VILLAGE OF OAKWOOD HILLS
BUILDING DEPARTMENT

A QUICK REFERENCE FOR THE BUILDING OF
<u>SWIMMING POOLS,</u>
<u>SPAS & HOT TUBS</u>

FOR REFERENCE ONLY
SEE MUNICAPAL CODE FOR COMPLETE DETAILS

<u>LOCATION REQUIREMENTS:</u>

1. An aboveground or in-ground swimming pool, spa or hot tub, and associated equipment are permitted only in the rear yard.

2. A pool, spa or hot tub and associated equipment may not be located on any existing easement.

3. A pool, spa or hot tub must be located at least five (5) feet away from any underground electrical wires and at least ten (10) feet from any overhead electrical wires.

4. A pool, spa or hot tub must be located no closer to the side or rear property lines than what is allowed for the principal building in the zoning district.

5. Swimming pools, decks, and equipment must be installed in accordance with the plan approved by the Village. The location and elevations must be strictly followed.

6. An in-ground pool shall be located at least twenty-five (25) feet from any part of the septic system.

7. An aboveground pool spa, or hot tub shall be located at least ten (10) feet from any part of the septic system.

<u>ENCLOSURE REQUIREMENTS:</u>

1. A pool, spa or hot tub must be completely surrounded by a 4' barrier (fence), which complies with the requirements of the building ordinance (see fence handout) and the 2021 International Swimming Pool and Spa Code. If a fence is used as the barrier it must be located within one (1) foot of the property line or shall be installed around the pool, spa or hot tub area only.

2. Spas or hot tubs with a safety cover, which complies with ASTM F 1346, shall be exempt from the 4' barrier requirement.

<u>CONSTRUCTION REQUIREMENTS:</u>

1. Existing grade should not be altered. Excavated spoils will need to be removed from site.

2. At a minimum, all in-ground swimming pools must be staked and a plat of survey approved prior to the pool permit being issued. If, during the installation of <u>any</u> pool the inspector finds that the pool, deck, walkway or equipment are not being installed in strict accordance with the approved plans, a "Stop Work" order will be issued and a new plat of survey requested to confirm compliance. It is strongly recommended that the homeowner/applicant plan on ordering a minimum of two surveys as a part of the pool installation process. The scheduling and cost of all surveys are the responsibility of the homeowner/applicant.

3. Barrier gates shall open outward away from the pool and be self-closing and shall have a self-latching device. The gate shall not swing over a stairway. If a gate must swing towards a stairway then a 3'x 3' minimum landing must be provided on the stairway side of the gate.

4. Pool equipment utilizing electricity must be installed in accordance with the requirements for permanently installed or storable swimming pools, depending on which category a given pool falls into, as outlined in the current edition of the National Electrical Code (NEC) as amended. Some of the common requirements are part of this handout. For more specific requirements see Article 680 of the NEC.

5. At no time shall equipment or construction materials be stored within the Village Right-of- Way.

6. Working hours:
   Monday through Saturday 7:00 a.m. to 7:00 p.m.
   No work is to be performed on Sundays or Holidays.

<u>ELECTRIC INSTALLATION FOR PERMANENT SWIMMING POOL</u>

1. The pump must be listed by an approved agency (UL, CSA, ETL, etc.) for permanent outdoor pool installation.

2. Electrical receptacles must be located at least ten (10) feet from inside wall of the pool, except a single locking type receptacle protected by ground-fault circuit interrupter is permitted to be installed between five (5) and ten (10) feet from the inside wall of the pool to provide power to the pump.

3. At least one convenience receptacle must be located not closer than ten (10) feet and not farther than twenty (20) feet from the pool. This receptacle shall be located not more than six (6) feet above the floor, platform, or grade above the pool.

4. ALL receptacles (outdoor only) located within twenty (20) feet of a pool must be protected by ground-fault circuit interrupter.

5. Electric lights located within ten (10) feet of the pool shall be at least five (5) feet above the maximum water level, shall be rigidly attached to the structure and shall be ground-fault protected.

6. A disconnecting means shall be accessible, located within sight of the pool, spa, or hot tub, and shall be located at least 5 feet horizontally from the inside walls of pool, spa, or hot tub.

7. All metallic parts of the pool structure and all metal within five (5) feet horizontally and twelve (12) feet above the pool shall be bonded to a common bonding grid with a minimum #8 solid copper wire.

8. Spa and hot tub electrical requirements are the same as for a pool.

<u>CONSTRUCTION DOCUMENTS:</u>

Submit two (2) current copies of a Plat of Survey indicating the following:

1. Show on the survey the size and location of the proposed pool, pool deck/walkway and equipment pad (drawn to scale).

2. Indicate the distance from the proposed pool, pool deck/walkway and equipment pad to all property lines and distance from the pool to the house (drawn to scale).

3. Show existing and proposed finished grade elevations of the swimming pool and surrounding deck.

4. Indicate on the survey the distance from the pool to underground (5' minimum) and overhead electric wires (10' minimum). (Call J.U.L.I.E. (utility locate service) at 1-800-892-0123).

5. Show location of the 4' barrier with gate requirements on survey. Provide a drawing of the fence indicating the spacing between pickets, spacing of horizontal rails, and height of fence.

6. Show the location and height of all proposed retaining walls.

7. Show pool alarm on house door(s) if required (house security alarm does not satisfy code).

8. Show location of pool cover switch and distance to pool.

9. Show location of pool electric disconnect switch and distance to pool.

10. Show location and distance of required GFI protected outlet not less than 10' nor more than 20' from pool wall.

11. Provide a note that all spoils shall be removed from site.

12. Provide cut sheets on all pool components (pump, filter, skimmer, heater, lights, pool wall construction, pool steps, pool cover, etc.) Include U.L. listing number.

13. Provide barrier and gate design as well as gate locking mechanism specifications.

An in-ground pool will require a Plat of Survey and grading plan, prepared by an Illinois Licensed Surveyor, showing the existing and proposed finished grade elevations, top of pool and walkway elevations, as well as the thirteen above items. The location of the pool should be STAKED by the Surveyor.

ZONING REQUIREMENTS

The setback requirements for a deck/walkway etc. shall comply with the principal building setback of the zoning district.
Check zoning requirements

INSPECTION REQUIREMENTS:

Above-ground pool, spa and hot tub:

1. An inspection will be made when the pool is installed, pump is connected and barrier is completed. All underground work must be left exposed for inspection.
2. All bonding wires.
3. Fence post holes.
4. Final inspection.

In-ground pool:

1. Concrete footing around base of pool.
2. All underground piping (pvc, gas, electric).
3. All bonding of metal components prior to placing of concrete.
4. Gravel base under walkway around pool.
5. Fence post holes.
6. Final inspection.

Additional inspections may be required depending on site and project conditions.

The permit holder is responsible for scheduling inspections.

TO APPLY FOR A PERMIT:

1. Complete permit application.

2. Submit two (2) copies of the plat of survey and provide equipment cut sheets. (See Construction Documents section above). Drawn to scale

3. Submit two (2) copies of the septic field plan. Indicate the location of the pool and distance to septic system.

4. Call J.U.L.I.E. (utility locate service) at 1-800-892-0123.

5. Submit a copy of Homeowner's Association approval letter, if applicable.

6. Copy of proposal from contractor

7. All contractors must be bonded with the Village for $10,000

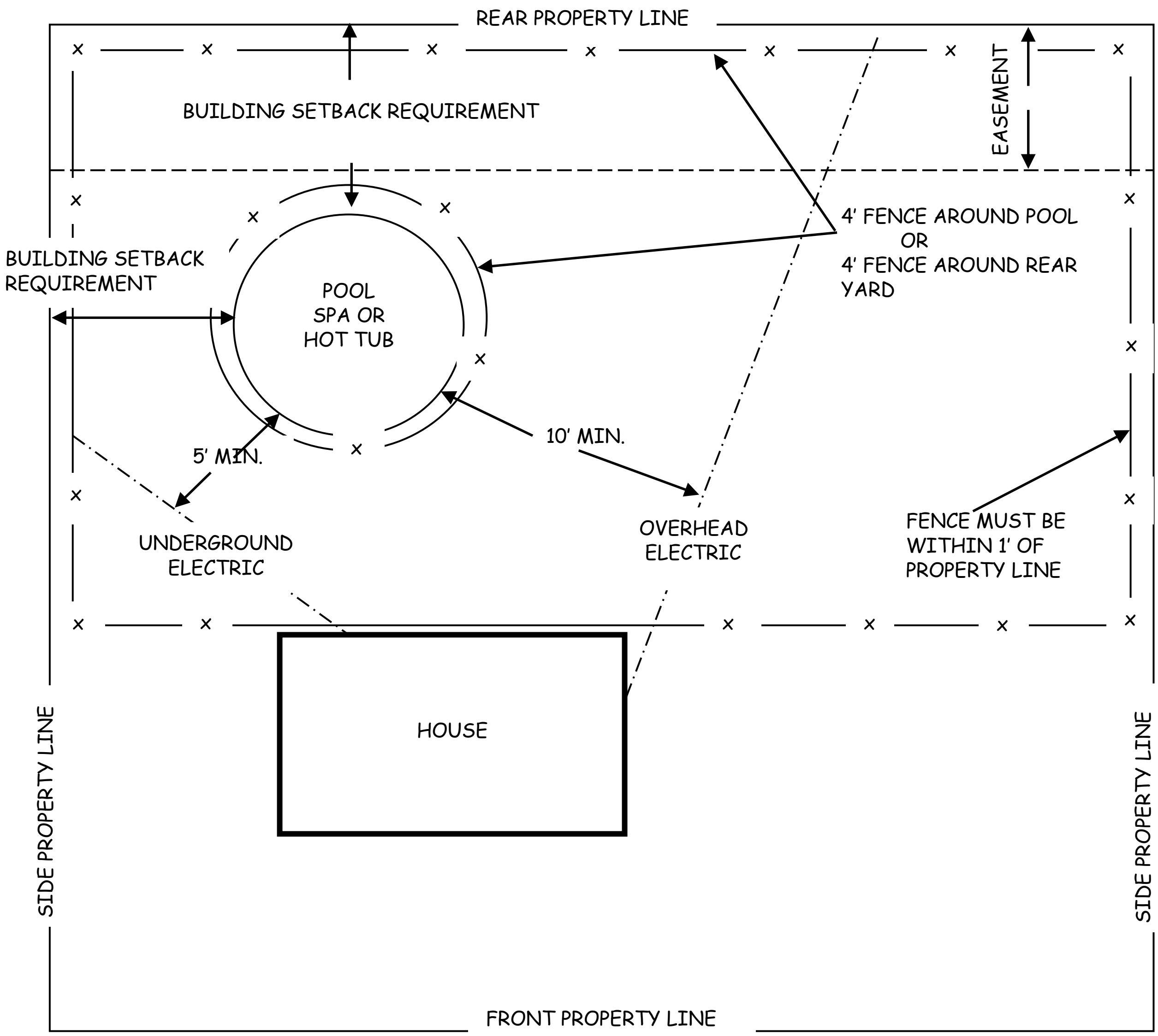
Call J.U.L.I.E. at 800-892-0123 or contact them at illinois1call.com for utility locations and before digging.

The above is provided for general information purposes only and shall not be construed as total compliance with any or all Codes and Ordinances of the Village of Oakwood Hills. Always consult the Codes or Ordinances for accurate information

(Rev. 2/2023)

1. An in-ground pool shall be located at least twenty-five (25) feet from any part of the septic system.

2. An aboveground pool spa, or hot tub shall be located at least ten (10) feet from any part of the septic system.



The Swimming Pool Barrier Guidelines

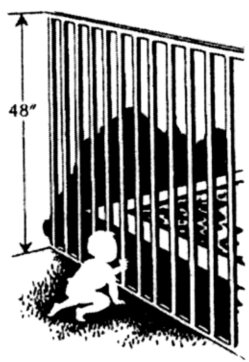
The definition of pool includes spas and hot tubs; the swimming pool barrier guidelines therefore apply to these structures as well as to conventional swimming pools.

A successful pool barrier prevents a child from getting OVER, UNDER, or THROUGH and keeps the child from gaining access to the pool except when supervising adults are present.

How to Prevent a Child from Getting OVER a Pool Barrier

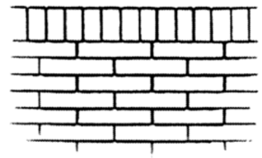
A young child can get over a pool barrier if the barrier is too low or if the barrier has handholds or footholds for a child to use when climbing.

The guidelines recommend that the top of a pool barrier be at least 48 inches above grade, measured on the side of the barrier which faces away from the swimming pool.

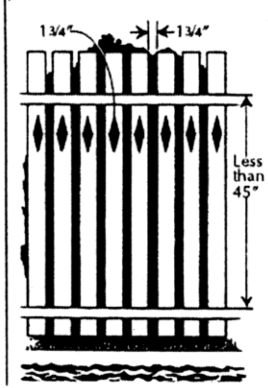


Guidelines recommend eliminating handholds and footholds and minimizing the size of openings in a barrier's construction.

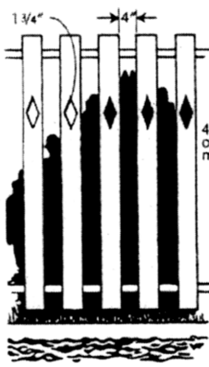
For a Solid Barrier:
No indentations or protrusions should be present, other than normal construction tolerances and masonry joints.



For a Barrier (Fence) Made Up of Horizontal and Vertical Members:
If the distance between the tops of the horizontal members is **less** than 45 inches, the horizontal members should be on the swimming pool side of the fence. The spacing of the vertical members should not exceed 1-3/4 inches. This size is based on the foot width of a young child and is intended to reduce the potential for a child to gain a foothold. If there are any decorative cutouts in the fence, the space within the cutouts should not exceed 1-3/4 inches.

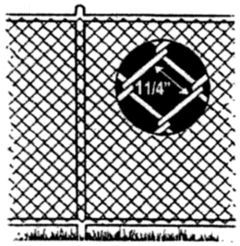


If the distance between the tops of the horizontal members is **more** than 45 inches, the horizontal members can be on the side of the fence facing away from the pool. The spacing between vertical members should not exceed 4 inches. This size is based on the head breadth and chest depth of a young child and is intended to prevent a child from passing through an opening. Again, if there are any decorative cutouts in the fence, the space within the cutouts should not exceed 1-3/4 inches.



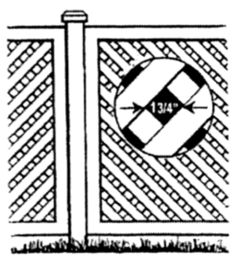
For a Chain Link Fence:

The mesh size should not exceed 1-1/4 inches square unless slats, fastened at the top or bottom of the fence, are used to reduce mesh openings to no more than 1-3/4 inches.

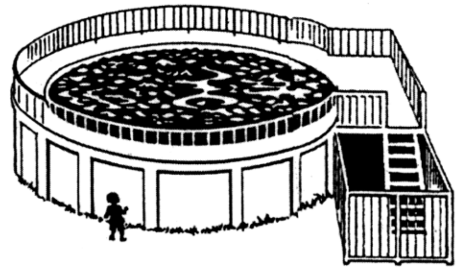


For a Fence Made Up of Diagonal Members (Latticework):

The maximum opening in the lattice should not exceed 1-3/4 inches.



For Aboveground Pools:

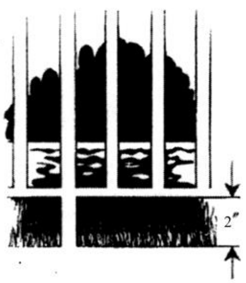


Aboveground pools shall have barriers. The pool structure itself serves as a barrier or a barrier is mounted on top of the pool structure.

Then the steps or ladder can be surrounded by a barrier such as described above.

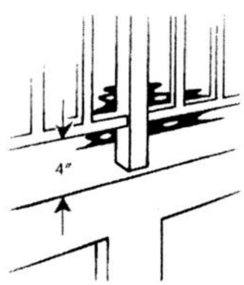
How to Prevent a Child from Getting UNDER a Pool Barrier

For any pool barrier, the maximum clearance at the bottom of the barrier should not exceed 2 inches above grade, when the measurement is done on the side of the barrier facing away from the pool.



Aboveground Pool with Barrier on Top of Pool:

If an aboveground pool has a barrier on the top of the pool, the maximum vertical clearance between the top of the pool and the bottom of the barrier should not exceed 4 inches.



How to Prevent a Child from Getting THROUGH a Pool Barrier

Preventing a child from getting through a pool barrier can be done by restricting the sizes of openings in a barrier and by using self-closing and self-latching gates.

To prevent a young child from getting through a fence or other barrier, all openings should be small enough so that a 4-inch diameter sphere cannot pass through. This size is based on the head breadth and chest depth of a young child.

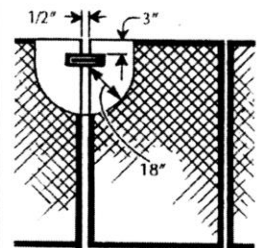
Gates:

There are two kinds of gates which might be found on a residential property. Both can play a part in the design of a swimming pool barrier.

Pedestrian Gates:

These are the gates people walk through. Swimming pool barriers should be equipped with a gate or gates which restrict access to the pool. A locking device should be included in the gate design. Gates should open out from the pool and should be self-closing and self-latching. If a gate is properly designed, even if the gate is not completely latched, a young child pushing on the gate in order to enter the pool area will at least close the gate and may actually engage the latch.

When the release mechanism of the self-latching device is less than 54 inches from the bottom of the gate, the release mechanism for the gate should be at least 3 inches below the top of the gate on the side facing the pool. Placing the release mechanism at this height prevents a young child from reaching over the top of a gate and releasing the latch.



Also, the gate and barrier should have no opening greater than 1/2 inch within 18 inches of the latch release mechanism. This prevents a young child from reaching through the gate and releasing the latch.

All Other Gates (Vehicle Entrances, Etc.):

Other gates should be equipped with self-latching devices. The self-latching devices should be installed as described for pedestrian gates.

When the House Wall Forms Part of the Pool Barrier:

In many homes, doors open directly onto the pool area or onto a patio which leads to the pool.

In such cases, the wall of the house is an important part of the pool barrier, and passage through any doors in the house wall should be controlled by security measures. The importance of controlling a young child's movement from house to pool is demonstrated by the statistics obtained during CPSC's study of pool incidents in California, Arizona and Florida: almost half (46 percent) of the children who became victims of pool accidents were last seen in the house just before they were found in the pool.

All doors which give access to a swimming pool should be equipped with an audible alarm which sounds when the door and/or screen are opened. The alarm should sound for 30 seconds or more immediately after the door is opened.

The alarm should be loud: at least 85 dBA (decibels) when measured 10 feet away from the alarm mechanism. The alarm sound should be distinct from other sounds in the house, such as the telephone, doorbell and smoke alarm. The alarm should have an automatic reset feature.

Because adults will want to pass through house doors in the pool barrier without setting off the alarm, the alarm should have a switch that allows adults to temporarily deactivate the alarm for up to 15 seconds. The deactivation switch could be a touchpad (keypad) or a manual switch, and should be located at least 54 inches above the threshold of the door covered by the alarm. This height was selected based on the reaching ability of young children.

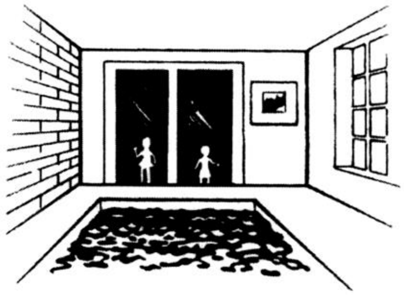
Power safety covers can be installed on pools to serve as security barriers. Power safety covers should conform to the specifications in ASTM F 1346-91. This standard specifies safety performance requirements for pool covers to protect young children from drowning.

If you wish further information on this standard, contact ASTM, Inc., Philadelphia, Pa. (formerly the American Society for Testing & Materials), directly.

Self-closing doors with self-latching devices could also be used to safeguard doors which give ready access to a swimming pool.

Indoor Pools:

When a pool is located completely within a house, the walls that surround the pool should be equipped to serve as pool safety barriers. Measures recommended above where a house wall serves as part of a safety barrier also apply for all the walls surrounding an indoor pool.



SECTION305
BARRIER REQUIREMENTS

305.1 General. The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable safety cover complying with ASTM F1346, the areas where those spas or hot tubs are located shall not be required to comply with Sections 305.2 through 305.7.

305.1.1Construction fencing required.
The construction sites for in-ground swimming pools and spas shall be provided with construction fencing to surround the site from the time that any excavation occurs up to the time that the permanent barrier is completed. The fencing shall be not less than 4 feet (1219 mm) in height.

305.1.2 Filling of pool, spa or hot tub. All pool barriers, gates and inspections must be in place and complete prior to filling of pool, spa or hot tub with water.

305.2 Outdoor swimming pools and spas.
Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections 305.2.1 through 305.7.

305.2.1 Barrier height and clearances.
Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 48 inches (1219 mm) above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier.
2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches (51 mm) for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches (102 mm) where measured on the side of the required barrier that faces away from the pool or spa.
4. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa, the vertical clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches (102 mm).

305.2.2 Openings.
Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

305.2.3 Solid barrier surfaces.
Solid barriers that do not have openings shall not contain indentations or protrusions that form handholds and footholds, except for normal construction tolerances and tooled masonry joints.

305.2.4 Mesh fence as a barrier.
Mesh fences, other than chain link fences in accordance with Section 305.2.7, shall be installed in accordance with the manufacturer's instructions and shall comply with the following:

1. The bottom of the mesh fence shall be not more than 1 inch (25 mm) above the deck or installed surface or grade.
2. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not permit the fence to be lifted more than 4 inches (102 mm) from grade or decking.
3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch (102 mm) sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall be not greater than 4 inches (102 mm) from grade or decking.

4. An attachment device shall attach each barrier section at a height not lower than 45 inches (1143 mm) above grade. Common attachment devices include, but are not limited to, devices that provide the security equal to or greater than that of a hook-and-eye-type latch incorporating a spring-actuated retaining lever such as a safety gate hook.
5. Where a hinged gate is used with a mesh fence, the gate shall comply with Section 305.3.
6. Patio deck sleeves such as vertical post receptacles that are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be installed on top of onground *residential* pools.

305.2.4.1 Setback for mesh fences.
The inside of a mesh fence shall be not closer than 20 inches (508 mm) to the nearest edge of the water of a pool or spa.

305.2.5 Closely spaced horizontal members.
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 pool or spa 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.

305.2.6 Widely spaced horizontal members.
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, the interior width of the cutouts shall not exceed $1^3/_4$ inches (44 mm).

305.2.7 Chain link dimensions.
The maximum opening formed by a chain link fence shall be not more than $1^3/_4$ inches (44 mm). Where the fence is provided with slats fastened at the top and bottom that reduce the openings, such openings shall be not greater than $1^3/_4$ inches (44 mm).

305.2.8 Diagonal members.
Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not greater than $1^3/_4$ inches (44 mm). The angle of diagonal members shall be not greater than 45 degrees (0.79 rad) from vertical.

305.2.9 Clear zone.
Where equipment, including pool equipment such as pumps, filters and heaters, is on the same lot as a pool or spa and such equipment is located outside of the barrier protecting the pool or spa, such equipment shall be located not less than 36 inches (914 mm) from the outside of the barrier.

305.3 Doors and gates.
Doors and gates in barriers shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access doors and gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

305.3.1 Utility or service doors and gates.
Doors and gates not intended for pedestrian use, such as utility or service doors and gates, shall remain locked when not in use.

305.3.2 Double or multiple doors and gates.
Double doors and gates or multiple doors and gates shall have not fewer than one leaf secured in place and the adjacent leaf shall be secured with a self-latching device.

305.3.3 Latch release.
For doors and gates in barriers, the door and gate latch release mechanisms shall be in accordance with the following:

1. Where door and gate latch release mechanisms are accessed from the outside of the barrier and are not of the self-locking type, such mechanism shall be located above the finished floor or ground surface in accordance with the following:
    1.1. At public pools and spas, not less than 52 inches (1219 mm) and not greater than 54 inches (1372 mm).
    1.2. At residential pools and spas, not less than 54 inches (1372 mm).
2. Where door and gate latch release mechanisms are of the self-locking type such as where the lock is operated by means of a key, an electronic opener or the entry of a combination into an integral combination lock, the lock operation control and the latch release mechanism shall be located above the finished floor or ground surface in accordance with the following:
    2.1. At public pools and spas, not less than 34 inches and not greater than 48 inches (1219 mm).
    2.2. At residential pools and spas, at not greater than 54 inches (1372 mm).
3. At private pools, where the only latch release mechanism of a self-latching device for a gate is located on the pool and spa side of the barrier, the release mechanism shall be located at a point that is at least 3 inches (76 mm) below the top of the gate.

305.3.4 Barriers adjacent to latch release mechanisms.
Where a latch release mechanism is located on the inside of a barrier, openings in the door, gate and barrier within 18 inches (457 mm) of the latch shall not be greater than $^1/_2$ inch (12.7 mm) in any dimension.

305.4 Structure wall as a barrier.
Where a wall of a dwelling or structure serves as part of the barrier and where doors, gates or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Operable windows having a sill height of less than 48 inches (1219 mm) above the indoor finished floor, doors and gates shall have an alarm that produces an audible warning when the window, door or their screens are opened. The alarm shall be *listed* and labeled as a water hazard entrance alarm in accordance with UL 2017.
2. In dwellings not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located at not less than 54 inches (1372 mm) above the finished floor.
3. In dwellings that are required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.
4. In structures other than dwellings, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1220 mm) above the finished floor.
5. A *safety cover* that is *listed* and *labeled* in accordance with ASTM F1346 is installed for the pools and spas.
6. An *approved* means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

305.5 Onground residential pool structure as a barrier.
An onground *residential* pool wall structure or a barrier mounted on top of an onground *residential* pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer allows the wall to serve as a barrier.
2. Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section 305.2.
3. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section 305.
4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4-inch (102 mm) diameter sphere.
5. Barriers that are mounted on top of onground *residential* pool walls are installed in accordance with the pool manufacturer's instructions.

305.6 Natural barriers.

In the case where the pool or spa area abuts the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge not less than 18 inches (457 mm), a barrier is not required between the natural body of water shoreline and the pool or spa.

305.7 Natural topography.

Natural topography that prevents direct access to the pool or spa area shall include but not be limited to mountains and natural rock formations. A natural barrier *approved* by the governing body shall be acceptable provided that the degree of protection is not less than the protection afforded by the requirements of Sections 305.2 through 305.5.