Swimming Pool and Spa Installations

1. Building Permits are required for the installation of swimming pools and Spas associated with a one or two family dwelling or multiple single family dwellings. Where a swimming pool is designed for water depth of less than 24 inches and the pool is installed entirely above ground, no permit is required.
2. Proper electrical connections must be inspected by a 3rd party electrical inspection service upon using the pool or spa. (Check with the Code Enforcement Officer for 3rd party inspectors.)
3. The National Electrical Safety Code (NESC) Article 234 does not permit swimming pools or platforms to be placed closer than 10 feet to overhead triplexed electrical secondary or service wires or communication wires, unless the wires meet a minimum height of 22'6'' measured from the water's edge. The NESC further limits the placement of swimming pools or platforms closer than 25' to overhead open wire (not triplexed) electrical secondary or service wires or high voltage wires, unless they meet a minimum height of 23' or greater measured from the water's edge. Similarly, underground electrical wires should not be located under the pool or within the area extending 5' horizontally from the inside wall of the pool.
4. Access to any pool must have a minimum enclosure of 48" in height, unless the pool has a removable or lockable ladder.
5. The gate access shall have self closing hinges, self latching hardware and a padlock installed.
6. The release mechanism shall be located on the back side of the gate, unless such mechanism is more than 54" above the deck. (See Outdoor swimming pool requirements provided.)
7. Any deck construction shall by inspected by the building inspector prior to using the pool or spa.
8. Swimming pools or a spa installed or substantially modified after December 14th 2006 shall be equipped with an approved pool alarm. No alarm is required if the hot tub or spa is equipped with a locking safety cover or a swimming pool is equipped with an automatic power safety cover.

Continue on Back

Pool Electrical Requirements

- The pump motor is to be located from 6 feet to 10 feet from the inside wall of the pool. The receptacle shall be a twist lock receptacle with bubble cover and the circuit must be designated, GFCI protected.

- Other receptacles on the property shall not be located within 6 feet of the inside wall of the pool.

- All receptacles installed out doors in wet locations shall be in a weatherproof enclosure, the integrity of which is not effected when in use.

- The pump motor cord shall not exceed 3 feet and have a grounding conductor no smaller than #12 AWG copper.

- The pump motor circuit shall be dedicated and isolated from all other receptacles.

- Time clocks shall be installed on pump motors for energy conservation.

- Pool heaters shall be installed with an on/off switch for easy access.

- Pump motor wiring shall not be smaller than #12 AWG copper and installed in conduit where under ground.

- PVC conduits shall be buried 18 inches deep, metal rigid conduits 6 inches deep.

- GFCI convenience receptacle is required not closer than 6 feet and no further than 20 feet from the inside wall of the pool.

- All metal parts must be bonded together with #8 solid bare copper.

- Use only THHN wire in conduit to twist lock receptacle and convenience receptacle.

- See electrical installation diagram attached.

Barrier Requirements

G105.3 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. 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 be 4 inches (102 mm).

2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) 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 (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed $1^3/_4$ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed $1^3/_4$ inches (44 mm) 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 (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed $1^3/_4$ inches (44 mm) in width.

6. Maximum mesh size for chain link fences shall be a $2^1/_4$-inch (57 mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than $1^3/_4$ inches (44 mm).

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 $1^3/_4$ inches (44 mm).

8. Gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and with the following requirements:

Continue on Back

8.1. All gates shall be self-closing. In addition, if the gate is a pedestrian access gate, the gate shall open outward, away from the pool.

8.2. All gates shall be self-latching, with the latch handle located within the enclosure (i.e, on the pool side of the enclosure) and at least 40 inches (1016 mm) above grade. In addition, if the latch handle is located less than 54 inches (1372 mm) from the bottom of the gate, the latch handle shall be located at least 3 inches (76 mm) below the top of the gate, and neither the gate nor the barrier shall have any opening greater than 0.5 inch (12.7 mm) within 18 inches (457 mm) of the latch handle.

8.3. All gates shall be securely locked with a key, combination or other child proof lock sufficient to prevent access to the swimming pool through such gate when the swimming pool is not in use or supervised.

9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:

9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or

9.2. 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 in accordance with UL 2017. The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening. Deactivation shall last for not more than 15 seconds. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or

9.3. Other means of protection, such as self-closing doors with self-latching devices, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.

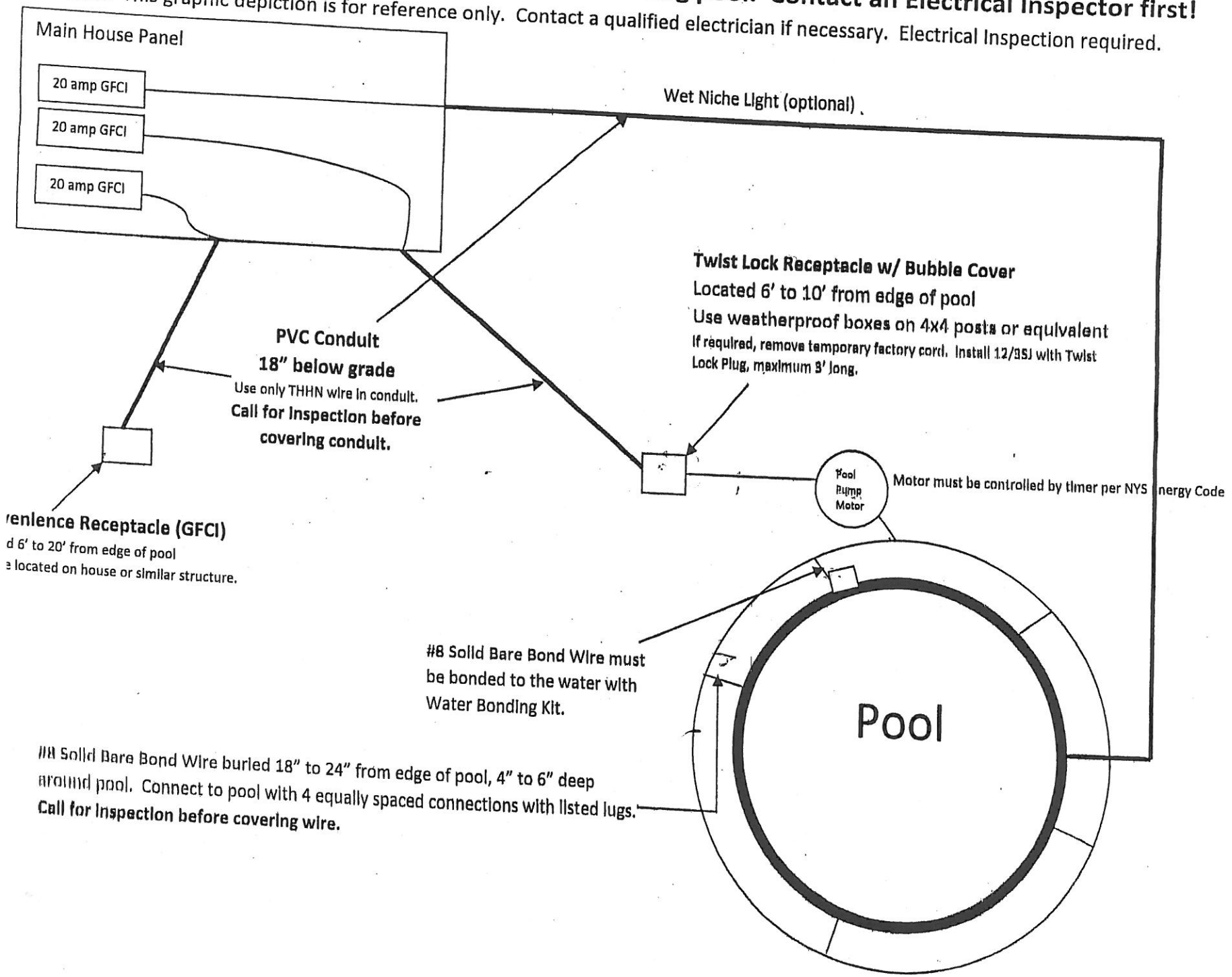
10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps:

10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or

10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

General guide for electric installation for a swimming pool. Contact an Electrical Inspector first!

Notice: This graphic depiction is for reference only. Contact a qualified electrician if necessary. Electrical Inspection required.



G106 ENTRAPMENT PROTECTION FOR SWIMMING POOL AND SPA SUCTION OUTLETS

G106.1 General. Suction outlets shall be designed to produce circulation throughout the pool or spa. Single-outlet systems, such as automatic vacuum cleaner systems, or multiple suction outlets, whether isolated by valves or otherwise, shall be protected against user entrapment.

G107 SWIMMING POOL AND SPA ALARMS

G107.1 Applicability. A swimming pool or spa installed, constructed or substantially modified after December 14, 2006, shall be equipped with an approved pool alarm.

Exceptions:

1. A hot tub or spa equipped with a safety cover which complies with ASTM F1346, as listed in Section AG109.

2. A swimming pool (other than a hot tub or spa) equipped with an automatic power safety cover which complies with ASTM F1346, as listed in Section AG109.

Pool alarms shall comply with ASTM F2208, as listed in Section AG109, and shall be installed, used and maintained in accordance with the manufacturer's instructions and this section.

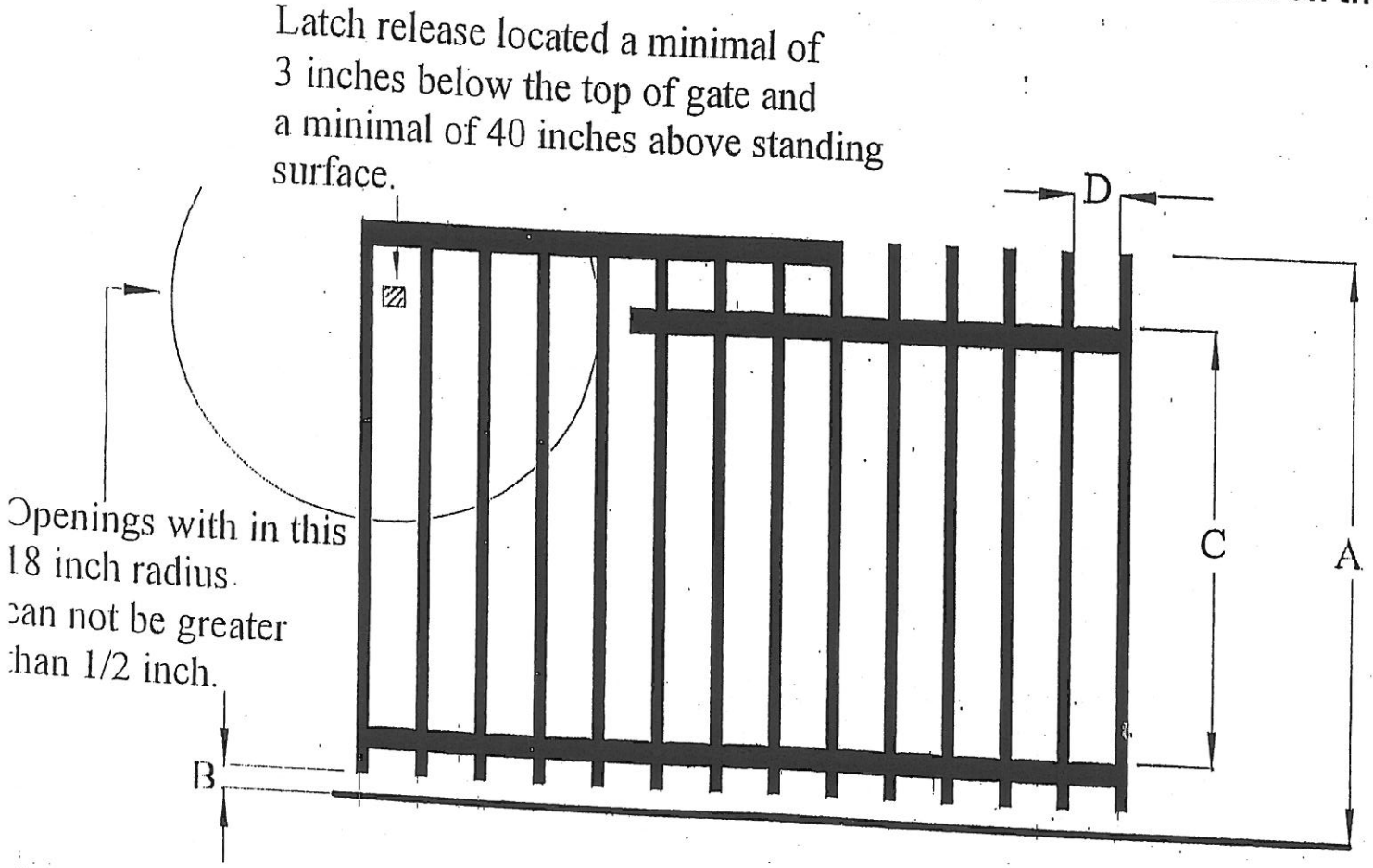
G107.2 Multiple alarms. A pool alarm must be capable of detecting entry into the water at any point on the surface of the swimming pool. If necessary to provide detection capability at every point on the surface of the swimming pool, more than one pool alarm shall be provided.

G107.3 Alarm activation. Pool alarms shall activate upon detecting entry into the water and shall sound poolside and inside the dwelling.

G107.4 Prohibited alarms. The use of personal immersion alarms shall not be construed as compliance with this section.

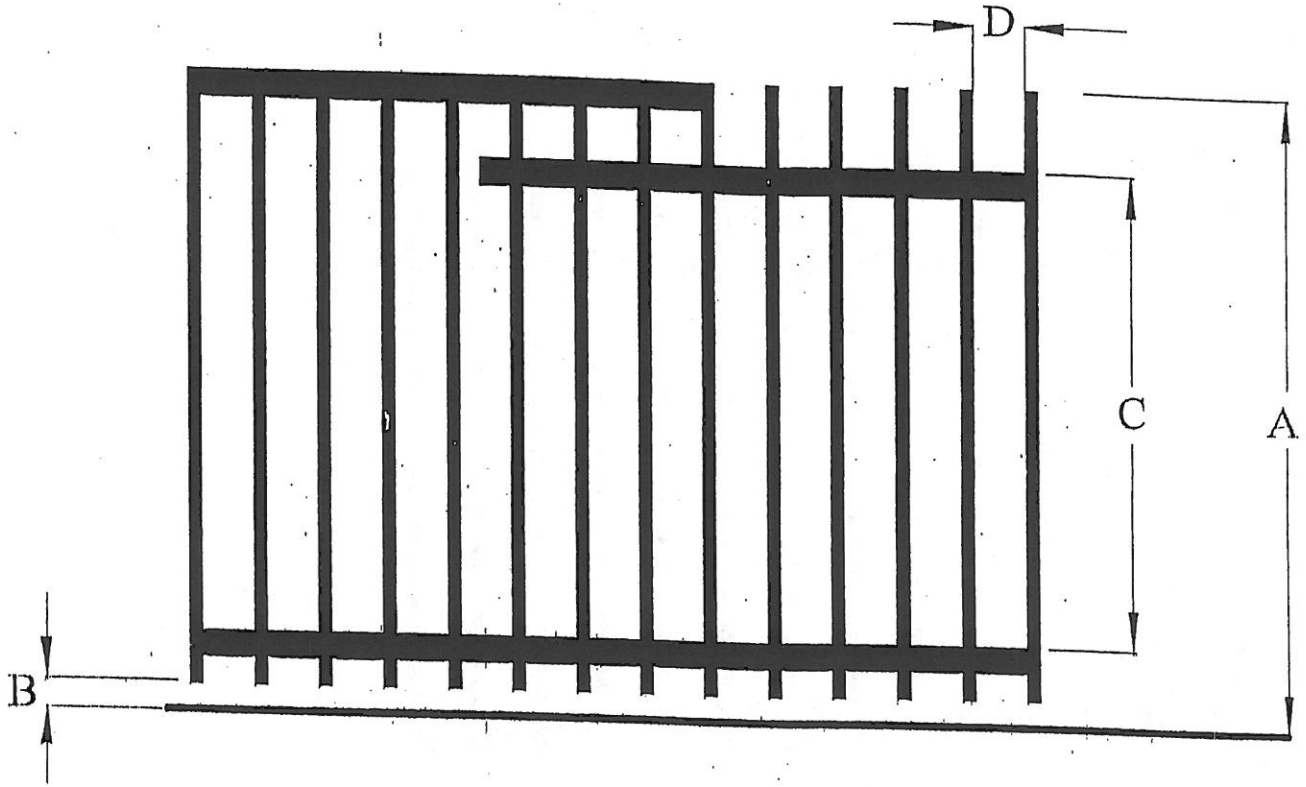
Pool Barrier Gate Example,

with latch release less than 54 inches above a standing surface and located on the pool side.



Dimension "A" must be 48 inches minimum from a standing surface to the top of gate.
Dimension "B" may be 2 inches maximum from standing surface to the bottom of gate.
If dimension "C" is less than 45 inches, dimension "D" cannot be greater than 1-3/4 inches.
Dimension "D" can never be greater than 4 inches.

Pool Barrier Fence Example



Dimension "A" must be 48 inches minimum from a standing surface to the top of gate.
Dimension "B" may be 2 inches maximum from standing surface to the bottom of gate.
If dimension "C" is less than 45 inches, dimension "D" cannot be greater than 1-3/4 inches.
Dimension "D" can never be greater than 4 inches.