

Electric Service Guide

Primary Services



Contact MID's Electric Engineering Department
(electric.standards@mid.org)
with any questions about this Service Guide.

Check MID's website (www.mid.org) "Electric Service Guide" for the
most current version of this Service Guide.

If you have any suggestions about improving this Service Guide,
please complete the form on the last page of this Guide and return
it to MID's Electric Engineering Department.

The Modesto Irrigation District (MID) has requirements for
primary voltage service and switchgear that may, or may not, be
consistent with other utilities. We strongly recommend that the
MID Electric Service Guide for Primary Service is reviewed prior to
design of the project and that a qualified licensed engineer is used
in the design, testing and installation of the primary switch gear
and components.

USE CAUTION WHEN DIGGING TO AVOID BURIED ELECTRICAL CABLES
BEFORE DIGGING CALL
USA (Underground Service Alert)
1 (800) 227-2600 or 811

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1 General Requirements for Service

1.1 This Guide sets forth Modesto Irrigation District's (MID's) requirements for the establishment of electric service to new or re-wired primary service installations. The requirements presented here are necessary for MID to supply uniform, satisfactory, and safe service. It is necessary that all written material (this Guide, as well as all of the notes on the drawings) be carefully read and followed.

1.2 It is important that arrangements be made prior to the purchase and installation of electric service lines and the location and setting of meters. Contact MID's Energy Services Department at (209) 526-7339 for new or additional service. This must be completed as soon as initial planning is considered.

NOTE: customer "service entrance facilities" is the term used to designate all the electrical components required to be furnished and installed by the customer.

1.3 Where the operation of the customer's equipment will require unusually stable voltage regulation, refer to Rule 2 in MID's Electric Service Rules at www.mid.org.

1.4 In addition to MID's requirements, the customer is responsible for complying with applicable provisions of City and County ordinances, the NEC, EUSERC, UL listed, and State of California General Orders, rules and regulations of the State of California.

1.5 NO service can be connected until approved by the appropriate local governing authority and MID. **Only authorized MID employees** are permitted to make connections between MID wiring and customer wiring. (See a list of local governing authorities on page 18.)

1.6 The MID design, service letter and cost estimate are valid for six months.

1.7 Building plans and definite load information for commercial and industrial installations must be furnished to a MID Electric Engineering Department: Project Manager at 1231 11th Street, Modesto, CA 95354, as soon as possible. Delays in supplying this required information could cause unnecessary inconvenience for the customer.

1.8 The customer's service voltage will be determined by a MID Electric Engineering Department. Multiple service voltages to one building or parcel of property will only be granted upon approval of a MID Electric Engineering Department and local governing authorities.

1.9 Normally, only one service point will be granted to one building or one parcel of property. Multiple service points may be granted one building or multiple buildings on one parcel, provided they meet the requirements of the "National Electric Code" as well as the requirements of MID and local governing authorities.

1.10 All primary meter installations must be reviewed and approved by MID. These drawings shall show the customer's name and job address. Submit a copy to: MID Electric Engineering Department, PO Box 4060, Modesto, CA 95352, prior to fabrication. A copy will be returned to the sender with approvals or required corrections.

- 1.11** Customer must submit panel manufacturer's specifications to a MID Electric Engineering Project Manager. The Electric Engineering Project Manager will submit the specifications to the Meter Department for approval.
- 1.12** If any changes are required to be made during the approval process, customer will be required to resubmit the package in its entirety and identify the changes visually or pictorially. Any previous approvals will be null and void.

2 Abbreviations

The following abbreviations may be used throughout this Service Guide.

Amp	Ampere
EUSERC	Electric Utility Service Equipment Requirements Committee
NEC	National Electric Code
CT	Current Transformer

3 Minimum Requirements for Commercial/Industrial Electric Service Installations

3.1 Underground Services

The customer is to provide all conduit to a location designated by MID.

3.2 Meter Location

- a) A clear, unobstructed work space shall be left on all sides of the meter. (See Drawings pages 28-32.)
- b) The meter(s) shall be located on the exterior of the building and shall be at least 3 feet from a property line. When it is absolutely necessary to locate meters in dedicated meter rooms, cabinets, or fenced enclosures, consult the MID Project Manager. MID representatives shall have access to such areas by using a MID key. The customer is responsible for having the lock(s) keyed for a MID key.
- c) Carports, breezeways, covered or screened porches, or any other area that might be enclosed at some future date should not be selected as a meter location. These areas may only be utilized with prior approval of the MID Project Manager.
- d) Meters or metering equipment shall be approved by the MID Metering Department.
- e) The area on either side of a door or swinging window, equal to the width of that door or swinging window is not acceptable as a meter location.
- f) A level standing and working surface shall be provided in front of each meter to permit ready access to the meter. This space must be at least 36 X 36 inches and contain no working obstructions.

3.3 Meter Socket

- a) The meter socket must be installed in a true vertical plane.
- b) The neutral conductor shall be connected to the neutral lugs and shall be located behind sealed panels.
- c) Meter sockets with extruded or cast aluminum jaws are not acceptable and will not be connected.
- d) Primary switchboard service sections shall be EUSERC compliant.
- e) The customer's wiring for new service or rewiring shall include a grounded conductor or bus in the service entrance equipment. The grounded conductor or bus shall connect to the proper terminals in the service entrance meter compartment and service switch. Sizing of this conductor or bus shall be in accordance with the requirements of local governing authorities.

3.4 Grounding

- a) Lugs for terminating the customer's ground wire (or other grounding conductors) shall be located outside of the sealable section and shall be designed to readily permit the customer's neutral system to be isolated, when necessary, from the serving agency.
- b) Ground buss, when provided, shall be located at the rear of underground terminating enclosures (i.e. pull boxes and pull sections.)
- c) Bare bus 7 inches above and below the current transformers shall be provided to permit application of MID safety grounds. A grounding knob may be provided on the line and load side of the bus at each current transformer location.

3.5 Metering Arrangements

- a) The metering arrangement shall be approved by the MID Meter Department.
- b) Unmetered services wires and metered load wires shall not be combined in the same conduit, raceway, or gutter.

4 Meter Installations on Low Voltage Switchboards, 12-21 Kilovolts, 0-600 Amps

4.1 Metering Equipment Requirements

4.1.1 EUSERC - Electric Utility Service Equipment Requirements Committee

EUSERC is an organization comprised of utility representatives from the western section of the United States that work to promote the standardization of electric service requirements and the design and engineering of metering and service equipment.

All metering and service equipment approved for use in the areas served by MID shall be built to the requirements developed by EUSERC. Approved metering and service equipment is available to customers and contractors through electrical wholesale distributors.

4.1.2 Approval of Electric Service Panel Manufacturer's Drawings

All electric service panels shall meet EUSERC requirements. Purchase or installation of any equipment that does not conform to EUSERC requirements is done at the customer's risk. Any electrical service panels that do not comply with EUSERC will be required to have field modifications completed or be replaced at the developer's expense.

Electric service panel drawings are submitted for review prior to purchase and installation. The project developer can submit three (3) copies of the panel manufacturer's drawings to MID. Submitted drawings shall reflect correct EUSERC drawing numbers. One copy will be returned to the sender with approval or corrections as needed. Send submittals to:

Modesto Irrigation District
Attn: Electric Engineering Department
Project Manager
Box 4060
Modesto, CA 95352
Telephone: (209) 526-7337

4.2 UL Listing Required

All meter sockets, boxes and enclosures shall be designed in accordance with the latest revision of AEIC-EEI-NEMA standard for watt-hour meter sockets, publication ANSI c12.7, UL standard for meter sockets UL414.

4.3 Panel Inspection Required Prior to Establishment of Service

Electric service will not be established until the service entrance facilities are satisfactorily inspected by MID and passes inspection by the local governing authority. MID will charge a re-inspection fee if multiple trips are required due to improperly installed or unapproved service facilities. Requirements will be set forth by the Engineering and Metering Departments. See the Notice To Contractor for requirements on page 27.

4.4 Type of Service

Since the type of service available may vary, it is important that the customer consult MID for information before proceeding with the purchase or equipment or installation of wiring. Equipment that is improperly installed or does not meet MID and EUSERC requirements will be rejected and must be replaced or repaired at the customer's expense before service will be established. The replaced or repaired equipment must be approved by a certified UL inspector for MID's acceptance.

4.5 Service Entrance Facilities

- a) The customer shall furnish, install and maintain the service equipment beyond the point of attachment to MID's primary service delivery point. All shall not be concealed except with expressed consent of MID.
- b) The type and size of service entrance conductors shall conform to the ordinance and codes of the local governing authority, or where there is no ordinance requirement they shall conform to current standards of the NEC.
- c) In general, a primary service will be supplied through only one set of service conductors of the same voltage classification.

4.6 Underground Service Terminations

The customer will terminate all service conductors to the service pull section or switchgear. (See Drawings pages 28-32) The customer/developer will terminate its service conductors on lug landings in the pull section.

4.7 Pull Section Lug Landings and Busing Requirements

- a) Single meter switchboard installation rated 600 Amps:

Bus bars shall extend from the landing lugs in the pull section to the CT bus stubs.

4.8 Meter and Service Locations Require MID Approval

- a) The location for the meter and service disconnect shall comply with applicable codes, laws and ordinances of the local governing authorities, and with the provisions of this Service Guide.
- b) On new installations, it is necessary that the location for the meter be approved in writing by a MID Electric Engineering Technician.

- c) Whenever any addition or alteration on existing service conduits, service entrance conductors or metering equipment is contemplated, the customer or contractor shall contact the Electric Engineering Technician.
- d) For single-occupancy buildings, meters and metering equipment may be installed:
 - 1) Outdoors.
 - 2) In a room within a building, approved by MID for the location of electric meters, with provision for proper illumination and with access only by a door opening to the outside of the building. See item 4.10, Meter Rooms.
- e) MID may require the customer to relocate a metering installation, at the customer's expense, if an existing meter location becomes inaccessible.
- f) For service stations, the utility underground service lateral conductors may not extend through a hazardous (classified) class 1 location (as defined by article 514 of the NEC). The underground pull can/section and metering would then be grouped and located outside (and prior to) the hazardous area at a location approved by MID.

4.9 Unacceptable Meter Locations

Contact a MID Electric Engineering Project Manager at 209-526-7540 for proper placement of Meter Equipment.

Meters or meter rooms shall not be located in or adjacent to a drive through.

4.10 Meter Rooms

An electric meter room is a weatherproof, illuminated room provided by the customer at his option and approved by MID for the location of the electric metering equipment. The following provisions will apply:

- a) Access: Access must be through a door on the building exterior opening directly into the electric meter room that provides immediate 24 hour a day access. All meter rooms that are to be locked must be keyed to MID specifications. *Al's Certified Safe and Lock or Easy Locks* will provide the specifications to qualified locksmiths or can provide the work. The key way for the lock is Schlage "C". Meter rooms must not inhibit use of personal protective equipment gear, e.g., not in a biohazard area.
- b) Communications equipment: Telephone, CATV, data processing equipment, etc., are not permitted in an electric meter room.
- c) Doors: The entrance to the electric meter room shall be through a vertical doorway not less than 3'-0" wide and 6'-6" high, and should swing out whenever possible.

Local governing authorities may require the doors to open out and utilize "lever-operated" hardware. If the door swings into the room, it is to be located so that it will not open into the meters or working space. Roll-up doors are not acceptable.

- d) Foreign equipment: Equipment foreign to the electrical equipment is not permitted within the electric meter room. **Only electric service equipment is permitted.**

Note: Sprinkler heads, when required in an electric meter room by the local fire department or building official, are acceptable. Requirements for shielding will be determined by the local governing authority.

- e) Meter clearances: All meter installations must provide minimum clearances as shown on pages 28-32.

- f) Meter heights: The minimum height of the meter may be 3 feet and the maximum height may be 6 feet 3 inches as measured from the standing surface to the centerline of the meter.

- g) Meter marking: See Section 4.11, Multi-Meter Identification (Labeling Requirements), for meter identification examples.

- h) Pull sections: The position of a pull section in a meter room is subject to approval by MID.

- 1) Pull sections should be positioned either:

(a) Opposite the access door to allow use of the doorway as additional working space for cable-pulling equipment.

(b) On a wall perpendicular to the access door.

Note: Do not locate on the same wall as the access door.

- 2) Pull sections must allow a minimum of 3 feet clear and level working space in front of the section. All 12kV pull sections require an unobstructed 8 feet clear area in front of any and all access doors for installation and removal of MID safety grounds.

- i) Readily accessible: Capable of being reached quickly and conveniently 24 hours a day for construction, operation, maintenance, inspection, testing or reading, without requiring those seeking access to climb over or remove obstacles; or to obtain special permission or security clearances. A stairway of normal rise (4" to 7") and run (11" minimum) conforming to building code requirements is acceptable. Shipboard ladders are unacceptable.
- j) Room identification: The meter room must be permanently identified "electric meter room" or "meter room" or "electric room." Placards are to be purchased and installed by the customer. The identifying marking for rooms shall be engraved into or raised from a tag of plastic laminate, aluminum, brass or other approved non-ferrous metal with 2-inch minimum letters. The engraving shall be deep or raised enough to prevent it from being obscured by subsequent painting of the service sections. **The tag shall be attached to a non-removable area of the door with a high strength, 5-minute epoxy adhesive.** Other types of adhesives **WILL NOT** be acceptable. The tag shall not be able to be removed without the use of hand tools.

- k) Vehicle access: Permanent vehicle access to the meter room is required for the installation and maintenance of metering equipment. Under some conditions, as determined by MID, the vehicle access requirement may be waived.

4.11 Multi-Meter Identification (Labeling Requirements)

- a) Marking of all meters and disconnects shall be required as follows:
- Where the installation requires more than one meter for service to the premises, each meter panel shall be permanently marked (**NOT PAINTED**) by the customer to properly identify the portion of the premises being served.
 - When adding a new meter to an existing service location, **ALL** meters shall be identified to properly indicate the portion of the premises being served.
 - Each main service disconnect shall be permanently marked (**NOT PAINTED**) by the customer to properly identify the street address and the building number (if applicable).
- b) The identifying marking for meters and disconnects shall be engraved into or raised from a tag of plastic laminate, aluminum, brass or other approved non-ferrous metal with 1/4 inch minimum letters. The engraving shall be deep or raised enough to prevent it from being obscured by subsequent painting of the service sections. **The tag shall be attached to a non-removable area of the panel with a high strength, 5-minute epoxy adhesive.** Other types of adhesives **WILL NOT** be acceptable. The tag shall not be able to be removed without the use of hand tools. If the main breakers are **NOT** installed directly adjacent to the meters, **BOTH** the meter and the main breaker shall be identified with individual tags.

4.12 Meter Access

All electric meters and main disconnects shall be accessible by MID 24 hours a day, 7 days a week. Fences, gates, alarms, security guards or the other means that prohibit direct accessibility are a violation of this requirement.

If the metering service panel is located behind a locked gate or door, the lock must be keyed to MID specifications. *Al's Certified Safe and Lock or Easy Locks* will provide the specifications to qualified locksmiths or can provide the work. The key way for the lock is Schlage "C". Another option is double hasp padlock hardware with a padlock keyed to MID specifications. These requirements apply to any situation where access is restricted.

4.13 Working Space in the Area of Meter Installation

A level standing and working surface shall be provided and maintained 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 in no case less than 3 feet. The height of the working space shall be equal to the overall height of the metering installation and in no case less than 6 feet 6 inches. The working space shall extend at least 3 feet in front of the metering enclosure.).

4.14 Meter Heights

Meters shall be located not more than 75 inches and not less than 48 inches above the ground or standing surface when installed outdoors. When installed in a cabinet or indoors in a meter room the minimum height may be reduced to 36 inches. The meter height shall be measured to the meter axis.

4.15 Meter Sockets

Sockets for primary instrument transformer installations shall be furnished and installed by the customer.

4.16 Meter Socket Connections

- a) For instrument transformer-rated meters, MID will furnish and install the normal secondary wiring from the metering transformers to the meter socket.

4.17 Grounding

- a) Lugs for terminating the customer's ground wire (or other grounding conductors) shall be located outside of the sealable section and shall be designed to readily permit the customer's neutral system to be isolated, when necessary, from the serving agency.
- b) Ground buss, when provided, shall be located at the rear of underground terminating enclosures (i.e. pull boxes and pull sections.)
- c) Bare bus 7 inches above and below the current transformers shall be provided to permit application of MID safety grounds. A grounding knob may be provided on the line and load side of the bus at each current transformer location.

4.18 Instrument Transformer Enclosure-General

- a) No connections shall be made in the instrument transformer enclosure to supply any other meter, or more than one load circuit.
- b) When the neutral conductor is a part of the service, it shall pass through the instrument transformer box, be continuous, and be capable of being bondable to the box.

4.19 Metered and Unmetered Conductors

Line side (unmetered) and load side (metered) conductors are prohibited from occupying the same raceway or enclosure by both MID policy and the NEC. Conductors from the customer's distribution section shall not pass through MID's sealable sections.

4.20 Sealing of Meters and Metering Equipment

- a) All meters and enclosures for meters, metering equipment and service entrance equipment on the line side of the meter, except as approved for access to replace fuses used for over-current protection, will be sealed by MID. The MID seal shall not be broken except by an authorized representative of MID, or with MID's permission granted in response to a request warranting approval. No person is permitted to tamper, or in any way interfere, with a meter or its connections as placed by MID.
- b) All removable panels and covers (tops, sides, front, and rear) to compartments used for terminating or routing un-metered conductors shall be sealable.
- c) Sealable latches, stud and wing-nut assembly, or sealing screws shall be used for sealing covers or sections.
- d) When a latch is used, it shall be designed to permit positive locking and made of a durable material that is non-corrosive.
- e) When a stud and wing-nut assembly is used for sealing, the stud shall be 1/4" x 20" (minimum). The stud and wing-nut shall each be drilled .0635" minimum for sealing purposes.
- f) Screws or bolts requiring special tools for installation or removal are not acceptable. Sealing methods, other than those mentioned, require MID approval.
- g) All service disconnects shall have a provision for locking in the open/off position.
- h) All compartments containing un-metered conductors shall be sealable. When a raceway or conduit for meter secondary wiring is necessary, such raceway or conduit shall be sealable.

4.21 Meter Socket Sealing Rings

Meter sockets shall be equipped with approved sealing rings as a part of the meter socket installation.

4.22 Switchboards-General

- a) Contact MID Metering Department for approval of switchgear specifications prior to manufacture of the switchgear to determine the type of metering, size of current and/or voltage transformers, and any special arrangement necessary for mounting instrument transformers, and compliance with EUSERC standards. Submit three (3) copies to: MID Meter Department, P.O. Box 4060, Modesto, CA 95352, prior to manufacturing.
- b) The rating of the instrument transformers will not necessarily be the same as the service switch.
- c) All compartments containing un-metered conductors shall be sealable. When a raceway or conduit for meter secondary wiring is necessary, such raceway or conduit shall be sealable.

- d) The meter current and potential transformers supplied by MID shall not be utilized for any other purpose.

4.23 Specially Engineered Service Section

All specially engineered service sections require MID approval. A switchboard design which does not conform to the standard switchboard herein, is considered specially engineered, and includes installations:

- a) Rated over 600 Amps or 24000 Volts.
- b) Where the service breaker ampacity rating exceeds that of the standard service section
- c) When recessed meter panels are used.

4.24 Service Limitations

Primary service is limited to 600 Amps maximum.

4.25 Metering Emergency Alarm Systems

MID policy typically does not allow connections to a customer's service preceding the electric meter. In those cases when it is impractical to install an emergency alarm system on the load side of the service meter, a separate house meter for the emergency system will be required.

4.26 Inspection Tag

MID inspects all new meter installations prior to energizing the customer's panel. Figure 1 on Drawing COMM-001.1 (page27) shows a copy of an orange colored tag that the MID service representative leaves when the MID inspection does not pass. The tag lists the most common installation infractions that prevent MID from setting electric meters.

5 Requirements for Commercial Multiple Meter Installations

5.1 Totalized Metering

Totalized metering may be available for certain larger commercial/industrial services. Contact MID Energy Services Department.

5.2 Non-Installation of Meters

The meters will not be installed until:

- a) The customer has complied with all the requirements listed above.
- b) The work has been inspected and passed by the local governing authorities.
- c) All required fees are paid.

6 Protection Requirements for Primary Distribution Services

6.1 General Protection Requirements

It is important to minimize the potential hazard to life and property when interconnecting facilities to the MID distribution system. This requires the automatic detection of abnormal conditions and trouble related to a PS (Primary Service) customer's equipment and the isolation of the condition and/or equipment within a reasonable time.

As a general rule, neither party should depend on the other for system protection. As such, MID's minimum protection requirements are designed and intended to protect the MID power system only. Moreover, the interconnection of a PS customer to the MID distribution system must not degrade existing MID protection and control schemes or interfere with the service of other customers.

The PS customer's facilities must isolate any fault or abnormality that could adversely affect the MID electric system or the electric systems of other entities connected to the MID electric system.

MID assumes no liability for damage to the PS customer-owned facilities resulting from a lack of adequate coordination between the PS customer's protective device(s) and MID's protective devices, or negligence due to the PS customer's failure to maintain protective and/or isolation equipment.

MID requires that the PS customer acquire the services of a qualified and licensed electrical engineer to review its plans. The PS customer must, at its expense, install, operate, and maintain system protection facilities in accordance with all applicable regulatory rules and requirements, and in accordance with this bulletin.

a) Data the PS Customer Provides to MID

The PS customer must provide the information necessary for MID to determine the interconnection requirements before MID approves the specific PS installation. This information includes, but is not limited to, the following:

- Single-Line diagrams.
- Meter and Relay diagrams.
- Three-Line diagrams of required protective device.
- Control diagrams including tripping circuit.
- Proposed relay specifications and settings.
- Relay manufacturer, model, style, type, ranges, settings, and a copy of the relay instruction manual.
- Projected electrical demand (kW), including the following information:
 - Power factor, load factor, large motor sizes, motor starting currents, customer's transformer size and estimated breakdown of electric energy use (kWh) by month.
- Full-size phase and ground coordination curves showing full coordination with MID's system.
- A registered electrical engineer must prepare and stamp the fault-study results.

- Maintenance program documentation for MID-required switches, interrupting devices and protective equipment.

MID strongly recommends that the PS customer, or their representative, provide the above information before ordering equipment and finalizing the design.

Also, before energizing the new PS facility, the PS customer must also provide a copy of the on-site test reports for the switches, devices, and relays at least 10 working days prior to energizing the service. This allows sufficient time for review, modification, and final MID approval. Qualified personnel must prepare these on-site test reports. Refer to Section 6.3 “Equipment Test Requirements” and Section 6.4 “Pre-Energizing Test” for further details.

b) Data that MID Provides to the Applicant

MID provides the following engineering data to the PS customer:

- System fault-duty at the property line.
- Settings for MID source-side protection devices and the required clearance time to comply with MID protection standards.

6.2 Specific Protection Requirements

MID must review and approve the fault-interrupting devices that the PS customer selects. There are four basic types of fault-interrupting devices available for distribution systems:

- Circuit breakers
- Recloser
- Interrupter
- Fuses

The following sections provide specific requirements for each of these devices.

a) Circuit Breaker Requirements

The interconnecting circuit breaker must have sufficient capacity to interrupt the maximum available fault current at its location. Phase and ground relays approved by MID (See Section Below) must be used to trip the circuit breaker for phase and ground faults. These relays must coordinate with MID’s source-side protection.

b) Relay Requirements

MID requires PS customers to install phase and ground over-current relays that trip the interrupting device at the POS (Point of Service). These relays must detect all phase and ground faults, and coordinate with MID’s source-side protection. All required relays must include relay targets, and have “manual reset” capability.

The PS customer must select phase and ground relays with event reporting capabilities approved by MID.

MID strongly recommends that PS customers submit all relays specification and setting proposals for MID approval before finalizing the design and ordering equipment. PS customers not submitting this information risk delaying their project

c) Relay Redundancy Requirements

The PS customer's protection system must contain redundancy such that the failure of any one component will still allow the customer's system to isolate the PS facility from the MID system under a fault condition. Three single-phase over-current relays and a ground over-current relay, or two three-phase over-current relays and a ground over-current relay satisfy the redundancy requirement. PS facilities, using microprocessor-based relays as a multifunctional protective device, must have backup relays.

d) Reclosers and Interrupters

MID must approve reclosers and interrupters.

e) Fuse Requirements

Fuses are single-phase, direct-acting, sacrificial links that melt to interrupt fault current and protect the equipment.

MID may approve the use of fuses as the fault interrupting device at the POS for load-only facilities (i.e., no generation is interconnected), if the fuses coordinate with the MID source-side devices for both phase and ground faults. Large primary fuses that do not coordinate with MID's source-side protective phase and ground relays are not allowed. These fuses may cause other customers on the circuit to lose power due to a fault inside the PS customer's facility.

The PS customer must replace the blown fuses manually after each fault before the facility can return to service. Only trained, qualified personnel should replace the primary fuses. If MID approves the fuses, the PS customer should consider installing a negative-sequence relay and/or other devices to protect its facility against single-phase conditions (however, this is not a requirement). The PS customer is responsible for protecting their equipment against single-phase conditions, if they determine or feel that it is needed. Customers must keep a full set of replacement fuses (MID must approve the size and type) onsite.

6.3 Equipment Test Requirements

The tests in this section apply only to the MID required equipment at the POS, specifically, the breaker, the relays, and the tripping circuitry.

The customer must complete the following requirements:

- The equipment must pass all the tests described below.
- The customer must submit two copies of the test reports to MID a minimum of 10 working days before energizing the PS facilities.
- Each test report must identify the equipment tested and that identification must match that in the Single-Line or Three-Line diagrams.

The customer must meet the above requirements and obtain MID approval of the test reports at least three working days before MID energizes the PS. MID strongly recommends that the PS customer coordinate the test program with MID.

a) Circuit Breaker Tests

The PS customer must perform the following circuit breaker tests:

- Minimum-to-trip test at 70% or less of the nominal control voltage on all circuit breakers operated by MID-required relays.
- Micro-ohm test on the main circuit breaker(s) at the POS.
- Timing test showing the time from the trip initiation to the opening of the main poles.
- Proving insulation tests, as described below.

b) Providing Insulation

A 1,000 or 2,500 volt (V) DC megger test, or a 1,000 V high-pot test is acceptable for the insulation tests described below.

- Megger circuit breaker(s) at the POS that is operated by MID-required relays according to Table 1 below:

Table 1 Circuit Breaker Positions and Connections	
Circuit Breaker Position	Connection
Circuit Breaker Open	Each pole to ground, pole 1 to 2, pole 3 to 4, pole 5 to 6
Circuit Breaker Closed	Pole 1-ground, pole 3-ground, pole 5-ground
If the poles are in a common tank or cell	Pole 1 to 3, pole 3 to 5, pole 5 to 1

- Megger (phase-to-phase and phase-to-ground) all buses from the POS to the main breaker or fuses.
- The main circuit breaker(s) must have a dielectric test performed on the insulating medium (gas or oil). This test is not required for factory-sealed, circuit-switcher interrupters.

c) Tests for Current Transformers and Current Circuits

PS customers must perform the following tests for current transformers (CTs) and current circuits associated with MID-required relays:

- Check the saturation on all CTs. If this is not possible, a manufacturer's curve is acceptable.
- Prove the ratio of all CTs by using current (primary to secondary) or voltage (secondary to primary).
- Check the CTs for the proper polarity.

- Check the CT circuits for the proper connections.
- Check the continuity of the CTs by:
 - Applying primary or secondary current at the CT block.
 - Verifying that the proper current exists in each phase relay and the ground relay.

Customers must perform each test (primary to secondary) in all combinations to prove that all phase relays and ground relays have proper connections.

PS customers must also ensure that no loose wiring or parallel current path exist, by applying or injecting the current to achieve a secondary reading of 5 amperes (A) in each relay.

Check each phase of each current circuit feeding MID-required relays. Megger the total circuit with the ground wire lifted (to prove that only one ground exists).

d) Relay and Fuse Tests

The testing requirements for relays/fuses include:

- PS customers must field test the settings of MID-required relays to verify the following items:
 - The minimum operating point at which the relays picks up (minimum pickup).
 - Time delays at three different current-test points, in integral multiples of the minimum pickup that closely characterize the time-current curve.
 - Test results must be within the tolerances listed below:
 - Current/Voltage/Time +or- 10%
 - Impedance/Phase Angle +or- 0.05%
 - Frequency +or- 0.05 Hz
- Check all fuses for continuity before energizing.

e) Test Recommended (But Not Required by MID) for the PS Customer's Transformer

It is recommended (but not required by MID) that the customer perform the following tests to prove the insulation and turns ratio on their primary service transformers.

Proving Insulation:

A 1,000 or 2,500 volt (V) dc megger test or a 1,000 V high-pot test is recommended for any of the insulation and turns ratio on their primary service transformers.

- Megger the main transformer(s) winding-to-winding and each winding-to-ground.
- Megger the buses (phase-to-phase and phase-to-ground) from the POS to the main transformer.
- Perform a dielectric test on the main transformer(s) insulating medium (gas or oil).

Proving Ratios

Prove the main transformer(s) ratio(s) using one of the following methods:

- Turns-ratio tester.
- Voltage-ratio test on the final operating tap. Consult with MID to best match the present distribution-system voltage.

6.4 Pre-Energizing Test

Customers must meet the following requirements before MID will energize the PS:

- Ensure that any inspections required by local governmental and regulatory agencies are complete and any applicable permits are obtained before MID energizes the PS.
- An MID technical representative must witness trip checks of all MID-required relays. This may require injecting a signal to trigger the relay. This proves that the relay will handle the trip current of the circuit breaker. It also proves relay targeting. Jumpering the studs on the back of the relay are not acceptable.

6.5 Post-Energizing Operation

- After energizing the PS and adding load, a MID technical representative must witness the reading of the load current in each phase relay and the absence of load current in the ground relay.

7 Maintenance Protection Requirements

7.1 General Protection Requirements

a) Data the PS Customer Provides to MID:

The PS customer must provide the information necessary for MID to determine the preventative requirements of their specific PS installation. This information includes, but is not limited to, the following:

- Single-Line diagrams.
- Meter and Relay diagrams.
- Three-Line diagrams of required protective device.
- Control diagrams including tripping circuit.
- Proposed relay specifications and settings (if settings changes are part of the maintenance).
- Relay manufacturer, model, style, type, ranges, settings, and a copy of the relay instruction manual (if settings changes are part of the maintenance).
- Full-size phase and ground coordination curves showing full coordination with MID's system (if settings changes are part of the maintenance).
- A registered electrical engineer must prepare and stamp the fault-study results (if settings changes are part of the maintenance).

b) Data that MID Provides to the Applicant:

MID provides the following engineering data to the PS customer if settings changes are part of the maintenance:

- System fault-duty at the property line.
- Settings for MID source-side protection devices and the required clearance time to comply with MID protection standards.

7.2 Equipment Test Requirements

The tests in this section apply only to the MID required equipment at the POS, specifically, the breaker, the relays, and the tripping circuitry.

The customer must complete the following requirements:

- The equipment must pass all the tests described below.
- The customer must submit two copies of the test reports to MID.
- Each test report must identify the equipment tested and that identification must match that in the Single-Line or Three-Line diagrams.

a) Circuit Breaker Tests

The PS customer must perform the following circuit breaker tests:

- Minimum-to-trip test at 70% or less of the nominal control voltage on all circuit breakers operated by MID-required relays.
- Micro-ohm test on the main circuit breaker(s) at the POS.
- Timing test showing the time from the trip initiation to the opening of the main poles.
- Providing insulation tests, as described below.

b) Proving Insulation

A 1,000 or 2,500 volt (V) DC megger test, or a 1,000 V high-pot test is acceptable for the insulation tests described below.

- Megger circuit breaker(s) at the POS that is operated by MID-required relays according to Table 1 below:

Circuit Breaker Position	Connection
Circuit Breaker Open	Each pole to ground, pole 1 to 2, pole 3 to 4, pole 5 to 6
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- Megger (phase-to-phase and phase-to-ground) all buses from the POS to the main breaker or fuses.
- The main circuit breaker(s) must have a dielectric test performed on the insulating medium (gas or oil). This test is not required for factory-sealed, circuit-switcher interrupters.

c) Tests for Current Transformers and Current Circuits

PS customers must perform the following tests for current transformers (CTs) and current circuits associated with MID-required relays:

- Check the saturation on all CTs. If this is not possible, a manufacturer's curve is acceptable.
- Prove the ratio of all CTs by using current (primary to secondary) or voltage (secondary to primary).
- Check the CTs for the proper polarity.
- Check the CT circuits for the proper connections.
- Check the continuity of the CTs by:
 - Applying primary or secondary current at the CT block.
 - Verifying that the proper current exists in each phase relay and the ground relay.

Customers must perform each test (primary to secondary) in all combinations to prove that all phase relays and ground relays have proper connections.

PS customers must also ensure that no loose wiring or parallel current path exists by applying or injecting the current to achieve a secondary reading of 5 amperes (A) in each relay.

Check each phase of each current circuit feeding MID-required relays. Megger the total circuit with the ground wire lifted (to prove that only one ground exists).

d) Relay and Fuse Tests

The testing requirements for relays/fuses include:

- PS customers must field test the settings of MID-required relays to verify the following items:
 - The minimum operating point at which the relays pickup (minimum pickup).
 - Time delays at three different current-test points, in integral multiples of the minimum pickup that closely characterize the time-current curve.
 - Test results must be within the tolerances listed below:
 - Current/Voltage/Time +or- 10%
 - Impedance/Phase Angle +or- 0.05%
 - Frequency +or- 0.05 Hz
- Check all fuses for continuity before energizing.

- e) Test Recommended (but not required by MID) for the PS Customer's Transformer

It is recommended (but not required by MID) that the customer perform the following tests to prove the insulation and turns ratio on their primary service transformers.

Proving Insulation:

A 1,000 or 2,500 volt (V) dc megger test or a 1,000 V high-pot test is recommended for any of the insulation and turns ratio on their primary service transformers.

- Megger the main transformer(s) winding-to-winding and each winding-to-ground.
- Megger the buses (phase-to-phase and phase-to-ground) from the POS to the main transformer.
- Perform a dielectric test on the main transformer(s) insulating medium (gas or oil).

Proving Ratios:

Prove the main transformer(s) ratio(s) using one of the following methods:

- Turns-ratio tester.
- Voltage-ratio test on the final operating tap. Consult with MID to best match the present distribution-system voltage.

8 General Notes

The following General Notes apply to both new and existing PS customers.

- The MID system has an A-C-B counterclockwise rotation.
- Before making changes to MID-required protection equipment, the customer must submit the proposed changes to MID for review and approval.

Submit to:
Energy Services Department
Attn: Major Account Representative
1231 Eleventh St. Modesto, CA 95354

- The customer is responsible for maintaining MID-required protection equipment in accordance with MID maintenance and test practices **every 5 years**. After completing such tests, the customer must submit maintenance and test report documentation to MID for review and approval.
- Contact the local MID representative with any questions.
- The PS customer is responsible for providing all test equipment and qualified personnel to conduct the tests in the presence of a MID technical representative.
- MID must approve Protective System designs including relays, fuses, settings and test results before energization can proceed.
- The customer is required to send a copy of all Final Reports related to the PS to MID.

9 Project Scheduling Table

Step	Party	Typical Time Required by MID *	Action
1	Customer		Supply Project proposal including site plans and commercial load form.
2	MID	40 business days	Engineering reviews the site plan and load information. MID to give rates for either primary vs. secondary service
3	Customer		Customer decides on type of service.
4	MID	5 business days	MID gives initial requirements to customer.
5	Customer		Customer submits final site plan and load info.
6	MID	20 business days	MID reviews and approves final site plan and load info.
7	Customer		Customer submits main panel cut sheets, switchgear drawings, protection packages, pays fees, and submits application to PM.
8	MID	15 business days	MID approves all submittals if no changes needed
9	Customer		Customer calls USA to locate underground utilities, install conduit and substructure. Request MID and the appropriate local governing authority to inspect conduit, substructure, and electric facilities.
10	MID	10 business days	MID inspects trench, conduit, and substructure. This stage repeats itself until there is satisfactory inspections. Meter department inspects installed panel for EUSERC compliance.
11	Customer		Customer submits protection testing results.
12	MID	25 Business Days	MID reviews protection testing results and approves. MID pulls primary cable.

13	Customer	Close trench, connect conductors to main panel. Contact the appropriate local governing authority for on-site inspection of electric facilities. Your facilities pass inspection and you request service.	
14	MID	15 business days	Meter Department wires instrument transformers; MID reviews the local governing authority inspection tag to verify equipment conformance; if the equipment passes, pre energization testing is performed. If passed the meter is set and the panel is energized.
15	Customer and MID	45 business days	Customer performs post energization testing. MID witnesses testing



*- : This schedule is to be used only as a general guide of what tasks are anticipated and the projected completion time of the tasks. The exact timing of many of the items on this list depends on many factors including MID review and construction times which are completely dependent on the project managers. There are also items that are out of everyone’s control i.e. weather, natural occurrences. Customer response time will also determine length of the project.

This schedule is for a typical new primary service project. All items listed here may not apply to your project.

10 Local Governing Authorities Within MID's Service Area

City of Modesto Building Department

1010 Tenth St. 3rd Floor
Modesto, CA 95353
Phone: 209-577-5232

City of Waterford Building Division

101 E St.
Waterford, CA 95386
Phone: 209-874-2328
Fax: 209-874-9656

Stanislaus County Building Department

1010 Tenth St. Suite 3500
Modesto, CA 95354
Phone: 209-525-6557
Fax: 209-525-7759

City of Oakdale Community Development

455 S. Fifth Ave.
Oakdale, CA 95361
Phone: 209-845-3625
Fax: 209-848-4344

San Joaquin County Building Department

1810 Hazelton Ave.
Stockton, CA 95205
Phone: 209-468-3121

City of Escalon Building Department

2060 McHenry Ave.
Escalon, CA 95320
Phone: 209-691-7460
Fax: 209-691-7439

City of Riverbank Building Department

6617 3rd St.
Riverbank, CA 95367
Phone: 209-863-7128

City of Ripon Building Department

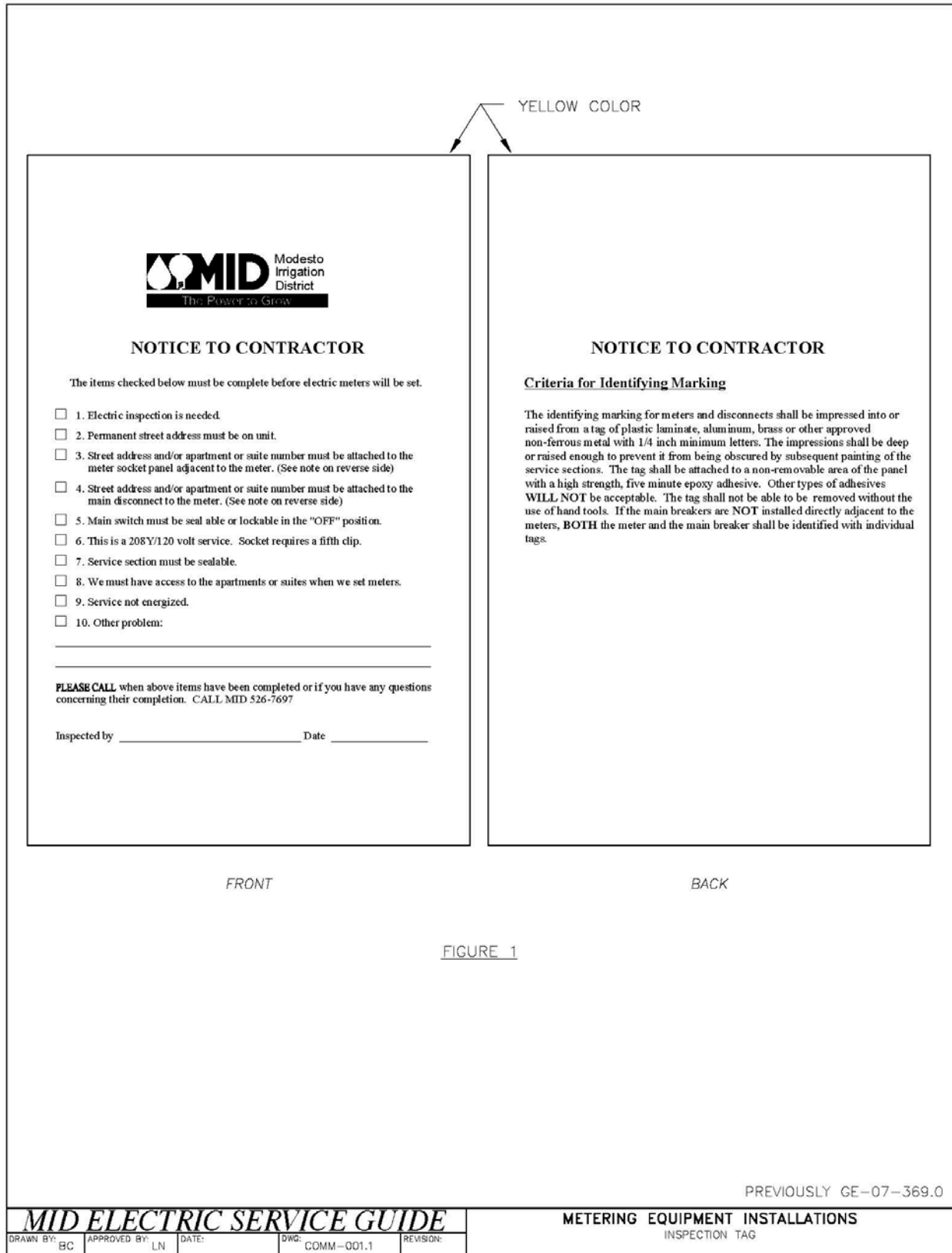
259 N. Wilma Ave.
Ripon, CA 95366
Phone: 209-599-2613
Fax: 209-599-2183

11 MID Contact Information

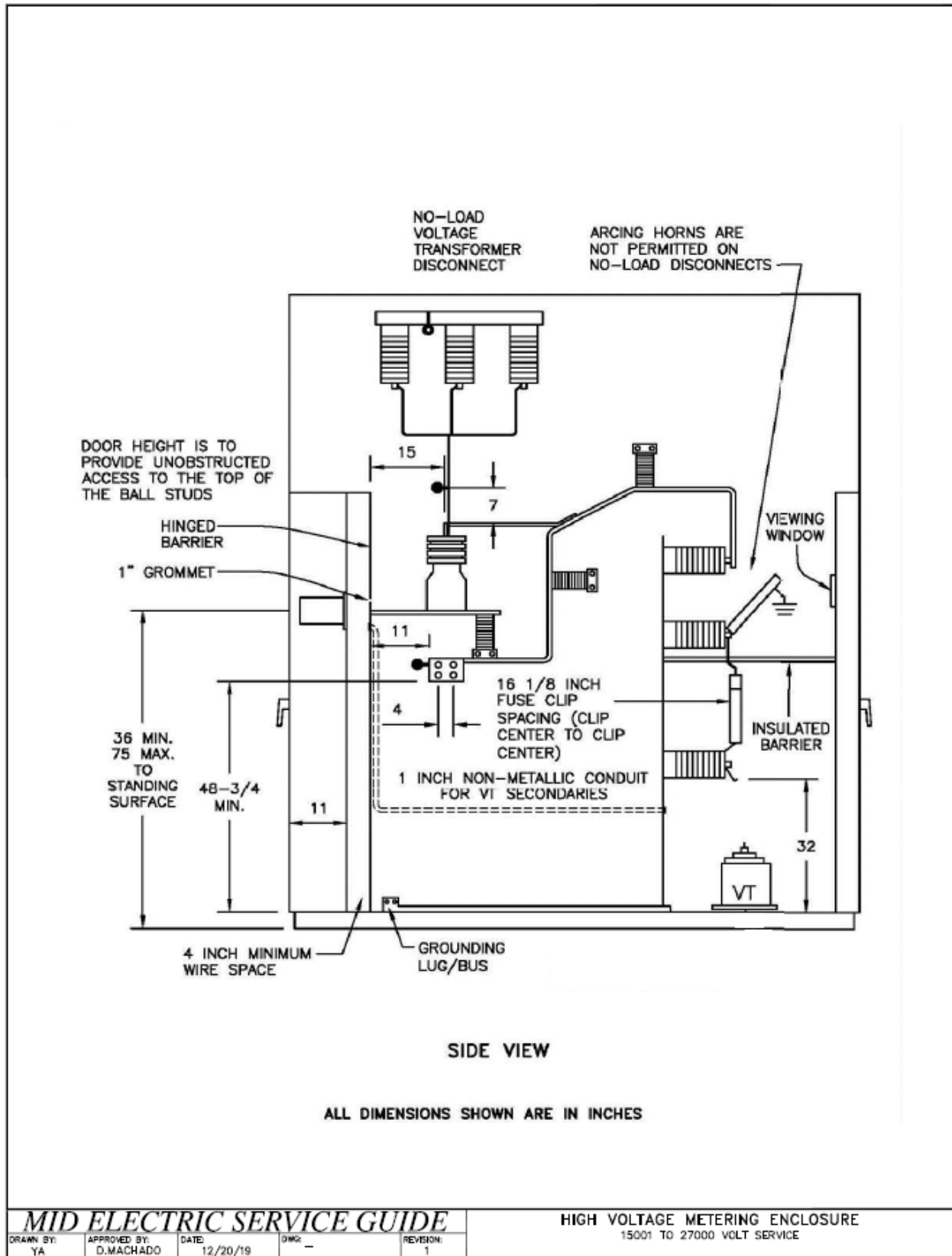
Modesto Irrigation District

1231 Eleventh Street (P.O. Box 4060)
Modesto, CA 95354 (Modesto, CA 95352)
Electric Engineering Department
Phone: 209-526-7337

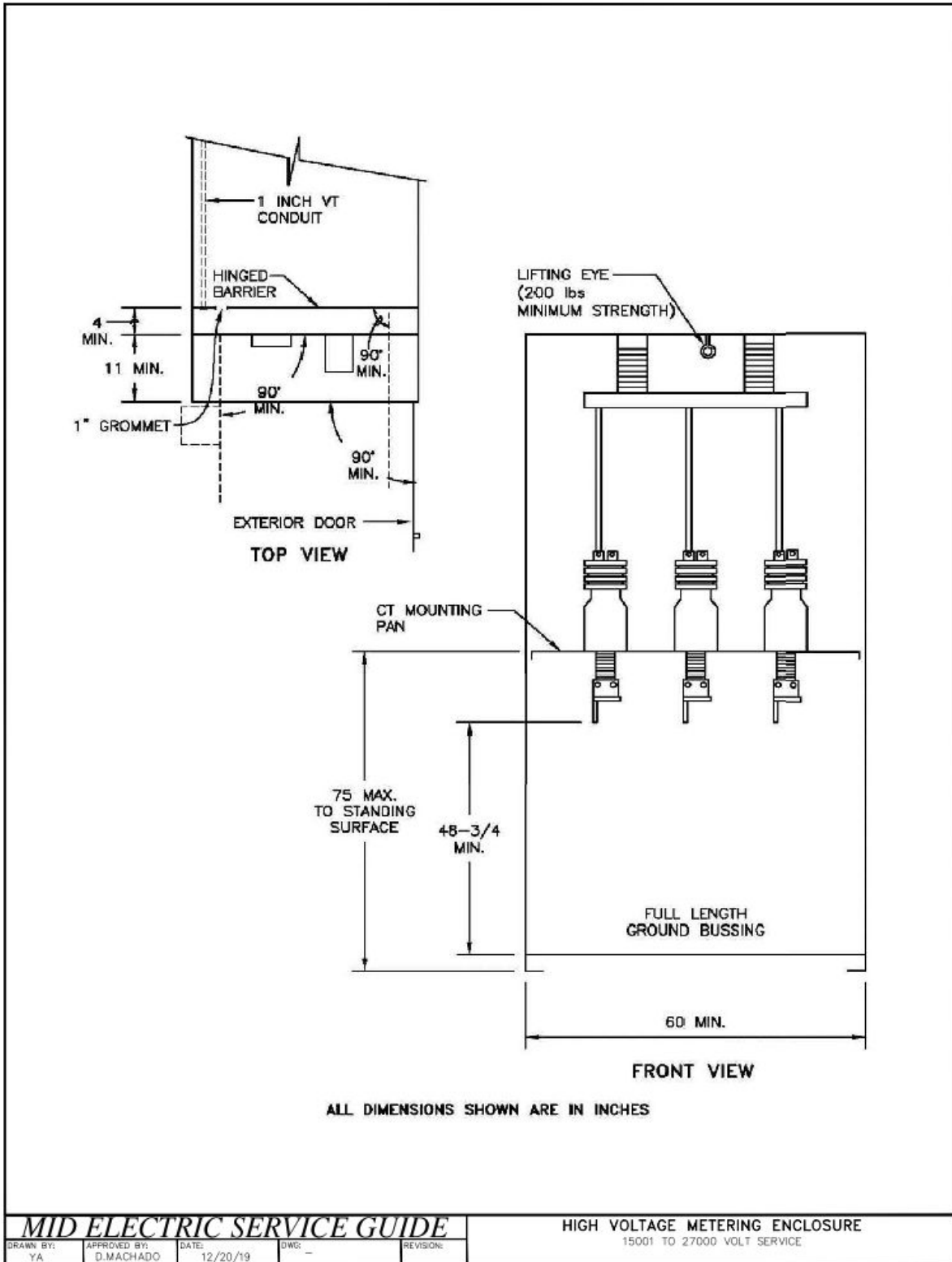
Drawing Pri 001.1: Inspection Tag



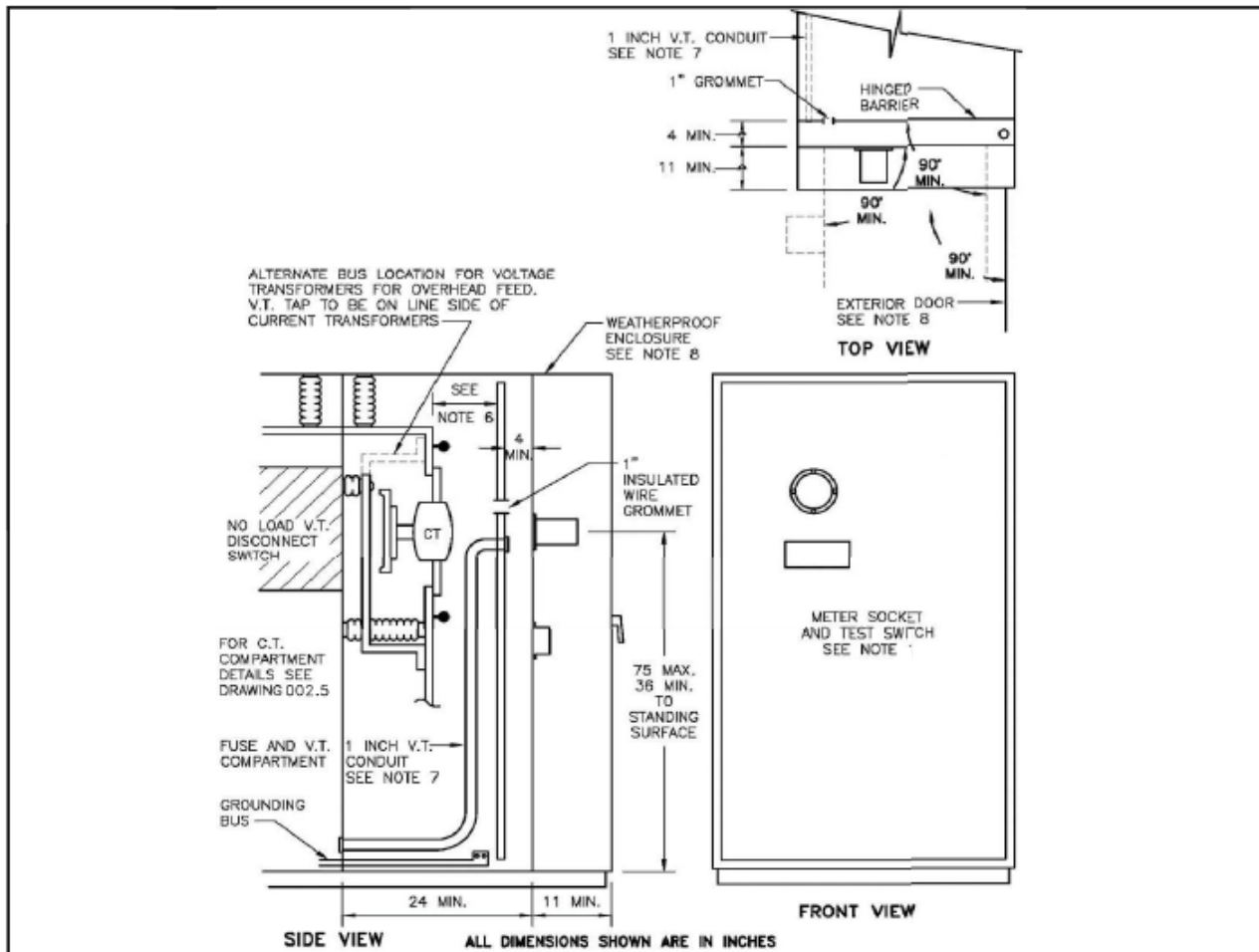
Drawing Pri 002.1



Drawing Pri 002.2



Drawing Pri 002.3



NOTES:

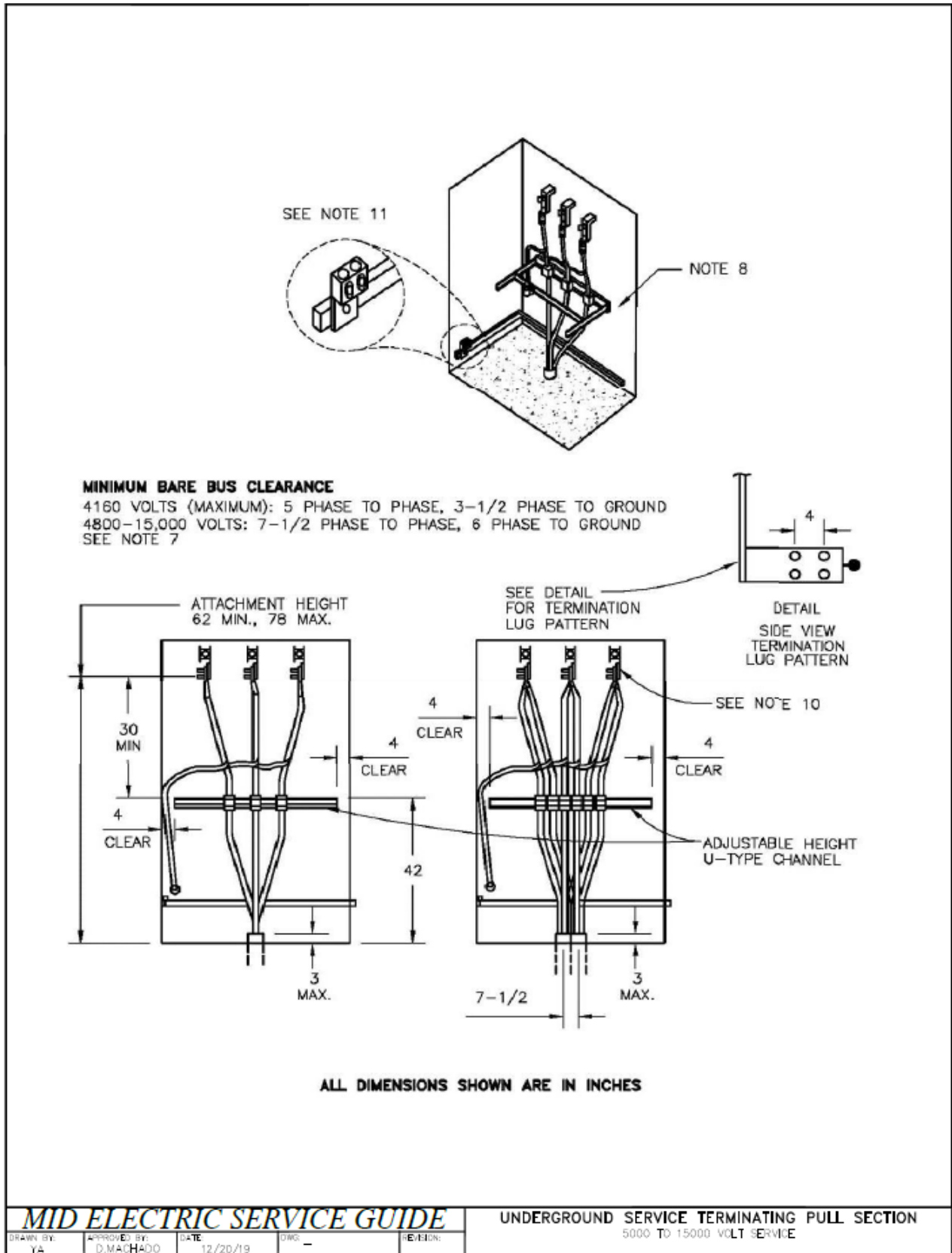
1. THE MASTER SOCKET PANEL SHALL BE A SINGLE, FULL-HEIGHT DOOR CONSTRUCTED OF 12-GUAGE (MINIMUM) STEEL AND FURNISHED WITH A METER RING, METER SOCKET, SEALING RING AND A SLOTTED OPENING WITH A REMOVABLE PLATE FOR INSTALLATION OF A TEST SWITCH. THE PLATE SHALL BE ATTACHED TO THE REAR OF THE PANEL WITH SCREWS THAT DO NOT PROTRUDE THROUGH THE FACE OF THE PANEL. THE EDGES OF THE PLATE AND THE SLOTTED OPENING SHALL BE SMOOTH TO PREVENT DAMAGE TO THE METER WIRING. SEE DRAWING 409 FOR METER SOCKET, TEST SWITCH CUTOUT AND REMOVABLE PLATE DETAILS.
2. THE PANEL SHALL BE EQUIPPED WITH HINGES. THE HINGES SHALL PERMIT THE PANEL TO OPEN TO 90-DEGREES AND SHALL BE EASILY INTERCHANGEABLE, RIGHT OR LEFT, ON THE METER SOCKET PANEL. REMOVABLE PIN TYPE HINGES SHALL BE REMOVABLE FROM THE TOP.
3. THE PANEL SHALL HAVE A HANDLE ATTACHED ON THE SIDE OPPOSITE THE HINGES.
4. PANEL SHALL BE SEALABLE ON THE SIDE OPPOSITE THE HINGES.
5. THE PANEL SHALL BE BONDED TO THE SWITCHBOARD ENCLOSURE WITH A FLEXIBLE, BRAIDED WIRE INSTALLED ACROSS THE HINGES.
6. A METAL ENCLOSED BARRIER WITH A CLEAR VIEWING WINDOW SHALL BE PROVIDED TO ISOLATE THE CURRENT TRANSFORMER COMPARTMENT FROM THE METER PANEL. THE BARRIER MUST BLOCK ALL ARC/FAULT ENERGY FROM COMING OUT OF THE CURRENT TRANSFORMER/PULL SECTION COMPARTMENT TOWARDS ANY PORTION OF THE DOORS DESCRIBED IN NOTE 8. THE BARRIER SHALL BE HINGED WITH A DOOR STOP AND MUST CLOSE WITH THE SERVING UTILITY'S CURRENT-TRANSFORMERS INSTALLED WITHOUT THE BARRIER CONTACTING THE TRANSFORMERS. THE HINGED METAL CLAD BARRIER MUST MAINTAIN PROPER CLEARANCES BETWEEN ALL EQUIPMENT ENERGIZED WITH PRIMARY VOLTAGE AND BONDED/GROUNDED EQUIPMENT. ENERGIZED EQUIPMENT INCLUDES BUT IS NOT LIMITED TO, CTS, "GROUND BALL STUDS" WITH COVERS INSTALLED, BUSES, ETC. THE INSPECTION WINDOWS MUST ALLOW FOR INFRARED TESTING AND VIEWING OF THE UPPER AND LOWER PRIMARY CT CONNECTIONS, "BALL GROUND STUDS," THE CT SECONDARY CONNECTIONS AND THE UTILITY'S INCOMING CONNECTIONS TO BUSES BELOW THE CTS.
7. ONE INCH, NON-METALLIC, VT AND C.T. CONDUIT SHALL BE LOCATED ON THE HINGED SIDE OF THE METER PANEL AT A MAXIMUM OF 75 INCHES ABOVE THE STANDING SURFACE. THE CONDUITS SHALL BE CONTINUOUS CONDUITS WITH NO JUNCTION BOXES OR "CONDULETS."
8. THE ALTERNATE METER PANEL ARRANGEMENT IS SHOWN AS A WEATHERPROOF ENCLOSURE WITH AN EXTERIOR DOOR.
9. THE UTILITY PULL SECTION HOUSING, THE UTILITY CURRENT TRANSFORMERS, THE UTILITY VOLTAGE TRANSFORMERS AND THE UTILITY REQUIRED VOLTAGE TRANSFORMER DISCONNECT CABINET/SECTIONS MUST BE OF METAL ENCLOSED DESIGN.

MID ELECTRIC SERVICE GUIDE

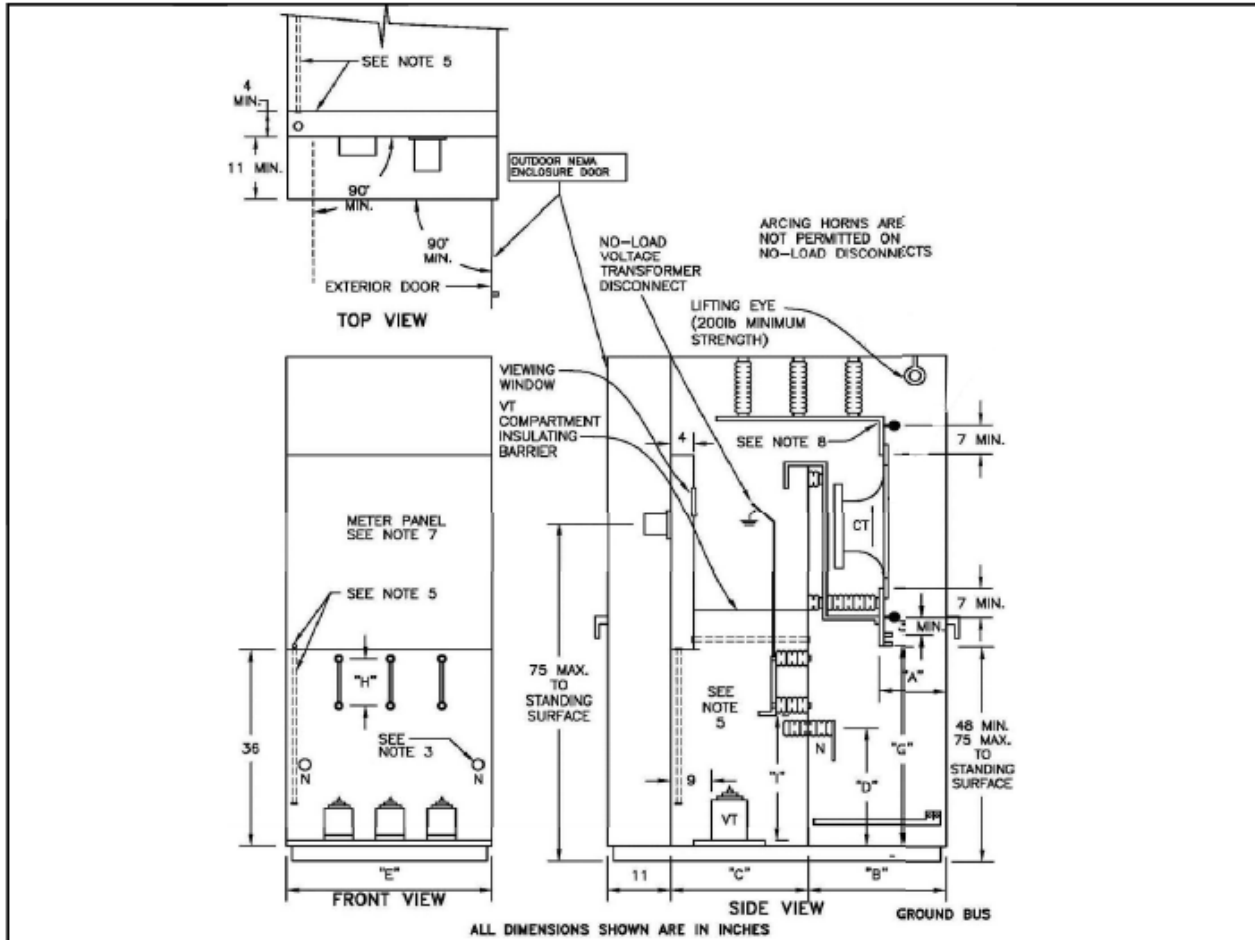
**HINGED METER PANEL WITH DUAL SOCKET
FOR 2400 TO 27000 VOLT SERVICE**

DRAWN BY: YA	APPROVED BY: D.MACHADO	DATE: 12/20/19	DWG: -	REVISION: 1
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Drawing Pri 002.4



Drawing Pri 002.5



NOTES:

- FOR REAR ACCESS DOOR REFER TO DWG 400, SHEET 2 NOTE 7.
- CONSULT SERVING UTILITY FOR NEUTRAL REQUIREMENTS IN 4 WIRE APPLICATIONS.
- PROVIDE FULL VOLTAGE AND BIL INSULATED NEUTRAL BUSHING FOR CONNECTION TO V.T. COMPARTMENT.
- PRIMARY TAPS FOR V.T.'S SHALL BE CONNECTED TO LINE SIDE OF METERING C.T.'S.
- ONE INCH, NON-METALLIC, V.T. AND C.T. CONDUIT SHALL BE LOCATED ON THE HINGED SIDE OF THE METER PANEL AT A MAXIMUM OF 75 INCHES ABOVE THE STANDING SURFACE. THE CONDUITS SHALL BE CONTINUOUS CONDUITS WITH NO JUNCTION BOXES OR CONDULETS.
- THE GROUNDING BUS SHALL EXTEND ON EITHER LEFT OR RIGHT SIDE OF THE ACCESS AREA OF THE C.T. COMPARTMENT. THE GROUNDING TERMINALS FOR USE WITH THE BALL STUDS SHALL BE TWO ALUMINUM-BOOIED MECHANICAL LUGS ACCEPTING A RANGE OF 6 AWG THROUGH 250 KCMIL CONDUCTORS, AND SHALL BE IDENTIFIED WITH A LABEL READING "SAFETY GROUNDING POINT FOR UTILITY USE ONLY".
- FOR SINGLE SOCKET METER PANEL REQUIREMENTS SEE DRAWING 408. FOR DUAL SOCKET PANEL REQUIREMENTS SEE DRAWING 409.
- BALL STUDS (1/2"-13 THREADS WITH INSULATING COVERS) FOR THE ATTACHMENT OF SAFETY GROUNDS SHALL BE PROVIDED ON THE LINE AND LOAD SIDE OF THE CURRENT TRANSFORMER (C.T.) BUS UNITS. THE STUDS SHALL BE LOCATED ON LESS THAN 7 INCHES FROM THE END OF THE BUS UNIT AND ORIENTED TOWARD THE COMPARTMENT ACCESS OPENING.

SPECIFICATIONS	VOLTAGE RATING	
	4800 Max.	4801-15000
MINIMUM BARE BUS CLEARANCE TO GROUND	3-1/2"	6"
MINIMUM BARE BUS CLEARANCE 0 TO 0	5"	7-1/2"
DIMENSION "A"	5" Min. 10" Max.	8" Min. 10" Max.
DIMENSION "B"	24" Min.	24" Min.
DIMENSION "C"	24" Min.	24" Min.
DIMENSION "D"	18" Min.	18" Min.
DIMENSION "E"	48" Min.	60" Min.
DIMENSION "G" (*See note below)	36-3/4" Min.	36-3/4" Min.
DIMENSION "H" FUSE MOUNTING (**)	8-1/2"	11-1/2"
CLIP CENTER		
DIMENSION "H" FUSE FERRULE DIAMETER	1-5/8"	1-5/8"
DIMENSION "I"	24"	24"

* DIMENSION "G" APPLIES WHEN USED AS A CABLE TERMINATION SECTION. CONSULT UTILITY.
 ** FUSE CENTERLINES SHALL BE ADJUSTABLE TO ALLOW FUSE VOLTAGE SELECTION AT NOT LESS THAN 7096 OF THE ACTUAL SYSTEM VOLTAGE APPLICATION.

MID ELECTRIC SERVICE GUIDE

HIGH VOLTAGE METERING ENCLOSURE
2400 TO 15000 VOLT SERVICE

DRAWN BY: YA	APPROVED BY: D.MACHADO	DATE: 12/20/19	DWG: -	REVISION: 1
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MODESTO IRRIGATION DISTRICT
 1231 Eleventh Street, PO Box 4060, Modesto, CA 95352
 Customer Service Phone: (209) 526-7337 Fax: (209) 526-7359
 Email address: CSCCommercial@MID.org

APPLICATION FOR NON-RESIDENTIAL ELECTRIC SERVICE(S)

-- MID USE ONLY --			
CSR Name	<input type="checkbox"/> Equivalent <input type="checkbox"/> Change in svc <input type="checkbox"/> New construction	Franchise District:	Tax District:
Account #:	Anticipated Load:	Rate:	Reactive Meter: <small>Yes No</small>
Svc Pt #:	NAICS Code:	Voltage:	
Deposit Amount/Reason for waiving:	Map grid seq #:	Class 1 Code:	
CS Approved by:	Date:	Mktg Approved by:	Date:
		Engr Approved by:	Date:

Please fill out the application completely, and attach supporting documentation. Sign and return to MID in the office, by fax or email.
 In accordance with MID Rules & Regulations, a minimum deposit of \$300, or three times the highest monthly bill, may be required to activate service.

Today's date: <u>9/10/2015</u>	Service start date: <u>12/1/2015</u>	Power On? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Type of Service: <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Lighting <input checked="" type="checkbox"/> Ag Pump – horsepower: <u>50</u>		
New construction: <input type="checkbox"/> Yes <input type="checkbox"/> No Square footage of building or work area: _____		

1. Legal billing name: John Doe
2. Doing business as (DBA): Business Name
Name of Organization or Entity
3. Service address: 1234 Sample Drive Modesto 95352
Street City Zip Code
4. Mailing address: PO Box 1111 Modesto 95352
Street City Zip Code
5. Type of business: Distribution/Trucking Company Franchisee? Yes No
Complete description of goods or services rendered
6. Number of years in business: 10 Business phone: 209-123-4567 Fax number: 209-456-7890
7. Type of ownership: Sole Proprietor Partnership LLC LLP Corporation Public Agency Other
8. If corporation, LLP or LLC list state where filed: California Year filed: 2004
9. Taxpayer ID number (EIN or SSN): 123456789 Business License number: 1234567
Copy of documents required Copy of license required
10. If business name is legal billing name, fictitious name file number: 11-2345 Filing date: 9/8/2010
11. Address of corporate office or residence address if sole proprietor: _____

12. Name and information for all corporate officers, partners, or sole owners:

Name	Title	Phone	Driver's License & State	Date of Birth
<u>John Doe</u>	<u>President/CEO</u>	<u>209-123-4567</u>	<u>D1234567</u>	<u>1/18/75</u>
<u>Jane Doe</u>	<u>Vice President</u>	<u>209-456-0987</u>	<u>D9876543</u>	<u>5/30/76</u>

13. Contact for billing inquiries: Jane Doe Vice President 209-456-0987 janedoe@email.com
Name Title Phone email address

14. Name of person completing form: Jane Doe Vice President
Name Title

Go to <http://www.mid.org/forms/> for the most current Application.

Signature (required): _____	Owner or Corporate Officer	Driver's License number & State	Date of Birth
<u>Jane Doe</u>	<u>Vice President</u>	<u>9/10/2015</u>	
<small>Print Name</small>	<small>Title</small>	<small>Date</small>	

Note: In accordance with published MID regulations, supporting documents verifying the legal billing name may be required.

Sample 1: Application for Non-Residential Electric Services

Commercial Load Information Form

Modesto Irrigation District
 ATTN: Electrical Engineering
 PO Box 4060
 1231 11th Street
 Modesto, California 95352
 Fax: (209) 526-7357

Date: _____

Project: Sample Warehouse Expansion

Location (Street): 1234 Sample Way, Modesto, CA 95353

Owner (Name): John Doe

Telephone: (209) 555-4444

Address: 5687 Data Drive, Modesto, CA 95353

Engineer (Name): David Doe

Telephone: (209) 566-5664

Address: 7896 Sample Ct., Modesto, CA 95352

Estimated Date Ready for Service: 9-15-2015 Pre-Construction Meeting Date: _____

Begin Rough Grading Date: _____

General Information

Approximate Square Footage: 8528 Type of Business: Warehouse

Electric Load Information

	Initial		Future		Initial		Future		
Lighting	3.4	kW		kW	Receptacles	1.0	kW		kW
Water Heater	1.5	kW		kW	Duct Air Heaters		kW		kW
Unit Air Heaters		kW		kW	1Ø Air Conditioners		HP/Ton		HP/Ton
Cooking Units		kW		kW	3Ø Air Conditioners	20	HP/Ton		HP/Ton
X-Ray (input)		kW		kW	1Ø Heat Pump		HP/Ton		HP/Ton
Welders		kW		kW	3Ø Heat Pump		HP/Ton		HP/Ton
Aux. Strip Heater		kW		kW	1Ø Misc. Motors		HP/Ton		HP/Ton
3Ø Motors		HP		HP	Largest 3Ø Motor		HP/Ton		HP/Ton

Total Initial Connected Electrical Load: 65 kW Size Main Fused Switch: 600 Amps

Total Future Connected Electrical Load: _____ kW Estimated Date of Future Load: _____

Type of Service Desired: (circle one) Overhead Underground

Phase: 3 Voltage: 208/120 Wires: 4 Estimated Initial Date: _____

- Site Plan: () One site plan in dxf or Autocad format on a CD
- () One sepia or two reproducible hard copies of the site plan; scaled
- (X) Emailed electronic file to electric_standards@mid.org

Signature of Applicant _____

Go to <http://www.mid.org/forms/> for the most current Form.

Office Use Only			
Application Complete	<input type="checkbox"/> Yes <input type="checkbox"/> No	Checked By: _____ If no, explain: _____	Date: _____

9/2015



APPLICATION FOR NON-RESIDENTIAL ELECTRIC SERVICE(S)

--- MID USE ONLY ---

CSR Name	Equivalent Change in svc New construction	Franchise District:	Tax District:
Account #:	Anticipated Load:	Rate:	Reactive Meter: Yes No
Svc Pt #:	NAICS Code:	Voltage:	
Deposit Amount/Reason for waiving:	Map grid seq #:	Class 1 Code:	
CS Approved by: Date:	Mktg Approved by: Date:	Engr Approved by: Date:	

Please fill out the application completely, and attach supporting documentation. Sign and return to MID in the office, by fax or email. In accordance with MID Rules & Regulations, a minimum deposit of \$300, or three times the highest monthly bill, may be required to activate service.

Today's date _____	Service start date: _____	Power On? <input type="checkbox"/> Yes <input type="checkbox"/> No
Type of Service: <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Lighting <input type="checkbox"/> Ag Pump - horsepower: _____		
New construction: Yes No Square footage of building or work area: _____		

1. Legal billing name: _____
2. Doing business as (DBA): _____
Name of Organization or Entity
3. Service address: _____
Street City Zip Code
4. Mailing address: _____
Street City Zip Code
5. Type of business: _____ Franchisee? Yes No
Complete description of goods or services rendered
6. Number of years in business: _____ Business phone: _____ Fax number: _____
7. Type of ownership: Sole Proprietor Partnership LLC LLP Corporation Public Agency Other
8. If corporation, LLP or LLC list state where filed: _____ Year filed: _____
Copy of documents required
9. Taxpayer ID number (EIN or SSN): _____ Business License number: _____
Copy of license required
10. If business name is legal billing name, fictitious name file number: _____ Filing date: _____
11. Address of corporate office or residence address if sole proprietor:

12. Name and information for all corporate officers, partners, or sole owners:

Name	Title	Phone	Driver's License & State	Date of Birth
Name	Title	Phone	Driver's License & State	Date of Birth
Name	Title	Phone	Driver's License & State	Date of Birth
13. Contact for billing inquiries: _____

Name	Title	Phone	email address
------	-------	-------	----------------------
14. Name of person completing form: _____

Name	Title	Telephone
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Signature (required): _____	Owner or Corporate Officer	Driver's License number & State	Date of Birth
_____	_____	_____	_____
Print Name	Title	Date	34

Note: In accordance with published MID regulations, supporting documents verifying the legal billing name may be required.

Commercial Load Information Form

Modesto Irrigation District
 ATTN: Electric Engineering
 PO Box 4060
 1231 11th Street
 Modesto, California 95352
 Fax: (209) 526-7357

Date: _____

Project: _____

Location (Street): _____

Owner (Name): _____ Telephone: _____

Address: _____

Engineer (Name): _____ Telephone: _____

Address: _____

Estimated Date Ready for Service: _____ Pre-Construction Meeting Date: _____

Begin Rough Grading Date: _____

General Information

Approximate Square Footage: _____ Type of Business: _____

Electrical Load Information

	Initial		Future			Initial		Future	
		kW		kW			kW		kW
Lighting					Receptacles				
Water Heater		kW		kW	Duct Air Heaters		kW		kW
Unit Air Heaters		kW		kW	1Ø Air Conditioners		HP/Ton		HP/Ton
Cooking Units		kW		kW	3Ø Air Conditioners		HP/Ton		HP/Ton
X-Ray (input)		kW		kW	1Ø Heat Pump		HP/Ton		HP/Ton
Welders		kW		kW	3Ø Heat Pump		HP/Ton		HP/Ton
Aux. Strip Heater		kW		kW	1Ø Misc. Motors		HP/Ton		HP/Ton
3Ø Motors		HP		HP	Largest 3Ø Motor		HP/Ton		HP/Ton

Total Initial Connected Electrical Load: _____ kW Size Main Fused Switch: _____ Amps

Total Future Connected Electrical Load: _____ kW Estimated Date of Future Load: _____

Type of Service Desired: (circle one) Overhead Underground

Phase: _____ Voltage: _____ Wires: _____ Estimated Initial Date: _____

- Site Plan: () One site plan in dxf or Autocad format on a CD
 () One sepia or two reproducible hard copies of the site plan; scaled
 () Emailed electronic file to electric.standards@mid.org

 Signature of Applicant

Office Use Only	
Application Complete <input type="checkbox"/> Yes <input type="checkbox"/> No	Checked By: _____ Date: _____ If no, explain: _____

Service Guide Customer Input Form

The Modesto Irrigation District strives to provide excellent customer service. In an effort to improve our Service Guides, this form is provided so you can share your comments and suggestions. Please fill out this form and submit it with along with your comments. Please be as specific as possible. Once the form is complete, email the form to our Standards Department at electric_standards@mid.org, or mail the form to the Modesto Irrigation District office, attention Electric Standards.

Modesto Irrigation District
 Attn: Electrical Standards
 PO Box 4060
 Modesto CA, 95352-4060

Name: _____ Date: _____

Phone Number: _____ Email: _____

Indicate which Service Guide your comments pertain to:

- | | |
|--|--|
| <input type="checkbox"/> Residential | <input type="checkbox"/> Solar Photovoltaic |
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Electric Vehicle |
| <input type="checkbox"/> Commercial and Industrial | <input type="checkbox"/> Residential Subdivision |
| <input type="checkbox"/> Temporary | <input type="checkbox"/> Street Lighting and Miscellaneous |

	Not Effective	Somewhat Effective	Effective	Very Effective	N/A
Organization of Service Guide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Requirements Were Clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Effectiveness of Sample Forms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Effectiveness of Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Effectiveness of Service Guide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

