

ELECTRICAL STANDARDS
CITY OF HANNIBAL MISSOURI

RESIDENTIAL ELECTRICAL ENTRANCE

METER BASE:

1. Location – height to be maximum six (6”) feet to center of base from ground level, minimum four (4’) feet to center of base from ground level. This shall apply to all new, updated and or altered electrical services.

Meter bases shall not be located within three (3’) feet of an existing or proposed gas meter.

Meter base shall not be located on covered porches, screened in porches, decks, etc., where BPW employees would be required to climb steps, steep grades in yards, or enter through doors, etc.. All locations shall be approved by the BPW Line Superintendent prior to approval of electrical service. Service needs to be placed on structure at a point nearest to the closest power pole.

SERVICE ENTRANCE:

2. **Typical installation**

- A. **Overhead Service**

1. Conduit secured to building shall be rigid galvanized, or PVC with an eye bolt in building frame work. Clamps shall be secured to frame of building and to be installed with in 12” of connections, not more that 30” apart. If conduit extends through roof, a minimum (18”) eighteen inches clearance required from roof to bottom of drip loop, **(galvanized conduit required with no couplings above the roof)**. Service needs to be placed on structure at a point nearest to the closest power pole.
 2. Any weather head that does not penetrate the roof must be at least 11 feet above the highest adjacent level
 3. Conductors shall extend minimum 18” from weather head for drip-loop.
 4. Neutral wire to be clearly marked or identified (white or gray tape) at each connection point.
 5. Meter base installed as above.

6. Weather head, drip loop and service drop locations shall provide a minimum clearance of 3' from windows, doors, or other accessible locations.
7. Service drops shall have the following clearances from 2001 IEEE;
 - 10' – Private sidewalks, yards, fences (top of).
 - 12.5' – Private driveways, patios, decks.
 - 15.5' – Public streets and alleys, measured vertically from grade.

Electrician/Installer shall verify all clearances for new or redirected service drops.

7. Utility easements shall be provided when necessary, to Board of Public Works by owner prior to installation.
8. Services installed on utility poles located in easements shall be mounted on brackets and provide a minimum of 6" clearance from pole.

B. Underground Service

1. Weather head mounted within four (4') feet of transformer and minimum forty (40") inches above other utility lines (Cable TV, Telephone, etc.).
2. Rigid galvanized conduit, or PVC securely mounted to pole. Clamps to be installed within 12" of connections, not more than 30" apart.
3. Meter Bases installed as above.
4. Disconnect installed below Meter Base, prior to going underground. Conduit from bottom of meter base to below grade level shall be rigid galvanized conduit or schedule 80 rigid nonmetallic conduit.
5. Cable to be buried minimum twenty four (24") inches below finished grade.
6. Neutral wire to be clearly marked or identified at each connection point.
7. Utility poles shall be provided and installed by homeowner when located on private property. Location of utility pole to be verified with Board of Public Works prior to installation to insure access for utility lines.
8. Utility easements shall be provided as necessary to Board of Public Works by owner prior to installation of electrical equipment.
9. Services installed on utility poles located in easements shall be mounted on brackets and provide a minimum of 6" clearance from pole

3. Service Entrance Conductors

- A. Minimum wire size for single-phase, 3 wire conductors

<u>Entrance Size</u>	<u>Copper</u>	<u>Aluminum</u>	<u>SE Cable</u>
*200 Amp	3/0	4/0	N/A
100 amp	#2	#1	#2

*** 2/0 copper allowed in some residential applications PLEASE CONTACT THE BUILDING INSPECTOR BEFORE USING**

- N/A = Not allowed

- B. If Entrance Conductors run more than 3' into building from point of entry, conductors shall be in conduit. **Conductors not protected from physical damage shall be in conduit.**

4. Equipment Grounding

- A. Grounding wire shall be installed on the meter base.
- B. Minimum #6 solid copper wire, no splice for 100 amp service. #4 for 200 amps. Utility ground rod & wire shall be new.
- C. ½ " x 8' copper clad steel ground rod.
- D. Non-Corrosive electrical clamp connecting ground wire to ground rod.
- E. Where exposed, ground wire shall be enclosed in ½ " conduit (rigid or PVC) from grade to meter base. Conduit attached to meter base with box connector and to wall with clamps.
- F. Water pipes shall not be used as the primary grounding system.
- G. Ground rod to be flush with or below grade. Ground rod and connection shall be exposed for inspection.

5. Service Panel

- A. Mounted at eye level, firmly secured to wall.
- B. Entrance conductors run thru wall shall be in conduit or nipple with lock nut and bushing.
- C. Main panel shall have 30" wide clearance space for access in front of panel.
- D. Electrical panels located on the exterior of homes shall be weather-proof. Panels located on open or unenclosed porches with roofs shall not be considered to be protected by weather and shall be weather-proof type.

- E. All circuits shall be labeled, also, location of sub-panels.
- F. Service panels shall not be located within three (3') feet of an existing or proposed gas meter.

Water/Sewer pipe or connectors/fittings will not be approved as electrical equipment. Only Electrical conduit/fittings, listed for use shall be approved.

All work shall conform to the current adopted edition of the National Electrical Code and City Ordinances.

Service entrances less than 100 amps shall not be approved for new or altered installations.

Electrician and or owner are responsible for verifying meter/panel/weather head locations prior to installation. Improperly installed services will not be approved.

This information is provided for guidance only, should you have any questions concerning an electrical installation, please contact;

Building Inspection Department
Joey Burnham, CFM, Building Inspector
573-221-0111

Or

Board of Public Works
Jared Stewart
573-221-8050

Revised June 12, 2007