

WEB SITE ADDRESS:

www.ventura.org/rma/build_safe/

REVIEW	FIRST	SECOND	THIRD	FOURTH
DATE				

PLAN REVIEW CORRECTION LIST
**COMMERCIAL AND INDUSTRIAL
 ELECTRICAL (Effective January 1, 2008)**

Project Address	Locality	Plan Check Number
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Owner/Agent	Mailing Address (Number & Street)
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City, State and Zip Code	Phone Number
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INSTRUCTIONS FOR ALL PLAN CHECKS

- Circled items on the following list identify required corrections. References are to (a) National Electrical Code (NEC) 2005 edition; (b) Ventura County Building Code (VCBC); (c) California Business and Professions Code (BPC); (d) California Building Code (CBC) 2007 Edition
- Corrections shall be made on the tracings. Three new sets of prints from the corrected tracings must be submitted for recheck, along with the marked-up set of drawings which was originally submitted for plan review.
- Minor corrections may be made on plans, in ink, when approved by the plan checker. Such corrections shall be initialed by the person responsible for the design.
- RETURN THIS LIST with corrected plans, forms, and energy calculations. To facilitate rechecking, indicate (on the line to the left of any item circled below) the sheet number of your drawings where required corrections are shown.
- The drawings you originally submitted for plan review, marked for correction, are available at the Division of Building and Safety office in (Ventura) (Simi Valley).

- ___ 5. We have reviewed your plans three times and have provided the service covered by the plan review fee we received. Additional plan review fee will be required to review your plans at all subsequent resubmittals.
- ___ 6. Provide the following information on the Plans:
 - ___ a. Existing items shall be identified as such.
 - ___ b. Revised items shall be outlined with a cloud.
- ___ 7. Provide a complete single line diagram with:
 - ___ a. Voltage and phase with bus size.
 - ___ b. Maximum fault current available - bus bracing and switch rated for same.
 - ___ c. Size and type of conduit (pvc, emt, etc.).
 - ___ d. Number, length, size and type of conductors with type of insulation.
 - ___ e. Amperage of overcurrent with A.I.C. rating.
 - ___ f. Short circuit current available at the end of each feeder.
 - ___ g. Sizes of UFER and metal piping bond with point of attachment.
 - ___ h. Total connected load of the main service.

GENERAL

- ___ 1. Plans and calculations require the wet signature and stamp of the person authorized to prepare them. BPC 6735,5536.1.
- ___ 2. Incomplete, inconsistent, or illegible drawings and calculations are unacceptable.
- ___ 3. Add owner's name/project name and job address to plans and calculations.
- ___ 4. To avoid additional plan review fee, please comply with all the remaining corrections by next resubmittal.
- ___ 8. Provide complete panel schedules:
 - ___ a. Panel number, voltage, phase and bus size.
 - ___ b. Breaker size, number of poles and A.I.C. rating.
 - ___ c. Number of lights and etc. each circuit by phase.
 - ___ d. Purpose and location of circuit.
 - ___ e. Total connected load in amps and load of each phase in volt- amperes.

I.D. number. "OR EQUAL" may not be used, however, you may list as many manufacturers as you wish that meet the requirements of 110-9 and/or 110-10.

- __ 9. Provide complete floor plan:
 - __ a. Location of all outlets, fixtures, switches, panels, service and etc.
 - __ b. Assign circuit to each item and show panel number.
 - __ c. Provide conductor size and type, with type of insulation.
 - __ d. Provide conduit size.
- __ 10. Fixture schedule:
 - __ a. Fixture by letter or number.
 - __ b. Wattage of lamp and total V.A. of fixture including ballast.
 - __ c. Number and type of lamp and type of mounting (flush, surface, etc.).
- __ 11. Provide C.C. of R. Title 24 information:
 - __ a. C.C. of R. Title 24 energy forms as required.
 - __ b. Switching (two levels) within sight of the fixtures.
- __ 12. As required by County of Ventura Building Code: Provide a Concrete-Encased Electrode, ("UFER"). Notwithstanding other provisions of Section 250-52 in the N.E.C., the electrical service grounding electrode for new construction where concrete footings in direct contact with earth are employed shall be a copper conductor installed as specified in 250-52 (A) (3) in the N.E.C. County of Ventura Building Code 250-50 (e). For existing buildings only, a copper clad ground rod is acceptable. State the size. 250-52 (A) (5)
- __ 13. Provide a metal piping bond. 250.104
- __ 14. Provide a 24" exist at each end of a switchboard that is 1200 amps or more. 110.26
- __ 15. Provide ground fault protection of disconnects 1000 amps or more and 277/480. 230.95
- __ 16. Provide a maximum of six service disconnects. 230.71
- __ 17. Contact the Southern California Edison Company for their contribution to the available fault current and provide a copy of their report as an integral part of the prints. (Sticky back to the velum)
- __ 18. The available fault current must be lower than the rating of the devices that are shown. (10,000 A.I.C. of the devices is assumed if it is not detailed on the plans). 110.9
- __ 19. When using a fully rated system to comply with 110-9 for available fault current protection, provide the A.I.C. rating of the devices. Provide the calculation method and data when using the impedance of the conductor to calculate the fault current to verify the short circuit current results.

*** AND/OR ***

When using series combination Rated Overcurrent Devices to comply with 110-9 for available fault current protection, show on the plans the manufacturer's name and model or
- __ 20. Show the KVA, voltage, phase, location and impedance of the transformer.
- __ 21. Show the grounding conductor size and point of attachment at each end of the separately derived A/C system. 250.30
- __ 22. Provide overcurrent for the conductors on the secondary side of the transformer. 240.4(F) and 384-16(d).
- __ 23. Provide on the plans the maximum length allowed (.....) for the secondary conductors of the transformer. 240-21
- __ 24. Describe in the legend or show on the one line, the wiring of the transformer primary and secondary windings.
- __ 25. Provide a four pole transfer switch on a 277y/480 system with ground fault protection. 230-95 (FPN No. 3).
- __ 26. The neutral size has been reduced smaller than the phase conductors. Show all calculations to substantiate a smaller size as per 220.61.
- __ 27. Where conductor sizes are adjusted to compensate for voltage drop, grounding conductors shall be increased in size proportionally. 250
- __ 28. Conductors installed in parallel shall not be smaller than 1/0. 310
- __ 29. Conductors shall use the ampacity correction factors from the appropriate conductor table of Article 310 for ambient temperature. 310-15
- __ 30. Provide a detail of the second building grounding required by 250.
- __ 31. Provide a detail of the second building disconnect required by 225, along with a note that the disconnect shall be suitable for use as service equipment.
- __ 32. Provide a show window receptacle for each 12' of window or major fraction therefore. 210
- __ 33. Provide a separate 20A. sign circuit with no other outlets to the outside of the occupancy. 600
- __ 34. Use a junction box when lighting fixtures are connected with more than 2 conduits. 410
- __ 35. Provide a 120 V. outlet within 25' of all mechanical units. NEC 210
- __ 36. Provide a disconnect switch fused per nameplate adjacent to all mechanical units. UMC
- __ 37. Show all wet, damp, and dry areas. Typical drawing is acceptable.
- __ 38. Hazardous (classified) Locations:
 - __ a. Add a note on the plans to the effect of: No areas covered by these plans are effected by Article 500 through 516.

- __ b. Define on the plans the exact extent of the areas required by Article 500 through 516.
 - __ c. Use a floor plan for above.
 - __ d. Use elevations for above.
 - __ e. Show mounting height of all devices.
- __ 39. The plans and permit must correspond exactly to the work being installed.
 - __ 40. The electrical drawings must be representative of the architectural drawings.
 - __ 41. Show all openings, windows and doors to scale.
 - __ 42. Show the door swings on the drawings.
 - __ 43. Show the dimensions of floor space, clear area, switchboards and equipment where necessary to determine the required working spaces. (Use a dimensioned floor plan and elevation drawings as needed). 110-26
 - __ 44. Provide on the drawings a legend of all electrical symbols and abbreviations used on the drawings.
 - __ 45. State the use of each room or area on the floor plan.
 - __ 46. Add these notes to the plans if circled:
 - __ a. All lighting controls shall be +48" to +15" and within sight of the lighting fixtures. CCR 24
 - __ b. All convenience receptacles shall be above +15". CCR 24
 - __ c. All heating and cooling controls shall be +48" to +15". CCR 24
 - __ d. All fire alarm controls shall be +48". CCR 24
 - __ e. Recessed incandescent fixtures in a fire rated assembly shall be approved prior to installation.
 - __ f. Parking lot conduits shall have a minimum of 24" of cover.
 - __ g. Boxes shall be secured as per Art.
 - __ h. Wiring in environmental air spaces shall be wired as per Art.
 - __ i. Patient care areas shall conform to Art. 517.
 - __ j. Provide a written test report of the ground fault protection system to the Electrical Inspector as per Art. 230-95.
 - __ k. For specific items of equipment, machinery or material they shall be listed as required by Art. 90-7.
 - __ 47. Submit a Site Power Plan:
 - __ a. Show the layout of the power company conduits, wire and equipment. Provide information showing the service point.
 - __ b. Designate which conduits and wire going from the meter to the transformer will be owned and maintained by the owner of the property and which will be owned and maintained by the Edison Company. All conduits and wire owned and maintained by the owner of the property shall be installed to the N.E.C. and proper information is needed.
 - __ 48. Identify all fire rated assemblies.

State on the plans that no fire rated assemblies are to be installed on this job.

- __ 49. Provide a stamp of approval from the Fire Department and Planning Division on the electrical pages for the installation of the generator.
- __ 50. Detail a complete anchoring system for all electrical equipment weighing in excess of 400 pounds. Submit these details as an integral part of the prints with other electrical information. Provide a plan view and cross section of the proposed anchoring system and foundation. Provide structural calculations and structural details for anchorage of electrical equipment in conformance with UBC 1632. The calculations and details shall be prepared by a California registered Civil Engineer, Structural Engineer or by a California licensed Architect.
- __ 51. California Code of Regulations Title 24.

For any questions concerning energy requirements, contact:

California Energy Commission
1516 Ninth Street
Sacramento, California 95814
Phone: (800) 772-3300

For any questions concerning handicap requirements, contact: Department of Housing & Community Development

P.O. Box 1407
Sacramento, California 95807
Phone: (916) 445-9471

THE FOLLOWING FORMS ARE REQUIRED:

- __ a. Other forms may be required depending on information submitted.
- __ b. Energy forms are to be on the plans.

