

**SPECIFICATIONS  
AND  
POLICY MANUAL  
FOR ELECTRIC  
OPERATIONS**



**January 2025**

**BOWLING GREEN MUNICIPAL UTILITIES  
ELECTRIC DIVISION**

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## Mission Statement

## **Our Vision**

**To be customer focused in all we do.**

## **Our Mission**

**To improve our customers' quality of life by providing reliable, safe and efficient utility services.**

**RULES  
AND  
REGULATIONS**

## **RULES AND REGULATIONS FOR ELECTRIC DIVISION**

**Additional Load** – The service connection, transformers, meters and equipment supplied by BGMU for each Customer have definite capacity, and no addition to the equipment or load connected thereto will be allowed except by consent of BGMU. Failure to give notice of additions or changes in load, and to obtain BGMU's consent for same, shall render Customer liable for any damage to any of BGMU's lines or equipment caused by the additional or changed installation.

**After Hours Charges** – Should the Customer request construction or line work to be performed other than during normal working hours, then the Customer must pay the overtime labor charges plus any other charges pertaining to the job.

**Athletic Field Lighting** – Athletic field lighting installations owned and maintained by the customer may be served on an off-peak basis in accordance with the provisions of the Outdoor Lighting Rate (Schedule LS). A copy of the outdoor lighting rate is available on request.

The Customer may be permitted to use up to ten percent (10%), not to exceed 10 kW, of the total installed lighting capacity to support ancillary electric loads related to the operation of the athletic field. In the event that the Customer fails to restrict service in accordance with these requirements, they shall be billed under the appropriate General Power Rate (GSA).

**Conflict** – In case of conflict between any provision of any rate schedule and the Specifications and Policy Manual for Electric Operations, the rate schedule shall apply.

**Customer's Responsibility for BGMU's Property** – All meters, meter bases, service connections and other equipment furnished by BGMU shall be and remain the property of BGMU. The Customer shall provide a space and exercise proper care to protect the property of BGMU; and in the event of loss or damage to BGMU's property arising from neglect of the Customer to care for same, the cost of the necessary repairs or replacements shall be paid by the Customer. In the event that underground utilities need to be located for digging or excavation purposes, State Law requires the Customer to contact *Kentucky 811/BUD* (Before You Dig) at 1-800-752-6007 two working days before any digging is to be done.

**Customer's Wiring-Standards** – All wiring of the Customer's premises must conform to BGMU's requirements and accepted modern standards, as exemplified by the requirements of the National Electrical Safety Code and National Electric Code.

**Damage to Customer-Owned Security Light Poles** – The person(s) or company responsible for damage to any poles by vehicle(s), construction equipment, or other known source will be billed for full cost of replacement.

If a pole is in need to be replaced because it is rotten or the pole has been damaged due to high winds, storm or an unknown source, the pole owner will be

charged a flat fee of \$200.00 per pole for replacement. This fee will cover in part, the cost of the pole and labor for replacement of the pole.

**Deposit** – A security deposit may be required to establish service with BGMU. Deposits must be paid at the time of accepted application. Deposits are non-transferrable from one customer to another. Based on the Customer's payment history, inflation, or an increased use of service, BGMU may require any customer to increase the deposit to a two months' average bill amount. For more information regarding the policy on deposits, please see BGMU's "Rules and Regulations for Customer Service".

**Electrical Inspection** – Electrical wiring within BGMU's service area is to be performed under the direction of a Master Electrician and must be inspected by the City Electrical Inspector prior to being energized by BGMU. Regardless as to whether the BGMU Customer lives inside or outside the city limits, all wiring shall comply with the National Electrical Code, National Electric Safety Code, BGMU Rules and Regulations and other applicable codes and City Ordinances.

BGMU shall have the right, but is not obligated, to inspect any installation before and/or after electrical service is connected. Furthermore, BGMU reserves the right to reject any installation not in accordance with BGMU standards. Neither inspection, rejection, nor failure to inspect shall render BGMU liable or responsible for any loss or damage resulting from defects in the installation, wiring, violation of BGMU's rules, or from accidents which may occur upon Customer's premises. BGMU is not responsible for and will not inspect onsite wiring (Customer wiring beyond the metering point). This is the responsibility of the City Electrical Inspector.

**Extensions and Additions to Street Lighting Systems**– BGMU shall, upon request by the City of Bowling Green, provide additions and extensions to the street lighting system. If the expense in any year ending June 30 exceeds 5% of the total investment in street lighting property and equipment, the Customer may be required to finance the additional costs in excess of the five percent.

**Generators**– All generation sources not designed and operated according to the BGMU Interconnection Procedures, including portable and permanently installed generators, connected to a customer's electrical system must have an open transition transfer switch installed that will prohibit parallel operation (see Drawing-Misc 06). Any closed transition transfer switch operations are not permitted.

**Interconnection**–BGMU offers interconnection services for qualifying renewable generation facilities. BGMU is contractually obligated to purchase its entire requirements for power and energy from TVA. TVA's Power Contract prohibits BGMU from compensating Customers, either directly or indirectly, for any excess power generated by the Customer. A Customer who wishes to interconnect and be compensated for excess generation must do so by participating in TVA's Green Power Providers Program, TVA's Dispersed Power Production Program, or through other arrangements with TVA.

The Customer must adhere to BGMU's Interconnection Guidelines and complete an Interconnection Agreement with BGMU prior to installation and interconnection of the qualifying system. Copies of BGMU's Interconnection Guidelines and Interconnection Agreement are available upon request.

The Customer's Interconnection and safety equipment must comply with the latest revision of the IEEE 1547 (Standard for Interconnecting Distributed Resources with Electric Power Systems) and must be certified and labeled by an acceptable Nationally Recognized Testing Laboratory as rated for utility interactive, grid connected power systems conforming to UL 1741 (Standard for Inverters, Converters, Controllers, and Interconnection System Equipment for Use with Distributed Energy Resources).

**Interruption of Service** -- BGMU will use reasonable diligence to provide a regular and uninterrupted supply of electricity. However, BGMU shall not be liable for any damages resulting from service interruptions or disturbances.

**Load Form** – A load form is required from the Customer or the Electrician before any work will be performed by BGMU. The load form can be acquired from the Engineering Department and/or can be found at the end of this document.

**Meter Location** – The location of the electric meter will be approved by BGMU's Engineering Department. This approval must be obtained prior to the construction of the permanent electric service. The meter location must be readily accessible and free of obstructions. Meters may not be enclosed or located on the inside of any structure. Meters may not be located within carports, porch areas, or decks which are or can become enclosed. For multi-unit residential and commercial buildings, meters must be ganged together and located in a centralized location.

**Meter Testing** – BGMU will, at its own expense, make periodic tests and inspections of its meters in order to maintain a high standard of accuracy. BGMU will make additional tests or inspections of its meters at the request of the Customer. Meters not tested within the last eight (8) years will be tested at the utilities expense. If the meter has been tested within the last eight (8) years and if tests made at the customer's request show that the meter is accurate within two (2%), slow or fast, no adjustment will be made in the Customer's bill and a test charge of fifty dollars (\$50.00) will be paid by the Customer. This charge will be shown on the Customer's next monthly utility bill. In case the test shows that the meter exceeds two percent (2%), fast or slow, an adjustment will be made in the Customer's billing for only the billing period prior to the test and there will be no charge for the testing.

**Multiple Commercial Metering Points** – If the Customer desires an additional metering point and by so doing will avoid paying some or any demand charges, then the Customer will pay all expenses BGMU incurs for supplying the additional service. BGMU reserves the right to deny such requests.

**Nonstandard Service** – Customer shall pay the cost of any special installation necessary to meet their particular requirements for service at other than standard

voltages, or for the supply of closer voltage regulation than required by standard practice. BGMU reserves the right to refuse to provide service at other than standard voltages if deemed cost prohibitive or impractical.

**Point of Delivery** – The point of delivery is the point of connection between the facilities of BGMU and the Customer's wiring. All wiring and equipment beyond this point of delivery shall be maintained by Customer. Maintenance and repair of underground service conduits shall be the responsibility of the Customer. The Customer will be responsible for the payment of all electricity, which is registered on the meter serving the Customer's premises.

**Pole Attachments** – New attachments to BGMU owned poles will be limited to utilities that have made application and received authorization through an executed Pole Attachment Agreement and an approved Attachment Permit. A sample copy of BGMU's Pole Attachment Agreement is available upon request.

**Protection of Customer's Equipment**– BGMU designs and operates the electric system to the voltage levels and voltage balance guidelines of ANSI C84.1, Electrical Power Systems and Equipment Voltage Levels. BGMU strives to avoid other power quality disturbances that might affect the Customer's equipment; however, protection of all equipment against the effects of high or low voltage levels, voltage unbalance, loss of phase, surges, lightning, or other unexpected disturbances is the Customer's responsibility.

**Pulse Metering**- Customers requesting pulse outputs from meter installations shall bare all expenses incurred by BGMU to provide pulse delivery.

**Relocation of Facilities** – Upon request by the Customer, BGMU will endeavor to relocate electrical facilities if an alternate route is possible and feasible. These relocation expenses will be paid by the Customer in full and in advance of any work.

**Secondary Compression Connectors** – In the case where the Customer is metered at the transformer rather than at the building, then the Customer must furnish the secondary conductor plus the two-hole secondary compression connectors. The secondary compression connectors must meet or exceed the Class A requirements of EEI-NEMA Standards TDJ-162. The physical dimensions must be a maximum spade width of 1 3/4" with 9/16" diameter holes. The holes must be proper NEMA spacing of 1 3/4" from center of holes. The Customer must provide BGMU with the proper Kearney or Anderson tool size and die size. BGMU reserves the right to refuse any connector that does not meet these specifications.

**Security Lighting on Customer Premises** –BGMU security lights are controlled by a photocell that turns lights on at dusk and turns them off at dawn. A seventy-five dollar (\$75.00) application fee may be collected at the time of application or may be added to the Customer's next monthly bill. If additional poles or light fixtures are required, the Customer will pay an estimated cost for the installation prior to receiving service. If service is transferred from one customer to another without being disconnected, no charge will apply. Usage

will be billed at a flat monthly rate as shown in BGMU's Outdoor Lighting Schedule.

The customer agrees that the security light fixtures and wires will remain the property of BGMU and may be removed at any time by BGMU upon failure to pay the charges set forth, or when deemed necessary by BGMU. Facilities paid for by the customer shall remain the property of the customer. Removal, relocation, replacement or required maintenance of customer owned facilities shall be at the customer's expense.

The customer further agrees to notify BGMU when the security light fails to turn on or operate properly, and BGMU shall make every reasonable effort to service the unit within two (2) business days. Further, the customer agrees to protect the unit from damage insofar as possible.

**Signs on Poles** – No signs, advertisements, posters or other type material are allowed to be attached to BGMU poles or any other equipment owned by BGMU.

**Standby and Resale Service** – All purchased electric service (other than emergency, or standby service) used on the Customer's premises shall be supplied exclusively by BGMU and the Customer shall not, directly or indirectly, sell, sublet, assign, or otherwise dispose of the electric service or any part thereof.

A Customer's sale of electricity for electric vehicle charging stations is not considered the resale of electricity provided the electric service has been supplied exclusively by BGMU, and the electricity is used only for transportation purposes.

**Underground Location** – In the case where the Customer requests BGMU electrical facilities to be located, the Customer must contact the **Kentucky 811/BUD (Before You Dig) Center at 1-800-752-6007**. Please call at least two working days before you plan to start digging, unless there is an emergency. There is no charge for this service. BGMU uses red marking paint to indicate electric lines.

**Voltage Fluctuations And other Power Quality Disturbances Caused by Customer** – The electric service must not be used in such a manner as to cause excessive voltage fluctuations or harmonic current levels on the BGMU System. BGMU may require the Customer to correct such conditions at their expense.

The maximum allowable voltage flicker (rapid change in voltage) caused at the Customer's service point of connection shall not exceed the requirements of the latest revision of IEEE 1453 (Recommended Practice for Measurement and Limits of Voltage Fluctuations and Associated Light Flicker on AC Power Systems).

The maximum harmonic distortion of the current and/or the voltage at the Customer's service point of connection with BGMU shall not exceed the requirements of the latest revision of IEEE 519 (Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems).

**NOTE: See 'Rules and Regulations For Customer Service' for additional procedures and policies.**

# **POLICIES**

## UTILITY EASEMENTS, RIGHT OF ACCESS AND TREE TRIMMING POLICY

The purpose of the electric easements of the Utility and its tree trimming policy is to maintain its commitment to the safety of the public, to continue its commitment to providing reliable electrical service to its customers and to be cost efficient in its tree trimming program.

BGMU employees, properly identified by a BGMU identification card, shall have access to the Customer's premises at all reasonable times for the purpose of reading meters, testing, repairing, removing or exchanging any and/or all equipment belonging to BGMU. Access privileges are assured by right-of-way conditions, which forbid obstacles such as buildings, fences, locked gates, trees, shrubs, dogs or other animals, from prohibiting entrance/exit to and from proper working areas. BGMU has the right to remove obstacles without compensation. BGMU may allow fences on the right-of-way easement, but requires the Customer to install a ten-foot gate, allowing access to the facilities by BGMU vehicles. If the owner chooses to lock the gate, BGMU may request access to the key, or the Customer will need to make arrangements with Electric Division personnel to access equipment. In emergency situations, BGMU may cut locks or remove fences to access equipment.

If construction is planned that will prohibit access to BGMU's meters or other facilities, the Customer should contact BGMU's Engineering Department for assistance in relocation of the facilities.

Since trees growing in lines or overhanging into the Utility's easement are a constant problem, BGMU enforces a tree trimming policy in conjunction with its easement agreement. The standard utility easement agreement states, "The Grantee (BGMU) shall have the further right from time to time to cut down and clean away any trees within or on either side of said easement which now or hereinafter in the opinion of the Grantee may be a hazard..."

### **Recommended Course of Action:**

1. ***Utility Easements*** – Should be clear and accessible to Utility personnel and vehicles. No permanent structure such as home additions, garages, storage buildings, etc., shall be placed on easements. Fencing will be allowed as long as a minimum 10' gate is installed for access to property. It is recommended that all forms of vegetation, such as: trees, shrubs or flowers, not be planted in the easement. If planting is done, it is requested that they be placed in areas so that they do not block or interfere with required Utility operations.
2. ***Tree Trimming*** – All tree pruning, both initial and retrimming, will be performed with due regard for the safety of the public and providing reliable and efficient service to the Customers.

## Tree Pruning Specifications

BGMU's tree trimming practices conform with the procedures set forth in the American National Standards Institute publication, "Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices" (ANSI A300). These standards require the use of "directional" and "natural trimming" methods (endorsed by the National Arborist Association, the National Arbor Day Foundation, and the International Society of Arboriculture).

Tree pruning will be done to maintain the proper required clearance of :

- 10 foot from primary wire
- 4 foot from secondary wire

***Trees in Utility Easement*** – Full trimming will be done to obtain proper clearance. BGMU reserves the right to cut down any tree located within the easement area.

***Trees adjacent to Utility Easement*** – The amount of trimming will be determined by the proximity of the wires in reference to the location of the tree. Trimming will be done to limbs that invade the easement or overhead wire.

***Tree Removal*** – Some trees may be removed and disposed of appropriately. The following categories are candidates for tree removals:

- Small trees that would require future trimming.
- Trees that are unsightly from previous trimmings or the result of trimming to achieve necessary clearance.
- Trees that are dead or diseased with no potential for growth.
- Trees that pose a definite hazard to electric wires.

## Customers Responsibilities

Tree trimming is a service provided by BGMU at no cost to the property owner. BGMU will clean up and haul away all trimmings resulting from normal right of way clearing. However, trees and limbs that fall into powerlines and must be trimmed to allow restoration of power are the responsibility of the property owner to clean up.

Stump removal is the property owner's responsibility.

## **EQUIPMENT OBSTRUCTION POLICY**

BGMU has experienced numerous problems where shrubs, trees, fencing and plants have been planted around our meter bases and electrical equipment. Our policy states that no obstruction is to be within five (5) feet of the sides, and eight (8) feet of the door to any of our pad mounted equipment. A clear space of 60 inches wide by 60 inches deep is required around all meter bases. We ask that you please respect our policy regarding this matter. It is very dangerous and could result in electrocution if you dig into the high voltage cable. It is also dangerous to BGMU personnel who must try to open and operate this equipment since this vegetation could cause a flashover or short-circuit. We also encourage smaller shrubs and bushes versus trees when planting at required distances from our equipment.

BGMU reserves the right to trim or remove any obstructions when access to BGMU equipment is necessary. Cleanup of cut shrubs, trees and plants within the obstruction free zone is the responsibility of the customer.

\*See Drawing-Misc. 04 for Illustration

## Meter Base/Meter Location Policy

The Electric Division of BGMU will begin on May 1, 2024, to implement the following revised "Meter Base Policy".

Single phase meter bases and/or meter base-main combos will be provided by the Customer. The specifications for this equipment are listed below:

1. All meter bases must be a NEMA 3R enclosure that is UL approved with label.
2. All meter bases must contain a lever bypass.
3. All meter bases must be ringless steel construction (galvanized and painted gray).

### **Approved Single Phase Meter Bases**

<b>Service Size and Type</b>	<b>Manufacturer</b>	<b>Catalog Number</b>
200 Amp Overhead	Milbank	U9801-RXL
		U4216-RXL
	Siemens/Talon	40824-026
		40834-026
	Square D Eaton	UTH4213T
		UTE4213BCH
200 Amp Underground	Milbank	U2349-O
		U9801-RXL
		U4216-RXL
	Siemens/Talon	40404-906
		40404-056
	Square D Eaton	UTH4213T UTE4213BCH
400 (320) Amp Overhead/ Underground***	Milbank	U1797-O-K3L-K2L (UG)
		U5161-X
		U1079-RRL-K3 (OH)
	Siemens/Talon	48104-82
		48104-8203
		48105-83BU
Square D Eaton	UTH4330T	
	UTH4339UCH	

\*\*\*Contact BGMU Engineering for size of line side conductor lug (provided by Customer).

**Non-approved meter bases will not be energized by BGMU.  
Approved Single Phase Meter Base-Main Combos**

<b>Service Size and Type</b>	<b>Manufacturer</b>	<b>Catalog Number</b>	
200 Amp Overhead/ Underground	Milbank	U5871-XL-200	
		U3995-XL-200	
	Siemens/Talon	MM0202B1200JLX	
		MM0202L1200RLC	
		MC0816B1200JLT	
	Square D	RCM200SL	
		RU816F200PSL	
	Eaton	MBX816B200BTS	
	400 (320) Amp Overhead/ Underground***	Milbank	U5890-X-2/200
			U5059-X-2/200-K3L
U6228-X-400-K3			
Siemens/Talon		MM0404B1400RLM	
Square D		QCD400SL, RC816D400SL	
Eaton		HPC4046SHLG	

\*\*\*\*\*Contact BGMU Engineering for size of line side conductor lug (provided by Customer).

Non-approved meter base-main combos will not be energized by BGMU.

**Three Phase Meter Bases**

After May 1, 2024, three-phase meter bases are to be obtained from BGMU and shall have the following charges:

<i>200 Amp, three-phase</i>	<i>\$275.00</i>
<i>320 Amp, three-phase</i>	<i>\$525.00</i>

*\*\*\*Beginning May 1, 2024, 100 amp meter bases will no longer be accepted for new construction or service changes on BGMU's Electric System. Exceptions may apply for traffic signal services, small lighting, service for small communication equipment, and/or two-wire services. Permission shall be received from BGMU's Engineering Department prior to use.*

## **Multi-Gang Meter Centers**

Residential applications shall have the following specifications:

- Single-Phase, 200 Amps and less shall have Bypass Horns.
- Single-Phase, greater than 200 Amps up to 320 Amps shall have Bypass Levers.
- Ganged Bases using Bypass Horns shall have external breaker or disconnect switch per position.
- Ringless, steel construction galvanized and painted gray, NEMA 3R Enclosure, UL Listed and labeled.

Single-Phase Commercial and any Three-Phase Application shall have the following specifications:

- Services sized 320 Amps and less shall have Bypass Levers.
- Ringless, steel construction galvanized and painted gray, NEMA 3R Enclosure, UL Listed and labeled.

## **Meter Location**

The location of the electric meter must be approved by BGMU's Engineering Department. BGMU's Engineering personnel will issue a "Meter Base Form" to the Electrical Contractor upon approval of the meter base location. A Work Order for the connection of the electrical service will not be completed without issuance of this Form.

The electric meter location must be readily accessible and free of obstructions. Meters may not be enclosed or located on the inside of any structure. Meters may not be located within carports, porch areas, or decks which are or can become enclosed. For multi-unit residential and commercial buildings, meters must be ganged together and located in a centralized location.

## **PCB POLICY**

BGMU has had many requests from insurance companies and others as to any possible PCB content in the oil of our electrical equipment such as transformers. BGMU is always glad to provide this information, if available. This information may not be available for all of our equipment and may require an outage, drawing a sample and sending the sample off for a gas chromatograph reading.

Contact BGMU for more information or to schedule a time for testing.

## **ELECTRIC MOTOR POLICY**

It is common for most motors to draw a heavy momentary current on starting. The starting current for AC motors can be three to ten times the normal full load current. Therefore, it is necessary for BGMU to place restrictions on the starting current of a motor either by limiting the size of the motor or by requiring the Customer to install suitable starting devices.

Prior to installing any motors, the Customer should consult with BGMU to verify the voltage, frequency and phase characteristics available for operation at the intended location.

The following rules shall apply for single and three-phase motors. However, BGMU may require the customer to install current limiting or other type starting, or size restrictions to **any** motors causing excessive voltage fluctuations that may be objectionable to the Customer using the motor as well as Customers supplied from the same line.

### **SINGLE PHASE MOTORS**

1. Motors of 5 H.P. and smaller can be generally started across the line, provided such starting does not cause undue interference to other Customers served from the same line. On equipment containing multiple motors exceeding 5 H.P. in total, it is recommended the controls should be so connected or operated such that motors will not be started simultaneously.
2. Motors greater than 5 H.P. up to and including 10 H.P. motors should have starting characteristics limiting the starting current to 300% of full load current.
3. For motors in excess of 10 H.P. , consult with BGMU

### **THREE PHASE MOTORS**

1. Motors of 15 H.P. and smaller can be generally started across the line, provided such starting does not cause undue interference to other Customers served from the same line. On equipment containing multiple motors exceeding 15 H.P. in total, it is recommended the controls should be so connected or operated such that motors will not be started simultaneously.
2. Motors greater than 15 H.P. up to and including 50 H.P. motors should have starting characteristics limiting the starting current to 300% of full load current.
3. For motors in excess of 50 H.P., consult with BGMU.

**CLEARANCE REQUIREMENTS FROM BUILDING**  
**FOR OIL FILLED TRANSFORMERS**

Transformers containing conventional mineral insulating oil shall be located from buildings not less than the distances listed in the table below:

<b><u>Transformer Rating</u></b>	<b><u>Minimum Distance From Building</u></b>
75 KVA or Less	10 ft
76-500 KVA	20 ft
More than 501 KVA	30 ft

**FIRE WALL CONSTRUCTION**

Where a transformer is located less than the specified minimum distance listed above, a fire-resistant wall can be constructed to the following specifications:

Provide a masonry or concrete barrier between building and transformers with wing walls at each end of barrier. The barrier shall extend at least 1 (one) foot above the top of the transformer bushings and pressure relief vents. The wing walls shall be of the same height and shall extend horizontally 3 (three) feet beyond the transformers, including any radiators and tap-changer enclosures. At multistory buildings, provide a fire resistive roof on this three sided-transformer enclosure.

\*See Drawings-Misc. 11 and Misc. 12 for Illustration

## DECORATIVE STREET LIGHTING

Requests for street lighting within the City of Bowling Green must be made to the City's Public Works Department and approval given prior to the City accepting maintenance and replacement for subject street lights. The City will typically provide street lights to a subdivision after it is fifty percent developed and dedicated to the City, but only wood poles and overhead wiring will be provided at the City's expense.

Where underground utilities have been installed and the subdivision is fifty percent developed and dedicated to the City, the City will be responsible for the cost of a wood pole installation with the Developer/Owner responsible for providing and installing the conduit needed for underground service lines. If decorative poles are desired, the Developer/Owner must pay the difference in cost between wood poles and poles of an alternate material. Conduit must be installed by the Developer/Owner in accordance with the design and specifications of Bowling Green Municipal Utilities. Payment for decorative poles must be received prior to ordering poles.

BGMU often gets requests from developers desiring decorative street lighting in newly developed subdivisions. Therefore, where underground utilities have been installed and the subdivision is not fifty percent developed and has not been dedicated to the City, BGMU does make provisions for installing street lights prior to the City's acceptance. In this case, the Developer must install all conduit and pay the entire estimated cost of the job including all material and labor cost up front. In addition to the installation cost, the Developer will be responsible for a monthly maintenance and energy charge. Once the City accepts the subdivision, the Developer will be refunded the initial payment minus the additional cost for decorative poles.

In all cases, when decorative poles are purchased, the Developer/Owner will be responsible for purchasing spare poles to add to BGMU's stock. These poles will be used as replacements for damaged poles due to vandalism, accidents or weather incidents. Spares will be purchased based on the number of poles ordered and listed below:

<u># Poles</u>	<u>Spare(s)</u>
5-10	1
11-20	2
21-30	3
31-40	4
41-50	5

Contact BGMU's Electric Engineering Department for available types, styles and colors of decorative poles and fixtures.

**GENERAL REQUIREMENTS FOR STREET  
LIGHT CONDUIT INSTALLATION**

1. Trenching, backfill, and conduit shall be furnished and installed by the Owner/Developer.
2. The installation of power conductors and street light poles will be performed by BGMU.
3. All materials and methods used by the Owner/Developer are subject to BGMU specifications. Periodic inspection during construction and a final inspection of the Owner/Developer's work is made by BGMU before acceptance.
4. The subdivision or area must be at least rough grade before any trenching can begin.
5. The minimum size of PVC conduit shall be 1". Sizes of 1 ¼", 1 ½" and 2" conduit may also be specified by BGMU.
6. The minimum depth to the top of the conduit shall be 24" below existing and final grade, including drainage ditches. The trench must be back-filled with clean dirt (no building debris).
7. All bends in the conduit shall be of sufficient radii to permit ease in pulling wire. All 90° bends must have a minimum radius of 18".
8. All street light conduit installations require warning tape to be installed 12" below final grade. Warning tape will be furnished by BGMU upon request.
9. All conduits shall contain a pull string for use in pulling the conductor through the conduit. The pull string shall be rated at least 150 lbs and be nylon construction.
10. When crossing other buried utility lines, conduit shall be located beneath all other utilities where possible.
11. The Owner/Developer is responsible for correcting any depth of conduit violation at the time the violation becomes apparent.
12. See Drawing Misc-09 for illustration of typical installation.
13. Any changes to BGMU's specifications must be designed or approved by BGMU.
14. Before any excavation is performed, the Owner/Developer must contact the Kentucky 811/BUD Center at 1-800-752-6007 for location of underground facilities. BGMU uses red marking paint to indicate underground electric lines.

## **POLICY ON UNDERGROUND SERVICES FROM OVERHEAD PRIMARY AND TRANSFORMERS**

### **1.0 GENERAL METHODS**

- 1.1 This specification covers underground service installations fed by an overhead primary distribution line in residential subdivisions, multi-unit apartment and condominium developments.
- 1.2 The typical construction consists of service conductors and conduit from the building to BGMU's pole or secondary pedestal.
- 1.3 All work done by the Owner/Developer shall be done according to standards and specifications prescribed by BGMU. Completed construction may be required to be inspected and approved by BGMU, prior to conduit being covered over by any backfill, concrete or otherwise.

### **2.0 PROPERTY RIGHTS AND MAINTENANCE**

- 2.1 As a condition to BGMU agreeing to install any electrical equipment upon any premises, the Owner/Developer must agree, for the benefits they will receive thereby, that BGMU shall have a right of ingress and egress, for so long as any of BGMU's equipment remains upon said premises, for the purpose of entering thereon from time to time and uncovering, installing, repairing, maintaining, removing, and replacing such equipment or any other equipment used in connection therewith, and said right shall extend for a reasonable distance outside the boundary of the area actually occupied by any such equipment for such incidental uses and purposes as BGMU may require. Upon exercise of the right hereby created, BGMU will have the responsibility of restoring the area used to its previous unimproved condition as near as can reasonably be done.
- 2.2 Upon request of the Owner/Developer, BGMU will attempt to relocate its equipment at the Owner's expense, if such relocation will not result in unreasonable interference with the electrical distribution system of BGMU.

### **3.0 SERVICES-SUBDIVISION**

The Owner/Developer shall contact BGMU Engineering Department for spotting the meter location on the building. The electric meter location must be readily accessible and free of obstructions. Meters may not be enclosed or located on the inside of any structure. Meters may not be located within carports, porch areas, or which are or can become enclosed. For multi-unit residential and

commercial buildings, meters must be ganged together and located in a centralized location.

- 3.1 Service conductors will be installed by BGMU.
- 3.2 The conduit is not allowed to run under any permanent building. Services which run under permanent buildings are to be relocated at the expense of the Owner.
- 3.3 Arrangements for road crossings and crossings of private property (other than the Owner's property with conduit) are the sole responsibility of the Owner.
- 3.4 The Owner/Developer shall open a trench from the meter location to the service pedestal or transformer pole. Minimum depth to top of conduit shall be 24 inches below existing and finished grade including drainage ditches. Trench must be backfilled with clean dirt (no building debris) before electrical conductor can be installed. (See Drawing-UG 03 and Drawing-UG 04)
- 3.5 The Owner/Developer shall furnish and install a continuous run(s) of conduit with a minimum size of 2 ½" I.D. Schedule 40 electric PVC with two 90 degree 18 inch radius (minimum) PVC elbows when a straight run (s) of conduit is all that is required. Conduit is to be capped at both ends. Call BGMU for assistance with installation of conduit into the secondary pedestal (please give one day advance notification).
- 3.6 When other than a straight run of conduit is required, then the Owner/Developer shall furnish and install a continuous run of conduit with elbows having a minimum bend radius of 18 inches. The total of all angles or bends shall not exceed 270 degrees (example: "3-90 degree bends" or "2-45 degree bends plus 2-90 degree bends" represents the allowable 270 degrees). All bends in conduit should be separated by at least 20 feet of straight conduit. Any service conduit that does not meet this specification will be rejected and corrected at the Owner/Developer's expense.
- 3.8 A pull string is to be provided in place for use in pulling the cable through the conduit. This string shall be rated at least 150 lbs. and shall be nylon construction.
- 3.9 When conduit of any size other than 2 ½" is required, the customer is required to furnish the conduit and straps at the transformer pole.
- 3.10 If request for service contains any of the following conditions, please contact BGMU Engineering so that special permission and instructions may be obtained.
  - a. any single phase service over 200 amps

- b. any three phase service
  - c. any service length greater than 200 ft.
- 3.11 In the case where the Owner/Developer has already wired and/or installed the meter base before a request for a meter spot, and the meter location is not in a suitable location as required by BGMU, then one of the following will be required:
- a. The Owner/Developer will install a UG secondary pedestal and conduit along the property line to behind the building from BGMU's closest electrical facilities. The Owner/Developer may then run the conduit from the pedestal to the meter base. BGMU will charge \$400.00 to be paid in advance. This charge is for the pedestal, extra cable, and additional labor. (See Drawing-Misc 03)
  - b. The meter base is to be installed at the point on the building closest to the existing BGMU electrical facilities. The Owner/Developer can install a weatherproof breaker at the meter base location and run the service conductor to the desired location for the main panel. All facilities past the meter base belong to and are installed by the Owner/Developer.
- 3.12 The top of the meter socket is to be located at a height of 6 feet above finished grade so that the meter is eye-level.
- 3.13 Proper grounding will be attained at the meter location by the Owner/Developer's contractor in accordance with the National Electrical Code.
- 3.14 All meter bases must adhere to the requirements of BGMU's Meter Base Policy. All maintenance for Customer-owned meter bases shall be provided by Owner. BGMU recommends that extra parts and lugs be provided and stored therein for any Customer-owned meter bases installed. All Customer-owned meter bases must be supplied with a method of bypass that is indicated in the Meter Base Policy.
- 3.15 All multi-gang meter bases are to be permanently labeled with their corresponding apartment or unit number prior to energizing the electric service. Each base is to be labeled inside with a permanent marker in the bottom right-hand corner and on the outside with a permanent 2" stick-on label.

#### **4.0 TEMPORARY SERVICE**

- 4.1 All requirements in Section 3 above are applicable to this section also.

- 4.2 Temporary service with requirements of less than 100 amps will be available at most poles with pole mounted transformers. Contact BGMU Engineering Department for temporary service requests above 100 amps.
- 4.3 The Owner/Developer, or Contractor shall supply the temporary pole, service disconnect and meter base.
- 4.4 The temporary service pole is to be placed within 100' of transformer pole.
- 4.5 The Owner/Developer, or Contractor shall be responsible for obtaining an Electrical Inspection prior to BGMU setting the meter and energizing the temporary service.

## **5.0 UTILITY CLEARANCE**

- 5.1 When BGMU conductors are to be parallel to water, sewer, and gas, there must be a minimum of three feet separation. When BGMU conductors are to be parallel to cable TV or telephone, there must be a minimum separation of one foot. No other utilities may be directly above the power cables.
- 5.2 Where more than one utility is to share a common trench, the width and depth is expanded by the Customer to meet the minimum clearance requirements. (See Drawing-UG 09 and UG 10).
- 5.3 When crossing under other buried utility lines, BGMU requires a minimum separation of 2 feet. When separation of 2 feet can not be achieved, the separation may be reduced to 1 foot with a 4" concrete encasement the length of 4 feet to each side of the buried line being crossed.
- 5.4 A working space of 60 inches wide by 60 inches deep is required around all meterbases.

## **6.0 INSPECTION AND ACCEPTANCE BY BGMU**

- 6.1 All materials and methods used by the Owner/Developer are subject to BGMU specifications. Periodic inspection during construction and a final inspection of Owner's/Developer's work is made by BGMU before acceptance.

**SPECIFICATIONS AND INSTALLATION PROCEDURES**  
**FOR**  
**UNDERGROUND DISTRIBUTION-RESIDENTIAL SERVICE**

**1.0 GENERAL METHODS**

- 1.1 This specification covers underground installations in residential subdivisions and in multi-unit apartment and condominium developments. The typical construction consists of low profile pad mounted transformers and pad mounted switchgear, located on a front lot easement on the Owner's property.
- 1.2 The Owner/Developer will provide materials and/or labor as required by BGMU to offset part of the construction cost.
- 1.3 All work done by the Owner/Developer shall be done according to standards and specifications prescribed by BGMU. BGMU will supervise to insure compliance with said standards and specifications. BGMU will also inspect the completed construction and approve before such work is covered by gravel or selected backfill. If such construction is covered before final inspection and approval by BGMU, the Owner/Developer shall, at their own expense, uncover the same at the request of BGMU. BGMU will not supply electric service before final inspection by BGMU.
- 1.4 For cases of primary installation the Owner/Developer shall submit to BGMU a written request for electrical service along with a complete plat of the development. This request and plat shall outline which areas are to be developed first, second, third, etc., which type of housing is proposed, anticipated construction schedules, and proposed location of all utilities. All significant lot corners and control points must be installed prior to BGMU staking of proposed overhead power lines. BGMU shall make all final decisions as to design and location of facilities.
- 1.5 BGMU reserves the right to refuse to install underground facilities when, in BGMU's opinion, the development does not lend itself to sound economical and engineering practices for underground power distribution or where sufficient easements and information are not provided.

**2.0 PROPERTY RIGHTS AND MAINTENANCE**

- 2.1 Clear and accessible areas shall be provided by the Owner/Developer for pad mounted transformers, switches, underground circuits, and all other necessary electrical equipment to be installed by BGMU. Easement requirements will be determined by the type and nature of the development.

- 2.2 The Owner/Developer shall supply surveying services for location of said equipment in such space or spaces upon said premises as determined by BGMU. Upon completion of any installation the entire installation, made by BGMU and all equipment used in connection therewith shall be and become a part of the electrical distribution system and a part of the operations of BGMU.
- 2.3 BGMU will have a right of ingress and egress, for so long as any of its equipment remains upon said premises, for the purpose of entering thereon from time to time and uncovering, installing, repairing, maintaining, removing and replacing such equipment or any other equipment used in connection therewith. The said right shall extend for a responsible distance outside the boundary of the area actually occupied by any such equipment for such incidental uses and purposes as BGMU may require. Upon exercise of the right hereby created, BGMU shall have the responsibility of restoring the area used to its previous condition as near as can reasonably be done.
- 2.4 Any damage caused to BGMU's facilities during construction periods shall be the responsibility of the Owner/Developer along with the expenses incurred to restore proper service. Damage incurred after completion of construction shall be the responsibility of the person(s) or company causing such damage.
- 2.5 The Owner/Developer is responsible for correcting any depth of conduit violation at the time the violation becomes apparent. For example, if the Owner/Developer should perform grading work and cause BGMU to no longer meet proper minimum depth requirements for primary or secondary conduit, then the Owner/Developer must correct the problem to BGMU's specifications.
- 2.6 Before any excavation is performed near BGMU's existing facilities, a 48-hour notice to Kentucky 811/BUD (Before You Dig) (1-800-752-6007) must be given so that necessary action can be taken to minimize danger to life and/or property. There is no charge for this service. Red paint indicates location of buried electric lines.
- 2.7 Upon request of the Owner/Developer, BGMU will attempt to relocate its equipment at the owner's expense if such relocation will not result in unreasonable interference with the electrical distribution system of BGMU.
- 2.8 BGMU shall have the right to serve other Customers from any transformer located upon any premises

### 3.0 PRIMARY CIRCUITS

- 3.1 BGMU will pull all electric cable, set transformers, and make all electrical connections.
- 3.2 The Owner/Developer agrees to install conduit, vaults, and any other equipment at no cost to BGMU in exchange for BGMU providing underground electric service.
- 3.3 The Owner/Developer shall open a trench as specified by BGMU Engineering Department. Depth to top of conduit shall be a minimum of 42" for primary and secondary conduit. (See Drawings- UG 05, UG 06, UG 07, and UG 08)
- 3.4 The Owner/Developer shall furnish and install up to three continuous runs of conduit and minimum size of 2 ½" I.D. Schedule 40 PVC conduit with whatever quantity of fittings are requested by BGMU's Engineering Department. Conduit to be capped on both ends and pull string installed. A spare run of conduit may also be required
- 3.5 BGMU will furnish and the Owner/Developer will install 2 runs of "warning tape" at a depth of one foot above conduit level and one foot below finish grade. BGMU provides the warning tape upon request at their warehouse location at 150 E. Main Street.
- 3.6 The bottom of the trench shall be undisturbed, tamped or relatively smooth earth. The trench shall be backfilled with clean dirt and shall be free from rock or other material which might damage the conduit system. Backfill shall contain no solid material larger than 2 inches in diameter. If native soils are not suitable, No. 9 crushed gravel shall be substituted four inches above and four inches below. (See Drawing-UG 05, UG 06, UG 07, and UG 08)
- 3.7 A pull string is to be provided in place for use in pulling the cable through the conduit. This string shall be rated at least 150 lbs. and shall be nylon construction.
- 3.8 BGMU shall provide at a cost of \$500 each to the Owner/Developer and the Owner/Developer will install all fiberglass transformer vaults for the placement of single-phase distribution padmount transformers. BGMU will provide and the customer will install any secondary vaults to BGMU's specifications.
- 3.9 All 90° bends in conduit for underground primary conductor shall have a minimum radius of 36".
- 3.10 All conduits beneath paved surfaces or in areas subject to vehicular traffic shall be Schedule 80 or encased in a 4" concrete envelope

and backfilled with #9 crushed stone. (See Drawing- UG 06 and UG 08)

- 3.11 No electrical equipment, conduit, or wiring is allowed under any permanent structure.
- 3.12 When a primary riser pole is required, the Owner/Developer must provide the necessary conduit and hardware to take up the pole. Standoff brackets will be provided by BGMU.
- 3.13 Guard posts are required around pad-mounted equipment that is exposed to vehicular traffic. It is the Owner/Developer responsibility to install and maintain guard posts, where required.

#### **4.0 SERVICES-SUBDIVISION**

- 4.1 The Owner/Developer shall contact BGMU Engineering Department for spotting the meter location on the building. The electric meter location must be readily accessible and free of obstructions. Meters may not be enclosed or located on the inside of any structure. Meters may not be located within carports, porch areas, or decks which are or can become enclosed. For multi-unit residential and commercial buildings, meters must be ganged together and located in a centralized location.
- 4.2 Service conductors will be installed by BGMU.
- 4.3 The conduit is not allowed to run under any permanent building. Services which run under permanent buildings are to be relocated at the expense of the Customer.
- 4.4 Arrangements for road crossings and crossings of private property (other than the Owner's property with conduit) are the sole responsibility of the Owner.
- 4.5 The Owner/Developer is responsible for opening the trench from the meter location to the pad mount transformer, service pedestal, or transformer pole. Minimum depth to top of conduit shall be 24" below existing and finished grade including drainage ditches. The trench must be backfilled with clean dirt (no building debris) before the electrical conductor can be installed. (See Drawing- UG 03 and UG 04)
- 4.6 The Owner/Developer shall furnish and install a continuous run(s) of conduit with a minimum size of 2 ½" I.D. Schedule 40 electric PVC with two 90 degree 18 inch radius (minimum) PVC elbows when a straight run (s) of conduit is all that is required. Conduit is to be capped at both ends. Call BGMU for assistance with installation of conduit into the transformer or secondary pedestal (please give one day advance notification).

- 4.7 When other than a straight run of conduit is required, then the Owner/Developer is to furnish and install a continuous run of conduit with elbows having a minimum bend radius of 18 inches. The total of all angles or bends shall not exceed 270 degrees (example: “3-90 degree bends” or “2-45 degree bends plus 2-90 degree bends” represents the allowable 270 degrees). All bends in conduit shall be separated by at least 20 feet of straight conduit. Any service conduit that does not meet this specification will be rejected and corrected at the Owner/Developer’s expense.
- 4.8 A pull string is to be provided in place for use in pulling the cable through the conduit. This string shall be rated at least 150 lbs. and be nylon construction.
- 4.9 When conduit of any size other than 2 ½” is required, the Owner/Developer is required to furnish the conduit and straps at the transformer pole.
- 4.10 If a request for service contains any of the following conditions, please contact BGMU Engineering so that special permission and instructions may be obtained:
- a. any single phase service over 200 amps
  - b. any three phase service
  - c. any service length greater than 200 ft.
- 4.11 In the case where the Owner/Developer has already wired and/or installed the meter base before a request for a meter spot, and the meter location is not in a suitable location as required by BGMU, then one of the following will be required:
- a. The Owner/Developer will install a UG secondary pedestal and the conduit along the property line to behind the building from BGMU’s closest electrical facilities. The Owner/Developer may then run the conduit from the pedestal to the meter base. BGMU will charge \$400.00 to be paid in advance. This charge is for this pedestal, extra cable, and additional labor. (See Drawing-Misc 03)
  - b. The meter base is to be installed at the point on the building closest to the existing BGMU electrical facilities. The Owner/Developer can install a weatherproof breaker at the meter base location and run the service conductor to the desired location for the main panel. All facilities past the meter base belong to and are installed by the Owner/Developer.
- 4.12 The top of the meter socket is to be located at a height of 6 feet above finished grade so that meter is eye-level.

- 4.13 Proper grounding will be attained at the meter location by the Owner's/Developer's contractor in accordance with the National Electrical Code.
- 4.14 All meter bases must adhere to the requirements of BGMU's Meter Base Policy. All maintenance for Customer-owned meter bases shall be provided by Owner. BGMU recommends that extra parts and lugs be provided and stored therein for any Customer-owned meter bases installed. All Customer-owned meter bases must be supplied with a method of bypass that is indicated in the Meter Base Policy.
- 4.15 All multi-gang meter bases are to be permanently labeled with their corresponding apartment or unit number prior to energizing the electric service. Each base is to be labeled inside with a permanent marker in the bottom right-hand corner and on the outside with a permanent 2" stick-on label.

## **5.0 TEMPORARY SERVICE**

- 5.1 All requirements in Section 4 above are applicable to this section also.
- 5.2 The temporary service will be available at most pad mounted transformers located within the development. The temporary pole is to be placed on the right hand side of the service entry door of the pad mounted transformer.
- 5.3 The Owner/Developer, or Contractor shall supply temporary pole, service disconnect and meter base with cable to BGMU's transformer, secondary pull box or temporary pedestal. BGMU will terminate and connect secondary cable. (See Drawing- UG 01).
- 5.4 The Owner/Developer, or Contractor shall be responsible for obtaining an Electrical Inspection prior to BGMU setting the meter and energizing the temporary service.

## **6.0 UTILITY CLEARANCE**

- 6.1 When BGMU conductors are to be parallel to water, sewer, and gas, there must be a minimum of three feet separation. When BGMU conductors are to be parallel to cable TV or telephone, there must be a minimum separation of one foot. No other utilities may be directly above the power cables.
- 6.2 Where more than one utility is to share a common trench, the width and depth is expanded by the Owner/Developer to meet the minimum clearance requirements. (See Drawing-UG 09 and UG 10).

- 6.3 When crossing under other buried utility lines, BGMU requires a minimum separation of 2 feet. When separation of 2 feet can not be achieved, the separation may be reduced to 1 foot with a 4" concrete encasement the length of 4 feet to each side of the buried line being crossed.
- 6.4 A working space of 60 inches wide by 60 inches deep is required around all meter bases.

## **7.0 INSPECTION AND ACCEPTANCE BY BGMU**

- 7.1 All materials and methods used by the Owner/Developer are subject to BGMU specifications. Periodic inspection during construction and a final inspection of Owner's/Developer's work is made by BGMU before acceptance.

**SPECIFICATIONS AND INSTALLATION PROCEDURES**  
**FOR**  
**COMMERICAL AND INDUSTRIAL UNDERGROUND DISTRIBUTION**

**1.0 GENERAL METHODS**

- 1.1 This specification covers underground primary and secondary installations to commercial and industrial Customers. The typical construction consists of underground primary, pad mounted transformers, and pad mounted switchgear located on a front lot easement on the Owner's property.
- 1.2 For cases of primary installation the Owner/Developer shall submit to BGMU a written request for electrical service along with a complete plat of the development. This request and plat shall outline which areas are to be developed first, second, third, etc., which type of housing is proposed, anticipated construction schedules, and proposed location of all utilities. All significant lot corners and control points must be installed prior to BGMU staking of proposed overhead power lines. BGMU shall make all final decisions as to the design and location of facilities.
- 1.3 The Owner/Developer agrees to complete a load form in order to provide BGMU's engineering staff with sufficient data to provide a safe and adequate service. **The load form must be submitted before BGMU can make any decision on design and location of electric facilities. A copy of BGMU's Load Form can be found at the end of this document.**
- 1.4 All commercial and industrial Customers whose demand requirements exceed 50 KW agree to enter into a power contract with BGMU for an initial term of 5 years.
- 1.5 To offset part of the construction cost, the Owner/Developer shall provide materials and/or labor as indicated.
- 1.6 All work done by the Owner/Developer shall be done according to standards and specifications prescribed by BGMU. Work shall be supervised by BGMU only for the purpose of insuring compliance with said standards and specifications, and the completed construction shall be inspected and approved by BGMU, prior to such work being covered over by dirt or otherwise. If such construction is so covered prior to final inspection and approval by BGMU, the Owner/Developer shall, at their own expense, uncover the same at the request of BGMU.
- 1.7 All changes made by the Owner/Developer in the project are subject to BGMU approval. The Owner/Developer may pay for changes that lead to extra investment by BGMU.

- 1.8 BGMU reserves the right to refuse to install underground facilities when, in BGMU's opinion, the development does not lend itself to sound economical and engineering practices for underground power distribution or where sufficient easements and information are not provided.
- 1.9 All services less than 50 KW shall be served with single-phase 120/240-volt power. Any Owner/Developer desiring three-phase service of any voltage with loads less than stipulated shall pay BGMU the estimated difference of all cost to furnish three-phase service versus single-phase service. This charge shall be paid prior to any construction by BGMU. BGMU reserves the right to refuse three-phase service.

## **2.0 PROPERTY RIGHTS AND MAINTENANCE**

- 2.1 Cleared and accessible areas shall be provided by the Owner/Developer for pad mounted transformers, switches, underground circuits and any and all other necessary electrical equipment to be installed by BGMU. Easement requirements will be determined by the type and nature of the development. Surveying work for easements to be done at Owner's/Developer's expense.
- 2.2 The Owner/Developer shall supply surveying services for location of said equipment in such space or spaces upon said premises as determined by BGMU. Upon completion of any installation the entire installation, made by BGMU and all equipment used in connection therewith shall be and become a part of the electrical distribution system and a part of the operations of BGMU.
- 2.3 As a condition to BGMU agreeing to install any electrical equipment upon any premises, the Owner/Developer must agree, for the benefits he will receive thereby, that BGMU shall have a right of ingress and egress, for so long as any of BGMU's equipment remains upon said premises, for the purpose of entering thereon from time to time and uncovering, installing, repairing, maintaining, removing, and replacing such equipment or any other equipment used in connection therewith, and said right shall extend for a reasonable distance outside the boundary of the area actually occupied by any such equipment for such incidental uses and purposes as BGMU may require. Upon exercise of the rights hereby created, BGMU shall use reasonable care, under the conditions then existing, to minimize damages to the premises.
- 2.4 Upon request of the Owner/Developer, BGMU will attempt to relocate its equipment at Owner's/Developer's expense if such relocation will not result in unreasonable interference with the electrical distribution system of BGMU.

- 2.5 BGMU shall have the right to serve other Customers from any transformer located upon any premises.
- 2.6 Before any excavation is performed near BGMU's existing facilities, a 48-hour notice to Kentucky 811/BUD (Before You Dig) (1-800-752-6007) must be given so that necessary action can be taken to minimize danger to life and/or property. There is no charge for this service. Red paint indicates location of buried electric lines.
- 2.7 Any damage caused to BGMU's facilities during construction periods shall be the responsibility of the Owner/Developer along with the expenses incurred to restore proper service. Damage incurred after completion of construction shall be the responsibility of the person(s) or company causing such damage.
- 2.8 The Owner/Developer is responsible for correcting any depth of conduit violation at the time the violation becomes apparent. For example, if the Owner/Developer should perform grading work and cause BGMU to no longer meet proper minimum depth requirements for primary or secondary conduit, then the Owner/Developer must correct the problem to BGMU's specifications.

### **3.0 PRIMARY CIRCUITS**

- 3.1 BGMU will pull all electric cable, set transformers, and make all electrical connections.
- 3.2 The Owner/Developer agrees to install conduit, vaults, and any other equipment at no cost to BGMU in exchange for BGMU providing underground electric service.
- 3.3 The Owner/Developer shall open a trench as designed by BGMU Engineering Department. Depth to top of conduit shall be a minimum of 42" for primary and secondary conduit. (See Drawing- UG 05, UG 06, UG 07 and UG 08)
- 3.4 The Owner/Developer shall furnish and install up to three continuous runs of conduit and a minimum size of 2 ½" I.D. Schedule 40 PVC conduit with necessary fittings as requested by BGMU's Engineering Department. Conduit shall be capped on both ends and a pull string installed. A spare run of conduit may also be required.
- 3.5 BGMU will furnish and the Owner/Developer will install 2 runs of "warning tape" at a depth of one foot above conduit level and one foot below finish grade. BGMU provides warning tape upon request at their warehouse location at 150 E. Main Street.

- 3.6 The bottom of the trench shall be undisturbed, tamped or relatively smooth earth. The trench shall be backfilled with clean dirt and shall be free from rock or other material which might damage the conduit system. Backfill shall contain no solid material larger than 2 inches in diameter. If native soils are not suitable, No. 9 crushed gravel shall be substituted four inches above and four inches below. (See Drawing- UG 05, UG 06, UG 07 and UG 08)
- 3.7 A pull string is to be provided in place for use in pulling the cable through the conduit. This string shall be rated at least 150 lbs. and shall be nylon construction.
- 3.8 BGMU shall provide at a cost of \$500 each to the Owner/Developer and the Owner/Developer will install all fiberglass transformer vaults for the placement of single-phase distribution padmount transformers. BGMU will provide, and the Owner/Developer will install, any secondary vaults to BGMU's specifications.
- 3.9 All 90° bends in conduit for underground primary conductor shall have a minimum radius of 36".
- 3.10 All conduits beneath road surfaces shall be Schedule 80 or encased in a 4" concrete envelope and backfilled with #9 crushed stone. (See Drawing- UG 06 and UG 08)
- 3.11 No electrical equipment, conduit, or wiring is allowed under any permanent structure.
- 3.12 When a primary riser pole is required, the Owner/Developer must provide the necessary conduit and hardware to take up the pole. The standoff brackets will be provided by BGMU.
- 3.13 Concrete pads for three phase transformers or junction boxes shall be constructed by the Owner/Developer or Contractor in accordance with specifications and drawings furnished by BGMU. An inspection must be made by BGMU prior to pouring the pad.
- 3.14 Guard posts are required around pad-mounted equipment that is exposed to vehicular traffic. It is the Owner's/Developer's responsibility to install and maintain guard posts where required.

#### **4.0 SERVICE FROM PAD MOUNTED TRANSFORMER**

- 4.1 The Owner/Developer shall contact BGMU Engineering Department for spotting the meter location on the building. The electric meter location must be readily accessible and free of obstructions. Meters may not be enclosed or located on the inside of any structure. Meters may not be located within carports, porch

areas, or which are or can become enclosed. For multi-unit residential and commercial buildings, meters must be ganged together and located in a centralized location. All services over 400 amperes shall be metered at the pad mounted transformer. All services of a voltage of greater than 250 volts shall be metered at the transformer.

- 4.2 For cases where the meter is located at the transformer, the entire installation of the service conductor and required conduit shall be provided by the Owner's/Developer's electrical contractor. In cases where the meter is located on the building, BGMU shall specify the size and quantity of conduits for the Owner/Developer to furnish and install.
- 4.3 The Owner/Developer is responsible for opening a trench from meter location to pad mount transformer, service pedestal, or transformer pole. Minimum depth to top of conduit shall be 24" below existing and finished grade including drainage ditches. Trench must be backfilled with clean dirt (no building debris) before electrical conductor can be installed. (See Drawing- UG 03 and UG 04)
- 4.4 The service conduit must be positioned inside the secondary compartment of the transformer as indicated on BGMU's transformer pad details that are provided with each job.
- 4.5 In the case where the Owner/Developer is metered at the transformer rather than at the building, the Owner/Developer must furnish the secondary conductor plus the two-hole secondary compression connectors. The secondary compression connectors must meet or exceed the Class A requirements of EEI-NEMA Standards TD-162. The physical dimensions must be a maximum spade width of 1 3/4" with 9/16" diameter holes. The holes must be proper NEMA spacing of 1 3/4" from center to center of holes. The customer must provide us with the proper Kearney or Anderson tool size and die size. BGMU reserves the right to refuse any connector that does not meet these specifications.
- 4.6 All multi-gang meter bases are to be permanently labeled with their corresponding apartment or unit number prior to energizing the electric service. Each base is to be labeled inside with a permanent marker in the bottom right-hand corner and on the outside with a permanent 2" stick-on label.
- 4.7 The top of the meter socket is to be located at a height of 6 feet above finished grade so that the meter is at eye-level.
- 4.8 No electrical conduit, wiring or equipment is allowed under any permanent structures.

- 4.9 Proper grounding will be attained at the meter location by the Owner's/Developer's contractor in accordance with the National Electrical Code.

## **5.0 SERVICE FROM BGMU RISER POLE**

- 5.1 The Owner/Developer shall contact BGMU Engineering Department for spotting the meter location on the building. The electric meter location must be readily accessible and free of obstructions. Meters may not be enclosed or located on the inside of any structure. Meters may not be located within carports, porch areas, or which are or can become enclosed. For multi-unit residential and commercial buildings, meters must be ganged together and located in a centralized location.

All services over 400 amperes shall be metered at the riser pole. All services of a voltage greater than 250 volts shall be metered at the riser pole. The Owner/Developer shall supply and install conduit and secondary conductor to BGMU's pole mounted transformers. Additionally, the Owner/Developer shall supply secondary compression connectors (See Section 4.5). BGMU will terminate wire at the riser pole. (See Drawing-Misc. 07)

- 5.2 Underground service from a BGMU riser pole to the meter location will be installed for services up to and including 400 amperes (240 volts and below). The service conductors will be installed by BGMU. The Owner/Developer shall supply and install conduit as specified by BGMU. Sufficient conduit and hardware shall be supplied by the Owner/Developer at the riser pole.
- 5.3 The Owner/Developer is responsible for opening a trench from the meter location to the pad mount transformer, service pedestal, or transformer pole. Minimum depth to top of conduit shall be 24" below existing and finished grade including drainage ditches. The trench must be backfilled with clean dirt (no building debris) before electrical conductor can be installed. (See Drawing- UG 03 and UG 04)
- 5.4 By special permission from BGMU's Engineering Department, CT cabinets may be installed at the building. The Owner/Developer will pay all additional costs for this installation. (See Drawing-Misc. 05 )

- 5.5 All multi-gang meter bases are to be permanently labeled with their corresponding apartment or unit number prior to energizing the electric service. Each base is to be labeled inside with a permanent marker in the bottom right-hand corner and on the outside with a permanent 2" stick-on label.
- 5.6 The top of the meter socket shall be located at a height of 6 feet above finished grade so that the meter is eye-level.
- 5.7 No electrical conduit, wiring or equipment is allowed under any permanent structures.
- 5.8 Proper grounding will be attained at the meter location by the Owner/Developer's contractor in accordance with the National Electrical Code.

## **6.0 UTILITY CLEARANCE**

- 6.1 When BGMU conductors are to be parallel to water, sewer, and gas, there must be a minimum of three feet separation. When BGMU conductors are to be parallel to cable TV or telephone, there must be a minimum separation of one foot. No other utilities may be directly above the power cables.
- 6.2 Where more than one utility is to share a common trench, the width and depth is expanded by the Customer to meet the minimum clearance requirements. (See Drawing-UG 09 and UG 10).
- 6.3 When crossing under other buried utility lines, BGMU requires a minimum separation of 2 feet. When a separation of 2 feet can not be achieved, the separation may be reduced to 1 foot with a 4" concrete encasement the length of 4 feet to each side of the buried line being crossed.
- 6.4 A working space of 60 inches wide by 60 inches deep is required around all meter bases.

## **7.0 INSPECTION AND ACCEPTANCE**

- 7.1 All materials and methods used by the Owner/Developer are subject to BGMU specifications. Periodic inspection during construction and a final inspection of Owner's/Developer's work is made by BGMU before acceptance.

## COST SHARING RESPONSIBILITIES FOR UNDERGROUND FACILITIES

In recognition of the great pride that officials in both the City of Bowling Green and Warren County take in our community, it is essential that Bowling Green Municipal Utilities' (BGMU) Electric Division establish general guidelines for underground electric line installations. These guidelines will assist BGMU engineers in promoting underground installation as aggressively as legally permitted by the TVA power contract restrictions for using rate payer's money. Further, the guidelines give other agencies and/or private parties a fair share of the installation cost should they wish to pursue underground versus overhead installation for specific projects. The guidelines are:

1. For a typical new underground-fed subdivision (small-size conductors), BGMU requires the developer to place equipment pads, trench, lay conduit and backfill ditch to BGMU's specifications. BGMU plus conductor in conduits and terminates all conductors at BGMU's expense.
2. For new installations of main distribution feeders where agencies or private parties desire underground rather than overhead circuits, the agencies or private parties bear all cost except:
  - a. Any reimbursement on state projects is credited as paid to BGMU for "would-be" overhead replacement.
  - b. Annual maintenance cost difference of overhead (6 %) and underground (1/2%) for a 20-year period is credited.
  - c. Any joint agency work is credited on a pro rata basis.
  - d. Any necessary maintenance cost of adjoining facilities is credited.
  - e. Any additional cost that BGMU determines justifiable and that is not contradictory to TVA policy is credited.
3. Customers or agencies desiring existing overhead circuits to be placed underground bear all cost except:
  - a. Annual maintenance cost difference of overhead (6%) and underground (1/2%) for a 10-year period is credited.
  - b. Any additional cost that BGMU determines justifiable and that is not contradictory to TVA policy is credited.
4. In the case of required replacement of direct buried underground conductor, BGMU requires the customer to place equipment pads, trench, lay conduit, and backfill ditch to BGMU specifications. BGMU pulls conductor and terminates all conductors at BGMU expense. Credited to the customer is the difference in annual maintenance expense of overhead (6%) and underground (1/2%) for a 10-year period and the estimated material cost for an overhead replacement. Also, the Customer may be entitled to additional credits

that BGMU determines justifiable. If the Customer chooses not to install the conduit system, BGMU will install conductors and equipment overhead.

BGMU through this document stresses its full support of the Comprehensive Plan of Bowling Green/Warren County and of Operation Pride insofar as is permitted by the Little TVA Act, the governing statute of BGMU. BGMU further supports requiring all new customers to install underground facilities rather than overhead facilities, but emphasizes its lack of authority to force private parties to use the underground method. Legal considerations prohibit BGMU from denying service based on this reason alone.

## **Policy on the Removal and Installation of Electric Meters**

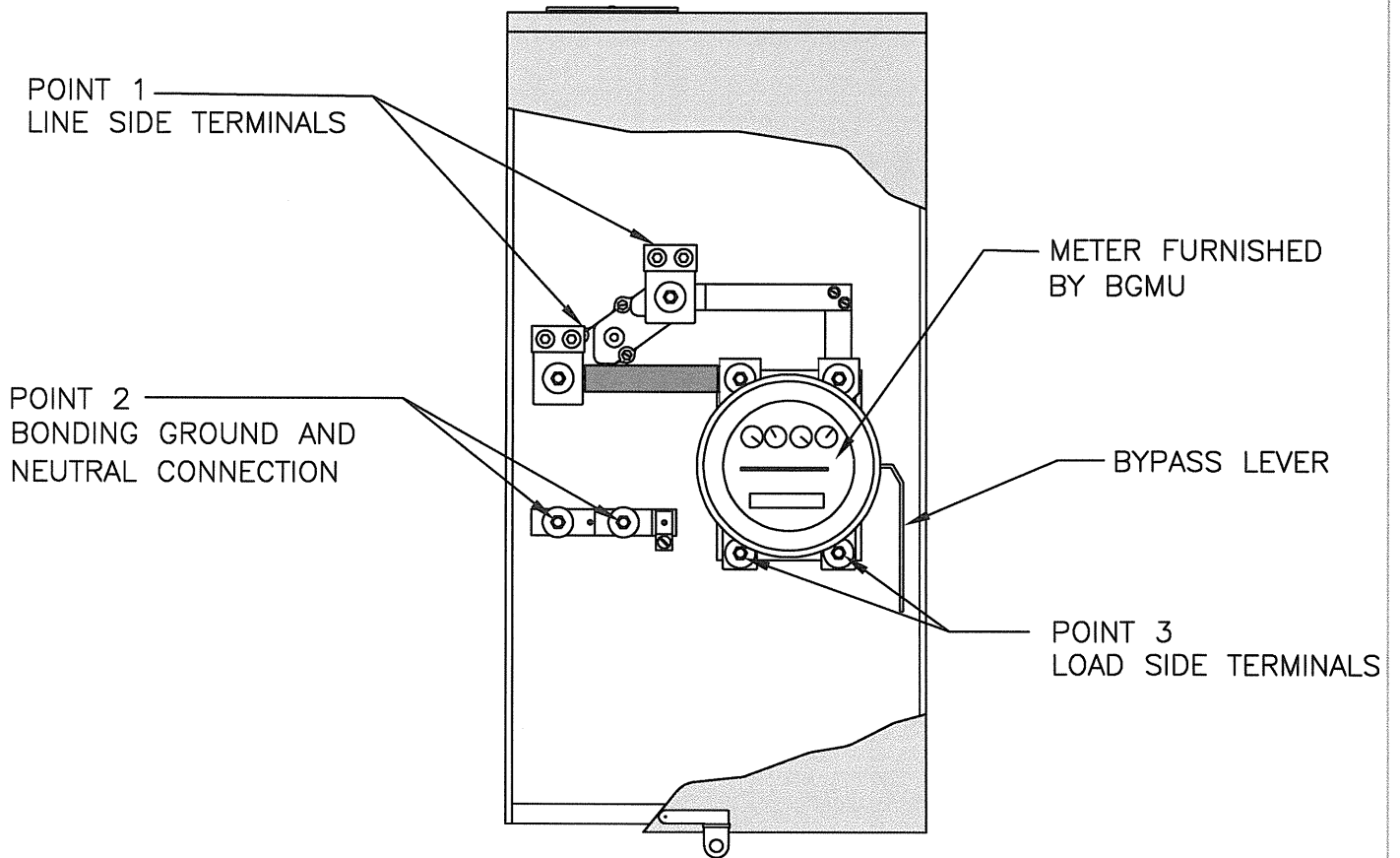
It is BGMU's Policy that only BGMU personnel shall be allowed to break a meter seal to remove and/or install an electric meter. Catastrophic meter failure and/or arc flash explosions can occur when attempting to remove an electric meter. The intent of this policy is to protect the safety of our customers, as well as electrical contractors.

Persons found to be in violation of this policy will be subject to meter tampering fines as noted in BGMU's "Rules and Regulations for Customer Service".

If an electrical contractor requests the removal of a meter to perform work, then an electrical inspection will be required prior to BGMU re-setting the meter. During emergency conditions, BGMU may agree (but is not required) to re-set the meter using the Five Day Letter Agreement with signatures from both the property owner and the electrical contractor.

# DRAWINGS

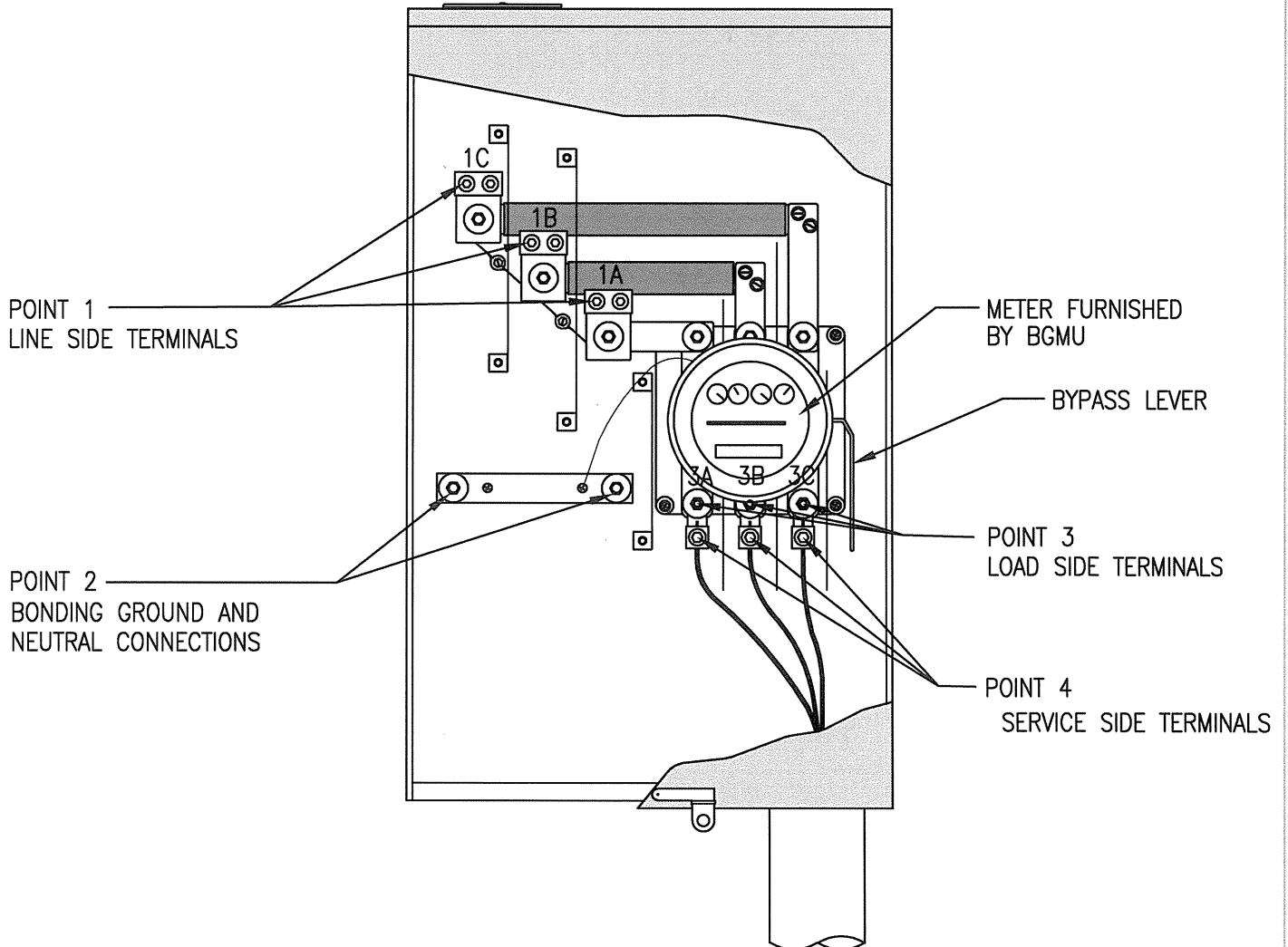
# 320 AMP METER BASE DIAGRAM ( SINGLE PHASE )



POINT 1, 2 & 3  
CHECK TORQUING INSTRUCTIONS ON INSIDE OF METER BASE

POINT 4  
IF USING BOLTED LUGS, APPLY COUNTER FORCE WHEN  
TIGHTENING SO AS NOT TO APPLY SIDWAYS TORQUE  
ON POINT 3 OR TIGHTEN LUG ON WIRE BEFORE  
INSTALLING ON POINT 3.

# 320 AMP METER BASE DIAGRAM ( THREE PHASE )



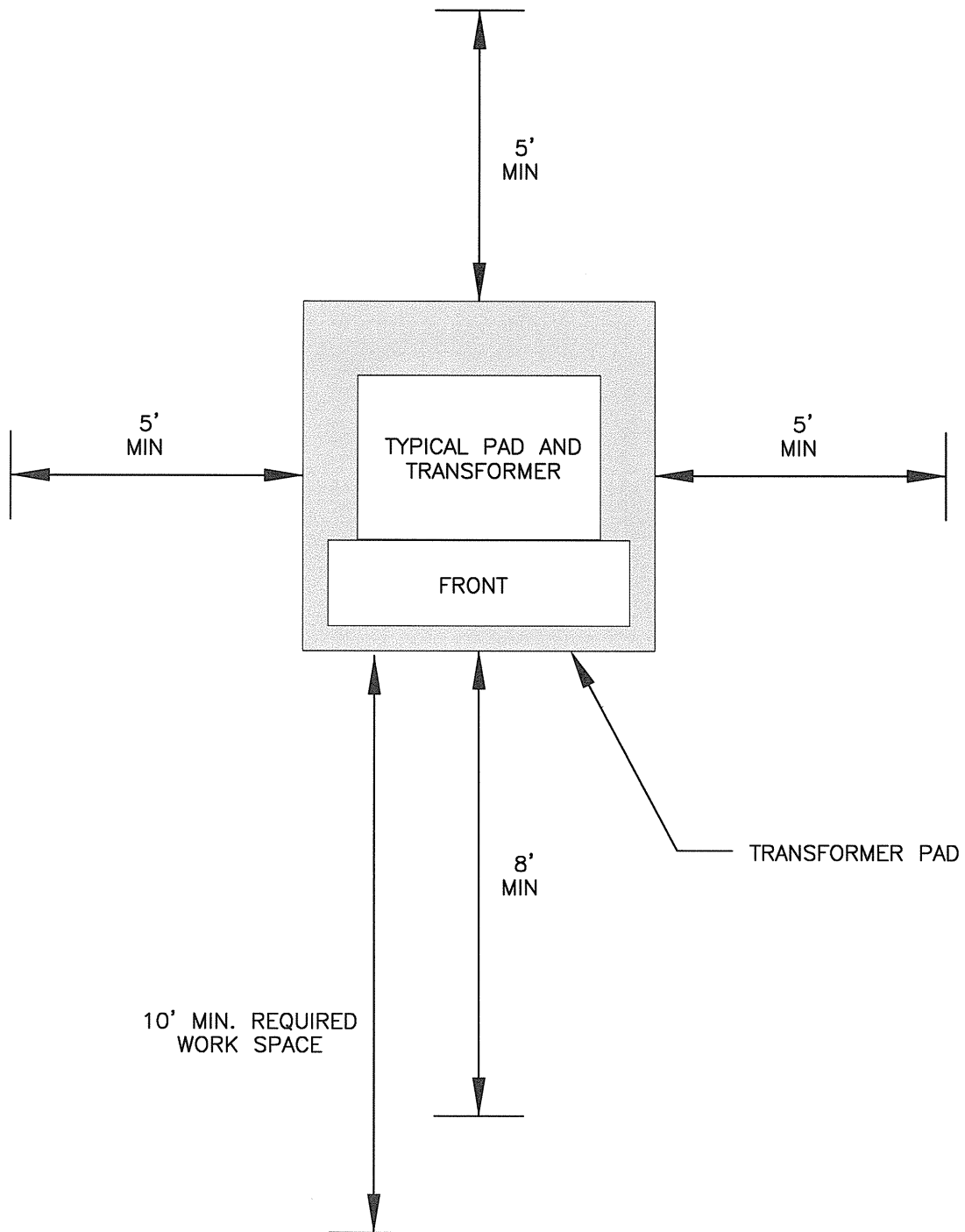
POINT 1, 2 & 3  
CHECK TORQUING INSTRUCTIONS ON INSIDE OF METER BASE

POINT 4  
IF USING BOLTED LUGS, APPLY COUNTER FORCE WHEN TIGHTENING SO AS NOT TO APPLY SIDWAYS TORQUE ON POINT 3 OR TIGHTEN LUG ON WIRE BEFORE INSTALLING ON POINT 3.

NOTE:  
FOR 120/240-VOLT DELTA CONNECTION, WILD LEG TO BE TERMINATED AT 1C AND 3C

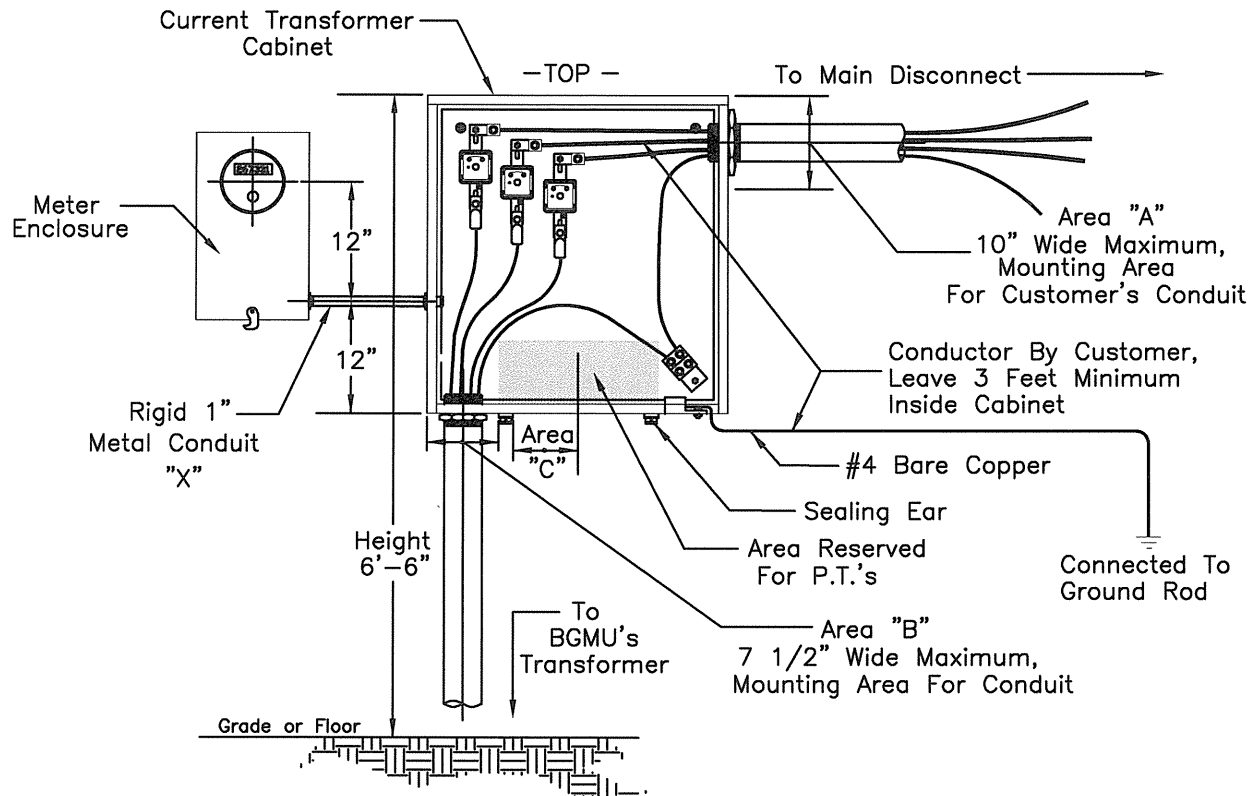


# TRANSFORMER PROTECTION CLEARANCES



# INSTRUCTION FOR INSTALLATION OF CURRENT TRANSFORMER CABINET

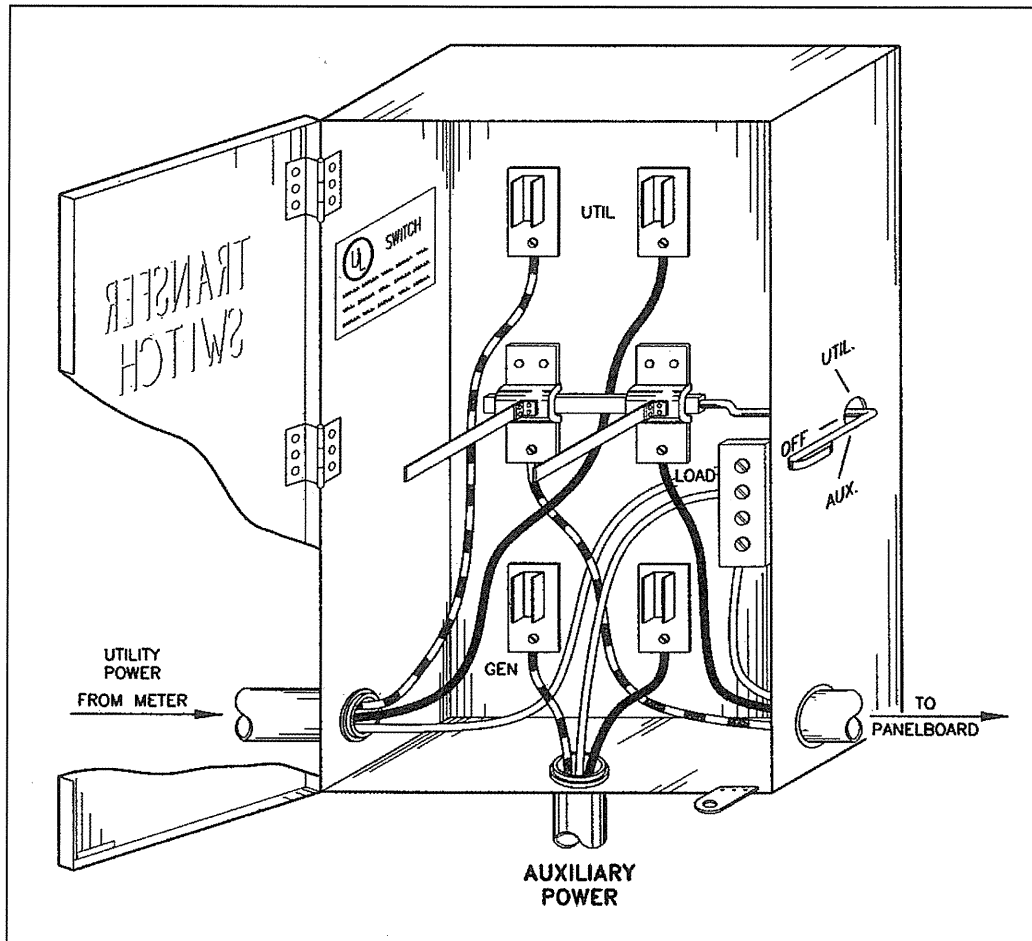
(600 AND 800 AMP SERVICES ONLY)



1. Installation of current transformer cabinet by special permission from BGMU engineering department only.
2. Transformer cabinet, grounding block and secondary connectors for Customer's wire to be purchased from BGMU, total cost \$475.
3. All equipment except instrument transformers to be installed on building by Customer.
4. A main disconnect on the outside of the building must be provided by Customer.
5. Conduit for Customer's conductor must be placed in area "A" as shown. Conduit for BGMU's conductor must be placed in area "B" as shown and size of conduit to be specified by BGMU. If additional conduit is required, locate in area "C". All conduit furnished and installed by Customer.
6. Rigid metal conduit "X" must be no shorter than 3 inches or longer than 3 feet. Conduit must enter current transformer cabinet as shown.
7. Height of current transformer cabinet is to be 6'-6".
8. Mounting position of cabinet must always be with sealing ears at the bottom.
9. Parallel conductors to be identified.
10. Current transformer cabinet to be grounded in accordance with the N.E.C.
11. Layout shown above may be reversed/mirrored to accommodate a main disconnect on the other side.
12. The 20" wide x 8" high shaded area inside cabinet reserved for installation of P.T.'s if required.

Revised: June 14, 2012

## TYPICAL TRANSFER SWITCH



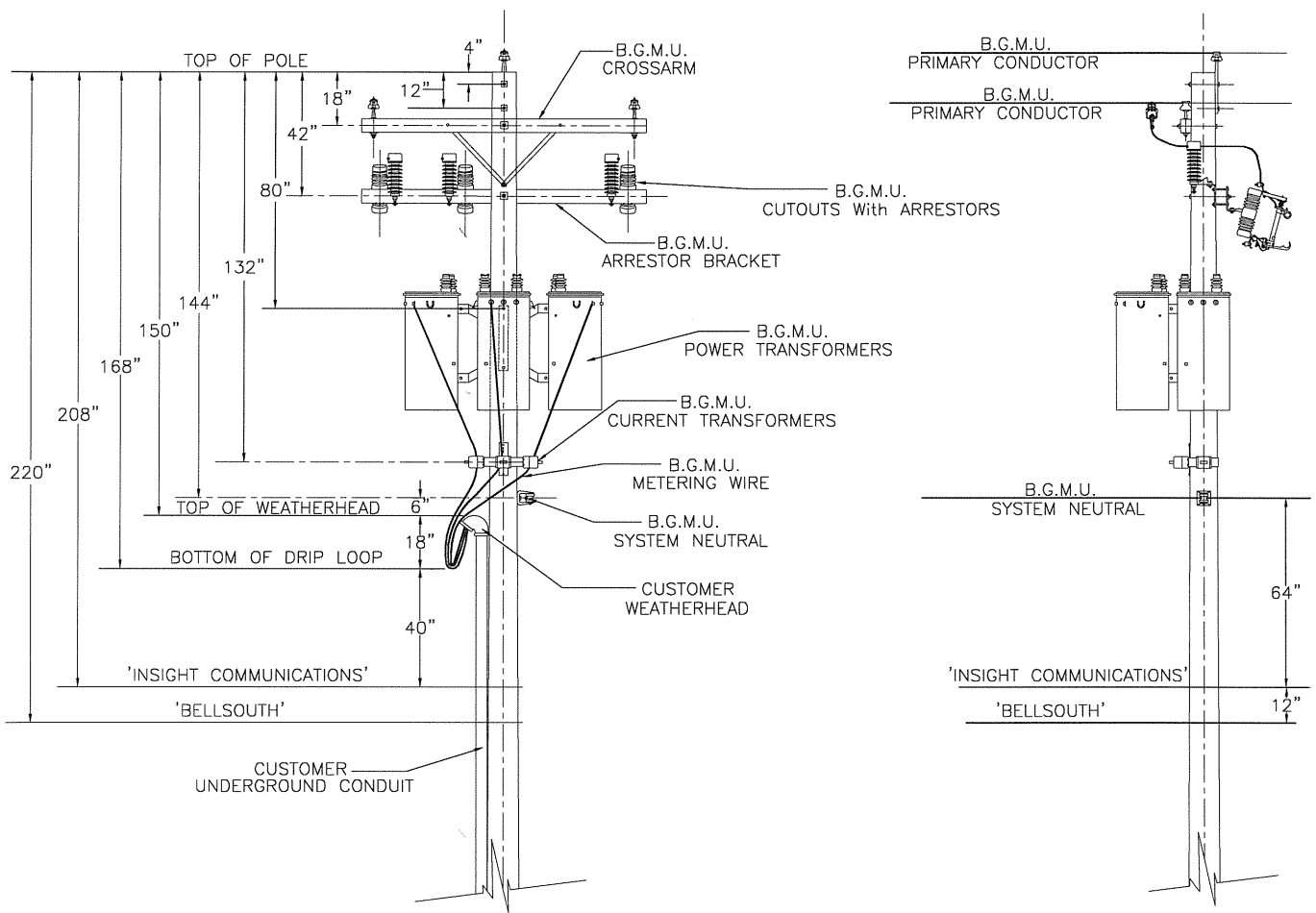
WHEN A GENERATOR CAN BE INADVERTANTLY CONNECTED TO ANOTHER ELECTRIC SYSTEM, A DOUBLE-POLE, DOUBLE THROW TRANSFER SWITCH MUST BE INSTALLED ON THE LOAD SIDE OF THE POWER SUPPLIER'S ELECTRIC METER.

THE TRANSFER SWITCH MUST PREVENT EMERGENCY GENERATED POWER FROM FEEDING BACK INTO THE POWER SUPPLIER'S SYSTEM AND ENDANGERING THE LIVES OF LINeworkERS, NEIGHBORS, PETS, LIVESTOCK, ETC.

ALL EQUIPMENT MUST BE LISTED FOR THE PURPOSE AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTION

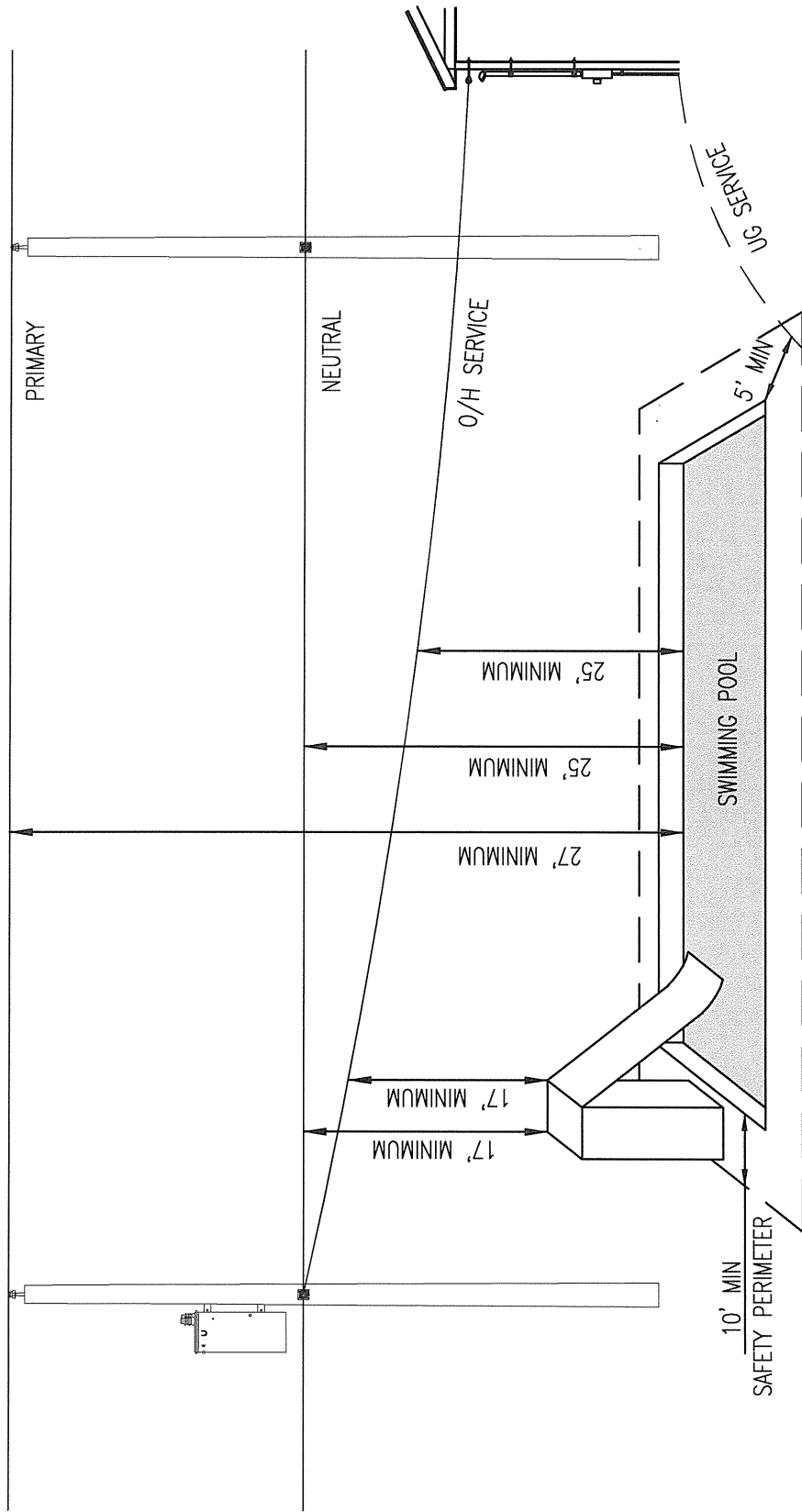
TRANSFER SWITCH NOT SUPPLIED BY BGMU

# TRANSFORMER BANK / POLE MOUNTED METERING DETAIL



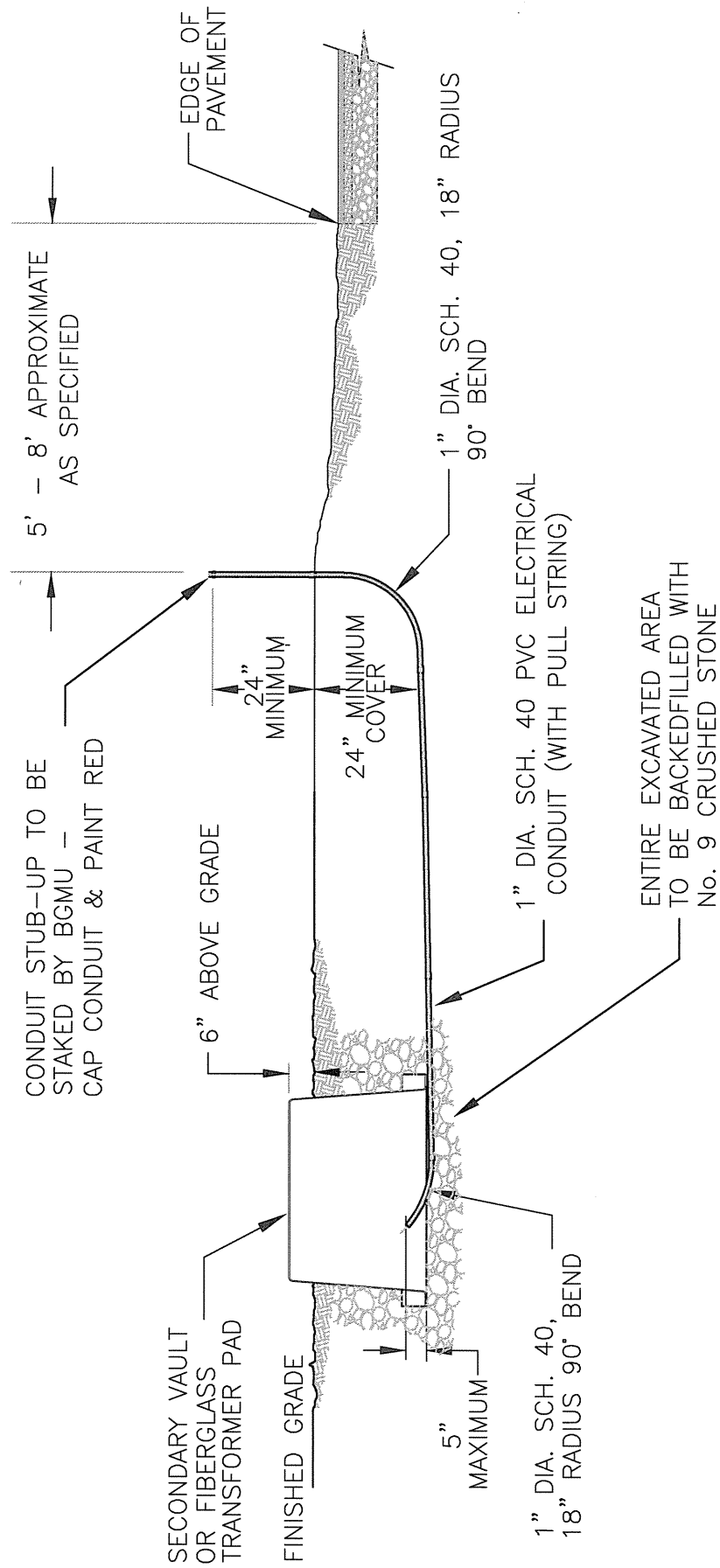
TYPICAL CONFIGURATION

# SWIMMING POOL CLEARANCES

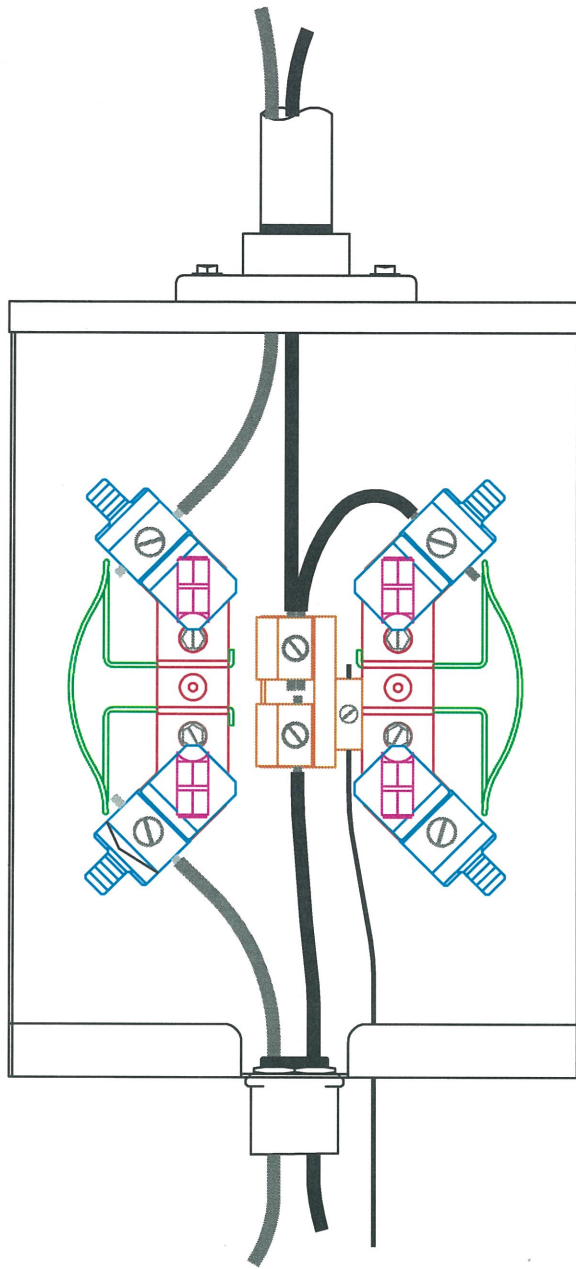


1. 27' MINIMUM TO PRIMARY VOLTAGE CONDUCTOR.
2. 25' MINIMUM TO SYSTEM NEUTRAL OR SERVICE CONDUCTOR.
3. 5' MINIMUM TO ANY UNDERGROUND ELECTRIC CONDUCTOR FROM EDGE OF WATER.
4. 10' MINIMUM SAFETY MARGIN FROM WATERS EDGE. NO OVERHEAD ELECTRIC CONDUCTORS DIRECTLY ABOVE THIS AREA.
- 17' MINIMUM TO NEAREST ELECTRIC CONDUCTOR FROM SLIDING BOARD, DIVING BOARD OR PLATFORM.

# STREET LIGHT CONDUIT DETAIL



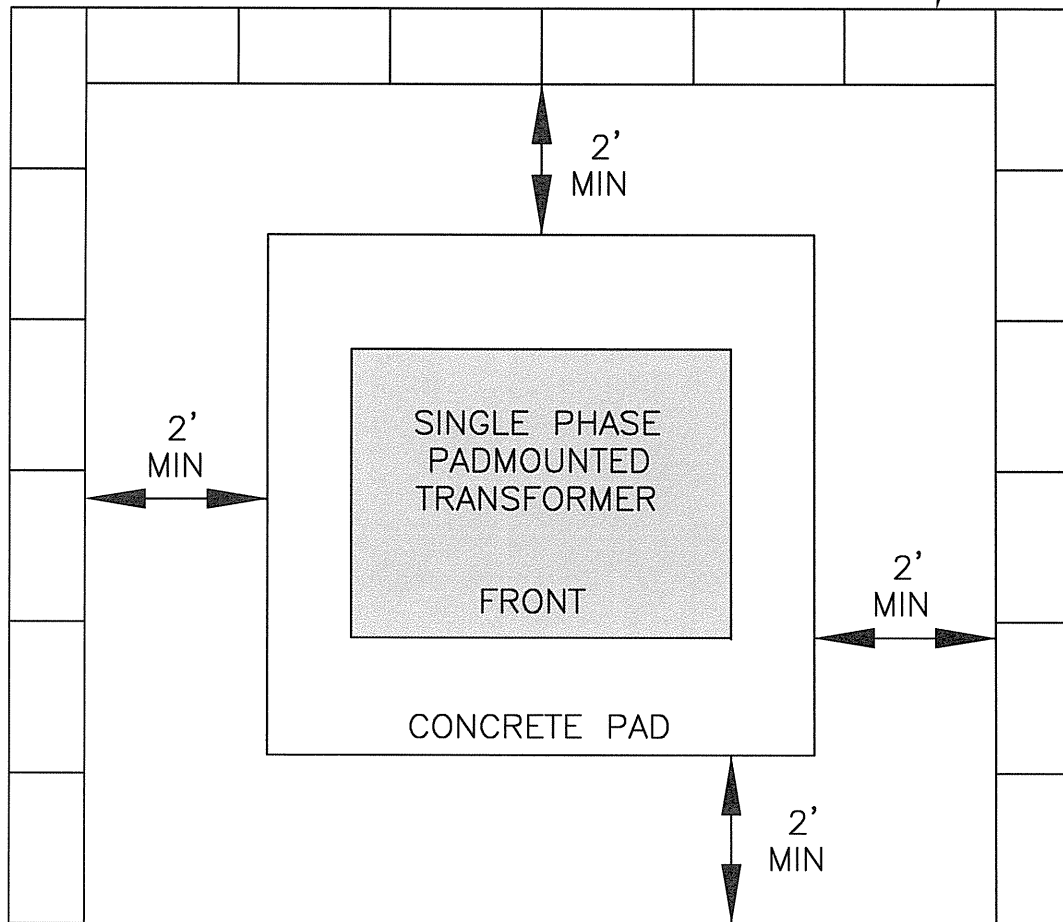
# TYPICAL CONFIGURATION



PERMANENT  
120 VOLT / TWO WIRE SERVICE

# FIREWALL CLEARANCES FOR SINGLE PHASE TRANSFORMER

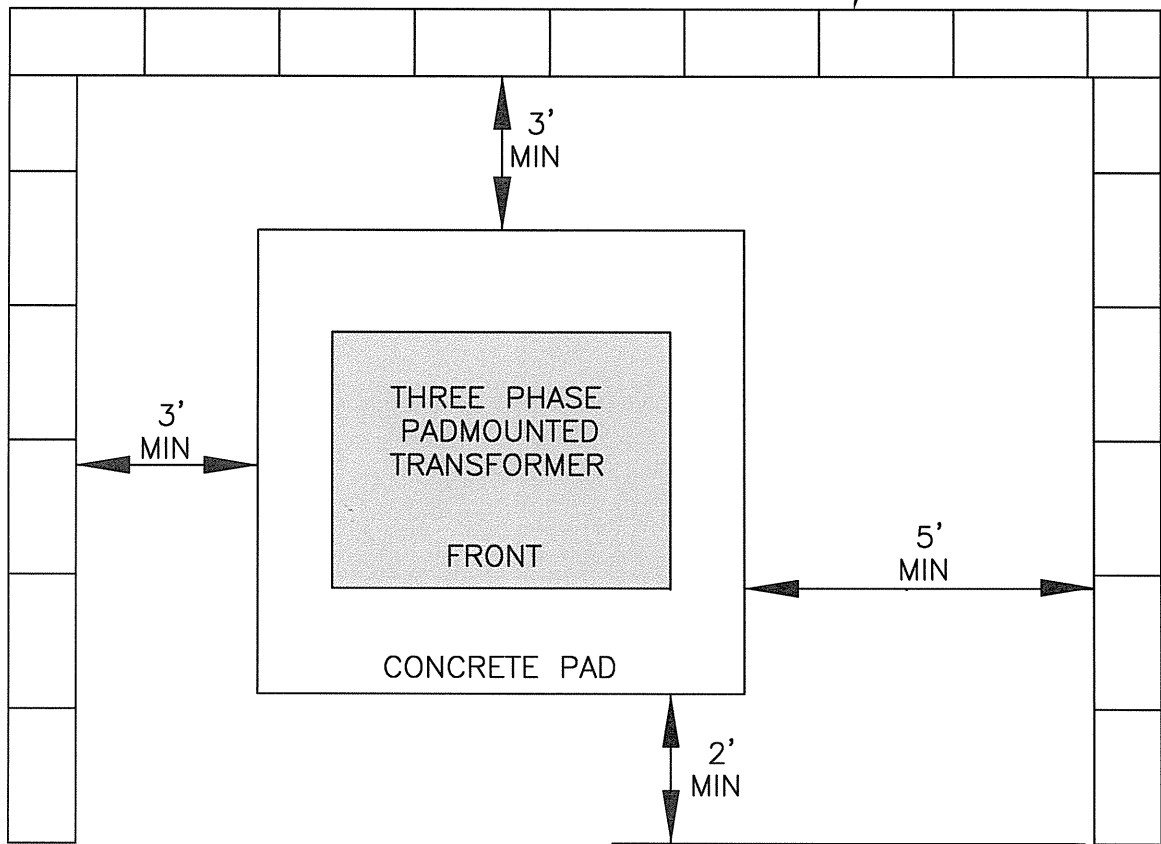
8" CONCRETE OR 8" BRICK FIREWALL  
HEIGHT OF WALL TO BE NO LESS THAN  
12" ABOVE TOP OF TRANSFORMER



THIS END LEFT OPEN  
FOR TRANSFORMER DOOR ACCESS

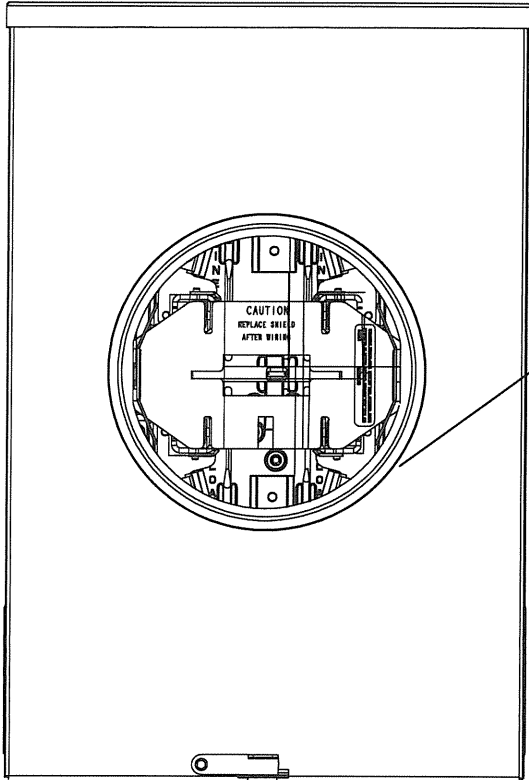
# FIREWALL CLEARANCES FOR THREE PHASE TRANSFORMER

8" CONCRETE OR 8" BRICK FIREWALL  
HEIGHT OF WALL TO BE NO LESS THAN  
12" ABOVE TOP OF TRANSFORMER



THIS END LEFT OPEN  
FOR TRANSFORMER DOOR ACCESS

# 200 Amp Meter With Separate Disconnect



COVER RINGLESS

STAINLESS STEEL  
LATCH TAB & RIBBON  
SEAL ROTARY LATCH

### Features and Ratings

- Ringless Type Meter Socket
- 200A Continuous, 200A Max., 600V AC
- Outdoor Enclosure (NEMA Type 3R)
- 1 Phase, 3 Wire, 120/240V Max
- 4 Jaw Meter Socket
- Meter Socket Type HQ-4GU
- For Underground Service Only
- Lever Bypass
- One Ground Lug Installed
- UL Listed

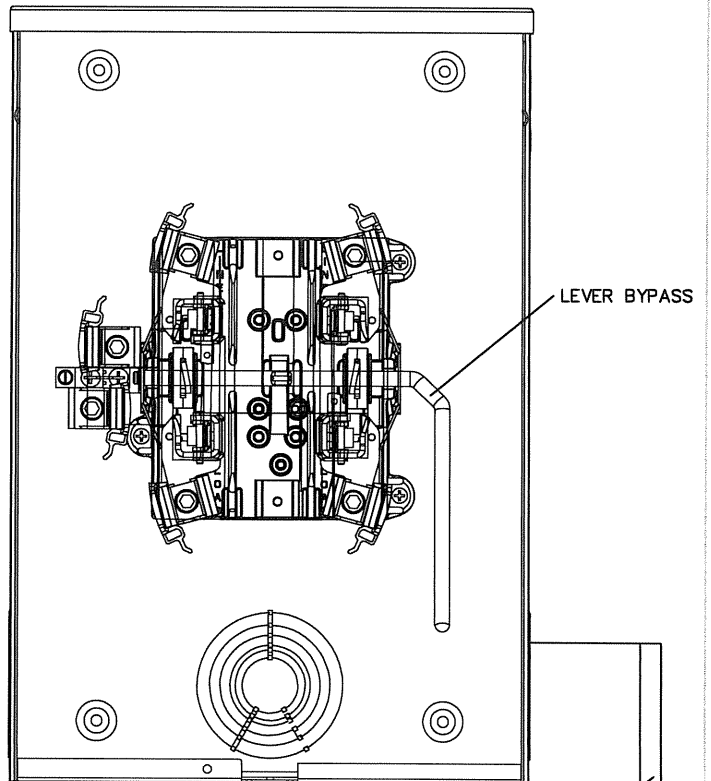
### Connectors, Wire Sizes and Torques

CONNECTOR	WIRE SIZE
LINE, LOAD, NEUTRAL*	#6 - 350 kcmil
GROUND	#14 - 2 AWG

\* External Hex Drive 1/2"

\* Internal Hex Drive 5/16"

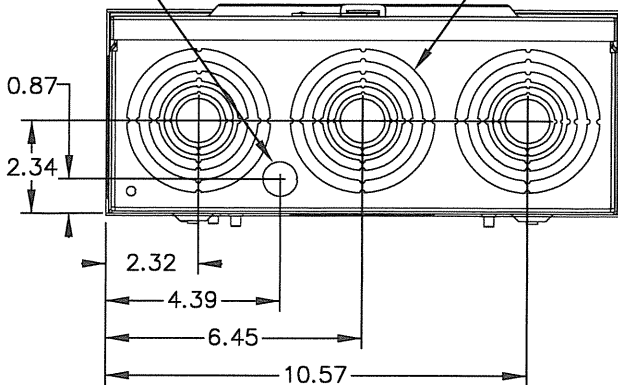
VIEW SHOWN WITH COVER REMOVED



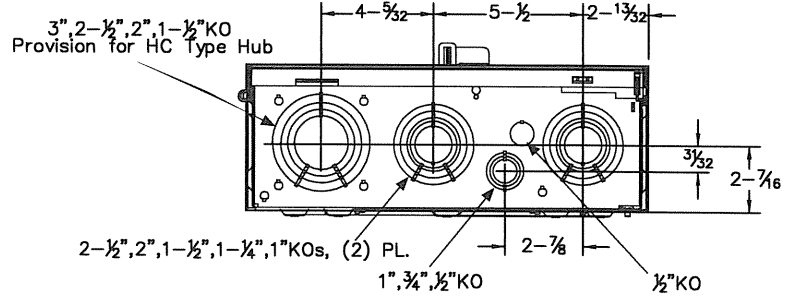
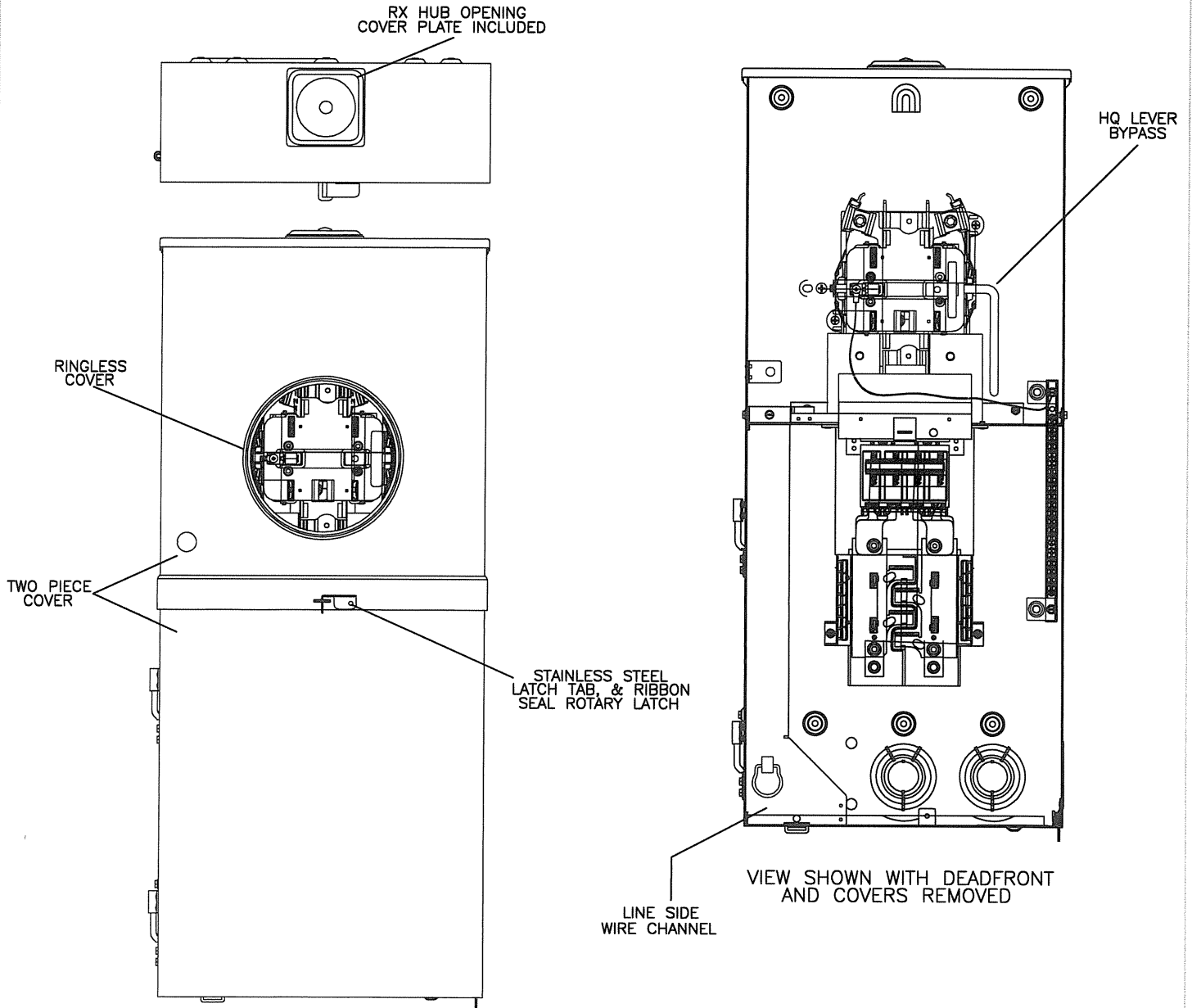
LEVER BYPASS

TO DISCONNECT

1/2"KO 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3"KO (3X)



# 200 Amp Meter Main Combo With Load Center



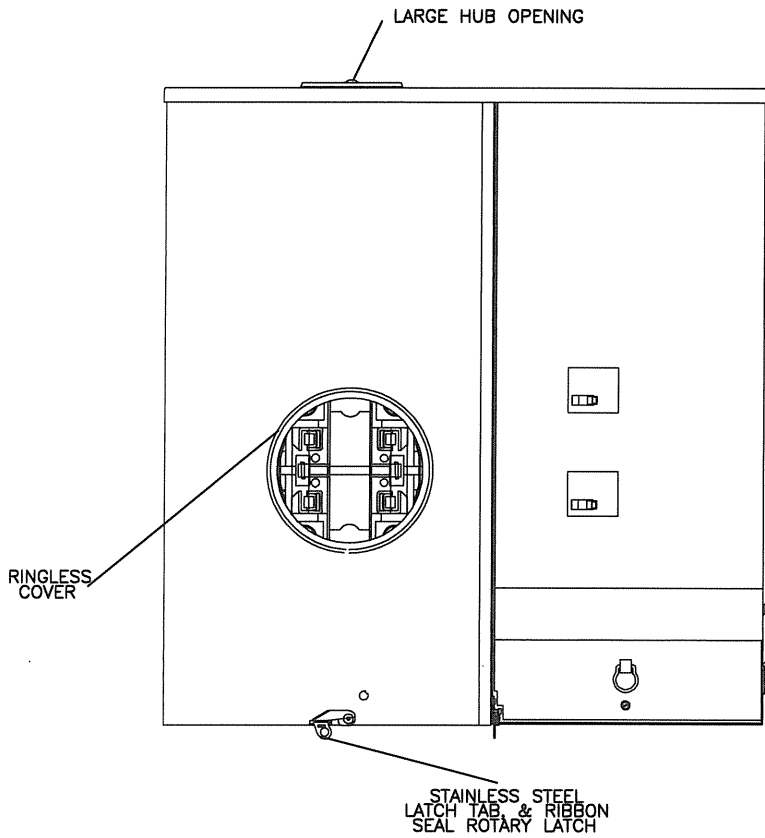
### Features and Ratings

- 200A Cont. Type HQ Lever Bypass Meter Socket
- Ringless Meter Cover
- 1 Phase, 3 Wire, 120/240V AC Max
- 200A Main Breaker factory installed
- Overhead or Underground Service Entrance
- RX Type Hubs Top End Wall
- HC Type Hubs Bottom End Wall
- UL Listed

TERMINAL	WIRE SIZE
Load A, B, N	250 kcmil
Line A, B, N	250 kcmil



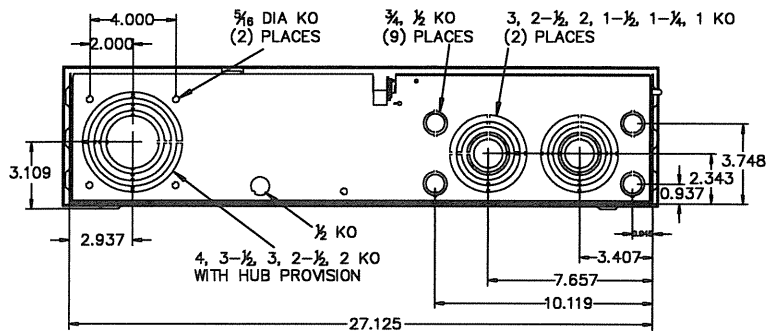
# 400 Amp Meter Main Combo



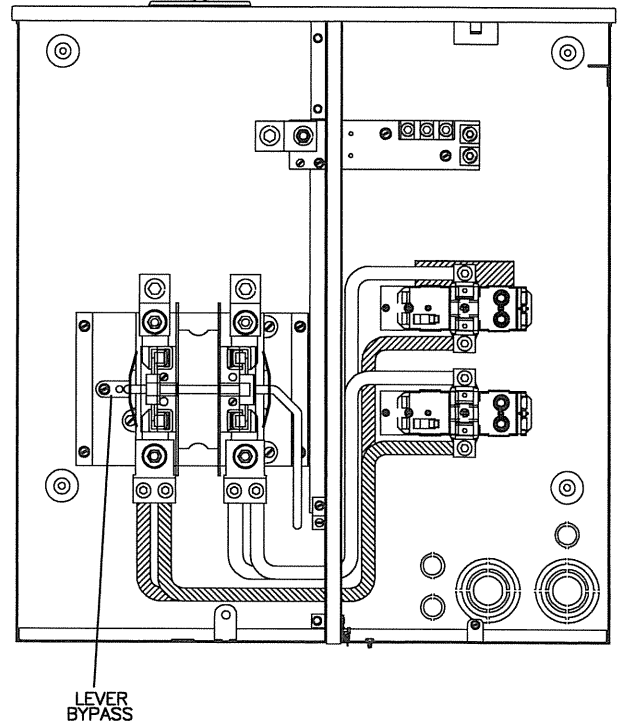
### Features and Ratings

- Outdoor Enclosure (NEMA Type 3R)
- Ringless Type Meter Cover
- Device Rating: 400A Max
- 120/240V ~ 1 Phase, 3 Wire
- Meter Socket Rating: 400A (320A Continuous)
- 4 Jaw, Lever Operated Bypass with Jaw Tension Release
- (2) 200A Breakers Factory Installed
- UL Listed only for use as Service Entrance Equipment
- Overhead or Underground Service Entrance Equipment

TERMINAL	WIRE SIZE
Load A, B, N	(2) 250 kcmil
Line A, B, N	350 kcmil



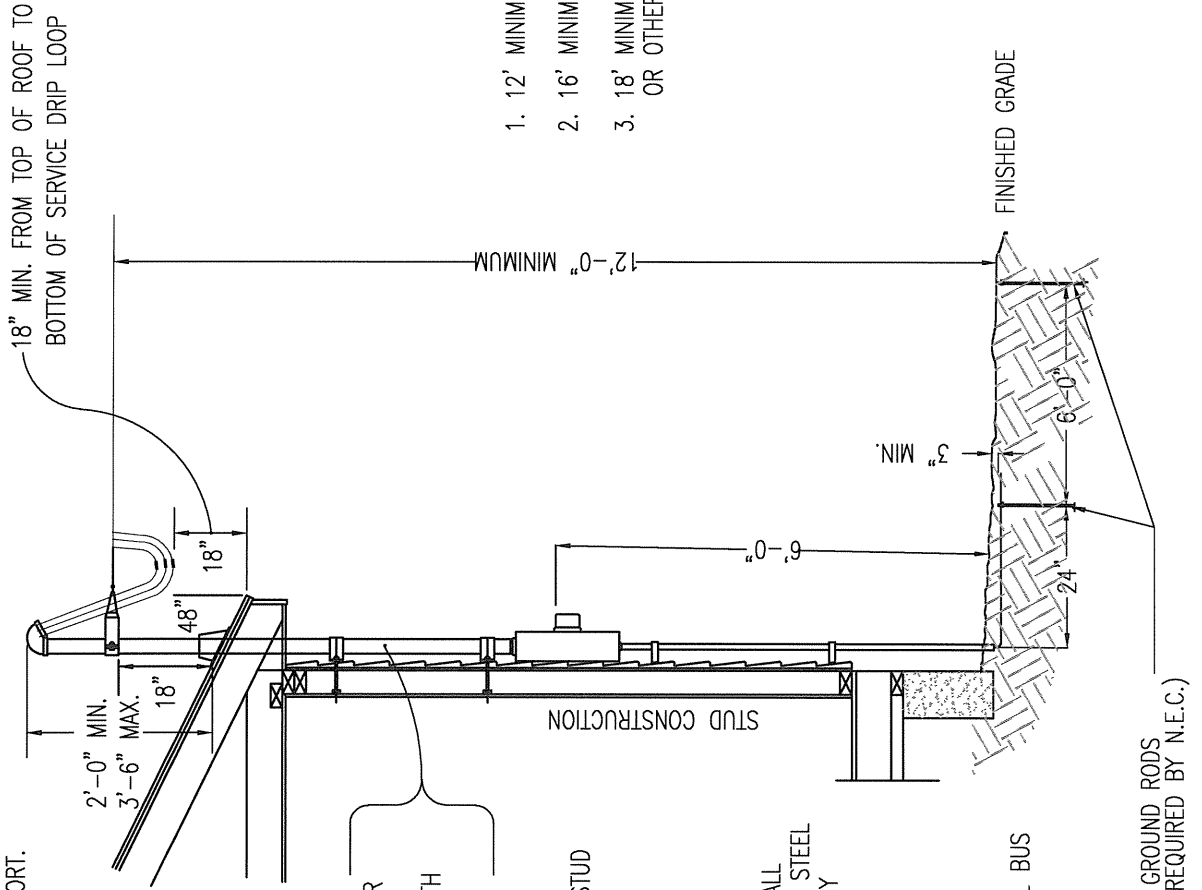
VIEW SHOWN WITHOUT COVER, DOOR, DEADFRONT



# SERVICE MASTS

NO JOINTS IN RISER MAST ABOVE ROOF LINE

IF RISER ABOVE ROOF EXCEEDS 3'-6" THEN GUY OR METAL BRACE AS REQUIRED FOR SUPPORT.



A 2-1/2" DIA. OR LARGER RIGID OR INTERMEDIATE GRADE GALVANIZED STEEL CONDUIT TO BE SECURED WITH TWO OR MORE BOLT MAST CLAMPS.

PANEL SHALL NOT BE LOCATED IN STUD SPACE DIRECTLY BEHIND METER.

MAST ENTRANCE CAN BE USED ON ALL TYPES OF BRICK, STUD, BLOCK AND STEEL CONSTRUCTION TO OBTAIN NECESSARY CLEARANCE.

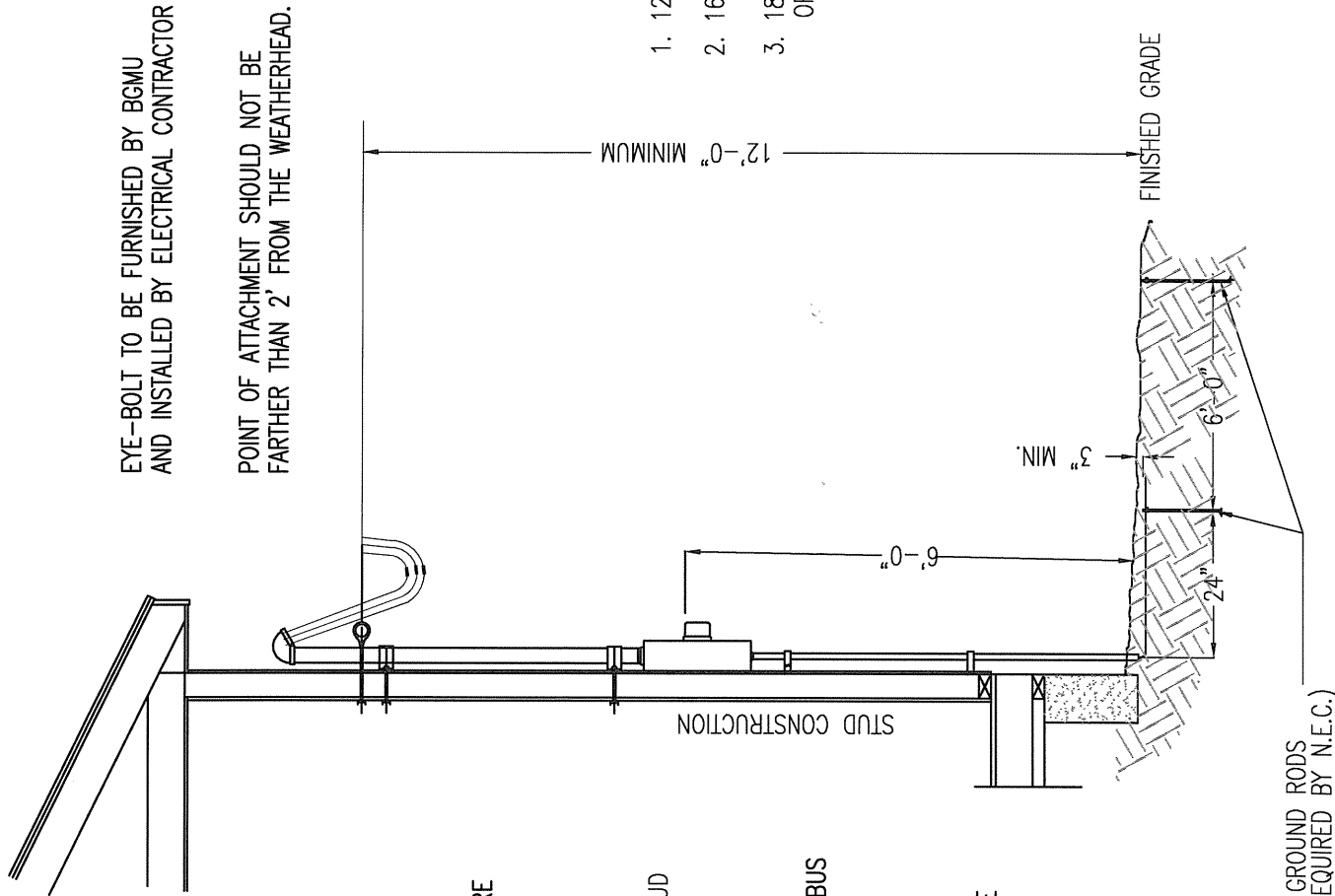
#6 COPPER GROUND FROM NEUTRAL BUS TO GROUNDING ELECTRODE

GROUND RODS  
(AS REQUIRED BY N.E.C.)

## CLEARANCES

1. 12' MINIMUM ABOVE WALKS AND FINAL GRADE
2. 16' MINIMUM ABOVE RESIDENTIAL DRIVEWAY
3. 18' MINIMUM ABOVE PUBLIC STREETS, ALLEYS OR OTHER AREAS SUBJECT TO TRUCK TRAFFIC

# SERVICE - BELOW ROOF LEVEL



EYE-BOLT TO BE FURNISHED BY BGMU AND INSTALLED BY ELECTRICAL CONTRACTOR

POINT OF ATTACHMENT SHOULD NOT BE FARTHER THAN 2' FROM THE WEATHERHEAD.

CONDUIT SECURED WITH TWO OR MORE BOLT MAST CLAMPS.

PANEL SHALL NOT BE LOCATED IN STUD SPACE DIRECTLY BEHIND METER.

#6 COPPER GROUND FROM NEUTRAL BUS TO GROUNDING ELECTRODE

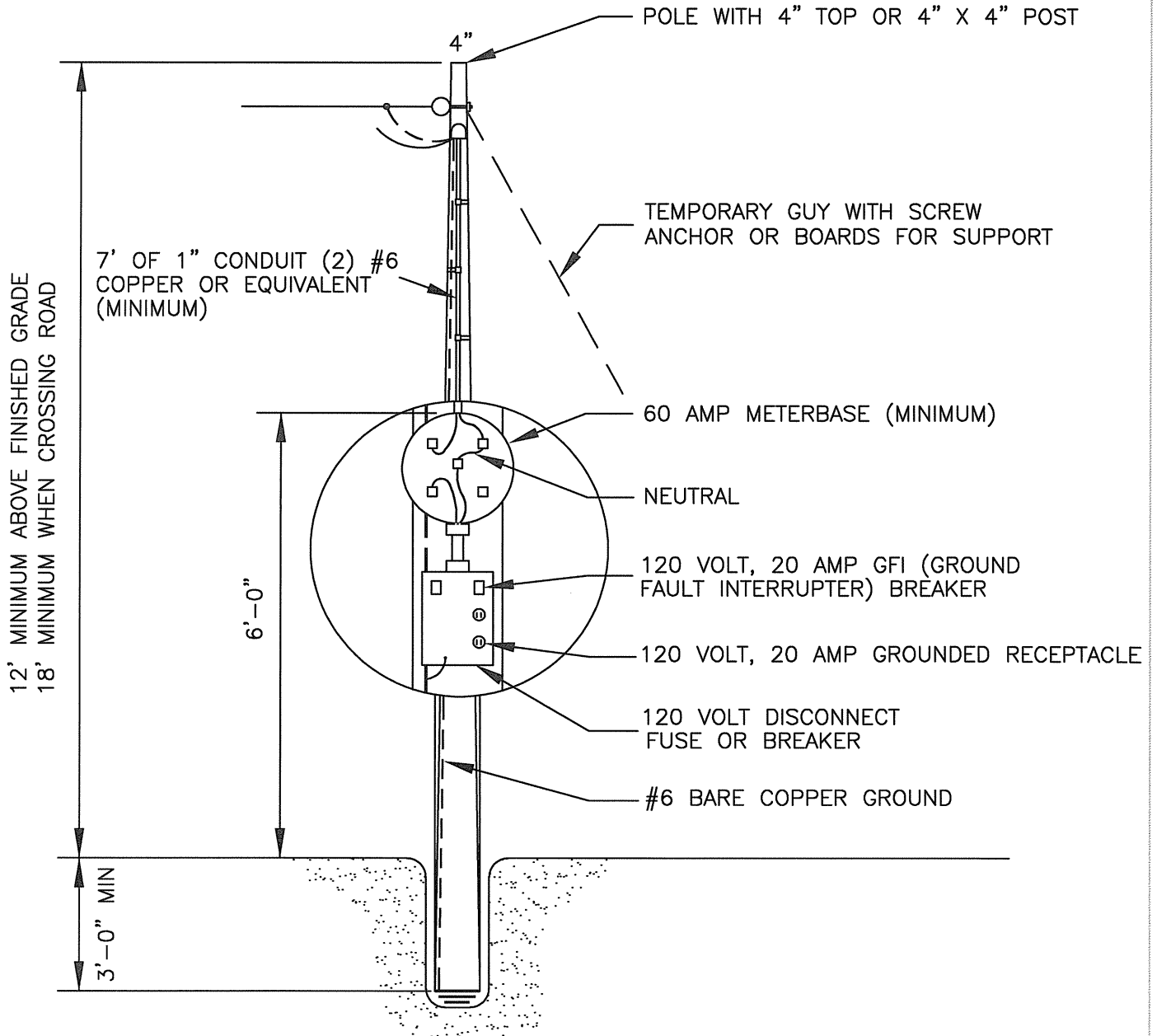
THIS TYPE SERVICE ENTRANCE CAN BE USED IN ALL TYPES OF BRICK, STUD, BLOCK AND STEEL CONSTRUCTION.

GROUND RODS (AS REQUIRED BY N.E.C.)

## CLEARANCES

1. 12' MINIMUM ABOVE WALKS AND FINAL GRADE.
2. 16' MINIMUM ABOVE RESIDENTIAL DRIVEWAY.
3. 18' MINIMUM ABOVE PUBLIC STREETS, ALLEYS OR OTHER AREAS SUBJECT TO TRUCK TRAFFIC.

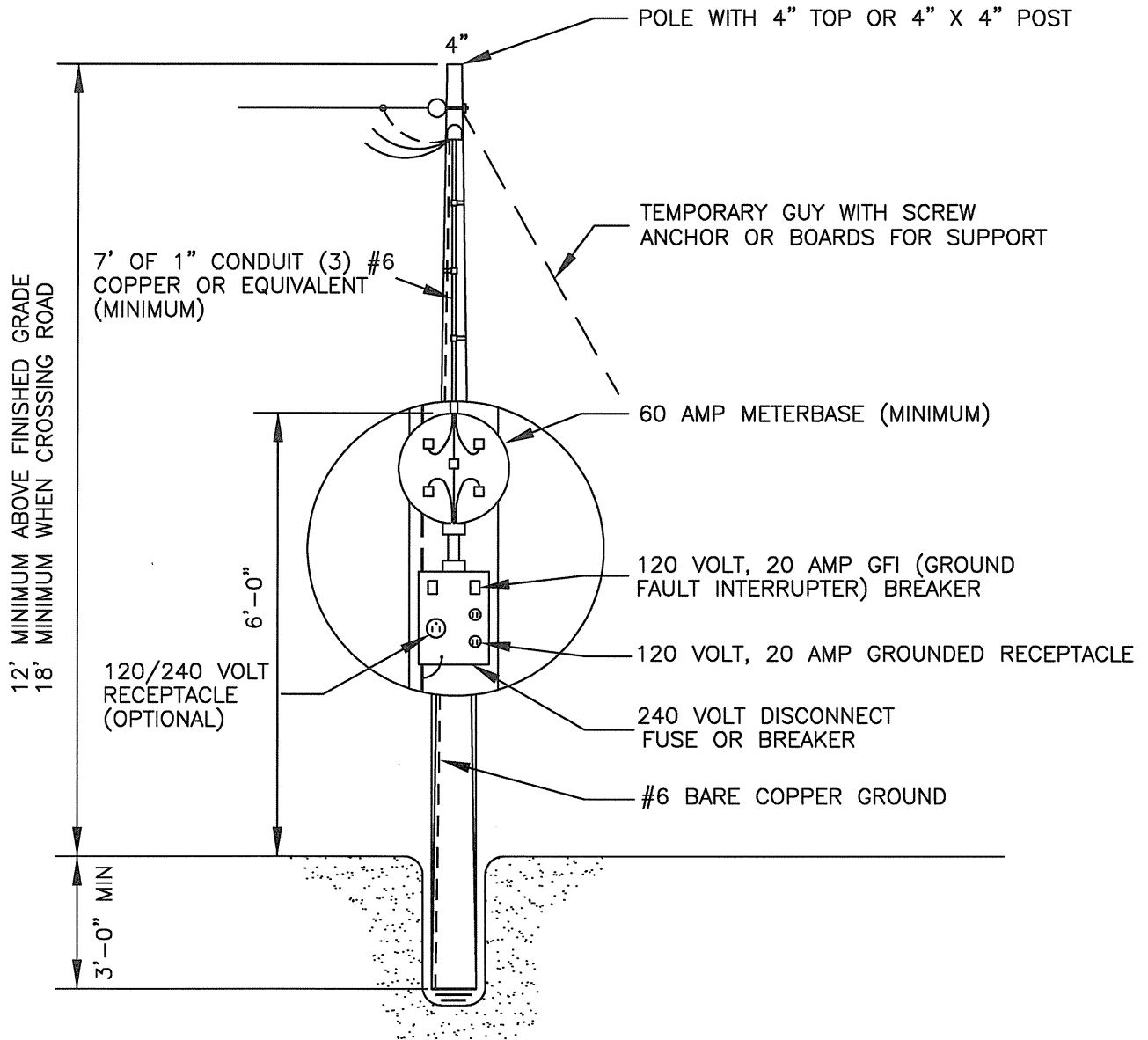
# TEMPORARY SERVICE POLE 120 VOLT



NOTE:  
 TEMPORARY SERVICE POLE MUST BE  
 INSPECTED BY CITY ELECTRICAL  
 INSPECTOR PRIOR TO CONNECTION  
 BY BGMU

# TEMPORARY SERVICE POLE

## 120/240 VOLT



NOTE:  
 TEMPORARY SERVICE POLE MUST BE  
 INSPECTED BY CITY ELECTRICAL  
 INSPECTOR PRIOR TO CONNECTION  
 BY BGMU

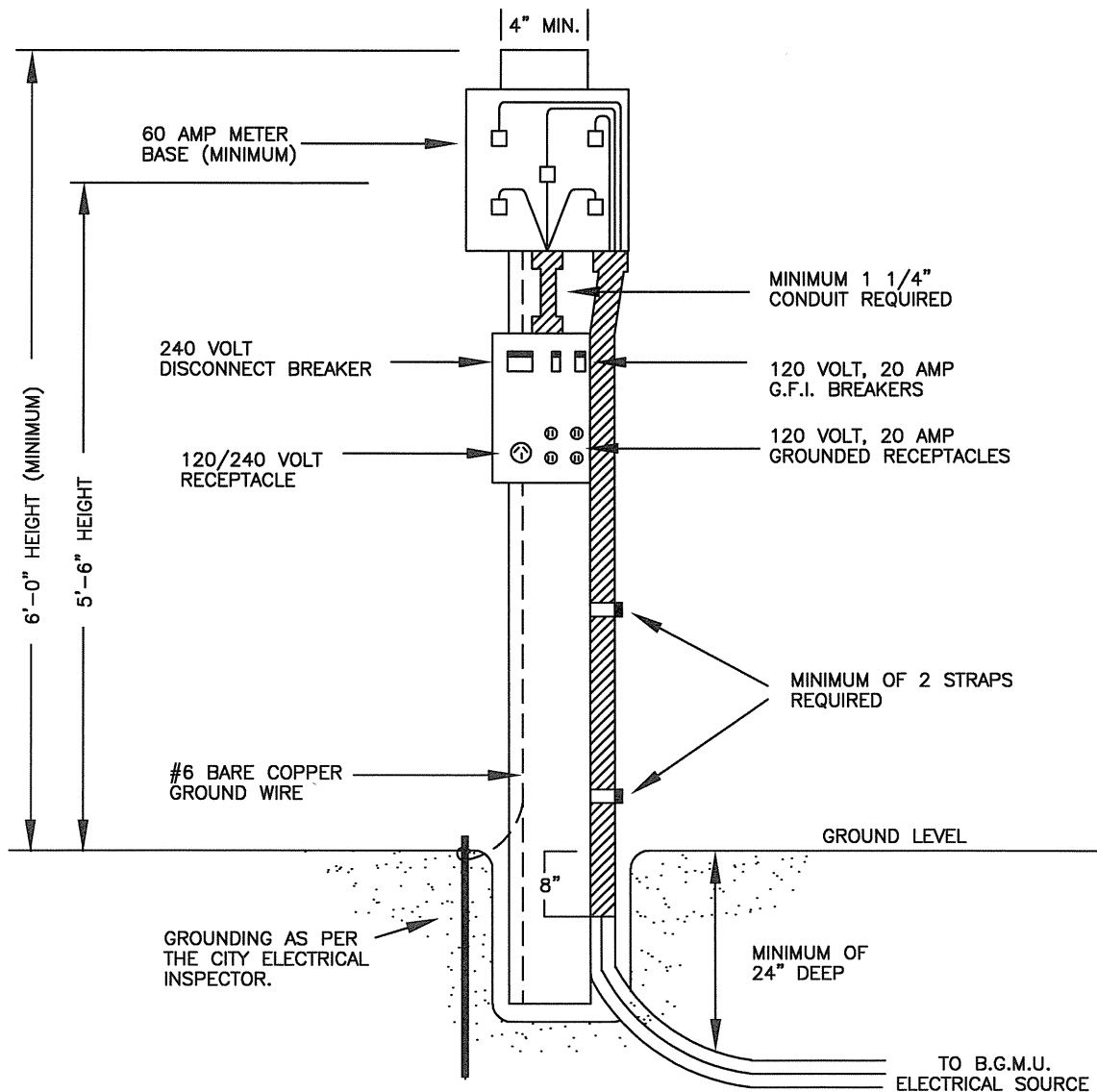
# UNDERGROUND TEMPORARY SERVICE POLE 120/240 VOLT

NOTE: This diagram is a guide. Contact City Electrical Inspector with any questions. Overhead type temporary poles may be used. No accessible elbows, junctions, LB, etc. will be allowed from BGMU electrical equipment up to the source side of the meter.

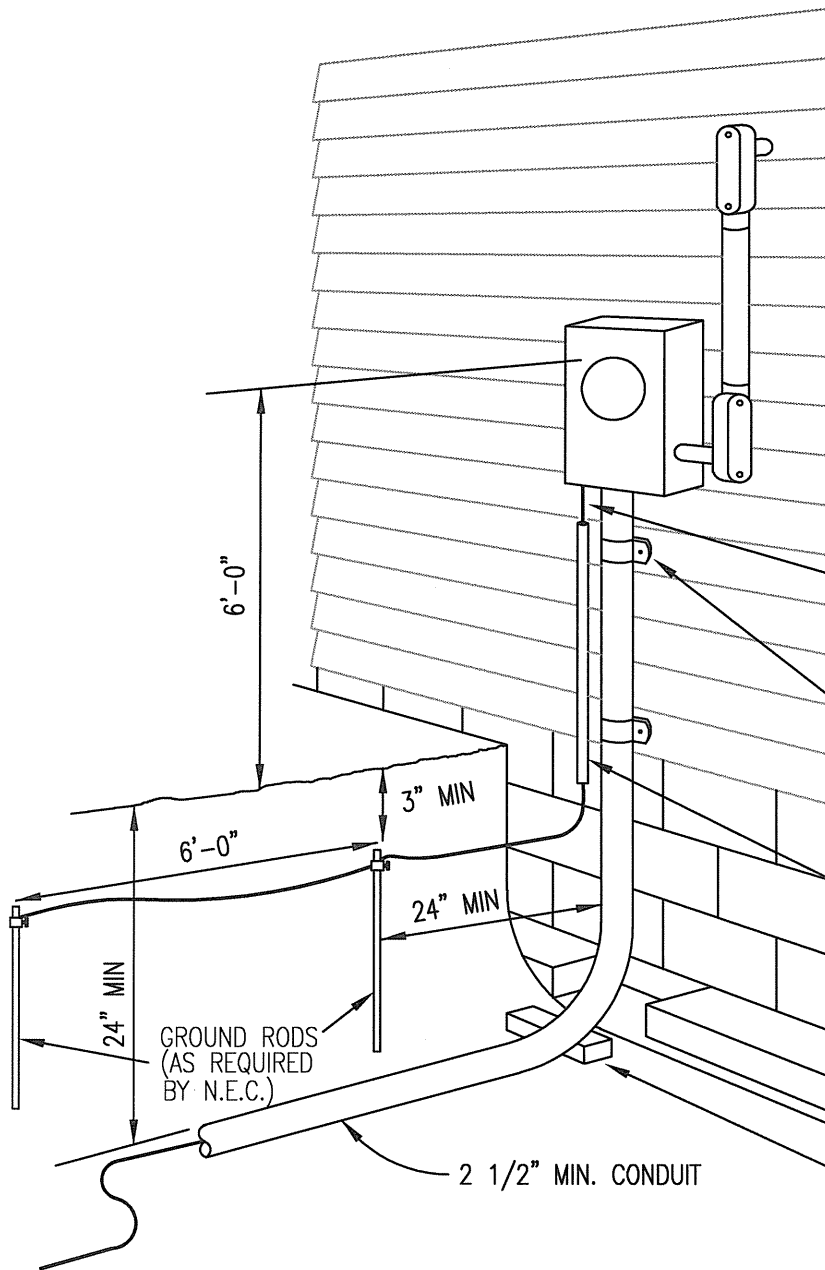
Temporary service pole must be inspected by the City Electrical Inspector prior to connection by BGMU. Minimum of 4" x 4" post required.

Conduit must be continuous from top/base of service pole source side of meter.

Temporary pole to be located on right hand side of the service entrance door of the padmounted transformer.



## UNDERGROUND SERVICE - WITH METER



METER BASE SHALL BE ATTACHED SECURELY TO THE STRUCTURE. BRICK VENEER OR EQUIVALENT SHALL BE ATTACHED USING LEAD ANCHORS OR TOGGLE BOLTS. PLASTIC ANCHORS SHALL NOT BE PERMITTED.

GROUND WIRE TO BE EXPOSED FOR FIRST 6" UNDER METER BASE FOR INTERCONNECTION OF OTHER UTILITIES.

ATTACH CONDUIT WITH TWO OR MORE TWO-BOLT MAST CLAMPS.

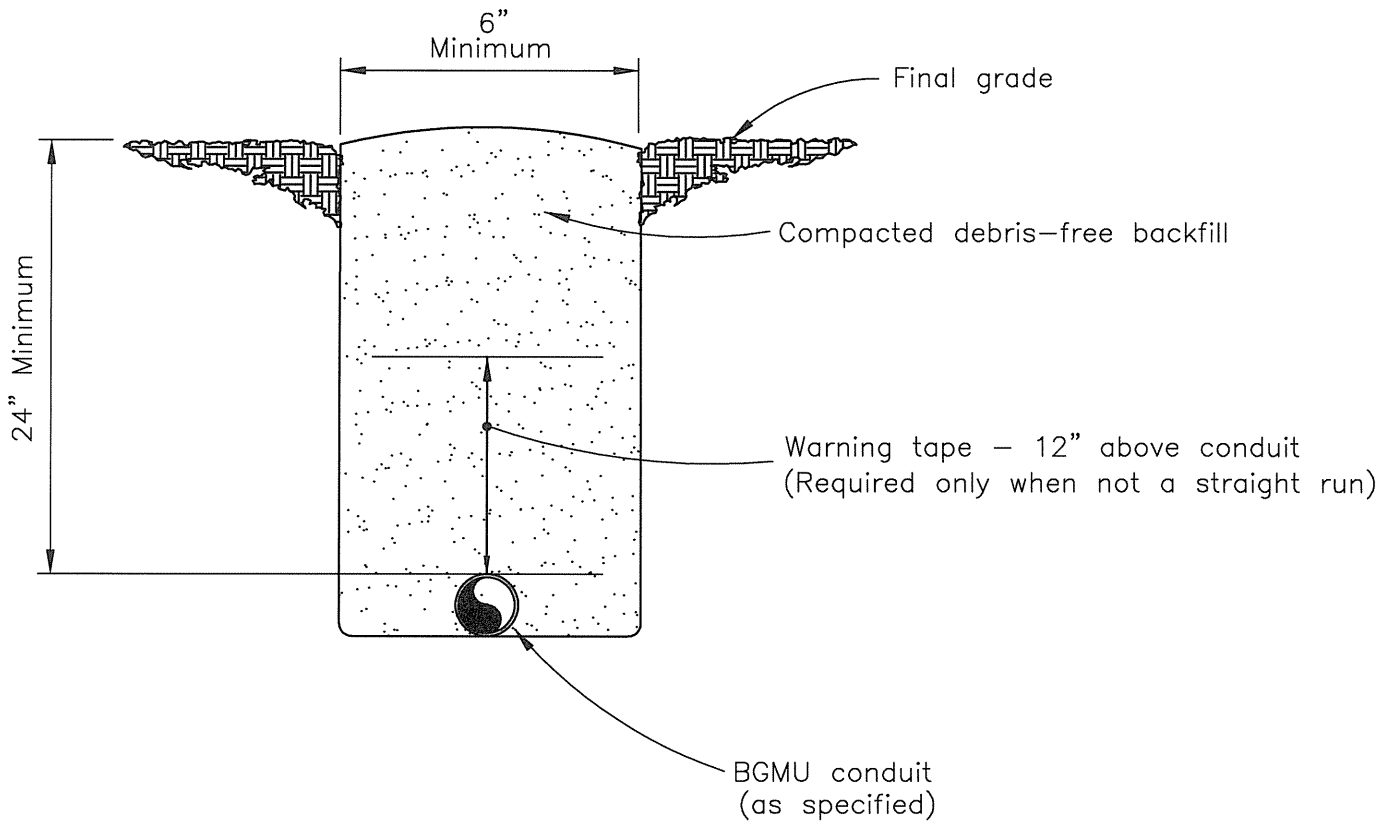
INSTALL GUARD STRIP ON GROUND WIRE. BOND METAL CONDUIT ON EACH END OR USE PVC.

INSTALL BRICK OR BLOCK TO SUPPORT CONDUIT DURING BACKFILLING AND SETTLING.

NYLON PULL ROPE RATED  
150 LBS. FOR SERVICE

CONTINUOUS RUN OF CONDUIT LIMITED TO 3-90° BENDS TO POLE.  
AT POWER POLE EXTEND CONDUIT A MINIMUM OF THREE FEET  
ABOVE GROUND TO BRACKET OR STRAP TO POLE. CAP ENDS  
OF CONDUIT.

## SERVICE LATERAL TRENCH DETAIL

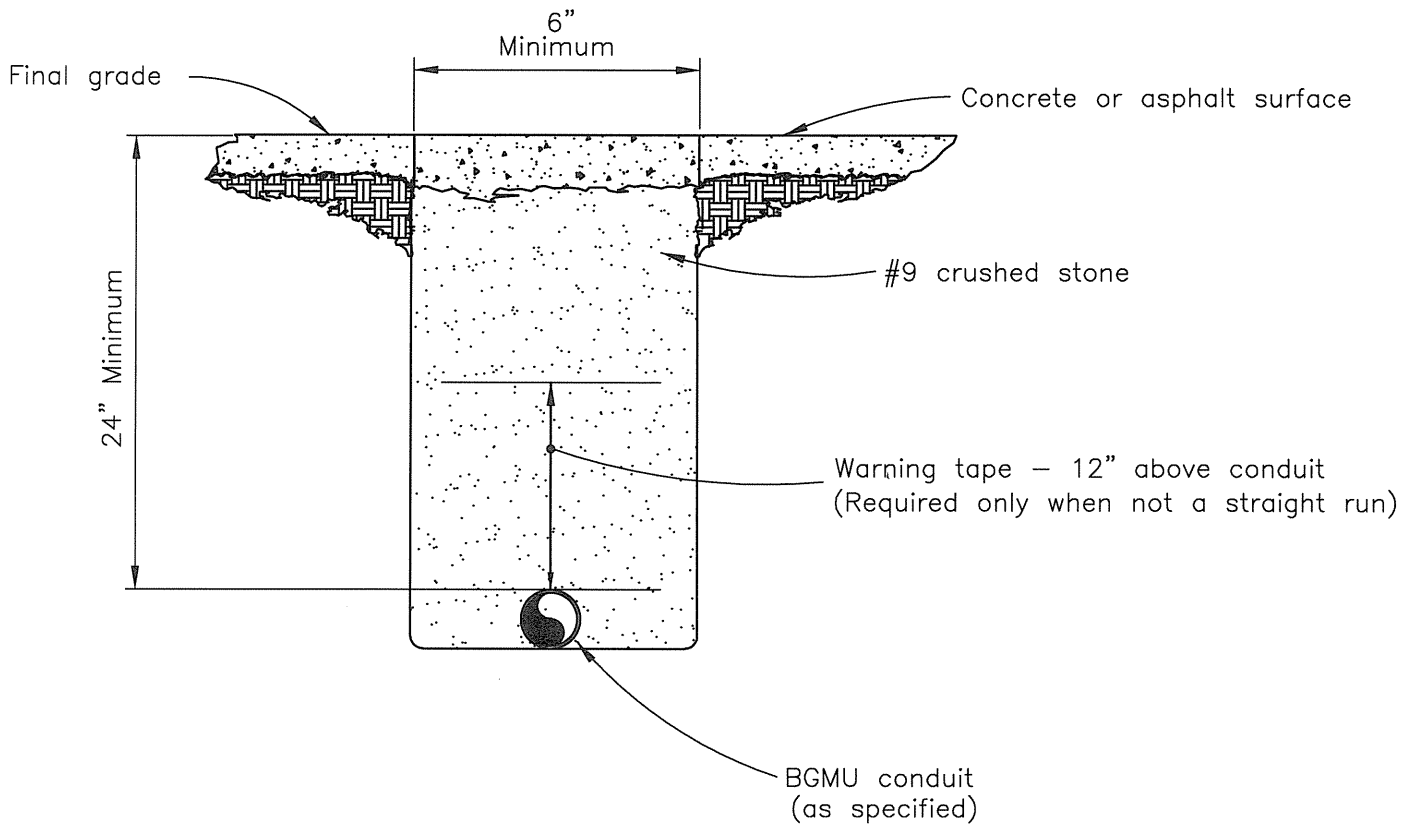


### NOTE:

1. All service conduit to be 2 1/2" schedule 40 PVC unless otherwise specified.
2. Warning tape required if other than straight run of conduit.
3. Excavation, conduit, encasement and backfill by Owner/Developer.
4. Install nylon pull string with a minimum rating of 150 lbs. breaking strength in each conduit.
5. Power conductor furnished by BGMU.

## SERVICE LATERAL EXCAVATION IN OPEN AREA

## SERVICE LATERAL TRENCH DETAIL

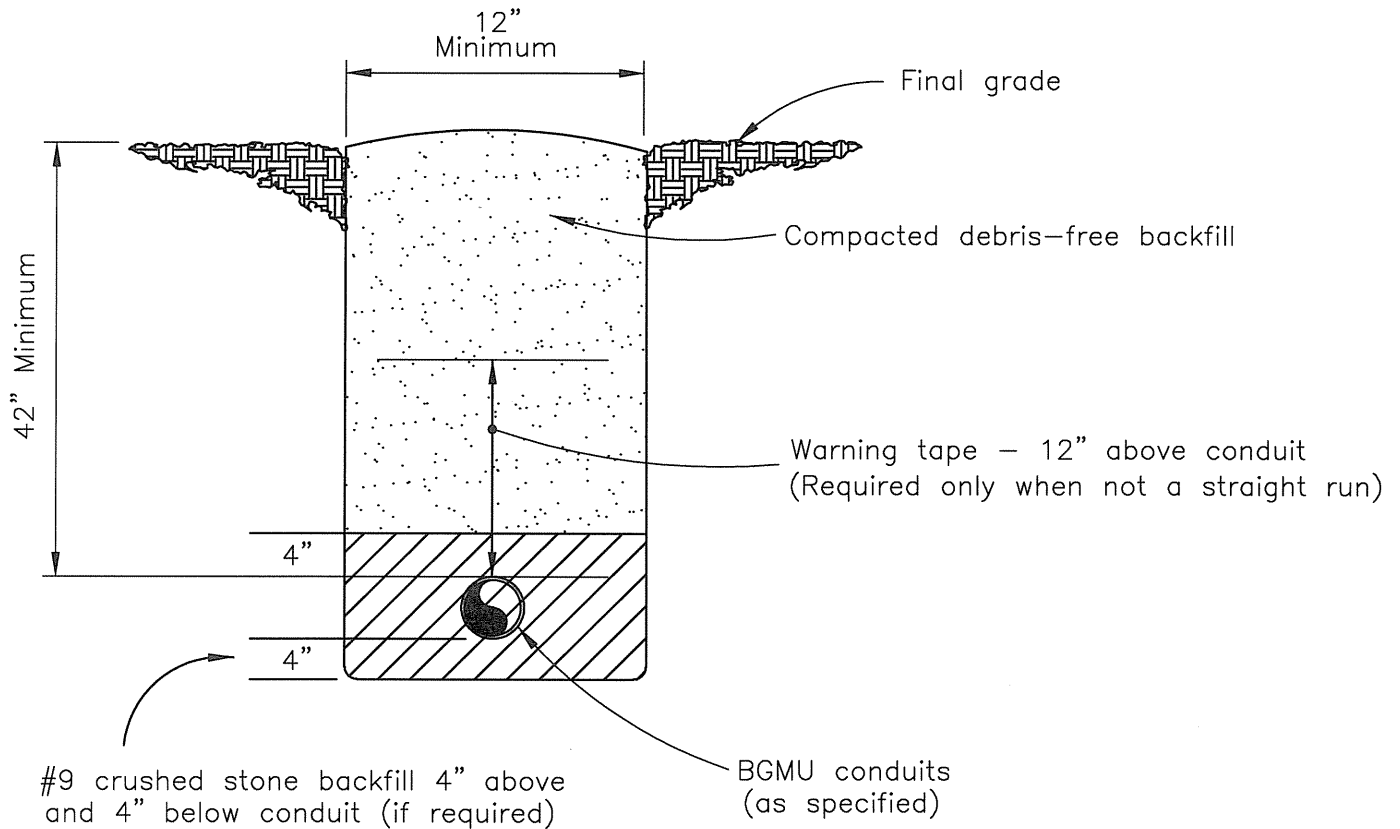


### NOTE:

1. For conduit under a load bearing surface use schedule 40 PVC with 4" concrete encasement around conduit or use schedule 80 PVC. #9 crushed stone backfill is required for either situation.
2. Warning tape required if other than straight run of conduit.
3. Excavation, conduit, encasement and backfill by Owner/Developer.
4. Install nylon pull string with a minimum rating of 150 lbs. breaking strength in each conduit.
5. Power conductor furnished by BGMU.

SERVICE LATERAL EXCAVATION UNDER LOAD BEARING SURFACES

## SECONDARY TRENCH DETAIL

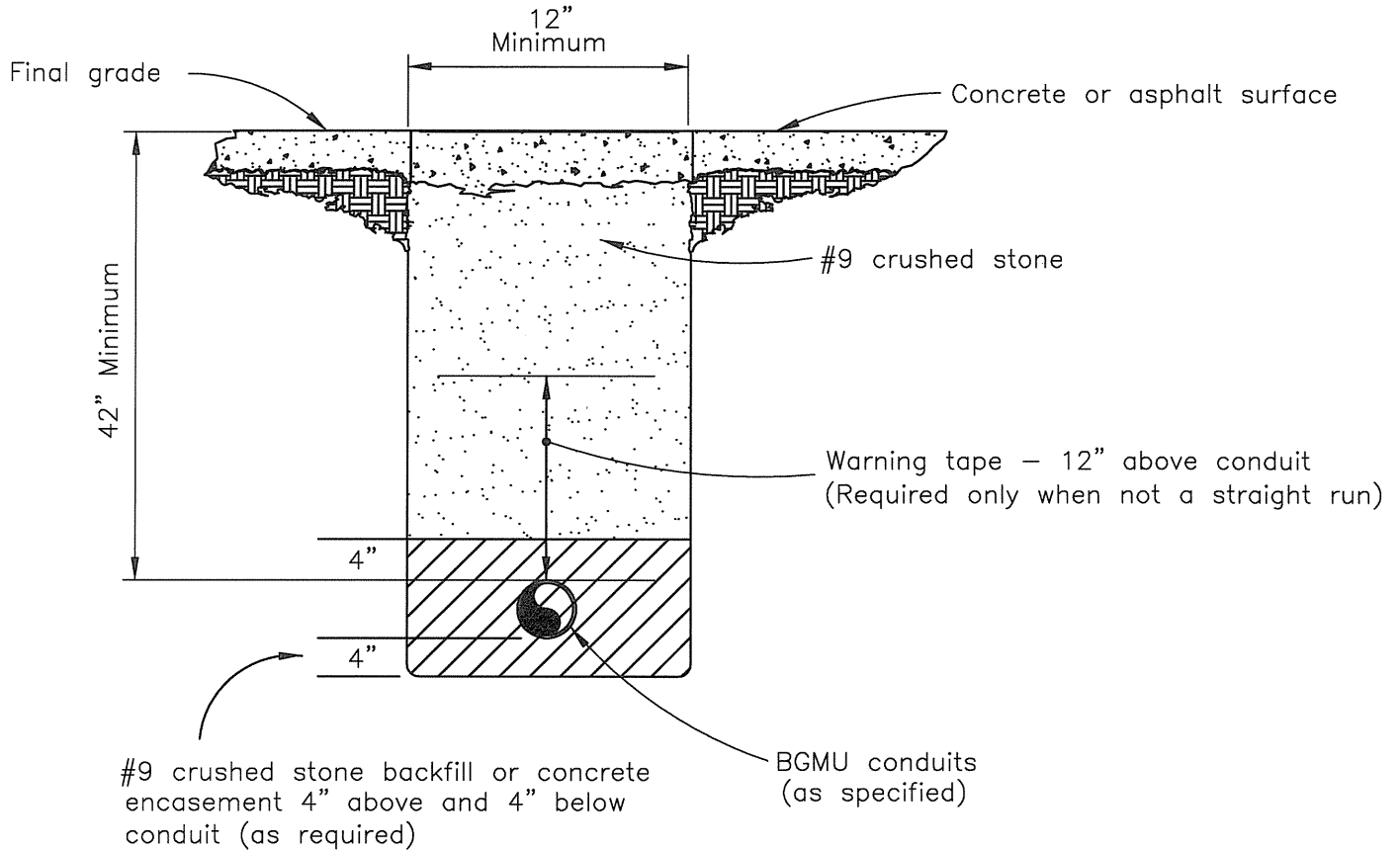


### NOTE:

1. All secondary conduit to be 2 1/2" or 3" schedule 40 PVC unless otherwise specified.
2. Warning tape required if other than straight run of conduit.
3. Excavation, conduit, encasement and backfill by Owner/Developer.
4. Install nylon pull string with a minimum rating of 150 lbs. breaking strength in each conduit.
5. Power conductor furnished by BGMU.

## SECONDARY EXCAVATION IN OPEN AREA

## SECONDARY TRENCH DETAIL

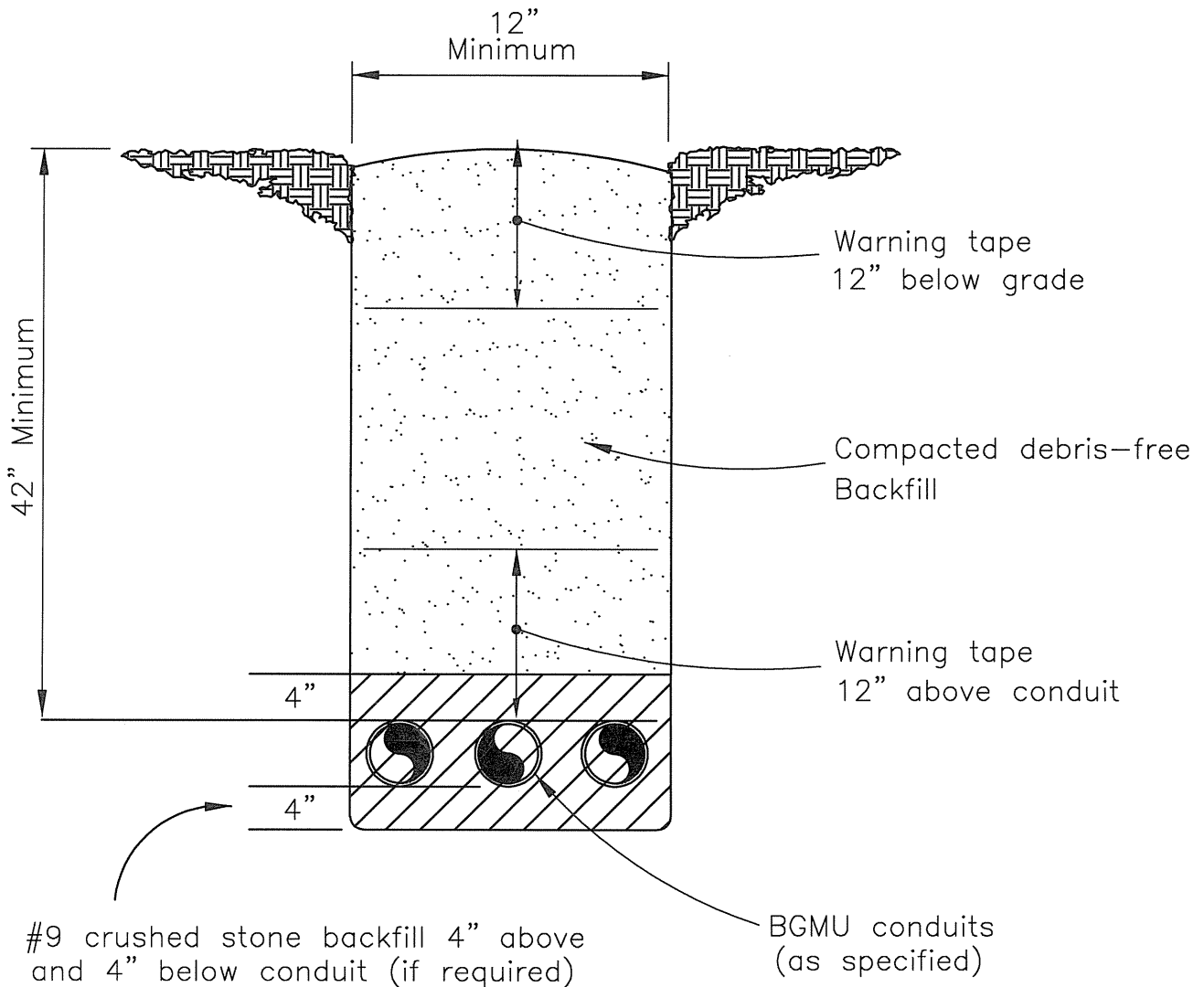


### NOTE:

1. For conduit under a load bearing surface use schedule 40 PVC with 4" concrete encasement around conduit or use schedule 80 PVC.  
#9 crushed stone backfill is required for either situation.
2. Warning tape required if other than straight run of conduit.
3. Excavation, conduit, encasement and backfill by Owner/Developer.
4. Install nylon pull string with a minimum rating of 150 lbs. breaking strength in each conduit.
5. Power conductor furnished by BGMU.
6. Must comply to city street cut requirements.

### SECONDARY EXCAVATION UNDER LOAD BEARING SURFACES

# PRIMARY TRENCH DETAIL

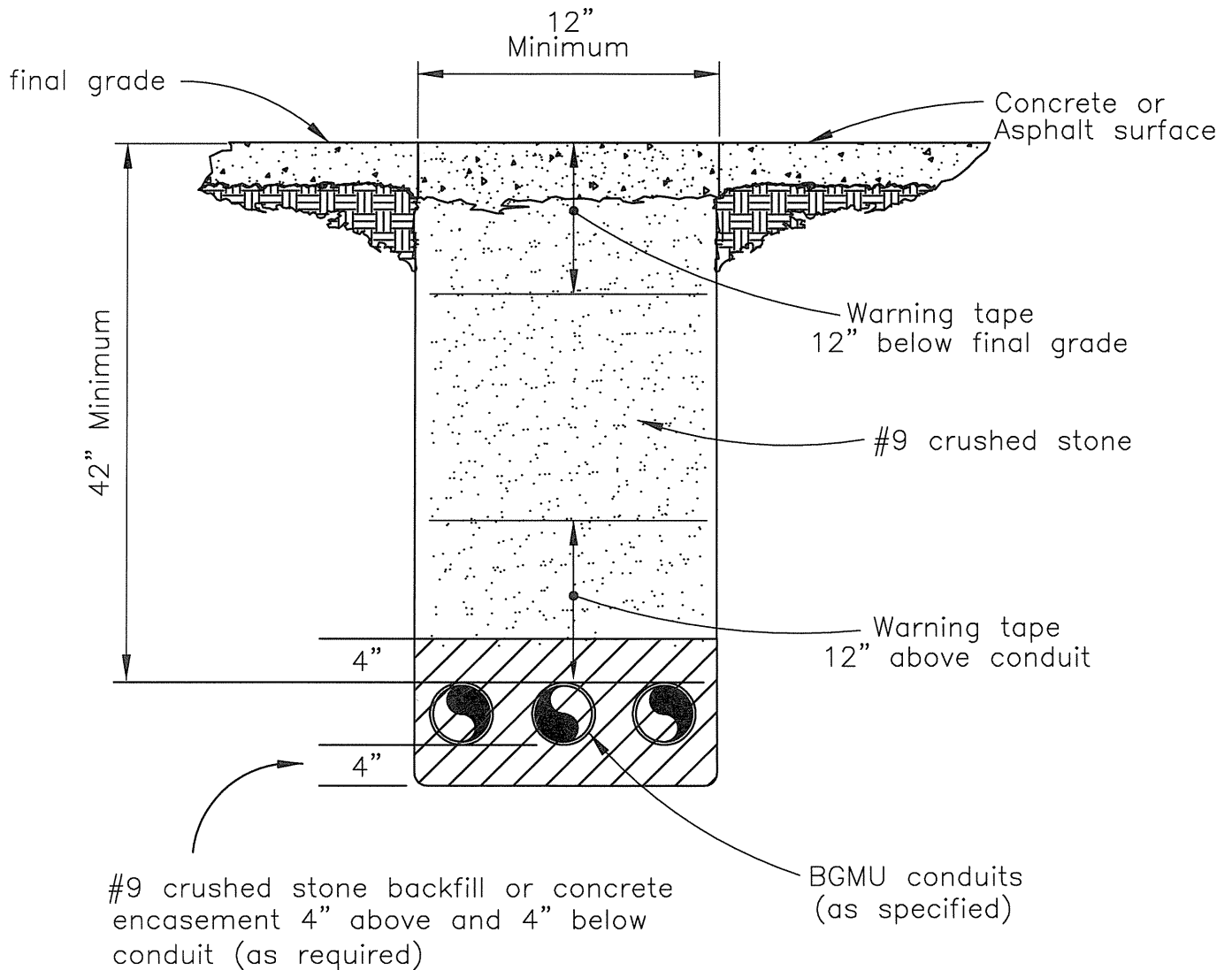


NOTE:

1. Excavation, conduit, encasement and backfill by Owner/Developer.
2. Install nylon pull string with a minimum rating of 150 lbs. breaking strength in each conduit.
3. Power conductor furnished by BGMU.

## PRIMARY EXCAVATION IN OPEN AREA

## PRIMARY TRENCH DETAIL



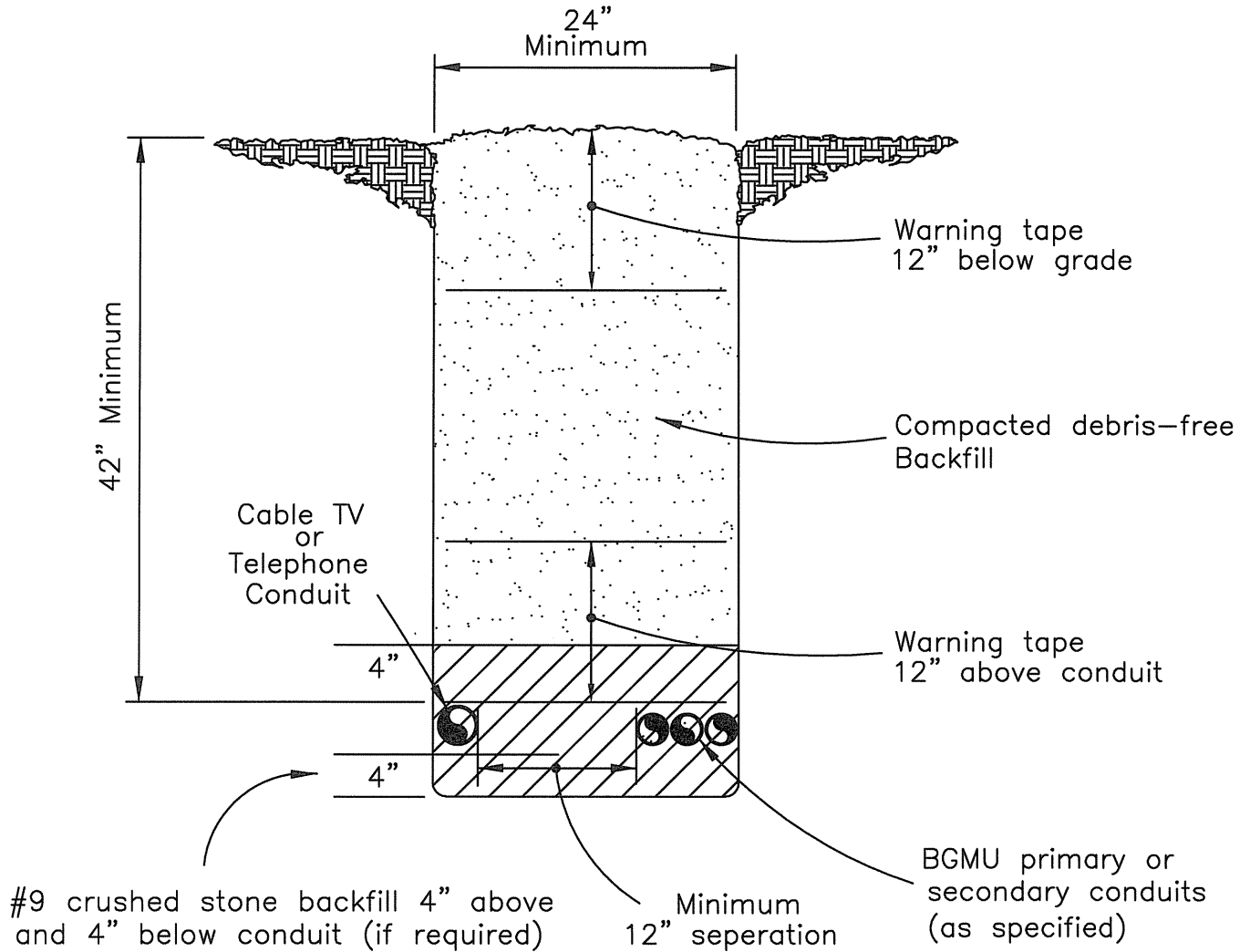
### NOTE:

1. For conduit under a load bearing surface use schedule 40 PVC with 4" concrete encasement around conduit or use schedule 80 PVC. #9 crushed stone backfill is required for either situation.
2. Must comply to city street cut requirements.
3. Excavation, conduit, encasement and backfill by Owner/Developer.
4. Install nylon pull string with a minimum rating of 150 lbs. breaking strength in each conduit.
5. Power conductor furnished by BGMU.

### PRIMARY EXCAVATION UNDER LOAD BEARING SURFACES

# JOINT PRIMARY AND SECONDARY TRENCH DETAIL

(WHERE APPROVED)

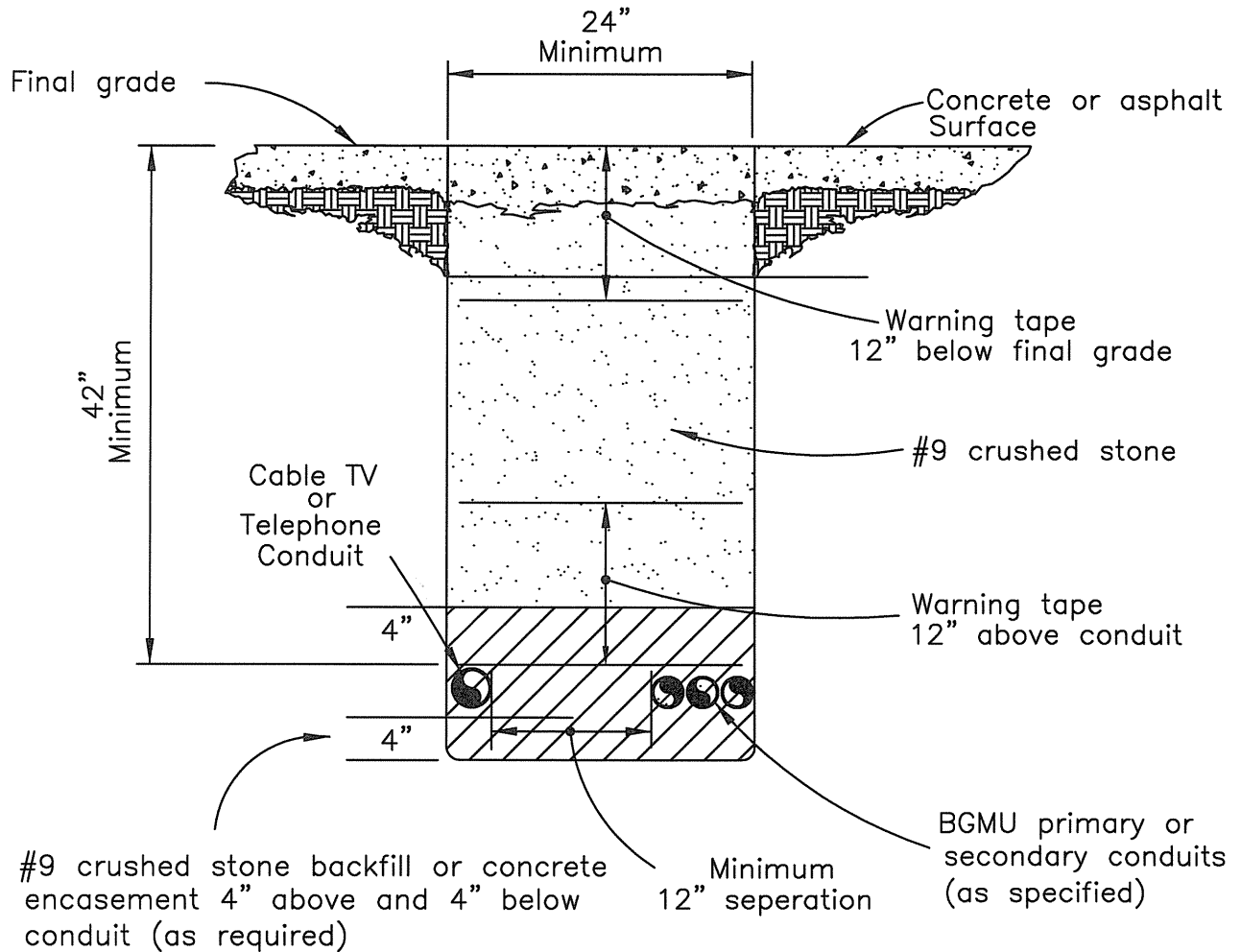


## NOTE:

1. Excavation, conduit, encasement and backfill by Owner/Developer.
2. Install nylon pull string with a minimum rating of 150 lbs. breaking strength in each conduit.
3. Power conductor furnished by BGMU.

PRIMARY AND SECONDARY EXCAVATION IN OPEN AREA FOR DUAL UTILITIES

## JOINT PRIMARY AND SECONDARY TRENCH DETAIL (WHERE APPROVED)



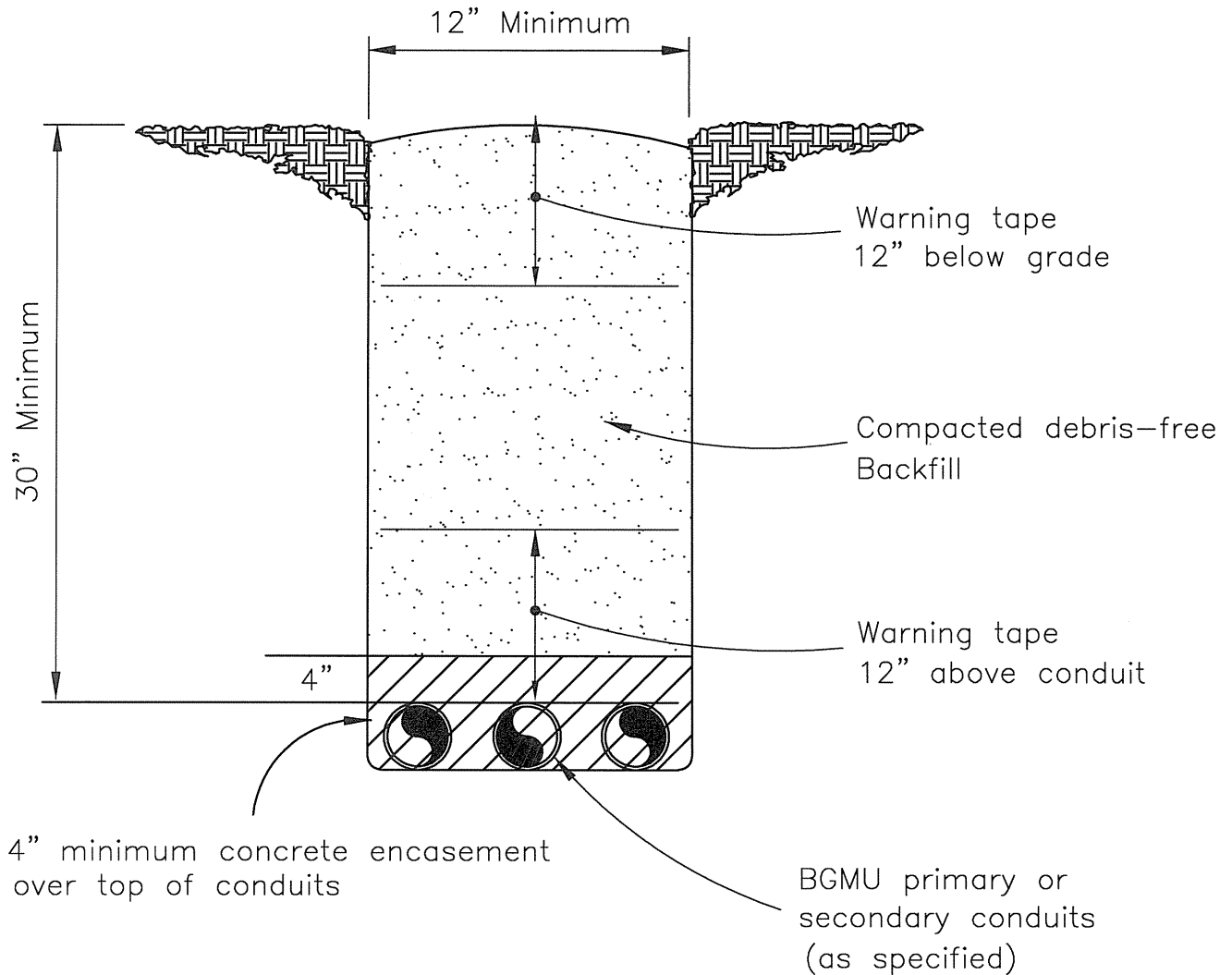
### NOTE:

1. For conduit under a load bearing surface use schedule 40 PVC with 4" concrete encasement around conduit or use schedule 80 PVC. #9 crushed stone backfill is required for either situation.
2. Must comply to city street cut requirements.
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4. Install nylon pull string with a minimum rating of 150 lbs. breaking strength in each conduit.
5. Power conductor furnished by BGMU.

PRIMARY AND SECONDARY EXCAVATION UNDER LOAD BEARING SURFACES FOR DUAL UTILITIES

## TRENCH DEPTH EXCEPTIONS

Exceptions to the cover requirements for primary and secondary conduit installations may be made only if necessary trench depth cannot be obtained due to rock, obstructions or other utilities. In these cases, depth of cover may be reduced when a concrete encasement is provided as shown below.



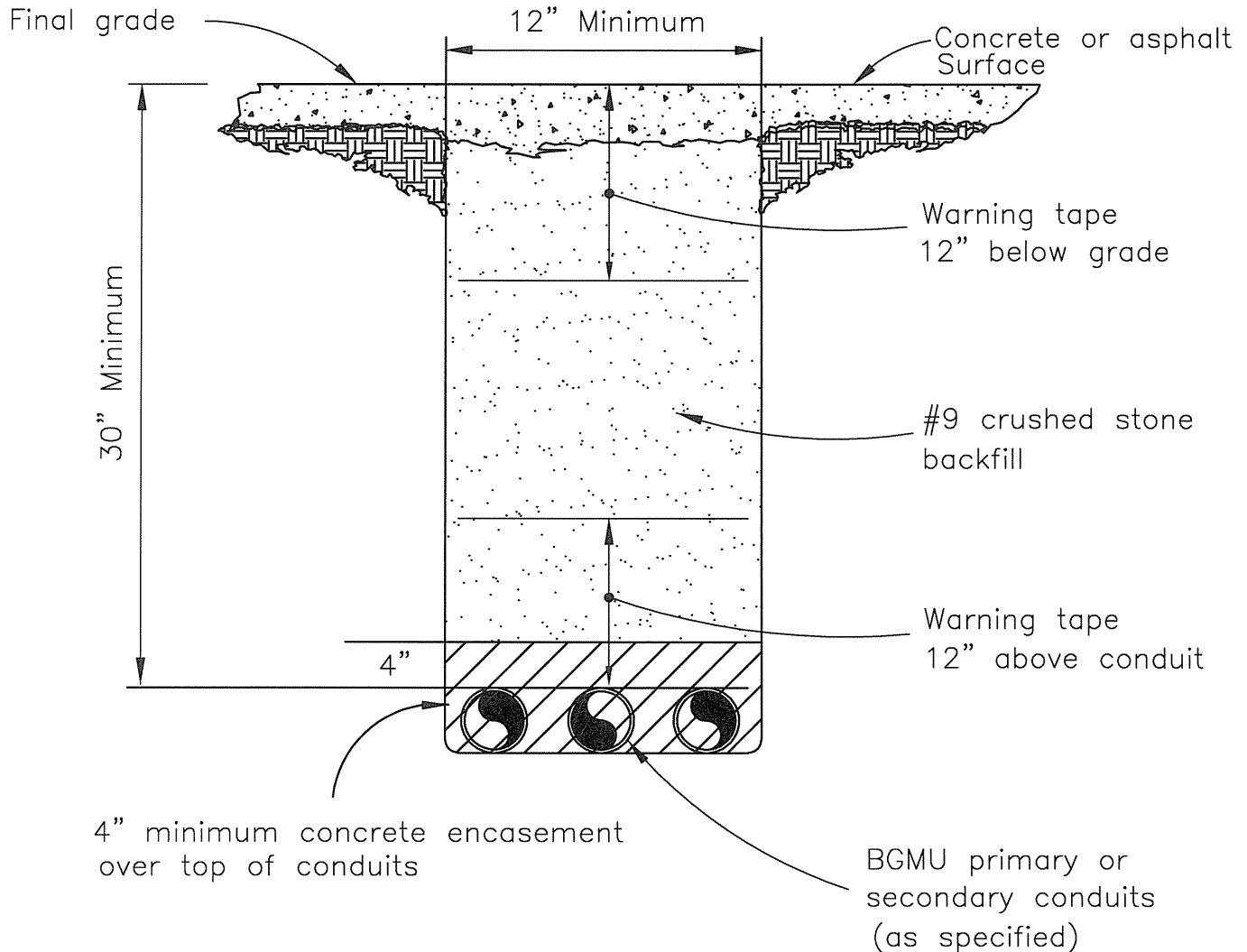
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PRIMARY AND SECONDARY EXCAVATION IN OPEN AREA

## TRENCH DEPTH EXCEPTIONS

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PRIMARY AND SECONDARY EXCAVATION UNDER LOAD BEARING SURFACES

**Bowling Green Municipal Utilities**  
**801 Center Street**  
**Bowling Green, KY 42102-7300**  
**(270) 782-1200**

**Electric Service  
Request Data  
Form**

**APPLICANT FOR SERVICE**

**GENERAL CONTRACTOR**

Name	Name
Contact	Contact
Address	Address
Phone	Phone

**CONSULTING ENGINEER**

**ELECTRICAL CONTRACTOR**

Name	Name
Contact	Contact
Address	Address
Phone	Phone

**PROJECT INFORMATION**

Project Name: _____
Project Location: _____
Type of Operation: _____

**ELECTRICAL ENTRANCE INFORMATION**

Electrical Entrance Size: _____ amp _____ 1 phase _____ 3 phase
Size and Number of Service Entrance Conductors: _____
Requested Service Voltage: _____ 120/240 _____ 120/208 _____ 277/480 _____ Other
Requested Service Type: _____ Overhead _____ Underground

**ELECTRICAL LOAD LISTING**

Heat _____ KW	Type Installation: _____
Aux. Heat _____ KW	Type Installation: _____
Water Heater _____ KW	_____ 1 phase _____ 3 phase
Air Conditioning _____ KW	_____ 1 phase _____ 3 phase
Lighting _____ KW	
Miscellaneous Small Appliances & Motors _____ KW	
Other _____ KW	

**TOTAL CONNECTED ELECTRICAL LOAD INFORMATION**

Total Electrical Load _____ KW- 3 phase _____ KW- 1 phase
Anticipated Future Load _____ KW- 3 phase _____ KW- 1 phase
Anticipated Demand Factor _____ %

Note: The Demand Factor is the ratio of the maximum anticipated demand to the total connected load. This value is important in determining the size of facilities to be installed and it also is used to determine the maximum contract demand on the Customer's Power Contract. If a demand factor is not provided then BGMU will, in most cases, assume a value of 80% (.80).

