

Residential Swimming Pools, Hot Tubs & Spas

Planning and Development Services Department

www.opkansas.org

This document contains general requirements and should not be considered as a complete list of all code requirements. Complete information is available in the codes and ordinances adopted by the city.

PERMITS

A building permit is required for the construction of all swimming pools that are 24 inches or greater in depth or any swimming pool with a heater, electrical lighting, or a filter system (unless it is equipped with a manufacturer installed cord and plug connection).

Note: The pool/spa permit includes the required barrier enclosure as part of the pool/spa permit. Separate permits will not be issued.

PLANS

A complete set of plans must be submitted to the Planning and Development Services Department of City Hall located at 8500 Santa Fe, to obtain a building permit. Provide a plot plan showing the following:

- Proposed pool or spa location - show distances to property lines.
- House and adjacent structures.
- Septic system tanks and lateral lines for lots without public sewers.
- Location of overhead or underground electric lines (provide dimensions from pool or spa).
- Location of mechanical filtering, heating equipment and screening method if applicable.
- Fence or other pool enclosure.
- Provide a deck-framing plan where decks constructed of wood are used for walkways or supporting spas or hot tubs (see [Guidelines for Residential Decks](#) for requirements).
- Setbacks of deck or pool patio from property lines.

Note: For one- & two- family dwellings, the city will provide a copy of the plot plan if it is in microfilm – call 913/895-6243 for plot plan assistance.

PUMPS AND FILTER

- Pool pump shall be sized to provide a turnover of the pool water at least once every twelve hours.
- Pool and spa pumps shall be listed by a nationally approved testing laboratory. Pumps less than 5HP shall comply with ANSI/UL 1081, “*Standard for Swimming Pool Pumps, Filters and Chlorinators.*”
- Filters shall be capable of maintaining water clarity.

INSPECTIONS – CALL 913/895-6220

All work, especially if underground, needs to be inspected prior to coverage or concealment. Inspections will be scheduled for the next workday unless a later date is requested. Call 913/895-6220, if you have questions

regarding inspections. Depending on the type of pool or spa, all of the inspections listed below may not be applicable. **All installations require a final inspection.**

- A bonding inspection is required prior to pouring concrete to verify that all metallic parts of the pool and the body of water are electrically bonded (connected together) including reinforcing bars in the concrete for the pool walls, bottom and deck; diving boards, ladders, handrails, fixtures for pool lights, electrical conduits and metal fences.
- A gas line inspection is required for any relocated or added gas line. The line must be inspected and tested prior to covering.
- A final inspection must be performed after all work is complete.

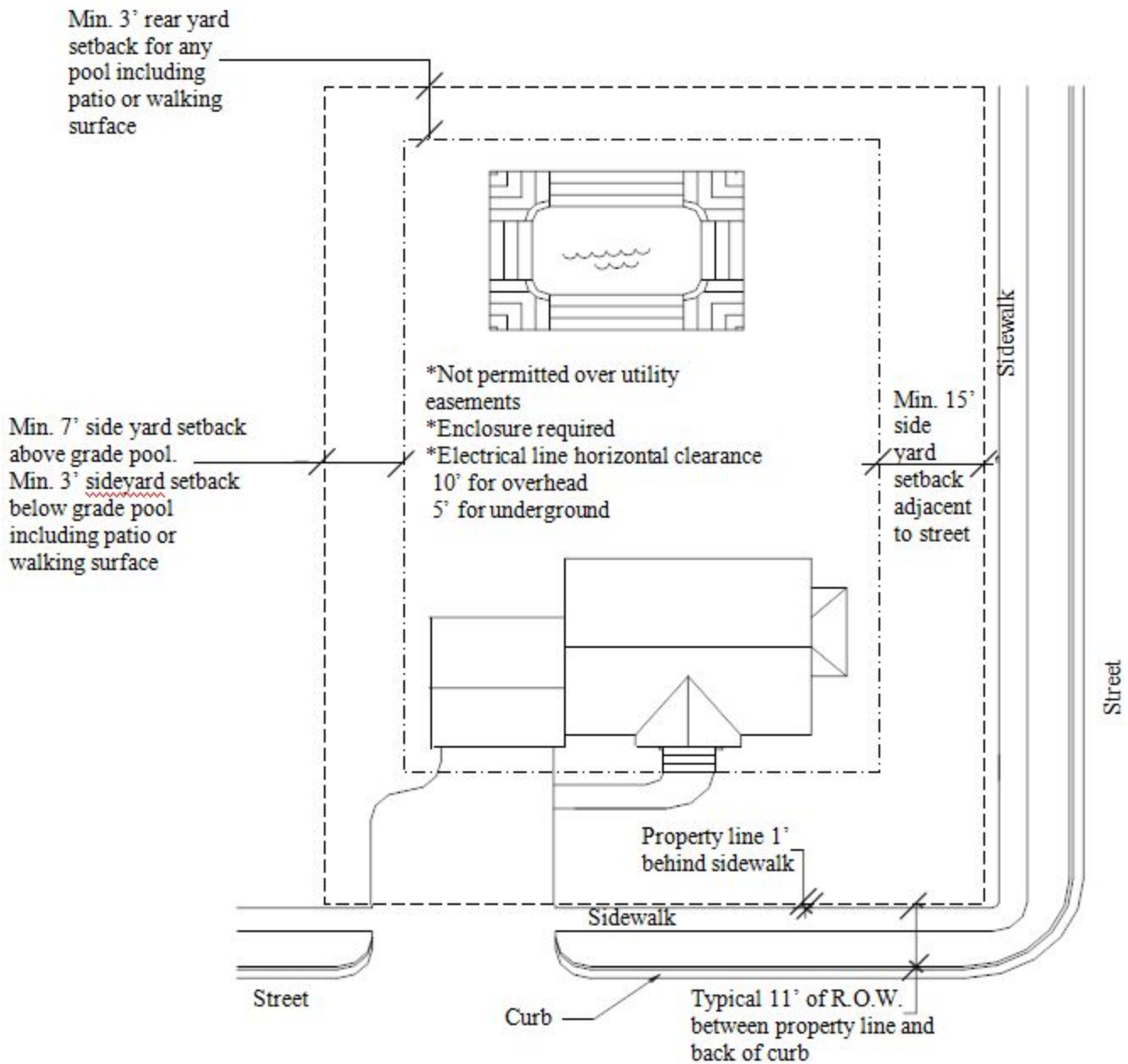
Note: Certificate of Compliance will be sent to the permit applicant to certify completion of the project and compliance with city code requirements when all work is inspected and approved.

SETBACKS - LOCATION ON THE PROPERTY

Unified Development Ordinance (*UDO 18.180.030, 180.200.030, 18.390.140, 180.420.050*)

The following setbacks for pools and fences apply to pools constructed in the **R-1, RP-1, R-2 and RP-2** Zoning Districts. Check with the Planning and Development Services Department, 913/895-6217, regarding setback requirements in other zoning districts.

- Pool/deck setbacks include any decking or walkway around the pool/spa.
- Front yard pools/spas are not permitted.
- **Side yard**
 - a. Patios, pools or similar structures, which are at or below grade, shall have a minimum 3-foot setback for interior side yards including the edge of the patio. Decks, spas and pools above grade shall maintain a minimum 7-foot setback.
 - b. Minimum 15-foot setback for side yards adjacent to a street.
- **Rear yard**
 - a. 3-foot setback for deck surfaces and patios that are less than 30 inches above grade. Decks over 30 inches shall be a minimum 3-feet or 1/3 the height of the deck structure.
 - b. Minimum 20-foot setback if adjacent to a street.
- Easements - pool/spa and deck shall not be located within a public drainage easement, storm sewer easement or a platted landscape easement. Property owners should also explore potential conflicts with other easements.



ACCESSORY STRUCTURES

Solid or membrane covers including shade structures shall meet the setback requirements for accessory structures – separate plans are required.

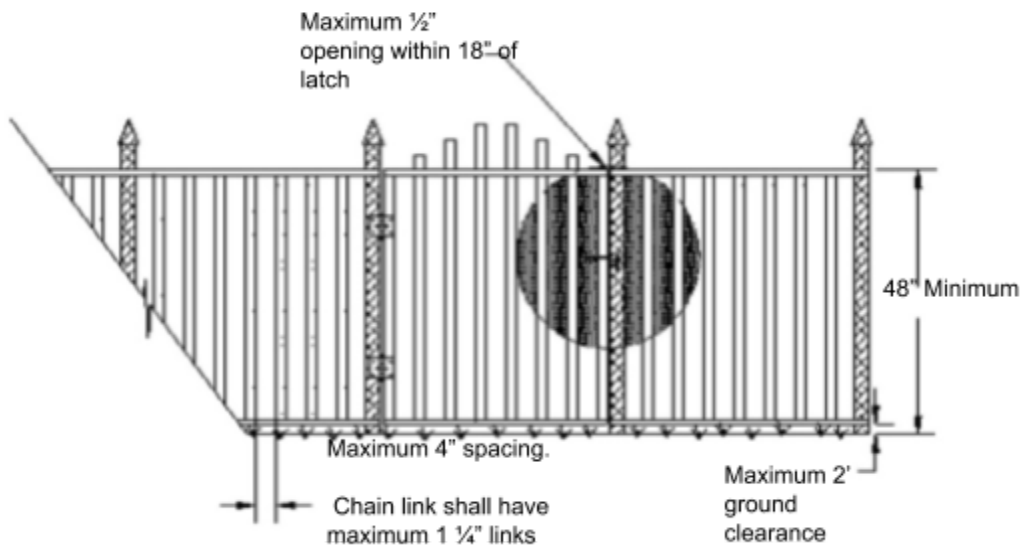
ENCLOSURES

To restrict access by children to the pool, spa or hot tub, a barrier must be constructed to surround the pool, spa or hot tub. (OPMC, 16.110.AU105)

- **Barrier**

- The height of the barrier must be at least 4 feet (measured from the adjacent ground level to the top of the fence on the side that faces away from the pool) - maximum height 8 feet.
- Ground clearance between the barrier and finished ground level shall not exceed 2 inches.
- Openings in the barrier shall not allow passage of a 4-inch diameter sphere.

- d. Where the barrier is composed of horizontal and vertical members, the distance between the tops of the horizontal members shall be equal to or greater than 32 inches. Where vertical members are spaced 1-³/₄" or less, the horizontal members shall be allowed to be spaced at a distance less than 32 inches. The horizontal members shall be located on the swimming pool side of the barrier. Where the barrier has decorative cutouts within vertical members or diagonal members (such as lattice fence), the spacing within the cutouts shall not exceed 1-³/₄" in width. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions, except for normal construction tolerances and tooled masonry joints.
- e. Barrier enclosures shall also comply with the city requirements for fences, if a fence is used as a barrier (see Guidelines for Residential Fence Permit)



- f. Maximum mesh size for chain link fences shall be a two and one-fourth inch (2 1/4") square, unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than one and three-fourths inches (1 3/4").
- g. Some homes associations have special requirements or covenants regarding fence locations and materials. Check with your homes association prior to selecting a fence design.

● **Gates**

- a. Gates in the enclosure must swing away from the pool area and be self-closing and self-latching.
- b. Where the release mechanism is located less than 54 inches from the bottom of the gate, the release mechanism and opening shall comply with the following:
 - The release mechanism shall be located on the poolside of the gate at least 3 inches below the top of the gate
 - The gate and barrier shall have no opening greater than 1/2 inch within 18 inches of the release mechanism.
- c. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:
 - The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346-91 (2010).
 - Doors with direct access to the pool through the dwelling unit wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen (if present) are opened.

➤ The alarm shall be listed in accordance with UL 2017 (2008 with 2010 revisions).

The deactivation switch(es) shall be located at least 54 inches above the threshold of the door; or

- d. Other means of equivalent protection, such as self-closing doors with self-latching devices, which are approved by the Governing Body shall be acceptable as long as the degree of protection is not less than the protection afforded by Item a) or b) in the Gates section above.
- Where an above-ground pool structure is tall enough to be used as a barrier, minimum 4 feet measured from the ground below to the top of the pool sides, or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps:
 - a. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or
 - b. The ladder or steps shall be surrounded by a barrier which meets the requirements of above items described under the Barrier and Gate segments. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4 inch diameter sphere.
- **Screening** (UDO, 18.390)
 - a. Mechanical filtering and heating equipment for new in-ground pools shall be screened from view unless equipment set back 25 feet from any rear or side property line.
 - b. Any equipment visible from streets shall be screened.
 - c. Screening shall be any combination of landscaping, solid fence, or other enclosure.
 - d. A solid privacy fence at property line shall be deemed as providing acceptable screening.

BUILDING CODES

(Reference OPMC 16.110 Appendix U)

The pool/spa or hot tub must be constructed in accordance with *2018 IRC Chapter 42, Appendix U of the OPMC and the 2017 National Electric Code (NEC) Article 680:*

- In-ground pools shall be designed and constructed in conformance with *ANSI/APSP/ICC-5 2011 American national Standard for Residential Inground Swimming Pools.*
- Above-ground pools shall be designed and constructed in conformance with *ANSI/APSP/ICC-4 2012 American national Standard for Aboveground/Onground Residential Swimming Pools.*
- Permanently installed spas and hot tubs shall be designed and constructed in conformance with *ANSI/APSP/ICC-3 2014 American National Standard for Permanently Installed Residential.*

Spas and Swim Spas

- Portable spas and hot tubs shall be designed and constructed in conformance with *ANSI/APSP/ICC-6 2013 American national Standard for Residential Portable Spas and SwimSpas.*
- Entrapment protection for swimming pools, spas and hot tubs shall be designed and installed in accordance with *ANSI/APSP/ICC-7 2013 American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins.*
- Decks and elevated walking surfaces - decks for one- and two- family dwellings shall be designed to support a minimum 40 pounds per square foot live load (see *Guidelines for Residential Decks* for design information). Decks supporting spas or hot tubs shall be designed to support the weight recommended by the manufacturer plus a 40-pound per square foot live load on adjacent deck areas. A plan of the deck is required to verify that adequate support is provided.
- Electrical Installations
 - a. All electrical wiring for the pool must be in accordance with *Section Chapter 42 of the 2018 IRC, Appendix U of the OPMC and 2017 NEC Article 680.*

- b. Clearance from services - residential pools/spas/hot tubs must be located so that there is at least a 5-foot horizontal clearance from the edge of the pool to any underground electrical wiring.
- c. Overhead conductor clearances.
- d. Except where installed with the clearances specified in Table E4203.6 (IRC 2018) the following parts of pools and outdoor spas and hot tubs shall not be placed under existing service-drop conductors, overhead service conductor, or any other open overhead wiring; nor shall such wiring be installed above the following:
 - Pools and the areas extending not less than 10 feet horizontally from the inside of the walls of the pool.
 - Diving structures and the areas extending not less than 10 feet (3048 mm) horizontally from the outer edge of such structures.
 - Observation stands, towers, and platforms and the areas extending not less than 10 feet (3048 mm) horizontally from the outer edge of such structures.
- Overhead conductors of network-powered broadband communications systems shall comply with the provisions in Table E4203.6 (IRC 2018) for conductors operating at 0 to 750 volts to ground. Utility-owned, -operated and -maintained communications conductors, community antenna system coaxial cables and the supporting messengers shall be permitted at a height of not less than 10 feet above swimming and wading pools, diving structures, and observation stands, towers, and platforms.

**TABLE E4203.6 [Table 680.8(A)]
OVERHEAD CONDUCTOR CLEARANCES**

	INSULATED SUPPLY OR SERVICE DROP CABLES, 0-750 VOLTS TO GROUND, SUPPORTED ON AND CABLED TOGETHER WITH AN EFFECTIVELY GROUNDED BARE MESSENGER OR EFFECTIVELY GROUNDED NEUTRAL CONDUCTOR (feet)	ALL OTHER SUPPLY OR SERVICE DROP CONDUCTORS (feet)	
		Voltage to ground	
		0-15 kV	Greater than 15 to 50 kV
A. Clearance in any direction to the water level, edge of water surface, base of diving platform, or permanently anchored raft	22.5	25	27
B. Clearance in any direction to the diving platform	14.5	17	18

For SI: 1 foot = 304.8 mm.

- Receptacles, (Reference 2018 IRC Section E4203.1)
 - a. Receptacles that provide power for water-pump motors or other loads directly related to the circulation and sanitation system shall be of grounding type, located not less than 6 feet from the inside walls of the pools, outdoor spas and hot tubs, and GFCI protected.
 - b. At least one 125-volt, 15- or 20-ampere receptacle supplied by a general-purpose branch circuit shall be located a minimum of 6 feet from, but not more than 20 feet, from the inside walls of permanently installed pools, outdoor spas and hot tubs. This receptacle shall be located not more than 6 feet, 6 inches above the floor, platform or grade level serving the pool, spa or hot tub.
 - c. All 15- and 20- ampere, single phase, 125-volt receptacles located within 20 feet of the inside walls of pools and outdoor spas and hot tubs shall be GFCI-protected.
- Underground utility lines - care should be taken when excavating to minimize potential problems with buried gas, water, sewer, and underground electrical lines. Applicants may obtain assistance regarding the location of underground utilities by calling 811 or 1-800-DIG-SAFE (1-800-344-7233).

The City of Overland Park does not warrant the accuracy, completeness, or timeliness of the information contained in this handout. To verify the city requirements please refer to the official version of the Municipal Code.