



CITY OF PALM DESERT

Building & Safety Department

73-510 Fred Waring Dr., Palm Desert, CA (760) 776-6420

SWIMMING POOL AND SPA REQUIREMENTS

(Including Fire Pit, BBQs, and Accessory Structures)

The Department of Building and Safety is dedicated to providing the highest level of code compliance, inspection services, and plan review to every architect, engineer, developer, contractor, business, and property owner that resides or works within our community. The Department strives to demonstrate fairness, equality, and the highest standard of professional ethics in providing our services while enforcing state construction laws and local ordinances that protect our citizens.

The following information is being provided as a general guideline. It is not the full extent of the regulatory codes required for the construction of a swimming pool and spa. If you have any questions, please feel free to contact the Department of Building and Safety staff.

Plan Design and Submittal Requirements:

1. **Planning Department.** Provide Planning Department approval for this Project. If you have questions regarding setbacks or zoning information please contact the Planning Department at (760) 776-6483.
2. **Public Works.** Provide Public Works Department approval for this Project. If you have questions regarding drainage or any other questions please contact the Public Works Department at (760) 776-6450.
3. **Riverside County Health Department.** *[For Commercial Only]* Provide written evidence from Riverside County Health Department, approving the swimming pool and/or spa construction or alteration for this Project before permit issuance. Contact the Health Department directly at (760) 863-7000.
4. **Building and Safety – Submittal Requirements**

a) Title Sheet / Site Plan:

- Two (2) sets of one sided fully dimensioned plans, drawn to scale, at a minimum of 11" x 17" size paper (California Building Code §107.2.1) that includes all property lines, easements, structures, pool equipment, equipment screen walls, overhead lines etc. (California Building Code §107.2.5)
- Dimension all structures from the pool edge including overhangs and eaves. Site plan shall bear the name and wet signature of the plan preparer.
- Identify pool depths within the footprint of the pool.

- One (1) plot plan for the Assessor's Copy
- Provide a note on the plans that the proposed construction will conform to the current building codes:
 - 2016 California Residential Based on the 2015 International Residential Code (IRC)
 - 2016 California Electrical Code Based on the 2014 National Electrical Code (NEC)
 - 2016 California Mechanical Based on the 2015 Uniform Mechanical Code (UMC)
 - 2016 California Plumbing Code Based on the 2015 Uniform Plumbing Code (UPC)
 - 2016 California Green Code California Building Standards Commission
 - 2016 California Energy Code California Energy Commission
- Provide the following information on the cover sheet:

Palm Desert Municipal Code requirements:

A. Approved temporary sanitary facilities (i.e. chemical toilets shall be on the construction site prior to request for first inspection). (Health and Safety Code, Section 5416)

B. Contractor and/or owner shall provide a trash bin to insure proper clean-up of all building materials. (Ordinance No. 262 of the Palm Desert Municipal Code)

C. Storage of building materials or debris shall be confined to the lot or which the permit is issued. Adjacent vacant properties may not be utilized for this purpose unless written permission of the owner is on file with this office. The public right-of-way shall be maintained in a clear condition at all times. (Palm Desert Municipal Code, Chapter 8.02)

D. Address numerals shall comply with Palm Desert Ordinance No. 1310. You may request a copy of the Ordinance at the Building Department.

E. CONSTRUCTION HOURS:

OCTOBER 1st THRU APRIL 30th	MAY 1st THRU SEPTEMBER 30th
Monday – Friday: 7:00 a.m. - 5:30 p.m.	Monday – Friday: 5:30 a.m. - 7:00 p.m.
Saturday - 8:00 a.m. - 5:00 p.m.	Saturday 8:00 a.m. - 5:00 p.m.
Sunday - NOT ALLOWED	Sunday - NOT ALLOWED
Government Code Holidays - NOT ALLOWED	
**Violation of the above work hours is a citable offense under Palm Desert Municipal Code Section 9.24.070.	

- Preparer's Signature. All construction documents (plans) shall bare the appropriate stamp and signature for architects/engineers for structural elements/other systems and/or contractor's license number and signature for non-structural pool/spa systems. Unlicensed individuals are prohibited from designing pools/spas and associated systems. (Business and Professions Code §5537)
- All notes and details must be legible.

b) Pool Shell (Vessel) Plan Requirements:

- Two (2) sets of structural plans and construction details from a licensed design professional.
- Preparer's Signature. All construction documents (plans) shall bare the appropriate stamp and signature for architects/engineers for structural elements/other systems and/or contractor's license number and signature for non-structural pool/spa systems. Unlicensed individuals are prohibited from designing pools/spas and associated systems. (Business and Professions Code §5537)
- The licensed design professional and/or Contractor is required to strike-out all engineering details and tables not applicable to this project.

Note: Any structural not included in the "boiler plate" engineering sheet must be specifically addressed by the Engineer/Architect of Record.

c) The following must be demonstrated within the plan submittal - Electrical Requirements:

- Provide sufficient general and specific electrical notes within the plan set to fully identify and demonstrate all electrical equipment, receptacle, lighting, grounding, and bonding per Article 680 of the 2016 California Electrical Code.
- Identify and demonstrate all outlets, receptacles, and lighting within the plan set (CEC §680.22).
- Identify and demonstrate all underwater lighting (CEC §680.23).
- Identify and demonstrate all equipotential bonding (CEC §680.26).
- Identify all conduit & conductor type/size serving pool/spa equipment.
- A single line diagram is required when adding a sub-panel. A single line diagram is not required for control/instrument control panel install.
- Provide location of the existing service panel and the new sub-panel.
- Provide 36" working clearances for the pool equipment disconnect and subpanel (California Electrical Code §110.26).
- Overhead utility/service lines must comply with California Electrical Code ~ Table 680.8 for Overhead Conductor Clearances. *If none exist, please state clearly on the site plan.*

d) The following must be demonstrated within the plan submittal - Mechanical/Plumbing:

- Provide manufacturer's equipment specifications for all heaters and pumps.
- Provide gas isometric with type of material, length of pipe, BTU demand, etc. (California Plumbing Code ~ Table 1216.2)
- For a proposed gas fire pits, identify location and provide appliance/equipment shutoff valve approval listing number. (California Plumbing Code §1212.5)

- Please note on the plan, “*All equipment shall be seismically anchored.*”
- Provide location of anti-entrapment/vortex covers meeting current standards of the American Society for Testing and Materials (ASTM) or the American Society of Mechanical Engineers (ASME). *Identify a minimum 3 foot separation between all drains and note hydraulically balanced.*
- **Existing Pools and Spas.** To eliminate safety hazards on existing pools and spas, California Health and Safety Code 115928 requires installations of pool anti-entrapment covers whenever a building permit is issued for the remodel or modification of an existing swimming pool, existing toddler pool or existing spa at a single family residence. The permit shall require that the suction outlet of the existing swimming pool, toddler pool, or spa be upgraded so as to be equipped with an anti-entrapment cover meeting current standards of the American Society for Testing and Materials (ASTM) or the American Society of Mechanical Engineers (ASME), ASME/ANSI Standard A 112.19.8.

e) **The following must be demonstrated within the plan submittal (Cal Energy - 2016 Energy Standards):**

- All pool systems equipment shall comply with current California Energy Code §150(p) for: Pool Systems and Equipment:
 1. Valves
 2. Pump sizing
 3. Flow rate
 4. System piping
 5. Filters
- Identify and demonstrate within the plan set compliance with the 2016 California Energy Code and 2016 Energy Standards. Include all Mandatory Measures (MF-1R) for Pool and Spa Heating Systems and provide the required energy compliance forms:
 - <http://www.energy.ca.gov/title24/2016standards/index.html>
 - <http://www.energy.ca.gov/efficiency/contacts.html>
 - <http://www.energy.ca.gov/2015publications/CEC-400-2015-032/appendices/forms/CF2R/2016-CF2R-PLB-03-PoolAndSpaHeatingSystems.pdf>

f) Safety Barrier Requirements:

All residential swimming pools shall be completely enclosed by a barrier complying with the following (CBC §3109.4):

1. Barrier Height and Clearances (CBC §3109.4.1):

- Must be no less than 48 inches above the grade measured on the side of the barrier that faces away from the swimming pool.
- The vertical clearance between grade and the bottom of the barrier shall not be greater than 2 inches measured on the side of the barrier the faces away from the swimming pool.
- Where the top of the pool structure is above grade, the barrier is authorized to be at ground level or mounted on top of the pool structure, and the vertical clearance between the top of the pool structure and the bottom shall not be greater than 4 inches.

2. Openings (CBC §3109.4.1.1). Openings within the barrier shall not allow the passage of a 4-inch diameter sphere

3. Solid Barriers Surfaces (CBC §3109.4.1.2). Solid barriers shall not have indentations or protrusions exceed for normal construction tolerances and tooled masonry joints.

4. Closely Spaced Barriers (CBC §3109.4.1.3):

- Where the barrier is composed of horizontal and vertical member and the distances between the tops on the horizontal members is less than 45 inches, the horizontal members shall be located on the swimming pool side of the fence.
- Spacing of vertical members shall not be less than 1 $\frac{3}{4}$ inches in width.
- Where decorative cut-outs are within vertical members, spacing within the cut-outs shall not be greater than 1 $\frac{3}{4}$ inches in width.

5. Widely Spaced Horizontal Members (CBC §3109.4):

- Where the barrier is composed of horizontal and members and the distances between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not be greater than 4 inches.
- Where decorative cut-outs within vertical members are used, spacing within the cut-outs shall not be greater than 1 $\frac{3}{4}$ inches in width.

6. Chain Link Dimensions (CBC §3109.4.1.5). Mesh size for chain link fences shall not be greater than a 2 $\frac{1}{4}$ inch square unless the fence is provided with slats fastened at the top or the bottom that reduce the openings to not more than 1 $\frac{3}{4}$ inches.

7. Diagonal Members (CBC §3109.4.1.6). Where the barrier is composed of diagonal members, the opening formed by the diagonal members shall not be greater than 1 $\frac{3}{4}$ inches.

8. Gates (CBC §3109.4.1.7):

- Access doors or gates shall comply with the sections above (CBC §3109.4.1.1 through 3901.4.1.6) and shall be equipped to accommodate a locking device.
- Pedestrian access doors or gates shall open outward away from the pool and shall be self-closing and have a self-latching device.
- Doors and Gates other than pedestrian access doors or gates shall have a self-latching device.
- Release Mechanisms (door hardware) shall be accordance with CBC Sections 1010.1.9 and 11 0.13.
- Where the release mechanisms of the self-latching device is located less than 54 inches from the bottom of the door or gate, the release mechanism shall be located on the pool side of the door or gate, 3 inches or more below the top of the door or gate, and the door or gate shall be without openings greater than ½ within 18 inches of the release mechanism.

9. Dwelling Wall as a Barrier (CBC §3109.4.1.8):

Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

- 1) Doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door or its screen (if present) is opened.

The alarm shall be listed and labeled in accordance with UL 2017.

In dwelling not required to accessible units (Type A or B), the deactivation switch shall be located 54 inches or more above the threshold of the door.

In dwelling units required to be accessible (Type A and B), the deactivation switch shall be located not higher than 54 inches and no less than 48 inches above the threshold of the door.

- 2) The pool shall be equipped with a power safety cover that complies with ASTM F1346.
- 3) Other means of protection such a self-closing doors with self-latching devices, which are approved, shall be accepted so long as the degree of protection afforded is not less than the protection afforded in 1) or 2).

NOTE: Utility Doors from Residential Garages that have direct access to the pool or spa are required to comply with #1

10. Pool Structure as Barrier (CBC §3109.4.9). This section is used for above ground pools. Please review this section accordingly.

g) The Swimming Pool Safety Act:

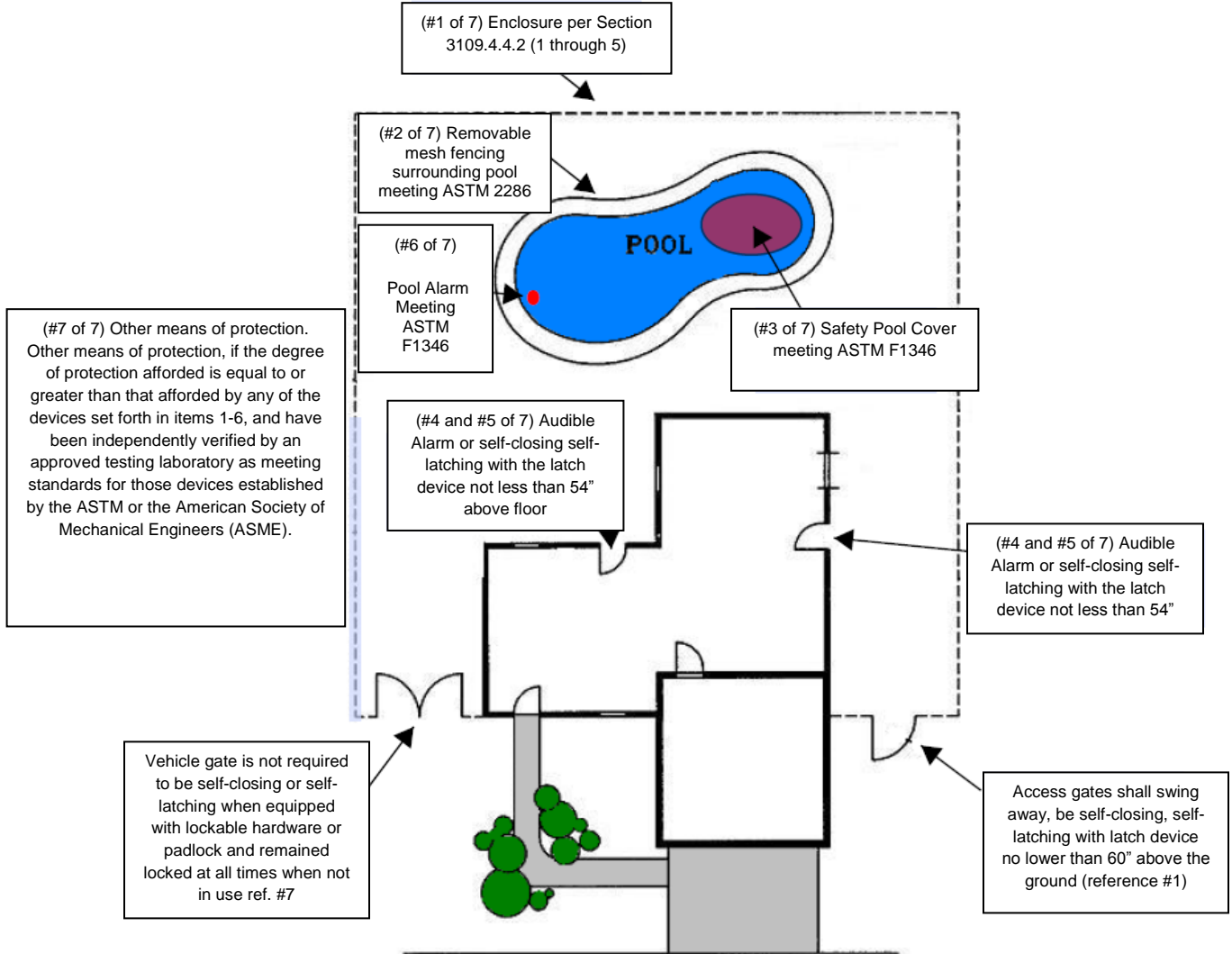
In addition to the above safety barrier requirements, the Swimming Pool Safety Act (Section 115920 of California Health and Safety Code) requires that new and remodeled residential private swimming pools, toddler pools, and spas be equipped with at least 2 of the 7 specific drowning prevention safety features:

1. Enclosure. The pool shall be isolated from access to a home by an enclosure that meets the requirements of Section 3109.4.4.3. This enclosure shall have all the following characteristics of:
 - Any access gates through the enclosure open away from the swimming pool and are self-closing with a self-latching device placed no lower than 60 inches above the ground.
 - Enclosures must be at least 5 feet (60 inches) high.
 - A maximum vertical clearance from the ground to the bottom of the enclosure of 2 inches.
 - Gaps or voids do not allow passage of a sphere equal to or greater than 4 inches.
 - An outside surface free of protrusions, cavities or other physical characteristics that would serve as handholds or footholds that could allow a child below the age of five to climb over.
2. Removable Mesh Fencing. The pool shall incorporate removable mesh pool fencing that meets American Society for Testing and Materials (ASTM) Specifications F2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device.
3. Safety Cover. The pool shall be equipped with an approved safety pool cover that meets all requirements of the ASTM Specifications F1346.
4. Exit Alarms. The residence shall be equipped with exit alarms on those doors providing direct access to the pool.
5. Self-Closing, Self-Latching Doors. All doors providing direct access from the home to the swimming pool shall be equipped with a self-closing, self-latching device with a release mechanism placed no lower than 54 inches above the floor.
6. Swimming Pool Alarms. Swimming pool alarms that will sound upon detection of accidental or unauthorized entrance into the water. These pool alarms shall meet and be independently certified to the ASTM Standard F 2208 "Standards Specification for Pool Alarms" which includes surface motion, pressure, sonar, laser, and infrared type alarms. Swimming pool alarms shall not include swimming protection alarm devices designed for individual use, such as an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water.
7. Other Means of Protection. Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the devices set forth above, and have been independently verified by an approved testing laboratory as meeting standards for those devices established by the ASTM or ASME.

Note: Prior to the issuance of any final approval for the completion of permitted construction or remodeling work, Building and Safety will inspect for all drowning safety prevention devices required by this act and if no violations are found, shall give the final approval.

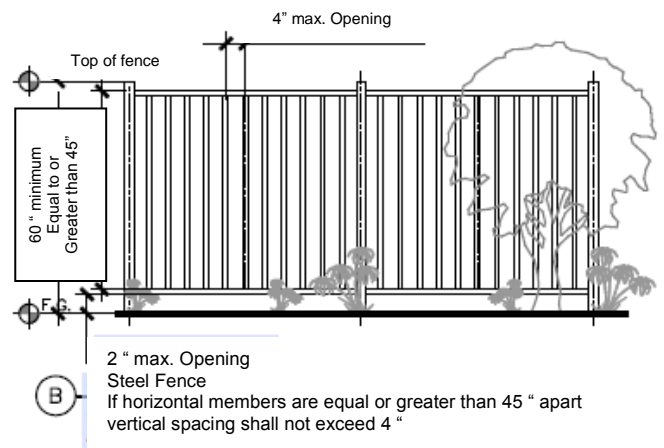
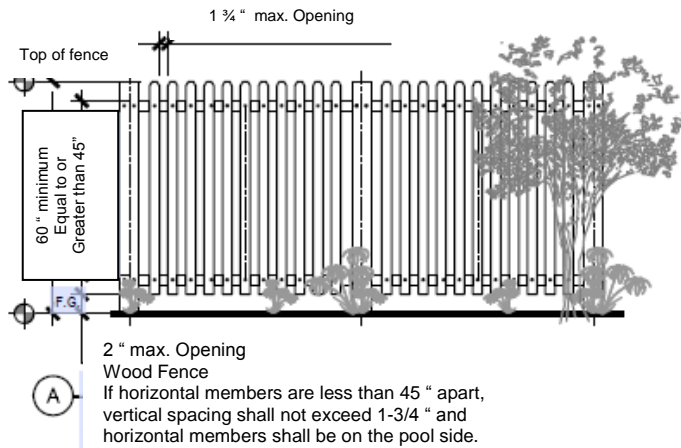
**THE SWIMMING POOL SAFETY ACT (CBC §3109.4.4.2)
Must Pick 2 of 7 Drowning Prevention Measures**

(These requirements are *in addition to* the required barriers of CBC §3109.4.1)

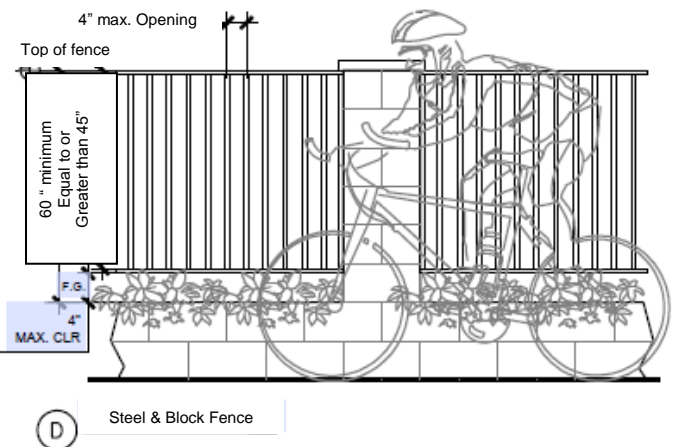
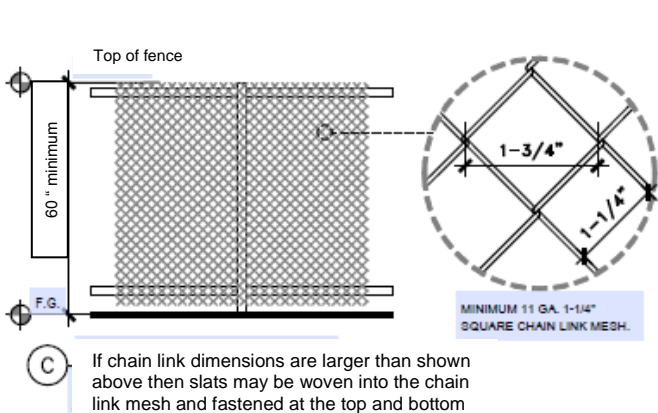


Above Ground Spas and Hot Tubs

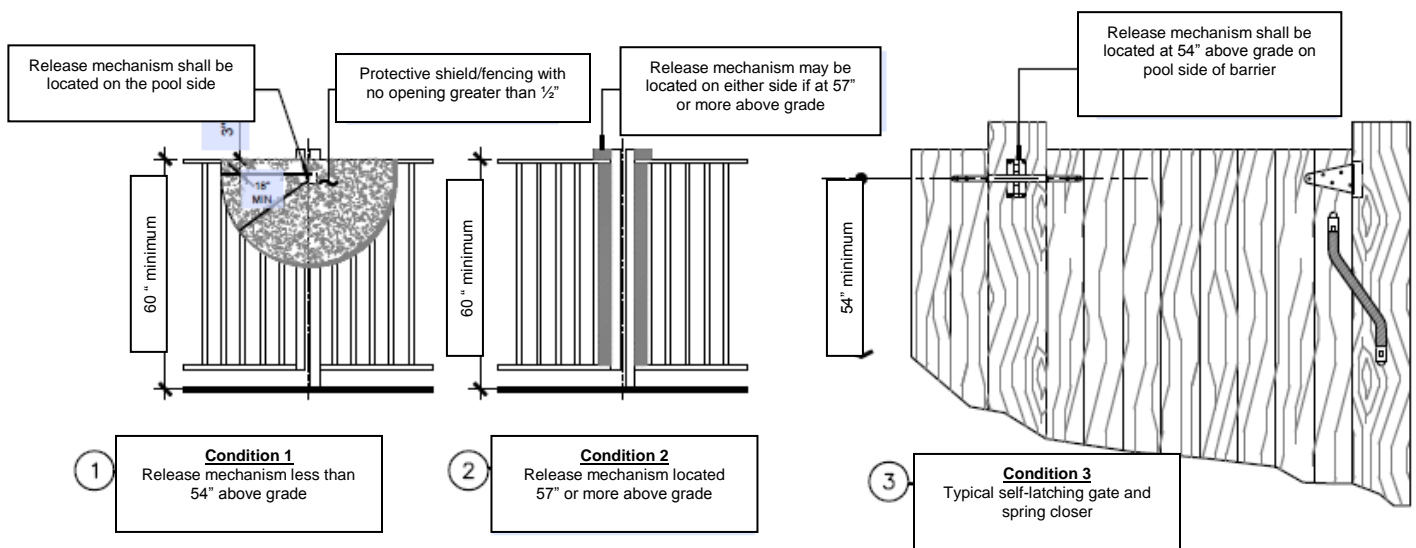
Hot tubs or spas that have a locking safety cover that complies with the American Society for Testing Materials-Emergency Performance Specifications (ASTM-ES 13-89) are exempt from the above barrier requirements.



* Note for wood and steel fence, spacing from grade level to bottom of fence may be 4 inches below fence if there is a solid impenetrable surface such as concrete



VARIOUS POOL FENCE TYPES (NOT ALL POSSIBLE FENCE DESIGNS ARE SHOWN, PLEASE CHECK WITH YOUR INSPECTOR FOR MORE INFORMATION)



Key Definitions

- "Swimming pool" or "pool" means any structure intended for swimming or recreational bathing that contains water over 18 inches deep. "Swimming pool" includes in-ground and above-ground structures and includes, but is not limited to, hot tubs, spas, portable spas, and non-portable wading pools.
- "Enclosure" means a fence, wall, or other barrier that isolates a swimming pool from access to the home.
- "Approved safety pool cover" means a manually or power-operated safety pool cover that meets all of the performance standards of the American Society for Testing and Materials (ASTM), in compliance with standard F1346-91.
- "Exit alarms" means devices that make audible, continuous alarm sounds when any door or window that permits access from the residence to the pool area that is without any intervening enclosure, is opened or is left ajar. Exit alarms may be battery operated or may be connected to the electrical wiring of the building.

Accessory Structures

Outdoor Kitchens and Barbeques:

- Will the proposed barbeque be masonry, pre-fabricated, roll-out, etc.?
- If masonry, provide construction details. Engineering may be required depending on design. A C-29 Masonry Contractor is required to construct.
- Provide detail for moisture protection between home and BBQ structure construction;
- If pre-fabricated, provide manufacturer name, current product listing, and copy of manufacturer specifications.
- Provide fuel gas isometrics, including calculations, sizing, and materials.
- Provide plumbing isometrics, including sizing and materials.

Masonry Equipment Walls:

- When masonry construction is incidental to a swimming pool project, a C-53 Swimming Pool Contractor may (within the scope of a swimming pool permit) construct the following:
 - 5' Pool/Spa Equipment Wall(s)
 - Remove/Replace Portions of CMU Wall(s) for Equipment Access Only
 - CMU Barbeques
 - Fire pits / Fire rings

PALM DESERT ORDINANCE 1203 REQUIREMENTS:

- Production model homes shall be stubbed out for future solar pool-spa heaters. (City of Palm Desert Ordinance No. 1203, Chapter 1507 Solar PV)
- Three options to allow for the future addition of solar heating equipment:
 1. Provide at least 36 inches of pipe between the filter and the heater to allow for the future addition of solar heating equipment
 2. Plumb separate suction and return lines to the pool dedicated to future solar heating
 3. Install built-up or built-in connections for future piping to solar water heating.

Revised 3/9/2018