

SECTION**33.0.0 Swimming Pools (Ord. 747, 5/21/84)****33.1.0 General**

No swimming pool shall be constructed nor shall repairs in excess of Five Hundred (\$500.00) dollars be performed without a building permit having first been issued for such construction or repair. (Ord. 702, 6/15/81)

33.1.1 Definitions - Swimming Pool

As used in this Ordinance, the term "Swimming Pool" means an artificial pool of water, more than one and a half feet (18") deep at any point, intended for the immersion or partial immersion therein of human beings.

33.1.2 Definitions - Private Swimming Pool

The term "private pool" shall mean any swimming pool designed and intended only for the use of an individual owner, his family, and invited guests; no charge being made for the use thereof.

33.1.3 Location of Pools

Pools shall be located on lots in accordance with the Zoning Code of the Village.

33.2.0 Certification of Plans and Specifications

All plans and specifications shall be made by and certified, sealed and signed by a Registered Architect or a Registered Professional Engineer or Registered Structural Engineer currently registered in the State of Illinois. Specifications shall include pumps, filters, skimmers sizes, makes, capacity, etc.

33.3.0 Permit Fees for Pool Construction (Ord. 688, 8/18/80)

Building Permit fees shall be the same as those specified for buildings listed elsewhere in this ordinance and shall be based on the total cost of construction of the pool, accessory buildings and appurtenances. In addition to the fees required above, there shall be Plumbing and Electrical Permit fees in the amount as stated in Chapter 25, Section 25.211 of the Flossmoor Municipal Code each, said fees to include a plan review and three (3) inspections. (FMC-307, 7/17/95)

33.3.1 Application for Permits

Permits for new construction shall be accompanied by plans in triplicate (3) and in complete detail.

1. Mechanical plans shall show the volume system flow rate in gal/min and turn over in hours.
2. Type and size of filtration system and means of waste disposal.
3. Type and size of pool heater, if provided.
4. Pool lay-out showing surface skimmers, inlets and location of each.
5. Rated capacity of pool pump in G.P.M. at the designed head. Size and type of motor and pump.
6. Water make-up (water replacement method).
7. Electrical plans shall be complete in detail and show all wiring, bonding, and grounding as required by the current edition of Art. 680 National Electrical Code covering swimming pools, fountains and similar installations.

33.4.0 Type of Construction of Pools (Ord. 710, 12/21/81)

- A. Private Residence Pools. Private Residence Pools shall be entirely below ground level (natural grade) with floors of reinforced concrete at least 6" in thickness and side walls of reinforced concrete at least 6" in thickness or a Combined Pool consisting of reinforced concrete bottom and fiberglass panels or stainless steel panels for pool walls. The height of each panel shall not exceed 36" and the paneled walls shall be backfilled with 1" washed stone. Due to the differences in design and construction of combined pools, the manufacturer's design data, construction details, brochures, etc. shall be submitted to the Building Commissioner for review and approval.
- B. Pools Other than Private Residence Pools. Pools other than Private Residence Pools shall be entirely below ground level (natural grade) with floors and walls of cast in place reinforced concrete at least 6" in thickness, and shall conform with all specifications and rules outlined in this Code.
- C. General Requirements. The concrete for swimming pools shall conform to the requirements of Section 20 "Concrete Construction" of the Building Code. All pool decks and slabs shall be of reinforced concrete at least 4" thick. Temporary or portable pools of less than 18 inches in depth may be constructed of other materials and are not defined as swimming pools. A building permit is not required.

33.4.1 Size and Depths of Pools

A pool may be any shape and dimension provided it meets with all other requirements of this Code. All pools shall be designed and built to withstand water pressure from within and to resist the pressure of the earth including hydrostatic and frost action when the pool is empty.

The minimum depth shall be three feet at the shallow end of the pool. The slope of the bottom of any part of a pool in which the water is less than five feet in depth shall not be more than one foot in ten feet. The maximum slope where the water is five feet or more in depth shall not exceed one foot in three feet. Combination diving and swimming pools shall be not less than thirty-six feet for use with one-half meter diving boards and not less than thirty-eight feet for use with one meter or three meter diving boards. Minimum depth at deep end of pool shall be 7'6" for one-half meter boards and 9'0" for one meter boards at a distance of 8'0" in front of board.

33.4.2 Walks Around Pools - Exterior Pools

A non-slip area, 4' wide pitched away from the pool edge shall be provided to extend entirely around the pool, except at diving board area where the walk area shall be 6' wide. The walk area shall be concrete, or other impervious, water-resistant material that is easily cleaned and is approved by the Building Commissioner.

33.4.2.1 Walks Around Pools - Interior Pools

Walk areas shall be a minimum of 3' wide at sides of pool and not less than 6' at deep end of pool, exclusive of areas provided for equipment.

Floor drains shall be installed around the pool providing one at either end and two each on either side - 30' minimum length. One additional floor drain may be required in equipment room if remotely located from pool area. These deck drains shall be 4" C.I. with brass C.P. grate type covers whose openings shall be small mesh construction. Deck drains shall be installed to provide continuous grade to point of discharge.

33.4.3 Fences

A fence or wall shall be erected to completely surround exterior pools. The fence or wall shall be of "non-climbable" type as an effective barrier to small children and be at least six feet (6'0") high. A fence six feet (6'0") high shall be permitted at rear and side lot lines if surrounding a pool, provided the fence is an approved fence, not in conflict with the Zoning Ordinance. Gates shall be equipped with self-closing and self-latching hardware with key-locking devices placed at the top of the gate.

The fence or wall may be constructed of steel chain link fence material, or of vertical wood boards, or of masonry or of other material that is permanent and durable and meets all other requirements of the code.

33.4.4 Safety Equipment

Pools shall be constructed and equipped with at least one (1) metal ladder at the deep end and at least one (1) concrete set of stairs with handrails at the shallow end of the pool.

33.4.5 Drainage from the Pool - Gravity

A drain outlet of at least 1-1/2" which connects to the recirculating system shall be permanently installed at the lowest point in the pool. It shall be ample in size with an 8" free grating area sufficient to minimize chances of clogging or occurrences of suction dangerous to the safety of bathers. The grating openings shall be of sufficiently small mesh and construction that bathers' fingers or toes will not be caught or injured. A hydrostatic relief valve shall be installed at all drain outlets of a pool. **(Ord. 702, 6/15/81)**

Drainage shall not be connected to a sanitary sewer but shall be discharged into a 4" x 12" site drain which shall gravitate through a 3" "P" trap which will empty into a 4" horizontal to a storm sewer or into underground leaching pit, a swale or natural water course.

Pools shall not be drained during periods of rain or floods.

33.4.6 Drainage of Pools – Mechanical

Where pools are so located that pool water cannot be discharged into a storm sewer, leaching pit or natural drainage water course, the pool will be pumped into a carrier which shall dispose of the water into a natural water course.

33.4.7 Subsoil Drainage

All interior swimming pools shall have a 4" subsoil perforated drainage line the entire periphery of the pool. This drainage shall dump into a storm sewer or surface water swale as directed by the Plumbing Inspector.

33.5.0 Water Supply

Source of water shall be that supplied by the Village water system (through meters) if available. If obtained from a private well or wells, the water shall be tested yearly and shall meet the bacteriological standards of the State of Illinois Department of Health standards for a safe drinking water. All payments for required tests shall be borne by the owner. The physical connection between the potable water supply line and the swimming pool shall be made by an Illinois licensed plumber. The point of discharge into the pool shall be firmly fixed at the deep end of the pool through a 1" x 12" C.P. gooseneck spout at a point at least six inches (6") above the overflow level of the pool. The spout shall be installed under a diving board. If no diving board is installed then it shall be installed adjacent to an exit pool ladder.

Where the water supply is obtained from the Village water system, a backflow preventer dual check valve shall be installed at the building water meter. The size of such valve shall be determined by the Plumbing Inspector. **(Ord. #702, 8/15/81)**

33.5.1 Water Supply - Exterior Pools

If obtained from the Village water system, it shall be taken from the nearest connection in the residence supplied with a shut-off valve and drain cock. Supply will be underground terminating in a gooseneck fill spout 1" x 12". Supply will be pitched back to the original connection so as to drain the fill line when pool is closed for any reason.

33.5.2 Pumps

- A. Circulating pumps shall be sized to give a complete turnover of pool water in ten (10) hours or less.
- B. Circulating pumps shall be equipped with an approved type hair and lint strainer on the inlet side when used in conjunction with pressure filters. When vacuum filters are used, strainers are not required.
- C. Pumps shall be mounted on a substantial base with sufficient anchorage so as to prevent movement and eliminate strain on connected piping.

33.6.0 Recirculation of Water in Pools

- A. Every pool shall be equipped with a mechanical recirculating system capable of circulating and filtering the entire contents of the pool in 10 hours or less.
- B. 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.
- C. Sufficient surface area shall be provided in pressure type filters (sand or diatomaceous earth) to filter pool contents in 10 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 and sand filters and once every two (2) days for pressure or vacuum diatomaceous earth filters.
- □ D. 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 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.
- E. 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.
- F. Operating instructions shall be posted on every filter system. All valves shall be properly designated, indicating their purpose.
- G. The recirculating pump shall have a sufficient capacity to discharge the volume of water required for the required turnover of the pool against their maximum head in the recirculation system. The pump shall be capable of backwashing pressure sand filters at a rate of 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. The basket of the strainer shall be non-corrosive and have the area of strainer openings not less than five (5) times the cross-sectional area of the inlet pipe.

33.6.1 Recirculation of Pool Filtered Water

Where the filtered out recirculated water cannot be discharged into a storm sewer, leaching pit or natural drainage water course, the filtered water shall be emptied into the sanitary sewer through a 3" sight drain. The sight drain shall be trapped but need not be vented.

33.6.2 Equipment Room

All mechanical equipment shall be set and secured to a concrete base and shall be so installed to provide ready accessibility for cleaning and operating.

33.6.3 Heaters

All interior constructed pools may have gas, electric or solar heated water heaters. Electric, gas or oil heaters may be used for exterior pools. Provision shall be made for proper venting of heaters and adequate ventilation for heater rooms.

All heaters shall be provided with a pressure relief valve with a rated input of 200,000 BTU. A check valve shall be installed between the filter and heater to prevent backflow when pump is off. The inlet and outlet piping at the heater shall be metal at least 24" from the heater.

33.7.0 Surface Skimmers

- A. On pool surface area up to 500 square feet, at least one (1) skimmer shall be installed, for 500 square feet to 800 square feet two (2) skimmers, 800 square feet to 1100 square feet three (3) skimmers, 1100 square feet to 1500 square feet four (4) skimmers.
- B. 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.
- C. The piping and other parts of a skimming system shall be designed for a total capacity of at least 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 30 gallons per minute or 3.75 gallons per minute per lineal inch of weir.
- D. 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.
- E. An easily removable and cleanable basket or screen through which all overflow water must pass shall be provided to trap large solids.
- F. 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 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.

33.7.1 Pool Piping

- A. The piping shall be sized to permit the rated flow for filtering and cleaning without exceeding the maximum head available from the pump at that flow.
- B. Valves with full size ports shall be installed throughout the system and on the main suction line in an accessible place.

33.7.2 Inlets

- A. Inlets--the recirculation inlets shall be so located as to produce uniform circulation of water throughout the pool and not cause excessive turbulence of the pool water. A minimum of 3 inlets or jets is required for a pool 30 feet or more in length. The inlets shall discharge at a minimum depth of 10 inches below the pool overflow level and shall be located at least 10 feet apart.
- B. 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 water. 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 through a 1" x 12" C.P. spout with a dual-check backflow preventer.

33.8.0 Water Disinfection

Disinfection of pool water as noted in Section 33.6.0 "Recirculation of Water in Pools" shall be in the form of sodium or calcium hypochloride or bromine and shall be applied daily or as frequently as needed to maintain a definite chlorine residual not to exceed one-half (.5) parts per million (.5 ppm) throughout the pool volume while the pool is in use.

33.8.1 Test Kits

A test kit with permanent color standards shall be provided at all pools by the owner thereof and be used at frequent intervals to check on the adequacy of chlorine treatment.

33.8.2 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. If the pool is used by such a person, it shall be caused to be closed immediately and shall not be released from such closure until authorized by the Village Sanitarian.

33.8.3 Inspection and Authority to Close

The Commissioner of Public Works, or the Sanitarian of the Village, shall have the authority and right to inspect any pool, or to check the operations thereof during reasonable daylight hours, or at night if the pool is being used at night. If it is found on inspection that the operation of the pool does not meet the sanitary and safety requirements of this ordinance or any other ordinance of the Village pertaining thereto, the officer making the inspection shall direct that the pool be closed until the sanitary and safety requirements are met.

33.8.4 Hose and Reel

All pools will be equipped with a hose and reel. The hose shall be of sufficient length to reach all points of pool area to wash and scrub down when necessary. Hose shall be stored on reel except when in use and shall be provided with an approved vacuum breaker at the sill cock.

33.8.5 Operations and Maintenance

- A. The pool shall be equipped with at least one throwing ring buoy not more than 15 inches in diameter and having a 60 foot 3/16-inch Manila rope attached, and at least one light strong pole with blunt ends and not less than 12 feet long.
- B. Diving boards or platforms more than three (3) feet above the water level shall be prohibited.
- C. All private swimming pools shall be maintained in a clean and sanitary condition, and all equipment shall be maintained in compliance with this Code.
- D. All operating valves shall be labeled with a water-proof tag so attached that they are readily visible and clearly identified as to their function. Operating instructions shall be fixed to an accessible wall of the equipment room.

33.8.6 Final Instructions

It is the responsibility of the installing contractor to instruct the owner as to the proper maintenance and operation of the pool system.