



Part 3.1

Swimming Pool Plan Detail

Items to Include in the Plans

Pool Dimensions and Surfacing Material

- Length
- Width
- Shallow water depth
- Deep water depths
- Square feet of surface area of pool that is more than 5 feet deep
- Square feet of surface area of pool that is less than 5 feet deep
- Total pool volume
- Type of pool surfacing material
- Pool color

Note: This plan detail doesn't yet include additional requirements needed to comply with the new federal law, the *Virginia Graeme Baker Pool and Spa Safety Act*. For guidance, see www.doh.wa.gov/ehp/wr/rules.htm.

Dimensions of Walking Surfaces

- Width
- Total square feet of walking surfaces
- All decks, locker rooms, and walkways to and from the pool are sloped to drains
- Surface is non-slip
- Type of surfacing material used
- Materials easy to clean, fast drying and water-sealed

Pool Floor and Wall Dimensions

- Floor slopes
- Wall dimensions including details on radius of slopes between floor and wall surfaces
- Pool surfaces free from protrusions
- Ledges [generally not allowed in pools (exception found in 246-260-091(3))]

Pool Setbacks

- At least 15 feet from accessible roof, balconies, trees, or any object that could allow a person to jump or dive into the pool

Barrier Protection

- Type of barrier provided
- Horizontal and vertical member construction of the barrier
- Maximum openings at the base of the barrier
- Barrier isn't compromised to reduce the minimum barrier height measured from the outside of the barrier (e.g. sloping hill, bench)
- At pools **without** lifeguards:
 - All gates or doors leading into the pool are self-closing and self-latching
 - Windows that are accessible to the public and opening to the pool, may not open more than 4 inches (bedroom windows that open need more barrier protection)
 - Separate locking method used to lock gates and doors when the pool is closed
 - Latches are installed on all gates and doors. Use one of the following latch types:
 - Continuously locked
 - Coded
 - Made with an 18 inch radius of protection to prevent a person from reaching through the outside of the gate to unlatch the door or gate
 - Or** raised 60 inches or more in height

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- Check Americans with Disabilities Act for latch requirements (see WAC 51-1100) and Fire Code (see 51-54-1000) for additional guidance for emergency exits; for on-line information go to: www.sbcc.wa.gov/pages/code.html#viewing_online

Inlets and Outlets and Make-up Water

- Number of inlets
- Location of inlets [when pool is greater than 2500 square feet bottom inlets required]
- Designed flow per inlet
- If outlet is an overflow channel, show:
 - Details on the overflow channel design. [General requirements require minimum slope of 0.1 foot/foot of run, if slope is less, hydraulic engineering justification is required]
 - Details of the accompanying balancing tank noting dimensions, valves, pipes, and freshwater makeup method with cross connection protection provided
 - Design will be sufficient to handle peak design surges and turnover
 - Design prevents flooding of the overflow system
 - Design provides an equalizer line or similar protection for the recirculating pump
 - Controls provided to ensure against flooding and preventing air lock on the pump
- If outlet is a skimmer (pool less than 2500 square feet of surface area) show:
 - Total length of each weir
 - Total height of each weir
 - Design can handle from 3 to 5 feet per second across the weirs at normal operating flow
 - Design of normal operating flow going across the weir (minimum of 60 percent)
 - Equalizer line users have opening to the pool protected with a grate rated through IAPMO or UL to protect against hair entrapment

Main Drains

- Spacing between main drains and a minimum of two separate drains
- There is more than one drain so no single drain becomes the sole source of suction
- Maximum velocity through any one drain pipe shall not exceed 6 feet per second assuming 100 percent of the total recirculation flow at peak flow conditions
- Main drain gratings:
 - Total open area of the grates
 - Maximum flow potential across the drains does not exceed 1.5 feet per second
 - Dimensions of the drain gratings
 - Means to secure and fasten the drain grates to the main drain sump

Fresh Water

- Note method for addition of fresh water
- Protections prevent back pressure or back siphonage
- Size of the fresh water makeup in relation to anticipated daily needs

Valves, Strainer Basket, and Pump

- Identify valve placement in the design
- Flow control from the overflow and the main drain system assures at least 60 percent of the flow comes from the overflow system
- Note design flow of the pump in relation to the overall range of flows with the filter clean and with the filter dirty
- Provide estimated range of flows determined by the design (hydraulic calculations welcome)

Turnover Rate, Filter, Disinfection Equipment, and other Chemical Feeding Equipment

- Provide turnover rate
- Turnover rate meets the minimum turnover requirement when filter is dirty
- GPM/SF rate of flow with filter clean and dirty

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- Filter and disinfection equipment listed to NSF 50 or equal
- Equipment sized to ensure it meets anticipated peak flows and demands and average demands
- If using cartridge filters, specify an extra set of cartridges
- When recirculation pump is turned off, controls for feeding disinfectant and other chemical feeding equipment for controlling pH also turns off (describe how this is accomplished)
- If using supplemental disinfectants e.g. ozone, copper/silver, or uV, please contact the office to ensure that they are correctly used

Mechanical Equipment and Chemical Storage

- Adequate space provided for access to equipment for routine maintenance and use
- All gauges and flow meters located so they can be easily read and provide accurate readings
- All chemicals stored in a separate room or according to the manufacturer's requirements
- Mechanical room:
 - Enclosed
 - Locked
 - Well ventilated
 - Sloped to drain
 - Lighted sufficient for equipment maintenance and reading of meters and gauges

Locker Rooms and Plumbing Fixtures

- Plumbing fixtures conform with applicable requirements toilets, urinals, showers, sinks, and hose bibs, diaper changing stations, drinking fountains, and janitor sinks
- Locker rooms designed to minimize cross traffic from persons in street shoes and those barefoot
- [See fixture requirements General use pools, WAC 246-260-031, Table 031.3, Limited use pools Table 031.4]

Ladders, Steps, and Handrails

- Location and placement of ladders
- Location, placement, and dimensions of steps
- Location and placement of handrails
- If pool deck is greater than 12 inches above pool water level, use special consideration

Mechanical Ventilation

- Conforms with ASHRAE standards for indoor pools
- Provides good air patterns in the indoor pool facility to eliminate short circuiting of fresh air to exhaust air
- Provides protection against moisture buildup
- Air pressure in indoor pool facility slightly lower than air pressure in surrounding rooms or areas
- Total air flow and the minimum fresh air component detailed

Lighting – Outdoor Pools

- Pools used after dusk meet minimum lighting conditions of 10 foot candles on the decks and pool surface
- Pool closed before dusk
 - Letter from the owner provided

Lighting - Indoor Pools

- Meets minimum standards for indoor pools of 30 foot candles on pool surfaces, 10 foot candles on pool decks
- Lights have protective covers
- The direction of natural light from windows and potential for glare problems from sunlight considered

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Bather Load

- Bather load projections calculated in accordance with size of the pool, walking surfaces, plumbing fixtures, surge volume in overflow channel, and balancing tank

Diving Boards, Platforms, and Starting Blocks

- Areas designed for diving, including deck level diving, meets specific pool dimension requirements
- Diving areas plans show sufficient cross sectional and plan view details, including:
 - Dimensions of the diving boards, platforms, and starting blocks
 - Construction plans for the diving boards, platforms, and starting blocks

Pool Depth Markings

- Placement of pool depth markings on pool decking and sidewall

Safety Line and Marking Line

- If there are sudden changes in slope, marked with safety float lines and/or marking lines – or, as preferred, both

Emergency Equipment

- Telephone
- First aid kit
- Blanket
- Pools **without** lifeguards:
 - Reaching pole
 - Life hook
 - Throwing buoy
- Pools **with** lifeguards:
 - Rescue tube or buoy
 - Backboard with supporting materials

For more information, contact the Washington State Department of Health Water Recreation Program at www.doh.wa.gov/ehp/wr/contact.htm.