

BOROUGH OF COPLAY
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Coplay, PA 18037

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SWIMMING POOL CODE

This information is accurate to the best of our ability and is set forth as a guide only. For specific questions, please contact the Borough Office.

POOL MILESTONES

Above Ground Pool

1. **Plan Review:** A set of approved plans must be on site for all inspections. Pool is set in place, trench is dug with conduit installed, electrical wiring is completed, and all necessary fencing, gates, and alarms are in place.
2. **Open Trench.**
3. **Pump and motor** are in place.
4. **Bonding is complete.**
5. **Call for inspection.**

In-ground Liner Pool

1. **Plan Review:** A set of approved plans must be on site for all inspections.
2. **Frame is set,** collar is poured, bonding is complete, trenches are dug, conduit is completed, and potting compound is installed.
3. **Equal potential bonding grid** is in place.
4. **Pool electrical wiring** is completed, fences and gates are installed, all alarms are in place and working: pool is completed.

In-ground Formed Pool (poured concrete)

1. **Plan Review,** a set of approved plans must be on site for all inspections.
2. **Steel rebar** is in place, bonding is complete, trenches are dug, conduit is installed, potting compound is installed.
3. **Equal potential bonding grid is in place.**
4. **Pool electrical wiring** is completed, fence and gates are installed, all alarms are in place and working: pool is completed.

DEFINITION

Pools in this Code refer to all private pools. This includes any structures intended for swimming, recreational bathing or wading that contains water over twenty-four (24) inches deep. This also includes in-ground, above ground, and on-ground pools, hot tubs, spas, and fixed-in-place wading pools. Prefabricated swimming pools accessory to single family dwellings which are less than twenty-four (24) inches deep, do not exceed 5,000 gallons and are installed entirely above ground are not regulated herein.

PERMITS AND PLANS REQUIRED

Permits: No swimming pool as defined herein or appurtenances thereto shall be constructed, installed, enlarged, altered, or used until the required permits and inspections have been obtained from the appropriate Municipality.

IT SHOULD BE NOTED THAT:

1. The application for building permit must be submitted by the contractor or their agent. Only when the property owner is doing the actual installation of the pool may they sign the permit application as the applicant. This is the Municipality's way of assuring that the permit is issued to the person directly responsible for the work being done, and as well, Pennsylvania State Law requires all contractors to provide proof of Workmen's Compensation Insurance Coverage when applying for building permits, to protect the property owner if an accident should occur during construction. Furthermore, when work is done in violation of the Municipality Ordinances, the permit applicant is prosecuted (so if the homeowner has taken that responsibility for the contractor, *they* will be prosecuted, NOT the contractor).
2. Building and Electrical Permits are required. However, no separate fencing permit is required when installed in conjunction with the erection of a swimming pool, unless fencing is being installed by a different contractor other than the one installing the pool.

Plans: Plans shall accurately show the dimensions of all structures, proposed and existing, as well as construction type and materials of the pool and all appurtenances related thereto. A detailed plot plan, indicating all existing and proposed structures will also be required to be submitted, which accurately reflects the proposed distances to all property lines. Plans must also detail the type of barrier proposed to enclose the pool; including ladder enclosures, gates, door alarms where required, etc.

INSPECTIONS

All pools, spas, and hot tubs require inspections. An electrical inspection must be performed prior to the covering or concealing of any electrical work servicing the pool. A FINAL building inspection is required PRIOR to using the pool. Please know that if a deck is constructed with the pool, additional inspections will be required. For specific information, contact the appropriate Municipality.

PLEASE REMEMBER THAT UNLESS AND UNTIL THE PROPER FENCING/BARRIER AND SELF LATCHING GATES ARE INSTALLED AND PROPER INSPECTIONS HAVE BEEN PERFORMED BY INSPECTORS AND APPROPRIATE MUNICIPALITIES, YOU MAY NOT USE THE POOL FOR SWUMMING PURPOSES. **NO POOL IS CONSIDERED COMPLETE AND APPROVED FOR USE UNTIL THE FINAL INSPECTION IS PERFORMED.** THEREFORE, IT IS IMERATIVE THAT YOU ARE SURE THE FINAL INSPECTION HAS BEEN DONE.

BARRIERS/FENCING (see attached drawings for additional information)

An outdoor swimming pool, including an on-ground, in-ground, or above ground pool, hot tub or spa, shall be provided with a barrier, which shall comply with the following:

1. The top of the barrier shall be at least 48 inches above grade, measured on the side of the barrier, which faces away from the swimming pool. The maximum vertical clearance between grade and bottom of the barrier shall be 2 inches measured on the side of the barrier, which faces away from the swimming pool.
2. Openings in fencing or barrier shall not allow passage of a 4-inch diameter sphere.
3. Solid barriers, which do not have openings, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. 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, the horizontal members shall be located on the swimming side of t he fence. Spacing between vertical members shall not exceed 1.75 inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches in width.
5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches in width.
6. Maximum mesh size for chain link fences shall be 1.25 inches square (measured on the diagonal); unless the fence is provided with slats fastened at the top or the bottom; then a standard chain link fence may be used.

7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall be no more than 1.75 inches.
8. Where the barrier is mounted on top of the pool structure and the means of access to the pool is a ladder or steps, then the ladder or steps either shall be capable of being secured, locked or removed to prevent access, or the ladder or steps shall be surrounded by a barrier which meets the requirements of this code. When the ladder or steps are secured, locked, or removed, any opening created shall not allow the passage of a 4-inch diameter sphere.
9. Said barrier or fencing shall be a minimum of four (4) feet; but shall not exceed six (6) feet in height.
10. Dwelling unit as a Barrier. Where a wall of a dwelling unit is proposed as part of the barrier/enclosure, the following shall apply:
 - a. Doors with direct access to the pool through that wall shall be equipped with an alarm, which produces an audible warning when the door and its screen are opened. The alarm shall sound continuously for a minimum of 30 seconds immediately after the door is opened and capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm shall be equipped with a manual means to temporarily deactivate the alarm for single opening. Such deactivation shall last no more than 15 seconds. The deactivation switch shall be located at least 54 inches above the threshold of the door.
11. Barriers shall be located so as to prohibit permanent structures, equipment, or similar objects from being used to climb the barrier.
12. Barrier exception: Swimming pools, hot tubs, or spas with an approved safety cover which complies with ASTM F 1346 may be exempt from this section.
13. Pool Covers: Heated pools shall be equipped with a vapor retardant pool cover on or at the water surface. Pools heated more than 90°F (32°C) shall have a pool cover with a minimum insulation value of R-12.
14. Gates. Access gates shall comply with the requirements of this Code, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches from the bottom of the gate, the release mechanism shall be located on the pool side of the gate at least 3 inches below the top of the gate, and the gate and barrier shall have no openings greater than 0.5 inches within 18 inches of the release mechanism.

ELECTRICAL INFORMATION (see attached drawing for additional information)

General: The construction and installation of electrical wiring for equipment in or adjacent to swimming pools, and to all appurtenances thereto shall comply with Chapter 43 of the International Building Code.

Overhead Conductor Clearances: The following parts of pools, outdoor spas, and hot tubs shall not be placed under existing service-drop conductors or any other open overhead wiring; nor shall such wiring be installed above the following:

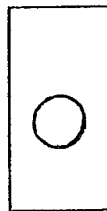
1. Pools and the areas extending 10 feet horizontally from the inside walls of the pool;
2. Diving structures; or
3. Observation stands, towers, and platforms.

Underground Wiring: underground wiring shall not be installed under or within the area extending 5 feet horizontally from the inside walls of pools and outdoor hot tubs and spas except where the wiring is installed to supply equipment for same.

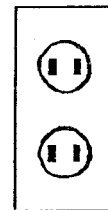
Receptacles

1. Location: a single, locking and grounding type receptacle which is protected by ground fault circuit interrupters and run in conduit, is required for the pump motor which shall be located not closer than 6 feet nor more than 10 feet from the pool, this measurement from the inside walls of the pool.
2. Where Required: At least one 125 Volt 15 or 20 ampere convenience duplex receptacle supplied by a general purpose branch circuit shall be located a minimum of 6 feet from and not more than 20 feet from the inside walls of the pool. This receptacle shall not be located more than 6 feet, 6 inches above the floor, platform or grade level serving the pool, spa, or hot tub.
3. GFCI Protection: All receptacles located within 20 feet of the inside walls of the pool, spa, or hot tub shall be protected by a ground fault circuit interrupter.

15 or 20 AMP
GFCI Protected



Single Twist Lock Receptacle



Duplex Receptacle

4. GFCI Protection is required for cord connected and hard-wired pump motors.
5. Outlets for limited-energy systems – such as fire alarm, signaling, remote control, communication systems, and so forth – must not be installed less than 10 feet from the inside walls of a pool.

Conduit Burial: unless an exception applies, all conduit must be buried a minimum of 18 inches, and electrical conduit ONLY is permitted, no EMT (Electrical Metallic Tubing) or Aluminum (Aluminum conduit is not permitted to be installed for feeders in pool areas where subject to corrosion).

Certifications: All pool, spa, and hot tub equipment must have UL or other nationally recognized testing laboratory approval. Any pool equipment without such a rating is not permitted, and any pool equipment altered by consumer or contractor will violate the national rating and will NOT be acceptable.

Grounding and Bonding: All equipment shall be properly boded and grounded as required by this Code and all other applicable codes, including but not limited to Chapter 42 of the International Residential Code.

Switching Devices: Switching devices shall be located no less than 5 feet horizontally from the inside walls of the pools, except where separated from the pool, spa and hot tub by a solid fence, wall or other permanent barrier.

Disconnecting Means - E 4203.3: An accessible disconnecting means shall be provided and located within sight from all pools, spas and hot tub equipment, and shall be located no less than 5 feet from the inside walls of the pool, spa or hot tub.

Time Switches: Time Switches that can automatically turn off and on heaters and pumps according to a preset schedule shall be installed on swimming pool heaters and pumps.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Where pumps are required to operate a solar-and-waste-heat-recovery pool heating systems.

Pool Heaters: All pool heaters shall be equipped with a readily accessible on-off switch to allow shutting off the heater without adjusting the thermostat setting. Pool heaters fired by natural gas or LPG shall not have continuously burning pilot lights.

APPENDIX G

SWIMMING POOLS, SPAS AND HOT TUBS

(The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.)

SECTION AG101 GENERAL

AG101.1 General. The provisions of this appendix shall control the design and construction of swimming pools, spas and hot tubs installed in or on the lot of a one- or two-family dwelling.

AG101.2 Pools in flood hazard areas. Pools that are located in flood hazard areas established by Table R301.2(1), including above-ground pools, on-ground pools and in-ground pools that involve placement of fill, shall comply with Sections AG101.2.1 or AG101.2.2.

Exception: Pools located in riverine flood hazard areas which are outside of designated floodways.

AG101.2.1 Pools located in designated floodways. Where pools are located in designated floodways, documentation shall be submitted to the *building official*, which demonstrates that the construction of the pool will not increase the design flood elevation at any point within the *jurisdiction*.

AG101.2.2 Pools located where floodways have not been designated. Where pools 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 pool will not increase the design flood elevation more than 1 foot (305 mm) at any point within the *jurisdiction*.

SECTION AG102 DEFINITIONS

AG102.1 General. For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

ABOVE-GROUND/ON-GROUND POOL. See "Swimming pool."

BARRIER. A fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.

HOT TUB. See "Swimming pool."

IN-GROUND POOL. See "Swimming pool."

RESIDENTIAL. That which is situated on the premises of a detached one- or two-family dwelling or a one-family *townhouse* not more than three stories in height.

SPA, NONPORTABLE. See "Swimming pool."

SPA, PORTABLE. A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating *equipment* are an integral part of the product.

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water over 24 inches (610

mm) deep. This includes in-ground, above-ground and on-ground swimming pools, hot tubs and spas.

SWIMMING POOL, INDOOR. A swimming pool which is totally contained within a structure and surrounded on all four sides by the walls of the enclosing structure.

SWIMMING POOL, OUTDOOR. Any swimming pool which is not an indoor pool.

SECTION AG103 SWIMMING POOLS

AG103.1 In-ground pools. In-ground pools shall be designed and constructed in conformance with ANSI/NSPI-5 as listed in Section AG108.

AG103.2 Above-ground and on-ground pools. Above-ground and on-ground pools shall be designed and constructed in conformance with ANSI/NSPI-4 as listed in Section AG108.

AG103.3 Pools in flood hazard areas. In flood hazard areas established by Table R301.2(1), pools in coastal high hazard areas shall be designed and constructed in conformance with ASCE 24.

SECTION AG104 SPAS AND HOT TUBS

AG104.1 Permanently installed spas and hot tubs. Permanently installed spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3 as listed in Section AG108.

AG104.2 Portable spas and hot tubs. Portable spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6 as listed in Section AG108.

SECTION AG105 BARRIER REQUIREMENTS

AG105.1 Application. The provisions of this chapter shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs.

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above *grade* measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of

- the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.
 3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
 4. 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 swimming pool 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.
 5. 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 $1\frac{3}{4}$ inches (44 mm) in width.
 6. Maximum mesh size for chain link fences shall be a $2\frac{1}{4}$ -inch (57 mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than $1\frac{3}{4}$ inches (44 mm).
 7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than $1\frac{3}{4}$ inches (44 mm).
 8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:
 - 8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate; and
 - 8.2. The gate and barrier shall have no opening larger than $\frac{1}{2}$ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.
 9. Where a wall of a *dwelling* serves as part of the barrier, one of the following conditions shall be met:
 - 9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or
 - 9.2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed and *labeled* in accordance with UL 2017. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or
 - 9.3. Other means of protection, such as self-closing doors with self-latching devices, which are *approved* by the governing body, shall be acceptable as long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.
 10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps:
 - 10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or
 - 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

AG105.3 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Section AG105.2, Item 9.

AG105.4 Prohibited locations. Barriers shall be located to prohibit permanent structures, *equipment* or similar objects from being used to climb them.

AG105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AG107, shall be exempt from the provisions of this appendix.

SECTION AG106 ENTRAPMENT PROTECTION FOR SWIMMING POOL AND SPA SUCTION OUTLETS

AG106.1 General. Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

SECTION AG107 ABBREVIATIONS

AG107.1 General.

ANSI—American National Standards Institute
11 West 42nd Street
New York, NY 10036

APSP—Association of Pool and Spa Professionals
NSPI—National Spa and Pool Institute
2111 Eisenhower Avenue
Alexandria, VA 22314

ASCE—American Society of Civil Engineers
1801 Alexander Bell Drive
Reston, VA 98411-0700

ASTM—ASTM International
100 Barr Harbor Drive,
West Conshohocken, PA 19428

UL—Underwriters Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062-2096

SECTION AG108 STANDARDS

AG108.1 General.

ANSI/NSPI

ANSI/NSPI-3-99 Standard for
Permanently Installed Residential Spas AG104.1

ANSI/NSPI-4-99 Standard for Above-ground/
On-ground Residential Swimming Pools AG103.2

ANSI/NSPI-5-2003 Standard for
Residential In-ground Swimming Pools AG103.1

ANSI/NSPI-6-99 Standard for
Residential Portable Spas AG104.2

ANSI/APSP

ANSI/APSP-7-06 Standard for Suction Entrapment
avoidance in Swimming Pools, Wading Pools, Spas,
Hot Tubs and Catch Basins AG106.1

ASCE

ASCE/SEI-24-05 Flood Resistant
Design and Construction AG103.3

ASTM

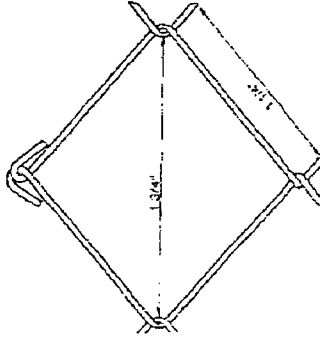
ASTM F 1346-91 (2003) Performance
Specification for Safety Covers and Labeling
Requirements for All Covers for Swimming Pools,
Spas and Hot Tubs AG105.2, AG105.5

UL

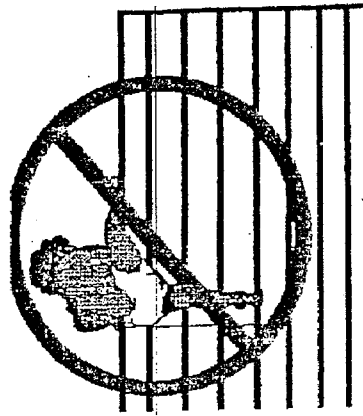
UL 2017-2000 Standard for General-purpose
Signaling Devices and Systems—with Revisions
through June 2004 AG105.2

Barriers, Fences & Gates

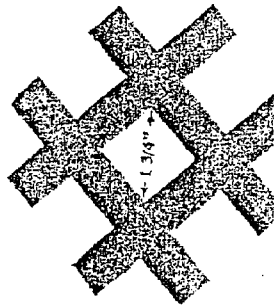
PLEASE NOTE!!!!
 these examples are illustrative only. There may be other regulations which apply to your specific construction. For further information, consult with the Building Inspector or the Building Code.



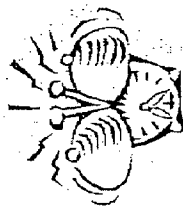
Chain Link Fencing, if used shall have a maximum mesh size of 1.25 inch square, and maximum opening of 1.75 inches



This type of fencing is not permitted.....obviously.....

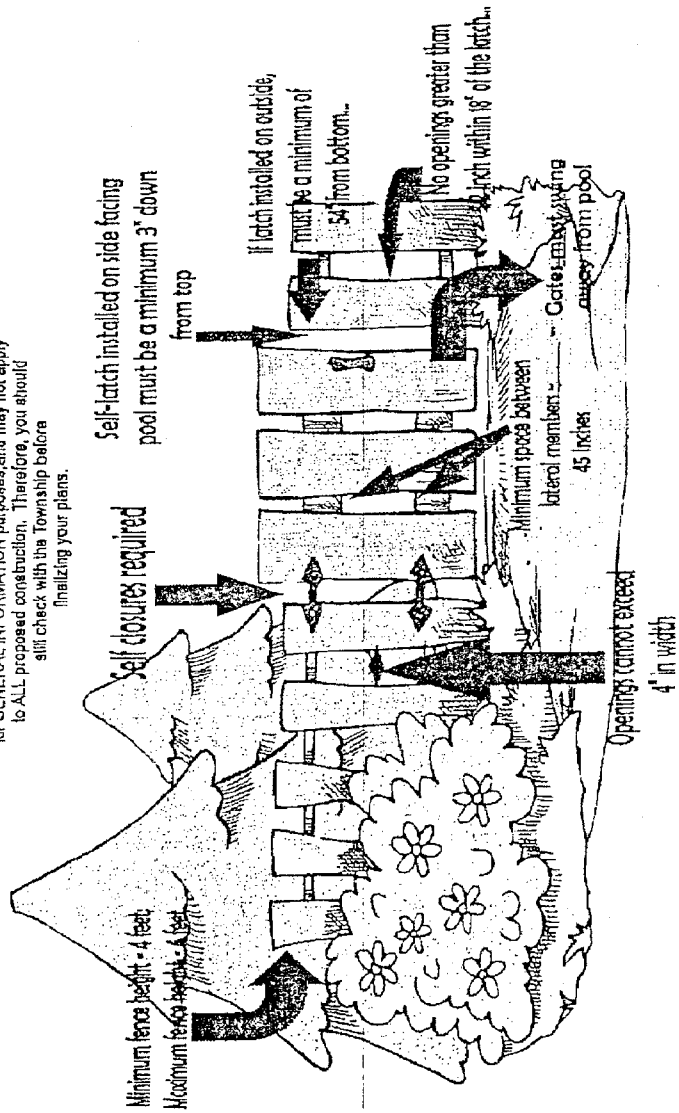


Lattice fencing cannot have openings greater than 1.75 inch....



If the house is to be used as part of the barrier, any doors leading to the pool area must be properly secured, which includes, but may not be limited to the installation of the required alarm system.

Please know that this diagram is meant for GENERAL INFORMATION purposes and may not apply to ALL proposed construction. Therefore, you should still check with the Township before finalizing your plans.



This packet is supplied as a general guide for your convenience. Complete with the 2009 IRC chapter 42 & appendix G as well as any applicable Municipal ordinances is the sole responsibility of the installer/contractor and the applicant.