



ORLAND PARK

IN-GROUND POOL REQUIREMENTS

DEVELOPMENT SERVICES DEPARTMENT
14700 RAVINIA AVENUE
ORLAND PARK, ILLINOIS 60462
708-403-5300

developmentservices@orlandpark.org

Address: _____ Permit # _____

- 1) Read and follow the Attached Land Development Code Sections Pertaining to the Installation of In-Ground Pools (Section 6-310.1.A).
- 2) Complete and submit required Building, Zoning, Electrical, & Plumbing Permits.
- 3) Brochure or Descriptive Drawings are required.
- 4) Submit Grading Plan Showing Existing and Proposed Grading Changes. Grading Plan to be signed by Registered Land Surveyor or Professional Engineer and to include % lot coverage.
- 5) The Required Fence (Minimum Height 5 feet, Section 6-310.H of the Land Development Code) protecting the pool is a separate permit. The fence permit must be obtained and the fence inspected before final approval for the pool is granted.
- 6) Construction access is required to be entirely on your own property. If this is not possible, written permission shall be submitted to Development Services from the property owner of any property that you will need to cross with construction equipment. This includes access over all Village owned properties, including, but not limited to, easements and parkways. You will also be required to return said properties to their original condition when construction is completed.

PLEASE NOTE THAT IF ANY PART OF POOL STRUCTURE, POOL DECK, OR REQUIRED FENCING ENCROACHES ON A DESIGNATED EASEMENT AND DAMAGE RESULTS WHEN THE EASEMENT IS USED FOR ITS PERMITTED PURPOSES, REPAIR OF SAID DAMAGE IS THE SOLE RESPONSIBILITY OF THE HOME-OWNER.

AFTER PERMIT IS APPROVED AND PICKED UP, THE FOLLOWING INSPECTIONS ARE REQUIRED:

- Footing Pre-Pour or Foundation Wall
- Underground Plumbing
- Underground Electric
- Underground Plumbing for Gas Line if Applicable
- Electrical Bonding
- Concrete Pre-Pour or Paver Base for Walk
- Finals – Building, Electrical & Plumbing

PRINTED NAME OF APPLICANT

SIGNATURE OF APPLICANT

DATE

SECTION 6-310.1. SWIMMING POOLS.

A. Swimming Pools. (Entire section revised by Ord. 2570 - 5/2/94; Amd. Ord. 4132 - 4/17/06 ; Entire Section moved from Section 6-302 Amd. Ord. 4574 - 7/6/10)

1. General Permit, Plan and Site Requirements

a. Permit(s)

Every swimming pool hereafter constructed, installed, altered, maintained, removed or demolished shall comply with all applicable provisions of this Section. No person shall construct, erect or alter an inground swimming pool without having obtained a building permit. Pool inspections, shall be as provided for in the Village Code (5-1-13), prior to the use of a pool:

1. State and County Approvals

Construction of a "Public Swimming Pool" will require an approval by county or state authorities having jurisdiction over "public swimming pools". These permit approvals shall be obtained before applying to the code official for a permit. Certified copies of these approvals shall be filed as part of the supporting data for the permit application.

b. Plans and Specifications

Applications for permits for swimming pools shall be accompanied by plans and specifications in duplicate and in sufficient detail showing the following:

1. Survey and Site Plan

A recent plat of survey and a site plan showing lot lines, easements if any, pool area plan and elevations with dimensions all drawn to scale of not less than one-eighth inch to the foot.

a. Proposed Final Site Grade Engineering

Site engineering plans must be submitted to The Village by a State of Illinois licensed engineer. Proposed plans shall include grade topographies for; established streets, drainage easements and proposed finished grades. The design shall be to approved engineered storm drainage elevations.

b Engineering Design Approval

Before a pool permit can be issued, The Village Engineering Department must approve proposed grading plans prior to the issuance of any swimming pool before a pool permit issuance. Drainage easements shall be verified and conform to recorded engineering grade elevations.

c. Final "As Built" Location and Topography

After completion and before the use of a `swimming pool, an "As Built" plan must be submitted by an Illinois licensed professional engineer. The final site grade elevations must conform to engineering drainage and location standards.

2. Location and Setbacks

Swimming pools shall be allowed in rear and side yards only with a minimum of ten (10) feet from side and rear lot lines. Pools placed within a side yard shall not be located within twenty (25) feet of a front yard. If any part of the pool structure, pool deck or required pool fencing encroaches on a recorded easement and damage results when the

easement is used for its stated purposes, then repair of said damage is the sole responsibility of the homeowner. Pools shall conform to the following conditions:

- a. Pools within a side yard shall not be located within twenty (25) feet of a building front yard setback.
- b. No part of the pool shall be allowed within the minimum required side yard building setback of each zoning district.
- c. Exterior pools shall provide a minimum 48" clear access distance around the pool from other structures located on the lot.
- d. Glass and glazing near a pool shall meet the requirements of the Village Building Code for glass in hazardous locations.
- e. The maximum total lot coverage including the pool area must comply with the applicable zoning district requirement.
- f. Swimming pool fence and barrier enclosures shall comply with Section 6-310 H of this code.
- g. The minimum side yard set back to the edge of the pool (water) shall not be less than 10'-0".

3. Fences and Barriers

A swimming pool permit application must include details and design for the construction of a pool "barrier" (fences walls or enclosures) for the protection of the public. A separate required fence permit may be submitted with a swimming pool permit application provided a signed letter is received from the land owner acknowledging the responsibility of required site barrier protection during and after construction. See Section 6-310 H "Swimming Pool Fences" of this code for fence regulations. A separate fence permit is not required for spas and hot tubs with a lockable safety cover that complies with ASTM F 1346. In the event of abandonment, such barriers must remain with the swimming pool, hot tub or spa and must comply with the provisions of this section. (Ord. 4880 - 2/3/14)

4. Lot Coverage

The maximum lot coverage including the pool areas shall be calculated and submitted with plans for each pool permit application. This calculation shall comply with requirements of the applicable zoning district.

5. Electrical Service

New residential construction service location shall be on the side (side yard) of all buildings. Wiring locations above, below or near a pool shall conform to the Village Electrical Code (Village Code 5-3). "JULIE" shall be called for locations of electrical service wires before excavation.

2. Definitions: (Also see Section 2-102 "Definitions" for "Swimming Pool")

The following words and terms shall, for the purposes of this section, have the meanings shown herein. Pools, swimming, hot tubs and spas above-ground/on-ground pool: See Definition of private swimming pool.

Above-ground/On ground pool:

Any pool of water installed completely above final exterior grade elevations which have been approved by the Village. Final exterior grades are those approved by the Village Engineering Department. See definition of private swimming pool.

Barrier:

A fence, a wall, a building wall, the wall of an above-ground swimming pool or a combination thereof, which completely surrounds the swimming pool that structurally obstructs access to the swimming pool and is at least 60 inches in height. A barrier includes self-closing gates on openings to public access.

Temporary Barrier:

A "barrier" surrounding the site during the construction of any type of pool regulated by this code. A temporary barrier may be reduced in height to 48 inches above the ground level. (Section 6-310 H. references "Swimming Pool Fences" details)

Hot tub:

See definition of private swimming pool.

In-ground pool:

Any pool of water installed below final exterior grade elevations which have been approved by the Village. Final exterior grades are those approved by the Village Engineering Department. See definition of private swimming pool.

Power safety cover:

A pool cover which is placed over the water area, and is opened and closed with a motorized mechanism activated by a control switch.

Private swimming pool:

Any structure that contains water over 20 inches in depth and which is used, or intended to be used, for swimming or recreational bathing in connection with an occupancy in Residential Use Group and which is available only to the family and guests of the householder. This includes in-ground, above-ground and on-ground swimming pools, hot tubs and spas. See Village Code 5-1-13 Section 3109, "General Pools" regulations

Private swimming pool, indoor:

Any private swimming pool that is totally contained within a private structure and surrounded on all four sides by walls of said structure.

Private swimming pool, outdoor:

Any private swimming pool that is not an indoor pool.

Public swimming pool:

Any swimming pool other than a private swimming pool.

Spa:

See definition of private swimming pool.

3. In-ground Swimming Pools

a. Applications for permits for In-ground swimming pools shall be accompanied by plans and specifications in duplicate and in sufficient detail showing the following:

1. The "General Permit, Plan and Site Requirements" of Items 1.a., 1.b. and Definitions Item 2. of this Section above shall apply to Inground Ground Swimming Pools.
2. Pool dimensions, depths and volume in gallons.
3. Type and size of filter systems, filtration and backwash capacities.

4. Pool piping layout, with all pipes and valves shown, and types of materials to be used.
5. The rated capacity of the pool pump in gallons per minute, and its working head at filtration and backwash flows.
6. The size and type of waste disposal system.
7. Location and type of waste disposal system.
8. Type and location of walk and fence construction as required. All swimming pools, appurtenances, water supply and drainage systems shall be constructed in conformity with approved plans. If deviation from such plans is desired, a supplementary plan shall be filed with the Village and all work shall stop until the supplementary plan has been approved.

b. Design and Construction.

1. Pools shall be constituted of concrete, steel or other approved materials, and shall have an impervious finish which provides an easily cleaned surface.
2. Swimming pools shall be engineered and designed to comply with all applicable provisions of the building ordinances of the Village of Orland Park including those ordinances relating to the specific materials used where not in conflict with this ordinance. A temporary private residential swimming pool shall be engineered and designed to withstand all anticipated forces to which it will be subjected. Wood shall not be used at or below grade as an integral part of the structure of both types of residential swimming pools. All wood used in swimming pool structures shall be protected against deterioration.
3. The bottom surface shall be smooth, to facilitate cleaning, and shall slope to the main drain. The slope of the bottom of any part of a pool in which the water is less than five (5) feet in depth shall not be more than one (1) foot in each ten (10) feet. The maximum slope where water is five (5) feet or more in depth shall not exceed one (1) foot in two (2) feet.
4. The side and end walls of a pool shall present a smooth finish and shall be vertical to a depth of at least six (6) feet. The pool walls may be vertical for thirty (30) inches from the water level below which the wall may be curved to the bottom with a radius at any point equal to the difference between the depth, at that point, and thirty (30) inches. The slope of the pool walls to a depth of six (6) feet shall not be more than one (1) foot horizontal in six (6) feet vertical.
5. Swimming pools shall be designed to withstand the water pressure from within and to resist the pressure of the earth when the pool is empty, to a pressure of twenty-two hundred (2200) pounds per square foot.

c. Recirculation and Filtering.

1. Every pool shall be equipped with a recirculating system capable of filtering the entire contents of the pool in eight (8) hours.
2. Filters shall be capable of maintaining the clarity of the water to permit the ready identification, through an eight (8) foot depth of water, of a disc two (2) inches in diameter, which is divided into four (4) quadrants in alternate colors of red and white.
3. Sufficient surface area shall be provided in pressure type filters (sand or diatomaceous earth) to filter pool contents in eight (8) hours or less at a maximum rate of

three (3) gallons per square foot per minute. In vacuum type filter-aid filters, the filtration rate shall not exceed two (2) gallons per square foot per minute. The quality of the filters shall be such that under normal operating conditions backwashing for cleaning purposes shall not be necessary more frequently than once every four (4) days for pressure sand filters and once every two (2) days for pressure or vacuum diatomaceous earth filters.

4. All pressure filters shall be equipped with influent and effluent pressure gauges to determine the pressure differential and frequency of cleaning. All other filters shall be equipped with at least one (1) pressure, vacuum, or compound gauge, as applicable, which shall be positioned in such a way as to determine the differential across the filter and the need of cleaning.

5. All pressure filter systems shall be equipped with an air release at the high point in the system. Each sand filter shall be provided with a visual means of determining when the filter has been restored to original cleanliness.

6. Operating instructions shall be posted on every filter system. All valves shall be properly designated, indicating their purpose.

7. The filters, and their installation and operation, shall conform to the requirements of the National Swimming Pool Institute "Minimum Standards for Residential Pools".

8. The recirculating pump shall have a sufficient capacity to discharge the volume of water required for the required turnover of the pool against the maximum head in the recirculation system. The pump shall be capable of backwashing pressure sand filters at a rate of fifteen (15) gallons per square foot of filter area. An approved hair and lint strainer, except on vacuum type filters, shall be provided on the suction side of the recirculating pump. Hair and lint catchers shall be so designed that they can be easily dismantled for cleaning and inspection. The basket of the strainer shall be non-corrosive; shall not have openings more than one-eighth inch (1/8") in width or diameter; and have the area of strainer openings not less than five (5) times the cross-sectional area of the inlet pipe.

d. Pool Piping.

1. The piping shall be sized to permit the rated flow for filtering and cleaning without exceeding the maximum head available from the pump at the flow.

2. Where the water velocity exceeds ten (10) feet per second, calculations shall be provided to verify correct operation with the pump and piping provided.

3. The recirculating piping and fittings shall meet the following requirements:

a. The vacuum fittings shall be located in an accessible position below the water line.

b. All materials, and their installation, shall conform to the requirements of the Plumbing code Ordinance of the Village of Orland Park.

4. Valves with full size ports shall be installed throughout the system and on the main suction line in an accessible place.

e. Inlets, Outlets and Make-up Water.

1. Inlets. The recirculation inlets shall be so located as to produce uniform circulation of water throughout the pool. The inlets shall discharge at a minimum depth of ten (10) inches below the pool overflow level, and a minimum of one (1) recirculation

system inlet shall be provided for every six hundred fifteen (615) square feet of surface area of the pool.

2. **Make-up Water.** Every pool shall be equipped with facilities for adding make-up water as needed. There shall be no physical connection between the water supply line and the pool system. If the make-up water is added directly to the pool, the outlet shall be at least six (6) inches above the upper rim of the pool, and if it discharges to a surge or balancing tank, the outlet shall be at least six (6) inches above the rim of the tank. If a hose connection from a sill cock or the plumbing fixture is to be used for supplying make-up water, then an approved in-line vacuum breaker or back flow preventer shall be installed between the sill cock or control valve at the fixture and hose connection.

3. **Outlet.** A main outlet shall be provided at the deepest point in every pool, for recirculating and for emptying the pool. If the pool is more than thirty (30) feet in length, multiple outlets shall be provided and spaced not more than thirty (30) feet apart, nor closer than four (4) feet to any wall. One (1) outlet shall be provided for each eight hundred (800) square feet of surface or area. All pool drain outlets shall be equipped with gratings having an effective or net area of not less than ten (10) times the area of the outlet pipe. The grating shall be of such a design that they cannot be readily removed by bathers. The recirculating piping shall be so arranged that the pool can be emptied to the sewer through a six inch (6") air gap. No direct connection shall be made to the sewer. Pools shall be equipped with facilities for completely emptying the pool and the discharge of the pool water, if to the sewer system of the Village, shall be at a rate not exceeding two hundred fifty (250) gallons per minute.

f. Overflow Gutters.

1. A pool with a water surface area of eight hundred (800) square feet or more shall be provided with overflow gutters on all vertical walls and extending around the entire perimeter of the pool.

2. The overflow gutter shall be of the open, roll-over, or semi-recessed type with a smooth finish and a level lip.

3. The gutter shall be at least four (4) inches deep and shall pitch at least one-quarter inch (1/4") per foot to the drain.

4. Drains shall be spaced at least every twenty (20) feet in the gutter and shall have at least two (2) inch connections to the drainage system.

5. The drainage system shall have an indirect connection to the sewer, with at least a six (6) inch air gap.

6. Satisfactory proof shall be furnished to the Village Building Director that adequate run off capacity will be obtained by other arrangements or modifications in gutter design proposed for use in closed or reverse flow systems of recirculation.

g. Skimmers.

1. On pool surface area up to 500 square feet at least one (1) skimmer; 500 square feet to 800 square feet two (2) skimmers; 800 square feet to 1100 square feet three (3) skimmers; and 1100 square feet to 1500 square feet four (4) skimmers. Skimmers shall be located at least thirty (30) feet apart.

2. The skimming device shall be built into the pool wall and shall develop sufficient velocity on the pool water surface to induce floating oils and wastes into the skimmer from the entire pool area.

3. The piping and other parts of a skimming system shall be designed for a total capacity of at least eighty (80) percent of the required filter flow of the recirculation system, and no skimmer shall be designed for a flow-through rate of less than thirty (30) gallons per minute or 3.75 gallons per minute per lineal inch of water.

4. The skimmer weir shall be automatically adjustable and shall operate freely with continuous action to variations in water level over a range of at least four (4) inches.

5. An easily removable and cleanable basket or screen through which all overflow water must pass shall be provided to trap large solids.

6. The skimmer shall be provided with an automatically controlled equalizer pipe to prevent air lock in the suction line. The equalizer pipe shall be not less than two (2) inches in diameter and be located at least one (1) foot below the lowest overflow level of the skimmer. The automatically controlled valve or equivalent device shall remain tightly closed under normal operating conditions of the skimmer, but shall automatically open when the skimmer becomes starved and the water level drops below the lowest overflow level of the skimmer.

h. Water Supply and Conditioning.

1. All water used in connection with the filling and operation of a private residential swimming pool or a public swimming pool shall come from the Village of Orland Park water distribution system or from the private wells now used for said purpose existing on the effective date of this ordinance; provided, however, that if a private residential swimming pool shall be constructed as herein provided in a part of the Village not served by the Village water distribution system, a private well may be used.

2. The source of water supply to all pools shall be equipped with approved backflow protection.

3. Over-the-rim filling spouts shall not be permitted unless located under a diving board or installed in a manner approved by the Director of the Building Department.

4. Equipment shall be provided for disinfection through the use of an effective germicide and algicide (such as high test calcium hypochlorite or sodium hypochlorite) and shall allow for pH factor control. Any disinfection method using materials other than chlorine compounds shall be subject to the approval of the Building Department.

5. Disinfection equipment shall be capable of maintaining a disinfectant of 0.5 parts per million.

6. The disinfectant shall be introduced into the recirculation system ahead of the filters.

7. Gaseous chlorination systems shall not be used for private residential swimming pools.

i. Electrical Equipment.

1. All electrical work shall comply with Article 680 of the National Electric Code currently enforced by the Village.

2. All electrical work must be performed by Registered Electrical Contractors. No work is to be started before Building Permit is approved and issued.

3. All work must be inspected before any enclosures of any type are made.
4. All equipment used must bear Underwriters Laboratories (UL) label or other nationally recognized testing agencies and inspected before installation.
4. Reinforcing rods, ladders, diving boards and all non-current conveying metal parts in swimming pool area must be grounded with #8 copper wire using approved clamps and lugs that will require a tool for installation or removal.
6. An unbroken #12 green insulated copper wire shall be used for grounding to distribution panel. Grounding of all equipment related to swimming pool such as deck boxes, transformers, filters, heaters must be grounded and visible for inspection.
7. The use of metallic raceways will not satisfy the requirements for grounding.
8. Rigid steel conduit from pool boxes to distribution panel shall be of ample size to accommodate wiring as per code requirements.
9. Only twelve (12) volt underwater light shall be used and it must bear UL label or other nationally recognized testing agency label. Light and transformer wiring shall be of ample capacity to carry current no smaller than #10 copper. Distance must be considered for determination of any voltage drop.
10. Deck box must be elevated no less than eight (8) inches from deck of the pool, and no less than four (4) feet from edge of the pool of sufficient size to accommodate all wiring. These boxes shall be so located as to avoid any tripping or damage hazard and it is recommended to be installed under diving board or some permanent structure such as fences, benches, observation tower, or similar structures with approved raceway to be of copper or brass or other corrosion resisting metal of threaded type fittings. Junction boxes shall have provisions for effective grounding by using threaded brass screws and lugs.
11. Service drop conductors or any other open overhead wiring shall not be located above swimming pool, surrounding area ten (10) feet horizontally from pool edge, diving observation tower, or other similar structures.

j. Steps or Ladders.

1. At least two (2) means of egress in the form of steps, ladders, or step holes shall be provided for each private swimming pool.
2. At least one (1) means of egress shall be located at the deep end and one (1) at the shallow end of the pool.
3. Treads of steps, ladders, or step holes shall be constructed of non-slip material and shall be at least three (3) inches wide for their entire length.
4. Ladders or step holes shall have handrails on both sides.

k. Heaters and Boilers. Swimming pool heaters and boilers, when installed, shall comply with applicable requirements of the American Standards Association (ASA), American Gas Association (AGA), American Society of Mechanical engineers (ASME), Underwriters' Laboratories (UL), or other nationally recognized testing agencies.

l. Walks.

1. The pool shall have an unobstructed walk area not less than three (3) feet wide and extending entirely around the pool.
2. The walk area shall be constructed of impervious material and shall have a non-slip surface.

3. The walk shall be sloped away from the pool at a pitch of at least one-quarter inch (1/4") per foot.

m. Diving Boards. No diving board or platform more than three (3) feet above water level shall be installed for use in connection with any private residential swimming pool. No diving board shall be permitted over any portion of the pool that is less than seven (7) feet in depth.

n. Water Drainage.

1. Water drained from the pool shall not be discharged to the sewer system during periods of rain or storms. At no time shall the rate of drain water discharge exceed a flow of two hundred fifty (250) gallons per minute.

2. Water drained from the pool shall not be drained over an adjacent owner's property but must be drained to streets with curb and gutters or to street drainage ditches, provided it is transported from the street right-of-way line to the street with a closed header, hose or pipeline. Any prohibited drainage shall constitute a nuisance.

o. Cleanliness and Health.

1. All swimming pools shall be maintained in a clean and sanitary condition and all equipment shall be maintained in a satisfactory operating condition during periods when such pools are in use.

2. No swimming pool shall be used, kept, maintained or operated in the Village of Orland Park if such use, keeping, maintaining or operating shall be the occasion of any nuisance, danger to life, or detriment to health.

p. Water Condition.

1. The water in a swimming pool shall be conditioned so that the pH is between 7.2 and 7.6 at all times.

2. A chlorine residual of between 0.5 ppm and 2.0 ppm as free available chlorine shall be maintained whenever swimmers are present in the pool. At no time shall the chlorine residual be less than 0.5 ppm combined.

3. Chlorinated cyanurates if they are used for disinfection shall meet the following requirements:

- a. 1.0 to 2.0 ppm free available chlorine; and
- b. cyanuric acid concentration of between 25 ppm to 100 ppm.

4. The water shall be free of any organic materials.

q. Protective Covering. A suitable substantial protective cover shall be provided and installed over all private residential swimming pool surfaces during the non-swimming season.

r. Presence of Swimmer. A responsible adult shall be present at all times that private residential swimming pools are in use.

s. Life Saving Equipment. Every private residential swimming pool shall be equipped with one or more throwing ring buoys not more than fifteen (15) inches in diameter and having a three-sixteenth inch (3/16") manila line, or other line as approved by the Building Director, attached to a length equal to the diameter or width plus the maximum depth of the pool but not more than sixty (60) feet total, and one or more light but strong poles with blunted ends and not less than twelve (12) feet in length, for making

reach assists or rescues. Life saving equipment, as required by the Director, shall be provided and maintained so as to be immediately available for use.

t. Abandoned Pools. Unused pools on residential premises not occupied or dwelt in for periods of thirty (30) days or more shall be completely drained or equipped with an approved pool cover (at minimum it must be a mesh safety cover). Abandoned pools shall be removed or filled to the grade of adjacent land. Such unused or abandoned pools shall not create an attractive nuisance. They shall not become a breeding ground for mosquitos. Such unused or abandoned pools not treated in the manner prescribed in this section shall be deemed a public health and safety hazard. (Amd. Ord. 4839 – 9/16/13)

u. Infectious Disease. It shall be unlawful for any person having an infectious or contagious disease to use any swimming pool, and no person in charge of any pool shall knowingly permit such use.