MISSISSIPPI POWER COMPANY LOCAL OFFICES AND OPERATING HEADQUARTERS

Customer Service Center

1-800-532-1502 - Company Wide Information

Town Address		
Coast District		
Coast District	Coast District Headquarters	
	$2908\ 28^{\text{th}}$ St.	
	Gulfport, MS 39501	
Bay St. Louis	300 Highway 90	
	Bay St. Louis, MS 39501	
Biloxi	676 Washington Loop	
	Biloxi, MS 39530	
Biloxi Service Center	Oak St.	
	Biloxi, MS	
Gulfport Service Center	2908 28 th St.	
	Gulfport, MS 39501	
Ocean Springs	711 Church St.	
	Ocean Springs, MS 39564	
Pass Christian	255 East 2 nd St.	
	Pass Christian, MS 39571	
Wiggins	625 West Central Ave.	
	P.O. Box 308	
	Wiggins, MS 39577	
Pascagoula/Moss Point	2326 Telephone Rd.	
District	Pascagoula, MS 39567	
Leakesville	St. Francis St.	
	P.O. Box 677	
	Leakesville, MS 39451	
Lucedale	Winter & Holmes St.	
	P.O. Box 357	
	Lucedale, MS 39451	
Moss Point	4730 Morris St.	
	Moss Point, MS 39563	

Coast Division

1 1110	Belt Division
Town	Address
Pine Belt District	2601 Highway 11 Bypass
Headquarters	Hattiesburg, MS 39401
Hattiesburg Office	420 West Pine St.
	P. O. Box 1271
	Hattiesburg, MS 39401
Hattiesburg Service	2601 Highway 11 Bypass
Center	Hattiesburg, MS 39401
Columbia	501 Broad St.
	P. O. Box 208
	Columbia, MS 39429
Lumberton	401 West Main St.
	Lumberton, MS 39455
Picayune	114 Elizabeth St.
	Picayune, MS 39466
Picayune Service	
Center	
Poplarville	201 West Cumberland St.
-	P. O. Box 351
	Poplarville, MS 39470
Purvis	135 Front St.
	Purvis, MS 39475
Richton	206 South Front St.
	P.O. Box
	Richton, MS 39467
Sumrall	Main Street
	P.O. Box 248
	Sumrall, MS 39482
Laurel	411 Oak St.
	P.O. Box 287
	Laurel, MS 39440
Laurel Service Center	Kingston & Front St.
	Laurel, MS 39440
Bay Springs	Bay Center
	Highway 15 South
	P. O. Box 367
	Bay Springs, MS 39422
Ellisville	106 Holly St.
	P.O. Box 580
	Ellisville, MS 39437
Heidelberg	Main St.
	P.O. Drawer G
	Heidelberg, MS 39439

Pine Belt Division

Taylorsville	107 Highway 28, East P.O. Box 376 Taylorsville, MS 39168
Waynesboro	807 Azalea Drive P.O. Box 872 Waynesboro, MS 39369-0872

Meridian Division

Town	Address
Meridian District	2401 11 th St.
	Meridian, MS 39301
Meridian Service	3118 Highway 45 North
Center	Meridian, MS 39301
Forest	610 East 3 rd St.
	P.O. Box 90
	Forest, MS 39074
Forest Service Center	
Newton	201 Scanlan St.
	P.O. Box 67
	Newton, MS 39345
Quitman	304 South Archusa Ave.
	Quitman, MS 39355
Stonewall	Burlington Ave.
	P.O. Box 68
	Stonewall, MS 39365
Union	313 Bank St.
	P.O. Box 146
	Union, MS 39365

MPC Metering Services Department

Town	Address
Metering Services	3118 Highway 45 North
	Meridian, MS 39301
	601-484-2654

For questions concerning information in this book	
not specifically addressed call	
601-484-2654 or (internal only) 8-760-2654.	

INTRODUCTION

This booklet is issued primarily as a convenient reference for customers, architects, engineers and contractors planning or constructing buildings or installing, repairing, or renewing apparatus or equipment to be connected to the Company's distribution system. Any future reference to the Company will imply Mississippi Power Company unless otherwise stated.

The practices discussed have been derived from research, experience and technical consideration. <u>As</u> <u>such they are supplementary to and do not intentionally conflict with the National Electrical Code</u> <u>or state and municipal laws and ordinances that may be in force within the cities, towns, or</u> <u>communities in which the Company furnishes electric service. If any conflict exists, the Code, law,</u> <u>or ordinance shall control</u>.

It is always necessary to refer to and comply with applicable codes, statutes, utility commission rules, and local ordinances. The information contained herein is general and does not include every detail or every lawful requirement.

The Company desires to serve its customers promptly and satisfactorily. It will endeavor to cooperate with contractors and customers to the fullest extent in completing service connections with as little delay and inconvenience as possible and will gladly give special attention to any particularly difficult situation confronting a customer.

The Company will be pleased to confer with those desiring information concerning rates, services, etc., upon request.

DEFINITIONS

General Information

Alterations and Additions Application For Service: Availability and Classification of Service: Number of Services and Meters: Use of Service by the Customer: **Temporary Service: Extensions: Motor Requirements: Power Factor Correction: Capacitor Installation: Cogeneration: Service Quality: Liability for Service Interruption: Overhead Services: Underground Services: Customer Owned Sockets:** Transformer Vaults: **Grounding: Tampering and Sealing:**

DEFINITIONS

Ampere Rating - The maximum allowable current that can safely pass through a device.

Approved - Acceptable to a qualified Mississippi Power Company employee.

Class of Service - The voltage rating and the number of phases for a particular service.

Company - Mississippi Power Company.

Conduit - A tubing or duct in which electric wires or cables are enclosed.

Current Transformer (CT) - A device which reduces the load current by a known ratio for metering purposes.

CT Enclosure (Instrument Transformer Enclosure) - A metal cabinet which houses instrument transformers.

CT Socket (Instrument Transformer Rated Source) - A meter socket that is used only with instrument transformers.

Customer - The corporation, municipality, governmental agency, association, partnership or individual using or planning to use electric service supplied by the Company or the architect, engineer, or electrical contractor acting as the customer's agent.

Diversified Demand - A company calculation to determine the maximum anticipated load (kw) based upon the customer's usage patterns and operation.

Electric Service - Electrical energy that is made available to the customer at the point of delivery.

Energy - The measure of work done. The electrical unit of energy is the kilowatt-hour, which is 1,000 watt-hours.

Final Grade - Ground level after all construction and landscaping procedures have been completed.

Grounded Conductor - A system or circuit conductor that is intentionally grounded.

Grounding Conductor, Equipment - The conductor used to connect non-current carrying metal parts of equipment, raceways, and other enclosures to the system grounded conductor and/or the grounding electrode conductor at the service equipment or at the source of a separately derived system.

Grounding Electrode Conductor - The conductor used to connect the grounding electrode to the equipment grounding conductor and/or to the grounding conductor of the circuit at the service equipment or at the source of a separately derived system.

Instrument Transformer - A current transformer or potential transformer used in metering.

Instrument Transformer Enclosure (CT Enclosure) - A metal cabinet which houses instrument transformers.

Isolated Location - Not readily accessible to persons unless special means for access are used.

Listed Equipment- Equipment or materials included in a list published by an organization acceptable to the authority having jurisdiction and concerned with product evaluation. This organization maintains periodic inspection of material or devices and finds them suitable for use in a specified manner. i.e. Underwriters Laboratory (U.L.)

Maximum Available Fault Current - The maximum amount of current that can flow when a fault (short circuit) condition exists between a conductor and ground or between two or more conductors at a given location.

Meter - A device that measures the amount of power and/or energy delivered to a customer.

Meter Socket - A weatherproof receptacle used for mounting a socket type meter.

National Electric Code (NEC) - The National Electrical Code, ANSI/NFPA 70. The code which governs the installation of electric conductors and equipment within or on public or private buildings or other structures. At the time of this printing, the current revision of the code is the 1993 edition. Future revisions of the National Electrical Code may change the requirements of the code or the references contained herein.

National Electrical Safety Code (NESC) - The National Electrical Safety Code, ANSI C2-1993. The code which governs the installation, operation, and maintenance of electric supply and communication lines, equipment, and associated work practices employed by utilities. Future revisions of the National Electrical Safety Code may change the requirements of the code or the references contained herein.

Neutral - The grounded service which carries the unbalanced 60 hertz current from other conductors.

Point of Delivery - The point at which the customer's conductors are connected to the Company's conductors.

Potential Transformer (PT) - A device which reduces the service voltage by a known ratio for metering.

Power (Demand) - The average rate of energy used over a period of time. A 15 minute interval is used for billing purposes. The unit of measure for power is the Kilowatt (kW), which is 1000 watts.

Qualified Employee - A Mississippi Power Company employee familiar with company safety rules and regulations and the construction, application, and operation of the equipment involved.

Raceway - An enclosed channel designed expressly for holding wires, cables, or bus bars.

Readily Accessible - Capable of being reached quickly, for operation, renewal, or inspections without requiring those to whom ready access is requisite to climb over or remove obstacles or to resort to portable ladders, chairs, etc.

Service - The conductors and equipment for delivering energy from the electricity supply system to the wiring system of the premises served.

Service Drop - The overhead service conductors that extend from the Company's last pole or aerial support to and including the splices, if any, connecting the customer's service entrance conductors at the building or other structure.

Service Entrance - The customer's conductors, conduit, and other associated equipment which extends from the point of delivery to the service equipment.

Service Entrance Capacity - The maximum rated allowable current passing through the service equipment.

Service Entrance Conductors: Overhead System - The service conductors between the terminals of the service equipment and a point usually outside the building, clear of building walls, where they are joined by tap or splice to the service drop.

Service Entrance Conductors: Underground System - The service conductors between the terminals of the service equipment and the point of connection to the service lateral.

Service Equipment - The necessary equipment, usually consisting of a circuit breaker or switch and fuses, and their accessories located near the point of entrance of supply conductors to a building or other structure, and intended to be the main electrical supply disconnect.

Service Lateral - The underground service conductors between the Company's distribution system and the point of delivery including any risers at a pole or transformer.

Special Permission - The written consent of the Company.

Weatherproof - So constructed or protected that exposure to weather will not interfere with successful operation.

GENERAL INFORMATION

A. <u>Alterations and Additions</u>:

When the Company connects a customer's installations to its supply lines, arrangements are made for meters, transformers, and other equipment to fit the installations as it is at that time. For maximum safety and billing accuracy, it is essential that the customer or contractor give notice to the Company before making any changes which will significantly increase or decrease the electrical load, reduce conductor clearances, or enclose or restrict access to Company facilities.

B. Application For Service:

The Company maintains local offices strategically placed throughout its service area as well as a company-wide customer service center. Information concerning original or added service should be directed to the Customer Service Center by calling 1-800-532-1502 or local offices.

The customer shall provide, free of expense to the Company, suitable locations and space for the transformer(s), meters, and other equipment owned by the Company which are necessary to supply service.

An application for service will be considered permission to cross the customer's property and install any equipment which may be necessary to provide electric service.

To avoid unnecessary delays, applications for service should be made as far in advance of required service date as possible. Specific instructions for locating the service address, will help to assure prompt service.

C. Availability and Classification of Service:

The customer should consult the Company well in advance of the date that service is required in order to determine what type of service is available in a particular location. A qualified company employee will determine the voltage, phase, etc. of a particular service since the availability may vary between different locations.

The information contained in this booklet refers primarily to service requirements at secondary distribution voltages (under 600 volts) for light and power installations. Service requirements for installations requiring higher distribution voltages are subject to special negotiations between the customer and the Company.

The Company is available to advise customers concerning the use of electrical equipment or situations not covered in this book.

D. <u>Number of Services and Meters</u>:

The Company shall connect only one service drop or service lateral to a building or structure for each class of service except as permitted by Section 230-2 of the National Electrical Code.

Only one watt-hour meter shall be installed per customer per class of service. An exception will be made if the characteristics of the customer load or billing rate require the Company to utilize multiple meters. Multiple meters will not be used for the customer's benefit.

On installations comprising more than six meters, a sealable main disconnect or main breaker, of a type acceptable to the Company, shall be provided as required by the National Electrical Code. The customer will always provide and maintain any main breakers or disconnects

E. <u>Use of Service by the Customer</u>:

Compatibility between the Company's distribution system and the customer's wiring system is of utmost importance. Because of this the following operating procedures are recommended to the customer:

- To safeguard both the property of the customer and that of the Company, the customer is warned against overfusing either the main fuse or those on branch circuits by installing fuses or circuit breakers larger than approved by the National Electrical Code, or in any way making protective devices of any type inoperative.
- The customer's wiring and equipment should be maintained in the condition required by inspection authorities having jurisdiction. The customer should use equipment and service in such a manner as not to disturb the company's service to other customers.
- When designing a wiring system, the customer should balance the load connected across each phase of the system as nearly as practical.
- The customer's wiring and equipment is to be installed and maintained by the customer in the condition required by the NEC or governmental authorities having jurisdiction.
- Customer equipment must not introduce electric or magnetic interference on the Company's system.
- Control devices such as those used for lighting and motor control shall be of such design as to introduce a minimum of harmonic distortion or other disturbances into the Company's system. These are detailed on page 11.
- The customer shall not use electric energy from any other source while being supplied by the Company without written consent of the Company.
- Electric service supplied to a customer shall not be resold or shared with others. An establishment which supplies electricity purchased from the Company to its tenants without any specific energy charges will not be considered as sharing with others.

F. <u>Temporary Service</u>:

Application for temporary service should be made well in advance of the required service date. To insure prompt service, the location of the temporary service should be plainly marked with the lot number and/or street address as shown on the service application.

G. <u>Extensions</u>:

In order to avoid delay, persons desiring service beyond the existing electric distribution lines of the Company should consult with the Company for the conditions under which service may be provided, and make the necessary arrangements before wiring installations are started.

H. Motor Requirements:

The following requirements and suggestions apply to motors connected to the secondary distribution systems of the Company:

- The National Electrical Code requires that all motors be equipped with suitable starting switches and have overload protection.
- The use of automatic time-delay circuit breakers for circuit protection in all cases is strongly recommended and where fuses are used they should be of the time-delay type. This time delay will, in many instances, prevent unnecessary shut-downs due to the tripping of an instantaneous type circuit breaker or blowing of ordinary short time fuses by large currents resulting from motor starting, temporary overloads or temporary low voltage conditions and ordinarily will provide adequate protection. All automatic controls using the time delay should be coordinated.
- In general, 120 volts single phase motors may be connected to a 2 wire, single phase service, provided the locked rotor current does not exceed 50 amperes. Motors in excess of 50 amperes may be connected to a 240 volt, 3 wire service, provided the locked rotor current does not exceed 150 amperes. Any applications of single phase motors exceeding these requirements are to be referred to the Company.
- All single phase motors should be connected for 240 volts whenever it is practical to do so in order to minimize voltage drop in the customer's wiring system and the supply system.
- Before any polyphase motors are installed it is advisable that the Company be consulted in order to determine the type and adequacy of the available service. Where three phase service has been secured, polyphase motors over 50 horsepower shall not be connected without utility starting equipment or other suitable technologies that limit starting current.

I. <u>Power Factor Correction</u>:

It is important to maintain the power factor of any load as near unity as possible. The maintenance of a high power factor may result in the reduction of conductor losses and equipment capacity requirements as well as higher overall efficiency.

J. Capacitor Installation:

In general, capacitors must be applied more carefully than most types of electrical equipment in order that satisfactory operation and maintenance will result. The customer should confer with the Company before any installations of this type of equipment are made.

K. Cogeneration:

Improperly installed generation equipment can create serious hazards to Company personnel working on the distribution system as well as for other customers connected to the distribution system. The operation of improperly installed generators can also result in damage to customer's wiring, electrical equipment or the generator itself. To safeguard against these hazards, customer owned generators shall be installed as follows:

- Standby generators shall be installed in compliance with the National Electrical Code and local codes. Customers utilizing emergency or standby generators shall provide an adequately sized double throw switch which will open all ungrounded conductors from the normal supply before connection is made to the emergency supply, and vice versa. Power from a standby generator must never be supplied to another premise because of the danger created by back-feeding into the distribution system.
- Subject to special requirements the Company will allow customer operation of parallel generating facilities. Generators designed to run parallel with the Company's system require special protective devices and operation coordination. Cogeneration is not allowed unless the Company is consulted prior to the installation and operation of parallel generators. Please consult the Company for specific requirements. A written agreement must be executed before interconnection.
- The customer may install an uninterruptible power supply on his system. An automatic transfer switch must be provided by the customer to disconnect the normal supply in the event of a power outage.

L. Service Quality:

The integrity of electric service is of utmost concern to the Company. Normal system operations and unavoidable system disturbance may, however, cause customers to experience problems with certain types of equipment, most notably computers. If the customer should experience equipment malfunctions caused by system disturbances, the Company stands ready to advise and assist the customer in resolving these problems. Please contact a qualified employee.

M. Liability for Service Interruption:

The Company will, at all times, exert itself toward the goal of supplying as nearly constant service as is reasonably practicable. However the Company does not and cannot not guarantee the supply of electric energy will be free from temporary interruptions. Temporary interruptions of the Company's service shall not constitute a breach of the Company's service obligations.

The Company is not liable for any damage which the customer may sustain by reason of the failure or partial failure of the service, or failure or reversal of phases, or variation in service characteristics, whether caused by accident, variation in service characteristics, repairs or other causes; nor is the Company liable for damage that may be incurred by the use of any service wiring, connections, instruments, services or electrical appliances, installed by or for the customer; nor is the Company liable for damage that may be incurred of the presence of the Company's property on customer's premises.

In the event of interruptions of service, the Company will restore the service as soon as reasonably practical. In the event conditions on the customer's premises cause an interruption, the Company will allow a reasonable time for those conditions to be corrected, but reserves the right to disconnect the service until the conditions are corrected to preserve the safety and reliability of the Company's system.

If the customer requires three phase service, the installation and maintenance of adequate relays with circuit breakers to protect against single phase conditions and phase reversal are advisable. Their installation and maintenance is the responsibility of the customer.

N. <u>Overhead Services</u>:

To avoid unnecessary delays, the availability of types of service should be confirmed with the Company before construction begins.

The point of connection between the Company's service drop and the customer's wiring system should be located at a point convenient to both the Company and the customer. Normally, the point of connection for an overhead secondary service is at the drip loop where the service is attached to the customer's structure. To comply with the appropriate safety codes, the point of connection must provide <u>service drop</u> clearances from windows, doors, awning or other parts of the building not less than those required in the current NEC. However, the service drop point of attachment shall not exceed 30 feet above final ground level.

The service drop will be attached to the customer's building at the point of connection only. Multiple points of attachments such as the service drop being attached to a corner of the building and then running to the point of connection will not be allowed.

If the type of building will not permit these minimum clearances, some satisfactory form of service mast must be provided to obtain them. The recommended structure for this purpose is a galvanized service mast through the roof. This mast shall have minimum strength equal to that of 2 inch inside diameter rigid steel conduit and shall extend above the roof the distance required by the National Electrical Code to give adequate clearance for overhead service conductors. Where long service drops are required, a larger size conduit may be necessary. The service mast shall be sufficiently braced to support the service conductors and shall be located at a point on the building where the service conductors from the pole will not overhang the roof, except for the overhanging eaves. The service mast must be secured by retaining straps placed no further apart than 24 inches. A minimum of two straps is required. There are to be no joints in the conduit above the straps. The portion of the service drop passing over the roof, including overhanging eaves, shall not exceed four feet. The clearance between the service drop and roof shall not be less than 18 inches at any point.

Safe and adequate anchorage structures for the Company's service drop and/or connections are required of the customer and in no case will the Company be responsible for the conditions of any customer's buildings or structures to which service wires are attached or have been attached.

Where service wires are to be installed on the side of buildings which have stucco, hollow tile, stone, brick, brick veneer, plaster, or sheet metal walls, and where there is available no surface suitable for the attachment of service supports having a screw fastening (house knob), the customer will install a suitable anchorage bolt or spool rack. Where the load to be served is sufficiently large to require the use of overhead service conductors of No. 4/0 aluminum and larger, 5/8" galvanized bolts for spoolracks or 5/8" eye bolts are required. Where the service conductors are smaller than No. 4/0 aluminum, the bolts may be smaller than 5/8 inch but in no case smaller than 3/8 inch diameter. These bolts are to be spaced

to conform to the conductor spacing as specified by the Company and should extend through the wall and each be anchored on the inside surface with a substantial washer not less than 1/8 inch thick and two inches square.

To prevent moisture from entering the raceways of conduit for service entrance conductors or service entrance cable, it is advisable to terminate them on the outside building wall at a point approximately 6 inches above the point of attachment of the highest service drop wire. The individual service entrance conductors are to extend downward to the points where connections are made to the service drop wires to form a drip loop. Each conductor of the service entrance must extend not less than **TWO FEET** beyond the service head to allow adequate wire for the drip loop and connection.

O. <u>Underground Services</u>:

The availability of underground service should be confirmed with the Company before construction begins.

Point of Service/ Location

The point of connection between the Company's service lateral and the customer's service entrance conductors shall be determined by a qualified employee after consultation with the customer

Padmounted transformers shall normally be located a minimum of 10 feet from a building. Clearance can be reduced (consistent with the applicable Code) if approved by the Company and the local inspection authority. Padmounted transformer locations are to be readily accessible and free from obstructions. They shall also be located where adequate natural airflow occurs preventing excessive transformer heating. The Company will make a final determination of the locations adequacy. Locations are to be approved by the Company prior to construction.

In certain prescribed districts or streets in downtown areas where the Company maintains an underground distribution system, underground services are installed by the customer at the customer's expense from an underground connection point generally in a company-provided hand hole, man hole, or vault at or near the property line of the customer. The Company will extend its service conductors not more than five feet inside the property line to these junction points.

When an instrument transformer enclosure is used, the point of connection (demarcation) shall be in this enclosure.

Service laterals, conduits, and accessories shall be furnished and installed by the customer and shall remain the property of the customer. The final connection of customer service entrance conductors will be made at the transformer by the Company. Company metering shall be located at one level only, preferably at the ground floor or basement level.

Generally, if the commercial/industrial customer is served from a padmounted transformer which is dedicated to that customer only, the point of connection will be at the secondary terminals of the padmounted transformer. MPC will furnish secondary connectors and install conductors at the padmount provided the provisions concerning maximum number of conductors per phase on page 13 are made. Consult the Company for specific details.

Special company policies cover residential underground services. Please consult the Company for specific requirements. The Company will install, own, and maintain service lateral conductors to the service location on the outside wall of the residence. This point should be the closest point to the Company's distribution facilities.

Each socket and service equipment in a group must be plainly and permanently marked to designate the particular suites, offices, or apartments served.

Conduit/Conductors/Raceways

All conduit and direct buried conductors shall be buried at a depth of not less than 30 inches below final grade.

Service voltage supplied from single phase pad-mounted transformers will be 120/240 volts.

Services from three phase padmounted transformers shall be either 120/208 volts or 277/480 volts as determined by the Company.

Metering equipment shall not be mounted in or on single phase, padmount transformers.

- Conduit must be securely fastened to the wall within 12 inches of the meter socket and 6 inches of final grade level. Conduit straps shall be fastened to walls with the same type fasteners as meter sockets.
- Inhibitor of the non-grit type must be applied to conductors when aluminum conductors are used.
- Safety dictates all meter positions shall be properly covered before the meter socket is energized.
- The service entrance conductors must be run in sealable metal raceways or the equivalent.

P. <u>Customer Owned Sockets</u>:

Where the customer desires a particular meter socket alignment not provided by the Company, it becomes necessary for the customer to furnish these devices. If a customer chooses to use meter sockets not furnished by the Company, he shall notify the company well in advance of required service date and shall comply with the following specifications. The Company will make the final determination of a device's suitability

- Customer purchased equipment shall be Underwriter Laboratory (UL) listed. The label, symbol, or the identifying mark used by the testing laboratory shall be affixed to the unit.
- Each meter socket shall be rated not less than the rating of the service equipment when used on single family dwellings. Each meter socket position shall be rated not less than the ampacity of the service or feeder conductors connected to the load side of the socket where multi-position metering assemblies are used.
- Line side connectors of meter socket assemblies to be connected to Company Service laterals shall be of a type satisfactory to the Company and comparable to company specifications for

similar equipment. The main bus of assemblies connected shall be rated not less than 100 amperes multiplied by the number of meter positions but not more than 1000 amperes.

- Line side connectors shall be designed and listed (UL486B) for the conductors (size and number) utilized in the assembly. Recommended torque values for all connectors shall be clearly marked in the connector compartment. All conductor strands shall be contained beneath the connector pressure device (set screw, pad, etc.)
- All meter spade jaws shall be spring reinforced.
- <u>Ring type sockets must be equipped with Company approved screw-type sealing rings.</u>
- Connectors for more than one conductor and connectors used to connect aluminum conductors must be approved for the purpose. Inhibitor of the non-grit type must be used on all aluminum conductors. The Company will not accept more than one conductor under one pressure device (set screw, pad, etc.)
- Conductors carrying unmetered energy shall not be contained in the same compartment, conduit, or raceway with conductors carrying metered energy.
- Meter sockets installed outdoors must be weatherproof (NEMA Type 3R). They shall also be of galvanized steel or aluminum construction. A unit is considered to be outdoors unless it is installed within the confines of the main structure of the building and totally protected from the weather. Units installed in metering room attached to a building will be considered outside unless the metering room is connected to the main structure of the building and has the same roofing as the building and roof flashing is installed.
- Multi-position, customer owned, meter sockets shall be constructed so the line side wiring compartment is separate from compartments housing service equipment or meter sockets and is accessible without having to remove any meter(s). Each meter position's cover shall be removable without having to remove any other cover(s).
- The customer shall be responsible for all maintenance of meter sockets not furnished by the Company. The Company shall affix a disclaimer statement to each customer owned meter socket in a place conspicuous to both Company personnel and customer which reads as follows:

NOTICE: This meter mounting device was not furnished by Mississippi Power Company and is not the property of Mississippi Power Company. Mississippi Power Company shall not be liable for any damage or injury caused by failure of this device or for repair or replacement of this device or any parts contained therein.

The sole purpose of this disclaimer statement is to inform the customer and electrical contractor that Mississippi Power Company does not own this device and does not assume any liability for damages that might be caused by the device or any responsibility for maintenance for the unit. It does not in any way imply that the meter socket assembly is inferior or unsafe.

Q. <u>Transformer Vaults</u>:

When the customer desires to be served from transformers in a customer owned transformer vault or room the customer shall consult the Company for requirements and specifications.

Meters should be readily accessible as defined on pages 6, 14 and 15.

R. <u>Grounding</u>:

Grounding electrodes and conductors are to be sized in accordance with the National Electrical Code with the following exceptions. The minimum grounding electrode size shall be an 8 foot 5/8 inch galvanized ground rod. The minimum grounding conductor size shall be No. 4 copper. The grounding conductor shall be terminated on the neutral bus in the meter socket.

Temporary service poles shall be grounded using an 8 foot ground rod as per pages 31 & 33. (Butt wrapped grounds are not permissible.)

Transformer rated installations must have a separate grounding provision as shown on pages 55, 67, 77, & 79.

S. <u>Tampering and Sealing</u>:

Unauthorized attempts to divert energy, tamper with metering equipment, or gain unauthorized access to Company electric facilities can be dangerous. Persons attempting these activities expose themselves to the risk of serious or fatal injury. These activities can also lead to fires or other property damage.

Unauthorized removal, tampering or damaging a meter or meter enclosure, breaking the seal, or the use of any method or device which permits the flow of unmetered or unauthorized electricity into a premise is a criminal act. Violators are subject to prosecution under state and local laws.

Any damage caused by tampering with company property will be paid for by those tampering with the metering equipment.

When a customer needs a seal removed in order to inspect his system, make repairs or make modifications, he must call the Company so that company personnel can be dispatched to remove the seal. When the work is complete and the Company has received notice from the inspecting authority, if needed, the Company will again dispatch personnel to resecure the installation.

METERING INSTALLATIONS FOR SERVICES LESS THAN 600 VOLTS

A. General:

To minimize problems, the customer, architect, or contractor should ascertain from the Company the point of delivery on the customer's building and the location of the metering equipment prior to installation. If the customer has not ascertained the location of the point of delivery, the Company may require the customer to relocate his service entrance equipment at his expense, or the Company may require payment for the additional cost of service, if any.

If, in order to comply with the requirements of governmental agencies, it becomes necessary for the Company to make any changes in the location of its equipment or to change the class of service given, the customer will, at his expense, make such changes in his wiring, service entrance, and utilization equipment as are made necessary by these changes.

Service entrance cable or conduit containing the service entrance conductors or service lateral conductors carrying unmetered energy shall not be concealed behind a wall. The only exception is for that section of a service mast which must be installed through the building roof, and that conduit shall not have any joints.

Conduit & Raceways:

To protect the service entrance conductors and prevent moisture from entering the service equipment, all conduit threads and fittings used in the service entrance raceway in outdoor locations are to be made raintight.

Where conduit is used, fittings with removable covers in the service conduit run are to be avoided if possible. If they are necessary, they cannot be concealed.

Conductors:

Wires carrying metered energy are not to be located in the same raceways, troughs, boxes, or conduits with wires carrying unmetered energy. Wires carrying metered energy from two or more different meters shall not be enclosed in a common conduit, raceway, trough, or box.

The grounded conductor in a set of service entrance conductors shall always be identified either by a continuous white or natural gray outer finish along its entire length or at the time of installation by a distinctive white marking at its termination.

When the service is 120/240 volt four wire, three phase, delta, the 208 volt phase to neutral conductor (high leg, power leg or stinger) shall be durably and permanently marked by an outer finish that is orange or red in color or by other effective means. For proper metering of four wire, three phase, delta service, the power leg must be in the right hand or "C" phase position in the meter socket.

All service entrance conductors shall be of sufficient size to conform with the rated capacity of service entrance equipment and should be of sufficient size to provide for reasonable future load increases.

The service entrance conductors may consist either of continuous lengths of multi-conductor cable approved for the purpose or individual conductors in conduit. Where service entrance cable is used, good workmanship requires it to be supported at intervals not over 24 inches.

Lightning arrestors or surge protection equipment installed by the customer must be connected on the load side of the service entrance equipment. <u>Under no circumstance can customer owned</u> <u>surge protection equipment be attached to or connected in the meter socket or connected</u> <u>anywhere along the service entrance cable, service entrance conductors, or service drop.</u>

Only one set of service entrance conductors will be allowed on the load side of the meter socket unless the load side socket connector is specifically designed for multiple conductors.

Service is to be properly grounded.

The Company shall furnish, install, test, and maintain adequate metering equipment to accurately measure the customer's use of electric energy.

Metering equipment furnished by the Company to be installed by the customer (meter sockets, meter cabinets, etc.) will be supplied as complete units in good operating condition. This equipment is the property of the Company and shall be used only for metering Mississippi Power Company customers. With the exception of this provided metering equipment, the customer will furnish and install all service entrance equipment, service circuit breakers or switches, branch circuit breakers or fuses and related equipment, together with the necessary wiring at his expense

The Company will provide and retain ownership of a suitable metering equipment (meter socket, etc.) for each installation except those noted above. The customer will install the meter socket and provide maintenance for the meter socket at his expense. If the meter socket should ever need replacing, the Company will supply a replacement socket to be installed by the customer.

The customer shall provide suitable mounting space on the customer's building wall, pole or other suitable structure for the Company's metering at secondary voltages. The Company will install and connect adequate metering facilities to measure the energy used in accordance with its applicable rates.

Connections to all meters, instrument transformers, and other equipment affecting the accuracy of these devices shall be made by a qualified employee.

Only service entrance and grounding conductors may be run through the meter socket or meter connection box. Company owned meter sockets or metering cabinets shall not be used as junctions boxes for the connection of branch circuits, feeder conductors or the connection of subsets of service conductors supplying separate service locations for the same or different premises. If a meter is to be relocated and the circuit is to remain in place, then the meter socket is the be removed. <u>Ownership of a Company owned meter socket cannot be transferred to the customer</u>. In such cases it is the customer's

responsibility to modify his equipment so that it complies with Company specifications and local electrical codes.

Where aluminum conductors are terminated in meter sockets or other company owned equipment, inhibitor of the non-grit type shall be used in each conductor connector and around the circumference of each conductor including the grounded conductor (neutral).

B. Installation of Watt-hour Meters For the Following Services:

120V Single Phase Service Through 100 Amps 120/208V Network Service Through 200 Amps 120/240V Single Phase Service Through 320 Amps 120/208V Three Phase Service Through 320 Amps 120/240V Three Phase Service Through 320 Amps 277/480V Three Phase Service Through 200 Amps

Locations:

The Company's preference is to furnish all meter sockets used for revenue metering except those noted, i.e., single phase residential. Only one conductor shall be permitted in each connector of Company owned meter sockets.

The Company will determine in each case the type of meter installation to be made. The meters used for these type installations do not require instrument transformers. **Decisions as to whether or not to use instrument transformers will be made based on the Company's calculations of diversified demand, rather than the service entrance capacity.**

On all new installations or existing installations that are to be rearranged in any way which may affect the service entrance conductors or service circuit breaker or switch, the meters will be installed outdoors except in those few cases where outdoor locations are not practical. In such cases, the meters may, with the Company's permission, be installed indoors in suitable locations as previously outlined.

For grouped installations, different sockets may be required than for single meter installations. It will be necessary to consult the Company before such installations are made so that the Company can furnish the proper meter sockets to fit into the desired layout.

Meter Enclosures:

Where service is 120 volts 2 wire 100 amps and under or 120/240 volts 3 wire, 200 amps and under single phase service;

The company will furnish an approved four terminal meter socket which will be installed as shown in the <u>installation drawings</u>. For commercial single phase application the <u>Company</u> will furnish its standard five terminal socket with bypass provisions to allow meters to be more readily removed for testing and repair without interruption to the customer.

Where service in 120/240 volt 320 amps single phase service;

The Company will furnish its standard class 320 side-wired socket for use.

For 120/208 volt, 3 wire installations of network type (two phase wires and a neutral) 200 amps and under:

A standard, five-terminal socket will be furnished by the Company. Such installations are similar to the 3 wire single phase installations described earlier, but the wiring is in accordance with diagrams for network service.

Where service is 120/240 volts 3 phase, 4 wire delta service 200 amps and under:

The Company will furnish its standard seven terminal meter socket which will be installed and connected as shown on the installation drawings and connection diagram for this type of service. It is necessary that all wires in the meter socket be identified in the manner shown on the connection diagram. Note that the position of the power leg on delta installations must be on the far right-hand side of the meter socket.

Where service is 120/208 volt or 277/480 volt wye, 3 phase 4 wire wye service 200 amps and under: The Company will furnish its standard seven terminal meter socket which will be installed and connected as shown on the installation drawing and connection diagram for this type of service. It is necessary that all wires in the meter socket be identified in the manner shown on the connection diagram.

For 120/208 volt, 4 wire, three phase and 120/240 volt, 4 wire, three phase services **less than 320 amps**, **but greater than 200 amps**:

A class 320 ampere socket will be furnished by the Company. As with the seven terminal sockets, the power leg on the 120/240V, 4W, 3PH service must be properly marked and located on the far right hand terminals of the socket.

Installation of Watt-hour Meters on the Following Services:

- 120/240V, 3 Wire, Single Phase Services Greater Than 320 Amperes
- 120/208V, 3 Wire Network Service Greater Than 320 Amps
- 120/208V and 120/240V, 4 Wire, Three Phase Service Greater Than 320 Amps
- 277/480V, 4 Wire, Three Phase Service Greater Than 320 Amps
- All 480V, 3 Wire, 3 Phase Delta Service

Instrument transformers are required for these installations and will be installed by qualified company personnel. The Company will designate the location of the metering equipment. Where necessary, the Company will furnish to the customer, for installation by the contractor, its standard instrument transformer enclosure. These cabinets house only the transformers and meter connections to and from the transformers. In no case shall the customers branch circuits or feeders be supplied from the instrument transformer enclosure.

The Company will also furnish a meter socket, to be installed by the contractor. The customer shall provide sufficient space in a location approved by the Company for this meter socket as well as the instrument transformer enclosure, if one is necessary.

When the space above the instrument transformer enclosure is intended as the location for the meter or meters, the entire space shall be reserved for this purpose.

If it is necessary to locate the meter remote from the instrument transformers, the necessary conduit between the instrument transformers and the meter location will be installed by the customer and may not exceed 50 feet in length. Where the installation utilizes a padmounted transformer, the maximum lateral distance shall not exceed fifteen (15) feet. 1 1/4" conduit with a maximum of two 90° bends or equivalent is allowed in each run of conduit. All conduit ends shall be reamed to protect the meter control cable. If the conduit is Rigid galvanized or EMT, the conduit ends shall be equipped with a bonding bushing.

It is not acceptable for the Company to place instrument transformers in customer owned switchgear unless extraordinary circumstances prevail and it is convenient for both the Company and the customer. If instrument transformers must be located in customer owned switchgear, each installations must be coordinated with the Company's Metering Services Department.

Where instrument transformers are to be located in the customer's switchgear, the instrument transformers will be provided by the Company and they shall be installed by the switchgear manufacturer at the customer's expense. Such instrument transformers shall be installed **ahead of all load** and in a separate compartment with a hinged, sealable door and shall be located such that metering personnel will have clear and unobstructed access to the instrument transformers. Shipping instructions along with a one-line diagram showing the location of the instrument transformers within the switchgear shall be sent to the Metering Services Department.

On multi-unit buildings where a wiring trough is utilized in serving customers and one or more customers are metered with instrument transformers, the company requires a loadside disconnecting

means be installed that is readily accessible to the Company. The disconnecting means shall accept a Company lock. The purpose of the disconnecting means is to enable the Company to disconnect and reconnect service to these customers without interruption of service to other customers served from the same trough.

The wiring from the instrument transformer secondary to the meter will be installed by the Company.

When parallel service entrance conductors pass through current transformers, care should be taken to ensure each transformer has only one phase passing through it.

TEMPORARY OVERHEAD SERVICE INSTALLATION

A. GENERAL NOTES:

• Pole length determined by service drop clearance requirements.

Clearance Requirements \longrightarrow 12.5 ft. - sidewalk only (restricted traffic) 16.5 ft. - residential driveway only 16.5 ft. - public driveways, alleys, and roads, construction areas

Pole specifications: 15" minimum circumference pressure treated creosote, CCA, or Penta 6" x 6" square treated timber minimum. Shortest acceptable pole is 18 feet, set 4 feet deep.

- Conductors, conduit, conduit straps, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Bracing is required for service drop greater than 100'. Entire length cannot exceed 125'.
- Grounding electrode conductor shall be #4 AWG copper or greater.
- Minimum 8' grounding electrode required (copper clad, aluminum clad, or steel).
- Service across a state or federal highway requires state highway permits from the Department of Transportation.

B. MOUNTING:

- Meter sockets, cabinets, trough and conduits shall be surface mounted.
- All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant type screws. Nailing to pole is not permissible.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. CONNECTIONS:

Customer shall apply a non-grit type corrosion inhibitor to connections and terminate them by torquing to manufacturer's specifications located in the enclosure. **Do not over-torque!**

- All service drop connections shall be made by Company.
- Disconnection of service and removal of service drop shall be made by Company <u>only</u>.



TEMPORARY UNDERGROUND SERVICE INSTALLATION

A. <u>GENERAL NOTES:</u>

- Pole length 6' minimum
- Pole type specification: 4" x 4" pressure treated creosote, CCA, or penta
- Conduit shall be two inch (2") minimum trade size rigid galvanized conduit furnished and installed by customer. Weather proof switchbox shall be furnished and installed by customer.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Grounding electrode conductor shall be #4 AWG copper or greater
- Minimum 8' grounding electrode required (copper clad, aluminum clad, or steel).
- Service across a state or federal highway requires state highway permits from the Department of Transportation.
- Installation to be within five feet of temporary service stub-out.

B. MOUNTING:

- Meter sockets, cabinets, trough and conduits shall be surface mounted.
- All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. Nailing to pole is not permissible.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. CONNECTIONS:

Customer shall apply a non-grit type corrosion inhibitor to connections and terminate them by torquing to manufacturer's specifications located in the enclosure. **Do not over-torque!**

- All service drop connections shall be made by Company.
- Disconnection of service and removal of service drop shall be made by Company <u>only</u>.



Metering Installations for Mobile Homes or Mobile Home Parks:

Overhead Installations

The metering pole <u>must be a minimum of 17 ft</u>, <u>Class 5 pole set at least 4 ft deep so that it will be</u> <u>of sufficient height and stability</u> to provide service drop clearances as <u>shown on page 31</u>.

All meter sockets shall be mounted in a manner that allows meters to be inserted and withdrawn without causing movement of the socket.

The mobile home feeder assembly shall terminate at the mobile home service equipment located adjacent to the mobile home. The feeder assembly shall not terminate in the meter socket.

Underground Installations

Mobile homes served by underground distribution must provide meter pedestals for the connection of service laterals and watt-hour meters.

A separate pedestal shall serve each mobile home as illustrated on page 39.

Meter pedestals must be approved by the Metering Services Department before being installed. The Company does not assume ownership of meter pedestals and is not responsible for maintenance.

Grounding should be in compliance with the National Electrical Code and applicable state or local codes.

Meter Sockets and Service Equipment Mounted on Manufactured Homes:

The 1993 National Electrical Code (NEC) has been modified to bring the NEC requirements for service to manufactured homes in line with the Department of Housing and Urban Development (HUD) manufactured home construction requirements. The NEC and HUD now both permit the service equipment and the meter socket to be mounted on the manufactured home under certain conditions. Refer to the following Sections of the NEC for these conditions.

Definitions	Refer to NEC Section 550-2
Exceptions	Refer to NEC Section 550-5a Exception No. 2 Refer to NEC Section 550-23a Exception No. 2

HUD has interpreted the requirement for installation of the service equipment by the manufacturer as shown in NEC 550-23 to include field installation under the supervision of the manufacturer. In areas where there is an electrical inspector, Mississippi Power will serve manufactured homes with the service equipment and meter socket mounted on the home, provided the inspector approves the installation, and the meter socket meets the MPC requirements for customer-furnished meter sockets. In areas where there is not an electrical inspector, the following conditions must be met in order to serve a manufactured home with the service equipment and meter socket mounted on the home.

- The NEC and HUD requirements must be met.
- The meter socket must comply with MPC requirements for customer-furnished meter sockets. Questions concerning approval of customer-furnished meter socket should be referred to MPC Metering Services Department.
- The foundation to which the home is attached must be constructed in such a manner that it is obvious that the home is not intended to be moved.
- If the service equipment and meter socket were not installed at the factory, the customer or manufactured home dealer must provide written documentation that the field installation was made under factory supervision.
- The Company must emphasize that these guidelines do not circumvent the NEC or HUD requirements.

TYPICAL OVERHEAD SERVICE TO MOBILE HOME

A. GENERAL NOTES:

• Pole length determined by service drop clearance requirements.

Clearance Requirements \longrightarrow 12.5 ft. - sidewalk only (restricted traffic) 16.5 ft. - residential driveway only 16.5 ft. - public driveways, alleys, and roads, construction areas

Pole specifications: 15" minimum circumference pressure treated creosote, CCA, or Penta 6" x 6" square treated timber minimum. Shortest acceptable pole is 18 feet, set 4 feet deep.

- Conductors, conduit, conduit straps, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Grounding electrode conductor shall be #4 AWG copper or greater.
- Minimum 8' grounding electrode required (copper clad, aluminum clad, or steel).
- Service across a state or federal highway requires state highway permits from the Department of Transportation.
- Not permissible for feeder from service pole to distribution to be in free air. Feeder must be 4 conductor in conduit or direct burial.

B. MOUNTING:

- Meter sockets, cabinets, trough and conduits shall be surface mounted.
- All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. Nailing to pole is not permissible.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. CONNECTIONS:

Customer shall apply a non-grit type corrosion inhibitor to connections and terminate them by torquing to manufacturer's specifications located in the enclosure. **Do not over-torque!**

- All service drop connections shall be made by Company.
- Disconnection of service and removal of service drop shall be made by Company <u>only</u>.



TYPICAL OVERHEAD INSTALLATION FOR MANUFACTURED HOME

A. <u>GENERAL NOTES:</u>

- Service entrance line and load conductors, conduit straps, weatherhead, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- A conduit entrance is preferred, but type SE entrance cable sized per NEC requirements is permissible as allowed by local inspection authority.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Service drop attachment shall be installed at minimum vertical clearance as illustrated. If minimum vertical clearance can not be maintained with the installation of an attachment bolt as shown, the customer shall install a steel service mast or service pole.
- Connections between service drop and service entrance conductors shall be made below weatherhead forming a drip loop.
- Meter and service drop furnished and installed by Company.
- Meter socket shall be readily accessible and allow workspace.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.
- Suitable service drop attachment point shall be screw-type knob inserted into solid wood or eye bolt (min 3/8") inserted through framing member to be furnished and installed by customer

C. CONNECTIONS:

Customer shall apply a non-grit type corrosion inhibitor to connections and terminate them by torquing to manufacturer's specifications located in the enclosure. **Do not over-torque!**



TYPICAL INSTALLATION FOR MOBILE HOME PARKS

A. <u>GENERAL NOTES:</u>

- Customer must provide meter pedestals for the connection of service laterals and watt-hour meters.
- Meter pedestals must be approved by MPC Metering Services prior to installation.
- Meter pedestals to be installed in a manner where they will not be subject to vehicular traffic with locations approved prior to installation by a qualified employee.
- Meter pedestal will remain the property of the customer with MPC having no responsibility for maintenance or upkeep of the pedestal.

B. MOUNTING:

- Customer to install meter pedestals after installation of service laterals by MPC.
- Care shall be exercised during installation to prevent damage to service lateral conductors.

C. <u>CONNECTIONS:</u>

MPC to terminate all service lateral connections in customer provided pedestal, torqued to manufacturer's specifications. **Do not over-torque!**



TYPICAL RESIDENTIAL OVERHEAD INSTALLATION

A. GENERAL NOTES:

- Service entrance line and load conductors, conduit straps, weatherhead, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Type SE entrance cable sized per NEC requirements is permissible as allowed by local inspection authority.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Service drop attachment shall be installed at minimum vertical clearance as illustrated. If minimum vertical clearance can not be maintained with the installation of an attachment bolt as shown, the customer shall install a steel service mast.
- Connections between service drop and service entrance conductors shall be made below weatherhead forming a drip loop.
- Meter and service drop furnished and installed by Company.
- Meter socket shall be readily accessible and allow workspace as illustrated.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.

C. CONNECTIONS:

Customer shall apply a non-grit type corrosion inhibitor to connections and terminate them by torquing to manufacturer's specifications located in the enclosure. **Do not over-torque!**




- OVERHEAD SERVICES SHOULD BE ACCESSIBLE BY MISSISSIPPI POWER CO. PERSONNEL USING A 16' LADDER.
- THESE 2 DRAWINGS SHOW THE OBSTRUCTION FREE WORKING CLEARANCES NECESSARY FOR MPC PERSONNEL TO SAFELY INSTALL OR MAINTAIN AN OVERHEAD SERVICE TO A HOME OR BUSINESS.
- BEFORE CONSTRUCTING AN OVERHEAD SERVICE, CALL MPC AT 1-800-532-1502 AND ASK FOR AN ENGINEER IF YOU ARE UNABLE TO MEET THESE CLEARANCES.



FOR GABLE SIDE INSTALLATION



TYPICAL STEEL SERVICE MAST INSTALLATION

A. GENERAL NOTES:

- Service entrance line and load conductors, conduit straps, weatherhead, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Galvanized steel pipe mast required with no joints above last wall strap.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Meter and service drop furnished and installed by Company.
- Meter socket shall be readily accessible and allow workspace.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.

C. CONNECTIONS:



TRIPLEX SERVICE INSTALLATION

A. <u>GENERAL NOTES:</u>

- Service entrance line and load conductors, conduit straps, weatherhead, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Type SE entrance cable sized per NEC requirements is permissible.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Eye bolt or toggle bolt should extend through facia to rafter, or solid lumber and fasten securely. MPC furnishes eye bolt only. Use of thread thru insulator or screw type hook should be avoided.
- Connections between service drop and service entrance conductors shall be made below weatherhead forming a drip loop.
- Meter and service drop furnished and installed by Company.
- Meter socket shall be readily accessible and allow workspace.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.

C. CONNECTIONS:



TYPICAL INSTALLATION OF UNDERGROUND, SINGLE PHASE SERVICE OVER 400 AMPERES USING INSTRUMENT TRANSFORMERS

A. <u>GENERAL NOTES:</u>

- Service lateral and meter furnished and installed by Company. Customer to provide approximate final grade level within six inches (6") prior to service lateral installation.
- Instrument transformers furnished and installed by Company.
- Meter socket and instrument transformer enclosure furnished by Company and installed by customer.
- Conduit shall be 1-1/4" rigid metal, intermediate metal, or PVC furnished and installed by customer.
- Metering control cable furnished and installed by Company.
- Conduit riser to current transfomer enclosure **sized by Company**, furnished and installed by customer.
- Requirements regarding accessibility to equipment and unobstructed working space adjacent to metering equipment are specified under Service Locations.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Enclosure, socket and conduits for service lateral and meter control cable shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Enclosure, socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount both enclosure and socket.

C. <u>CONNECTIONS:</u>



DUPLEX INSTALLATION

A. <u>GENERAL NOTES:</u>

- The device shown may be used when the inspection authority having jurisdiction requires the installation of a service disconnecting means adjacent to the meter. MPC furnished gang meter center only if installation is all-electric.
- Requirements regarding accessibility to equipment, unobstructed working space, clearances, proper mounting and conduit arrangement are specified under Service Locations.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. OVERHEAD SERVICE:

• Metering center and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount metering center.

C. <u>UNDERGROUND SERVICE</u>:

- Customer installs wiring trough and meter sockets shall be furnished by Company and installed by customer. MPC maintains a list of approved sockets for use on its system.
- Customer provides single service lateral attachment point in trough.
- No other conductors, conduits, or wireways can be connected to the line side wiring trough.

D. MARKING:

• Each socket position and the corresponding building unit served (suite, apartment, or office) shall be accurately, clearly and permanently labeled before meters are installed.

Letters and/or numbers shall be a minimum 1" height of contrasting color.



UNDERGROUND SINGLE PHASE SERVICE FOR MULTI-FAMILY HOUSING

(with six or less units per building using gang meter center)

A. <u>GENERAL NOTES:</u>

- The device shown may be used when the inspection authority having jurisdiction requires the installation of a service disconnecting means adjacent to the meter. MPC furnishes the gang meter center only if the installation is all-electric. Tenant breakers are furnished and installed by customer.
- Requirements regarding accessibility to equipment, unobstructed working space, clearances, proper mounting and conduit arrangement are specified under Service Locations.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. <u>UNDERGROUND SERVICE</u>: (illustrated)

• Wiring Space and Line-side Connections:

- Line side studs shall be equipped with nut, flat washer, and pressure maintaining (as a "Belleville") spring washer.
- Torquing requirements shall be clearly marked in the line side compartment. Load side conductors shall be properly torqued by customer. Line side conductors shall be installed and torqued by Company.
- Metering center and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount metering center.
- Minimum Conduit Requirements:
 - Two Positions: (1) 3" conduit
 - Three or Four Positions: (1) 3" conduit
 - Five or Six Positions: (2) 3" conduit or (1) 4" conduit

C. OVERHEAD SERVICE:

• It is unlikely that all-electric installations will utilize an overhead service entrance. Requirements for this installation are not specified but will generally follow requirements as shown in Single Family Dwellings.

D. <u>MARKING</u>:

• Each socket position and the corresponding building unit served (suite, apartment, or office) shall be accurately, clearly and permanently labeled before meters are installed. Letters and/or numbers shall be a minimum 1" height of contrasting color.



MULTI-FAMILY INSTALLATION GREATER THAN SIX POSITIONS

A. <u>GENERAL NOTES:</u>

- The device shown may be used when the inspection authority having jurisdiction requires the installation of a service disconnecting means adjacent to the meter. MPC furnishes the disconnect enclosure and socket enclosures only if the installation is all-electric. Customer should contact MPC prior to purchasing main disconnect and tenant breakers for manufacturer type.
- Meter socket enclosures are available in multiples of four (4) units only.
- Installations which are not all-electric require customer furnished and MPC approved equipment.
- Requirements regarding accessibility to equipment, unobstructed working space, clearances, proper mounting and conduit arrangement are specified under Service Locations.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. UNDERGROUND SERVICE: (illustrated)

- Wiring Space and Line-side Connections:
- Line side studs shall be equipped with nut, flat washer, and pressure maintaining (as a "Belleville") spring washer. All parts shall be plated to prevent corrosion. Customer furnished connectors shall meet requirements of U.L. "486 B".
- Torquing requirements shall be clearly marked in the line side compartment. Load side conductors shall be properly torqued by customer. Line side conductors shall be installed and torqued by Company.
- Metering center and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount metering center.
- Minimum Conduit Requirements:
 - Two Positions: (1) 3" conduit
 - Three or Four Positions: (1) 3" conduit
 - Five or Six Positions: (2) 3" conduit or (1) 4" conduit

C. OVERHEAD SERVICE:

• It is unlikely that all-electric installations will utilize an overhead service entrance. Requirements for this installation are not specified but will generally follow requirements as shown in Single Family Dwellings.

D. MARKING:

• Each socket position and the corresponding building unit served (suite, apartment, or office) shall be accurately, clearly and permanently labeled before meters are installed. Letters and/or numbers shall be a minimum 1" height of contrasting color.



CONDOMINIUM INSTALLATIONS

MPC will generally service condominium projects as prescribed in Paragraph D <u>Underground Services</u> with the following additions and exceptions.

- Parallel distribution transformers will not be allowed.
- Service Voltage may be provided at 120/208 3phase 4 wire, 277/480 3phase 4 wire, or at the local rated primary distribution voltage.
- Only one transformer will be provided unless the load requires two.
- Locations close to the water may be required to be elevated.
- Minimum clearance from obstructions around the (each) transformer shall be maintained at:
 10 foot in foort and 2 foot around the sides of the transformer.
 - 10 feet in front and 3 feet around the sides of the transformer
- Modular type meter centers shall be furnished and installed by the customer per the requirements of Paragraph E, <u>Customer Owned Sockets</u>. A list of specific approved meter centers can be provided upon request.
- Meter centers must be designed for the operating voltage of the electricity meters to be utilized. i.e. 120/208 3 wire installations MUST have 5 terminal sockets installed for proper registration.
- Where ground floor retail space exists, the metering for this shall be located exterior to the facility and have by-pass type sockets installed, furnished by MPC.
- Residential tenant meter centers shall be located in a single location or on every other floor beyond the ground floor. Meter centers on each floor must have prior company approval.
- Each unit feeder circuit will be properly tested and labeled by the contractor prior to being energized. Upon completion of testing, each socket shall be permanently marked using adhesive marking labels furnished by Mississippi Power OR contractor provided engraved plates riveted to each socket cover.
- The demarcation point for electric service installations <600volt will be the secondary of the padmount transformer. Primary voltage installations will be at the primary metering point.
- Duct Bank installations, shall maintain a minimum depth of not less than 30" from finished grade, and shall be encased in concrete.
- Meter rooms will maintain the requirements identified on Plate 91.
- The max number of conductors per phase is 16. If locomotive cable is used the customer is to terminate the conductors and provide MPC with the connector information







MEDIUM SIZED SINGLE PHASE COMMERCIAL 400 AMPERE SERVICE

A. GENERAL NOTES:

- Service entrance line and load conductors, conduit, conduit straps, weatherhead, lock nuts, bushings, connectors and miscellaneous mounting hardware furnished and installed by customer.
- This installation is used for services greater than 200 amperes but less than 320 amperes continuous.
- Meter socket furnished (normally) by Company and installed by customer.
- Meter furnished and installed by Company.
- Generally, service lateral furnished and installed by Company. Contact Company for determination.
- Requirements regarding accessibility to equipment and unobstructed working space adjacent to metering equipment are specified under Service Locations.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.
- Three inch (3") trade size rigid metal conduit or schedule 40 PVC furnished and installed by customer.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. <u>CONNECTIONS:</u>



SINGLE PHASE 200 AMPERE INSTALLATION SMALL COMMERCIAL

A. <u>GENERAL NOTES:</u>

- Service entrance line and load conductors, conduit straps, weatherhead, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Meter socket, meter socket hub and service drop attachment device furnished (normally) by Company and installed by customer.
- Meter and service drop furnished and installed by Company.
- Requirements regarding accessibility to equipment and unobstructed working space adjacent to metering equipment are specified under Service Locations.
- Installations that require a steel service mast shall be installed by customer.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.

C. <u>CONNECTIONS:</u>



LARGE SINGLE PHASE COMMERCIAL FOR SERVICES GREATER THAN 400 AMPERES

A. <u>GENERAL NOTES:</u>

- Service lateral and meter furnished and installed by Company.
- Instrument transformers furnished by Company and installed by company
- Meter socket and instrument transformer enclosure furnished by Company and installed by customer.
- Conduit shall be 1-1/4" rigid metal or intermediate metal conduit furnished and installed by customer.
- Metering control cable furnished and installed by Company.
- Requirements regarding accessibility to equipment, unobstructed working space, clearances, proper mounting and conduit arrangement are specified under Service Locations.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Enclosure, socket and conduits for service lateral and meter control cable shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Enclosure, socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount both enclosure and socket.
- Conduits shall be furnished and installed by customer.

C. CONNECTIONS:



SMALL SIZED THREE PHASE COMMERCIAL FOUR WIRE SERVICE

A. <u>GENERAL NOTES:</u>

- When this socket is utilized for 277/480V 4 wire installations, a disconnecting means ahead of and immediately adjacent to the meter socket will be installed by the customer. The disconnecting means must be rated not less than the load to be carried and must have an interrupting rating at system voltage sufficient for the current that must be interrupted.
- Service entrance line and load conductors, conduit, conduit straps, weatherhead, lock nuts, bushings, connectors and miscellaneous mounting hardware furnished and installed by customer.
- Meter socket furnished (normally) by Company and installed by customer.
- Meter furnished and installed by Company.
- Service lateral furnished and installed by customer.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.
- Three inch (3") trade size rigid metal conduit or schedule 40 PVC furnished and installed by customer.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. CONNECTIONS:



MEDIUM SIZED THREE PHASE COMMERCIAL 600 AMPERE OVERHEAD SERVICE

A. <u>GENERAL NOTES:</u>

- This arrangement may be utilized in lieu of transformer rated metering for commercial services above 200 amperes up to 480 amperes continuous. Service installation is limited to 120/208, 3 Phase, 4 wire and 120/240 3 phase 4 wire. <u>NO 277/480 volt available</u>
- Contact a qualified employee well in advance of required service date to determine best method of service.
- The same requirements shall be applicable for the 400 ampere, self contained socket as specified for the 200 ampere socket with regard to location, height, accessibility to equipment, unobstructed working space, clearances, proper mounting and mast/weatherhead arrangement.
- Service entrance line and load conductors, conduit, conduit straps, weatherhead, lock nuts, bushings, connectors and miscellaneous mounting hardware furnished and installed by customer.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Meter and service drop furnished and installed by Company.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket. Only the pre-punched holes provided by the manufacturer shall be used to mount socket.

C. <u>CONNECTIONS:</u>



MEDIUM SIZED THREE PHASE COMMERCIAL 600 AMPERE UNDERGROUND SERVICE

A. <u>GENERAL NOTES</u>:

- This arrangement may be utilized in lieu of transformer rated metering for commercial services above 200 amperes up to 480 amperes continuous. Service installation is limited to 120/208, 3 phase, 4 wire and 120/240 3 phase 4 wire. No 277/480 volt available.
- Contact a qualified employee well in advance of required service date to determine best method of service.
- The same requirements shall be applicable for the 600 ampere, self contained socket as specified for the 200 ampere socket with regard to location, height, accessibility to equipment, unobstructed working space, clearances, proper mounting and mast/weatherhead arrangement.
- Service entrance line and load conductors, conduit, conduit straps, weatherhead, lock nuts, bushings, connectors and miscellaneous mounting hardware furnished and installed by customer.
- Meter socket furnished by Company and installed by customer.
- Meter furnished and installed by Company.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket. Only the pre-punched holes provided by the manufacturer shall be used to mount socket.
- Minimum three inch (3") trade size rigid metal conduit or schedule 40 PVC furnished and installed by customer. MPC to specify size.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. <u>CONNECTIONS</u>:



OVERHEAD, INSTRUMENT TRANSFORMER, METERING INSTALLATION ON BUILDING SIDE

A. <u>GENERAL NOTES:</u>

- This arrangement may be utilized for services above 480 amperes and 277/480 3 phase 4 wire services greater than 200 amperes.
- Service drop and meter furnished and installed by Company.
- Instrument transformers furnished by Company and may be issued to customer for installation or installed by Company employees.
- Meter socket furnished by Company and installed by customer.
- 1-1/4" metal or intermediate metal (EMT) or SCH 40 PVC conduit furnished and installed by customer.
- Metering control cable furnished and installed by Company.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Socket and 1-1/4" conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.

C. CONNECTIONS:

• All connections shall be made by Company.



OVERHEAD, STEEL SERVICE MAST, INSTRUMENT TRANSFORMER, METERING INSTALLATION THRU THE ROOF

A. <u>GENERAL NOTES:</u>

- This arrangement may be utilized for services above 400 amperes.
- Service drop and meter furnished and installed by Company.
- Instrument transformers furnished by Company and may be issued to customer for installation or installed by Company employees.
- Meter socket furnished by Company and installed by customer.
- 1-1/4" metal or intermediate metal (EMT) or SCH 40 PVC conduit furnished and installed by customer. Service mast shall be mechanically supported via use of UM-Strut® or other approved means.
- Metering control cable furnished and installed by Company.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.
- Service mast and meter control cable mast shall be securely fastened together.

B. MOUNTING:

- Socket shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 x 1-1/2" corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.

C. CONNECTIONS:

• All connections shall be made by Company.



TYPICAL THREE PHASE, PADMOUNT TRANSFORMER, METERING INSTALLATION SERVING ONE CUSTOMER COMMERCIAL/INDUSTRIAL

A. <u>GENERAL NOTES:</u>

- Conductors, conduit, conduit straps, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer. MPC furnishes padmount termination connectors and completes the conductor installation.
- Meter socket and pedestal furnished (normally) by Company and installed by customer.
- Meter socket shall be mounted on a pedestal or outside wall of building. Meter socket shall not be mounted on the padmount transformer.
- C.T.s on secondary spades and 12 conductor control cable to be furnished and installed by Company.
- Concrete pad furnished and installed by customer per MPC specifications.
- Placement of meter socket in alley ways or area where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Padmount transformer orientation should be approved by Company prior to installation of concrete pad. Padmount location shall be approved by a qualified MPC employee prior to installation. The location should allow reasonable natural air flow to prevent transformer overheating.
- Meter socket and conduit straps shall be fastened to the pedestal using bolts. Bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. CONNECTIONS:

• All connections shall be made by Company only.



TYPICAL THREE PHASE, PADMOUNT TRANSFORMER, METERING INSTALLATION SERVING MULTIPLE CUSTOMERS FROM A COMMON SERVICE LATERAL

A. <u>GENERAL NOTES:</u>

- Conductors, conduit, conduit straps, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Meter sockets furnished (normally) by Company and installed by customer.
- Conductors to be sized and installed as required by current NEC requirements.
- Placement of meter socket in alley ways or area where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter sockets, cabinets, trough and conduits shall be surface mounted.
- Meter socket, instrument transformer cabinet and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding), or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket and cabinet.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. CONNECTIONS:

- Customer shall apply a non-grit type corrosion inhibitor to connections and terminate them by torquing to manufacturer's specifications located in the enclosure. **Do not over-torque!**
- All instrument transformer metering connections shall be made by Company.

D. MARKING:

- Each socket position and the corresponding building unit served (suite, apartment or office) shall be accurately, clearly and permanently labeled before meters are installed.
- Each meter socket position shall be labeled on both the inside and outside surfaces.
- Letters and/or numbers shall be minimum 1" in height of contrasting color.


TYPICAL THREE PHASE, PADMOUNT TRANSFORMER, METERING INSTALLATION SERVING MULTIPLE CUSTOMERS FROM A SINGLE PADMOUNT TRANSFORMER

A. <u>GENERAL NOTES:</u>

- Conductors, conduit, conduit straps, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer. These items will general include, but not limited to, all hardware at the meter socket and inward to the customer's switchgear.
- Meter sockets and current transformer enclosure furnished (normally) by Company and installed by customer.
- Placement of meter socket in alley ways or area where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Padmount transformer orientation should be approved by Company prior to installation of concrete pad. Padmount location shall be approved by a qualified MPC employee prior to installation. The location should allow reasonable natural air flow to prevent transformer overheating.
- Meter sockets, cabinets, and conduits shall be surfaced mounted by the customer.
- Meter socket, instrument transformer cabinet and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding), or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket and cabinets.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. CONNECTIONS:

- Customer shall apply a non-grit type corrosion inhibitor to connections and terminate them by torquing to manufacturer's specifications located in the enclosure. **Do not over-torque!**
- All instrument transformer metering will be furnished by Company. Connections shall be made by Company with customer providing a minimum of two (2) feet conductor extending from front of enclosure.



REQUIREMENTS FOR SERVICES GREATER THAN 600 VOLTS

Service at more than 600 volts, nominal, is subject to special negotiations between the customer and the Company since the metering and service installations for such service require special engineering consideration in practically all cases. It is always advisable to consult the Company well in advance of the time such service will be required so the customer and Company's design and construction work can be properly coordinated and equipment made available.

A metering installation at primary voltage may be located at the Company's option either on the customer's pole or structure, or on Company's pole or structure, but it should be located as close as practical to the point where the Company's circuits join the customer's circuits.

TYPICAL WIRING OF METER SOCKET FOR SINGLE PHASE, TWO WIRE SERVICE

A. <u>GENERAL NOTES:</u>

- Service entrance line and load conductors, conduit straps, weatherhead, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Meter and service drop furnished and installed by Company.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.
- 120 volt 2 wire services are generally available for billboards, traffic control devices, and CATV amplifiers. Customer must have MPC approval prior to use on other type installations. Commercial use requiring demand meter is not available.

B. MOUNTING:

- Meter sockets and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.

C. CONNECTIONS:



TYPICAL WIRING OF METER SOCKET FOR SINGLE PHASE, THREE WIRE OVERHEAD SERVICE

A. <u>GENERAL NOTES:</u>

- Service entrance line and load conductors, conduit straps, weatherhead, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Meter and service drop furnished and installed by Company.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.

C. CONNECTIONS:



TYPICAL INSTALLATION FOR SINGLE PHASE, THREE WIRE, 200 AMPERE UNDERGROUND SERVICE

A. <u>GENERAL NOTES:</u>

- Service entrance line and load conductors, conduit straps, weatherhead, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Meter socket, meter socket hub and service drop attachment device furnished by Company and installed by customer.
- Meter and service lateral furnished and installed by Company. Customer to provide approximate final grade level within six inches (6") prior to service lateral installation.
- Requirements regarding accessibility to equipment and unobstructed working space adjacent to metering equipment are specified under Service Locations.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be minimum #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.
- Minimum two inch (2") trade size rigid metal conduit or schedule 40 PVC furnished and installed by customer. MPC to specify size of conduit.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. CONNECTIONS:



TYPICAL WIRING FOR SINGLE PHASE, THREE WIRE 400 AMP SERVICE

A. <u>GENERAL NOTES:</u>

- Service entrance line and load conductors, conduit straps, weatherhead, lock nuts, bushings, connectors, and miscellaneous mounting hardware furnished and installed by customer.
- Installation available for services greater than 200 amperes but less than 320 amperes continuous.
- Meter socket and closing plate shall be furnished by Mississippi Power and installed by customer.
- Meter and service lateral furnished and installed by Company. Customer to provide approximate final grade level within six inches (6") prior to service lateral installation.
- Requirements regarding accessibility to equipment and unobstructed working space adjacent to metering equipment are specified under Service Locations.
- Placement of meter socket in alley ways or areas where meter is subject to damage shall require advance approval of a qualified employee.

B. MOUNTING:

- Meter socket and conduit shall be surface mounted without brick or other exterior veneers encasing the equipment.
- Meter socket and conduit straps shall be fastened to building using lead anchors (brick or solid masonry), toggle bolts (other masonry siding) or wood screws (studs, solid lumber). All screws and bolts shall be #12 corrosion resistant. A minimum of four (4) fasteners shall be used to mount socket.
- Two inch (2") trade size rigid metal conduit or schedule 40 PVC furnished and installed by customer.
- Conduit ends shall be equipped with a proper bushing to protect conductors.

C. CONNECTIONS:





NOTES:

- 1. Service duct shall be located in the extreme right side of the secondary compartment.
- 2. Reinforce with No. 4 bars with a 12" x 12" grid, 4 in. below top of pad except as shown above.
- 3. Concrete shall have a minimum ultimate 28 day compressive strength of not less than 3,000 pounds, pad shall be cured not less than 72 hours.
- 4. Average weight of pad is 3700 lbs. concrete.
- 5. Mounting surface shall be level, smooth and uniform with minimal irregularities.
- 6. This pad will also accommodate a 500 KVA transformer.
- 7. Lifting insert for 1 in. diameter threaded bolt, 4" depth, Meadow Burke FX-14, 4 locations (omit if poured in place).
- 8. Maintain 2 in. of clear concrete between rebar and all outer surfaces.

SUBJECT	UNDERGROUND DISTRIBUTION			
DETAIL	EQUIPMENT PADS AND VAULTS - PRE-CAST OR POURED IN PLACE PAD FOR 45 KVA THROUGH 300 KVA			
LOOP FEED PAD MOUNTED TRANSFORMERS, 12 KV THRU 25 KV				
Date	02-26-99	REVISED 09-25-00, 01-26-02, 01-09-07, 04-09-10 12-20-13	📥 Mississippi Power	A- SUH15001

SUH-15.001





SUH-17.001

INSPECTIONS

The wiring and appliances of the customer should be installed and maintained in accordance with the requirements of the National Electrical Code and such state, municipal and county inspection requirements as may be in force at the time such installation is made.

Where inspection service is required, the customer will have the wiring inspected and approved by an authorized electrical inspector and have the installation released for connection **before** the Company makes connection to its system. The Company will not inspect any wiring or equipment installed by the customer, but may refuse or terminate service if the Company actually observes any condition on the customer's installation or equipment with the Company, in its sole judgment, regards as hazardous or of such character that satisfactory service cannot be given.

Where no public inspection authorities have jurisdiction, the Company may require written notice from the wiring electrician or customer that the installation is ready for electric service. The Company will not inspect any wiring or equipment installed by the customer but may refuse or terminate service if the Company actually observes any condition on the customer's installation or equipment which the Company, in its sole judgment, regards as hazardous or of such character that satisfactory service cannot be given.





POWER QUALITY

A. <u>Harmonics Guideline</u>:

It is the intention of the Company to provide clean, stable, and reliable power to all of its customers. In order to insure that the processes and operations of one customer connected to the system do not affect another, MPC will follow the IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems; IEEE Std. 519-1992. Furthermore, as the most effective means to date to implement the standard, Mississippi Power Company will follow the approach developed by British Columbia Hydro Electric.

It should be recognized that this is a two fold approach. Considerable effort should be spent in the planning and design phase of plant installation. However, many unique problems could arise after the plant is in operation. In this light, customers are required to demonstrate, through field measurements, that their installations comply with the harmonic current limits during the commissioning stage as well as during normal operation.

Two criteria should be met by the customer. First, the customer's total harmonic producing loads, acting as current sources, should not distort the system voltage waveform beyond limits set in IEEE 519 with the exception that the limits on triple harmonics be reduced to one third of the limits for odd order harmonics. Second, the customer's capacitors should not cause a resonance condition, both series and parallel, on the system. Furthermore, the Company considers that reducing harmonic voltage distortion is a shared responsibility between the customer and the Company.

B. Design Considerations:

The following items should be considered during the design phase of load consideration:

For calculating harmonic current distortions, the maximum fundamental frequency load current under normal plant operation conditions, e.g., steady state conditions, should be used as the base value. The Point of Common Coupling (PCC) will be defined as the Mississippi Power Company point electrically nearest to the customer installation.

The nominal RMS operating voltage of the PCC is used as the base value for the harmonic voltage distortion.

The total harmonic distortion, current or voltage, is defined to include harmonics up to the fortieth. A zero background harmonic distortion is assumed in the calculation of harmonic currents at the PCC. The supply system harmonic impedance as seen from the PCC is zero at all harmonic frequencies.

Engineering information provided by the Company.

- System fault level.
- Supply system harmonic impedance at the PCC.

• Background harmonic voltage distortion at the PCC.

C. Conclusions:

In conclusion, the harmonic levels outlined in IEEE 519 should be adhered to by the customer. It is the customer's responsibility to insure that the criteria are met and that the levels are adhered to. Furthermore, it is the customer's responsibility to ensure that his equipment operates successfully as well as within the original design criteria set forth.

SERVICE LOCATIONS

A. General:

The preferred location for metering equipment is outdoors. For indoor installations, special permission must be obtained from a qualified employee.

Meters must be placed in locations readily accessible to authorized company representatives.

Meters may not be located any closer to open conductors than allowed by the National Electrical Safety Code.

All posts and timber supports on which meters are to be mounted must be pressure treated with preservative with 0.4 lbs./ft³ minimum concentration.

Meters shall be placed so that the meter registers will be <u>not more than five feet</u>, <u>six inches nor less</u> <u>than four feet</u> above finished grade level. The only exceptions shall be when using multiple gang meter sockets, the highest meter register shall not be more than six feet and the lowest meter register shall not be less than two feet above finished grade.

Safety dictates metering equipment shall be located so Company personnel are provided level, unobstructed working space. This working space around metering or other service equipment should extend a minimum distance of 3 feet in front and 18 inches to either side of the equipment, and a height of 6 feet, 3 inches from the final grade level. Meters may not be installed within 6 feet of belts or other moving machinery which may endanger the safety of those doing work on the meter.

Metering equipment should not be installed in an enclosure within 6 feet of a gas meter(s) unless separated by a partition and separate entrances are provided for access to metering equipment and gas meter(s).

No electric meter shall be installed where it would be necessary to climb over gas or other pipes, or other HVAC equipment to read or service the meter

If necessary to locate metering equipment adjacent to a drive way, walkway, parking lot or any location that will subject the meter to damage, special permission must be obtained from a qualified employee who will have the option to require the customer to furnish and install protective barriers.

Meters are to be placed in locations that are not subject to vibration or strong magnetic fields.

Metering accuracy is of utmost importance to the Company and customers. Therefore, any location a qualified employee determines may cause erroneous registration shall not be allowed.

Typical metering installations are illustrated by drawings in this book. If questions arise, consult a qualified employee by dialing the Toll Free number provided.

B. Indoors:

Where special permission is obtained to locate metering equipment indoors, adequate lighting shall be provided to allow safe installation, maintenance, and testing.

Where meters are installed indoors, they must be located on the first floor or in the basement where they will be readily accessible to authorized Company representatives.

Meters may not be placed in basements where the only entrance is through a trap door, on lattices, in coal or wood bins, in sheds, attics, bedrooms, bathrooms, toilet rooms, restaurant kitchens, stairways, ventilating or elevator shafts, furnace rooms (the latter at the discretion of the Company), <u>in any</u> <u>location where there is less than 6 feet, 3 inches of headroom</u>, or in any place where inconveniences will be caused either to the customer or to Company personnel.

C. <u>Multi-Occupancy Buildings:</u>

All rules for outdoor or indoor meter location still apply.

In multiple occupancy (two or more occupancies) buildings, where several floors, apartments, stores, etc., are rented separately, meters and other company equipment may only be located where they are accessible at all reasonable hours to the Company's representatives for the purpose of installation, maintenance, removal, reading, inspecting, and testing. Meters will preferably be located all together at a single outdoor location. If there is not suitable outdoor location, then the meters should be grouped together in a common meter room, common hallway, or a suitable location on the first floor which is accessible to all occupants of the building.

Cabinet Mounting, Electrical Connection, & Socket Labeling Requirements.

To preserve the safety and reliability of the Company's system, all connections (whether for overhead or underground service) between the Company's system and the customer's wiring will be made by the Company. The Company will not permit nor tolerate unauthorized connections.

Any anticipated service entrance which consists of more than <u>four conductors per phase must be</u> <u>installed only with prior approval of the Company</u> in order to arrive at the optimum sizing and number of conductors. Failure to consult the Company prior to the actual installation of the service entrance equipment may result in the customer rewiring the service entrance or paying an additional cost for service connection.

Mounting and Labeling of Meter Sockets and Metering Cabinets:

Metering equipment furnished by the Company shall be surface mounted.

To insure safety, accuracy, and reliability of service it is necessary that meter sockets and metering cabinets be securely installed in a level and plumb position at a height specified in the installation drawings.

Meter sockets, metering cabinets, and conduit straps shall be installed with the following:

- Lead anchors or double helix concrete screws shall be used with brick or solid concrete surfaces.
- Toggle bolts shall be used with other masonry siding.
- Wood screws shall be used with solid wood surfaces.
- All mounting hardware shall be minimum #12 (1/4") corrosion resistant screws.
- A minimum of 4 fasteners shall be used to install any socket or cabinet unless specifically stated otherwise.

Where the exterior wall is other than brick or concrete blocks, the wall should be framed in a manner to provide a solid mounting surface for the metering equipment.

To avoid delays in providing service to multi-unit buildings (apartments, condominiums, or commercial), both the meter socket and the building unit served shall be accurately, clearly, and permanently labeled before meters are installed. Each meter socket positions must be labeled on the outside surface with letters and/or numbers at least one inch in height of contrasting color. Mississippi Power will furnish adhesive backed labels for use by the customer meeting these specifications.