

City of North Richland Hills

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North Richland Hills, Texas 76180
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Contractor's Guide

For

SWIMMING POOLS and HOT TUBS

**INSPECTIONS DEPARTMENT
24 Hour Inspection Request Line
Facsimile**

**817-427-6330
817-427-6333
817-427-6303**

1. General Information

This *Contractor's Guide* is designed to aid swimming pool contractors operating in North Richland Hills by describing the requirements for (1) obtaining a swimming pool permit, (2) scheduling the required inspections at the proper stages of construction, and (3) identifying the key elements examined by the building inspector during the inspection. Some modification of these guidelines is necessary for vinyl lined pools and for hot tubs. Check with the building inspector for specific questions. Pools, spas and hot tubs 24" in depth and used for bathing are regulated by these codes. The City of North Richland Hills has adopted the following codes:

1. 2012 International Building Code
2. 2014 National Electric Code
3. 2012 International Plumbing Code
4. 2012 International Mechanical Code
5. 2012 International Fire Code
6. 2009 International Energy Code; 2015 International Energy Code is required on 9/1/2016
7. 2012 International Residential Code
8. 2012 International Fuel Gas Code

2. Basic Requirements For Obtaining A Swimming Pool Permit

1. A Swimming Pool Permit Application completed by a registered pool contractor.
2. Refer to Bulletin Number 150 for specific plan submittal requirements (included below).
3. All contractors (electricians, plumbers, L.P. installers, fence, etc) performing work for which a permit is required are required to be registered with the City of North Richland Hills and pay the applicable fees.

3. Guidelines for Swimming Pool Construction

1. Office hours are 8:00 to 5:00 Monday through Friday.
2. The recorder number to schedule an inspection is 817-427-6333.
3. The pool contractor may obtain all required permits if validated by the subcontractors.
4. All contractors (pool contractor, electrical, plumber, L.P. installer) must be registered prior to the issuance of the swimming pool permit (see Information Bulletin Number 600).
5. A re-inspection fee will be charged when:
 - a. The requested inspection is not ready.
 - b. The pool area is locked or inaccessible.
 - c. The requested inspection has been previously disapproved and not corrected.
 - d. Deviating from City approved plans.
 - e. The City approved plans are not on site and available for the inspector.
 - f. A temporary or permanent fence, 4 feet in height, is not in place at all times after excavation has commenced.
6. No construction may begin until a swimming pool permit has been issued.
7. The swimming pool permit (yellow job site display) shall be displayed in a place clearly visible from the street.
8. City-approved swimming pool plans must be available on the job site at all times during pool construction.
9. Requested inspections will not be performed, a dis-approval will be issued with a re-inspection fee if trash is blowing or loose on the job site. No inspection will be performed until all trash has been contained.
10. No concrete inspections will be performed unless the temperature is 36 degrees or above and rising.
11. During inclement weather, inspections requested should be cancelled and be recalled at a later date.

4. Inspections Required

This *Contractor's Guide* describes each required inspection in detail with some limitations and generally covers only the key elements. Not all items reviewed by a building inspector are listed in this guide. Items not included in this guide are located in the codes and ordinances adopted by the City. The Information Bulletins provide additional information to the contractor regarding specific items.

The following is a list of the minimum inspections required for all swimming pools. Hot tubs may or may not require all of these inspections. Other inspections may be required as determined by the Building Official.

- A. Stake Out (showing water's edge in relation to adjacent structures and property lines)
- B. Belly steel and bonding
- C. Underground electrical
- D. P-Trap (when applicable)
- E. Deck steel and bonding
- F. Pre-Plaster (safety inspection)
- G. Gas installation (when applicable)
- H. Final (including pool cover, fences, gates, lot drainage/grading, electrical, plumbing and mechanical as necessary)

NOTE: A temporary fence at least four (4) feet in height is required surrounding the pool or pool yard at all times after commencement of excavation of the pool.

A. Stake Out Inspection

Scheduling:

This inspection is performed prior to excavation of the pool.

General Inspection Procedures:

1. Compare the stake out of the pool with the approved plans for location, size and setbacks.
2. Pool location and elevation is evaluated for possible grading and site drainage problems.
3. Inspect for overhead electric wires.

B. Belly Steel and Bonding Inspection

Scheduling:

This inspection is performed prior to the placement of gunite, but after all reinforcing steel and bonding wire is in place.

General Inspection Procedure:

1. Compare approved blueprint with correct size and placement of reinforcing steel.
2. A No. 8 solid copper bond wire encircles the pool, looped up to dowels on all sides of the pool in at least four places for connection to deck.
3. Bond all metal parts, including any pool equipment regardless of location, within five feet of the waters edge must be bonded together. This includes any diving boards, fences, window and door frames, associated pool pumps.
4. Form boards set per the approved plans and do not encroach required setbacks.
5. Pool steel must be adequately supported by chairs.

C. Underground Electrical Inspection

Scheduling:

This inspection is performed when the contractor has all electrical conduit and conductors placed in the open ground ditch visible for inspection and before pouring any deck concrete or before back filling any ditch.

General Inspection Procedure:

1. Review approved blueprints to determine the type and location of underground electrical service.
2. Verify all conduits are placed at proper depth (see Table 680-10 from the 1999 NEC attached).
3. Verify any conduit and/or conductor is approved for in-ground or direct burial use and correct size.

4. Verify for compliance with proper wiring, grounding and bonding methods.
5. Verify allowable bends in conduit and/or conductor.

D. P-Trap Inspection (when applicable)

Scheduling:

This inspection is performed after the installation of the P-trap and backwash equipment.

General Inspection Procedure:

1. Inspect P-trap connection for proper installation and verify minimum 3" pipe size.
2. Check for minimum 1" air gap between pool backwash discharge and P-trap.

E. Pre-Plaster Inspection

Scheduling:

- 1) A "Pre-Plaster/Safety Inspection" is required prior to introducing water to all pool/spa construction projects. All door alarms, permanent fencing, and self-closing gates must be installed and function at this time. Please Note: Electronic gate openers (including solar powered) do not qualify as a self-closing gate.

F. Pool Deck & Bonding Inspection

Scheduling:

This inspection is performed prior to the placement of concrete and when the contractor has all form boards, reinforcing materials in place and all bonding is completed.

General Inspection Procedure:

1. Compare approved blueprints location of deck installation.
2. Verify proper bonding of steel, pool equipment and any other metal within five feet of the water's edge.

G. Gas Installation Inspection (when applicable)

Scheduling:

This inspection is performed after the gas equipment is installed and before any gas piping is covered or concealed.

General Inspection Procedure for Natural Gas:

1. Inspect piping for stops, flex lines, proper support and burial depth.
2. Gauged pressure indicates 15 psi of air pressure.
3. Pressure is maintained for not less than 15 minutes without a perceptible drop.

General Inspection Procedure for LP Gas:

1. Verify tank is placed in the pre-approved location as indicated on the permit application.
2. Verify tank complies with 10 foot minimum setback from property lines, easements, right-of-ways and structures.
3. Inspect LP gas piping for proper installation and burial depth.
4. Gauged pressure indicates 15 psi of air pressure.

5. Pressure is maintained for not less than 15 minutes without a perceptible drop.

H. Final Inspection

Scheduling:

This is the last inspection to be made after the pool is complete and before the pool is put into use.

General Inspection Procedure:

1. Check for completion and approval of all previously required inspections.
2. Lot is graded in accordance with city grading standards and the approved grading plan.
3. All electrical fixtures are suited and approved for the use intended and no open or exposed wiring exists. GFCI protection is installed for pool lights and all electrical switching devices and there is at least one GFCI receptacle within ten feet of the pool.
4. Inspect P-trap connection or verify cartridge filter as necessary.
5. Check pool yard for required minimum six (6) foot fence enclosure.
6. Check all gates or openings in the fence for presence of self-latching and self-closing devices.
7. Check all mechanical equipment.
8. Check that all means of disconnect is within sight of the pool equipment.
9. Check that pool cover is on site if pool is heated by fuel gas or electricity.

INFORMATION BULLETIN

DEPARTMENT OF PLANNING AND INSPECTION SERVICES	SUBJECT	BULLETIN NUMBER
CITY OF NORTH RICHLAND HILLS	Blueprint and plan requirements for swimming pools.	150
NRH		DATE July 2016

For purpose of these requirements, the term "pool" shall include in-ground and above-ground swimming pools, spas and hot tubs that are twenty-four (24) inches or more in depth. In general, the term "pool" does not typically include stock tanks, fish ponds, detainage/retainage ponds, and the similar features. Please contact the

- A. Two (2) sets of blueprints or construction plans and specifications of the pool shall be submitted with the completed permit application form. All drawing shall be to scale, legible and intelligible. Construction plans shall be drawn to scale and dimensioned with sufficient clarity to indicate the location, nature and extent of all proposed work. For in-ground pools, a detail containing the re-bar design must be provided. The drawings must contain sufficient detail for the Plans Examiner to determine conformity with the provisions of all codes, ordinances, and regulations as set forth by the City of North Richland Hills.
- B. Two (2) copies of a plot plan drawn to scale and dimensioned showing the proposed pool and associated equipment relative to any property lines, easements and existing buildings. The plot plan shall indicate the existing and proposed drainage flow using arrows. The plot plans shall bear the approval stamp of ONCOR Electric prior to submittal to the city. For ONCOR approval, submit plans as follows:

ONCOR

Above Ground Pools:
2501 Urban Dr., Fort Worth, TX
(817) 624-6016

In Ground Pools:
2118 So. Bowen Rd., Arlington, TX
(817) 861-7551

- C. Two (2) copies of a drainage/grading plan showing drainage flow arrows and supportive spot elevations. Additional spot elevations are required at the pool decking (near the waters edge) and the building's finish floor nearest the pool (typically a rear door elevation – do not include threshold height). Pool deck elevations must be a minimum of three (3") inches below the finish floor elevation of an occupied building.
- D. No part of water's edge shall be within six (6) feet of a side (for interior lots) lot line, twenty (20) feet of a side yard line adjacent to the street for a corner lot, or six (6) feet of a rear property line.
- E. Pool decking may not encroach a public utility easement more than three (3) feet, unless an encroachment permit has been obtained from the Public Works Department.
- F. The water's edge shall be a minimum of five (5) feet from a permanent structure, unless the pool plans are designed to provide sufficient support to prevent failure of the adjacent foundation and bear the original stamp and signature of a Texas Professional Engineer. (Exception: Portable hot tubs and spas). Windows located within five (5') feet of the water's edge must be of tempered glass. NOTE: this may require existing windows to be modified and/or replaced.
- G. A wall or fence, not less than six (6) feet in height, with self-closing and self-latching gate(s) at all entrances shall completely enclose either the pool area or the surrounding yard area where to pool is located. Electric gate closers (including solar powered gates) are not approved as a self-closing device.
- H. Swimming pool door alarms are required on all exterior door openings that provide access to a swimming pool, spa or hot tub. Door alarms must meet the following requirements:
 - 1) Alarms must be on all doors with direct access to a pool, spa or hot tub area.
 - 2) The alarm must sound within 7 seconds after the door is opened.
 - 3) The alarm must capable of creating an audible notification that is at least 85 dBA at the source and must be audible throughout the house.
 - 4) The alarm must be installed at least 54 inches above the floor and be mounted to the door/wall so that it cannot

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be easily removed.

- 5) The alarm must have a manual means to temporarily deactivate the alarm for a single opening
 - 6) In existing homes, the alarm may be battery powered or connected to the permanent electrical wiring system. New homes must have alarms that are permanently connected to the building's electrical wiring system.
 - 7) In new homes constructed after July 1, 2016, exit doors which may be capable of providing access to a future swimming pool, hot-tub or spa must be pre-wired to the electrical system to accommodate the installation of a hardwired door alarm. All new homes are required to have a junction box with an appropriately capped electrical power conductor installed at all exit doors capable of serving a future swimming pool.
 - 8) A "Pre-Plaster/Safety Inspection" is required prior to introducing water to all pool/spa construction projects. All door alarms, permanent fencing, and self-closing gates must be installed and function at this time.
- I. A temporary wall or fence at least four (4) feet in height shall completely enclose either the pool area or the surrounding yard area where the pool is to be located at all times after pool excavation commences. All permanent 6 foot fencing, gates, and safety alarms must be installed and functioning once water is introduced to the pool.
- J. The following is a list of minimal required inspections:
1. Stakeout (showing water's edge in relation to adjacent structures and property lines)
 2. Belly steel and bonding
 3. Underground electrical
 4. Underground plumbing (as necessary)
 5. Pre-plaster
 6. Deck steel and bonding
 7. LP Gas Installation (if applicable)
 8. Pool Final to include pool cover, fences, gates, drainage/grading, electrical, and plumbing.