



DEVELOPMENT SERVICES – BUILDING INSPECTION

**INSPECTION GUIDELINES:
PANEL TORQUE**

INSPECTION CODE: 246, 406

SCOPE: RESIDENTIAL AND COMMERCIAL

APPLICABLE CODES: 2016 CBC, CRC, CPC, CMC, CEC, CALGreen, CEnC, and PAMC

The information provided in this document is general and intended as a guide only. Each project is unique and additional requirements may be enforced as deemed appropriate.

IMPORTANT

Meter removal and service disconnect/reconnect are to be performed by City of Palo Alto Utilities (CPAU) personnel only. Contractors who tamper with CPAU equipment will be issued a citation. Citations will be assessed at \$500.00 per incident. (PAMC 12.20.01.0)

Failure to complete the items below prior to inspection may result in a re-inspection fee.

COMMON CODE DEFECT/INSPECTION FAILURE

- All interior surfaces of panels shall be vacuumed out (do not blow out) or cleaned with a clean dry cloth. (CEC 110.12)
- Internal parts/equipment shall not be damaged and shall be free of contaminants. (CEC 110.12)

TORQUE VERIFICATION STICKER

- After panel has been torqued, the CPA inspector shall apply a torque verification sticker with the date and CPA inspector number.

INSPECTION

- All panels and feeders shall be de-energized prior to inspection/torque.
- The electrical contractor must be on site with the following tools. (CEC 110.3 (B))
 - Torque wrench
 - Torque screwdriver (with a range of up to 50 lb-in.) and be audible type (ratcheting)
 - Slip-joint pliers such as Channel locks to secure lugs in place when applying the proper torque
- To help expedite this inspection, contractor to provide a written list of torque specifications on site for the inspection specific to each piece of electrical equipment, including: main lugs, ground lugs, equipment ground and neutral bus bars, circuit breakers, bolt-in breaker screws, and primary and secondary transformer connections.

- Contractor to torque all connections per the manufacturer's listings prior to the CPA inspection. The inspector will witness a spot check. If all terminations are found to be properly torqued, no further torquing will be required. If loose connections are found, all connections will be required to be torqued.
 - Note that circuit breakers have their torque values listed directly on the breaker. All other torque specifications can be found on the equipment enclosure.
- The Tightening Torque Tables found in the CEC Annex I may be used when the torque values cannot be located in the equipment (i.e. transformers and equipment usually built before the 1980's).
- Apply anti-corrosion grease or oxidation inhibitor on all conductors terminating at mechanical lugs. (CEC 110.3 (B))
- All underground conduits shall be sealed with duct seal or approved methods. Sealants must be identified for that use. (CEC 300.5 (G), CEC 230.8)