

# **MUSCATINE POWER AND WATER ELECTRIC SERVICE RULES**

**APPROVED BY THE BOARD OF TRUSTEES: JUNE 28, 2022  
AMENDED 5/30/2023**

## **WELCOME TO MUSCATINE POWER AND WATER**

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We designed this handbook to help you understand Muscatine Power and Water's processes and procedures in order to provide you the best service possible. It covers topics ranging from service installation to meter reading to billing. Keeping you well informed is important to us, so we have compiled our Service Rules in this concise and easy-to-use format. If you have any questions about the Service Rules or Muscatine Power and Water, please feel free to call us at 563-263-2631 or stop at our Business Office at 3205 Cedar Street in Muscatine.

Remember, exceptional service is our goal and what keeps Muscatine Power and Water - Your Reliable Neighbor.

This document may also be found on our web site at [www.mpw.org](http://www.mpw.org).

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# STATEMENT OF OPERATION

## PRELIMINARY STATEMENT

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Muscatine Power and Water's (MPW) utility services are provided in accordance with these Service Rules and applicable Utility policies and procedures. These rules are intended to ensure safe installation of facilities, long life of infrastructure, and that all customers are treated fairly. By accepting Utility services, customers agree to be bound by these Service Rules and applicable Utility policies and procedures.

The Board of Water, Electric, and Communications Trustees of the City of Muscatine, Iowa has approved and published the Service Rules. They are issued pursuant to Chapter 476, Code of Iowa, and govern the distribution of electricity by the Utility within its exclusive service area as approved by the Iowa Utilities Board (IUB).

These Service Rules are subject to change from time to time to ensure safe and efficient service and to comply with city, state, and federal statute and applicable administrative law.

These Service Rules are intended to govern the overall operation of the Electric Utility. Where a rule cannot be reasonably applied to a specific situation, MPW reserves the right to decide on a resolution to the issue.

The IUB regulates certain aspects of Utility operations. Regulatory authority of the IUB is limited to those statutes referenced in Section 476.1B of the Code of Iowa. All other Utility operations fall under the authority of the Board of Water, Electric, and Communications Trustees of the City of Muscatine, Iowa.

The Utility's records are maintained at the MPW Business Office located at 3205 Cedar Street, Muscatine, Iowa. Address all written correspondence to Muscatine Power and Water, 3205 Cedar Street, Muscatine, Iowa, 52761.

## DEFINITIONS

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The following words and phrases shall have the following meanings, as used in these Service Rules.

### *Applicant*

Means a person, partnership, association, firm, public or private corporation, governmental agency, or legal entity applying to the Utility for service provided for in these Service Rules.

### *Application Fee*

Means a non-refundable fee submitted to MPW by the customer and required before MPW will begin work on the Application Packet for a Customer Renewable Energy project.

### *Avoided Cost*

Means what it would have cost MPW to generate or contract for the energy in the absence of the Customer Renewable Generation.

### *Breaker*

Means an over-current protective device.

### *Code*

Means the official code of laws for the State of Iowa.

### *Complaint*

Means a statement or question by anyone, whether a Utility customer or not, alleging a wrong, grievance, injury, dissatisfaction, illegal action or procedure, dangerous condition or action, or Utility obligation.

### *Contiguous Locations*

Means those locations where one customer has more than one building on the same property or on adjacent property separated only by a public right-of-way.

***Contract***

Means any claim, account, or demand against, or in agreement with the Utility, express or implied.

***Contractor***

Means any person, firm, or corporation performing work for a customer.

***Creep***

Means any registration of the meter when all items within the building are turned off.

***Customer***

Means any person, firm, association, or corporation, any agency of the federal, state, or local government, or legal entity responsible by law for payment for the electric service from the Utility.

***Customer Renewable Generation***

Means regardless of whether the customer owns, leases or has some other arrangement concerning the development and operation of the system; it is a self-contained electrical generating system (including but not limited to solar panels, PV systems, and wind turbines) comprising of all necessary wiring, Inverter(s), manually operated load-break disconnect switch with a locking mechanism in the open position, and anti-Islanding protection, such system is located on customer's property.

***Delinquent or Delinquency***

Means an account for which a service bill or service payment agreement has not been paid in full on or before the last date for timely payment.

***Demand***

Means the quantity of electrical power needed by the customer at a given point in time, measured in kilowatts (kW).

***Electric Rate Sheet***

Means the electric section of the Rate Sheet produced by MPW addressing customers' water and electric rates in detail including generation; available on [www.mpw.org](http://www.mpw.org).

***Electric Service***

Means furnishing to the public any power and energy for compensation.

***Energy***

Means electric energy measured in kilowatt-hours (kWh).

***Engineering Fee***

Means an additional non-refundable fee to address the cost of MPW evaluating the impact of a proposed Customer Renewable Generation project on the MPW Electric System. The fee is assessed when there is a possibility of a Customer Renewable Generation project impacting other customers on the MPW Electric System or for the project to impact reliability. The full cost of such studies is the responsibility of the customer and must be paid in full before a project will be allowed to interconnect to the MPW Electric System. The fee, if needed, is based on consultant fees or MPW labor costs to complete the MPW Electric System study(s).

***Governing Body***

Means the Board of Water, Electric, and Communications Trustees of the City of Muscatine, Iowa.

***IAC***

Means the Iowa Administrative Code, as amended, and is used in designating references within the Code.

***Inverter***

Means equipment that converts direct current (DC) to alternating current (AC) in a Photovoltaic (PV) System.



*Islanding*

Means a condition in which load and distributed resources/generation remains energized while isolated from the utility.

*IUB*

Means Iowa Department of Commerce, Iowa Utilities Board.

*Maximum Demand*

Means the greatest demand required by a customer during a specific length of time measured in kilowatts.

*Meter*

Means, unless otherwise qualified, a Utility-approved device that measures and registers the quantity of electrical energy used.

*Meter Socket*

Means the device to which the meter is attached.

*MPW Electric System*

Means all equipment and facilities used by MPW to provide electricity to its customers up to the Point of Common Coupling (PCC).

*Net Metering*

Means the difference of the energy used from the energy generated over a period of time.

*Overtime Charges*

Means when it is necessary for work to be performed outside of normal MPW business hours, overtime charges will apply at customer's expense.

*Point of Common Coupling (PCC)*

Means typically, the electric meter, unless otherwise stated.

*Power*

Means electric power measured in kilowatts.

*Premises*

Means a tract of land, building, or part of a building or facility to which services are provided.

*Service Rules*

Means these rules as adopted by the Board of Water, Electric, and Communications Trustees of the City of Muscatine, Iowa.

*Tampering*

Means any unauthorized connection or usage of service as defined in the appropriate theft of utility services policies or procedures.

*Timely Payment*

Means a payment on a customer's account made on or before the due date shown on a current bill for service, or in conformance with an agreement between the customer and the Utility for a series of partial payments to settle a delinquent account, as the date which determines application of a late payment charge to the current bill or future collection efforts.

*Utility*

Means Muscatine Power and Water (MPW).

# **SERVICE**

## TYPE OF SERVICE

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### ***Extent of Service (Availability)***

Throughout MPW's assigned service area, the Utility makes available electric service of character determined by MPW to meet the needs of the customer. In providing the service, the Utility generally constructs, owns, and maintains all facilities up to, but not including, the point at which the service wire attaches to the premises. (See specific rules in the *Overhead Services* and *Underground Services* sections.) MPW also owns and maintains the meter.

### ***Electrical Safety for Customers***

Electricity is dangerous if not used properly. Injury and death can result from improper use.

Customers are responsible for installing and maintaining safe appliances and equipment that is compatible with electrical service.

Electronic equipment is susceptible to damage due to voltage spikes or surges. Customers should consider installing transient voltage surge suppression (surge protectors) at the main service entrance and point of use. If a momentary dip or outage would cause a loss of data, interruption in operation, or other harm, an uninterruptible power supply (battery backup) should be considered.

Customers are responsible for keeping their property free of any interference or hazards that could affect the Utility's service or equipment on the customer's property. Contact MPW for advice or assistance in handling potential interferences with service lines (e.g., tree limbs, roof features, animal nests, construction, etc.).

### ***Electricity Characteristics***

The following classes of service will normally be available to the customer, dependent upon load and location:

#### **Secondary Voltage**

<b>Voltage</b>	<b>Phase</b>	<b>Wye</b>	<b>Amps</b>
120/240 volt	Single		Up to 400 amperes
120/208 volt	Three	Four-wire	Up to 2000 amperes
277/480 volt	Three	Four-wire	Up to 3000 amperes
2400/4160 volt	Three	Four-wire	Up to 350 amperes

In three-phase locations where 120/240 volt single-phase service is desired, MPW may elect to provide 120/208 volt single-phase service, up to 400 amperes. Other secondary voltages may be made available for special service requirements at the Utility's option.

The secondary service voltage levels are nominal and may vary within the generally accepted limits of regulation as set forth in the IAC, Section 199, Chapter 20, *Service Supplied by Electric Utilities*.

#### **Primary Voltage Service**

Service at primary voltage (13800/7967 volt, three-phase, four-wire wye) may be available for large power loads at MPW's discretion.

### ***Character Restrictions***

The character of electric service to be made available to each customer shall be dependent upon the following:

- The service available at the proposed location.
- The size of the load.
- The operating characteristics of the customer's equipment.

However, MPW is not liable for any damages arising from interruptions or fluctuations in service. In addition, MPW is not liable for damage to any customer or third-party equipment resulting from the use of its service or from the presence of Utility equipment on customer's premises.

## **ENGINEERING PRACTICES**

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MPW facilities shall be constructed, installed, maintained, and operated in accordance with accepted good engineering practices in the electric industry to ensure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.

MPW requires customers to comply with applicable provisions of the publications listed below as standards of accepted good practice, unless otherwise ordered by the IUB.

- National Electric Code, ANSI/NFPA-70
- Recommended Practice for Grounding of Industrial and Commercial Power Systems, IEEE Std. 142 (the IEEE Green Book), or Grounding of Industrial and Commercial Power Systems ANSI C114.1
- City Electric Code of Muscatine, Iowa
- National Electric Safety Code (NESC)
- Iowa Electric Safety Code
- American Standard Code for Electricity Metering
- American National Standards Institute (ANSI)
- Institute of Electrical and Electronics Engineers (IEEE) Standards

In the case of a conflict between the standards listed, the most stringent standard shall govern to the extent required.

References to the publications listed above shall be deemed to be the latest edition or revision accepted by the IUB as a standard of good practice.

## **SPECIAL CONDITIONS OF SERVICE**

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### ***Requirements for Electric Loads and Motors***

All installations of electrical power loads on the Utility's system shall conform to the safety rules as set forth in the National Electrical Code and other such codes or specifications as may be applicable.

#### **Protective Devices**

Customers must provide suitable protective devices for motors and equipment to prevent damage caused by: improper or dangerous operation in case of overload, loss of voltage, low voltage, and single-phasing of polyphase motors, reversal of phase-rotation of polyphase motors, or the re-establishment of normal service after any of the above. MPW is not responsible for motor or equipment damage caused by any of the above conditions. These devices should only be

installed after contacting the MPW Engineering department regarding requirements for protective equipment.

### **Large Motor Application**

Customers must apply to MPW to install a motor with an inrush current of an amperage that would overload MPW's distribution system. MPW must approve the application before it can be installed. All motors in excess of 5 horsepower single-phase and 25 horsepower three-phase shall be installed with soft start. MPW reserves the right to limit the number and size of motors installed on single-phase and three-phase services. These motors should only be installed after contacting the MPW Engineering department regarding requirements for motor-starting equipment, wiring, and other specifications.

### **Tankless Electric Water Heaters**

Tankless electric water heaters, also known as on-demand water heaters, use a large amount of energy to heat the water. Tankless water heaters shall not be installed without confirming that the electric service is of sufficient capacity to supply the power to heat the water safely. These water heaters should only be installed after contacting the MPW Engineering department to confirm the service can meet the electrical needs of the equipment.

### **Electric Vehicle Charging Stations**

Electric vehicle charging stations should only be installed after contacting the MPW Engineering department to ensure MPW's service can accommodate the charging station. Electric vehicle charging stations can vary greatly in capacity and it is important for MPW to evaluate the impact on the distribution system before a charger is installed.

## ***Maximum Single-Phase Loads – Transformer Upgrade***

In each case where the simultaneous single-phase load is about to exceed the capability of the installed transformer, it is the customer's responsibility to arrange with MPW for the installation of a suitable transformer before such simultaneous load exceeds the capability of the presently installed transformer.

MPW reserves the right to limit the capacity of any single-phase service when, in its judgment, such service will impair the service to other customers or such service shall exceed the capacity of the Utility's facilities.

## ***Corrective Equipment***

Welders, hoists, corn dryers, x-ray machines, and other equipment where the use of electricity is intermittent or the load fluctuates rapidly, shall be installed and used in such a manner as to not adversely affect voltage regulation or impair the Utility's service to other customers. The customer will be required to install and maintain, at their own expense, suitable corrective equipment to eliminate fluctuating voltage or power factor conditions or other disturbance detrimental to other customer's service or to MPW's use of its own equipment.

## ***Arc Welding Installation***

Home welders cannot be connected to residential secondaries of the distribution system except by special permission from MPW. Ordinarily, home welders must have a separate transformer installed and separate service extended to the home or garage that is not connected to the regular lighting secondary to avoid flicker and voltage disturbances.

The customer must pay all costs for installing the additional transformer and service. Separate metering and billing will be provided at the commercial rate.

### ***Energy Conservation Certification for New Structures***

MPW cannot extend or provide service to any structure completed after April 1, 1984, unless the owner or the builder of the structure has certified to MPW that the building conforms to the energy conservation requirements adopted under IAC subrule 661-16.801(103A) as amended and updated by subrule 661-16.802(103A).

If this compliance is already being certified to a state or local agency, a copy of that certification must be provided to the Utility. If no state or local agency is monitoring compliance with these energy conservation standards, the owner or builder shall certify that the structure complies with the standards by signing a form provided by the Utility.

No certification will be required for structures that are not heated or cooled by electric service or are not intended primarily for human occupancy.

### ***Other Special Conditions of Services – Transformer Size***

MPW will determine the size of transformers to be installed that will provide adequate service and voltage regulation for all types and classifications of service. Transformer size will be determined by load information supplied by the customer and/or comparison to a similar type load requirement.

### ***Industrial Customers***

All customers with a demand of 1,000 kW (Industrial Customers) or more are subject to the following additional terms and conditions.

#### **Character of Service/Point of Delivery**

Electric energy furnished shall be at a mutually determined voltage. The Utility will maintain at least one transformer, with point of delivery being the secondary terminals of the transformer. At the Utility's discretion, additional transformers or service specifications may be made by separate agreement with Industrial Customers.

#### **Service Facilities**

The Utility shall deliver service at the secondary terminals of its transformer to be located at a mutually agreeable point within the Industrial Customer's plan premises. The Industrial Customer shall furnish the connectors and the Utility shall make the connections to the secondary terminals of the transformer. Facilities schedules may be established by the Utility for Industrial Customers.

#### **Access and Relocation**

Industrial Customers shall provide the Utility with the necessary right-of-way or easement for the incoming power lines and space for the transformers, concrete pads, and conduit for primary cables. Industrial Customers must permit duly authorized MPW representatives to enter the premises at all reasonable times in order to carry out Utility-related tasks and services. Should the Industrial Customer request the Utility to relocate its lines, equipment, or both, the Industrial Customer will reimburse the Utility the actual cost for such relocation.

#### **Rates**

Rates for Industrial Customers shall be established by the Utility on a periodic basis.

#### **No Resale**

Industrial Customers shall not sell or otherwise dispose of any Utility-supplied electricity to any other party except to a corporation or joint venture in which the Industrial Customer directly owns or controls an interest.

**Maintenance Scheduling**

MPW and the Industrial Customer shall mutually agree in advance from time to time upon the schedule for regular maintenance of the Utility's facilities which may affect the supply of electric energy to the Industrial Customer. Not all activities that could interfere with the provision of steady electric service can be anticipated and interruptions may occur from time to time.

The Utility's Service Rules also apply to Industrial Customers. In case of a contradiction between a provision of the remainder of the Service Rules and a term in this section, the more specific term shall govern.

**SERVICE CLASSIFICATION**

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Service classification shall be based on the type of service supplied and on similarities in customer load and demand characteristics. Service classifications shall be defined as part of the rate schedules adopted by the Governing Body. In addition, the Utility reserves the right to supply Industrial I and Industrial II service in accordance with the provisions of a written contract. As nearly as practicable, rate schedules adopted by MPW shall reflect relative differences in the costs of providing various quantities of service to each customer class.

Electrical service shall be available at the applicable rate schedule.

***Residential*****Residential Service Entrance (Overhead)**

In new or remodeled single-family dwellings, regardless of size, a minimum of a 120/240-volt, 60-hertz, single-phase, three-wire, 200-ampere service entrance must be installed in accordance with the City or State Electric Code. (See Exhibits 1 and 2)

**Residential Service Entrance (Underground)**

In new or remodeled single-family dwellings, regardless of size, a minimum of a 120/240-volt, 60-hertz, single-phase, three-wire, 200-ampere service entrance must be installed in accordance with the City or State Electric Code. (See Exhibits 3 and 4)

***Commercial I***

Commercial I service includes:

- Standard single-phase, 120/240-volt, 60-hertz service.
- Three-phase 120/208-volt wye, or 277/480-volt wye, 60-hertz service (may not be available at all locations).

As per the City Electrical Code, the minimum service size shall be 100-ampere.

***Commercial II***

Any customer with a demand of at least 50 kW but less than 1,000 kW shall be billed for service at the Commercial II rate schedule.

***Commercial II Irrigation***

Any customer that uses electricity predominately for irrigation with a demand of at least 50 kW but less than 1,000 kW shall be billed for service at the Commercial II Irrigation rate schedule.

***Industrial I***

Any customer with a demand of at least 1,000 kW but less than 7,500 kW shall be billed for service at the Industrial I rate schedule.

***Industrial II***

Any customer with a demand of at least 7,500 kW shall be billed for service at the Industrial II rate schedule.

***Security Lights***

Security lighting is available in areas within MPW's service territory in accordance with the Utility's *Security Lighting Policy* and at the security light rate schedule. MPW owns and maintains the lights. Any additional costs shall be paid by the customer in accordance with the Utility's Security Light Lease Agreement.

***Street Lights***

Street lighting is available in areas outside the City of Muscatine but within our electric service territory at the street light rate schedule. MPW owns and maintains the lights. Any additional costs shall be paid in accordance with the Utility's Street Light Lease Agreement.

**SERVICE EXTENSIONS**

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***General***

Service extensions may require a contribution in aid of construction (CIAC) payment by the customer. MPW will own and maintain extensions up to the applicable point of delivery.

***Non-Residential Low-Use Extensions***

MPW shall supply service where no permanent residence exists for uses such as isolated water pumps, cribs, dryers, feedlots, etc., upon payment of a CIAC equal to the total cost of installing the service. The CIAC is not refundable.

The customer will be billed for electric service at the applicable rate.

***Temporary Service***

Where service is likely to be temporary by determination of MPW, the Utility will supply temporary electric service upon payment of a CIAC equal to the estimated cost of installing and removing the service. Any CIAC payment more than actual costs will be refunded when service facilities are removed. The Utility also requires a customer deposit as explained in the *Deposits* section.

The customer will be billed for electric service at the applicable rate schedule. (See Exhibits 5 and 6)



### ***Single-Phase Extensions***

For standard single-phase extensions, there will be no CIAC for overhead extensions for new service if there is only one new pole, one new transformer (if needed) and related conductor added or if an underground extension in an existing underground area is less than 300 feet. However, for overhead extensions that require more than one additional pole or for any underground extensions in an existing underground area that requires trenching of more than 300 feet, the incremental cost above the cost of adding one new pole, one new transformer (if needed) and related conductor will require a CIAC payment for the full amount of the estimated incremental cost. Upon payment, MPW will complete the extension. This CIAC is not refundable.

The customer will be billed for electric service at the applicable rate schedule.

### ***Three-Phase Extensions with Estimated Construction Costs Up to \$100,000***

If a customer requests extension of three-phase electric service, MPW will determine if the estimated cost will be below \$100,000. If the estimated cost is determined to be below \$100,000, a refundable contribution in aid of construction (CIAC) may be required calculated as follows:

	Total cost of extending the three-phase service
Less	The customer's next three-years' estimated electric service billings adjusted to exclude net energy and MISO market demand costs
Equals	CIAC payment
Where	Net energy costs are determined based on Energy Adjustment Clause (EAC) calculations (both the EAC and the net energy cost included in base rates)

If the calculation above results in negative amount, then no CIAC payment will be required. No credits shall be issued if the calculation results in a negative number.

The CIAC refund amount will be calculated after the end of the calendar year during which the third anniversary of service occurs. The refund will be prorated based on a ratio of the actual energy used during the first three full years of service compared to the expected energy usage. The maximum refund is 100% of the CIAC.

A written agreement between the customer and MPW must be executed for MPW to move forward with the interconnection process.

The customer will be billed for electric service at the applicable rate schedule.

### ***Three-Phase Extensions with Estimated Construction Costs Above \$100,000***

For customers constructing new facilities or expanding existing facilities in MPW's service territory where the estimated costs to serve the load exceed \$100,000, a refundable CIAC is required. The CIAC will be equal to the full cost of the service extension.

CIAC payments will be made on a milestone schedule such that payments are received before significant associated costs are incurred by MPW. Milestones may include engineering/design, material procurement, construction, etc. A milestone payment schedule will be determined at the time of negotiating an extension agreement. CIAC milestone payments will be made based on initial estimated costs of construction, but a final CIAC payment or credit will be required when actual costs are determined.

The CIAC amount is refundable over ten years based on the energy (kWh) usage at the new or expanded facility in comparison to the level of usage for which MPW designed the extension. The annual refund amount will be calculated on a calendar-year basis based on the kWh used in that calendar year with any refund paid to the customer within 60 days after the end of the calendar year. The initial calendar year

will be a partial year, as will be the final calendar year to ensure a full ten years from the start of electric service by MPW.

As an example, if the MPW design was based on average usage of 10,000,000 kWh per year, and the new or expanded facility used 8,000,000 kWh for the calendar year, then the refund after the end of that year would be 10% of 80% of the CIAC. If the calendar year usage was 12,000,000 kWh rather than 8,000,000 kWh, the refund after the end of the year would be 10% of 120% of the CIAC.

Note, it is possible the full CIAC may not be refunded; however, in no case will the refund exceed the CIAC.

A written agreement between the customer and MPW must be executed for MPW to move forward with the interconnection process.

The customer will be billed for electric service at the applicable rate schedule.

### ***Abnormal Circumstances***

The above provisions for service extensions are meant to cover most typical situations. However, at the Utility's sole discretion, any abnormal or unique circumstances may require modifications to the general terms detailed above. Utility staff will work with customer to determine the appropriate terms under these circumstances.

### ***Overhead Services***

All new electrical services will be underground unless an overhead service is approved by the Utility.

### ***Underground Services***

#### **Apartments, Condominiums, Mobile Home Parks, Commercial I & II, and Industrial I & II**

Subject to MPW's extent of service limitations, the underground secondary service will be installed, owned, and maintained at the customer's expense. The customer must consult with the Utility prior to the planning of any underground service installation.

MPW reserves the right to specify the size and type of underground conductor to be used, the location of the transformer or pole to which the service must be connected, the side of the pole on which the conduit is to be installed, and the height to which it must be extended. (See Exhibits 3, 4, and 8)

#### **Underground Service to New Residential Subdivisions**

New residential subdivisions will only be served underground. The Utility will furnish a complete underground electric system as shown in the *MPW's Responsibilities* section below, exclusive of items shown under the *Developer's or Customer's Responsibilities* section. (See Exhibits 3 and 4)

#### **MPW's Responsibilities**

MPW will perform the following:

- Design the underground system using load information supplied by the developer.
- Furnish, install, and connect primary high voltage and secondary cable systems.
- Furnish, install, and connect service cable from transformer or service pedestal to meter socket.
- Furnish and install transformers for underground services.

- Furnish secondary pedestals and fiberglass transformer pads at developer's expense.
- Determine location(s) of meter socket(s).
- Design, furnish, and install street lighting on dedicated City of Muscatine streets.

#### Developer's or Customer's Responsibilities

The developer or customer will perform the following:

- As early as practical, submit to MPW a plat of the development that has been approved by the proper local authorities.
- Furnish all easements requested by MPW. These easements, if applicable, shall be in addition to general Utility easements shown on plat submitted.
- Bring development to final grade before MPW begins construction of the underground electric system. The developer is responsible for any rework required by the Utility for the development not being at final grade.
- Furnish and install a complete duct system as designed by MPW. MPW must approve the duct material, size, and depth.
- Obtain any necessary electrical permits and have installation inspected and approved by the City, County, or State Electrical Inspector, as appropriate.
- Install a 200-ampere service entrance switch, with proper branch circuits, that complies with National Electric Code specifications and City or State Electric Code, as applicable.
- If a service length is 120' or less, a 2" conduit must be installed. If a service length exceeds 120', a 2.5" conduit must be installed. The conduit must extend from the meter socket to the utility source. The top of the conduit must be at least 30" deep.
- Restoration of property after trench excavation.

#### Ownership and Maintenance

MPW will own, operate, and maintain the new subdivision underground electric distribution system including street lights, street light poles, street light cable, and service conductor (to the customer's meter). If the customer has installed an obstruction (such as, but not limited to, a deck, porch, patio, shed, fence, etc.) that results in additional cost to the Utility to repair the service or change the meter location, charges to the customer may apply.

If an underground service has failed and the Utility has determined the service needs to be replaced, the customer is responsible for installing the appropriate conduit as per the *Developer's or Customer's Responsibilities* section above. The trench and backfill shall be free of debris or rocks that may damage the service cable. Property restoration after trench excavation is the responsibility of the customer. MPW will furnish and install the new underground service cable.

If any underground service requires relocation because of new construction on the property owner's premises or because the property owner desires relocation for any reason, the property owner is responsible for the cost of relocation. If an underground cable or other Utility property is damaged, the party causing the damage is responsible for the cost of repair or replacement.

If an MPW-owned service conductor needs replacement because of increased load, the Utility is responsible for the cost of replacement.

### **Underground Residential Service in Areas Served by Existing Overhead Lines**

Responsibility for installation, maintenance, and ownership of underground service to new residences or converting residences to underground service in areas served by existing overhead lines will be as follows (See Exhibits 3 and 4):

#### **MPW's Responsibility**

MPW will perform the following:

- Upon receipt of the request, a Utility representative will discuss the installation with the customer.
- Furnish and install the new service cable in customer's conduit from the existing secondaries to the meter socket.

#### **Customer's Responsibility**

The customer will perform the following in accordance with City or State Electric Code and Utility standards:

- Formally request underground service with the Utility.
- Obtain any necessary electrical permits and have installation inspected and approved by the City, County, or State Electrical Inspector, as appropriate.
- Install a 200-ampere service entrance switch, with proper branch circuits, that complies with National Electric Code specifications and City or State Electric Code, as applicable.
- If a service length is 120' or less, a 2" conduit must be installed. If a service length exceeds 120', a 2.5" conduit must be installed. The conduit must extend from the meter socket to the utility source. The top of the conduit must be at least 30" deep.
- Restoration of property after trench excavation.

#### **Ownership and Maintenance**

MPW will own, operate, and maintain the new underground service. If the customer has installed an obstruction (such as, but not limited to, a deck, porch, patio, shed, fence, etc.) that results in additional cost to the Utility to repair the service or change the meter location, charges to the customer may apply.

If an underground service has failed and the Utility has determined the service needs to be replaced, the customer is responsible for installing the appropriate conduit, as per the *Customer Responsibilities* section above. The trench and backfill shall be free of debris or rocks that may damage the service cable. Property restoration after trench excavation is the responsibility of the customer. MPW will furnish and install the new underground service cable.

If any underground service requires relocation because of new construction on the customer's premises or because the customer desires relocation for any reason, the customer is responsible for the cost of relocation. If an underground cable or other Utility-owned equipment is damaged, the party causing the damage is responsible for the cost of repair or replacement.

If a Utility-owned service conductor needs replacement because of increased load, MPW is responsible for the cost of replacement.

## ***Utility Facility Relocations***

### **Permanent Facility Relocations**

MPW will relocate, upon a residential customer's request, and without charge, a pole, guy wire, or street light where such facilities affect the customer's ability to access a garage, carport, driveway, or other similar surface or structure. Costs for relocation of underground facilities, such as padmount transformers, will generally be the responsibility of the customer.

The cost for relocating electric facilities for a commercial or industrial customer will be the responsibility of the customer.

### **Temporary Facility Relocations**

Any residential or commercial customer, or their responsible contractor, should apply to MPW for temporary disconnection, removal, or covering of service wires to avoid contact with or damage to lines during tree trimming, painting, installation of siding, or other similar operations. Normally, work completed during regular Utility hours is not charged to the customer. Work completed outside of regular Utility hours is charged to the customer or contractor. Damage to the Utility's facilities resulting from failure to comply with this provision will be billed to the party responsible for the damage.

All parties moving houses, buildings, or other large objects along routes of the Utility's transmission or distribution lines, which requires the assistance of Utility personnel for raising lines, lowering lines, or for escort purposes, shall be required to notify the Utility well in advance of such moves. All costs for such services will be the responsibility of the requesting party and may require payment in advance.

## ***Building Demolition***

When a building served or previously served by the Utility is demolished, it is the property owner's responsibility to disconnect all water services to the property by removing the curb stop risers or valve boxes and to disconnect the water service lines at the main. This shall be done before power is disconnected from the property. The only exception is if the property owner enters into a written agreement with MPW identifying that the current service line to the curb stop is approved material and declaring that the water service line will be utilized within one year. The Utility shall require a deposit or bond as assurance the property owner will comply with the agreement.

## **METERS**

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### ***Meter Ownership and Installation***

All meters will be selected, furnished, owned, installed, and removed by the Utility. Submetering and electricity sales to retail customers for the purpose of resale are not permitted.

### ***Combined Bill***

Any firm or corporation under one roof, or a group of buildings at one contiguous location, separated only by public property, may be furnished services through one or several meters. At MPW's discretion, customers served by more than one meter may receive a combined bill.

### ***Meter Socket Ownership, Installation and Repair***

MPW provides electric meter sockets for the following installations:

- Single-phase up to a six-gang socket. (See Exhibit 7)
- 120/208 volt network service up to a six-gang socket.
- Instrument rated metering installations.
- Individual three-phase services of 200 amperes or less.

The customer is responsible for providing and installing all other meter sockets including meter sockets with integral disconnect switch, which must be approved by MPW.

The customer shall own all meter sockets (except instrument rated meter sockets which are owned by MPW) and shall be responsible for maintaining meter sockets in a serviceable condition so the meter can be installed and removed as needed.

## **TAMPERING AND UNAUTHORIZED CONSUMPTION**

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### ***Tampering***

Visible seals will be placed on all meters, meter sockets, instrument transformers, and instrument transformer enclosures for the purpose of security. Breaking of these seals or tampering with meters, their associated equipment, or interconnecting wiring is prohibited to maintain the safety and integrity of the system.

Evidence of tampering will result in an investigation based upon the Utility's theft of utility services policies and procedures. The parties involved will be subject to costs and penalties as described in the policies and procedures, and may be prosecuted under the laws of the State of Iowa.

### ***Unauthorized Consumption***

If a customer is found consuming electricity in such a way that the energy is not registered through an MPW-provided meter, service may be disconnected without notice. The incident will be investigated under the appropriate theft of utility services policies or procedure, and the responsible parties will be subject to the associated fees for the investigation. The customer will also be required to install, at their expense, the necessary wiring to direct all consumption through the MPW-provided meter. The parties involved will be subject to costs and penalties as described in the policies and procedures and may be prosecuted under the laws of the State of Iowa.

### ***Meter Locations and Accessibility***

MPW will designate the locations of meters and metering equipment. All new residential, commercial, and industrial meters shall be installed outdoors. All upgraded services shall have the meter installed outdoors if currently indoors. No wiring dependent on the meter location shall be started until the location has been definitely assigned. Meter sockets and enclosures shall be plumb and securely mounted.

MPW authorized representatives must have access to meters at all reasonable hours for the purpose of inspecting, testing, removal or setting, and reading meters. If access is not possible due to an obstruction on the customer's property surrounding the meter, it will be the customer's responsibility to provide access in a timely manner. All meter installations must have at least a 4' clear frontal approach and clear access to the meter, with a minimum of 7' of headroom, and a 2' clear lateral working area from any part of the meter enclosure to any obstacle. The top of the overhead meter sockets must be installed between 4'6" and 6'6" above the finished surface grade. Underground meter sockets must be installed so that the ground line on the meter socket is within 6" of the final grade.

Any customer-installed obstruction that encloses an outdoor metering location (e.g., carport, garage, three-season room, deck, etc.), will require the customer to relocate the meter socket to an outdoor location specified by the Utility at the customer's expense.

### ***Optional Outdoor Aesthetic Cabinet over the Meter Socket***

The following guidelines shall be used when installing an optional outdoor aesthetic cabinet over the meter socket. These guidelines are in addition to and in no way preclude or lessen any other requirement stated in the *Meters* section.

- The cabinet shall be equipped with a hinged door that exposes the entire meter socket.
- There must be a clearance of 15" from the face of the meter socket to the inside of the cabinet door when closed. There must be a minimum clearance of 24" on both sides, the top and bottom of the meter socket.
- The customer is permitted to lock the cabinet if a key is provided to MPW.

### ***Meter Testing***

Initial and subsequent periodic testing will be in accordance with the Utility's *Watt-Hour Meter and Associated Equipment Inspection and Testing Program*. Customers may also request a referee test pursuant to the provisions of the current IUB rules.

### ***Customer Access to Meter Register***

Where possible, customers will have continuous visual access to the meter kWh registers for reading. If it is necessary to apply a multiplier to the register reading, the multiplier will be placed on the kWh register or meter nameplate.

### ***Instrument-Rated Metering***

Single-phase and three-phase services greater than 200 amperes will be metered with current transformers and instrument rated meters.

#### **Underground Secondary Metering Installed on a Structure**

MPW will furnish the meter, meter socket, associated current transformers (CTs), and secondary wire. MPW will make all secondary connections from CTs to the meter socket and install the meter.

For installations with load current of 1200 amperes or less, the customer must furnish and install a rain-tight CT enclosure with a suitable latch, sealing device, and one-inch rigid conduit with fittings necessary for a wire-way between the CT enclosure and meter socket. Maximum length of the one-inch conduit is to be 50' with no more than three 90-degree bends in a single-pull section. The customer must also mount the meter socket onto the structure and CTs into their enclosure with white dot (H1) facing line side.

For installations with load current above 1200 amperes, MPW may require the CTs be placed in a separate compartment inside the customer's switchgear. This switchgear compartment and the included bus bar must be on the incoming line side of the main disconnect and be accessible to and lockable by Utility personnel. The customer must run one-inch rigid conduit between the switchgear CT compartment and the customer-mounted meter socket. Maximum length of the one-inch conduit is to be 50' with no more than three 90-degree bends in a single-pull section. The customer must also mount the meter socket onto the structure and CTs into their enclosure with white dot (H1) facing line side.

The customer must furnish and install a ground rod at the meter socket and run No. 4 copper wire from the ground rod to the meter socket.

#### **Underground Secondary Metering Installation on Padmount Transformer**

MPW will furnish the meter, meter socket, and associated equipment.

The customer must install a structure for the meter socket. This structure must be attached to the transformer's cement pad, or adjacent to the pad, on the right side of the transformer determined by facing the transformer's door. The customer must install the meter socket on this structure meeting accessibility requirements listed in Meter Locations and Accessibility above. MPW will install the remaining meter equipment.

#### **Overhead Secondary Metering Installed on a Pole or Structure**

MPW will furnish the meter, meter socket, associated CTs, CT mounting bracket, and secondary wire. MPW will make all secondary connections from CTs to the meter socket and install the meter.

The customer must furnish and install a one-inch rigid conduit with fittings necessary for a wire-way from the overhead CTs to the meter socket. The maximum length of the one-inch conduit is to be 50' with no more than three 90-degree bends in a single-pull section. The customer must mount the meter socket and CTs with white dot (H1) facing the line side.

The customer must also furnish and install a ground rod at the meter socket and run No. 4 copper wire from the ground rod to the meter socket.

#### **Primary Metering**

MPW will furnish and install the metering and associated equipment.

#### **Primary Metering – Additional Power Source**

MPW will furnish and install, at the customer's expense, all metering, associated equipment, and sockets.

#### **Inspection**

In all cases, the meter will not be set until the service has been inspected and approved by the City, County, or State Electrical Inspector, as applicable.

### ***Demand Metering***

When a customer's energy use approaches or exceeds 50kW based on a 30-minute demand interval, a demand meter will be installed for detecting peak demand for the billing period.

### ***Pulse Initiator for Customer's Optional Load Shedding***

MPW will, subsequent to receiving a written request and at the customer's expense, acquire and install a pulse-initiating device on the provided demand meter, a weatherproof box housing an isolation relay, and interconnecting wiring between the two. All technical information about the load-shedding device shall be provided to the Utility.

It is the customer's responsibility to furnish, install, and maintain the load-shedding device, wire-way, and wire between the isolation relay and load-shedding device.



### ***Special Metering Installations***

MPW reserves the right, at its expense, to place special meters or instruments on a customer's premises for the purpose of special tests of all, or part, of service provided.

### ***Individual Metering – Multi-Occupancy Premises***

Individual metering is required on multi-occupancy premises in which units are separately rented or owned, except the Utility may provide single meters for the following:

- Service for central heating, cooling, water heating or ventilation systems.
- Where individual metering is impractical, unreasonable or uneconomical.
- Where submetering or resale was permitted prior to July 12, 1966.
- Where resale as an undefined part of a fixed rental or lease payment was permitted prior to January 1, 1979.

## **ELECTRICITY CONSERVATION AND EMERGENCIES**

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In order to ensure the general welfare of the people of Muscatine, electric resources should be used in such a way as to prevent waste and unreasonable use. Should an emergency arise and electricity availability becomes limited, electricity shall be curtailed in accordance with the appropriate load shedding policy.

## **LIMITATION OF UTILITY LIABILITY**

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MPW cannot guarantee a utility service will be free from interruptions or fluctuations in service. The Utility will not be liable for any injury, loss, or damage resulting from interruption, shortage or insufficiency of service, or irregularities of service (e.g., overload, loss of voltage, high or low voltage, loss of phase, phase reversal, etc.) unless caused by willful acts or gross negligence on the part of the Utility. In no event shall MPW be liable for consequential or punitive damages.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, MPW DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

MPW is not liable for any damage to persons or equipment, whether owned by a customer or third party, resulting from the use of an MPW service or from the presence of MPW equipment on or near premises.

## **RIGHT TO DENY SERVICE**

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All customers are required to maintain their property and electrical systems consistent with applicable building, safety, electrical, or other code standards. MPW reserves the right to deny service to any customer if the Utility determines that providing the utility service would create or perpetuate a hazardous, unsafe, or dangerous condition.

# **CUSTOMER RENEWABLE GENERATION**

## OBJECTIVE

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MPW allows interconnection of renewable energy systems with our utility infrastructure, with prior approval and coordination. Customers wanting to generate their own electricity may do so with a signed application from MPW. Systems up to the greater of 50 kW<sub>AC</sub> (“AC” refers to alternating current, to differentiate from direct current) or three times the prior year’s peak load are eligible for interconnection. Participation is limited at 1,000 kW<sub>AC</sub>.

With the Customer Renewable Generation program, energy needs will first be supplied from the customer renewable generating system. When energy needs are greater than that produced by the customer renewable generating system, energy will be provided from MPW.

Interconnection programs vary from utility to utility. Renewable energy companies may not be fully aware of our requirements. Before signing any contracts or installing a renewable energy system, contact MPW to discuss sizing, the application and any restrictions.

The application and further information, including information about Net Metering, are available at: <http://mpw.org/electric/customer-owned-generation/>.

## CUSTOMER RENEWABLE GENERATION

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***Customers should contact MPW’s Energy Services department early in their Customer Renewable Generation Project to provide additional information and guidance.***

MPW allows Customer Renewable Generation to be interconnected to the MPW Electrical System in accordance with Utility policy, the Electric Services Rules and applicable Utility procedures. In interconnecting a Customer Renewable Generation to the MPW Electrical System, customer agrees to be bound by MPW’s Service Rules, Policies and Procedures, as amended from time to time.

MPW recognizes that customers may choose to work with Contractor(s) on their Customer Renewable Generation project. Ultimately, the customer is responsible for verifying and ensuring their Contractor(s) follow MPW’s policies, rules, and procedures, as well as any applicable laws, codes, or industry practices. All references to “customer” in this section, also refer to anyone working on behalf of the customer with regard to a Customer Renewable Generation project, such as contractor, solar developer, electrician, etc.

MPW’s *Customer Renewable Generation Policy* sets the policy for how the Utility handles Net Metering, it states in part that if an MPW customer chooses to add their own renewable generation, it is MPW’s approach that the costs for such projects should not be shifted or shared by the rest of the Utility’s customers.

### ***MPW Staff Contact for Customer Renewable Generation projects***

Please contact MPW’s Energy Services department with any questions:

Energy Services Advisor  
 Muscatine Power & Water  
 3205 Cedar Street  
 Muscatine, IA 52761  
 563-263-2631  
 energyservices@mpw.org

## ***Net Metering & Rates***

MPW allows customers to install Customer Renewable Generation behind MPW's electric revenue meter where the electric energy generated directly offsets energy delivered by MPW.

For Residential and Commercial I customers, in the case where monthly energy generated is more than the Customer's monthly usage, then energy flows into MPW's Electric System and the energy in kWh will register as a credit. Any credits will be banked and carried forward to the next month and subtracted from future net energy use for that property where the Customer Renewable Generation is located. There will be an annual true-up with the February bill cycle where MPW will provide an Energy Credit at MPW's avoided cost for any remaining kWh credits and the bank will be reset to zero.

For all other net metering customers, the true-up will be monthly, lagging one or two months from the relevant billing month to allow for matching the net kWh delivered to MPW with the avoided costs of energy for that month.

### **Net Metering Billing**

Customer will receive a monthly bill using the appropriate MPW rate. All applicable Facilities Charges, Demand Charges, and/or other adjustments will be included. If there is a net energy usage, the Customer will be billed on the net kWh usage.

For Residential and Commercial I customers, if a net credit is applicable, the kWh will be zero except during the February true-up when a bill credit will be calculated for the total kWh credit at the applicable avoided cost rate.

For all other net metering customers, the excess (exported) energy for each month will be credited back at the avoided cost rate for the month in which the exported energy was delivered. This true-up may lag one or two months to allow for matching the net kWh delivered to MPW with the avoided costs of energy for that month.

### **Applicable Rates**

MPW's current electric rates for net metering are published in our Electric Rate Sheet on [www.mpw.org](http://www.mpw.org) or at <http://mpw.org/electric/customer-owned-generation/> for Residential and Commercial I customers. There are no separate net metering rates other than for Residential and Commercial I customers. The monthly bill will include a facility charge according to Customer's applicable rate.

### **Avoided Cost Rates**

For Residential and Commercial I customers, the Avoided Cost rate will be set annually based on the prior calendar year's purchased power costs, excluding MPW renewable energy purchases.

For all other customers, the rate will be set monthly based on MPW's actual avoided costs for the month in which the excess energy was produced, with a one- or two-month lag in providing the Energy Credit to allow for calculation of actual costs.

## ***Managing Impact to Electric System***

The capacity of the MPW Electrical System to accommodate any interconnections is handled on a first come, first serve basis. MPW is not obligated to modify, upgrade, or expand any aspect of the MPW Electric System to accommodate such requests. A Customer Renewable Generation project is limited to the higher of 50 kW<sub>AC</sub> or three times the customer's prior-year peak demand up to 1,000 kW<sub>AC</sub>. MPW's engineering evaluation of a proposed project may result in limits on the allowable size of the Customer Renewable Generation that is more restrictive than the maximums otherwise specified here. If the interconnection is determined to be limited, the customer has the option to pay for system upgrades to accommodate the full requested capacity. MPW has sole discretion and final approval over any interconnecting Customer Renewable Generation.

## ***Approval Procedures***

Before a Customer Renewable Generation project can be connected to MPW's Electrical System, the following steps are required:

- Customer must familiarize themselves with these rules
- Customer must submit the completed Customer Renewable Generation Application Packet to MPW along with the Application Fee to start the Customer Renewable Generation project
- MPW performs a site visit
- MPW reviews the proposed project, determines whether changes, studies or system modifications or other issues need to be addressed
- MPW will provide written authorization to proceed with construction of Customer Renewable Generation
- The applicable (City or County) Electrical Inspector must approve the installation
- Customer provides MPW with copy of the electrical permit to install their facility
- MPW installs a bidirectional meter and verifies the external lockable load-break disconnect switch
- MPW installs a second meter for customer installations >50 kW<sub>AC</sub> to measure the kW and kWh that customer renewable energy installation generates
- MPW reserves the right to perform any additional inspections at the utility's own expense
- MPW provides a signed, written MPW authorization to connect the Customer Renewable Generation within 10 business days of being notified that the Customer Renewable Generation is ready for interconnection

### **Customer Expenses**

Customer, at its own expense, must pay the Application Fee and for any additional equipment and services required to connect the Customer Renewable Generation to MPW's Electric System and to meet all requirements set by MPW. Potential charges include but are not limited to the Application Fee, equipment, engineering fees, and overtime charges.

### **Required Permits**

At its sole expense, Customer must: (i) obtain all necessary electrical permit(s) for the installation of the Customer Renewable Generation and, if applicable, have a licensed electrician perform the work, and (ii) obtain and maintain any governmental authorizations or permits that may be required for the operation of the Customer Renewable Generation. Customer must reimburse MPW for any and all losses, damages, claims, penalties or liability MPW incurs as a result of customer's failure to obtain or to maintain any governmental authorizations and permits that may be required for construction and operation of Customer Renewable Generation.

### **No Changes After MPW Authorization**

After MPW gives a written authorization (authorization form in the Customer Renewable Generation Application Packet) to connect the Customer Renewable Generation to the MPW Electric System, Customer shall not make any changes or modifications including removal of the Customer Renewable Generation or of its mode of operation without the prior written approval of MPW.

### ***Safety, Applicable Standards, and Electrical Requirements***

Customer agrees to install, operate, and maintain the Customer Renewable Generation in a safe and prudent manner and in conformance with all applicable laws, codes and regulations. For safety reasons, there are specific requirements in the construction and operation of Customer Renewable Generation. These safety requirements are for protection of Customer's personnel, MPW personnel, Customer property, MPW property, and public safety. Property damage and even death could occur if the requirements outlined in this Rules are not followed. If any of these requirements are not met, MPW reserves the right, in its sole discretion to disconnect the Customer Renewable Generation.

Customer Renewable Generation must be installed and maintained in compliance with all applicable National Electric Code requirements, building codes, City Electric Code of Muscatine, Iowa or Muscatine County Code, and MPW Electric Service Rules. All equipment used in a Customer Renewable Generation project must be Underwriters Laboratories (UL) approved and meeting current industry standards. Applicable standards include but are not limited to:

- All National Electric Code (NEC) and American National Standards Institute (ANSI) requirements at the time of installation of the Customer Renewable Generation, including, but not limited to NEC Articles 690 and 705;
- Building and Electric Codes;
- All applicable Underwriters Laboratories (UL) standards (e.g., UL 1741), and
- Institute of Electrical and Electronics Engineers (IEEE) Standards 1547 (*Standard for Interconnecting Distributed Resources with the Electric Power System.*) and its complementary standards as applicable.

#### **Power Quality Parameters**

All power quality parameters (including but not limited to voltage, flicker, frequency, distortion) are specified at the PCC. In particular, the following requirements must be met:

##### **Flicker**

Any voltage flicker resulting from the connection of the Inverter to MPW's Electric System at the PCC cannot exceed the limits defined by the maximum borderline of irritation curve identified in IEEE Std. 519-1992.

##### **Frequency**

Customer Renewable Generation must be designed to operate on a 60 Hz electrical system.

##### **Waveform Distortion**

Customer Renewable Generation must have low current-distortion levels to ensure that no adverse effects are caused to other equipment connected to MPW's Electric System. Customer Renewable Generation's electrical output at the PCC must comply with Section 10 of IEEE Std. 519-1992. The key requirement is that total harmonic distortion must be less than 5% of the fundamental frequency current at rated Inverter output. Each individual harmonic is limited to the percentages listed in IEEE Std. 519-1992.

##### **Power Factor**

Customer Renewable Generation must operate at a power factor >0.95 (leading or lagging) when output is  $\pm 5\%$  of Customer Renewable Generation.

**Islanding Protection**

Customer Renewable Generation must cease to energize the utility line when the Inverter is subjected to islanding conditions such as loss of source on MPW system. MPW, at its own discretion and expense, may conduct periodic testing of anti-islanding.

Customer should contact MPW to further discuss any operation that does not include Customer Renewable Generation disconnecting on the loss of MPW power and assures no reconnection attempts until MPW power is present.

**Voltage**

Iowa Administrative Code 199-20.5(2)d. states that the voltage must be maintained per ANSI C84.1. The ANSI requirement states that the voltage shall be maintained between +/-5% of nominal voltage at the PCC (example: 114-126 VAC at a nominal voltage of 120 VAC). The MPW allowed size shall be determined during the engineering assessment. If Customer operates outside the voltage tolerance, they assume the sole responsibility for damaged equipment. MPW will not be able to correct Customer voltage and will expect Customer to maintain voltage within tolerance for other customers. Should conditions change that affect other customers MPW reserves the right to disconnect the Customer Renewable Generation until the voltage issue is resolved.

***Disconnection***

A manual, lockable, visibly open, load-break disconnect switch that provides a clear indication of the switch position must be available with the Customer Renewable Generation at or near the Point of Common Coupling to MPW's Electric System to provide a point of electrical separation from MPW's Electric System. MPW will approve the location of the disconnect switch. The disconnect switch must be easily visible, mounted separately from the metering equipment, readily accessible to MPW personnel, and capable of being locked in the open position with an MPW lock. MPW may open the disconnect switch thereby isolating Customer Renewable Generation from the MPW Electric System for reasons including, but not limited to, maintenance or emergency work, Customer Renewable Generation adversely affecting other Customers, failure of the Customer Renewable Generation to comply with codes/regulations, the Customer Renewable Generation creating hazardous or unsafe conditions, and/or failure to comply with standards. MPW will provide and attach an additional label to the manual load-break disconnect switch for MPW purposes.

**Breaker**

Customer's Breaker at the service panel must be dedicated and must be capable of interrupting the maximum available fault current. The Breaker shall be clearly marked to indicate power source and connection to MPW's Electric System.

***Metering***

MPW will install a bidirectional, electric meter with two registers within the one meter. The registers record power received by and produced by the customer. Both readings are present on the bill. A second meter is required for all installations >50 kW<sub>AC</sub>.

***Access to Premises***

Customer must allow MPW staff and MPW's contractors unrestricted access to the premises where the Customer Renewable Generation is located for any lawful and business necessary reasons that may arise, including but not limited to (i) inspections, (ii) meter reading and maintenance or replacement, (iii) to open the load-break disconnect switch, and (iv) to disconnect the interconnection facilities at MPW's meter or transformer and as necessary to perform maintenance to MPW's Electric System.

### ***Ongoing Compliance and Waiver of Liability***

Violation of any of these rules could result in MPW disconnecting and prohibiting connecting of the Customer Renewable Generation to MPW's electrical system.

If customer ceases operation of the Customer Renewable Generation, customer must notify MPW within 15 business days.

If a Premises should change ownership, the Customer Renewable Generation continues to be subject to these rules and the new owner is obligated to conform to these rules if they chose to continue to interconnect with the MPW Electric System.

Customer bears all responsibility and liability for any damages occurring to Customer, the Electrical System, and any person from the Customer Renewable Generation.

CUSTOMER HEREBY RELEASES, WAIVES, DISCHARGES AND COVENANTS NOT TO SUE MPW, ITS EMPLOYEES OR TRUSTEES FROM ALL LIABILITY TO CUSTOMER, CUSTOMER'S PERSONAL REPRESENTATIVES, ASSIGNS, HEIRS, AND NEXT OF KIN FOR ANY AND ALL LOSS OR DAMAGE, AND ANY CLAIM OR DEMANDS THEREFORE ON ACCOUNT OF INJURY TO PERSON (INCLUDING DEATH) OR PROPERTY ARISING OUT OF OR RELATED TO THE CUSTOMER RENEWABLE GENERATION OR ACTIVITIES BY CUSTOMER WITH REGARD TO THAT SYSTEM.

## **STANDBY GENERATORS**

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Customers shall not introduce or use in conjunction with MPW-supplied electrical services any other source of electricity supply without the prior written approval from MPW Engineering Services at 563-263-2631. These services include but are not limited to temporary or emergency standby generator, or other energy facilities.

Typically, these electrical energy services must be permitted by the local electrical authority (e.g., city or county electrical inspection departments).

For the safety of MPW personnel, as well as protection of the customer's equipment, there must be a positive means to guarantee that the standby generator, or other energy facilities cannot accidentally be connected in parallel to the MPW's electrical system.

A manual or automatic break-before-make transfer switch must be used and meet the following requirements:

- Must be installed at the customer's expense
- Must be designed so that under no conditions will the standby generator and the MPW's electrical system operate in parallel without express written agreement between the customer and MPW
- Shall be installed in compliance with the NEC
- Should incorporate a visual indication or some means of determining the physical position of the switch
- Interlocking breakers with visible means of determining the open are acceptable
- Socket-mounted transfer switches are allowed

Before installing a system, please contact your MPW engineering representative to be sure the proposed standby transfer switch and meter socket installation meets MPW requirements.

If a standby generator is connected without an approved transfer switch, service will be disconnected until such switch is installed. Safety of personnel demands this requirement.

## **INQUIRIES OR QUESTIONS**

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For more information, contact Engineering Services at 563-263-2631.



# **CUSTOMER RELATIONS**

## APPLICATION FOR SERVICE

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Residential customers may obtain MPW services by visiting the MPW Business Office at 3205 Cedar Street, by calling 563-263-2631, or by visiting [www.mpw.org](http://www.mpw.org). Commercial and Industrial customers may obtain service by visiting the MPW Business Office.

In order for the application to be complete, the applicant must provide:

- Full name of account holder, first and last name of other occupants
- Personally identifying information to verify identity
- Phone number(s)
- Previous address(es)
- Employer and employer telephone number
- Name, address, and telephone number of an Emergency Contact
- Collection of other customer information as required

The application process shall include:

- Payment of past due bills owed to the Utility.
- Determination and collection of deposit, if applicable.
- Applicant's voluntary designation of a person or agency to receive a copy of any notice to disconnect service due to the applicant's nonpayment of a bill or deposit.
- An opportunity to enter into Budget Billing. This application may require other needed information.
- An opportunity to sign up for Automatic Payment. This application may require other needed information.
- Information about online account access.

As soon as practical after the approval of an application, the Utility will supply service to the applicant in accordance with these Service Rules and at a rate established by the Utility for the applicant's appropriate class of service.

Premises receiving service must also comply with equipment provisions of the *Service* section of these Service Rules.

Electric Services are available to customers who are 18 years of age or older, or head of household.

The benefits of and/or rights conferred upon the customer by MPW are non-transferable, except when approved in writing by MPW.

When an account is established, MPW follows standard account verification procedures for security.

## DEPOSITS

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A deposit is intended to guarantee partial payment of bills for utility services. A deposit may be required prior to approval of the service application. A person other than the customer may pay the deposit. In any case where a deposit has been refunded or is found to be inadequate, a new or additional deposit may be required upon 12 days' written notice to the customer.

### ***Credit Criteria for Initial Service Deposits***

A deposit may be required of an applicant if any of the following criteria exists:

- Past payment history with MPW is unsatisfactory.
- Applicant has no credit or unsatisfactory credit with another utility provider.
- New service is for a different rate classification than that for which the payment history was established.

### ***Initial Service Deposits***

An initial service deposit may be required for services from applicants who meet the credit criteria above. The amount of an initial service deposit will not exceed up to the 2 highest monthly meter readings for service during the previous 12 months.

### ***Credit Criteria for New or Additional Deposits***

A 12-day written notice will be sent to a customer who is required to provide a new or additional deposit, if the initial service deposit has been refunded or is found to be inadequate. The amount of a new or additional deposit will not exceed up to the 2 highest monthly meter readings for service during the previous 12 months.

A new or additional deposit may be required from customers who meet any of the following criteria:

- Customer has made two late payments, or received two Non-Sufficient Funds (NSF) check or Automated Clearing House (ACH) reject notices, or a combination of any two, in the previous 12 months. If the customer has had service less than 12 months, the number of NSF or ACH reject notices will be prorated.
- Diversion of services or fraud.

### ***Deposit Calculation Criteria***

A customer's deposit may not exceed up to the 2 highest monthly meter readings for the previous 12 months based on current rates. The highest meter reading in the previous 12 months may be adjusted for the following:

- Change in the number of persons serviced.
- Change in type of service.
- Installation or removal of energy conservation or alternative energy measures.

Where the service connection was not previously metered, the maximum estimated charge shall be based on comparable existing service of the Utility.

### ***Receipt for Deposit***

Each deposit, replacement of deposit, or supplement of a deposit will be reflected on the bill for the account. The Utility shall keep the following records concerning the deposit:

- The name and address of each customer on behalf of whom the deposit was made.
- The amount and date of the deposit.
- Each transaction concerning the deposit.

A receipt may be obtained by filing a written request at the MPW Business Office and by providing adequate personal identification.

### ***Interest on Deposits***

The interest rate on deposits with the Utility is based on the Utility's prior year short-term investment earnings rate. This rate shall be reviewed every January 1 and adjusted as needed. Interest accrues from the date of deposit to the date of refund or to the due date of any MPW service bill to which the deposit is applied. The refund date is the date on which the refund is forwarded to the depositor's last known address.

### ***Deposit Refund***

#### **Refund for Prompt Payment**

The deposit will be applied to the current balance after 12 consecutive months of prompt payment, which includes 11 timely payments and 1 automatically forgiven late payment. If a customer is not eligible to have their deposit credited after 12 months, their account will be re-reviewed every 12 months to determine refund eligibility. If it is necessary to collect a new or additional deposit as per the *Credit Criteria for New or Additional Deposits*, the deposit will be retained until the final billing for the account.

#### **Refund for Termination of Service**

Upon termination of service, the deposit, plus accrued interest (if any), less any unpaid bill for services, will be credited to the account. Any excess deposit will be refunded to the account holder.

### ***Unclaimed Deposits and Overpayments***

A record of each unclaimed deposit or overpayment will be maintained for a period of 2 years from the date service is terminated. During that time, MPW shall make a reasonable effort to return the funds. Deposits or overpayments remaining unclaimed 1 year after termination of service will be transferred to the State of Iowa in accordance with Chapter 556, Code of Iowa.

## **BILLING INFORMATION**

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Monthly meter readings are taken on dates designated by the Utility. If a meter cannot be read, the customer is asked to supply the meter reading on a card supplied by MPW, or via phone or an online submission. An estimated reading will be used if a reading is not received from the customer. Estimated meter readings cannot be used for billing for more than 3 consecutive months. A MPW representative must read each meter at least once every three years if the customer has provided the meter readings during that time.

Customers are billed monthly according to the appropriate rate schedule for metered service received during the billing period.

MPW will only provide specific billing information to the customer or their designee.

### ***Billing Form***

MPW may show the following information on the bill, or advise the customer (on the bill) that the information can be obtained by contacting MPW:

- The actual or estimated meter readings at the beginning and end of the billing period.
- The date of the meter readings.
- The number and kind of units metered.
- The identification of the applicable rate schedule.

- The account balance brought forward and amount of each charge for rate-schedule-priced Utility service, sales tax, other taxes, late payment or other charges, and total amount currently due.
- The last date for timely payment shall be clearly shown and shall not be less than 20 days after the bill is rendered.
- A distinct marking to identify the type of meter reading.
- A distinct marking to identify a minimum bill, and/or facility charge, which may be provided for in the rate schedule for each service class and will apply to any billing period during which service remains connected.
- Any conversions from meter reading units to billing units, or any other calculations to determine billing units from recording or other devices or any other applicable factors and amount of sales tax adjustments used in determining the bill.

### ***Bill Payment Terms***

A bill is due and payable when rendered and is considered delinquent after 20 days from the time it is rendered. A bill is considered rendered by MPW when deposited in the U.S. mail with postage prepaid or when sent electronically to an email account that a Customer has provided to the Utility or when delivered by MPW to the last known address of the party responsible for payment. A late payment charge of 1.5% of the unpaid balance will be assessed on past-due accounts. Each account will be granted 1 forgiveness of a late payment charge in each calendar year. The customer will be informed of the use of this one-time forgiveness on their next bill.

Customers can pay bills by mail, telephone, direct payment at the MPW Business Office, direct deposit through a financial institution, or through MPW's online bill payment system.

Failure to receive a properly rendered bill does not entitle the customer to relief from late payment charges. In addition to this late payment charge, disconnection and reconnection charges may still apply.

### ***Partial Payments***

Unless otherwise designated by the customer, partial payments will be applied to the various Utility products or services utilized by the customer in accordance with Utility practices. The late payment charge shall apply only to the bill amount outstanding after the due date.

### ***Returned Checks and ACH Rejects***

A service charge is assessed to any customer whose check is returned unpaid or ACH payment is rejected by the financial institution on which it is drawn. The service charge shall be in addition to the late payment charge if the check or ACH is not made good prior to the delinquent date of the bill. If one or more checks are dishonored or ACH payments rejected within a 6-month period, MPW may require future payments by cash, cashier's check, or money order.

### ***Budget Billing***

MPW offers Budget Billing to all residential customers as well as other customers whose consumption is less than 3,000 kWh per month. This plan is designed to limit the volatility of a customer's bill and maintain reasonable account balances. Budget Billing

- is offered to each eligible customer when the customer initially requests service;
- is available to existing eligible customers upon request anytime during the calendar year; and,
- may be cancelled at any time upon request of the customer.

The Budget Billing amount is calculated at the time of entry into the plan. It will be recalculated at least annually, but can also be recalculated monthly, quarterly, when requested by the customer, or whenever price, consumption, or a combination of factors results in a new estimate differing by 10 percent or more from that in use.

When the amount is recalculated, the account balance is divided by 12, and the resulting Budget Billing amount is adjusted.

Irrespective of the account balance, a delinquency in payment shall be subject to the same collection and disconnection procedures as other accounts, with the late payment charge applied to the Budget Billing amount. MPW may terminate Budget Billing after 30 days of delinquency. Balances are addressed as follows:

- Any balance due shall be paid at the time of termination.
- If there is a credit balance, the customer shall be allowed the option of obtaining a refund (if over \$25) or applying the credit to future charges.

The Utility is not required to offer a new Budget Billing plan to a customer for 6 months after the customer has discontinued Budget Billing.

### ***Payment Agreements – Residential Customers***

#### **Availability of a First Payment Agreement**

A reasonable payment agreement may be offered to a customer in the following situations:

- Customer cannot pay a delinquent MPW bill in full, or
- Customer has an outstanding debt to MPW, and
- Customer is not in default of a payment agreement with MPW.

#### **Reasonableness**

A payment agreement is determined to be reasonable by considering the following:

- Current household income
- Ability to pay
- Payment history (including prior defaults on similar agreements)
- Size of the bill
- Amount of time and reason why the bill is outstanding
- Any special circumstances creating extreme financial hardship

The Utility may require the customer to confirm financial difficulty with an acknowledgment from the Iowa Department of Human Services or another agency.

## ***Types and Terms of Payment Agreements***

### **First Payment Agreement**

An agreement may be offered as follows:

<b>Disconnection Length</b>	<b>Additional Conditions</b>	<b>Payment Agreement Terms</b>
Received disconnection notice, or have been disconnected for 120 days or less	Not currently in default of a payment agreement	Payments may be spread evenly over at least 12 months. Payments are set for specific amounts to be paid at specific times.
Have been disconnected more than 120 days	Not currently in default of a payment agreement	Payments may be spread evenly over at least 6 months. Payments are set for specific amounts to be paid at specific times.

### **Payment Agreement Contents**

The agreement will include the following:

- Terms and agreements of the payment agreement.
- Provisions for paying the current amount due.
- The address and a toll-free or collect telephone number where a qualified representative can be reached.

The document will be considered rendered to the customer when addressed to the customer's last-known address and deposited in the U.S. mail with postage prepaid. If delivery is not by U.S. mail, the document shall be considered rendered to the customer when delivered to the last-known physical or email address of the person responsible for payment for the service.

Each customer entering into a first payment agreement will be granted at least 1 late payment that is made 4 days or less beyond the due date for payment and the first payment agreement shall remain in effect.

### **Entering into a Payment Agreement**

Agreements may be made over the phone or in person. In either instance, MPW will provide to the customer (within 3 days of the agreement date) a written document reflecting the terms and conditions of the payment agreement.

- For agreements made in person, the customer will receive a signed copy of the agreement.
- For agreements made over the phone, the customer will receive a copy in the mail (or other delivery method).

Unless the customer notifies MPW within 10 days from the date the document is rendered, the customer confirms acceptance of the terms of the agreement by making the first agreed-to payment.

### **Refusal of Payment Agreement by MPW**

A customer may propose a payment agreement to MPW. If an agreement is not reached between MPW and the customer, MPW may refuse the offer orally, but the Utility must provide a written refusal to the customer (including the reason for the refusal) within 3 days of the oral notification. The written refusal shall be considered rendered to the customer when addressed to

the customer's last-known address and deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the written refusal shall be considered rendered to the customer when handed to the customer or when delivered to the last-known address of the person responsible for the payment for the service.

A customer may ask the IUB for assistance in working out a reasonable payment agreement. The request for assistance must be made to the IUB within 10 days after the rendering of the written refusal. During the review of this request, the Utility may not disconnect the service.

### **Second Payment Agreement**

MPW may offer a second payment agreement to a customer who is in default of a first payment agreement if the customer has made at least 2 consecutive full payments under the first payment agreement. The second payment agreement will be for the same term or longer than the term of the first payment agreement. The customer is required to pay for current service in addition to the monthly payments under the second payment agreement and may be required to make the first payment in advance as a condition of entering into the second payment agreement. The Utility may offer additional payment agreements to the customer but is not required to do so.

### ***Adjustment of Bills after Issuance***

Bills may be adjusted for the following reasons:

#### **Meter Error**

- Meter creep or meter test has an average error of more than  $\pm 2\%$  for watt-hour metering.
- Demand metering has an error of more than  $\pm 1.5\%$  in addition to the errors allowed under accuracy of demand metering (*Watt-Hour Meter and Associated Equipment Inspection and Testing Program*).

#### **No Meter Error**

- Incorrect reading of the meter.
- Incorrect application of the rate schedule.
- Incorrect connection of the metering installation.
- Other similar reasons.

Rules for adjustments due to metering or billing errors shall be in accordance with current IUB rules.



## **DISCONNECTIONS, DENIALS, AND RECONNECTIONS**

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### ***Customer Initiated (Voluntary)***

#### **Temporary Disconnections and Reconnections – Meter (Voluntary)**

Upon reasonable notice by a customer, MPW may make temporary disconnections for the customer's convenience. The customer may be required to pay a charge for disconnection and for reconnection. The customer will be advised of the charges at the time of the request.

#### **Temporary Disconnections and Reconnections – Service Drop (Voluntary)**

If a customer requests temporary disconnection of service, the following charges and rules will apply:

- The customer must pay for after-hours disconnections and reconnections at the current Utility applicable rates for labor, equipment, and materials.
- The temporary disconnection shall not be for a period longer than 12 months. If longer than 12 months, the customer is considered to have terminated service.

Prior to reconnection:

- The service must be inspected and approved by the City, County, or State Electrical Inspector, if any electrical work was done during disconnected period.
- All amounts that the customer owes the Utility must be paid in full.

These charges are in addition to any charges that may be made for installation of service equipment for temporary service governed by the *Service* section of these Service Rules.

#### **Permanent Disconnections (Voluntary)**

A customer requesting permanent disconnection shall provide a minimum 1 business days' notice to MPW. With proper notification, no charges shall be made for permanent disconnections.

### ***Utility Initiated (Involuntary – Other than Nonpayment)***

#### **Just Cause for Disconnection or Denial (Involuntary)**

MPW reserves the right to refuse or disconnect service for any of the reasons listed below, subject to the provisions of this section and other provisions of these Service Rules. If a customer fails to comply with a rule of the Utility, a 12-day written notice will be given, allowing the customer time to comply with the Service Rules. Except for reasons given in the first 4 items below or disconnection at the customer's request, no service will be disconnected unless the Utility is prepared to reconnect the service within 24 hours. A reconnection charge is posted to the account when the disconnection results from an act or omission on the part of the customer.

One written notice, including all reasons for the notice, will be given where more than one cause exists for disconnection of service. In determining the final date by which the account is to be settled or other specific action taken, the days of notice for the causes shall be concurrent.

Reasons for refusal or disconnection without notice are:

- Existence of a hazardous condition, as determined by MPW.
- Customer use of equipment in such a manner that will adversely affect MPW's equipment or service to others.

- Tampering with MPW-furnished/owned equipment. (For the purposes of these Service Rules, a broken or absent meter seal alone does not constitute tampering).
- Unauthorized use or resale of the Utility's service.

Reasons for refusal or disconnection with notice are:

- Violation of or noncompliance with these Service Rules.
- Failure of the customer or prospective customer to furnish service equipment, permits, certifications or rights-of-way specified by the Utility as a condition of receiving service.
- Failure of the customer or prospective customer to fulfill his contractual obligations for service or facilities.
- Failure of the customer or prospective customer to permit the Utility safe and reasonable access to its equipment.

#### **Disconnection and Reconnection Charge (Involuntary – Other Than Nonpayment)**

For any disconnection or reconnection pursuant to these Service Rules, the customer shall pay the current Utility applicable rates for labor, equipment, and materials.

#### ***Utility Initiated (Involuntary – Due to Nonpayment)***

MPW reserves the right to refuse or disconnect service for nonpayment of the bill or deposit, subject to the provisions of these Service Rules.

MPW may disconnect electric service after 24-hour notice (and without a 12-day written notice) for failure of the customer to comply with the terms of a payment agreement.

#### **Written Notice**

MPW shall give a 12-day written notice to the customer and, where applicable, the person or agency designated by the customer to receive such notice, that service will be disconnected if the account is not settled. Notice shall include the "Customer Rights and Responsibilities to Avoid Shutoff of Electric Service for Nonpayment" and a collect telephone number where a representative qualified to provide additional information about the disconnection can be reached. Each Utility representative shall provide their first name to the caller and have immediate access to current, detailed information concerning the customer's account and previous contacts with MPW.

#### **Multi-Occupancy Premises**

If the disconnection will affect occupants of residential units leased from the customer (renters), the premises of any building known by the utility to contain residential units affected by disconnection must be posted, at least 2 days prior to disconnection, with a notice informing any occupants of the date when service will be disconnected and the reasons for disconnection.

#### **Landlord Notification**

In the cases of a residential customer, if attempted contact is unsuccessful, and MPW has reason to believe that the residential customer is a renter, the landlord, if known, shall be contacted to determine if the customer is still in occupancy, and if not, his present location. The landlord shall also be informed of the date when services may be disconnected.

#### **Avoiding Disconnection – Disputed Bill**

If the customer has received notice of disconnection (either 12-day or 24-hour) and has a dispute concerning a bill for Electric Utility service, the customer may dispute their bill by notifying MPW of the reason for the dispute. The customer must pay the undisputed part of the bill. MPW will

not disconnect electric service for 45 days from the date the bill was mailed while the dispute is being resolved between the customer and MPW.

### ***Disconnection***

Disconnection of a residential customer will take place between the hours of 6 AM and 2 PM on a weekday, and not on weekends or holidays.

#### **Personal Contact**

When disconnecting service to a customer, MPW shall make a diligent attempt to contact, by telephone or in person, the individual or agency on record to inform them of the pending disconnection and available remedies.

If the attempt at customer contact fails, the premises will be posted with a notice informing the customer of the pending disconnection. The notice shall be posted at least 24 hours prior to disconnection. A posting charge is assessed to all accounts requiring a posting notice. The posting charge is reviewed periodically by the Utility and is adjusted as needed.

### ***Reconnection***

If a disconnected customer makes payment or other arrangements during the business hours of Monday – Friday, 8 AM - 3 PM, all reasonable efforts will be made to reconnect the customer that day. Before reconnection, all bills must be paid or the customer shall make satisfactory payment arrangements.

#### **Reconnection Charge for Nonpayment**

For any reconnection of service pursuant to these Service Rules, there is a reconnection service charge during normal working hours.

Additional charges apply for reconnection of service outside normal working hours. Reconnection charges are reviewed periodically by the Utility and adjusted as needed.

### ***Severe Cold Weather***

If the National Weather Service forecast for the following 24 hours (in the customer's area) includes a forecasted temperature of 20°F or colder, service will not be disconnected at a location where electricity is used as the only source of space heating or to control or operate the only space heating equipment at the residence.

If MPW has posted a disconnect notice or verbally warned of disconnection in compliance with these Service Rules, and is not permitted to disconnect because of a National Weather Service forecast, disconnection may immediately proceed without further notice once the temperature (in the customer's area) rises above 20°F. The forecasted temperature must be above 20°F for at least 24 hours. Disconnection will not occur if the customer has paid the past due amount, or is entitled to postponement of disconnection under another provision in these Service Rules.

### ***Health of a Resident***

Disconnection of a residential customer will be postponed if the disconnection of service would present a special danger to the health of any permanent resident of the premises. A special danger to health is indicated if a person appears to be seriously impaired and may, because of mental or physical problems, be unable to manage the person's own resources, to carry out activities of daily living, or to be protected from neglect or hazardous situations without assistance from others.

Indicators of a special danger to health include but are not limited to:

- Age
- Infirmary
- Mental incapacitation
- Serious illness
- Physical disability (including blindness and limited mobility)
- Other factual circumstances which indicate a severe or hazardous health situation

MPW may require the customer to provide written verification of the health condition by a physician or a public health official. This verification must include the following items:

- The name of the person endangered.
- A statement that the person is a resident of the premises in question.
- The name, business address, and telephone number of the certifying party.
- The nature of the health danger.
- Approximately how long the danger will continue.

Initial verification by the certifying party may be by telephone if written verification is forwarded to MPW within 5 days.

When MPW receives the written verification, the customer's service will not be disconnected for 30 days. The 30 days allows for payment agreements to be made.

If a customer's service is disconnected and serious illness notification is received by MPW within 14 days of the disconnection, service will be restored to the customer.

If payment arrangements are not made within 30 days, and the customer does not keep the current account paid while the payment agreement is in effect, the customer is subject to disconnection under these Service Rules.

### ***Winter Energy Assistance (November 1 through April 1)***

If MPW is informed that the customer's household may qualify for winter energy assistance or weatherization funds, no disconnection of service will take place for 30 days from the date MPW is notified to allow the customer time to obtain assistance. Disconnections are prohibited from November 1 through April 1 for a resident who is a head of household and who has been certified to the Utility by the local community action agency as eligible for either the low-income home energy assistance program or weatherization assistance program.

Prior to November 1, the Utility will notify customers via a bill insert describing the availability of winter energy assistance funds and the application process.

### ***Abnormal Electric Consumption***

A customer who is subject to disconnection for nonpayment of bill and who has electric consumption which appears to the customer to be abnormally high, may ask for assistance from MPW to identify the factors contributing to this usage pattern and to suggest remedial measures. MPW will provide assistance by discussing patterns of electric usage that may be readily identifiable, suggesting that an energy audit be conducted, and identifying sources of energy conservation information and financial assistance that may be available to the customer.

### ***Insufficient Reasons for Denying Service***

In accordance with IUB rules, the following do not constitute sufficient cause for refusal of service to a present or prospective customer:

- Delinquency in payment for service by a previous occupant of the premises to be served.
- Failure to pay for merchandise purchased from the Utility.
- Failure to pay for a different type or class of Utility service.
- Failure to pay the bill of another customer as guarantor thereof.
- Failure to pay back bills rendered for a meter error.
- Failure to pay bill adjustment resulting from non-meter error.
- Failure of a residential customer to pay a deposit during the period November 1 through April 1 for the location at which the customer has been receiving service.
- Delinquency in payment for service by an occupant if the customer applying for service is creditworthy and able to satisfy any deposit requirements.

### ***Service Limitation Policy***

Reserved

## **CHARGES FOR SERVICES**

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### ***Charged Services***

Customers may be billed for the cost of services that are not MPW's responsibility, including the following items.

#### **Residential Customers**

For the relocation of Utility facilities at the customer's request, an advance payment equal to the total estimated cost of the relocation must be made. The customer is responsible for the actual cost of the relocation.

#### **Commercial I, Commercial II, Industrial I and Industrial II**

For a service call where the trouble is found to be on the customer's equipment, customer will be charged actual cost at Job Sales rate.

For a requested relocation of facilities belonging to the customer or the Utility, a payment equal to the total estimated cost shall be required in advance of any construction. The customer is responsible for the actual cost of the relocation.

### ***Non-charged Services***

The customer will not be billed for services or equipment for which MPW is responsible.

### ***Underground Facilities Locating***

The Utility will locate underground service facilities without charge. Customers should call Iowa One Call (811 or 1-800-292-8989) no less than 48 hours in advance of beginning work. Every effort to locate the underground facilities correctly will be made by MPW, but the Utility cannot guarantee its location nor be held liable. MPW will not locate private services as a practice, but will provide locates to customers as a courtesy, provided the customer waives any responsibility or liability to the Utility for any damages incurred since the Utility cannot guarantee the accuracy of the locations.

## **CUSTOMER COMMUNICATIONS**

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### ***Utility Customer Representative***

A Utility representative charged with customer communication will give their first name to the customer, whether communication is in person or by telephone. The representative will have immediate access to current detailed information concerning the customer's account and previous contact with the Utility and shall be properly qualified and instructed in the screening and prompt handling of complaints.

### ***Telephone Procedure***

Telephone number 563-263-2631 is attended continuously 24 hours a day, 7 days a week for the handling of problems or complaints of an emergency nature. It is staffed during business hours Monday through Friday to handle routine business questions and other communications.

### ***Complaint Procedure***

Customers should contact an MPW Customer Service Representative to initiate a complaint. The complaint may be pursued with the appropriate Supervisor, Manager, Director, and the General Manager, in that order, if the customer is not satisfied with the initial handling of the complaint.

Complaints concerning the charges, practices, facilities, or services of the Utility will be investigated promptly, thoroughly, and courteously. MPW keeps records of written complaints sufficient to enable review and analysis of its procedures and actions. Based on MPW staff judgment, customers may be asked to submit complaints in writing. The complaint should include the following information:

- Name(s) of complainant
- Address(es) of complainant
- Telephone number(s) of complainant
- Nature of the complaint
- Relief sought

A written complaint may be filed with the Chairperson of the Governing Body if the customer is not satisfied with the General Manager's handling of the complaint. If the Chairperson believes the customer's complaint warrants further attention, the Chairperson may place the complaint on the agenda of the next regularly scheduled Board meeting for the ultimate resolution of the complaint by the Governing Body.

A customer who is unable to travel need not appear before any Utility official described above in person to explain the nature of their complaint. They may do so by telephone or in some other mutually agreeable fashion.

Complaints involving policies or actions of the Utility that are regulated by the IUB may also be filed with the IUB in accordance with applicable regulations.

## **CUSTOMER OBLIGATIONS**

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Acceptance of any Utility service obligates a customer to all conditions of service set forth by the Utility, these Service Rules, and the rules of the IUB. Customers may request a copy of the Service Rules by contacting MPW Customer Service Representatives at 3205 Cedar St., Muscatine, IA, by calling 563-263-2631, or by viewing the Service Rules on [www.mpw.org](http://www.mpw.org). The Utility reserves the right to revise the Service Rules and conditions of service at any time.

### ***Use of the Utility's Facilities by Customers and Others***

#### **Utility Facilities**

The customer or any third party shall not, without written consent from MPW, use any of the poles, structures, or other Utility facilities for fastening thereto, support, or for any other purpose whatsoever. Nor shall the customer or a third party locate anything in such proximity to the Utility's facilities that will cause, or be likely to cause, interference with service or a dangerous condition in connection with unauthorized use of poles.

#### **Non-liability of the Utility**

The Utility assumes no liability for unauthorized attachments, equipment, or appurtenances whether attached by individuals or companies. Upon becoming aware of such attachments, MPW will remove them immediately. In the case Utility personnel become aware of illegally attached lines, equipment, or appurtenances that are of a hazardous nature to life, limb or property, such attachments will be removed immediately by the Utility without notification.

### ***Customer Liability for Damages or Alterations***

#### **Customer Liability**

The customer is responsible for all damage to or loss of Utility property located on customer's premises unless the damage or loss is due to the negligence of the Utility or by any act or omission on the part of the Utility or its authorized representative.

#### **Protection of Utility's Facilities on Customer's Premises**

All equipment installed by the Utility at its own expense is the Utility's facilities. Customers are responsible to protect the Utility's facilities on the customer's premises and not interfere with or alter or permit interference with or alteration of the Utility facilities except by duly authorized MPW representatives.

Under no circumstances or conditions shall any person who is not a Utility representative connect to or disconnect from any meter, or disturb any connections between the meter and the service after the meter has been installed. All electric services must be connected or disconnected only by an authorized MPW representative. Any tampering constitutes theft of service and may lead to disconnection as outlined in the Utility's theft of utility services policies and procedures.

## ***Customer Equipment***

### **Customer Equipment Standards**

Except for facilities defined in *Extent of Service*, the customer is responsible for all wiring and electrical equipment on customer's premises. The installation and maintenance of customer facilities shall be consistent with applicable standards imposed by these divisions of the Service Rules dealing with alternate energy production, special conditions of service, applicable engineering practices, and any other applicable statutory or administrative law. Location of the meter loop and meter socket shall be at the discretion of the Utility, with consideration given to the customer's convenience.

### **Utility Not Liable**

No inspection or approval by the Utility of a customer's compliance with the *Services* section shall be construed to impose any duty or liability on the Utility, but shall be considered solely for ensuring protection of MPW's property and for ensuring the continuity of service to MPW customers.

## **ACCESS TO CUSTOMER PREMISES**

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Customer and owner authorize MPW, or its designees, to:

- Enter their home, business, or upon their property, in the presence of the customer or their representative, during normal business hours or by appointment, to install, inspect, test, maintain, replace, remove, or otherwise deal with MPW-supplied equipment and services.
- Access the outside areas of the customer's property, at reasonable times even without the customer being present for these same purposes.

Customer acknowledges that emergencies and after hours call outs may necessitate access to premises beyond normal business hours.

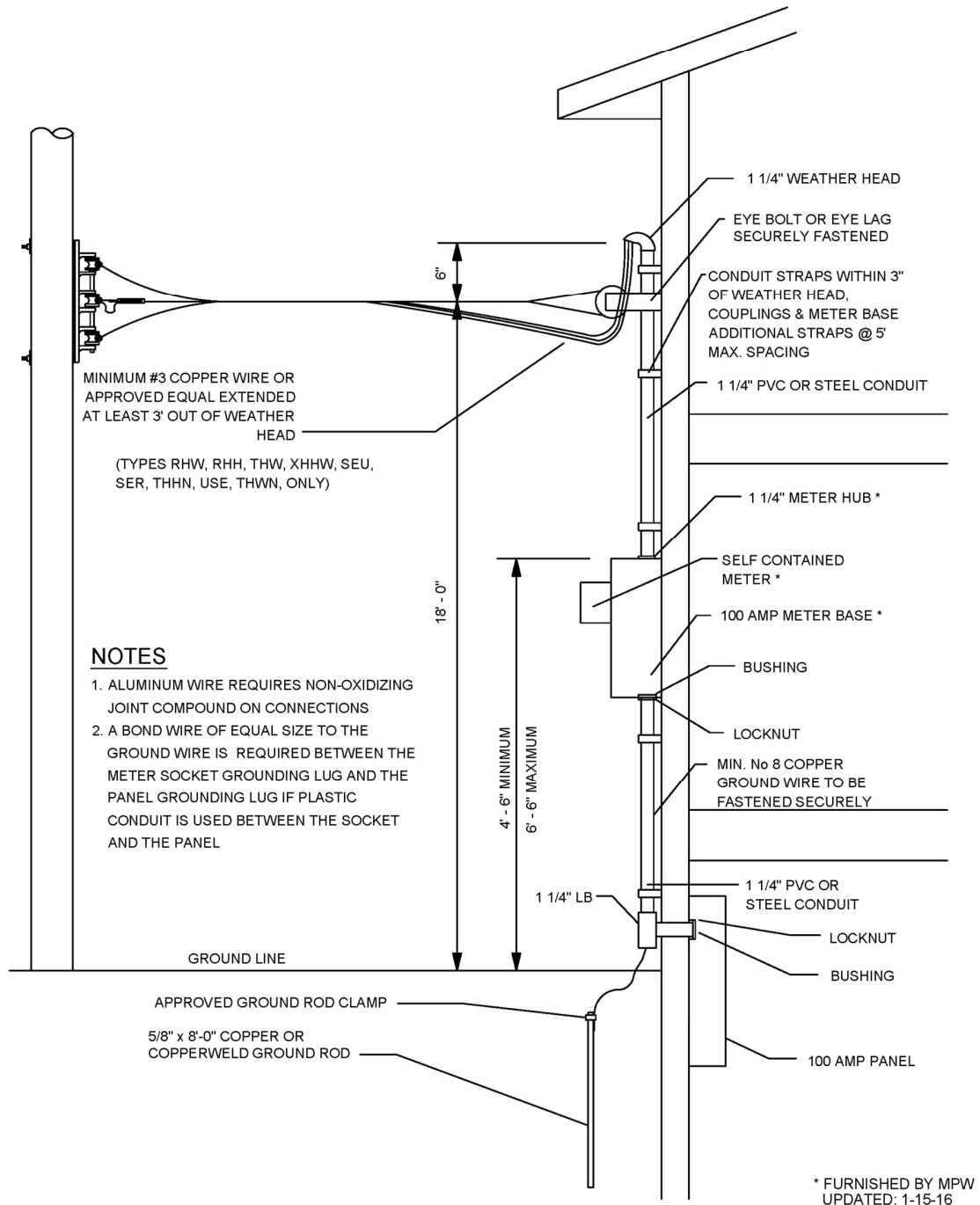
Customer and owner also grant to MPW, without charge, right-of-way over and on the premises on which MPW-owned equipment and structures are located.



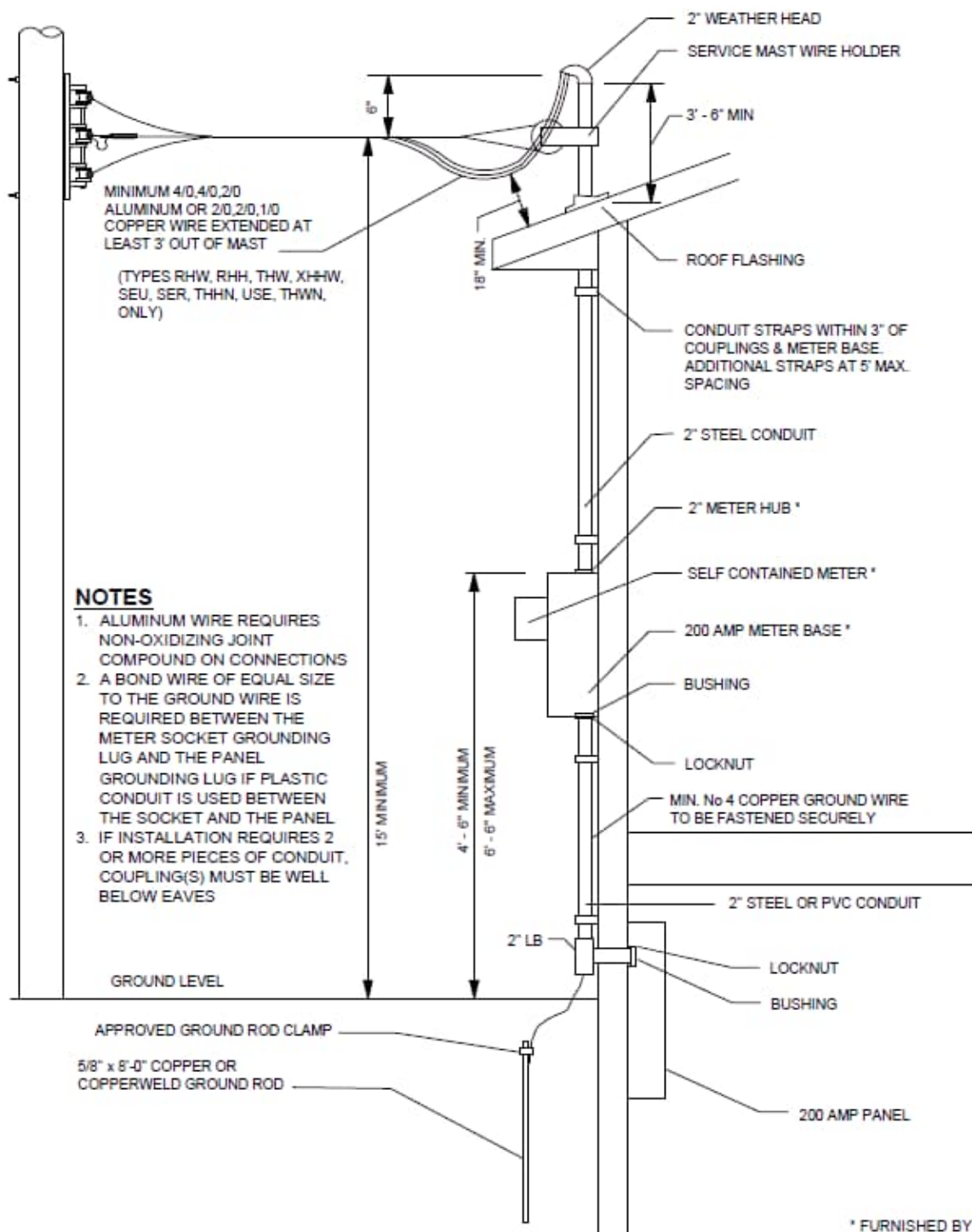
# **ELECTRIC EXHIBITS**



**Exhibit 1A**  
**Typical 100 Amp Two Story Installation**  
 (Not Applicable To Single Family Residential)



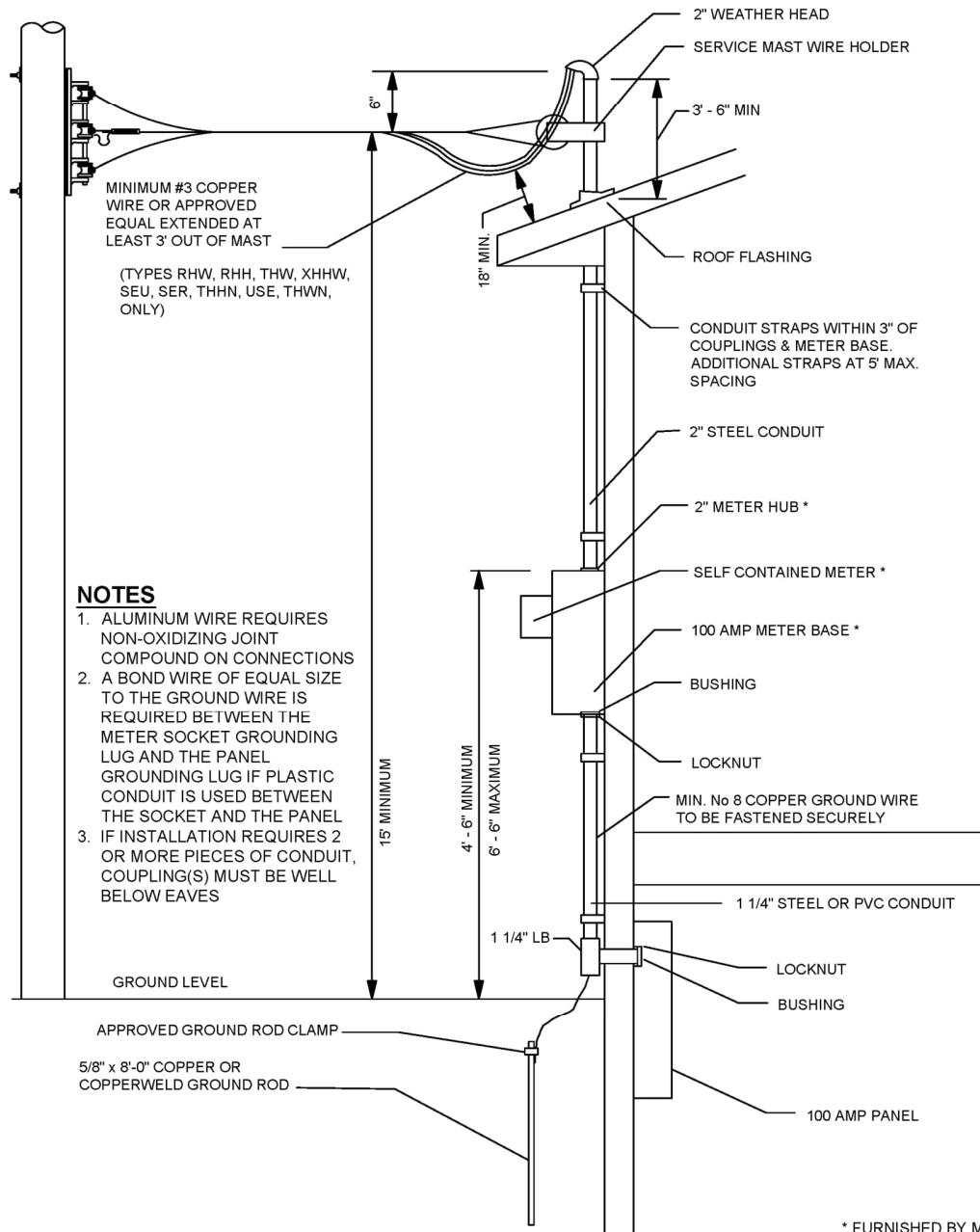
## Exhibit 2 Typical 200 Amp Single or 1 & 1/2 Story Installation



\* FURNISHED BY MPW  
UPDATED: 8-9-07

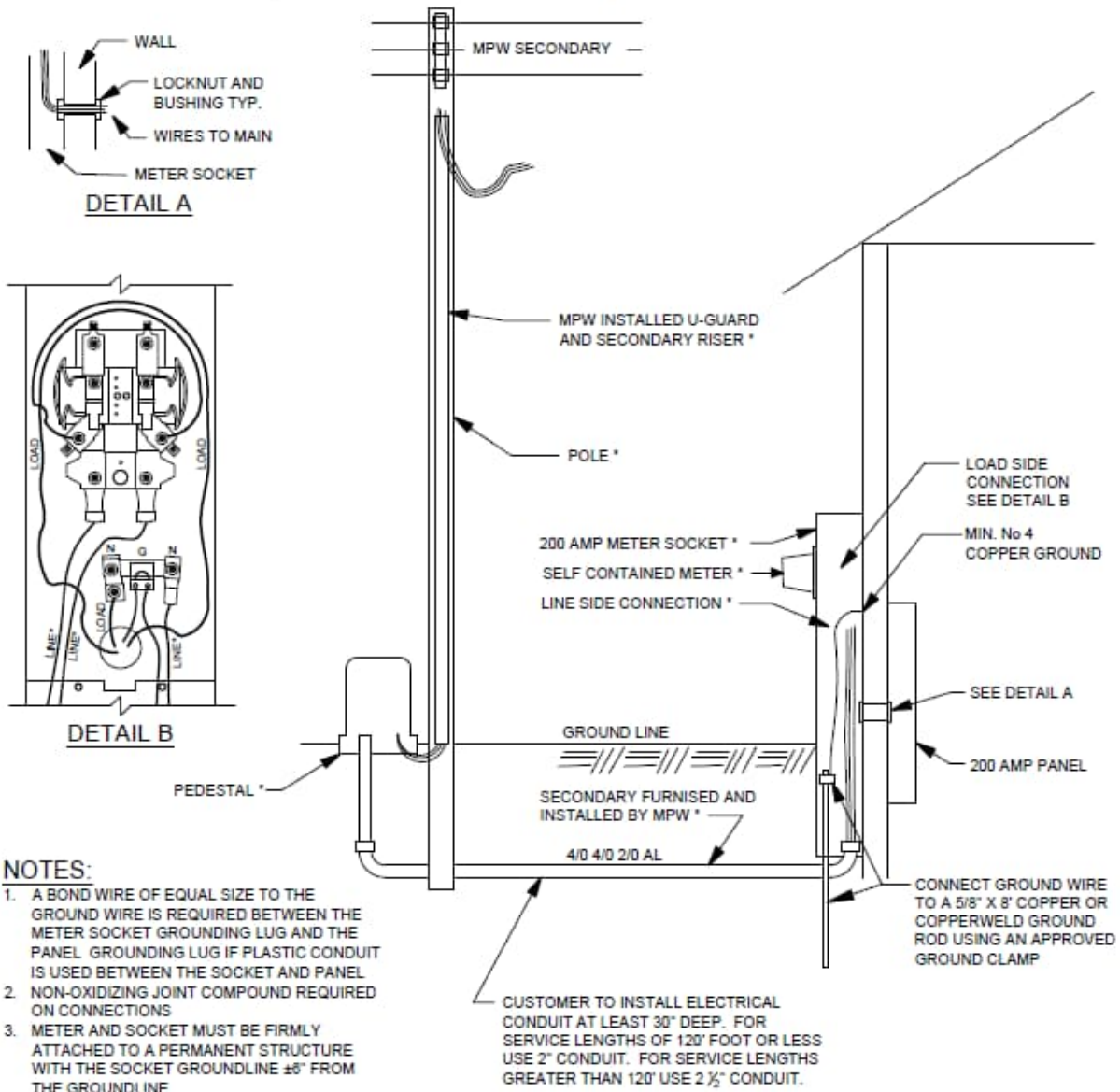
## Exhibit 2A Typical 100 Amp Single or 1 & 1/2 Story Installation

(Not Applicable To Single Family Residential)



\* FURNISHED BY MPW  
UPDATED: 1-15-15

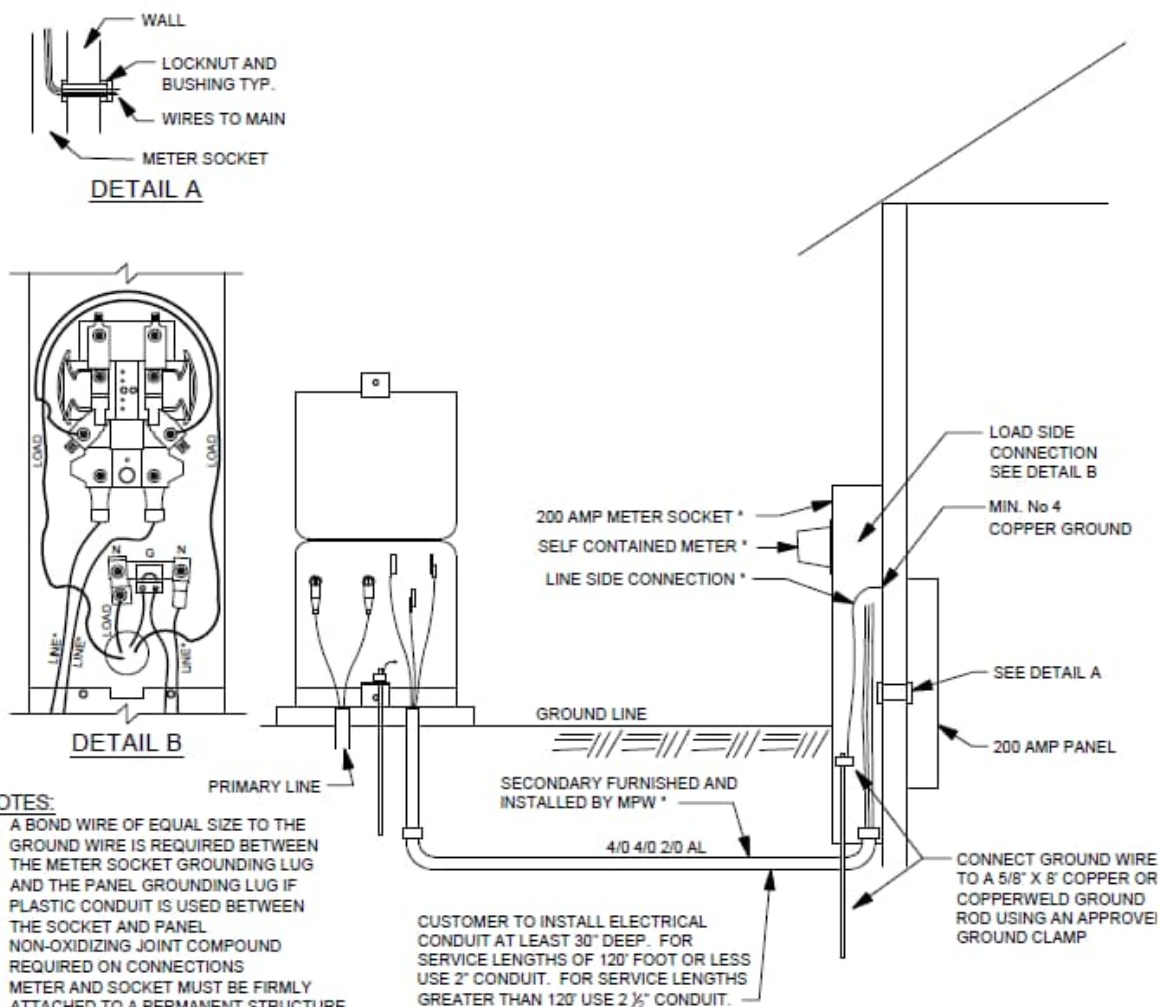
### Exhibit 3 Typical 200 Amp Underground Service Installation (in Overhead Area)



SERVICE SIZE	MINIMUM WIRE SIZE		PVC OR STEEL CONDUIT SIZE		METER SOCKET	BREAKER OR FUSE SIZE
	COPPER	ALUMINUM	COPPER CONDUCTOR	ALUMINUM CONDUCTOR		
200 AMP	No. 2/0	No. 4/0	2"	2"	200 AMP	200 AMP

\* FURNISHED BY MPW  
UPDATED: 5-7-19

### Exhibit 4 Typical 200 Amp Underground Service Installation (in Underground Area)



**NOTES:**

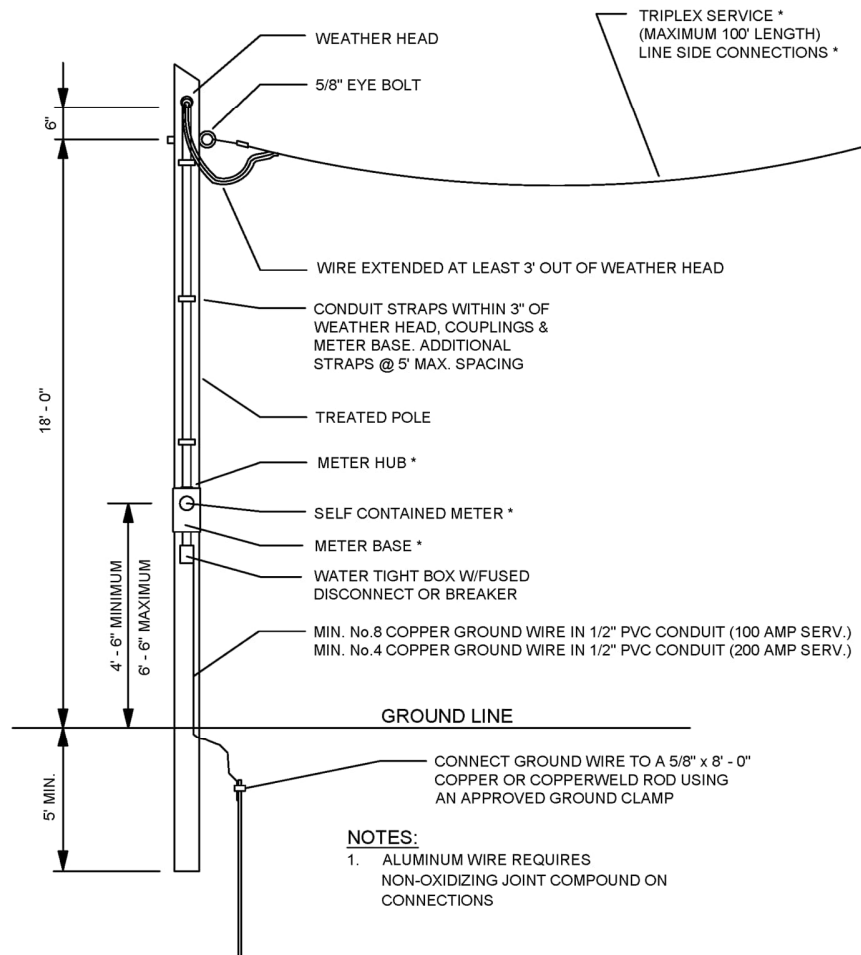
1. A BOND WIRE OF EQUAL SIZE TO THE GROUND WIRE IS REQUIRED BETWEEN THE METER SOCKET GROUNDING LUG AND THE PANEL GROUNDING LUG IF PLASTIC CONDUIT IS USED BETWEEN THE SOCKET AND PANEL
2. NON-OXIDIZING JOINT COMPOUND REQUIRED ON CONNECTIONS
3. METER AND SOCKET MUST BE FIRMLY ATTACHED TO A PERMANENT STRUCTURE WITH THE SOCKET GROUNDLINE ±6" FROM THE GROUNDLINE

CUSTOMER TO INSTALL ELECTRICAL CONDUIT AT LEAST 30" DEEP. FOR SERVICE LENGTHS OF 120' FOOT OR LESS USE 2" CONDUIT. FOR SERVICE LENGTHS GREATER THAN 120' USE 2 1/2" CONDUIT.

SERVICE SIZE	MINIMUM WIRE SIZE		PVC OR STEEL CONDUIT SIZE		METER SOCKET	BREAKER OR FUSE SIZE
	COPPER	ALUMINUM	COPPER CONDUCTOR	ALUMINUM CONDUCTOR		
200 AMP	No. 2/0	No. 4/0	2"	2"	200 AMP	200 AMP

\* FURNISHED BY MPW  
UPDATED: 5-7-19

### Exhibit 5 Typical Customer Service Pole for Overhead Service (Not Applicable To Single Family Residential)



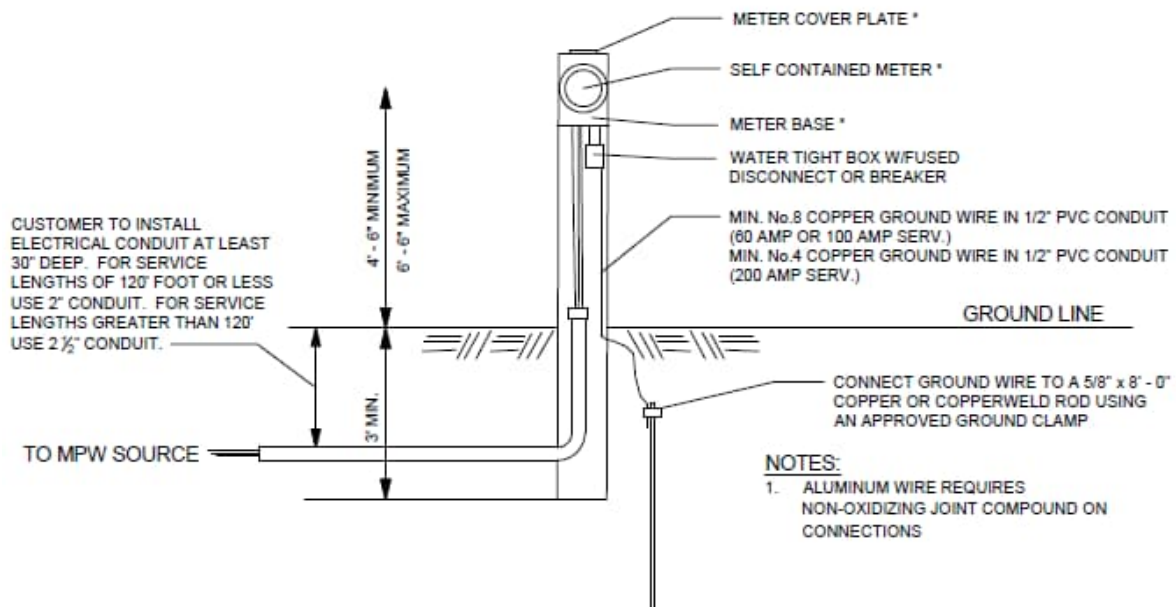
SERVICE SIZE	MINIMUM WIRE SIZE		PVC OR STEEL CONDUIT SIZE		METER SOCKET	BREAKER OR FUSE SIZE
	COPPER	ALUMINUM	COPPER CONDUCTOR	ALUMINUM CONDUCTOR		
60 AMP	No. 4	APPROVED EQUAL TO No. 4 CU.	1 1/4"	1 1/4"	100 AMP	60 AMP
100 AMP	No. 3	APPROVED EQUAL TO No. 3 CU.	1 1/4"	1 1/4"	100 AMP	100 AMP
200 AMP	No. 2/0	No. 4/0	2"	2"	200 AMP	200 AMP

\* FURNISHED BY MPW  
UPDATED: 1-15-15



## Exhibit 6 Typical Customer Service Pole for Underground Service

(Single Family Residential Requires 200 Amp Minimum)



SERVICE SIZE	MINIMUM WIRE SIZE		PVC OR STEEL CONDUIT SIZE		METER SOCKET	BREAKER OR FUSE SIZE
	COPPER	ALUMINUM	COPPER CONDUCTOR	ALUMINUM CONDUCTOR		
60 AMP	No. 4	APPROVED EQUAL TO No. 4 CU.	1 1/4"	1 1/4"	100 AMP	60 AMP
100 AMP	No. 3	APPROVED EQUAL TO No.3 CU.	1 1/4"	1 1/4"	100 AMP	100 AMP
200 AMP	No. 2/0	No. 4/0	2"	2"	200 AMP	200 AMP

\* FURNISHED BY MPW  
UPDATED: 5-7-19

## Exhibit 7 Typical 200 Amp Multi-Gang Sockets

FURNISHED BY MPW (MULTI-GANG SOCKET)

1	2	3	4	5	6
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MAXIMUM CONDUCTOR LUG SIZE

	2	3	4	5	6
LINE	600 KCMIL OR 250 KCMIL PARALLEL	600 KCMIL OR 250 KCMIL PARALLEL	600 KCMIL OR 250 KCMIL PARALLEL	600 KCMIL OR 250 KCMIL PARALLEL	600 KCMIL OR 250 KCMIL PARALLEL
LOAD	250 MCM	250 MCM	250 MCM	250 MCM	250 MCM

LUGS ARE TIN PLATED FOR COPPER OR ALUMINUM

LINE SIDE

MINIMUM REQUIRED CONDUCTOR SIZE

	2	3	4	5	6
COPPER	350 KCMIL OR	350 KCMIL OR	PARALLEL 4/0 OR	PARALLEL 4/0 OR	PARALLEL 250 KCMIL OR
ALUMINUM	APPROVED EQUAL	APPROVED EQUAL	APPROVED EQUAL	APPROVED EQUAL	APPROVED EQUAL

LOAD SIDE

MINIMUM REQUIRED CONDUCTOR SIZE

COPPER	2/0
ALUMINUM	APPROVED EQUAL

NOTE:

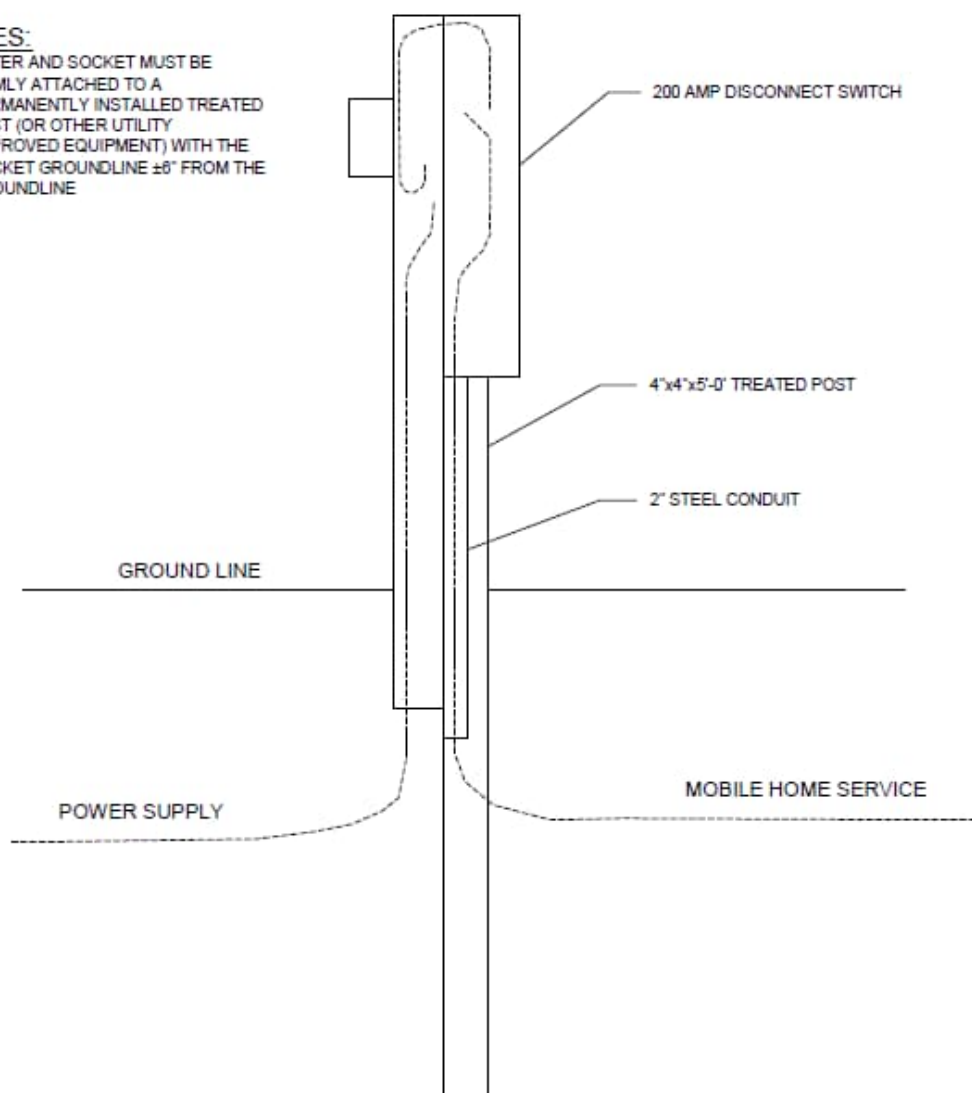
- NEUTRAL CAN BE REDUCED TWO WIRE SIZES, GROUND WIRE TO BE MINIMUM 1/0 COPPER ON ALL MULTI-GANG SOCKETS.

\* FURNISHED BY MPW  
UPDATED: 8-9-07

### Exhibit 8 Typical Mobile Home 200 Amp Meter with Disconnect Switch

**NOTES:**

- 1. METER AND SOCKET MUST BE FIRMLY ATTACHED TO A PERMANENTLY INSTALLED TREATED POST (OR OTHER UTILITY APPROVED EQUIPMENT) WITH THE SOCKET GROUNDLINE  $\pm 8"$  FROM THE GROUNDLINE



\* FURNISHED BY MPW  
UPDATED: 8-9-07