CITY OF MADISON HEIGHTS
COMMUNITY DEVELOPMENT DEPARTMENT

ARTICLE XI
SWIMMING POOLS

Sec. 6-283. **Definitions**

The following words and phrases, when used in this Article, shall have the meanings respectively ascribed to them:

- **Private** shall mean that it is not open to the public and is intended for the use of the resident or his immediate family and guests.
- **Swimming pool** shall mean any outdoor artificially constructed pool, located either above or below grade intended for swimming, wading or bathing, having a depth of two feet or more at any point.
- **Portable pool** shall mean a one-piece pool less than twenty-four inches in depth.

Definitions of terms used in this Article other than those listed above shall be as defined by the National Swimming Pool Institute.

Sec. 6-284. **Application of building code to Article provisions**

The applicable provisions of the Madison Heights Building Code adopted by Section 6-16, herein, shall govern the construction, alteration and installation of swimming pools.

Sec. 6-285. **Application of electrical code to Article provisions**

All electrical installations or wiring in connection with swimming pools shall conform to the electrical code of the City relative to swimming pools and no electrical wires shall be permitted over the pool area, excepting public utility wires, including telephone, telegraph and electrical wires.

Sec. 6-286. **Permit Required**

It shall be unlawful for any person to commence construction or assembly of a swimming pool until a building permit authorizing such work shall have been obtained from the Building Official or his or her designee.

Sec. 6-287. **Application requirements**

Application for a permit to construct or assemble a swimming pool shall be approved by the Building Official or his or her designee. Such application shall be accompanied by plans, specifications and calculations in duplicate, drawn to scale and in sufficient detail showing the following:

(1) Plot plan with elevations and topography at not greater than one foot contours for fifty (50) feet measured radially from all points of the pool walls and all existing principal and accessory buildings within said radius;
(2) Pool dimensions, depths and volume in gallons;
(3) Filter system with type and size, filtration and backwash capacities;
(4) Pool piping layout, with all pipe sizes and valves shown, and types of materials to be used;
(5) The rate capacity and head at filtration and backwash (where applicable) flows of the pool pump in gallons per minute with the size and type of motor;
(6) Disposal system for pool wastes;
(7) Mechanical and structural data and details;
(8) Location of sewer lines, and all water supplies and utilities, electrical, gas, telephone, etc., within twenty-five (25) feet of the pool; and wells and private sewage disposal systems within seventy-five (75) feet of the pool;
(9) Location of ditches, drains, culverts and watercourses within the plot areas;
(10) Method to be employed to clean the pool, vacuum, etc.

Sec. 6-288. **Inspections**

(a) Inspections during and after construction or assembly of a swimming pool shall be made by the Building Official or his or her designee for the purpose of determining that all provisions of this Article are being fulfilled and complied with.

(b) Final inspection and approval shall be required prior to pool usage. All pool installations must be completed, filled with water and the filter systems in operation at the time of the final inspection.

(c) The health officer and the Building Official or his or her designee shall have the right at any reasonable hour to inspect any swimming pool for the purpose of determining compliance with the intent of this Article.

Sec. 6-289. **Location of outdoor pool**

(a) There shall be a distance of not less than six feet between the adjoining side and rear property lines and outside of any permanent pool wall. Portable swimming pools may be located three feet from the property line with a six foot screen constructed along the property line, according to specifications set by the Building Official and approved by City Council.

(b) There shall be a distance of not less than six feet between the outside of any non-portable pool wall and a building located on the same lot.

(c) No swimming pool shall be located less than twenty-five (25) feet from any front lot line.

(d) No swimming pool shall be located less than ten feet from any side street or alley right of way, and in the case of a corner lot, the rear lot line of which abuts a lot on the side street, the edge of the pool nearest the side street shall be located not less than the front yard setback distance on the side street.

(e) No non-portable swimming pool shall be located in an easement.

Sec. 6-291. **Additional requirements for non-portable pools**

(a) All types of equipment and material shall be approved by the Building Official before installation on a non-portable pool. All work shall be done in a workmanlike manner. The pool structures shall be engineered and designed to withstand the expected forces to which it may be subjected.

(b) A walkway or deck constructed of concrete or other approved material, three feet wide, sloped away from the pool shall be constructed around the perimeter of the pool. The walkway surface shall be reasonably skid resistant.

(c) Excavations shall be protected in an approved manner for safety purposes.

(d) The design of the pool and surrounding area shall be constructed and arranged in such a manner that all scum, splash and deck water shall not return to the pool except through the filter system.

(e) Pool floor and walls shall have an approved impermeable surface.

(f) Diving boards shall be securely anchored and shall be installed with every consideration for safety in usage.

Sec. 6-292. **Water supply and waste disposal**

(a) Swimming pools shall be provided with a potable water supply.

(b) There shall be no cross connection between the potable water system and swimming pool circulation systems. The water supply line to the pool shall be protected against backflow of water by means of a fixed air gap of six inches or more above the highest possible water level, or by an approved vacuum breaker installed in an approved manner. No over the rim fill spout will be accepted unless located under a diving board or installed in an approved manner so as to remove any hazard.

(c) There shall be no direct connections with the private or public sewer system.

(d) All pool drainage and wastewater shall be disposed of in a manner approved by the Building Official and City Engineer. Pool drainage water shall be discharged in such a manner that it flows directly into a storm sewer or other approved disposal area and shall not, in any case, be discharged directly on the ground so as to flow onto any adjoining property except through, or upon, an approved drainage easement.

Sec. 6-293. **Recirculation system**

Every pool shall be equipped with a recirculation system capable of maintaining reasonable clarity of pool water

Sec. 6-294. **Maintenance and operation**

(a) Swimming pools and pool equipment shall be maintained and operated in a manner which will not contribute to health or safety hazards or to a public nuisance.

(b) Proper germicidal levels shall be maintained at all times during pool usage to protect the health of users. A chlorine residual of three to one parts per million shall satisfy this requirement. Other disinfecting agents may be approved by the Building Official or his or her designee.

(c) The pH of the pool water shall be maintained between 7.0 and 7.5.

(d) Testing devices capable of accurately measuring pH and germicidal levels shall be provided and utilized to insure safe pool operation.

Sec. 6-295. **Creation of a nuisance prohibited**

No outdoor swimming pool shall be used in such a manner as to constitute a nuisance as defined in Article II of Chapter 17.

Sec. 6-296. **Responsibility for control of private pool**

No person shall use any private swimming pool unless said pool shall be under the direct control of the owner or a responsible adult person designated by the owner.

Sec. 6-297. **Abandonment**

Failure to maintain any swimming pool or any part thereof for a period of one year or more shall be deemed to be conclusive proof of an intention to abandon the same by the owner thereof; and such swimming pool or any part thereof may be abated by the Building Official in accordance with the provisions of Section 6-294; provided, however; that any intentional abandonment through which a swimming pool constitutes a public nuisance may be summarily abated in accordance with the provisions of Section 6-298.

Sec. 6-298. **Penalty for violation of Article provisions; abatement of nuisances**

Any person, or anyone acting in behalf of said person, violating any of the provisions of this Article, or any rules, regulations or codes lawfully promulgated or adopted hereunder, shall, upon conviction thereof, be subject to a fine of not more than five hundred dollars ($500.00) or to imprisonment for a period of not more than ninety (90) days, or both such fine and imprisonment at the discretion of the court. Each day that a violation of this Article is continued or permitted to exist without compliance shall constitute a separate offense punishable upon conviction in the manner prescribed in this Section.

In addition any improper or incorrect installation, operation, maintenance or use so defined in this Article shall also constitute a nuisance and the Building Official may in addition to the penal provisions abate such nuisance by means of any appropriate court actions.

DEPTH REQUIREMENTS FOR UNDERGROUND ELECTRICAL WIRING

The required depth for underground power wiring varies, based on the type of wiring and the materials being used. This table summarizes the most common requirements from the electrical code.

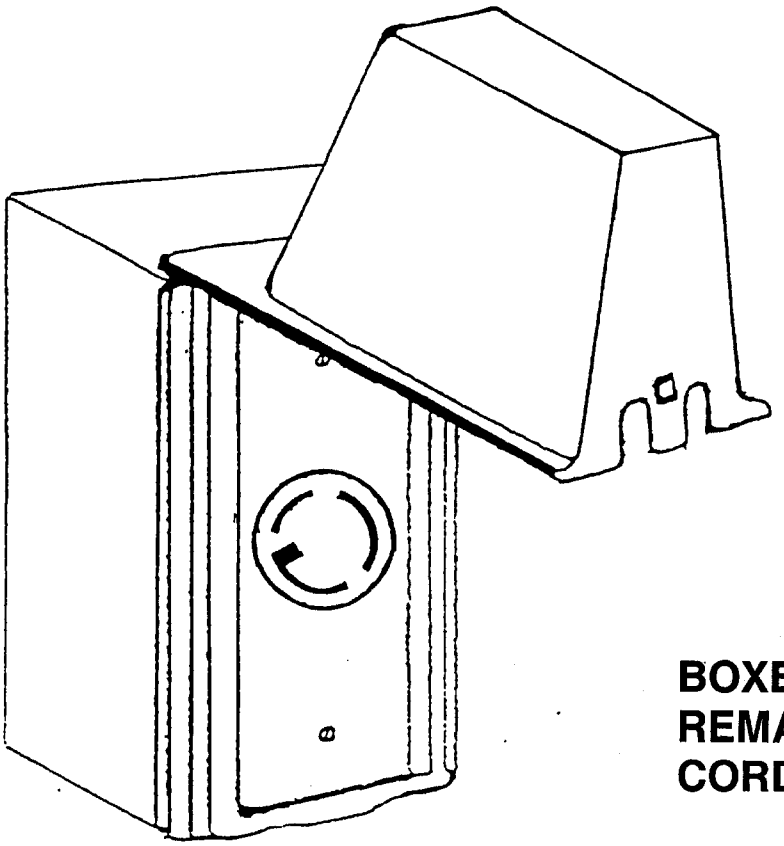
MINIMUM COVER

Cover is the Distance From the Surface of the Ground or Finished Grade to the Top of the Cable or Conduit.

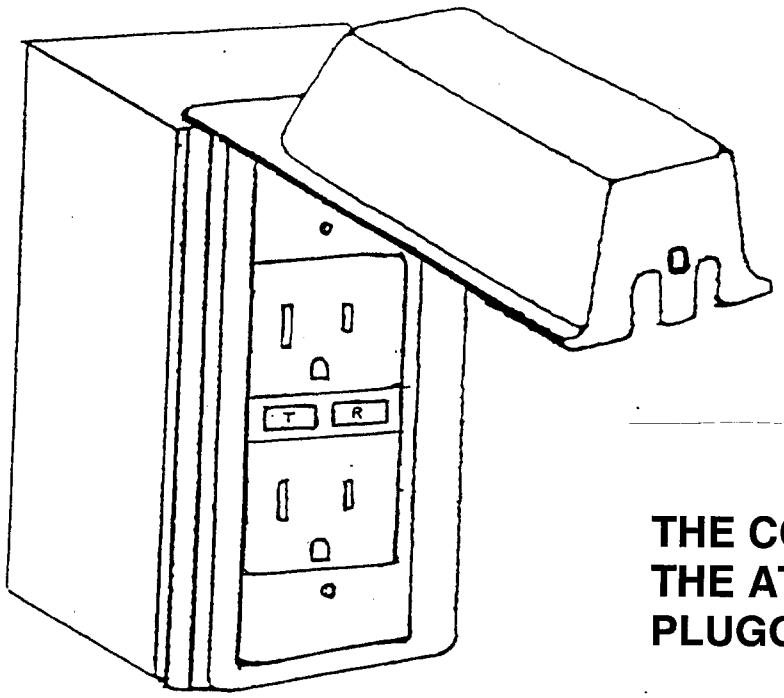
Rigid metal conduit or intermediate metal conduit	6”
Residential wiring, 15 or 20 amps, 120 volts, protected by a ground-fault circuit-interrupter	12”
Nonmetallic conduits (most commonly Schedule 40 PVC – must be electrical, not plumbing)	18”
Direct burial cables Under concrete 4” thick or greater	24” 18”

NOTE: Conductors or conduit emerging from the ground that are subject to damage must be metal or schedule 80 PVC.

- The table shows the amount of cover, not the depth of a trench. For the depth of a trench, add the diameter of the cable or conduit.
- Direct burial cables emerging from the ground must be sleeved in conduit or physically protected.
- Call for electrical inspection of your open trench, with the wiring in place, before covering.



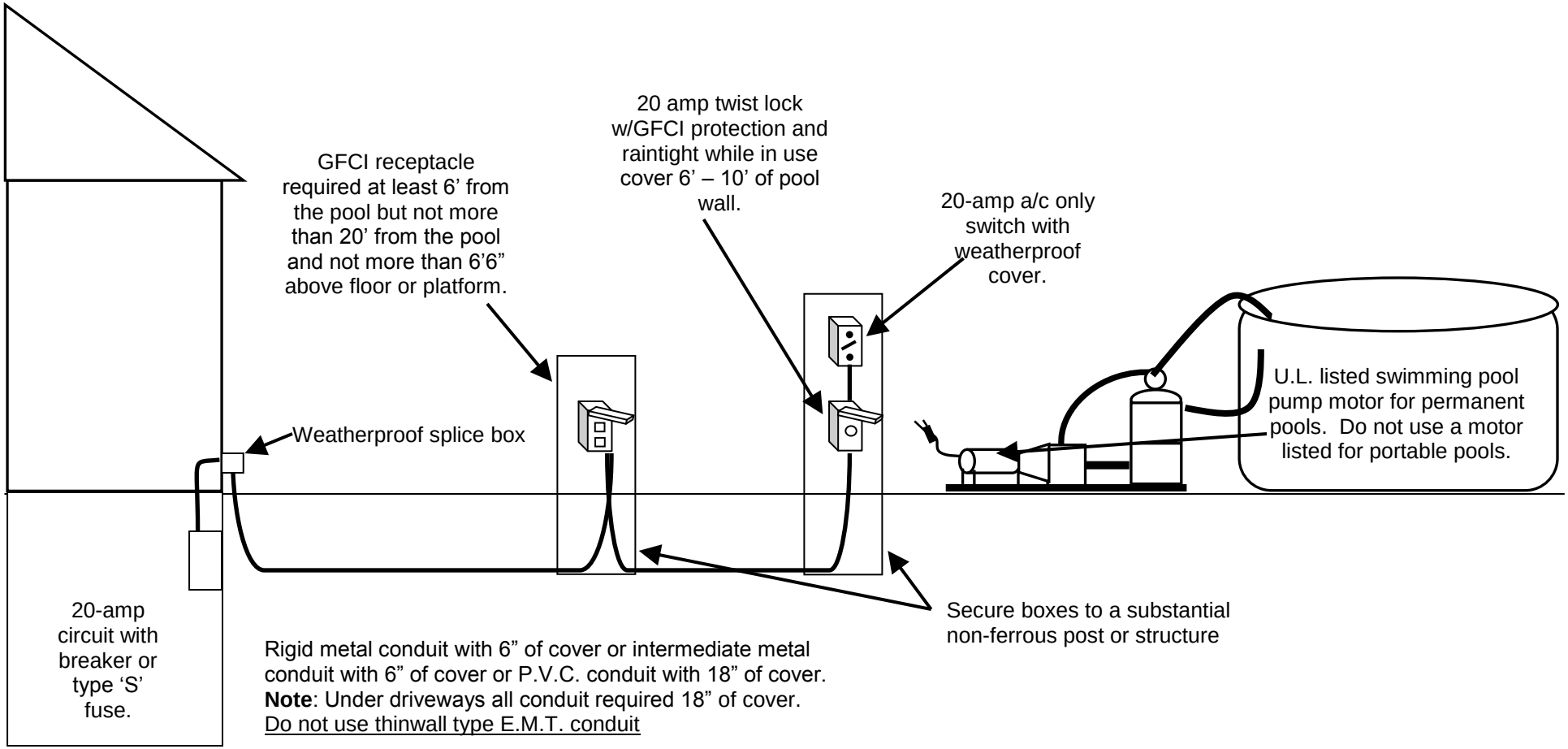
BOXES AND COVERS, WHICH REMAIN WEATHERPROOF WITH CORD AND PLUG, INSERTED.



THE COVER CLOSES AFTER THE ATTACHMENT CAP IS PLUGGED IN.

PERMANENT SWIMMING POOL WIRING

Based on the 2014 NEC and 2015 MRC



Rigid metal conduit with 6" of cover or intermediate metal conduit with 6" of cover or P.V.C. conduit with 18" of cover.
Note: Under driveways all conduit required 18" of cover.
Do not use thinwall type E.M.T. conduit

Use three #12 conductors type TW, THW, THWN, or XHWN.
1 green, 1 black, 1 white. Do not use multi-color cables.

Underground wiring shall not be installed under the pool or within 5 feet of the inside pool wall.

Overhead conductors cannot be closer than 10 feet, measured horizontally, from the inside pool wall.

All wiring must comply with the bonding requirements.

Install equipotential bonding wire (see minimum cover tables).

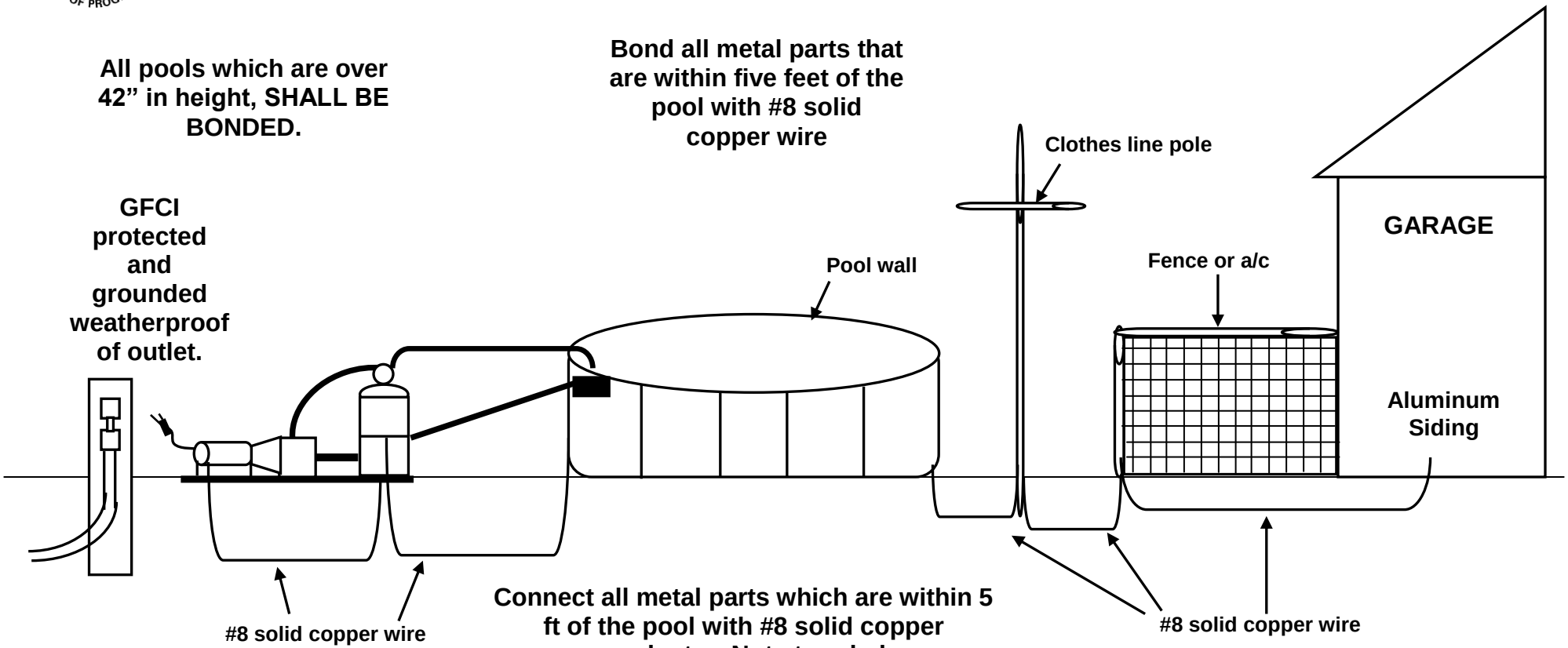
BONDING REQUIREMENTS PERMANENT SWIMMING POOLS

Based on the 2014 NEC and 2015 MRC

All pools which are over 42” in height, SHALL BE BONDED.

Bond all metal parts that are within five feet of the pool with #8 solid copper wire

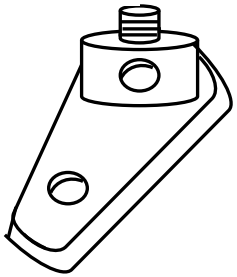
GFCI protected and grounded weatherproof of outlet.



Connect all metal parts which are within 5 ft of the pool with #8 solid copper conductor. Not stranded.
Install equipotential bonding grid.
18” – 24” from pool wall 4” – 6” deep.

Examples are ladders, pool wall, elec. boxes and pump equipment.

LUG



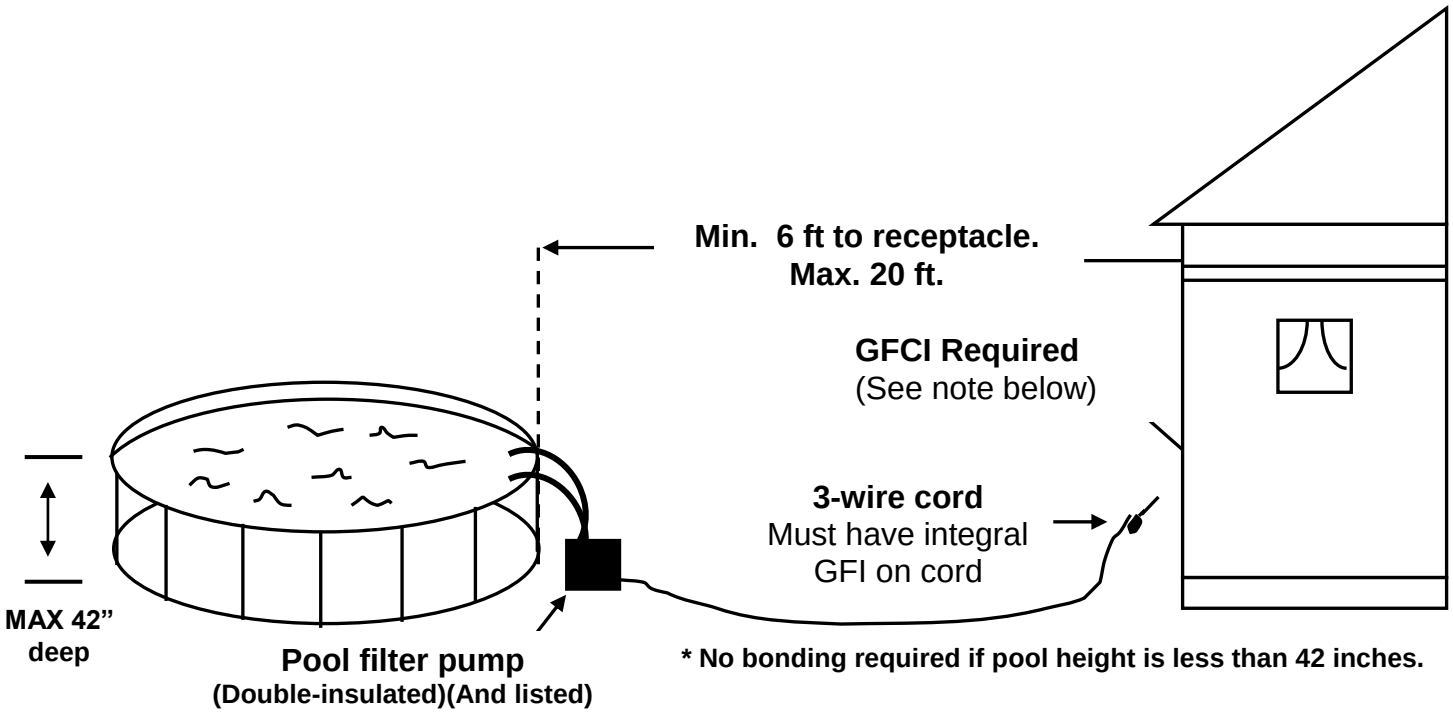
Use all copper, brass or stainless steel lugs and hardware

Based on 2014 NEC and 2015 MRC

EXAMPLE OF A STORABLE SWIMMING POOL

(Pool no more than 3 ½ ft deep)

Based on the 2014 NEC and 2015 MRC



STORABLE POOLS ONLY: The type of pump suitable for use with storable pools has a 25-foot flexible cord and attachment plug. It is marked:

"This Pump is for Use with Storable Pools Only. – DO NOT USE with Permanently Installed Pools. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity. A permanently installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage." Cords may NOT be shortened nor shall attachment caps be changed to a different type. If a listed double insulated pump motor comes with a shortened cord, the assembly must be located so that the cord will reach an electrical outlet at least ten feet away from the pool.

PUMPS

DOUBLE INSULATION: Pumps with a minimum 25-foot supply cord are double insulated and have inaccessible metal parts grounded with the equipment-grounding conductor terminated at the attachment plug. These pumps do not have a bonding connector. Cords shall be equipped with a ground fault circuit interrupter that is an integral part of attachment plug or located in power supply cord within 12" of attachment plug.

GFCI: These units are intended for connection to circuits protected by ground fault circuit interrupts and are marked, "WARNING – Risk of electric shock. Connect only to a grounding type receptacle protected by a ground fault circuit interrupter (GFCI)." All receptacles within 20' of pool walls.

* Note: Outlet will require a raintight while in use cover. Distance from pool to receptacle shall be at least 6 ft.

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 $1^3/_4$ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed $1^3/_4$ 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 $1^3/_4$ inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a $2^1/_4$-inch (57 mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than $1^3/_4$ 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 $1^3/_4$ 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 $^1/_2$ 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 of the code, shall be exempt from the provisions of sections AG105.2, AG105.3, and AG105.4 of the code.

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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

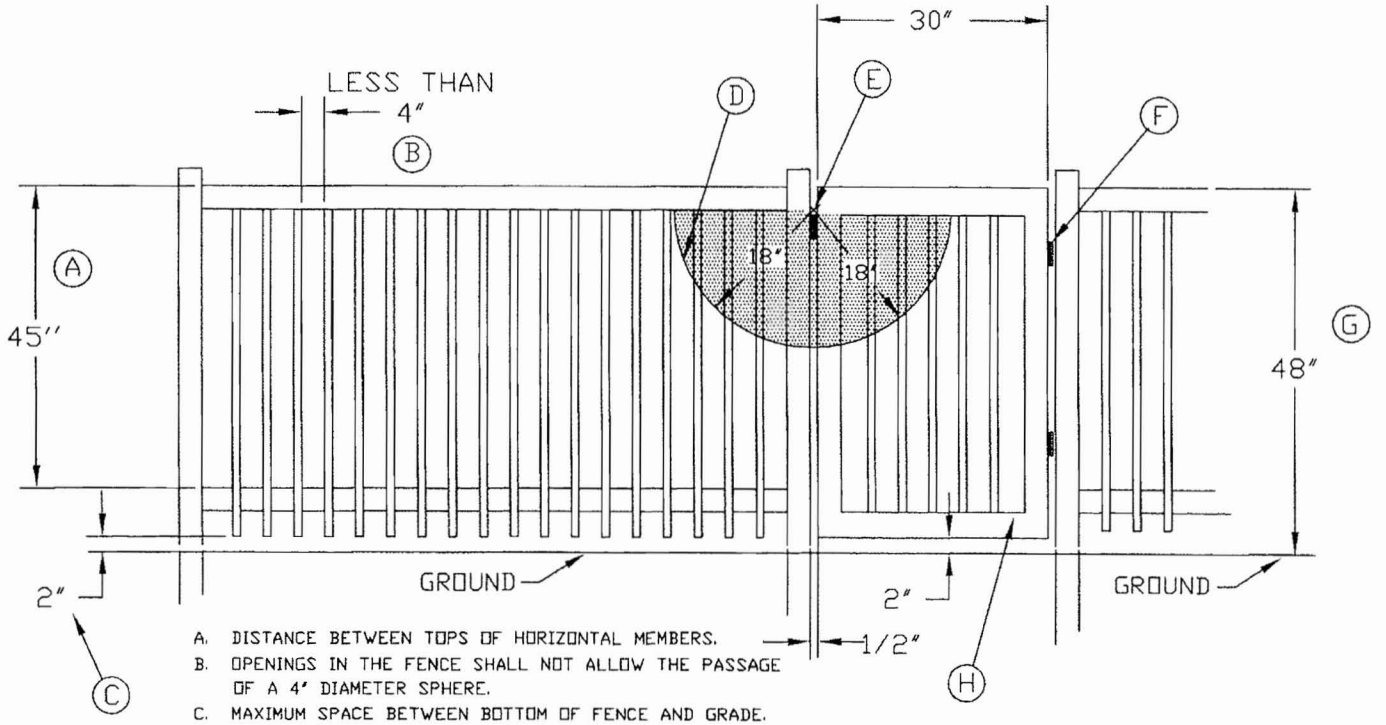
ASCE/SEI-24-05 Flood Resistant
Design and Construction..... AG103.3.

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

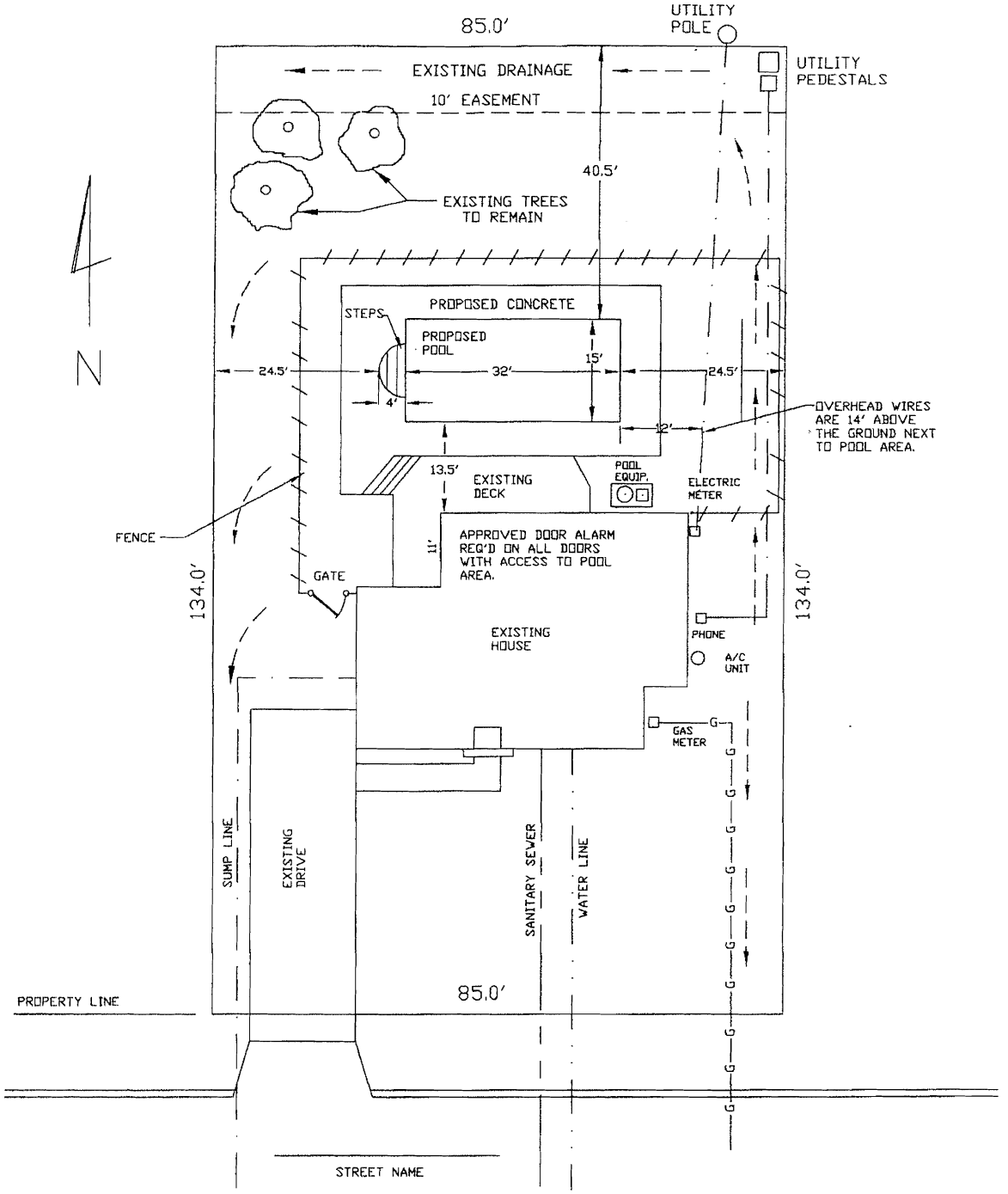
UL 2017-2000 Standard for General-purpose
Signaling Devices and Systems—with Revisions
through June 2004..... AG105.2



A. DISTANCE BETWEEN TOPS OF HORIZONTAL MEMBERS.
B. OPENINGS IN THE FENCE SHALL NOT ALLOW THE PASSAGE OF A 4″ DIAMETER SPHERE.
C. MAXIMUM SPACE BETWEEN BOTTOM OF FENCE AND GRADE.
D. THE GATE AND FENCE SHALL NOT HAVE AN OPENING GREATER THAN 1/2″ WITHIN 18″ OF THE GATE RELEASE MECHANISM. (PLEXI-GLASS, TREATED PLYWOOD, ETC. CAN BE INSTALLED IN SHADED AREA TO MEET 1/2″ MAXIMUM REQUIREMENT.)
E. SELF-LATCHING DEVICE WITH RELEASE MECHANISM LOCATED ON THE POOLSIDE 3″ BELOW TOP OF GATE.
F. SELF-CLOSING GATE.
G. HEIGHT OF FENCE ABOVE GRADE.
H. GATE MUST OPEN OUTWARDS AWAY FROM POOL.

SAMPLE FENCE & GATE DETAILS

SCALE 1/2" = 1'

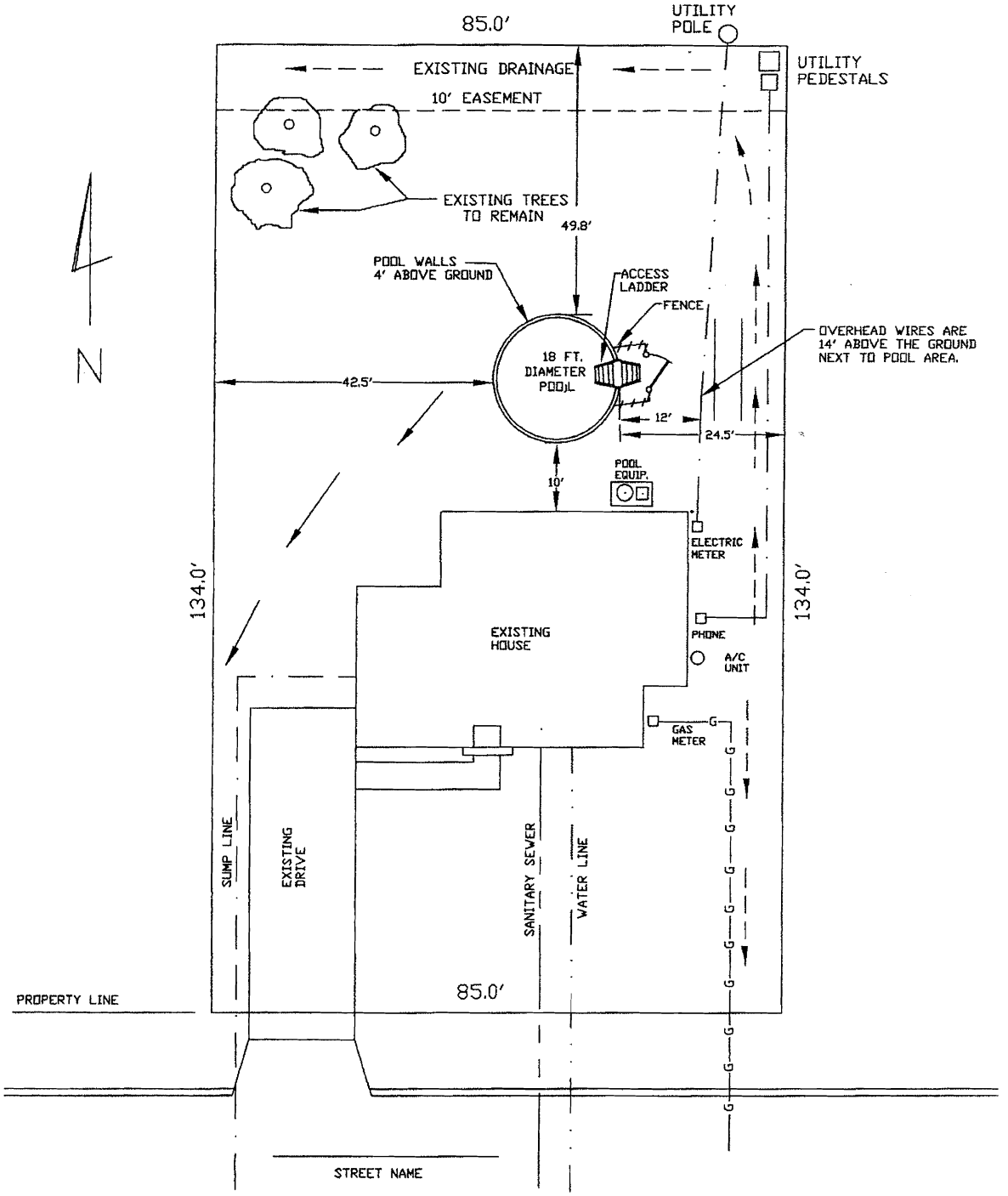


SAMPLE PLOT PLAN

PRIVATE IN GROUND POOL

SHOW THE UTILITY LOCATIONS BOTH ABOVE AND BELOW GROUND.
SHOW THE LOCATION OF THE ELECTRIC METER, GAS METER AND A/C UNIT.
SHOW THE LOCATION OF THE WATER, SANITARY, AND SUMP LINES.

BUILDER: XYZ CONST.	
ADDRESS XXX	PHONE XXX
OWNER: RESIDENT	
ADDRESS XXX	PHONE XXX

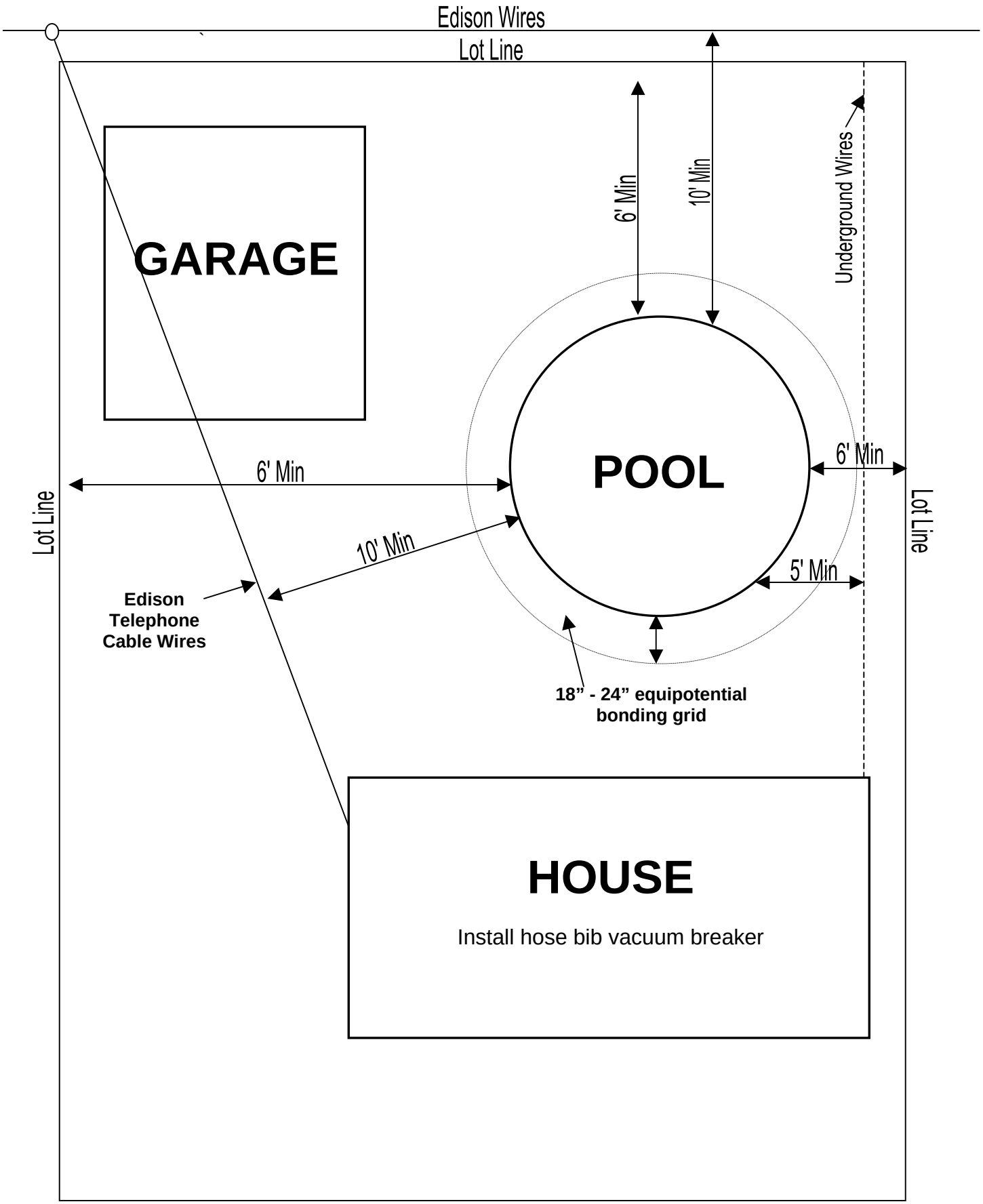


SAMPLE PLOT PLAN

PRIVATE ABOVE GROUND POOL

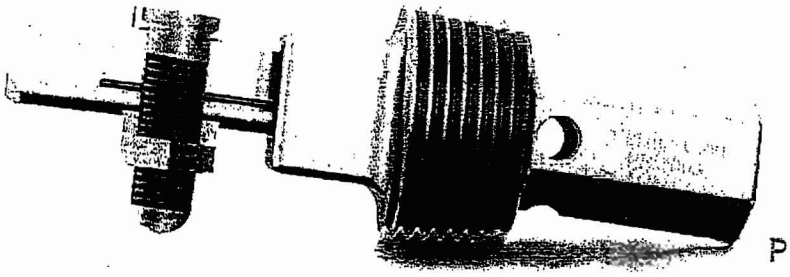
SHOW THE UTILITY LOCATIONS BOTH ABOVE AND BELOW GROUND.
SHOW THE LOCATION OF THE ELECTRIC METER, GAS METER AND A/C UNIT.
SHOW THE LOCATION OF THE WATER, SANITARY, AND SUMP LINES.

BUILDER: XYZ CONST.	
ADDRESS XXX	PHONE XXX
OWNER: RESIDENT	
ADDRESS XXX	PHONE XXX


Edison Wires
Lot Line
GARAGE
6' Min
10' Min
Underground Wires
POOL
6' Min
6' Min
Lot Line
Lot Line
10' Min
5' Min
Edison
Telephone
Cable Wires
18" - 24" equipotential
bonding grid
HOUSE
Install hose bib vacuum breaker

WATER BONDING FITTINGS

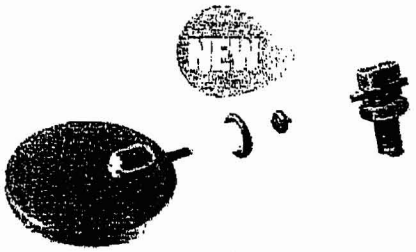
POOLBOND



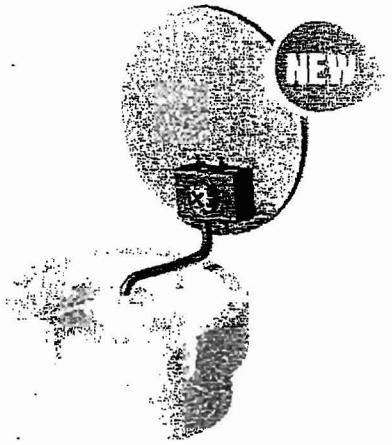
PB-2008

LISTED
4OYZ

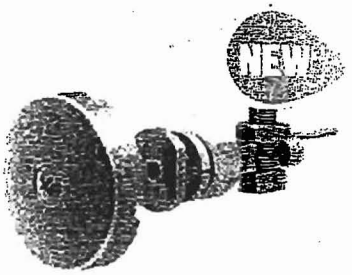
JUST GOT BETTER



ABOVE GROUND
INSTRUCTIONS ON BACK



SKIMMER MOUNT
INSTRUCTIONS ON BACK



WALL MOUNT
PART# PB-W

THE 2008 NATIONAL ELECTRICAL CODE (NEC) REQUIRES THAT AN INTENTIONAL ELECTRICAL BOND BE MADE TO THE POOL WATER. THIS REQUIREMENT IS SPELLED OUT IN SECTION 680.26(C) OF THE NEC. THIS REQUIREMENT COVERS BOTH INGROUND AND ABOVE GROUND POOLS, SPAS, AND FOUNTAINS.

(Patent Pending and UL Listed)

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

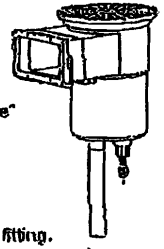
Included: One PoolBond fitting, one bonding lug.
Fitting Type: 1" NPT male pipe thread.

Application: PoolBond can be installed on swimming pools, spas, bathtubs, ponds and fountains. PoolBond will effectively connect the water in pools, spas, and fountains to the equipotential bonding system. Important: PoolBond must be installed at an elevation below the water line to insure that the water remains bonded when the filtration system is not operated. Installation is shown for an in-ground swimming pool. On other installations, the same guidelines apply.

Where to Install: PoolBond can be installed at any location in the pool's filtration piping as long as the elevation of the PoolBond fitting is at least 3 inches below the elevation of the pools water surface. Always install PoolBond in an orientation that avoids trapped air. Three typical installations are illustrated below. Care must be taken to properly pressure test all plumbing prior to burial of lines. Review "Assembly Procedure" for proper tightening of the PoolBond fitting in plastic plumbing. PoolBond is cast from a corrision resistant bronze alloy and will not corrode under normal swimming pool chemical conditions including salt system sanitation.

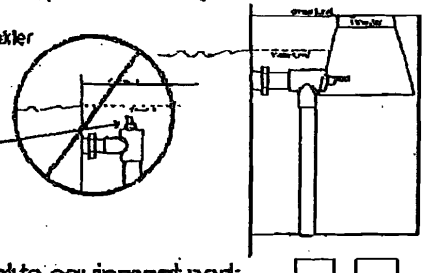
1. Install in Skimmer:

- Using proper sized plastic bushings, PoolBond can be installed in one of the threaded skimmer outlet ports. See "Assembly Procedure" for proper tightening of PoolBond.



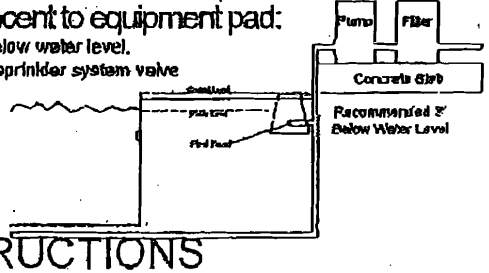
2. Install in a return line:

- PoolBond can be installed in the filtration return line adjacent to inlet fitting. Avoid installations that could trap air.
- If access is required for service purposes, a sprinkler system valve box can be used for access.



3. Install on suction side adjacent to equipment pad:

- Install on suction side plumbing at least 3" below water level.
- If access is required for service purposes, a sprinkler system valve box can be used.



SAVE THESE INSTRUCTIONS

(Patent Pending and UL Listed)

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2. Install in a return line:

- PoolBond can be installed in the filtration return line adjacent to inlet fitting. Avoid installations that could trap air.
- If access is required for service purposes, a sprinkler system valve box can be used for access.

Do Not install as shown
Trapped air will prevent proper contact with water

3. Install on suction side adjacent to equipment pad:

- Install on suction side plumbing at least 3" below water level.
- If access is required for service purposes, a sprinkler system valve box can be used.

Pump
Filter
Concrete Slab
Recommended 3"
Below Water Level

SAVE THESE INSTRUCTIONS