



## Construction Requirements For Swimming Pools & Spas

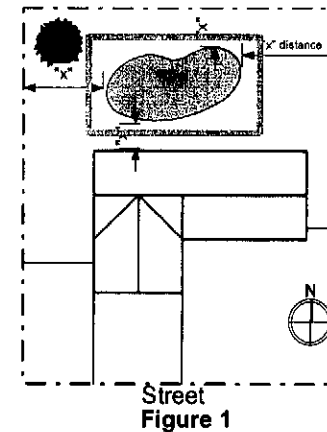
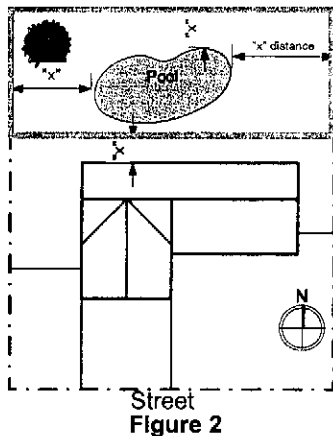
**PERMITS REQUIRED:** All bodies of water used for recreational bathing or swimming greater than 18" (inches) deep are required to be permitted and inspected. A single permit will be issued for your pool or spa and all associated equipment. (Encroachment permits may be required from the Engineering Division when intending to use public right-of-way.)

### FENCE AND GATES

#### **REQUIRED PROTECTION:**

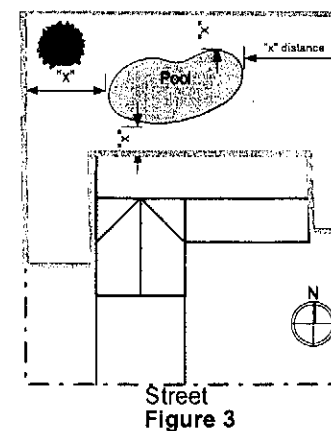
ALL pools, spas, and bodies of water as described above, greater than 18" (inches) in depth shall be protected from unwanted access by one of the following:

1. Completely surround the pool or spa on all sides with a 5' high, non-climbable fence. (See "Enclosure" page 2)



2. Provide a non-climbable fence between the house and the pool, and utilize the property line fences (walls) to act as the remaining barriers. (See "Enclosure" page 2)

3. Use the rear yard fencing as a portion of the barrier with the wall of the house as the remaining barrier. The house must have alarms on all doors that provide access to the pool area. The door alarms are to meet all the following
  - a) Has a continuous audible sound,
  - b) sounds within 7 seconds upon the door being opened, and
  - c) keeps sounding while the door is open.



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# Construction Requirements

## For Swimming Pools & Spas (continued)

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### SWIMMING POOL AND SPA ENCLOSURE PROTECTION

#### 1. General

All bodies of water used for recreational bathing or swimming greater than 18" in depth shall be equipped with at least one of the following safety features to provide a complete enclosure:

- a) The pool shall be isolated from access to a home by an enclosure that meets the requirements of UBC section 3152B (see section 2. Enclosure)
- b) The pool shall be equipped with an approved safety cover that meets or exceeds ASTM Standard F1346-91. Hot tubs or spas shall be equipped with a locking safety cover that meets or exceeds ASTM-ES 13-89.
- c) The residence shall be equipped with exit alarms that make an audible, continuous sound whenever any door that permits access from the home to the pool area is opened or left ajar. Alarms may be battery operated and have an on/off switch.
- d) All doors providing direct access from the home to the pool area, when not equipped with exit alarms (see "C" above), shall be self-closing and self-latching with the release mechanism placed no lower than 54" above the finished floor. (see page 1 figure # 3).
- e) All man doors from garages providing direct access to the pool area shall be self-closing and self-latching with the release mechanism placed no lower than 54" above the finished floor, or in lieu of the latch, the door is equipped with an exit alarm.
- f) Other means of protection; if the degree of protection is equal to or greater than that afforded by any of the devices listed above and approved by the Building Official.

#### 2. Enclosure

All enclosures shall have all of the following characteristics:

- a) Any access gates through the enclosure shall open away from the pool area and be self-closing and self-latching with the latching device placed no lower than 60" above the ground. Gate widths shall be limited to 4' maximum with wider gates meeting the regulations for vehicular gates.
- b) Double doors or pairs of vehicular gates require that one side be fixed with a rod that extends into the ground. The opposite gate shall be latched at 60" above the ground. In addition to the latch and rod, the two gates are required to be bolted together in a manner that requires the use of a tool for removal or opening (**Padlocks are not acceptable**). Vehicular gates may swing in any direction.
- c) A minimum height of 60". The height differential for walls and fences adjacent and perpendicular to the required enclosure shall maintain a 2' minimum distance below the top of the enclosure.
- d) A maximum vertical clearance from the ground to the bottom of the enclosure of 2".
- e) Gaps or voids, if any, do not allow passage of a sphere equal to or greater than 4" in diameter (chain link fencing is acceptable).
- f) An outside surface free of protrusions, cavities and other physical characteristics that would serve as handholds or footholds that could enable a child below the age of five years to climb over.

**NOTE: A complete site plan will be required for all permits. The type and location of the swimming pool / spa enclosure shall be clearly shown on the plans. This is to include all fences and gates as well as door alarms.**

#### Notice to Contractors:

**Any person entering into an agreement to build a swimming pool shall give the consumer notice of these State regulations.**

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# Construction Requirements

## For Swimming Pools & Spas (continued)

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### PLUMBING INSTALLATIONS

Plumbing shall comply with the most recently adopted edition of the California Plumbing Code.

#### Water lines

All exposed PVC shall be painted with ultraviolet protection (ie. Latex paint)

#### Gas Lines

New gas lines shall not utilize the Southern California Gas Company's plugged test tee to connect to the gas meter. (See figure 4)

Gas piping may not be installed under concrete that is intended to be covered by a room addition, patio cover, wood deck or other structure.

#### 1. Polyethylene (PE) Gas Piping (PVC NOT ALLOWED)

Plastic gas yard piping is required to be buried 18" minimum below finish grade.

Only approved transition fittings shall be used when changing from plastic piping to metal piping. They shall be installed horizontally not less than 30" from the riser with the metallic pipe extending to the risers at the heater and meter locations. When the termination of plastic piping occurs at a meter vault, transition to metal piping must occur a minimum of 24" outside of the vault.

Transition fittings shall be left unwrapped for inspection purposes and then primed and wrapped with tape approved for that purpose.

#### 2. Steel Gas Piping

Steel gas pipe shall be either machine coated, dipped and wrapped or coated by some other type of approved means that comply with the California Plumbing Code installation standards. All risers, fittings and short lengths of pipe less than 6" above finish grade shall be primed and spirally wrapped with 10mil tape to a 40 mil. thickness. Burial depth shall be a minimum of 12" below grade.

#### 3. Testing of Gas Piping

All gas lines are to be tested prior to use and are to be under pressure when the inspector arrives at the job. The gas line must be pressure tested with air at 10 psi for a minimum of 15 minutes.

### MECHANICAL EQUIPMENT

Heaters and other mechanical equipment are to be listed by an approved listing agency and installed according to the manufacturer's installation instructions, and the latest adopted editions of the California Plumbing Code, and the California Mechanical Code.

#### 1. Flexible Connectors

Flexible gas appliance connectors shall be listed and approved for outdoor use and may not penetrate the walls of a heater enclosure.

#### 2. Clearances

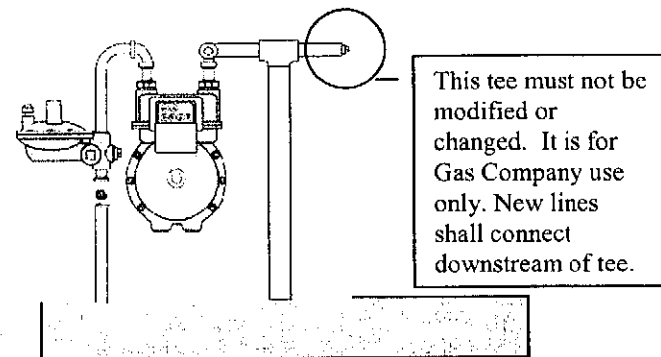
The Mechanical Code requires that pool and spa heaters be located a minimum of 4' from openings into a building as well as 5 feet from property lines (minimum Planning Department setback). For clearances to combustible material, see the manufacturer's installation instructions.

#### 3. Pool Cover (C.E.C. compliance only)

If the pool or spa is equipped with a gas heater, a pool cover shall be available at the time of final inspection.

#### 4. Piping (Energy requirement)

At least 36" of pipe length is required between the filter and the heater to allow for the future addition of solar heating equipment.



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# Construction Requirements

## For Swimming Pools & Spas (continued)

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### ELECTRICAL INSTALLATIONS

Electrical wiring and equipment in or adjacent to pools, spas or fountains shall comply with the applicable requirements of the most recently adopted edition of the California Electric Code.

#### 1. Underground Wiring Locations

Except for wiring supplying pool or spa equipment, underground wiring may not be located under the pool or within an area extending 5 feet (1.52m) horizontally from the wall of the pool. (When space limitations exist, special approval may be attained if certain installation conditions are met.)

##### a) Rigid Nonmetallic Conduit (plastic)

Rigid nonmetallic conduit for circuits exceeding 20 amperes is required to be a minimum of 18" below grade. For GFCI protected circuits of 20 amperes or less the minimum burial depth is 12". These burial depths may be reduced to 4" when the conduit is located under a 4" thick concrete slab with no vehicular traffic (such as driveways), and the slab extends not less than 6" beyond the underground installation.

##### b) Rigid Metal Conduit

Rigid metal conduit is required to be a minimum of 6" below finish grade. This burial depth may be reduced to 4" when the conduit is located under a 4" concrete slab with no vehicular traffic.

Metal conduit passing through the pool decking shall be protected from corrosion by either a factory applied plastic coating or field wrapped with primer and a listed 10 mil. tape.

#### 2. Overhead Conductor Clearances

Overhead conductors, less than 20' vertical distance above, or 20' horizontal distance from a swimming pool or spa, may be restricted by the Electrical Code or by the electrical utility company. If wiring exists, or is proposed in the area described above, contact the Building and Safety Division and Southern California Edison Company.

#### 3. Feeders

Feeder conductors to sub-panels serving swimming pools and/or spas shall have sufficient ampacity to supply the load served.

#### 4. Junction Box Support

Electrical enclosures shall be rigidly supported from a structural member of a building or structure such as a block wall, gazebo, or spa enclosure. Junction boxes not over 100 cubic inches will be considered as adequately supported if two or more rigid metal conduits are threaded wrench tight into the box and those conduits are supported within 18" of the box. Non-metallic conduit shall not be used as a means of support for junction boxes.

#### 5. Wet Niche Fixtures

Approved metal forming shells shall be installed for the mounting of all wet-niche underwater fixtures and shall be equipped with provisions for threaded conduit entries.

Conduit shall be extended from the forming shell to a suitable junction box or other enclosure located not less than 4' from the inside wall of the pool.

Metal conduit shall be brass or other corrosion resistant material.

Where rigid nonmetallic conduit is used, a No. 8 insulated copper conductor shall be installed in this conduit with provisions for terminating in the forming shell, junction box or transformer enclosure, or ground fault circuit interrupter enclosure. The termination of the No. 8 conductor in the forming shell shall be covered with, or encapsulated in, a listed potting compound to protect such connection from the possible deteriorating effect of pool water.

#### 6. Receptacle required

Provide electrical receptacle between 10' and 25' of the pool. Receptacles must be GFCI protected.

# Construction Requirements For Swimming Pools & Spas (continued)

## WHEN TO CALL FOR INSPECTION

Inspections may be obtained by calling 909/477-2777 for automated permit scheduling. Building and Safety must receive requests prior to 4:30pm in order for an inspection to be scheduled for the following business day. Requests for Monday inspections must be received prior to 4:30pm on the previous Friday. Please provide the permit number, job address and the type of inspection desired when placing an inspection request.

Inspectors may be reached in the office between 7:00a.m. and 8:00 a.m. to discuss code issues and to inquire about inspection times. Answers to general code questions may be obtained between the hours of 7:00 a.m. and 6:00p.m. Monday through Thursday by calling the general code information line at 909/477-2710 and selecting 4 from the automated attendant.

### 1. Excavation, Set backs and Bonding (Before guniting) Inspection

When the pool has been excavated, all required reinforcing steel is in place and bonded together with all metal parts of the pool structure, light forming shells, all metal parts of electric equipment associated with pool circulating system, metal parts associated with pool covers, and all fixed metal parts (including metal window frames and doors, post bases and wrought iron fencing and railings that are within 5' horizontally of the inside walls of the pool). All plumbing / piping associated with the pool circulation system and / or the spa jets.

### 2. Underground Inspection

When the electrical conduit has been installed, electrical boxes are in place with the proper supports, and the conductors pulled, and the gas line has been installed, capped and pressurized to a minimum of 10 p.s.i. The minimum burial depth of gas and electric lines will be checked at this time.

### 3. Enclosures and Rough Electrical (Fence and gate) Inspection

When pool fencing and gates comply with the pool enclosure requirements specified above, and all plumbing, electrical, and heater connections are complete but prior to plastering the pool

**It is the responsibility of the pool contractor to clear and remove excess and spilled plaster from the job site and adjoining public right-of-way immediately after the completion of the pool plastering operation. Failure to do so may result in additional inspection fees being levied and further legal action.**

### 4. Final Inspection

When the pool cover is on the job site, the pool is filled and all equipment is operational.

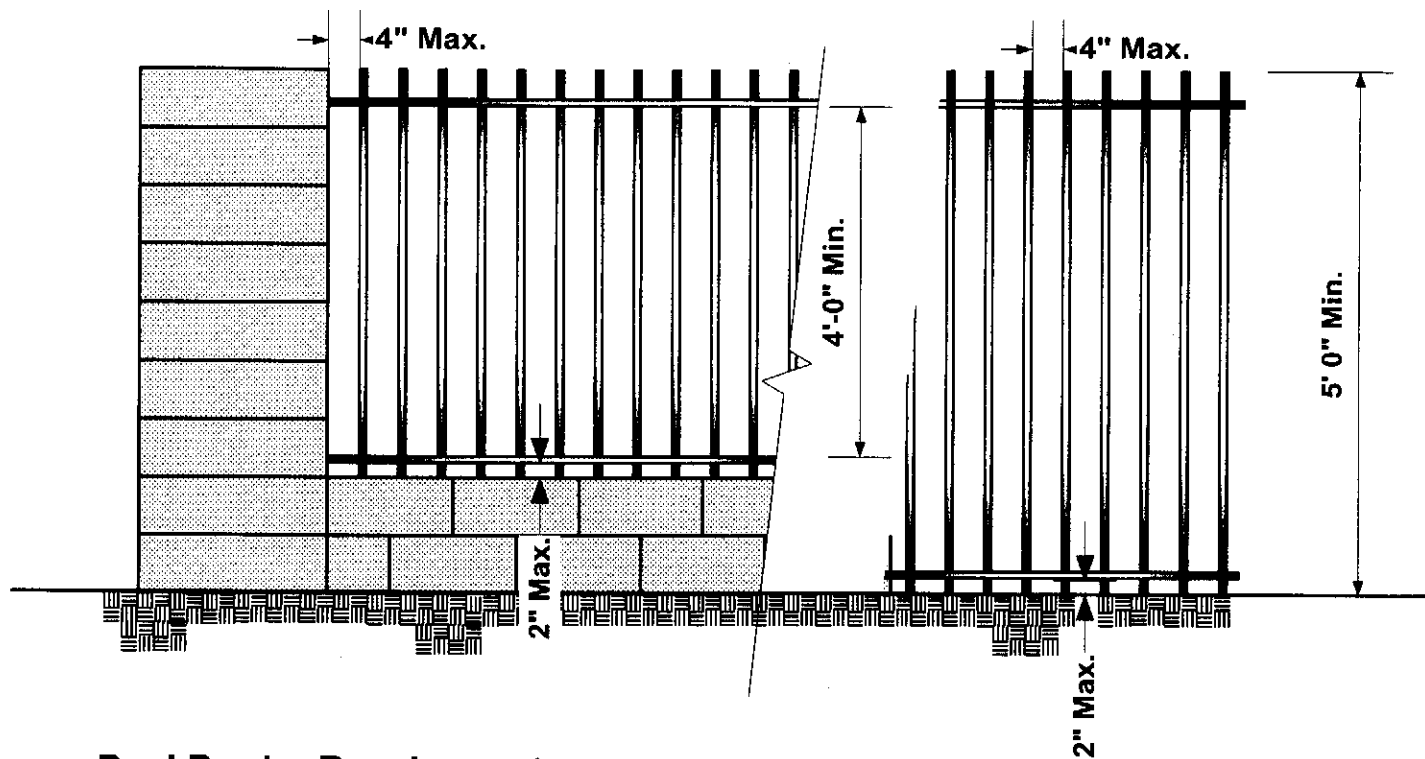
For further information, please visit the BUILDING AND SAFETY DIVISION during designated office hours or call 909/477-2710.



***ENJOY YOUR NEW POOL!***



## Wrought Iron Pool Barriers



### Pool Barrier Requirements

- 1) 5' non-climable fence measured from outside the pool area. (No "steps" that would allow a small child to get a foot hold in the barrier.)
- 2) Minimum 48" clear between horizontal members.
- 3) Maximum 4" spacing between slats or wrought iron pickets.
- 4) Maximum 2" space between the finished ground level and lowest horizontal element.
- 5) Gates must swing away from the pool area, be self closing and self latching, and the latch must be located on the pool side at least 60" above the ground.
- 6) Contact the Planning Division for maximum fence height.