



First Edition – January 2013

## A Model Residential Pool Enclosure By-law For Canadian Municipalities

### **Introduction**

*Canadian municipalities are strongly recommended to enact By-laws that address backyard swimming pool enclosures. This model By-law is offered by the Pool & Hot Tub Council of Canada (PHTCC) as a template for communities across the country. The underlying objective of the combined articles outlined in this model By-law is to make the backyard swimming pool a safe environment for all citizens. Based on an extensive review of injury prevention literature, practical experiences in the field, and an assessment of existing by-laws and legislation, this document supports the fostering of the Layered Approach to Swimming Pool Safety. This intervention has proven to be the most effective way of safeguarding residential swimming pools. Key elements of this model By-law have been derived from the collective expertise garnered from relationships with sister organizations that also address water safety concerns.*

*The PHTCC is a voluntary, not-for-profit association representing the interests of the aquatic leisure industry. As such it is not considered a harmonized organization, and therefore does not qualify as an accredited national standards-writing body. Notwithstanding the above, municipalities are encouraged to adopt sections of this document in whole or in part.*

*Additional information on swimming pool safety can be obtained from the website: [www.safepools.ca](http://www.safepools.ca)*

### **Scope**

- *This model By-law specifically addresses private residential swimming pools. It is not intended for commercial or public swimming pools that are already effectively regulated at both provincial and national levels.*
- *This model By-law can be applied to new installations as well as existing swimming pools.*
- *This model By-law does not apply to a spa that has a substantial, structurally adequate hardcover permanently attached to its supporting structure, provided that this same cover is securely fastened and locked to prevent access at all times when the spa is not in use. This model By-law is applicable to all other spas.*



## **The Layered Approach to Swimming Pool Safety**

**Several key elements need to be in place in order to maintain an effective level of protection and prevent residential pool drownings and accidents:**

- a) Municipalities must ratify Pool Enclosure Barrier By-laws**
- b) Public Awareness/Educational programs focussing on water safety need to be established**
- c) Regulatory measures must support the Layered Approach to Swimming Pool Safety. The Layered Approach places a series of hurdles that deters unwanted access to the pool area, and includes:**
  - i) Responsible Adult Supervision – No matter what other safeguards are in place, there is no substitute for adult supervision. Vigilance is required at all times.**
  - ii) Physical barriers – fencing, automatic safety covers, doors, window latches**
  - iii) Warning systems – access alarms, wave detectors, immersion alarms**
  - iv) Supplemental safeguards - safety equipment (shepherd’s hook, ring buoy, lifeline)**
    - posted signs, rules and painted notices (e.g., ‘No Diving’)**
    - personal flotation devices for young children and weak swimmers**
    - swimming lessons and first aid training for all family members**
    - a telephone installed poolside with emergency numbers listed**

**Safety is best served by having homeowners take ownership of whatever “layers of protection” measures that they are committed to using. Such approaches achieve greater compliance and have been successful in reducing child incidents.**

**The Layered Approach to Swimming Pool Safety avoids reliance on one sole mechanical/electronic device that might be overridden or disengaged. It allows for select combinations of safeguards that create a safe environment in and around the swimming pool.**

**A Model Residential Pool Enclosure By-law for Canadian Municipalities makes up one component in the series of safety measures that are required.**

### **Reference Materials:**

- i) PHTCC Recommended Guidelines – Suction Avoidance Provisions (G-0109)**
- ii) PHTCC Recommended Guidelines – General Safety Provisions for Pools and Hot Tubs (G-0209)**
- iii) Safety Sign – Backyard Pool and Spa Safety Rules**
- iv) American Society of Testing and Materials Standard, ASTM F 1346-91 – Swimming Pool and Spa Covers**
- v) Association française de normalisation (AFNOR) Standard NF P 90-309 – Abris de piscines**

## A BY-LAW TO PRESCRIBE THE DESCRIPTION AND SPECIFICATIONS OF LAWFUL RESIDENTIAL POOL ENCLOSURE BARRIERS

The Municipal Council of \_\_\_\_\_ enacts as follows:

1. This Bylaw may be cited as \_\_\_\_\_ Pool Enclosure Bylaw (DATE).

### **2. Definitions**

As used in this article, the following terms shall have the meanings indicated:

- **“Barrier”** means a fence, wall or building or any combination thereof;
- **“Chief Building Inspector”** means the Chief Building Inspector of \_\_\_\_\_ and such other persons as he or she may designate from time to time as his or her assistants;
- **“Child-Resistant Window”** means a window equipped with a window guard that limits the window opening to less than 100mm;
- **“Effective Grade Level”** means the highest level of ground at a fence location within a horizontal distance of 0.5 m either side of its respective location.
- **“Enclosure”** means a fence, wall, cover or other structure, including any permitted door, gate or other opening, which surrounds and restricts access to an outdoor swimming pool.
- **“Entrance”** means a door, doorway, window, gate, or any other structure or opening providing for a means of entry or exit or both.
- **“Exterior”** means the outside surface of a fence, swimming pool enclosure, deck or ramp which does not face toward a swimming pool or swimming pool area, or towards the contained portion of the property that it is intended to delineate.
- **“Fence”** means a free-standing barrier, guard, railing, or any structure that encloses property or an area of property, except a structural part of a building or wall.
- **“Gate”** means any part of a swimming pool fence which opens on hinges and includes a door located in the wall of an attached or detached garage or carport which forms part of the swimming pool fence.
- **“Hot Tub”** means a hot tub, whirlpool, hydro massage pool, or spa.
- **“Inflatable Pool”** means a pool, as defined in this by-law, consisting of an air supported structure which is capable of containing water with a depth in excess of 0.61 metres at any point.
- **“Non-climbable”** means a minimum of a 1.52 m vertical face presented to the exterior of a swimming pool enclosure. For an enclosure of chain link construction, means a mesh which is no greater than 38 mm square for a minimum of 1.52 m vertically. For all other enclosures, means that there are no horizontal openings greater than 38 mm for 1.52 m vertically. For an enclosure of vertical panel wood construction, means top and bottom rails at least 1.2 m apart for any Fence having a height of 1.53 m or less, and horizontal rails a minimum of 0.60 m apart for any Fence having a height greater than 1.53 m.
- **“Owner”** includes the registered owner of a property and any lessee, tenant, mortgagee in possession, or person occupying or in charge of a property.
- **“Person”** means an individual, firm, corporation, partnership, association, or organization.

- **“Pool”** means a structure, basin, chamber or tank containing or capable of containing water, and is designed to be used for swimming, wading, or bathing, and:
  - a) has a depth at any point equal to or exceeding 0.75 m; and
  - b) has an open exposed surface area equal to or exceeding 1 m<sup>2</sup>; and
  - c) includes, without limitation, in-ground swimming pools, above-ground pools, wading pools, and landscape pools, and
  - d) is not under the jurisdiction of the Building Code; and
  - e) is not completely inside a building; and
  - f) is not owned by government or a local board or commission constituted under any statute or by-law; and
  - g) is not a pond or reservoir to be utilized for farming purposes; and
  - h) excludes spas; and
  - i) excludes storm water management ponds.
- **“Self-closing device”** means a mechanical device or spring which returns a swimming pool fence gate to its closed position within 30 seconds after it has been opened.
- **“Self-latching device”** means a mechanical device or latch which is engaged each time the swimming pool fence gate is secured to its closed position; which will not allow the swimming pool fence gate to be re-opened by pushing or pulling, and which will ensure the swimming pool fence gate remains closed until unlatched by either lifting or turning the device itself directly or by a key.
- **“Spa”** shall include those pools commonly referred to as a hot tub, a whirlpool, a Jacuzzi or a hydro massage pool.
- **“Temporary Pool”** means an Inflatable Pool or other Pool which is designed to be installed temporarily and removed periodically on a seasonal or more frequent basis.
- **“Wall”** means a solid, free-standing barrier that encloses property or an area of property.

### **3. Prohibitions**

3.1 No Person shall construct or install a Pool, cause a Pool to be constructed or installed, or commence with construction or installation of a Pool, without first obtaining a Pool Enclosure permit from the City. The Chief Building Inspector may optionally request a site inspection prior, during or upon completion of the construction of any new Pool and Pool Enclosure.

3.2 No Person shall construct or install a Pool, or cause a Pool to be constructed, or installed, which is not completely enclosed by a Pool Enclosure in accordance with this by-law.

3.3 No Person shall use any Pool Enclosure unless it is constructed, installed and maintained in accordance with this By-law and any applicable provincial Building Code requirements.

3.4 (a) No Person shall place water in a Pool or cause or permit water to remain in the Pool if the required Pool Enclosure is not completely constructed in compliance with the requirements in this by-law.

(b) Despite subsection 3.4(a), where a Person is constructing or causing to be constructed a Pool for which a Pool Enclosure permit has been issued, a Person may place water in a Pool or cause or permit water to remain in the Pool if there is temporary fencing in place in compliance with section 10 of this by-law, but only where such temporary fencing is in place for no longer than 120 days after the issuance of the Pool Enclosure permit.

(c) Despite subsection 3.4(a), where a Pool is in existence on the date of the passing of this by-law, a Person may place water in a Pool or cause or permit water to remain in the Pool if there is temporary fencing in place in compliance with section 10 of this by-law, but only where such temporary fencing is in place for no longer than 30 days, or such longer period of time if approved in writing by the Chief Building Inspector.

3.5 No Person shall remove any part of a Pool Enclosure if the Pool is filled with water.

3.6 No Person shall construct or maintain a double gate access to a Pool without one of the two gates having a Self-closing device and a Self-latching device. The gate of this double gate access without a Self-closing device and a Self-latching device must have a device permanently affixed to the ground or other non-movable object that prevents access through this gate without lifting or removing this device and then releasing the latch.

3.7 No Owner shall fail to ensure that:

(a) all gates forming part of the Pool Enclosure meet the standards of this by-law;

(b) all entranceways to a Pool Enclosure through a Wall of a main building meet the standards of this by-law;

(c) all entrances forming a part of a Pool Enclosure are locked when the area is not actively in use; and

(d) a Hot Tub is fitted with a lockable lid or cover that complies with the American Society of Testing Materials (ASTM) Standard F1346-91 (2010) as amended, or a guard as specified in Section 13.1(b).

3.8 No Person shall place, pile, attach or lean any object or material against or near a Pool Enclosure so as to facilitate climbing of the Pool Enclosure, diminish the structural integrity of a Pool Enclosure or render the Pool Enclosure to be in non-conformity with the provisions of this by-law.

3.9 No Person shall fail to comply with the terms set out in this by-law.

#### **4. Pool Enclosure General Requirements**

4.1 Every Owner of a Pool shall maintain in good repair a sturdy, Non-climbable enclosure around the entire Pool area having:

(a) a minimum vertical height of 1.52 m above the effective grade level where the Pool Enclosure Barrier includes Fence or Wall sections;

(b) except in the case of a building Wall, no opening greater than 100 mm wide at its least dimension and no opening greater than 50 mm between the bottom of the enclosure Barrier and the effective grade at the base of the Barrier;

(c) except in the case of a building Wall, no access through the Barrier except by way of one or more Self-closing, Self-latching gates and the latch and lock located on the swimming Pool side of the gate at a height of not less than 1.0 m above the effective grade level at the base of the gate.

4.2 Pool Enclosure Barriers may not consist of hedges, shrubs, bushes, trees and other plants.

#### **5. Standards for Fences as Pool Enclosures** (Refer to Appendix A for examples of permanent fencing barriers)

5.1 No Person shall erect a Fence as a Pool Enclosure Barrier or part thereof unless such Fence shall consist of:

(a) chain link construction, with;

(i) a mesh not greater than 38 mm consisting of 12 gauge galvanized steel wire, or of 11 gauge steel wire covered with vinyl or other product which has been approved by the chief building official which would yield a total thickness equivalent to 12 gauge wire;

(ii) no horizontal rails, bracing or exposed attachments or members on the Exterior side of the Pool Enclosure for a height of 1.52 m above grade and with a minimum vertical distance of 0.86 m between the lower two horizontal members;

(iii) the top and bottom rails firmly fastened to the upright posts, which rails shall consist of at least 32 mm galvanized steel pipe except where a continuous galvanized steel tension rod of at least 5 mm thickness is substituted for the bottom rail; and

(iv) if constructed of alternate products or methods, the same shall have been pre-approved by the Chief Building Inspector.

(b) vertical panel wood construction with:

- (i) vertical members of at least 25 mm nominal thickness attached to a top and bottom rail in such a manner as to not facilitate or permit climbing from the Exterior and which vertical members shall be spaced not more than 100 mm apart;
- (ii) supported by posts at least 100 mm x 100 mm nominal dimensions, spaced not more than 2.4 m apart, which posts shall extend at least 0.6 m into the ground for any Fence having a height of 1.53 m or less and shall extend at least 0.9 m into the ground for any Fence having a height greater than 1.53 m, and which posts shall be securely embedded into the soil and any portion thereof below grade consisting of wood shall be treated with an approved wood preservative or be of pressure treated wood; or posts are attached to steel brackets that have been sunk into a concrete footing;
- (iii) top and bottom rails of at least 38 mm x 100 mm nominal dimensions;
- (iv) top and bottom rails at least 1.2 m apart for any Fence having a height of 1.53 m or less, and horizontal rails a minimum of 0.60 m apart for any Fence having a height greater than 1.53 m;
- (v) if constructed of alternate products or methods, the same shall have been pre-approved by the Chief Building Inspector.

(c) metal picket construction with:

- (i) vertical members spaced not more than 100 mm apart which are attached to a supporting structure not containing any diagonal members or framework in such a manner that would not facilitate or permit climbing from the Exterior;
- (ii) supporting posts firmly embedded into the ground spaced not more than 2.4 m apart which posts shall extend at least 0.4 m into concrete footings for any such Fence having a height of 1.53 m or less and shall extend at least 0.5 m into concrete footings for any such Fence having a height greater than 1.53 m; and
- (iii) has minimum 55 mm diameter top and bottom rails permanently connected to the vertical members, such rails to maintain minimum 1.2 m vertical separation at all locations, and
- (iv) if constructed of alternate products or methods, the same shall have been pre-approved by the Chief Building Inspector.

(d) interlocking polyester mesh construction with:

- (i) Fence poles permanently secured and spaced a maximum of 1.0 m on centre to the decking surface;
- (ii) each pole on the Fence and on the gate having a locking sleeve anchored to the deck with an approved adhesive. Each locking sleeve shall have a minimum of two stainless steel screws anchored to the aluminum or stainless steel poles;
- (iii) each sleeve embedded into the decking surface to a minimum depth of 88 mm, into a hole of minimum diameter 15 mm, and permanently affixed with an approved adhesive;
- (iv) a Self-latching and lockable gate;
- (v) fencing and gate having no top crossbars;
- (vi) each fencing system having been approved by an independent testing laboratory and meeting the requirements of American Society for Testing and Materials (ASTM) Standard F-2286, and
- (vii) if constructed of alternate products or methods, the same shall have been pre-approved by the Chief Building Inspector.

(e) safety glass of the laminated or tempered type or wired glass construction with:

- (i) glass panels positioned so there is no opening of more than 38 mm between the panel and the post where horizontal.

(f) such other materials and construction that will provide an equivalent degree of safety as shall have been pre-approved by the Chief Building Inspector; or

(g) a combination of (a), (b), (c), (d), (e) and (f).

5.2 No Person shall use any Fence that forms part of a Pool Enclosure which:

(a) contains barbed or razor wire, electrified wiring, sharp projections or any other unsafe or dangerous characteristics on either the Exterior or interior; or

(b) is located less than 1.2 m from the nearest inside wetted surface of the Pool wall.

## **6. Standards for Walls as Pool Enclosures**

6.1 Except outbuildings to service the Pool such as a changing room or storage shed for pool maintenance equipment, no Person shall use the Wall of a building as part of the required Pool Enclosure Barrier unless:

(a) the main Entrance to the building is not located within the Pool area and unless the service Entrance if located therein is lockable.

6.2 No Person shall erect a dividing Wall or retaining Wall as a Pool Enclosure Barrier or part thereof unless such Wall:

(a) is constructed of concrete block/pavers, poured concrete, dry stone/boulder, stone veneer, brick, wood/timber, gabion or a combination thereof;

(b) is Non-climbable.

## **7. Standards for Certified Safety Covers as Pool Enclosures**

7.1 No Person shall install a safety cover as a Pool Enclosure or part thereof unless:

(a) such cover meets or exceeds Association for Testing and Materials (ASTM) F1346 - 91(2010) Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs, and

(b) such cover is kept locked at all times except when the Pool is in use and being supervised by a responsible adult Person.

(c) the main Entrance to the building is not located within the Pool area and unless the service Entrance if located therein, has a Self-closing door equipped with a Self-latching device located not less than 1.5 m above the bottom of the door; and

(d) only child resistant windows provide access to the enclosed Pool area.

## **8. Standards for Certified Shelters as Pool Enclosures**

8.1 No Person shall erect a shelter as a Pool Enclosure or part thereof unless such shelter:

(a) meets or exceeds Association Française de Normalisation (AFNOR) Standard NF P 90-309

(b) is kept locked at all times except when the Pool is in use and being supervised by a responsible adult.

## **9. Standards for Pool Enclosure Entrances**

9.1 No Person shall erect an Entrance which forms part of a Pool Enclosure unless such entrance:

(a) is of construction type and height at least equivalent to that of the required Pool Enclosure;

(b) is supported on hinges of sufficient quantity and strength to safely and adequately support the entrance at all times;

- (c) is self-closing and equipped with a self-latching device placed at the top or on the interior of the entrance; and
- (d) is equipped with an operable locking device, and
- (e) is Non-climbable.

- 9.2 No Person shall construct, or use any Entrance to a Pool area which forms part of the Pool Enclosure Barrier, unless such Entrance is kept locked at all times except when the Pool is in use and being supervised by a responsible adult.
- 9.3 No Person shall construct, or use an entrance to a Pool area through a door from a detached or attached garage unless the door complies with Sections 9.1 and 9.2 of this by-law.

**10. Temporary Fence During Construction** (Refer to Appendix B for example of temporary fencing barrier)

10.1 The Owner shall ensure that temporary fencing meeting the requirements of this section is in place during all phases of construction of the Pool such that unauthorized access to the site is prevented.

10.2 During construction of a Pool a temporary enclosure is required to consist of a minimum 1.2 m high mesh Fence having a mesh not greater than 38 mm, with a steel T-bar support post every 3.0 m maximum and a 9 gauge galvanized steel wire located at the top and bottom of such Fence. The clearance between the underside of the temporary Fence and the Effective Grade Level shall not exceed 50 mm. Temporary fencing approved for use at industrial construction sites also may be deployed for this purpose. The temporary enclosure may be constructed of other material that will provide an equivalent degree of safety and provided that the alternative has been approved by the chief building official.

10.3 Notwithstanding section 4.1(a) of this by-law, if a Pool Enclosure is damaged and requires replacement or repair, water may remain in a Pool enclosed by a temporary Pool Enclosure with the permission in writing of the Chief Building Inspector pending the replacement or repair of the Pool Enclosure, subject to any time limits which may be imposed by the Chief Building Inspector.

**11. Above-Ground Pools**

- 11.1 For the purposes of this By-law above-ground Pools are deemed to be the same as in-ground Pools, and require the same Pool Enclosure around the entire Pool area except as provided in Subsection 11.2.
- 11.2 No Person shall construct, or use an above-ground Pool unless all access points are maintained in accordance with Section 9 of this By-law. Above-ground Pools with vertical sides which extend at least 1.5 m above the effective grade level and are constructed in such a manner that would not facilitate or permit climbing from the Exterior need not have a Pool Enclosure around the perimeter, provided access points are maintained in accordance with this By-law. Access ladders connected to above-ground Pools must be retractable and Self-latching.
- 11.3 No Person shall construct or use a deck or ramp or part thereof serving a Pool area with a height greater than 0.6 m above the effective grade level unless a continuous safety rail is constructed and maintained around the Exterior perimeter of the deck or ramp in conformance with the applicable provincial Building Code.

**12. Temporary Pools**

- 12.1 If a permit has been obtained with respect to the Pool Enclosure for a Temporary Pool, the Temporary Pool may be reinstalled and refilled with water without additional permits or inspections provided there have been no alterations to the Pool Enclosure.

### **13. Hot Tubs**

13.1 No permit or Pool Enclosure is required for a Hot Tub which is:

- (a) equipped with a substantial cover in accordance with Section 3.7(d) of this by-law; or
- (b) equipped with a guard not less than 1.0 m in height, measuring from the surface of the platform or deck.

### **14. Application**

14.1. Every owner shall ensure any Pool existing as at the date this By-law is passed complies with this By-Law on or before \_\_\_\_\_ [1 year from date By-law passed]

### **15. By-law Inspection and Enforcement Provisions.**

15.1 (a) A Building Inspector may issue Orders under this by-law, directed to an owner or to any Person or Persons whom he or she believes to have care and control of property on which a Pool or Pool Enclosure is located:

- (i) if, in the opinion of such issuer, a Pool Enclosure is not constructed, used and maintained in good working order in accordance with any of the provisions of this by-law, or;
- (ii) if the construction of a Pool Enclosure is, in the opinion of such issuer, substantially suspended or discontinued or incomplete, or;
- (iii) if, in the opinion of such issuer, a Pool Enclosure permits, presents, or causes an unsafe condition or hazard to exist.

(b) Such orders issued under this section shall specify the nature of the contravention, the section of the by-law contravened and the time allotted for the contravention to be abated.

(c) Upon receipt of an order, the issuee(s) shall ensure no water shall be placed in the Pool or allowed to remain therein until the Building Inspector certifies that the contravention has been abated and the Pool Enclosure prescribed by this by-law is in place and in good repair.

15.2 No Person shall hinder or obstruct, or attempt to hinder or obstruct any building inspector in the exercise of a power or the performance of a duty under this by-law.

15.3 Subject to the related section(s) of the *Community Charter*, a building inspector may enter onto property at any time if the inspector is of the opinion that his or her presence is necessary to address immediate health and safety conditions which appear to present imminent danger or hazards to persons.

15.4 A Service of the Order shall be executed:

- (a) The order shall be served on the owner of the property and such other persons affected by it as the inspector determines and a copy of the order may be posted on the property.
- (b) An Order required by this by-law is to be served personally or by regular mail sent to the known address of the Person to whom notice is to be given or to that Person's agent for service.
- (c) If the Order is sent by regular mail the service shall be deemed to have been made on the third day after the day of mailing.

### **16. Offences**

16. (a) Every Person who violates any of the provisions of this by-law or who causes, suffers or permits any act or thing to be done in contravention or violation of this by-law, or who neglects or refrains from doing anything required to be done by any of the provisions of this by-law shall be guilty of an offence.

(b) Every Person who commits an offence contrary to the provisions of this by-law is liable on summary conviction to the penalties provided in the *Offence Act* and to the costs of prosecution.

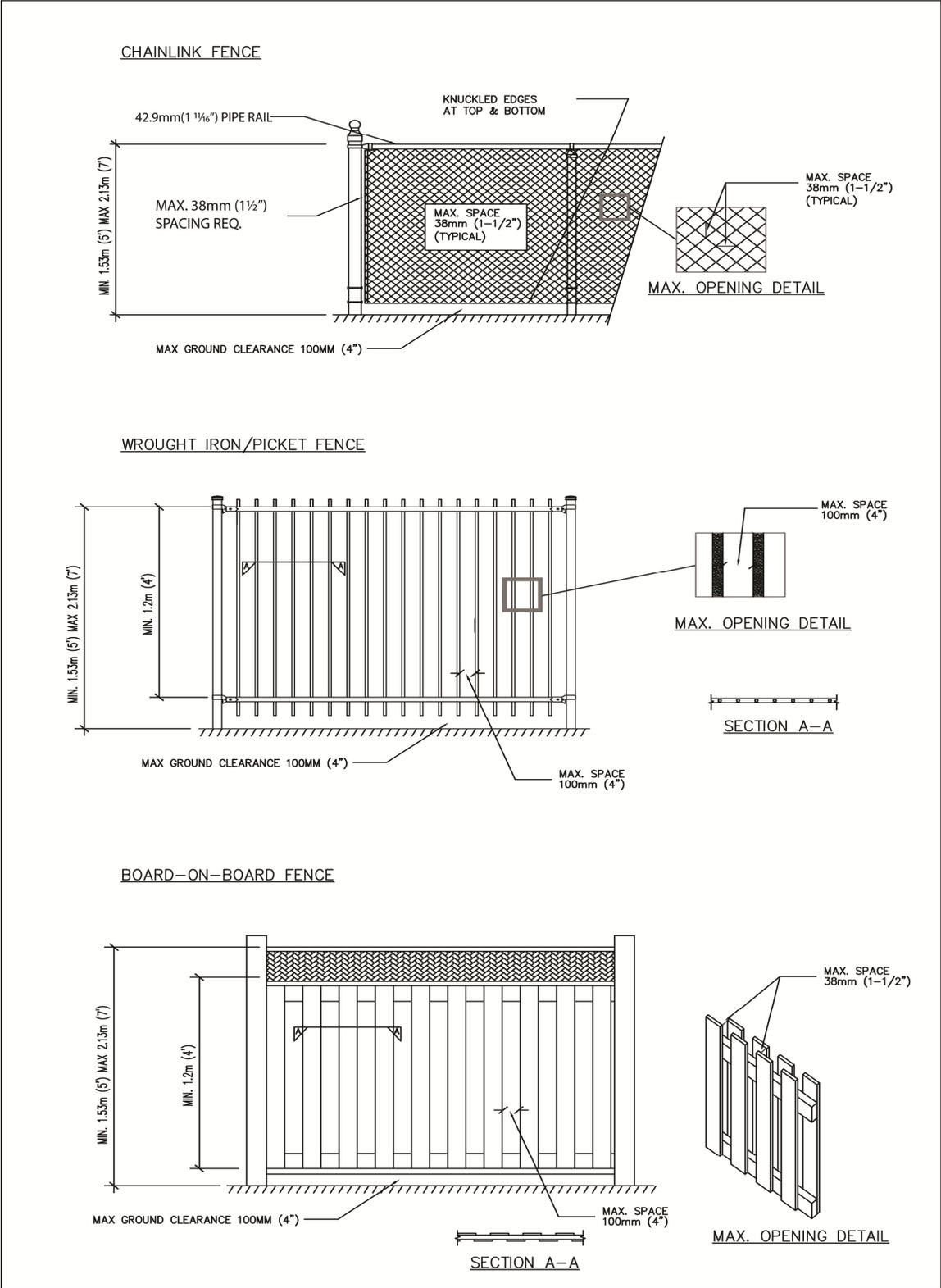
(c) The City may enforce the provisions of this by-law through the issue of a ticket under the City's Municipal Ticket Information by-law.

**17. Repeal (if applicable)**

17. *[provision repealing any prior Pool Enclosure regulations of this jurisdiction]*



Appendix A: Examples of Permanent Fencing Barriers



Appendix B: Example of Temporary Fencing Barrier

