City of North Richland Hills Consumer Health Department
Plan Review Checklist for Public Swimming Pools

Definitions:

- ❑ Class A pool – Any pool used, with or without a fee, for accredited competitive aquatic events. A "Class A" – competition pool may 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 lodgings such as hotels, motels, apartments, condominiums, mobile home parks, property owners associations, clubs, etc. or a school, college or university while being operated for academic or continuing education classes or clubs or practice events (excluding competition events). 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 splasher pool with a maximum water depth of 36 inches at any point or wading pool with a maximum depth of two feet at any point.
- ❑ Class E pool – A special purpose pool such as wave or surface action pools, catch pools, leisure rivers, interactive play attractions, vortex pools, and other such pools used primarily for aquatic attractions.
- ❑ Spa – A constructed permanent or portable structure that is two feet or more in depth, that has a surface area of 250 square feet or less, or a volume or 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, hydrojet circulation, hot water, cold water, mineral baths, air induction bubbles, or any combination thereof. **(THIS DOCUMENT EXCLUDES SPA REQUIREMENTS)**

The attached requirements represent minimal health code requirements, and are not considered all inclusive of all requirements.

A new 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 health permit is issued for operation.

Any alteration of plans may result in non-compliance with NRH Consumer Health Department Codes.

Submission and Review of Plans:

___Prior to beginning the construction of a new public swimming pool/spa or the extensive remodeling of an existing public swimming pool/spa, the owner shall submit plans and specifications for such construction or remodeling to Building Inspections and the Consumer Health Department for review.

___The plans and specifications must indicate the following:

1. Plan of entire project site/tract map
2. Plot plan, deck detail, exit/entries (pools, ladders, stairs, etc.) and pool enclosure (including gate detail and fence panels)

3. Details of any structures within/adjacent to the pool yard enclosure (pump room, etc.) including location of doors, windows, interior equipment details.
4. Plumbing detail including suction outlet details, gauges, and pipe diameter etc., pool volume, pool perimeter, anticipated user load
5. Pool/Spa structure details:

a. depth markers
b. lights
c. skimmers
d. coping
e. fill line and/or applicable hose bibbs

6. Equipment list (including equipment specifications) and locations
7. Safety equipment and signs

___The plans and specifications shall be submitted and stamped with the seal of a professional engineer.

___A Pre-Construction Engineer's Letter stamped by the engineer shall also be submitted with the plans for review (See back of packet).

___A copy of the plans and specifications and the plan review checklist must be kept at the site during the time of construction.

___Application received by Consumer Health, permit and fees paid

Time and Limitations on Construction/ Remodeling:

___Remodeling or new construction must begin and end in accordance with the time limits of the project's building permit.

___If the proposed remodeling or new construction is not initiated or completed and approved by the former departments before the expiration of the project's building permit, plans must be resubmitted with the then-existing plan review fee.

Inspection of Facilities by the Public Health Department:

___Contact Consumer Health at 817-427-6650 to schedule a **pre-gunite inspection**. The inspector will verify light, skimmer, & return inlet placements and proper drain installation.

___Contact Consumer Health at 817-427-6650 to schedule a **pre-plaster inspection**. The inspector will verify proper step, tile and depth measurements, location and function of emergency phone, fencing detail, and placement of safety equipment.

___Contact Consumer Health at 817-427-6650 to schedule a **preliminary inspection** at least seven days before construction is completed. Inspector will perform a full pool inspection to address any issues that must be resolved prior to the final inspection.

___Contact Consumer Health at 817-427-6650 to schedule a **final/opening inspection** to permit the facility. Inspector will perform a full pool inspection, including water chemistry.

Alterations to Plans:

___Before any alterations are made to the submitted and approved plans you must contact the plan examiner for approval. 817-427-6650.

Water Supply:

___A connection shall be made to a public water system or approved individual source that meets the requirements of the **TCEQ.**

Plumbing/ Electrical Work/ Mechanical Facilities & Structures:

___All plumbing, electrical work, mechanical facilities, and structures for the public swimming pool and spa shall meet or exceed all applicable requirements of NRH Code of Ordinances, the 2006 International Building Code, and the 2005 National Electrical Code.

Pool Backwash:

___Plumbing facilities will be installed so that swimming pool filter backwash is deposited into the Sanitary Sewer to be filtered and recycled in a manner approved by the Director of Public Works. Contact Public Works at 817-427-6460

___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 bibbs in the pool enclosure or any hose bibbs that may be used to fill the pool, spa, or slide.

___Sight glass must be removable for cleaning

Pool, Spa, or Slide Location:

___The pool or slide 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.

___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 if the above space requirements cannot be met.

___All slides shall be installed per the manufacturer recommendations, at the appropriate depth level. Equipment must meet CPSC guidelines.

Fencing:

___See section 27 Pool Yard Enclosures for specific requirements regarding the separate Classes of pools. All pools/spas are required to:

1. Have gates/openings that open outward away from the pool except where prohibited by the Fire Code.
2. Prohibit climbing structures or planters that may allow children to climb the fence to be within 36 horizontal inches of the exterior of the fence.
3. Maintain the pool enclosure free of gaps greater than 4" in diameter between the vertical members, and between the horizontal members used near the deck or walkway on the exterior of the fence.

4. Maintain the gates to close and latch from its fully open position to a position where the gate is open six inches from the fully closed position.
5. Horizontal members shall be spaced 45 inches or greater as measured from the top of the lower member to the top of the above member; if the horizontal members are placed less than 45 inches apart, the vertical members of the fence shall be no farther apart than 1 ¾ inches. See TX Health & Safety Code chapter 757 for more information.

Storage of Pool/Spa Chemicals:

___Disinfection or other chemicals and feed equipment shall be stored in such a manner that pool users shall not have access to such facilities and/or chemicals.

___Dry chemicals shall be stored off the floor in a dry, above ground level room and protected against flooding, or wetting. Recommend separate storage area to allow chemicals to be completely protected from elements/wetting and heat.

___Storage of pool chemicals must also meet or exceed all applicable requirements of North Richland Hills Code of Ordinances, as amended. Contact the Fire Department at 817-427-6900 for more information.

Recirculation:

___Capacity of pool in gallons _____.

___Surface area of pool _____.

___Turnover rate for pool is _____ gallons/minute (Pre-Construction Letter).
The volume of the pool (gallons) divided by the turnover rate (gallons/ minute) shall be no greater than 6 hours.

___At least one surface skimmer shall be provided for each 500 square feet (1 skimmer/500ft^2) of the water surface area or fraction thereof.
(Pool square footage ____ /500ft^2 = ____).Minimum number of required skimmers ____.
Number of skimmers on the plan _____. (Gutter system is exempt.)

___A pool 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 (1 inlet/300ft^2). Minimum number of return inlets required: (Pool square footage_____ / 300ft^2 = _____). 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. 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.

___Main drains shall be hydraulically balanced and equipped with a main drain sump and an A112 approved grate or drain cover. Drains that are 24 inch diagonally are exempt from the A112 approved cover requirement.

___Main drain covers and/or grates must be in compliance with Virginia Graeme Baker Act.

Disinfection:

___The Texas Department of State Health Services must, first approve any disinfectant or process used to sanitize pool water other than chlorine and bromine.

Safety Equipment:

___Lighting (location and total watts/incandescent equivalent for deck and water surface area) (.5 watts or incandescent equivalent/ft^2)
Required: (Square footage of deck/water surface area on plans_____ / 2 =_____)
Total wattage on plans _____.
___Emergency Phone/electronic summoning device details, location (must be outside pool yard enclosure) within 200 feet unobstructed. Clear instructions must be posted for use.
__Entrance/exit details: 2 exits required at minimum. Entry/exits may consist of ladders, steps, recessed treads, zero depth entries or combinations thereof. Areas where water depth is 18 inches or less may also be included as an exit.
Number of exits shown on plans (detailed):_____
Deep end of pool >30 feet wide, exits on either side of deep end required *yes/no*
Exits required every 75 ft: (Perimeter of pool on plans _____ft / 75 ft = _____)
Correct number of required exits on plans *yes/no*
___Safety Equipment (additional 12 ft reaching pole with shepherd's crook and ring buoy with safety line, width of pool is required if the pool is 2000ft^2 – 4000ft^2. Another set is required for every 6000ft^2 for pools greater than 4000ft^2.
Square footage of pool on plans:_____ Additional # safety equipment needed _____
___Heater *yes/no*
___SVRS/AVS required *yes/no* (Pool depth less than 4 feet)
___Depth Markers / No Diving + International Symbol in compliance:
4 inches in height, including "FT" or "IN"
Permanent color, contrasting color to background, slip resistant
2-foot increments of depth around pool,
Pool sidewall (excluded in zero-depth entry pools) and deck placement,
Minimum and maximum depths, & at 5 foot depth (pools deeper than 5 ft),
Points of major deviations of pool shape
within 24 inches of water's edge & read facing pool
Placed every 25 feet of pool perimeter
___Water fountain location on plans (required)
___A backboard shall be provided at any facility that has a slide or diving board.
___See sections 21 Safety Design and 25 Safety Equipment for more requirements.

Pool Operator's Certification:

___A Certified Pool Operator must be employed at each public/semipublic pool
___Class A, B, and D pools and spas located at Class A and B facilities shall be maintained under the supervision of a Certified Pool Operator.
___Upon completion of construction of any pool, the builder and/or designer shall provide the manager and operators complete written and oral operational instructions for the pool.

References:

Texas Department of State Health Services Standards for Public Swimming Pools and Spas 2004

See the following tables for additional requirements.

TEXAS DEPARTMENT OF HEALTH
CONSTRUCTION STANDARDS FOR PUBLIC POOLS
http://www.tdh.state.tx.us/beh/gs/pools.htm

Note: Some items listed to be inspected at Pre-Plaster may need to be inspected at Preliminary. Some items of concern may be caught early if these items are inspected at the time of the Pre-Plaster inspection.

1.	**PLANNING MATERIALS**	**Sec. 265.183 page 19**	
	Plans and specifications submitted for Dept. review/approval.		
	No construction activity until Health Dept. approves plans.		

2.	**CONSTRUCTION INSPECTIONS/PERMITTING**	**DATE**
	Static hydraulic pressure test completed prior to deck pour.	
	Inspection(s) completed prior to gunite application/cement pour.	
	Post-gunite/pre-plaster inspection complete	
	Pre-permit inspection (after plaster)	
	Final construction approved and permit secured prior to operation.	
	Permit Application submitted, permit and fees paid	

3.	**GENERAL CONSTRUCTION AND DESIGN**	**Sec. 265.184 page 20**	**Plans**
	Interior surfaces shall be smooth, cleanable.		
	Industry standard materials used for pool/spa construction.		
	NSFI Standard - 50 conformances for equipment.		
	Interior color of basin white or light tint.		
	Components shall be constructed to protect against freezing.		
	Hydrostatic relief valve required if ground water is detected at site.		
	Interior footing surface shall be slip-resistant		
	Basin design free of entrapment and other hazards.		
	Pool/spa shall be designed to meet anticipated user loads.		
	Maximum allowable wall slope of 11° from plumb (DOES NOT APPLY TO CLASS D)		
	Wall-to-Floor juncture radius of ≥ 4.5 ft. in depths ≥ 8 ft. (DOES NOT APPLY TO CLASS A OR D)		
	Wall-to-Floor juncture radius of ≥ 2.5 ft. in depths of 3 ft. (DOES NOT APPLY TO CLASS A OR D)		
	Floor slope from shallow end wall toward deep end shall not exceed 1 ft. in 10 ft. (DOES NOT APPLY TO CLASS D)		
	Floor slope of deep water drop off not to exceed 1 ft. in 3 ft. (DOES NOT APPLY TO CLASS A OR D)		
	Visual separation (4 inch band) for water < 3 ft. in depth from deeper areas. (DOES NOT APPLY TO CLASS A OR D)		
	Zero depth design slope not to exceed 1 in 12 to a water depth of 1.5 ft. (DOES NOT APPLY TO CLASS D)		
	Floor inlets required in water less than 1.5 ft (1 per 200 sq. ft. or portion thereof)		
	Offset ledges: max width 8 inches; within 11° of plumb. (See Figure 25 TAC page24) (DOES NOT APPLY TO CLASS D)		

	UNDERWATER SEATING	**Sec. 265.184 page 24**	**Plans**	**Pre-Plaster**
	Underwater seating: max width 18 inches.			
	Underwater seating: max depth 24 inches.			
	Underwater seating located outside diving envelope. (DOES NOT APPLY TO CLASS D)			
	Underwater seating visually separated by 1-inch solid or broken stripe.			
	Underwater seating must have integral steps if used as entry/exit.			

	WATER LOUNGES Sec. 265.184 page 24	Plans	Pre-Plaster
	Minimum 20 inches wide.		
	Minimum 10 sq. ft. of horizontal surface		
	Join pool wall over distance ≥ 3 feet.		
	Depth 2-10 inches below water surface.		
	Visually set apart by a 1-inch solid or broken stripe.		
	Located outside of diving envelope		
	Have slip-resistant surface		
	Be located in water 4 feet or less		

	WADING POOL SPECIAL REQUIREMENTS (CLASS D ONLY) Sec. 265.184 page 25	Plans	Pre-Plaster
	Maximum depth no greater than 24 inches.		
	15 ft. setback from shallow end of pool or enclosed by fencing.		
	Enclosed by fencing if within 35 ft. of deep end of pool.		
	Maximum depth no greater than 24 inches.		
	Step down ≤ 18 inches from deck to bottom of pool/seat.		
	Floor pitch ≤ 1 ft./12 ft.		

4. DECKS ENTRY/EXIT, DIVING FACILITIES Sec. 265.186 pages 26-35

	DECKS Sec. 265.186 pages 26-27	Plans	Pre-Plaster
	Class A pools must conform to sanctioning body's requirements.		
	Class B pools - ≥ 6 ft. wide, unobstructed (35% may be replaced with other structures)		
	Class C pools - ≥ 4 ft. wide, unobstructed (35% may be replaced with other structures)		
	Class D pools - ≥ 4 ft. wide, unobstructed (35% may be replaced with other structures)		
	Diving Platforms deck - ≥ 4 ft. wide for sides and rear. (DOES NOT APPLY TO CLASS D)		
	All Other Deck Equipment deck clearance - ≥ 3 ft. wide		
	Decks slope (other than wood) maximum of ½ in per ft except ramps		
	Wood decks slopes maximum 1/8 in per ft		
	Gaps required between wood deck to meet good engineering practices		
	Deck gaps between deck and walkways maximum horizontal clearance of 3/16 in		
	Deck vertical elevation between deck and walkways maximum difference of ¼ inch		
	Joints at coping and concrete decks shall be watertight		
	Deck edges rounded, tapered, or shaped to eliminate sharp corners.		
	Deck drains shall not mix with pool/spa water.		
	Site graded to drain away from pool.		
	Perimeter deck drainage, site and roof drainage shall be away from pool area.		
	Deck valve box pits ≥ 10" width and provided with covers.		
	Hose bibs and hose adequate for deck cleaning with TCEQ approved cross-connection device		

	ENTRY/EXIT Sec. 265.186 pages 28-30	Plans	Pre-Plaster
	Minimum two entry/exits: one at shallow end, one at deep end. (DOES NOT APPLY TO CLASS D)		
	Areas where distance from deck to bottom of pool is ≤ 18 inches may be an entry/exit.		
	Pools 30 ft. or wider require entry/exits on opposite sides of deep areas (DOES NOT APPLY TO CLASS D)		
	Entry/exits for diving pools see section 265.186 (c)(3) and (e)(6)		
	Entry/exit for non-diving pools shall be located to serve deep and shallow areas.		
	Entry/exits provided every 75 ft. of pool wall length or fraction of.		
	Stairs, ladders, and recessed treads shall not interfere with racing lanes (DOES NOT APPLY TO CLASS D)		
	Stairs, ladders, and recessed treads shall have slip-resistant surfaces		

	STEPS Section 265.186 page 26	Plans	Pre-Plaster
	Tread depth ≥ 12 inches (horizontal run)		
	Tread width ≥ 20 inches.		
	Riser height ≤ 10 inches (bottom riser may taper to zero)		
	Solid or broken visual warning strip (1 inch) underwater steps.		
	Step handrails required at any pools with lifeguard mandate.		
	Handrails terminate within 8" of last step or to water depth of 36 inches from step surface		
	Outside handrail diameter from 1.25-2 inches		

	LADDERS (DOES NOT APPLY TO CLASS D) Section 265.186 page 26	Plans	Pre-Plaster
	Ladder treads and handrails corrosion resistant		
	A handrail on each side of ladder treads.		
	Ladder handrail distance is 17 inches to 24 inches.		
	Uniform distance between ladder treads is 7 inches to 12 inches.		
	Maximum vertical distance from coping to top tread is 12 inches.		
	Ladder step tread minimum horizontal depth of 1.5 inches.		
	Inside edge of ladder handrails below water shall be ≤ 5 inches from pool edge.		
	Ladder treads shall be ≤ 3.5 inches from pool wall.		

	RECESSED TREADS (DOES NOT APPLY TO CLASS D) Section 265.186 page 26-27	Plans	Pre-Plaster
	Handrails shall be corrosion resistant.		
	Handrail provided on each side of ladder.		
	Ladder handrail distance is 17 inches to 24 inches.		
	Uniform distance between ladder treads is 7 inches to 12 inches.		
	Maximum vertical distance from coping to top tread is 12 inches.		
	Step depth ≥ 4.5 inches.		
	Step width ≥ 12 inches.		
	Tread sloped to drain into pool not more and ½ inch/foot.		

	SWIMOUTS (DOES NOT APPLY TO CLASS D) Section 265.186 page 27	Plans	Pre-Plaster
	Located completely outside the perimeter shape of the pool.		
	Maximum water depth of 20 inches, unless stairs are provided.		
	If used as entry/exits, steps must be provided.		
	Wall return inlet required for circulation if pool does not have perimeter overflow system		

	DIVING FACILITIES (APPLIES TO CLASS A) Sec. 265.186 pages 27-29
	See requirements listed in TDH pool regulations.

	STARTING BLOCKS Sec.265.186 page 29
	See requirements listed in TDH pool regulations

	PLAY EQUIPMENT/WATER SLIDES Sec. 265.186 page 29
	Design and installation meet CSPC standards.

	SLIDES
	See requirements listed in TDH pool regulations.

5. CIRCULATION SYSTEM Sec. 265.187 page 35-37

	TURNOVER	Pre-Construction	Post-Construction
	Turnover rate for pools average depth of 4 ft. depth - 6 hours.		
	Turnover rate for pools < 4 ft. depth - (average depth x 1.5).		
	Turnover rate for CLASS D wading pool – once per hour		

	FLOW VELOCITY	Pre-Construction	Post-Construction
	Discharge flow velocity maximum of 10 ft. per second. (copper wire 8 ft./sec)		
	Suction flow velocity maximum of 6 ft. per second.		
	Suction outlet/grate flow velocity maximum of 1.5 ft. per second.		

	PIPING, GAUGES, FLOW METERS, VALVES Sec. 265.187 page 36	Plans	Pre-Gunite
	Static hydraulic pressure test required before deck is poured and maintained throughout pour		
	Piping is NSFI approved (schedule 40 +) and properly installed.		
	Piping capable of complete drainage or evacuation. (freeze damage)		
		Plans	**Preliminary**
	Gauges: pump suction, filter inlet, filter outlet.		
	Flow meter(s) provided for filter flow during filtering		
	Labeled circulation piping with function and flow direction.		

6.	FILTERS, BACKWASH Sec. 265.188 page 37-38	Plans	Preliminary
	Filter meets ANSI/NSFI Standard 50 requirements.		
	Filter is properly designed/installed for pool/spa.		
	Filter equipped with automatic and manual air release devices.		
	Filter operating parameters/instruction plate affixed to unit.		
	Observable free fall or sight glass on backwash piping.		
	Sight glasses are removable for cleaning, if used.		

7.	PUMPS AND MOTORS Sec. 265.189 pages 38-39	Plans	Preliminary
	Pump motor sized to meet filter flow rate requirements.		
	Strainer installed upstream of pump.		
	Pump motor properly designed/installed.		
	Shut off valves installed for pump removal if below pool elevation.		
	Motors shall comply with UL requirements.		

8.	SUCTION OUTLETS AND RETURN INLETS Sec. 265.190 page 39-43	Pre-Construction Or Plans	Post-Construction or Final
	Designed to protect against suction entrapment and evisceration.		
	Approved suction outlet cover or grate.		
	Approved cover stamped with all requirements of Virginia Graeme Baker Act		
	Approved grate minimum diagonal of 24 inches and flow velocity is 1.5 fps or less		
		Plans	**Pre-Gunite**
	Dual main drains outlets provided, hydraulically balanced.		
	Main drain outlets spaced 3 ft. to 20 ft. apart from each other.		
	Main drains located at the lowest point of the pool/spa.		
	No means of isolating suction outlets.		
		Pre-Construction	**Post-Construction**
	Water velocity shall not exceed 6 ft/sec on suction pipes		
	Water velocity shall not exceed 1.5 ft/sec across a 24-inch diagonal grate		
	Water velocity shall not exceed flow rate for approved covers		
		Plans	**Preliminary**
	SVRS required for covers or grates less than 24-inch diagonal in water 4 ft deep or less		
	Fasteners to grates and covers shall be stainless steel or brass.		
	Replacement cover on-site with approved fasteners		

	VACUUM OUTLETS Sec. 265.190 page 42	Plans	Pre-Plaster
	Vacuum outlets installed between 12 inches and 18 inches deep.		

	Vacuum outlets protected by self-closing, self-locking cover.	
	CLEARANCE BENEATH COVER OR GRATE Sec 265.190 page 43	**Pre-Gunite Inspection**
	Sump below grate required	
	Distance between cover/grate and suction pipe at least 1.5 X pipe diameter or 8 in (whichever is less)	
	Sump below all open area of cover or grate	
	Cover assemblies that do not connect directly to circulation piping must have manufacturer's Recommended sump or a field built sump of the design specified by the manufacturer.	

	RETURN INLETS Sec. 265.190 page 43	**Plans**	**Pre-Gunite**
	1 return inlet for every 300 square feet		
	Return inlets must not project more than 1 inch beyond wall		
	Return inlets shall be at least 12 inches below the water level.		
	Floor return inlets shall be flush with floor. (influence of 15 ft radius)		

	SKIMMER/GUTTER SYSTEMS Sec. 265.191 page 44	**Plans**	**Pre-Gunite**
	Skimmers/Gutter systems designed and installed hazard free.		
	Skimmers provided one per 500 ft^2 for pools.		

		Preliminary	**Final**
	Skimmer equalization valve with approved cover		

		Pre-Construction	**Post-Construction**
	Skimmer system capable of 100% of circulation system flow.		
	Skimmer flow rate **≥** 3 gallons per skimmer per weir inch.		
	Gutter systems provided for **≥** 50% of pool perimeter.		
	Gutter system surge capacity **≥** one gallon per ft^2 pool surface area.		
	Gutter system surge capacity **≥** two gallons per ft^2 spa surface area.		
	Gutter system capable of 100% of circulation system flow.		

9.	**ELECTRICAL REQUIREMENTS (NRH Code of Ordinances) Sec. 265.192 page 44-48**	**Building Inspections**	
	Electrical equipment installed per NEC (2005).		
	Electrical equipment design UL or equivalent approved.		
	GFCI protection on lighting		
	GFCI protection of all plugs in pool/spa yard enclosure		
	GFCI protection on all outlets in dressing or sanitary facilities		
	GFCI protection on any switch that serves lights or equipment that is 5 to 10 ft from wall		
	GFCI and circuit breakers shall comply with 2005 NEC code		
	Pump motors internally and externally grounded		
	No insulated overhead wires within 20 ft. of outdoor pool/spa enclosure.		
	Non-insulated overhead wires of outdoor pool/spa meet 2005 NEC requirements		
	Non-overhead wires shall be at least 5 feet from edge of water		
	Electrical disconnect for service personnel located within sight of equipment		
		Plans	**Preliminary**
	Location of other electrical equipment see Sec. 265.192 page 47		
	Emergency shut-off located within sight of spa		
	Emergency shut-off clearly labeled as "Emergency Spa Shutoff"		
	Emergency shutoff readily accessible to spa users		
	Emergency shutoff no closer than 5 ft unless switch is non-electrical air switch		

10	**HEATERS Sec. 265.193 page 48-49**	**Plan**	**Preliminary**

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	Heaters ≥ 200K BTU Texas Dept. of Licensing/Regulation certified.		
	HEATER INSULATION AND TESTING (see Sec. 265.193 (b) page 48)		

	TEMPERATURE AND THERMOMETER	**Plans**	**Preliminary**
	Water temperature shall not exceed 104 degrees F.		
	Break-resistant thermometer designed for use in spa available to spa users and staff.		
	Control for water temperature in spa not accessible to spa users		

HEATING ENERGY SOURCE (see Sec 265.193 (d) page 49)

11.	**WATER SUPPLY** **Sec. 265.194 page 49-50**	**Building Inspections**	**Date of inspection**
	Water supply from approved source.		
	No direct connection to wastewater system		

		Plans	**Preliminary**
	Over-the-rim fill spout: no trip hazard; ≤ 2" beyond edge of pool; pliant end-piece, air gap		
	Backflow prevention/anti-siphon on submerged fill lines.		
	Backflow prevention/anti-siphon devices on fill hose lines.		
	Backflow prevention/anti-siphon devices on pump priming devices.		

12.	**FACILITY DRINKING WATER** **Sec 265.195 page 50**	**Plans**	**Preliminary**
	Water source potable and meets requirements.of TAC, Chapter 290, Subchapter D		
	Drinking fountain provided and available for bather use.		
	Water supply protected against cross-contamination (30 TAC, Chapter 290, Subchapter D)		

13.	**WASTE WATER DISPOSAL** **Sec. 265.196 page 50-51**	**Plans**	**Preliminary**
	Backwash to approved sewage disposal system (sanitary sewer)		
	Backwash discharge through proper air gap.		

14.	**DISINFECTANT EQUIPMENT AND CHEMICAL FEEDERS** **Sec. 265.197 page51-52**	**Preliminary**	**Final**
	Equipment shall comply with ANSI/NSF 50-1996		
	Pool shall be able to maintain up to 5 ppm chlorine (outdoors) and 3 ppm (indoors)		
	Chemicals shall be stored away from pool and spa users.		
	Dry chemicals shall be stored off the floor and protected against flooding or getting wet		
	Chemicals shall be introduced downstream from the filter and heater		
	Chemical feeders shall comply with ANSI/NSF 50-1996		

15. GAS CHLORINATION **See Sec 265.198 page 52-55**

16. SPECIFIC SAFETY FEATURES **Sec. 265.199 page 55-62**

	HANDHOLDS **(DOES NOT APPLY TO CLASS D)** **Sec. 265.199 page 55**	**Plans**	**Pre-Plaster**
	Provided at least every 2 ft. for depths > 42 inches if no seat, bench, swimout, or lounge.		
	May be coping, rope, railing, ledge, deck, negative edge, or similar construction		
	Handholds ≤ 9 inches above design water level.		
	Handholds are ≤ 3.5 inches thick and ≥ 4 inches wide.		
	Handholds overhang ≤ 2 inches and ≥ 1 inch.		

	FLOAT LINES AND FLOOR MARKINGS (DOES NOT APPLY TO CLASS D)	Plans	Pre-Plaster
	Transition point from shallow to deep shall have a 4-inch min. width row of floor tile, painted line, or similar means of color contrasting with bottom for pools for pool over 5 feet deep		
		Plans	**Preliminary**
	Float line and buoys provided 1 to 2 ft. before 5-ft. depth point for pools over 5 feet deep		
	Float line buoys secured ≤ 7 ft. apart.		
	Float line must be tightly tensioned.		
	Float line must provide good handhold and be durable.		
	Float line wall anchors are recessed with no projection.		

	DEPTH MARKERS Sec. 256.199 page 55-56	Plans	Pre-Plaster or Preliminary
	Provided on deck and sidewalls.		
	Indicate depth from water level to floor of pool taken 3 feet from pool wall.		
	Depth markers and units of measurement (Ft.) ≥ 4 inches		
	Be of contrasting color		
	Have permanent colors (no paint)		
	Provided every 2-ft. of depth change and uniformly installed around pool		
	Provided ≥ one per side; ≥ one every 25 ft. of deck.		
	Provided at minimum and maximum depth points and at 5-ft depth of pool over 5 feet deep		
	Designate depth, on irregularly shaped pools, at all major deviations if shape		
	Units of measurement spelled out in “feet” or “inches” or abbreviated as “FT” and “IN”		
	On deck shall be slip resistance and 24 inches of water’s edge		
	Pool sidewall markers shall be posted in the top 4.5 in. of pool wall.		
	Positioned correctly.		
	Zero depth entry pools and other coping types that do not allow space for a wall depth marker may use other methods to mark depth. (see page 56)		

	“NO DIVING” WORDS AND SYMBOL Sec. 256.199 page 57-58	Plans	Pre-Plaster
	“NO DIVING” words and international symbol marked on pool deck in contrasting colors		
	“NO DIVING” and international symbol. (4 inch letters) in water ≤ 6 ft.		
	Shall be placed at the extreme ends of the min. and max depth of 6 feet on all pool sides.		
	Within 24 inches of water’s edge and positioned correctly		
	Located on permanent structures above the deck (other than a diving board) that persons may attempt to use diving.		

	SIGNAGE REQUIREMENTS Sec. 256.199 page 58	Plans	Pre-Plaster
	Securely mounted and visible from inside the pool enclosure.		
	“WARNING - NO LIFEGUARD ON DUTY”. (4”inch letters) (DOES NOT APPLY TO CLASS D A OR B)		
	“NO DIVING” and international symbol. (4 “ letters)		
	“NO DIVING” inside pool enclosure. (4 “ letters)		
	“CHILDREN SHOULD NOT USE POOL WITHOUT ADULT SUPERVISION” (2” letters)		
	Directions to nearest telephone or emergency summoning device – Exterior of Each Gate		

		Preliminary	Final
	LIFEGUARD PERSONNEL STANDARDS Sec 265.199 pages 58-59		
	Lifeguards and second responders provided during competitive events (CLASS A ONLY)		
	Lifeguard and second responders provided (CLASS B ONLY)		
	Lifeguard and second responders provided Class C pools with diving boards or slide that is not locked or chained to prevent use (CLASS C ONLY)		
	LIFEGUARD CHAIRS AND EQUIPMENT Sec. 265.199 page 59		
	See pages 59-60		

	SAFETY EQUIPMENT (DOES NOT APPLY TO CLASS D) **Sec. 265.199 page 60**	**Plans**	**Pre-Plaster**
	Shepherds crook: 12 ft., non-conductive, non-telescoping pole.		
	USCG Ring Buoy with outside diameter or 15-24 in. with attached rope ¼ to 3/8-in.diameter and length at least max. pool width.		
	Provide 1 additional set of safety equipment for pool between 2000-4000 sq ft. water surface		
	Provide 1 additional set of safety equipment for pool over 4000 sq ft for each additional 6000 sq ft.		

	Backboard with 3 tie down straps and head immobilizer in pool with slide, diving board or lifeguard
	24-item first aid kit meets OSHA requirements for pools with lifeguards.

	TELEPHONES **Sec. 165.199 pages 60-61**	**Plans**	**Pre-Plaster**
	Phone summons emergency service and accessible within 200 feet from pool or spa water		
	Phone located outside of pool/spa yards		
	Sign on all exterior gates/doors stating location of phone .		
	Sign stating “In case of emergency, call 911” in min. 1-in letters inside pool/spa yard		
	Sign describing location of phone if phone is not visible from pool/spa.		

	LIGHTING **Sec. 165. 199 pages 61-62**	**Plans**	**Preliminary**
	Lighting above water for decks/water surface ≥ 0.5 watts/sq. ft. of deck and water surface		
	Underwater lighting installed at 0.5 watts per ft^2 pool/spa surface area.		
	Bottom of pool/spa clearly visible without glare..		

		Plans	**Final**
	INDOOR VENTILATION (Indoor Pools Only) Sec 165.199 page 62		
	Meet ASHRAE 62-1989 “Ventilation for Acceptable Indoor Air quality” standards		

	SAFETY/SANTIATION OF AQUATIC ACTIVITY DEVICES Sec 165.199 page 62
	See page 62

17.	**POOL YARD ENCLOSURES Sec. 265.200 pages 62-63**
A.	*CLASS A, B AND YOUTH CAMP POOLS/SPAS see page 62-63*

B.	*APARTMENT, CONDOMINIUM,& HOA POOLS/SPAS (CLASS C ONLY)*	**Plans**	**Pre-Plaster**
	Completely encloses pool/spa		
	6 feet in height as measured from the ground surface on the outside of the fence		
	No openings UNDER which a (4”) diameter sphere can pass		
	(45”) or more between tops of horizontal members - No openings through which a (4”) diameter sphere can pass		
	Less than (45”) between tops of horizontal members - No openings through which a (1.75”) diameter sphere can pass		
	Chain link fencing prohibited		
	Decorative designs or cutouts on/ in enclosure: □ **NO** openings greater than (1.75”) in any direction		
	No large indentations/protrusions in a solid wall on the side away from the pool		
	No permanent equipment/ structures constructed/placed that makes them readily available for climbing over the enclosure.		
	Self-closing, Self-latching device; able to be locked, opens outward away from the pool yard		
	LATCH (60”) off ground or higher		
	Latch LOWER than (60”) off ground IF:		

	(1) latch is on pool side (2) Latch is 3" or more below top of gate, AND (3) No opening greater than 1/2" in any direction within 18" from the latch; OR		
	Latch (42") off ground or higher if the gate can ONLY be opened by a key, card, or combination on both sides of the gate.		
	No doors or windows in enclosure that open to outside the pool enclosure (prohibited)		

C.	*OTHER CLASS C POOLS AND CLASS D POOLS AT CLASS C FACILITIES*	**Plans**	**Pre-Plaster**
	Height ≥ 6 ft. (NRH Code of Ordinances)		
	Openings in or under enclosure do not allow passage of 4-in diameter sphere.		
	No objects placed within 36 inches from outside of fence.		
	Chain link enclosures not allowed.		
	Windows, door, or gates of a building that are capable of being opened are not allowed		
	Gates/doors are self-closing and self-latching.		
	Gates/doors open away from pool/spa.		
	Gate/door opening hardware is hand-activated and ≥ 3.5 ft. high.		
	Gates/doors are capable of being locked / secured.		

18.	**DRESSING/SANITARY FACILITIES** **Sec. 265.201 pages 64-67**	**Plans**	**Preliminary**
	Separate dressing/toilet facilities for each gender.		
	Proper construction for cleaning/sanitation.		
	Proper lighting and ventilation		
	Shower provided		
	Adequate floor drains and floor pitch to facilitate drainage.		
	Hose bibs provided		
A.	*Lavatories, showers, and toilets see fixture schedule page 66.*		
	Class C and D pool/spa exemptions see page 66(apartments, hotel, motel, condominium)		
	Showers		
	Dressing rooms		
	Toilets		
	Urinals		
	Hand drying towels or devices		
	Baby changing table(s). (NOT REQUIRED BY CODE)		
	Lavatory(s)		
	Anti-scald, shower fixture(s): fixed mixing valves (90° F to 110° F)		
	Drinking fountain(s) provided in pool area.		
	Adequate hose bibs provided for cleanup.		
	Mirrors/hand cleanser dispensers are shatter-resistant.		
	Soap provided at hand sinks.		
	Toilet paper provided.		
	Covered trash can provided		

	FOOD, BEVERAGES, AND CONTAINERS **Sec. 265.202 page 67**	**Preliminary**	**Final**
	Trash container provided where food and beverages are allowed.		

(Engineer's Letterhead)

(Date)

Pre-Construction Certification

I, _____, the undersigned licensed professional engineer, have examined the plans/blueprints and specifications for the (swimming pool) (spa) and associated facilities to be constructed/installed at:

_____ (Location Name)

_____ (Street Address)

North Richland Hills, Texas _____ (Zip Code) submitted to me by:

_____ (Builder's Name)

_____ (Street Address)

_____, _____(City, State & Zip Code)

(Telephone) _____-_____- _____ (Fax)_____-_____- _____

and

_____ (Owner's Name)

_____ (Street Address)

_____, _____(City, State & Zip Code)

(Telephone) _____-_____- _____ (Fax)_____-_____- _____

I certify that the submitted plans/blueprints and specifications for the above described (swimming pool) (spa) and associated facilities meet or exceed the requirements detailed in Sections 265.184 through 265.201 and 265.205 of the Texas Department of Health Standards for Swimming Pools and Spas (http://www.tdh.state.tx.us/beh/Pools/pools.htm) adopted on May 21, 1999 by the Texas State Board of Health and implemented on October 1, 1999. Furthermore, I certify the accuracy of the calculations that I am providing below.

Pool Volume _____ Gallons

Designed Turnover Rate _____ per Hour

Designed Flow Rate _____ Gallons per Minute

Designed Total Dynamic Head _____ Feet of Head

Maximum Velocity in Suction

Lines at Designed Flow _____ Feet per Second

Maximum Velocity in Return

Lines at Designed Flow _____ Feet per Second

Pools/Spas with Grates:

Maximum Velocity at main drain

grate (min. 24" diag.) at Designed Flow _____ Feet per Second

Maximum Flow through Remaining

Drain Grate with One Main Drain Blocked_____ Feet per Second

Pools/Spas with Covers:

Maximum Designed Flow Rate at main

drain with approved covers _____Gallons per Minute

Main drain cover Approved

Flow Rate (stamped on cover) _____ Gallons per Minute

Maximum Flow through Remaining

Drain Cover with One Main Drain Blocked_____ Gallons per

Minute_____

Engineer's Signature Engineer's Seal

(Engineer's Letterhead)

(Date)

Post-Construction Certification

I, _____, the undersigned licensed professional engineer, have examined the completed construction/installation of the (swimming pool) (spa) and associated facilities located at:

_____ (Location Name)

_____ (Street Address)

North Richland Hills, Texas _____ (Zip Code) constructed by:

_____ (Builder's Name)

_____ (Street Address)

_____, _____(City, State & Zip Code)

(Telephone) _____-_____- _____ (Fax)_____-_____- _____

and owned by:

_____ (Owner's Name)

_____ (Street Address)

_____, _____(City, State & Zip Code)

(Telephone) _____-_____- _____ (Fax)_____-_____- _____

I certify that the completed and installed (swimming pool) (spa) and associated facilities at the above described location meets or exceeds the requirements detailed in Sections 265.184 through 265.201 and 265.205 of the Texas Department of Health Standards for Swimming Pools and Spas (http://www.tdh.state.tx.us/beh/Pools/pools.htm) adopted on May 21, 1999 by the Texas State Board of Health and implemented on October 1, 1999. Furthermore, I certify the accuracy of the calculations that I am providing below.

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Maximum Velocity in Return

Lines at Designed Flow _____ Feet per Second

Pools/Spas with Grates:

Maximum Velocity at main drain

grate (min. 24" diag.) _____ Feet per Second

Maximum Flow through Remaining

Drain Grate with one Main Drain Blocked_____ Feet per Second

Pools/Spas with Covers:

Maximum Flow Rate at Main

Drain with approved covers _____Gallons per Minute

Main Drain cover Approved

Flow Rate (stamped on cover) _____ Gallons per Minute

Maximum Flow through Remaining

Drain Cover with One Main Drain Blocked_____Gallons per Minute_____

Engineer's Signature Engineer's Seal