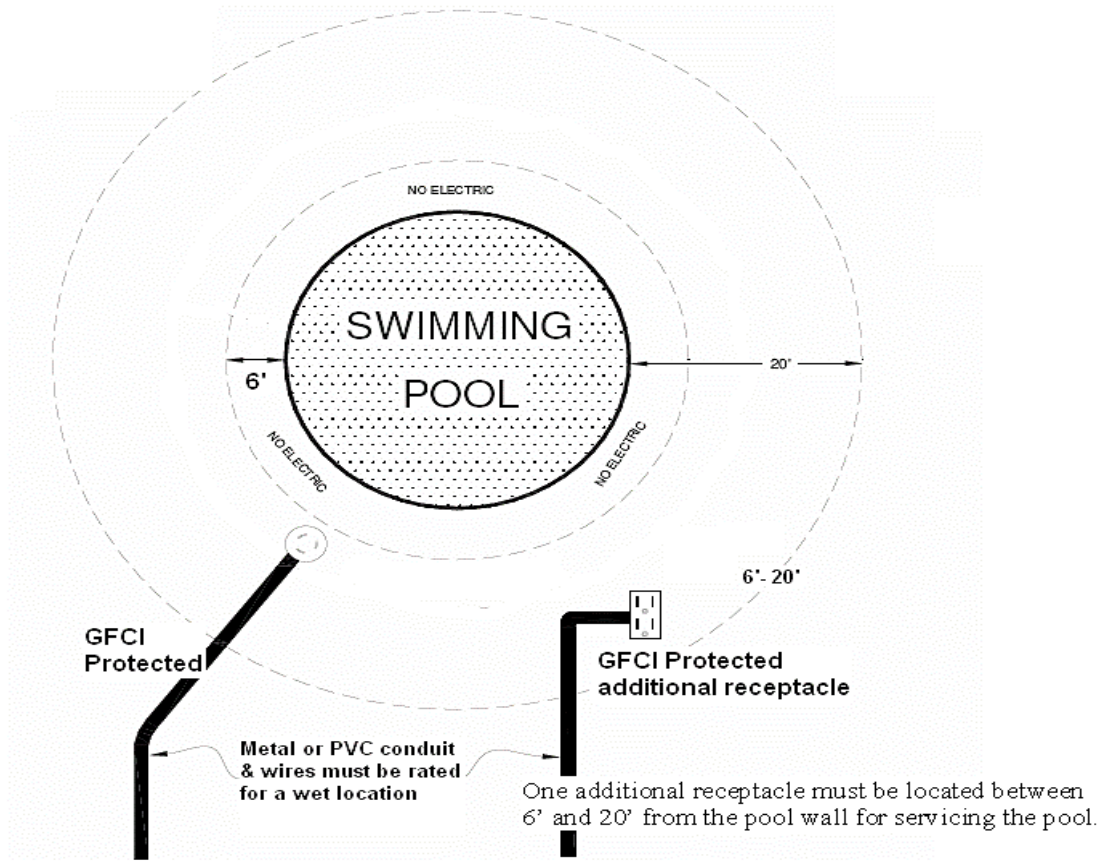
G.F.C.I. Ground Fault Circuit Interrupter



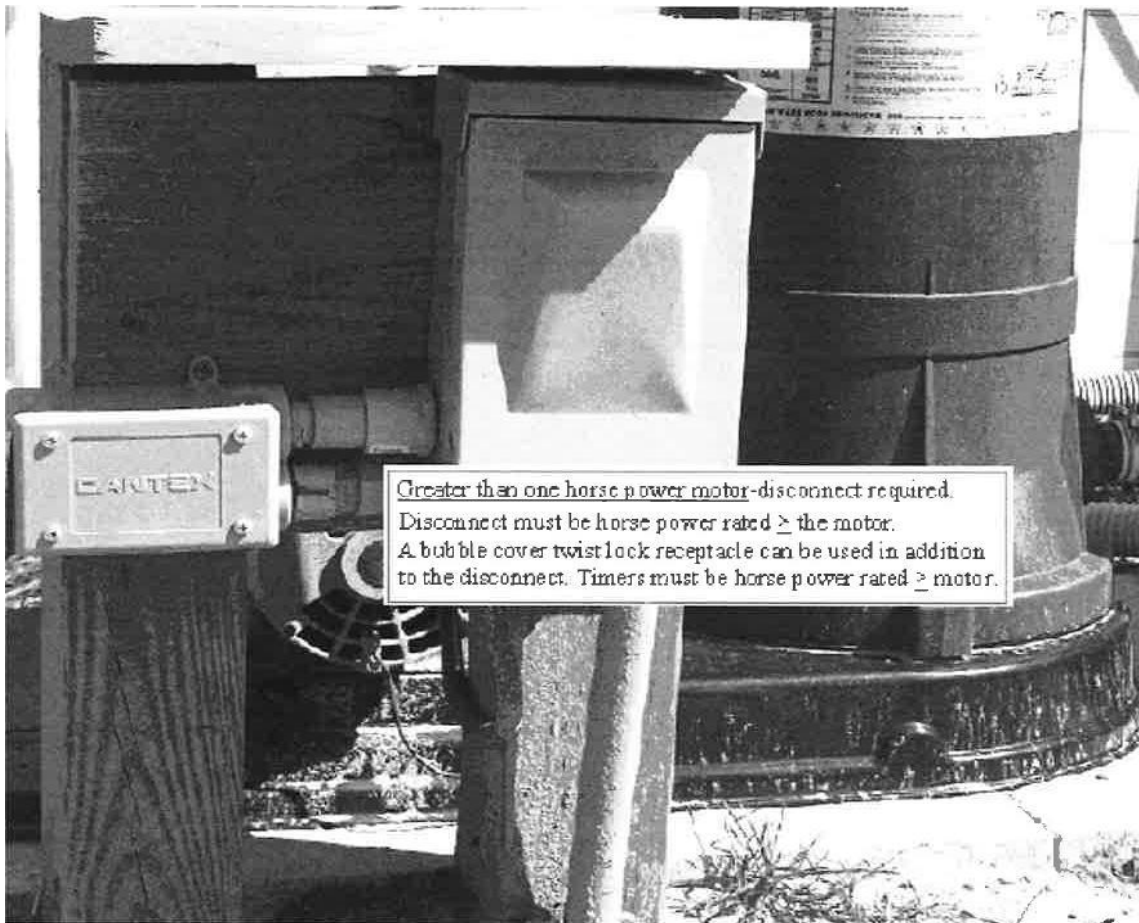
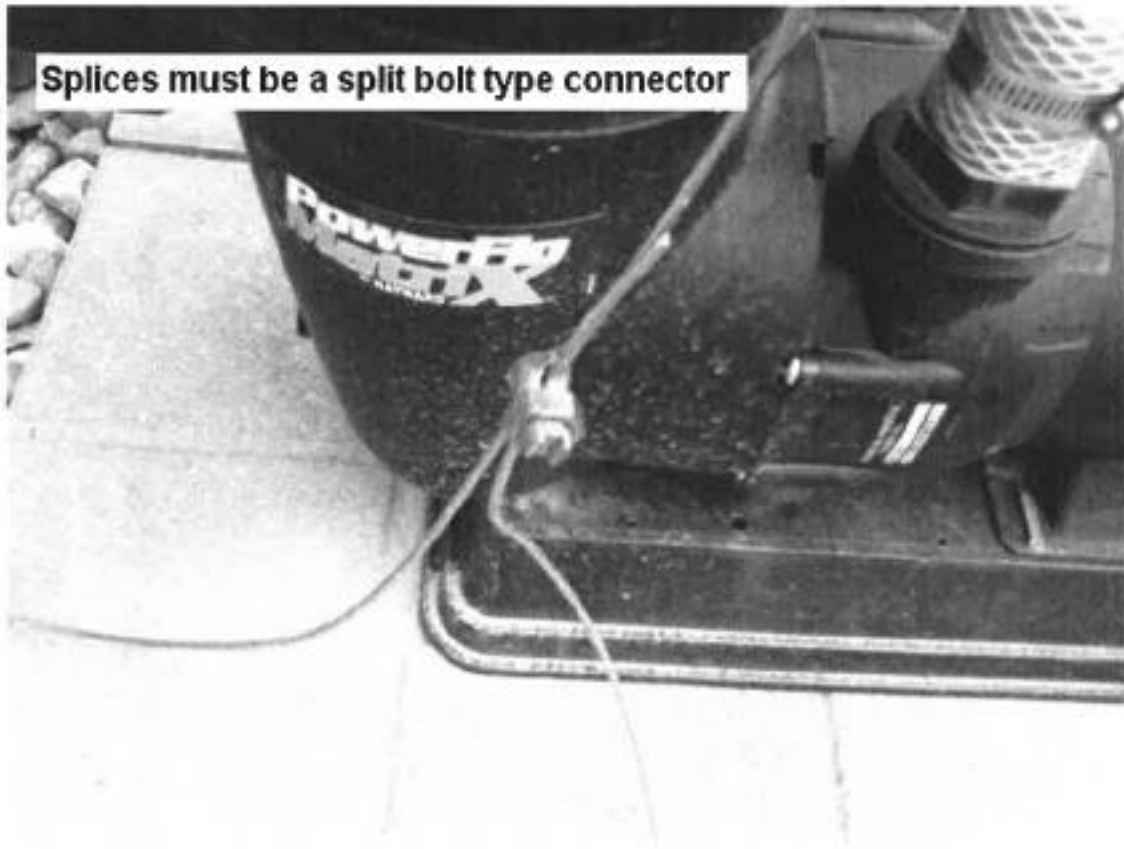
Pump Motor Wiring

These are some of the wiring requirements for the pump motor:

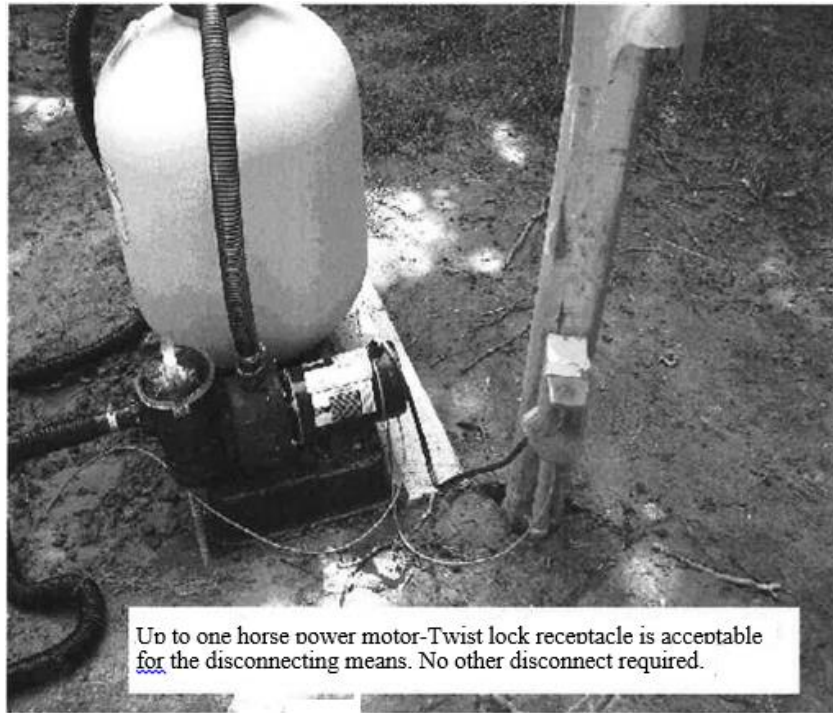
- The conduit must be trenched in at required depth up to the pump motor receptacle.
- If the pump draws 10 or more amps, a separate dedicated circuit is required.
- Wiring must be in conduit listed and approved as a pool wiring method (exposed 12-2 UF cable is not permitted). 12-3 UF cable inside approved conduit from the house to the pool is permitted.
- Conductors in the conduit must all be insulated, including the equipment grounding conductor (3 insulated conductors required).
- Conductors must be approved for **wet** locations and have a "W" (for wet) included in the labeling on the individual wires (i.e. THWN or THHW).
- The pump motor receptacle must be a single **Twist Locking Receptacle**
- The receptacle cover must be a wet location in use type (bubble cover).
- The cord for the pump shall **not exceed 3'** in length and shall consist of 12-3 gauge wire.
- The circuit must be GFCI protected.



Splices must be a split bolt type connector



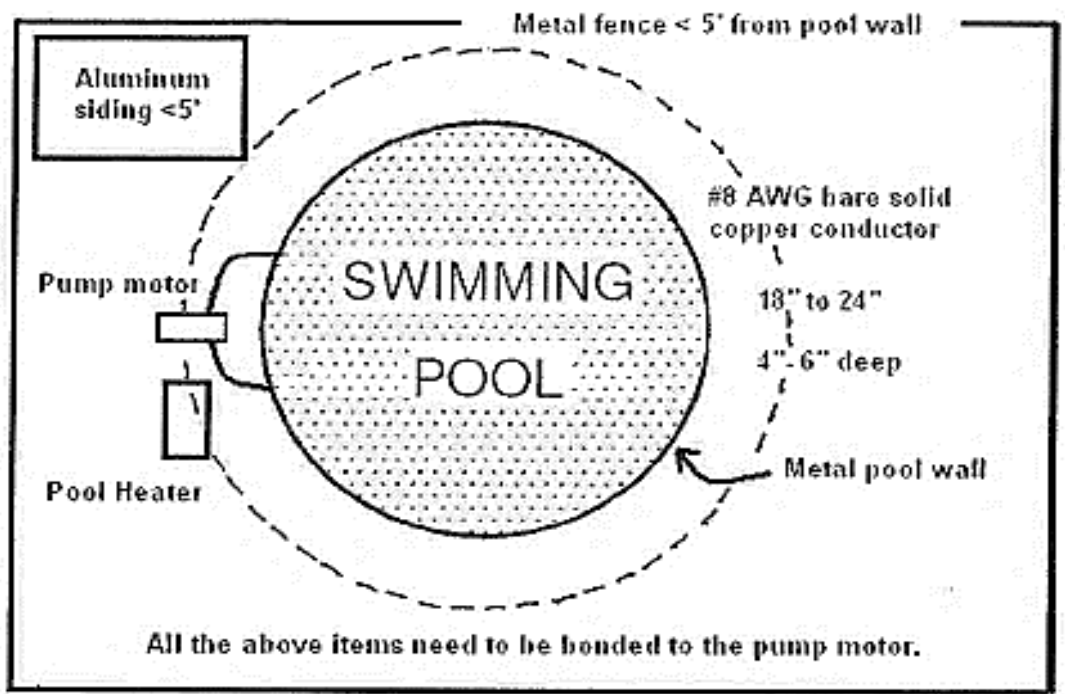
Greater than one horse power motor-disconnect required.
Disconnect must be horse power rated \geq the motor.
A bubble cover twist lock receptacle can be used in addition
to the disconnect. Timers must be horse power rated \geq motor.



680.26 Equipotential Bonding

Equipotential Bonding is required for all permanently installed pools. These are some of the requirements:

- A minimum of one, 8 AWG bare solid copper conductor shall be provided around the perimeter of the pool.
- Only listed splices are permitted in the conductor.
- The required conductor shall be located 18" to 24" from the inside wall of the pool.
- The conductor shall be buried 4" to 6" below grade and shall follow the contour of the ground surface.



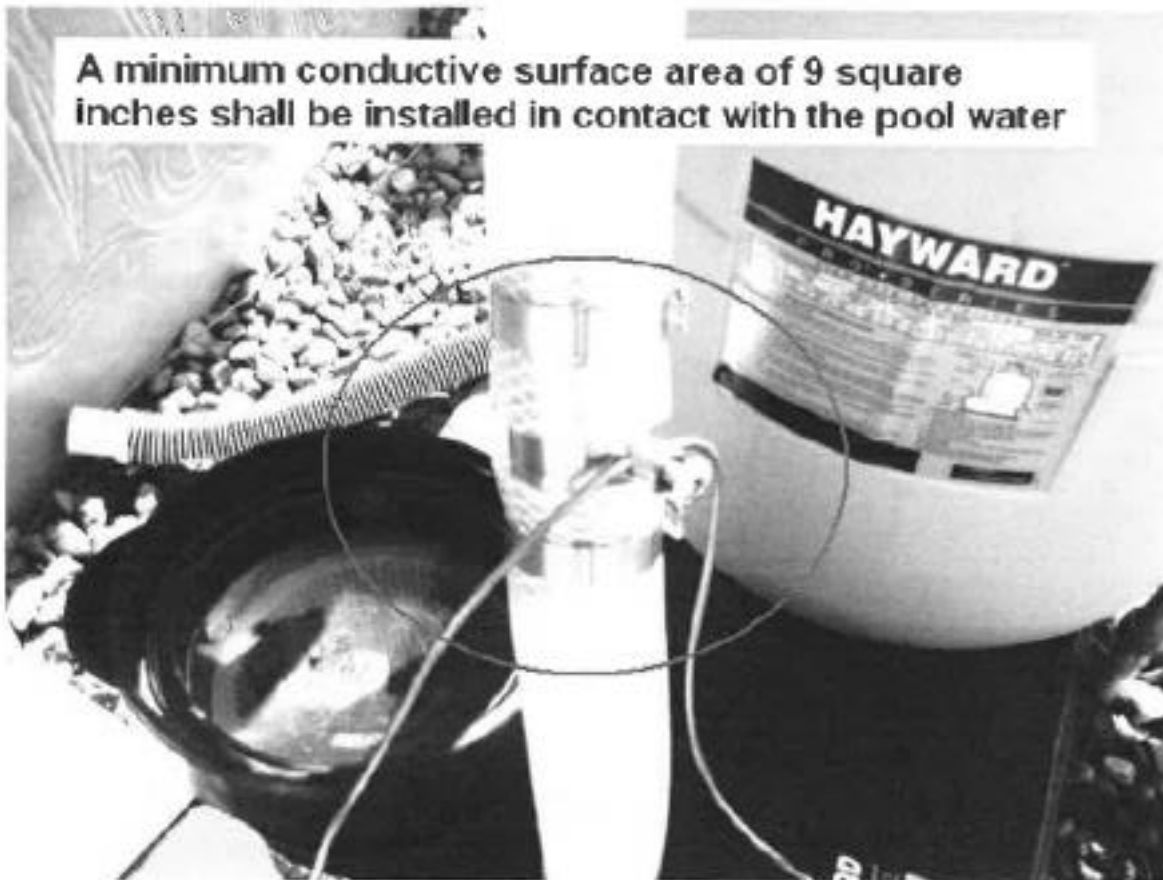
8 solid copper wire 18"-24" from pool wall & trenched 4"-6" deep



Bond pool wall with #8 solid copper conductor

Pool Water Bonding

An intentional bond of a minimum conductive surface area of 9 square inches shall be installed in contact with the pool water (see photo below).



Items
Required
For
Permit

Application Submittal

- Site plan showing distances off lot lines, horizontal distance from any overhead/underground wiring to pool edge and distances from pool edge to any buildings (sample provided on the last page of this handout)

BEWARE OF UNDERGROUND UTILITY WIRES

Please remember that there may be underground electric, phone, or cable T.V. wires buried on your property generally in 5' or 6' wide easements on your side and rear lot lines. Please call the Digger's Hotline before you do any digging on your property. **DIGGERS HOTLINE: (800) 242-8511**

This information is only a general guide to help you plan a building project. While we have made an attempt to answer the questions most often asked of this department, your situation may not be included. Please feel free to call or email with any questions you may have. 920-886-6130 or inspections@ci.neenah.wi.us