

Construction Code Requirements for Swimming Pools

The following information is an attempt to explain the requirements of filing for the permits for pools and to provide you with some examples of some typical barriers as prescribed in The New Jersey Edition of the 2009 International Residential Code, this also contains the electrical requirements as prescribed under the National Electrical Code 2008.

All applications for a construction permit shall include the following information:

- (1) Construction permit application folder.
- (2) Provide a Utility Dig Number by calling 1-800-272-1000.
- (3) Completed Building and Electrical applications, if the homeowner is not doing their own electrical work the application must be sealed by a N.J. licensed electrical contractor.
- (4) Two sets of the plans or the manufactures specifications for the pool to be installed.
- (5) Two sets of a survey of the property to reflect the location the pool and the setbacks to the rear and side property lines. The setback for the following Townships are as follows:
Westampton is six feet (6') from both rear and side property lines.
Hainesport Township is fifteen feet (15') from the rear and side property line, with at least (10') to setback to the principal structure.
Eastampton Township is Ten feet (10') from the rear and side property line, with at least (10') setback to the principal structure.

Note: All swimming pools, spas and hot tubs require both a building and electrical permit before the project is started. Also, final inspection must be obtained from this office before the pool, spa or hot tub is used. Failure to do so may result in a fine in the amount of five hundred dollars (\$2000.00) a day for every day that the violation exists.

The following pages are the code requirements for Swimming Pools

PLEASE BE AWARE THAT THE STATE BUILDING REGULATIONS HAVE CHANGED REGARDING POOLS. ANY POOL THAT IS 24" IN DEPTH OR GREATER, REGARDLESS OF THE OVERALL SQUARE FOOTAGE, WILL REQUIRE BUILDING PERMITS FOR INSTALLATION.

A PROPER BARRIER PROTECTION WILL BE NEEDED IN YOUR YARD TO PROTECT THE POOL.

PLEASE CONTACT YOUR LOCAL TOWNSHIP BUILDING DEPARTMENT FOR FURTHER GUIDANCE AND INFORMATION.

Building Code Requirements

APPENDIX G

SWIMMING POOLS, SPAS AND HOT TUBS

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 subject to this code.

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. Deleted.

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. Deleted.

- 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9.

AG105.3 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Section AG105.2, Items 1 through 7.

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

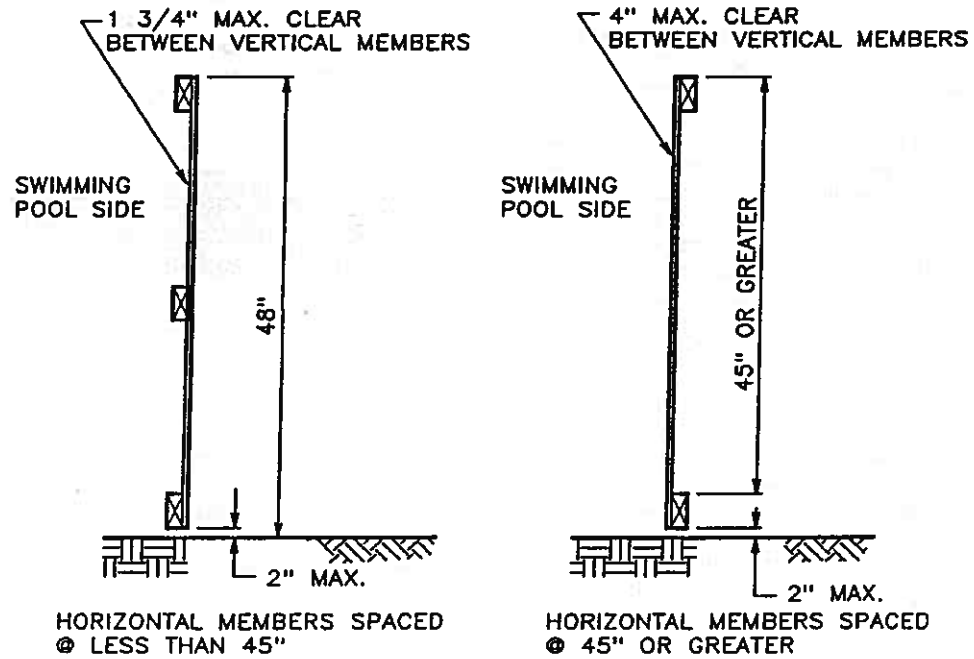


Figure 421.10.1(1)
PRIVATE SWIMMING POOL BARRIER CONSTRUCTION

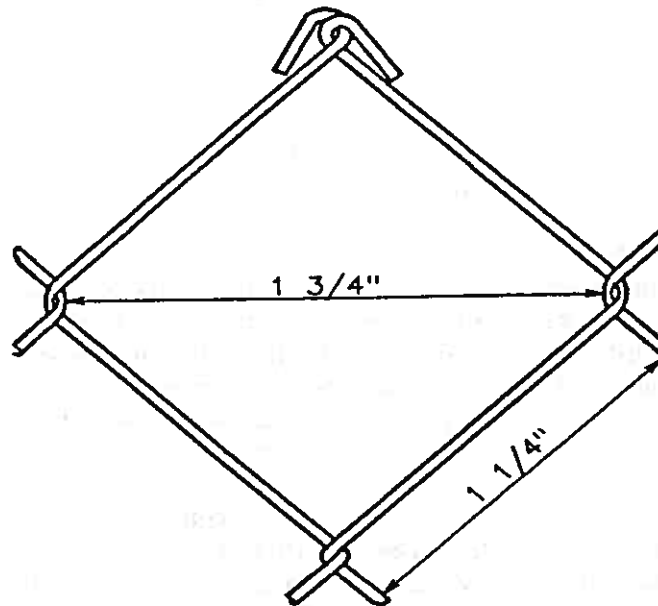


Figure 421.10.1(2)
CHAIN LINK FENCE MESH FOR PRIVATE SWIMMING POOLS

Enclosure For Above Ground, Outdoor, Private Swimming Pool

* Requires Fourth Side Fence Enclosure Under The Deck To Secure Open Under Of Ladder

* Not Illustrated

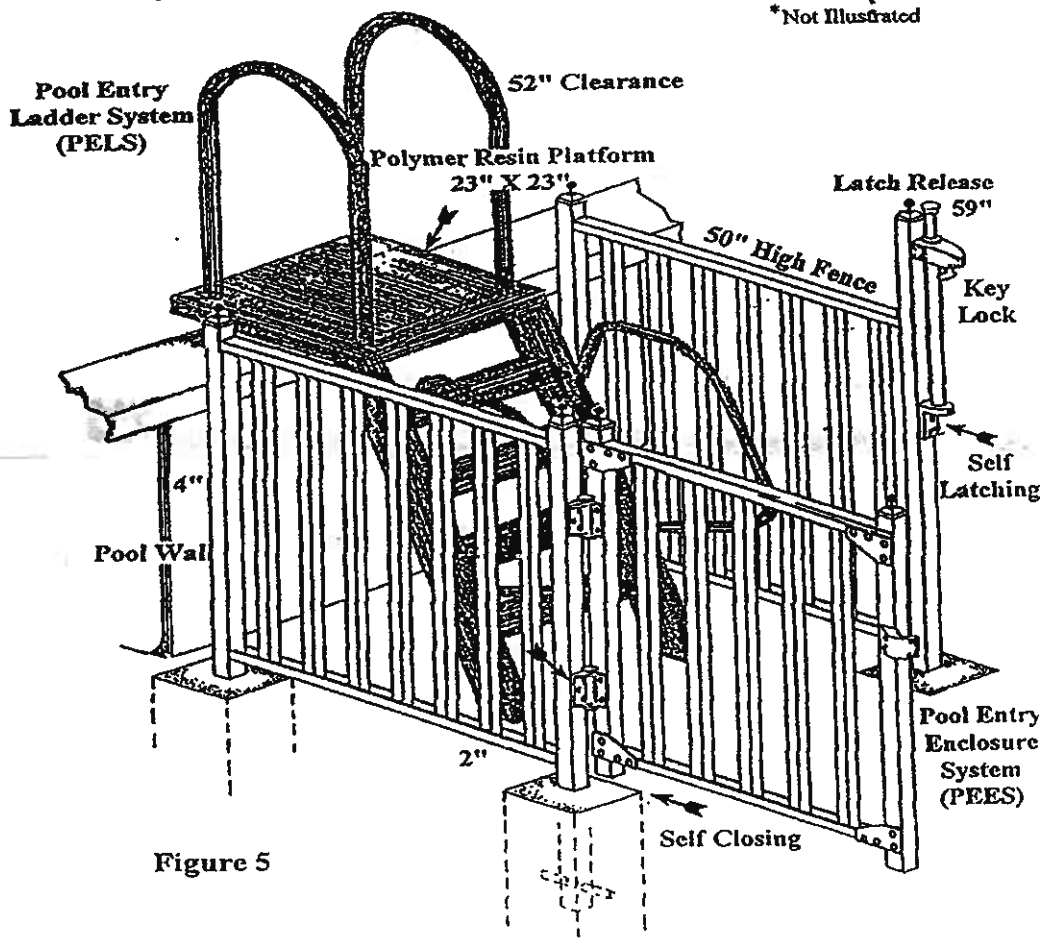


Figure 5

Model Barrier Code Enclosure

Electrical Requirements for Swimming Pools

All Electrical Wiring Shall comply with the 2008 NEC article 680, below are some helpful hints
All plans shall be signed by the applicant, must list the project address and township, block and lot, date prepared. Any of the items checked below are missing from the plans, the information which is missing must be added to the plans and resubmitted before a permit can be issued.

- ☐ 1. All wire, including the cord shall be 12 AWG minimum.
- ☐ 2. 12/2 with ground is acceptable inside the house only! Type UF, NM (romex) or MC.
- ☐ 3. All conductors shall be buried in ridged non-metallic electrical conduit (do not use water pipe), wired with single insulated conductors, buried a minimum of 18 inches below grade.
- ☐ 4. The ground wire in the conduit shall be insulated.
- ☐ 5. A GFCI protected 120 volt convenience receptacle located outdoors is required to be located not less than 10 feet nor more than 20 feet from the inside wall of the pool. This receptacle may be existing, the wiring need not be in conduit, and it cannot be on the same circuit as the pool if the pool pump is rated over 50 % of the circuit ampacity. It must be GFCI protected and not more than 20 feet from the pool.
- ☐ 6. If you wish to have the receptacle for the pool pump located less than 10 feet from the pool, it must meet the following requirements:
 - a. It cannot be less than 5 feet from the pool.
 - b. It must be 20 amp. rated twist lock single receptacle.
 - c. The cover shall be capable of being closed with the plug inserted.
 - d. The circuit shall be GFCI protected.
- ☐ 7. The cord on the pool pump must be 12 AWG and not longer than 3 feet .
- ☐ 8. Free standing receptacles, switches etc... shall be supported by something other than the conduit. (for example: if backed by a pressure treated 4" X 4" would provide the required support)
- ☐ 9. The bonding wire shall be # 8 AWG solid; insulated or bare minimum, lugs shall be copper, brass or stainless.
- ☐ 10. The following shall be bonded together: the pool structure, pump motor, metal ladder, metal fence and any other metal objects within 5 feet of the pool.
- ☐ 11. A ground rod is not required at the pool.

A copy of the 2002 National Electrical Code is available in our office for review, or you can visit www.NFPAcatalog.org to order a copy.

Below you will find a sample wiring diagram

SAMPLE WIRING DIAGRAM FOR ABOVE-GROUND POOL

