



Muskegon Charter Township
1990 E Apple Ave, Muskegon, Michigan 49442
Telephone: (231)777-2555

Pool Requirements

International Swimming Pool and Spa Code: Section 101.2. Scope. The provisions of this code shall apply to the construction, alteration, movement, renovation, replacement, repair and maintenance of aquatic recreation facilities, pools and spas. The pools and spas covered by this code are either permanent or temporary, and shall be only those that are designed and manufactured to be connected to a circulation system and that are intended for swimming, bathing or wading.

Because of potential safety hazard concerns, Muskegon Charter Township requires that a separate fencing permit be taken out by the person installing the fence before a swimming pool permit can be issued.

All swimming pools to be constructed shall be enclosed by a fence which shall be at least four (4) feet in height and which shall be of a type not readily climbed by children. The gates shall be self-closing and latching not readily available for children to open from the outside. Further, all doors with direct access to the pool shall be equipped with an approved alarm system or self-closing doors and latching doors approved by the Building Department. Additional restrictions will affect a corner lot.

If there is an existing fence, an inspection will be required to verify safety requirements for alarms on doors and gates. Entrapment protection for swimming pool and spa suction outlets are required by code.

321.2 Artificial lighting required. When a pool is open during periods of low natural illumination, artificial lighting shall be provided so that all areas of the pool, including all suction outlets on the bottom of the pool, will be visible. Illumination shall be sufficient to enable a lifeguard or other persons standing on the deck or sitting on a lifeguard stand adjacent to the pool edge to determine if a pool user is lying on the bottom of the pool and that the pool water is transparent and free from cloudiness.

323.3 Obstructions and entrapment avoidance. There shall not be obstructions that can cause the user to be entrapped or injured. Types of entrapment include, but are not limited to, wedge or pinch-type openings and rigid, non-giving cantilevered protrusions.

Our building department can be contacted Monday-Thursday between 7:30 a.m. - 6:00 p.m. at (231) 777-2555.

Checklist:

- _____ Two (2) copies of the following drawings are required. Drawings must be drawn to scale, dimensioned and of sufficient clarity. Drawings must be submitted along with a completed permit application form.
- _____ Site plan shall include all dimensions, including size of pool, deck, and pool barrier/fencing, in reference to the property line & all building locations are required to be shown on the pool plans. Property lines must be shown on plans
- _____ Pool plans must have all pool specs and include all pool equipment
- _____ Section through the pool structure must include all depth dimensions
- _____ Equipment drawings' diagrams must include dimension in reference to property line
- _____ A separate permit for the pool barrier/fence is required
- _____ On-ground storable pools shall be installed in accordance with manufacturer's instructions. Decks provided by the pool manufacturer shall be installed in accordance with the manufacturer's instructions. Decks fabricated on site

shall be in accordance with the Michigan Residential Code.

_____ On-ground storable residential pool vinyl liners shall have the identification number affixed to the liner.

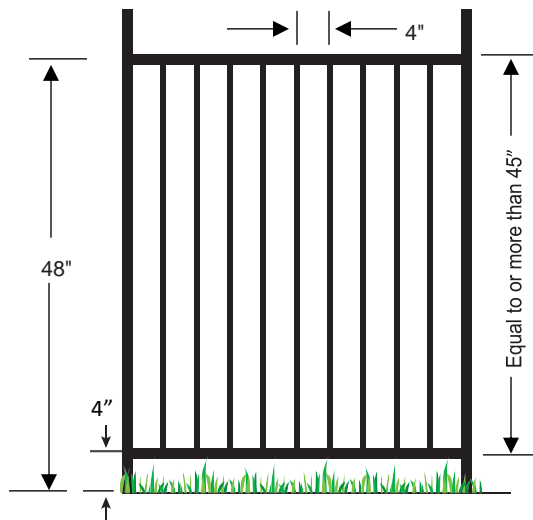
_____ Signed deck handout if plans include decking for above-ground pools

SAFETY BARRIER GUIDELINES, Courtesy of U.S. Consumer Product Safety Commission

An effective pool barrier prevents a child from going OVER, UNDER, or THROUGH the barrier and keeps children from accessing the pool when supervising adults are not present.

Fencing Regulations:

A young child can climb over a pool barrier if the barrier is too low or if the barrier has handholds or footholds that children can use to climb. The top of a pool barrier should be at least 48 inches above grade, measured on the exterior side of the fence or barrier. Some states, counties, or municipalities require pool barriers to be 60 inches above grade.



Eliminate handholds and footholds on barriers and minimize the size of openings when constructing a barrier.

Courtesy of U.S. Consumer Product Safety Commission

For a Barrier with Horizontal and Vertical Members

If the distance between the top side of the horizontal members of the barrier or fence is less than 45 inches high, then the horizontal members should be located on the interior side of the fence.

The spacing between vertical members and within decorative cutouts should not exceed 1 3/4 inches. This size

more than 45"

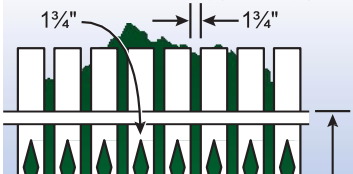
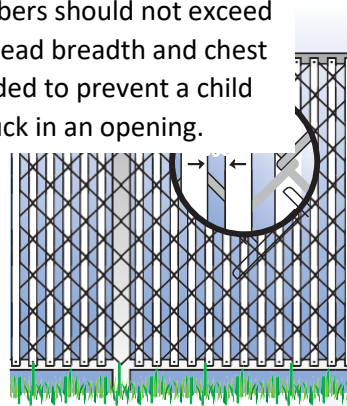
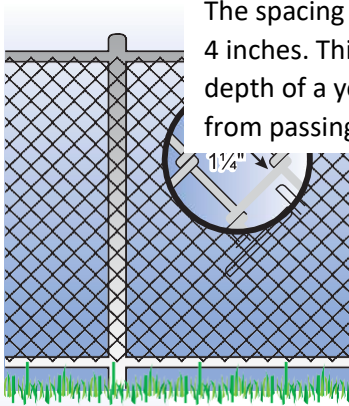
U.S. Consumer Product Safety Commission

45" or more

For a Chain-Link Fence

The openings in the mesh of a chain-link fence should not exceed 1 3/4 inches square unless slats, fastened at the top or bottom of the fence, are used to reduce the mesh openings to no more than 1 3/4 inches.

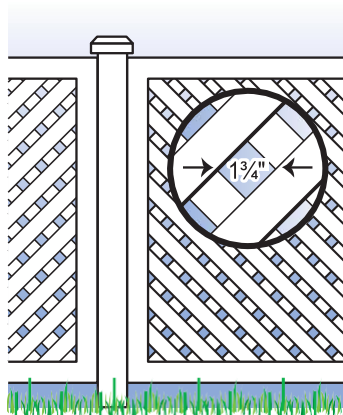
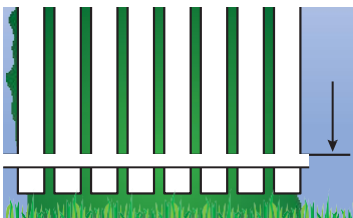
If the distance between the tops of the horizontal members is more than 45 inches high, the horizontal members can be located on the exterior side of the fence. The spacing between vertical members should not exceed 4 inches. This size is based on the head breadth and chest depth of a young child and is intended to prevent a child from passing through or getting stuck in an opening.



Courtesy of U.S. Consumer Product Safety Commission

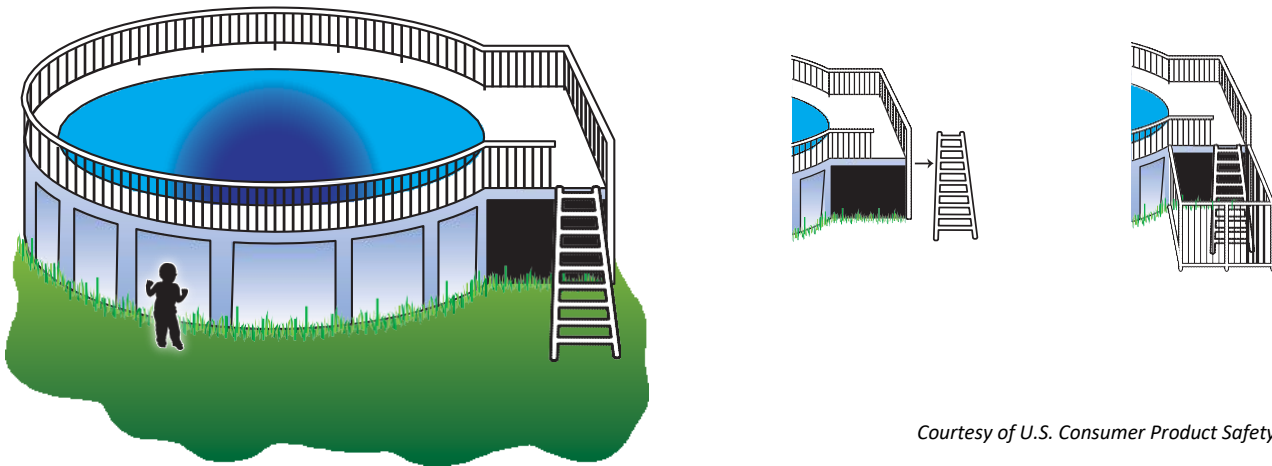
For a Fence with Diagonal Members or Latticework

The maximum opening in the latticework should not exceed 1 3/4 inches.



For Above-Ground Pools

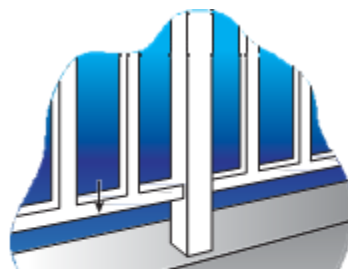
Above-ground pools should have barriers. The pool structure can serve as a barrier if the walls of the pool are high enough, or if a barrier can be mounted onto the top of the pool structure.



If the pool walls are not high enough, or there are other structures close to the pool, such as a ladder or a table or a chair, often children are able to access the pool. There are ways to prevent young children from climbing and gaining access to an above-ground pool. The steps or ladder leading to the pool can be designed to be secured, locked, or removed to prevent access; or the steps or ladder can be surrounded by a barrier, such as the barriers described in these guidelines.

Above-Ground Pool with Barrier on Top of Pool

If an above-ground pool has a barrier on top of the pool, the maximum vertical clearance between the top of the pool and the bottom of the barrier should not exceed 4 inches

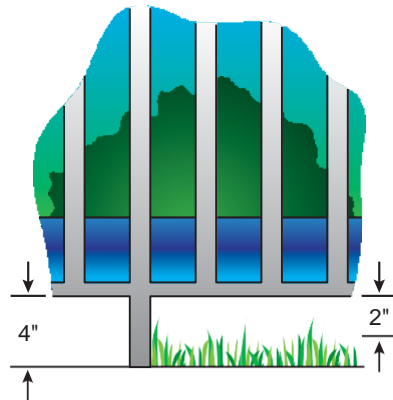


4"

Courtesy of U.S. Consumer Product Safety Commission

How to Prevent a Child from Going UNDER a Pool Barrier

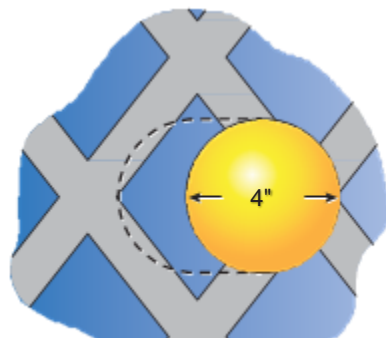
For any pool barrier, the maximum clearance at the bottom of the barrier should not exceed 4 inches above the surface or ground, when the measurement is done on the outside of the barrier. If the bottom of the gate or fence rests on a non-solid surface, such as grass or gravel, industry recommends that the clearance should not exceed 2 inches.



Courtesy of U.S. Consumer Product Safety Commission

How to Prevent a Child from Going THROUGH a Pool Barrier

To prevent a child from going through a pool barrier, restrict the size of openings in the barrier, and use self-closing and self-latching gates. To prevent a young child from going through a fence or other barrier, make sure all openings in the barrier are small enough to prevent a 4-inch diameter sphere from passing through any opening. This size is based on the head breadth and chest depth of a young child.





Courtesy of U.S. Consumer Product Safety Commission



Portable Pools

Portable pools are becoming more popular. Portable pools vary in size and height, from tiny blow-up pools to larger designs that can hold thousands of gallons of water. Portable pools present a real danger to young children.

Never leave children around a portable pool unsupervised.

Portable pools should be fenced, covered, or emptied and stored away when not in use. Tell neighbors, friends, and caregivers that you have a portable pool and advise them of the potential dangers of a portable pool in your yard.

Courtesy of U.S. Consumer Product Safety Commission

Removable Mesh Fences

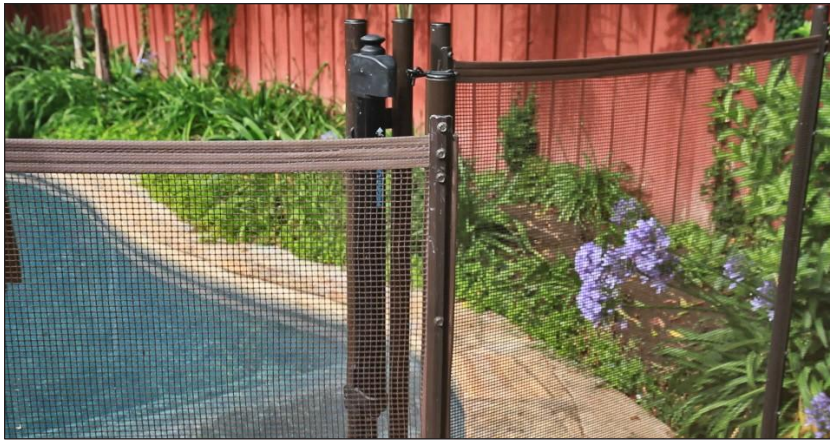
Mesh fences are made specifically for swimming pools or other small bodies of water. Although mesh fences are meant to be removable, the safest mesh fences for pools are locked into the pool deck so that the fence cannot be removed without extensive use of tools. Like other pool fences, mesh fences should be a minimum of 48 inches in height. The distance between vertical support poles and the attached mesh, along with other manufactured features, should be designed to keep a child from climbing the fence. The removable vertical support posts should extend a minimum of 3 inches below grade, and they should be spaced no farther apart than 40 inches. The bottom of the mesh barrier should not be more than 1 inch above the deck or installed surface. *For more information on Removable Mesh Fencing see ASTM standard F 2286 – 05.*



Courtesy of U.S. Consumer Product Safety Commission

Gates

There are several kinds of gates that might be found on a residential property: pedestrian gates and vehicle or other types of gates. Gates can be used as a swimming pool barrier. All gates should be designed with a locking device.



Courtesy of U.S. Consumer Product Safety Commission

Pedestrian Gates

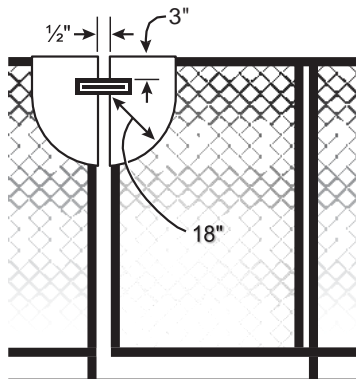
These are gates people walk through. Swimming pool barriers should be equipped with one or more gates that restrict access to the pool. Gates should open out from the pool and should be self-closing and self-latching. With this design, if the gate is not closed completely, a young child pushing on the gate in an effort to enter the pool area will actually be closing the gate, which may then safely latch.



Courtesy of U.S. Consumer Product Safety Commission

When the release mechanism of the self-latching device on the gate is less than 54 inches from the bottom of the gate, the release mechanism for the gate should be at least 3 inches below the top of the gate on the interior side. Placing the release mechanism at this height prevents a young child from reaching over the top of a gate and releasing the latch.

Additionally, the gate and barrier should have no opening greater than $\frac{1}{2}$ inch within 18 inches of the latch-release mechanism. This prevents a young child from reaching through the gate and releasing the latch.



Courtesy of U.S. Consumer Product Safety Commission

All Other Gates (Vehicle Entrances)

Other gates should be equipped with self-latching devices. The self-latching devices should be installed as described for pedestrian gates.



Courtesy of U.S. Consumer Product Safety Commission

When One Side of the House Forms Part of the Pool Barrier

In many homes, doors open directly from the house to the pool area or to a patio leading to the pool. In these cases, the side of the house that leads to the pool is an important part of the pool barrier. Passage through any door from the house to the pool should be controlled by security measures.



Courtesy of U.S. Consumer Product Safety Commission

Door Alarms

All doors that allow access to a swimming pool should be equipped with an audible alarm that sounds when the door and/or screen are opened. Alarms should meet the requirements of UL 2017, General-Purpose Signaling Devices and Systems, Section 77, and have the following features:

- The alarm sound should last for 30 seconds or more and start within 7 seconds after the door is opened.
- The alarm should be loud: at least 85 dB (decibels), when measured 10 feet away from the alarm mechanism.
- The alarm sound should be distinct from other sounds in the house, such as the telephone, doorbell, and smoke alarm.
- The alarm should have an automatic reset feature to deactivate the alarm temporarily for up to 15 seconds, to allow adults to pass through house doors without setting off the alarm. The deactivation switch could be a touchpad (keypad), or a manual switch, and should be located at least 54 inches above the threshold and out of the reach of children.

Self-closing doors with self-latching devices could be used along with door alarms to safeguard doors that give access to a swimming pool.

Courtesy of U.S. Consumer Product Safety Commission

Power Safety Covers

Power safety covers can be installed on pools to provide security barriers, especially when one side of the house serves as the fourth wall or side of a barrier. Power safety covers should conform to the specifications in the ASTM F 1346-91 standard, which specifies safety performance requirements for pool covers to protect young children from drowning.



Indoor Pools

When a pool is located completely inside a house, the walls that surround the pool should be equipped to serve as pool safety barriers. Guidelines recommended for using door alarms, pool alarms, and covers where the house wall serves as part of a safety barrier also apply for all the walls surrounding an indoor pool.

Courtesy of U.S. Consumer Product Safety Commission

