

## CHAPTER 27

### SWIMMING POOLS

#### 27.01 COMPLIANCE REQUIRED

It shall be unlawful to construct, maintain, Install or enlarge any swimming pool in the City of Hickory Hills except in compliance with the provisions of this chapter.

#### 27.02 DEFINITION

The term "swimming pool" is defined as a receptacle for water, or an artificial pool of water having a depth at any point of more than 2 feet, intended for the purpose of immersion or partial immersion therein of human beings, and including all appurtenant equipment.

#### 27.03 LOCATION

No portion of a swimming pool outside of a building shall be located at a distance less than 8 feet from any side property line.

#### 27.04 PERMIT REQUIRED

It shall be unlawful to proceed with the construction, installation, enlargement or alteration of any private residential swimming pool and appurtenances within the city without a permit therefor from the Building Commissioner.

#### 27.05 DRAWINGS, PLANS AND PERMITS

(a) All drawings and plans for the construction, installation, enlargement or alteration of any swimming pool and appurtenances shall first be presented to the Building Commissioner for examination and approval as to proper location and construction.

(b) All plans and drawings shall be drawn to a scale of not less than one-eighth of an inch to the foot, on paper or cloth, in ink or by some process that will not fade or obliterate. All distances and dimensions shall be accurately figured and drawings made explicit and complete, showing the lot line, and including information pertaining to the pool, walk, and fence construction, water supply system, drainage and water disposal systems, and all appurtenances pertaining to the swimming pool. Detail plans and vertical elevations shall also be provisions in accordance with the Building Code.

(c) All private residential swimming pools, appurtenances, water supply and drainage systems shall be constructed in conformity with the approved plans.

#### 27.06 RECIRCULATION POOLS

All swimming pools shall be of the recirculation type in which circulation of the water is maintained through the pool by pumps; the water drawn from the pool being clarified and disinfected before being returned to the pool.

#### 27.07 MATERIALS

Swimming pool walls and floors shall be constructed of any impervious material which will provide a tight tank with white or light colored finish and easily cleaned surfaces. The floor or bottom surface of the pool shall have a non-slip finish as smooth as possible. The side and walls of a pool shall present a smooth finish and shall be vertical to a depth of at least 6 feet or shall have a slope or curvature meeting one of the following conditions:

(a) The pool wall may be vertical for 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 30 inches.

(b) To a depth of 6 feet, except as in subsection (a) above, the wall's slope shall not be less than one foot horizontal in 6 feet vertical.

#### **27.08 STRUCTURAL DESIGN**

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 2,200 pounds per square foot. The slope of the bottom of any part of a pool in which the water is less than 5 feet in depth shall not be more than one foot in 10 feet. The maximum slope where water is 5 feet or more in depth shall not exceed one foot in two feet.

#### **27.09 WALK AREAS**

Unobstructed walk areas not less than 36 inches wide shall be provided to extend entirety around the pool. The walk area shall be constructed of impervious material, and the surfaces shall be of such as to be smooth and easily cleaned and of non-slip construction. The slope of the walks shall have a pitch of at least one-fourth inch to the foot, designed so as to prevent back drainage from entering the pool.

#### **27.10 FENCES AND SAFETY POOL COVERS**

All permanently constructed outdoor swimming pools shall be completely enclosed by a fence of the type required for residential use by Section 24.04 (d) of the Building Code. Such fence shall be of a height of not less than 6 feet and shall be equipped with a self-closing gate, with the gate latch 4-1/2 feet over grade.

All temporary type outdoor swimming pools with a height of one foot or more shall have either (1) a fence as provided in this section, or (2) a safety type pool cover with tie-downs and locking devices. Where safety type pool covers are used in lieu of a fence as provided herein, such pool cover shall be kept in place and secured at all times when the pool is not in operation.

#### **27.11 STEPS OR LADDERS**

Two or more means of egress in the form of steps or ladders shall be provided for all swimming pools. At least one such means of egress shall be located on a side of the pool at both the deep end and shallow end of the pool. Treads of steps and ladders shall be constructed of non-slip material and at least 3 inches wide for their full length. Steps and ladders shall have a handrail on both side.

#### **27.12 SKIMMERS**

In every swimming pool at least one skimming device shall be provided for each 800 square feet of surface area or fraction thereof. Skimmers shall be located at least 30 feet apart. Handholds shall be provided and consist of a bull-nosed coping not over 2-1/2 inches thick for the outer two inches or an equivalent approved handhold. The handhold must be no more than 9 inches above the normal water line. Skimming devices shall be built into the pool wall, shall adequately remove floated oils and waste and shall meet the following general specification:

(a) Each skimmer shall be designed for a flow-through rate of at least 30 gallons per minute and a total capacity of all skimmers on any pool shall be at least 50 percent of the required filter flow of the recirculation system.

(b) They shall be automatically adjustable to variations in water level over a range of at least 3 inches.

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

(d) The skimmer shall be provided with a device to prevent airlock in the suction line. If an equalizer pipe is used, it shall provide an adequate amount of make-up water for pump suction should the water of the pool drop below the weir level. This pipe shall be at least two inches in diameter and shall be located at least one foot below the lowest overflow level of the skimmer.

(e) An equalizer line shall be provided with a valve that will remain tightly closed under normal operating conditions, but will automatically open at a differential or not more than 4 inches between the pool level and the level of the overflow tank.

(f) The overflow weir shall be of sufficient length to maintain a rate of flow of at least 20 gallons per minute per lineal foot of weir lie.

### **27.13 WATER SUPPLY**

No source of water other than that secured from the city water distribution system shall be used in swimming pools.

### **27.14 INLETS**

(a) Swimming pool water recirculation system inlet shall be located so as to produce so far as possible uniform circulation of water throughout the pool without the existence of dead spots and to carry pool bottom deposits to the outlets, and shall discharge at a minimum depth of 10 inches below the pool overflow level. A minimum of one recirculation system inlet shall be provided for every 615 square feet of surface area of the pool.

(b) Pools shall be equipped with suitable 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 6 inches above the rim of the pool. If the make-up water line discharges to a surge or balancing tank, the point of discharge shall be at least 6 inches above the rim of the tank. If a hose connection from a sill cock or other plumbing fixture is to be used for supplying make-up water, then an approved vacuum breaker shall be installed between the sill cock or control valve at the fixture and the hose connection. The vacuum breaker shall be installed at a height not less than 7 feet 6 inches above the floor, platform or ground upon which a person would stand when operating the sill cock or control valve. Maximum size of the fillpipe shall be 2 inches.

### **27.15 OUTLETS**

(a) In swimming pools 30 feet in width or less, water circulation system outlets shall be located so as to provide at least one outlet at the deepest point in the pool. If the pool width is more than 30 feet multiple outlets shall be provided and spaced not more than 30 feet apart, nor closer than 4 feet to any wall. All pool drain outlets shall be equipped with gratings having an area of opening not less than four times the cross-sectional area of the outlet pipe. The gratings shall be of such design so they cannot be readily removable by bathers and will not injure bathers' fingers. One outlet shall be provided for each 800 square feet of surface area.

(b) Pools shall be equipped with facilities for completely emptying the pool and the discharge of the pool water to the sewer shall be at a rate not exceeding 200 gallons per minute. No direct connection shall be made to the sewer.

(c) Water drained from the pool shall not be discharged to the sewer system during the periods of rain or storm. At no time shall the rate of drain water discharge exceed a flow of 200 gallons per minute.

## **27.16 RECIRCULATION SYSTEM AND APPURTENANCES**

(a) The swimming pools' recirculation systems shall consist of pumping equipment, hair and lint catcher, filters, together with the necessary pipe connections to the pool inlets and outlets, facilities and pipe connections necessary for back washing filters, and facilities and equipment for disinfecting the pool water.

(b) Every swimming pool shall have a recirculating system with an hourly capacity equal to the pool volume divided by eight.

(c) The recirculation system pump shall have sufficient capacity to discharge the volume of water required for an eight hour turnover of the pool against the maximum head in the recirculating system.

(d) The pump used for backwashing filters shall have sufficient capacity to provide a filter backwash rate of at least 12 gallons per minute per square foot of filter area.

(e) A hair and lint catcher or strainer shall be installed on the suction side of the circulation pump to prevent hair, lint and other extraneous matter from reaching the pump and filters. Hair and lint catchers shall be so designed that they can be easily dismantled for the cleaning and inspection and shall be so located as to be easily accessible for cleaning. The design features shall be as follows: Water passes through the strainer from the outside; the strainer is made of non-corrosive material; the width of diameter of strainer openings is not more than one-eighth Inch; the area of the strainer openings shall be at least five times the cross-sectional area of the inlet pipe to the strainer.

(f) Recirculating systems shall contain rapid pressure filters. Sufficient filter area shall be provided to filter the entire contents of the pool in 18 hours at the rate of not more than three gallons per square foot of filter area per minute. The filter backwashing facilities shall be sufficient to backwash at a rate of 12 gallons per minute per square foot of filter area. All backwash water and effluents shall be discharged to the sewer through an indirect connection. Pressure filters shall be equipped with readily accessible air relief valves, loss of head or pressure gauges on the inlet and outlet pipes, and an access head or hole large enough to permit inspection, maintenance and repair work. Sight glasses that can be easily removed for cleaning shall be provided in the effluent line from the filter units.

(g) Equipment shall be provided for the disinfection of all pool water. Any disinfection method using materials other than chlorine compounds shall be subject to the approval of the Building Commissioner. Disinfection equipment installed for the use of chlorine compounds shall have sufficient capacity to maintain a minimum free chlorine residual of 0.5 parts per million. The disinfectant shall be introduced into the recirculation system ahead of the filters.

(h) Gaseous chlorination systems shall not be made use of as a disinfection method for pool water.

## **27.17 ELECTRICAL REQUIREMENTS**

(a) All electrical installations provided for, installed and used in conjunction with private residential swimming pools, shall be of conformance with the Electrical Code.

(b) No current carrying electrical conductors shall cross private residential swimming pools, either overhead or underground or within 15 feet of such pools.

(c) All metal fences, enclosures or railings near or adjacent to swimming pools, which might become electrically alive as a result of contact with broken overhead conductors or from any other cause, shall be effectively grounded.

**27.18 SAFETY PRECAUTIONS**

Every swimming pool shall be equipped with one or more throwing ring buoys not more than 15 inches in diameter and having 60 feet of 3/16 inch manila line attached, and one or more light but strong poles with blunted ends and not less than 12 feet in length, for making reach assists or rescues.

**27.19 INSPECTION**

The Building Commissioner periodically shall inspect all swimming pools to determine whether or not the provisions of the ordinances regarding health, sanitation and safety applicable thereto are being complied with.

**27.20 PERMIT FEES**

The permit fee for the erection, construction, and inspection of any in-ground swimming pool shall be \$35.00 and for any above-ground swimming pool shall be \$20.00.

**27.21 INSPECTIONS REQUIRED**

All swimming pools shall comply with all of the requirements of the City ordinances and Building Code, Plumbing Code, and Electrical Code, and shall be subject to the appropriate structural, plumbing, and electrical inspections as determined by the City.