

CITY OF MILPITAS

Building & Safety Department
455 E. Calaveras Blvd.
Milpitas, CA 95035
408-586-3240

www.ci.milpitas.ca.gov



RESIDENTIAL ELECTRICAL PANEL (SERVICE OR SUBPANEL)

1. PERMIT INFORMATION:

- The installation of a new electrical panel or modifications to an existing panel requires an electrical permit.
- The new electrical panel must be installed in the same general location as the current electrical panel, otherwise plans must be submitted and approved and the permit obtained in person from the Permit Center, Building & Safety Department, 455 E. Calaveras Blvd.
- If the new electrical panel exceeds 200 amps, plans must be submitted and approved and the permit obtained in person from the Permit Center.
- A Building Permit may be issued only to a State of California Licensed Contractor or the Homeowner.
- If the work is performed by the Homeowner personally or by his/her workers, and an inspection indicates the work cannot be completed satisfactorily, then a licensed contractor must perform the work.
- If the Homeowner hires workers, State Law requires the Homeowner to obtain Worker's Compensation Insurance. Proof of this insurance is required prior to inspection.

2. INSTALLATION REQUIREMENTS

- Building Codes:** All work must comply with the 2010 California Building Code (CBC), 2010 California Residential Code (CRC), 2010 California Electrical Code (CEC), 2010 California Energy Code based upon 2008 Building Energy Efficiency Standards (CEnc), 2011 Milpitas Municipal Code (MMC) and P.G.&E installation standards.
- Equipment must be installed in accordance with it's listing and the manufacturer's installation instructions [CEC 110.3(B)].
- If a new panel is being installed and the service is less than 100 amps, the service panel must be upgraded to a minimum 100 amps [CEC 230.79(C)].
- Disconnecting means and overcurrent protection shall be installed in accordance with CEC Article 230.70, and Article 240.24.
- The service disconnecting means shall be installed at a readily accessible location (as defined in CEC Article 100) either inside or outside of a building or structure or inside nearest the point of entrance of the service conductors [CEC 230.70(A)(1)].
- The building main service disconnect and/or disconnects shall be installed on the first floor level of the building [MMC II-6-2.03(4)].
- Panels shall not be installed in bathrooms [(CEC 230.70(A)(2) and 240.24(E)].
- Panels must be protected from physical damage (garages) [CEC 240.24(C)].

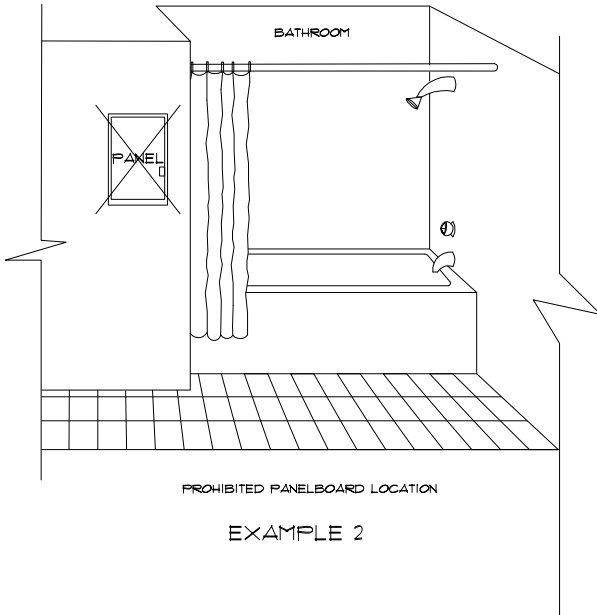
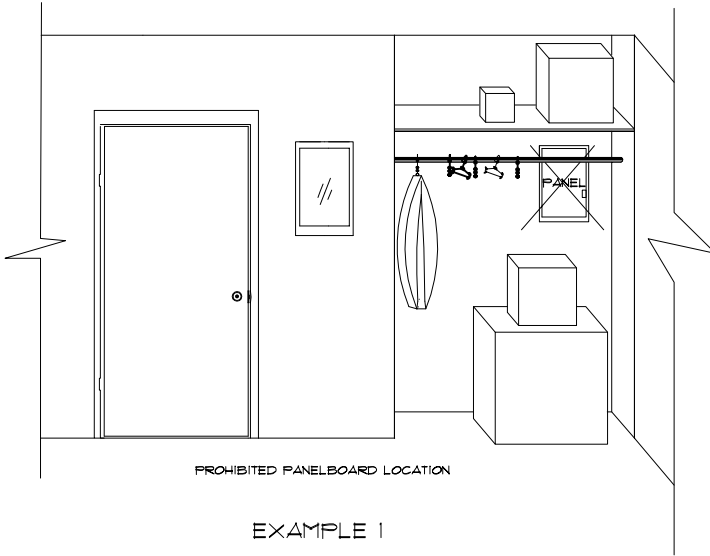
- Panels are not to be installed in vicinity of easily ignitable material, such as inside clothes closets [CEC 240.24(D)].
- There shall be a min. 30" wide x 36" deep clear working space in front of the panel [CEC 110.26].
- New circuit breakers must be listed and approved for installation in the panel [CEC 110.3(B)].
- Each circuit in the panel must be identified with a circuit directory that is located on the face or inside of the panel door [CEC 408.4].
- Grounding and bonding of the electrical service is required when the water piping is replaced. Grounding and bonding shall comply with the California Electric Code. Grounding shall consist of a continuous grounding electrode conductor ran from the service panel to a grounding electrode and to the cold water pipe. **The underground water service shall not be used as the sole grounding system; it must be supplemented with an additional electrode** (CEC 250.53(D)(2)). Grounding of the main water line must occur within the first 5 feet of water piping into the building. All grounding electrodes that are present at each building served shall be bonded together (CEC 250.50).
- In conformance with CEC Section 210.12(B), listed arc-fault circuit interrupters, combination type, shall be installed for all 120 volt, single phase, 15 and 20 amp branch circuits supplying outlets installed in family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas when:
 - Any electrical service panel containing branch circuits supplying any of the above areas is being replaced.
 - Any electrical subpanel containing branch circuits supplying any of the above areas is being replaced.
 - Any alteration or extension is made to the branch circuits that supply any of the above areas.

3. INSPECTION PROCEDURES

- A minimum of two inspections are required, a utility release and a final. The utility release inspection should be scheduled when the new panel is installed and ready to be hooked by PG&E. A wire lath inspection is required for stucco repairs. A final inspection should be scheduled after all of the work is complete. For each inspection, the Permit Card and the Approved Job Copy of the Drawings (if any) must be presented to the inspector. Permits expire 180 days after issuance or last inspection passed, whichever is the latest.

4. QUESTIONS:

- If you have any questions regarding your project contact the Building & Safety Department at (408) 586-3240.



LOCATION OF ENCLOSURES & OVERCURRENT DEVICES

(a) Readily Accessible (See Example 1)

1. Service equipment shall be installed at a readily accessible location outside of the building.

2. Overcurrent devices (breakers) shall shall be readily accessible (either inside or outside) and shall be installed such that the center of the grip of the handle of the switch / breaker is not more than 6'7" above the floor or working platform.

(b) Occupant To Have Ready Access

Each occupant shall have ready access to all overcurrent devices protecting the conductors supplying that occupancy.

Exception : Multiple-occupancy building if electrical maintenance provided by management under continuous management supervision.

(c) Not Be Exposed To Physical Damage
Refer to CEC 240.24C

(d) Not Installed In Vicinity Of Easily Ignitable Material example: Clothes closets
CEC 240.24D

(e) Distribution Panels In Bathrooms
Refer to CEC 240.24E

1. Commercial Applications

Electrical distribution equipment with overcurrent protection is permitted to be located in a bathroom provided all the clearances required in CEC 110.26 are met.

2. Dwelling Units, Hotels and Motels

Overcurrent devices shall not be located in bathrooms.

| REV. | DATE | BY: | SCALE: |
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| | | | N.T.S |
| | | | DATE: June 2009 |
| | | | DRAWN BY: H.R. |

City of Milpitas
BUILDING AND SAFETY
LOCATION OF PANEL ENCLOSURES
WITH OVERCURRENT DEVICE