New York State
Department of State
Division of Building Standards and Codes
One Commerce Plaza
99 Washington Avenue, Suite 1160
Albany, NY 12231-0001
(518) 474-4073
Fax: (518) 474-5788
www.dos.ny.gov

NEW YORK STATE OF OPPORTUNITY. | **Building Standards and Codes**

TB-1014-RCNYS-Rev 1

TECHNICAL BULLETIN

Code Effective Date: **May 12, 2020**[1]

Source Document: **19 NYCRR Part 1220 – Residential Construction**
19 NYCRR Part 1221 – Building Construction
19 NYCRR Part 1226 – Property Maintenance[2]

Topic: **Summary of Requirements for Swimming Pools and Spas – Rev 1**

This document, issued pursuant to Executive Law § 376(6), is intended to summarize the current requirements for swimming pools contained in the Uniform Code.

Please note that local laws regarding fencing and other safety requirements for swimming pools may be more restrictive than the requirements for swimming pools contained in the Uniform Code. Those considering the purchase, installation, or substantial modification of a swimming pool should review the full text of the provisions found in the Uniform Code and should also consult the applicable local laws, ordinances, codes, and regulations of the municipality where the pool is to be installed for any further requirements.

Section R326 of the 2020 Residential Code of New York State[3] (2020 RCNYS), applies to swimming pools and spas installed in or on the lot of dwellings regulated by the 2020 RCNYS, as well as to pools accessory to detached one- and two-family dwellings classified as Group R-3 occupancies constructed under the 2020 Building Code of New York State (2020 BCNYS).[4] For the purpose of this bulletin, these pools will be considered: "pools regulated by the 2020 RCNYS."

Section 3109 of the 2020 BCNYS applies to communal pools accessory to townhouses and to pools that are part of, or accessory to, uses regulated by the 2020 BCNYS, except as noted above. For the purpose of this bulletin, these pools will be considered: "pools regulated by the 2020 BCNYS."

The Uniform Code generally defines "swimming pool" and "spa" as follows:

> ***Swimming pool.*** *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 wading pools.*
>
> ***Spa.*** *A portable or nonportable structure intended for recreational or therapeutic bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product. Spas are shallow in depth and are not designed for swimming or diving.* [Some spas may also be referred to as hot tubs. For the purposes of this bulletin, the term "spa" includes hot tubs.]

---

[1] The "Code Effective Date" for this Technical Bulletin is May 12, 2020, which is the effective date of the 2020 update of the New York State Uniform Fire Prevention and Building Code (the Uniform Code).
[2] The Uniform Code is contained in Title 19 of the Official Compilation of Codes, Rules and Regulations of the State of New York (19 NYCRR) Parts 1220 through 1227 and the publications incorporated by reference into those Parts, including, but not limited to the 2020 NYS specific code books which are based on the 2018 International Code Council books.
[3] Access to online versions of the 2020 Codes of New York State may be found on the ICC website.
[4] *See* Section 326.1 of the 2020 RCNYS; *see also* Exception 1 of Section 3109.1 of the 2020 BCNYS which provides as follows: "Pools located in or on the lot of detached one- and two-family dwellings classified as Group R-3 and constructed under the *Building Code of New York State* may be regulated by the *Residential Code of New York State*."

Barrier Requirements

The barrier requirements are intended to provide *"protection against potential drowning and near-drowning by sufficiently preventing access to swimming pools and spas by persons outside the property, persons within the dwelling, and persons in other parts of the property not contained within the pool enclosure."*[5] The barrier may consist of *"a fence, the walls of a permanent structure, any other structure or combination thereof which completely surrounds the swimming pool and sufficiently obstructs access to the swimming pool*."[6]

The 1984 version of the Uniform Code required an approved enclosure, at least 4 feet in height, around all outdoor swimming pools at all residential use and mixed-use properties. All subsequent versions of the Uniform Code have contained a similar requirement for new swimming pools. Therefore, all existing and proposed swimming pools (including spas) that are *"capable of containing water more than 24 inches deep"* shall be surrounded by a barrier enclosure.[7] However, spas which are equipped with a safety cover which complies with ASTM F1346 are exempt from the permanent barrier requirement pursuant to Executive Law §378(14).

Temporary Barriers. During the installation or construction of an outdoor swimming pool or spa, the swimming pool or spa must be surrounded by a temporary barrier with a height of at least 48 inches above grade measured on the side of the barrier that faces away from the swimming pool.

The requirement for a temporary barrier may not apply to an above-ground pool where the pool structure constitutes a barrier, or to spas equipped with a safety cover which remains in place at all times except when one or more people is engaged in installation or construction of the spa, in compliance with Section R326.4.1 of the 2020 RCNYS or Section 3109.3.1 of the 2020 BCNYS, as applicable.

Permanent barriers. For swimming pools, the temporary barrier must be replaced with a permanent barrier within 90 days of the date of issuance of the building permit for the installation or construction, or 90 days of the date of commencement of the installation or construction. For hot tubs and spas which are not equipped with a safety cover complying with ASTM F1346, the temporary barrier must be replaced with a permanent barrier within 90 days of the date of issuance of the building permit for the installation or construction, or 90 days of the date of commencement of the installation or construction. The local code enforcement official has the authority to extend the time for completion of the permanent barrier for good cause, such as a delay in construction caused by weather.[8]

The permanent barrier requirements for swimming pools which are newly constructed or substantially modified after May 12, 2020, apply regardless of whether a safety cover is provided. These requirements also apply to swimming pools constructed prior to May 12, 2020, as barrier requirements have been part of the Uniform Code since 1984. However, spas which are equipped with an ASTM F1346-compliant safety barrier are exempt from the permanent barrier requirements. Permanent barriers must satisfy specific requirements summarized as follows:

1. The top of the barrier must be at least 4 feet (48 inches) high.[9]
2. The space between the bottom of the barrier and grade cannot exceed 2 inches.[10]
3. Where the top of the pool is above grade, the barrier may be at ground level or mounted on top of the pool structure.[11]
4. A solid barrier surface without openings, such as a masonry or stone wall, cannot contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.[12]
5. Openings in the barrier must comply with the provisions of Sections R326.4.2.3 through R326.4.2.6 of the 2020 RCNYS or Sections 3109.3.2.3 through 3109.3.2.6 of the 2020 BCNYS, as applicable.[13]

---

[5] *See* Section R326.4. of the 2020 RCNYS and Section 3109.3 of the 2020 BCNYS.
[6] *See* definition of Permanent Barrier, Section R326.2 of the 2020 RCNYS and Section 3109.2. of the 2020 BCNYS.
[7] *See* Chapter 2 of the 2020 BCNYS and the 2020 RCNYS for the definition of Swimming Pool.
[8] *See* Section R326.4.1.2 of the 2020 RCNYS and Section 3109.3.1 of the 2020 BCNYS.
[9] *See* Section R326.4.2.1 of the 2020 RCNYS and Section 3109.3.2.1 of the 2020 BCNYS.
[10] *See* Section R326.4.2.1 of the 2020 RCNYS and Section 3109.3.2.1 of the 2020 BCNYS.
[11] *See* Section R326.4.2.1 of the 2020 RCNYS or Section 3109.3.2 of the 2020 BCNYS.
[12] *See* Section R326.4.2.2 of the 2020 RCNYS and 3109.3.2.2 2020 BCNYS.
[13] The opening provisions are the same in the 2020 RCNYS and the 2020 BCNYS, they are as follows:

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 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 be not greater than 1 3/4 inches (44 mm) in width.*

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 be not greater than 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall be not greater than 1 3/4 inches (44 mm) in width.*

Chain link dimensions. *Maximum mesh size for chain link fences shall be a 2 1/4 inch (57mm) square, unless the fence has vertical slats fastened at the top or the bottom which reduce the openings to not more than 13/4 inches (44 mm).*

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).*

6. Barriers shall be located to prohibit permanent structures, equipment, or similar objects from being used to climb the barriers.[14]

Building or dwelling wall as part of the barrier. A wall or walls that are part of the building or dwelling, and all the walls surrounding an indoor pool, can form part of the required barrier if they meet the barrier provisions summarized above, in addition to one of the two conditions noted below:[15]

1. *a) all doors with direct access to the pool through that wall are equipped with an alarm that is listed in accordance with UL 2017, Alarms for access to pools regulated by the 2020 RCNYS shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening, the deactivation shall last for not more than 15 seconds; and*

   b) operable windows in the wall or walls used as a barrier shall have a latching device located no less than 48 inches above the floor. Openings in operable windows shall not allow a 4-inch-diameter sphere to pass through the opening when the window is in its largest opened position; and

   c) where the dwelling is wholly contained within the pool barrier or enclosure, alarms shall be provided at every door with direct access to the pool.

Alternatively, these sections allow the use of other approved means of protection, such as self-closing and self-latching devices, as long as the degree of protection afforded is not less than the protection afforded by Item 1 (described above).

According to Section R326.1.1 of the 2020 RCNYS and 3109.1.1 of the 2020 BCNYS, in addition to the swimming pool specific requirements, swimming pools must comply with other applicable sections of the Uniform Code. These other applicable requirements include, but are not limited to, emergency escape and rescue openings in accordance with Section R310 and window fall protection in accordance with Section R312 of the 2020 RCNYS. Any window opening control devices (required per Item 1, above) must also comply with Section R312.2.2 of the 2020 RCNYS and with the *Standard Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms* (ASTM F2090).

In the case of a pool regulated by the 2020 BCNYS, the wall or walls of a multiple dwelling *"may serve as part of the barrier, provided there is no direct access from the dwelling to the pool."*[16]

Pool Structure as a barrier. In the case of an above-ground pool, where the pool structure itself serves as a part of the required barrier, or where the barrier is mounted on top of the pool structure, the pool structure shall meet the applicable barrier and gate requirements summarized in this document. If the pool is residential, then the pool structure must be designed and constructed in compliance with ANSI/APSP/ICC 4. In either case, if the means of access is a ladder or steps, then:

1. *the ladder or steps shall be capable of being secured, locked or removed to prevent access, or*
2. *the ladder or steps shall be surrounded by a complying swimming pool barrier.*

Gates. Access gates must satisfy the above requirements applicable to barriers, and the additional requirements summarized below:

1. *All gates must be self-closing.*[17]
2. *If the gate is a pedestrian access gate, the gate must open outward, away from the pool.*
3. *All gates shall be self-latching, with the latch handle located within the enclosure and at least 40 inches above grade. If the latch handle is located less than 54 inches from grade, the latch handle shall be located at least 3 inches below the top of the gate, and neither the gate nor the barrier shall have any openings greater than 0.5 inches within 18 inches of the latch handle.*
4. *All gates must be securely locked with a key, combination, or another child-proof lock sufficient to prevent access when the swimming pool is not in use or supervised.*

Pool Alarms

Unless it is equipped with an automatic safety cover compliant with ASTM F1346, a swimming pool that is installed, constructed, or substantially modified after December 14, 2006, shall be equipped with an approved pool alarm (or multiple alarms if necessary) that:

---

[14] *See* Section R326.4.4 of the 2020 RCNYS and Section 3109.3.4 of the 2020 BCNYS.
[15] *See* Section R326.4.2.8 of the 2020 RCNYS and Section 3109.3.2.8 of the 2020 BCNYS.
[16] *See* Section 3109.3.2.8.2 of the 2020 BCNYS.
[17] For swimming pools and spas not installed, constructed, or substantially modified after December 14, 2006, only pedestrian gates are required to be self-closing.

- is in compliance with reference standard ASTM F2208-2014, titled *Standard Safety Specification for Residential Pool Alarms* (see Section R326.7 of the 2020 RCNYS and Section 3109.5 of the 2020 BCNYS);
- is capable of detecting entry into the water and of giving an audible alarm pool side and inside the dwelling or, for a pool regulated by the 2020 BCNYS, inside the building where it is monitored as applicable (see Section R326.7.2 of the 2020 RCNYS and 3109.5.2 of the 2020 BCNYS); and
- is not a personal immersion alarm (see Section R326.7.3 of the 2020 RCNYS and Section 3109.5.3 of the 2020 BCNYS).

Pool alarms are not required in either a spa equipped with a safety cover or in a swimming pool equipped with an automatic power safety cover, where either complies with reference standard ASTM F1346-91 (2010), titled *Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs*.

Entrapment Protection Requirements

Suction outlet systems shall be protected against user entrapment in accordance with Section 8003 of the Federal Swimming Pool and Spa Drain Cover Standard (CPSC 15 USC 8003) including the federally adopted standard,[18] and with ANSI/APSP/ICC 7, where applicable.[19]

Suction Outlets for Pools Regulated by the 2020 RCNYS

In addition to the entrapment protection requirements stated above, suction outlets in pools regulated by the 2020 RCNYS must comply with the following:

- Suction outlets must be designed to produce circulation throughout the pool or spa (see Section R326.6 of the 2020 RCNYS).
- Pool and spa suction outlets (except surface skimmers) shall have a cover that conforms to ANSI/ASME A112.19.8, or an 18-inch by 23-inch drain grate or larger, or an approved channel drain system (see Section R326.6.2 of the 2020 RCNYS).
- Outlet circulation systems shall be equipped with atmospheric vacuum relief. The vacuum release system shall either conform to ASME A112.19.17, or be an approved gravity drainage system (see Section R326.6.3 of the 2020 RCNYS).
- Single or multiple pump circulation systems shall have a minimum of two suction outlets separated by a horizontal or vertical distance of 3 feet from one another (see Section R326.6.4 of the 2020 RCNYS).
- Where a vacuum or pressure pool cleaner fitting is provided, it shall be located in an accessible position, at least 6 inches and not more than 12 inches below the minimum operational water level, or as an attachment to the skimmer (see Section R326.6.5 of the 2020 RCNYS).

Maintenance Requirements

Section 303.1 of the 2020 Property Maintenance Code of New York State (2020 PMCNYS) requires that existing swimming pools *"be maintained in a clean and sanitary condition, and in good repair*."

Sections 303.2 and 303.3 of the 2020 PMCNYS require the maintenance of barriers for all swimming pools or spas, and the maintenance of pool alarms for swimming pools or spas constructed or substantially modified after December 14, 2006. Pool alarms shall be maintained in accordance with the manufacturer's instructions and Section R326.7 of the 2020 RCNYS or Section 3109.5 of the 2020 BCNYS, as applicable. However, alarms are not required for spas equipped with a safety cover that complies with ASTM F1346 or for swimming pools equipped with an automatic safety cover that complies with ASTM F1346.

According to Section 303.4 of the 2020 PMCNYS, body entrapment protections for suction outlets in swimming pools and spas are required to be maintained in accordance with either the 2020 RCNYS or the 2020 BCNYS, as applicable.

Accessibility

Swimming pools and spas regulated by either the 2020 BCNYS or the 2020 RCNYS may be required to be accessible. Per Section 320.1 of the 2020 RCNYS, "*Where there are four or more dwelling units or sleeping units in a single structure,*

[18] On September 6, 2011 a new rule identified a successor standard, APSP-16-2011, to replace ASME/ANSI A112.19.8. Another rule, which as of the date of this document was effective on May 24, 2021 due to a Covid-19 related delay, and incorporates some, but not all, Sections of APSP-16-2017 as the successor drain cover standard.

[19] *See* Section R326.5.1 of the 2020 RCNYS and Section 3109.4 of the 2020 BCNYS.

the provisions of Chapter 11 of the Building Code of New York State for Group R-3 shall apply." Per Section 1103.1 of the 2020 BCNYS, *"Sites, buildings, structures, facilities, elements and spaces, temporary or permanent, shall be accessible to individuals with disabilities."* Swimming pools and spas located at recreational facilities which are regulated by 2020 BCNYS must be accessible and be on an accessible route per Section 1110.4.14 of the 2020 BCNYS, with a few exceptions. Waterslide catch pools are exempt from the requirement to provide an accessible means of entry, though a portion of the pool edge must be located on an accessible route. Where there are multiple spas in a cluster, at least 5% but not less than one spa in each cluster shall be accessible and located on an accessible route. Finally, swimming pools which serve building(s) which contain Type A or Type B units must be located on an accessible route but are not required to provide an accessible means of entry into the pool.

Section 1109.13 exempts the controls, doorknobs, latches, and other operating mechanisms for access doors or gates in barrier walls and fences protecting pools and spas, provided they comply with Section 1010.1.9.2 of the 2020 BCNYS, which requires the operable parts of the latch release on self-latching devices at a maximum of 54 inches above the finished floor or ground, provided that the self-latching devices are not also self-locking devices operated by means of a key, electronic opener, or integral combination lock.

Referenced Standards and Other Applicable Uniform Code Provisions

Some requirements applicable to swimming pools and spas are located in other codes and referenced standards which have been incorporated by reference and are, therefore, part of the Uniform Code. These include, but are not limited to:

- In-ground pools regulated by the 2020 RCNYS must be designed and constructed in conformance with reference standard ANSI/APSP/ICC 5-2011, *American National Standard for Residential Inground Swimming Pools*.
- Above-ground and on-ground pools regulated by the 2020 RCNYS must be designed and constructed in conformance with reference standard ANSI/APSP/ICC 4-2012, *American National Standard for Aboveground/Onground Residential Swimming Pools*.
- Permanently installed spas regulated by the 2020 RCNYS shall be designed and constructed in conformance with reference standard ANSI/APSP/ICC 3-2014, *American National Standard for Permanently Installed Residential Spas and Swim Spas.*
- Portable spas regulated by the 2020 RCNYS shall be designed and constructed in conformance with reference standard ANSI/APSP/ICC 6-2013, *American National Standard for Residential Portable Spas and Swim Spas.*
- Electric wiring and equipment associated with swimming pools, 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 42 of the 2020 RCNYS or NFPA 70.[20]
- The State Energy Conservation Construction Code includes requirements for pools regulated by the 2020 BCNYS and 2020 RCNYS. (See, for example, Sections C404.9, C502.2.5, R403.10, and R403.12 of the 2020 Energy Conservation Construction Code of New York State).

Designers, installers, applicants, etc. are permitted to use an updated or replacement standard, provided they can show to the satisfaction of the authority having jurisdiction that the updated standard is not expressly prohibited by the Uniform Code and the proposed standard meets or exceeds the requirements of the Uniform Code, including the applicable standards as required by the Uniform Code. Please see the guidance document titled "Alternative Materials, Designs, and Methods of Construction" located at https://dos.ny.gov/technical-support for more information.

In addition to those sections mentioned at the beginning of this document, several technical requirements that may be applicable to swimming pools are covered in other sections of the Uniform Code and should be discussed with the authority having jurisdiction, including, but not limited to:

- Safety glazing material in indoor and outdoor swimming pool enclosures.
- Support provisions for membrane structures, where used.
- Recirculation of supply air to a swimming pool and associated deck areas.
- Regulation of solar heating systems.
- Protection against backflow.
- Discharge of wastewater from swimming pools.

[20] One item that is often overlooked are the bonding requirements Section E4204.2 #7 of 2020 RCNYS or 680.28 of NFPA 70 which requires all permanent metal parts within 5-foot horizontally of the edge of the pool and 12-foot vertically of maximum pool water level to be bonded, unless they are separated from the pool by a permanent barrier that prevents contact by a person. This includes metal railings, siding, awnings, window frames and fences. This bonding is often overlooked when an electrical inspection is not done as part of the inspection such as when deck constructed around a spa or pool or when a portable spa is placed on a deck adjacent to the metal railings or next to the structure.

Compliance with other Design and Construction Standards

In addition to the requirements of the Uniform Code, other federal and state laws and regulations apply, including but not limited to:

- The requirements of 15 USC § 8003.
- Public swimming pools are subject to the NYS Department of Health requirements contained in Subpart 6-1 of Title 10 of the Official Compilation of Codes, Rules and Regulations of the State of New York.[21]

The information contained in this bulletin is an abbreviated version of the 2020 Uniform Code provisions applicable to swimming pools and spas. Those considering the installation or substantial modification of a swimming pool or spa and those responsible for maintaining existing swimming pools or spas should consult the full text of the applicable provisions of the Uniform Code, as well as the full text of the provisions of applicable documents and regulations including those here referenced.

John R. Addario, PE, Director
Division of Building Standards and Codes

[21] 10 NYCRR § 6-1.1 – 6-1.31