

**5.0 SERVICE EQUIPMENT**

**5.1 GENERAL**

- 5.1.1 Each service entrance shall be provided with disconnecting means and over current protection as required by the latest edition of the NEC. The maximum number of disconnects on a service is six at one location.
- 5.1.2 The location of the service equipment and the general electrical arrangement will be agreed upon after mutual consideration of all factors by the customer and LIPA.
- 5.1.3 Service equipment shall conform to the NEC and all local authorities having jurisdiction.
- 5.1.4 Service equipment shall be grounded in accordance with NEC Article 250.

**5.2 CURRENT RATING**

- 5.2.1 A new single phase service entrance for an installation of one meter shall have a capacity of not less than 100 amperes and for an installation of two or more meters not less than 150 amperes. (See Section 8.0)
- 5.2.2 For 120/240 volt single phase service the maximum single service entrance shall be as follows:

<u>Service Point</u>	<u>Maximum Size</u>
Overhead service	400 amperes
Secondary riser service	600 amperes
Below grade transformer	600 amperes
Pad mounted transformer	800 amperes

- 5.2.3 For 120/208 volt single phase service the maximum single service entrance shall be 300 amperes.
- 5.2.4 For three phase service the maximum single service entrance shall be as follows:

<u>Service Type</u>	<u>Maximum Size</u>
208Y/120 volt overhead	600 amperes
208Y/120 volt riser	800 amperes
208Y/120 volt PM transformer	4,000 amperes
480Y/277 volt overhead & riser	400 amperes
480Y/277 volt PM transformer	2,500 amperes
240/120 volt delta	800 amperes (pole mounted transformers only)

Multiple service entrances for higher rated services must be approved by LIPA.

- 5.2.5 600 ampere overhead services may be approved on a case by case basis, consult with Distribution Design before planning any such installation.

**5.3 SERVICE RATED BELOW 600 VOLTS**

- 5.3.1 Service equipment shall include provision for metering transformers when load currents of any one customer will exceed or 300 amperes for single phase or 200 amperes for multi-phase, see Section 8.
- 5.3.2 For service equipment 1,000 amperes and above, it is required that the Distribution

Design Department be contacted to discuss the service equipment and its arrangement. It is important that the customer/contractor provide the Distribution Design Department with detailed plans and specifications prior to the purchase of service equipment and proceeding with the installation.

- 5.3.3 Upon request, LIPA will inform the customer/contractor of the magnitude of the current which the service equipment may be called upon to interrupt under fault conditions.
- 5.3.4 Any tap made ahead of the main service equipment, for fire pumps, exit lights, control power for circuit breaker, etc., shall be provided with disconnecting means and over current protection adequate for the fault duty. Such connections shall be made only where specifically approved by LIPA and will require an additional meter.
- 5.3.5 The customer is responsible for maintenance of his service equipment and transformer pad or vault, if applicable. For access to a customer's vault, contact LIPA well in advance in order to de-energize the vault. **Warning: Neither the customer nor the contractor shall enter an energized vault, fenced enclosure or other transformer containment without LIPA de-energizing the facility first. Serious injury may result.**
- 5.3.6 The customer shall install equipment which has a voltage rating suitable to the service and an ampere rating which is adequate for the initial and anticipated future load current requirements. The equipment shall be capable of interrupting load current equal to its ampere rating.

#### 5.4 SERVICE ABOVE 600 VOLTS

- 5.4.1 All primary service installations shall be discussed with the Distribution Design Department before planning, estimating, ordering or purchasing equipment
- 5.4.2 Based on the electrical arrangement selected, LIPA will advise the customer concerning its requirements for basic insulation level, protective equipment and metering facilities and will supply such additional information as estimated short circuit data, relay recommendations, etc., so the customer may complete the design of his installation. The customer shall submit detail plans and specifications for inspection and approval by LIPA prior to the purchase of equipment or proceeding with the installation.
- 5.4.3 Circuit Breakers or other switchgear furnished, owned and maintained by customers taking power 600 volts and above, must include provision for testing (*to determine if voltage is present*) and for grounding of normally energized parts to permit maintenance and other work to be performed in a safe manner.
- 5.4.4 If an air circuit breaker is utilized, it shall conform with latest NEMA Standards for Power Circuit Breakers and meet the following requirements:
  - A) An operating mechanism of mechanically trip free construction.
  - B) An over current tripping device on each pole arranged for delayed over current protection with instantaneous tripping for currents of fault magnitude.
- 5.4.5 Under no circumstances shall customer wiring ever be able to provide a path for electric current flow from one LIPA service entrance to another.