



## **City of Hudson On-Ground, Residential Use Swimming Pool Building Permit Process**

A Building Permit & Zoning Approval is required before the installation of a new On-ground, Residential use swimming pool.

Note; Residential use, prefabricated swimming pools that are less than 24" deep, not greater than 5,000 gallons & installed entirely above ground do not require a building permit.

Zoning approval for all new pool installations will still be required.

### **References Attached;**

Zoning requirements; City of Hudson Ordinance 165.12(5).  
Swimming Pool Code ISPSC; Chapter 7; Pool Requirements for On-ground pools  
Chapter 3; Sec 305; Barrier Requirements.  
(Restricting/Controlling access to outside pools)  
Chapter 3; Sec 306; Decks located in direct access to pools.  
(Additional requirements).

The Following Information & Applications will need to be provided;

1. Provide a completed Building Permit Application & Permit fee.
2. Provide a completed Zoning Permit Application.  
Note; The Zoning application requires a scaled site plan showing all lot lines, the location of the new pool in relationship to the lot lines, all structures, and location of the fencing (or barrier).
3. Fencing or Barrier requirement; Review Section 305 & Confirm which method of compliance will be used to restrict access to the pool.
4. Deck: If a new or existing deck is in direct access to the new pool, Review Code Section 306 and Code Section 703 & Confirm compliance.
5. Provide Pool Manufacture's Information on the Swimming pool and all related pool equipment.
6. Electrical Permit and Inspection.
  - Electrical Permit & Inspection is required on all Pool Installations.
  - Electrical wiring completed in the City of Hudson is permitted & inspected by State of Iowa Electrical Bureau, they can be reached at (515) 725 6147.

Once this information is received, reviewed & approved, we will issue the building permit.

### **Note;**

- The Swimming Pool will need an Approved Building & Electrical Inspection prior to the operation & use of the swimming pool.

If you have questions regarding the building permit, plans needed, or general construction questions give me a call, & for Zoning questions please talk to Chrissi Wiersma, Zoning Administrator (319 988 3600).  
Thanks,

**Steve Jordan**  
City of Hudson  
Building Inspections

Contact Information; Office; 319 988 3600  
Cell; 319 404 7356  
[sjordan@cityofhudsonia.com](mailto:sjordan@cityofhudsonia.com)

## CHAPTER 7

# ONGROUND STORABLE RESIDENTIAL SWIMMING POOLS

### SECTION 701 GENERAL

**701.1 Scope.** This chapter describes certain criteria for the design, manufacturing, and testing of *onground storable pools* intended for *residential* use. This includes portable pools with flexible or nonrigid side walls that achieve their structural integrity by means of uniform shape, support frame or a combination thereof, and that can be disassembled for storage or relocation. This chapter includes what has been commonly referred to in past standards or codes as onground or above-ground pools.

**701.2 General.** In addition to the requirements of this chapter, onground storable *residential swimming pools* shall also comply with the requirements of Chapter 3.

**701.3 Floor slopes.** Floor slopes shall be uniform and in accordance with Sections 701.3.1 through 701.3.4.

**701.3.1 Shallow end.** The slope of the floor from the shallow end wall towards the deep area shall not exceed 1 unit vertical in 7 units horizontal to the point of the first slope change.

**701.3.2 Transition.** The slope of the floor from the point of the first slope change towards the deepest point shall not exceed 1 unit vertical in 3 units horizontal.

**701.3.3 Adjacent.** The slope adjacent to the *shallow area* shall not exceed 1 unit vertical in 3 units horizontal and the slope adjacent to the side walls shall not exceed 1 unit vertical in 1 unit horizontal.

**701.3.4 Change point.** The point of the first slope change shall be defined as the point at which the *shallow area* slope exceeds 1 unit vertical in 7 units horizontal and is not less than 6 feet (1889 mm) from the shallow end wall of the pool.

**701.4 Identification.** The manufacturer's name and the liner identification number shall be affixed to the onground storable *residential pool* vinyl liner.

**701.5 Installation.** *Onground storable pools* shall be installed in accordance with the manufacturer's instructions.

### SECTION 702 LADDERS AND STAIRS

**702.1 Ladders and stairs.** Pools shall have a means of entry and exit consisting of not less than one *ladder* or a *ladder* and staircase combination.

**702.2 Type A and Type B ladders.** *Type A, double access,* and *Type B, limited access,* A-frame ladders shall comply with Sections 702.2.1 through 702.2.7. See Figure 702.2.

**702.2.1 Barrier required.** Ladders in the pool shall have a physical barrier to prevent children from swimming through the riser openings or behind the *ladder*.

**702.2.2 Platform.** Where an A-frame ladder has a platform between the *handrails*, the platform shall have a width of not less than 12 inches (305 mm) and a length of not less than 12 inches (305 mm). The platform shall be at or above the highest ladder tread. The walking surface of the platform shall be *slip resistant*.

**702.2.3 Handrails or handholds.** A-frame ladders shall have two *handrails* or handholds that serve all treads. The height of the handrails or handholds shall be not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

**702.2.4 Diameter.** The outside diameter of *handrails* or handholds shall be not less than 1<sup>1</sup>/<sub>4</sub> inches (32 mm) and not greater than 2 inches (51 mm).

**702.2.5 Clear distance.** The clear distance between *ladder handrails* shall not be less than a space of 12 inches (305 mm).

**702.2.6 Treads.** *Ladder* treads shall have a horizontal uniform depth of not less than 2 inches (51 mm).

**702.2.7 Riser height.** All risers shall be of a uniform height of not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the platform or top of the pool structure to the uppermost tread shall be uniform with other riser heights.

**Exception:** The height of the bottom riser shall be permitted to vary from the other risers.

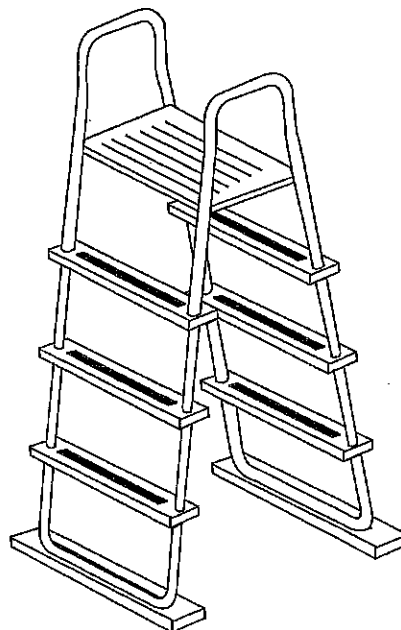


FIGURE 702.2  
TYPICAL A-FRAME LADDER TYPES A AND B

**702.3 Type C staircase ladders (ground to deck).** *Type C staircase ladders* shall comply with Sections 702.3.1 through 702.3.6. See Figure 702.3.

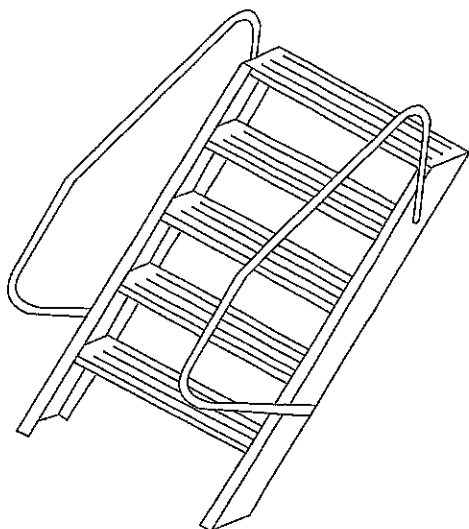


FIGURE 702.3  
TYPICAL IN-POOL STAIRCASE LADDER TYPE C

**702.3.1 Handrails or handholds.** *Staircase ladders* shall have not less than two *handrails* or handholds that serve all treads. The height of the *handrails* or handholds shall be not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

**702.3.2 Diameter.** The outside diameter of *handrails* and handholds shall be not less than 1 $\frac{1}{4}$  inches (32 mm) and not greater than 2 inches (51 mm).

**702.3.3 Treads.** *Ladder* treads shall have a horizontal uniform depth of not less than 4 inches (102 mm).

**702.3.4 Riser height.** Risers shall be of a uniform height not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the platform or top of the pool structure to the uppermost tread shall be uniform with other riser heights.

**Exception:** The height of the bottom riser shall be permitted to vary from the other risers.

**702.3.5 Top step.** The top step of a staircase *ladder* shall be flush with the deck or between 7 inches (178 mm) to 12 inches (305 mm) below the deck level.

**702.3.6 Width.** Steps shall have a minimum unobstructed width of 19 inches (483 mm) between the side rails.

**702.4 Type D in-pool ladders.** *Type D in-pool ladders* shall be in accordance with Sections 702.4.1 through 702.4.7. See Figure 702.4.

**702.4.1 Clearance.** There shall be a clearance of not less than 3 inches (76 mm) and not greater than 6 inches (152 mm) between the pool wall and the *ladder*.

**702.4.2 Handrails or handholds.** *Ladders* shall be equipped with two *handrails* or handholds that extend above the platform or deck not less than 20 inches (508 mm).

**702.4.3 Clear distance.** The clear distance between *ladder handrails* shall not be less than 12 inches (305 mm).

**702.4.4 Diameter.** The outside diameter of *handrails* and handholds shall be not less than 1 inch (25 mm) and not greater than 2 inches (51 mm).

**702.4.5 Riser height.** Risers shall be a uniform height not less than 7 inches (178 mm) and not greater than 12 inches (305 mm).

**Exception:** The height of the bottom riser shall be permitted to vary from the other risers.

**702.4.6 Top tread.** The vertical distance from the pool coping, deck, or step surface to the uppermost tread shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm) and uniform with other riser heights.

**702.4.7 Tread depth.** *Ladder* treads shall have a horizontal uniform depth of not less than 2 inches (51 mm).

**702.5 Type E protruding in-pool stairs.** *Type E* protruding in-pool stairs shall be in accordance with Sections 702.5.1 through 702.5.7. See Figure 702.5.

**702.5.1 Barrier required.** Ladders in the pool shall have a physical barrier to prevent children from swimming through the riser openings or behind the ladder.

**702.5.2 Handrails or handholds.** In-pool stairs shall be equipped with not less than one *handrail* or handhold that serves all treads with a height of not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

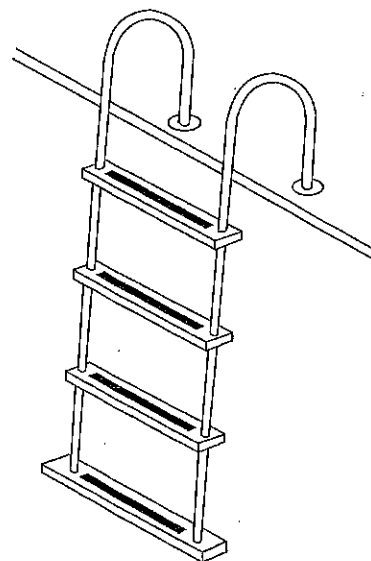


FIGURE 702.4  
TYPICAL IN-POOL LADDER TYPE D

**702.5.3 Removable handrails.** Where *handrails* are removable, they shall be installed such that they cannot be removed without the use of tools.

**702.5.4 Leading edge distance.** The leading edge of *handrails* shall be 18 inches (457 mm)  $\pm$  3 inches ( $\pm$  76 mm), horizontally from the vertical plane of the bottom riser.

**702.5.5 Diameter.** The outside diameter of *handrails* or handholds shall be not less than 1 $\frac{1}{4}$  inches (32 mm) and not greater than 2 inches (51 mm).

**702.5.6 Tread width and depth.** Treads shall have an unobstructed horizontal depth of not less than 10 inches (254 mm) at all points and an unobstructed surface area of not less than 240 square inches (.017 m<sup>2</sup>).

**702.5.7 Uniform riser height.** Risers shall have a uniform height of not less than 7 inches (178 mm) and not greater than 12 inches (305 mm).

**Exceptions:**

1. The height of the bottom riser can vary from the other risers.
2. The vertical distance from the pool coping, deck, or step surface to the uppermost tread shall be not less than 7 inches (178 mm), not greater than 12 inches (305 mm) and uniform with other riser heights.

**702.6 Type F recessed in-pool stairs.** Type F recessed in-pool stairs shall be in accordance with Sections 702.6.1 through 702.6.7. See Figure 702.5.

**702.6.1 Barrier required.** *Ladders* in the pool shall have a physical barrier to prevent children from swimming through the riser openings or behind the *ladder*.

**702.6.2 Handrail or handhold.** In-pool stairs shall be equipped with not less than one *handrail* or handhold that serves all treads with a height of not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

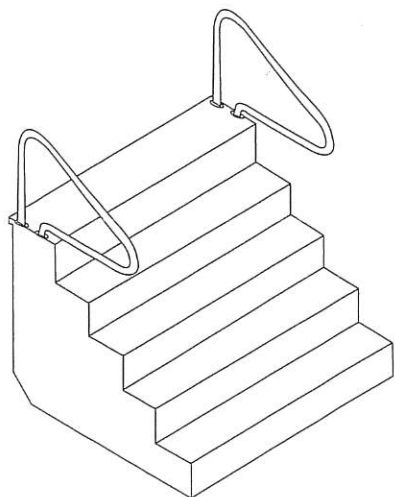


FIGURE 702.5  
TYPICAL IN-POOL STAIRCASE TYPES E and F

**702.6.3 Removable handrails.** Where *handrails* are removable, they shall be installed such that they cannot be removed without the use of tools.

**702.6.4 Leading edge distance.** The leading edge of *handrails* shall be 18 inches (457 mm)  $\pm$  3 inches ( $\pm$  76 mm), horizontally from the vertical plane of the bottom riser.

**702.6.5 Diameter.** The outside diameter of *handrails* and handholds shall be not less than 1 $\frac{1}{4}$  inch (32 mm) and not greater than 2 inches (51 mm).

**702.6.6 Tread width and depth.** Treads shall have an unobstructed horizontal depth of not less than 10 inches (254 mm) at all points and an unobstructed surface area of not less than 240 square inches (0.17 m<sup>2</sup>).

**702.6.7 Uniform riser height.** Risers shall have a uniform height of not less than 7 inches (178 mm) and not greater than 12 inches (305 mm).

**Exceptions:**

1. The height of the bottom riser can vary from the other risers.
2. The vertical distance from the pool coping, deck, or step surface to the uppermost tread shall be not less than 7 inches (178 mm), not greater than 12 inches (305 mm) and uniform with other riser heights.

**SECTION 703  
DECKS**

**703.1 General.** Decks provided by the pool manufacturer shall be installed accordance with the manufacturer's instructions. Decks fabricated on-site shall be in accordance with the *International Residential Code*.

**703.2 Cantilevered.** Cantilevered decks shall not exceed the height of the pool.

**703.3 No gaps.** Decks that are installed flush with the top rail of the pool shall have all gap openings between the deck and top rails closed-off or capped.

**703.4 Extension over pool.** Where a deck extends inside the top rail of the pool, it shall extend not more than 3 inches (76 mm) beyond the inside of the top rail of the pool in accordance with Figure 703.4 and shall have a smooth finish.

**703.5 Slip resistant.** The deck walking surface shall be *slip resistant*.

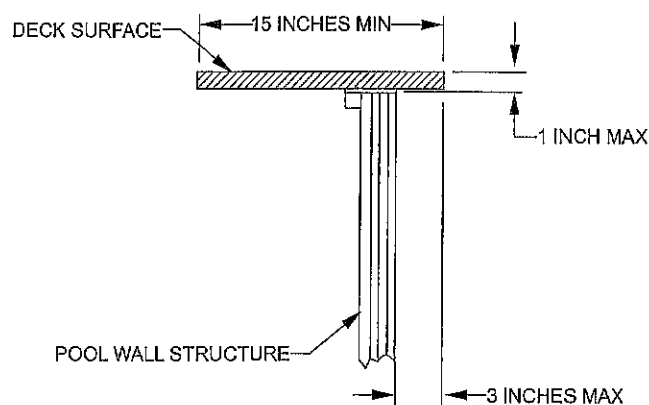
**703.6 Walk-around decks.** Walk-around decks shall have a level walking surface of not less than 15 inches (381 mm) in width, as measured from the inside edge of the pool top rail to the outside of the pool walk-around. See Figure 703.6.

**SECTION 704  
CIRCULATION SYSTEM**

**704.1 Draining the system.** In climates subject to freezing, *circulation system* equipment shall be designed and fabricated to drain the pool water from the equipment and exposed

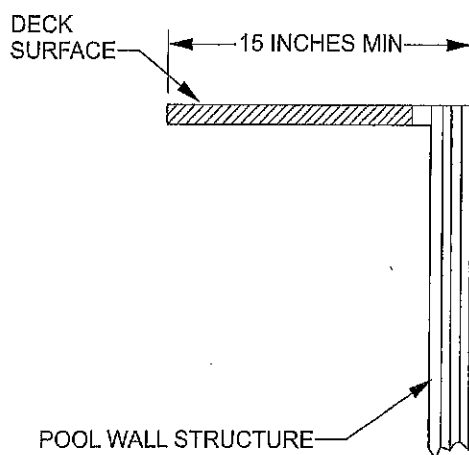
pipng, by removal of drain plugs and manipulating valves or by other methods in accordance with the manufacturer's instructions.

**704.2 Turnover.** Where *circulation equipment* is required by the manufacturer, the equipment shall be sized to provide a turnover of the pool water at least once every 12 hours. The system shall be designed to provide the required *turnover rate* based on the manufacturer's specified maximum flow rate of the filter, with a clean media condition of the filter.



For SI: 1 inch = 25.4 mm.

**FIGURE 703.4**  
**TYPICAL CANTILEVER DECK SUPPORT**



For SI: 1 inch = 25.4 mm.

**FIGURE 703.6**  
**WALK-AROUND DECK WIDTH**



*International Building Code* or the *International Residential Code* shall comply with Section 304.2.1 or 304.2.2.

**Exception:** *Aquatic vessels* located in riverine flood hazard areas that are outside of designated floodways and *aquatic vessels* located in flood hazard areas where the source of flooding is tides, storm surges or coastal storms.

**304.2.1 Aquatic vessels located in designated floodways.** Where *aquatic vessels* are located in designated floodways, documentation shall be submitted to the *code official* that demonstrates that the construction of the aquatic vessel will not increase the design flood elevation at any point within the jurisdiction.

**304.2.2 Aquatic vessels located where floodways have not been designated.** Where *aquatic vessels* are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed *aquatic vessel* and any associated grading and filling, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

**304.3 Aquatic vessels in flood hazard areas subject to high-velocity wave action.** *Aquatic vessels* installed in flood hazard areas subject to high-velocity wave action (coastal high hazard areas) shall be designed and constructed in accordance with ASCE 24.

**304.4 Protection of equipment.** Equipment shall be elevated to or above the design flood elevation or be anchored to prevent flotation and protected to prevent water from entering or accumulating within the components during conditions of flooding.

**304.5 GFCI protection.** Electrical equipment installed below the design flood elevation shall be supplied by branch circuits that have ground-fault circuit interrupter protection for personnel.

## SECTION 305 BARRIER REQUIREMENTS

**305.1 General.** The provisions of this section shall apply to the design of *barriers* for *aquatic vessels*. These design controls are intended to provide protection against the potential drowning and near drowning by restricting access to such vessels. These requirements provide an integrated level of protection against potential drowning through the use of physical barriers and warning devices.

### Exceptions:

1. *Spas* and hot tubs with a lockable safety cover that complies with ASTM F 1346.
2. Swimming pools with a *powered safety cover* that complies with ASTM F 1346.

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

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

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

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

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

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

1. The bottom of the mesh restraining fence shall be not more than 1 inch (25 mm) above the deck or installed surface or grade.
2. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not permit the fence to be lifted more than 4 inches (102 mm) from grade or decking.
3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch (102 mm) sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not be more than 4 inches (102 mm) from grade or decking.
4. An attachment device shall attach each barrier section at a height not lower than 45 inches (1143 mm) above grade. Common attachment devices include, but are not limited to, devices that provide the secu-

rity equal to or greater than that of a hook-and-eye-type latch incorporating a spring-actuated retaining lever such as a safety gate hook.

5. Where a hinged gate is used with a mesh *barrier*, the gate shall comply with Section 305.3.
6. Patio deck sleeves such as vertical post receptacles which are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be used on top of on ground *residential pools*.

**305.2.5 Closely spaced horizontal members.** Where the *barrier* is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the *aquatic vessel* side of the fence. Spacing between vertical members shall not exceed 1.75 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.

**305.2.6 Widely spaced horizontal members.** Where the *barrier* is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.

**305.2.7 Chain link dimensions.** The maximum opening formed by a chain link fence shall be not more than 1.75 inches (44 mm). Where the fence is provided with slats fastened at the top and bottom which reduces the openings, such openings shall be not more than 1.75 inches (44 mm).

**305.2.8 Diagonal members.** Where the *barrier* is composed of diagonal members, the maximum opening formed by the diagonal members shall be not more than 1.75 inches (44 mm). The angle of diagonal members shall not be greater than 45 degrees (0.79 rad) from vertical.

**305.2.9 Clear zone.** There shall be a clear zone of not less than 36 inches (914 mm) around the exterior of the *barrier* and around any permanent structures or equipment such as pumps, *filters* and heaters that can be used to climb the barrier.

**305.2.10 Poolside barrier setbacks.** The *aquatic vessel* side of the required *barrier* shall be not less than 20 inches (508 mm) from the water's edge.

**305.3 Gates.** Access gates shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the vessel and shall be self-closing and have a self-latching device.

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

**305.3.2 Double or multiple gates.** Double gates or multiple gates shall have at least one leaf secured in place and

the adjacent leaf shall be secured with a self-latching device. The gate and *barrier* shall not have openings larger than  $\frac{1}{2}$  inch (12.7 mm) within 18 inches (457 mm) of the latch release mechanism. The self-latching device shall comply with the requirements of Section 305.3.3.

**305.3.3 Latches.** Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from grade, the release mechanism shall be located on the vessel side of the gate at least 3 inches (76 mm) below the top of the gate, and the gate and *barrier* shall not have openings greater than  $\frac{1}{2}$  inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

**305.4 Structure wall as a barrier.** Where a wall of a dwelling or structure serves as part of the *barrier*, doors and operable windows with a sill height of less than 48 inches (1219 mm) that provide direct access to the *aquatic vessel* through the wall, shall be equipped with one or more of the following:

1. An alarm that produces an audible warning when the door or its screen or window, is opened. The alarm shall be *listed* and *labeled* as a water hazard entrance alarm in accordance with UL 2017. In dwellings or structures not required to be Accessible units, Type A units or Type B units, the deactivation switch shall be located 54 inches (1372 mm) or more above the threshold of the door. In dwellings or structures required to be Accessible units, Type A units or Type B units, the deactivation switch shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the threshold of the door.
2. A safety cover that is *listed* and *labeled* in accordance with ASTM F 1346.
3. An *approved* means of protection, such as self-closing doors with self-latching devices, provided that the degree of protection afforded is not less than the protection afforded by Items 1 or 2.

**305.5 Pool structure as a barrier.** Where an onground *residential pool* structure is used as a *barrier* or where the *barrier* is mounted on top of the pool structure, the following shall apply:

1. An onground pool wall, itself, shall be permitted to be the *barrier* where the pool structure is on grade and the wall is at least 48 inches (1219 mm) above grade for the entire perimeter of the pool and complies with the requirements of Section 305.2.
2. Where the means of access is a *ladder* or steps, 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* that meets the requirements of this section.
3. When the *ladder* or steps are secured, locked or removed, any opening created shall not allow the passage of a 4 inch (102 mm) diameter sphere.
4. The *barrier* shall be installed in accordance with the manufacturer's instructions.

**305.6 Natural barriers.** In the case where the vessel area abuts the edge of a lake or other natural body of water, public



access is not permitted or allowed along the shoreline, and required *barriers* extend to and beyond the water's edge a minimum of 18 inches (457 mm), a *barrier* is not required between the natural body of water shoreline and the vessel.

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

## SECTION 306 DECKS

**306.1 General.** Decks shall be designed and installed in accordance with the *International Residential Code* or the *International Building Code*, as applicable in accordance with Section 102.7, except as provided in this section.

**306.2 Slip resistant.** Decks, ramps, coping, and similar step surfaces shall be *slip-resistant* and cleanable. Special features in or on decks such as markers, brand insignias, and similar materials shall be *slip-resistant*.

**306.3 Stair treads and risers.** Stair riser heights shall be in accordance with the *International Residential Code* or the *International Building Code*, as applicable in accordance with Section 102.7.1.

**306.4 Slope.** The minimum slope of decks shall be in accordance with Table 306.4 except where an alternative drainage method is provided that prevents the accumulation or pooling of water. The slope for decks, other than wood decks, shall be not greater than  $\frac{1}{2}$  inch per foot (1 mm per 24 mm) except for ramps. The slope for wood and wood/plastic composite decks shall be not greater than  $\frac{1}{4}$  inch per 1 foot (1 mm per 48 mm). Decks shall be sloped so that standing water will not be deeper than  $\frac{1}{8}$  inch (3.2 mm), 20 minutes after the cessation of the addition of water to the deck.

**306.5 Gaps.** Gaps shall be provided between deck boards in wood and wood/plastic composite decks. Gaps shall be consistent with *approved* engineering methods with respect to the type of wood used and shall not cause a tripping hazard.

**306.5.1 Maximum gap.** The open gap between pool decks and adjoining decks or walkways, including joint material, shall be not greater than  $\frac{3}{4}$  inch (19.1 mm). The difference

in vertical elevation between the pool deck and the adjoining sidewalk shall be not greater than  $\frac{1}{4}$  inch (6.4 mm).

**306.6 Concrete joints.** Isolation joints that occur where the pool coping meets the concrete deck shall be watertight.

**306.6.1 Joints at coping.** Joints that occur where the pool coping meets the concrete deck shall be installed to protect the coping and its mortar bed from damage as a result of the anticipated movement of adjoining deck.

**306.6.2 Crack control.** Joints in a deck shall be provided to minimize visible cracks outside of the control joints caused by imposed stresses or movement of the slab.

**306.6.3 Movement control.** Areas where decks join existing concrete work shall be provided with a joint to protect the pool from damage due to relative movement.

**306.7 Deck edges.** The edges of all decks shall be radiused, tapered, or otherwise designed to eliminate sharp corners.

**306.8 Valves under decks.** Valves installed in or under any deck shall be provided with access for operation, service, and maintenance as required by the *International Plumbing Code* or *International Residential Code*, as applicable in accordance with Section 102.7.1. Access covers shall be provided.

**306.8.1 Hose bibbs.** Hose bibbs shall be provided for rinsing down the entire deck and shall be installed in accordance with the *International Plumbing Code* or *International Residential Code*, as applicable in accordance with Section 102.7.1, and shall be located not more than 150 feet (45 720 mm) apart. Water-powered devices, such as water-powered lifts, shall have a dedicated hose bibb water source.

**Exception:** *Residential pools* and spas shall not be required to have hose bibbs located at 150-foot (45 720 mm) intervals, or have a dedicated hose bibb for water-powered devices.

## SECTION 307 GENERAL DESIGN

**307.1 General.** The provisions of this section apply to all *aquatic vessels*.

**Exception:** The provisions of Sections 307.3 through 307.6 do not apply to *listed* and *labeled portable residential spas* and *listed* and *labeled portable residential exercise spas*.

TABLE 306.4  
MINIMUM DRAINAGE SLOPES

| SURFACE                          | TYPICAL MINIMUM DRAINAGE SLOPE<br>(INCH PER FOOT) |
|----------------------------------|---|
| Brick and heavy textured finish  | $\frac{3}{8}$ inch                                |
| Carpet                           | $\frac{1}{2}$ inch                                |
| Exposed aggregate                | $\frac{1}{4}$ inch                                |
| Textured, hand-finished concrete | $\frac{1}{8}$ inch                                |
| Wood                             | $\frac{1}{8}$ inch                                |
| Wood/plastic composite           | $\frac{1}{8}$ inch                                |

For SI: 1 inch per foot = 83.3 mm per m.



**165.07 ZONING AFFECTS EVERY STRUCTURE.** Except as hereinafter provided, no building, structure, or land shall be erected, constructed, reconstructed, occupied, moved, altered, or repaired, except in conformity with the regulations herein specified for the class of district in which it is located.

**165.08 MINIMUM STREET FRONTAGE.** No lot shall be created after the adoption of this Development Ordinance unless it abuts at least 30 feet on a public street right-of-way, or is accessible to a public street by an easement.

**165.09 LOT OF RECORD.** In any Residence District on a lot of record at the time of enactment of this Development Ordinance, a single-family dwelling may be established regardless of the size of the lot, provided all other requirements of this Development Ordinance are complied with. However, where two or more vacant and contiguous substandard recorded lots are held in common ownership, they shall be combined into zoning lots and shall thereafter be maintained in common ownership and shall be so joined and developed for the purpose of forming an effective and conforming zoning lot. For the purpose of this section, the razing of a building on a substandard lot shall constitute the formation of a vacant lot.

**165.10 LOTS UNSERVED BY SEWER AND/OR WATER.** In any residential district where neither public water supply nor public sanitary sewer are reasonably available, one single-family dwelling may be constructed, provided the otherwise specified lot area and width requirements shall be a minimum of one and one-half acres.

**165.11 EASEMENTS.** Constructing a building or structure on an easement is prohibited. Placing fences, trees, and landscaping on easements is discouraged.

**165.12 ACCESSORY BUILDINGS, STRUCTURES, AND USES.**

1. **Time of Construction.** No accessory building or structure shall be constructed on any lot prior to the completion of the foundation of the principal building to which it is accessory.
2. **Percentage of Rear Yard Occupied within an R District.** No detached accessory building or buildings shall occupy more than 30 percent of the area of a rear yard.
3. **Height of Accessory Buildings within an R District.** No detached accessory building or structure shall exceed 18 feet in height, and the side walls shall not exceed 12 feet in height.
4. **Location on Lot.** No accessory building or structure shall be erected in any front yard. Accessory buildings or structures shall be no closer than six feet from any principal buildings.
5. **Swimming Pools.** No public or private swimming pool shall be erected or maintained unless:
  - A. It is entirely enclosed by buildings or fences or has walls not less than four or more than eight feet in height and of such construction that a person may not enter the property from the street or from any adjacent property without opening a door or gate or scaling a wall or fence; holes or openings

in the fence shall be four inches or less in least dimension; such fences or walls shall be equipped with self-latching gates or doors; or

B. It is equipped with ladders, covers, or other equipment that when so deployed would prohibit persons from entering the water within the pool; or

C. It is otherwise constructed or maintained such that no person who is not an intended occupant of the swimming pool may enter the water within the pool without the consent of the party in possession of the swimming pool.

**165.13 MORE THAN ONE PRINCIPAL STRUCTURE ON LOT.** In any district more than one principal structure—housing a principal permitted use—may be erected on a single lot provided that the area, yard, and other requirements shall be met for each structure as though it were on an individual lot.

**165.14 REQUIRED YARD CANNOT BE REDUCED OR USED BY ANOTHER BUILDING.** No lot, yard, court, parking area, or other open space shall be so reduced in area or dimension as to make any such area or dimension less than the minimum required by this Development Ordinance, and if already less than the minimum required it shall not be further reduced. No required open space provided around any building or structure shall be included as part of any open space required for another building or structure.

**165.15 CONVERSION OF DWELLINGS.** The conversion of any principal building or structure into a dwelling, or the conversion of any dwelling so as to accommodate an increased number of dwelling units or families, shall be permitted only within a district in which a new building for similar occupancy would be permitted under this Development Ordinance, and only when the resulting occupancy will comply with the requirements governing new construction in such district with respect to minimum lot size, lot area per dwelling unit, dimensions of yards and other open spaces, and off-street parking. Each conversion shall be subject also to such further requirements as may be specified hereinafter within the section applying to such district.

**165.16 YARD AND PARKING SPACE RESTRICTION.** No part of a yard or other open space or off-street parking or loading space required by this Development Ordinance shall be included as part of yard, open space, off-street parking, or loading space similarly required for any other building.

**165.17 TRAFFIC VISIBILITY ACROSS CORNER LOTS.** In a Residential or Agricultural District on any corner lot, no fence, wall, hedge, or other planting will be allowed to obstruct vision between a height of two and one-half feet and 10 feet above the centerline grades of the intersecting streets. Nor shall the same be erected, placed, or maintained within the triangular area formed by the right-of-way lines at such corner and a straight line joining the right-of-way lines at points which are 25 feet distant from the intersection of the right-of-way lines, and measured along the right-of-way line.

**165.18 ESSENTIAL SERVICES.** Essential services shall be permitted as authorized and regulated by law and other ordinances of the community. With the exception of buildings and telecommunication towers, it is the intent to exempt such essential services from the application of this Development Ordinance. Said buildings and telecommunication towers must be located in the appropriate zoning district, and must abide by the corresponding requirements thereof.