

ENCLOSURE AND SAFETY FEATURES FOR SWIMMING POOLS AND OTHER BODIES OF WATER FOR SINGLE FAMILY AND DUPLEX DWELLINGS

The purpose of this policy is to identify the enclosure and safety feature requirements for new or altered swimming pools, spas, hot tubs, and other deep bodies of water. This policy also clarifies how to handle repairs, replacements, and alterations of existing enclosures, and addresses the requirements when alterations, additions, or repairs are made to an existing dwelling containing a swimming pool. This policy applies to one- and two-family dwellings.

Applicable Laws

- California Swimming Pool Safety Act (California Health & Safety Code 115920-115929)
- Chapter 11.50 of the County of Los Angeles Health and Safety Code (LACHSC) Title 11. These provisions apply to all swimming pools, fishponds, and other outdoor bodies of water.
- Chapter 11.51 of the LACHSC. These provisions apply to indoor and outdoor swimming pools, spas, hot tubs and other bodies of water located on the premises of one- and two-family dwellings.

Definitions

- A. **ALTERED (REMODELED) SWIMMING POOL:** Any construction, renovation, addition, or repair to an existing swimming pool other than the following:
1. Alterations such as re-plastering or changing the decking, tile, or coping.
 2. Alterations that only require electrical, plumbing, or mechanical permits, such as replacing pumps, gas lines, or heaters.
- B. **BODY OF WATER:** Any artificially constructed outdoor structure, excluding swimming pools as defined, that holds water deeper than 24 inches, such as a water feature or fishpond.
- C. **ENCLOSURE:** A fence, wall, building wall, or other barrier, which completely surrounds and obstructs access to the swimming pool or body of water.

- D. **SUCTION OUTLET:** A fitting or fixture typically located at the bottom or on the sides of a swimming pool that conducts water to a recirculating pump.
- E. **SWIMMING POOL:** Any structure intended for swimming or recreational bathing that contains water over 18 inches deep, including, but not limited to, in-ground and above-ground structures, hot tubs, spas, portable spas, and unportable wading pools.
- F. **TEMPORARY BARRIER:** A temporary swimming pool enclosure, which is used to prevent the public from injuries due to excavations during construction of a swimming pool. The temporary barrier shall be not less than 72 inches high in accordance with LACBC Section 3306.9.

I. Requirements for New or Altered Swimming Pools

A. ENCLOSURE REQUIREMENTS

1. General Requirements

LACHSC Chapters 11.50 and 11.51 require that every new or altered swimming pool have an enclosure meeting the following requirements:

- a. Enclosure shall completely surround and obstruct access to the swimming pool.

Note: Existing fencing surrounding a property may be used as the enclosure provided the fencing complies with all Part I.A requirements.

- b. Top of swimming pool enclosure shall be at least 60 inches above grade. The height shall be measured from the side away from the swimming pool as depicted in LACBC Figures 31B-4 and 31B-5.
- c. Vertical clearance from ground to bottom of enclosure shall be a maximum of 2 inches.
- d. Shall be of permanent and durable construction, composed of chain link fencing, solid wood fencing, masonry/concrete, wrought iron, building walls, or an alternate material approved by the Building Official and in accordance with the material specific enclosure requirements specified in sections below. See Attachment A for Examples of Fence and Gate Construction.

- e. Prohibited elements:
 - i. Decorative design elements on the side of the enclosure away from the swimming pool, such as protrusions, indentations, or cutouts, which render the enclosure easily climbable.
 - ii. Horizontal members that create a "ladder" effect.
 - iii. Any gap or void in the enclosure that allows the passage of a 1-3/4 inch diameter sphere, except as permitted in the material specific requirements below.
 - f. Enclosure shall be installed, inspected, and approved by Building Official's inspector prior to plastering or filling the swimming pool with water.
2. Material Specific Enclosure Requirements
- a. Chain Link Fencing
 - i. Wire for the chain link shall be no less than 11-gauge.
 - ii. Posts shall be galvanized pipe of at least 1-1/4 inch diameter and spaced not more than 10 feet apart.
 - iii. Posts shall be set no less than 12 inches into concrete. The concrete shall be poured into a minimum 6 inches wide and a minimum 18 inches deep hole.
 - iv. Openings in the chain link shall not allow passage of a 1-3/4 inch diameter sphere.
 - b. Solid Wood Fencing
 - i. Redwood or pressure treated posts shall be no less than 3 inches by 3 inches, set no more than 10 feet apart, and embedded at least 18 inches below grade.
 - ii. Vertical boards at least 1/2 inch thick shall be placed side-by-side without any gaps or spaces.
 - iii. Vertical boards shall be securely fastened to no less than two horizontal rails that are at least 2 inches by 3 inches in cross section.

- iv. Distance between the tops of the horizontal rails located on the outside of the fence shall be no less than 45 inches apart.

c. Masonry/Concrete Fencing

- i. Masonry fences shall be supported on a foundation of concrete extending no less than 12 inches below grade, no less than 12 inches in width, and no less than 6 inches in thickness.
- ii. Reinforcing steel located in the masonry wall, when required, shall be embedded at least 16 times the bar diameter into the footing.

d. Wrought Iron Fencing

- i. When horizontal members are spaced less than 45 inches apart, horizontal members shall be placed on the inside face of the fence and vertical members shall be spaced at no more than 1-3/4 inches apart (maximum gap).
- ii. When horizontal members are spaced 45 inches or more, vertical member spacing shall be no more than 4 inches apart (maximum gap).

e. Building Walls

Serving as part of the swimming pool enclosure, which completely surrounds and obstructs access to the swimming pool shall be permitted when accompanied by one of the following:

- i. All doors providing direct access to the swimming pool from the dwelling shall have self-closing and self-latching devices with a release mechanism placed no lower than 54 inches above the floor, OR
- ii. All doors, and operable windows with sill heights less than 24 inches above the floor, providing direct access to the swimming pool from the dwelling, shall have an alarm meeting the following requirements:
 - Alarm shall sound continuously for a minimum of 30 seconds and within 7 seconds after a door (and its screen, if present) or window is opened or left ajar.
 - Alarm shall be capable of providing a sound pressure level of not less than 85 dBA when measured indoors at 10 feet.
 - Alarm shall automatically reset under all conditions.

- Alarm system shall be equipped with a manual means, such as a touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last no longer than 15 seconds. Deactivation switch shall be located no lower than 54 inches above the floor.
- Alarm may be battery operated or connected to the electrical wiring of the building.

EXCEPTION: An alarm is not required on operable windows with openings that will not allow a 4-inch diameter sphere to pass through where the openings are in their largest opened position.

Notes:

- i. All doors providing direct access to the swimming pool from a garage or accessory structure shall be self-closing and self-latching with a release mechanism located no lower than 54 inches above the floor.
- ii. The following doors are prohibited as part of the swimming pool enclosure due to intrinsic problems with self-closing and self-latching devices:
 - Double doors or pairs of doors
 - Doors wider than 4 feet
 - Overhead garage doors

f. Above-Ground Swimming Pool Walls

Where an above-ground swimming pool structure is used as a barrier or where the barrier is mounted on top of the swimming pool structure, the ladder or steps shall be secured to prevent access, or they shall be surrounded by a barrier. When the barrier is mounted on top of the above-ground swimming pool structure, the maximum vertical clearance between the top of the swimming pool structure and the bottom of the barrier shall not allow the passage of a sphere 4 inches in diameter.

g. Alternate Enclosures

Enclosures of a type of construction not listed in this policy shall be submitted to Research Section for review and approval.

3. Gate Requirements

- a. Pedestrian walkway access gates, when part of the swimming pool enclosure, shall meet all the general requirements and applicable material specific requirements listed above.
- b. Gates shall be self-closing and self-latching.
- c. Gates shall open or swing away from the swimming pool.
- d. Release mechanism of the self-latching device shall be placed no lower than 60 inches above the ground.
- e. Prohibited gates:
 - i. Double gates or pairs of gates
 - ii. Gates wider than 4 feet
 - iii. Driveway gates

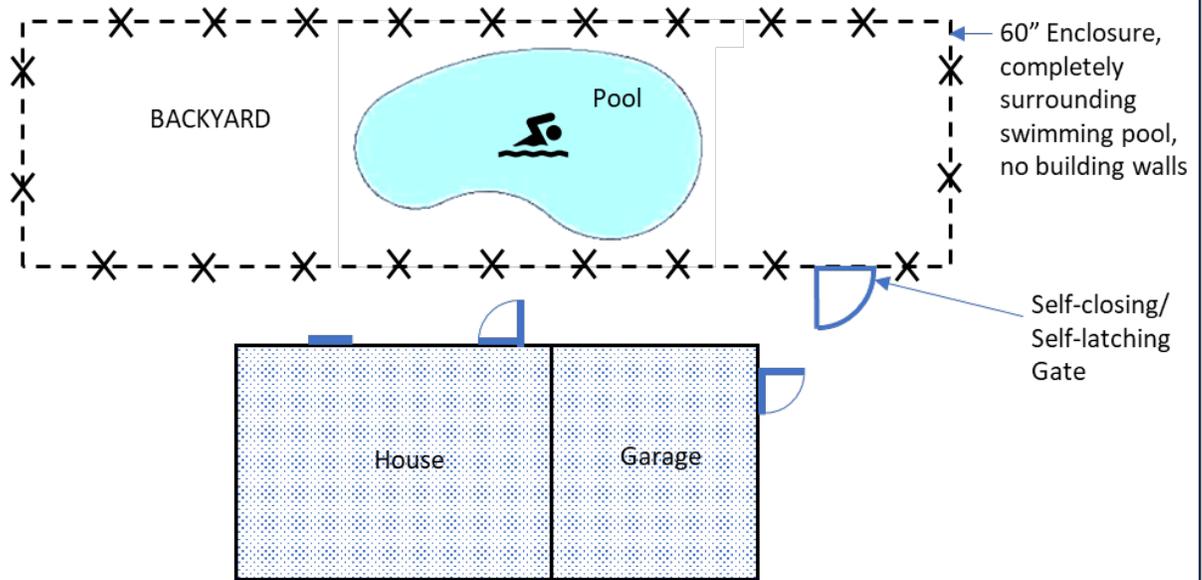
Note: exclusions are due to the intrinsic problems with self-closing and self-latching devices for these types and sizes.

- f. Additional locking devices, hooks, or bolts may be installed on gates to provide additional security for the premises provided normal, satisfactory operation of the required self-closing and self-latching systems are maintained.

B. DROWNING PREVENTION SAFETY FEATURES

The California Swimming Pool Safety Act (California Health & Safety Code 115920-115929) mandates that new or remodeled swimming pools include multiple drowning prevention safety features. However, restrictions on allowable feature combinations, and incongruities between state and County enclosure requirements, make identifying compliant pool safety plans difficult. To clarify these requirements, the following three figures, labeled Option 1 through Option 3, have been provided to illustrate the permissible combinations of drowning prevention safety features. All new or remodeled swimming pool projects must select one of the permissible combinations shown in these figures.

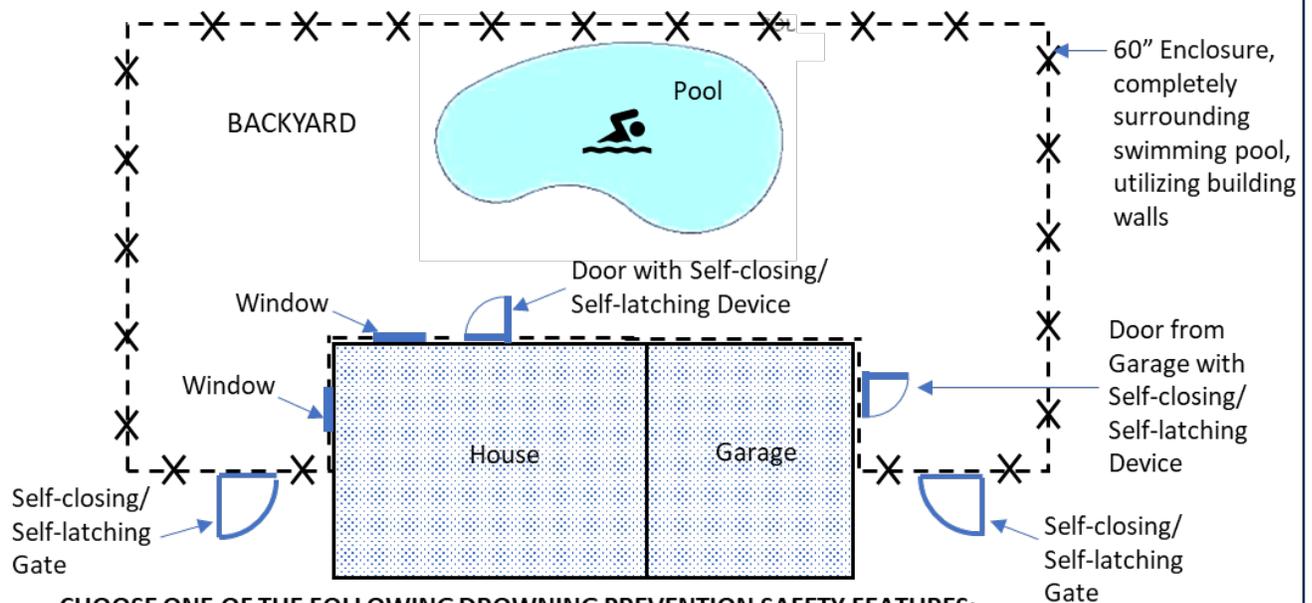
OPTION 1: DROWNING PREVENTION SAFETY FEATURE COMBINATIONS FOR ENCLOSURES NOT UTILIZING BUILDING WALLS



CHOOSE ONE OF THE FOLLOWING DROWNING PREVENTION SAFETY FEATURES:

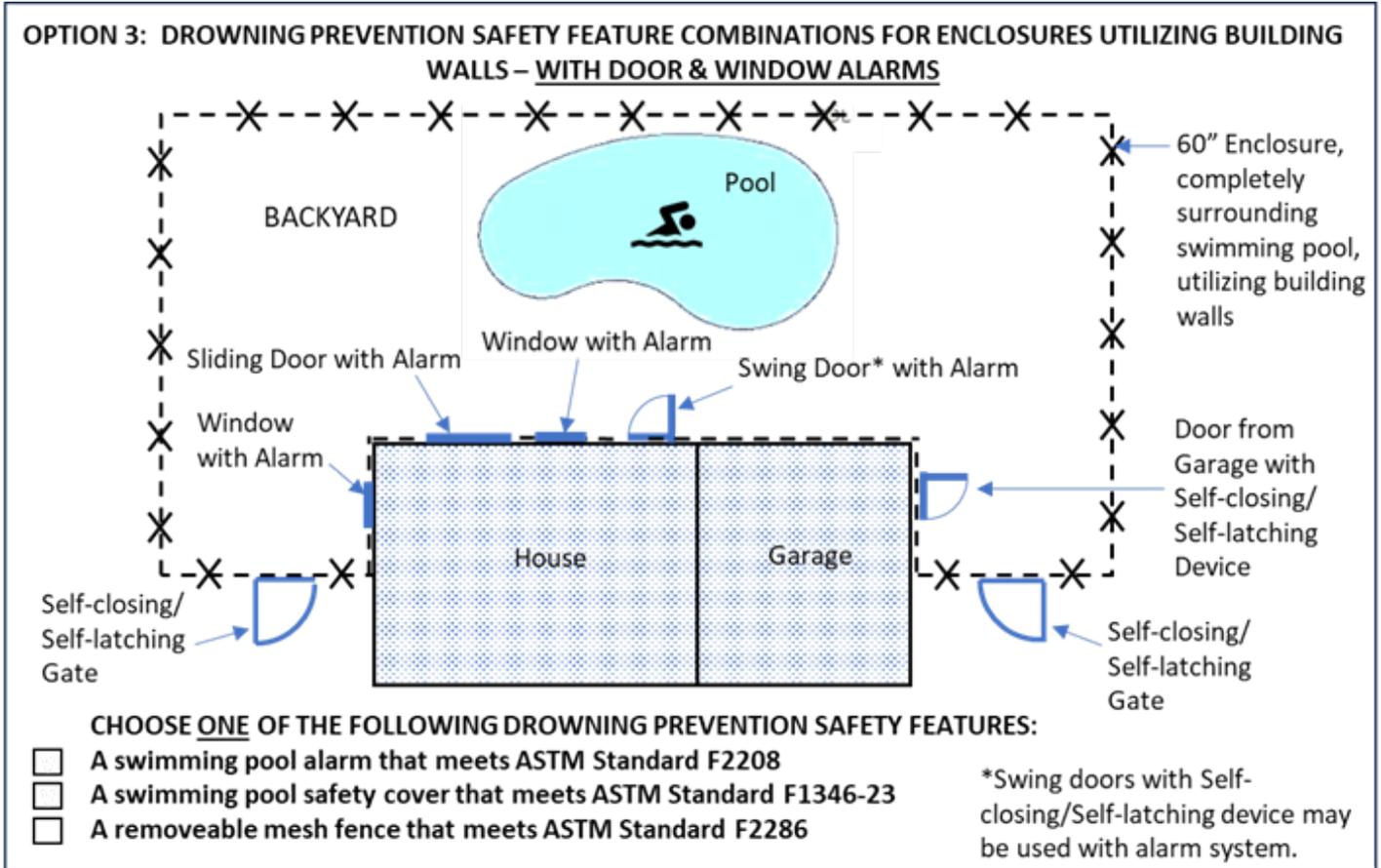
- A swimming pool alarm that meets ASTM Standard F2208
- A swimming pool safety cover that meets ASTM Standard F1346-23
- A removeable mesh fence that meets ASTM Standard F2286

OPTION 2: DROWNING PREVENTION SAFETY FEATURE COMBINATIONS FOR ENCLOSURES UTILIZING BUILDING WALLS – WITH SELF-CLOSING/SELF-LATCHING DOORS



CHOOSE ONE OF THE FOLLOWING DROWNING PREVENTION SAFETY FEATURES:

- A swimming pool alarm that meets ASTM Standard F2208
- A swimming pool safety cover that meets ASTM Standard F1346-23
- A removeable mesh fence that meets ASTM Standard F2286



1. Requirements for Drowning Prevention Safety Features

a. Swimming Pool Alarms

- i. Swimming Pool Alarms shall, when placed in a swimming pool or spa, sound upon detection of accidental or unauthorized entrance into the water.
- ii. Swimming Pool Alarms shall meet and be independently certified to the ASTM International F2208 standard.
- iii. Swimming Pool Alarms shall be in good repair and operable as designed.

b. Swimming Pool Safety Covers

- i. Swimming Pool Safety Covers shall be accompanied by a label verifying that the cover meets the specifications of the ASTM International F1346-23 standard.

- ii. Swimming Pool Safety Covers shall be manually operated or power operated.
- c. Removable Mesh Fencing
 - i. Removable Mesh Fencing shall meet the ASTM International F2286 standard.
 - ii. Removable Mesh Fencing shall have a gate that is self-closing and self-latching and can accommodate a key lockable device.

C. SUCTION OUTLETS

The California Swimming Pool Safety Act (California Health & Safety Code 115920-115929) requires the following safety measures for suction outlets:

1. Requirements for new swimming pools
 - a. The swimming pool shall either have:
 - i. At least two circulation suction outlets per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least 3 feet in any dimension between the suction outlets, OR
 - ii. Be designed to use alternatives to suction outlets, including, but not limited to, skimmers or perimeter overflow systems to conduct water to the recirculation pump.
 - b. The circulation system shall have the capacity to provide a complete turnover of swimming pool water, as specified in Section 3124B of Chapter 31B of the California Building Standards Code (Title 24, California Code of Regulations).
 - c. Suction outlets shall be covered with anti-entrapment grates, as specified in the ANSI/APSP-16 performance standard or successor standard designated by the federal Consumer Product Safety Commission, that cannot be removed except with the use of tools. Slots or openings in the grates or similar protective devices shall be of a shape, area, and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers.

2. Requirements for altered swimming pools

The suction outlet or suction outlets of the existing swimming pool shall be upgraded so as to be equipped with anti-entrapment grates, as specified in the ANSI/APSP-16 performance standard or a successor standard designated by the federal Consumer Product Safety Commission.

II. Other Considerations and Requirements

A. ALTERATIONS, ADDITIONS, OR REPAIRS TO DWELLINGS WITH EXISTING SWIMMING POOLS

Alterations, additions, or repairs to a dwelling that alter, create, or replace doorways or doors that provide direct access to an existing swimming pool shall require compliance with the enclosure requirements of Part I.A of this policy for all doorways that provide direct access to an existing swimming pool in that dwelling.

B. REPAIR OR REPLACEMENT OF EXISTING SWIMMING POOL ENCLOSURES

Repair or replacement of an existing swimming pool enclosure shall meet all requirements of Part I.A of this policy.

C. COMPLAINTS OR CODE VIOLATIONS

Existing swimming pool enclosures shall be maintained in good condition and meet all requirements of Part I.A of this policy.

EXCEPTION: Fencing which complies with the provisions of LACHSC 11.50 and built before September 1, 1995.

Complaints regarding missing or damaged swimming pool enclosures of occupied buildings shall be referred to the nearest Sheriff's Station (LACHSC 11.50.130). For vacant buildings, complaints shall be referred to the Property Rehabilitation and Code Enforcement Section.

D. DWELLINGS WITH ONLY HOT TUBS OR SPAS

For dwellings only containing a hot tub or spa, an enclosure according to Part I.A of this policy shall be required.

EXCEPTION: When the exterior wall of a dwelling serves as part of the enclosure, a lockable spa cover complying with ASTM F1346 may be provided in lieu of the door and window alarms, and the self-closing and self-latching doors required by Part I.A.2.e of this policy.

E. HANDRAILS AND GUARDRAILS

Stairways, ramps, and landings for slides or similar swimming pool features shall have handrails and/or guardrails when they are 30 inches above adjacent grade in accordance with LACBC Section 1015.2.

F. ENCLOSURE REQUIREMENTS FOR BODIES OF WATER

Bodies of water shall have an enclosure meeting all requirements of Part I.A of this policy.

G. PROTECTION OF EXCAVATION DURING SWIMMING POOL CONSTRUCTION

Every excavation for the construction of a swimming pool located 5 feet or less from the street lot line shall be enclosed with a temporary barrier that is not less than 6 feet high and in accordance with LACBC Section 3306.9. Where the excavation is located more than 5 feet from the street lot line, a temporary barrier in accordance with LACBC Section 3306.9 shall be erected where required by the Building Official. Temporary barriers shall be maintained until the permanent swimming pool enclosure and drowning prevention safety features have been installed and approved by the Building Official.

Attachments.

Supersedes BCM 3109.4.4 Article 1 dated 08-16-18.

RECOMMENDED BY:



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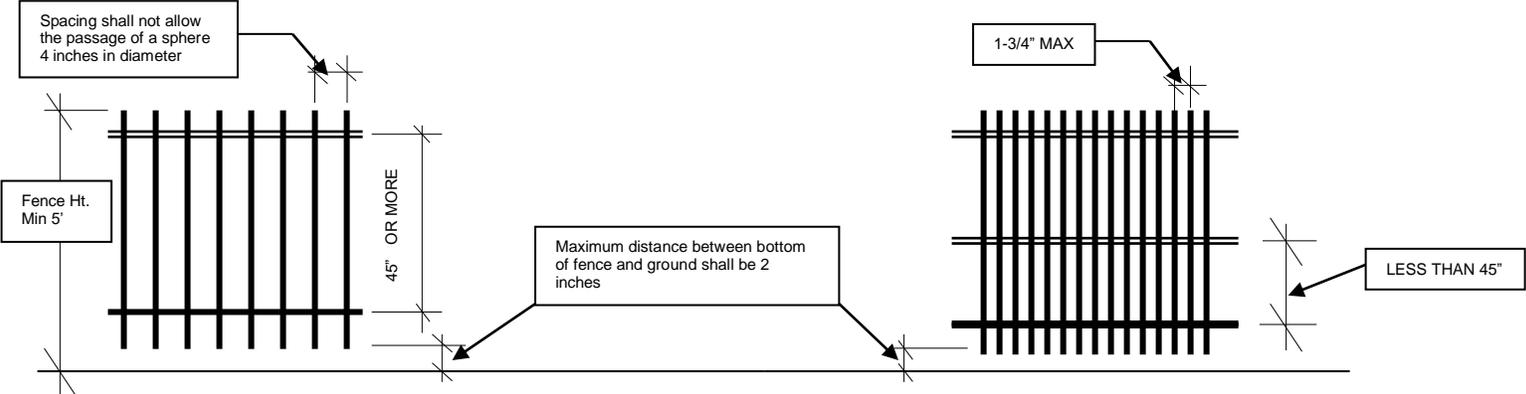
BY:



BRIAN SMITH
Assistant Superintendent of Building

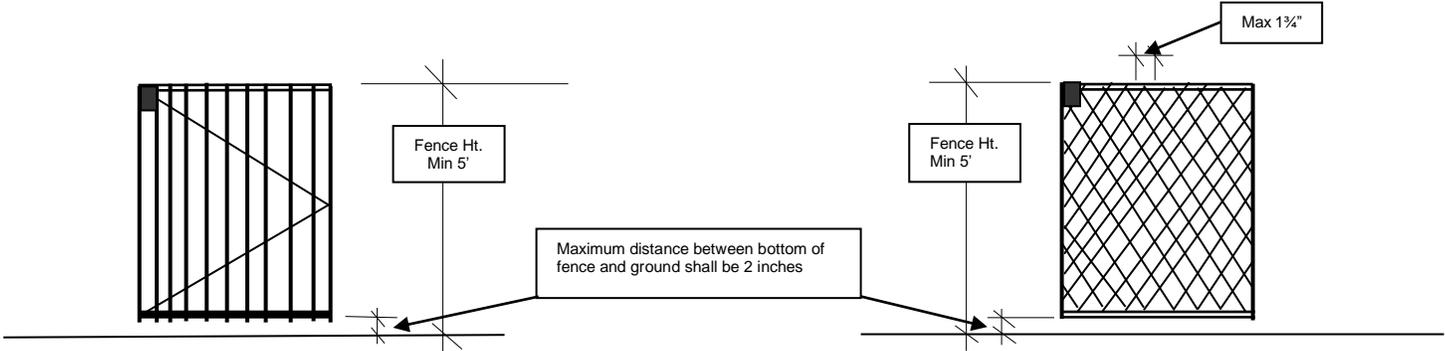
SAMPLE FENCE AND GATE CONSTRUCTION FOR SWIMMING POOLS, SPAS, AND HOT TUBS
ANY STRUCTURE THAT CONTAINS WATER OVER 18 INCHES DEEP

Revised: 08/2018



Wrought iron fence with horizontal members at 45" or more apart.

Wrought iron fence with horizontal members less than 45" apart shall be located on the pool side.



Pool gate-release mechanism allowed on either side

Chain link fence
Notes:
 1. 11 GA. min.
 2. For existing chain link fences meeting height requirements with openings exceeding 1 3/4", vertical Wood slats or equivalent may be installed to meet code requirements.

- Notes:**
- All pedestrian gates shall be self-closing and self-latching.
 - Any decorative design work on the side away from the pool, such as protrusions, indentations, or cutouts, which render the barrier easily climbable, is prohibited.

