



City of  
**WALKER**

COMMUNITY DEVELOPMENT  
DEPARTMENT

# Residential Pool & Spa Guide



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[4243 Remembrance Rd NW Walker MI 49534](#)



# COMMUNITY DEVELOPMENT DEPARTMENT

## Residential Pool / Spa Requirements

### STEP 1: SUBMIT ALL REQUIRED DOCUMENTS FOR REVIEW

- BUILDING PERMIT APPLICATION** – required for any pool that holds more than 24” (2 feet) of water.
- SITE PLAN** - Plan should include lot lines, existing and proposed structures, setbacks, easements, and dimensions. *(Provide one full size and one electronic copy)*
- ELECTRICAL PERMIT** - Required for inground pools & permanently placed above ground pools.
- MECHANICAL PERMIT** - Required for all pools with heaters.
- KENT COUNTY ENVIRONMENTAL HEALTH REVIEW FORM** - *(for properties with well / septic)*
- SWIMMING POOL, SPA AND HOT TUB BARRIER RESPONSIBILITY FORM** Required for any construction of pools, spas and/or hot tubs.
- A REFUNDABLE PERFORMANCE BOND OF \$100 IS REQUIRED AT THE TIME OF PERMIT ISSUANCE.** The bond will be refunded after all final inspections have been performed.

**STEP 2: INSPECTION REQUIREMENTS** – will vary depending on pool type, and may include:

#### **ELECTRICAL**

- Underground
- Bonding
- Final

#### **MECHANICAL**

- Underground
- Final

#### **BUILDING**

- Final – Electrical & mechanical inspections must be completed prior to the building final inspection.

### CONTACT INFORMATION

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### **ADDITIONAL INFORMATION:**

- Electrical Guidelines: Pools & Hot Tubs (attached)
- Electrical Guidelines: Storable Pools (attached)
- Pool Bonding Fact Sheet (attached)
- [Sec. 94-338. Swimming pool section of the City of Walker Zoning Ordinance](#)
- \*Section of the 2015 International Swimming Pool and Spa Code available by request

*Please review this entire guide to confirm all building and zoning requirements have been met. The building code for pools is very strict and it is critically important for safety. It is strongly recommended that work on pools is performed by a licensed contractor experienced in pool installation.*

**2015 INTERNATIONAL SWIMMING POOL AND SPA CODE**  
**BARRIER REQUIREMENTS RESPONSIBILITY FORM**

**CONTRACTOR:**

**I, AS THE CONTRACTOR, HAVE READ AND AGREE TO  
INSTALL THE BARRIER AS REQUIRED BY SECTION 305 OF  
THE 2015 INTERNATIONAL SWIMMING POOL AND SPA  
CODE:**

**SITE ADDRESS:** \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**HOMEOWNER:**

**I, AS THE HOMEOWNER, HAVE READ AND AGREE TO  
INSTALL THE BARRIER AS REQUIRED BY SECTION 305 OF  
THE 2015 INTERNATIONAL SWIMMING POOL AND SPA  
CODE:**

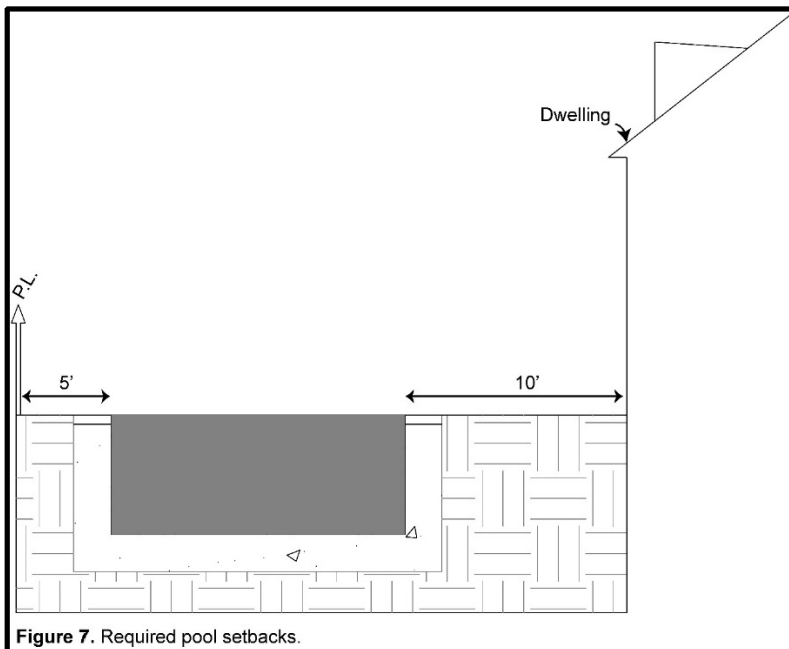
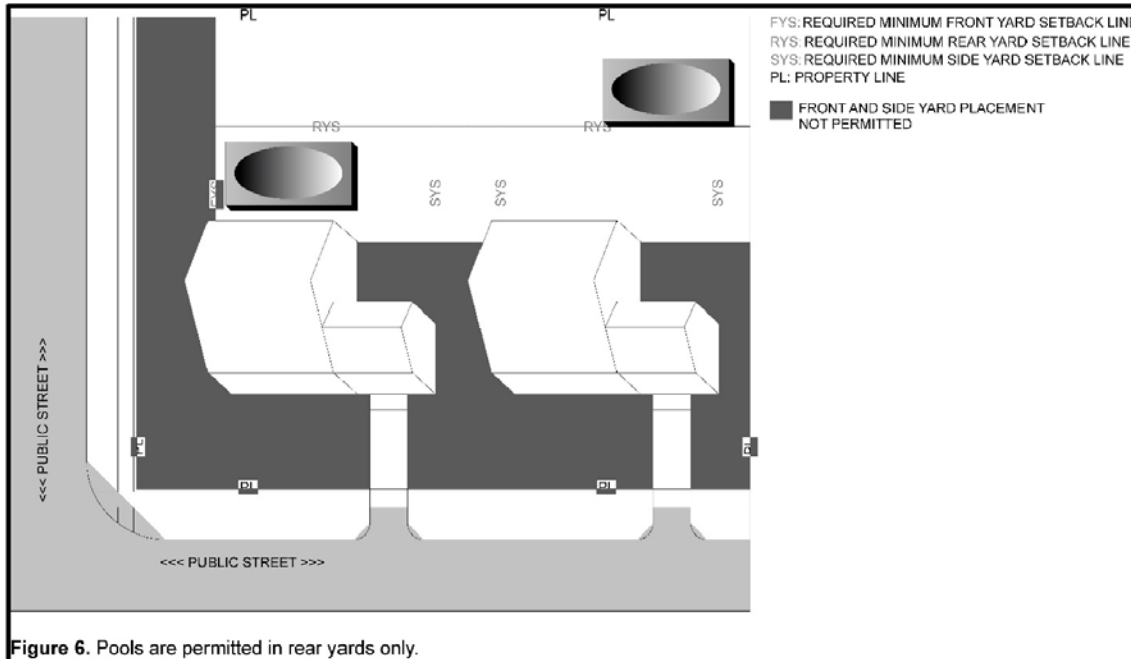
**SITE ADDRESS:** \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

Sec. 94-338. - Accessory buildings and swimming pools.

- (a) All accessory buildings shall be located within the rear yard and at least ten feet away from any other building. If any private garage is located less than ten feet from a dwelling house, the garage shall be made fire resistant in the manner required for attached garages.
- (b) Swimming pools constructed, erected or placed in or on the ground as accessory to a residential dwelling unit shall be located within the rear yard. A wall of a swimming pool shall be located at least five feet from a side or rear property line and at least ten feet from a dwelling. The requirements of this subsection shall apply to any swimming pool for which a building permit is required under the building code of the city.
- (c) No accessory building or swimming pool in any zoning district shall be constructed or located within a drainage easement described in a final subdivision plat or a final site condominium project plan, or within a drainage easement of the city or other governmental entity which is recorded with the Kent County Register of Deeds or otherwise established by law.



(Ord. No. 91-392, § 1, 3-12-91; Ord. No. 98-512, § 2, 4-13-98; Ord. No. [16-632](#), § 1, 9-26-16)

**Cross reference—** Buildings, ch. 18.

## Storable pools

### Electrical guidelines based on the 2015 Michigan Residential Code

*This is not a complete set of electrical rules. This is a guideline only. If you have any questions please contact us. Our goal is to help ensure that your project goes as smoothly as possible.*

**Definitions. Storable Swimming pools.** Those that are constructed on or above the ground and are capable of holding water with a maximum depth of 42 inches, **OR** a pool with nonmetallic, molded polymeric walls or inflatable fabric walls regardless of the dimensions.

**Cord and Plug** connected pool filter pumps shall be provided with a ground fault circuit interrupter that is an integral part of the attachment plug or located in the power supply cord within 12 inches of the attachment plug.

**Ground-fault circuit-interrupters** are required for all 125v, 15 and 20 amp receptacles that are located within 20 feet of the inside walls of a storable pool.

**Receptacle outlets** shall not be located less than 6 feet from the inside walls of a storable pool.

**Supply Cords** shall not be ran through any doorways or windows.

**Extension cords** may **NOT** be used for supplying pool pumps for storable pools.

**Storable pools** shall be used according to the listings and installed according to the manufacture installation instructions.

\*\*\*If there is not an exterior GFCI protected receptacle outlet located for the storable pool pump motor to plug into without using an extension cord you will need to add a receptacle outlet. An electrical permit will be required prior to the installation of any electrical wiring.

1. Before beginning any electric work you must first apply for and receive a written electrical permit. **Work cannot be started until an electrical permit is obtained.**
2. A permit may be obtained by a homeowner who occupies or will occupy a single family dwelling and other accessory structures located on the same lot intended for use by the homeowner for which the permit is obtained and who will install the electrical equipment as certified by the homeowner on the permit application pursuant to the act. **Homeowner electrical permits cannot be obtained for rental properties or commercial properties. An Electrical Contractor licensed by the State of Michigan shall obtain electrical permits for rental properties and commercial properties.**
3. It is the permit holders' responsibilities to call for all necessary inspections prior to the concealment of any electrical wiring or equipment. If work is covered prior to an inspection the wall and or floor covering may be ordered to be removed.
4. Permits will expire if work is not started within 6 months of the permit issue date or if the work has been abandoned for a period of 6 months.

## Spa/Hot Tub Information Sheet

Check list of items needed for your spa or hot tub install:

- Apply for a building permit and electrical permit, if needed.
- Hot tub must have a cover that locks.
- Must be 5 feet from house, if there is a window, glass must be tempered.
- Can be set closer if no window (glass), within 5 feet.
- Proof of structure to hold the weight of the hot tub or spa.

### Chapter 10- Portable Residential Spas and Portable Residential Exercise Spas.

1001.1 **Scope:** This chapter shall govern the installation, alteration and repair of portable residential spas and portable exercise spas intended for residential use.

1001.2 **General.** In addition to the requirements of this chapter, portable residential spas and portable residential exercise spas shall also comply with the requirements of Chapter 3.

1001.3 **Listings.** Equipment and appliances shall be listed and labeled and installed as required by the terms of their approval, in accordance with the conditions of the listings, the manufacturer's instructions and this code. Manufacturer's instructions shall be available on the job site at the time of inspection.

1001.4 **Certification.** Factory-build portable spas and portable exercise spas installed in a residential application shall be listed and labeled in compliance with UL 1563 or CSA C22.2 No. 218.1.

1001.5 **Installation.** Spa equipment shall be supported to prevent damage from misalignment and settling in accordance with the manufacturer's instructions.

1001.6 **Access.** Electrical components that require placement or servicing shall be accessible.

1001.7 **Instructions and safety signage.** Instructions and safety signage shall comply with UL 1563 or CSA C22.2 No. 218.1 the manufacturer's recommendations and the requirements of the local jurisdiction.

## Pools and Hot tubs

### Electrical guidelines based on the 2015 MRC and 2017 MEC

*This is not a complete set of electrical rules. This is a guideline only. If you have any questions please contact us. Our goal is to help ensure that your project goes as smoothly as possible.*

1. **Work cannot be started until an electrical permit is obtained.**
2. **Storable pools** do not require an electrical permit if the storable pool can be installed per installation instructions. If the storable pool pump motor can be plugged into an existing exterior outlet without using an extension cord additional electrical will not need to be installed.
3. A permit may be issued to a homeowner who occupies or intends to occupy a single family dwelling located on the same lot intended for use by the homeowner for which the permit is obtained and who will install the electrical equipment as certified by the homeowner on the permit application pursuant to the act.
4. It is the permit holders' responsibilities to call for all necessary inspections prior to the concealment of any electrical wiring or equipment. If work is covered prior to an inspection the wall and or floor covering may be ordered to be removed.
5. Permits will expire if work is not started within 6 months of the permit issue date or if the work has been abandoned for a period of 180 days. A permit may be extended 180 days if requested by the permit applicant and approved by the building department.

#### **Key points:**

1. **Receptacle outlets** shall not be located closer than 6 feet to the inside wall of a pool or hot tub. At least one receptacle outlet is required no more than 20 feet from a pool or hot tub. Receptacle outlets installed outdoors in a wet location shall be listed weather-resistant type and shall include an enclosure that is listed extra duty and is weatherproof while in use and cord is attached.
2. **Switches** shall not be located closer than 5 feet from the inside walls of a pool or hot tub. A disconnecting means located within sight of the motor is required. Cord and plug connection is considered a means of disconnecting therefore an additional switch is not necessary.
3. **Luminaires and paddle fan ceiling fans** around outdoor pools and hot tubs shall not be installed over the pool or the area extending 5 feet from the inside walls of the pool or hot tub except where no part of the luminaire or paddle fan ceiling fan is less than 12 feet above the maximum water level. Existing luminaires that are located within 5 feet from the inside walls of a pool or hot tub and are not less than 5 feet above the maximum water level is permitted to remain if the luminaires are rigidly attached to the structure and is protected by a ground fault circuit interrupter.
4. **Underground wiring** shall not be installed under or within the area extending 5 feet from the inside walls of the pool or hot tub unless the wiring is necessary to supply the pool equipment. Cover requirements are for PVC – 12", UF – 18", RMC – 6".
5. **Timers** must be installed to automatically turn off pool pumps and pool heaters.
6. **Flexible Cords** shall not exceeding 3 feet in length. Flexible cords shall include a copper equipment grounding conductor not smaller than 12 AWG.
7. **GFCI protection** is required for all outdoor receptacle, pool pump motors, underwater lighting, hot tubs, electrically operated pool covers, pool heater gas ignition circuits.

## **Bonding:**

**Equipotential bonding** is required for permanently installed pools and hot tubs to reduce voltage gradients in the prescribed areas. This is done in order to reduce shock hazards if a person comes in contact with two separate conductive surfaces at the same time. You are required to connect each and every separate metal part and conductive surfaces together so they all have the same potential. This is done either mechanically or by connecting a #8 AWG or larger solid copper conductor to each object and surface. You must use connections that are listed for the location such as direct burial or concrete encased. Machine screws must engage not less than two threads or be secured with a nut. Sheet metal screws shall not be used. This bonding wire is not required to be connected to any remote panelboards or to any ground rods.

The prescribed area required to be bonded together are as follows.

1. **Fixed metal parts.** All metal parts located within 5 feet of the pool or hot tub walls shall be bonded. These metal parts include but are not limited to metal piping, metal awnings, metal fences, metal door and window frames, metal post, metal pool ladders , and metal underwater lighting.
2. **Metallic components.** All metallic parts of the pool structure shall be bonded.
3. **Metal fittings.** All metal fittings within or attached to the pool shall be bonded except small parts not over 4 inches in any dimension and do not penetrate into the pool more than 1 inch.
4. **Electrical equipment.** Metal parts of electrical equipment associated with the pool water circulation system including pump motors and pool covers shall be bonded.
5. **Underwater luminaires.** All metal forming shells and mounting brackets except low voltage nonmetallic forming shells.
6. **Conductive pool shells.** Conductive pool shells shall be bonded. These are pools constructed of poured concrete, pneumatically applied or sprayed concrete, and concrete block. Vinyl liners and fiberglass composite shells are NOT considered conductive pool shells.
7. **Perimeter surfaces.** You are required to bond the perimeter surface extending 3 feet beyond the inside walls of the pool and shall include unpaved surfaces, poured concrete surfaces and other types of paving. This is done by running a #8 AWG or larger copper conductor around the pool 18 to 24 inches from the pool wall and buried 4 to 6 inches below the surface or secured within the concrete. If the pool has a conductive pool shell the perimeter surface bond shall be attached to the pool reinforcing steel at a minimum of 4 points uniformly spaced around the pool.
8. **Pool water.** Where none of the bonded parts are in direct contact with the pool water, the pool water will need to be bonded by a conductive surface not less than 9 in<sup>2</sup> in contact with the pool water at all times. This could be achieved by a corrosion resistant plate installed in the pool strainer or a water bonding fitting installed in the circulation lines.



# POOL BONDING

Standard summary of NEC 680.26 / MRC E4204.2

*\*This is for illustrative purposes only and does not address all standards of the Michigan Electrical and Building Code*

## Water Bonding 3 possible options listed below [680.26(C), E4204.3]



Perma cast PBAG



Burndy BWB680



PB 2008

## Perimeter Bonding

[680.26(B)(2),E4204.2(2)]#8 solid copper 18"-24" out and located in concrete pad or buried 4"-6" below grade



## Pump and Conductive pool bonding

[680.26(B)(3),680.26(B)(6),E4204.2(3),(6)]

