



OUTDOOR RESIDENTIAL SWIMMING POOLS, SPAS, and HOT TUBS

BUILDING INSPECTIONS BULLETIN

This bulletin provides requirements and information regarding the submittal documentation of construction drawings for residential swimming pools, a list of required inspections as may be applicable to an individual swimming pool, and basic information regarding plan review and inspections for swimming pools.

The City of Benbrook has adopted the 2018 International Swimming Pool and Spa Code, 2018 International Residential Code and the 2017 National Electrical Code, all with local amendments. All of these adopted codes are promulgated nationally and are offered to municipalities for adoption. Please refer to these documents for code related items when designing your project.

*The 2018 International Swimming Pool and Spa Code establishes minimum requirements for the design, construction, alteration, repair, and maintenance of swimming pools, spas, hot tubs, and aquatic facilities.

**The 2018 International Residential Code (2018 IRC) applies to detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures unless excepted in 2018 IRC R101.2.

*** The 2017 National Electrical Code (2017 NEC) establishes minimum requirements for all electrical installations within the City of Benbrook.

**** All adopted codes have been amended locally. To view the City of Benbrook's local Amendments please visit:
<https://www.benbrook-tx.gov/119/Codes-Ordinances>

To conform to the City of Benbrook's Storm Water Quality Ordinance, **ALL** pools permitted on or after September 1st, 2022 must have:

- A Backwash / Drain Line installed to the sanitary sewer via **P-Trap** and **Air Gap regardless of the type of pool or filtration system.**
- All exterior hose bibbs must have vacuum breakers installed.

All pools permitted on or after November 1st, 2022 must comply with the following:

- Compliance with 2018 IECC R403.10 consisting of:
 - An on-off switch for electric power to pool heaters compliant with R403.10.1 must be present,
 - A Time switch for heaters and pump motors which is compliant with R403.10.2 must be installed,
 - Installation of a vapor-retardant cover for all outdoor heated pools and spas which is compliant with R403.10.3.

CONTRACTOR RESPONSIBILITY

It is the responsibility of the pool contractor to comply with all building, energy, electrical and plumbing codes, rules, and laws pertaining to the pool regardless of contractual obligations with their client. This includes pool barriers, installation of hand rails, installation of guards, bonding to existing surfaces, ensuring that all products are listed and labeled, etc.

All Plumbing Work as defined by Texas Occupations Code Title 8, Chapter 1301, Subchapter A, Sec. 1301.002 (7) must be performed by a properly licensed and registered Plumbing Contractor, unless otherwise excepted by the Texas Occupations Code or other State of Texas Law.

All Electrical Work as defined by Texas Occupations Code Title 8, Chapter 1305, Subchapter A, Sec. 1305.001 (11) must be performed by a properly licensed and registered Electrical Contractor, unless otherwise excepted by the Texas Occupations Code or other State of Texas Law,

CONSTRUCTION DOCUMENT REQUIREMENTS

The requirements for construction documents (plans, drawings, etc.) being submitted for plan review must conform to Plan Preparation and Submittal Requirements which can be found online at <https://www.benbrook-tx.gov/DocumentCenter/View/8503/Plan-Sbmttl-Rqrmnt-11022021>. Two legible copies of each of the plans or documentation, and one electronic copy in pdf format must be submitted for each document type.

Site Plan

The site plan must accurately depict the location of the following:

- ✓ Property lines,
- ✓ Location and extent of easements,
- ✓ Required front, side, and rear yard setback lines,
- ✓ Location and height of all existing and proposed above grade elements (decks, buildings, pool equipment, etc),
- ✓ Retaining walls,
- ✓ Paved surfaces,
- ✓ Proposed location of the swimming pool (dimensions are required to all structures, retaining walls, property lines, etc.),
- ✓ Location of proposed pool equipment.
- ✓ **Approved by Oncor.**

Pool Plan

The pool plan must specifically indicate all items associated with the pool such as:

- ✓ Profile of the pool in relationship to grade,
- ✓ Hot tub or spa,
- ✓ Depth of the pool,
- ✓ Locations of pool lights,
- ✓ All appurtenances for the pool such as diving boards, slides, etc.
- ✓ Pool stairs,
- ✓ Tanning deck,
- ✓ Spillway,
- ✓ Seating inside pool,
- ✓ Swim-up Pool Bar,
- ✓ Fire Pit,
- ✓ Jump Rocks,
- ✓ Site Elements such as:
 - Pool deck,
 - Waterfalls,
 - Decorative rock features,
 - Stairs and ramps,
 - Handrails,
 - Location of cabanas, pool houses, patio covers, pergolas, arbors, etc.
 - Outdoor kitchens

Elevations

Elevations will be required when construction such as the following exist:

- ✓ Above grade features such as water falls, decorative rock features, jump rocks, swim-up pool bars, etc. will be constructed about the pool area,
- ✓ If any portion of the pool, spa, hot tub, or deck is above grade,
- ✓ Stairs and ramps in pool deck,
- ✓ Handrails and guards.

BWA's Automatic Fills / Water Source Form

- ✓ Completely fill out and turn in with construction documents

Pool Equipment and Construction Information

- ✓ All pool equipment to be installed,
- ✓ Type of Luminaires to be installed and their respective voltage,
- ✓ Type of filter to be installed,
- ✓ Is the pool In-ground, Partially in-ground, or Above ground
- ✓ Type of pool (Include manufacturers installation instructions for fiberglass and pre-manufactured pools)
 - Gunite,
 - Fiberglass,
 - Pre-manufactured (these are generally the above-ground type)

Engineer's Letter

- ✓ Required when the pool is located within 5 feet of structures or a supporting retaining wall

Structural Design

Typically, a structural design for a pool is not required for the plan review process, however, if the pool will require piers or other special construction we request that the structural design be submitted for record keeping purposes. The City does reserve the right to request that structural designs be submitted if deemed necessary by City Staff.

INSPECTION REQUIREMENTS

Inspection Requests

- ✓ All Inspections must be called in to 817-249-6000 or requested online.
- ✓ Inspections requested BEFORE 7am will be performed on the business day of the inspection request.
- ✓ Inspections requested after 7am will be performed on the following business day.

Inspection Information

- ❖ Some inspections may not be required for a particular pool. For example, if a gas line is not being installed, a Gas Underground would not be required.
- ❖ Additionally, some pools may require inspections that are not listed below. For example, a gas line which is tied in to an existing gas line and run down the wall of the structure would require a gas line inspection and a gas test.
- ❖ It is the responsibility of the pool contractor to be certain that all required inspections are called for and passed before the contractor proceeds.
- ❖ Do not cover anything without a passing inspection.

Typical Inspections

- Belly Steel
- P-Trap / Vacuum Breaker
- Electric Underground
- Gas Underground
- Deck Steel
- Pre-Plaster
- Pool Final

INSPECTIONS

Following are typical items that are inspected at each of the inspection types. As each project is unique, additional items will be inspected as necessary.

Belly Steel

- Pool is located as shown on City Approved Plans,
- Pool is as designed on City Approved Plans,
- Pool and luminaire bonding,
- All bonding clamps are listed for "Direct Burial",
- Provisions for utilization of code compliant pool drains,
- Belly steel is complete,
- Belly steel complies with the engineer's letter / design if applicable,
- Piers have been drilled if indicated on City Approved Plans,
- Verify overhead power / telephone / CATV / internet cabling is compliant with 2017 NEC Article 680.

P-Trap / Vacuum Breaker

- Must be performed prior to Pre-Plaster Inspection
- Backwash / Drain Line to sanitary sewer,
- Sanitary Sewer P-Trap,
- Code Compliant Air Gap between Backwash / Drain Line and Sanitary Sewer,
- Vacuum Breakers must be installed on all exterior hose bibbs.

Electric Underground

- Underground wiring burial depth is compliant with 2017 NEC Table 300.5
- Underground wiring method complies with 2017 NEC 680.11
- Ditch-lines are free of rocks, construction debris, etc.

Gas Underground

- Gas line is an approved type for direct burial,
- Gas Line is a minimum of 18 inches deep measured from top of gas line to grade,
- Tracer wire is installed,
- Ditch-lines are free of rocks, construction debris, etc.
- Proper sizing of gas line. (The inspector may require the plumber to provide gas pipe sizing calculations)

- ❑ **Deck Steel**
 - Deck is located as shown on City Approved Plans,
 - All perimeter surfaces within 3 feet of the pool are bonded (regardless of whether they are new or existing),
 - Cups for diving boards, ladders, slides, etc. are present and bonded,
 - Equipotential bond is installed if required by 2017 NEC Article 680.26 (B) 2,
 - Provisions are installed to bond metal items within 5 feet horizontally and 12 feet vertically of the pool such as fences, gutters, window frames, raceways, etc.,
 - All bonding clamps are listed for "Direct Burial"

- ❑ **Pre-Plaster**
 - Ensure that the pool barrier is complete and compliant with 2018 ISPSC Section 305,
 - Metal items within 5 feet horizontally and 12 feet vertically of the pool are bonded,
 - Glazing (Glass) within 5 feet horizontally and 5 feet vertically of the pool, hot tub, spa, etc. is of the safety glazing type (tempered),
 - GFI protection of all pool luminaires,

- ❑ **Pool Final**
 - All work is complete,
 - All portable toilets, dumpsters, etc. have been removed,
 - Installation of pool drain systems which are in accordance with the 2018 ISPSC,
 - Re-inspection of the pool barrier,
 - Installation of guards if required,
 - Verification that the gas meter is correctly sized if a gas line has been installed,
 - GFCI protection of pool pump motors whether by receptacle or by direct connection in accordance with 2017 NEC 680.21 (C),
 - Bonding of all electrical equipment,
 - Completion of all electrical work,
 - Electrical equipment connections to all pool equipment,
 - Installation of all required disconnecting means,
 - Presence of a GFCI protected, 120 volt, 15 amp receptacle located between 6 and 20 feet from the inside wall of the pool in accordance with 2017 NEC 680.21 (A)(1),
 - Compliance with 2018 IECC R403.10 consisting of:
 - An on-off switch compliant with R403.10.1,
 - Time switch for heaters and pump motors which is compliant with R403.10.2
 - Installation of a vapor-retardant cover for all outdoor heated pools and spas which is compliant with R403.10.3.

OTHER INFORMATION

City of Benbrook

Website: <https://www.benbrook-tx.gov/>

Code Amendments: <https://www.benbrook-tx.gov/119/Codes-Ordinances>

Permit Department: 817-249-6064

Benbrook Water Authority

The water purveyor for the City of Benbrook is Benbrook Water Authority. Please note that they are a completely, separate entity. Below is the link to their website:

Website: <https://www.benbrookwater.com/>

Phone: **817-249-1250**

International Code Council (ICC)

Website: <https://www.iccsafe.org/>

I Codes: <https://codes.iccsafe.org/codes/i-codes>