



## **PICKENS COUNTY BUILDING CODES ADMINISTRATION**

### **RESIDENTIAL BOAT DOCK ELECTRICAL INSTALLATION**

All power to floating structures under this jurisdiction shall require a separate building permit. If the applicant chooses to deviate from the guidelines as outlined below, the applicant shall provide detailed installation instructions meeting the minimum requirements as outlined below.

**BOAT DOCK WITH POWER:** If the floating structure is to be provided with power, all power SHALL be provided from a load center and fitted with a **dedicated** circuit breaker and run to a disconnect (sub panel) on shore as follows:

1. Providing power to disconnect on shore:

Run a minimum of one (1) three (3) conductor 12 gauge wire for 110/120 volt power requirements or one (1) four (4) conductor 10 gauge wire for 220/230 volt requirement, in non-metallic conduit buried 18 inches or conductors UL rated for direct burial buried 24 inches below final grade to a disconnect (sub panel) box on the shore as described below. **Note: (leave open for inspection)**

**(Meter Can/Disconnect at the road)**

**Install** two 8-foot ground rods a minimum of 16 feet apart. Use UL approved clamps to connect #4 bare copper wire to connect ground rods. The #4 bare copper wire shall be connected to the grounding set screw within the meter can, protecting the ground wire up 4 ft. from grade.

2. Installation of the disconnect (sub panel) or meter can/disconnect on shore:

**Install** a minimum of (1) one pressure treated 4"x6" post installed 3 feet into the ground. The pressure treated post must be a minimum of 4 feet and maximum of 8 feet from the end of the ramp.

**Install** a weatherproof disconnect secured to the post a minimum of 2 feet above the final grade and an 8 ft. ground rod w/UL approved direct burial connector with #4 bare copper to grounding buss bar in sub panel.

**Install** a Ground Fault Circuit Interrupter (GFCI) breaker sized for the anticipated load within the weatherproof disconnect **isolating the neutrals and grounds.**

**Install** a waterproof non-metallic single gang box with a weatherproof in-use cover to the pole. Install a single duplex receptacle connected and fed from the disconnect using liquid tight - non-metallic flex conduit and the appropriate sized stranded wire. **The bottom of the receptacle shall be a minimum of 24 inches above final grade.**

3. All hinged connections (Dock/Ramp, and Ladder Connections) shall be bonded using a #6 stranded wire with approved connectors.
4. There shall be the appropriate sized SOW (hard service, oil, sunlight and water resistant, portable or other approved method of providing plug and cord power) cord fitted with a three (3) prong grounding type plug run from the receptacle on shore to the dock. It is also acceptable to install a waterproof non-metallic junction box on the end of the ramp to accept the plug and cord on the shore side and liquid-tight non-metallic flex conduit with appropriate thhn conductors on the water side. The SOW cord /conduit shall be secured when placed on the ramp. The SOW cord shall be protected and provided with 12-inch loops at all flexible ramp and/or dock connections. The cord/conduit shall terminate on the dock in a non-metallic waterproof junction box. **The junction box may serve as a single switch or receptacle.**
5. All other accessory fixtures and/or receptacles shall be connected to the junction box/switch using the above referenced SOW cord (protected up to 8 feet) or thhn conductors placed in liquid tight non-metallic flex conduit with appropriate connections. All metal junction boxes/receptacle boxes shall be minimum of 24 inches off the walking boards of the dock and be bonded to the metal dock frame. All electrical shall be bonded back to the subpanel on shore with an approved GREEN grounding screw or buss bar mounted in the box (**this connection must be visible for inspection**).