



# Village of Woodridge

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## **Pool Installation Guide**

This handout is a basic guideline of the information needed to apply for and obtain a permit to install a Swimming Pool/Spa/Hot Tub at residential properties. Some of the following elements may or may not be required for every project depending on the type of pool and the scope of work involved. For example, if a new above ground pool is to be installed and a deck built to provide access to the pool then details are needed on the deck construction and the pool installation.

If applicable, see the individual Village handouts about requirements for contractors, decks, patios, fencing and pavement.

### **INFORMATION REQUIRED FOR SWIMMING POOL/SPA/HOT TUB PERMITS**

- Provide a list of all contractors to be used and include their contact information on the permit application. The use of a licensed electrician is highly recommended.
- Provide a plat of survey showing locations, with details and dimensions, of the pool/spa structure, associated pool equipment such as pumps, heaters and power operated pool covers, fencing with location of gates, structures existing on site or to be built including buildings, decks, paved surfaces, garages, sheds, etc., electrical service power lines with distance from pool (for both underground and overhead services), easements, etc.
- Provide details of all new work to be done as part of the pool construction project such as: is it an above or in ground pool, pool material/structure, pool depth and/or height above ground, fencing with self closing gates shown, pool ladders, pavement or decks, plumbing connections to water supply or drainage systems, gas piping installation with details of piping material, gas shut off valves and gas supply location.
- Provide all electrical details of additions or modifications including pump/motor specifications, length of pump power cord, additional equipment such as pool lights, heaters and power operated pool covers, equipment disconnecting means, all new and existing receptacles on site with distances from the pool, type and size/ampacity of receptacles, GFCI protection of all equipment and receptacles, wiring method to be used to supply electrical power to pool equipment including depth of underground conduit, location of wiring/conduit with distance to pool, wire sizes, fuse/circuit breaker ampacity, bonding of pool structure and equipment, etc.
- A drawing with an engineering stamp must be submitted when applying for a permit to be installed on a deck or addition.

**SWIMMING POOLS, HOT TUBS AND SPA INSTALLATION GUIDE  
FOR LOCATION OF UTILITIES CONTACT J.U.L.I.E. AT 800-892-0123**

**ZONING**

Swimming pools and hot tubs are allowed in the buildable area or the required rear yards only, can be no closer than six (6) feet to any side or rear yard property line, and cannot be installed so that any part of pool or deck is within any easement.

Swimming pools and hot tubs less than 48” in height must be enclosed by a fence (at least 48" high) with self-closing, self-latching gates. The fence, latch and gate must be constructed so as to provide an effective barrier to small children. An acceptable alternative to the fence would be a pool cover of rigid construction capable of supporting 150 lbs. at the center.

Swimming pools and hot tubs over 48” in height using the pool wall or spa structure as a barrier and accessible only by ladder must be provided with a readily removable ladder or one which is designed to be made inaccessible.

Any excess dirt generated during the project must be hauled off site.

**ELECTRIC**

Note that this handout is a guideline only. Additional requirements in the National Electrical Code, International Residential Code and International Building Code and Village of Woodridge amendments to these and other codes apply.

The use of a licensed electrician is highly recommended.

**SWIMMING POOLS**

Village amendments to the National Electrical Code have restricted the wiring methods, which may be used to supply outdoor and indoor pool and spa equipment. Outdoor wiring is to be done in rigid metal conduit or intermediate metal conduit with the exception that rigid nonmetallic conduit, liquid tight flexible metal or nonmetal conduit may be employed but only in restricted uses.

No receptacles are allowed within 10 feet of the inside walls of the pool; with the exception that one single, locking, GFCI protected receptacle may be installed between 5 and 10 feet of the pool for the purpose of providing power to the pool pump motor for motors supplied with 3’ or 6’ cords. The receptacle for a storable pool type pump must be not less than 10’ from the pool.

All pool equipment receptacles and outdoor receptacles must be GFCI protected. Outdoor receptacles must be provided with “Weatherproof in use” covers.

Lighting fixtures or lighting outlets shall not be installed over the pool, or area 5 feet wide surrounding the pool.

Lighting fixtures and lighting outlets located within 5 to 10 feet of the inside walls of the pool must be GFCI protected and rigidly attached to a permanent structure.

All switches must be located at least 5 feet away from the inside walls of the pool.

No overhead wiring shall be allowed over the pool or within 10 feet horizontally of the pool.

No underground wiring (except that serving the pool equipment) shall be located under the pool or within 5 feet of the pool.

Underground wiring may be direct burial cable (24" minimum depth), rigid plastic (PVC) conduit (18"), or rigid steel or IMC conduit (6"). If plastic conduit or direct burial is used, steel rigid conduit or IMC must be installed as protection, from the minimum burial depth, up to the point of termination above ground. i.e. ALL risers, and 90's need to be of either IMC or RMC.

(FYI burial depths are the top of the conduit or gas line after they have been placed in the trench, not to the bottom of the trench itself). Inspection needed before backfilling trench.

All metal parts of the pool, installed pool equipment including pumps, motors and heaters, metal water and drain piping, electrical conduit, fixed metal parts and concrete metal reinforcements shall be bonded together with a solid copper wire of a size no less than #8 AWG. Per NEC Article 680.26.

When submitting, contractor/homeowner will need to submit a Scope of Work outlining:

Type of conduit?

Depth to be buried?

Distance from pool?

Bonding requirements Per NEC Article 680.6 and 680.7(B)?

Dedicated 20A circuit required that is GFCI protected?

### **SPAS AND HOT TUBS**

All outside spas and hot tubs shall follow the same electrical requirements as swimming pools.

For indoor spas all receptacles and switches shall be a minimum of 5 feet from the inside walls of the tub. For outdoor spas, all receptacles must be a minimum of 10 feet from the inside walls of the tub.

Any receptacle located within 10 feet of an indoor spa/hot tub must be GFCI protected. All washroom and all outdoor receptacles must be GFCI protected. Outdoor receptacles must be provided with "Weatherproof in use" covers.

Receptacles that provide power to the tub must also be GFCI protected.

Lighting fixtures and lighting outlets over or within 5 feet horizontally of the tub must be at least 7-1/2 feet (indoors) and 12 feet (outdoors) above the maximum water level of the tub and must be GFCI protected.

The metal parts of the tub, tub equipment, electrical conduit, and any metal surfaces and additional electrical devices or controls located within 5 feet of the inside wall of the tub shall be bonded together with a solid copper wire of a size no less than #8 AWG.

## **REQUIRED INSPECTIONS**

### **Above-ground pool**

- Underground Electric (and plumbing if required for any gas line and tracer wire): See previous page for required burial depths.
- Rough Electric: When equipment pad has been poured, the electrical box has been attached to the post and wire has been pulled. But before receptacle has been installed.
- Final (including Bonding): When all equipment is in place, (including pump and heater) and all electric and all necessary bonding/grounding is complete. (If fence is required, fence will need to be installed completely with self-closing/latching gate and if the fence is within 5 feet of the pool it will need to be grounded).

### **In-ground pool**

- Underground Electric (and plumbing if required for any gas line and tracer wire): See previous page for required burial depths. (FYI burial depths are to the top of the conduit or gas line after they have been placed in the trench, not to the bottom of the trench itself). Inspection needed before backfilling trench.
- Before any concrete or pavers are installed for the pool deck there will need to be a bonding inspection, and either a pre-pour concrete, or paver base inspection.
- Final: When all equipment is in place, (including pump and heater) and all electric and all necessary bonding/grounding is complete. (If fence is required, fence will need to be installed completely with self-closing/latching gate and if the fence is within 5 feet of the pool, it will need to be grounded).