ELECTRICAL SERVICE ENTRANCE REQUIREMENTS

City of Jackson Missouri

Building & Planning Department

101 Court Street

Jackson, MO 63755

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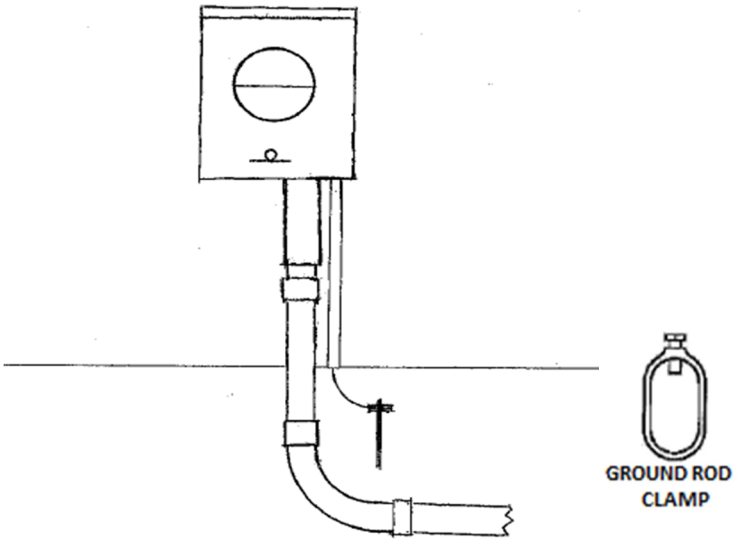
Revised March 2018

Underground Electric Service Entrance 320 amp/ 200 amp/ 100 amp



I. Underground Service Requirements

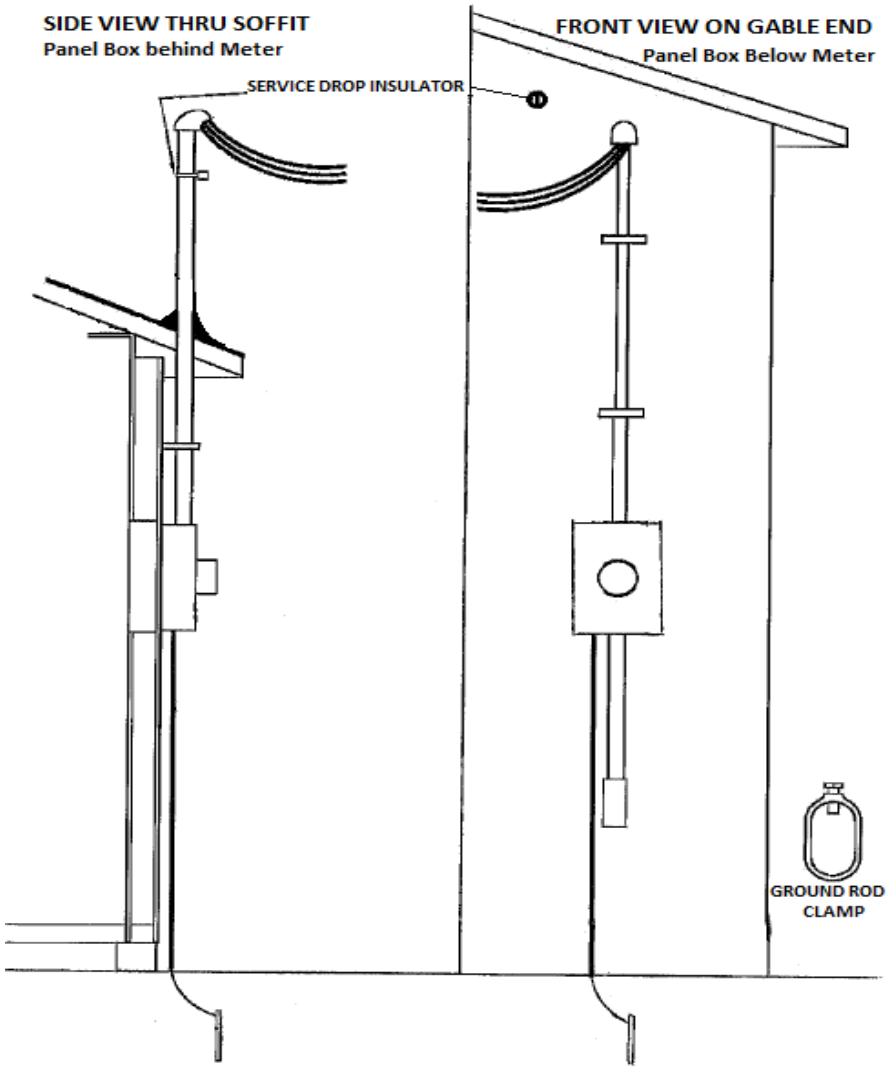
1. Conduit
   a. 3" PVC conduit – 320 amps (owner pays for all service wire and labor)
   b. 2 ½" PVC conduit – 200 amps (city supplies 100' of service wire then charged per foot)
   c. 2" PVC conduit – 100 amps (city supplies 100' of service wire then charged per foot)
2. Center of meter base shall be 5' – 6' **above final grade**
3. If panel box is more than 10' from the meter base you must have a disconnect below the meter base or enclosed with the meter
4. Expansion fitting with lock nut and bushing installed in the bottom left or right side of meter base
5. Long sweep 90° (there can't be no more than 270° of bends from the meter to the transformer pad)
6. Conduit must be buried at least 36" below finished grade/ 2' minimum where there is rock
7. A pull string must be installed in the conduit from meter base to transformer or pedestal
8. Line side (city power) lugs are on top of meter and load side (to service panel) lugs are on bottom of meter
9. If there is no conduit stub out from the transformer, conduit must be brought to the side of the transformer behind the opening of the transformer door or as determined by City of Jackson
10. Look for the notch out in the footing for the PVC conduit on slab construction before installing the meter base

II. Grounding for underground service

1. 5/8" X 8' copper clad steel ground rod driven below grade

2. Min. #6 solid copper wire with no splices attached to a non – corrosive clamp to the ground rod (services up to 320 amp)
3. #6 solid copper wire runs from ground rod to meter base then from meter base to the panel box as a continuous wire run **NO SPLICES**
4. Wire must be enclosed in ½" PVC conduit from grade to the meter base attached with a lock nut and a bushing

Overhead Electric Service Entrance 320 amp/ 200 amp/100 amp

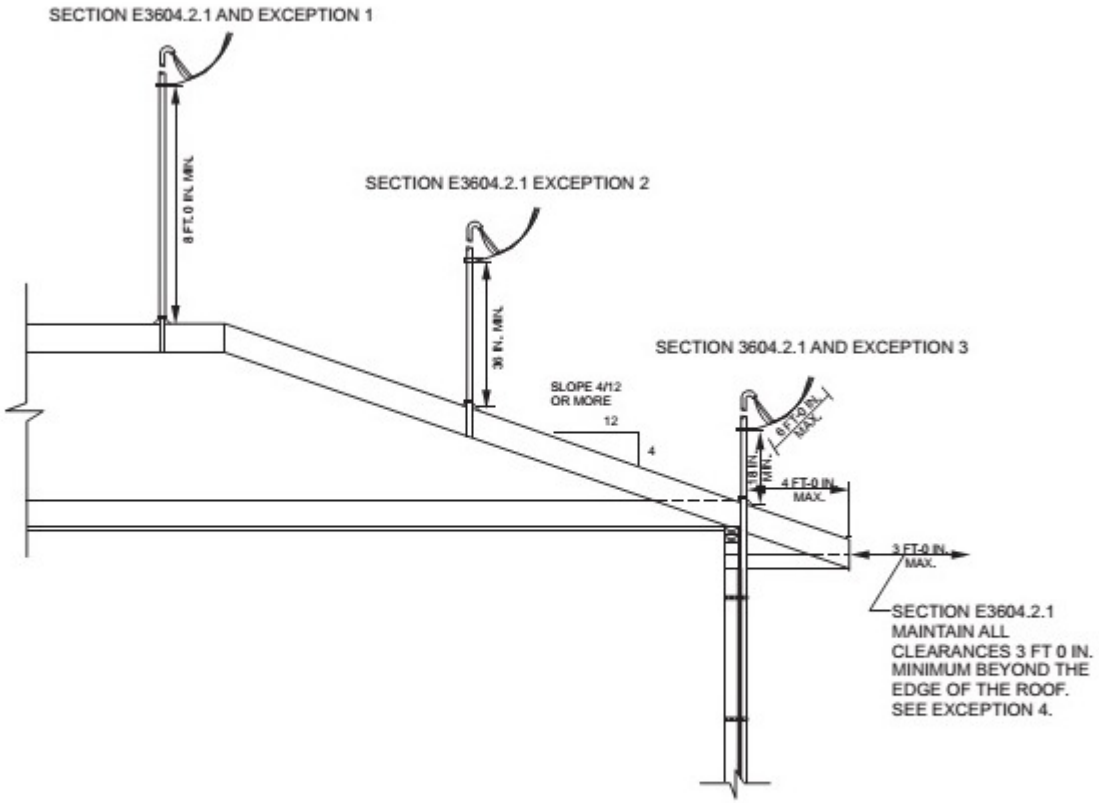


I. Overhead Service Requirements

1. Conduit
   a. 3" Rigid, EMT, PVC conduit – 320 amps (owner leaves minimum 24" out of overhead for drip loop)
   b. 2" Rigid, EMT, PVC conduit – 200 amps (owner leaves minimum 24" out of overhead for drip loop)
   c. 1 1/2" Rigid, EMT, PVC conduit – 100 amps (owner leaves minimum 24" out of overhead for drip loop)
2. Wire 2 hot and 1 neutral with neutral being marked

a. 320 amp 4/0 copper only (all 3 wires same size with neutral wire clearly marked)
b. 200 amp 2/0 copper/ 4/0 aluminum (all 3 wires the same size with neutral wire clearly marked)
c. 100 amp #4 copper/ #2 aluminum (neutral can be 1 size smaller (#6 copper) (#4 aluminum)

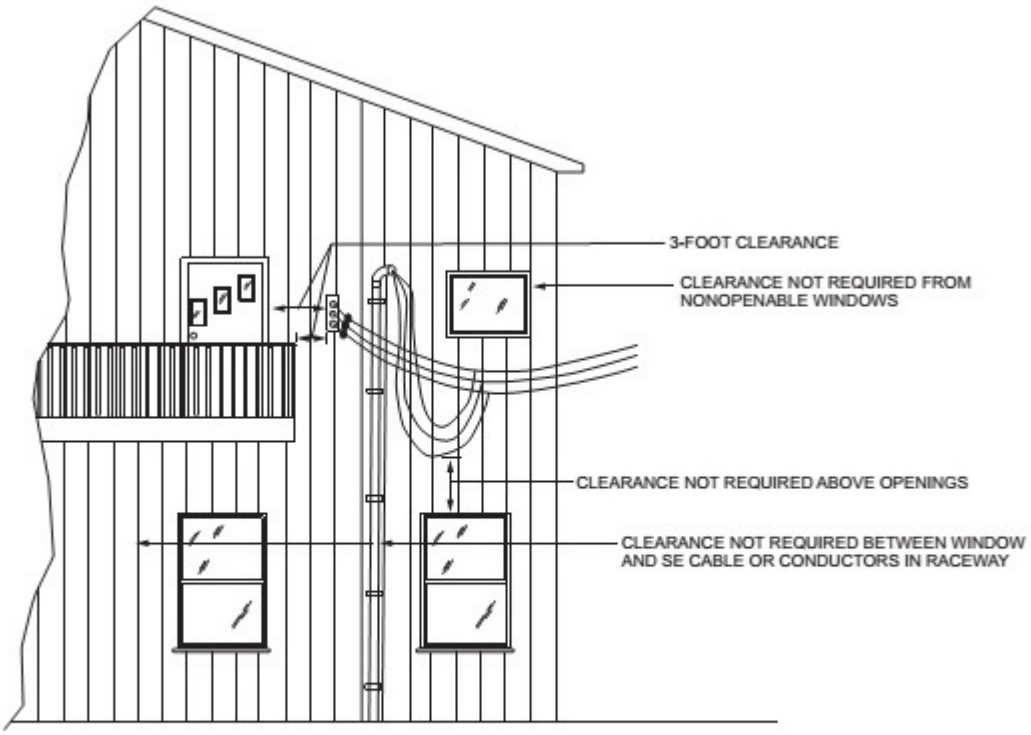
3. Center of meter base shall be 5’ – 6’ above final grade
4. Line side (city power) lugs are on top of meter and load side (to service panel) lugs are on bottom of meter
5. If mast goes thru soffit it **must** be **Rigid steel** conduit mast clamp with an insulator (provided by the contractor or owner), wire must maintain a min 12’ clearance from finished grade to the electric service entrance (weather head), see the diagram below Figure E3604.2.1 for roof clearances



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE E3604.2.1
CLEARANCES FROM ROOFS

6. If the conduit **doesn’t** go through the soffit and the wire maintains a min 12’ clearance from finished grade to the electric service entrance (weather head) then either Rigid, EMT, or PVC can be used with a solid attachment for a house knob (provided by the contractor or owner)
7. Rigid, EMT, PVC conduit must be strapped min 6” from service head then not exceeding 30” after that
8. Clearance from building openings from over hanging wire, see the diagram below Figure E3604.1



For SI: 1 foot = 304.8 mm.

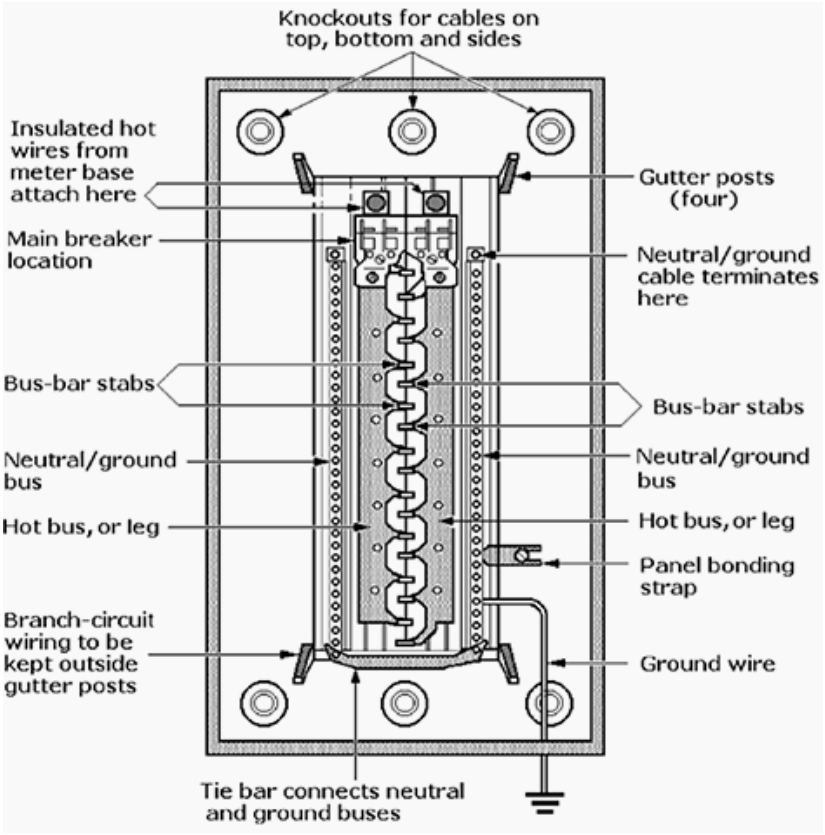
FIGURE E3604.1
CLEARANCES FROM BUILDING OPENINGS

9. If panel box is behind the meter base a Rigid, EMT, or PVC nipple shall be used with lock nuts and bushings
10. If panel box is more than 10' from the meter base you must have a disconnect below the meter base or enclosed with the meter using Rigid, EMT, or PVC conduit with an LB to panel

II. Grounding for overhead service

1. 5/8" X 8' copper clad steel ground rod driven below grade
2. Min. #6 solid copper wire with no splices attached to a non – corrosive clamp to the ground rod
3. #6 solid copper wire runs continuously from ground rod to meter base then from meter base to the panel box
4. Wire must be enclosed in ½" PVC conduit from grade to the meter base attached with a lock nut and a bushing

Service Panel Installation



I. Service Panel

1. Service Panel must be mounted level and firmly secured inside the stud cavity or on concrete
2. Service panels shall not be located in bathrooms, toilet rooms, clothes closets, or over the steps of a stairway
3. Service entrance cables to the service panel must be in conduit if less than 10’ of the meter
4. Service entrance cables to the service panel behind the meter, must be in a short nipple with either Rigid, EMT, or PVC through the wall, with a lock nut and bushing on each end
5. Neutral wires and bare ground wires cannot be in the same bus bar screw hole, they must be separated
6. Panel bonding screw or strap must be installed at the first main disconnect
7. Panel service working space must maintain a 30” wide by 3’ deep by 6’ 6” height clearance at all times
8. Min. #6 solid copper wire with no splices attached from the meter base to the service panel
9. All circuits must be labeled appropriately

IF UPGRADING THE SERVICE PANEL OR METER BASE ONLY, EVERYTHING MUST BE BROUGHT UP TO THE NEC 2014 AND CITY OF JACKSON CODES