CONSTRUCTION PLAN APPROVAL PROCEDURE
For Public Swimming Pools and Spas

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INTRODUCTION ........................................................................................................................................... 3

PLANS MUST INCLUDE THE FOLLOWING .................................................................................................. 4

CONSTRUCTION GUIDELINES .................................................................................................................. 6

1. STRUCTURE .............................................................................................................................................. 6

2. PERMANENT MARKING (Lines/Depth Markers) .................................................................................... 6

3. RECESSED STEPS AND LADDERS ........................................................................................................ 7

4. SHALLOW END STAIRS (See Figure 31 B-7) ......................................................................................... 7

5. HANDHOLDS (See Figure Approved Handholds) .................................................................................. 7

6. RECIRCULATION SYSTEM ...................................................................................................................... 8

7. FILTERS .................................................................................................................................................. 9

8. FLOWMETER AND GAUGES .................................................................................................................. 9

9. CHEMICAL FEEDERS ............................................................................................................................. 9

10. EQUIPMENT AREA .................................................................................................................................. 10

11. AUTO FILL LINE AND BACKFLOW DEVICES ................................................................................... 10

12. DECK .................................................................................................................................................... 10

13. SAFETY STRUCTURES AND EQUIPMENT ......................................................................................... 11

14. ANCILLARY FACILITIES (Toilets, Showers, Drinking Fountains) ......................................................... 11

15. ENCLOSURE OF POOL AREAS ........................................................................................................... 12

16. SOLAR HEATING .................................................................................................................................. 13

17. SPA POOLS (Special Requirements) (see Figure 31B-6) .................................................................... 13

FIGURES AND TABLES ............................................................................................................................. 15

APPROVED HANDHOLDS .......................................................................................................................... 15

FIGURE 31B-1: DEPTHS AND CLEARANCES FOR POOLS WITH DIVING BOARDS GREATER THAN 30 INCHES (762mm) ABOVE THE WATER LINE ......................................................................... 16

Table 31B-1 .................................................................................................................................................. 16

FIGURE 31B-2: DEPTHS AND CLEARANCES FOR POOLS WITH DIVING BOARDS 30 INCHES (762MM) OR LESS ABOVE THE WATER LINE .................................................................................. 17

TABLE 31B-2 ................................................................................................................................................. 17

FIGURE 31B-3: DEPTH AND CLEARANCES FOR POOLS WITHOUT DIVING BOARDS .......................... 18

TABLE 31B-3A: POOLS WITH A MAXIMUM WATER DEPTH ≤ 6’0” .......................................................... 18

TABLE 31B-3B: POOLS WITH A MAXIMUM WATER DEPTH > 6’0” ............................................................ 18

FIGURE 31B-4: PERPENDICULAR FENCING DIMENSIONS ON SLOPING GROUND ............................ 19

FIGURE 31B-5: EFFECTIVE FENCING HEIGHT ......................................................................................... 19

FIGURE 31B-6: DEPTHS AND DIMENSIONS FOR SPA POOLS ............................................................... 20

TABLE 31B-6 ................................................................................................................................................ 20

FIGURE 31B-7: STAIR AND HANDRAIL DIMENSIONS ............................................................................ 21

TABLE 31B-7 ................................................................................................................................................. 21
CONSTRUCTION PLAN APPROVAL PROCEDURE
FOR PUBLIC SWIMMING POOLS AND SPAS

INTRODUCTION
California Building Code Title 24, Section 3103B requires that a person proposing to construct, renovate or alter a semi-public or public pool, ancillary facilities or equipment and appurtenances shall submit plans to the Riverside County Department of Environmental Health for review and obtain written approval prior to any work being started.

- To begin, submit three (3) sets of detailed plans and specifications, complete a swimming pool construction plan application form, and pay the required plan check fee.

- The plans must include sufficient information to demonstrate compliance with the California Health and Safety Code, California Code of Regulations, California Building Code, and Riverside County Ordinance 465.

- The applicant will be notified when the plans are approved or rejected. Plans that are incomplete, or otherwise not approved, will be returned to the applicant for revision and subsequent resubmittal.

- When approved plans are picked up, the applicant or agent will be required to sign for the returned plans and approval notice. Two (2) sets of plans will be returned to the applicant. One set of approved plans must be submitted to the local Building Department for their review and approval.

- If any changes on the plans are desired after the approval, additional written consent from this Department must be obtained for such changes. (Amended plans and additional fees may be required).

- Building permits for swimming pools/spas are not to be issued until plan approval has been obtained from the Department of Environmental Health.

- The swimming pool/spa shall not be open for use until final approval is granted by the Department of Environmental Health and current Environmental Health Permit fees are paid.

- Appointments for the following inspections must be coordinated in advance with the area Plan Check Specialist:

  - Open trench / Plumbing
  - Pre-gunite
  - Pre-plaster
  - Final Inspection (construction complete and/or prior to placing a pool/ spa in operation)

Note: Plans are checked in the order they are submitted to this Department. Plans found to be incomplete and/or do not meet code will be rejected. Applicants may request a consultation with the plan checker by appointment.
PLANS MUST INCLUDE THE FOLLOWING:

1. **Contact Information**
   - Name of owner – address, phone number, fax number and e-mail address
   - Name of contractor/architect – address, phone number, fax number and e-mail address

2. **Project Name and Job Site Address** – street number, city & zip, APN

3. **Plan of entire project site/tract map** (including all buildings, structures and roads)

4. **Plot plan, with deck and pool enclosure details**
   - Location of pool, filtration equipment, and backwash disposal (if applicable)
   - Location, floor plan and finish schedules for ancillary structures including restrooms, showers, and drinking fountains
   - Deck details
     - Dimensions
     - Pool/spa location
     - Deck drainage
     - Deck material
     - Enclosure details (i.e., fence, gate, building wall, etc.) of structures surrounding the pool area. Show a profile view of each structure drawn to scale.
     - Landscape features within 5’ of pool enclosure
     - Hose bib locations
     - Locations of structures to meet ADA requirements

5. **Pool/Spa structure details**
   - Scale – Plans must be drawn or printed in ink, on paper of sufficient dimension to allow for all approval notes and stamps without obscuring any portion of the submitted drawing.
     - Swimming pools - ¼ in. = 1 ft. (top and profile view)
     - Spa pools – 1 in. = 1 ft. (top and profile view)
   - Specifications of each body of water
     - Dimensions
     - Surface area in sq. ft.
     - Volume in gallons
   - Diagrams of each body of water – profile view (see Figures 31B-1, B-2, B-3, B-6)
     - Length and depth
     - Ladders and handrails
     - Safety rope anchors, if applicable
     - Stairs with tread and riser dimensions
     - Gutter systems, if applicable
     - Diving boards, if applicable (See Figures 31B-1,B-2)
     - Surge basin, if applicable
     - Handholds
     - Water slides, if applicable
   - Diagrams of each body of water – top view
     - Geometric dimensions
     - Equipment layout
     - Skimmer(s), equalizer line(s), split main drains, returns, etc…
     - Pipe sizes and type of material
     - Stairs, ladders, and handrails
     - Lifts
6. **Equipment list** – include make and model number

*Note:* Equipment must meet current NSF/ANSI 50 performance standards.

A. Pump – type, rate of flow, hp
B. Filter – type and square footage
C. Skimmer(s)
D. Suction outlet covers
E. Chlorinator
F. Flowmeter
G. Chemical Monitoring and Control System (must display pH and ORP or PPM)

7. **Other items to be shown or listed**

A. Location of permanent markings (i.e. depth marker, trim tile, etc.)
B. Safety rope and anchors, if applicable
C. Lighting - deck illumination and underwater
D. Auto-fill line
E. Backwash disposal method
F. Solar heater system detail, if applicable
G. Pressure and vacuum gauge
H. Spa emergency shut off switch
I. Indoor pool ventilation
J. Additional sanitation systems: UV, chlorine generator, ozone, etc.

*Note:* See #17 (Spa – Special Requirements) on pg. 13
CONSTRUCTION GUIDELINES

All pools must conform to the requirements of Chapter 31-B, Title 24, Public Pools, California Building Code. This guideline is intended for the construction of general use pools and spas.

Note: Please contact this Department for further details if your pool varies from standard construction (e.g., spray grounds, etc.).

1. STRUCTURE
   A. All pools and spas must be lined with white plaster or other approved finish materials. If materials other than white plaster are proposed, a sample must be submitted to this department for approval.
   B. Swimouts, islands, benches, recessed areas or other types of projections are NOT permitted.
   C. Water depth at the shallow end of the pool cannot exceed 3 ½ ft. There must be uniform water depth along the entire base of the stairs.
   D. The body of the pool must not be less than 12 ft. in width if the maximum water depth is 6 ft. or less. If the water depth is greater than 6 ft., the body of the pool cannot be less than 15 ft. wide.
   E. Pools with a depth no greater than 4 ½ ft. must have a uniform slope, no greater than 1 ft. vertical of 10 ft. horizontal. For pools with water depth greater than 4 ½ ft., the slope must meet the requirements in Figure 31B-3. All slopes must be continuous and uniform.

2. PERMANENT MARKING (Lines/Depth Markers)
   A. No markings, designs or lettering are permitted on the pool shell.
   B. Contrasting tile used along the edge of steps and spa benches must be slip-resistant and minimum of 1 in., not greater than 2 in. wide.
   C. In pools greater than 5 ft. in depth, a straight line of slip-resistant tile of contrasting color, must be installed where the water depth is 4 ½ ft. The tile must be at least 4 in. but no greater than 6 in. wide.
   D. Depth markers must be located at the minimum, maximum, at each end, both sides at each end, break in slope, and along the perimeter at an interval of not greater than 25 ft. Depth marker numerals must be a minimum of 4 in. in height and of contrasting color with the background. Abbreviations of FT and IN may be used instead of feet and inches.
   E. Durable slip-resistant depth markers must be installed on the coping or deck no more than 3 ft. from the water.
   F. In pools with water depth of 6 ft. or less, the universal “No Diving” marker is required to be installed on the deck directly adjacent to the depth marker.
   G. Lane lines may be identified with slip-resistant tile no greater than 12 in. wide.
3. **RECESSED STEPS AND LADDERS**

A. A means of entry/exit is required at the deep end(s) of pools over 4 ½ ft. deep.

B. Steps and step holes must have minimum tread of 5 in. and width of 14 in. Step risers must be uniform and cannot exceed 12 in. in height.

C. Steps of ladders must have a clearance of not less than 3 in. or more than 5 in. from the pool wall.

D. Hand railings must be provided at the top of both sides and extend over the coping or edge of the deck.

E. Where the width of the pool exceeds 30 ft., a means of entry/exit is required on each side of the pool no more than 100 ft. apart.

4. **SHALLOW END STAIRS** *(See Figure 31 B-7)*

   **Note:** See Spa Pools 17C for further requirements.

A. Stairs are required at the shallow end of all pools when the depth exceeds 1 ft. Pools with multiple shallow ends must have stairs at a minimum at one shallow end.

B. Stairs must meet the following tread requirements *(See Figure/Table 31B-7)*:

   - Top steps that are rectangular must have treads at least 14 in. wide, not to exceed 18 in.
   - Top steps that are convex, concave, or triangular must have treads at least 21 in. wide, not to exceed 24 in.
   - All remaining treads must be uniform and at least 12 in. wide, not to exceed 16 in.

C. The bottom step must terminate in water 3 ½ ft. deep or less.

D. All risers must be uniform in height, minimum 6 in. and not to exceed 12 in.

E. Hand rails are required for all stairs. The rail must not be less than 28 in. and no more than 36 in. above the coping and step treads. The handrail must extend from the deck to not less than a point above the lowest step. If it ends at the last step, it must have a clearance of not less than 3 in. from the riser.

F. Finish step tread and riser construction tolerances shall be plus or minus ½ inch.

5. **HANDHOLDS** *(See Figure Approved Handholds)*

All bullnose coping or cantilevered decking must be no greater than 2 ½ in. thick, and extend out over the pool at least 1 in. but not more than 2 in., and be a maximum of 9 in. above waterline. All corners must be coved and edging must be rounded.
6. **RECIRCULATION SYSTEM**

A. The **minimum** turnover rates are as follows:

<table>
<thead>
<tr>
<th>Pool Type</th>
<th>Minimum Turnover Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wading pool</td>
<td>1 hour or less</td>
</tr>
<tr>
<td>Spa pool</td>
<td>½ hour or less</td>
</tr>
<tr>
<td>Water feature</td>
<td>½ hour or less</td>
</tr>
<tr>
<td>Medical pool</td>
<td>2 hours or less</td>
</tr>
<tr>
<td>All other types of public pools</td>
<td>6 hours or less</td>
</tr>
</tbody>
</table>

B. Each pool must be provided with a separate recirculation/disinfection system.

C. All components of the system must meet current NSF/ANSI 50 performance standard and installed in accordance with the manufacturer specification.

D. Each pump on a pool system must be connected to at least two suction outlets. The suction outlets must be hydraulically balanced and symmetrically plumbed through one or more “T” fittings and that are separated by a distance of at least 3 ft. in any dimension between the suction outlets.

E. Suction outlets, including equalizer lines, must be covered with an approved drain cover which meets the current performance standard. The drain cover must be rated to meet or exceed the flow rate of the pump.

F. The main drain must be located at the bottom of the pool or spa. Alternative outlet locations that have been designed by a licensed engineer who has experience working on public pools may be considered.

G. The pool must provide continuous skimming of the pool water, with a minimum 100 percent of the required flow rate coming through the skimmers. One skimmer must be provided for every 500 sq. ft. of pool water surface area or enough to meet the required pump rate, whichever is greater. Skimmers must:

- Be recessed into the wall.
- Have a removable basket accessible from the deck, and an approved skimming weir.
- Not be used in pools with more than 5,000 sq. ft. of pool water surface area.

**Note:** If used, skimmer equalizer lines must be connected to at least 2 suction outlets, located at least 3 ft. apart, through a “T” fitting and be covered with approved drain covers.

H. Return inlets must be located to enhance water circulation and be installed with approved directional fittings. Two return inlets are required for the first 10,000 gallons and one return inlet for each additional 10,000 gallons or fraction thereof. Return inlets must be located at least 18 in. below the water line and must be at least 10 ft. apart (except for spas and waders). For pools over 40 ft. in width or greater than 3,000 sq. ft. in area, approved floor mounted inlets are required.

I. All piping and fittings must be approved for potable water supply.

J. Plumbing must be sized so that the rate of flow does not exceed 6 ft. per second in all suction lines and 8 ft. per second for all return lines.

K. Hydrostatic relief valves are required for pool(s) and spa(s) located in high ground water areas.

L. The recirculation system must be labeled clearly with directional symbols indicating the direction of water flow. If more than one system is located on site, the equipment must be identified as to which the system serves.
7. **FILTERS**

A. Filters must be sized to the following filtration rates:

- Cartridge Filters: 0.375 GPM/sq. ft.
- Diatomaceous Earth: 2 GPM/sq. ft.
- Rapid Sand: 3 GPM/sq. ft.
- High Rate Sand: Per current NSF/ANSI 50 performance standard

B. For disposal of filter backwash:

1. No direct connection of a pool or its recirculating system shall be permitted to a sanitary sewer, storm drain or waste water system. All filters must be permanently plumbed to an approved waste water system via a legal air gap. A sight glass is required when an air gap is not visible from filter location.

   **Note:** For the installation of cartridge filters, an approved area for proper wash down of filters must be provided. Replacement filters must be available on-site.

2. Backwash water may not be returned into the pool or spa. Backwash piping of any pool or spa may not be interconnected.

3. Backwash from a diatomaceous earth filter must discharge into a separation tank that has been installed to collect the waste diatomaceous earth mixture prior to discharging into a sanitary sewer.

4. Sump and drain piping must have sufficient capacity to receive recirculation system backwash without overflow of the sump receiver.

8. **FLOWMETER AND GAUGES**

A. A pressure and vacuum gauge must be provided for each pump system. Each gauge must have a scale range approximately 1 ¼ times the maximum anticipated working pressure or vacuum and must be accurate to within 2 percent of scale. The pressure gauge located on the filter shall be marked with the clean start up pressure reading.

B. A flowmeter must be installed on each recirculation system per manufacturer’s instructions and be accurate to within 10 percent of flow.

C. All gauges and flowmeters are to be located so they can be easily read without having to climb over equipment or piping.

9. **CHEMICAL FEEDERS**

A. An approved automatic disinfectant feeder or chlorinator(s) is required to be installed on the recirculation system of every pool and/or spa. Models, which allow fumes to escape, must not be permitted to be installed in any room that is not properly vented.

B. Chemical feeders must be constructed with an adjustable output rate device to permit repeated adjustments without loss of output rate accuracy and adjusted by an automatic chemical monitoring and control system.

C. All disinfectant feeders are to be sized at a rate equivalent to at least 3 pounds of available chlorine per 10,000 gallons of pool water per day.

D. Piping used for the chemical feeder and its auxiliary equipment must be resistant to corrosion or chemical deterioration.
10. **EQUIPMENT AREA**
   A. Equipment for recirculation, filtration, and disinfection of pool water must be installed so that access is limited to persons authorized by the pool owner or operator.
   
   B. All filters, valves, pumps, strainers, and equipment must be readily accessible for repair and replacement.
   
   C. Pool equipment must be mounted on a continuous slab of concrete sloped $\frac{1}{4}$ in. per ft. to a drain (except at the point where the pipe(s) emerge from ground).
   
   D. Equipment must not be installed in pits.

11. **AUTO FILL LINE AND BACKFLOW DEVICES**
   A. Potable water must be supplied via a permanently installed fill line protected by an approved backflow prevention device.
   
   B. An adequate number of hose bibs are required in the pool area to allow a 75 ft. hose to reach all parts of the deck. In addition, a hose bib is required in the equipment area. An approved, non-removable backflow device must protect each hose bib.

12. **DECK**
   A. A minimum 4 ft. wide continuous and unobstructed decking (measured from the water edge of the coping) must be provided around the pool. Decking must be flush with the coping.
   
   B. Adjacent pools must be separated by a minimum of 6 ft. of approved decking.
   
   C. Approved decking must be extended an additional 4 ft. behind and on the sides of diving boards, slides, ADA equipment, and their appurtenances.
   
   D. The deck must be constructed of concrete or like material that is slip-resistant, cleanable, and non-abrasive. Materials other than brushed concrete must be approved by this Department.
   
   E. All parts of the deck must drain at a slope of $\frac{1}{8}$– $\frac{1}{4}$ in. per ft. away from the pool to floor drains or other approved water disposal areas. The deck must be constructed and finished to prevent standing water.
   
   F. Stress protection is required at contact points of the deck and the pool shell. Expansion joints and spaces must be sealed with approved caulking.
   
   G. Decking elevation differences must not create a safety hazard. If decking is to have a difference of elevation, safety barriers may be required.
   
   H. The deck and areas of emergency egress must be properly illuminated to identify any potential hazards.
   
   I. Valves cannot be located in the deck area, but rather in the equipment area.
13. SAFETY STRUCTURES AND EQUIPMENT

A. Underwater lighting is required to provide complete illumination to all areas of the pool with no blind spots. The light must provide a minimum of ½ watt per square ft. of pool or spa surface area.

B. A body hook permanently attached to a 12 ft. minimum fixed length rescue pole is required. *

C. A minimum 17-in. diameter life ring with an approved rope (3/16 in.), long enough to span the width of the pool is required. *

*For pools that exceed 75 ft. in length or 50 ft. in width, a rescue pole and life ring must be provided on two opposing sides of the pool at centralized locations.

D. All required signs must be affixed to an approved permanent structure visible to all pool users. All letters and numbers must be a minimum of 4 in. high, unless otherwise denoted.

   1. Where no lifeguard service is provided, a sign stating, “WARNING: NO LIFEGUARD ON DUTY”, is required. In addition, the sign should also state in letters 1 in. high, “Children under the age of 14 shall not use pool without a parent or adult guardian in attendance”.

   2. An illustrated sign with text at least ¼ in. showing the correct procedure to administer artificial respiration and CPR procedures must be posted.

   3. A sign listing the emergency telephone number 911 (min. 4 in. text), the telephone number of the nearest emergency services, and the street address of the pool facility (min 1 in. text) is required to be posted.

   4. In pools with a depth of 6 ft. or less, a sign stating “NO DIVING” must be posted.

   5. A sign must be posted indicating the maximum number of occupants allowed for each pool or spa. The occupant capacity is based on one pool user for every 20 sq. ft. of pool water surface area and one pool user for every 10 sq. ft. of spa water surface area.

   6. Diarrhea sign(s), in either 1 in. text or diagram, stating that persons having currently active diarrhea or who have had diarrhea within the past 14 days cannot enter the pool water, must be located at the entrance(s) to the pool facility.

   7. A “KEEP CLOSED” sign must be posted on the exterior side of gates and doors leading into pool enclosure area.

E. A test kit for measuring the disinfectant residual, pH, and if used, cyanuric acid concentration is required.

14. ANCILLARY FACILITIES (Toilets, Showers, Drinking Fountains)

A. Ancillary structures must be provided at each pool/spa site.

   Note: Public toilet facilities may be omitted when the pool users have access to toilet facilities either in living quarters located within 300 ft. walking distance or in an adjacent building such as a recreational facility, clubhouse, or cabana. Shower and dressing facilities are not required when the pool users have access to adjacent living quarters. Drinking fountains are not required if drinking water is available in adjacent buildings or living quarters.
B. For the purpose of calculating the number of showers, toilets and lavatories, one pool user must be considered for every 15 sq. ft. of pool water surface area.

1. One shower must be provided for every 50 pool users
2. One lavatory must be provided for every 80 pool users
3. Separate toilet facilities must be provided for each sex. One toilet must be provided for every 60 females and one toilet plus one urinal for every 75 male pool users.
4. One drinking fountain must be provided for the first 250 pool users and one additional fountain for each additional 200 pool users.

C. Construction of showers and lavatories.

1. Floors must be slip-resistant, nonabsorbent, and easily cleanable. Floors must have a minimum 5 in. cove base at the floor/wall juncture and must be sloped not less than ¼ in. per ft. to floor drains.
2. Walls must be smooth, moisture-resistant and easily cleanable.
3. Showers and lavatories must be provided with hot and cold running water. The hot water must be limited to a maximum of 110°F. Permanently mounted single-service soap and towel dispensers must be provided at lavatories. Showers must be provided with soap dispensers.
4. Dressing rooms and toilet rooms shall be vented.

15. ENCLOSURE OF POOL AREAS

A. The pool must be enclosed by either one, or a combination, of the following: a fence, wall, portion of a building or other approved durable enclosure. Doors, openable windows, or gates of living quarters or associated private premises will not be permitted as part of the pool enclosure. The enclosures, doors and gates must meet all of the following specifications:

1. The enclosure must have a minimum effective perpendicular height of 5-ft. as measured from the outside as depicted in Figures 31B-4 and 31B-5.
2. Openings, holes or gaps in or under the enclosure, doors, and/or gates must not allow the passage of a 4-in. diameter sphere. The enclosure must be constructed over concrete or other hard and permanent material.
3. The enclosure must be designed and constructed so that it cannot be readily climbed by small children. Horizontal and diagonal member designs, which might serve as a ladder for small children, are prohibited. Horizontal members must be spaced at least 48 in. apart. No planters or other climbable structures are allowed within a 5 ft. area as depicted in Figure 31B-5. The area 5ft outside of the pool enclosure must be public, common area.
4. Chain link may be used provided that the openings are not greater than 1 ¾ in. (measured horizontally).
B. Gates and doors opening into the pool enclosure must also meet the following specifications:

1. Gates and doors must be equipped with self-closing and self-latching devices. The self-latching device must keep the gate or door securely closed. Gates and doors must open outward away from the pool except where otherwise prohibited by law. Hand activated door or gate-opening hardware must be located no less than 42 in. and no more than 44 in. above the deck.

2. Gates and doors must be capable of being locked during times when the pool is closed. Exit doors, which comply with Chapter 10, Title 24, CCR, will be considered as meeting this requirement.

3. The pool enclosure must have at least one means of egress without a key for emergency purposes. If multiple gates/doors are provided and only one means of egress is provided, this gate/door must be clearly labeled with a sign stating “EMERGENCY EXIT” in minimum 4 in. lettering.

4. The enclosure must be constructed so that all persons will be required to pass through common pool enclosure gates or doors in order to gain access to the pool area. All gates and doors exiting the pool area must open into a public area.

16. SOLAR HEATING
   A. If utilized, solar heating system must not allow water to bypass the filtration system, interfere with the required turnover rate or exceed the pipe flow velocities.
   
   B. Suction outlets must be split a minimum of 3 ft. apart through a “T” fitting a minimum of 3 ft. apart and be covered with approved drain covers. Suction outlets cannot be located within 5 ft. of a pool inlet.

17. SPA POOLS (Special Requirements) (see Figure 31B-6)
   A. Surface area of a spa must not exceed 250 sq. ft. and the water depth must not exceed 4 ft.
   
   B. The water depth over the benches must be uniform and not exceed 24 in. Benches must be at least 12 in., no more than 24 in. wide.
   
   C. Two approved handrails are required at the stairs of spa pools.
   
   D. The minimum clearance between parallel benches, or the bench and the bottom step riser, must be at least 2 ft.
   
   E. A spa aeration and/or hydro-jet system must be completely separate from its filtration system and must not be interconnected with any other body of water.
   
   F. All jet pump suction outlets must be hydraulically balanced and symmetrically plumbed through one or more “T” fittings and must be separated by a distance of at least 3 ft. apart in any dimension. All suction outlets must be covered with approved drain covers which meet the current performance standard.
   
   G. A clearly labeled “Emergency Shut-Off Switch” is required to identify the switch. It must be installed adjacent to the spa and must turn off all recirculation, jet, and blower pumps.
   
   H. A minimum of two depth markers must be provided indicating maximum depth.
   
   I. The maximum allowable water temperature of a spa is 104ºF.
J. Unpaved areas, planters or flowerbeds cannot be located within 4 ft. of the spa.

K. A warning sign for spa pool shall be posted stating in minimum 1 in. lettering:

**Caution:** Elderly persons, pregnant women, infants and those with health conditions requiring medical care should consult with a physician before entering the spa. Unsupervised use by children under the age of 14 is prohibited. Hot water immersion while under the influence of alcohol, narcotics, drugs or medicines may lead to serious consequences and is not recommended. Do not use alone. Long exposure may result in hyperthermia, nausea, dizziness or fainting.
FIGURES AND TABLES

APPROVED HANDHOLDS

Concrete Handholds

Bullnose Type

Cantilevered Type

Perimeter Overflow Pools

slope 1/4 in. per ft. min. to drain

slope 1/4 in. to 1 in. per ft. away from pool

slope 1/4 in. to 1 in. per ft. away from pool

slope 1/4 in. per ft. min. to drain

slope 1/4 in. per ft. min. to drain

slope 1/4 in. per ft. min. to drain

1 in. min. 2 in max.

tile

2 1/2 in. max.

2 1/2 in. max.

2 1/2 in. max.

2 1/2 in. max.

2 1/2 in. max.

1/2 in. min. 2 in max.

2 in. min. 6 in max.

dock slab

plaster

plaster

tile

bond beam

pliable waterproof joint

pliable waterproof joint

pliable waterproof joint

pliable waterproof joint

pliable waterproof joint

sand backfill

12 in. max.

4 in. min.

3 in. min.

3 in. min.
FIGURE 31B-1: DEPTHS AND CLEARANCES FOR POOLS WITH DIVING BOARDS GREATER THAN 30 INCHES (762mm) ABOVE THE WATER LINE

LONGITUDINAL SECTION

Table 31B-1

<table>
<thead>
<tr>
<th>BOARDS AND PLATFORMS</th>
<th>DEPTH OF WATER</th>
<th>LENGTH OF SECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D1</td>
<td>D2</td>
</tr>
<tr>
<td>1-meter board</td>
<td>Min.</td>
<td>5'-6&quot;</td>
</tr>
<tr>
<td>3-meter board</td>
<td>Min.</td>
<td>6'-6&quot;</td>
</tr>
</tbody>
</table>

Notes for Figure 31B-1 and Table 31B-1:
1. Maximum radius shall equal D2 minus D1 dimensions.
2. Radius at the shallow end shall not be more than 12 inches.
3. The length of a section is based on the maximum slope and other maximum and minimum dimensions.
4. Where there is a break in slope, the break shall be located at a water depth equal to 4'-6".
5. The springline depth at (4) shall not be more than 4'-0".
6. The maximum water depth shall be 3'-6".
7. Each pool shall be provided with a main drain submerged suction outlet typically located at the bottom of the pool that conducts water to a recirculating pump.
TABLE 31B-2

<table>
<thead>
<tr>
<th>Dimension</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>D4</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>L4</th>
<th>W1</th>
<th>W2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>2'6&quot;</td>
<td>8'6&quot;</td>
<td>0'0&quot;</td>
<td>7'0&quot;</td>
<td>6'0&quot;</td>
<td>6'0&quot;</td>
<td>2'6&quot;</td>
<td>30'0&quot;</td>
<td>9'0&quot;</td>
<td>3'0&quot;</td>
</tr>
<tr>
<td>Maximum</td>
<td>--</td>
<td>3'6&quot;</td>
<td>--</td>
<td>--</td>
<td>10'0&quot;</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Notes for Figure 31B-2 and Table 31B-2:
1. Radius at the shallow end shall be a minimum of 1'0".
2. Springline D1 shall extend to the break in slope between the shallow area and the deep area.
3. Maximum radius shall equal D2 minus D1 dimensions.
4. Where there is a break in slope, the break in slope shall be located at a water depth equal to 4'6".
5. Length of section based on the maximum slope and other maximum or minimum dimensions.
6. Each pool shall be provided with a main drain submerged suction outlet typically located at the bottom of the pool that conducts water to a recirculation pump.
FIGURE 31B-3: DEPTH AND CLEARANCES FOR POOLS WITHOUT DIVING BOARDS

TABLE 31B-3A: POOLS WITH A MAXIMUM WATER DEPTH \( \leq 6'0'' \)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>W1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>2'6''</td>
<td>--</td>
<td>0'0''</td>
<td>3'6''</td>
<td>3'0''</td>
<td>3'0''</td>
<td>6'0''</td>
</tr>
<tr>
<td>Maximum</td>
<td>--</td>
<td>6'0''</td>
<td>3'6''</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

TABLE 31B-3B: POOLS WITH A MAXIMUM WATER DEPTH > 6'0''

<table>
<thead>
<tr>
<th>Dimension</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>W1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>2'6''</td>
<td>&gt;6'0''</td>
<td>0'0''</td>
<td>3'6''</td>
<td>3'0''</td>
<td>3'0''</td>
<td>7'6''</td>
</tr>
<tr>
<td>Maximum</td>
<td>--</td>
<td>--</td>
<td>3'6''</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Notes for Figure 31B-3 and Tables 31B-3a and 31B-3b:
1. Radius at the shallow end shall be a maximum of 1'0''.
2. Springline D1 shall extend to the break in slope between the shallow area and the deep area.
3. Maximum radius shall equal D2 minus D1 dimensions.
4. Where there is a break in slope, the break in slope shall be located at a water depth equal to 4'6''.
5. Each pool shall be provided with a main drain submerged suction outlet typically located at the bottom of the pool that conducts water to a recirculation pump.
FIGURE 31B-4: PERPENDICULAR FENCING DIMENSIONS ON SLOPING GROUND

FIGURE 31B-5: EFFECTIVE FENCING HEIGHT
TABLE 31B-6

<table>
<thead>
<tr>
<th>Dimension</th>
<th>D1</th>
<th>D2</th>
<th>L1</th>
<th>L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>--</td>
<td>24”</td>
<td>12”</td>
<td>24”</td>
</tr>
<tr>
<td>Maximum</td>
<td>24”</td>
<td>48”</td>
<td>24”</td>
<td>--</td>
</tr>
</tbody>
</table>

Notes for Figure 31B-6 and Table 31B-6:
1. Bottom slope shall not exceed 1:10 and must be uniform
2. Bench ramping shall not exceed 1:10 uniform slope, measured at the inner circumference of the bench.
3. Six inch minimum radius at “pinch points.”
4. See Sections 311B for step and handrail dimensions.
TABLE 31B-7

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>T-1 Standard</th>
<th>T-1 Triangular, Concave, Convex</th>
<th>T-2</th>
<th>T-3</th>
<th>W-1</th>
<th>H-1</th>
<th>H-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>14”</td>
<td>21”</td>
<td>12”</td>
<td>3”</td>
<td>24”</td>
<td>6”</td>
<td>28”</td>
</tr>
<tr>
<td>Maximum</td>
<td>18”</td>
<td>24”</td>
<td>16”</td>
<td>--</td>
<td>--</td>
<td>12”</td>
<td>36”</td>
</tr>
</tbody>
</table>

Notes for Table 31B-7:
1. Six inch minimum radius at "pinch points".