

# GENERAL COMMERCIAL SWIMMING POOLS AND SPAS, PUBLIC INTERACTIVE WATER FEATURES & FOUNTAINS

**PLAN SUBMITTAL REQUIREMENTS, PERMITTING, & INSPECTIONS. THESE REQUIREMENTS ARE IN ADDITION TO BUILDING INSPECTIONS REQUIREMENTS.**

## PERMIT APPLICATIONS AND DOCUMENTS REQUIRED

- A. Building Permit application with information requested furnished.
- B. Electrical Permit and Plumbing Permit applications.
- C. General contractor, and all sub contractors must be currently registered and have a valid State-issued license, where required.
- C. All permit applications must be signed and dated.
- D. Pre-Construction Certification, completed, signed and Engineer stamped.

## IMPORTANT NOTES

- This handout represents minimal pool code requirements, and is not considered all inclusive of all requirements.
- Additional documents may be required for clarification not listed or contained in this document.
- A new pool facility shall be required to meet the applicable construction standard that is most restrictive to its use.
- All State and local requirements must be met before a Permit to Operate is issued (See Pool Final under 'Inspections').
- Any alteration of plans after approval may result in non-compliance.
- Ensure Building Permit placard is displayed at the building site until the "Swimming Pool Final" is issued.
- All swimming pool re-inspection fees must be paid before another re-inspection will occur.
- Check all ordinances before beginning any work to ensure all work is in compliance. It is the responsibility of the pool builder, developer, owner, and all contractors to obtain updates to ordinances, code changes, and handouts.

## DRAWING SUBMITTAL PACKAGE – (\*not applicable for PIWF)

Prior to beginning construction of a new public swimming pool, spa, public interactive water feature or fountain (PIWF) or extensive remodeling of an existing public swimming pool, spa, or PIWF the applicant/owner is required to submit plans and specifications for the construction or remodel for review, as well as other departments or divisions that may be applicable (i.e., Building Inspections Division, Fire Department, etc.). See specific categories provided in detail in this handout.

- Three (3) complete drawing submittal packages are required. Applications shall be signed and dated. Plans and specifications submitted shall be stamped with the seal of a Professional Engineer.
- A *Commercial Pool and Spa Pre-Construction Certification* signed and stamped by a Professional Engineer shall be submitted with the plans for review. \*
- Prior to the issuance of the Permit to Operate the *Commercial Pool and Spa Post-Construction Certification* signed and stamped by a Professional Engineer shall be submitted upon completion of all construction activities and given to the Inspector at the Pool Final inspection. The pool area shall not be occupied prior to obtaining the Permit to Operate. \*
- The plans and specifications must indicate the following:
  - Plan of entire project site/tract map
  - Complete deck showing width
  - Plot plan, deck detail and pool enclosure location- even in if done by others - including gate swing, detail and fence panels (See Pool & Spa Enclosure Specific Code Requirements), equipment location with reference to the property line(s), and setback(s) from property lines.

Plumbing details including gauges, pipe diameter, direction of water flow, equipment and fixtures served. (See 'Recirculation').

- Pool/Spa structure details & locations
  - a. Depth markers
  - b. Play, diving, slide structures, if applicable
  - c. All suction outlets
  - d. Exits/entries including ladders, stairs and beach entries
  - e. Benches, steps, tanning ledges
  - f. Accessibility sleeve or equivalent
  - g. Inlets
  - h. Lights – Underwater lighting if installed shall be 0.5 watts per square foot. If underwater lighting is not provided, lighting above water and deck shall not be less than 0.5 watts (incandescent equivalent) per square foot. All portions of deck and water must be illuminated and the bottom of the pool or spa must be readily seen.
  - i. Skimmers
  - j. Coping
  - k. Fill line and/or applicable hose bibs
  - l. Pool profile including depth
- Safety equipment and signs (See Signage)
- Drainage shall be shown either on the plot plan or the drawing itself. Ensure natural drainage of the lot is adhered to or note any and all deck drains or other means of capturing water to alter the flow.
- Design drawing showing the pool/spa/deck layout along with a dimensioned pool profiles (section). Specifications indicating equipment size & type, pool/spa volume (size & gallon capacity), electrical and gas (if heated) requirements. Appropriate electric/gas company's stamp of approval shall be on all plan submittals. See additional plan review requirements under RECIRCULATION.

#### **DOCUMENTS REQUIRED ON SITE**

The Pool Permit placard, approved set of plans, and all construction tags with inspection results shall be on-site at all times during pool construction.

#### **REVISIONS/ALTERATIONS TO PLANS**

Before any alterations are made to submitted and approved plans you must contact a Plans Examiner for approval. Additional fees for plan review may apply.

#### **POOL OR SPA LOCATION**

- Pool, spa, slide, or play features must not be subject to watershed drainage from the surrounding areas.
- Decks shall be sloped to effectively drain to perimeter areas or to deck drains. Drainage shall remove pool and spa splash water, deck cleaning water, and rainwater without leaving standing water deeper than 1/8 inch. Water from deck drainage shall not be mixed with pool or spa water. Drain water must be routed to storm sewer or terminate on property, not impeding natural flow of drainage, and ultimately captured in storm sewer.
- Indoor pool deck drains may drain to the sanitary sewer by means of an air gap.
- Class D pools shall be separated a minimum of 15 feet from the shallow area of another pool and/or separated a minimum of 35 feet from the deep end (five feet or greater) of another pool in the same pool yard enclosure. A Class D pool may be surrounded by a separate pool enclosure, which complies with pool enclosure standards, if the above space requirements cannot be met.

## DEFINITION & CLASSIFICATIONS

**POOL** - Any man-made, permanently installed or non-portable structure, basin, chamber, or tank containing an artificial body of water that is used for swimming, diving, aquatic sports, or other aquatic activity other than a residential pool that is operated by an owner, lessee, operator, licensee or concessionaire, regardless of whether a fee is charged for use. A pool may be either publicly or privately owned. The term does not include a spa or decorative fountain that is not used as a pool. References within the standard to various types of pools are defined by the following classification categories:

- **CLASS A POOL** – Any pool used, with or without a fee, for accredited competitive aquatic events such as Federation Internationale De Natation Amateur (FINA), United States Swimming, United States Diving, National Collegiate Athletic Association (NCAA), National Federation of State High School Associations (NFSHSA), events. A “Class A” – pool may also be used for recreation.
- **CLASS B POOL** – Any pool used for public recreation and open to the general public with or without a fee.
- **CLASS C POOL** – Any pool operated for and in conjunction with (i) lodgings such as hotels, motels, apartments, condominiums, or mobile home parks; (ii) property owners associations, private organizations, or clubs; or (iii) a school, college or university while being operated for academic or continuing education classes. The use of such a pool would be open to occupants, members or students, etc. and their guests but not open to the general public.
- **CLASS D POOL** – A wading pool with a maximum water depth of 24 inches at any point.
- **CLASS T POOL** – A pool that is operated exclusively for therapeutic purposes, such as physical therapy, and is under the direct supervision and control of licensed medical personnel.

**SPA** – A constructed permanent or portable structure that is two (2') feet or more in depth, that has a surface area of 250 square feet or less, or a volume of 3250 gallons or less, which is intended to be used for bathing or other recreational uses and is not drained and refilled after each use. It may include, but is not limited to, hydro jet circulation, hot water, cold water, mineral baths, air induction bubbles, or any combination thereof.

**PUBLIC INTERACTIVE WATER FEATURES & FOUNTAINS (PIWF)** – Any indoor or outdoor installation maintained for public recreation that includes water sprays, dancing water jets, waterfalls, dumping buckets, or shooting water cannons in various arrays for the purpose of wetting the persons playing in the spray streams. See TAC Title 25, Part 1, Ch 265, Sub M, Sections 265.301-265.308.

## INSPECTIONS

### A. BELLY STEEL AND GROUND

1. Check for the approved set of plans. The approved set shall be onsite and remain onsite throughout construction and be available for the inspector at all times.
2. Check and insure that swimming pool(s) location is correct.
3. Temporary safety fencing must be in place prior to calling for this inspection.
4. Four (4) ground clamps minimum for pool, one (1) minimum for spa.
5. All metal parts of the swimming pool, including metal of the pool's shell, metal fittings within or attached to swimming pool structure, metal conduit and electrical equipment and motors associated with the swimming pool water circulating system must be connected to a common bonding grid with a solid conductor not smaller than #8. This must be connected with an approved clamp in four locations to the pool's steel. The break in the swimming pool floor must have extra steel (doubled).
6. Check and ensure proper steel is used and is chaired. #3 bars at 12" on center minimum with 12" overlap.
7. Must have anti-siphon valve on hose bib.
8. Check plumbing in the pool and spa for protection against entrapment hazards.

9. Check for dual main drains with greater than or equal to three feet (3') separation between covers or grates as measured from inside to inside of each cover or grate. \*Please note, size of cover or grate may determine SVRS (Safety Vacuum Release System) requirement for spa and pools less than or equal to four (4') feet.
10. Check and ensure hydrostatic relief valve, plug or other approved hydrostatic system is installed if provided.
11. Check and ensure static hydraulic pressure test, performed on all circulation system piping, is completed prior to gunite or shot crete pour and maintained throughout pour. Test must be designed to operating pressure of the system or 25lbs. per sq inch, whichever is less.

**B. GAS/P-TRAP & PLUMBING ROUGH**

1. Check and ensure that gas line is 18" deep with yellow 18 GA wire and has had a pressure test performed.
2. Check and ensure static hydraulic pressure test, performed on all circulation system piping, is completed prior to deck pour and maintained throughout pour. Test must be designed to operating pressure of the system or 25lbs. per square inch, whichever is less.
3. Check and ensure p-trap with air gap is installed in compliance with local Plumbing Code.
4. Should a separate p-trap be provided on the discharge line for the pool equipment a separate inspection is required.

**C. DECK STEEL**

1. Check and insure that swimming pool(s) location is correct and that the swimming pool(s) deck complies with approved set of plans on deck width and placement.
2. Check and ensure static hydraulic pressure test, performed on all circulation system piping, is completed prior to deck pour and maintained throughout pour. Test must be designed to operating pressure of the system or 25lbs. per sq inch, whichever is less.
3. Check and ensure that diving board and all metal within 5' of water are grounded.
4. Check and ensure that steel or mesh is used in deck.
5. Check and ensure that ground wire goes to swimming pool equipment.
6. The minimum concrete thickness is 4" with maximum 2" of sand under deck.
7. Isolation joints required at foundation/deck abutment.
8. Check skimmer and inlet number and location. These may also be checked at Pre-Plaster.

**D. PRE-PLASTER**

1. Permanent fencing, doors and complete enclosure must be in place and correct including all gates and latches (See Pool and Spa Enclosure /Specific Code Requirements).
2. Check main drain placement and location.
3. Check other suction outlet location and placement (play features, blowers, etc).
4. Check skimmer and inlet number and location.
5. Check visual separation tile layout, if applicable.
6. Check tile stripe at edge of each bench, step, ledge and other required areas.
7. Check vertical wall and depth markers, if set. These may also be checked at Pool Final.
8. Check ladder/exit/entry location and placement
9. Check and ensure no vacuum lines.
10. Check all step and bench depth, width and rise.

**E. POOL FINAL**

1. Check for the approved set of plans. The approved set shall be onsite and remain onsite throughout construction and be available for the inspector at all times.
3. Check and ensure all pool equipment, filters, and plumbing matches approved set of plans.
4. Check and ensure that swimming pool equipment is grounded and operating properly and SVRD is installed, if required, per manufacturer's instructions.

5. Check and ensure *Commercial Pool and Spa Post-Construction Certification* is signed, stamped by Professional Engineer and provided on site to inspector at Pool Final Inspection.
6. Upon approval of final inspection and prior to occupation of pool, owner/operator is required to obtain a Permit to Operate.
7. Check and ensure back wash line is indirectly terminated to location approved by Plumbing Code. Backwash line must have readily observable discharge by means of freefall or clear site glass installed that is able to be removed for cleaning.

**F. POOL & SPA ENCLOSURE / SPECIFIC CODE REQUIREMENTS**

1. Temporary fencing (if needed) must be placed before construction begins and remain standing until the Pre-Plaster Inspection at which time the permanent fence is to be erected.
2. Gates. All gates shall be equipped to accommodate a locking device. All pedestrian yard gates must have self-closing, self-latching, lockable gates and open away from the pool. Non-pedestrian yard gates, maximum of one, shall have a self-latching device and remain locked at all times when the pool area is not in use. Where the release mechanism of the self-latching device is located less than 60 inches from the bottom of the gate, the release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate, and the gate and barrier shall have no opening greater than 0.5 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.
3. Barrier height. Barrier (fence) height shall be a minimum of 48" and a maximum of 96" measured from inside yard at grade. Height recommended for all Class C pools is six (6) feet. Height recommended for all Class A & B pools is seven (7) feet.
4. Closely spaced horizontal members. For barriers in which the horizontal members of the fence are spaced less than 45" apart, the horizontal members shall be placed on the pool side of the barrier. (Pickets shall be located on the outside of the fence with the posts being on the inside). Spacing between vertical members shall not exceed 1.75 inches (44 mm) in width. Should the pickets be located on the inside of the fence, measures shall be taken to render the fence non-climbable. For example, anti-climb bars or angled horizontal members shall be used to achieve this purpose. Where there are cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.
5. Widely spaced horizontal members. For barriers in which horizontal members of the fence are spaced greater than 45" apart, the vertical member spacing shall not allow a four inch (4") diameter sphere to pass between pickets. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.
6. Spacing to the base horizontal member measured to the top of a hard deck surface shall not allow a four (4") diameter sphere to pass.
7. Diagonal members. Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be no more than 1.75 inches (44 mm).
8. Maintain the gates to close and latch from its fully open position to a position where the gate is opened six inches from the fully closed position.
9. Barriers and Gates must meet all requirements of the TAC, Health & Safety Code Chapter 757 and must meet all requirements of the Texas Department of State Health Services Standards for Pools and Spas.

**G. WATER SUPPLY** A connection shall be made to a public water system or approved individual source that meets the requirements of the TCEQ (Texas Commission on Environmental Quality).

**H. PLUMBING / ELECTRICAL WORK / MECHANICAL FACILITIES & STRUCTURES** All plumbing, electrical work, mechanical facilities, and structures for a public swimming pool and spa shall meet or exceed all applicable requirements of the Town.

## I. POOL BACKWASH

- Plumbing facilities will be installed so that swimming pool and spa filter backwash is disposed into the Sanitary Sewer.
- Diatomaceous Earth (DE) filters are required to filter the backwash water through an approved separation tank.
- No direct connection between the pool's drainage discharge and the sewage system is permitted. All wastewater must be discharged through an indirect waste connection. An air gap at least 2 times the diameter of the discharge pipe is required.
- No direct connection between the water of the pool, spa, or slide is permitted to the water supply, unless approved backflow prevention devices are installed.
- Backflow prevention devices are required on all hose bibs in the pool enclosure or any hose bibs that may be used to fill the pool, spa, or slide.

## J. DISINFECTION & STORAGE OF POOL / SPA CHEMICALS

- The Local Regulatory Authority of the City of Frisco must first approve any disinfectant or process used to sanitize pool water other than chlorine and bromine.
- Disinfection or other chemicals and feed equipment shall be stored in such a manner that pool and spa users shall not have access to such facilities and/or chemicals. Rooms to house chemicals shall have proper ventilation.
- Dry chemicals shall be stored off the floor in a dry, above ground level room and protected against flooding, or wetting.
- Storage of pool chemicals must also meet or exceed all applicable requirements of the current Fire Code and Building Codes, as they currently exist or may be amended.

## K. SIGNS Include, but not limited to, the following: (Please note the height requirement of all letters of each specific sign where provided.)

1. **"WARNING – NO LIFEGUARD ON DUTY"**. Letters minimum **one (1") inch** height. This sign is required if no lifeguard is provided.
2. **"CHILDREN SHOULD NOT USE POOL WITHOUT ADULT SUPERVISION"**. Letters minimum **two (2") inch** height. This sign is required if no lifeguard is provided.
3. **"NO DIVING"** along with the International Symbol for No Diving. Letters minimum **four (4") inch** height. Required in the decking or coping also.
4. **"ADULTS SHOULD NOT SWIM ALONE"**.
5. **"FOR EMERGENCY DIAL 911"** or appropriate phone operating instructions. Letters minimum **four (4") inch** height. For example: **"PUSH BUTTON TO DIAL 911"** - all 4 inch height letters.)
6. **"NO GLASS IN POOL AREA"**
7. **"SWIMMERS MUST SHOWER BEFORE ENTERING SWIMMING POOL/SPA"**
8. **"NO ANIMALS IN POOL AREA"**
9. **"(PHYSICAL STREET ADDRESS OF POOL)"** is required next to phone and legible.
10. **"(LOCATION OF EMERGENCY PHONE AT ALL POOL BARRIER ENTRANCES)"** Letters minimum **one (1) inch** height. Required if gates are locked; facing outward away from pool.
11. **"(LOCATION OF EMERGENCY PHONE)"** Letters minimum **one (1) inch** height. Required inside the pool barrier IF the emergency phone is not readily visible from the pool and spa.
12. Maximum pool load limits shall be posted.
13. General pool rules shall be posted.

**L. SPA AREA SIGNAGE**

1. **“ALCOHOL SHOULD NOT BE CONSUMED PRIOR TO OR WHILE USING SPA”**
2. **“DO NOT USE SPA IF THE WATER IS ABOVE 104° FAHRENHEIT (40° CENTIGRADE)”**  
Letters minimum **one (1”) inch** height.
3. **“CHILDREN SHOULD NOT USE SPA WITHOUT ADULT SUPERVISION”** Letters minimum **two 2” inch** height. Required if no lifeguard is provided.
4. **“EMERGENCY SPA SHUT-OFF”** Letters minimum **one (1) inch** height.
5. **“(LOCATION OF EMERGENCY SPA SHUT-OFF)”** Letter minimum **one (1) inch** height.  
Required if emergency shut-off is not readily visible from spa.

**M. SIGNS FOR PIWF(S)**

**SIGNAGE REQUIRED (ALL 2-INCH LETTERS):**

1. **“NON-SERVICE ANIMALS PROHIBITED”;**
2. **“CHANGING DIAPERS WITHIN 6 FEET OF THE WATER FEATURE IS PROHIBITED”;**
3. **USE OF THE WATER FEATURE IF ILL WITH A CONTAGIOUS DISEASE OR DIARRHEA IS PROHIBITED”;**
4. **“DO NOT DRINK WATER FROM THE WATER FEATURE”;**
5. **A SIGN TO USE WHEN POOL IS VOLUNTARILY/INVOLUNTARILY CLOSED; AND,**
6. **NON-EMERGENCY CONTACT PHONE NUMBER OF OPERATOR/OWNER WHEN THERE IS NONE ONSITE.**

**N. RECIRCULATION** Plans should list or reference each of these items:

- Capacity of pool/spa in gallons.
- Surface area of pool/spa.
- Turnover rate for pool/spa is gallons/minute. The volume of the pool (gallons) divided by the turnover rate (gallons/ minute) shall be no greater than 6 hours. The volume of the spa (gallons) divided by the turnover rate (gallons/ minute) shall be no greater than 30 minutes.
- At least one surface skimmer shall be provided for each 500 square feet of the water surface area or fraction thereof. Minimum number of required skimmers. Number of skimmers on the plan. Gutter system is exempt.
- A pool or spa shall have a minimum of 2 return inlets. At least one return inlet is required for every additional 300 square feet of surface area or fraction thereof. Minimum number of return inlets required. Number of return inlets on the plan.
- Inlets shall be equipped with adjustable, directional eyeball sockets.
- A flow meter or rate of flow indicator shall be properly installed per manufacturer directions on the recirculation system of the pool or spa. Proper placement requires 10 times the diameter of the pipe before the flow meter and 2 times the diameter of the pipe after the flow meter.
- Minimum dual hydraulically balanced main drains with sumps required for each suction system provided including circulation, boosters, waterfalls or features. Suction systems including sumps and covers/grates must comply with ASME/ANSI A112.19.8 – 2007, the Virginia Graeme Baker Law, and other applicable or successor standards. Suction systems must be designed and installed to prevent exceeding approved flow rates either gallons per minute (GPM) or feet per second (FPS) with one cover/grate 100% blocked. Drain covers/grates must have minimum separation of three (3) feet measured inside edges of cover to cover. Suction sumps must be installed prior to belly steel inspection. Field fabricated covers or grates which are normally larger than 18X23 (and field fabricated sumps) must be designed and certified by a Professional Engineer in the field as meeting the testing and certification requirements of the ASME/ANSI A112.19.8 – 2007 or any approved successor standard. Suction systems using grates may not exceed flow rates of 1.5 feet per second with one grate 100% blocked.

**O. GAUGES, PIPING**

- One (1) flow meter indicating rate of flow per pump
- One (1) pressure inlet gauge and one pressure outlet gauge per pump
- One (1) vacuum gauge prior to each pump
- Label circulation piping with function and flow direction

**P. POOL OPERATOR CERTIFICATION**

- A copy of the pool operator's certification shall be submitted with the Permit to Operate. "Certified Pool/Spa Operator" (CPO), a "Certified Aquatic Facility Operator" (AFO), or a "Pool Operator on Location" (POOL), or the equivalent will be approved.

**REFERENCES**

Municipal Health, Building, Electrical, Plumbing, and Fire Codes, and The Texas Department of State Health Services 'Standards for Public Swimming Pools and Spas 2004', Texas Health & Safety Code Chapter 757, TAC Title 25, Ch 265, Sub M, Section 265.301-308. For information about the Virginia Graeme Baker (VGB) Law, the CPSC Interpretation, and other important information regarding the VGB Law visit <http://test.apsp.org/32/index.aspx#VGB>. You may email questions directly to the CPSC at [info@cpsc.gov](mailto:info@cpsc.gov).