

In the City Council  
City of Lodi  
Lodi, California

ORDINANCE NO. 520

ADOPTING RULES AND REQUIREMENTS GOVERNING  
THE INSTALLATION OF ELECTRICAL METERS.

The City Council of the City of Lodi does ordain as follows :

Section 1. GENERAL: These rules cover the details of EXO type installations only. The details for the arrangement of switchboards shall comply with the minimum requirements of the Western Utilities Electric Service Standardization Committee. For further information regarding switchboards, please consult the Utilities Department of the City of Lodi, California.

All meter installations shall comply with the minimum requirements contained herein and with rules and regulations of the inspection authorities having jurisdiction.

If any question arises for which you cannot find the answer in the following pages, it is suggested that you call the Utilities Department of the City of Lodi, 8-0641, for such further information.

Whenever any electrical wiring of Class I, as defined in the City of Lodi Electrical Code, is installed, provision shall be made for the installation of metering equipment complying with these service requirements, except when there is existing metering equipment which, in the opinion of the Electrical Inspector of the City of Lodi, is satisfactory and adequate to register all electric current to be supplied.

When a property owner is permitted to do his own wiring he will be considered the electrical contractor for the purpose of these requirements.

Section 2. SERVICE ENTRANCE REQUIREMENTS: The service entrance head or outlet shall be located in accordance with Section 2324 of the National Electrical Code as interpreted by the City of Lodi. The service head should be placed higher than the point of service attachment, if possible, to preclude the possibility of water entering the service conduit or cable and ultimately the meter. The customer's service entrance wires shall extend two feet beyond the service head or outlet and thus be long enough to provide for drip loops and attachment to the service drop.

In these requirements the capacity of the service switch has been used as the basis for determining the size of other related equipment. In those cases where a main service switch is not used, the current carrying capacity of the service entrance conductors shall be considered as the service switch capacity.

Section 3. METER SEQUENCE: The metering arrangements required by the Utilities Department of the City of Lodi provide for the line current to enter first the meter and then the disconnect and overload protective devices.

Section 4. TYPE OF METERING INSTALLATION: Provision shall be made for the installation of a self-contained meter (no instrument transformers) under the following conditions:

(a) If the capacity of the service switch does not exceed 100 Amps, on commercial application, or 200 Amps on domestic application.

(b) For power loads if the connected load does not exceed 30 h.p. and the voltage is 300 volts or less.

In all other cases provision shall be made for the installation of instrument transformers and a transformer-type meter. For large installations the Utilities Department, City of Lodi, should be consulted to determine if provision is necessary for installation of a varhour meter to measure power factor.

Socket type meters will be used on all installations.

Section 5. METER SOCKETS: The contractor shall install meter sockets in accordance with the following table:

SELF-CONTAINED METERS		No. of Jaws in Socket
	<u>Type of Service</u>	
Single-phase	2 wire, 120 or 240 v.	4
Single-phase	3 wire, 120/240 V.	4
Single-phase	3 wire, 120/208V. wye	5
Three-phase	3 wire	5
Three-phase	4 wire delta	7
Three-phase	4 wire wye	7

Sockets for self-contained meter shall be installed and wired by the contractor.

Section 6. INSTRUMENT TRANSFORMER INSTALLATIONS: An instrument transformer installation consists of metering current or potential transformers, or both, mounted in a metal cabinet and a watthour meter with its accompanying test facilities. For large loads a varhour meter is required in addition to the watthour meter.

The Utilities Department, City of Lodi, will furnish and install the secondary wiring from the instrument transformers to the meter in conduit or raceways furnished and installed by the contractor. Provision must be made for the installing of meter test blocks or test switches, which will also be furnished by the said Utilities Department.

The contractor shall furnish and install a metal cabinet for housing the metering instrument transformers in accordance with the following specifications. The sizes tabulated below are minimum requirements which are acceptable to the Utilities Department, City of Lodi.

MINIMUM INSTRUMENT TRANSFORMER CABINET SIZES

<u>Service Switch Capacity</u>	<u>240 Volt 3-Wire Service</u>	<u>208 Volt, 4-Wire, or 480 Volt, 3-Wire Service</u>
200 Amp.	24x24x10"	24x36x10"
400 Amp.	24x36x10"	36x36x10"
600 Amp.	24x36x10"	36x36x10"
800 Amp.	36x48x10"	36x48x10"

When a service switch larger than 800 Amps. is to be used in this type of installation, the Utilities Department, City of Lodi, should be consulted to determine the cabinet size.

In all cases provision shall be made for sealing the cabinet by the use of padlock-type seals.

All covers which must be lifted into place should be equipped with two handles or similar lifting devices. All covers shall have a small caution sign on the front saying, "Do not break seals. No fuses inside."

Instrument transformer cabinets may be mounted either indoors or outdoors, provided that outdoor installations shall be rain-tight. Cabinets may be mounted either horizontally or vertically at the customer's option, provided that the cables shall enter and leave the cabinet in such a manner that the Utilities Department can conveniently install and connect the transformers.

Sufficient length of meter loop conductors shall be left to connect to current transformers. A meter loop conductor is defined as a wire or cable extending into the cabinet for connection to the primary of a metering current transformer.

#### Section 7. MULTIPLE METER INSTALLATIONS:

(a) When a building has more than one customer or more than one type of service it is necessary to use a multiple meter installation. Non-switchboard multiple occupancy installations can usually best be arranged by utilizing a meter trough. Standardized meter troughs using ring-type sockets or individual sockets in combination with standardized wire gutters or their equivalent are recommended. Troughs and wire gutters containing unmetered wiring shall always be provided with two studs having 1/16" holes for sealing in addition to the screws normally used to hold the cover in place. Unmetered service wires and metered load wires shall not be run in the same conduit, raceway, or wiring gutter.

(b) The rules for spacing of multiple meter installations using socket-type meters shall be as follows:

Horizontal indoor installations--10 inches minimum on centers.

Horizontal outdoor installations-- $7\frac{1}{2}$  inches minimum on centers

Vertical indoor or outdoor installations-- $8\frac{1}{2}$  inches minimum on centers.

The above spacings are satisfactory for all socket-type meter installations with the exception of three-phase, four-wire services. For this type of installation, it is strongly recommended that the Utilities Department, City of Lodi, be consulted for each individual case in order to determine proper spacing.

(c) When using meter troughs on multiple occupancy installations, the use of busline terminals on the meter sockets is recommended. Not more than three meters shall be mounted on a single front panel of a meter trough.

Die cast sockets shall not be used as a wiring gutter for more than two meters. Care should be exercised on this type installation that metered and unmetered wiring does not occupy the same conduit. Wire larger than No. 2 AWG shall not be used in die cast sockets.

(d) In multiple occupancy buildings or multiple building properties all the meters shall be mounted at a common location adjacent to the street. Where one or more meters are added to an existing installation, they shall either conform to the existing plan, or the existing meters shall be rearranged to conform to a new plan.

(e) Cabinets designed for installation of meters and service switches shall be 12 inches deep. Care should be exercised to design a cabinet so that neither the roof nor the door supports will interfere with installation of the meter. With the cabinet door open, a clear space of at

least 15 inches directly in front of the socket is required to insert the meter in the socket.

(f) Each meter position in multiple meter installations shall be clearly and prominently marked in a permanent manner by the contractor to indicate the particular location supplied by it. Meters will not be installed until the marking is complete.

In case of multiple dwellings where one building includes six apartments or less, the markings shall be such that, facing the building from the street, the apartment designation will be "Lower Right", "Lower Left", "Lower Rear Left", "Lower Middle", "Upper Front Right", etc. In case of multiple dwellings of seven apartments or more, each meter switch shall be marked by letter or numeral to correspond to the apartment it serves.

Section 8. METER LOCATIONS: Electric meter installations shall:

(a) Be located so as to be accessible to authorized representatives of the Utilities Department, City of Lodi, for reading, test and inspection at all reasonable times. Outdoor meter locations are preferred.

(b) Not be located in any of the following places:

- (1) On any floor higher than the ground floor.
- (2) In any place where moisture, fumes or dust may interfere with its operation or materially damage the meter.
- (3) In any elevator shaft or hatchway.
- (4) In any hazardous location.
- (5) In any place not in general use.
- (6) Directly over any stairway, ramp or steps.
- (7) On any surface subject to excessive vibration, as determined by the Utilities Department.

- (8) In any doorway.
- (9) On or recessed in the external surface of any wall or any building that is built within 3 feet of any property line or on the line of any walk, alley or driveway giving access to commercial or industrial property, except when permitted by the Utilities Department.
- (10) On any portion of a building which might at a later date be enclosed and thus make the meter inaccessible. Examples of these locations are carports, breezeways, covered porches, etc.

Since meters are sometimes noisy, it is recommended that locations on exterior walls of bedrooms or bedroom closets be avoided if possible.

Section 9. METER HEIGHTS: Meters shall be located not more than 75 inches and not less than 66 inches above the ground or standing surface when installed outdoors. When installed outdoors in a cabinet or indoors in a meter room, the minimum height may be reduced to 36 inches.

In the event special permission is granted to locate a meter adjacent to a walk or driveway (see METER LOCATIONS, b-9), it should be mounted 84 inches above such walk or driveway. However, in no event shall a demand meter be mounted higher than 75 inches.

Section 10. WORKING SPACE: A level standing and working surface shall be provided in front of each metering installation. A clear and unobstructed working space shall be provided above this surface. The width of the working space shall be sufficient to permit ready access to the metering equipment and in no case less than 3 feet. The height of the working space shall be equal to the over-all height of the metering installation and in no case less than 6 feet. The working space shall extend at least 3 feet from the surface on which the metering equipment is mounted.

Section 11. DISCONNECTING AND CONNECTING METERS: Under no circumstances will an electrical contractor or any one other than an employee of the Utilities Department, City of Lodi, be allowed to break a seal on the Utility's meter, or connect or disconnect a meter.

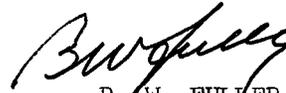
Section 12. PENALTIES: Any person, firm or corporation violating any of the provisions of this ordinance shall be guilty of a misdemeanor and upon conviction thereof shall be punishable by a fine of not more than Five Hundred Dollars (\$500.00) or by imprisonment in the City Jail for a period of not more than six (6) months, or by both such fine and imprisonment.

Section 13. VIOLATIONS: Every person, firm or corporation violating any of the provisions of this ordinance shall be deemed guilty of a separate offense for each day or portion thereof during which such violation continued and shall be punishable therefor as herein provided.

Section 14. PROHIBITIONS: It is unlawful for any person, firm or corporation, either as owner, architect, contractor, artisan or otherwise, to do or knowingly to cause or permit to be done any electrical wiring as defined in this ordinance in such manner that the same shall not conform to all of the provisions of this ordinance.

Section 15. This ordinance shall be published one time in the "Lodi News-Sentinel", a newspaper of general circulation printed and published in the City of Lodi, and shall be in force and take effect thirty days from and after its passage.

Approved this 2nd day of February, 1955.



B. W. FULLER  
Mayor of the City of Lodi

ATTEST :  
HENRY A. GLAVES, JR.  
City Clerk

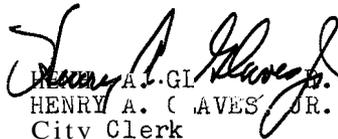
I, HENRY A. GLAVES, JR., City Clerk of the City of Lodi and ex officio Clerk of the City Council of said City, do hereby certify that the foregoing Ordinance No. 520 was introduced in regular meeting of said Council held January 5, 1955, and was thereafter passed, adopted and ordered to print at a regular meeting of the City Council held February 2, 1955, by the following vote:

AYES: Councilmen - Hughes, Mitchell, Robinson and Fuller

NOES: Councilmen - None

ABSENT: Councilmen - Richey

I FURTHER CERTIFY That Ordinance No. 520 was approved and signed by the Mayor on the date of its passage and has been published pursuant to law.

  
HENRY A. GLAVES, JR.  
HENRY A. GLAVES, JR.  
City Clerk

Dated: February 18, 1955