

CITY OF MILPITAS

Building & Safety Department
455 E. Calaveras Blvd.
Milpitas, CA 95035
408-586-3240
www.ci.milpitas.ca.gov



RESIDENTIAL POOL AND SPA

1. PERMIT INFORMATION:

- Building, Plumbing and Electrical Permits are required for the construction of a new or remodeling of an existing in-ground pool and/or spa. Above ground pools and spas may only require plumbing and/or electrical permits.
- The installation of all in-ground pools and spas require drawings and engineering detailing the work to be performed
- Prior to obtaining a permit, the property owner is required to sign the "*Pool/Spa Safety Requirements Certificate*".
- Prior to final inspection, the property owner is required to sign and give to the Building Inspector the "*Pool/Spa Anti-entrapment Device Certificate*".
- Homeowners Association:** If the property is regulated by a Home Owners Association, any exterior work must have written approval of the Association. It is the property owners responsibility to obtain the approval.
- A Permit may be issued only to a State of California Licensed Contractor or the Homeowner.
- If the work is performed by the Homeowner personally or by his/her workers, and an inspection indicates the work cannot be completed satisfactorily, then a licensed contractor must perform the work.
- If the Homeowner hires workers, State Law requires the Homeowner to obtain Worker's Compensation Insurance. Proof of this insurance is required prior to inspection.

2. INSTALLATION REQUIREMENTS

- Building Codes:** All work must comply with the 2013 California Residential Code (CRC) or 2013 California Building Code, 2013 California Electrical Code (CEC), 2013 California Mechanical Code (CMC), 2013 California Plumbing Code (CPC), 2010 California Energy Code based upon 2008 Building Energy Efficiency Standards (CEnc) (2013 becomes effective 7/1/14), 2013 California Green Building Code and 2013 Milpitas Municipal Code (MMC).
- All equipment must be installed in accordance with it's listing and the manufacturer's requirements.
- A separate electrical permit is required for any new electrical. All work must comply with the provisions of the CEC Article 680. Indoor installations must comply with the provisions of the CEC Section 680.43.
- A separate plumbing permit is required if a new gas line is required. New gas piping must be installed back to the meter or calculations must be provided to show the existing piping is adequately sized. It is the responsibility of the installer to verify that the new or existing gas supply is correctly sized before installation. Refer to the separate handout "*Natural Gas Piping*" for additional information.
- The following are requirements for portable outdoor spas:
 - Above ground pools and/or spas do not require drawings but must be installed a minimum of 3 feet from side and rear property lines, and 6 feet from buildings on the same lot and 14 feet from buildings on adjacent lots (MMC XI-10-54.08(A)).

- A Building Permit is not required for a portable outdoor spa, but an Electrical Permit is required for installation of new electrical (GFCI receptacle) and a Plumbing Permit is required for installation of new gas piping.
- The spa must be a listed, labeled package unit. The listing must be by an approved agency such as UL. The label must be attached to the unit and identify the listing agency and equipment.
- Cords with cord-and-plug connections shall not be longer than 15 feet.
- The spa must be protected by a ground-fault circuit-interrupter.
- The spa must have a dedicated circuit sized as required by the manufacturers instructions.
- The spa must have a minimum 12 AWG equipment grounding conductor.

3. ENCLOSURES AND SAFETY DEVICES

- All outdoor pools and/or spas require the installation of enclosures and safety devices. Refer to the attached "*Pool/Spa Safety Requirements Certificate*" for detailed information.

4. ANTI-ENTRAPMENT REQUIREMENTS

- Whenever a Building Permit is required for the construction of a new swimming pool or spa, or the remodel or modification of any existing swimming pool, toddler pool, or spa, the pool or spa shall comply with the anti-entrapment requirements detailed in the attached "*Pool/Spa Anti-entrapment Device Certificate*".

5. ENERGY REQUIREMENTS

- Certification by Manufacturers:** Any pool or spa heating system or equipment may be installed only if the manufacturer has certified that the system or equipment has all of the following (CEnC Section 114):
 1. **Efficiency:** A thermal efficiency that complies with the Appliance Efficiency Regulations; and
 2. **On-off switch:** A readily accessible on-off switch, mounted on the outside of the heater that allows shutting off the heater without adjusting the thermostat setting; and
 3. **Instructions:** A permanent, easily readable, and weatherproof plate or card that gives instruction for the energy efficient operation of the pool or spa heater and for the proper care of pool or spa water when a cover is used; and
 4. **Electric resistance heating:** No electric resistance heating.

Exception 1: Listed package units with fully insulated enclosures, and with tight-fitting covers that are insulated to at least R-6.

Exception 2: Pools or spas deriving at least 60% of the annual heating energy from site solar energy or recovered energy.

- ❑ **Installation:** Any pool or spa heating system or equipment shall be installed with all of the following (CEnC Section 114):
 1. **Piping:** At least 36" of pipe shall be installed between the filter and the heater or dedicated suction and return lines, or built-in or built-up connections shall be installed to allow for the future addition of solar heating equipment; and
 2. **Covers:** A cover for outdoor pools or outdoor spas that have a heat pump or gas heater.
 3. **Directional inlets and time switches for pools:** If the system or equipment is for a pool:
 - A. The pool shall have directional inlets that adequately mix the pool water; and
 - B. A time switch or similar control mechanism shall be installed as part of the pool water circulation control system that will allow all pumps to be set or programmed to run only during the off-peak electric demand period and for the minimum time necessary to maintain the water in the condition required by applicable public health standards.
- ❑ **Pilot Light:** A natural gas pool and spa heaters may be installed only if it does not have a continuously burning pilot light (CEnC Section 115).
- ❑ **Pool Systems and Equipment Installation:** Any residential pool system or equipment installed shall comply with the requirements listed in this section (CEnC Section 150(p)).

1. **Pump sizing and flow rate:**

- A. All pumps and pump motors installed shall be listed in the Commission's Directory of Certified Equipment and shall comply with the Appliance Efficiency Regulations.
- B. All pump flow rates shall be calculated using the following system equation:

$$H = C \times F^2, \text{ where:}$$

H is the total system head in feet of water.

F is the flow rate in gallons per minute (gpm).

C is a coefficient based on the volume of the pool:

0.0167 for pools less than or equal to 17,000 gallons.

0.0082 for pools greater than 17,000 gallons.

and;

- C. Filtration pumps shall be sized, or if programmable, shall be programmed, so that the filtration flow rate is not greater than the rate needed to turn over the pool water volume in 6 hours or 36 gpm, whichever is greater; and

This means that for pools of less than 13,000 gallons the pump must be sized to have a flow rate of less than 36 gpm and for pools of greater than 13,000 gallons, the pump must be sized using the following equation:

$$\text{Max Flow Rate (gpm)} = \frac{\text{Pool Volume (gallons)}}{360 \text{ minutes}}$$

- D. Pump motors used for filtration with a capacity of 1 hp or more shall be multi-speed; and

- E. Each auxiliary pool load (spa) shall be served by either separate pumps or the system shall be served by a multi-speed pump; and

Exception: Pumps if less than 1 hp may be single speed.

- F. Multi-speed pumps shall have controls which default to the filtration flow rate when no auxiliary pool loads are operating; and
- G. For multi-speed pumps, the controls shall default to the filtration flow rate setting within 24 hours and shall have an override capability for servicing.

2. System piping:

- A. A length of straight pipe that is greater than or equal to at least 4 pipe diameters shall be installed before the pump (that is, for a 2" suction pump, there must be at least 8" of straight pipe before the pump's strainer basket); and
- B. Pool piping shall be sized so that the velocity of the water at maximum flow for auxiliary pool loads does not exceed 8 feet per second in the return line and 6 feet per second in the suction line.

The following table shows the minimum pipe sizes required by pool volume based on a 6-hour turnover filtration flow rate:

Pool Volume (gallons)		Minimum Pipe Diameter (in.)	
Min	Max	Return	Suction
-	13000	1.5	1.5
13000	17000	1.5	2
17000	21000	2	2
21000	30000	2	2.5
30000	42000	2.5	3
42000	48000	3	3
48000	65000	3	3.5

and;

- C. All elbows shall be sweep elbows or elbow-type that have a pressure drop of less than the pressure drop of straight pipe with a length of 30 pipe diameters. For example, a 2" elbow must have a pressure drop less than a 5-foot length of 2" straight pipe.
3. **Filters:** Filters shall be at least the size specified in NSF/ANSI 50 for public pool intended applications. The filter factors that must be used are (in ft²/gpm):

Cartridge	0.375
Sand	15
Diatomaceous Earth	2

4. **Valves:** Minimum diameter of backwash valves shall be 2 inches or the diameter of the return pipe, whichever is greater.

Title 24 Energy Compliance Reports: The following forms must be filled out and attached to the permit prior to final inspection:

- Mandatory Measures form MF-1R.
- Installation Certificate CF-6R-MECH-03.

6. **SMOKE ALARMS, CARBON MONOXIDE ALARMS & SPARK ARRESTERS:**

In single family and multi-family residences (including townhomes, condominiums and apartments), installation of smoke alarms, carbon monoxide alarms and spark arresters on all chimneys is required prior to the final inspection. Refer to the "*Smoke Alarm, Carbon Monoxide Alarm and Spark Arrester Certificate*" attached for detailed information.

7. **INSPECTION PROCEDURES**

Several inspections may be required. Ask your inspector what inspections will be required after the first inspection occurs. All trenches must be inspected before they are back-filled. All reinforcing must be inspected before concrete or grout is placed. The final inspection is to be scheduled when all work is completed. All items required by the Energy Code, including covers on heated pools and spas, programmable time switches on circulation pumps and installation of a permanent plate or card that gives instruction for the energy efficient operation of the pool or spa heater & for the proper care of pool or spa water when a cover is used must be installed, and the Title 24 Energy Compliance Reports must be completely filled out and attached to the permit to obtain the final inspection.

For each inspection, the Permit Card and the Approved Job Copy of the Drawings (if any) must be presented to the inspector. Permits expire 180 days after issuance or last inspection passed, whichever is the latest.

8. **QUESTIONS:**

If you have any questions regarding your project contact the Building & Safety Department at (408) 586-3240.

Consumer Product Safety Commission Safety Alert

Install Ground-Fault Circuit-Interrupter Protection for Pools, Spas and Hot Tubs

CPSC Document #5039

The U.S. Consumer Product Safety Commission (CPSC) recommends installing and using ground-fault circuit-interrupters (GFCIs) for protection against electrocution hazards involving electrical circuits and underwater lighting circuits in and around pools, spas, and hot tubs.

CPSC is aware of more than a dozen electrocutions and a similar number of electrical shock incidents involving circuits around swimming pools between 1997 and 2002. Electrical incidents involving underwater pool lighting were more numerous than those involving any other consumer product used in or around pools, spas, and hot tubs.

The greater danger associated with electrical shock in a swimming pool is that anyone in the pool may be rendered immobile and unable to rescue themselves or to call for help. Drowning becomes a likely outcome, even if the current is not immediately lethal. Bystanders and would-be rescuers risk serious injury if the current flow isn't stopped before they make contact with a conductive fixture, such as a ladder, or enter the water to try to help a victim.

While grounding provides essential protection for pool, spa, and hot tub equipment, GFCIs are the most effective means for protecting people against electrical shock hazards of this nature.

A GFCI constantly monitors the flow of current through a protected lighting fixture, pump motor or appliance circuit and senses any loss of current to an outside path. If the current flowing into an electrical appliance or fixture differs by a very small amount from what flows

back out, the GFCI instantly interrupts the current flow to prevent a sustained, lethal level of electricity from reaching the consumer. The consumer may feel a painful shock but should be protected from electrocution.

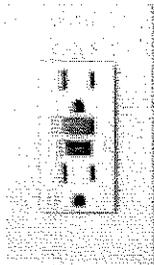
The National Electrical Code (NEC) requires GFCI protection for cord- and plug-connected pumps on pools, spas, and hot tubs; 120-volt underwater lighting fixtures; and receptacle outlets in the vicinity of pools, spas and hot tubs. Today, the code prohibits electrical installations closer than five feet from water and requires GFCI protection for all electrical equipment, including 240-volt equipment located five to 10 feet from the water and for receptacles within a 20-foot perimeter.

Older pools, spas and hot tubs may not have adequate GFCI protection. In particular, pools older than 30 years may not have GFCI protection on underwater lighting circuits. Because the NEC provision for spas only became effective in 1981, even somewhat newer spas or hot tubs may not be protected.

CPSC urges consumers to have an electrician who is qualified in pool and spa repairs install adequate GFCI protection for all pool, spa, and hot tub electrical equipment and for underwater swimming pool lighting fixtures. Additionally, outdoor outlets that could potentially be used to plug in electrical appliances (e.g., radios, pumps, washers) used near the pool also should be equipped with GFCI protection. Remember to test the GFCI regularly to be assured of continued protection.

TO PREVENT ELECTROCUTION:

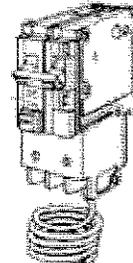
- Install GFCIs
 - On underwater lighting circuits operating at more than 15 volts.
 - On all electrical equipment used with pools, spas and hot tubs, including heaters operated on 240-volt circuits.
 - On all outdoor receptacles and any indoor receptacles that could potentially be used to power electrical appliances within 20 feet of the water's edge.
 - In accordance with applicable local codes and the NEC.
- Test GFCIs monthly to assure continued protection. Infrequently used and portable or cord-connected GFCIs should be tested before each day's use.
- To test a GFCI:
 - Plug a nightlight into the outlet and turn it on.
 - Press the "TEST" button. Did the light go out? If not, replace the GFCI.
 - Press the "RESET" button. Did the light come back on? If not, replace the GFCI.



Receptacle GFCI



Portable GFCI



Circuit Breaker GFCI

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**POOL/SPA
SAFETY REQUIREMENTS
CERTIFICATE**

Project Address: _____ Permit Number: _____

Conditional to receiving a permit listed above for construction of a new swimming pool or spa, or for the remodeling of an existing pool or spa, at the location listed above, I (the property owner) agree to install the enclosures and safety devices required by the 2013 California Building Code, Section 3109.4.4.

At least one of the following 7 drowning prevention safety features shall be installed:

- 1) The pool shall be isolated from access by an enclosure that meets all of the following:
 - Have a minimum height of 60 inches.
 - Have a maximum vertical clearance from the ground to the bottom of the enclosure of 2 inches.
 - Gaps or voids, if any, do not allow passage of a sphere equal to or greater than 4 inches in diameter.
 - An outside surface free of protrusions, cavities or other physical characteristics that would serve as handholds or footholds that could enable a child below the age of five years to climb over.
 - Access gates through the enclosure shall open outward away from the pool and shall be self-closing and have a self-latching device placed no lower than 60" above the ground.
- 2) The pool shall incorporate removable mesh pool fencing that meets ASTM Specifications F2286 in conjunction with a gate that is self-closing and self-latching that can accommodate with a key lockable device.
- 3) The pool shall be equipped with an approved safety pool cover that meets all of the requirements of the ASTM Specifications F1346.
- 4) The residence shall be equipped with exit alarms on those doors providing direct access to the pool.
- 5) 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) Have swimming pool alarms that, when placed in pools, 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 F2208.
- 7) 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 in the items 1-4 above, and have been independently verified by an approved testing laboratory as meeting standards for those devices established by the ASTM or the ASME.

The enclosures and safety devices will be constructed in the location shown on the drawings submitted for the building permit and will be completed and shall have passed inspection by the Building and Safety Department before plastering occurs for in-ground pools/spas and before installation of above ground pools/spas.

Signature of Property Owner

Print Name

Date:

CITY OF MILPITAS

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**POOL/SPA DRAIN
ANTI-ENTRAPMENT
DEVICE
CERTIFICATE**

Project Address: _____ Permit Number: _____

I (the property owner) hereby certifies that the permit listed above for construction of a new swimming pool or spa, or the remodel or modification of an existing swimming pool, toddler pool, or spa, at the location listed above, complies with the anti-entrapment requirements below.

Whenever a building permit is issued for the construction of a new swimming pool or spa, the pool or spa shall meet all of the following requirements (CBC Section 3109.4.4.8):

1. The suction outlets of the pool or spa for which the permit is issued shall be equipped to provide circulation throughout the pool or spa as prescribed in paragraphs 2 and 3 below.
2. The swimming pool or spa shall either have at least two circulation suction outlets per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension between the suction outlets, or be designed to use alternatives to suction outlets including, but not limited to, skimmers or perimeter overflow systems to conduct water to the recirculation pump.
3. The circulation system shall have the capacity to provide a complete turnover of pool water, as specified in CBC Section 3124B of Chapter 31B.
4. Suction outlets shall be covered with anti-entrapment grates, as specified in the ANSI/APSP-16 performance standard or successor standard designated by the federal Consumer Product Safety Commission, that cannot be removed except with the use of tools. Slots of openings in the grates or similar protective devices shall be of a shape, area and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers.
5. Any backup safety system that an owner of a new swimming pool or spa may choose to install in addition to the requirements set forth in paragraphs 1 through 4 above shall meet the standards as published in the document, "*Guidelines for Entrapment Hazards: Making Pools and Spas Safer*", Publication Number 363, March 2005, United States Consumer Products Safety Commission.

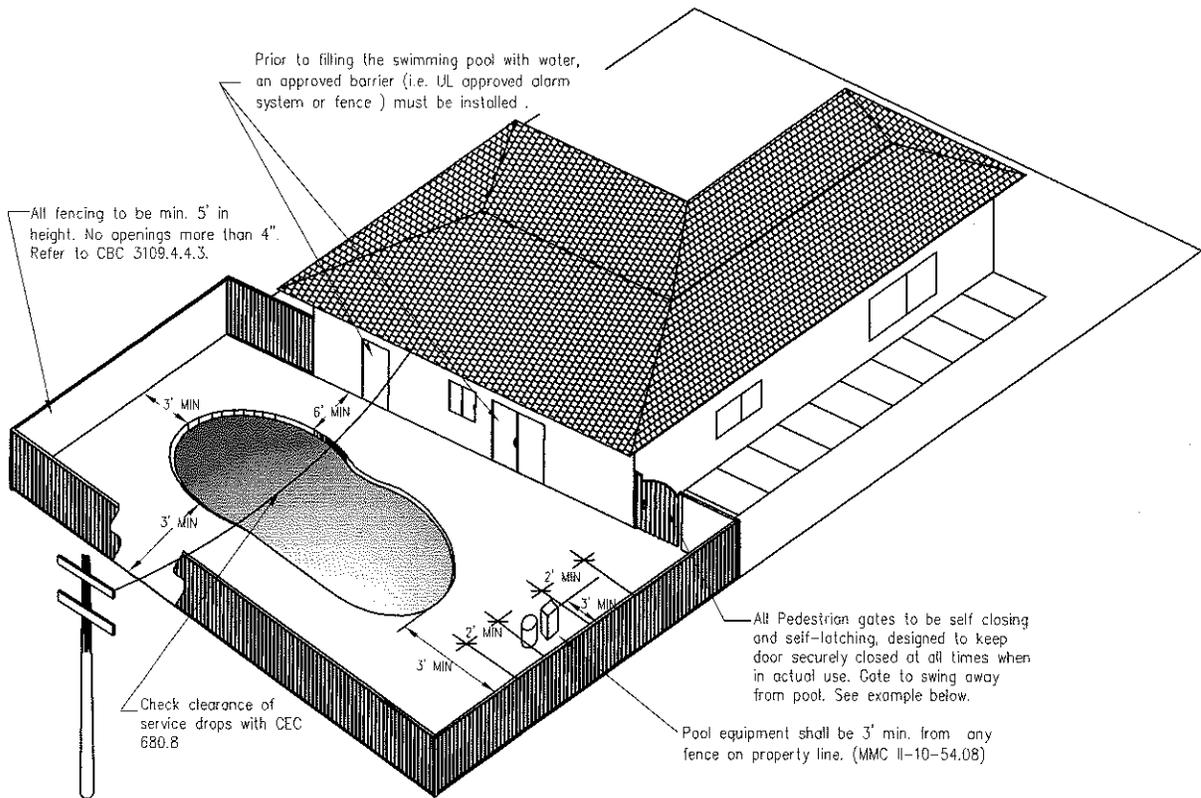
Whenever a Building Permit is issued for the remodel or modification of any existing swimming pool, toddler pool, or spa, the permit shall require that the suction outlet or suction outlets of the existing swimming pool, toddler pool, or spa be upgraded so as to be equipped with anti-entrapment grates, as specified in the ANSI/APSP-16 performance standard or a successor standard designated by the federal Consumer Product Safety Commission. (CBC Section 3109.4.4.8)

Suction outlets shall be designed and installed in accordance with ANSI/APSP-7 (CBC 3109.5).

Signature of Property Owner

Print Name

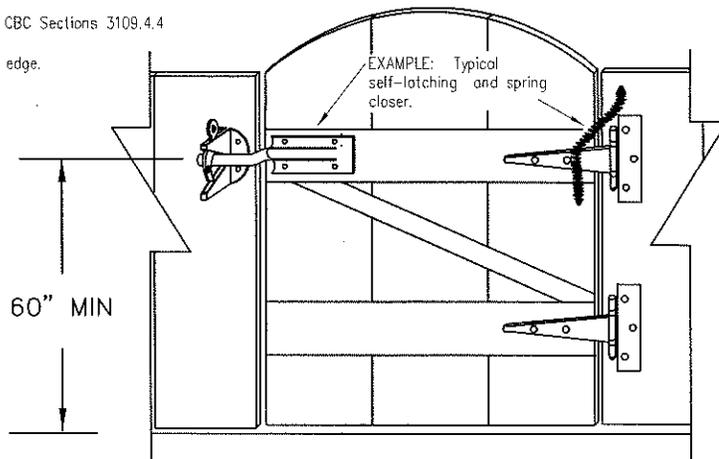
Date:



Note: Pool safety requirements per CBC Sections 3109.4.4

Bond all metals within 5' of waters edge.
CEC 680.26

GF1 as required per CEC 680.22



REV.	DATE	BY:	SCALE:
			N.T.S
			DATE:
			OCT. 2007
			DRAWN BY:
			Henry Rafael
			REVIEWED BY:
			LEON SHEYMAN

City of Milpitas
 BUILDING AND SAFETY DEPARTMENT
 SWIMMING POOL

SHEET
1
 OF 1 SHEETS



SMOKE ALARM, CARBON MONOXIDE ALARM and SPARK ARRESTER CERTIFICATE

This "Certificate" can be signed by the property owner and provided to the Building Inspector prior to final inspection if access to the interior of the dwelling for inspection of the smoke and carbon monoxide alarms is not possible and the permitted work being performed is exterior only (such as re-roofing, re-siding, patio covers, swimming pools and the like).

In single family and multi-family residences (including townhomes, condominiums and apartments), installation of smoke alarms, carbon monoxide alarms and spark arresters is required prior to the final inspection as follows:

Smoke Alarms shall be listed and labeled in accordance with UL 217 and installed in accordance with the provisions of the code and the household fire warning equipment provisions of NFPA 72. Systems and components shall be California State Fire Marshal listed and approved. Alarms shall be tested and maintained in accordance with the manufacturer's instructions. Alarms that no longer function shall be replaced. Conventional ionization smoke alarms that are solely battery powered shall be equipped with a ten-year battery and have a silence feature. **Alarms installed in one and two-family dwellings shall be replaced after 10 years from the date of manufacture marked on the unit, or if the date of manufacture cannot be determined.** (CRC R314)

Smoke detection systems. Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72.

Location. Smoke alarms shall be installed in each sleeping room, outside each separate sleeping area in the immediate vicinity of the bedrooms and on each story of the dwelling. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level. Apartment complexes and other multiple-dwelling complexes shall have a smoke detector installed in the common stairwells. For R-3.1 occupancies (Residential Care Facilities), refer to CBC Section 907.2.11.2. The installation of smoke alarms and smoke detectors shall also comply with the following requirements:

1. Smoke alarms shall not be located where ambient conditions, including humidity and temperature, are outside the limits specified by the manufacturer's published instructions.
2. Smoke alarms shall not be located within unfinished attics or garages or in other spaces where temperatures can fall below 40°F or exceed 100°F.
3. Where the mounting surface could become considerably warmer or cooler than the room, such as a poorly insulated ceiling below an unfinished attic or an exterior wall, alarms shall be mounted on an inside wall.
4. Smoke alarms shall be installed a minimum of 20 feet horizontal distance from a permanently installed cooking appliance, except ionization smoke alarms with an alarm-silencing switch or Photoelectric smoke alarms shall be permitted to be installed 10 feet or greater from a permanently installed cooking appliance and Photoelectric smoke alarms shall be permitted to be installed greater than 6 feet from a permanently installed cooking appliance where the kitchen or cooking area and adjacent spaces have no clear interior partitions and the 10 foot distances would prohibit the placement of a required smoke alarm or smoke detector. Smoke alarms listed for use in close proximity to a permanently installed cooking appliance can be installed in accordance with their listing.
5. Smoke alarms shall be installed not less than a 3 foot horizontal distance from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by the code.
6. Smoke alarms shall not be installed within a 36 inch horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow from those registers.
7. Smoke alarms shall not be installed within a 36 inch horizontal path from the tip of the blade of a ceiling-suspended (paddle) fan.
8. Where stairs lead to other occupied levels, alarm shall be located so that smoke rising in the stairway cannot be prevented from reaching the alarm by an intervening door or obstruction.

9. For stairways leading up from a basement, alarms shall be located on the basement ceiling near the entry to the stairs.
10. For tray-shaped ceilings (coffered ceilings), alarms shall be installed on the highest portion of the ceiling or on the sloped portion of the ceiling within 12 inch vertically down from the highest point.
11. Smoke alarms installed in rooms with joists or beams shall comply with the requirements of NFPA 72, Section 17.7.3.2.4.
12. Heat alarms and detectors installed in rooms with joists or beams shall comply with the requirements of NFPA 72, Section 17.6.3.

Carbon Monoxide Alarms: An approved carbon monoxide alarm listed as complying with UL 2034, approved and listed by the California State Fire Marshal, installed and maintained in accordance with NFPA 720 and the manufacturer's instructions shall be installed if they do not already exist in existing dwellings or sleeping units having a fossil fuel-burning heater or appliance, fireplace or an attached garage as follows: **outside each separate dwelling unit sleeping area in the immediate vicinity of bedroom(s) and on every level of dwelling unit.** Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances, installed and maintained as required for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075. (CRC R315)

Power supply: Smoke and carbon monoxide alarms shall receive their primary power from the building wiring and shall be equipped with a battery back-up. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Smoke and carbon monoxide alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection. Smoke and carbon monoxide alarms are permitted to be solely battery operated (carbon monoxide alarms can also be plug-in with battery back-up) in existing buildings where no construction is taking place; in existing areas of buildings undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure unless there is an attic or crawl space available which could provide access for building wiring without the removal of interior finishes; where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck; or when work is limited to the installation, alteration or repairs of plumbing or mechanical systems or the installation, alteration or repair of electrical systems which do not result in the removal of interior wall or ceiling finishes exposing the structure: and, for carbon monoxide alarms, when other power sources recognized for use by NFPA 720 are used.

Interconnection: Where more than one smoke or carbon monoxide alarm is required to be installed within an individual dwelling or sleeping unit, the alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit, except interconnection is not required in buildings that are not undergoing alterations, repairs or construction of any kind; where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure unless there is an attic or crawl space available which could provide access for interconnection without the removal of interior finishes and no previous method for interconnection existed; where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck; or when work is limited to the installation, alteration or repairs of plumbing or mechanical systems or the installation, alteration or repair of electrical systems which do not result in the removal of interior wall or ceiling finishes exposing the structure. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Spark arresters: When a permit has been issued and the value of the work exceeds \$1,000, a spark arrester must be installed on all fireplace chimneys, if one does not already exist, per MMC Section II-3-2.06. Spark arresters shall be constructed in conformance with CRC Section 1003.9.2.

*** CERTIFICATION ***

I understand the above requirements and certify that I now have smoke alarms, carbon monoxide alarms and spark arrestors installed as required above.

HOMEOWNERS NAME (please print): _____

ADDRESS: _____

SIGNATURE: _____

DATE: _____ PERMIT NO. _____