TOWN OF WILTON
22 TRAVER ROAD
GANSEVOORT, NEW YORK 12831-9127

(518) 587-1939, Ext. 603
FAX (518) 587-2837
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Mark Mykins
Senior Building Inspector
Code Enforcement Officer
Zoning Officer

John Herlihy
Building Inspector
& Code Enforcement Officer

Marcus Hart
Asst. Building Inspector
& Asst. Code Enforcement Officer

SWIMMING POOL PERMIT APPLICATION

DATE:_____ **PERMIT NO:**_____

APPLICANT'S NAME: _____

ADDRESS: _____

PHONE: _____

OWNER'S NAME: _____

ADDRESS: _____

PHONE: _____

CONTRACTOR/INSTALLER: _____

ADDRESS: _____

PHONE: _____

TAX MAP NUMBER: _____

PROPERTY LOCATION: _____

POOL INFORMATION

Type of Pool: _____ **In-Ground** _____ **Above Ground**

Estimated Construction Cost: _____

Size: Length _____**ft.** **Width** _____**ft.** **Depth** _____**ft.**

Type of Pool Construction: _____

GENERAL REQUIREMENTS:

POOL PERMIT IS EFFECTIVE FOR SIXTY (60) DAYS FROM DATE OF ISSUANCE.

A copy of a survey must be submitted showing property lines, existing structures, septic system, well location, proposed location of pool and show all distances from lot lines to both the pool and structures. Pool (measured from the outside of the pool wall) and accessory equipment (pump, filter & heater) setbacks are as follows:

Pool	**Accessory Equipment**
50 ft. from front yard property line	50 ft. from front yard property line
20 ft. from side and rear yard property lines	10 ft. from side & rear property lines
10 ft. from easements	10 ft. from easements

Application for electrical inspection is necessary. A copy of the application is to be filed with this office. Electrical code requirements will be furnished upon request.

This office is to be notified upon completion of construction, including installation of fencing. **Fencing must be installed immediately after the pool is installed.**

A final inspection will be made before use of the pool is authorized.

I have read the regulations and agree to abide by these and all requirements of the Town of Wilton.

Signature of Applicant_____Date_____

Fee $50.00 (Check)(Cash)

Date:_____20_____ Building Inspector_____

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Attention Applicant, Owner and Contractor:

Once this permit is issued, it is effective for 60 days. In order for the permit to be closed out and a Certificate of Compliance to be issued from the Building Department all of the following requirements shall be met.

1. Any doors from the home and or garage that lead into the pool area must have code compliant alarms that are installed and operable for inspection.
2. The required "in pool alarm" must be installed and operable at time of inspection.
3. A third party electrical inspection shall have been performed on all newly installed electrical work and appliances. The inspection agency and inspector must be on the list of town approved inspectors provided with the permit.
4. All pool fencing shall be installed and completed. All gates must be code compliant, (self closing and latching).

While the pool is under construction, a code compliant construction safety fence shall be erected and maintained until the permanent fence is completed.

The permit is effective for 60 days, after which time the permit is expired and the **applicant** will have to renew the permit for a fee of $50.00 which will extend the permit for an additional 60 days. If the permit is not renewed the applicant will be in violation of the code of the Town of Wilton and the NY State uniform code and a violation letter will be sent.

Sign below to acknowledge that you have read and understand the above statement.

_____ _____

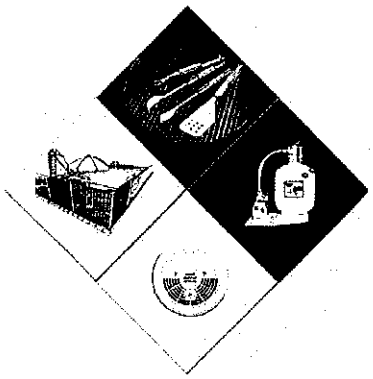
Signature of Applicant Date

POOL FENCE

AN INVESTMENT WORTH MAKING . . .

AND A REQUIREMENT OF THE CODE!

Swimming pools, spas, and hot tubs are becoming more frequent in the back yards of homes across the State. While very enjoyable to the users, these places of comfort are very alluring to young children. Protection against unsupervised children is paramount in avoiding a household disaster.



Barriers like pool fences are working! In 1985, New York State started requiring pool fences when the rate of child deaths (newborn to 4 years old) soared to 17 drownings per million. By 1999, that number dropped by 95%.

When do I need a barrier?

Barriers, such as fences, are required around swimming pools, hot tubs and spas. This includes both fixed and portable units, including pre-formed or inflatable pools. The only exception is when a swimming pool is not able to contain more than 24" of water.

Are existing swimming pools exempt from barrier requirements?

No. All swimming pools, no matter how old, are required to have a barrier around them. The Property Maintenance Code of New York State requires an approved barrier around all swimming pools, regardless of their age.

What are the requirements for barriers?

The *Residential Code of New York State* and the *Building Code of New York State* regulate the construction parameters of barriers. Several options are available.

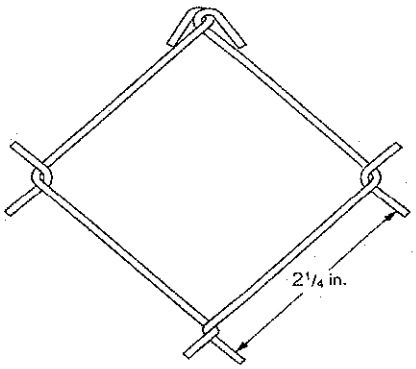
1. A 48" barrier shall surround the pool area. The barrier can be made using various methods including masonry, wood, or metal. Whatever method is used, it must not allow passage of children through the barrier as well as be constructed to prevent climbing.

2. For above ground pools, the side wall can be used as part of the barrier as long as the walls are 48" above the ground and the access ladder is secured. A barrier can be placed on top of the pool if it doesn't quite make the 48" by itself.

3. When the wall of a building serves as the barrier, or a portion thereof, a power operated top can be used or alarms can be placed on the doors leading to the pool area.

CODES DIVISION
DEPARTMENT OF STATE

For more information, contact the Department of State Division of Code Enforcement and Administration 41 State St. Albany, NY 12231
Phone: (518)-474-4073
Fax: (518)-486-4487
http://www.dos.state.ny.us

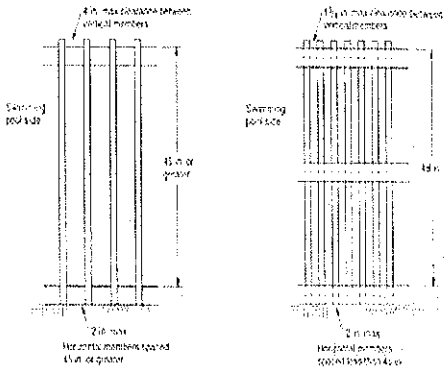


Do I need to put a barrier up to protect my hot tub or spa?

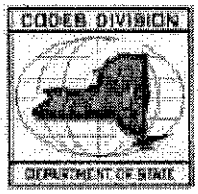
No. Hot tubs and spas are exempt from the barrier if equipped with a safety cover complying with the ASTM F1346 safety standard.

Do fences, gates and folding ladders need to be locked?

Yes. Pool gates and folding ladders do need to be locked when unsupervised. This needs to be achieved by a key, combination, or child-proof lock.



Specifics on fence construction and permitted gates are found in the Residential Code of New York State and the Building Code of New York State



CURRENT REQUIREMENTS FOR SWIMMING POOLS CONTAINED IN THE STATE FIRE PREVENTION AND BUILDING CODE (THE "UNIFORM CODE") (June 2008)

Introduction

The State Uniform Fire Prevention and Building Code (the "Uniform Code") is promulgated by the State Fire Prevention and Building Code Council (the "Code Council") pursuant to Article 18 of the Executive Law. The Uniform Code includes provisions contained in Parts 1219 to 1228 of Title 19 of the *New York Code, Rules and Regulations* (the "NYCRR") and the provisions contained in the publications that are mentioned in Parts 1220 to 1227. Those publications include the 2007 editions of the *Residential Code of New York State*, the *Building Code of New York State*, the *Plumbing Code of New York State*, the *Mechanical Code of New York State*, the *Fuel Gas Code of New York State*, the *Fire Code of New York State*, the *Property Maintenance Code of New York State*, and the *Existing Building Code of New York*.

The Uniform Code includes a number of provisions relating to swimming pools. This document is intended to summarize the requirements for swimming pools currently found in the Uniform Code.

Please note that local laws regarding fencing and other safety requirements for swimming pools may be more restrictive than requirements for swimming pools contained in the Uniform Code. If you are considering the purchase of a swimming pool, you should review the Uniform Code provisions summarized in this document and, in addition, you should consult the local laws, ordinances, codes and regulations of the municipality where the pool is to be installed for any further requirements.

Definition of "swimming pool"

The term "swimming pool" is defined in the Uniform Code as "any structure, basin, chamber or tank which is intended for swimming, diving, recreational bathing or wading and which contains, is designed to contain, or is capable of containing water more than 24 inches (610 mm) deep at any point. This includes in-ground, above-ground and on-ground pools; indoor pools; hot tubs; spas; and fixed-in-place wading pools." [1]

NOTE: A pool which is *capable* of containing more that 24 inches of water is a "swimming pool" (and is subject to all applicable Uniform Code provisions relating to "swimming pools") even if the pool is filled to a depth of less than 24 inches.

Barrier Requirements: Outdoor Residential Swimming Pools

An outdoor residential swimming pool must be provided with a barrier which completely surrounds the swimming pool and obstructs access to the swimming pool. The barrier may consist of a fence, a wall, a building wall, or any combination thereof.[2] The barrier must be at least 4 feet (48 inches) high, and must satisfy certain specified requirements (which are discussed in more detail below).

Access gates must satisfy the requirements applicable to barriers, as well as certain additional requirements (which are discussed in more detail below). In addition, access gates must 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.

NOTE: In general, the barrier requirements discussed in this document apply to all swimming pools, without regard to the date of construction or installation of the pool.[3]

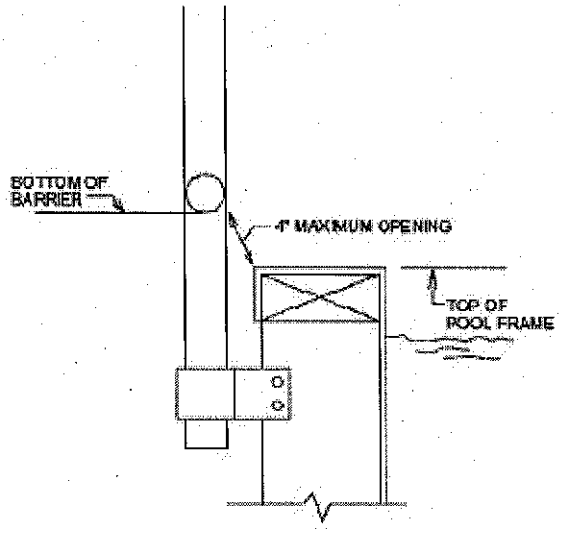
NOTE: As mentioned above, the definition of "swimming pool" includes hot tubs and spas. However, a hot tub or spa with a safety cover that complies with reference standard ASTM F 1346, entitled *Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs*, is exempt from the barrier requirements discussed here.

NOTE: The principal purpose of the Uniform Code's barrier requirements is to make swimming pools inaccessible to children. The specific requirements discussed below are intended to prevent a child from crawling under the barrier, fitting through the barrier, or climbing over the barrier. The requirements for access gates are intended to prevent a child from opening an access gate.

Barriers provided for outdoor residential swimming pools must satisfy the following requirements:

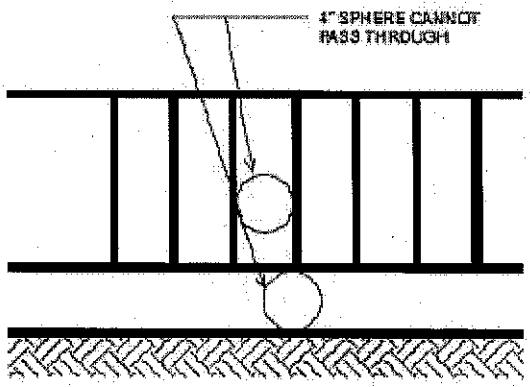
- The barrier must completely surround the swimming pool and must obstruct access to the swimming pool.
- The barrier must be at least 4 feet (48 inches) high.
- The space between the bottom of the barrier and the ground cannot exceed 2 inches.
- In the case of an above-ground pool, the barrier may be at ground level or mounted on top of the pool structure; however, if the barrier is mounted on top of the pool structure, the space between the top of the pool structure and the bottom of the barrier cannot exceed 4 inches. *See Figure 3109.4.1 on Page 3.*

- Any opening in the barrier must be small enough to prevent the passage of a 4-inch-diameter sphere through the opening. *See Figure 3109.4.1.1 on Page 3.*



For SI: 1 inch = 25.4 mm.

Figure 3109.4.1



For SI: 1 inch = 25.4 mm.

Figure 3109.4.1.1
BARRIER OPENINGS

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- A barrier that does not have openings, such as a masonry or stone wall, cannot contain indentations or protrusions (except for normal construction tolerances and tooled masonry joints).

- 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:

  - the horizontal members must be located on the swimming pool side of the fence;

  - the spacing between vertical members cannot exceed 1.75 inches; and

  - spacing within any decorative cutouts in vertical members cannot exceed 1.75 inches. *See Figure 3109.4.1.3 below.*

- Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more:

  - spacing between vertical members cannot exceed 4 inches; and

  - spacing within any decorative cutouts in vertical members cannot exceed 1.75 inches. *See Figure 3109.4.1.3 below.*

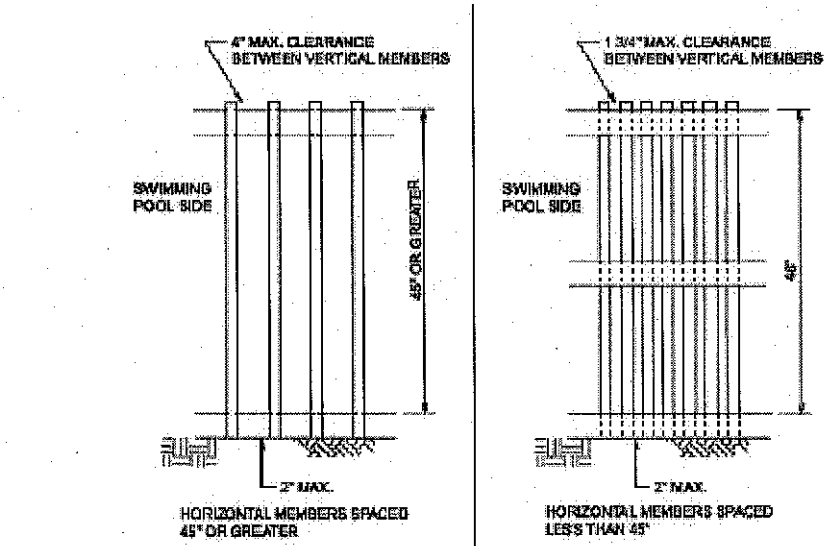

Figure 3109.4.1.3
PRIVATE SWIMMING POOL BARRIER CONSTRUCTION

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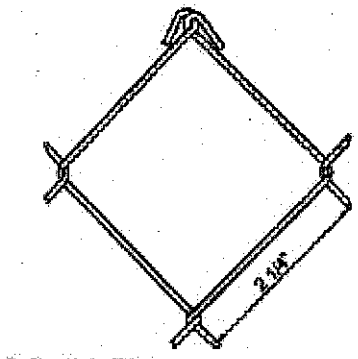
- If a chain link fence is used as the barrier, the mesh size cannot exceed 2.25-inch square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1.75 inches. *See Figure 3109.4.1.6, right.* (*The Figure on this page appears with the permission of the International Code Council. This Figure may not be reproduced without the express written consent of the International Code Council.)*



For SI: 1 inch = 25.4 mm.

Figure 3109.4.1.6
CHAIN-LINK FENCE MESH FOR PRIVATE SWIMMING POOLS

- Where the barrier is composed of diagonal members, such as a lattice fence, the opening formed by the diagonal members cannot exceed 1.75 inches.

- Access gates must satisfy the requirements stated above, and with the following additional requirements:

    - All gates must be self-closing.

        - In addition, if the gate is a pedestrian access gate, the gate must open outward, away from the pool.

    - 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.

    - 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.

- A building wall can form part of the required barrier. However, where a wall of a dwelling serves as part of the barrier, at least one of the following requirements must be satisfied:

    - the pool must be equipped with a powered safety cover in compliance with reference standard ASTM F1346, entitled *Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs*; or

- all doors with direct access to the pool through that wall must be equipped with an alarm which (1) produces an audible warning when the door and its screen, if present, are opened, (2) sounds continuously for a minimum of 30 seconds *immediately* after the door is opened, (3) is capable of being heard throughout the house during normal household activities, (4) automatically resets under all conditions, and (5) is equipped with a manual means, such as touchpad or switch, to deactivate the alarm temporarily for a single opening (such deactivation cannot last for more than 15 seconds, and the deactivation switch[es] must be located at least 54 inches above the threshold of the door); or

- other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body and which afford a degree of protection not less than the protection afforded by the powered safety cover and door alarm described above, must be provided.

- In the case of an above-ground pool, the pool structure itself can serve as a part of the required barrier, provided that the pool structure is sufficiently rigid to obstruct access to the pool. However, 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, then:

  - the ladder or steps shall be capable of being secured, locked or removed to prevent access, or the ladder or steps shall be surrounded by a barrier which meets the requirements of Items 1 through 9 above; and

  - when the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter sphere.

- Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.

Barrier Requirements: Indoor Residential Swimming Pools

All walls surrounding an indoor residential swimming pool must comply with the above-stated requirements for building walls used as all or part of a barrier around an outdoor residential swimming pool.[4]

Barrier Requirements: Public Swimming Pools

A public swimming pool must be completely enclosed by a fence at least 4 feet in height or a screen enclosure. Openings in the fence must not permit the passage of a 4-inch diameter sphere. The fence or screen enclosure must be equipped with self-closing and self-latching gates.[5]

See also section 302.7.2.1 of the *Property Maintenance Code of New York State*, which provides that an approved enclosure, at least 4 feet in height, must be provided around outdoor swimming pools, so that such pools are inaccessible to children. The enclosure may surround either the pool area or the property.

NOTE: The *State Sanitary Code* (10 NYCRR Chapter 1) is a regulation promulgated by the New York State Department of Health. Subpart 6-1 of the *State Sanitary Code* applies to all swimming pools *except* (1) a swimming pool "owned and/or maintained by an individual for the use of his family and friends; (2) spa pools used under medical supervision or associated with hospitals; and (3) float tank or relaxation tank used for solitary body immersion in skin-temperature salt water." Therefore, Subpart 6-1 applies to most "public" swimming pools. If a swimming pool is subject to the provisions of Subpart 6-1 of the *State Sanitary Code*, then

- the pool must be enclosed within a fence or other barrier, at least four feet high, which can only be entered by bathers through self-closing and positive self-latching doors or gates;
- the knob or handle controlling the latch must be at least 40 inches above grade;
- the gate or door must be locked, and access to pool prevented, when the pool is not supervised;
- swimming pool fences constructed after the effective date of Subpart 6-1 (March 30, 1988) must meet the requirements of the Uniform Code; and
- in the case of a swimming pool fence constructed prior to March 30, 1988, no opening shall exceed four inches.

Temporary Pool Enclosures [6]

During the installation or construction of a swimming pool, the swimming pool must be enclosed by a temporary enclosure. The temporary enclosure may consist of a temporary fence, a permanent fence, the wall of a permanent structure, any other structure, or any combination of the foregoing. However:

- all portions of the temporary enclosure must be at least four (4) feet high, and
- all components of the temporary enclosure must be sufficient to prevent access to the swimming pool by any person not engaged in the installation or construction process and to provide for the safety of all such persons.

The temporary enclosure must remain in place throughout the period of installation or construction of the swimming pool, and thereafter until the installation or construction of a permanent enclosure has been completed.

The temporary enclosure must be replaced by a permanent enclosure. The permanent enclosure must comply with all applicable "Barrier Requirements" described at pages 2 to 7 of this publication, and with any additional requirements that may be imposed by any other New York State codes or regulations applicable to swimming pool enclosures or by any local law applicable to swimming pool enclosures and in effect in the location where the swimming pool has been installed or constructed.

The permanent enclosure must be completed within ninety days after the date of issuance of the building permit for the installation or construction of the swimming pool, or the date of commencement of the installation or construction of the swimming pool, whichever is later. (If the swimming pool is installed or constructed without the issuance of a building permit, the permanent enclosure must be completed within ninety days after the date of commencement of the installation or construction of the swimming pool - note, however, that this provision does not permit the installation or construction of a pool without a building permit where such a permit is required by applicable law.) The local code enforcement official has authority to extend the 90 day period for completion of the permanent enclosure for good cause, such as a delay in construction caused by bad weather.

Pool Alarm Requirements [7]

Every swimming pool that is installed, constructed or substantially modified after December 14, 2006 must be equipped with an approved pool alarm which:

- is capable of detecting a child entering the water and giving an audible alarm when it detects a child entering the water;
- is audible poolside and at another location on the premises where the swimming pool is located;
- is installed, used and maintained in accordance with the manufacturer's instructions;
- is classified to reference standard ASTM F2208, entitled *Standard Specification for Pool Alarms* (either the version adopted in 2002 and editorially corrected in June 2005, or the version adopted in 2007); and
- is not an alarm device which is located on person(s) or which is dependent on device(s) located on person(s) for its proper operation.

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 must be installed.

Pool alarms are not required in:

- a hot tub or spa equipped with a safety cover classified to reference standard ASTM F1346 (2003), entitled *Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs*, or
- any swimming pool (other than a hot tub or spa) equipped with an automatic power safety cover classified by to reference standard ASTM F1346 (2003).

Entrapment Protection Requirements [8]

- Suction outlets must be designed to produce circulation throughout the pool or spa.
- Single outlet systems, such as automatic vacuum cleaner systems, or other such multiple suction outlets whether isolated by valves or otherwise must be protected against user entrapment.
- All pool and spa suction outlets (except surface skimmers) must be provided with:
    - a cover that conforms with reference standard ASME/ANSI A112.19.8M, entitled *Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Whirlpool Bathtub Appliances*, or
    - a drain gate that is 12" × 12" or larger, or
    - a channel drain system approved by the local code enforcement official.
- All pool and spa single or multiple outlet circulation systems must be equipped with atmospheric vacuum relief should grate covers located therein become missing or broken. Such vacuum relief systems shall include at least one the following:
    - safety vacuum release system conforming to reference standard ASME A112.19.17, entitled *Manufacturers Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub and Wading Pool*, or
    - a gravity drainage system approved by the local code enforcement official.
- Single or multiple pump circulation systems must be provided with a minimum of two (2) suction outlets of the approved type.
    - The suction outlets must be separated by a minimum horizontal or vertical distance of three (3) feet.
    - These suction outlets must be piped so that water is drawn through them simultaneously through a vacuum relief-protected line to the pump or pumps.
- If the pool or spa is equipped with vacuum or pressure cleaner fitting(s), each fitting must be located:
    - in an accessible position which is at least (6) inches and not greater than twelve (12) inches below the minimum operational water level, or
    - as an attachment to the skimmer(s).

Design and Construction Requirements

In-ground pools must be designed and constructed in conformance with reference standard ANSI/NSPI-5, entitled *Standard for Residential In-ground Swimming Pools.*[9]

Above-ground and on-ground pools must be designed and constructed in conformance with reference standard ANSI/NSPI-4, entitled *Standard for Above-ground/On-ground Residential Swimming Pools.*[10]

NOTE: A"public" swimming pool that is subject to Subpart 6-1 of the *State Sanitary Code* must comply with the design standards and construction provisions of Subpart 6-1.

Maintenance Requirements

The *Property Maintenance Code of New York State* provides that swimming pools must be maintained in a clean and sanitary condition, and in good repair.[11]

NOTE: A "public" swimming pool that is subject to Subpart 6-1 of the *State Sanitary Code* must comply with the operation, supervision and maintenance provisions of Subpart 6-1.

Other Requirements

Several other technical requirements are covered by the Uniform Code:

- Safety glazing material is required in the walls and fences enclosing indoor and outdoor swimming pools where certain conditions are met. See *Building Code of New York State* §2406.2.9.

- Support provisions for membrane structures: see *Building Code of New York State* §3102.8.3.

- Recirculation of supply air to a swimming pool and associated deck areas: see *Mechanical Code of New York State* § 403.2.1.2.

- Regulation of solar heating systems: see *Mechanical Code of New York State* § 1401.

- Swimming pools shall be protected against backflow in accordance with *Plumbing Code of New York State* § 608. See *Plumbing Code of New York State* § 423.1.

- Where waste water from swimming pools, backflow from filters and water from pool deck drains discharge to the building drainage system, the discharge must be through an indirect waste pipe via an air gap. See *Plumbing Code of New York State* § 802.1.4.

- Suction fittings for use in swimming pools shall comply with reference standard ASME/ANSI A112.19.8M, entitled *Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Whirlpool Bathtub Appliances*. See *Residential Code of New York State* § 2701.1.

- The construction and installation of electric wiring and equipment associated with swimming pools, wading pools, hot tubs and spas, and hydromassage bathtubs, whether permanently installed or storable, and metallic auxiliary equipment, such as pumps, filters and similar equipment, are subject to the provisions of Chapter 41 of the *Residential Code of New York State*. For example:

    - Wiring methods must comply with *Residential Code of New York State* § 4102.

    - Equipment location and clearances must comply with *Residential Code of New York State* § 4103.

    - *Residential Code of New York State* § 4104 contains requirements relating to bonding of metallic parts, and permitted methods of bonding.

    - *Residential Code of New York State* § 4105 contains requirements relating to grounding of equipment.

    - *Residential Code of New York State* § 4106 contains requirements relating to installation of equipment.

    - *Residential Code of New York State* § 4107 contains special provisions relating to storable swimming pools.

    - *Residential Code of New York State* § 4108 contains special provisions relating to spas and hot tubs.

    - *Residential Code of New York State* § 4109 contains special provisions relating to hydromassage bathtubs.

State Energy Conservation Construction Code Requirements

The State Energy Conservation Construction Code (the "Energy Code") is promulgated by the Code Council pursuant to Article 11 of the Energy Law. The Energy Code is included provisions in Part 1240 of Title 19 of the NYCRR and in the publication mentioned in that Part. That publication is the *Energy Conservation Construction Code of New York State.*

Pool heaters must have an ON-OFF switch mounted for easy access to allow the heater to be shut off without adjusting the thermostat setting and to allow restarting of the heater without relighting the pilot light.[12]

All heated swimming pools must be equipped with a pool cover. However, outdoor pools deriving more than 20 percent of the energy for heating from renewable sources are exempt from this requirement.[13]

Heated pools must have time clocks so that the pump may be set to run during the off-peak electric demand period. This also allows the pump to run for the minimum time necessary to keep the water in a clear and sanitary condition in accordance with applicable health standards.[14]

ENDNOTES

1. See 19 NYCRR Sections 1220.1(d)(7), 1221.1(d)(2), 1222.1(c)(1), 1228.2(b)(4), and 1228.4(b)(3).

2. See *Residential Code of New York State*, Appendix G, section 105.2 and the definitions in *Residential Code of New York State*, Appendix G, section 102.1. See also *Property Maintenance Code of New York State* § 302.7.2.1, which provides that an approved enclosure, at least 4 feet in height, must be provided around outdoor swimming pools, so that such pools are inaccessible to children.

3. See Tarquini v. Town of Aurora, 77 N.Y.2d 354 (1991).

4. See *Residential Code of New York State*, Appendix G, section 105.3.

5. See *Building Code of New York State* § 3109.3.

6. See 19 NYCRR, Part 1228, section 1228.4.

7. See 19 NYCRR, Part 1228, section 1228.2.

8. See *Residential Code of New York State*, Appendix G, § 106.

9. See *Residential Code of New York State*, Appendix G, § 103.1.

10. See *Residential Code of New York State*, Appendix G, § 103.2.

11. See *Property Maintenance Code of New York State* § 302.7.2.

12. See *Energy Conservation Construction Code of New York State* § 504.3.1.

13. See *Energy Conservation Construction Code of New York State* § 504.3.2

14. See *Energy Conservation Construction Code of New York State* § 504.3.3.

1221.3. Swimming pool alarms. [amended text 12/14/2006]

(a) **Purpose.** Paragraph (b) of subdivision (14) of section 378 of the Executive Law, as added by Chapter 450 of the Laws of 2006, requires that the New York State Uniform Fire Prevention and Building Code (the Uniform Code) provide that any "residential or commercial swimming pool constructed or substantially modified after the effective date of this paragraph (December 14, 2006) shall be equipped with an acceptable pool alarm capable of detecting a child entering the water and of giving an audible alarm." The Introducer's Memorandum in Support of Chapter 450 states, in pertinent part, that "drowning is the second leading cause of unintentional injury-related deaths in children between the ages of one and fourteen nation wide, and the third leading cause of injury-related deaths of children in New York. . . . (T)echnological advances have produced several different types of pool alarms designed to sound a warning if a child falls into the water. When used in conjunction with access barriers, these alarms provide greater protection against accidental pool drownings." This section and section 1220.5 of Part 1220 of this Title are intended to implement the provisions of Executive Law section 378(14)(b).

(b) **Definitions.** The following terms shall, for the purposes of this section and for the purposes of section 1220.5 in Part 1220 of this Title, have the following meanings:

(1) **Approved.** Approved by the code enforcement official responsible for enforcement and administration of the Uniform Code as complying with and satisfying the purposes of this section and section 1220.5 in Part 1220 of this Title.

(2) **Commercial swimming pool**. Any swimming pool (as defined in paragraph (4) of this subdivision) that is not a residential swimming pool (as defined in paragraph (3) of this subdivision).

(3) **Residential swimming pool**. A swimming pool (as defined in paragraph (4) of this subdivision) which is situated on the premises of a detached one- or two-family dwelling; a multiple single-family dwelling (townhouse) not more than three stories in height; a one-family dwelling converted to a bed and breakfast; a community residence for 14 or fewer mentally disabled persons, operated by or subject to licensure by the Office of Mental Health or the Office of Mental Retardation and Developmental Disabilities; a one-or two-family dwelling operated for the purpose of providing care to more than two but not more than eight hospice patients, created pursuant to Article 40 of the Public Health Law, and defined as a hospice residence in §4002 of said Law; a manufactured home; a mobile home; or a factory manufactured dwelling unit.

(4) **Swimming pool.** Any structure intended for swimming, recreational bathing or wading which contains or which is designed to contain water over 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground pools; indoor pools; hot tubs; spas; and fixed-in-place wading pools.

(5) **Substantial damage**. Damage of any origin sustained by a swimming pool whereby the cost of restoring the swimming pool to its before damaged condition would equal or exceed 50 percent of the market value of the swimming pool before the damage occurred.

(6) **Substantial modification.** Any repair reconstruction, rehabilitation, addition, or improvement of a swimming pool, the cost of which equals or exceeds 50 percent of the market value of the swimming pool before the repair, rehabilitation, addition, or improvement is started. If a swimming pool has sustained substantial damage, any repairs are considered to be a substantial modification regardless of the actual repair work performed.

(c) **Pool alarms.** Each residential swimming pool installed, constructed or substantially modified after December 14, 2006 and each commercial swimming pool installed, constructed or substantially modified after December 14, 2006 shall be equipped with an approved pool alarm which:

(1) is capable of detecting a child entering the water and giving an audible alarm when it detects a child entering the water;

(2) is audible poolside and at another location on the premises where the swimming pool is located;

(3) is installed, used and maintained in accordance with the manufacturer's instructions;

(4) is classified by Underwriter's Laboratory, Inc. (or other approved independent testing laboratory) to reference standard ASTM F2208, entitled "Standard Specification for Pool Alarms," as adopted in 2002 and editorially corrected in June 2005, published by ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428; and

(5) is not an alarm device which is located on person(s) or which is dependent on device(s) located on person(s) for its proper operation.

(d) **Multiple pool alarms.** A pool alarm installed pursuant to subdivision (c) of this section 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 installed.

(A) Wiring Methods. Feeders shall be installed in rigid metal conduit, intermediate metal conduit, liquidtight flexible nonmetallic conduit, rigid polyvinyl chloride conduit, or reinforced thermosetting resin conduit. Electrical metallic tubing shall be permitted where installed on or within a building, and electrical nonmetallic tubing shall be permitted where installed within a building. Aluminum conduits shall not be permitted in the pool area where subject to corrosion.

Exception: An existing feeder between an existing remote panelboard and service equipment shall be permitted to run in flexible metal conduit or an approved cable assembly that includes an equipment grounding conductor within its outer sheath. The equipment grounding conductor shall comply with 250.24(A)(5).

(B) Grounding. An equipment grounding conductor shall be installed with the feeder conductors between the grounding terminal of the pool equipment panelboard and the grounding terminal of the applicable service equipment or source of a separately derived system. For other than (1) existing feeders covered in 680.25(A), Exception, or (2) feeders to separate buildings that do not utilize an insulated equipment grounding conductor in accordance with 680.25(B)(2), this equipment grounding conductor shall be insulated.

(1) Size. This conductor shall be sized in accordance with 250.122 but not smaller than 12 AWG. On separately derived systems, this conductor shall be sized in accordance with Table 250.66 but not smaller than 8 AWG.

(2) Separate Buildings. A feeder to a separate building or structure shall be permitted to supply swimming pool equipment branch circuits, or feeders supplying swimming pool equipment branch circuits, if the grounding arrangements in the separate building meet the requirements in 250.32(B)(1). Where installed in other than existing feeders covered in 680.25(A), Exception, a separate equipment grounding conductor shall be an insulated conductor.

680.26 Equipotential Bonding.

(A) Performance. The equipotential bonding required by this section shall be installed to reduce voltage gradients in the pool area.

(B) Bonded Parts. The parts specified in 680.26(B)(1) through (B)(7) shall be bonded together using solid copper conductors, insulated covered, or bare, not smaller than 8 AWG or with rigid metal conduit of brass or other identified corrosion-resistant metal. Connections to bonded parts shall be made in accordance with 250.8. An 8 AWG or larger solid copper bonding conductor provided to reduce voltage gradients in the pool area shall not be required to be extended or attached to remote panelboards, service equipment, or electrodes.

(1) Conductive Pool Shells. Bonding to conductive pool shells shall be provided as specified in 680.26(B)(1)(a) or (B)(1)(b). Poured concrete, pneumatically applied or sprayed concrete, and concrete block with painted or plastered coatings shall all be considered conductive materials due to water permeability and porosity. Vinyl liners and fiberglass composite shells shall be considered to be nonconductive materials.

(a) *Structural Reinforcing Steel.* Unencapsulated structural reinforcing steel shall be bonded together by steel tie wires or the equivalent. Where structural reinforcing steel is encapsulated in a nonconductive compound, a copper conductor grid shall be installed in accordance with 680.26(B)(1)(b).

(b) *Copper Conductor Grid.* A copper conductor grid shall be provided and shall comply with (b)(1) through (b)(4).

(1) Be constructed of minimum 8 AWG bare solid copper conductors bonded to each other at all points of crossing
(2) Conform to the contour of the pool and the pool deck
(3) Be arranged in a 300-mm (12-in.) by 300-mm (12-in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.)
(4) Be secured within or under the pool no more than 150 mm (6 in.) from the outer contour of the pool shell

(2) Perimeter Surfaces. The perimeter surface shall extend for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall include unpaved surfaces as well as poured concrete and other types of paving. Bonding to perimeter surfaces shall be provided as specified in 680.26(B)(2)(a) or (2)(b) and shall be attached to the pool reinforcing steel or copper conductor grid at a minimum of four (4) points uniformly spaced around the perimeter of the pool. For nonconductive pool shells, bonding at four points shall not be required.

(a) *Structural Reinforcing Steel.* Structural reinforcing steel shall be bonded in accordance with 680.26(B)(1)(a).

(b) *Alternate Means.* Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, a copper conductor(s) shall be utilized where the following requirements are met:

(1) At least one minimum 8 AWG bare solid copper conductor shall be provided.
(2) The conductors shall follow the contour of the perimeter surface.
(3) Only listed splices shall be permitted.
(4) The required conductor shall be 450 to 600 mm (18 to 24 in.) from the inside walls of the pool.
(5) The required conductor shall be secured within or under the perimeter surface 100 mm to 150 mm (4 in. to 6 in.) below the subgrade.

(3) Metallic Components. All metallic parts of the pool structure, including reinforcing metal not addressed in 680.26(B)(1)(a), shall be bonded. Where reinforcing steel is encapsulated with a nonconductive compound, the reinforcing steel shall not be required to be bonded.

(4) Underwater Lighting. All metal forming shells and mounting brackets of no-niche luminaires shall be bonded.

Exception: Listed low-voltage lighting systems with nonmetallic forming shells shall not require bonding.

(5) Metal Fittings. All metal fittings within or attached to the pool structure shall be bonded. Isolated parts that are not over 100 mm (4 in.) in any dimension and do not penetrate into the pool structure more than 25 mm (1 in.) shall not require bonding.

(6) Electrical Equipment. Metal parts of electrical equipment associated with the pool water circulating system, including pump motors and metal parts of equipment associated with pool covers, including electric motors, shall be bonded.

Exception: Metal parts of listed equipment incorporating an approved system of double insulation shall not be bonded.

(a) *Double-Insulated Water Pump Motors.* Where a double-insulated water pump motor is installed under the provisions of this rule, a solid 8 AWG copper conductor of sufficient length to make a bonding connection to a replacement motor shall be extended from the bonding grid to an accessible point in the vicinity of the pool pump motor. Where there is no connection between the swimming pool bonding grid and the equipment grounding system for the premises, this bonding conductor shall be connected to the equipment grounding conductor of the motor circuit.

(b) *Pool Water Heaters.* For pool water heaters rated at more than 50 amperes and having specific instructions regarding bonding and grounding, only those parts designated to be bonded shall be bonded and only those parts designated to be grounded shall be grounded.

(7) Metal Wiring Methods and Equipment. Metal-sheathed cables and raceways, metal piping, and all fixed metal parts shall be bonded.

Exception No. 1: Those separated from the pool by a permanent barrier shall not be required to be bonded.

Exception No. 2: Those greater than 1.5 m (5 ft) horizontally of the inside walls of the pool shall not be required to be bonded.

Exception No. 3: Those greater than 3.7 m (12 ft) measured vertically above the maximum water level of the pool, or as measured vertically above any observation stands, towers, or platforms, or any diving structures, shall not be required to be bonded.

(C) Pool Water. An intentional bond of a minimum conductive surface area of 5806 mm^2 (9 $in.^2$) shall be installed in contact with the pool water. This bond shall be permitted to consist of parts that are required to be bonded in 680.26(B).

680.27 Specialized Pool Equipment.

(A) Underwater Audio Equipment. All underwater audio equipment shall be identified for the purpose.

(1) Speakers. Each speaker shall be mounted in an approved metal forming shell, the front of which is enclosed by a captive metal screen, or equivalent, that is bonded to, and secured to, the forming shell by a positive locking device that ensures a low-resistance contact and requires a tool to open for installation or servicing of the speaker. The forming shell shall be installed in a recess in the wall or floor of the pool.

(2) Wiring Methods. Rigid metal conduit of brass or other identified corrosion-resistant metal, liquidtight flexible nonmetallic conduit (LFNC-B), rigid polyvinyl chloride conduit, or reinforced thermosetting resin conduit shall extend from the forming shell to a listed junction box or other enclosure as provided in 680.24. Where rigid polyvinyl chloride conduit, reinforced thermosetting resin conduit, or liquidtight flexible nonmetallic conduit is used, an 8 AWG insulated solid or stranded copper bonding jumper shall be installed in this conduit. The bonding jumper shall be terminated in the forming shell and the junction box. The termination of the 8 AWG bonding jumper in the forming shell shall be covered with, or encapsulated in, a listed potting compound to protect such connection from the possible deteriorating effect of pool water.

(3) Forming Shell and Metal Screen. The forming shell and metal screen shall be of brass or other approved corrosion-resistant metal. All forming shells shall include provisions for terminating an 8 AWG copper conductor.

(B) Electrically Operated Pool Covers.

(1) Motors and Controllers. The electric motors, controllers, and wiring shall be located not less than 1.5 m (5 ft) from the inside wall of the pool unless separated from the pool by a wall, cover, or other permanent barrier. Electric motors installed below grade level shall be of the totally enclosed type. The device that controls the operation of the motor for an electrically operated pool cover shall be located such that the operator has full view of the pool.

FPN No. 1: For cabinets installed in damp and wet locations, see 312.2.

FPN No. 2: For switches or circuit breakers installed in wet locations, see 404.4.

FPN No. 3: For protection against liquids, see 430.11.

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THIS IS A LIST OF THE INSPECTION AGENCIES APPROVED BY THE TOWN BOARD TO WORK IN THE TOWN OF WILTON. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF ANY SPECIFIC AGENCY.

Last Modified: 01_20_23 T. Morgan