



## Building & Safety Division

Community Development Department  
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## Main Service Panel Upgrade Submittal Checklist Handout

### Main Service Panel Upgrade Checklist

- Torque wrench required at time of inspection to verify lug / terminal connections. CEC 110.3(B)**
- Indicate Main Breaker size and buss bar max amperage to be installed. CEC 110.3
- Indicate existing Main Breaker size and buss bar max amperage to be removed.
- Enclosure must be Listed & Labeled (L&L) as suitable for service equipment. CEC 230.66
- Provide working space. CEC 110.26
- All circuit breakers listed for panel. CEC 110.3(B)
- Overcurrent Protection Device's readily accessible and max height 6 foot, 7 inches. CEC 240.24(A)
- Indicate size and type of insulation for service entrance conductors. CEC 310.8(D)
- Identify point of interconnection with PG&E on the site plan.
- If underground service laterals, identify burial depth and use of warning ribbon. CEC 300.5(D)(3)
- Identify neutral conductor at both ends. (White marking or tape) CEC 200.6 (B)
- Show location of ground rods, size and material used. Minimum burial depth shall be 8 feet. CEC 250.52(5)
- Drive ground rods vertical, if bedrock encountered, rod may be buried horizontally 2 ½ feet deep or driven at a 45 degree angle. CEC 250.53(G)
- If rod resistance >25 ohms, install 2<sup>nd</sup> ground rod a minimum of 6 feet from first and bond to 1<sup>st</sup> rod. "Recommended rod spacing is 16 feet." CEC 250.53(2)
- Identify grounding conductor size and type. CEC 250.66
- Buried clamps L&L for direct burial. Not more than 1 conductor per single clamp. (Marked "DB") CEC 250.70
- Connections must be accessible. CEC 250.68(A)
- Use all electrodes when present on premises. CEC 250.50
- Connection to metal water pipe if ≥10 feet in direct contact with soil. CEC 250.52(A)(1)
- Connection to metal water pipe that is part of Grounding Electrode system (GES) not >5 foot after water entry to building. CEC 250.68(C)
- Service enclosure main bonding jumper must connect enclosure, service neutral and equipment grounds. CEC 250.24(B)
- Bond any metal piping system capable of becoming energized, including hot and cold water and gas lines. CEC 250.104(A)(B)
- GEC must connect to Equipment Grounding Conductors' (EGC's), service entrance enclosures, service neutral and grounding electrodes. CEC 250.24(D)
- Intersystem Bonding required: Must accept min. of 3 conductors and be terminal or bond bar electrically connected to meter or service enclosure. CEC 250.94(1 thru 6)
- Intersystem bonding access required external to service equipment and separate structure disconnecting means. CEC 250.94
- AFCI required on all (NEW) 120 volts for 15amp, and 20amp circuits. CEC 210.12(A)
- All multi-wire circuits require handle ties. CEC 210.7(B)
- Each neutral conductor requires individual terminal. CEC 408.41
- Field labeling required to distinguish each circuit from all others. CEC 408.4(A)

## INSPECTION SEQUENCE:

**Torque wrench required at time of inspection to verify lug / terminal connections. CEC 110.3(B)  
Upon completion of this verification, inspector will affix a label of compliance.  
This label MUST be present for PG&E to restore power to service panel.**

**The City of Gilroy shall not be held responsible for PG&E's failure to reconnect power  
due to contractor failing inspection.**

### **Rough Electrical Inspection & Meter Release:**

- Inspector will verify that the submitted plans accurately reflect the proposed installation size of main service panel.
- Inspector will verify compliance of work space requirements in front of panel.
- Service entrance conductors will be verified at this time to insure they are of the correct size and insulation rating.
- Grounded and ungrounded conductors shall be identified as such.
- Inspector will verify correct installation of "Grounding Electrode System".
- All bonding components (water & gas bonding if applicable) shall be in place at the time of this inspection.
- **Inspection items to call in are #150 – UFER / Ground Rod, #250 – Rough Electrical, #915 – New Service, #916 – Service Upgrade, on permit card.**

### **Final Building Permit:**

- Inspector will verify that all finished surfaces are in place and water tight.
- Intersystem Bonding Buss bar shall in place and verify continuity visually.
- All required AFCI & GFCI circuit breakers shall be installed at this time.
- Labeling of all circuits shall be identified.
- If a new service mast was installed, roof flashing will be inspected at this time.
- Verify all Smoke Alarms and Carbon Monoxide Detectors are present where required and in working order.
- (Smoke & CO Affidavit signed by the building owner meets the above requirement).
- **Inspection items to call in are #935 – Smoke Detector, #950 – Final Electric, #995 – Final Permit, on permit card.**

**NOTE:** After completion of this inspection, (Final Building Permit) City staff will NOT visit the site again.