



5371 S. Saginaw St.  
Grand Blanc, MI 48507  
810-424-2600 Ext. 2904

## Building Permit Application - Swimming Pool

Visit [www.gbtgov.com](http://www.gbtgov.com) or 810-424-2600 Ext. 2904 for assistance

Authority: 1972 PA 230

Penalty: Failure to provide the information may result in denial of your request.

Applicant to complete all items and provide plot plan and detailed construction drawings

**\*\*\* Submit completed application with plot plan to [permits@gbtgov.com](mailto:permits@gbtgov.com) \*\*\***

### Soil Erosion/Sedimentation Control Permit:

It is the responsibility of the permit applicant to obtain an SESC permit or waiver from the Genesee County Drain Commission and provide proof of said permit or waiver to this office prior to applying for this permit.

Permits can be obtained by visiting [https://www.gcdcwws.com/permit-process](http://www.gcdcwws.com/permit-process) or by calling 810-732-7870

### I. Project Information

Address	City	State	Zip	Township	County
		MI		Grand Blanc	Genesee
Subdivision	Lot #	Date of Application:			

### II. Identification

#### A. Owner or Lessee:

Name	Phone #	Email:	
Address	City	State	Zip

#### B. Contractor

Name	Phone #	Email:	
Address	City	State	Zip
Builders License #	Expiration Date:		
Fed Employer ID#	Worker's Comp Ins. Carrier	MESC Employer Number	

### III. Completing Application

#### Swimming Pool Permit Details (Required)

Please provide a complete description of the work to be completed under this permit:

Inground or Above Ground		Size of Pool	
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Construction Cost - Proposed Work:	\$	-
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### III. Completing Application (Continued)

**Plot plan required. Plan must show all dimensions and distances to lot lines, structures, underground utilities, right-of-ways, and easements. All overhead power lines within 36 feet of proposed construction must be shown. Plot plan must include pool and deck if applicable. Deck Permit and Electrical Permit must be applied for separately.**

#### **General:**

Construction shall not be started until the permit has been approved and issued. Any regulated activity started prior to the applicant securing the permit will be charged an additional administrative fee at the same rate as the required permit fee, not to exceed \$100.00. This shall be paid prior to the issuance of the required permit. All construction shall be in compliance with the building code currently in effect. No work shall be concealed until it has been inspected.

When ready for an inspection, please schedule on our website at [www.gbtgov.com](http://www.gbtgov.com) -> I want to -> Building Inspections. If scheduling by phone, please call 810-

#### **Expiration of Permit:**

A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing the work.

A permit will be cancelled when no inspections are requested and conducted within six (6) months of the date of issuance or the date of a previous inspection. Cancelled permits cannot be refunded or reinstated.

### IV. Applicant Information

Applicant is responsible for the payment of all fees and charges applicable to this application and must provide the following information:

Name	Phone #	Email:	
Address	City	State	Zip

### V. Applicant Affidavit

#### **As the Licensee:**

I hereby certify that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his/her authorized agent, and we agree to conform to all applicable laws of the State of Michigan. All information submitted on this application is accurate to the best of my knowledge.

#### **As the Homeowner: (Please sign and submit the Homeowner Building Permit Acknowledgement Form)**

I hereby certify that the work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the building code and shall not be covered up, enclosed, or put into operation until it has been inspected and approved by the Building Inspector. I shall cooperate with the Building Inspector and I assume the responsibility to arrange for all necessary inspections.

### VI. Signature of Applicant

Section 23a of the state construction code act of 1972, 1972 PA 230, MCL 125.1523a, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who are to perform work on a residential building or a residential structure. Violators of section 23a are subjected to civil fines.

Signature:	Date:

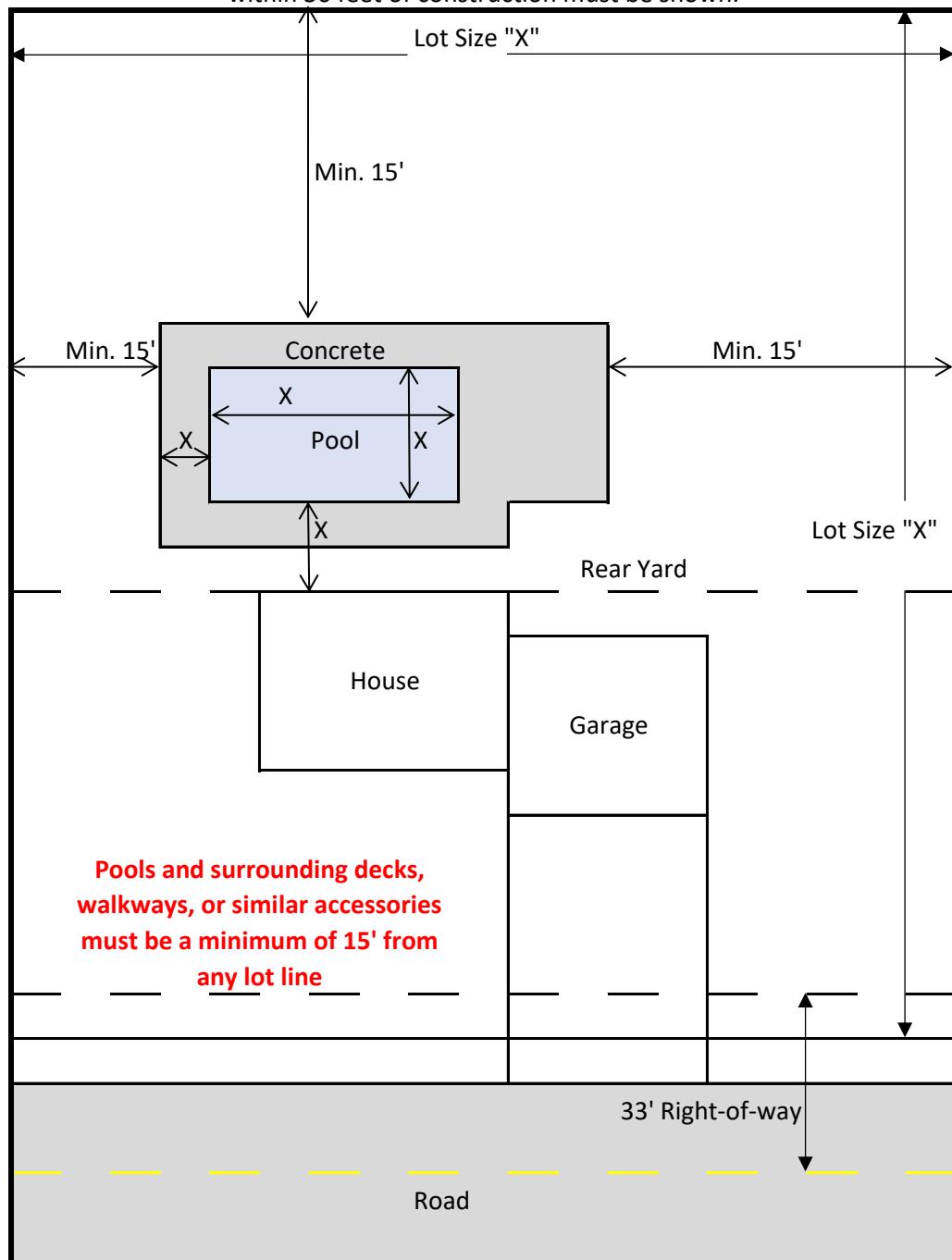
### VII. For Office Use Only

Use Group	Construction Type	Square Feet	
Approval Signature	Date	Permit Fee	\$ -
		Plan Review Fee	\$ -
		TOTAL FEES DUE	\$ -

## \*\*Example\*\*

### Swimming Pool Plot Plan

Plan must show all dimensions and distances to lot lines, structures, underground utilities, right-of-ways, and easements. All overhead powerlines within 36 feet of construction must be shown.



X = Required Dimension

#### 4.70 SWIMMING POOLS

- Requirement for Fence:** A fence or similar enclosure shall be erected and maintained around any swimming pool. Such fence or enclosure shall be approved by the Building Department in conformance with the Township Building Code. Required fences for pools in the MHP District shall be setback at least twenty-five (25) feet from any mobile home or attached structure.
- Setback:** Swimming pools, spas, hot tubs, similar facilities and surrounding decks, walks or similar accessories shall be at least fifteen (15) feet from any lot line.
- Restriction from front yard:** Swimming pools, spas, hot tubs and similar devices shall not be located in any front yard. Accessory private swimming pools are permitted in the single family residential districts provided that they are located in the rear yard and meet the requirements herein.
- Surrounding walk:** All public swimming pools shall be surrounded by a slip resistant walk at least four (4) feet wide.
- Permits:** Permits shall be applied for and issued from the Township Building Department prior to excavation or construction of any swimming pool requiring a fence as noted in item (1) above. The application shall be accompanied by a complete set of plans and specifications designed in accordance with the Township Building Code Section 625.0 Swimming Pools. A final inspection and approval from the Township Building Department must be obtained prior to use of the swimming pool.

#### 4.71 THEATERS (INDOOR), CINEMAS, CONCERT HALLS AND PLAY HOUSES

- Access shall be from an arterial roadway.
- A traffic impact study shall be submitted according to Section 6.6.
- Wrought iron fencing may be placed along the frontage to direct pedestrians to safe crossing points, if the Planning Commission determines the need.
- The subject site shall be located with access to an existing traffic signal, or placed such that installing a traffic signal will not significantly impact through traffic flow.
- The principal building and parking lot shall be setback at least fifty (50) feet from any adjacent residential district. This setback shall

be landscaped with at least the amount of plant materials specified in Section 5.10.3.

#### 4.72 VETERINARY CLINICS

- The use shall be operated by a licensed or registered veterinarian.
- The principal and all accessory buildings or structures used for the treatment or holding of animals shall be setback at least one hundred (100) feet from abutting residential districts, churches or restaurants on the same side of the street; fifty (50) feet from the front property line and fifty (50) feet from all other property lines.
- All principal use activities shall be conducted within a totally enclosed principal building; no outdoor pet enclosures or runs are permitted.
- Any indoor boarding shall be limited to that incidental to treatment or surgery.
- Any veterinary clinic building or structure which is used for the treatment or holding of animals which is adjacent to a residential district shall have the following construction features:
  - Walls are soundproofed to allow a maximum transmission of 65 dB measured at any point on the outside of the exterior wall;
  - Doors must be solid core;
  - Ventilation must be forced air.
- Outdoor exercising is allowed when the pet is accompanied by a employee provided no animals shall be permitted outside of the buildings between 8:00 p.m. and 7:00 a.m.
- A caretakers quarters may be permitted.

#### 4.73 VETERINARY (ANIMAL) HOSPITALS

- Minimum lot size shall be five (5) acres.
- The principal and all accessory buildings or structures used for the treatment and holding of animals shall be setback at least two hundred (200) feet from the front property line and at least five hundred (500) feet from any property line abutting a residential districts or use on the same side of the street.
- Outdoor enclosures or runs visible to adjacent residential districts shall be screened with fully obscuring fences, walls and/or landscaping (for landscaping, the full obscuring affect must be achieved within three years of planting).
- A caretakers quarters may be permitted.

## CHAPTER 3

# GENERAL COMPLIANCE

### SECTION 301 GENERAL

**301.1 Scope.** The provisions of this chapter shall govern the general design and construction of public and *residential* pools and spas and related piping, equipment, and materials. Provisions that are unique to a specific type of pool or spa are located in Chapters 4 through 10.

**301.1.1 Application of Chapters 4 through 10.** Where differences occur between the provisions of this chapter and the provisions of Chapters 4 through 10, the provisions of Chapters 4 through 10 shall apply.

### SECTION 302 ELECTRICAL, PLUMBING, MECHANICAL AND FUEL GAS REQUIREMENTS

**302.1 Electrical.** Electrical requirements for aquatic facilities shall be in accordance with NFPA 70 or the *International Residential Code*, as applicable in accordance with Section 102.7.1.

**Exception:** Internal wiring for portable *residential* spas and portable *residential* exercise spas.

**302.2 Water service and drainage.** Piping and fittings used for water service, makeup and drainage piping for pools and spas shall comply with the *International Plumbing Code*. Fittings shall be *approved* for installation with the piping installed.

**302.3 Pipe, fittings and components.** Pipe, fittings and components shall be *listed* and *labeled* in accordance with NSF 50 or NSF 14. Plastic jets, fittings, and outlets used in public spas shall be *listed* and *labeled* in accordance with NSF 50.

#### Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas *listed* and *labeled* in accordance with UL 1563 or CSA C22.2 No. 218.1.
2. *Onground storables pools* supplied by the pool manufacturer as a kit that includes all pipe, fittings and components.

**302.4 Concealed piping inspection.** Piping, including process piping, that is installed in trenches, shall be inspected prior to backfilling.

**302.5 Backflow protection.** Water supplies for pools and spas shall be protected against backflow in accordance with the *International Plumbing Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1.

**302.6 Waste-water discharge.** Where waste water from pools and spas, backwash from filters and water from deck drains discharge to the building drainage system, such installation shall be in accordance with the *International Plumbing*

*Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1.

**302.7 Tests.** Tests on water piping systems constructed of plastic piping shall not use compressed air for the test.

**302.8 Maintenance.** Pools and spas shall be maintained in a clean and sanitary condition, and in good repair.

**302.8.1 Manuals.** An operating and maintenance manual in accordance with industry-accepted standards shall be provided for each piece of equipment requiring maintenance.

### SECTION 303 ENERGY

**303.1 Energy consumption of pools and permanent spas.** The energy consumption of pools and permanent spas shall be controlled by the requirements in Sections 303.1.1 through 303.1.3.

**303.1.1 Heaters.** The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater, mounted on the exterior of the heater or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

**303.1.2 Time switches.** Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

#### Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- or waste-heat recovery pool heating systems.

**303.1.3 Covers.** Outdoor heated pools and outdoor permanent spas shall be provided with a vapor-retardant cover or other *approved* vapor-retardant means in accordance with Section 104.11.

**Exception:** Where more than 70 percent of the energy for heating, computed over an operating season, is from site-recovered energy such as from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

**303.2 Portable spas.** The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP 14.

**303.3 Residential pools and permanent residential spas.** The energy consumption of *residential* swimming pools and

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 security 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 fence, the gate shall comply with Section 305.3.
6. Patio deck sleeves such as vertical post receptacles that are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be installed on top of onground *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 pool or spa side of the fence. Spacing between vertical members shall not exceed  $1\frac{3}{4}$  inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed  $1\frac{3}{4}$  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, the interior width of the cutouts shall not exceed  $1\frac{3}{4}$  inches (44 mm).

**305.2.7 Chain link dimensions.** The maximum opening formed by a chain link fence shall be not more than  $1\frac{3}{4}$  inches (44 mm). Where the fence is provided with slats fastened at the top and bottom which reduce the openings, such openings shall be not more than  $1\frac{3}{4}$  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  $1\frac{3}{4}$  inches (44 mm). The angle of diagonal members shall be not 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) between the exterior of the barrier and 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 pool or spa 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 pool or spa, shall be self-closing and shall 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 pool or spa side of the gate not less than 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 and where doors or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Operable windows having a sill height of less than 48 inches (1219 mm) above the indoor finished floor and doors shall have an alarm that produces an audible warning when the window, door or their screens are 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 operable parts of the alarm deactivation switches shall be located 54 inches (1372 mm) or more above the finished floor. In dwellings or structures required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.
2. A *safety cover* that is *listed* and *labeled* in accordance with ASTM F 1346 is installed for the pools and spas.
3. An *approved* means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

**305.5 Onground residential pool structure as a barrier.** An onground *residential* pool wall structure or a barrier mounted on top of an onground *residential* pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer allows the wall to serve as a barrier.

**306.9 Valves under decks.** Valves installed in or under decks shall be accessible for operation, service, and maintenance. Where access through the deck walking surface is required, an access cover shall be provided for the opening in the deck. Such access covers shall be slip resistant and secured.

**306.9.1 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 pools and spas.

**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.

**307.2 Glazing in hazardous locations.** Hazardous locations for glazing shall be as defined in the *International Building Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1 of this code. Where glazing is determined to be in a hazardous location, the requirements for the glazing shall be in accordance with those codes, as applicable.

**307.3 Materials.** Pools and spas and appurtenances thereto shall be constructed of materials that are nontoxic to humans and the environment; that are generally or commonly regarded to be impervious and enduring; that will withstand the design stresses; and that will provide a watertight structure with a smooth and easily cleanable surface without cracks or joints, excluding structural joints, or that will provide a watertight structure to which a smooth, easily cleaned surface/finish is applied or attached. Material surfaces that come in contact with the user shall be finished, so that they do not constitute a cutting, pinching, puncturing or abrasion hazard under casual contact and intended use.

**307.3.1 Beach pools.** Clean sand or similar material, where used in a beach pool environment, shall be used over an impervious surface. The sand area shall be designed and controlled so that the circulation system, maintenance, safety, sanitation, and operation of the pool are not adversely affected.

**307.3.2 Compatibility.** Assemblies of different materials shall be chemically and mechanically compatible for their intended use and environment.

**307.4 Materials and structural design.** Pools and spas shall conform to one or more of the standards indicated in Table 307.4. The structural design of pools and spas shall be in accordance with the *International Building Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1 of this code.

TABLE 307.4  
RESERVOIRS AND SHELLS

MATERIAL	STANDARD
Fiberglass reinforced plastic	IAPMO Z124.7
Plastic	IAPMO Z124.7
Stainless steel (Types 316, 316L, 304, 304L)	ASTM A 240
Tile	ANSI A108/A118/A136.1
Vinyl	ASTM D 1593

**307.4.1 Installation.** Equipment for pools and spas shall be supported to prevent damage from misalignment and settling and located so as to allow access for inspection, servicing, removal and repair of component parts.

**307.5 Freeze protection.** In climates subject to freezing temperatures, outdoor pool and spa shells and appurtenances, piping, filter systems, pumps and motors, and other components shall be designed and constructed to provide protection from damage from freezing.

**307.6 Surface condition.** The surfaces within public pools and spas intended to provide footing for users shall be slip resistant and shall not cause injury during normal use.

**307.7 Colors and finishes.** The colors, patterns, or finishes of the pool or spa interior shall not obscure objects or surfaces within the pool or spa.

**Exception:** Residential pools and spas.

**307.8 Roofs or canopies.** Roofs or canopies over pools and spas shall be in accordance with the *International Building Code* or *International Residential Code*, as applicable in accordance with Section 102.7.1 and shall be constructed so as to prevent water runoff into the pool or spa.

**307.9 Accessibility.** An accessible route to public pools and spas shall be provided in accordance with the *International Building Code*. Accessibility within public pools and spas shall be provided as required by the accessible recreational facilities provisions of the *International Building Code*. Accessibility for pools and spas accessory to detached one- and two-family dwellings and townhouses not more than three stories in height shall be provided where required by the *International Residential Code*.

## SECTION 308 DIMENSIONAL DESIGN

**308.1 Floor slope.** The slope of the floor from the point of the first slope change to the deep area shall not exceed one unit vertical in three units horizontal (33-percent slope).

**Exception:** Portable *residential* spas and portable *residential* exercise spas.

**311.4.1 Fittings.** Fittings used in circulation systems shall be *listed* and *labeled* as complying with one of the standards in Table 311.4.1.

**Exceptions:**

1. Suction outlet fitting assemblies and manufacturer-provided components certified in accordance with APSP 16.
2. Skimmers and manufacturer-provided components.
3. *Gutter* overflow grates and fittings installed above or outside of the overflow point of the pool or spa.

**311.4.2 Joints.** Joints shall be made in accordance with manufacturer's instructions.

**311.4.3 Piping subject to freezing.** Piping subject to damage by freezing shall have a uniform slope in one direction and shall be equipped with valves for drainage or shall be capable of being evacuated to remove the water.

**311.4.4 Suction outlet fitting assemblies.** Suction outlet fitting assemblies shall be *listed* and *labeled* in compliance with APSP 16.

**311.5 System draining.** Equipment shall be designed and fabricated to drain the water from the equipment, together with exposed face piping, by removal of drain plugs, manipulating valves, or by other methods. Drainage shall be in accordance with manufacturer's specifications.

**311.6 Pressure or vacuum gauge.** Gauges shall be provided on the circulation system for public pools. Gauges shall be provided with ready access.

1. A pressure gauge shall be located downstream of the pump and between the pump and filter.
2. A vacuum gauge shall be located between the pump and filter and upstream of the pump.

**311.7 Flow measurement.** Public swimming pools and wading pools shall be equipped with a flow-measuring device that indicates the rate of flow through the filter system. The flow rate measuring device shall indicate gallons per minute (lpm) and shall be selected and installed to be accurate within plus or minus 10 percent of actual flow.

**311.8 Instructions.** Written operation and maintenance instructions shall be provided for the circulation system of public pools.

**311.9 Hydrostatic pressure test.** Circulation system piping, other than that integrally included in the manufacture of the

pool or spa, shall be subjected to a hydrostatic pressure test of 25 pounds per square inch (psi) (172.4 kPa). This pressure shall be held for not less than 15 minutes.

## SECTION 312 FILTERS

**312.1 General.** The provisions of this section apply to filters for pools and spas.

**Exceptions:**

1. Portable *residential* spas and portable *residential* exercise spas.
2. *Onground storables pools* supplied by the pool manufacturer as a kit that includes a filter that is in accordance with Section 704.

**312.2 Design.** Filters shall have a flow rating equal to or greater than the design flow rate of the system. Filters shall be installed in accordance with the manufacturer's instructions. Filters shall be designed so that filtration surfaces can be inspected and serviced.

**312.3 Internal pressure.** For pressure-type filters, a means shall be provided to allow the release of internal pressure.

**312.3.1 Air release.** Filters incorporating an automatic means of internal air release as the principal means of air release shall have one or more lids that provide a slow and safe release of pressure as a part of the design and shall have a manual air release in addition to an automatic release.

**312.3.2 Separation tanks.** A separation tank used in conjunction with a filter tank shall have a manual method of air release or a lid that provides for a slow and safe release of pressure as it is opened.

## SECTION 313 PUMPS AND MOTORS

**313.1 General.** The provisions of this section apply to pumps and motors for pools and spas.

**Exceptions:**

1. Portable *residential* spas and portable *residential* exercise spas.
2. *Onground storables pools* supplied by the pool manufacturer as a kit that includes a pump and motor that is in accordance with Section 704.

TABLE 311.4.1  
CIRCULATION SYSTEM FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 1527
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D 2846; ASTM F 437; ASTM F 438; ASTM F 439; CSA B137.6
Copper or copper-alloy tubing	ASME B 16.15
Polyvinyl chloride (PVC) plastic pipe	ASTM D 2464; ASTM D 2466; ASTM D 2467; CSA B137.2; CSA B137.3
Stainless steel pipe, Types 304, 304L, 316, 316L	ASTM A 182; ASTM A 403

**315.4.1 Surge capacity.** Where perimeter surface skimming systems are used, they shall be connected to a circulation system with a system surge capacity of not less than 1 gallon for each square foot (40.7 liters per square meter) of water surface. The capacity of the perimeter overflow system and related piping is permitted to be considered as a portion of the surge capacity.

**315.5 Equalizers.** Equalizers on skimmers shall be prohibited.

**315.6 Hazard.** Skimming devices shall be designed and installed so as not to create a hazard to the user.

## SECTION 316 HEATERS

**316.1 General.** The provisions of this section apply to heaters for pools and spas.

**Exception:** Portable residential spas and portable residential exercise spas.

**316.2 Listed and labeled.** Heaters shall be *listed* and *labeled* in accordance with the applicable standard listed in Table 316.2.

**316.3 Sizing.** Heaters shall be sized in accordance with the manufacturer's specifications.

**316.4 Installation.** Heaters shall be installed in accordance with the manufacturer's specifications and the *International Fuel Gas Code*, *International Mechanical Code*, *International Energy Conservation Code*, NFPA 70 or *International Residential Code*, as applicable in accordance with Section 102.7.1.

**316.4.1 Temperature.** A means shall be provided to monitor water temperature.

**316.4.2 Access prohibited.** For public pools and spas, public access to controls shall be prohibited.

**316.5 Heater circulation system.** Heater circulation systems shall comply with Sections 316.5.1 and 316.5.2.

**316.5.1 Water flow.** Water flow through the heater bypass piping, back-siphonage protection, and the use of heat sinks shall be in accordance with the heater manufacturer's specifications.

**316.5.2 Pump delay.** Where required by the manufacturer, heaters shall be installed with an automatic device that will ensure that the pump continues to run after the

heater shuts off for the time period specified by the manufacturer.

## SECTION 317 AIR BLOWER AND AIR INDUCTION SYSTEM

**317.1 General.** This section applies to devices and systems that induce or allow air to enter pools and spas either by means of a powered pump or passive design.

**317.2 Backflow prevention.** Air blower systems shall be equipped with backflow protection as specified in UL 1563 or CSA C22.2 No. 218.1.

**317.3 Air intake source.** Air intake sources shall not induce water, dirt or contaminants.

**317.4 Sizing.** Air induction systems shall be sized in accordance with the manufacturer's specifications.

**317.5 Inspection and service.** Air blowers shall be provided with access for inspection and service.

## SECTION 318 WATER SUPPLY

**318.1 Makeup water.** Makeup water to maintain the water level and water used as a vehicle for sanitizers or other chemicals, for pump priming, or for other such additions, shall be from a potable water source.

**318.2 Protection of potable water supply.** Potable water supply systems shall be designed, installed and maintained so as to prevent contamination from nonpotable liquids, solids or gases being introduced into the potable water supply through cross-connections or other piping connections to the system. Means of protection against backflow in the potable water supply shall be provided through an air gap complying with ASME A112.1.2 and the *International Residential Code* or the *International Plumbing Code*, as applicable in accordance with Section 102.7.1.

**318.3 Over-the-rim spouts.** Over-the-rim spouts shall be located under a diving board, adjacent to a ladder, or otherwise shielded so as not to create a hazard. The open end of such spouts shall not have sharp edges and shall not protrude more than 2 inches (51 mm) beyond the edge of the pool. The open end shall be separated from the water by an air gap of not less than 1.5 pipe diameters measured from the pipe outlet to the rim.

TABLE 316.2  
WATER HEATERS

DEVICE	STANDARD
Electric water heater	UL 1261, UL 1563 or CSA C22.2 No. 218.1
Gas-fired water heater	ANSI Z21.56/CSA 4.7a
Heat exchanger	NSF 50
Heat pump water heater	UL 1995, AHRI 1160, CSA C22.2 No. 236
Photovoltaic solar water heaters	NSF 50
Thermal radiant solar water heater	NSF 50

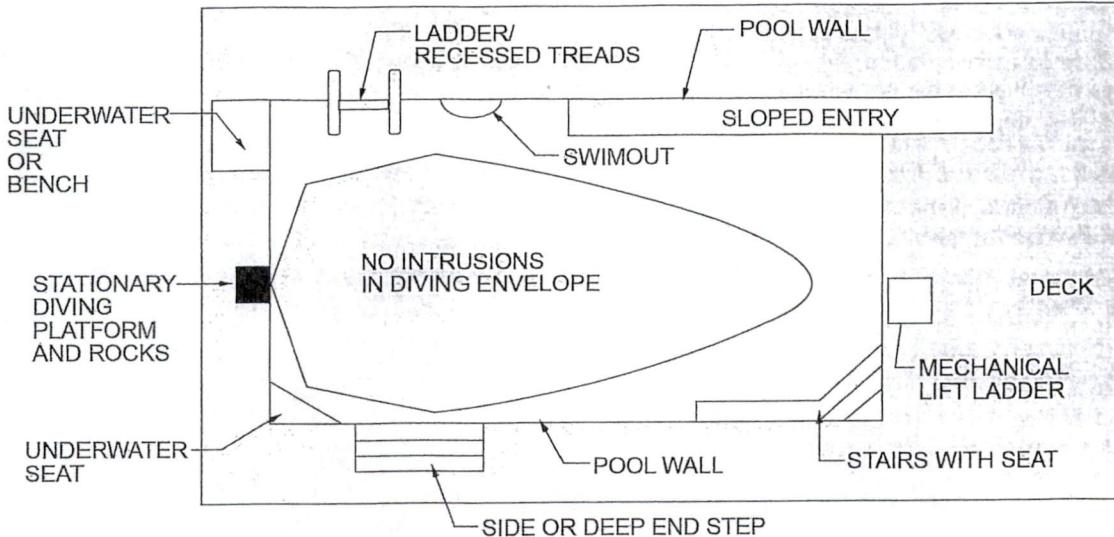


FIGURE 322.2  
MINIMUM WATER DIVING ENVELOPE

**322.2 Outside diving envelope.** Where installed, steps and ladders shall be located outside of the minimum diving water envelope as indicated in Figure 322.2.

**322.3 Ladders.** Ladder treads shall have a uniform horizontal depth of not less than 2 inches (51 mm). There shall be a uniform distance between ladder treads, with a distance of not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The top tread of a ladder shall be located not greater than 12 inches (305 mm) below the top of the deck or coping. Ladder treads shall have slip-resistant surfaces.

**322.3.1 Wall 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.

**322.3.2 Handrails and handholds.** Ladders shall be provided with two handholds or two handrails. The clear distance between ladder handrails shall be not less than 17 inches (432 mm) and not greater than 24 inches (610 mm).

**322.4 Recessed treads.** Recessed treads shall have a minimum depth of not less than 5 inches (127 mm) and a width of not less than 12 inches (305 mm). The vertical distance between the pool coping edge, deck, or step surface and the uppermost recessed tread shall be not greater than 12 inches (305 mm). Recessed treads shall have slip-resistant surfaces.

**322.4.1 Vertical spacing.** Recessed treads at the center-line shall have a uniform vertical spacing of not less than 7 inches (178 mm) and not greater than 12 inches (305 mm).

**322.4.2 Drainage.** Recessed treads shall drain into the pool.

**322.4.3 Handrails and grab rails.** Recessed treads shall be provided with a handrail or grab rail on each side of the treads. The clear distance between handrails and grab rails shall be not less than 17 inches (432 mm) and not greater than 24 inches (610 mm).

## SECTION 323 SAFETY

**323.1 Handholds required.** Where the depth below the *design waterline* of a pool or spa exceeds 42 inches (1067 mm), handholds along the perimeter shall be provided. Handholds shall be located at the top of deck or coping.

### Exceptions:

1. Handholds shall not be required where an underwater bench, seat or swimout is installed.
2. Handholds shall not be required for wave action pools and action rivers.

**323.1.1 Height above water.** Handholds shall be located not more than 12 inches (305 mm) above the *design waterline*.

**323.1.2 Handhold type.** Handholds shall be one or more of the following:

1. Top of pool deck or coping.
2. Secured rope.
3. Rail.
4. Rock.
5. Ledge.
6. Ladder.
7. Stair step.
8. Any design that allows holding on with one hand while at the side of the pool.

**323.1.3 Handhold spacing.** Handholds shall be horizontally spaced not greater than 4 feet (1219 mm) apart.

**323.2 Handrails.** Where handrails are installed, they shall conform to this section.

# 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.

**701.1.1 Permanent inground residential swimming pool.** This chapter does not apply to permanent inground *residential* pools, as defined in Chapter 8.

**701.2 General.** In addition to the requirements of this chapter, onground storable *residential* swimming pools shall 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 (14-percent slope) 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 (33-percent slope).

**701.3.3 Adjacent.** The slope adjacent to the shallow area shall not exceed 1 unit vertical in 3 units horizontal (33-percent slope) and the slope adjacent to the side walls shall not exceed 1 unit vertical in 1 unit horizontal (100-percent slope).

**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 (14-percent slope) and is not less than 6 feet (1889 mm) from the shallow end wall of the pool.

**701.4 Identification.** For onground storable *residential* pools with a vinyl liner, the manufacturer's name and the liner identification number shall be affixed to the liner. For onground storables *residential* pools without a liner, the manufacturer's name and identification number shall be affixed to the exterior of the pool structure.

**701.5 Installation.** *Onground storables 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.

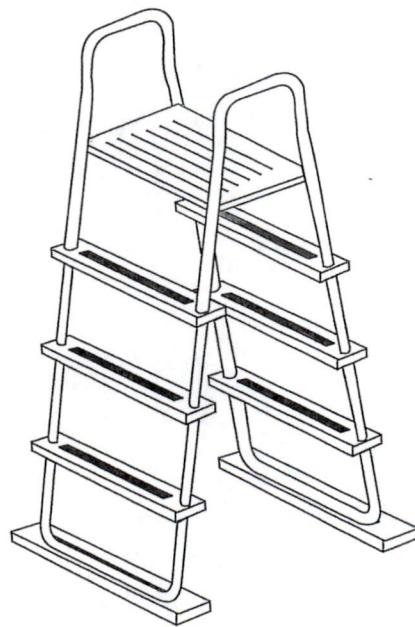


FIGURE 702.2  
TYPICAL A-FRAME LADDER, TYPES A AND B

**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.

**Exception:** Barriers for ladders shall not be required where the ladder manufacturer provides a certification statement that the ladder complies with the ladder entrapment test requirements of APSP 4.

**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.

uniform circulation of water so that sanitizer residual is maintained throughout the pool. Where installed, submerged suction outlets shall conform to APSP 16.

**704.9 Surface skimmer systems.** The surface skimming system provided shall be designed and constructed to skim the pool surface when the water level is maintained between the minimum and maximum fill level of the pool.

**704.9.1 Coverage where used as a sole outlet.** Where surface skimmers are used as the only pool water outlet system, not less than one skimmer shall be provided for each 800 square feet ( $74.3\text{ m}^2$ ), or fraction thereof, of the water surface area.

**704.9.2 Coverage where used in combination with other outlets.** Where surface skimmers are not the only outlet for pool water, they shall be considered to cover only that fraction of the 800 square feet ( $74.3\text{ m}^2$ ).

**704.9.3 Location and venting.** Skimmers shall be equipped with a vent that serves as a vacuum break.

## SECTION 705 SAFETY SIGNS

**705.1. Signs to be installed prior to final inspection.** Safety signage such as "NO DIVING" signs and other safe use instruction signs that are provided by the pool and ladder manufacturer shall be posted in accordance with the manufacturer's instructions prior to final inspection.

**705.2 Safety signs for ladders.** Safety signage for ladders shall be in accordance with Sections 705.2.1 through 705.2.3.2.

**705.2.1 A-frame ladders.** Safety signage for A-frame ladders shall be in accordance with Sections 705.2.1.1 through 705.2.1.4.1. The words on the signage shall be readable by persons standing in the pool and standing outside of the pool as applicable for the required location of each sign.

**705.2.1.1 No diving warning.** A-frame ladders shall have the following words posted on the in-pool side of the ladder and on the pool entry side of the ladder: "NO DIVING." The location of the words shall be above the elevation of the design water level of the pool.

**705.2.1.2 Entrapment warning.** A-frame ladders shall have the following words posted on the pool side of the ladder: "TO PREVENT ENTRAPMENT OR DROWNING DO NOT SWIM THROUGH, BEHIND, OR AROUND LADDER."

**705.2.1.3 Type A, A-frame ladders.** Type A double access A-frame ladders shall have the following words posted on the ladder: "REMOVE AND SECURE LADDER WHEN POOL IS NOT OCCUPIED."

**705.2.1.4 Type B, A-frame ladders.** Type B limited access A-frame ladders shall have the following words posted on the ladder: "SECURE LADDER WHEN POOL IS NOT OCCUPIED."

**705.2.1.4.1 Swing up or slide up secured ladders.** Type B limited access A-frame ladders that utilize

swing-up or slide-up sections for limiting access to the pool shall have the following words posted on the ladder as applicable for the type of securing method:

1. "WHEN POOL IS NOT OCCUPIED, SWING UP AND SECURE."
2. "WHEN POOL IS NOT OCCUPIED, LIFT OFF."
3. "WHEN POOL IS NOT OCCUPIED, SLIDE UP AND SECURE."

**705.2.2 Type C staircase ladders.** Type C staircase ladders that swing up to limit access to the pool or that are removed to limit access to the pool shall have the following words posted on the ladder: "WHEN NOT IN USE SWING UP AND SECURE OR REMOVE."

**705.2.3 Type D in-pool ladder.** Safety signage for Type D in-pool ladders shall be in accordance with Sections 705.2.3.1 and 705.2.3.2. The words on the signage shall be readable by persons standing in the pool or standing outside of the pool as applicable for the required location of each sign.

**705.2.3.1 No diving warning.** Type D in-pool ladders shall have the following words posted on the in-pool side of the ladder and on the pool entry side of the ladder: "NO DIVING." The location of the words shall be above the elevation of the design water level of the pool.

**705.2.3.2 Entrapment warning.** Type D in-pool ladders shall have the following words posted on the ladder: "WARNING: TO PREVENT ENTRAPMENT OR DROWNING, DO NOT SWIM THROUGH, BEHIND, OR AROUND LADDER."

Grand Blanc Township  
Building Department

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