Safety First

Electric Service and Meter Manual

Written by:

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Revised 11/28/23

aes Indiana

Forward

The Electric Service & Meter Manual is intended for use of electrical contractors, engineers, architects, and others in the planning or installation of electric services and metering facilities on the AES Indiana's system. The Electric Service & Meter Manual is not intended as an instruction manual for untrained persons. This manual establishes rules and regulations as well as the latest practices in service installations. In the event conditions arise which are not specifically covered in this manual, AES Indiana shall be consulted to determine the applicable requirements.

AES Indiana reserves the right to review and approve the design and layout of all new electrical service facilities to be connected to the power system to assure the customer's equipment is compatible with the company's design standards and will not in any way diminish continuity of service to its customers.

All customers' electrical installations shall conform to the requirements of local ordinances and inspection authorities as well as rules and regulations of AES Indiana, as approved by the Indiana Utility Regulatory Commission, the National Electrical Safety Code, and the Indiana Electrical Code where applicable. All installations shall be approved by the authority having jurisdiction before connection to power is made. This edition of the Electric Service & Meter Manual (Goldbook) references the Indiana Electrical Code which is the National Electrical Code as adopted by the State of Indiana with the Indiana Amendments.

All previous editions of the Electric Service & Meter Manual are hereby superseded, as well as any other AES Indiana publications prior to issuance of this edition.

The Electric Service & Meter Manual is divided into; Introductory Information, seven Parts and seven Groups of drawings as follows:

1. Introductory information contains District Maps, Important Notices and required data for obtaining electric service.
2. Six parts that detail the rules for obtaining electric service on the AES Indiana system plus one part concerning power quality and reliability.
3. GB1-XXX are drawings that generally cover single phase overhead and underground meter fittings and cabinets.
4. GB3-XXX are drawings that generally cover three phase overhead and underground meter fittings and cabinets
5. GB4-XXX are drawings that generally cover service drops and attachments.
6. GB5-XXX are drawings that generally cover service laterals and service points.
7. GB6-XXX are drawings that generally cover junction cabinets and boxes for service laterals.
8. GB7-XXX are drawings that generally cover equipment pads, pole risers, standard fault currents, transfer switches, etc.
9. GB8-XXX are drawings that are for the use of government agencies only for obtaining service for traffic signals, signs, street lighting, etc.

Where to obtain information

Please contact our website https://apps.aesindiana.com/goldbook/ for the most current AES Indiana Electric Service and Meter Manual (Gold Book). To be automatically notified of the latest revision, please send a blank e-mail to charlie.eldridge@aes.com with "GOLDBOOK CHANGES" and YOUR NAME in the subject line.

The "Gold Book" is in an Adobe Acrobat Reader (pdf) format, click on link Free Adobe Acrobat Reader for a free software download.

Contact information by subject

Mailing address

AES Indiana
Standards, Code Compliance, & Quality Control
1230 West Morris Street
Indianapolis, Indiana 46221-1744
ipl.standards@aes.com

Office addresses:
Main Office, Electric Building - One Monument Circle
Customer Service Center - 2102 N. Illinois Street
Arlington Service Center - 3600 North Arlington Avenue
Morris Street Service Center - 1230 West Morris Street

All metering equipment is available at the Arlington Service Center

Contractor information

Type of service

For ordering service connection:	New & altered single (1) phase	(317) 261-8222
	0-200 ampere	(317) 261-8222
	New & altered three (3) phase over 200 ampere contact engineering	GB0-100, GB0-110
	Construction or temporary	(317) 261-8222

For ordering service removal

Wrecking / Removal	(317) 261-2700, (317) 630-5623 Fax

Electrical inspection authorities covering territory served by AES INDIANA

City of Indianapolis *(Marion County, excluding Beech Grove, Lawrence, Southport and Speedway)*	Department of Business and Neighborhood Services City of Indianapolis 1200 Madison Ave. Suite 100 Indianapolis, IN 46225 https://www.indy.gov/agency/department-of-business-and-neighborhood-services	General Information Ph: (317) 327-8700
To Be Determined Permit Questions e-mail Electrical inspections questions e-mail Construction Services direct line Automated inspection request line Self-Certification tag line	Supervisor, Bureau of Construction Services (BCS) mailto:permitquestions@indy.gov mailto:ele.inspectionquestions@indy.gov available from 8 - 5	Ph: (317) 327-8938 Ph: (317) 327-5525 Ph: (317) 327-8408
Beech Grove Mike Hughes	Electrical Inspector City Hall 806 Main Street Beech Grove, IN 46107	Ph: (317) 281-0898
Boone County Charlie Campbell	Electrical Inspector 116 W. Washington St., Rm. 101 Lebanon, IN 46052 8 AM – 9 AM & 3 PM – 4 PM Mon. thru Fri.	Ph: (765) 482-3821 Fax: (765) 483-5241
City of Cumberland (Hancock Co.)	8 AM –4 PM Mon. thru Fri.	Ph: (317) 894-6202 Fax (317) 894-6216
Greenwood Kenneth Seal	Electrical Inspector 300 S. Madison Avenue Greenwood, IN 46142	Ph: (317) 881-8698
Hamilton County (Carmel and Clay Townships Only)	Building & Electrical Inspectors 1 Civic Square Carmel, IN 46032	Ph: (317) 571-2444

If a correction is needed,
please send an e-mail with the correction to charlie.eldridge@aes.com to have it corrected

Electrical inspection authorities covering territory served by AES INDIANA

Hancock County Scott Williams Dan Cameron	Court House Annex 111 American Legion Pl., Suite 146 Greenfield, IN 46140	Ph: (317) 462-1133
Hendricks County Steve Cox Aaron Ross	Building Inspector's Office 355 S. Washington St., Suite 212 Danville, IN 46122	Ph: (317) 745-9255
Johnson County Wes Harris	Building Commissioner and Inspectors 86 W. Court Street Court House Annex Franklin, IN 46131 Between 8:00 - 9:00 AM	Ph: (317) 346-4350
Lawrence	Electrical Inspector 9001 E. 59th Street, Suite 300 Lawrence, IN 46216	Ph: (317) 545-8787
Mooresville Tim Bennett	City Electrical Inspector 4 E. Harrison Street Mooresville, In 46158	Ph: (317) 831-9545
Morgan County Scott Troutman Mike Snider	Electrical Inspector 180 S. Main St., Suite 204 Martinsville, IN 46151	Ph: (765) 342-1060
Owen County Rick Smeltzer	Electrical Inspector 86 E Market St. Spencer, IN 47460	Ph: (812) 829-5017

If a correction is needed,
please send an e-mail with the correction to charlie.eldridge@aes.com to have it corrected

Electrical inspection authorities covering territory served by AES INDIANA

Putnam County		
Art Kenworthy	Building Inspector 1542 S. Bloomington St., Suite 1500 Greencastle, IN 46135	Ph: (765) 653-5727
Shelby County		
David Adams	Electrical Inspector 25 West Polk Shelbyville, IN 46176	Ph: (317) 392-6480
Southport		
Dave Keiser	Electrical Inspector	Ph: (317) 610-6496
Speedway		
Kevin Schrader	Electrical Inspector 1451 N. Lynhurst Dr. Speedway, IN 46224	Ph: (317) 281-7120
Whitestown		
Dave Taylor	Electrical Inspector 6210 S. 700 East, Suite 200 Whitestown, IN 46075	Ph: (317) 942-1553
Zionsville	Building Inspector	
Adam Holman	Planning Department	Ph: (317) 873-8246
Mike Lathrop	1100 W. Oak St. Zionsville, IN 46077	Ph: (317) 873-8248

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please send an e-mail with the correction to charlie.eldridge@aes.com to have it corrected

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For the use of government agencies only

It is unlawful to break seals on company meters or to disconnect meters from service without notifying the service connection division on telephone number (317) 261-8133. (see section 555)

Electricity used on construction services shall be metered. Services that have been disconnected by the company are to be restored only by AES Indiana's personnel. Unmetered circuits and jumpered meter bases will be disconnected, an energy diversion charge, and pro-rated billing will be assessed. (see section 555)

It is unlawful to attach and/or mount any customer owned equipment, wire, cable, lights, signs, etc. To any of AES Indiana's facilities without obtaining an attachment permit. (see section 180)

aes Indiana

"Holey Moley sez"

Don't dig blind

Electric	**Red**
Gas or oil	**Yellow**
Communications	**Orange**
Potable water	**Blue**
Sewer	**Green**
Reclaimed water & irrigation lines	**Purple**
Temporary survey markings	**Pink**
Proposed excavation	**White**

All of the following information is needed when calling Indiana 811:

- County
- Township
- Street address
- Type of work
- Extent of work
- Name of caller and title
- Telephone number
- Best time to call
- Start date and start time
- Contractor
- Contractor address

Indiana 811 Know what's below.

Call two working days before you dig

Underground plant protection information

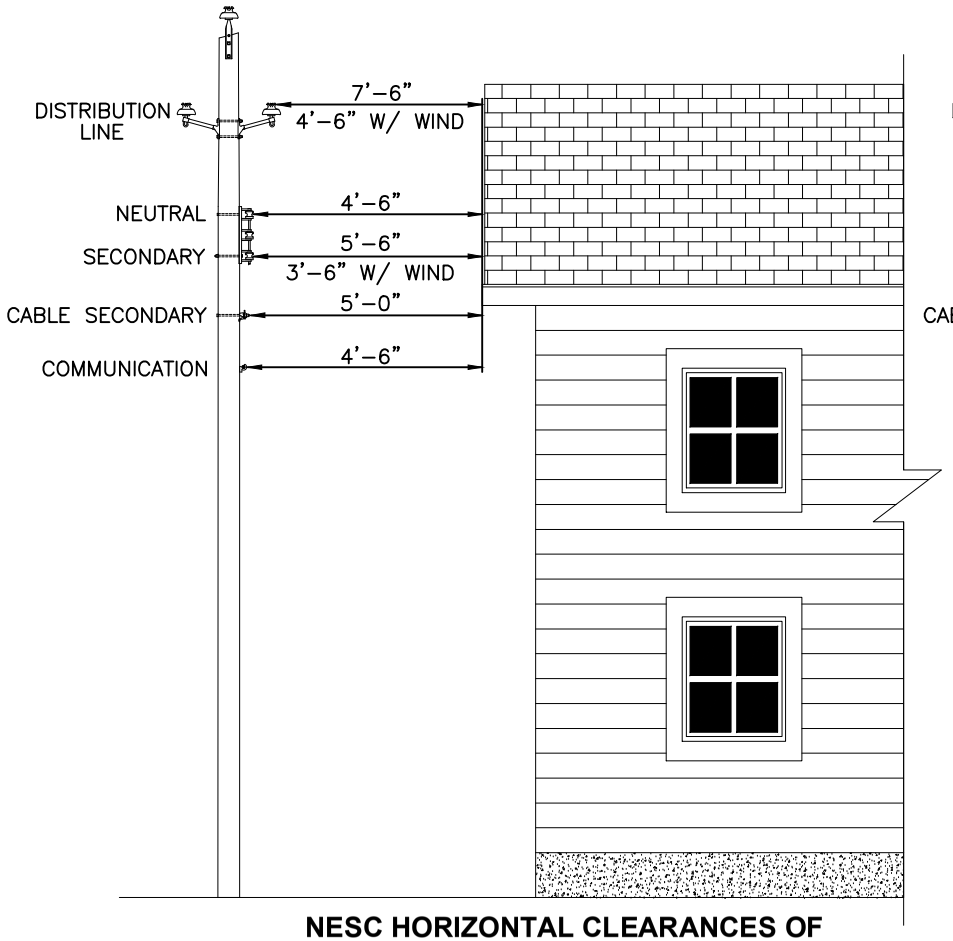
Toll free
call 811
before you dig

REV 6/6/17

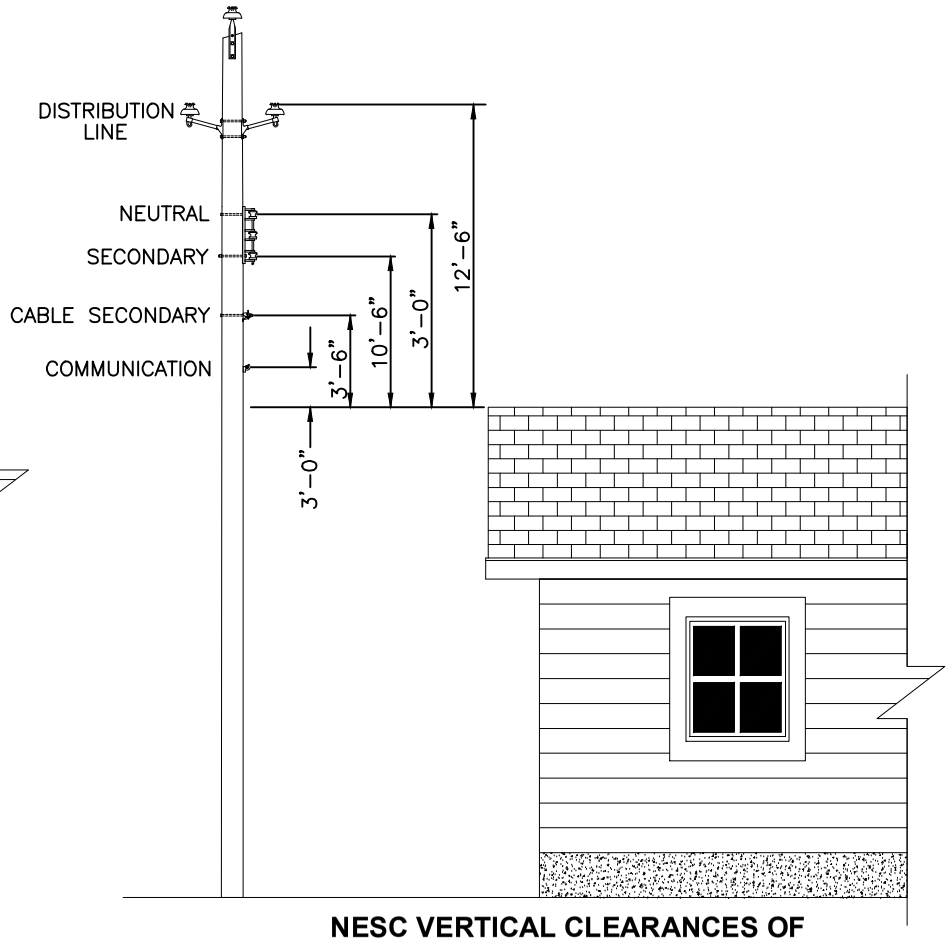
GB0-020

REV 6–8–15

CODE CLEARANCES



NESC HORIZONTAL CLEARANCES OF WIRES, CONDUCTORS AND CABLES FROM BUILDINGS



NESC VERTICAL CLEARANCES OF WIRES, CONDUCTORS AND CABLES FROM BUILDINGS

aes Indiana

GB0-025

- THE INDIANAPOLIS POWER & LIGHT COMPANY IS CONCERNED ABOUT YOUR SAFETY AND THE SAFETY OF THE PUBLIC. THE DIMENSIONS IN THE ABOVE DRAWINGS ARE MINIMUM CLEARANCES THAT SHALL BE MAINTAINED AFTER CONSTRUCTION OF YOUR PROJECT. THE NATIONAL ELECTRICAL SAFETY CODE IS THE LAW IN THE STATE OF INDIANA AND THE DIMENSIONS SHOWN SHALL BE OBSERVED. GENERALLY, THE OVERHEAD HIGH VOLTAGE WIRES ARE NOT INSULATED FROM CONTACT.

- DURING CONSTRUCTION OF YOUR PROJECT AND THE LINE IS A DISTRIBUTION LINE (NOT A TRANSMISSION LINE), STAY AT LEAST 10 FEET AWAY. THIS CLEARANCE DISTANCE IS 20 FEET FOR CRANES AND DERRICKS USED IN CONSTRUCTION UNLESS YOU HAVE TAKEN OSHA-MANDATED ENCROACHMENT PREVENTION PRECAUTIONS. IF YOU ARE UNSURE OF THE POWER LINE'S VOLTAGE, CONTACT THE INDIANAPOLIS POWER & LIGHT COMPANY BEFORE WORK BEGINS. FOR SPECIFIC CLEARANCE REQUIREMENTS VISIT WWW.OSHA.GOV.

- **IF THE INDIANAPOLIS POWER & LIGHT COMPANY OVERHEAD LINES ARE CLOSE TO YOUR STRUCTURE, PLEASE CALL (317) 261-8196 IN ORDER TO ENSURE SAFETY AND COMPLIANCE WITH THE NATIONAL ELECTRICAL SAFETY CODE AND OSHA REGULATIONS.**

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The following information is required for electric service from the company. All fields are mandatory.

Service address _____

Zip code _____

Customer name (Bill payer when the service is initially engergized) _____

Mailing address _____

Mailing city/state/zip code _____

Federal tax ID _____

Is this a registered business in the state of Indiana? Yes ☐ No ☐

You must be registered. Please do so at https://www.in.gov/sos/business/. Contact the IPL business line on (317) 261-8444 if you have questions.

Responsible party (To answer questions regarding the bill). _____

Phone number _____

Service size amperes _____

Service type 1Ø, 3-Wire ☐ 3Ø, 4-Wire Wye ☐ 3Ø, 4-Wire Delta ☐

Voltage 120/240 V ☐ 120/208 V ☐ 277/480 V ☐

kW Load _____

Permanent ☐ Temporary ☐

Owner ☐ Tenant ☐

Date wanted (service ready?) _____

Date of full operation _____

Electrician's company name _____

Electrician's name _____

Phone number _____

Form completed by: _____

Title/role: _____

Commercial / industrial information sheet

REV 4-24-18

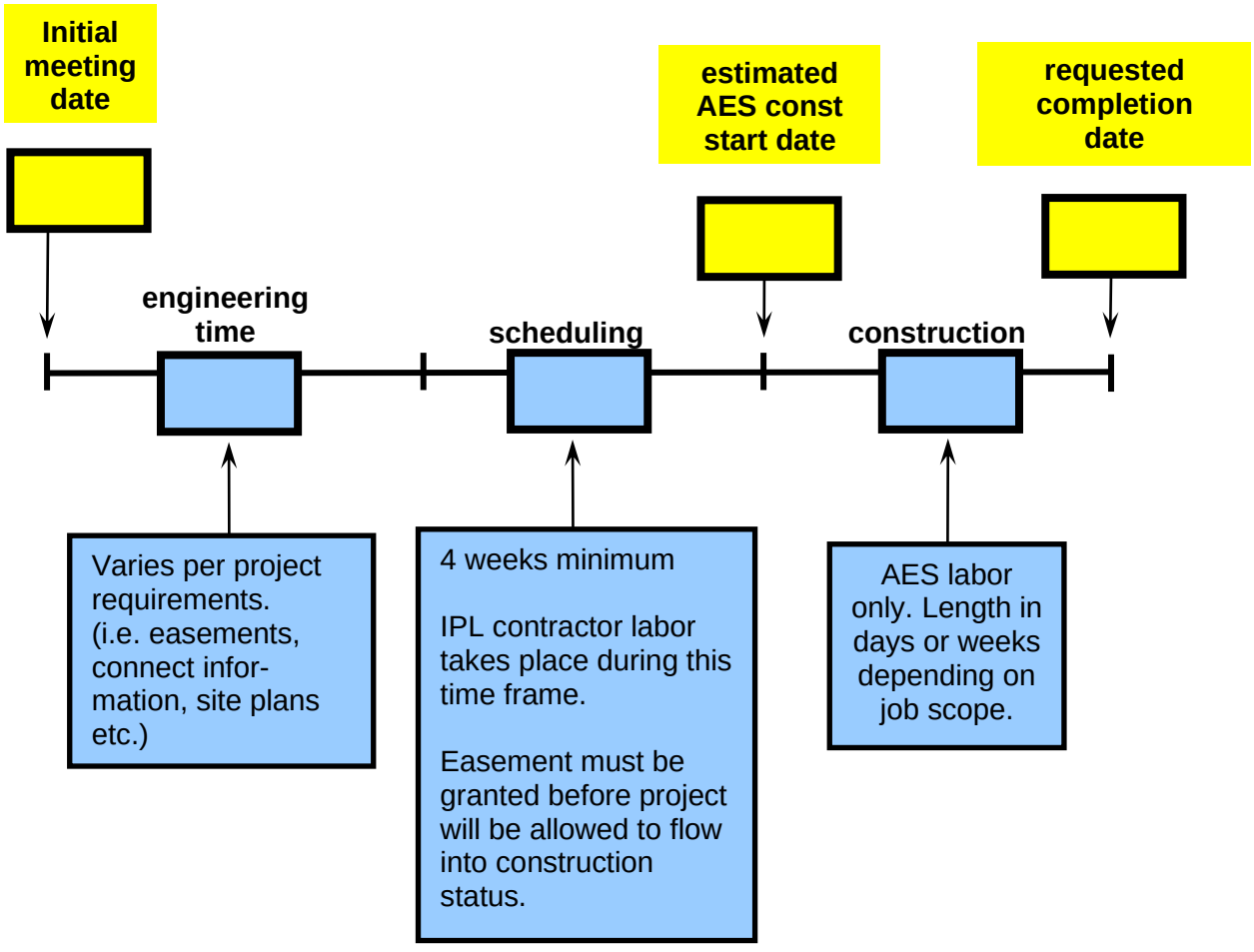
GB0-030

Work management

- The flow chart below is an essential tool in helping our customers and Project Designers arrive at an accurate project completion date.
- Since each project is unique, the requirements for successful project completion will vary.
- Please keep in mind that requirements such as easements and railroad crossings require longer lead times and have the potential to greatly affect the timeliness of the project.
- AES Indiana's Project Designers will work with you to determine these requirements as well as the expected project completion date.

Potential causes for delay

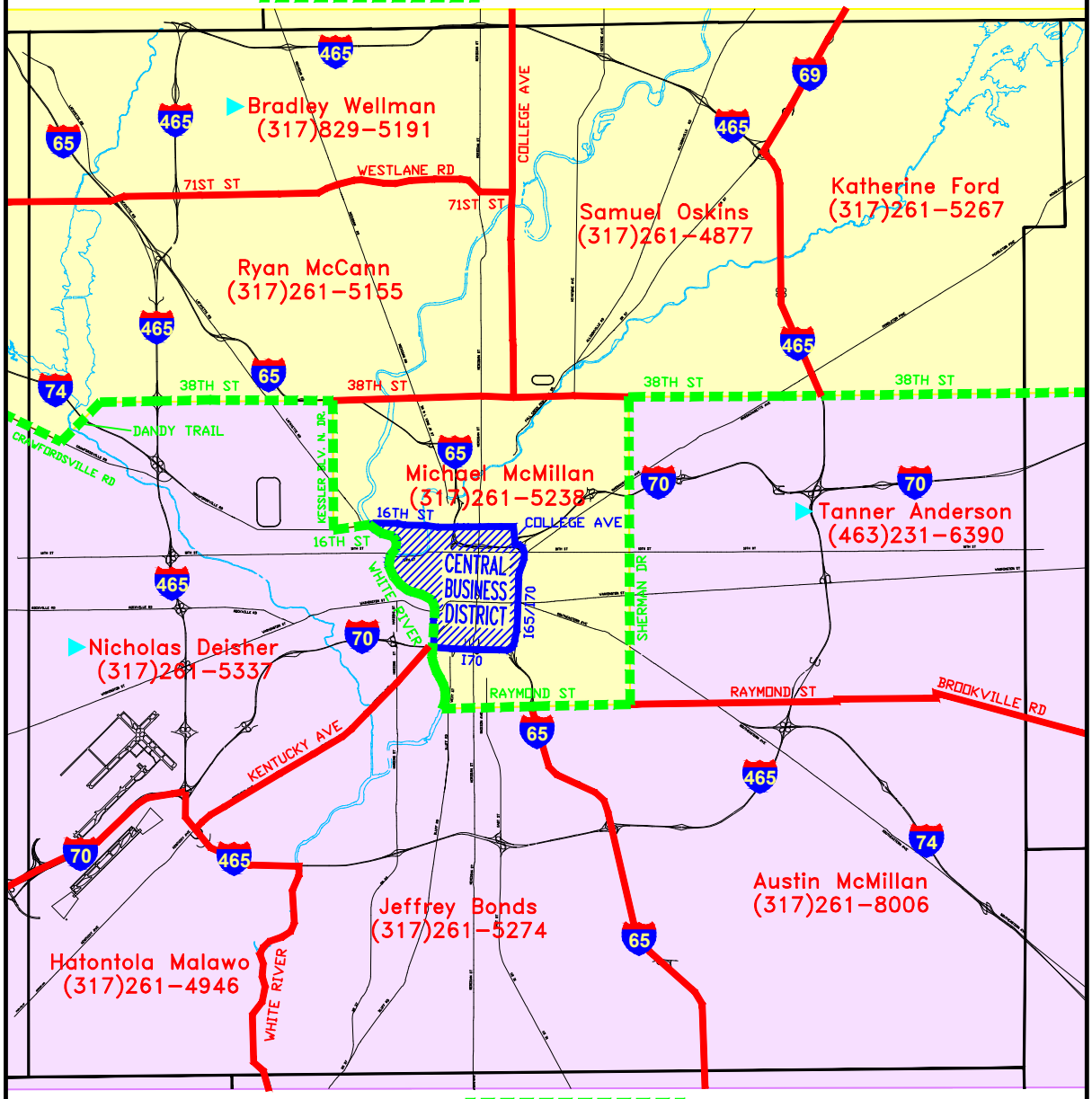
- Delays in Project Designer receiving site plans on time.
- Delays in receiving customer load and/or billing information.
- Not obtaining an easement in a timely manner.
- Not obtaining necessary permits.
- Weather delays - excessive rain or storms in our service territory and surrounding area.
- Failure to place Self Certification/City-Inspection Tag in meter equipment.



aes Indiana

NORTH DISTRICT
TEAM LEADER
Dan Davenport
(317)261-5497

SPECIAL PROJECTS ENGINEER
Nicholas Deisher
(317)261-5337



SOUTH DISTRICT
TEAM LEADER
Jordan Watkins
(317)261-6196

MAJOR OVERHEAD PROJECTS
MANAGER
David Skeem
(317)261-3480

Nicholas Allen	(317)261-5157
Kyle Dunn	(317)261-8952
James Herin	(317)261-4980
Asunda Herath	(463)281-8730
Martez Johnson	(317)261-8694
Jonathan Lloyd	(317)261-6527
Dieon Roy	(317)261-8518
Terry Short	(317)261-8732

MAJOR UNDERGROUND PROJECTS

For Central Business District please refer to drawing GB0-110.

NOTE:

EMAIL ADDRESS FORMAT IS
firstname.lastname@aes.com

CUSTOMER PROJECTS ENGINEERING DISTRICT MAP

▶ = REVISION MARK
REV 5-8-24

GB0-100

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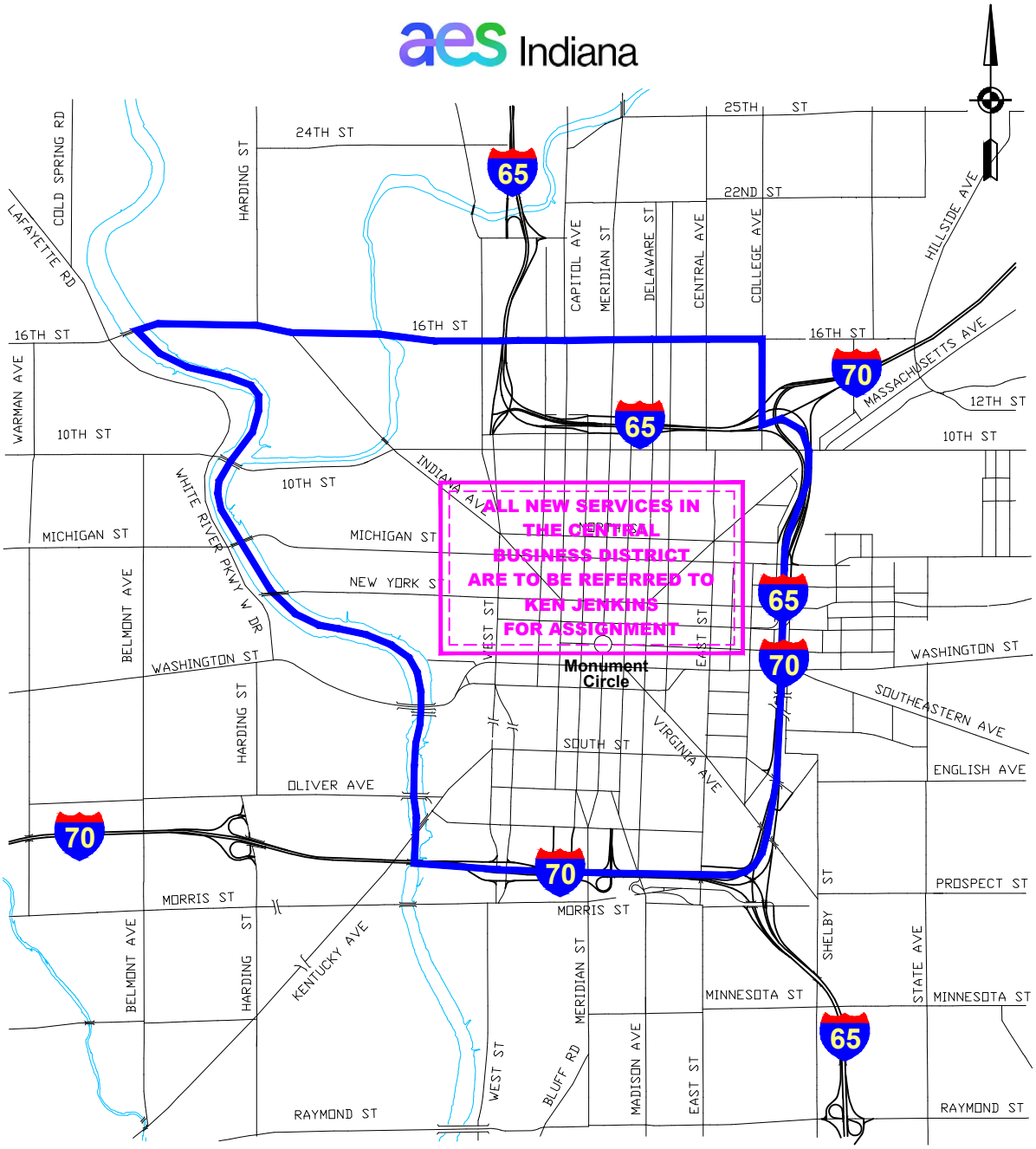

FIRST CONTACT PERSON FOR NEW CENTRAL BUSINESS DISTRICT (CBD) SERVICES (FOR SERVICES OUTSIDE THE CBD PLEASE REFER TO GB0-100)

Ken Jenkins
(317)261-5193

Adam Hokanson	(317)261-8733
David Lufcy	(317)261-8955
▶ Larry Grinter	(317)261-5966
▶ Rachel LeMaire	(317)261-5108
Robert Page	(317)224-3175
Rob Wall	(317)261-5277

NOTE:

EMAIL ADDRESS FORMAT IS
firstname.lastname@aes.com

CENTRAL BUSINESS DISTRICT ENGINEERING DISTRICT MAP

MAJOR UNDERGROUND PROJECTS ENGINEERING TEAM

REV 11-18-23

GB0-110

Distributed Generation Contact Information

Level I Applications (10 kW or Smaller)

Contact:
Brandon Stuckey, Interconnections Analyst, (317) 224-5612
Email: aesindianainterconnection@aes.com

Level II and III Applications (Over 10 kW)

First Contact:
Account Management Executives shown on drawing GB0-120

Second Contact:
Brandon Stuckey, Interconnections Analyst, (317) 224-5612
Email: aesindianainterconnection@aes.com

Technical

Joshua Spalding, Planning, (317) 261-8615

Regulatory

Chad Rogers, Director, Regulatory Affairs, (317) 261-8983

NOTE:
EMAIL ADDRESS FORMAT IS
firstname.lastname@aes.com

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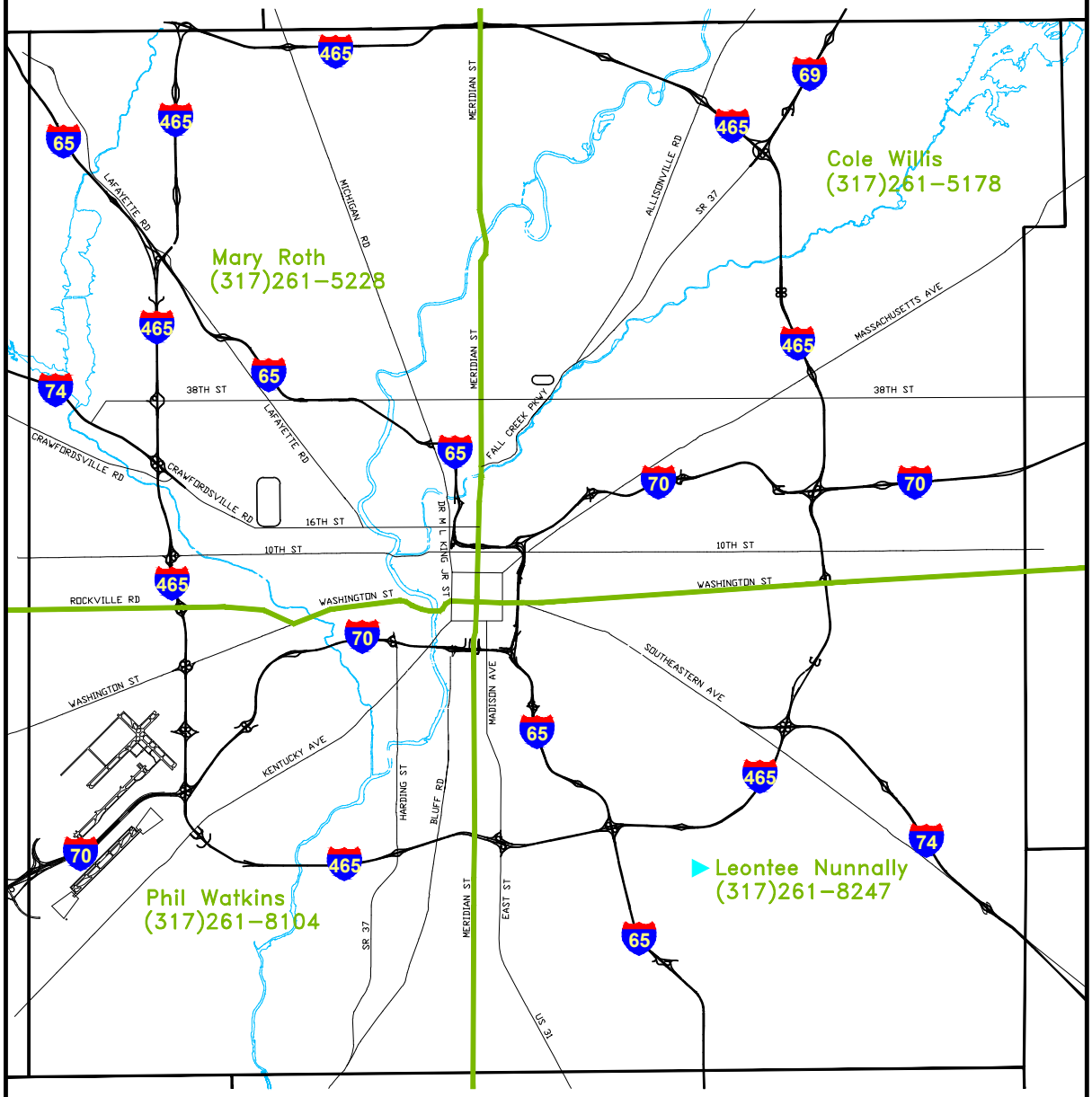


NOTE:

EMAIL ADDRESS FORMAT IS
firstname.lastname@aes.com

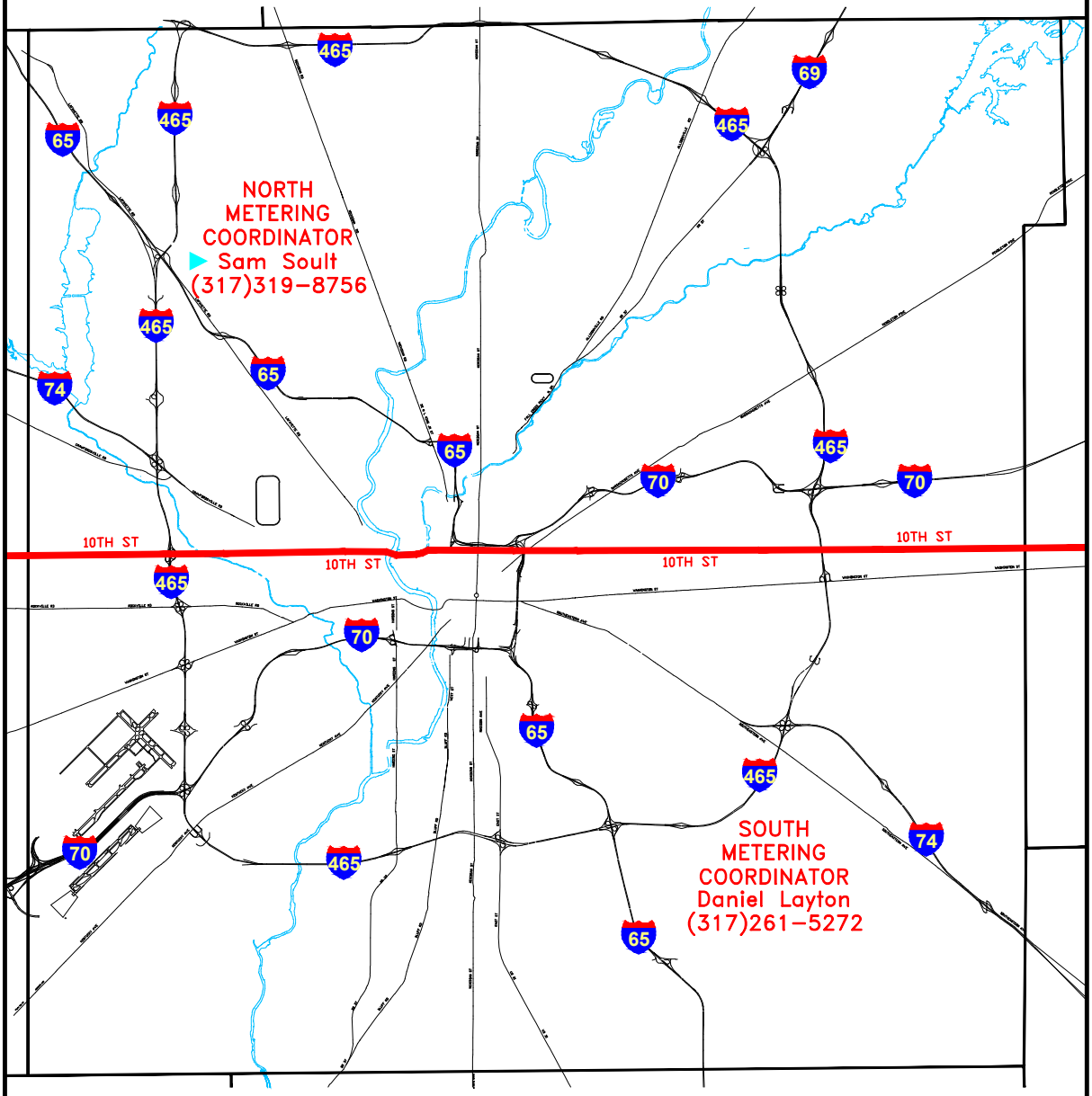
ACCOUNT MANAGEMENT EXECUTIVES

REV 3-13-24

▶ = REVISION MARK

GB0-120

aes Indiana



CUSTOMER SERVICE
METERING
TEAM LEADER
Michael Vores
(317)261-8106

NOTE:

EMAIL ADDRESS FORMAT IS
firstname.lastname@aes.com

METER INSTALLATIONS DISTRICT MAP

REV 11-21-23

▶ = REVISION MARK

GB0-130

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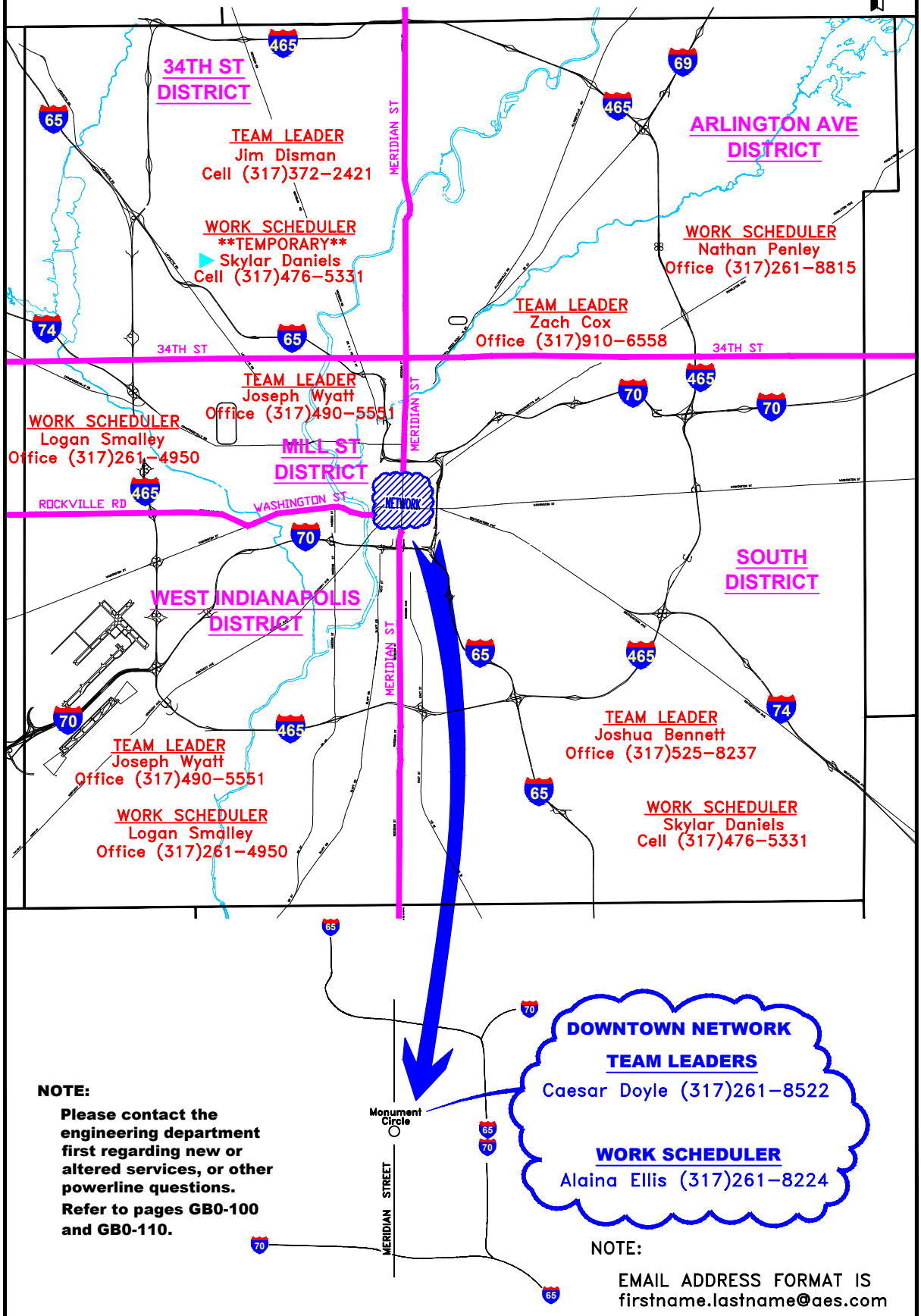


NOTE:

Please contact the engineering department first regarding new or altered services, or other powerline questions.

Refer to pages GB0-100 and GB0-110.

NOTE:

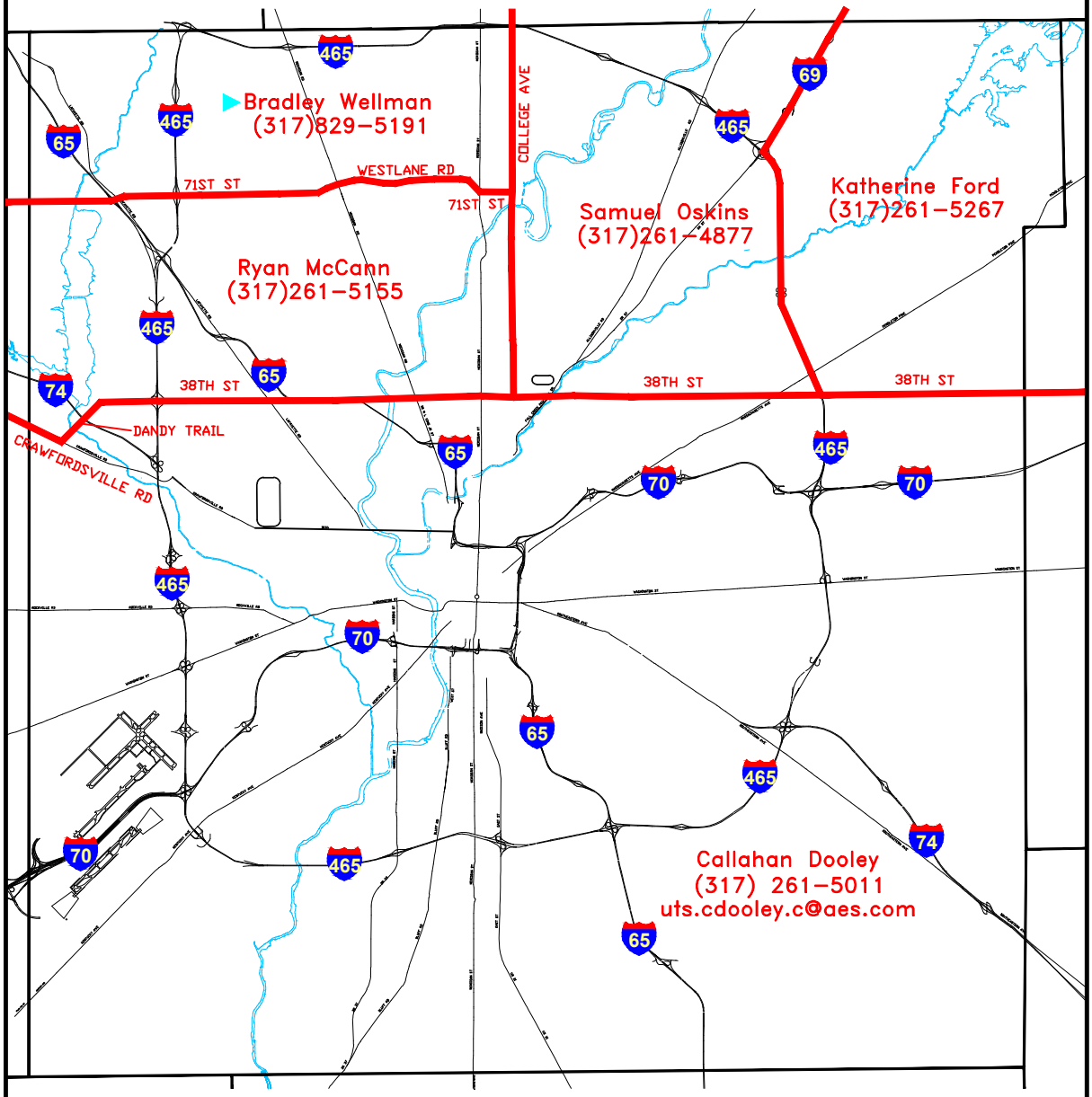
EMAIL ADDRESS FORMAT IS
firstname.lastname@aes.com

CONSTRUCTION AND MAINTENANCE DISTRICT MAP

▶ = REVISION MARK
REV 5-7-24

GB0-140

aes Indiana



NORTH TEAM LEADER
Dan Davenport
(317) 261-5497

SOUTH TEAM LEADER
▶ Jordan Watkins
(317) 261-6196

CONVERSION FROM AN OVERHEAD SERVICE DROP TO AN UNDERGROUND SERVICE LATERAL.

NEW SINGLE LOT UNDERGROUND SERVICE INSTALLATIONS.

UNDERGROUND SERVICE LATERAL RELOCATIONS.

UG RESIDENTIAL SERVICE ENGINEERING 400 AMPERES AND BELOW

REV 5-8-24 ▶ = REVISION MARK

GB0-150

aes Indiana

Michael Schaefer
(317) 261-5097
Team leader

Residential service installations and small commercial (non-CT metered) installations

Covers the entire Company service territory for the service connection crews

Monsanto Love
(317) 261-8672
Team leader

Underground construction

Covers the entire Company service territory:
Maintains and repairs residential services and small commercial (non-CT metered)

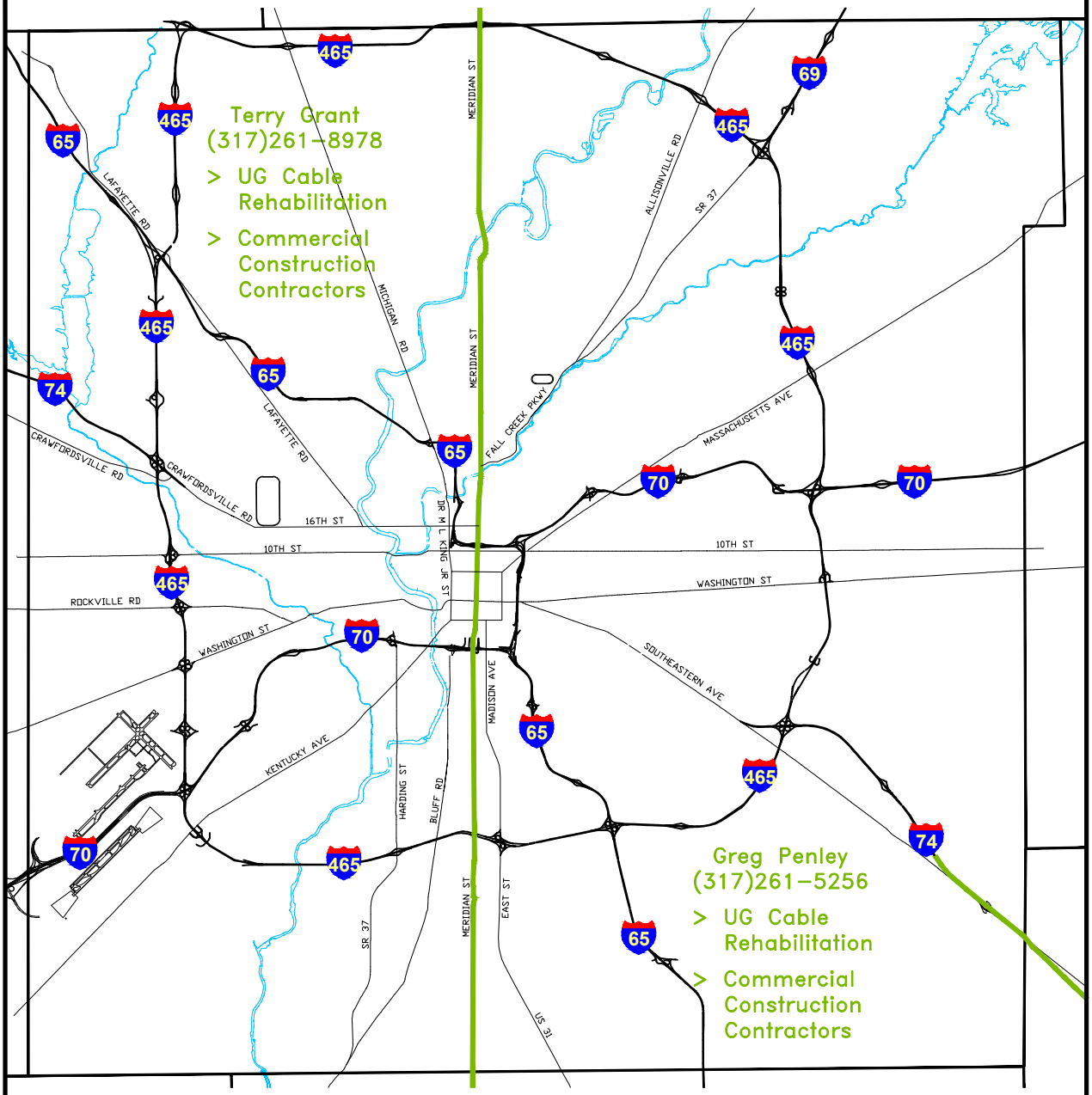
Note:
email address format is
firstname.lastname@aes.com

Residential service installations and small commercial (non-CT metered) installations

REV 05/17/22

GB0-160

aes Indiana



TERRITORY WIDE RESPONSIBILITIES

Terry Grant
- Service Installation Contractors

Greg Penley
- URD Construction Contractors

NOTE:

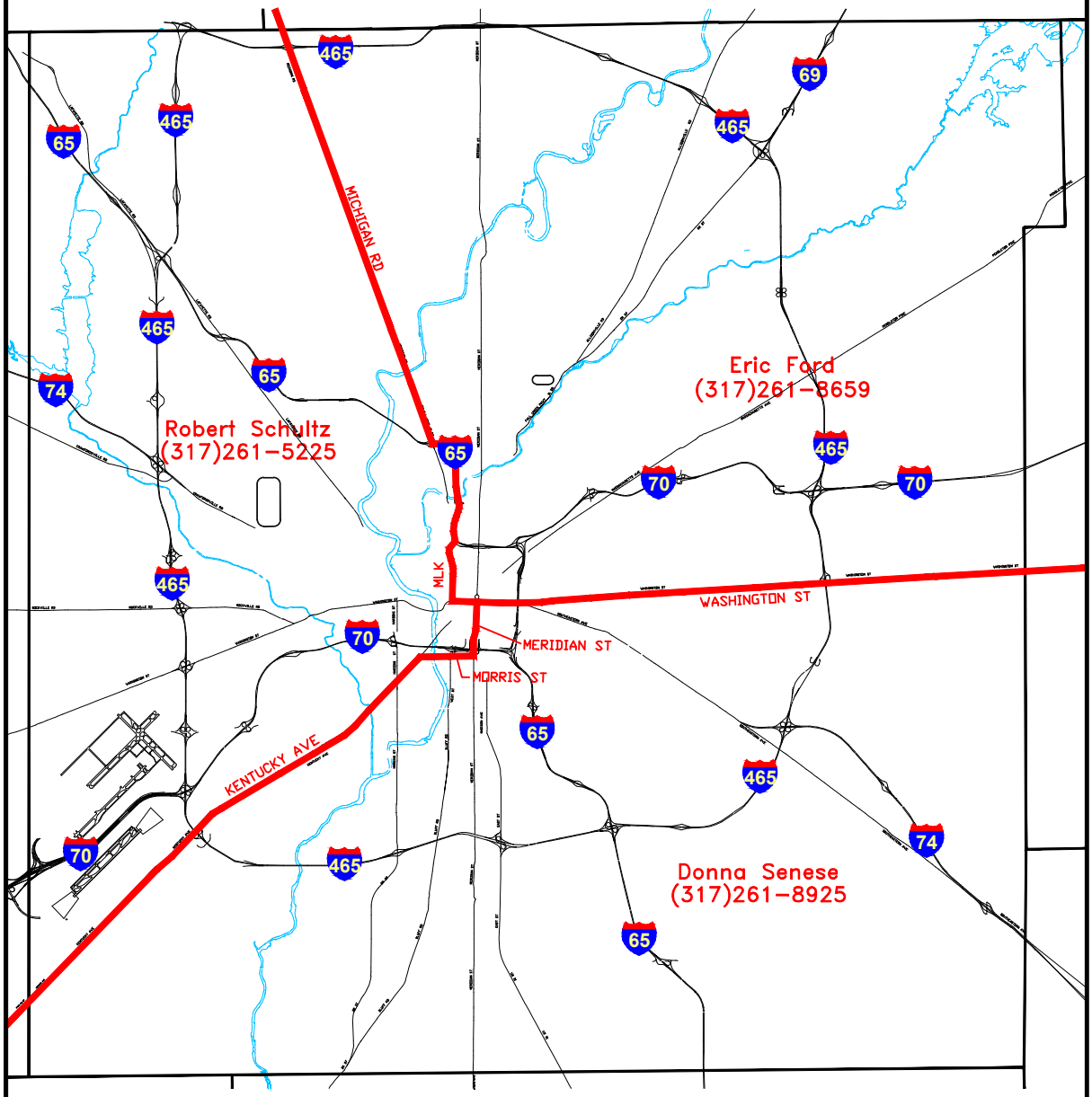
- EMAIL ADDRESS FORMAT IS firstname.lastname@aes.com

CONTRACT COORDINATOR RESPONSIBILITIES

REV 10-15-18

GB0-165

aes Indiana



CONSTRUCTION & MAINTENANCE CONTRACTOR COORDINATOR
Aaron Davis
(317)261-8025

LIGHTING DESIGN TEAM LEADER
▶ Eric Ford
(317)261-8659

NOTE:

EMAIL ADDRESS FORMAT IS
firstname.lastname@aes.com

STREET LIGHTING DISTRICT MAP

▶ = REVISION MARK
REV 5-7-24

GB0-170

aes Indiana

Michael Seybert
Contractor Coordinator
Transmission/Capital Work Tree Trimming
(317) 261-8092

Isaac Titche
Contractor Coordinator
TDSIC/Smart Grid Tree Trimming
(317) 261-8737

Seth Graves
Contractor Coordinator
Production/Cycle Tree Trimming
(Line Clearing in Residential and Commercial Areas)
(317) 261-8554

Each covers the entire service territory for the contracted tree trimming crews within their described work type.

Cody Flint
Manages the Production, Transmission, TDSIC, and Capital
(317) 261-8672

Covers the entire Company service territory:
Manages tree interference and removals with
the distribution and transmission lines.

Note:
email address format is
firstname.lastname@aes.com

Part I - GENERAL

Part I: General

100 Application for service

It is important that the customer or their representative notify AES Indiana (the Company) well in advance of the date a new temporary or permanent electric service will be required, especially when it is evident that construction work will be necessary.

All new customers should be notified that it is necessary for them to make an application to have the service energized.

Application for service to a single-family residence or a single-family apartment may be made by telephoning the Customer Contact Department - (317) 261-8222 or by visiting the Customer Service Center at 2102 North Illinois Street.

The applicant shall give the correct street address and include detailed information as to his connected load, other service requirements and pertinent information regarding the responsible individual or corporation.

All new underground services require an underground application and agreement, except secondary network service area.

Application for a service to a commercial/industrial building should be made by calling the appropriate Engineering Division (see maps in front of book for jurisdiction). A completed copy of the Commercial/Industrial Information Sheet GB0-030 is to be submitted at initial meeting.

102 Inspection for electric service

The company will furnish electric service only after an authority having jurisdiction (normally an electrical or building inspector) has approved an installation for electrical service. An inspection or a self-certification certificate is acceptable in areas where permitted by the authority having jurisdiction. Where a self-certification certificate is permitted and used, it shall have the current date and it is considered no longer valid after 45 days from that date.

Temporary services may or may not require an electrical inspection, check with the authority having jurisdiction. If an inspection is not required, a copy of the "Letter in-Lieu of Electrical Inspection for Temporary Electrical Service" is required to be completed and inserted in the meter fitting.

State of Indiana buildings, Federal buildings, and services on railroad property do not require an inspection; however, the engineer in charge of the customer's construction shall take responsibility for the correctness of the electrical service by filling out and signing the "Letter in Lieu of Electrical Inspection" provided by the Company.

The City of Indianapolis - Department of Business and Neighborhood Services does not include Speedway, Southport, Lawrence, Beech Grove, or any areas outside Marion County.

Inspections are needed if (see comment below about the service disconnect position):

A The service has been cut off for over 1 year (AES Indiana requires the Indianapolis self-certification tag and reconnect numbers)

B The building or structure has had a fire (Indianapolis requires a permit, sticker completed by a City of Indianapolis inspector or self-certification tag, and authorization numbers if electrical construction is performed. AES Indiana requires the Indianapolis self-certification tag and reconnect numbers if no electrical construction is performed)

C The meter fitting has been relocated (Indianapolis requires a permit, sticker completed by a City of Indianapolis inspector or self-certification tag, and authorization numbers)

D A mobile home lot has a new or replaced mobile home (Indianapolis requires a permit, sticker completed by a City of Indianapolis inspector or self-certification tag, and authorization numbers)

E A new or altered service has been installed (Indianapolis requires a permit, sticker completed by a City of Indianapolis inspector or self-certification tag, and authorization numbers)

F Any service equipment past the meter to the service panelboard have been replaced with the same size, type, and configuration of equipment (Indianapolis requires a permit, sticker completed by a City of Indianapolis inspector or self-certification tag, and authorization numbers. Other areas, contact the AHJ for their requirements)

G Any normal maintenance work has been performed without upgrading (For Indianapolis; repair/replacement of the meter fitting (meter base), riser and weather head does not require an electrical permit unless it is being upgraded or relocated. Any work performed from the meter to the building, including the panelboard requires an electrical permit. Other areas, contact the AHJ for their requirements)

H AES Indiana field personnel may require an inspection (regardless of the length of time), if in their opinion a hazardous or potentially hazardous condition exists

I Any type of distributed generation that requires a bi-directional meter such as a generator, solar voltaic panels, etc. (Before the installation of a bi-directional meter, Indianapolis requires a permit, a sticker completed by a City of Indianapolis inspector or self-certification tag, and authorization numbers. Other areas, contact the AHJ for their requirements)

Indianapolis requirement: If emergency work is done after hours, the authorization number and electrical permit if required, shall be obtained the next business day.

Service disconnect position requirement for this section only

In all cases where a service has been disconnected, the main disconnect (circuit breaker or fuses) shall be in the open (off) position or the service will not be reconnected.

103 Right to refuse or discontinue service

Since it is the Company's obligation to provide reasonably adequate service to all Customers, the Company reserves the right to refuse or discontinue service without notice if, in the opinion of the Company, the Customer's wiring, equipment or appliances are unsafe or unsuitable for receiving electric service or are harmful to the service of other Customers. The Company will make a reasonable effort to notify the Customer prior to disconnection and shall inform the Customer of the steps which must be taken to have service restored. This is reflected in the "Rules and Regulations, Section 25.1" that are approved by the Indiana Utility Regulatory Commission.

105 Types of service available

The Company furnishes 60 hertz alternating current service at designated standard voltages. All types of service are not available in every locality and the type of service to be furnished at a particular location is determined by one or more of the following conditions:

Type of service available at the customer's location.

Type and size of load to be served.

Temporary or permanent service (for temporary underground services, see Section 220E).

107 Temporary service

Temporary Service is defined as, any service in operation for less than 30 months per AES Indiana Rules and Regulations, Rules 4.1 and 12.2.

110 Rate considerations

To assure the customer obtains the most advantageous service and metering arrangement with regard to monthly charges for electric service, the Engineering Department should be consulted prior to the selection of the number and/or type of service for all loads in excess of 50 kW; and all loads involving space heating, cooking, air conditioning, water heating, process heating, snow melting and all fluctuating loads such as welders, x-ray machines, electric furnaces, etc. Industrial or commercial buildings to be electrically heated, in most cases, should be wired so the electric heating equipment along with any air conditioning and/or water heating can be separately metered from other electric uses on the premises.

112 Fault current levels for the selection of PPE

Although the exact amount of fault current cannot be known for a particular installation, the Company will furnish the data for calculation. Upon request, the Company will furnish the X & R values, size of the transformer, and the size and type of the primary source fuse. If the service conductors are owned by the Company, their size and material will also be provided. The fault current and Thevenin equivalent impedance will not be provided. The Company does not provide minimum fault current information or associated protective device clearing times.

To request this information, please submit a written request to the Customer Projects Engineering Person shown on drawing GB0-100. Also, allow ample time for the information to be gathered and returned to you.

Disclaimer

AES Indiana shall not be liable for any errors, inaccuracies, or delays in content, or for any actions taken in reliance thereon. AES Indiana expressly disclaims all warranties, expressed or implied, as to the accuracy of any the content provided, or as to the fitness of the information for any purpose.

Although AES Indiana makes every reasonable effort to obtain reliable information and proper calculations, AES Indiana provides no warranty, expressed or implied, as to the accuracy, reliability, or completeness of furnished data past the time of gathering data for the calculations to be made. The AES Indiana power grid is a dynamic power system that changes from moment to moment as demands are made to the system. Furthermore, permanent changes to the system are common which will change the information provided and the Company will not notify the customer when such changes occur.

113 Additional charges

Customers requesting non-emergency work to be done during a time when the Company's overtime pay is required to be paid and is for the customer's convenience will be billed at the current overtime rate per hour on a field invoice.

114 Maintaining security of locked facilities

It is unlawful to break locks for access to any Company facilities without notifying the Service Dispatch Office on telephone number (317) 261-8111. Cooperation will be extended at the request of the qualified electrician under emergency conditions. A request shall be made to the Service Dispatch Office for these cases.

There are situations where a qualified electrical contractor needs to gain access into a pad mounted transformer, a locked meter cabinet, or a locked junction cabinet for normal maintenance or construction work. Under these conditions, contact the Service Connection Department at (317) 261-8133 at least 48 hours in advance.

If this is for the installation of conduits into locked pad mounted equipment, the contractor’s conduits shall be within 5 feet of the AES Indiana equipment. Two hours will be allotted for the appointment. Regular hours for this work are 8:00 AM - 1:00 PM, Monday – Friday. Work performed after regular business hours (after 3:30 PM) will be billed at the current overtime rate per hour on a field invoice. In the event that AES Indiana arrives at a site, and no one is present, the contractor shall start this process over.

For access to sealed meter facilities, see Section 555.

115 Termination of service on building

The Service Installation team will locate all single- and two-family residential services 400 amperes and below. Services of over 400 amperes will be located by the Engineering Department.

Where more than one overhead service 400 amperes and below have risers in the same location. The service head shall be no further from the service drop than 24 inches with sufficient service entrance conductors to reach the service drop.

The point of termination for either an overhead service drop, or an underground service lateral shall be located on the side of the building at the closest point to the Company's facilities. (See Drawing GB5-010 for U.G. Residential Services.)

Exception: See section 220A2j.

Structures deemed as temporary by the Engineering Department (normally structures without a permanent foundation) shall be served as shown on Drawings GB4-060, GB5-080, and GB5-090.

The service drop or lateral shall not cross adjacent property.

116 Replacing or maintaining the residential meter fitting

Residential meter fittings for underground services that have been replaced or maintained where the service lateral is too short to reach the new location of the meter fitting connections will be spliced below the meter by the Company if the cable is direct buried. Providing the four-foot by four-foot splice pit to expose the service lateral cable is the responsibility of the customer.

The customer will always be responsible for the replacement of the meter fitting, trenching, backfill, furnishing and installing any required conduit, and repair of the landscape.

117 Converting from residential overhead to underground service

400 ampere services or less that are being converted from overhead to underground are the responsibility of Service Connections. Services of over 400 amperes are the responsibility of the Engineering Department.

The customer will be charged for converting from an overhead to an underground service. Additionally, the customer will always be responsible for the replacement of the meter fitting, trenching, backfill, furnishing and installing any required conduit, and repair of the landscape.

118 Relocating the residential service point or cable

400 ampere services or less that need to be relocated or replaced are the responsibility of Service Connections. Services of over 400 amperes are the responsibility of the Engineering Department.

For underground services, the customer will be charged for any modifications to their service laterals. Additionally, the customer will always be responsible for the replacement of the meter fitting, trenching, backfill, furnishing and installing any required conduit, and repair of the landscape.

119 Upgrading a residential underground service lateral

Where a customer is upgrading their service and the existing cable size is inadequate for the new service, there will be no charge if the 30-month revenue equals or exceeds the AES Indiana cost of the project. The customer will be responsible for the replacement of the meter fitting, trenching, backfill, furnishing and installing any required conduit and repair of all landscape.

120 Overhead service

An overhead service drop must clear trees and other obstructions and be a minimum of three feet from windows, porches, fire escapes and similar structures. Also, it shall be located so it will not be necessary to climb on roofs to make a connection or disconnection. Suitable support of sufficient strength for the attachment of the service wires shall be provided by the customer. The customer is prohibited from disconnecting their service drop from the point of termination after installation.

125 Height of service drop

The point of attachment of the service drop shall be a minimum of 13.5 feet and a maximum of 22 feet above ground, and in all cases be of such height as to provide at least the minimum clearances at any point for the service drop as required by the National Electrical Safety Code. If the 13.5' dimension cannot be met for any reason, then refer to drawings GB4-005 and GB4-007.

The clearance of the service drop shall be maintained in all cases of grade changes and/or the installation of swimming pools, decks, room additions, outbuilding, etc. Clearance requirements for swimming pools are much greater than for normal grade and in many cases the service drop must be converted to an underground service lateral (see Section 117) to meet the NESC requirements.

127 Underground service lateral within 5 feet of a pool

Where a service lateral is within 5 feet of a pool, the service lateral shall be relocated to be 5 feet or further from the pool and apron/deck. The customer will be charged for any modifications to their service laterals. Additionally, the customer will always be responsible for the replacement of the meter fitting, trenching, backfill, furnishing and installing any required conduit, and repair of the landscape.

Where 5 feet cannot be obtained, the customer may install Schedule 40 PVC conduit with a minimum of 18 inches of cover under the apron/deck of the pool, but AES Indiana prohibits the installation of the cable under any part of the pool itself. This conduit shall extend a minimum of 5 feet past the edge of the pool and 2 feet past the apron/deck.

130 Length of service drop

The length of the service drop from pole to point of attachment on the building or other structures shall not exceed 125 feet, in many cases it may need to be considerably shorter.

135 Extension of lines

Where there is a reasonable prospect that capital expenditure is warranted, the Company will extend its lines and service facilities in accordance with the conditions set forth in its Rules and Regulations. All applications for line extensions shall be referred to the appropriate Engineering Division. (See maps in front of the book for jurisdiction.)

137 Clearances to hazardous (classified) locations

Company lines and equipment are not suitable for installation above, below or within areas defined by the Indiana Electrical Code as classified locations. Locations shall be classified depending on the properties of the flammable gas, flammable liquid-produced vapor, combustible-liquid produced vapors, combustible dusts, or fibers/flyings that may be present, and the likelihood that a flammable or combustible concentration or quantity is present. The boundaries and classification of those areas shall be determined by a professional engineer where these conditions exist.

140 Easement - rights-of-way - tree trimming

Line extensions are contingent upon assistance by the applicant in securing the necessary easements, rights-of-way, and tree trimming permits. The Company shall be under no obligation to start construction until satisfactory easements, rights-of-way, and tree clearances have been obtained.

142 Right tree right place

Misplaced or improperly maintained trees can cause power outages during severe weather. You can help prevent power outages by using the following guidelines to plant your trees. For information about planting the right tree in the right place, please go to this webpage.

The normal clearance that must be maintained from transformers and equipment is ten feet. Lesser clearances are permitted to some parts of transformers and equipment. Plant large trees (those that will become 40 feet tall or more at full maturity) at least 50 feet away from overhead distribution lines. Plant smaller trees (those that will be less than 25 feet tall at full maturity) at least 10 feet away from the lines. These are general guidelines and will not apply in all circumstances.

Contact the Company at (317) 261-8635 before considering planting near transmission towers or easements. The Company will remove any trees or shrubs that are not compatible with transmission lines.

145 Automatic reclosing equipment

The Company has equipment installed at its substations, which provides rapid opening and automatic reclosing of its distribution circuits to clear temporary faults that occur on the circuits. It is the responsibility of the customer to provide adequate protection for all electrical apparatus of the customer that might be adversely affected by the Company's reclosing equipment.

146 Continuity of power

The Company will use due diligence in providing a regular and uninterrupted supply of energy; if the supply should be interrupted or fail for any reason, the Company shall not be held liable for damage. The Company shall have no duty to provide advance warning of interruption of supply. It is the customer's responsibility to provide for his need for continuous power. For more information, see AES Indiana Rules and Regulations for Electric Service, Rule 23 on Page 20.

147 Single phase protection

It is the customer's responsibility to provide and maintain protection for multi-phase equipment that may be adversely affected by a loss of phase condition. The Company assumes no liability for equipment damaged by a loss of phase condition.

148 Phase reversal protection

It is the customer's responsibility to provide and maintain protection for multi-phase equipment that may be adversely affected by a phase reversal condition. The Company assumes no liability for equipment damaged by a phase reversal condition.

150 Alterations - changes in size of service

The Company shall be notified well in advance of any new additions to electrical installations so it will be possible for the Company to take such measures as will enable it to continue rendering adequate service. The connection of additional equipment to existing lines may result in unsatisfactory operation until such time as the Company is able to increase capacity to take care of the added load. Additionally, the Company reserves the right to disconnect service upon fourteen (14) days written notice if this section is not in compliance.

160 Number of services

The Company will ordinarily install one service drop or lateral for each service voltage to a building or structure.

In the case of multiple occupancy buildings having no central meter location, the service to each room or tenant must be installed to the established point of service on the building, regardless of the existence of fire walls.

A weatherhead box or bus duct is required for customers from the overhead system under the following conditions:

1. More than four (4) connections per phase to the service drop or;
2. Larger than 1600 Amperes of Service.

See Drawings GB7-070 & GB7-080 for a sample weatherhead box.

162 Master metering

Master metering is generally prohibited on all new multi-unit buildings. Electricity delivered to a new building containing units which are separately rented, leased, or owned shall be sold based on individual meter measurements for each occupancy unit, except for electricity used in hotels, motels, and other similar transient lodging.

Service applicants who believe individual metering will present a hardship for their project must contact the company during the design of the project for review of their individual case. The service applicant shall establish that costs of purchasing and installing separate meters in such a building exceed the long-range benefits of individual metering of units before an exemption may be granted. See Indiana Administrative Code 170, Standards of Service for additional information.

165 Maximum size secondary overcurrent device

The maximum size service overcurrent device is determined by the service voltage, but in no case shall it exceed 3000 amperes.

170 Fire pump installations

All fire pump installations must be referred to the Engineering Department for approval, prior to installation.

175 Auxiliary power installations

A Definitions

Distributed Generation (DG) is any electric generation facility connected to a utility electric power system. The utility electric power system consists of any facilities that deliver electric power to a load including those distribution facilities serving industrial and commercial customer loads directly from a utility sub-transmission or transmission system. Distributed generation, including renewable energy resource technologies are distributed resources that are not directly connected to the utility bulk power transmission system.

Interconnected Operation refers to any connections and equipment between a utility and electric generation facility that permits synchronous or parallel operation with each other.

Non-interconnected Operation refers to any connections and equipment between a utility and electric generation facility designed to ensure that the electric generation facilities are always isolated from the utility.

B Interconnected operation

Distributed generation can be connected to the Company's system providing an interconnection review process is completed. The interconnection review process includes an application form, a signed agreement, and provisions to ensure the safety of all personnel. Application forms are designated as Level 1 for 10 kW and smaller units, Level II for 2000 kW and smaller units and Level III for all others. Application forms and instructions can be obtained from the Company's web site for residential or business. Contact information is on Drawing GB0-115. Distributed generation can be connected to the Company's system in the following operating modes.

1 Emergency/Standby – Operated when the Company's service is not available with parallel operation for short durations.

2 Peak Shaving – Operated during peak demand periods with parallel operation for extended times.

3 Base Load Power – Operated continuously at a predetermined output with continuous parallel operation.

4 Cogeneration – Operated primarily to produce thermal energy with extended or continuous parallel operation.

5 Renewable Non-Dispatched – Operated in response to the availability of a renewable energy resource such as solar, wind, etc. with parallel operation for extended times.

6 Closed Transition Transfer Switch (CTTS) Operation - Any momentary (i.e., about 100-150ms) paralleling of customer generation with AES Indiana during return to normal configuration.

7 Other – Describe the application.

C Non-interconnected operation

Distributed Generation covered under special contract or emergency generating units used mainly in the event the Company's service is not available, shall be connected through suitable switches to ensure that the emergency generation is always isolated from the Company's lines. Portable generators or temporary power sources shall not be connected to the customer's electrical system in such a way as to energize or back feed into the Company's facilities. This creates an extreme hazard to Company employees and other restoration crews working on the Company's lines and equipment. See Drawing GB7-090.

176 Duplicate facilities

Duplicate facilities requested by a customer to provide backup to the normal energy source will normally be installed on a Standard Contract Rider Number 4 in accordance with 176A below. The Standard Contract Rider Number 4 requires a monthly billing inventory charge to be collected if the duplicate facilities are in place. In some cases, duplicate facilities will be installed without initial installation charges or monthly billing inventory charge (see 176B).

Duplicate facilities are defined as facilities which provide backup, or alternate feeds into a customer's electrical service(s) and can carry the full customer's load in the event of failure of the normal service facilities. Duplicate facilities may serve the customer's electrical load on a full-time basis, but its main function is to provide redundant, backup, or emergency service.

A Standard Contract Rider Number 4 is defined in the tariffs that are on file with the Indiana Utility Regulatory Commission.

A Duplicate facilities are installed at no initial cost to the customer; however, they will require a monthly billing inventory charge:

1 Sewage pumping stations, manufacturing plants, etc. who require a totally duplicate installation of power (primary cable, wire, transformers, service drops or laterals, etc.)

2 Duplicate primary circuit construction required to provide a second feed from a different circuit.

B Duplicate installations not requiring any initial cost to the customer, or a monthly billing inventory charge will be installed provided the customer classes listed below installs double ended switchgear to take advantage of the facilities being installed. The Company will not operate the customer's double ended switchgear without compensation from the customer. The duplicate facilities include primary conductors from separate units in a substation or different substations. Due to the operation of the distribution system, this arrangement cannot be guaranteed to be permanent, but every attempt will be made to restore the feeds to different units after switching is completed.

1 Commercial radio stations

2 Commercial television stations

3 Hospitals

A hospital is defined as having an emergency room for four or more persons, a place to perform surgeries, and provide other critical care services to people on a 24-hour inpatient basis. Additionally, the load shall be 1000 kVA or greater as determined by the Company.

177 Interconnecting secondary multiple services

Where more than one secondary service is installed that is served from more than one source and can be electrically connected, the provisions in 1, 2 or 3 shall be followed.

1. An interlocking system shall be installed in such a manner that no two services can be electrically connected without the disconnection of one of them from the Company's service drop or lateral. An example of this would be the Kirk Key Interlock system.

2. A system that uses a Programmable Logic Controller (PLC) to momentarily, no more than 20 cycles, connect two secondary services together before opening one of them from the Company's service drop or lateral.

3. Closed Transition Transfer Switch Operation (CTTS). Distributed or emergency generation using a CTTS switch may be applied to the Company's system provided that the customer submits a DG Interconnection Application and signs a DG Interconnection Agreement as required by Section 175. AES Indiana will review the application for parallel operation. The customer is required to submit design details such as the closed transition time, synchronizing check relays used, backup trip mechanism if transfer lasts longer than the expected closed transition time and reverse power relays used.

In 1, 2, or 3, the customer shall provide a one-line diagram of his proposed interlock installation to the Company's Project Engineer for approval.

180 FOREIGN ATTACHMENTS

Radio or television antennas, floodlights, signs, wires, cables, or other attachments shall not be connected to or installed on the Company's pad mount transformers, metal clad switchgear, poles, crossarms, structures, or other facilities. Antennas, floodlights, signs, etc. shall not be installed so they can fall on the Company's lines or structures. Attaching advertising signs to utility poles is prohibited by City Ordinance and Company rules and regulations.

Obtaining an attachment permit in some cases may be permitted for power conductors and communications cables on some company poles. The company's engineer will calculate loading, clearances, and space requirements in accordance with the National Electrical Safety Code. The application fees and costs for engineering and upgrading the company's facilities are to be borne by the applicant.

181 EASEMENT ENCROACHMENTS

As a general rule, encroachments on Company easements are prohibited. For additional information, please call the Real Estate Department shown on the "Where To Obtain Information" (page iii). Structures such as buildings, swimming pools, garages, etc. shall not be permitted inside the company easements.

Any grade changes and the installation of driveways and parking lots may be permitted with prior written approval from the Company. In the event a portion of a paved or concrete driveway or parking lot area must be removed for maintenance or new construction performed by the Company, repair of any damage to these areas inside the easement shall be made by the property owner.

182 CUSTOMER GROUNDS

Conductors from the customer's grounds, grounding grids, isolated equipment to be grounded, or grounding systems shall not be permitted to enter or to be attached to any Company transformer, riser pole, pedestal, or any other of the Company's facilities.

Exception 1: Where a communication company in the vicinity of or on a pole, pedestal, switchgear, transformer, or other Company facility, their grounding shall be permitted to be connected to the Company's system neutral or grounding system.

Exception 2: Where a customer is served through vault installed transformers.

183 GROUNDED SERVICE CONDUCTOR

Where a grounded service is provided, the grounded service conductor (normally the neutral) shall be taken to each service disconnecting means grounded (neutral) terminal or bus. Reference the National Electrical Safety Code Rule 092 and Indiana Electrical Code Section 250.24(C).

185 Service demand

Demand as used in this book shall mean the kilowatt demand as determined by the Company.

190 Fire walls

If a structure is required to have a fire wall for more than one point of service, a note similar to the following shall be placed on a drawing, or a letter in the case of an existing building, by the architect or engineer and the drawing or letter shall have his/her seal affixed.

> This is a fire wall, as required by the State of Indiana, for the purpose of multiple points of electrical service.

A letter from the authority having jurisdiction i.e.: the local electrical inspector, to allow multiple services would be acceptable, in lieu of the note.

Letter in-lieu of electrical inspection
(May ONLY be used for State of Indiana buildings, Federal buildings, services on railroad property, or where the authority having jurisdiction is not under the authority of the Indiana Fire Prevention and Building Safety Commission. This is not for the use of the "log cabin" statute, Indiana Code 36-7-8-3 in the State of Indiana law.)

Customer or project name: _____

Service address: _____

City / town: _____

Important notice

It is the customer's responsibility to assure that all facilities on the customer's side of the point of delivery of electricity are maintained in safe operating condition. This responsibility includes assuring that the customer's electrical facilities comply with all local construction codes and safety standards. Customers should coordinate this responsibility with their architectural and engineering consultants, construction contractors, or subcontractors, as appropriate, before their electrical systems are energized. Failure to do so may result in injury or damage resulting from unsafe conditions. AES Indiana is not responsible for unsafe or non-compliant conditions on the customer's side of the service point.

Customer's certification of readiness

The undersigned customer or its authorized representative do hereby certify to AES Indiana and agree that:

1. he has read the foregoing notice and fully understand the customer's obligations for operating safety;
2. he has conferred with the architect, engineering consultant, general contractor, or subcontractor(s), as applicable and appropriate, responsible for the design and construction of the facilities, to verify that the electrical systems on the customer's side of the point of delivery have been constructed to the best of their knowledge in compliance with local construction and safety standards (including, for example, the Indiana Electrical Code);
3. he has determined and confirmed to the best of their knowledge that the electrical systems do in fact comply with these local construction and safety standards;
4. he understands and agrees that in reliance of these representations, AES Indiana has agreed to energize electric service to the customer's service entrance section at such facilities;
5. he assumes full responsibility for any and all damages and injuries that may occur to the customer's property, employees or members of the public or other third parties as a result of conditions on the customer's side of the point of delivery at the service address noted above; and
6. he hereby releases AES Indiana from any and all damages, or injuries that may result as a result of the electric service provided by AES Indiana provided that the service meets the applicable requirements of the National Electrical Safety Code (NESC) and the standards of the Indiana Utility Regulatory Commission.

If not the owner/customer, I certify that I have the owner/customer's permission to act in his stead.

Customer/representative signature: _____

Customer/representative name: _____

Business name: _____

Business address: _____

_____

Telephone number: _____

Date: _____

Letter in-lieu of electrical inspection for temporary electrical service
(May ONLY be used for temporary services where the Authority Having Jurisdiction does not inspect temporary electrical services.)

Customer or project name: _____

Service address: _____

City / town: _____

Important notice

It is the customer's responsibility to assure that all facilities on the customer's side of the point of delivery of electricity are maintained in safe operating condition. This responsibility includes assuring that the customer's temporary electrical facilities comply with all local construction codes and safety standards. Customers should coordinate this responsibility with their architectural and engineering consultants, construction contractors, or subcontractors, as appropriate, before their temporary electrical systems are energized. Failure to do so may result in injury or damage resulting from unsafe conditions. AES Indiana is not responsible for unsafe or non-compliant conditions on the customer's side of the service point.

Customer's certification of readiness

The undersigned customer or its authorized representative do hereby certify to AES Indiana and agree that:

7. he has read the foregoing notice and fully understand the customer's obligations for operating safety;

8. he has conferred with the architect, engineering consultant, general contractor, or subcontractor(s), as applicable and appropriate, responsible for the design and construction of the facilities, to verify that the electrical systems on the customer's side of the point of delivery have been constructed to the best of their knowledge in compliance with local construction and safety standards (including, for example, the Indiana Electrical Code);

9. he has determined and confirmed to the best of their knowledge that the electrical systems do in fact comply with these local construction and safety standards;

10. he understands and agrees that in reliance of these representations, AES Indiana has agreed to energize electric service to the customer's temporary service entrance at such facilities;

11. he assumes full responsibility for any and all damages and injuries that may occur to the customer's property, employees or members of the public or other third parties as a result of conditions on the customer's side of the point of delivery at the temporary service address noted above; and

12. he hereby releases AES Indiana from any and all damages, or injuries that may result as a result of the temporary electric service provided by AES Indiana provided that the temporary service meets the applicable requirements of the National Electrical Safety Code (NESC) and the standards of the Indiana Utility Regulatory Commission.

If not the owner/customer, I certify that I have the owner/customer's permission to act in his stead.

Customer/representative signature: _____

Customer/representative name: _____

Business name: _____

Business address: _____

_____

Telephone number: _____

Date: _____

Part II – SECONDARY SERVICE – OTHER THAN NETWORKED SERVICE AREA

Part II: Secondary service - other than networked service area

200 Secondary voltages available

After determination as to whether electricity will be supplied from overhead or underground in accordance with the Company's underground policy and any legal requirement, the Company will specify one of the following secondary service voltages:

(a) Single phase, 120 volt, two wire

(b) Single phase, 120/240 volt, three wire

(c) Single phase, 120/208 volt, three wire

(d) Three phase, 120/240 volt, four wire, delta

(e) Three phase, 120/208 volt, four wire, wye

(f) Three phase, 277/480 volt, four wire, wye

Service at other voltages will be supplied only in special cases at the discretion of the Company.

205 Requirements for service

Shop drawings for all free-standing switchgear shall be approved (in writing at customer request) by the Engineering and Metering Departments in advance of any firm commitments on each individual installation. This will ensure proper spacing and bracing of bus bars, and proper switch metering sequence. (See Section 550 for Meter Department Approval.)

A. *Single phase, 120 volt, two wire,* may be provided for service, not to exceed 30 amperes.

B. *Single phase, 120/240 volt, three wire,* may be provided for loads not to exceed 170 kW demand.

The largest individual service disconnecting means shall not exceed 800 amperes.

Where the service disconnecting means does not consist of a single main switch or circuit breaker, the combined rating of the individual switches or circuit breakers shall not exceed 800 amperes.

The largest individual single phase motor for this service shall be 5 HP unless investigation by the Engineering Department indicates that a larger size is permissible.

Residential services are not designed nor intended to provide service for unconventional or high demand equipment such as "on demand" water heaters or other intermittent, high demand or frequently started devices such as welders, large motors, etc. See Section 210 for more information as well as the Company Rates.

Exception: A single family dwelling unit disconnecting means shall not exceed 1600 amperes.

C. *Single phase, 120/208 volt, three wire,* may be provided for services not to exceed 125 amperes or 200 amperes for dwelling units and temporary use (See Section 107 for the definition of temporary).

Residential services are not designed nor intended to provide service for unconventional or high demand equipment such as "on demand" water heaters or other intermittent, high demand or frequently started devices such as welders, large motors, etc. See Section 210 for more information as well as the Company Rates.

All services or feeders over 125 (200 for dwelling units and temporary use) ampere capacity shall be three phase, four wire, and the load balanced as nearly equal as possible on the three phases. The difference in amperes between any two phases at the customer's peak load shall not be greater than 20%.

Exception: 400 ampere services or feeders are permitted if they are in listed single phase meter centers for multifamily dwellings.

D. *Single phase, 480 volt, three wire,* may be provided for services not to exceed 125 amperes for dwelling units in the Central Business District with prior approval of the Meter and Engineering Departments. This voltage is only available where the building is served with 480Y/277 volts and dwelling units will be installed. Single phase, 480 volt, three wire is not available for any other purpose.

All services or feeders over 125 ampere capacity shall be three phase, four wire, and the load balanced as nearly equal as possible on the three phases. The difference in amperes between any two phases at the customer's peak load shall not be greater than 20%.

E. *Three phase, 120/240 volt, four wire, delta,* may be provided for loads of 75 kW demand or less of single phase load, with appliances and/or motors requiring three phase service with ratings exceeding the limitations for single phase service or with a single motor of 5 HP or more. The phase having the higher voltage to ground shall not be used for any single phase load.

The largest individual service disconnecting means shall not exceed 3000 amperes.

Where a switchgear is used and the service disconnecting means does not consist of a single main switch or circuit breaker, the combined rating of the individual switches or circuit breakers shall be permitted to exceed 3000 amperes. However, the switchgear shall not exceed 3000 amperes.

The largest individual three phase motor for this service shall be 25 HP unless investigation by the Engineering Department indicates that a larger size is permissible.

Three phase, 120/240 volt, four wire, delta service is not normally available in underground service areas.

F. *Three phase, 120/208 volt, four wire, wye,* will be provided on a cost to serve basis.

The largest individual service disconnecting means shall not exceed 3000 amperes.

Where a switchgear is used and the service disconnecting means does not consist of a single main switch or circuit breaker, the combined rating of the individual switches or circuit breakers shall be permitted to exceed 3000 amperes. However, the switchgear shall not exceed 3000 amperes.

The largest individual three phase motor for this service shall be 20 HP unless investigation by the Engineering Department indicates that a larger size is permissible.

The load shall be balanced as nearly equal as possible on all 3 phases. The difference in amperes between any two phases at the customer's peak load shall not be greater than 20%.

G. *Three phase, 277/480 volt, four wire, wye,* will be provided on a cost to serve basis.

The largest individual service disconnecting means shall not exceed 3000 amperes.

Where a switchgear is used and the service disconnecting means does not consist of a single main switch or circuit breaker, the combined rating of the individual switches or circuit breakers shall be permitted to exceed 3000 amperes. However, the switchgear shall not exceed 3000 amperes.

The load shall be balanced as nearly equal as possible on all 3 phases. The difference in amperes between any two phases at the customer's peak load shall not be greater than 20%.

The largest individual three phase motor for this service shall be 40 HP unless investigation by the Engineering Department indicates that a larger size is permissible.

The minimum size individual service disconnecting means shall be 100 ampere, three phase, four wire.

210 Rapidly fluctuating or pulsating loads

The limitations given for single phase motors in Section 205 B, for three phase motors in Section 205 C, D, E, and F are for manually and automatically controlled motors with moderate starting frequencies up to approximately ten times per hour. Motors with high starting frequency duty or with severe pulsating characteristics, or other fluctuating loads of high magnitude and/or frequency, such as welders, shall be referred to the Engineering Department to determine how such loads will be served.

The Customer shall pay the cost of any special installation necessary to meet his requirements for service for the supply of closer voltage regulation than is required by standard practice. Additional, larger, or specially designed transformers or equipment will be billed to the Customer where harmonics or other loads described in the previous paragraph are encountered and the customer does not correct the problem.

220 Underground service

Normally new underground lines and equipment will be installed by the Company at no cost to the customer, providing the total estimated cost of the installation does not exceed the estimated revenue for the first 2½ years. If the estimated cost of the installation exceeds the estimated revenue, the Customer shall pay the difference of such costs in advance of construction. The Company is not required to make any underground installation, if in the judgment of the Company it is not technically or economically justified as specified by the City Ordinance and/or the Indiana Utility Regulatory Commission. Call the Distribution Engineering Division (see map GB0-100 in front of this book for jurisdiction) for new projects.

A. *Installation of underground services:* Underground services will be installed in accordance with the following division of responsibilities:

1. Company responsibilities

a. The Company will furnish and install primary cable and conduit. In new projects, trenching and backfill is provided, if standard trenching equipment can be used.

b. The Company will furnish and install all riser pole conduits for cables installed by the Company.

c. The Company will locate, furnish, and install the transformer pad and transformer. The concrete pad and transformer shall be set before any conductors are installed by the customer.

d. The Company will furnish and install all secondary cable between the pad mount transformer and line side of metering equipment or junction cabinet, located on the outside of the building.

e. The Company will make all connections in the pad mount transformer. The Company will make all connections in the service junction cabinet or junction box in accordance with 560K.

2. Customer Responsibilities

a. The developer or customer shall clear all trench routes of all surface and subsurface obstructions to a depth of 42 inches and 8 feet wide, plus grade all trench routes to within 4 inches of final grade. In the case of wooded areas or steep grades, the contractor shall consult the Engineering Department to determine the most feasible trench route.

b. The developer or customer is to have curbs installed in residential projects prior to the installation of the Company facilities.

c. Overhead to underground conversions of commercial/industrial customers when they continue to use a wall mounted bushead or weatherhead; the customer shall furnish, install, maintain, and own all secondary cable and conduit between the bushead and the pad mounted transformer.

d. All PVC buried conduit shall be gray. Services shall be installed in accordance with the Company's specific instruction.

Rigid conduit is defined as conduit that is not flexible. Most conduit is PVC but some is Rigid Metallic (RMC), Intermediate Metal (IMC), or Reinforced Thermosetting Resin Conduit (RTRC). Electrical Metallic Tubing (EMT) is not conduit, it is tubing.

Except for the next paragraph, the customer shall furnish and install 4" rigid conduits with a pull string in a 36" deep trench as directed by the Company for the installation of the Company's secondary cables.

For single family homes, doubles, apartments, condominiums, townhouses, row houses, and the like, the customer shall furnish and install 4" rigid conduits with a pull string in a 36" deep trench as directed by the Company for the installation of the Company's secondary cables if two runs or more of cable are required to the same location. Conduit will also be required in areas under patios, decks, sidewalks, landscaping, or any other area that will be inaccessible after the installation of the Company’s service cable.

e. The developer or customer shall install the company's conduits with a customer provided pull string in the conduit in a 36" deep trench, as directed by the Company, for the installation of the Company's primary cables; if site preparation has proceeded to the point of requiring conduit installation before it is feasible for the company to do the installation. The ends of the conduit shall be clearly marked for future location.

f. The developer or customer is responsible for non-standard trenching as follows (this is not an all-inclusive list):

- Ground frozen deeper than 6 inches
- Adverse terrain or ground conditions which may require the use of additional equipment to pull the trencher
- Ground conditions, which may require the use of a backhoe to open and/or maintain the trench
- Buried debris which requires the use of a backhoe
- Digging under buried facilities
- Boring under streets, driveways, trees, alleys, etc.

g. The customer shall furnish secondary conduit and wire or cable between the riser pole or pad mount transformer and any customer owned equipment whether inside or outside.

Exception: The Company will install secondary cable to an outdoor customer owned meter center, meter fitting, or an outdoor customer owned switch if the switch is an integral part of a meter center or meter fitting. The Company will make the actual terminations to the customer owned equipment in this case. The customer shall furnish and install a pull string for AES Indiana use.

Metallic conduit shall not enter a transformer.

h. Customer shall furnish and install posts to protect transformers and other facilities as specified by the Company when exposed to vehicular traffic. Each post shall be a minimum of 7'-0" long and 6 inch diameter steel pipe. The posts shall be concrete filled, set in concrete and extend 4'-0" above grade. Contact the Company for approval of post arrangement.

i. The customer, in some cases, may elect to install the service lines from the Company's secondary distribution system to the meter fitting or junction box. Before installations of this type, the contractor shall submit plans of the proposed installation to the Engineering Department for approval and enter into an agreement with the Company prior to installation.

j. For Town Houses, Condos, Apartments and similar structures, the following may be permitted for "wrap around" single phase services:

- The company's Engineer will look at each individual service to determine if a "wrap around" service will be permitted. This shall be done before the installation of the customer's conduit since a "wrap around" service may not be permitted.

- If a "wrap around" service is permitted, the customer shall provide and install four inch, gray, schedule 40 PVC (schedule 80 PVC where above grade) continuous from his meter location to the Company's transformer exactly as laid out by the Company's engineer. This conduit(s) with a pull string installed shall be turned up into the transformer pad and all bends shall be 36 inch or larger radius sweeps.

- The Company's service cable will be provided, installed, and maintained by the Company.

- The customer shall supply and install a warning ribbon 12 inches above the duct line that meets the requirements of section 300.5(D)(3) in the Indiana Electrical Code.

- The point required to pull the cable shall be truck accessible with a set up area. See Section 220A3e for the definition of "truck accessible".

3. Special notes

a. Under no circumstances is an equipment box pad or a service pedestal permitted to be drilled, cut, or otherwise modified. All cable or conduit is to enter under the edge of the pad or pedestal at the proper depth, see Section 220A2d.

b. Maximum cable size to a riser pole is 600 kcmil and maximum cable size to a pad mounted transformer is 750 kcmil.

c. The maximum number of secondary conduits (if nonmetallic, they shall be gray) to be run are shown in the following table:

to riser pole	(with truck access)	4 conduits
	(without truck access)	2 conduits
to 1Ø transformer (concrete pad)		4 conduits
to 1Ø transformer (box pad)		4 conduits
to rectangular polyethylene service pedestal		4 conduits
to 3Ø transformer		8 conduits

All cases are limited to one circuit per conduit.

Exception: Isolated phase installations may be permitted if approved by the Engineering Department.

d. All nonmetallic conduit installed above grade shall be gray schedule 80 or heavier. All metallic conduit installed above grade shall be IMC or rigid.

e. All 400A and larger meter and junction cabinet locations, other than residential, shall be truck accessible.

Exception: If fifty feet, or less, straight line distance and no more than 180 degrees of bends in the total run, then the location does not have to be truck accessible.

"Truck Accessible" is defined throughout this manual as terrain modified to have no more than a 4% grade, capable of supporting the weight of a fifteen-ton truck when the surrounding soil is saturated, and the access route is at least ten feet in width. The access route shall be clearly and permanently evident. An example would be a stone drive with plantings outlining the route with a very light cover of soil and seeded.

Additionally, where truck accessibility is required for pad mounted equipment, the set-up location shall be large enough to allow outriggers to be used. This will require an area that is 15 feet wide by 25 feet long for this purpose. These are minimum requirements and special circumstances may require wider drive access and larger truck setup areas as defined by AES Indiana engineering.

f. Where the Company's service cable passes through communications company equipment to a meter fitting, the portion of the run that is inside the communication equipment shall be rigid metal conduit or intermediate metal conduit. In addition, the conduit run shall be continuous from the meter fitting to a point that is clear of the equipment pad by at least two feet.

B. *Underground installation to single family dwelling units:* In areas where the Company's underground distribution system exists, Customer Service shall be contacted for all residential underground service at (317) 261-8222. Where underground distribution does not exist at presently, call the Distribution Engineering Division (See map GB0-100 in front of this book for jurisdiction).

C. *Underground Service to Mobile Home Park:* Due to the unique nature of the mobile home park, the customer shall contact the Distribution Engineering Division (see map GBO-100) before any preliminary work begins.

D. *New Underground Temporary Services:* New underground temporary services that are CT metered and those that need PTs shall be built the same as permanent services. Underground temporary services will be billed by using Full Cost Customer Billing procedures.

223 Covering and painting of poles

Poles shall not be painted or covered with any material unless permission is specifically given in writing by the AES Indiana Standards, Code Compliance & Quality Control Department.

225 COVERING, ENCLOSING AND PAINTING OF PAD MOUNTED EQUIPMENT

Pad mounted equipment (transformers, switchgear, metering, etc.) shall not be covered or enclosed with any material unless permission is specifically given in writing by the AES Indiana Standards, Code Compliance & Quality Control Department.

Fencing may be installed if sufficient clearance is provided around the equipment for switching with the use of "hot sticks". This requires 10 feet of clearance on the sides where switching is performed. Additionally, 3 feet of clearance is required on the remaining sides and back for ventilation and personnel access (for clearance to building walls, see drawings GB7-020, GB7-030, and GB7-040). The top of the enclosure shall remain open for adequate ventilation. These requirements prohibit the installation of hollow decorative "rocks" or other enclosures that prohibit the free flow of air around the equipment. Any enclosure or fencing shall not have a locked gate nor be over 6 feet in height.

Painting of the equipment is permitted if a solid color is used and the decals are not painted over; however, black or essentially black paint is not permitted due to excessive equipment heating. Any other deviation such as a design shall be approved in writing by AES Indiana Standards, Code Compliance & Quality Control Department before proceeding. The customer will be responsible for maintaining the paint condition after custom paint is applied including mitigating rust and graffiti. Additionally, if the equipment is replaced for any reason, the Company will not be responsible for repainting the equipment.

Service pedestals and all other ground mounted equipment is permitted to be painted in the same manner as pad mounted equipment above. However, the glass or plastic of meters and viewing windows shall not be painted or covered in any manner.

230 METERING ENCLOSURE GROUNDING BEHIND SERVICE DISCONNECTING MEANS

Metering enclosures and fittings shall be grounded in accordance with Article 250 of the Indiana Electrical Code.

Where Indiana Electrical Code Section 250.142(B) Exception 2 is not permitted or used, a grounding conductor shall be run from the service grounding electrode conductor and grounded service conductor at the service equipment to the meter fitting or meter cabinet. This grounding conductor shall be copper and sized and installed in accordance with the Indiana Electrical Code requirements for grounding electrode conductors.

235 480 V COLD SEQUENCE METER

An individual lockable main service disconnecting means with overcurrent protection shall be installed ahead of and within five feet of each 480 volt meter. No tap shall be permitted on the line side of the main service. This applies to all 480 volt services, 225 ampere and smaller, and metered feeders. See Section 555 for accessing locked and/or sealed equipment.

Part III – SECONDARY SERVICE – DOWNTOWN UNDERGROUND NETWORKED SERVICE AREA

Part III: Secondary service downtown underground networked service areas

300 Secondary voltages available

In the areas served from the underground networked secondary distribution system, all services shall be installed underground, and the Company will specify one of the following secondary voltages:

(a) Single phase, 120 volt, two wire

(b) Three phase, 120/208 volt, four wire, wye

(c) Three phase, 277/480 volt, four wire, wye

(d) Single phase, 277/480 volt, three wire

(e) Single phase, 120/208 volt, three wire

305 Requirements for service

A *Single phase, 120 volt, two wire,* may be provided only for service to traffic signals and other public safety equipment, not to exceed 30 amperes. At the Company's discretion, this may be made available for other uses.

B *Single phase, 120/208 volt, three wire,* may be provided for services not to exceed 125 amperes or 200 amperes for dwelling units and temporary use (See Section 107 for the definition of temporary).

Residential services are not designed nor intended to provide service for unconventional or high demand equipment such as "on demand" water heaters or other intermittent, high demand or frequently started devices such as welders, large motors, etc. See Section 210 for more information as well as the Company Rates.

All services or feeders over 125 (200 for dwelling units and temporary use) ampere capacity shall be three phase, four wire, and the load balanced as nearly equal as possible on the three phases. The difference in amperes between any two phases at the customer's peak load shall not be greater than 20%.

C *Single phase, 277/480 volt, three wire* service is available at the option of the Company where three phase, 277/480 volt, four wire, wye is existing. The maximum size individual service, which may be installed, is 125 amperes. Where multiple services of this type are installed, all services or feeders shall have the load balanced as equal as possible on all three phases. An individual disconnecting means shall be installed on the line side of the meter fitting and within sight from the meter fitting (the definition of "within sight" is in the Indiana Electrical Code). The difference in amperes between any two phases at the customer's peak load shall not be greater than 20%.

D *Three phase, 120/208 volt, four wire, wye* service is available in practically the entire networked service area. The largest individual service disconnecting means shall not exceed 3000 amperes.

All services or feeders over 125 (200 for dwelling units and temporary use {See Section 107 for the definition of temporary}) ampere capacity shall be three phase, four wire, and the load balanced as equal as possible on the three phases. The difference in amperes between any two phases at the customer's peak load shall not be greater than 20%.

Where a switchgear is used and the service disconnecting means does not consist of a single main switch or circuit breaker, the combined rating of the individual switches or circuit breakers shall be permitted to exceed 3000 amperes. However, the switchgear shall not exceed 3000 amperes.

The maximum size individual motor, which may be installed without Engineering Department approval, is 75 HP.

E *Three phase, 277/480 volt, four wire, wye* service is available for loads of 2000 kW demand or larger at the option of the Company. The maximum size individual motor, which may be installed without Engineering Department approval, is 125 HP.

The largest individual service disconnecting means shall not exceed 3000 amperes.

Where a switchgear is used and the service disconnecting means does not consist of a single main switch or circuit breaker, the combined rating of the individual switches or circuit breakers shall be permitted to exceed 3000 amperes. However, the switchgear shall not exceed 3000 amperes.

The load shall be balanced as nearly equal as possible on all 3 phases. The difference in amperes between any two phases at the customer's peak load shall not be greater than 20%.

The minimum size individual service disconnecting means shall be 100 ampere, three phase, four wire.

310 Special requirements

A. An individual main switch shall be installed ahead of each meter. No tap shall be allowed on the line side of the main switch. This applies to all services and metered feeders. Individual services larger than 1200 ampere shall be free standing switchgear with the metering compartment an integral part of the switchgear.

B. All service entrance conductors shall be copper and no smaller than #4 AWG. For 200 ampere and larger services, the only acceptable wire sizes are 3/0, 350 kcmil and 500 kcmil.

C. Specific requirements for the short circuit capacity at each location shall be obtained from the Engineering Department.

D. Shop drawings for all free-standing switchgear shall be approved in writing by the Major Underground Distribution Projects Engineering Division in advance of any firm commitments on each individual installation. This will ensure proper spacing and bracing of bus bars, adequate auxiliary enclosure for cable limiters when required and proper switch metering sequence. (See Section 550 for Meter Department Approval.)

E. Space for a transformer vault on public or private property adjoining the main service entrance equipment generally will be required when the demand is 500 kVA and larger.

F. At the cable entrance to a customer's premises the contractor shall install a metal junction box (sized and located by the Major Underground Distribution Projects Engineering Division) to enclose the service cables and splices. The Major Underground Distribution Projects Engineering Division will designate the location at which the service conductors shall be installed. (See GB6-070)

G. Customer-owned underground secondary service cables, 3/0, 350 kcmil, and 500 kcmil entering Company manholes or transformer vaults, shall be protected with cable limiters. These cable limiters shall be provided and installed by the Company at the point of connection to Company lines.

H. In the event more than two cables per phase are required, cable limiters shall be installed at both ends of the service cables. The customer shall provide and install cable limiters on all ungrounded conductors at the line side of the service switch.

I. Normally, the Company will own the cable to the property line and the customer will own the cable from the property line to the service.

J. All temporary construction services shall be approved and located by the Major Underground Distribution Projects Engineering Division prior to installation by the electrical contractor.

K. Meter enclosures and fittings shall be grounded in accordance with Article 250 of the Indiana Electrical Code.

Metering enclosure grounding: Where Indiana Electrical Code Section 250.142(B) Exception 2 is not permitted or used, a grounding conductor shall be run from the service grounding electrode conductor and grounded service conductor at the service equipment to the meter fitting or meter cabinet. This grounding conductor shall be copper and sized and installed in accordance with the Indiana Electrical Code requirements for grounding electrode conductors.

L. The customer shall install conduit seals that will limit the flow of hazardous gases and vapors from outside and inside the service lateral conduits in accordance with the Indiana Electrical Code Sections 230.8 and 300.5(G).

Part IV -
PRIMARY SERVICE - OTHER THAN NETWORKED SERVICE AREA

400 GENERAL REQUIREMENTS

A. Primary voltage service is available for qualifying loads and requires approval by the Company in the design stages of the project. Engineering shall be consulted early in the planning stage to make certain all requirements are met.

Although voltage is held to within five percent of nominal for lower voltage service, primary voltage service may vary eight percent or more from nominal. See Indiana Administrative Code 170, Standards of Service for additional information.

B. Service may be available at the Company's option at voltage levels of 4.16 kV, 13.2 kV, 34.5 kV, 138 kV or 345 kV depending upon the load to be served and the location on the system.

Where 4.16kV is to be supplied: All switchgear, cable, potheads, and the like shall be rated for 15kV class grounded wye insulation. Utilization equipment, such as transformers, shall be dual primary voltage 13.2kV x 4.16kV. Any surge protection shall be for the supplied voltage and replaced when the service is upgraded to 13.2kV.

C. Primary voltage services at 4.16 kV and 13.2 kV shall have a grade accessible, customer controlled, disconnecting device and overcurrent protection near the service point (see 400G below), unless all facilities to the buildings are under the exclusive control and ownership of the Company. Primary voltage services at 34.5 kV, 138 kV or 345 kV shall require special consideration.

D. The service overcurrent protection shall be sized to coordinate with the Company system and the system neutral shall be taken to the customer's service equipment.

E. Interconnecting multiple services at primary voltages. Where more than one primary voltage service is installed that is served from more than one source and can be electrically connected, the provisions in 1, 2, or 3 shall be followed.

1. *Interlocking System.* An interlocking system shall be installed in such a manner that no two primary voltage services can be electrically connected together without the disconnection of one of them from the Company's service drop or lateral. An example of this would be the Kirk Key Interlock system. The customer shall provide a one-line diagram of his proposed interlock installation to the Company's project engineer for approval.

2. *Programmable Logic Controller (PLC).* A system that uses a Programmable Logic Controller (PLC) to momentarily, no more than 20 cycles, connect two primary voltage services together before opening one of them from the Company's service drop or lateral. Where an installation of this type is made, the Company's systems protection engineer shall be consulted by the Companies project engineer to verify the safety of interconnecting these services. He shall review the distance from each sub-station, the impedance of the primary voltage feeders, the over-current devices in the sub-station, sub-station, and circuit loading, etc. to verify the feasibility of the installation. The customer shall provide a one-line diagram of his proposed interlock installation to the Company's project engineer for approval.

3. *Closed Transition Transfer Switch Operation (CTTS).* Distributed or emergency generation using a CTTS switch may be applied to the Company's system provided that the customer submits a DG Interconnection Application and signs a DG Interconnection Agreement as required by Section 175. AES Indiana will review the application for parallel operation. The customer is required to submit design details such as the closed transition time, synchronizing check relays used, and backup trip mechanism if transfer lasts longer than the expected closed transition time and reverse power relays used.

F. The metering facilities shall be located on the line side of the service disconnecting and overcurrent protective devices.

G. For overhead services, the Company will own the facilities up to and including the line side primary dead-end, the cutouts, and the metering facilities. The customer shall own all other facilities, from the service point (interface) with AES Indiana. In addition to this point of contact, the customer shall also own the metering pole. The customer shall maintain his own facilities.

For underground service, the Company will own the facilities up to the line terminals of the service/metering switchgear and the customer will own everything beyond this service point. The service/metering switchgear will be furnished and installed by the Company and sold to the customer or the customer may purchase and install the service/metering switchgear to the Company's specifications. The company will maintain ownership of the metering equipment inside the switchgear.

Exception: Under certain conditions, a customer may lease the Company owned facilities past the service point up to each building with a Standard Contract Rider Number 4.

A Standard Contract Rider Number 4 is defined in the tariffs that are on file with the Indiana Utility Regulatory Commission.

H. Where a Standard Contract Rider Number 4 is utilized (the customer is renting the facilities from the Company and the Company maintains the facilities on the load side of the primary meter) all the rules for secondary service shall apply except for requiring the installation of secondary metering facilities.

I. Electrical inspections and acceptance by the Company are required for all services before they are connected to the Company's system. Feeders to buildings, structures, or poles on the customer's premises from the Company's system and installed by the Company are included in this requirement.

J. In the case of an altered service, existing facilities shall be made to conform to current standards.

K. Underground services where the Company is supplying the cable shall not be permitted to enter a building or structure. The Indiana Electrical Code, Section 230.6, shall not be used for this requirement.

Part V - METERING

Part V: Metering

500 General information

Information on metering problems, available equipment, and general requirements can be obtained at the Meter Department Office, 3600 North Arlington Avenue, (317) 261-5262 or (317) 261-5227.

100, 200, and 320 ampere single phase self-contained meter fittings shall be furnished and installed by the customer. The company will continue to furnish 2, 3, and 4 gang meter fittings for multi-family homes. The customer is responsible for maintaining his wire and cable connections, see Section 555A.

Meter cabinets and three phase meter fittings will be furnished by the Company for installation by the customer. The Company retains ownership of these meter fittings and the cabinets. However, the customer is responsible for maintaining his wire and cable connections, see Section 555A.

If a meter cabinet and/or instrument transformers have deteriorated to a condition that the installation is no longer safe or metering correctly, it is the responsibility of the customer to have the metering equipment replaced by a qualified electrician. Meter cabinets and three phase meter fittings will be furnished by the Company for installation by the customer. 100, 200, and 320 ampere single phase self-contained meter fittings shall be furnished and installed by the customer. However, all Company meters will always be installed and maintained by the Company. Any failed condition will be determined by a representative from the Company's Meter Department and if the cabinet has failed inspection due to damage, charges may apply for the replacement parts.

The two categories of metering installations are residential and general service. The term general service includes both commercial and industrial applications of electric service. The following is a brief outline of the principal Company requirements relative to the metering installation for each of these categories. At the end of Part VII are drawings depicting typical installations covered in this manual.

505 Equipment for residential installation

A. 100 - 200 ampere overhead or underground

The Company will provide a 200 ampere meter fitting available in 2, 3, and 4 gang. See section 500 for single gang 200 ampere meter fittings.

B. 400 ampere overhead or underground

See section 500 for 320 ampere meter fittings.

C. 600-1600 ampere underground

The Company will furnish a single enclosure containing current transformers and a meter fitting.

D. Location

Metering facilities are to be in hot sequence and located on the outside of the structure in an accessible location agreeable to the Company. See drawing GB5-010 for acceptable meter locations and Section 550A7 for the definition of cold sequence. In general, exceptions for cold sequence are for 480 volt installations and installations in the networked areas covered in Part III.

A clear working space of at least 4 feet shall be maintained in front of the metering facilities. Safe and ready access to this area shall be provided.

510 Multi-family dwellings

Metering shall be installed on the outside of all multi-family dwellings. Information relative to the location of metering facilities and the type of metering equipment to be installed should be obtained before any work is started on multiple meter installations. Only locations that are readily accessible and agreeable to the Company will be acceptable.

When ganged meter fittings are required, the customer shall notify the Meter Department in sufficient time to order and receive these fittings prior to installation time.

515 Meter centers outside of the downtown underground networked service area

Any deviations from this section will require meter department approval prior to purchasing the meter center. For the installation of meter centers in the Downtown Underground Networked Service Area, see Section 517.

A. With prior approval of the Meter Department, meter centers may be provided, installed, and maintained by the customer. Both single and three phase meter centers shall be in a vertical stack of no more than four (4) positions. However, if due to space constraints, the contractor may request a waiver for a vertical stack of five (5) positions. This request shall be submitted to the Company Meter Layout group for prior approval before ordering the equipment. All customer provided meter centers shall be UL listed or listed by another Nationally Recognized Testing Laboratory (NRTL).

B. Residential meter centers fed from single phase, 120/240 volt shall have a maximum rating of 800 amps per meter center and limited to a maximum rating of 225 amps per position. Each position shall have a ringless cover, horn bypass, and have a disconnecting means on the load side.

C. Residential meter centers fed from commercial three phase 120/208 volt, four wire, wye source shall have ringless covers with a horn bypass. A 5th jaw shall be installed at the 9:00 position and connected to the neutral by the customer. Individual meters shall be balanced across the three phases and neutral with a maximum of 200 amps per position. 120/240 volt single phase meter centers shall not be permitted to connect to 120/208 volt three phase services.

Three phase meter positions at 120/208 volt shall have ring-less covers and bypass levers with a maximum rating of 225 amps per position.

D. Single phase and three phase services of the same voltage from the same meter center are permitted. With approval by the Meter Department the largest disconnecting means shall not be greater than 300 amperes for a three-phase service. (For instance, a house panel.)

E. The attachment of external metering cabinets and/or cabling to the Meter Center shall not be permitted.

F. Single phase and/or three phase meter centers and service equipment (commonly known as a meter/main) are permitted if provided, installed, and maintained by the customer. Unmetered service cable shall be separated from the customer's service equipment or overcurrent devices by a factory installed barrier.

G. Meter centers for three phase 120/208 or 120/240 volt are limited to 225A maximum per position.

H. All meter centers shall be located on the outside ground floor of the structure in an accessible location if the building is equal to or less than eight stories. If the building is nine or more stories, the meters may be installed on every 3rd floor in a designated room. The door into the room shall have warning signs "Danger High Voltage" and "Authorized Personnel Only". Inside, the door shall have listed panic hardware and open in the direction of egress plus an exit sign installed above the egress door. This room shall be at least 7 feet wide. Provisions shall be made for the use of a company key for access, keyless entry is not acceptable. Additionally, a 3/4" conduit sleeve shall be provided to the outside of the building for the installation of an outside antenna for remote metering. This conduit sleeve shall be sealed against the weather by the customer. See Section 520 and 560R for more information. If a vertical stack of four meters is used (five if permitted), the bottom of the meter center shall be located 24 inches above final grade. All other meter centers metering shall be installed at the height of not more than 6 feet nor less than 5 feet above final grade, measured to the top of the meter center metering equipment. Where the presence of metering equipment on the structure is objectionable, meter centers may be located on a customer-owned and installed meter support, approved by the Meter Department.

Single phase or three phase meter centers located outside of the downtown underground networked service area shall have a disconnecting means located on the load side of each meter position. Meter centers with seven or more disconnecting means is required to have a main disconnecting means for the entire meter center.

A clear and level working space of at least 4 feet shall be maintained in front of the face of the meters. Safe and ready access to this area or room shall be provided.

I. All initial connections in a meter center shall be made by the customer.

J. Each individual meter fitting in all multiple meter installations shall be correctly identified by a permanent form of metal tag (or the equivalent thereof) which indicates the building address and type of service to be served by each meter. Markings with pencil, crayon, paper tags, etc. will not be acceptable. Insofar as practical, it is preferable in multi-family dwellings that the numbering arrangement be in an orderly sequence in each group. Multi-meter installations not identified will not be connected. The Company will install and bill meters in multiple installations according to markings supplied by the electrical contractor and under no circumstances will assume responsibility for errors which are the result of incorrectly identified meter fittings.

517 Meter centers in the downtown underground networked service area

A. All meter centers shall be located on the outside ground floor of the structure in an accessible location if the building is equal to or less than eight stories. If the building is nine or more stories, the meters may be installed on every 3rd floor in an area agreeable to the Meter Department. Provisions shall be made for the use of a company key for access, keyless entry is not acceptable. Additionally, a 3/4" conduit sleeve shall be provided to the outside of the building for the installation of an outside antenna for remote metering. This conduit sleeve shall be sealed against the weather by the customer. See Section 520 and 560R for more information.

B. Residential meter centers, 120/208, 3-wire, single phase fed from commercial three phase 120/208 volt, four wire, wye source shall have ring-less covers with a bypass lever. A 5th jaw shall be installed at the 9:00 position and connected to the neutral by the customer. Individual meters shall be balanced across the three phases and neutral with a maximum of 200 amps per position. 120/240 volt single phase meter centers shall not be permitted to connect to 120/208 volt three phase services.

C. Three phase meter positions at 120/208 or 120/240 volt shall have ring-less covers and bypass levers with a maximum rating of 225 amps per position.

D. Single phase or three phase meter centers shall have a disconnecting means for the entire meter center and additionally a disconnecting means shall be located on the line side of each meter position.

A clear and level working space of at least 4 feet shall be maintained in front of the face of the meters. Safe and ready access to this area shall be provided.

E. All initial connections in a meter center shall be made by the customer.

F. Single phase and/or three phase meter centers and service equipment (commonly known as a meter/main) are permitted if provided, installed, and maintained by the customer. Unmetered service cable shall be separated from the customer's service equipment or overcurrent devices by a factory installed barrier.

G. Each individual meter fitting in all multiple meter installations shall be correctly identified by a permanent form of metal tag (or the equivalent thereof) which indicates the building address and type of service to be served by each meter. Markings with pencils, crayons, paper tags, etc. will not be acceptable. Insofar as practical, it is preferable in multi-family dwellings that the numbering arrangement be in an orderly sequence in each group. Multi-meter installations not identified will not be connected. The Company will install and bill meters in multiple installations according to markings supplied by the electrical contractor and under no circumstances will assume responsibility for errors which are the result of incorrectly identified meter fittings.

520 COMMERCIAL AND INDUSTRIAL METERING UNDER 600 VOLTS

In all cases, the meter location and the type of facilities to be installed are subject to approval by the Meter Department prior to starting construction.

The metering equipment shall be located in a safe area and at heights indicated on the typical installation drawings. Section 110.26 of the Indiana Electrical Code shall be followed and a clear level working space of at least 4 feet shall be maintained in front of the meter. Safe and ready access to this area shall be provided.

If the metering facilities are located inside, a 3/4" conduit sleeve shall be provided from the meter location to the outside of the building for the installation of an outside antenna for remote metering. This conduit sleeve shall be sealed against the weather by the customer.

The location:

- If inside must be clean, dry, illuminated, and readily accessible.
- If outside must be readily accessible, level, away from obstructions such as dumpsters and grease pits, etc.

A. 100 - 225 AMPERE SERVICES

Self-contained meters may be utilized for installations either underground or overhead in this range of capacities, where demand metering will not be required. Self-contained meters shall be installed ahead of the service disconnecting means in all cases.

Exception 1: Where a group of more than six disconnect switches are to be connected to a single set of service entrance conductors.

Exception 2: Installations in the networked areas where a main disconnect ahead of each meter is always required.

Exception 3: 480 volt installations.

A two gang 120/240 or 120/208 volt, three phase, four wire meter fitting is permitted to be provided by the customer upon approval by the Company for 200 ampere or smaller services.

B. 250 - 1200 ampere

Installations for metering a customer's load greater than 225 ampere capacity are referred to as transformer rated installations which require the use of metering transformers in addition to the actual meter or meters.

Normally the device for mounting the necessary metering transformers, as well as the meter, is furnished by the Company. The exception would be an installation where a customer purchases a free-standing switchgear in which case the metering transformers would be installed in a separate, sealable compartment in the switchgear. (See Section 550)

525 Outdoor installations - overhead only

For outdoor mounting of metering transformers, the Company will supply transformers open mounted on an assembly. This assembly is to be installed on the structure by the customer's electrical contractor at the designated location. The overhead service drop will extend through the current transformers and then will be connected by the Company to the customer's service entrance conductors. The meter enclosure shall be securely mounted at the height of 6 feet above final grade measured to the top of the enclosure. The installation is to be done by the customer's electrical contractor. The contractor will furnish and install a UL listed 1¼ inch rigid conduit with weatherhead between the meter enclosure and the metering transformer assembly. The use of conduit bodies (condulets) with removable covers is prohibited. The Company will provide the necessary control cable to the contractor for installation in this conduit to interconnect the meter and metering transformers. All connections between the meter and metering transformers will be made by the Meter Department. (See GB3-030).

526 Transformer mounted CT metering - three phase underground installations only, 450 ampere minimum size service

For customers served by a pad mounted transformer where that customer is the sole customer served and has only one service served from this transformer, the company will offer metering installations at the transformer. Exceptions may be permitted in certain cases where approved by the Company's Line, Metering, and Engineering departments.

The customer shall install the following in accordance with Drawing GB5-110: (1) a company meter fitting, (2) conduit under the transformer pad to the meter fitting with a #4 Cu. PE grounding wire and metering cable installed, (3) PT's, if 480 volt, in the meter fitting. The company will furnish the metering cable and grounding wire plus furnish and install the CT's and make up all metering connections.

If this option is selected, all service cable and conduit shall be supplied, installed, and maintained by the customer.

Under no circumstances shall the metering be permitted to be attached to the transformer, the pad, or any company facilities.

535 Metering totalization

The Company will permit totalization of any two or more services, which when any two are combined will exceed the limit of the largest allowable individual service size. The above services must be in the same structure, but not necessarily in the same location.

Exception: Two meters will be totalized when the combined services do not exceed the limit of the largest allowable individual service size, provided the two services supply normal and emergency power to a critical load and a Standard Contract Rider Number 4 is collected monthly on the duplicate facilities which supply the emergency service. The duplicate meter facilities shall also be included in the Standard Contract Rider Number 4.

A Standard Contract Rider Number 4 is defined in the tariffs that are on file with the Indiana Utility Regulatory Commission.

540 Underground service - non-networked area

When underground service is to be provided, the Company will provide a steel outdoor enclosure for a single underground service (100 to 1200 ampere inclusive except for 100 to 320 ampere, 1Ø).

550 Switchgear installations

Shop drawings for all free-standing switchgear shall be approved in writing for network service area and in writing at customer request for non-network service area by the Meter and Engineering Departments in advance of any firm commitments on each individual installation. This will ensure proper location and arrangement of metering transformers in the switchgear. In such installations, the Company will deliver the metering transformers directly to the job site for installation by the customer's electrical contractor. Also, the meter cabinet and coded cable will be furnished by the Company for the installation by the customer's electrical contractor. The use of conduit bodies (condulets) with removable covers is prohibited. The meter cabinet shall be connected to the metering compartment in the switchgear with a 1¼ inch rigid conduit provided and installed by the customer's electrical contractor. The meter fitting shall be installed at a location agreeable to both the customer and the Company. (See Section 310D for Secondary Network Service Area and Section 205 for Secondary Non-Network Service Area).

A. Metering instrument transformer standards for low voltage (less than 600 volts) switchgear

The following standards shall be observed in the planned installation of metering compartments in switchgear rated at 600 volts or less. Plans covering essential specifications for the metering transformer compartment of the switchgear shall be submitted to the Metering Department for approval before the fabrication of the switchgear. The principal points, which shall be considered, are as follows:

(1) A separate compartment shall be provided exclusively for metering transformers with access to the compartment through a sealable hinged door or doors. Bolted panels cannot be accepted for access to space in which current and potential transformers are installed.

(2) The metering transformer compartment shall be suitable in size 36"W x 36"H x 30"D for the installation of the three (3) current transformers of the specified type and three (3) potential transformers (if required) of the specified type. These transformers will be supplied by the Company and delivered to the electrical contractor for installation in the metering compartment. Meter compartment dimensions may be changed only upon written approval from the Company's Meter Department. Delivery will not be made until the contractor informs the Metering Department that the switchgear has been delivered to the job site. All metering transformers shall be installed in the compartment, so they are readily accessible for inspecting, checking, changing or removing. See Drawing GB3-120 for details.

(3) The current transformer compartment shall be covered by a hinged door or doors. These may be either single or double doors provided they are sized to allow them to be completely opened (120°) for access to the compartment. The doors shall be provided with a handle equipped with padlocking facilities.

(4) Window type current transformers will be supplied for any project.

(5) A 12" removable copper bus link shall be provided to facilitate the removal of current transformers.

(6) The switchgear bus shall be arranged and supported in such a way as to allow for the removal of the bus link and the current transformer without disturbing any of the remaining bus work, current transformers and/or without removing any cable or cable terminations.

(7) All metering transformers shall be installed in "Hot Sequence" only, except on the AES Indiana Downtown Network, which shall be installed in "Cold Sequence" only.

"Hot Sequence" indicates no customer switches or overcurrent devices are permitted in front of metering transformers. "Cold Sequence" indicates customer switches and overcurrent devices are required to be installed in front of metering transformers.

(8) The metering compartment shall be electrically and physically isolated from the remainder of the switchgear by a barrier made of Arboron or a similar material approved by the Company.

(9) Where potential transformers are required, they shall be mounted within the metering compartments to allow adequate electrical clearance from all other energized and/or grounded surfaces and to provide for easy removal, repair, and inspection. An isolating switch shall be installed to allow for protection and isolation of the potential transformers. The supporting shelf for the potential transformers must be capable of supporting 60 pounds and be 12 to 20 inches from the bus.

(10) The switchboard manufacturer shall drill and tap a ¼" x 20 hole in each bus on the line side of the current transformers. A brass screw shall be provided in each hole. The connection of the potential and current transformers shall be made by Meter Department Personnel.

(11) The Company meters will be installed either on the outside of the switchgear or at a point remote from the switchgear in a location agreeable to the electrical contractor and the Company. The distance between the switchgear and metering shall not exceed 50 feet. A meter cabinet furnished by the Company shall be installed by the electrical contractor. The electrical contractor shall furnish and install a 1¼ inch conduit between the metering transformer compartment in the switchgear and the meter cabinet. The use of conduit bodies (condulets) with removable covers is prohibited. The coded control cable will be furnished by the Company and installed by the contractor in the conduit for interconnecting the metering transformers and the metering equipment.

B. Metering instrument transformer standards for high voltage (over 600 volts) metal-clad switchgear

Where the instrument transformers are to be mounted in 4kV or 13kV customer owned switchgear, the following standards and conditions shall be followed. Before fabrication is started, the manufacturer shall provide the Company with complete shop drawings and one-line electrical diagrams of the switchgear system and components for approval by the Installations and Metering Department and Engineering Department.

(1) A separate Company Metering Compartment 42 inches in width and a nominal height of 96 inches shall provide adequate space for the mounting of three bar type current transformers and three potential transformers for the location of the metering equipment. Access to this compartment shall be through padlockable hinged doors only, removable panels are not acceptable. There shall be no alarms or trip circuits that would cause the unit to go offline if doors are opened.

(2) Current transformers shall be installed in a vertical position in the compartment such that they may readily be replaced or removed. Potential transformers shall be mounted on a lockable, draw out carriage. Grounding devices with a visible grounding connection shall be provided to assure that all parts are properly grounded when the potential transformers are exposed. Connections to the primary side of the potential transformers shall be made on the line side of the current transformers. Carriage shall be able to support the weight of three 100 pound transformers.

A name plate and/or stencil shall be provided on the front and rear doors to identify the metering compartment.

(3) Wiring from the current transformers shall be routed to a suitable short-circuiting terminal block with removable bars/screws. Wiring from the potential transformers shall be routed to a suitable fused terminal block. Both blocks shall have conductors correctly identified. Both blocks shall be located in the same cubical as the potential transformers and approximately 5 feet above the floor for easy access.

(4) All metering transformers shall be installed in "Hot Sequence" only, except where the installation will be on the AES Indiana downtown network, which shall be installed in "Cold Sequence" only. See Section 550A7 for Definition of Hot & Cold Sequence.

(5) All meter cabinets and auxiliary metering equipment shall be located remote from the switchgear and be mounted on an exterior building wall or on free standing structure in a location agreeable to the contractor and the Company, see drawing GB5-100. The distance between the switchgear and metering shall not exceed 50 ft. A meter cabinet furnished by the Company shall be installed by the electrical contractor. The contractor shall furnish and install an 2 inch schedule 80 PVC conduit where the installation will be underground or where the installation will be overhead, the contractor shall furnish and install a 1¼ inch rigid conduit. The use of conduit bodies (condulets) with removable covers is prohibited. Either method will connect the meter cabinet to the metering cubical. The coded control cable will be furnished by the Company and shall be installed by the contractor.

Note, all meter cabinets shall be located outside only for easy Company access.

555 Maintaining meter security

A. It is unlawful to break seals and/or locks on Company meters or to remove meters without notifying the Service Connection Division on telephone number (317) 261-8133.

Cooperation will be extended at the request of the customer for normal maintenance or under emergency conditions. Request shall be made to the Service Connection Division for these cases.

B. The Company reserves the right to seal all meters, metering equipment and fused or unfused switches, together with any enclosures, gutters or raceways containing unmetered circuits, whether any of such equipment has been furnished by the Customer or the Company. This is reflected in the "Rules and Regulations, Section 17.2" that are approved by the Indiana Utility Regulatory Commission.

C. Electricity used on construction services shall be metered. Services that have been disconnected by the company are to be restored only by AES Indiana personnel. Unmetered circuits and bypassed meter fittings will be disconnected, an energy diversion charge, and pro-rated billing will be assessed.

557 Installation of surge protective device and other devices at meter sockets

The installation of any meter adapter surge suppressor or any similar interface devices between the meter and meter socket is not acceptable and prohibited. If any surge suppressor or other similar interface device such as a generator connection, is found installed between the meter and meter fitting, Company field personnel will remove the device.

560 General requirements

A. A signed sketch shall be provided for all current transformer rated metering installations by the customer's electrical contractor. The sketch shall include location of the metering and all distances from windows, doors, gas meters, stairways, corners of buildings and posts if required.

B. All meter fittings and cabinets are to be surface mounted on the exterior of the building or free standing; flush mounted meter fittings and cabinets are not permitted.

C. To provide adequate clearance for testing and maintenance, a conduit nipple (a minimum of 4 inches long) shall be provided between the meter fitting and any other electrical equipment.

D. Facilities to accommodate socket type meters installed at any location served by two phases and a neutral of the three phase, four wire 120/208 volt, wye system, shall be equipped with a neutral terminal block. The neutral terminal block (fifth terminal) shall be furnished by the Company and installed on the left side of fitting by the electrical contractor. (See Drawing GB1-060.)

E. A maximum of 4 conductors may be connected to the line or load side of the current transformer.

F. Customer shall furnish and install posts to protect meter cabinets, junction boxes, conduits, and other facilities as specified by the Company when exposed to vehicular traffic. Each post shall be a minimum of 7'-0" long and 6 inch diameter steel pipe. The posts shall be concrete filled, set in concrete and extend 4'-0" above grade. Contact the Company for approval of post arrangement.

G. For the installation of Company cables:

1. All nonmetallic conduit installed above grade shall be gray schedule 80 or heavier.
2. Where conduit is installed from a meter fitting or enclosure into the earth, the conduit shall extend a minimum of 18" below grade and have a box adapter at the point of termination of the conduit in order to provide a smooth edge. This requirement does not apply to continuous conduit turned up for riser poles or into pad mounted transformers.
3. All metallic conduit shall be rigid steel or IMC.
4. All conduit elbows for the installation of the Company's cable shall be 4" X 36" radius minimum.
5. All conduit runs shall be installed with a pull string.

H. The electrician shall take precautions when adding any circuits to an existing installation to insure that it is connected on the load side of the meter. Only one conductor may be connected to each terminal of an individual meter position in any self-contained meter fitting. Terminals for more than one conductor and terminals used to connect aluminum shall be so identified.

I. On a three phase, four wire, delta service, the phase conductor having the higher voltage to ground shall be permanently marked at each point of connection, in accordance with the Indiana Electrical Code. If red or orange is used to mark the phase having the higher voltage to ground, red or orange shall not be used to mark any other phases.

J. The contractor shall install the meter fittings and meter cabinets provided by the Company. If service junction boxes are required, they shall be provided by the Company and installed by the contractor as specified by the Engineering Department.

K. The Company will make all connections in the service junction box. The contractor shall identify all cables by meter position. If no junction box is required, the Company will make connections on the line side of the meter or current transformers.

L. Metered and unmetered conductors shall not be installed in the same conduit, raceway, junction box, or switch. (See exception on pole meters Section 570.)

M. Metering equipment is only available at the Arlington Service Center, 3600 North Arlington Avenue.

N. All 400A and larger meter, and junction cabinet locations, other than residential, shall be truck accessible. See Section 220A3e for the definition of truck accessible.

O. Devices, fittings, clamps, or equipment shall not be permitted to be installed or attached to any metering cabinet or meter fitting without written permission from the Meter Department unless it is for the installation of the metering cabinet or meter fitting in accordance with the Company's standards.

Exception: Where a clamp or device is for intersystem bonding, is in compliance with the Indiana Electrical Code Section 250.94 and does not interfere with either the operation of the cover of a meter fitting or intrude into the interior of a meter fitting.

P. Metered and unmetered power conductors shall not cross inside CT meter cabinets.

Q. Conductors shall not enter or leave through the back of a CT cabinet.

R. In all cases where meters and/or metering equipment will be in a locked room, fenced area, or enclosure, a means for the authorized Company personnel shall be provided for access with a Company key. This may be by means of either a separate door or gate with a Company lock or a chain with a Company lock and a customer lock. Keyless entry is not acceptable.

565 Unacceptable meter locations - this is not meant to be an all-inclusive list

A. Above an opening or obstruction

B. On mobile (manufactured) homes located in mobile home parks, mobile homes not approved for the installation of a meter on the side, recreational vehicles, or construction trailers.

C. Under a porch or carport, whether open or closed.

D. Within a locked enclosure. See Section 560R for more information.

E. Behind shrubbery planted close to the building.

F. Within six (6) inches of any right-angle obstruction.

G. On the side of a building adjacent to a driveway or an alley.

H. Within three feet of a door, or two feet of any window or outside corner.

I. Section 110.26 of the Indiana Electrical Code shall be followed for minimum working clearances. A clear working space of at least 4 feet shall be maintained in front of the metering facilities. Safe and ready access to this area shall be provided.

J. Within three (3) feet of all gas metering, regulating equipment, and any other source of combustible quantities of gas.

570 Metering on poles and underground facilities

Meter installations on Company poles or underground facilities such as pad mount transformers, service junction boxes, etc., will not be permitted. Customer-owned poles will be permitted for metering installations if approved by the Company. The customer must provide either two conduits (one for line wires and one for load wires) or a single conduit may be used in conjunction with color-coded wire to distinguish metered and unmetered conductors. Line and load wires shall not be installed in the same conduit if the load wires have been provided overcurrent protection. Wires with painted ends shall not be used. If two conduits are used, they must be installed on the same quarter of the pole surface with the line service cap 12 inches above the load service cap.

Where the installation of more than one meter on customer-owned facilities is contemplated, such as in mobile home parks, the Engineering and Meter personnel shall be consulted for installation specifications on an individual job basis.

Only conductors in rigid conduit will be permitted for pole metering installations. See Section 220A2d for the definition of rigid conduit.

575 GROUNDING SERVICES

All grounding and bonding of service raceways, meter enclosures, junction cabinets, junction boxes, etc. shall be done by the customer in accordance with the Indiana Electrical Code, Article 250. Bonding shall be done in such a manner as to avoid a parallel path with the grounded (neutral) conductor.

The grounding electrode conductor (GEC) shall not pass through any meter fitting, meter cabinet or junction cabinet. The GEC may terminate inside the Company meter fitting, meter cabinet or junction cabinet.

Exception: Where the service equipment is located before the metering equipment, the GEC shall be permitted to pass through and bonded to the meter fitting, meter cabinet or junction cabinet.

The GEC is the conductor used to connect the grounding electrode to the grounded conductor of the service at the service equipment. The bonding jumper used to bond the conduits entering the meter fitting or enclosure is required by the Indiana Electrical Code and is permitted by AES Indiana.

Part VI - POWER QUALITY AND ELECTRIC SERVICE RELIABILITY

600 Service reliability

Reliability of service is of prime importance to both the Company and the Customer. The Company's record of excellent service reliability is the result of sound engineering, system design and carefully implemented maintenance programs.

Despite these efforts, power system disturbances do occur. Generally, most of the Customer equipment can tolerate short-term voltage variations. But in today's electronic world, the inability of microprocessors and electronic controls to tolerate power system disturbances can result in equipment problems and downtime.

The Company encourages care in the design of the electrical system, and in the installation of power conditioning equipment. This will promote satisfactory operation of customer equipment and prevent electrical problems to the Company's and other Customers' equipment. The Customer should consider the following items as a guide for electrical system design where power quality is an important factor:

(a.) Wiring and grounding practices that comply with the current edition of the Indiana Electrical Code.

(b.) Dedicated circuits for electronic systems.

(c.) Multistage surge protective device (SPD).

(d.) Single phasing protection for motors.

(e.) Derated or "K" rated transformers for load with high harmonic content.

(f.) Line reactors for protection of adjustable speed-drive motors.

(g.) Uninterruptible power supply (battery or rotary).

(h.) Back-up or emergency generation for some applications.

Should there be any questions about the application of these concepts, please call the Company's Power Quality Consultant on (317) 261-8382. The consultant will be most happy to assist you in obtaining the electric service to meet your needs.

610 Power quality issues

Further explanation of issues that affect both the Company and the Customer are denoted below.

A. Harmonic distortion

IEEE Standard 519 - 2014, contains the goals for the design of electrical systems that include both linear and nonlinear loads. The use of this standard for system design will assure compatible performance and safety of customer systems and minimize problems for neighboring Customers. Examples of nonlinear loads include adjustable speed drives, inverters, computers, lighting, high efficiency HVAC, etc.

Previous experience by the Company has shown that the design requirements of IEEE Std. 519 - 2014 should be specified by the Customer at the Point of Common Coupling with other loads such as a Customer's main switchgear bus. Please contact the Company for assistance at specific locations.

B. Transformer Derating

The capacity of transformers provided by the Company may be inadequate due to a change in Customer load from a linear type to a nonlinear type. This action may result in premature failure and/or loss of life expectancy of the transformer that directly serves Customer load. Therefore, the rating of the step-down transformer provided by the Company will be reviewed using ANSI/IEEE C57.110 - 2008. This review is based upon the Customers' specified system design results per IEEE Std. 519 - 2014 and/or actual testing. The excess facility charges of a Standard Contract Rider Number 4 may apply to the Customer, if a larger than normal transformer is required to serve a load because of nonlinear characteristics. The excess facilities of a Standard Contract Rider Number 4 do not apply to the Customer with a design that meets the harmonic distortion goals described above.

C. Low Frequency Oscillatory Transient

Transients caused by capacitor-bank switching may occur at Customer locations. This transient can be caused by switching either the Company or Customer capacitor banks. The transient oscillates on the normal 60 Hz. sine wave and decays in a very short period of time. Typical magnitudes of the transient, including the normal 60 Hz. sine wave, are 1.1-2.0 per unit of nominal system voltage. The time duration of the transient alone is about 0.5-2 cycles. Specifications for the design of Customer systems should include appropriate protection for these transients.

D. Impulsive transient

Lightning is a prime example of an impulsive transient and can cause damaging over voltages to appear on both Company and Customer electrical facilities. Multistage surge protective device (SPD) protection is necessary to avoid catastrophic equipment failure. IEEE/ANSI C62.41.1 - 2002 and C62.41.2-2002 provide information to properly coordinate equipment withstand capability and environmental characteristics to ensure proper protection. Customer specifications for the design and operation of electrical systems should include multistage SPD protection.

E. Voltage Unbalance and/or Single Phasing

Voltage unbalance results from a load that is not balanced between phases. Voltage unbalance can occur by various means, including a phase loaded significantly heavier than another and loss of one or two phases of a three phase power system. Loss of one or two phases of a three phase power system that serves motor load at Customer locations is often called "single phasing". Voltage unbalance may result in motor damage due to heating. Appropriate protection for these conditions cannot be economically provided by the Company. Therefore, it is the Customers' responsibility to provide and maintain protection for multi-phase equipment that may be adversely affected by these conditions. The Company assumes no liability for equipment damaged by a loss of phase condition.

F. Voltage Sag

A voltage sag is a short duration voltage decrease. Voltage sags are usually associated with power system faults but can also be caused by switching heavy loads, starting of motors, etc.

Voltage sags caused by power system faults often have a different voltage on each phase, generally have durations of a second or less, and are more likely to occur during adverse weather conditions. Smaller voltage changes occur more often than large voltage changes. Thus, equipment with greater sensitivity is more likely to experience problems. Customer equipment that cannot tolerate a voltage sag due to power system faults should be specified with the capability to ride through this condition.

Voltage sags caused by switching heavy loads, starting motors are best controlled by the Customer. Customer systems should include electrical and/or mechanical devices to limit the sag at the point of delivery to 2% below the impressed voltage at the point of delivery. Please contact the Company for assistance at specific locations.

G. Voltage Fluctuations

Loads that exhibit continuous rapid variation in their current magnitude can result in voltage fluctuations. These voltage fluctuations can cause corresponding fluctuations in lighting equipment output. The magnitude and frequency of the fluctuating light output can become very irritating to people.

Examples of loads that can cause voltage fluctuation and may result in flicker are welding machines, arc furnaces, X-ray machines, etc. Customers installing equipment that may exhibit these characteristics should specify, install, and operate equipment that will limit the fluctuations to the limits specified by the Company. Typically, these limits will range in magnitude from 0.3% of the impressed RMS voltage, at the metering point for modulation frequencies in the 5-10 Hz. range to a maximum of 2% for other modulation frequencies. Please contact the Company for the limits at specific Customer locations.

Part VII – SECONDARY SERVICES AVAILABLE FOR ROADWAY, SAFETY, AREA LIGHTING AND TRAFFIC SIGNALS

700 Secondary voltages available

After determination as to whether electricity will be supplied from overhead or underground in accordance with the Company's underground policy and any legal requirements, the Company will supply (all voltages may not be available in some areas) one of the following service voltages:

(a) Single phase, 120 volt, two wire

(b) Single phase, 120/240 volt, three wire

(c) Single phase, 120/208 volt, three wire

(d) Single phase, 277/480 volt, three wire

(e) Single phase, 240/480 volt, three wire

705 Requirement for service

A. *Single phase, 120 volt, two wire,* may be provided for services not to exceed 30 amperes.

B. *Single phase, 120/240 volt, three wire,* may be provided for services not to exceed 200 amperes.

C. *Single phase, 120/208 volt, three wire,* may be provided for services not to exceed 125 amperes.

D. *Single phase, 277/480 volt, three wire,* may be provided for services not to exceed 125 amperes. A metered service in this voltage is only available for outdoor/roadway lighting applications. The Company will supply a cold sequence meter fitting with a molded case switch to the customer. A flat rate service is available to qualifying customers under the terms and conditions of Rate MU-1 as filed with the IURC.

See Section 550A7 for the Definition of Hot & Cold Sequence.

E. *Single phase, 240/480 volt, three wire,* may be provided for services not to exceed 200 amperes. A metered service in this voltage is only available for outdoor/roadway lighting applications. The Company will supply a cold sequence meter fitting with a molded case switch to the customer. A flat rate service is available to qualifying customers under the terms and conditions of Rate MU-1 as filed with the IURC.

See Section 550A7 for the Definition of Hot & Cold Sequence.

All voltages will be provided on a cost to serve basis.

710 Applicability of part I and part V

Except as modified in this Part VII, all the rules in Part I and V generally apply.

715 Application for traffic signal service

Application for a metered traffic signal service shall be made on the "Meter Installation Request" form provided by the Company. The engineer in charge of the customer's construction shall take responsibility for the correctness of the electrical service by filling out and signing the "Letter in Lieu of Electrical Inspection" provided by the Company unless the service equipment has been inspected and tagged.

720 Special requirement

Service equipment, sized for the maximum load, shall be installed by the customer at the point of service for all lighting equipment to be billed under Rate MU-1 (a flat rate service with no metering equipment).

725 Special underground requirements

For the installation of Company owned street lighting and/or protective lighting, the customer may be required to install gray 4" rigid PVC conduit with a pull string in a 24" deep trench at locations specified by the Company. These locations may include roads, sidewalks, landscaping, or any area that may prove to be inaccessible.

730 Customer supplied concrete column bases

Depending on the installation and application, the customer may be required to install poured concrete bases for the installation of Company street light columns. Contact the lighting representative shown on GB0-170 for verification. The detailed drawings for the construction of concrete bases are shown on GB8-100 and GB8-110 if the customer is responsible for their construction and installation.

735 Protective posts

For the protection of various Company facilities, protective posts may be required in accordance with Section 220A2h.

GB1 SERIES OF DRAWINGS

(1Ø OH AND UG METER FITTINGS AND CABINETS)

100/200 ampere, 600 V

(100A for up to 125 ampere service and 200A for up to 225 ampere service)

- Meter fittings shall be designed for use with standard socket type watt-hour meters.
- Meter fittings shall be in a NEMA 3R enclosure even if installed inside.
- Meter fittings shall be of the ringless type.
- Meter fittings shall have a swing style latch, which will accept padlock or wire style seals.
- Meter fittings shall be UL listed. (Listings with other Nationally Recognized Testing Laboratories are acceptable)
- Meter fittings shall be provided with a horn by-pass.
- Meter fittings shall be provided with concentric knockouts in the back, sides and bottom.
- Meter fittings shall be clearly marked with the manufacturer's name, catalog number and electrical ratings.
- Meter fittings shall have provisions for a 5th terminal.
  - Where a 5th terminal is required, it shall be listed and made by the same manufacturer as the meter fitting and for that meter fitting.
- 100 ampere meter fittings shall have tin-plated jaws and line side connectors suitable for the minimum range of 6 through 2/0 AWG CU/AL conductors. 100 ampere meter fittings shall be used for overhead services only.
- 200 ampere meter fittings shall have tin-plated jaws and line side connectors suitable for the minimum range of 6 AWG through 350 kcmil CU/AL conductors.
- Meter fittings with a lever by-pass shall not be permitted for these size meter fittings.

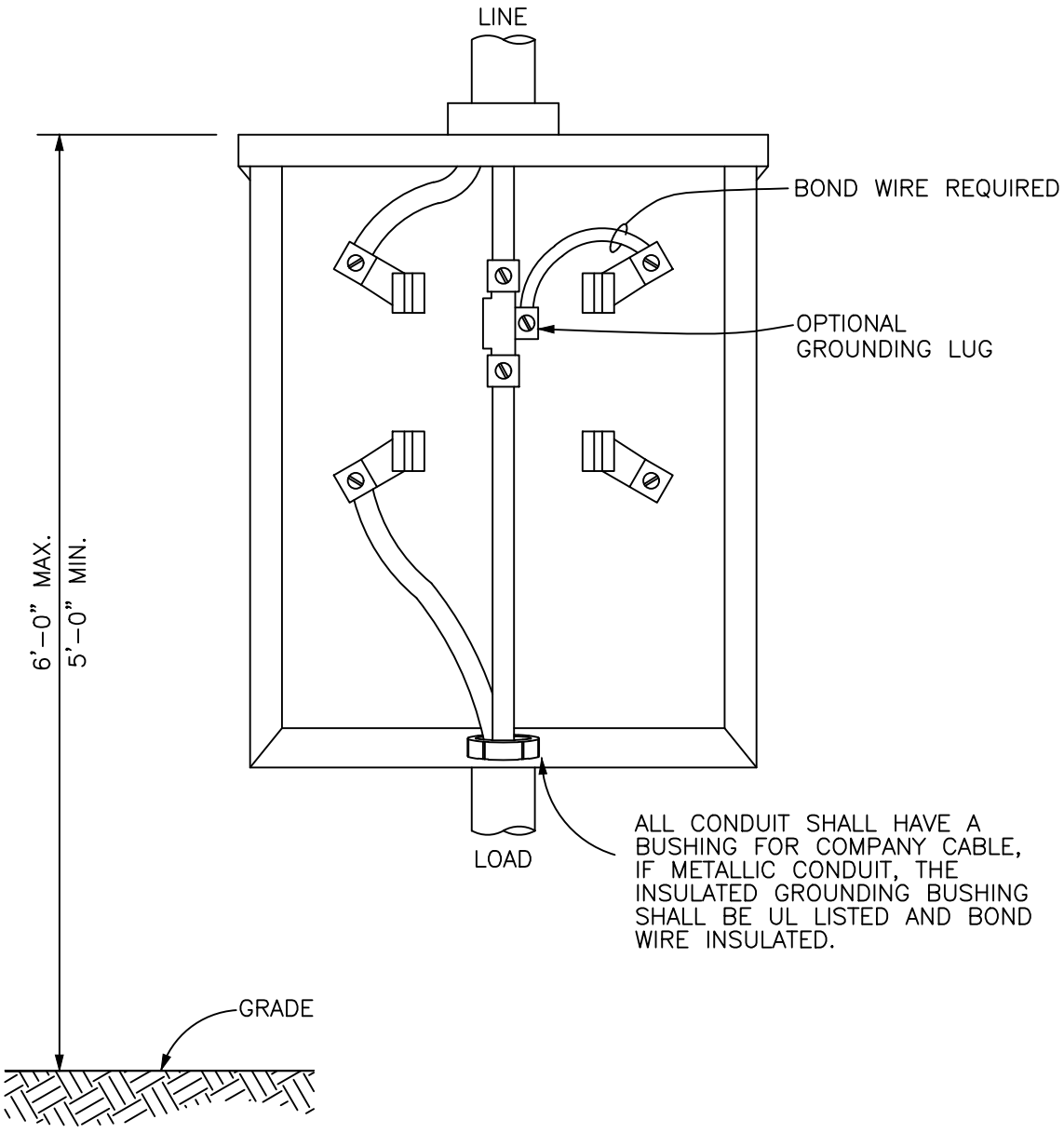
320 ampere, 600 V

(320A meter fitting is for up to 400 amperes of service)

- Meter fittings shall be designed for use with standard socket type watt-hour meters.
- Meter fittings shall be in a NEMA 3R enclosure even if installed inside.
- Meter fittings shall be of the ringless type
- Meter fittings shall have a swing style latch, which will accept padlock or wire style seals.
- Meter fittings shall be UL listed. (Listings with other Nationally Recognized Testing Laboratories are acceptable)
- Meter fittings shall be provided with a jaw release lever by-pass.
- Meter fittings shall be provided with concentric knockouts in the back, sides and bottom.
- Meter fittings shall be clearly marked with the manufacturer's name, catalog number and electrical ratings.
- Meter fittings shall be rated at a minimum of 320 amperes.
- Meter fittings shall have line side 3/8" diameter studs or tin-plated jaws and connectors suitable for the minimum range of 2/0 AWG - 600 kcmil CU/AL for terminating cable. IPL connections shall be on the left side.

aes Indiana

▶ CUSTOMER TO FURNISH THE METER FITTING, SEE GB1–005 FOR THE SPECIFICATIONS.

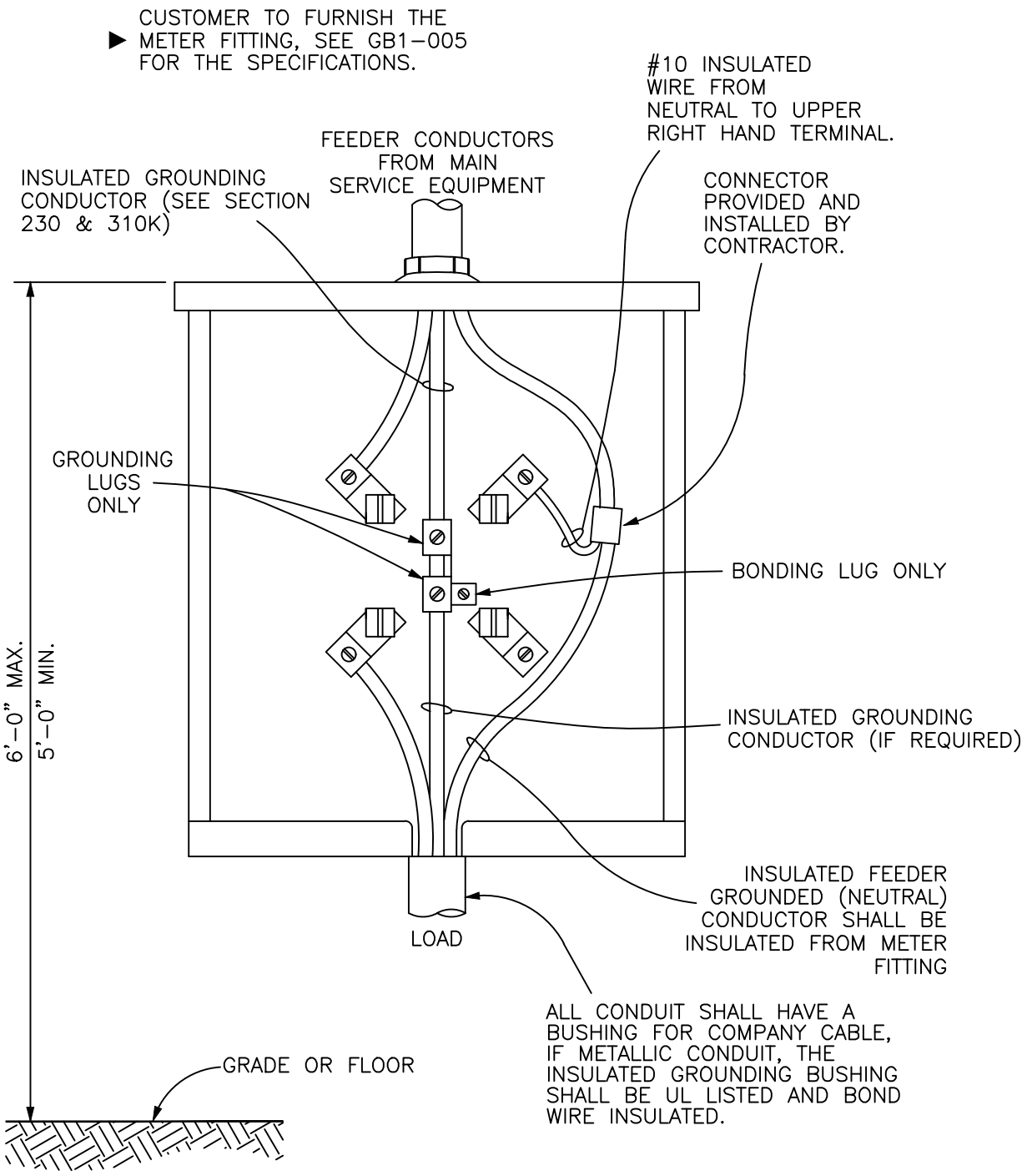


100 A METER FITTING
OVERHEAD INSTALLATION
120 VOLT, 1 PHASE, 2 WIRE
30A MAXIMUM SERVICE

REV 10–10–11

GB1-010

aes Indiana

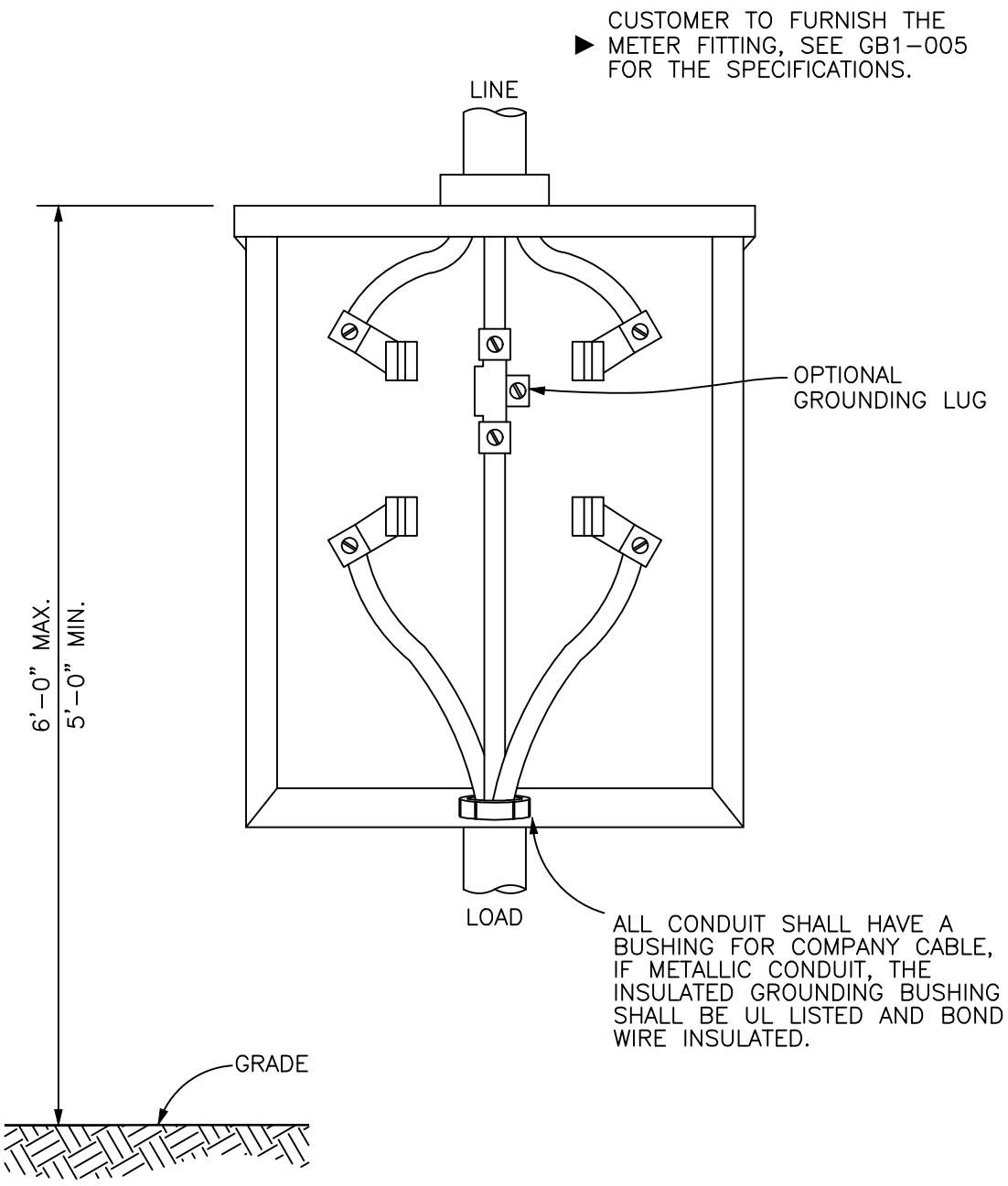


100A METER FITTING
INSTALLED AFTER MAIN SERVICE EQUIPMENT
120 VOLT, 1 PHASE, 2 WIRE
30A MAXIMUM SERVICE

REV 10–10–11

GB1-015

aes Indiana

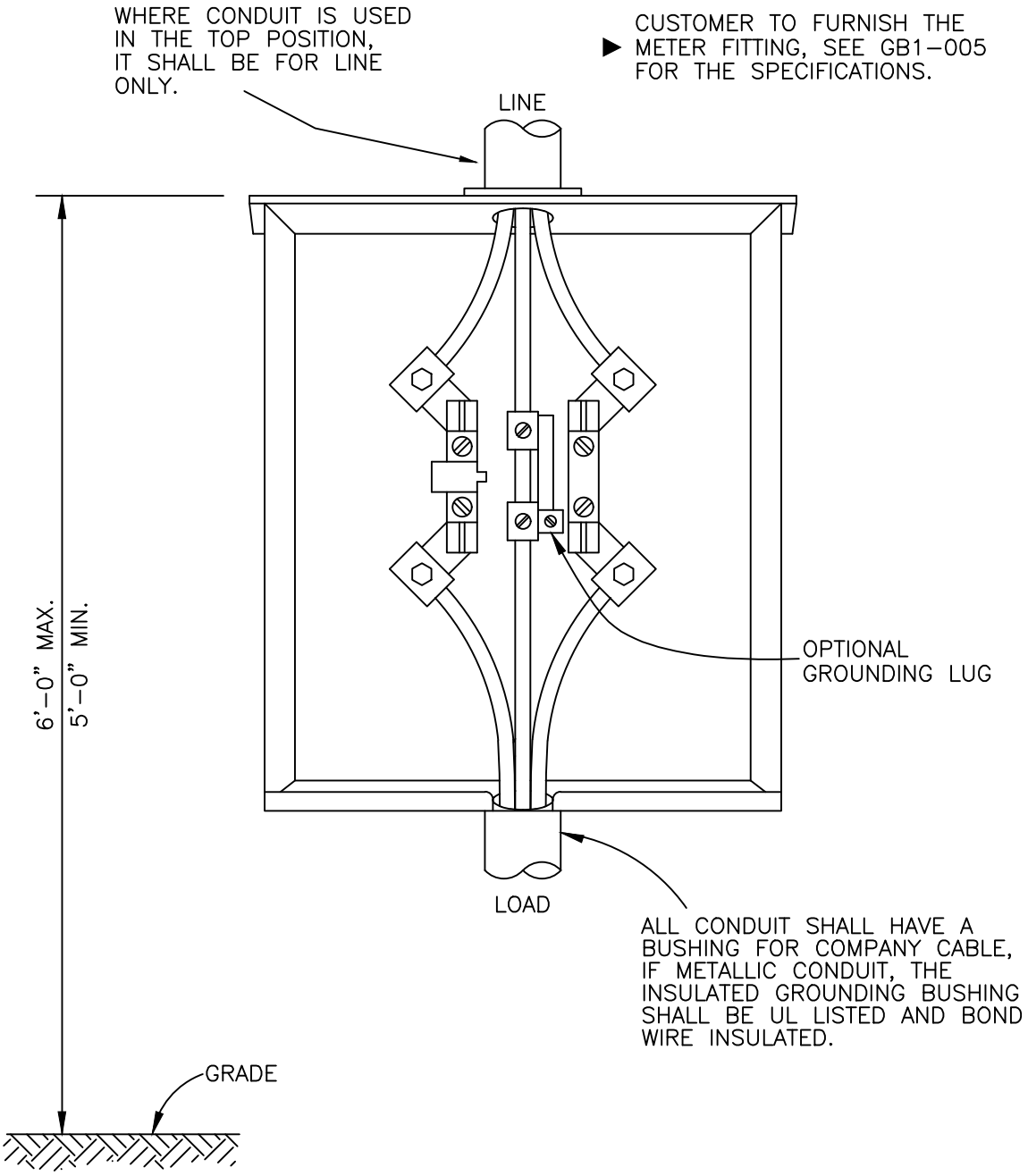


100A METER FITTING
OVERHEAD INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
125A MAXIMUM SERVICE

REV 10–10–11

GB1-020

aes Indiana

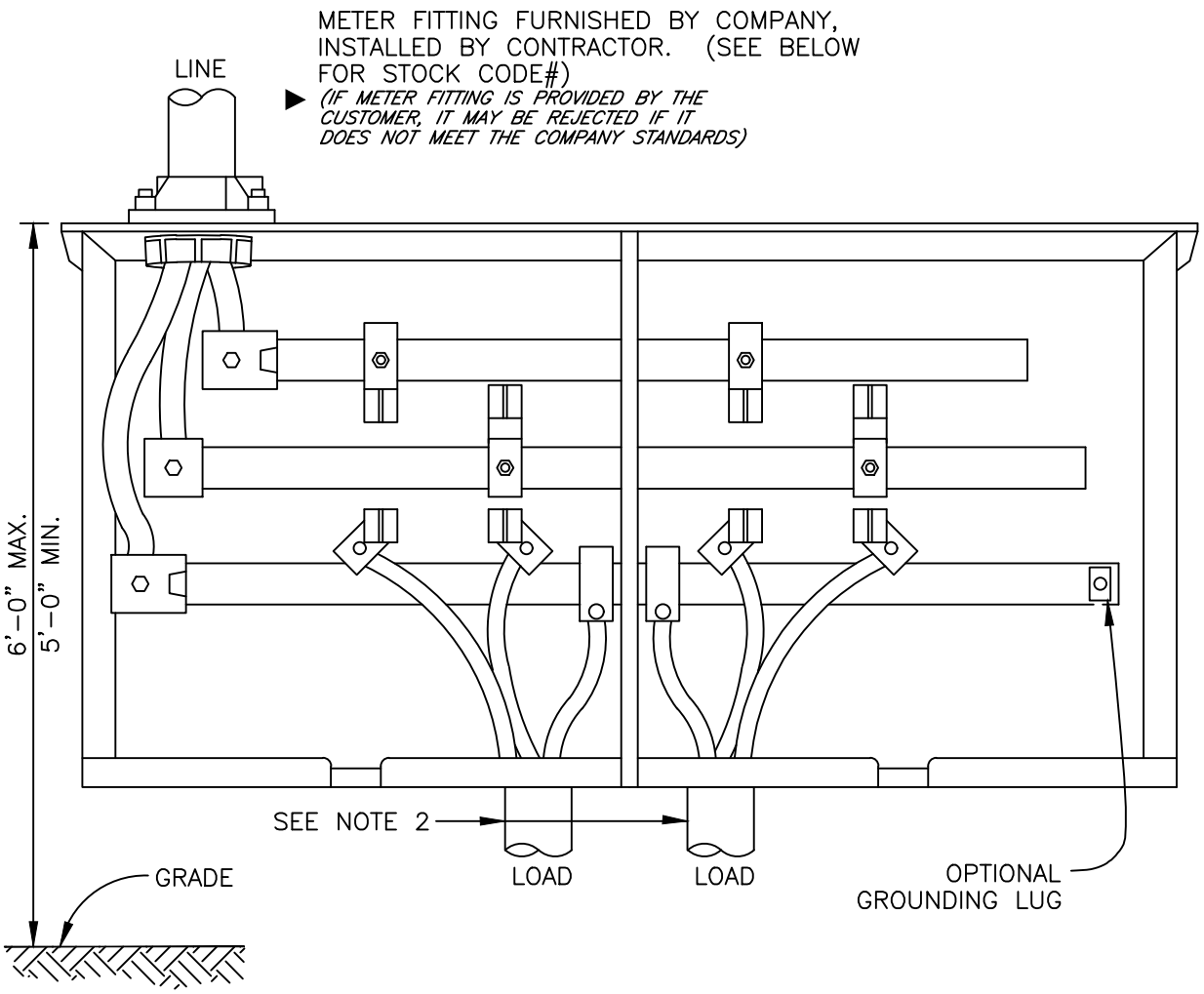


200A METER FITTING
OVERHEAD INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
225A MAXIMUM SERVICE

REV 10–10–11

GB1-030

aes Indiana



	STOCK CODE #	MAX. LINE LUG SIZE	USE
TWO METER POSITION CABINET	4008-058	500 KCMIL-AL OR CU	COMMERCIAL/RESIDENTIAL
THREE METER POSITION CABINET	4008-059	500 KCMIL-AL OR CU	RESIDENTIAL ONLY
FOUR METER POSITION CABINET	4008-175	500 KCMIL-AL OR CU	RESIDENTIAL ONLY

NOTES:

1. GANGED METER FITTINGS SHALL NOT BE USED TO SUPPLY 120/208 VOLT SINGLE PHASE SERVICES.
2. ALL CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.

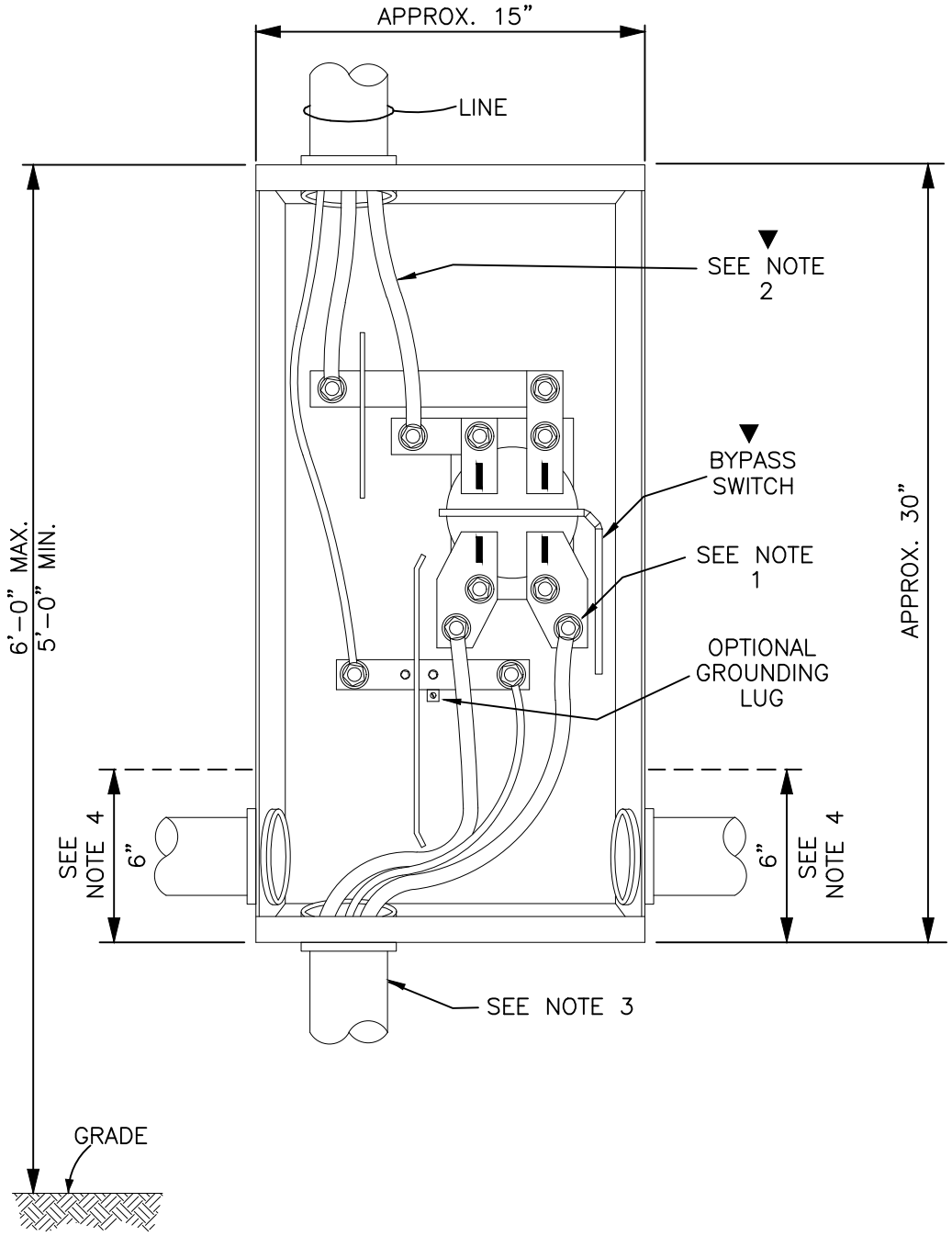
200A METER FITTING 2, 3 OR 4 GANG OVERHEAD INSTALLATION 120/240 VOLT, 1 PHASE, 3 WIRE 225A MAXIMUM SERVICE PER POSITION

REV 7-30-03

GB1-040

aes Indiana

CUSTOMER TO FURNISH THE METER FITTING, SEE GB1–005 FOR THE SPECIFICATIONS.

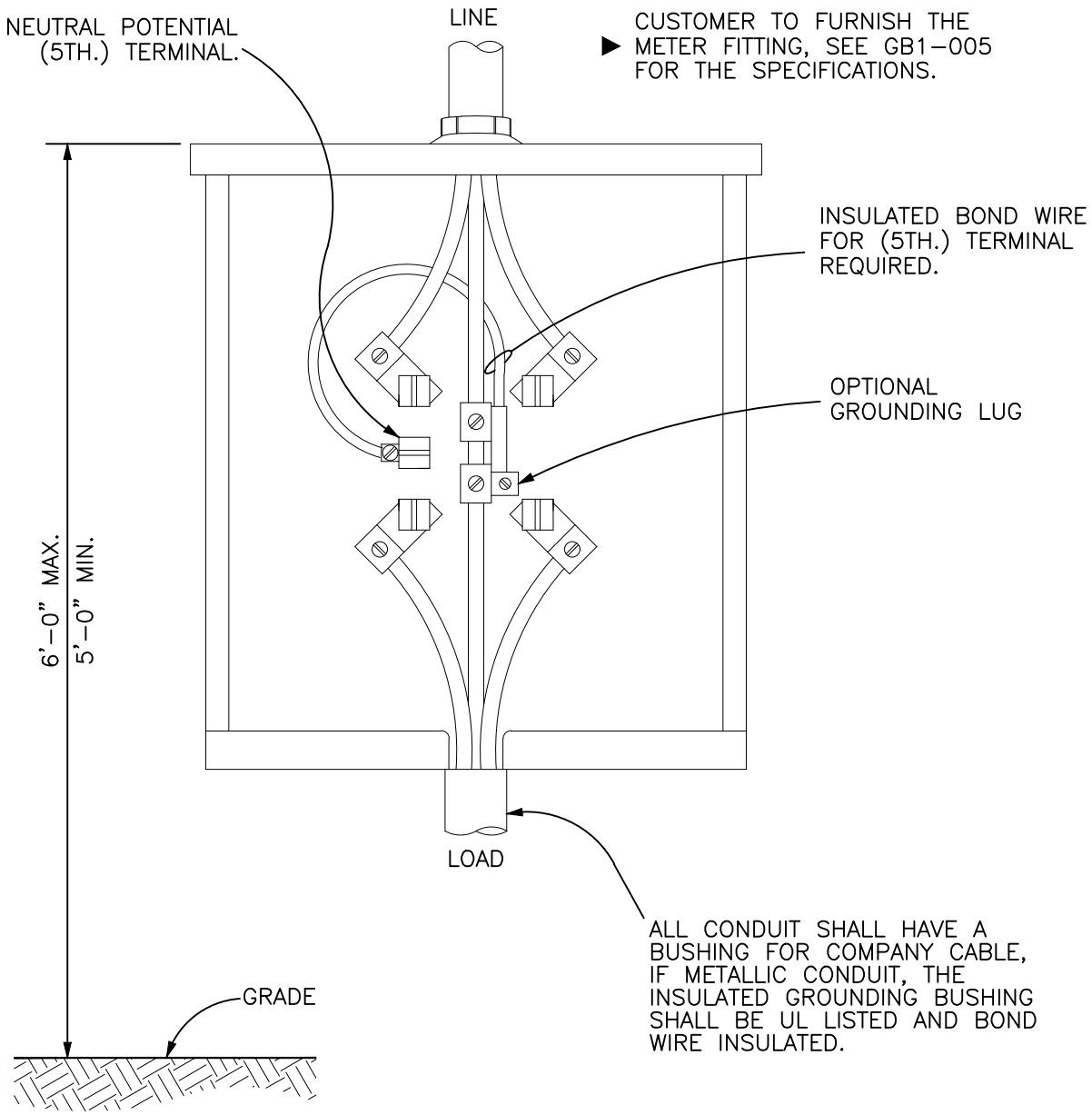


NOTES:

1. CONTRACTOR TO PROVIDE AND INSTALL CONNECTORS FOR CUSTOMER OWNED CABLES.
2. ▶ IPL CABLE CONNECTIONS SHALL BE ON THE LEFT SIDE OF THE METER FITTING AS SHOWN.
3. ALL CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.
4. LOAD CONDUITS SHALL BE LOCATED IN LOWER 6” OF METER FITTING.
5. DIMENSIONS OF ACTUAL FITTING MAY VARY FROM THOSE SHOWN ABOVE.

320A METER FITTING
OVERHEAD INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
250A TO 400A SERVICE

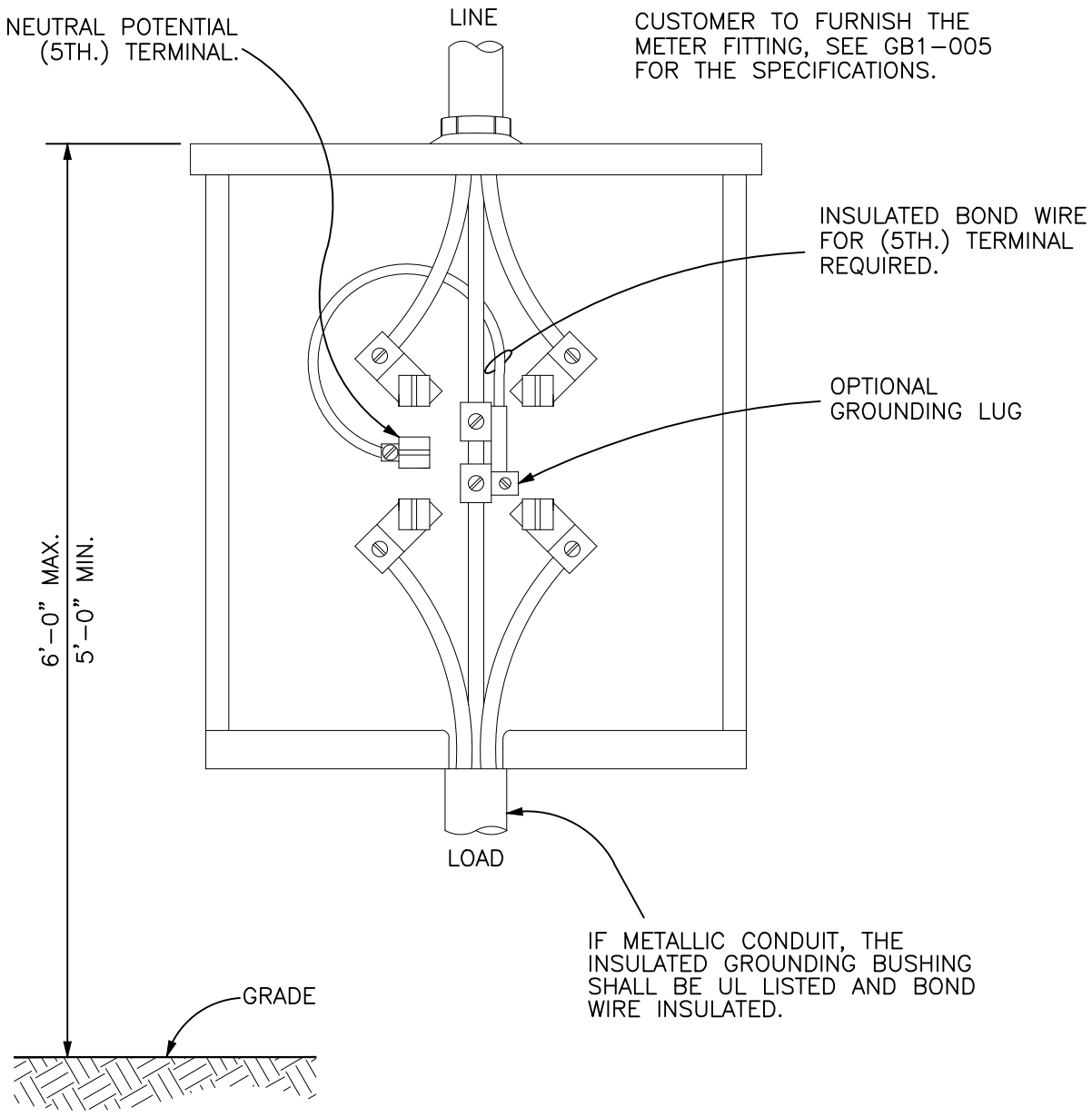
aes Indiana



100A METER FITTING
OVERHEAD INSTALLATION
120/208 VOLT, 1 PHASE, 3 WIRE
125A MAXIMUM SERVICE

REV 10–10–11

GB1-060

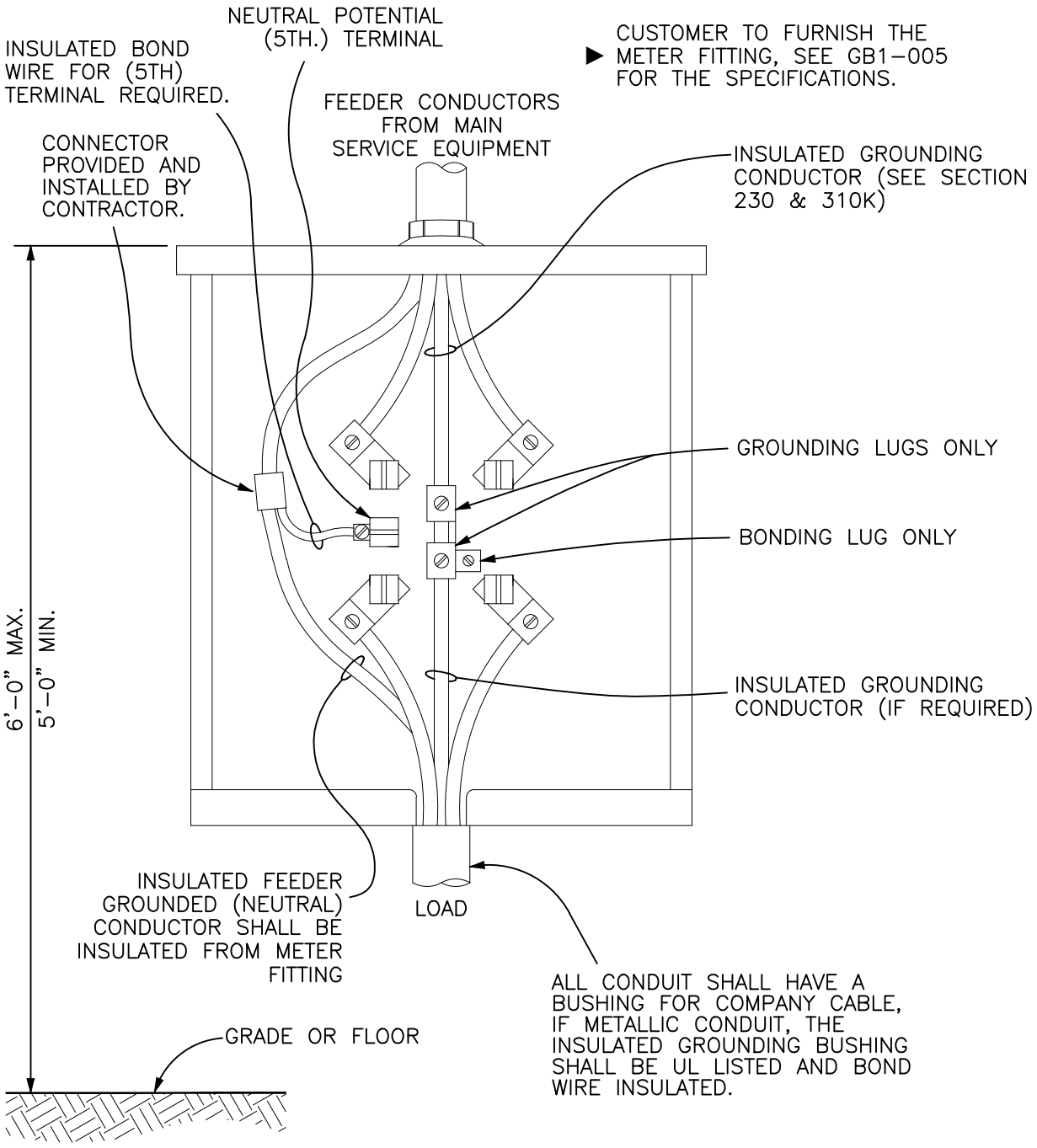


200A METER FITTING
OVERHEAD INSTALLATION
RESIDENTIAL OR TEMPORARY
120/208 VOLT, 1 PHASE, 3 WIRE
200A MAXIMUM SERVICE

REV 2–27–17

GB1-065

aes Indiana

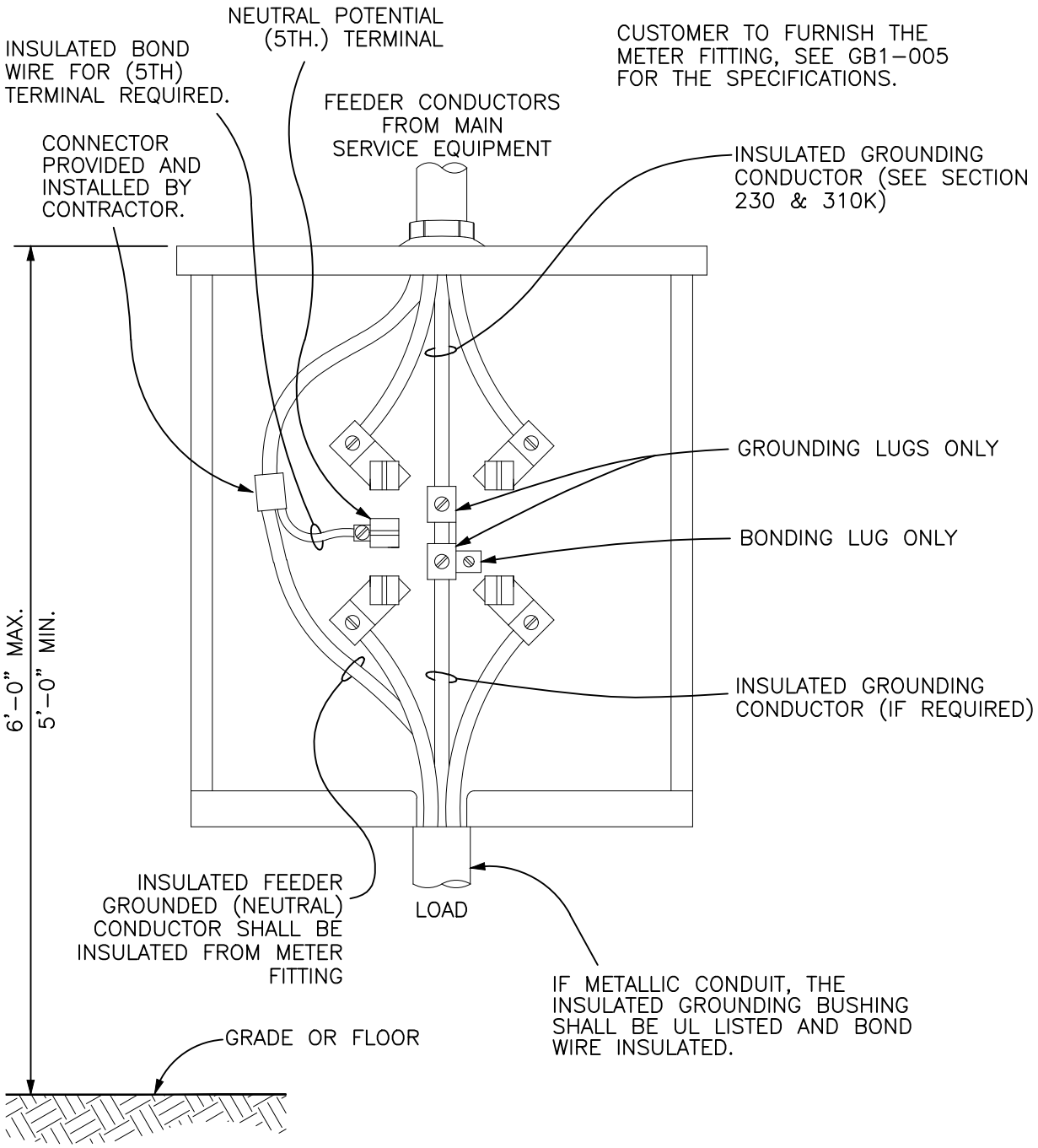


100A METER FITTING
INSTALLED AFTER MAIN SERVICE EQUIPMENT
120/208 VOLT, 1 PHASE, 3 WIRE
125A MAXIMUM SERVICE

REV 10–10–11

GB1-070

aes Indiana

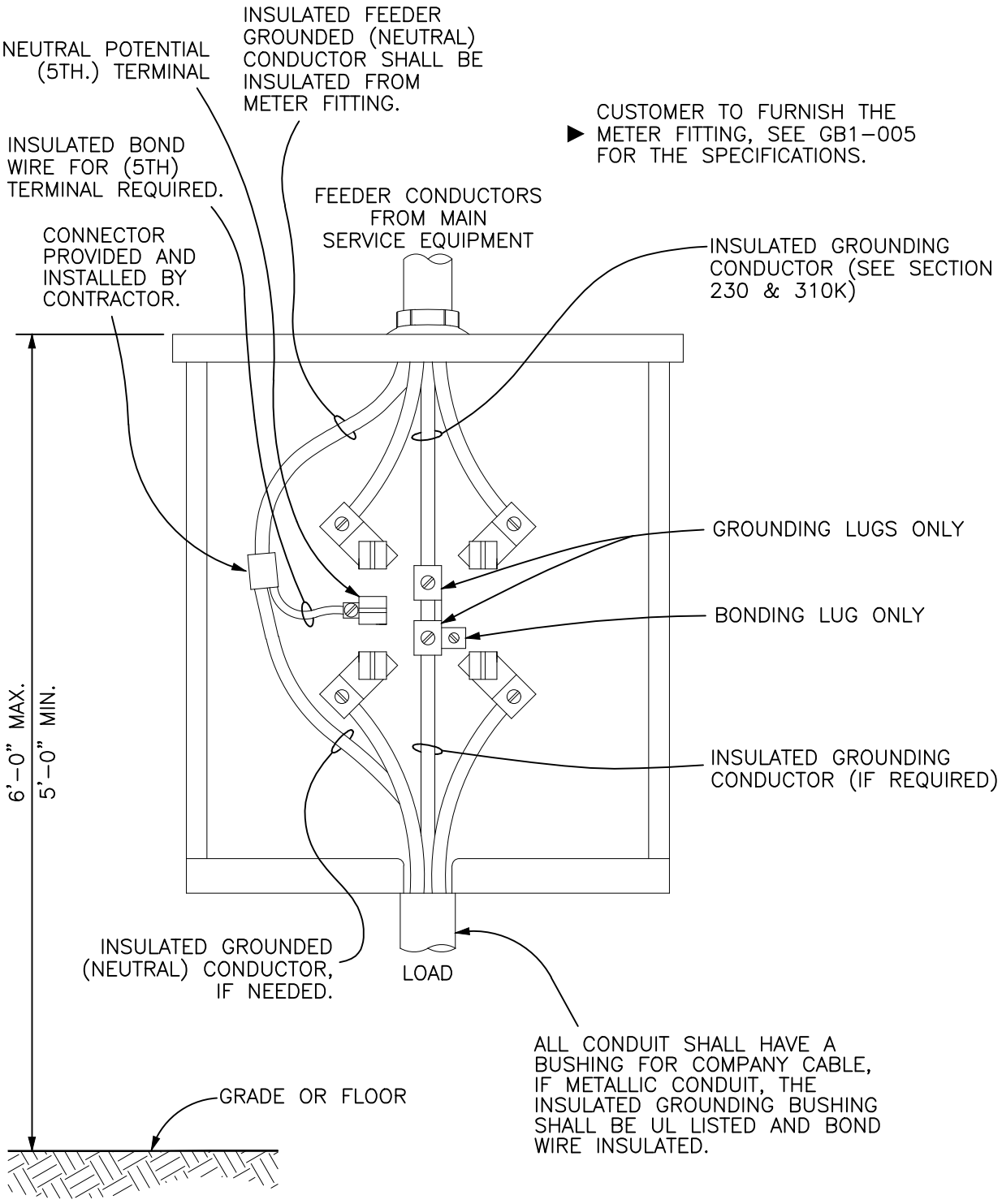


200A METER FITTING
INSTALLED AFTER MAIN SERVICE EQUIPMENT
RESIDENTIAL OR TEMPORARY
120/208 VOLT, 1 PHASE, 3 WIRE
200A MAXIMUM SERVICE

REV 2–27–17

GB1-073

aes Indiana

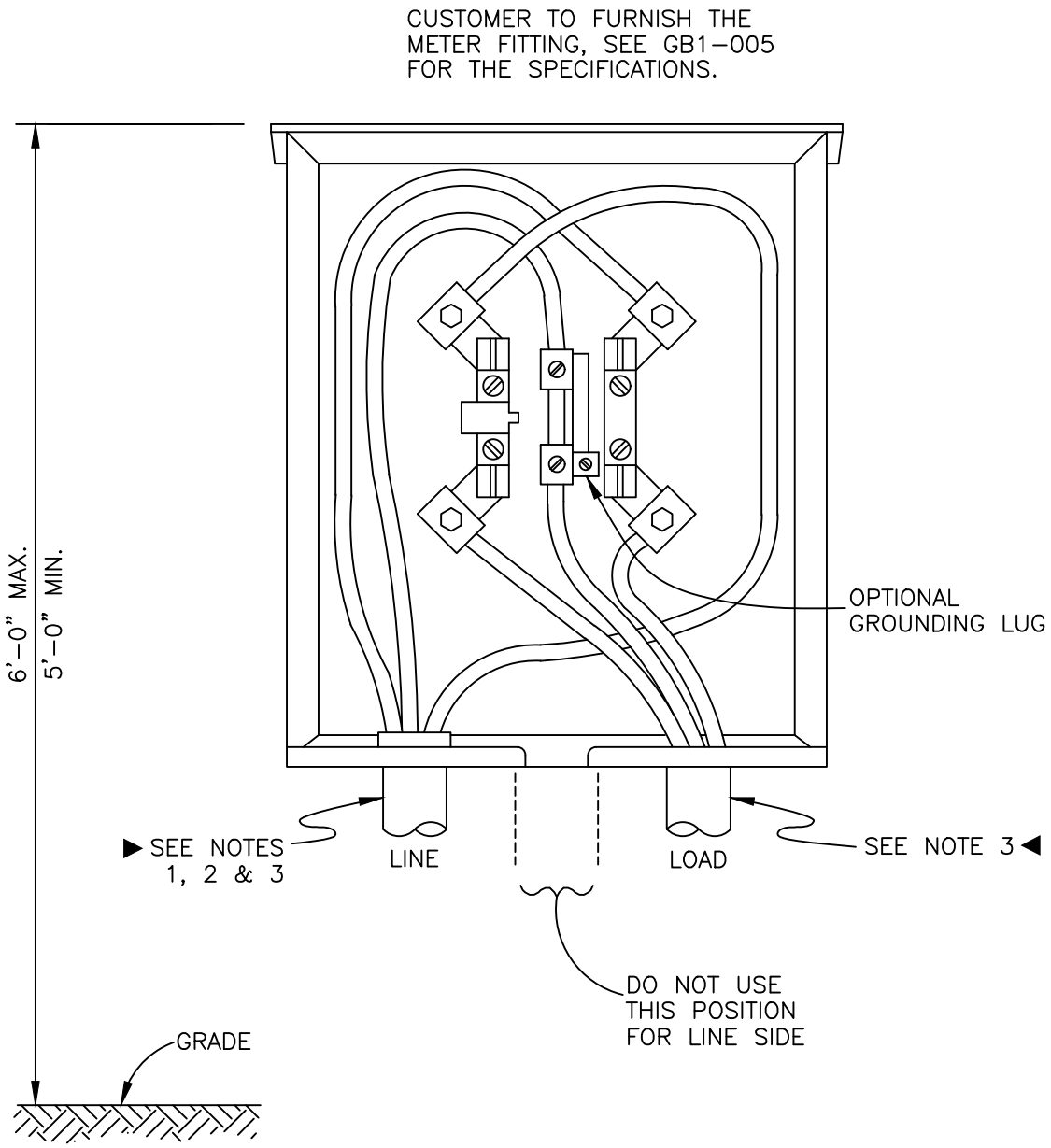


200A METER FITTING
INSTALLED AFTER MAIN SERVICE EQUIPMENT
NETWORK INSTALLATION ONLY
277/480 VOLT, 1 PHASE, 3 WIRE
125A MAXIMUM SERVICE

REV 10–10–11

GB1-075

aes Indiana



NOTES:

1. MINIMUM 2–1/2" RIGID METALLIC CONDUIT OR GRAY SCHEDULE 80 PVC INSTALLED BY CONTRACTOR.

▶ 2. LINE CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.

3. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.

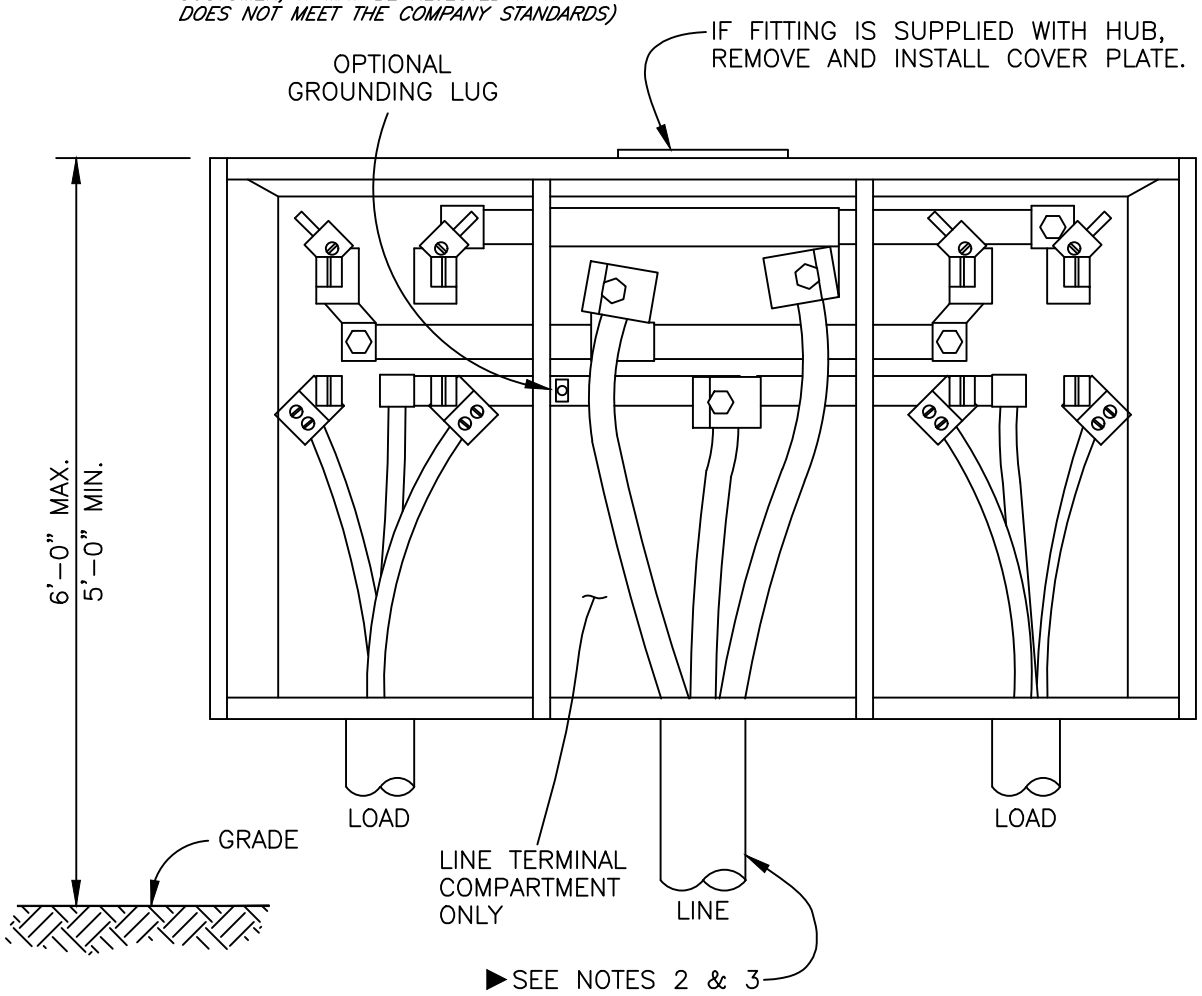
200A METER FITTING UNDERGROUND INSTALLATION 120/240 VOLT, 1 PHASE, 3 WIRE 225A MAXIMUM SERVICE

REV 11–16–15

GB1-080

METER FITTING FURNISHED BY COMPANY, INSTALLED BY CONTRACTOR. (SEE BELOW FOR STOCK CODE#)

(IF METER FITTING IS PROVIDED BY THE CUSTOMER, IT MAY BE REJECTED IF IT DOES NOT MEET THE COMPANY STANDARDS)



	STOCK CODE #	MAX. LINE LUG SIZE	USE
TWO METER POSITION CABINET	4008–058	500 KCMIL–AL OR CU	COMMERCIAL/RESIDENTIAL
THREE METER POSITION CABINET	4008–059	500 KCMIL–AL OR CU	RESIDENTIAL ONLY
FOUR METER POSITION CABINET	4008–175	500 KCMIL–AL OR CU	RESIDENTIAL ONLY

NOTES:

1. GANGED METER FITTINGS SHALL NOT BE USED TO SUPPLY 120/208 VOLT SINGLE PHASE SERVICES.
2. MINIMUM 3" RIGID METALLIC CONDUIT OR GRAY SCHEDULE 80 PVC INSTALLED BY CONTRACTOR.
3. ▶ LINE CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.

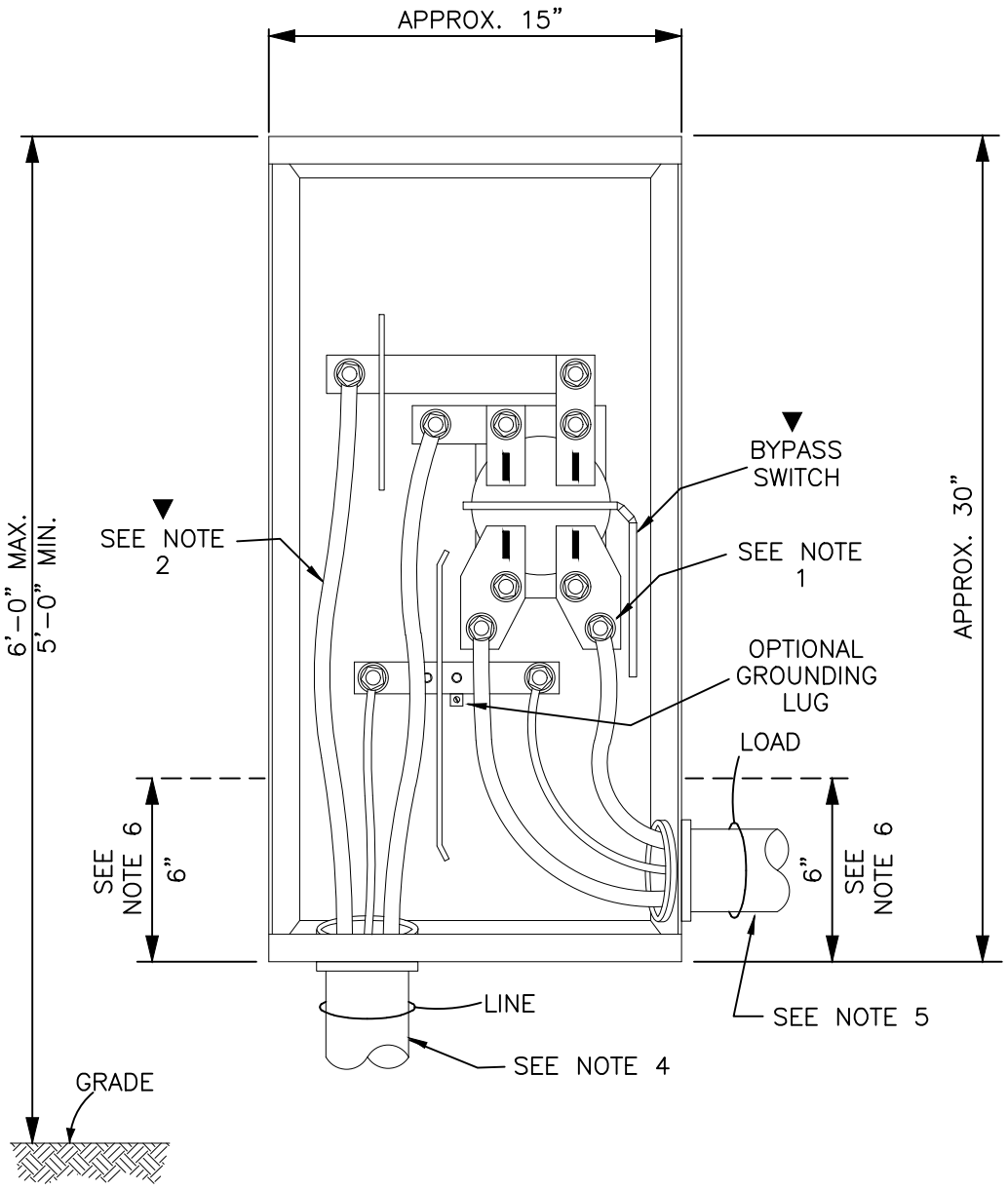
200A METER FITTING, 2, 3 OR 4 GANG UNDERGROUND INSTALLATION 120/240 VOLT, 1 PHASE, 3 WIRE 225A MAXIMUM SERVICE PER POSITION

REV 11–16–15

GB1-090

aes Indiana

CUSTOMER TO FURNISH THE METER FITTING, SEE GB1–005 FOR THE SPECIFICATIONS.



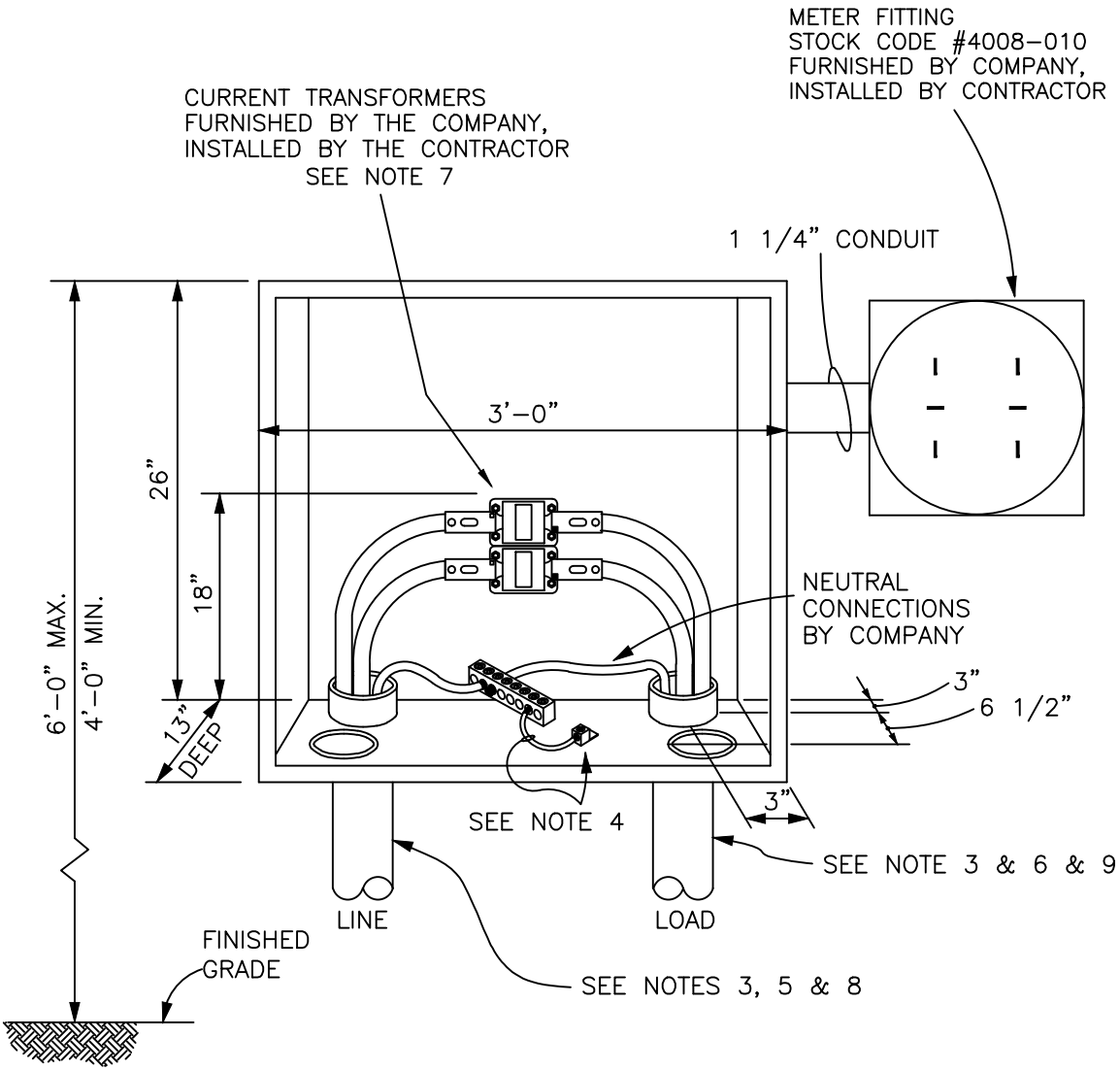
NOTES:

1. CONTRACTOR TO PROVIDE AND INSTALL CONNECTORS FOR CUSTOMER OWNED CABLES.
2. ▶ IPL CABLE CONNECTIONS SHALL BE ON THE LEFT SIDE OF THE METER FITTING AS SHOWN.
3. DIMENSIONS OF ACTUAL FITTINGS MAY VARY FROM THOSE SHOWN ABOVE.
4. MINIMUM 3” RIGID METALLIC CONDUIT OR GRAY SCHEDULE 80 PVC INSTALLED BY CONTRACTOR.
5. ALL CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.
6. LOAD CONDUITS SHALL BE LOCATED IN LOWER 6” OF METER FITTING.

320A METER FITTING
UNDERGROUND INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
250A TO 400A SERVICE

REV 2–8–19

GB1-100



NOTES:

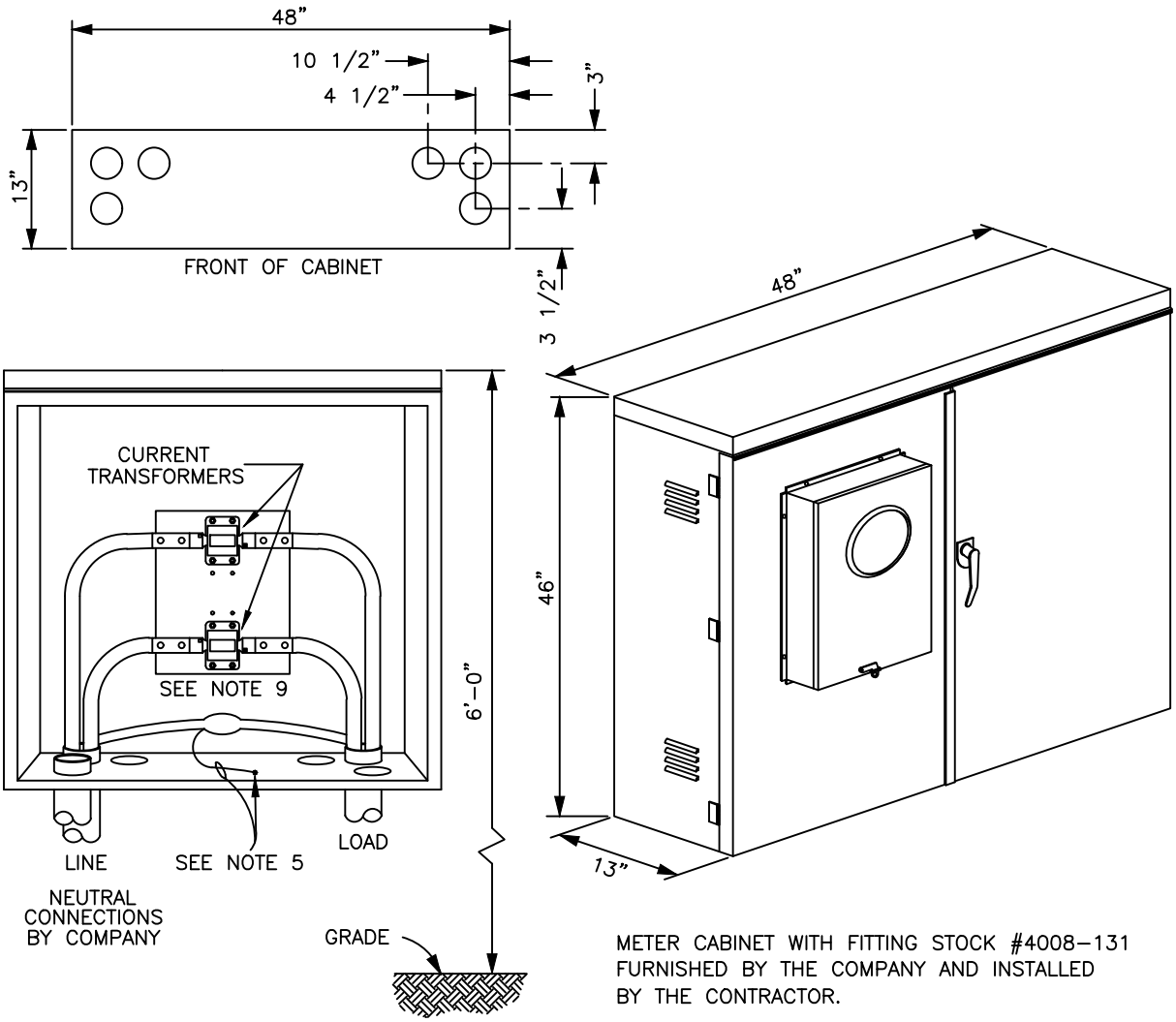
1. METER CABINET (STOCK #4008-138), METERING TRANSFORMERS AND CODED CABLE FURNISHED BY COMPANY, INSTALLED BY CONTRACTOR.
2. 1 1/4" CONDUIT FOR REMOTE METER, FURNISHED AND INSTALLED BY CONTRACTOR.
3. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.
4. ▶ BONDING LUG AND 18 INCHES OF INSULATED 2/0 AWG MINIMUM COPPER CONDUCTOR SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
5. MINIMUM 4" RIGID METALLIC CONDUIT OR GRAY SCHEDULE 80 PVC INSTALLED BY CONTRACTOR.
6. ALL CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.
7. THE CURRENT TRANSFORMER MOUNTING BRACKETS SHALL BE BUTTED AGAINST EACH OTHER. TOP C.T. SHALL BE AT 18".
8. 2-4" LINE CONDUITS LOCATED "FRONT TO BACK" ARE REQUIRED FOR SERVICES OF 600A AND ABOVE. CONDUIT SHALL NOT ENTER BACK OF CABINET.
9. MAXIMUM OF 4 CONNECTIONS TO COMPANY CT'S.

RESIDENTIAL OUTDOOR METERING (SINGLE FAMILY DWELLING ONLY) UNDERGROUND INSTALLATION 120/240 VOLT, 1 PHASE, 3 WIRE 450A TO 800A SERVICE

REV 12-8-14

GB1-110

aes Indiana



METER CABINET WITH FITTING STOCK #4008-131 FURNISHED BY THE COMPANY AND INSTALLED BY THE CONTRACTOR.

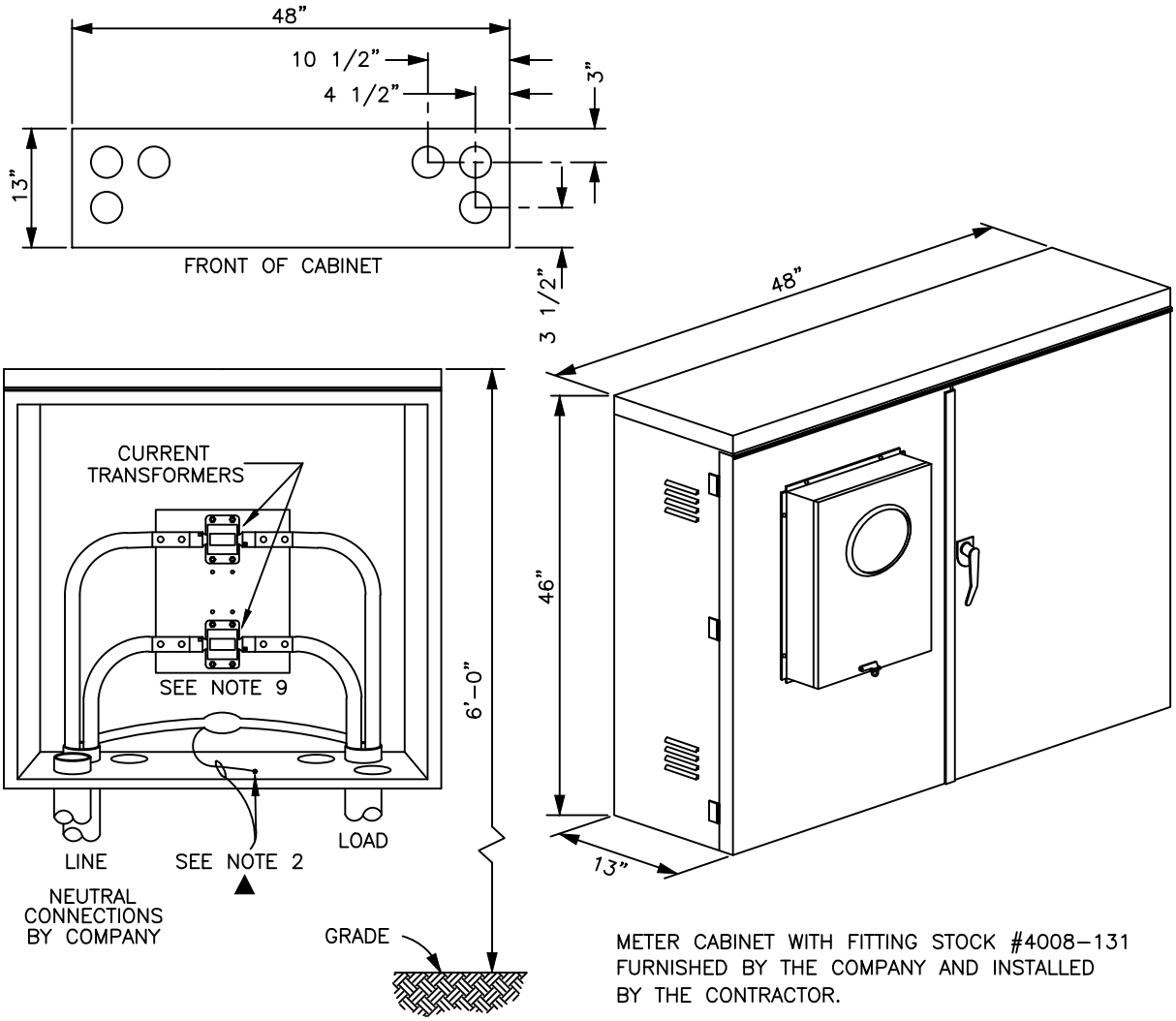
NOTES:

1. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.
2. CONDUITS SHALL NOT ENTER BACK OF METER CABINET. USE KNOCKOUT IN BOTTOM OF METER CABINET ADJACENT TO SIDES. LOAD CONDUITS MAY EXIT FROM THE LOAD SIDE IN LOWER 24" OF THE METER CABINET IF APPROVED BY THE COMPANY.
3. 2-4" LINE CONDUITS ARE REQUIRED FOR SERVICES OF 600A AND ABOVE.
4. METERING TRANSFORMERS FURNISHED BY COMPANY, INSTALLED BY CONTRACTOR.
5. ▶ BONDING LUG AND 18 INCHES OF INSULATED 2/0 AWG MINIMUM COPPER CONDUCTOR SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
6. CUSTOMER TO FURNISH AND INSTALL PROTECTIVE POSTS, AS APPROVED BY COMPANY, WHEN EXPOSED TO VEHICULAR TRAFFIC.
7. MINIMUM 4" RIGID METALLIC CONDUIT OR GRAY SCHEDULE 80 PVC INSTALLED BY CONTRACTOR.
8. ALL CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.
9. MOUNT THE TWO (2) CURRENT TRANSFORMERS ON THE TOP AND BOTTOM MOUNTING STUDS, LEAVING THE MIDDLE MOUNTING OPEN.
10. METER CABINET SHALL BE TRUCK ACCESSIBLE. IF EXPOSED TO VEHICULAR TRAFFIC CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.

COMMERCIAL OUTDOOR METERING
UNDERGROUND INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
450A TO 800A SERVICE

REV 12-8-14

GB1-120



METER CABINET WITH FITTING STOCK #4008-131 FURNISHED BY THE COMPANY AND INSTALLED BY THE CONTRACTOR.

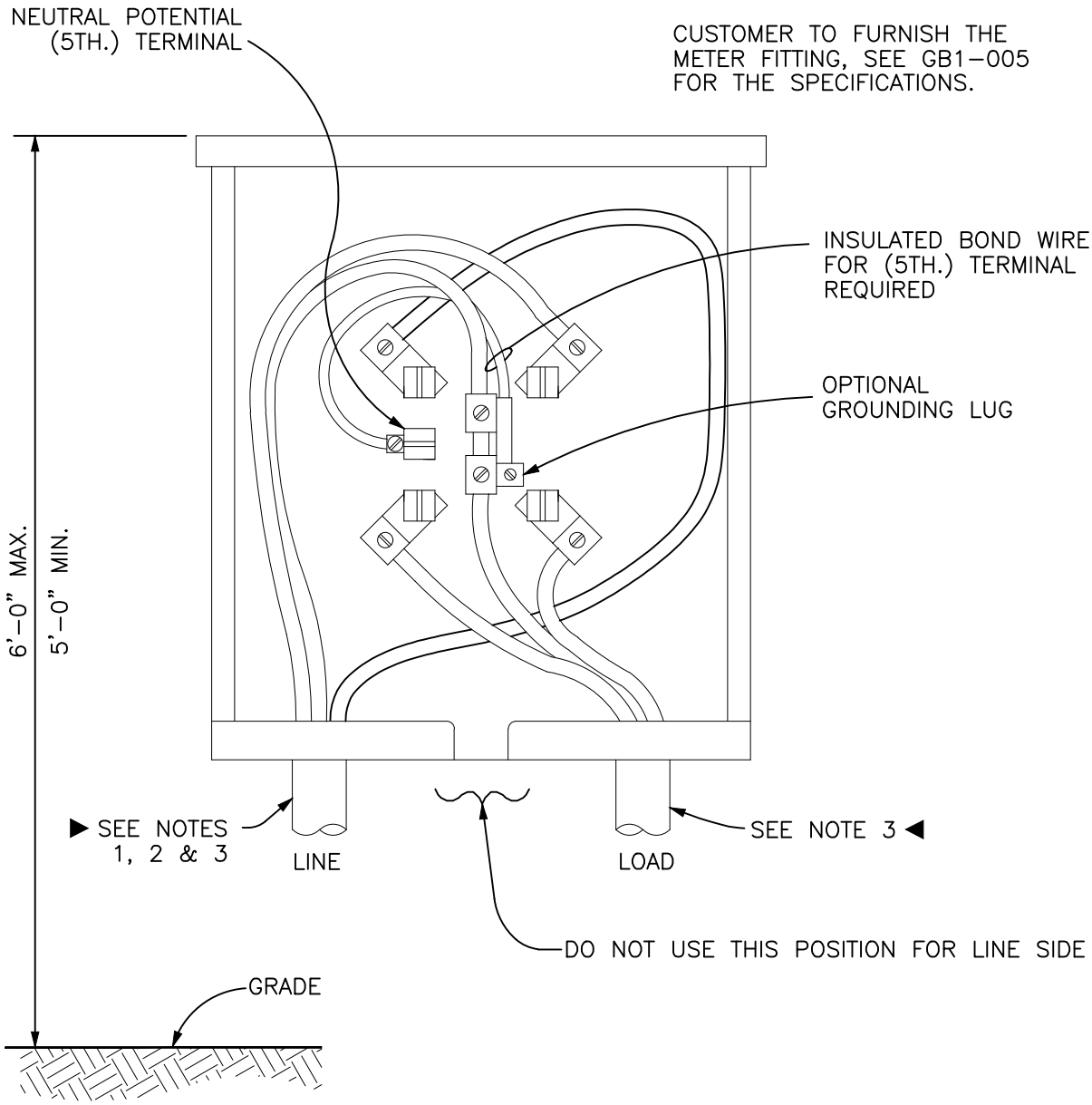
NOTES:

1. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.
2. ▶ BONDING LUG AND 18 INCHES OF INSULATED 300 KCMIL MINIMUM COPPER CONDUCTOR SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
3. MINIMUM 4" RIGID METALLIC CONDUIT OR GRAY SCHEDULE 80 PVC INSTALLED BY CONTRACTOR.
4. IF METALIC CONDUIT, INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.
5. MOUNT THE TWO (2) CURRENT TRANSFORMERS ON THE TOP AND BOTTOM MOUNTING STUDS, LEAVING THE MIDDLE MOUNTING OPEN.
6. MAXIMUM OF FOUR (4) CONDUCTORS MAY BE CONNECTED TO LINE OR LOAD SIDE OF CURRENT TRANSFORMER.
7. 2-4" LINE CONDUITS ARE REQUIRED FOR SERVICES OF 850A TO 1200A.
   3-4" LINE CONDUITS ARE REQUIRED FOR SERVICES OF 1250A TO 1600A.

RESIDENTIAL OUTDOOR METERING (SINGLE FAMILY DWELLING ONLY) UNDERGROUND INSTALLATION 120/240 VOLT, 1 PHASE, 3 WIRE 850A TO 1600A SERVICE

REV 12-8-14

GB1-121



NOTES:

1. MINIMUM 2–1/2" RIGID METALLIC CONDUIT OR GRAY SCHEDULE 80 PVC INSTALLED BY CONTRACTOR.

▶ 2. LINE CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.

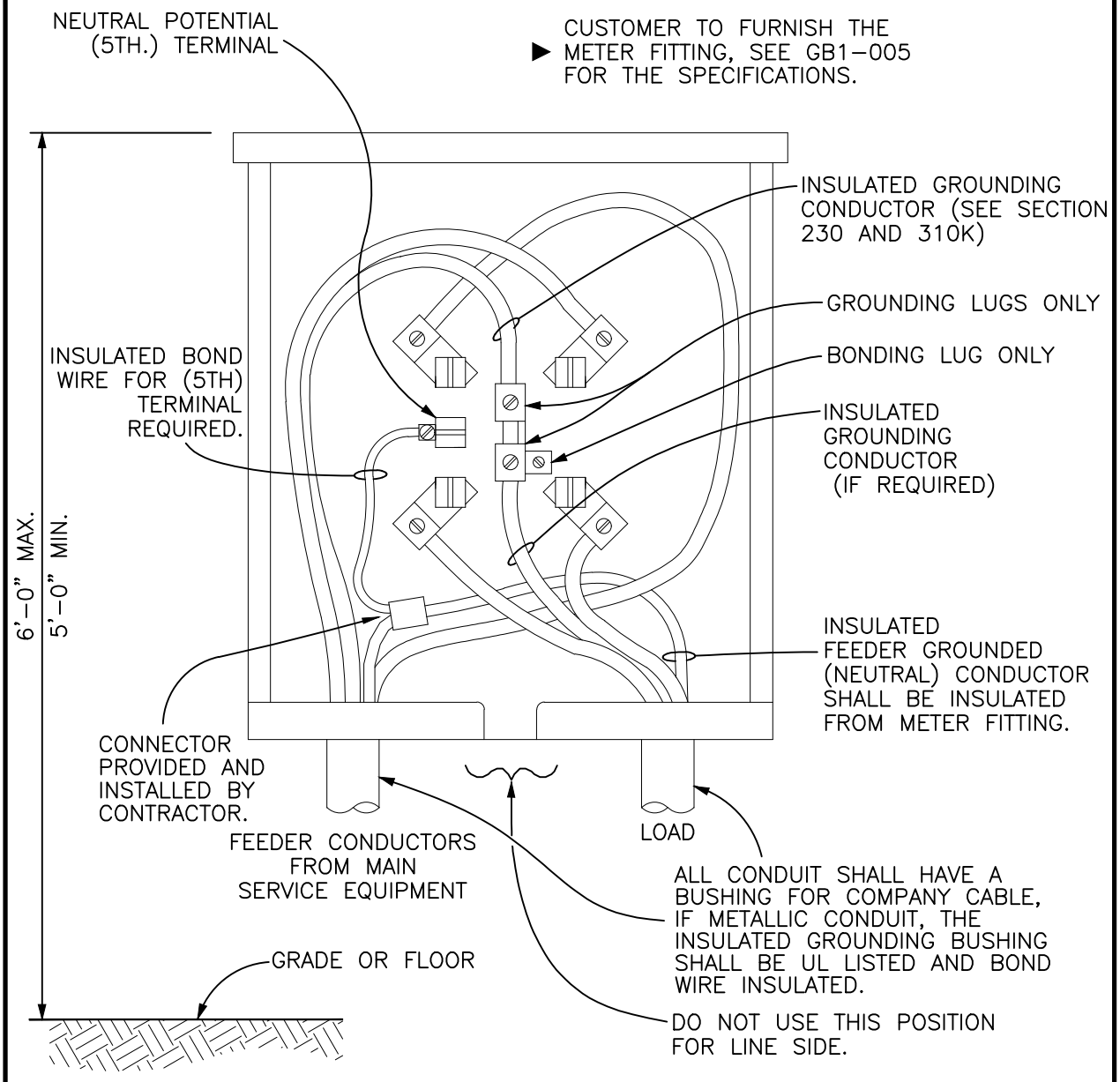
3. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.

200A SINGLE PHASE RESIDENTIAL SERVICES AND 125A SINGLE PHASE COMMERCIAL SERVICES UNDERGROUND INSTALLATION 120/208 VOLT, 1 PHASE, 3 WIRE 200A MAXIMUM SERVICE

REV 11–16–15

GB1-130

aes Indiana



NOTES:

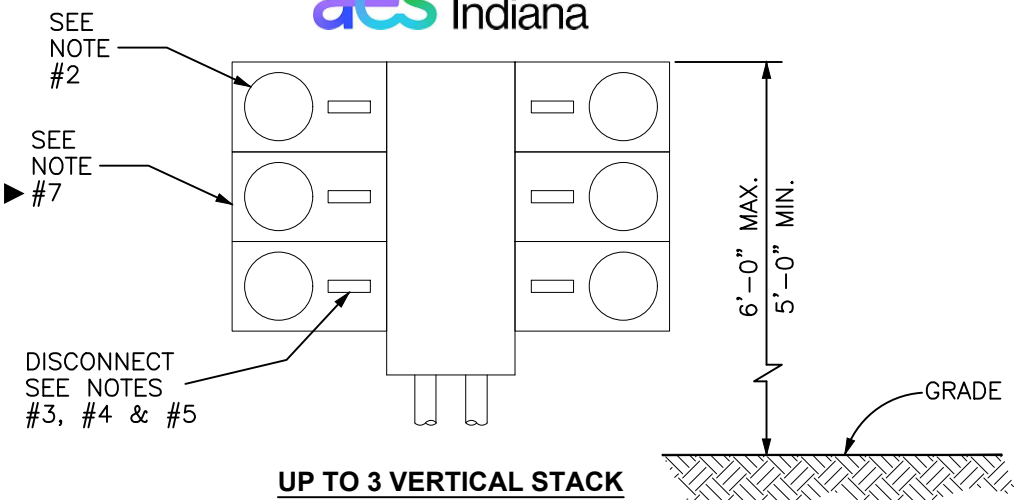
LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.

200A METER FITTING
INSTALLED AFTER MAIN SERVICE EQUIPMENT
120/208 VOLT, 1 PHASE, 3 WIRE
200A MAXIMUM SERVICE

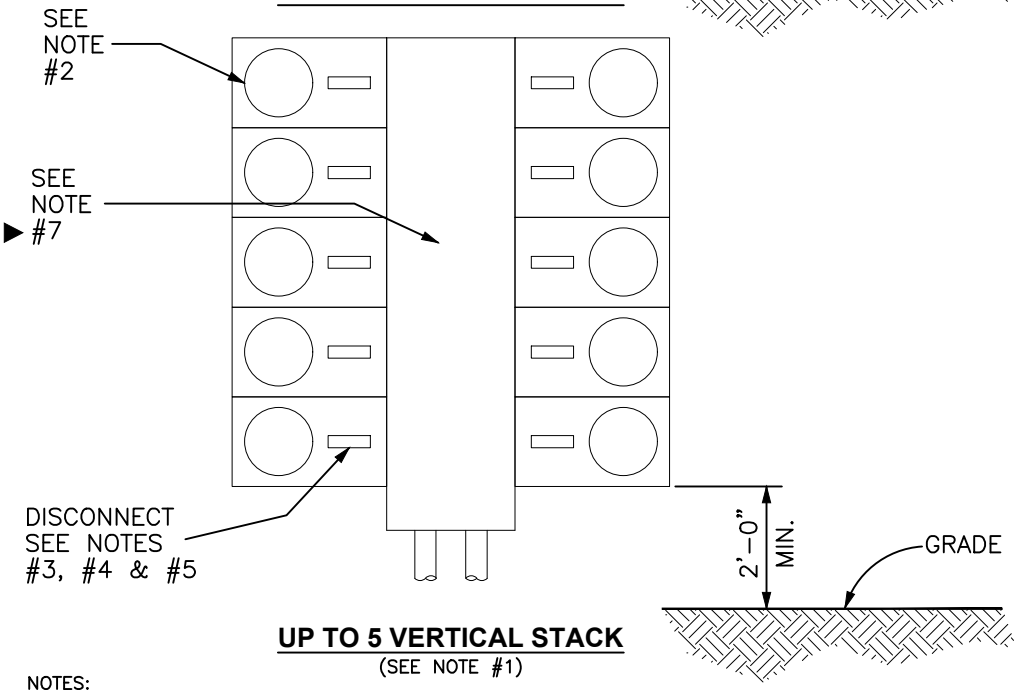
REV 10–10–11

GB1-140

aes Indiana



UP TO 3 VERTICAL STACK



UP TO 5 VERTICAL STACK
(SEE NOTE #1)

NOTES:

1. 5 VERTICAL STACK METER CENTER IS PERMITTED ONLY IF APPROVED BY THE METERING DEPARTMENT.
2. IF FED FROM 120/208 VOLTS, A 5TH JAW SHALL BE INSTALLED IN THE 9:00 POSITION.
3. IF OUTSIDE THE DOWNTOWN UNDERGROUND NETWORK, EACH POSITION SHALL BE IN HOT SEQUENCE.
4. IF SERVED FROM THE DOWNTOWN UNDERGROUND NETWORK, EACH POSITION SHALL BE IN COLD SEQUENCE.
5. SEE SECTION 550A FOR THE DEFINITION OF HOT AND COLD SEQUENCE.
6. ▶ EACH POSITION SHALL BE PERMANENTLY IDENTIFIED.
7. ▶ 7 DISCONNECTING MEANS OR MORE SHALL HAVE A MAIN DISCONNECTING MEANS ON THE LINE SIDE OF THE METER CENTER.
8. ▶ EACH METER CENTER SHALL COMPLY WITH SECTION 515.

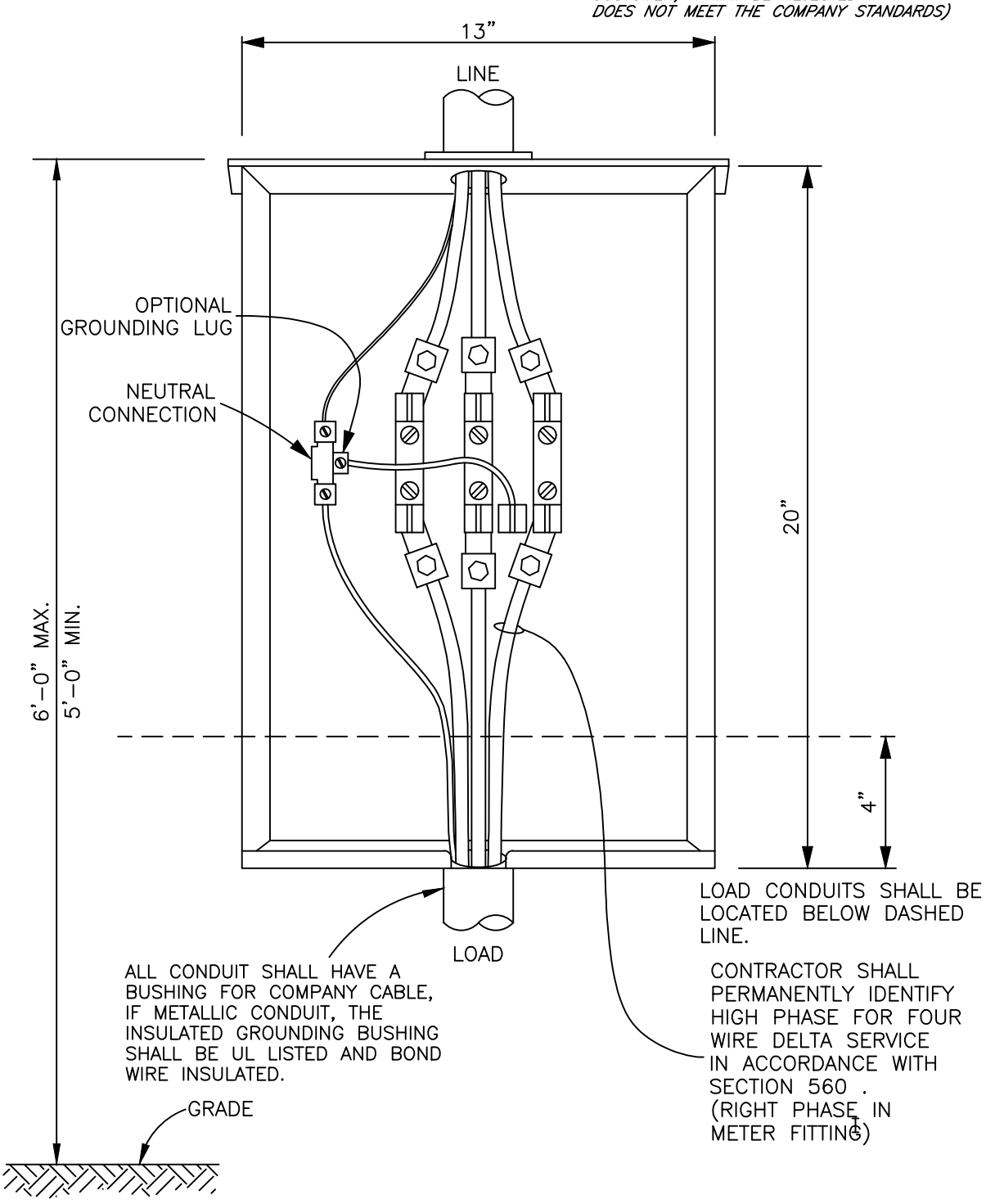
100A & 200A METER CENTER
UNDERGROUND INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
225A MAXIMUM PER POSITION
120/208 VOLT, 1 PHASE, 3 WIRE
200A MAXIMUM PER POSITION RESIDENTIAL
100A MAXIMUM PER POSITION COMMERCIAL

GB3 SERIES OF DRAWINGS

(3Ø OH AND UG METER FITTINGS AND CABINETS)

aes Indiana

METER FITTING STOCK
CODE #4008–035
FURNISHED BY COMPANY,
INSTALLED BY CONTRACTOR.
(IF METER FITTING IS PROVIDED BY THE CUSTOMER, IT MAY BE REJECTED IF IT DOES NOT MEET THE COMPANY STANDARDS)

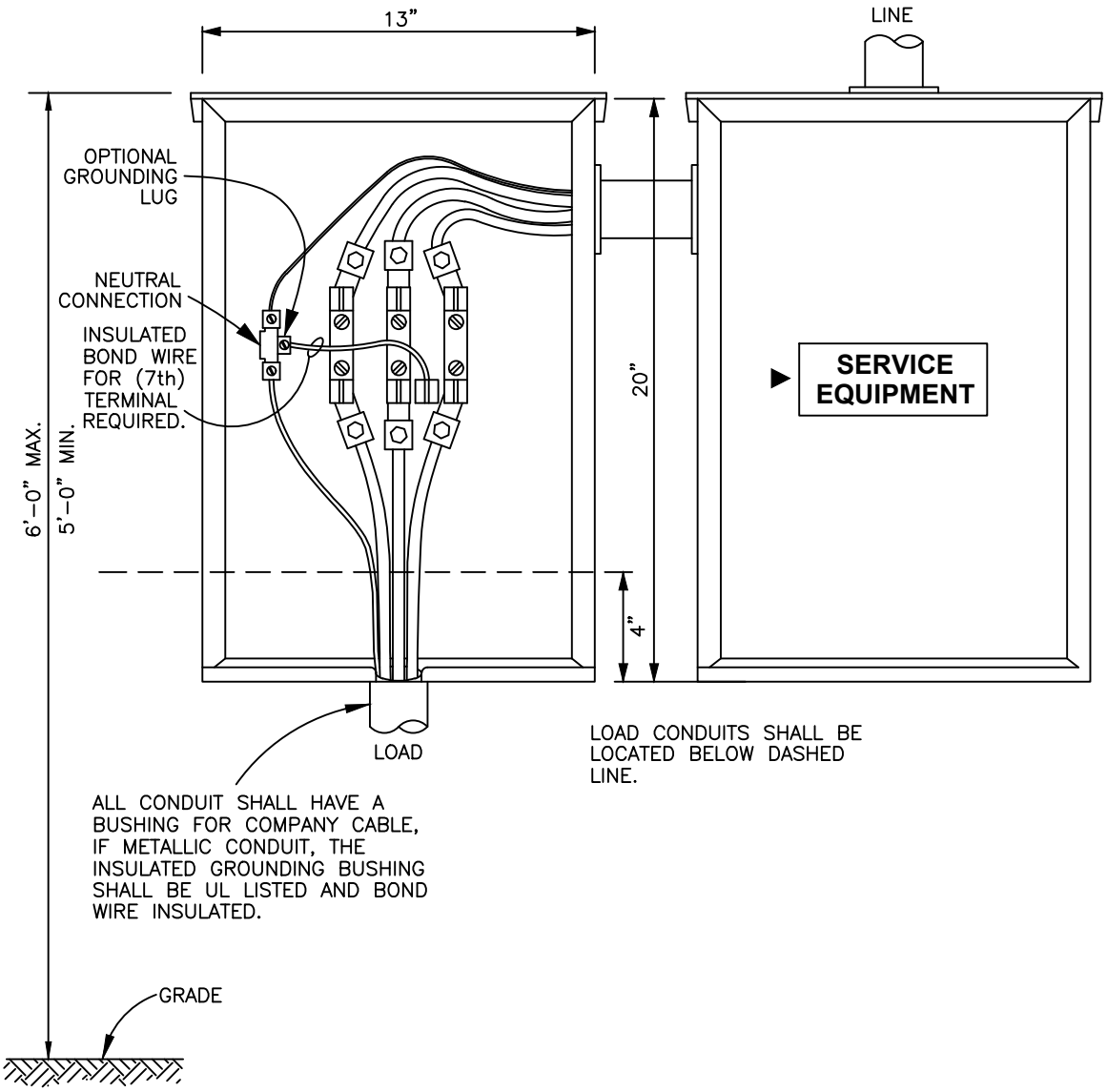


200 A METER FITTING
OVERHEAD INSTALLATION
120/208 VOLT 3 PHASE 4 WIRE
120/240 VOLT 3 PHASE 4 WIRE
225 A MAXIMUM SERVICE

REV 11–16–09

GB3-012

METER FITTING STOCK
CODE #4008–035
FURNISHED BY COMPANY,
INSTALLED BY CONTRACTOR.
(IF METER FITTING IS PROVIDED BY THE CUSTOMER, IT MAY BE REJECTED IF IT DOES NOT MEET THE COMPANY STANDARDS)



NOTES:

▶ 1. CUSTOMER SHALL MAKE THE FINAL CONNECTIONS IN THE SERVICE DISCONNECT AND IN THE METER FITTING.

▶ 2. THE SERVICE EQUIPMENT SHALL BE PERMANENTLY LABELED BY THE CUSTOMER, "SERVICE EQUIPMENT".

▶ 3. ALL 277/480 VOLT METER FITTINGS SHALL BE IN COLD SEQUENCE, SEE SECTION 550A7 FOR THE DEFINITION, AND THE SERVICE DISCONNECT SHALL BE IN A LOCKABLE ENCLOSURE.

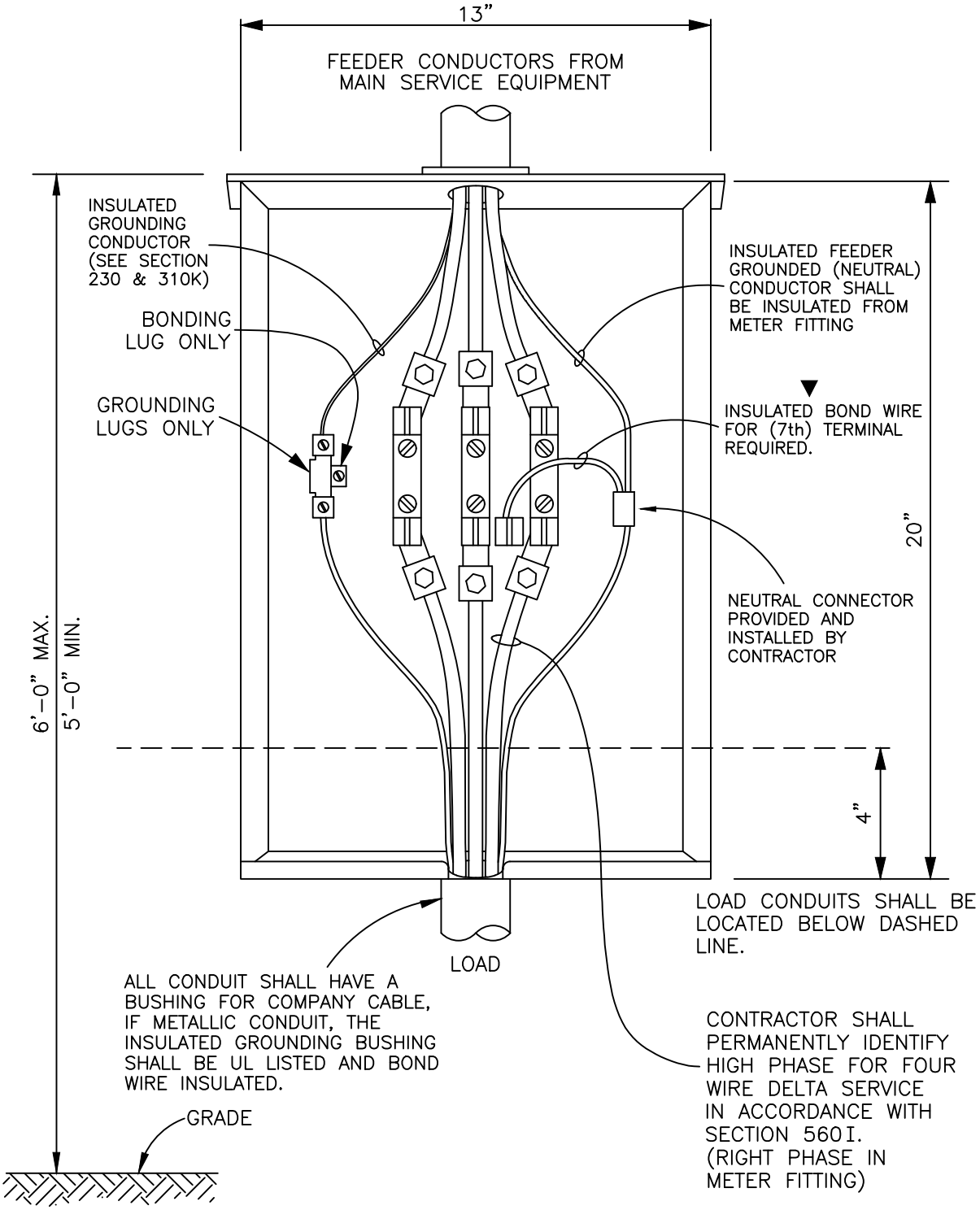
200 A METER FITTING
OVERHEAD INSTALLATION
277/480 VOLT 3 PHASE 4 WIRE
225 A MAXIMUM SERVICE

REV 12–8–14

GB3-013

aes Indiana

METER FITTING STOCK
CODE #4008–035
FURNISHED BY COMPANY,
INSTALLED BY CONTRACTOR.
(IF METER FITTING IS PROVIDED BY THE CUSTOMER, IT MAY BE REJECTED IF IT DOES NOT MEET THE COMPANY STANDARDS)

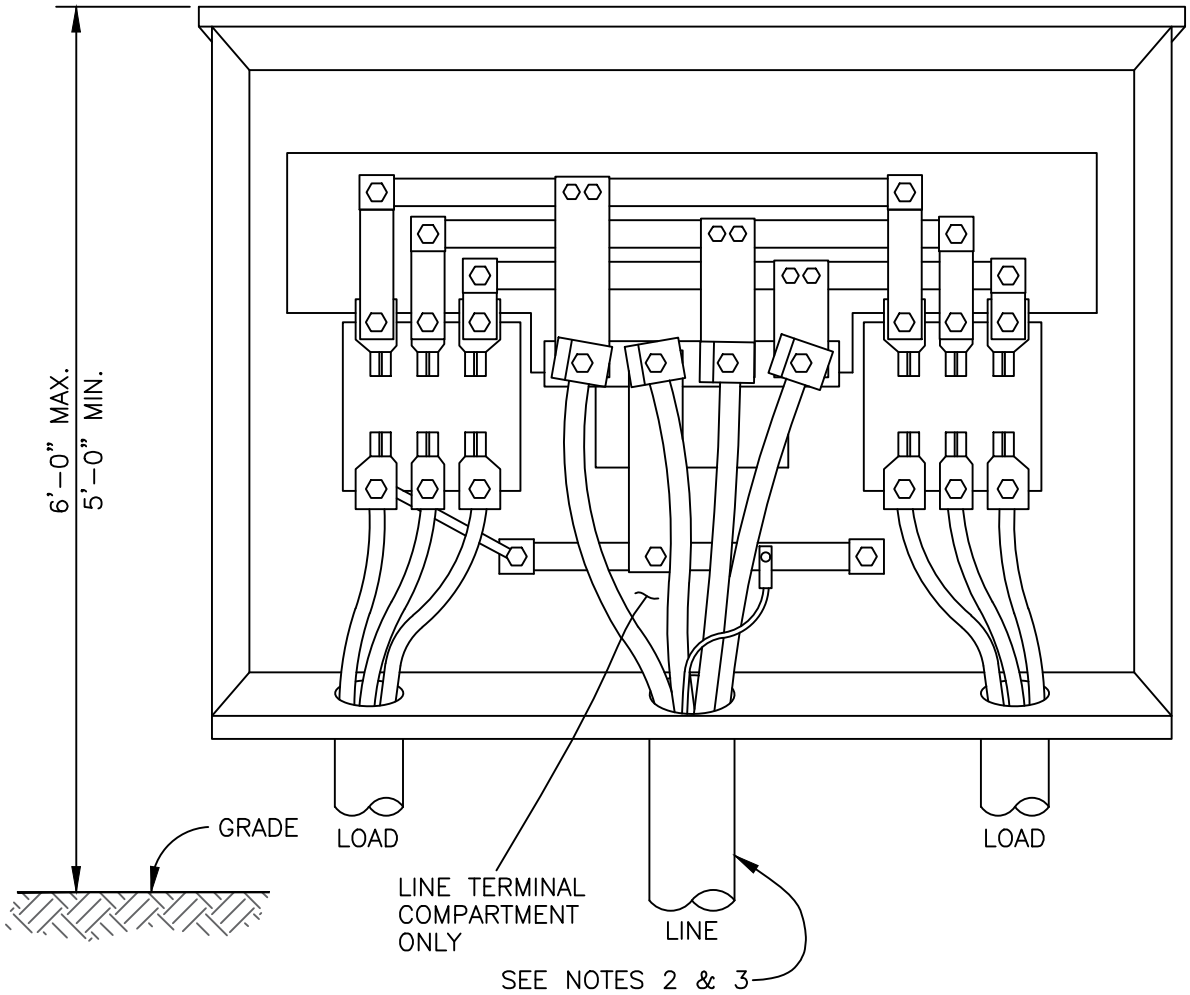


200 A METER FITTING
INSTALLED AFTER MAIN SERVICE EQUIPMENT
120/208 VOLT 3 PHASE 4 WIRE
120/240 VOLT 3 PHASE 4 WIRE
225 A MAXIMUM SERVICE

REV 11–16–09

GB3-015

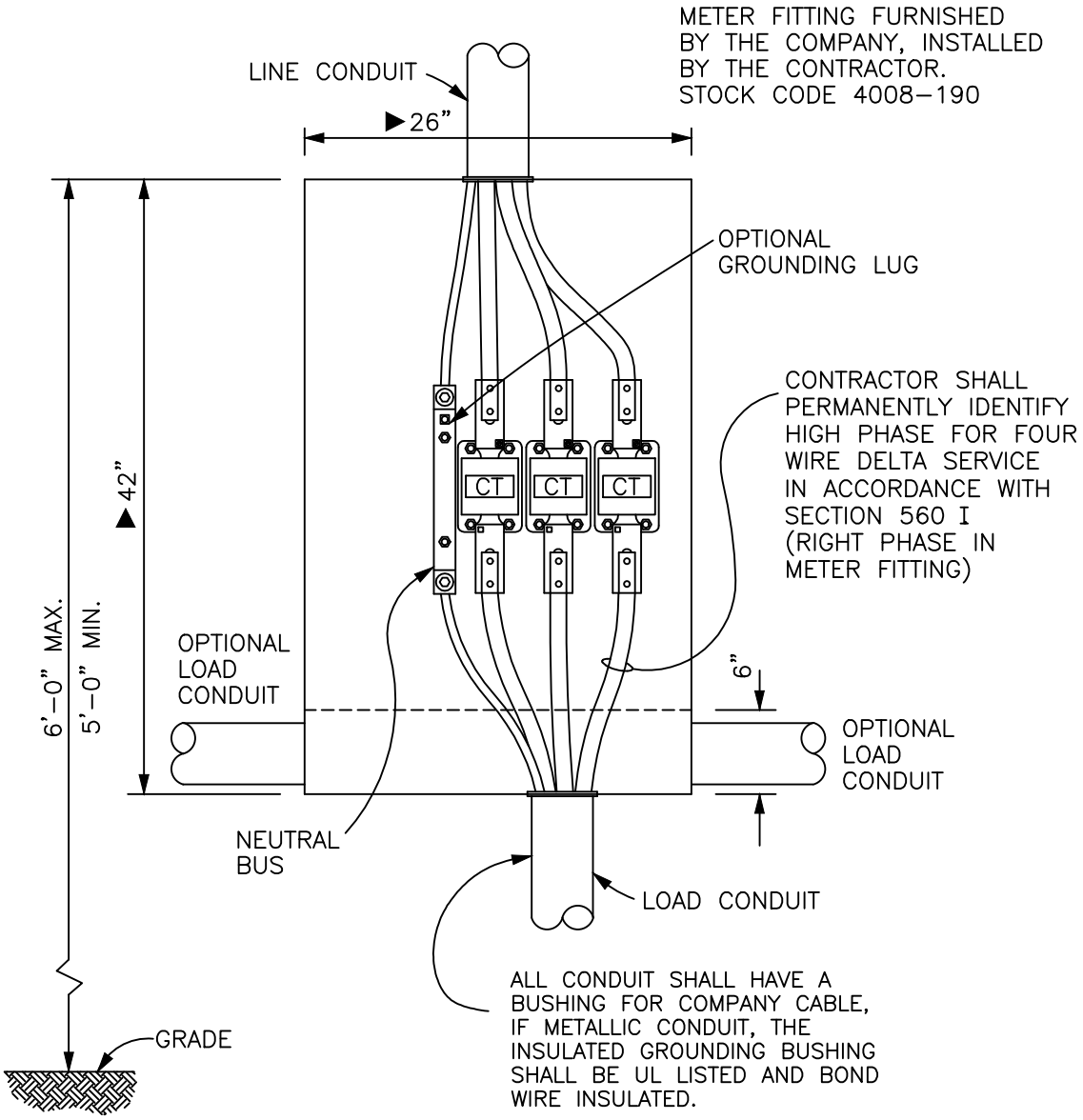
METER FITTING FURNISHED AND INSTALLED BY CONTRACTOR.



NOTES:

1. MORE THAN TWO GANGED METER FITTINGS IN ONE CABINET SHALL NOT BE PERMITTED.
2. GANGED METER FITTINGS WILL BE PERMITTED TO SUPPLY 120/208 VOLT AND 120/240 VOLT 3 PHASE SERVICES.
3. FOR UNDERGROUND SERVICE CABLE, MINIMUM 4" RIGID METALLIC CONDUIT OR GRAY SCHEDULE 80 PVC INSTALLED BY CONTRACTOR.
4. IF UNDERGROUND, LINE CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE; IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED.
5. BONDING WIRES SHALL BE INSULATED.
6. THE METER FITTING SHALL MEET THE REQUIREMENTS SHOWN ON DRAWING GB1–005 FOR 320 AMPERE, 600 VOLT EXCEPT THE RATING SHALL BE A MINIMUM OF 200 AMPERES.
7. CONTRACTORS SHALL PERMANENTLY IDENTIFY HIGH PHASE FOR FOUR WIRE DELTA SERVICE IN ACCORDANCE WITH SECTION 560I. (RIGHT PHASE IN METER FITTING)

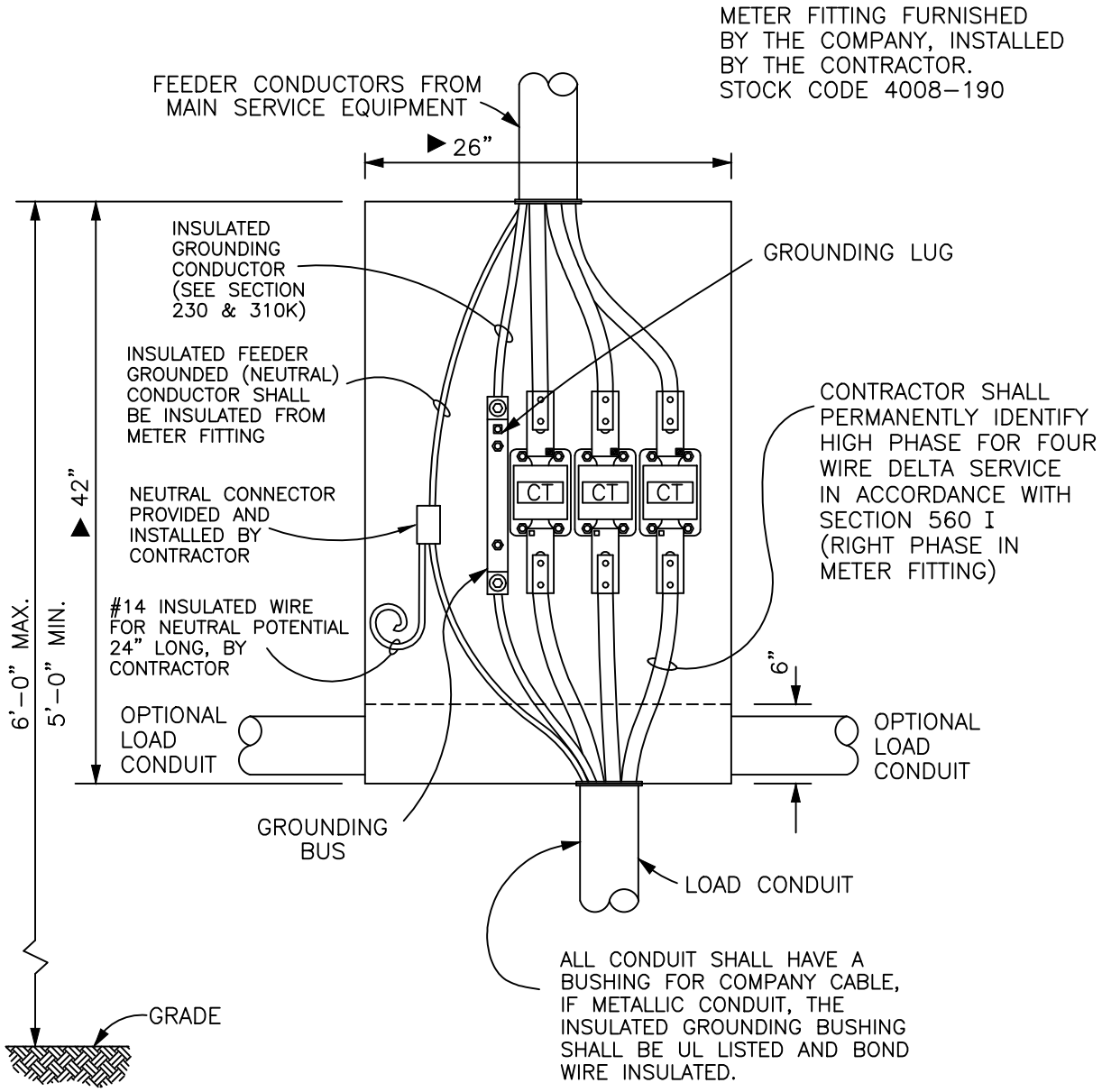
200A METER FITTING, TWO GANG OVERHEAD OR UNDERGROUND INSTALLATION 120/208 OR 120/240 VOLT, 3 PHASE, 4 WIRE 225A MAXIMUM SERVICE PER POSITION



NOTES :

1. USE CENTER KNOCKOUT FOR LINE CONDUIT.
2. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
3. NO ACCESS PERMITTED THROUGH THE BACK OF CABINET

OUTDOOR METERING, OVERHEAD OR TROUGH INSTALLATIONS 120/208 VOLT, 3 PHASE, 4 WIRE 120/240 VOLT, 3 PHASE, 4 WIRE 250 A TO 400 A SERVICE



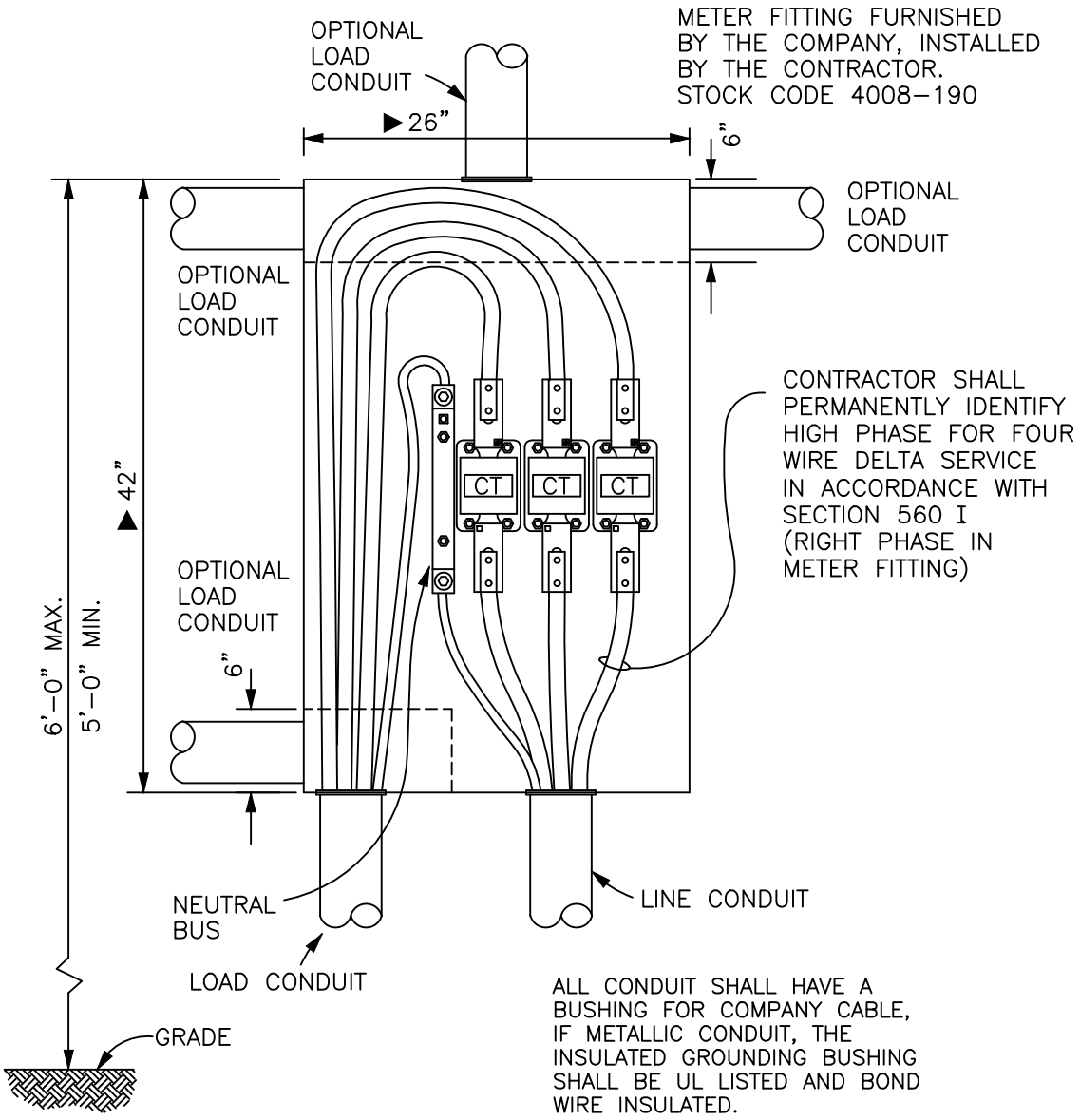
NOTES :

1. USE CENTER KNOCKOUT FOR LINE CONDUIT.
2. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
3. NO ACCESS PERMITTED THROUGH THE BACK OF CABINET

OUTDOOR METERING, INSTALLED AFTER MAIN SERVICE EQUIPMENT 120/208 VOLT, 3 PHASE, 4 WIRE 120/240 VOLT, 3 PHASE, 4 WIRE 250 A TO 400 A SERVICE

REV 5–7–12

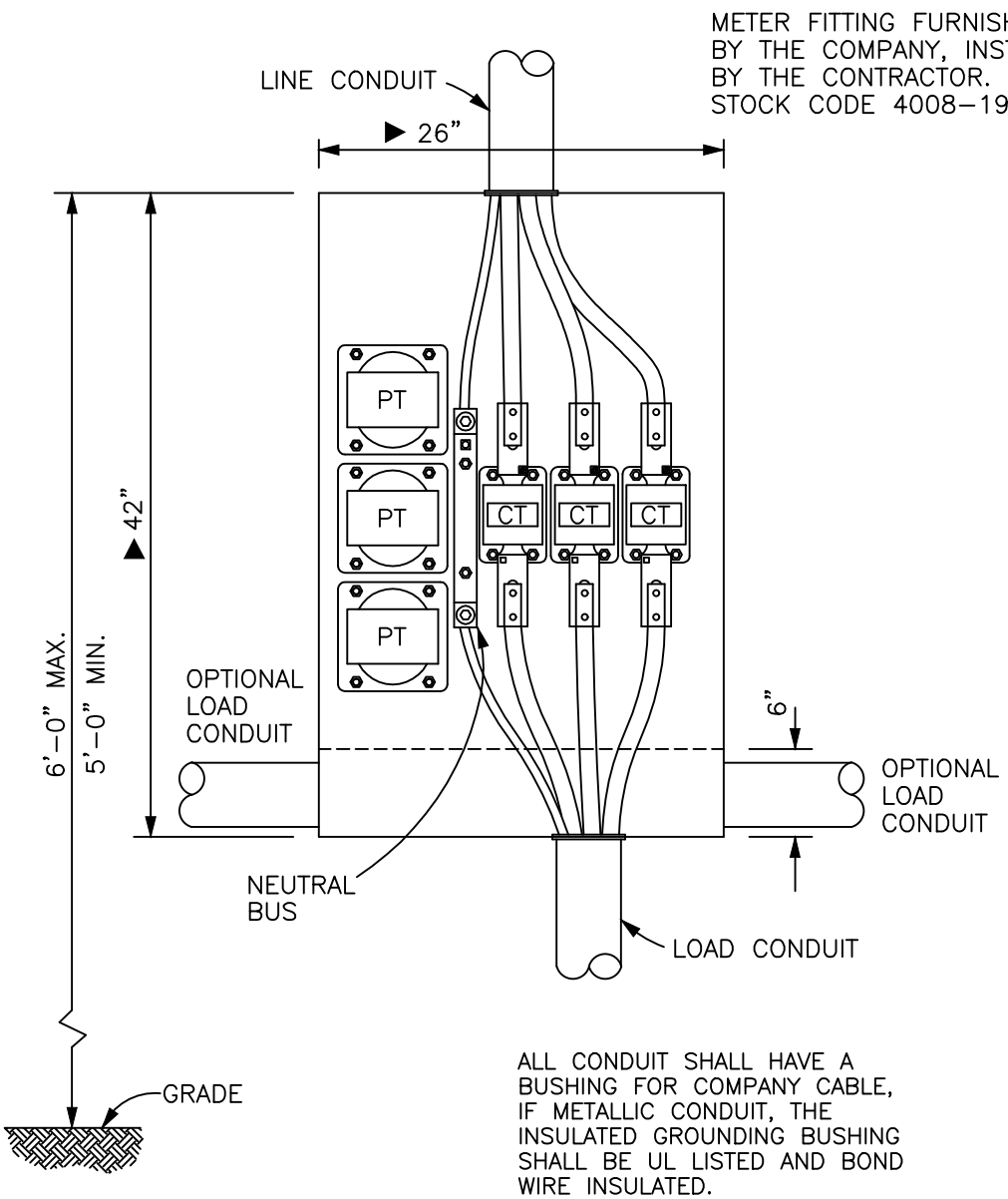
GB3-021



NOTES :

1. USE CENTER KNOCKOUT FOR LINE CONDUIT.
2. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
3. NO ACCESS PERMITTED THROUGH THE BACK OF CABINET

OUTDOOR METERING, UNDERGROUND INSTALLATION 120/208 VOLT, 3 PHASE, 4 WIRE 120/240 VOLT, 3 PHASE, 4 WIRE 250 A TO 400 A SERVICE



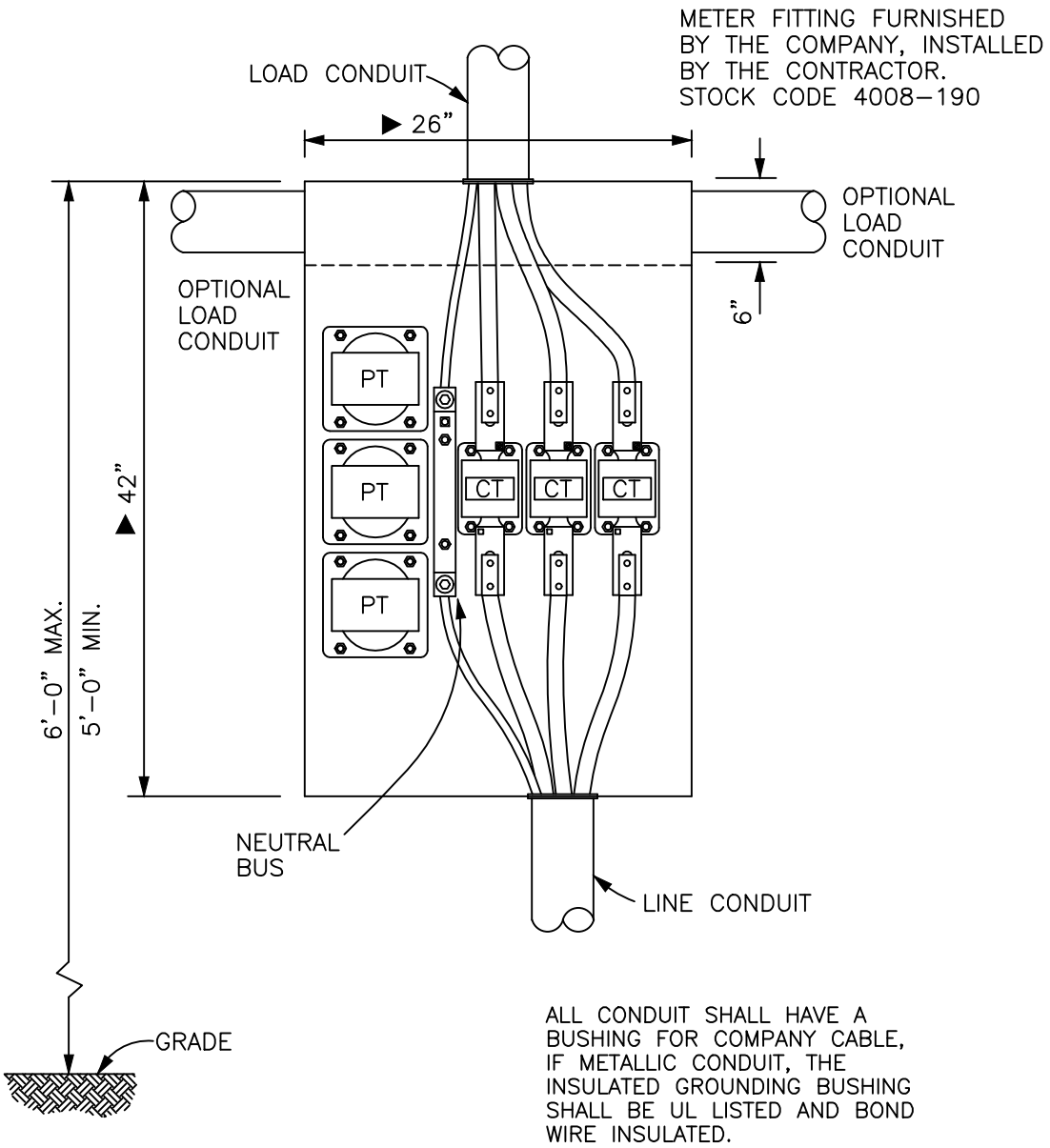
NOTES :

1. USE CENTER KNOCKOUT FOR LINE CONDUIT.
2. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
3. NO ACCESS PERMITTED THROUGH THE BACK OF CABINET

OUTDOOR METERING, OVERHEAD OR TROUGH INSTALLATIONS 277/480 VOLT, 3 PHASE, 4 WIRE 250 A TO 400 A SERVICE

REV 5–7–12

GB3-024



NOTES :

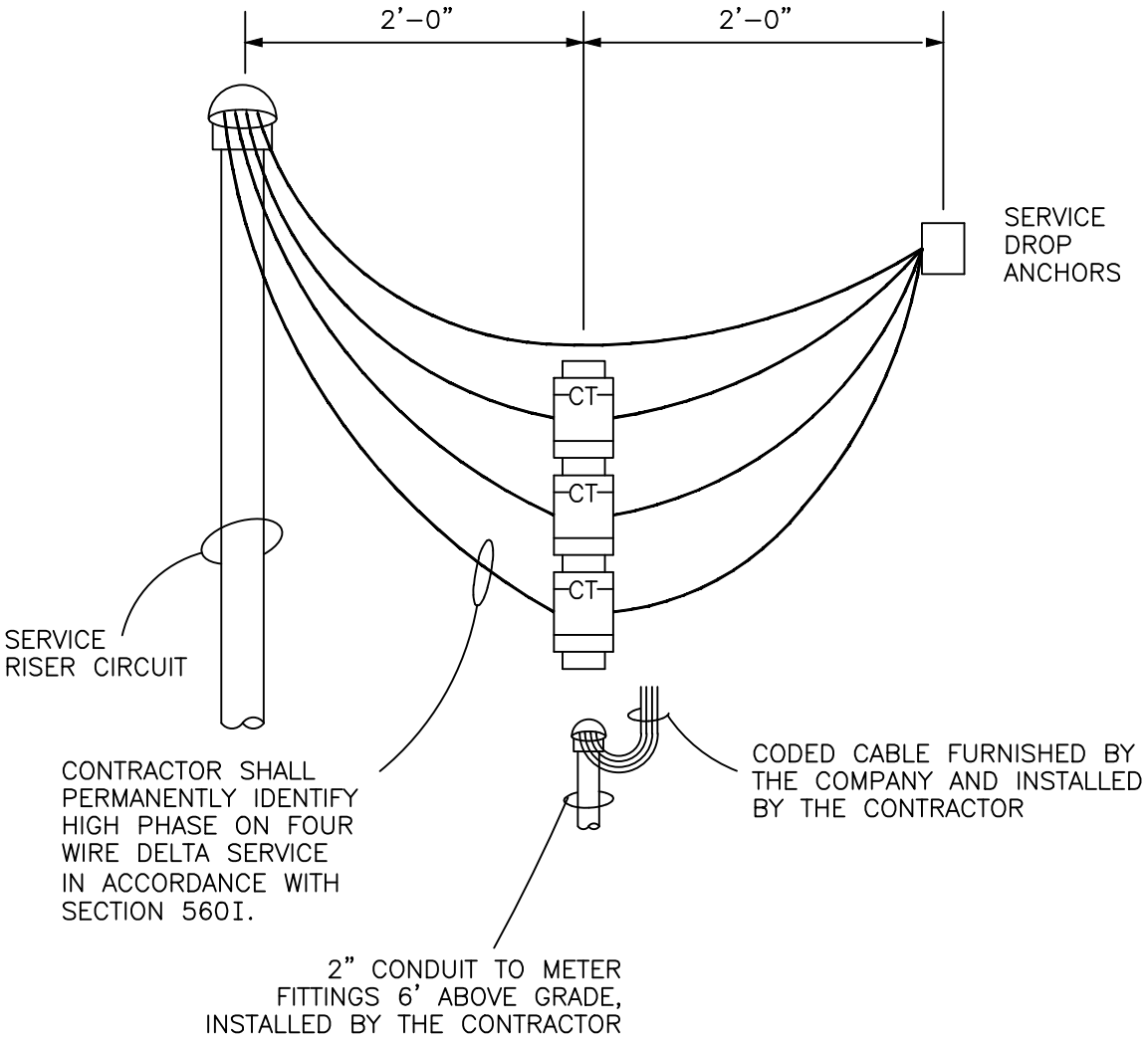
1. USE CENTER KNOCKOUT FOR LINE CONDUIT.
2. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
3. NO ACCESS PERMITTED THROUGH THE BACK OF CABINET

OUTDOOR METERING, UNDERGROUND INSTALLATION 277/480 VOLT, 3 PHASE, 4 WIRE 250 A TO 400 A SERVICE

REV 5–7–12

GB3-026

aes Indiana



TO METER FITTING
(FOR DETAILS ON 120/240V & 120/208V SEE DRAWINGS GB3–032
ON 277/480V SEE DRAWING GB3–033)

NOTES:

1. THE COMPANY WILL FURNISH CURRENT TRANSFORMERS MOUNTED ON A CHANNEL FOR THE CONTRACTOR TO INSTALL.

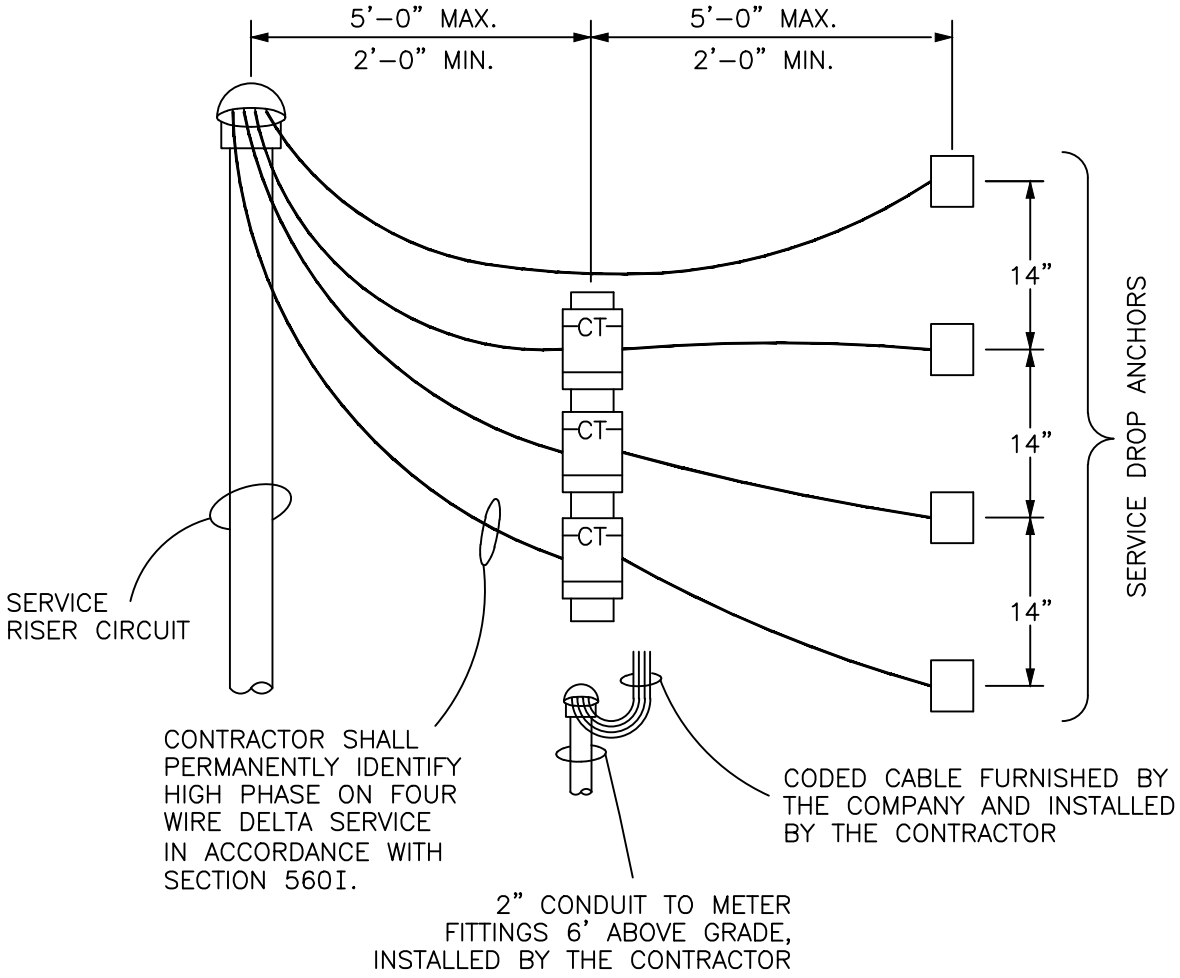
▶ 2. THE USE OF CONDUIT BODIES (CONDULETS) WITH REMOVABLE COVERS IS PROHIBITED FOR METERING CABLE.

OUTDOOR METERING
OVERHEAD INSTALLATION
WALL MOUNTED
120/240 VOLT, 1 PHASE, 3 WIRE
120/208 VOLT, 3 PHASE, 4 WIRE
120/240 VOLT, 3 PHASE, 4 WIRE
277/480 VOLT, 3 PHASE, 4 WIRE
0 A TO 400 A SERVICE

277/480 VOLT, 1 PHASE, 3 WIRE

(INTERSTATE LIGHTS ONLY)

aes Indiana



TO METER FITTING
(FOR DETAILS ON 120/240V AND 120/208V SEE DRAWING GB3–032
ON 277/480V SEE DRAWING GB3–033)

NOTES:

1. THE COMPANY WILL FURNISH CURRENT TRANSFORMERS MOUNTED ON A CHANNEL FOR THE CONTRACTOR TO INSTALL.

2. SEE SEC. 205B FOR 240V SINGLE PHASE REQUIREMENTS.

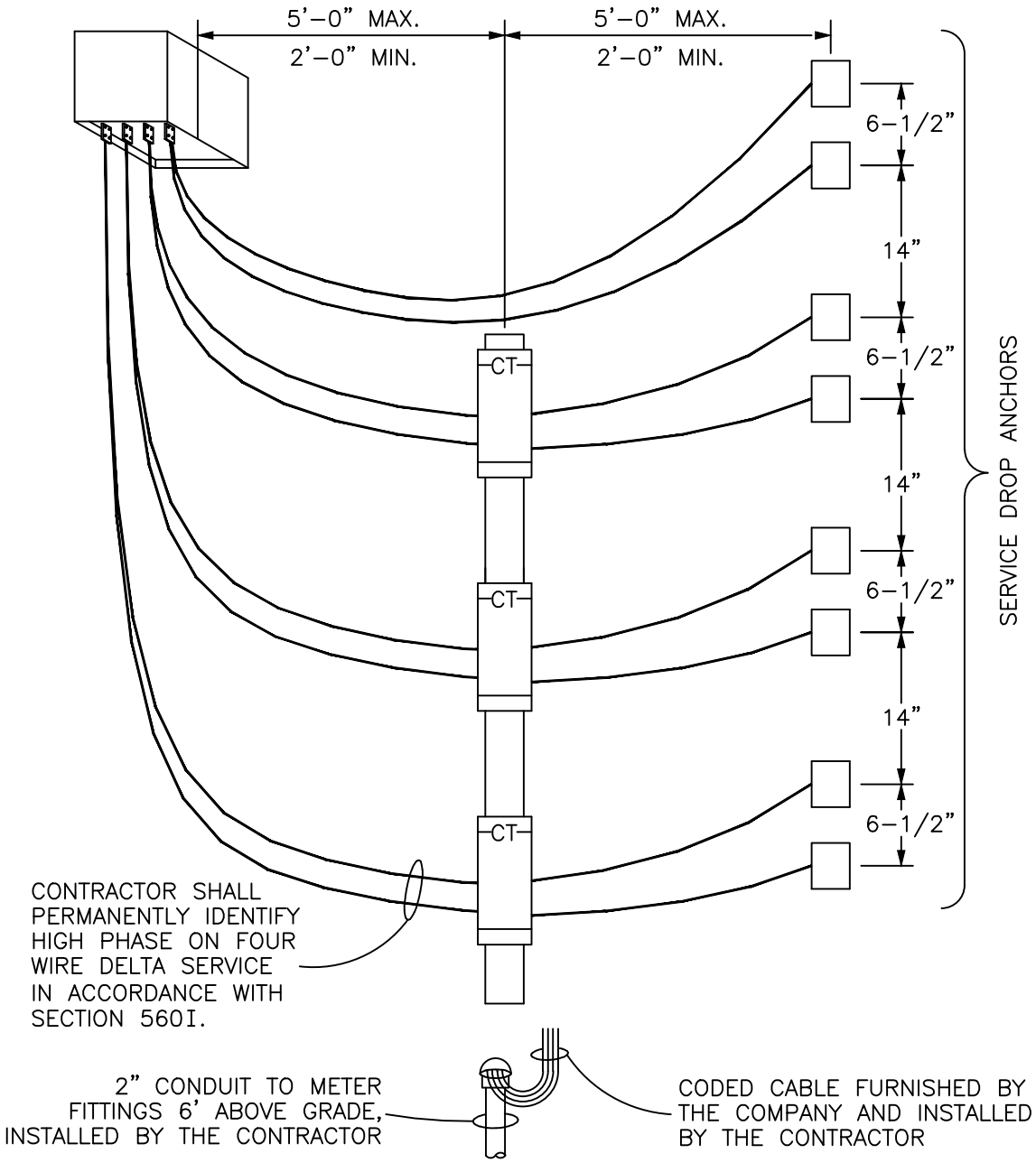
▶ 3. THE USE OF CONDUIT BODIES (CONDULETS) WITH REMOVABLE COVERS IS PROHIBITED FOR METERING CABLE.

OUTDOOR METERING
OVERHEAD INSTALLATION
WALL MOUNTED
120/240 VOLT, 1 PHASE, 3 WIRE
120/208 VOLT, 3 PHASE, 4 WIRE
120/240 VOLT, 3 PHASE, 4 WIRE
277/480 VOLT, 3 PHASE, 4 WIRE
401 A TO 1600 A SERVICE

277/480 VOLT, 1 PHASE, 3 WIRE

(INTERSTATE LIGHTS ONLY)

aes Indiana



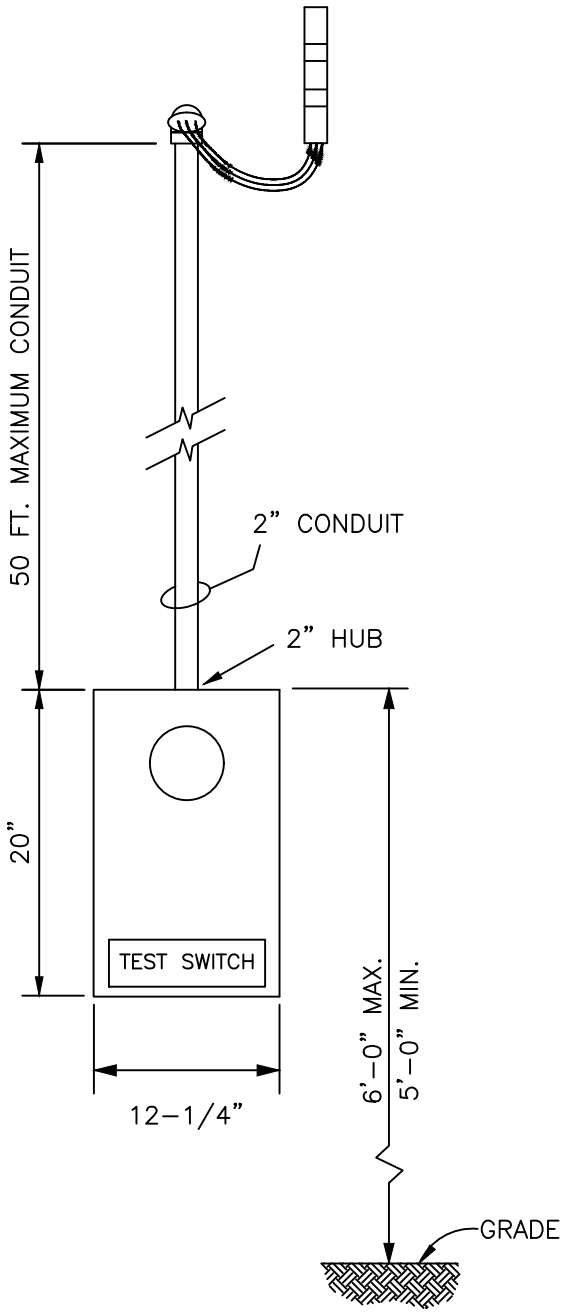
TO METER FITTING
(FOR DETAILS ON 120/240V AND 120/208V SEE DRAWING GB3–032
ON 277/480V SEE DRAWING GB3–033)

NOTES:

1. THE COMPANY WILL FURNISH CURRENT TRANSFORMERS MOUNTED ON A CHANNEL FOR THE CONTRACTOR TO INSTALL.

▶ 2. THE USE OF CONDUIT BODIES (CONDULETS) WITH REMOVABLE COVERS IS PROHIBITED FOR METERING CABLE.

OUTDOOR METERING
OVERHEAD INSTALLATION
WALL MOUNTED
120/208 VOLT, 3 PHASE, 4 WIRE
120/240 VOLT, 3 PHASE, 4 WIRE
277/480 VOLT, 3 PHASE, 4 WIRE
1601 A TO 3000 A SERVICE



NOTES:

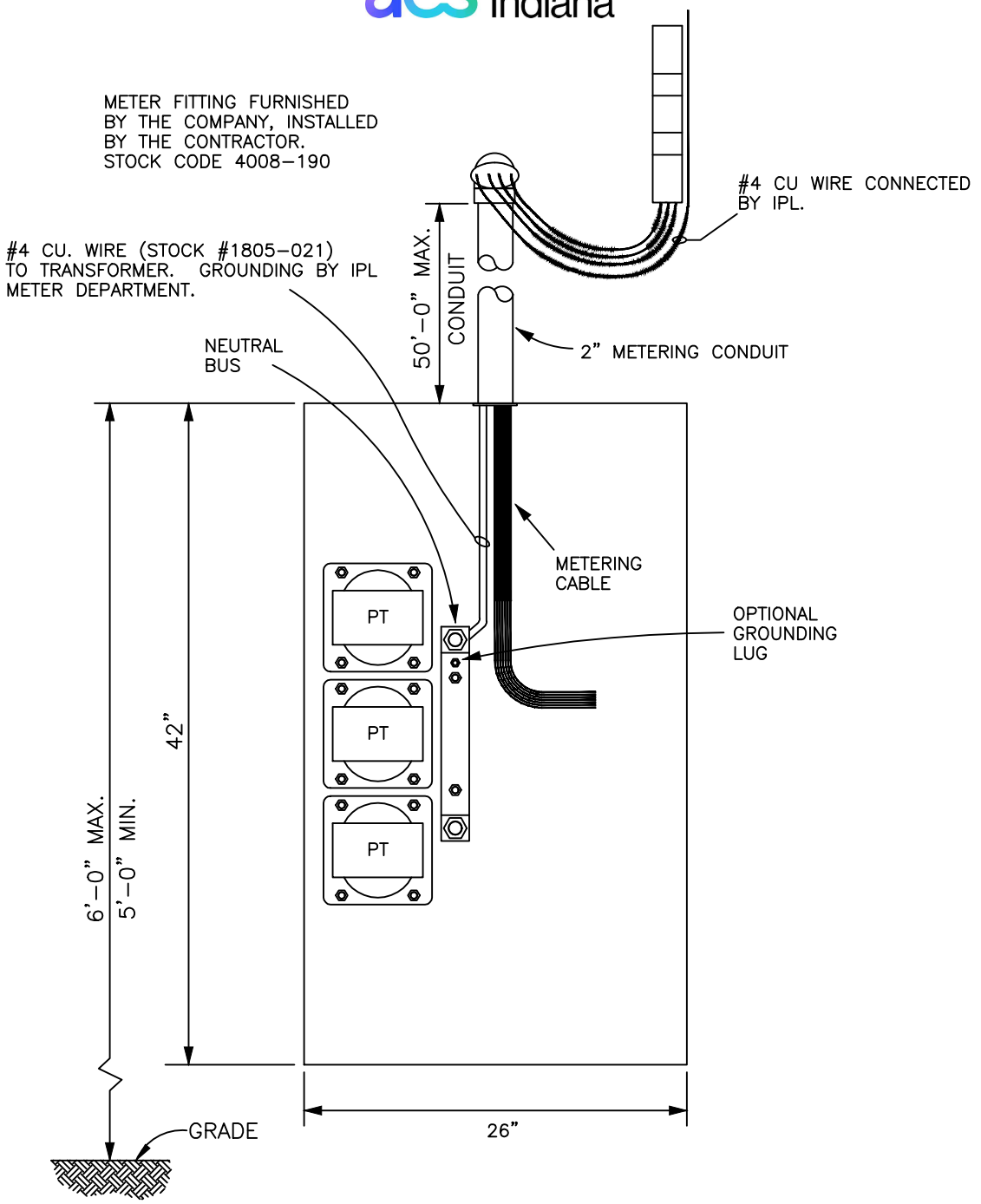
1. METER CABINET STOCK CODE #4008–321 FURNISHED BY THE COMPANY AND INSTALLED BY THE CONTRACTOR, WIRED BY IPL.

▶ 2. THE USE OF CONDUIT BODIES (CONDULETS) WITH REMOVABLE COVERS IS PROHIBITED FOR METERING CABLE.

OUTDOOR METERING CABINET TRANSFORMER RATED OVERHEAD INSTALLATION

REV 5–23–17

GB3-032



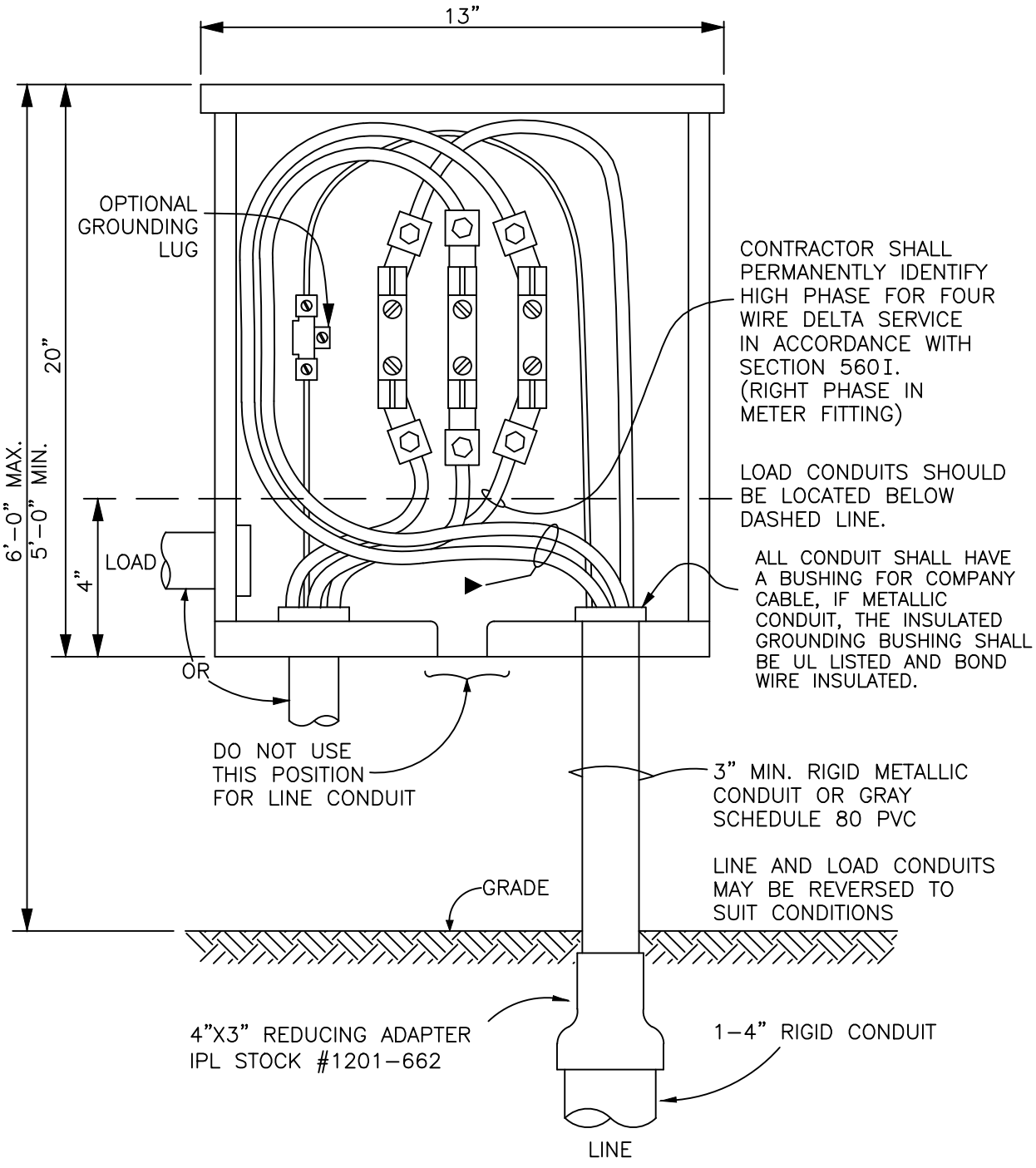
NOTES:

1. USE CENTER KNOCKOUT FOR LINE CONDUIT.
2. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
3. CONTRACTOR SHALL INSTALL BOTH THE SUPPLIED METER CABLE AND THE 4 CU AWG GROUNDING WIRE BETWEEN THE TRANSFORMER AND METER CABINET.
4. ▶ THE USE OF CONDUIT BODIES (CONDULETS) WITH REMOVABLE COVERS IS PROHIBITED FOR METERING CABLE.

OUTDOOR METERING, OVERHEAD INSTALLATION, PT'S IN THE METER FITTING

aes Indiana

METER FITTING CODE # 4008–035
FURNISHED BY THE COMPANY,
INSTALLED BY CONTRACTOR.
(IF METER FITTING IS PROVIDED BY THE CUSTOMER, IT MAY BE REJECTED IF IT DOES NOT MEET THE COMPANY STANDARDS)

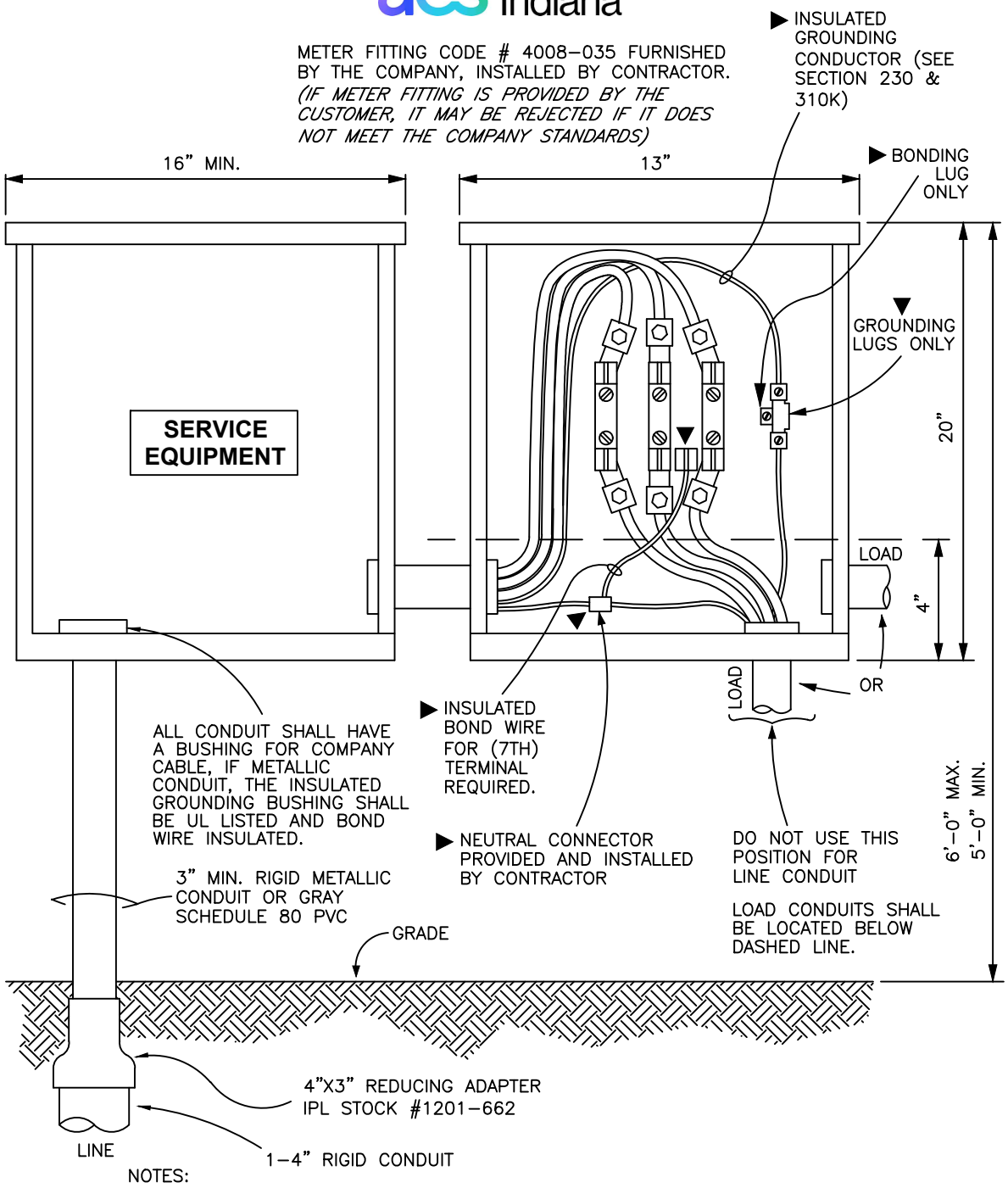


200 A METER FITTING
UNDERGROUND INSTALLATION
120/208 VOLT, 3 PHASE, 4 WIRE
120/240 VOLT, 3 PHASE, 4 WIRE
225 A MAXIMUM SERVICE

REV 11–16–10

GB3-042

aes Indiana



NOTES:

▶ 1. CUSTOMER SHALL MAKE THE FINAL CONNECTIONS ON THE LOAD SIDE OF THE SERVICE DISCONNECT AND IN THE METER FITTING.

▶ 2. THE LINE AND LOAD CONDUCTORS IN THE SERVICE EQUIPMENT AND METER FITTING SHALL NOT CROSS.

3. THE SERVICE EQUIPMENT SHALL BE PERMANENTLY LABELED BY THE CUSTOMER, "SERVICE EQUIPMENT".

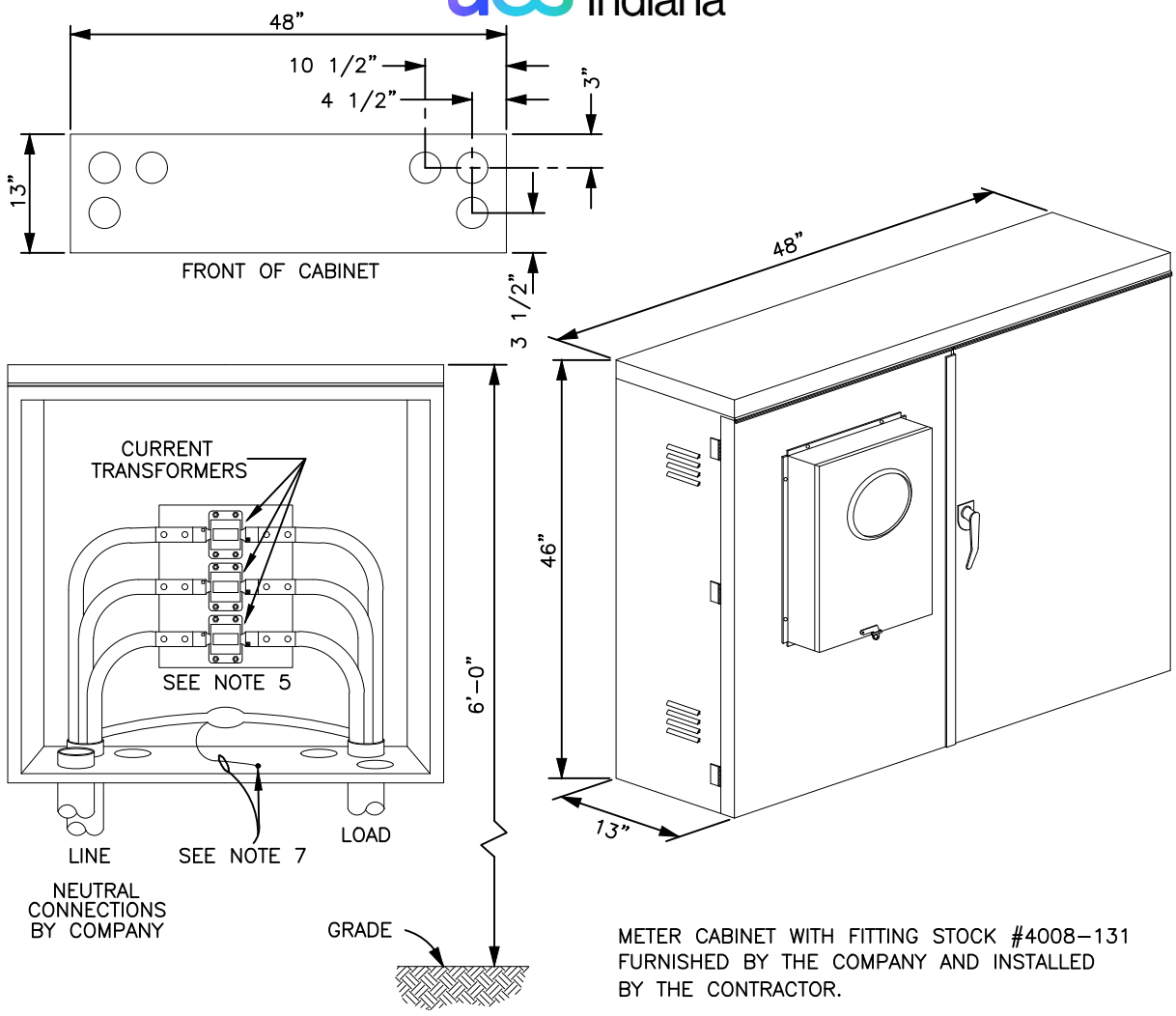
4. ALL 277/480 VOLT METER FITTINGS SHALL BE IN COLD SEQUENCE, SEE SECTION 550A7 FOR THE DEFINITION, AND THE SERVICE DISCONNECT SHALL BE IN A LOCKABLE ENCLOSURE.

▶ 5. THE SERVICE CABLE FROM IPL IS NORMALLY 4/0 AL., ALLOW PROPER WIRE BENDING SPACE FOR THIS CABLE.

200 A METER FITTING UNDERGROUND INSTALLATION 277/480 VOLT, 3 PHASE, 4 WIRE 225 A MAXIMUM SERVICE

REV 5–29–19

GB3-044



METER CABINET WITH FITTING STOCK #4008-131 FURNISHED BY THE COMPANY AND INSTALLED BY THE CONTRACTOR.

NOTES:

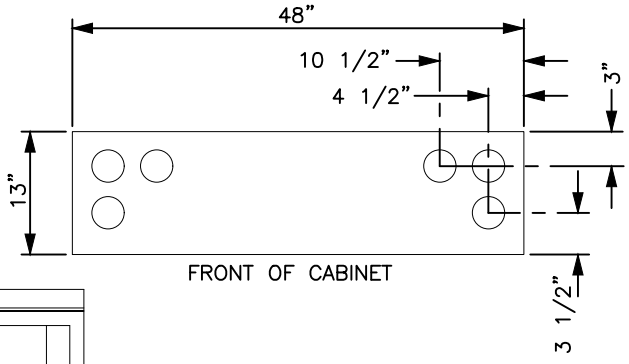
1. CONDUIT FROM SELF-CONTAINED METER FITTING MUST ENTER THE BOTTOM 24" OF THE METER CABINET AND BE FED FROM THE LINE SIDE OF THE CT's.
2. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.
3. CONDUIT SHALL NOT ENTER BACK OF CABINET. USE KNOCKOUTS IN BOTTOM OF METER CABINET ADJACENT TO SIDES.
4. CONTRACTOR SHALL FURNISH AND INSTALL THE SERVICE CABLES AND CONDUIT FROM SELF-CONTAINED METER FITTING TO THE METER CABINET. LINE SIDE CURRENT TRANSFORMER CONNECTIONS AND ALL NEUTRAL CONNECTIONS SHALL BE MADE BY THE COMPANY.
5. CONTRACTOR SHALL PERMANENTLY IDENTIFY HIGH PHASE FOR FOUR WIRE DELTA SERVICE IN ACCORDANCE WITH SECTION 560 . HIGH PHASE SHALL BE CONNECTED TO BOTTOM CURRENT TRANSFORMER AND RIGHT PHASE IN SELF-CONTAINED METER FITTING.
6. METERING TRANSFORMERS FURNISHED BY THE COMPANY, INSTALLED BY THE CONTRACTOR.
7. ▶ BONDING LUG AND 18 INCHES OF INSULATED 2/0 AWG MINIMUM COPPER CONDUCTOR SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
8. METER CABINET SHALL BE TRUCK ACCESSIBLE. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
9. ALL CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.

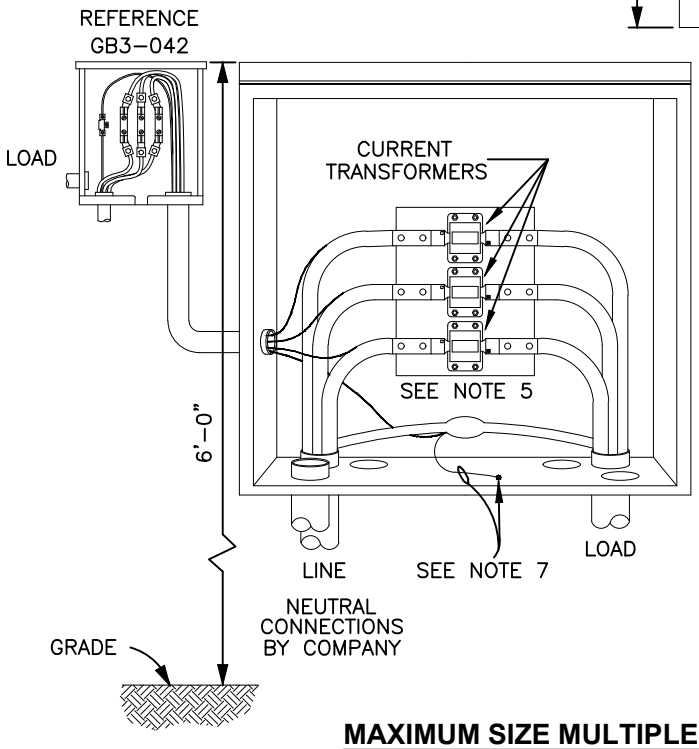
OUTDOOR METERING
UNDERGROUND INSTALLATION
120/208, or 120/240 VOLT, 3 PHASE, 4 WIRE
500 A TO 1200 A SERVICE

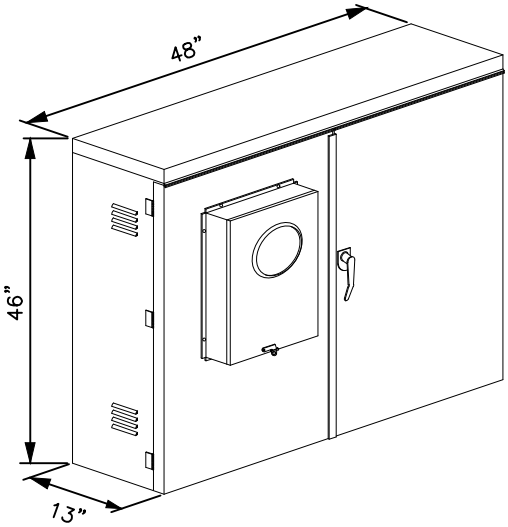
REV 12-8-14

GB3-060

METER CABINET STOCK #4008–131 AND METER FITTING #4008–035=200A FURNISHED BY THE COMPANY AND INSTALLED BY THE CONTRACTOR.







MAXIMUM SIZE MULTIPLE SERVICES

120/208 OR 120/240 V

1–100 A AND 1–800 A	1–200 A AND 1–800 A
1–100 A AND 1–1000 A	1–200 A AND 1–1000 A

NOTES:

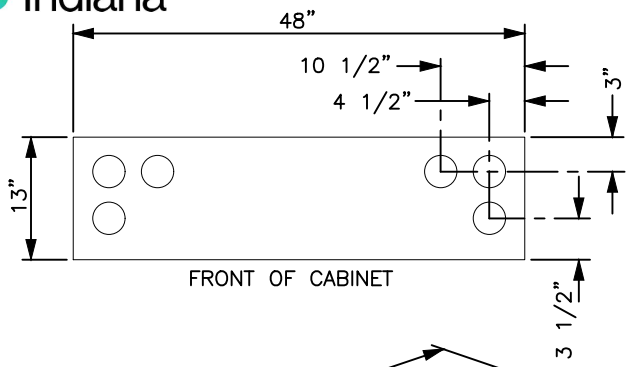
1. CONDUIT FROM SELF–CONTAINED METER FITTING MUST ENTER THE BOTTOM 24" OF THE METER CABINET AND BE FED FROM THE LINE SIDE OF THE CT's.
2. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.
3. CONDUIT SHALL NOT ENTER BACK OF CABINET. USE KNOCKOUTS IN BOTTOM OF METER CABINET ADJACENT TO SIDES.
4. CONTRACTOR SHALL FURNISH AND INSTALL THE SERVICE CABLES AND CONDUIT FROM SELF–CONTAINED METER FITTING TO THE METER CABINET. LINE SIDE CURRENT TRANSFORMER CONNECTIONS AND ALL NEUTRAL CONNECTIONS SHALL BE MADE BY THE COMPANY.
5. CONTRACTOR SHALL PERMANENTLY IDENTIFY HIGH PHASE FOR FOUR WIRE DELTA SERVICE. HIGH PHASE SHALL BE CONNECTED TO BOTTOM CURRENT TRANSFORMER AND RIGHT PHASE IN SELF–CONTAINED METER FITTING.
6. METERING TRANSFORMERS FURNISHED BY THE COMPANY, INSTALLED BY THE CONTRACTOR.
7. ▶ BONDING LUG AND 18 INCHES OF INSULATED 2/0 AWG MINIMUM COPPER CONDUCTOR SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
8. METER CABINET SHALL BE TRUCK ACCESSIBLE. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
9. THE CURRENT TRANSFORMER MOUNTING BRACKETS SHALL BE BUTTED AGAINST EACH OTHER. TOP C.T. SHALL BE AT 30".
10. ALL CONDUIT SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.

OUTDOOR METERING, UNDERGROUND INSTALLATION 120/208 or 120/240 VOLT, 3 PHASE, 4 WIRE 500 A TO 1200 A SERVICE

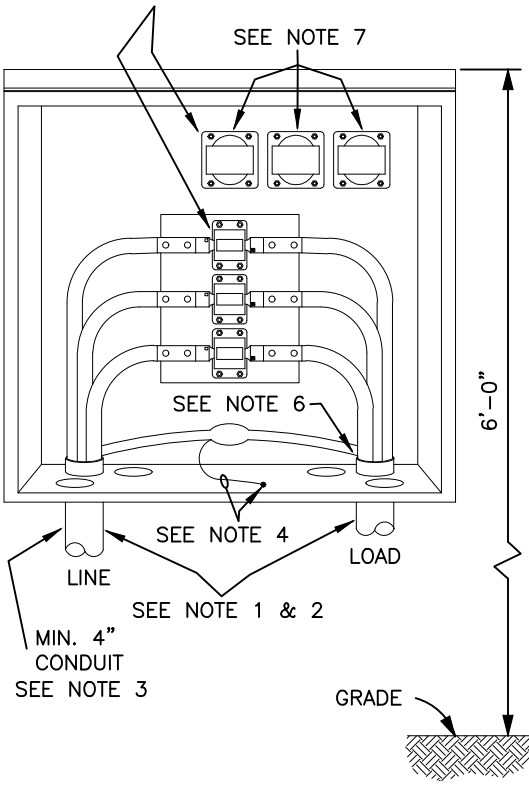
REV 12–8–14

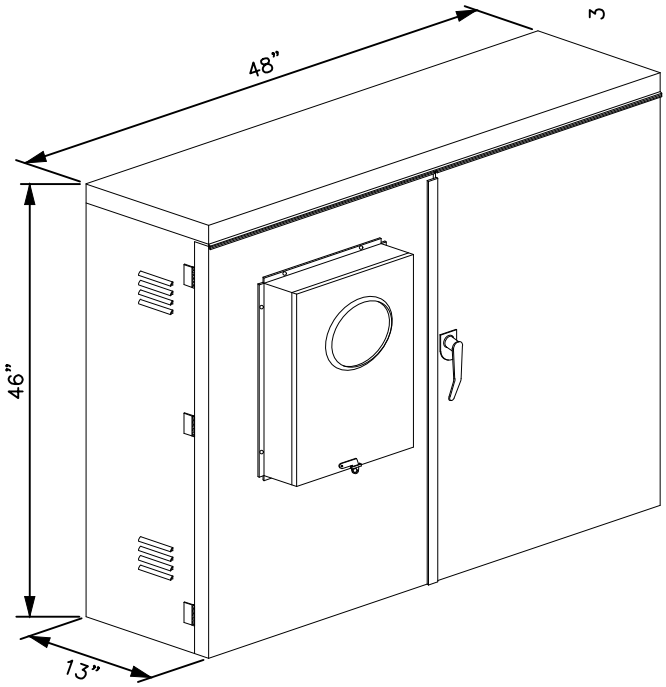
GB3-070

aes Indiana



CURRENT TRANSFORMERS AND POTENTIAL TRANSFORMERS FURNISHED BY THE COMPANY, INSTALLED BY THE CONTRACTOR





METER CABINET WITH FITTING STOCK CODE # 4008-131 FURNISHED BY THE COMPANY AND INSTALLED BY THE CONTRACTOR.

NOTES:

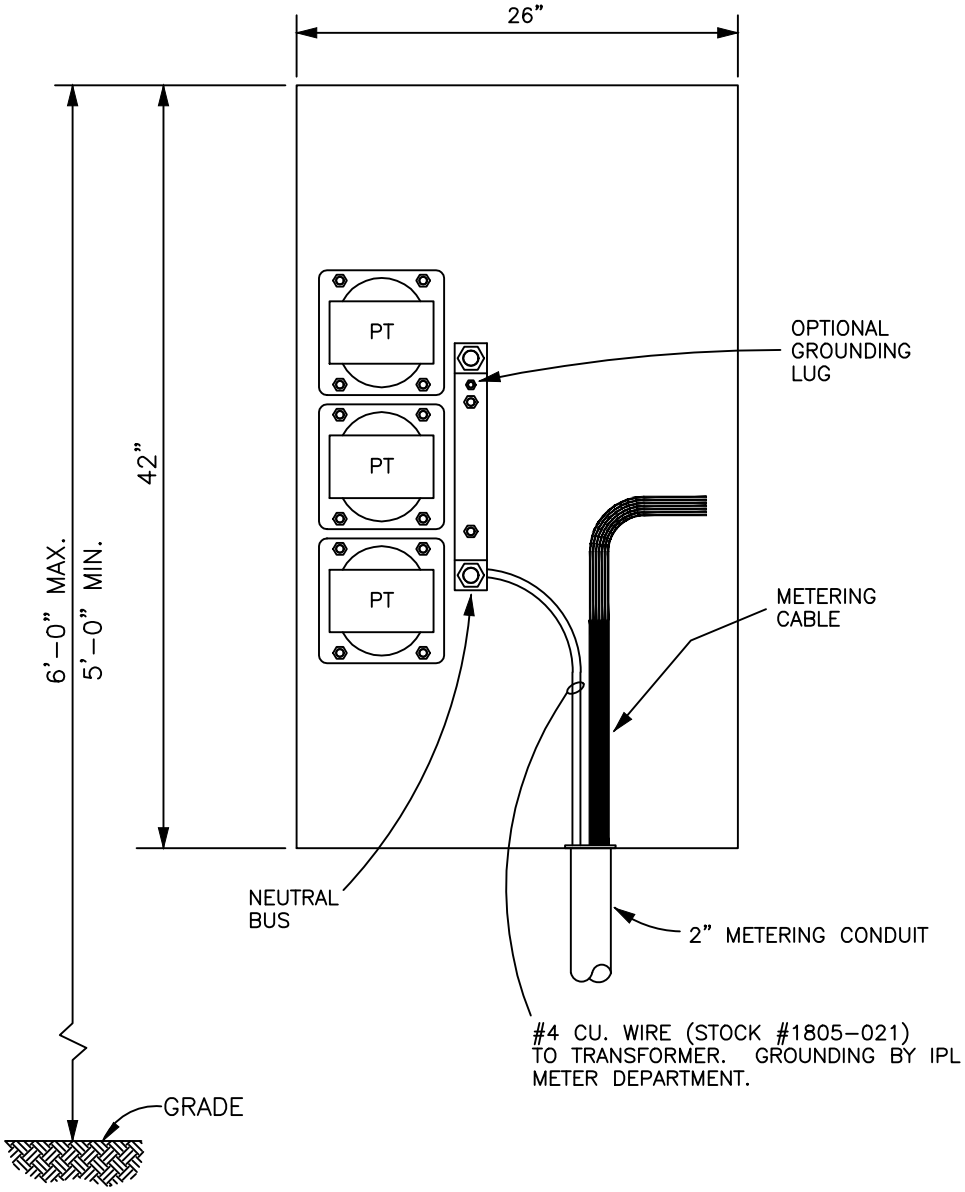
1. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.
2. CONDUITS SHALL NOT ENTER BACK OF METER CABINET. USE KNOCKOUT IN BOTTOM OF METER CABINET ADJACENT TO SIDES.
3. 1-4” LINE CONDUIT REQUIRED FOR SERVICES FROM 250 A TO 400 A.
   2-4” LINE CONDUITS REQUIRED FOR SERVICES FROM 450 A TO 800 A.
   3-4” LINE CONDUITS REQUIRED FOR SERVICES FROM 900 A TO 1200 A.
4. BONDING LUG AND 18 INCHES OF INSULATED 2/0 AWG MINIMUM COPPER CONDUCTOR SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
5. METER CABINET SHALL BE TRUCK ACCESSIBLE. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
6. ▶ LINE CONDUITS SHALL HAVE A BUSHING FOR COMPANY CABLE, IF METALLIC CONDUIT, THE INSULATED GROUNDING BUSHING SHALL BE U.L. LISTED AND BOND WIRE INSULATED.
7. INSTALL POTENTIAL TRANSFORMERS WITH PRIMARY ON BOTTOM (H1,H2) AND SECONDARY ON TOP (X1, X2).

OUTDOOR METERING, UNDERGROUND INSTALLATION 277/480 VOLT 3 PHASE, 4 WIRE 250 A TO 1200 A SERVICE

REV 11-16-15

GB3-085

METER FITTING FURNISHED
BY THE COMPANY, INSTALLED
BY THE CONTRACTOR.
STOCK CODE 4008–190

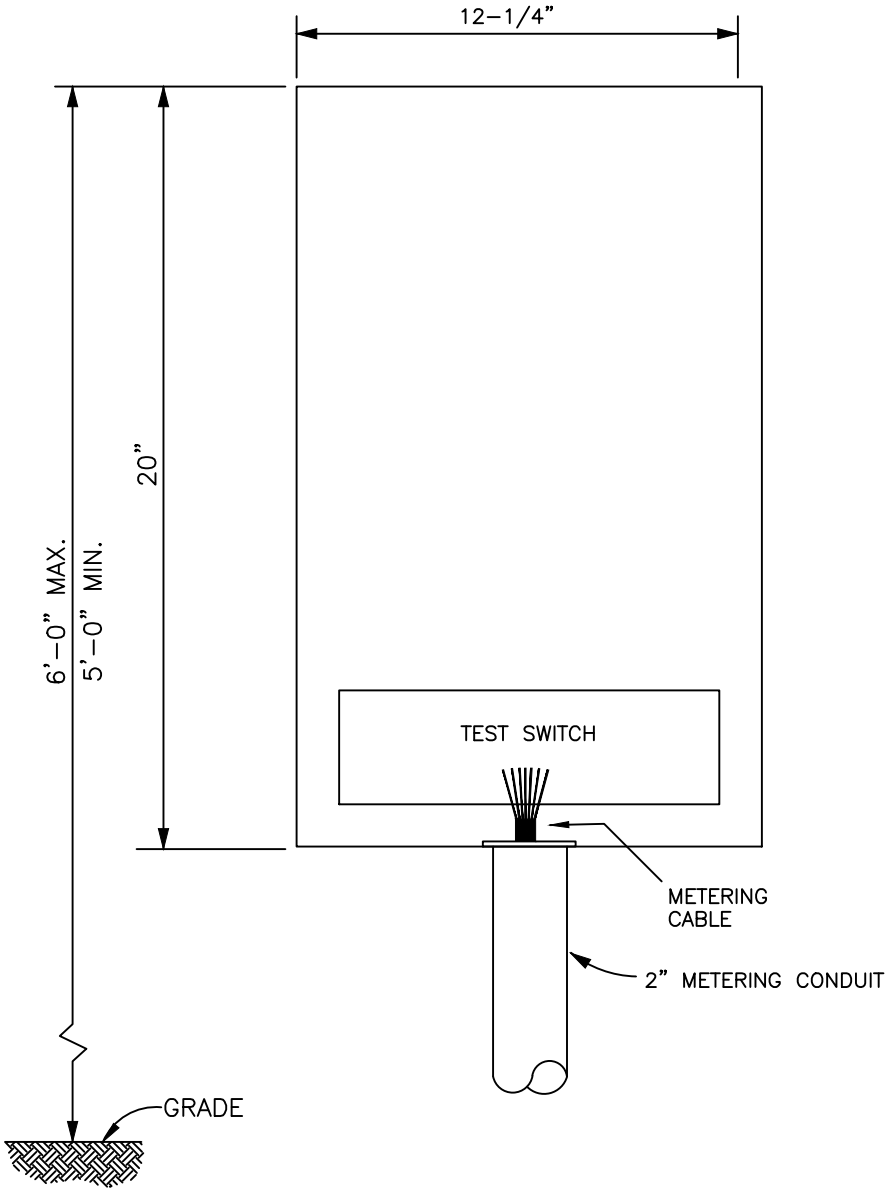


NOTES:

1. USE CENTER KNOCKOUT FOR LINE CONDUIT.
2. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
3. CONTRACTOR SHALL INSTALL BOTH THE SUPPLIED METER CABLE AND THE 4 CU AWG GROUNDING WIRE BETWEEN THE TRANSFORMER AND METER CABINET.
4. SEE GB5–110 FOR METER CABINET SUPPORTING STRUCTURE.
5. ▶ THE USE OF CONDUIT BODIES (CONDULETS) WITH REMOVABLE COVERS IS PROHIBITED FOR METERING CABLE.

OUTDOOR METERING, UNDERGROUND INSTALLATION, TRANSFORMER MOUNTED CT's ONLY 277/480 VOLT, 3 PHASE, 4 WIRE 450 A TO 3000 A SERVICE

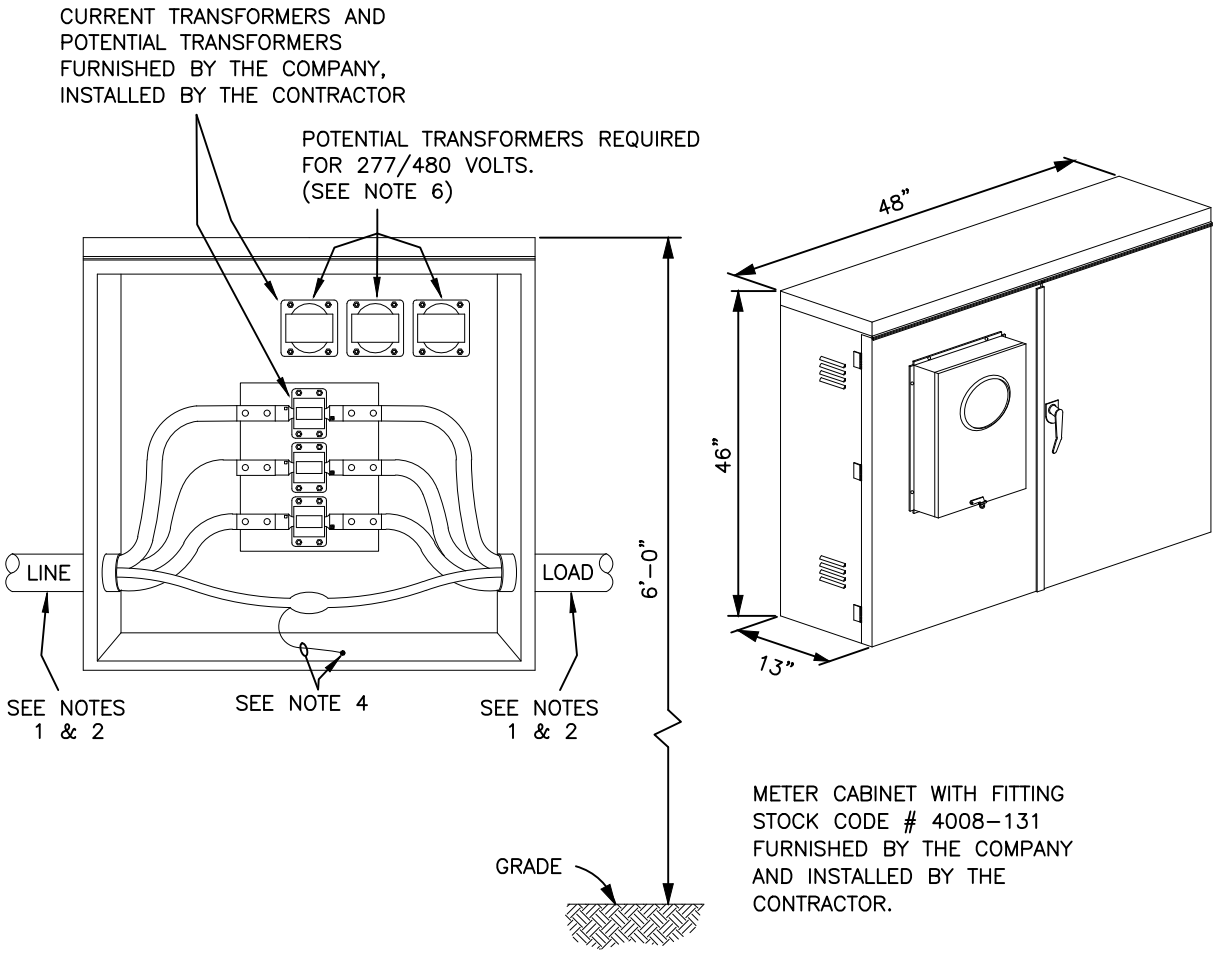
METER FITTING FURNISHED
BY THE COMPANY, INSTALLED
BY THE CONTRACTOR.
STOCK CODE 4008–321



NOTES:

1. USE CENTER KNOCKOUT FOR LINE CONDUIT.
2. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.
3. CONTRACTOR SHALL INSTALL THE SUPPLIED METER CABLE BETWEEN THE TRANSFORMER AND METER CABINET.
4. SEE GB5–110 FOR METER CABINET SUPPORTING STRUCTURE.
5. ALL WIRING IN METER FITTING BY IPL.
6. ▶ THE USE OF CONDUIT BODIES (CONDULETS) WITH REMOVABLE COVERS IS PROHIBITED FOR METERING CABLE.

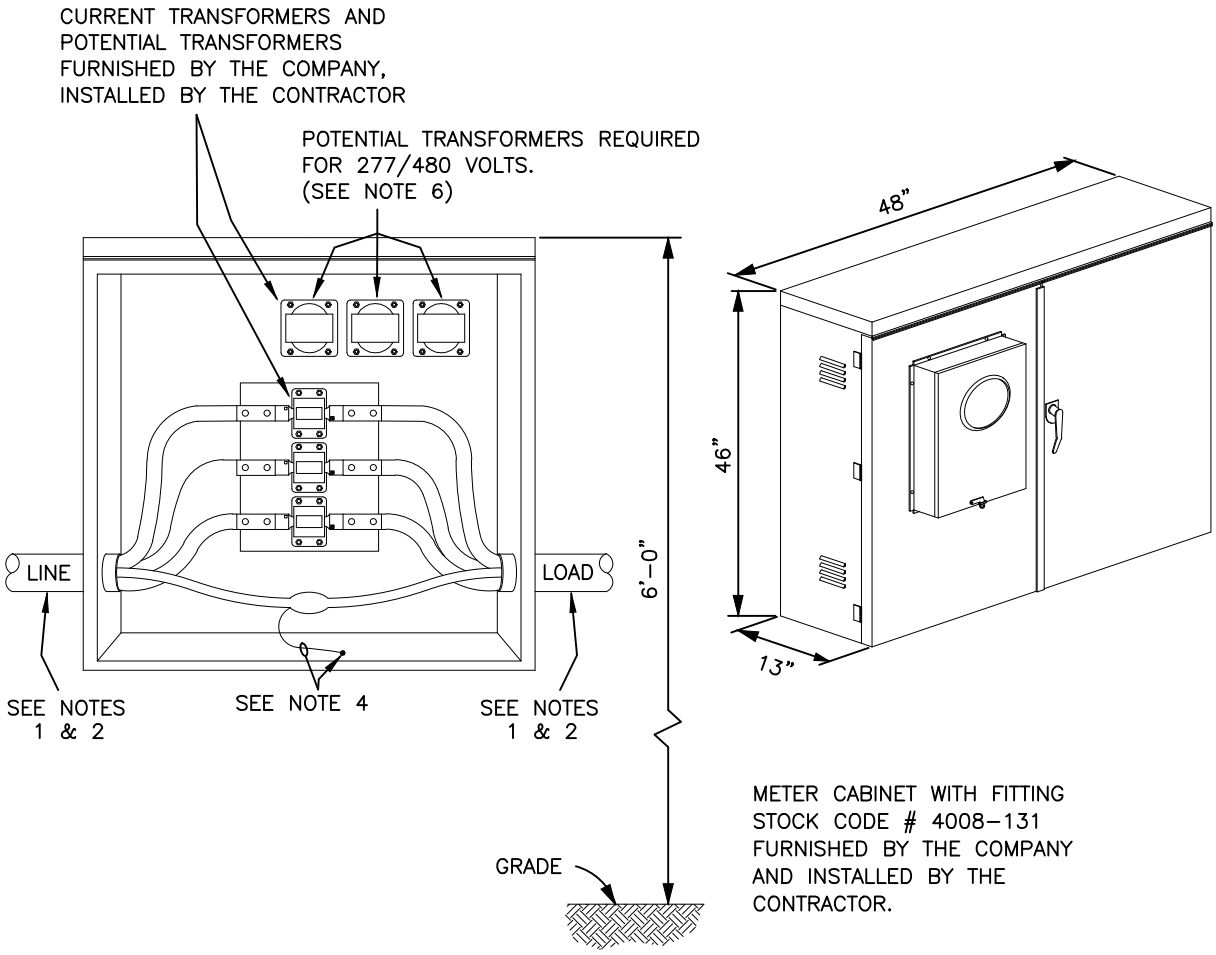
OUTDOOR METERING, UNDERGROUND INSTALLATION, TRANSFORMER MOUNTED CT's ONLY 120/208 VOLT, 3 PHASE, 4 WIRE 450 A TO 3000 A SERVICE



NOTES:

1. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.
2. CONDUITS SHALL NOT ENTER BACK OF METER CABINET. CONDUITS MAY BE INSTALLED ON THE SIDES BETWEEN THE VENTS. KNOCKOUTS IN BOTTOM OF METER CABINET ADJACENT TO SIDE MAY ALSO BE USED.
3. CONTRACTOR SHALL PERMANETLY IDENTIFY HIGH PHASE FOR FOUR WIRE DELTA SERVICE IN ACCORDANCE WITH SECTION 560I, HIGH PHASE SHALL BE CONNECTED TO BOTTOM CURRENT TRANSFORMER.
4. ▶ BONDING LUG AND 18 INCHES OF INSULATED 2/0 AWG MINIMUM COPPER CONDUCTOR SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
5. CUSTOMER SHALL FURNISH AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY, WHERE SUBJECT TO DAMAGE.
6. INSTALL POTENTIAL TRANSFORMERS WITH PRIMARY ON BOTTOM (H1,H2) AND SECONDARY ON TOP (X1, X2).

INDOOR METERING
120/208 OR 120/240 VOLT, 3 PHASE, 4 WIRE
277/480 VOLT, 3 PHASE, 4 WIRE
250 A TO 1200 A SERVICE

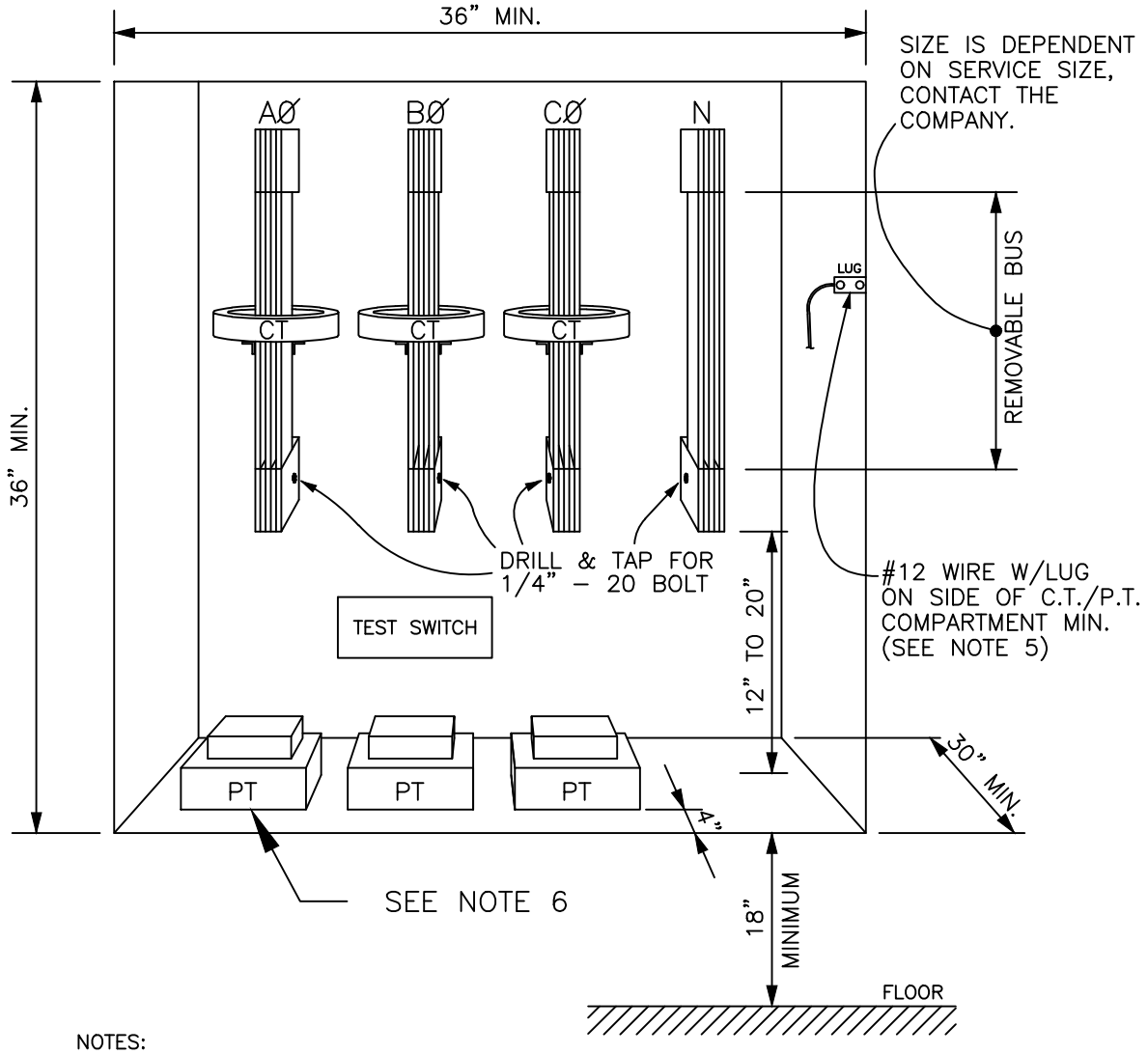


NOTES:

1. LINE AND LOAD CONDUITS MAY BE REVERSED TO SUIT CONDITIONS.
2. CONDUITS SHALL NOT ENTER BACK OF METER CABINET. CONDUITS MAY BE INSTALLED ON THE SIDES BETWEEN THE VENTS. KNOCKOUTS IN BOTTOM OF METER CABINET ADJACENT TO SIDE MAY ALSO BE USED.
3. CONTRACTOR SHALL PERMANETLY IDENTIFY HIGH PHASE FOR FOUR WIRE DELTA SERVICE IN ACCORDANCE WITH SECTION 560I, HIGH PHASE SHALL BE CONNECTED TO BOTTOM CURRENT TRANSFORMER.
4. ▶ BONDING LUG AND 18 INCHES OF INSULATED 2/0 AWG MINIMUM COPPER CONDUCTOR SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
5. CUSTOMER SHALL FURNISH AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY, WHERE SUBJECT TO DAMAGE.
6. INSTALL POTENTIAL TRANSFORMERS WITH PRIMARY ON BOTTOM (H1,H2) AND SECONDARY ON TOP (X1, X2).

INDOOR METERING
120/208 OR 120/240 VOLT, 3 PHASE, 4 WIRE
277/480 VOLT, 3 PHASE, 4 WIRE
250 A TO 1200 A SERVICE

aes Indiana



NOTES:

1. CT, PT AND CODED CONTROL CABLE FURNISHED BY THE COMPANY AND INSTALLED BY ELECTRICAL CONTRACTOR.
2. METERING CABINET FURNISHED BY THE COMPANY AND INSTALLED BY ELECTRICAL CONTRACTOR WITH A 1–1/4" CONTINUOUS CONDUIT FROM C.T./P.T. COMPARTMENT TO METER CABINET. METERING CABINET SHALL BE INSTALLED AT A REMOTE POINT IN A LOCATION AGREEABLE TO THE CUSTOMER AND THE COMPANY.
3. IDENTIFY C.T./P.T. COMPARTMENT WITH NAME PLATE OR STENCIL.
4. 480 VOLT SERVICES, FLOOR OF COMPARTMENT TO BE CAPABLE OF SUPPORTING 60 LBS. INDEFINITELY.
5. A NEUTRAL TAP MAY BE USED IN PLACE OF A NEUTRAL BUS USING #12 COPPER WIRE W/LUG FOR TERMINATION.
6. INSTALL P.T.'s WITH PRIMARY TO REAR AND SECONDARY TO THE FRONT.
7. METER COMPARTMENT DIMENSIONS MAY BE CHANGED ONLY UPON WRITTEN APPROVAL FROM THE COMPANY'S METER DEPARTMENT.
8. CONTRACTOR SHALL PERMANENTLY IDENTIFY HIGH PHASE FOR FOUR WIRE DELTA SERVICE IN ACCORDANCE WITH SECTION 560.
9. ▶ THE USE OF CONDUIT BODIES (CONDULETS) WITH REMOVABLE COVERS IS PROHIBITED FOR METERING CABLE.

METERING COMPARTMENT FOR SWITCHGEAR 120/240 or 120/208V or 277/480V

REV 5–23–17

GB3-120

GB4 SERIES OF DRAWINGS

(GENERALLY COVERS SERVICE DROPS AND ATTACHMENTS)

aes Indiana

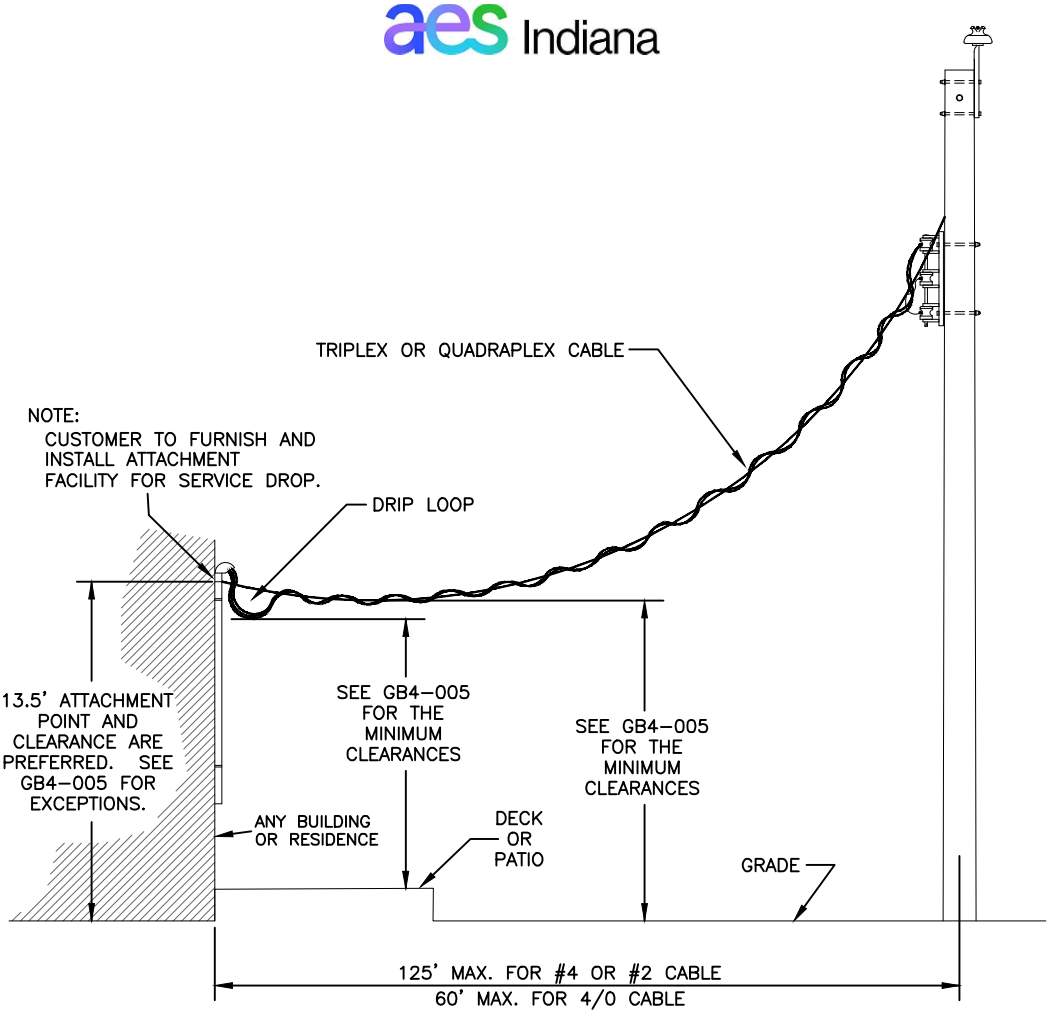
MINIMUM CLEARANCES FOR TRIPLEX AND DUPLEX SERVICE CONDUCTORS

SURFACE CROSSED BY SERVICE DROP	REQUIRED CLEARANCE FOR 150V PHASE TO GROUND AND BELOW	REQUIRED CLEARANCE FOR 150V TO 300V PHASE TO GROUND
SUBJECT TO PEDESTRIANS OR RESTRICTED TRAFFIC ONLY. INCLUDES LAWN AREAS, DECKS, PLATFORMS, SIDEWALKS AND SIMILAR AREAS.	12 FEET (SEE NOTE #2)	12 FEET (SEE NOTE #3)
RESIDENTIAL DRIVEWAYS AND RESIDENTIAL PARKING AREAS NOT SUBJECT TO VEHICLES THAT ARE 8 FEET OR MORE IN HEIGHT.	12 FEET	12.5 FEET
ROADS, STREETS, ALLEYS, AND OTHER AREAS SUBJECT TO TRUCK TRAFFIC (SEE NOTE #8), COMMERCIAL DRIVEWAYS, PARKING LOTS. OTHER AREAS TRAVERSED BY VEHICLES, SUCH AS CULTIVATED, GRAZING, FOREST, AND ORCHARD LANDS, INDUSTRIAL SITES, COMMERCIAL SITES, ETC.	16 FEET	16 FEET
SWIMMING POOLS, DECKS AROUND POOLS, RAILROAD TRACKS, AND SERVICES LARGER THAN 400 AMPERES OR GREATER THAN 300V PHASE TO GROUND.	(SEE NOTE 6)	(SEE NOTE 6)

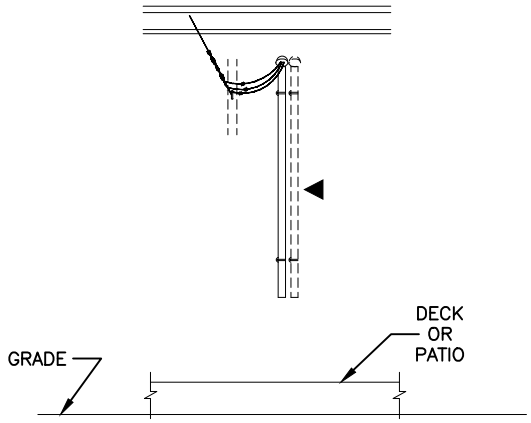
NOTES:

1. ALL CLEARANCES ARE BASED ON THE REQUIREMENTS FOR STANDARD TRIPLEX AND QUADRAPLEX CABLES AND MEET OR EXCEED THE NATIONAL ELECTRICAL SAFETY CODE.
2. THIS CLEARANCE MAY BE REDUCED TO 10 FEET FOR SERVICE DROPS TO RESIDENTIAL BUILDINGS ONLY.
3. THIS CLEARANCE MAY BE REDUCED TO 10.5 FEET FOR SERVICE DROPS TO RESIDENTIAL BUILDINGS ONLY.
4. WHERE COMMUNICATIONS CONDUCTORS (TELEPHONE, CABLE TV, ETC.) ARE LOCATED, MID-SPAN CLEARANCE OF 18" SHALL BE MAINTAINED TO THE SERVICE DROP CONDUCTORS.
5. ONLY POWER SERVICE-DROP CONDUCTORS SHALL BE PERMITTED TO BE ATTACHED TO A SERVICE MAST. SEE THE INDIANA ELECTRICAL CODE, SECTION 230.28.
6. CROSSING THIS AREA REQUIRES THE ASSISTANCE OF A PROJECT DESIGNER. SEE THE CUSTOMER PROJECTS ENGINEERING DISTRICT MAP, GB0-100 FOR THE NAME AND CONTACT INFORMATION.
7. SEE SECTIONS 115, 120, 125, AND 565 FOR ADDITIONAL INFORMATION.
8. TRUCK TRAFFIC IS BASED ON ANY VEHICLE OVER 8 FEET IN HEIGHT.

OVERHEAD SERVICE DROP CLEARANCE UP TO 400 AMPERES



SIDE VIEW



FRONT VIEW

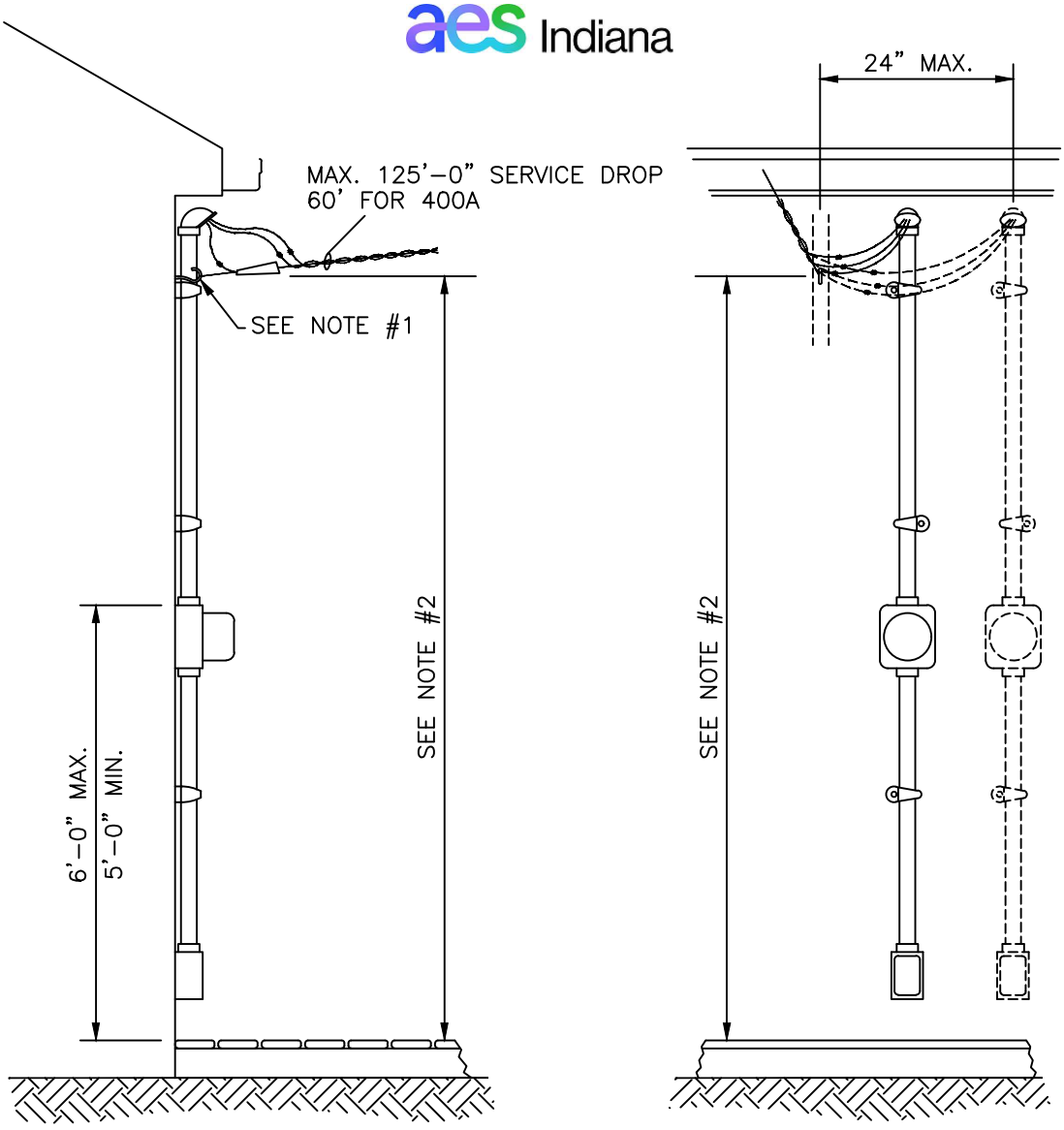
NOTES:

▶ 1. WHERE MORE THAN ONE SERVICE RISER IS INSTALLED, THE SERVICE HEADS SHALL BE NO FURTHER FROM THE SERVICE DROP THAN 24 INCHES WITH SUFFICIENT SERVICE ENTRANCE CONDUCTORS TO REACH THE SERVICE DROP.

QUADRAPLEX OR TRIPLEX SERVICE

REV 6-1-22

GB4-007



SIDE VIEW **FRONT VIEW**

NOTES:

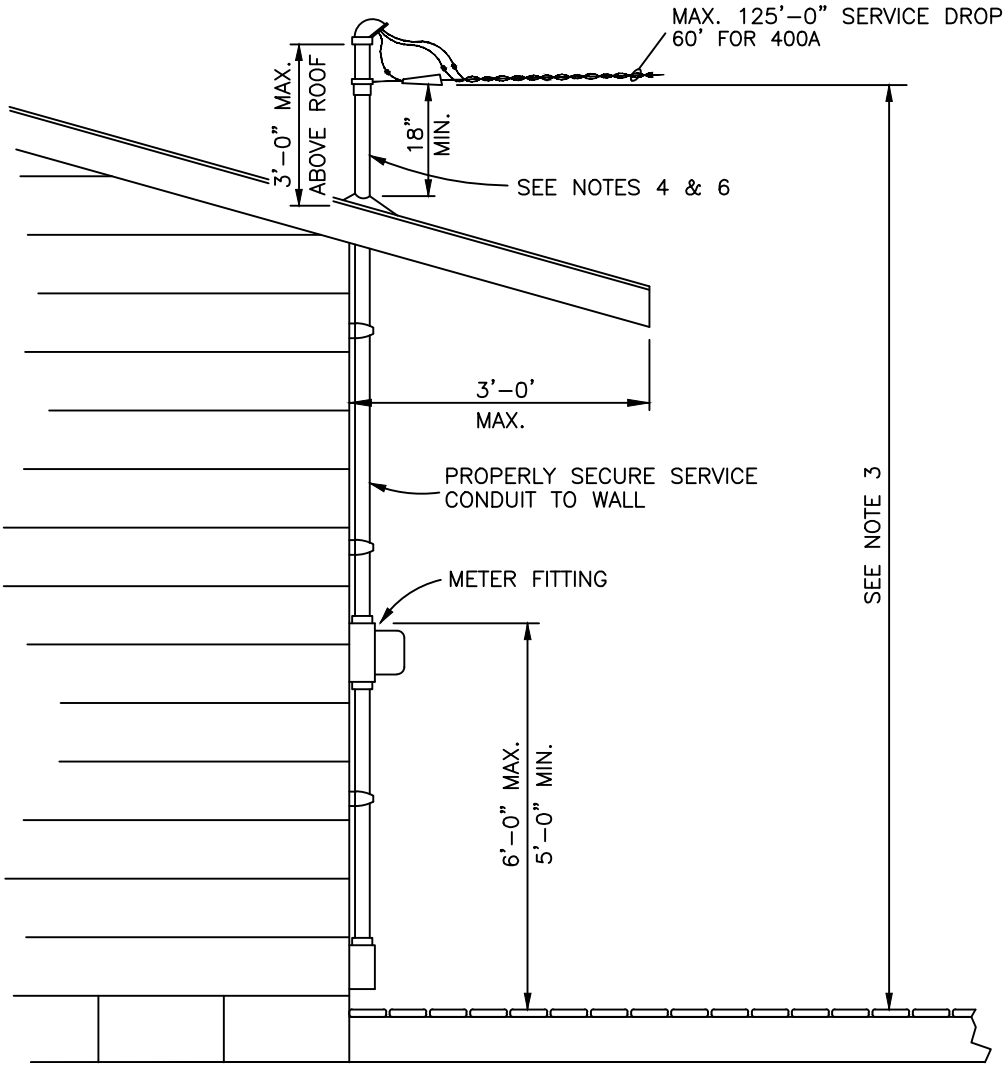
1. CONTRACTOR TO FURNISH AND INSTALL A MINIMUM SIZE 3/8" GALVANIZED LAG SCREW EYE OR EYE BOLT FOR ATTACHMENT OF SERVICE DROP.
2. 10'–0" MINIMUM ABOVE DECK, PATIO, GRADE, OR OTHER AREAS OF PEDESTRIAN TRAFFIC TO THE ATTACHMENT POINT. (SEE ALSO GB4–007)
3. THE SERVICE DROP SHALL NOT MAKE A SMALLER ANGLE THAN 30° WITH THE SIDE OF THE BUILDING.
4. FOR VERTICAL CLEARANCES, SEE DRAWING GB4–005.
5. ▶ WHERE MORE THAN ONE SERVICE RISER IS INSTALLED, THE SERVICE HEADS SHALL BE NO FURTHER FROM THE SERVICE DROP THAN 24 INCHES WITH SUFFICIENT SERVICE ENTRANCE CONDUCTORS TO REACH THE SERVICE DROP.

SERVICE CONNECTION BELOW ROOF 400 A MAXIMUM SERVICE

REV 6–1–22

GB4-010

aes Indiana



NOTES:

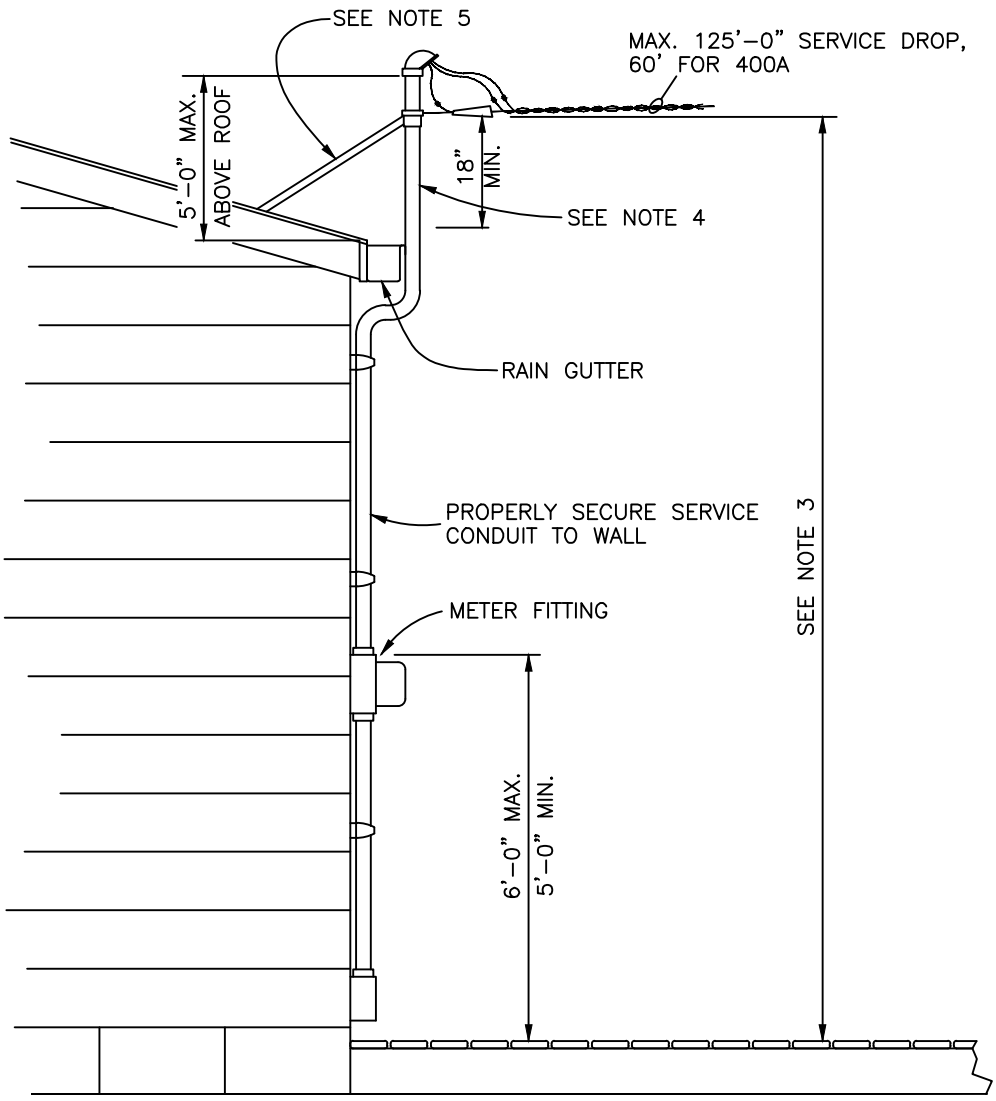
1. SERVICE HEAD SHALL BE LOCATED SO CONNECTION CAN BE MADE FROM A LADDER WITHOUT CLIMBING ON ROOF.
2. NO COUPLINGS OR FITTINGS SHALL BE INSTALLED WITHIN 6'–0" OF SERVICE HEAD.
3. 10'–0" MINIMUM ABOVE DECK, PATIO, GRADE, OR OTHER AREAS OF PEDESTRIAN TRAFFIC TO THE ATTACHMENT POINT. (SEE ALSO GB4–007)
4. CUSTOMERS SERVICE RISER EXTENDING THROUGH ROOF FOR SUPPORT OF SERVICE DROP SHALL BE A MINIMUM OF 2" RIGID GALVANIZED OR INTERMEDIATE METAL CONDUIT.
5. ▶ WHERE MORE THAN ONE SERVICE RISER IS INSTALLED, THE SERVICE HEADS SHALL BE NO FURTHER FROM THE SERVICE DROP THAN 24 INCHES WITH SUFFICIENT SERVICE ENTRANCE CONDUCTORS TO REACH THE SERVICE DROP.
6. ▶ THE SERVICE DROP SHALL NOT MAKE A SMALLER ANGLE THAN 30° WITH THE SIDE OF THE BUILDING.
7. ▶ NOT APPROVED FOR 480V. SERVICES.
8. ▶ FOR VERTICAL CLEARANCES, SEE DRAWING GB4–005.

SERVICE RISER EXTENDING THROUGH ROOF 400 A MAXIMUM SERVICE

REV 12–30–21

GB4-020

aes Indiana



NOTES:

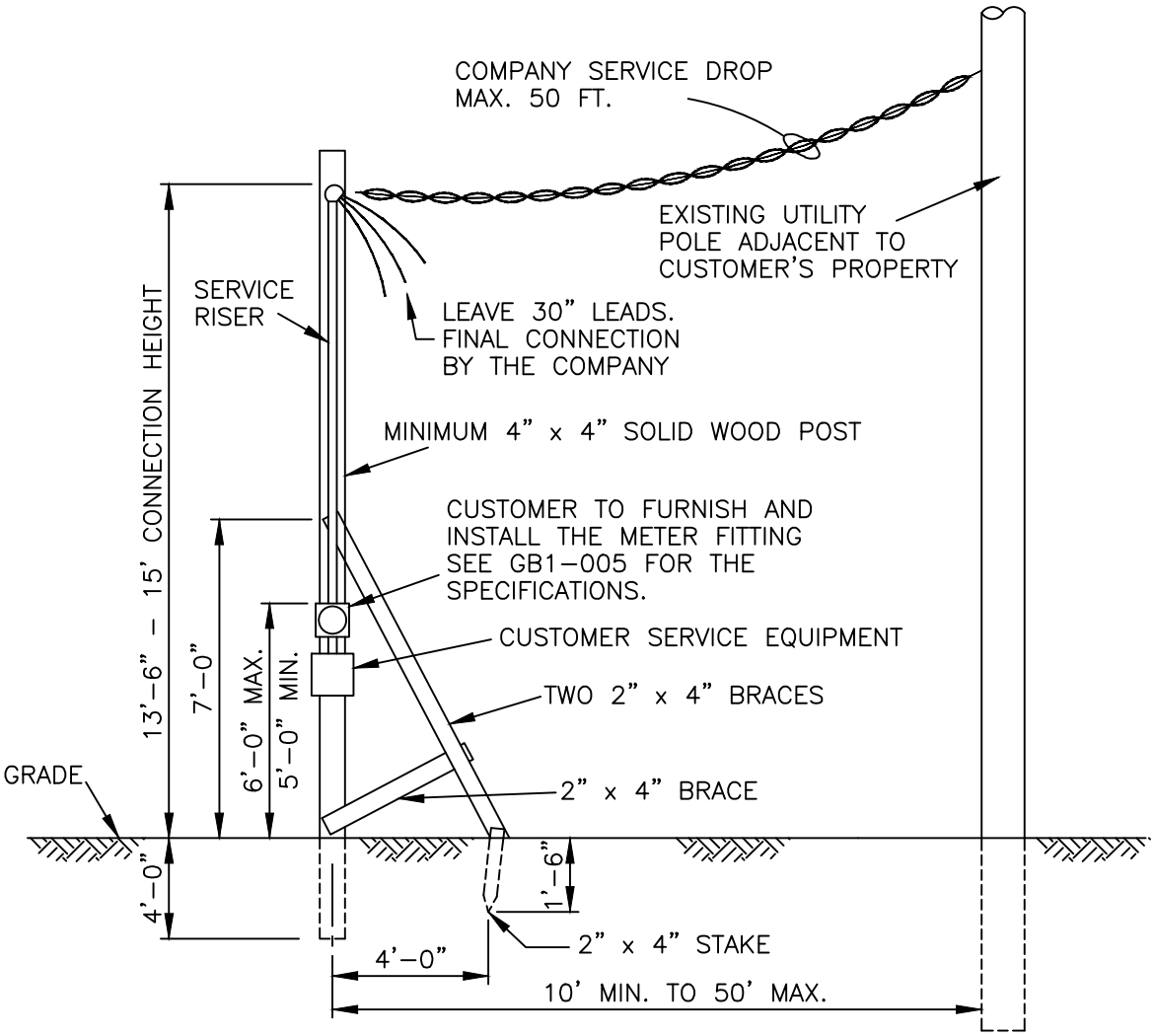
1. SERVICE HEAD SHALL BE LOCATED SO CONNECTION CAN BE MADE FROM A LADDER WITHOUT CLIMBING ON ROOF.
2. NO COUPLINGS OR FITTINGS SHALL BE INSTALLED WITHIN 6'–0" OF SERVICE HEAD.
3. 10'–0" MINIMUM ABOVE DECK, PATIO, GRADE, OR OTHER AREAS OF PEDESTRIAN TRAFFIC TO THE ATTACHMENT POINT. (SEE ALSO GB4–007)
4. CUSTOMERS SERVICE RISER SHALL BE A MINIMUM OF 2" RIGID GALVANIZED, INTERMEDIATE METAL, OR ALUMINUM CONDUIT (3" FOR 400A).
- ▶5. WHERE MORE THAN ONE SERVICE RISER IS INSTALLED, THE SERVICE HEADS SHALL BE NO FURTHER FROM THE SERVICE DROP THAN 24 INCHES WITH SUFFICIENT SERVICE ENTRANCE CONDUCTORS TO REACH THE SERVICE DROP.
- ▶6. 2–RIGID SUPPORTS SECURED TO TWO SEPARATE RAFTERS.
- ▶7. THE SERVICE DROP SHALL NOT MAKE A SMALLER ANGLE THAN 30° WITH THE SIDE OF THE BUILDING.
- ▶8. NOT APPROVED FOR 480V. SERVICES.
- ▶9. FOR VERTICAL CLEARANCES, SEE DRAWING GB4–005.

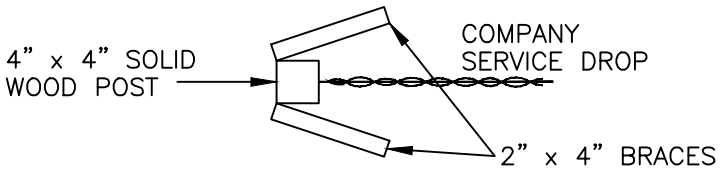
SERVICE RISER EXTENDING ABOVE ROOF 400 A MAXIMUM SERVICE

REV 12–30–21

GB4-030

aes Indiana





TOP VIEW

NOTES:

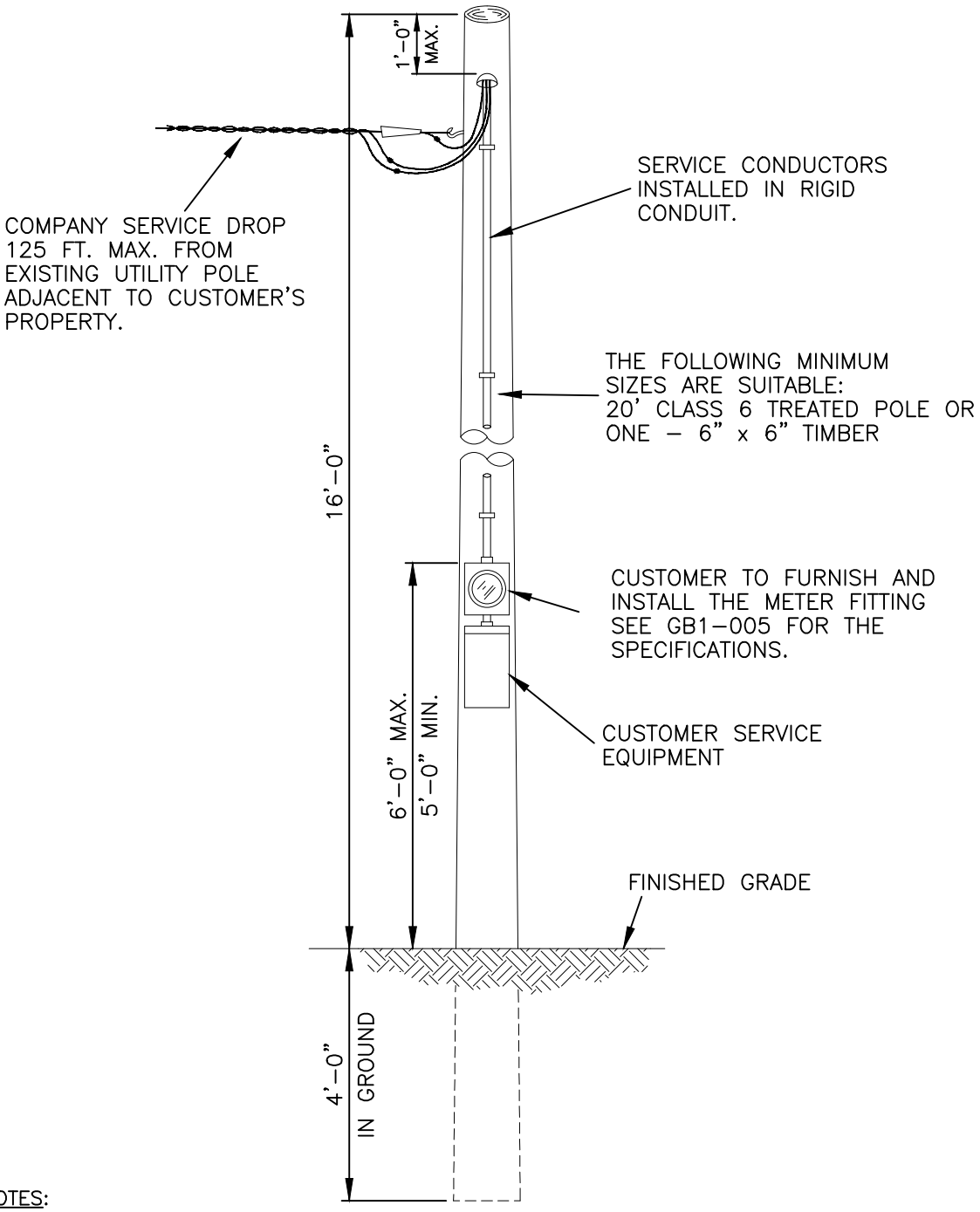
1. ENTIRE STRUCTURE TO BE CONSTRUCTED AND INSTALLED BY THE CONTRACTOR.
2. THE USE OF THIS STRUCTURE IS NOT PERMITTED IF SERVICE WIRES PASS OVER PUBLIC STREETS, ALLEYS, ROADS, AND DRIVEWAYS.
3. TEMPORARY CONSTRUCTION SERVICE POLE MUST BE A MINIMUM OF 10 FT. FROM THE COMPANY'S POLE AND MUST BE POSITIONED TO ALLOW THE SERVICE DROP TO CLEAR THE COMMUNICATION CABLES BY AT LEAST 40 INCHES.
4. ALTERNATE METHODS MAY BE USED WITH PERMISSION OF SERVICE CONNECTION.
5. FOR DEFINITION OF "TEMPORARY", SEE SECTION 107.
6. ▶ FOR VERTICAL CLEARANCES, SEE DRAWING GB4-005.

TEMPORARY OVERHEAD CONSTRUCTION SERVICE 120/240 VOLT, 1 PHASE, 3 WIRE 225 A MAXIMUM SERVICE

REV 11-28-16

GB4-040

aes Indiana



NOTES:

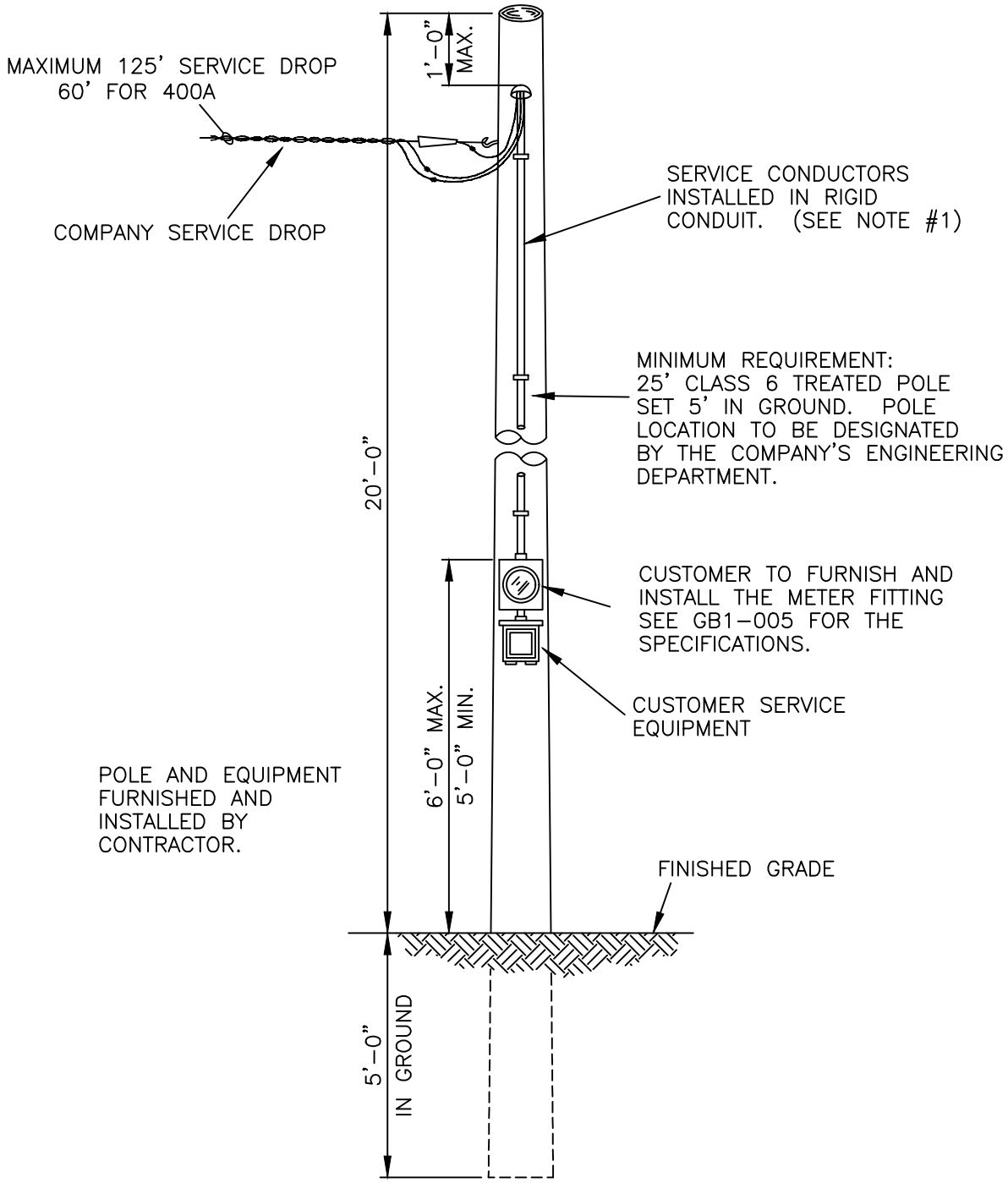
1. POLE AND EQUIPMENT FURNISHED AND INSTALLED BY CONTRACTOR.
2. TEMPORARY CONSTRUCTION SERVICE POLE MUST BE A MINIMUM OF 10 FT. FROM THE COMPANY POLE AND MUST BE POSITIONED TO ALLOW THE SERVICE DROP TO CLEAR THE COMMUNICATION CABLES BY AT LEAST 40 INCHES.
3. FOR DEFINITION OF "TEMPORARY", SEE SECTION 107.
4. SEE SECTION 220A2d FOR THE DEFINITION OF RIGID CONDUIT.
5. ▶ FOR VERTICAL CLEARANCES, SEE DRAWING GB4–005.

TEMPORARY POLE METER INSTALLATION FOR CONSTRUCTION 120/240 VOLT, 1 PHASE 3 WIRE 225 A MAXIMUM SERVICE

REV 11–28–16

GB4-050

aes Indiana



NOTES:

1. SEE SECTION 220A2d FOR THE DEFINITION OF RIGID CONDUIT.
2. ▶ FOR VERTICAL CLEARANCES, SEE DRAWING GB4-005.

PERMANENT POLE METER INSTALLATION FOR ONE SERVICE 120/240 VOLT, 1 PHASE, 3 WIRE 400 A MAXIMUM SERVICE

REV 11-28-16

GB4-060

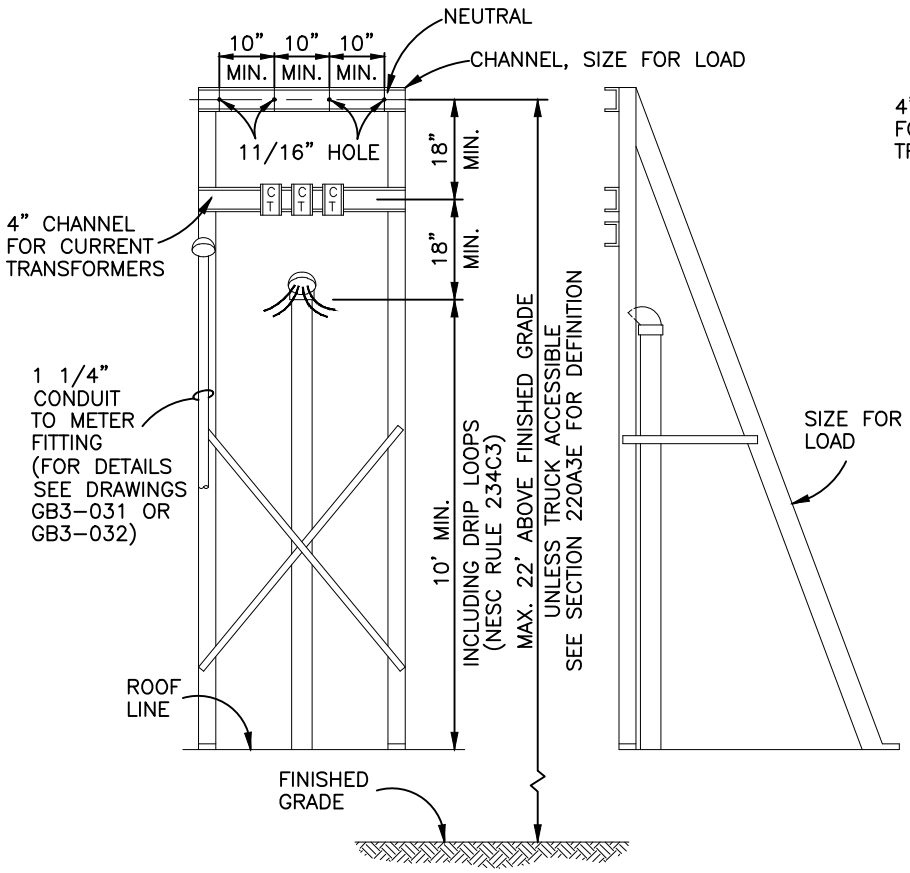
TYPICAL ROOF STRUCTURES FOR SERVICE DROP AND METERING TRANSFORMERS FOR 480 VOLT SERVICES

REV 11-3-09

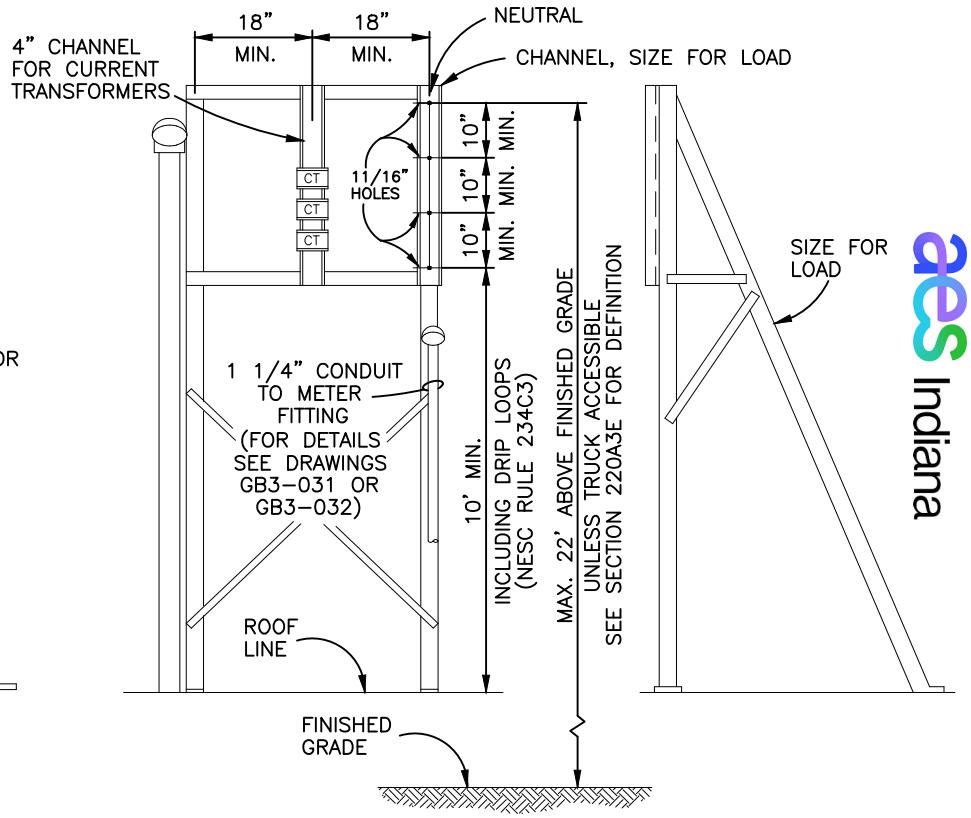
GB4-070

NOTE:

THE COMPLETE INSTALLATION SHALL BE SUBJECT TO APPROVAL OF THE COMPANY'S ENGINEERING DEPARTMENT.



HORIZONTAL MOUNTING



VERTICAL MOUNTING

aes Indiana

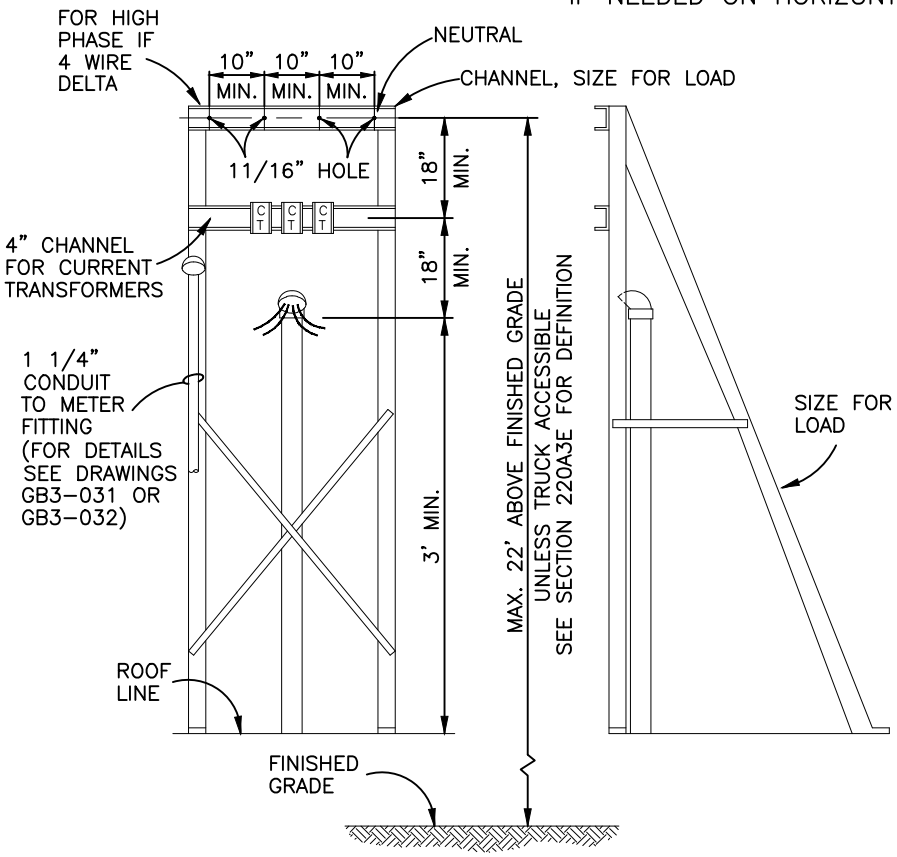
TYPICAL ROOF STRUCTURES FOR SERVICE DROP AND METERING TRANSFORMERS FOR 300 VOLT SERVICES

REV NEW 6-23-09

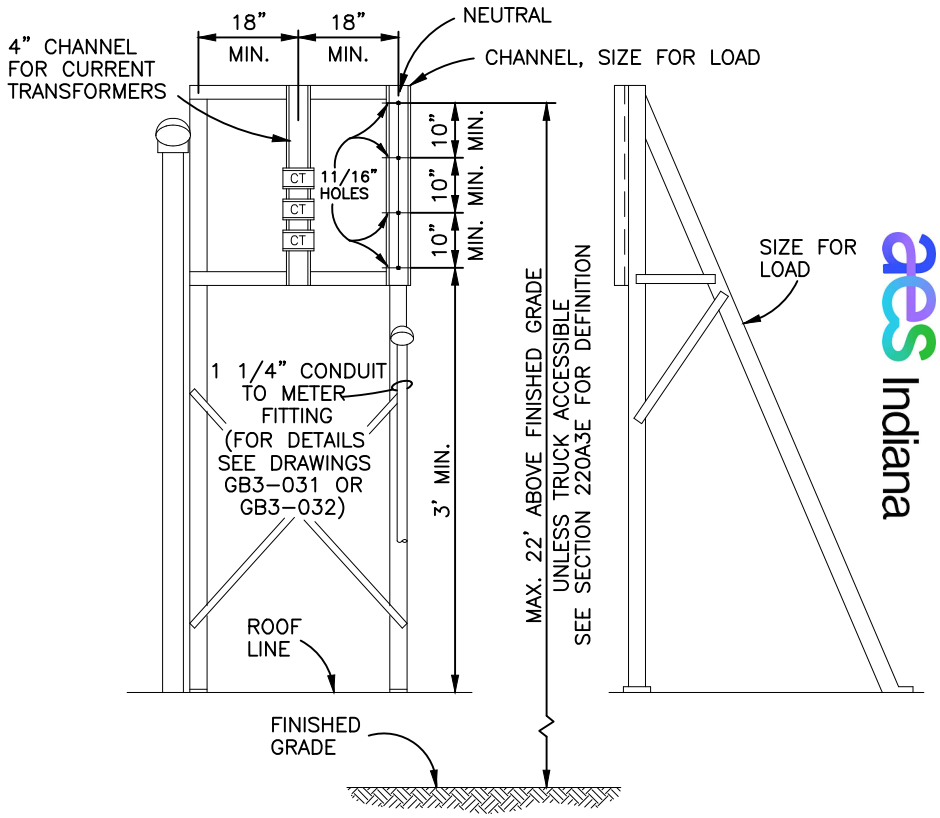
GB4-075

NOTES:

1. THE COMPLETE INSTALLATION SHALL BE SUBJECT TO APPROVAL OF THE COMPANY'S ENGINEERING DEPARTMENT.
2. THE NEUTRAL AND HIGH PHASE MAY BE REVERSED IF NEEDED ON HORIZONTAL INSTALLATIONS ONLY.



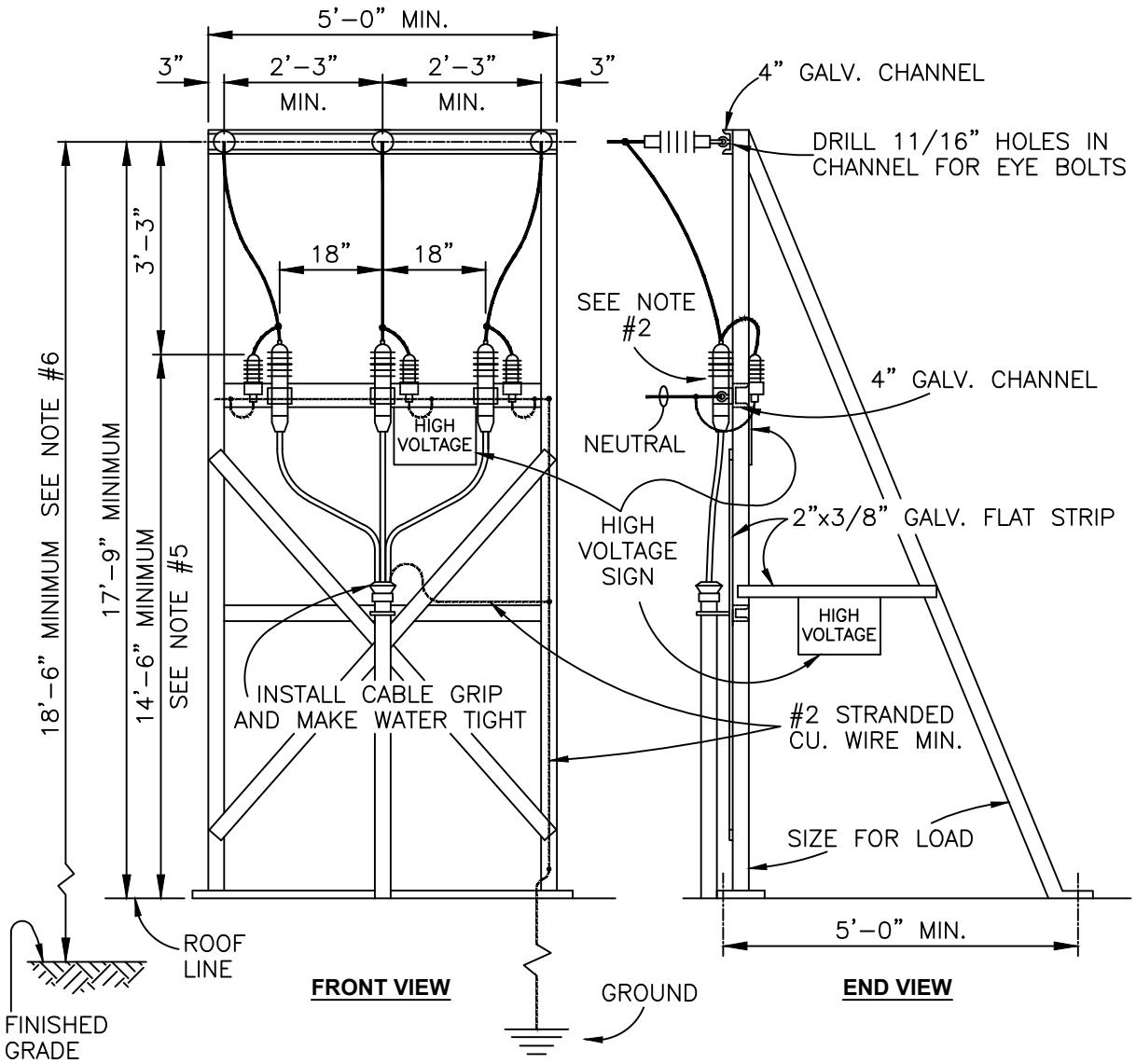
HORIZONTAL MOUNTING



VERTICAL MOUNTING

aes Indiana

aes Indiana



NOTES:

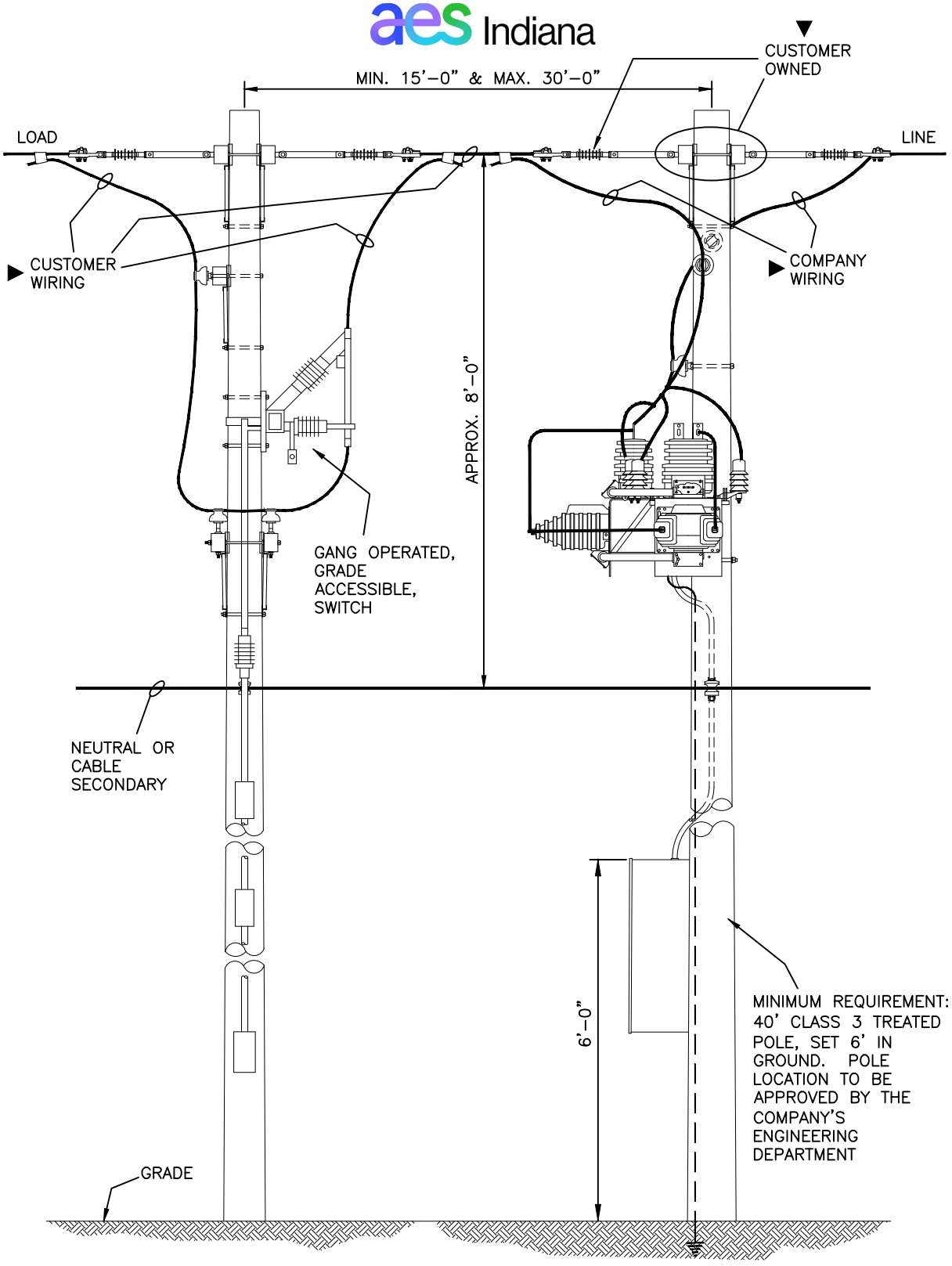
1. DIMENSIONS FOR SPACING OF PHASES ARE FOR LINES LEAVING STRUCTURES AT 90 . FOR CONTACTS AT OTHER ANGLES, CHANGE SPACING SO MINIMUM OF 18" WILL BE MAINTAINED BETWEEN CONDUCTORS.
2. COMPANY WILL FURNISH ONLY DEAD END CLAMPS, INSULATORS, ARRESTERS AND SIGN.
3. THE COMPLETE INSTALLATION SHALL BE SUBJECT TO APPROVAL BY THE COMPANY'S ENGINEERING DEPARTMENT.
4. SEE SECTION 400 FOR ADDITIONAL INFORMATION.
5. 14'–6" SHALL BE MAINTAINED FROM THE ROOF LINE TO THE LOWEST LIVE PART, DRIP LOOP, JUMPER, OR SERVICE DROP.
6. 18'–6" MINIMUM FROM GRADE TO THE LOW POINT OF THE SAG OVER STREETS, DRIVES AND PARKING LOTS.
7. SHALL BE TRUCK ACCESSIBLE, SEE SECTION 220A3e FOR DEFINITION.

ROOF STRUCTURE FOR MAXIMUM 13.2 KV PRIMARY SERVICE SINGLE CONDUCTOR CABLE

REV 5–5–09

GB4-080

aes Indiana



NOTES:

1. SEE SECTION 400 FOR ADDITIONAL INFORMATION.
2. THE COMPANY WILL FURNISH ONLY THE DEAD END CLAMPS, INSULATORS, METERING EQUIPMENT AND METER WIRING.
3. THE POLES AND CUSTOMER EQUIPMENT SHALL BE INSTALLED AND MAINTAINED BY THE CUSTOMER.
4. THE COMPLETE INSTALLATION SHALL BE SUBJECT TO APPROVAL OF THE COMPANY'S ENGINEERING DEPARTMENT.
5. THE PRIMARY METER INSTALLATION SHALL BE TRUCK ACCESSIBLE, SEE SECTION 220A3e FOR THE DEFINITION.
6. THE SERVICE DISCONNECTING MEANS AND POLE WILL NOT BE REQUIRED IF A STANDARD CONTRACT RIDER NUMBER 4 IS UTILIZED.

PRIMARY METER AND SERVICE DISCONNECTING MEANS

REV 11–17–15

GB4-090

GB5 SERIES OF DRAWINGS

(GENERALLY COVERS SERVICE LATERALS AND SERVICE POINTS)

aes Indiana

In cases where a customer is required by AES Indiana or chooses to install conduit or open the trench for AES Indiana cable installation, it is preferred by AES Indiana that the customer hire a trenching contractor approved by AES Indiana. The following is a list of approved trenching contractors:

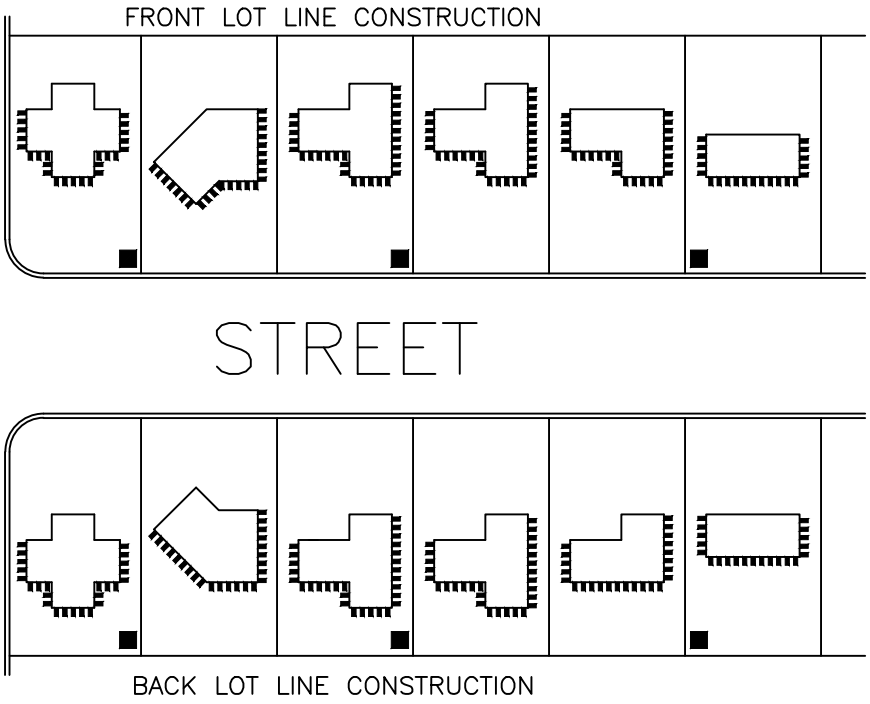
Contractor	Office Phone	Fax Number	Contact
AK&M Trenching 6902 W. Range Rd. Boggstown, IN 46110	(317) 729-6060	(317) 729-5584	Tony Mohr
JAM, Excavating Services, 3120 W. Morris St. Indianapolis, IN. 46241	(317) 691-4086		Jennifer Marlett Dillion Douthitt
Garver Utilities Service 824 Baronne St. Lebanon, IN 46052	(765) 482-6209	(765) 482-6209	Randy Moore
Greenwald Enterprises 7637 Hayworth Rd. Indianapolis, IN 46221	(317) 856-8105	(317) 856-4557	Doug Greenwald Joe Greenwald Josh Sloan
Robinson Trenching 12368 Southeastern Ave. Indianapolis, IN 46259	(317) 862-3929	(317) 862-9319	Ed Robinson Jake Henderson James Layne Matt Robinson Scott Robinson
Stover Construction 1116 E. US-52 Morristown, IN 46161	(317) 557-4061	(765) 763-7580	David Stover Crystal Stover
Sub-Surface of Indiana 7225 W. 700 South Morgantown, IN 46160	(812) 597-4195	(812) 597-4196	Jeremy Akers – West Todd Larson Gary Fox - East
Meade Inc. 3150 W. Morris St Indianapolis, IN 46241 ***Lighting Work***, (See Note 3)	(317) 780-0322	(317) 780-0366	Grant Williams Nick Shelburn

NOTES:

1. Customer provided trenches shall meet the criteria required in Section 220A2.
2. Customer provided trench and conduit shall be inspected by the AES Indiana representative that marked the trench route with you for proper depth and installation prior to backfilling the trench. Corrections due to improper installation shall be the responsibility and expense of the customer.
3. For AES Indiana lighting work only, not for general trenching work.

APPROVED TRENCHING CONTRACTORS

aes Indiana



■ COMPANY SERVICE FACILITIES

▪▪▪▪▪▪▪▪▪▪▪▪ METER FITTING SHALL BE LOCATED IN THIS AREA

NOTES:

1. THE ABOVE DRAWING SHOWS VARIOUS SHAPED HOUSES AND COMPANY FACILITIES WITH BOTH FRONT AND BACK LOT LINE CONSTRUCTION.
2. ▶ THE SERVICE INSTALLATION TEAM WILL LOCATE ALL SINGLE AND TWO FAMILY RESIDENTIAL SERVICES 400 AMPERES AND BELOW. SERVICES OVER 400 AMPERES WILL BE LOCATED BY THE ENGINEERING DEPARTMENT.
3. THE COMPANY WILL NOT INSTALL SERVICE CABLE TO A METER FITTING WHICH IS NOT IN PRESCRIBED AREA AS INDICATED ABOVE.
4. SEE DRAWING GB5–020 FOR INSTALLATION REQUIREMENTS.
5. SEE SECTION 565 FOR UNACCEPTABLE METER LOCATIONS.

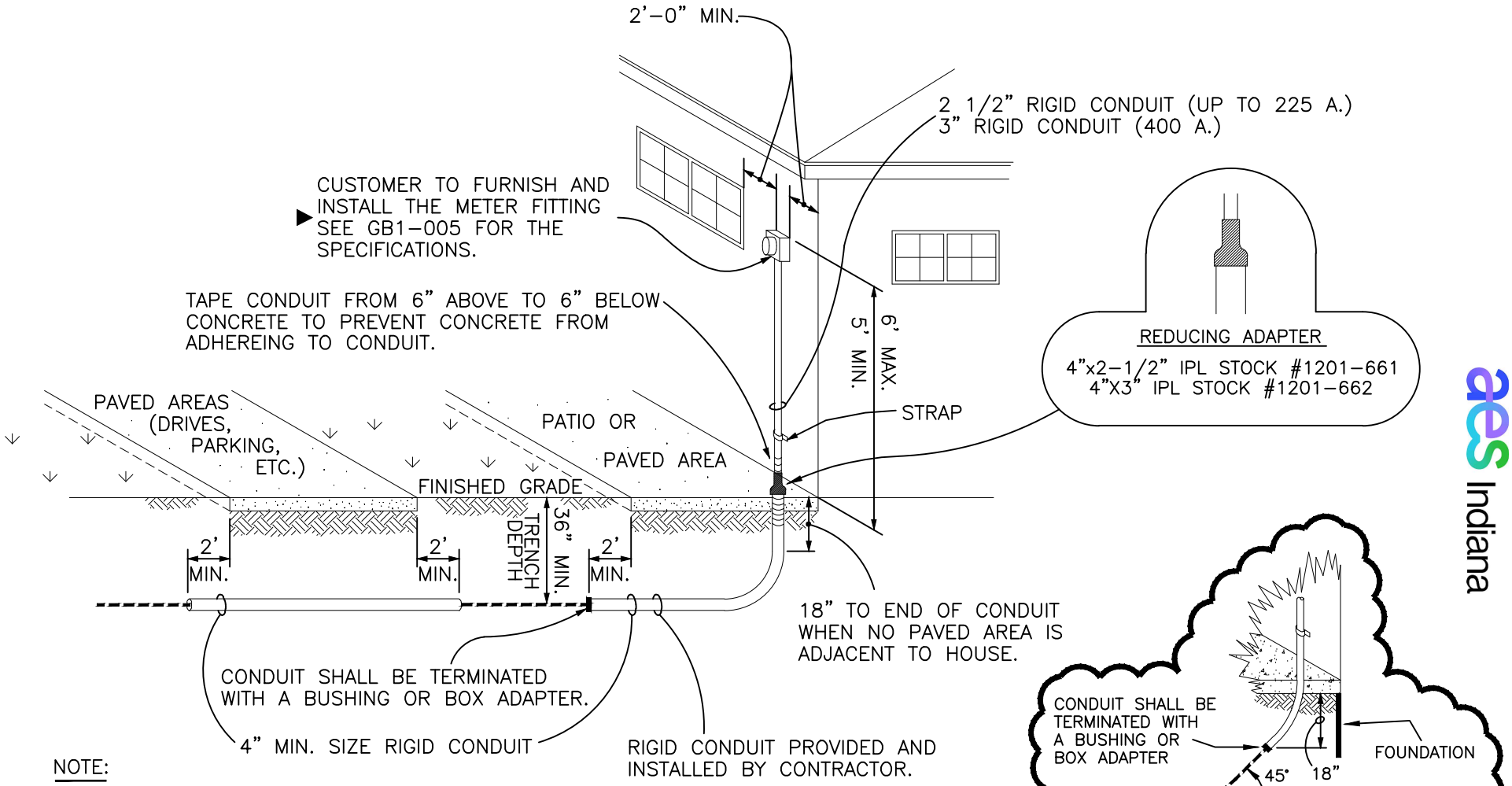
RESIDENTIAL METER LOCATIONS FOR UNDERGROUND SERVICE

REV 5–28–08

GB5-010

REV 10-10-11

UNDERGROUND RESIDENTIAL SERVICE
400 A MAXIMUM SERVICE



NOTE:

1. SEE DRAWING GB5-010 FOR POINT OF TERMINATION ON DWELLING
2. IF NONMETALLIC CONDUIT, GRAY SCHEDULE 80 OR BETTER IS TO BE USED, ABOVE GRADE.
3. ALL NONMETALLIC BURIED CONDUIT SHALL BE GRAY
4. SEE SECTION 220A2d FOR THE DEFINITION OF RIGID CONDUIT.

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GB5-020

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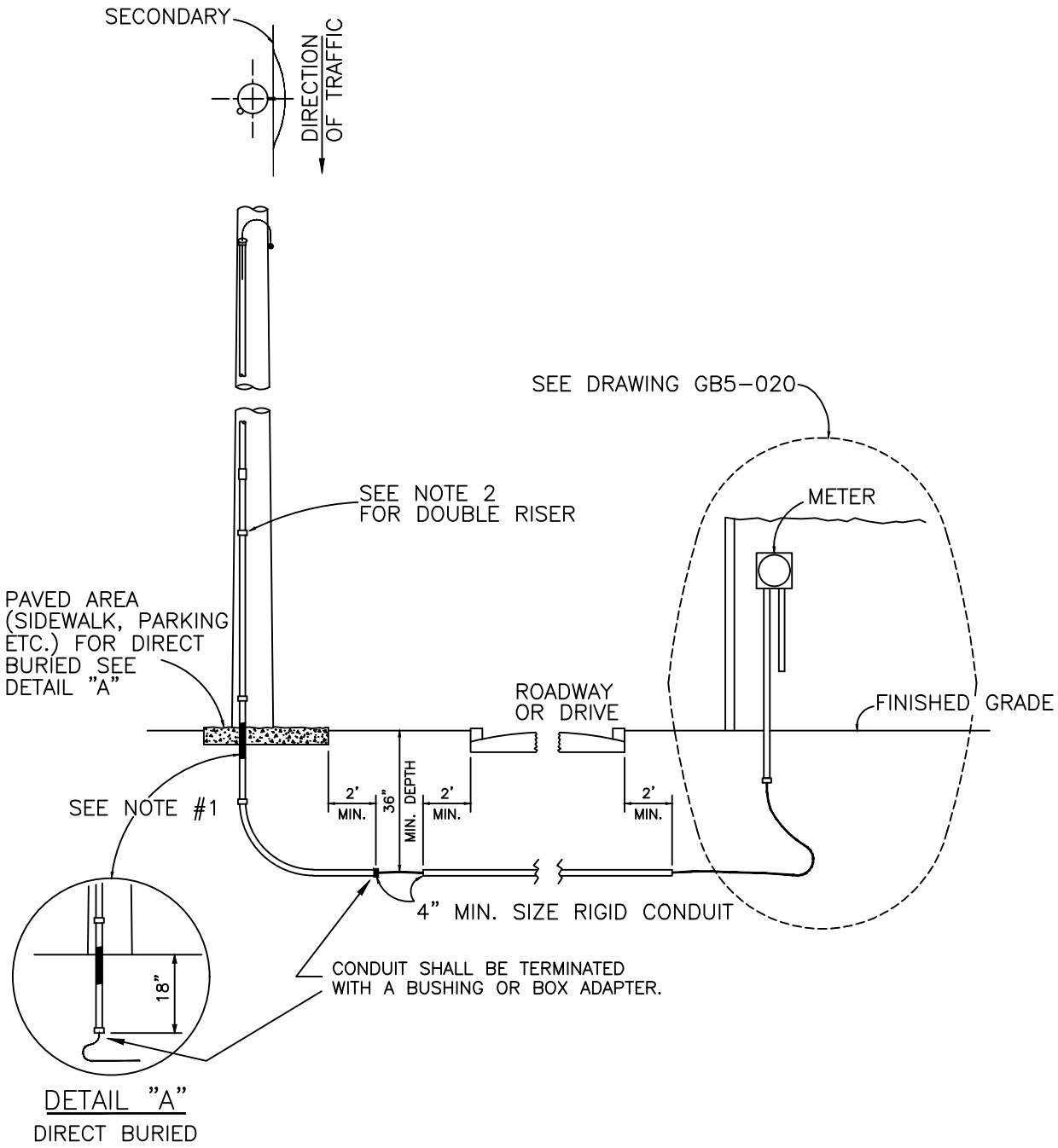


DETAIL "A"
DIRECT BURIED

NOTES:

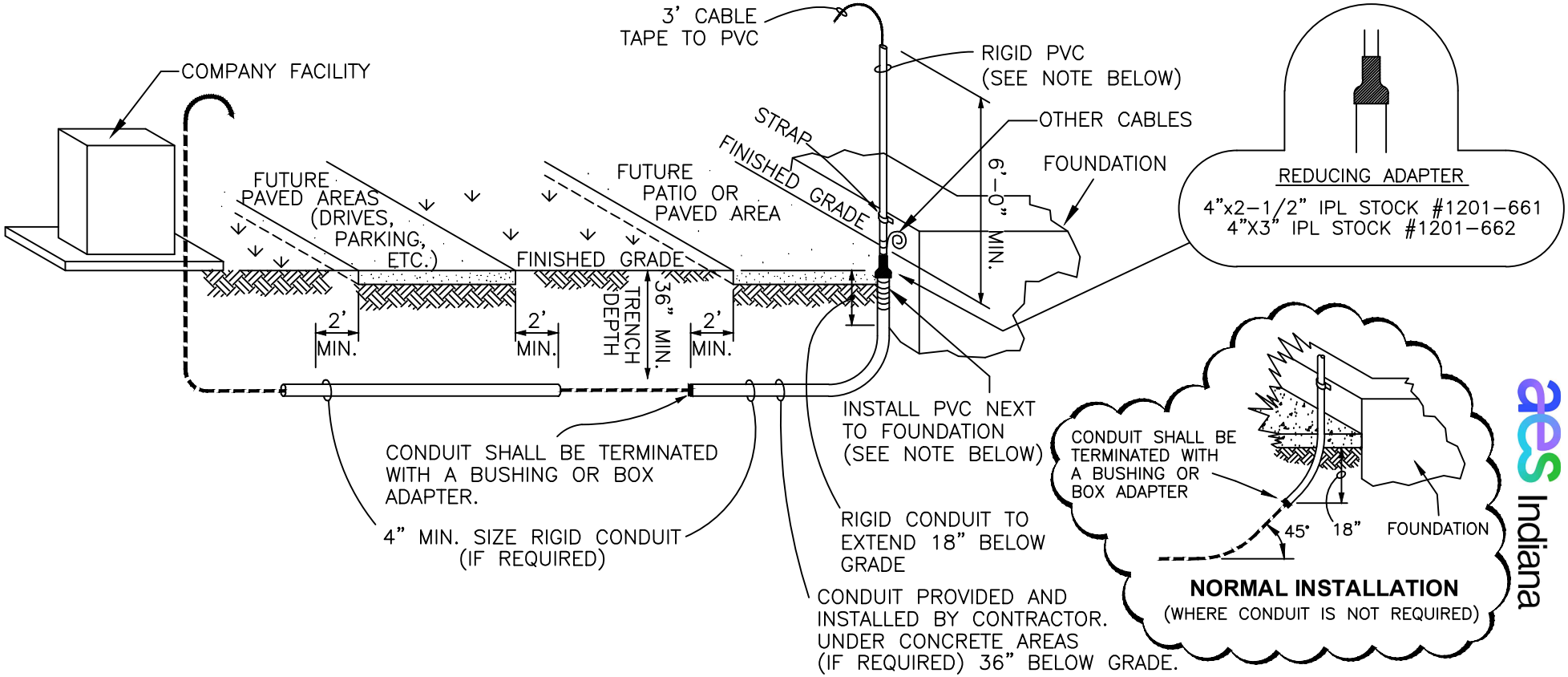
1. TAPE CONDUIT FROM ABOVE GROUND LINE TO 6" BELOW TO PREVENT CORROSION, IF USING METALIC CONDUIT.
2. SEE DRAWING GB7-010 FOR RISER ATTACHMENT TO POLE.
3. ALL NONMETALLIC BURIED CONDUIT SHALL BE GRAY
4. ▶ SEE SECTION 220A2d FOR THE DEFINITION OF RIGID CONDUIT.

SECONDARY RISERS FOR SINGLE AND THREE PHASE SERVICES

REV 11-30-09

NEW RESIDENTIAL SERVICE CABLE INSTALLATION TO FOUNDATION

GB5-040



ALL NONMETALLIC BURIED CONDUIT SHALL BE GRAY.

▶ SEE SECTION 220A2d FOR THE DEFINITION OF RIGID CONDUIT.

SERVICE CABLE INSTALLATION TO THE FOUNDATION

1. THE CONTRACTOR SHALL MARK THE SERVICE LOCATION ON THE FOUNDATION, WITH RED PAINT, IN AN APPROVED LOCATION, SEE DRAWING NUMBER GB5-010.
2. THE CONTRACTOR SHALL PROVIDE AN EIGHT FOOT LENGTH OF GRAY SCHEDULE 80 PVC CONDUIT AT MARKED LOCATION.
3. THE CONTRACTOR SHALL CALL THE COMPANY, AT (317) 261-8222, TO REQUEST THE INSTALLATION OF CABLE TO THE MARKED LOCATION. AFTER INSTALLATION, IF THE LOCATION CHANGES OR THE CABLE IS DAMAGED, THE CONTRACTOR IS RESPONSIBLE FOR THE COSTS OF RELOCATION OR REPAIR.
4. THE CONTRACTOR SHALL ROLL INTO A COIL ALL OTHER CABLES AND SECURE TO OUTSIDE OF CONDUIT ABOVE GRADE.

WHEN CONSTRUCTION HAS PROGRESSED TO THE POINT THAT THE METER BASE MAY BE INSTALLED

5. THE CONTRACTOR SHALL INSTALL THE METER BASE, CONDUIT, AND THE COMPANY'S SERVICE CABLE INTO THE METER FITTING.
6. THE CONTRACTOR SHALL CALL THE COMPANY, AT (317) 261-8222, TO REQUEST PERMANENT SERVICE.
7. THE CONNECTION OF THE COMPANY'S SERVICE CABLE SHALL BE MADE BY THE COMPANY IN THE METER FITTING.

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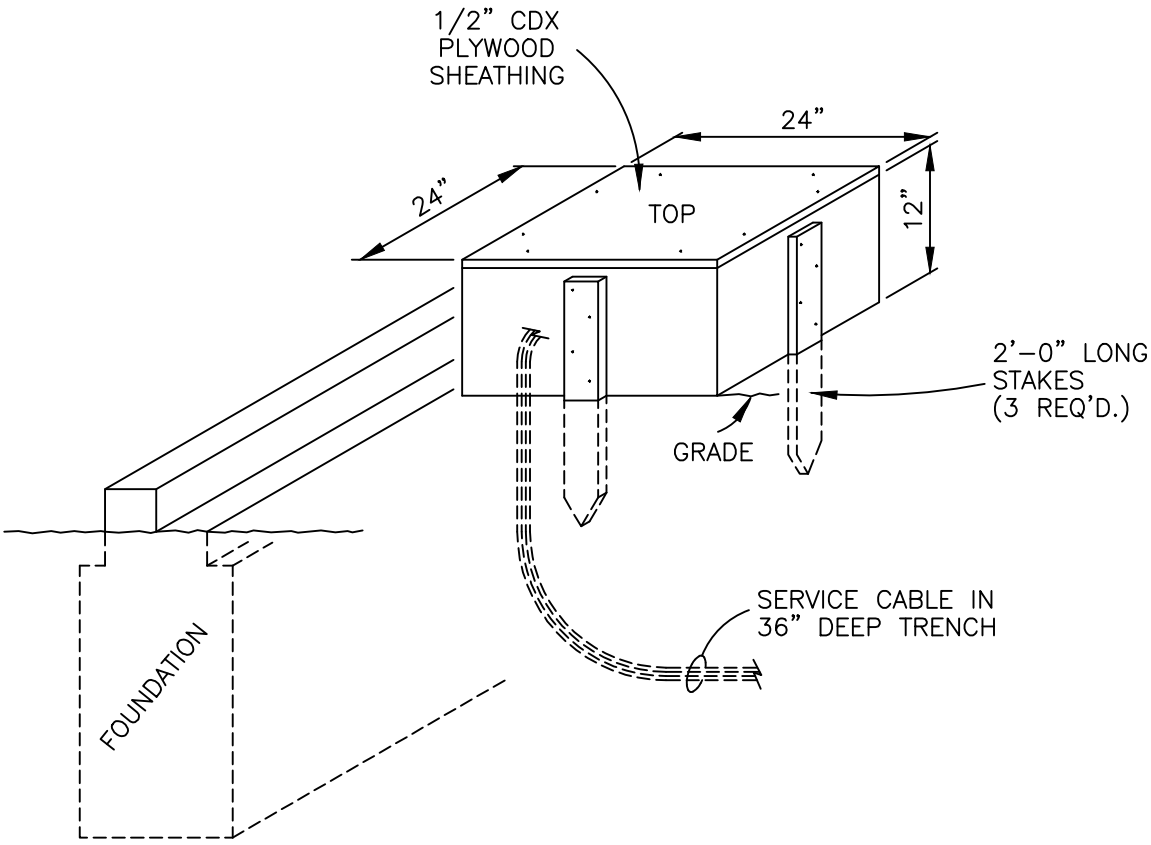


PRELIMINARY INSTALLATION
INSTRUCTIONS FOR BUILDER

1. NO BOTTOM REQUIRED.
2. PLACE BOX NEXT TO FOUNDATION–DO NOT INSTALL TOP.
3. INSTALL STAKES.
4. GRADE TO WITHIN ±4" OF FINAL GRADE–CLEAR DEBRIS.

COMPANY

1. TRENCH & INSTALL CABLE.
2. LOOP 7 FT. OF CABLE IN BOX.
3. ATTACH TOP TO BOX.

FINAL INSTALLATION
ELECTRICAL CONTRACTOR

1. REMOVE LID AND BOX.
2. INSTALL CABLE IN CONDUIT AS REQUIRED AND FASTEN TO WALL.
3. INSTALL METER CABINET ON CONDUIT AND FASTEN TO WALL.
4. INSPECT SERVICE AND TAG.
5. ▶ CALL (317) 261–8222 TO REQUEST SERVICE.

COMPANY

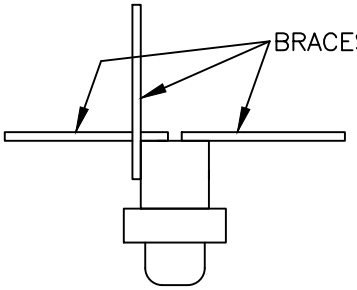
1. MAKE CONNECTION IN METER BASE.
2. INSTALL METER AND ENERGIZE SERVICE.

CUSTOMER TO BE RESPONSIBLE FOR PROTECTION OF SERVICE EQUIPMENT.

NEW RESIDENTIAL SERVICE CABLE INSTALLATION TO FOUNDATION OPTIONAL METHOD

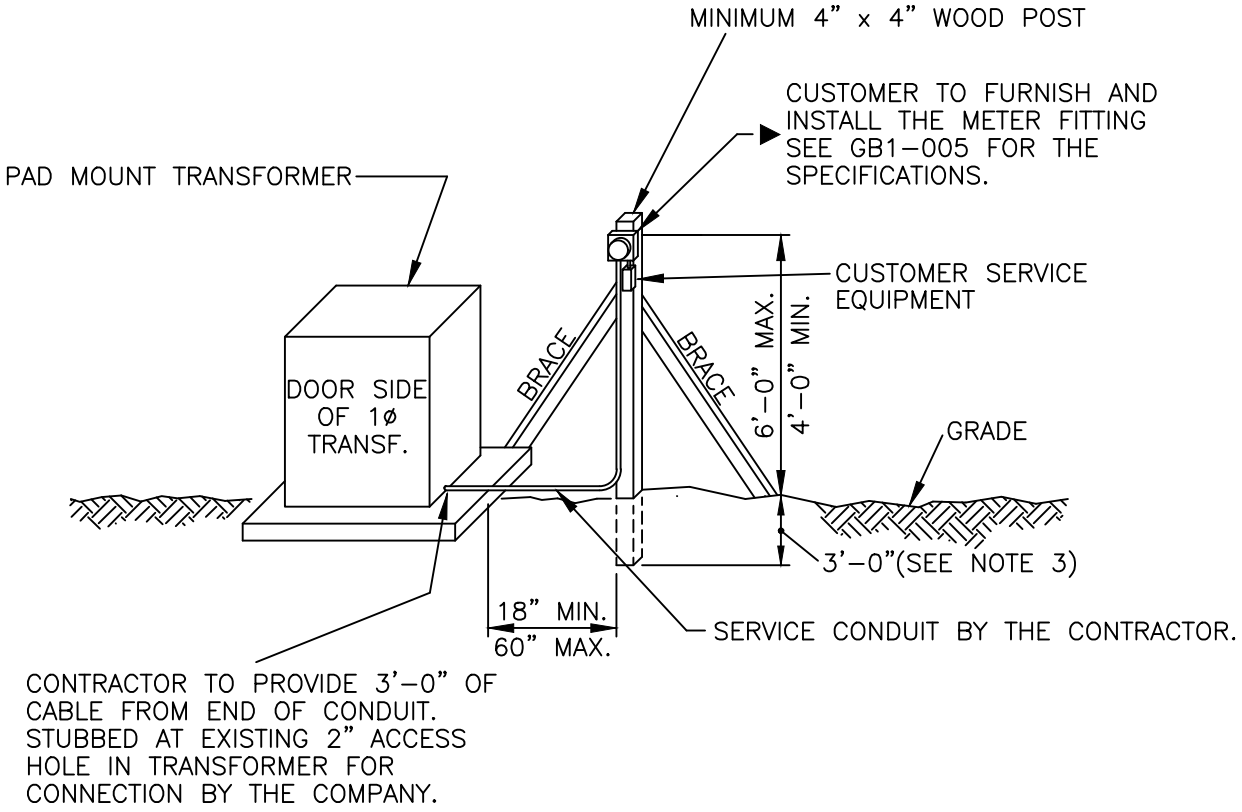
REV 5–15–96

GB5-050



BRACING DETAIL

PLAN VIEW



1Ø PAD

NOTES

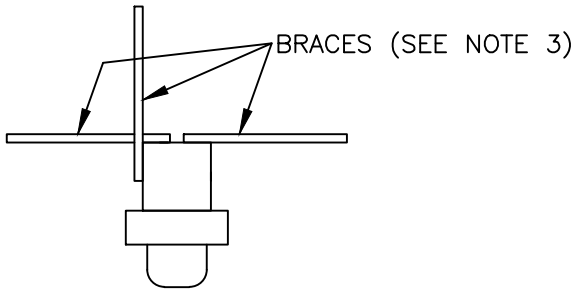
1. THE COMPANY WILL COMPLETE CABLE INSTALLATION AND CONNECT IN 1ø PMT.
2. TEMPORARY SERVICE SHOULD NOT BE IN PROPOSED PERMANENT SERVICE ROUTE.
3. 4" X 4" POST MUST BE SET 3' DEEP IN SOLID GROUND OR BRACING WILL BE REQUIRED.
4. FOR DEFINITION OF "TEMPORARY", SEE SECTION 107.

TEMPORARY UNDERGROUND CONSTRUCTION
120/240 VOLT, 1 PHASE, 3 WIRE
225 A MAXIMUM SERVICE

REV 10-10-11

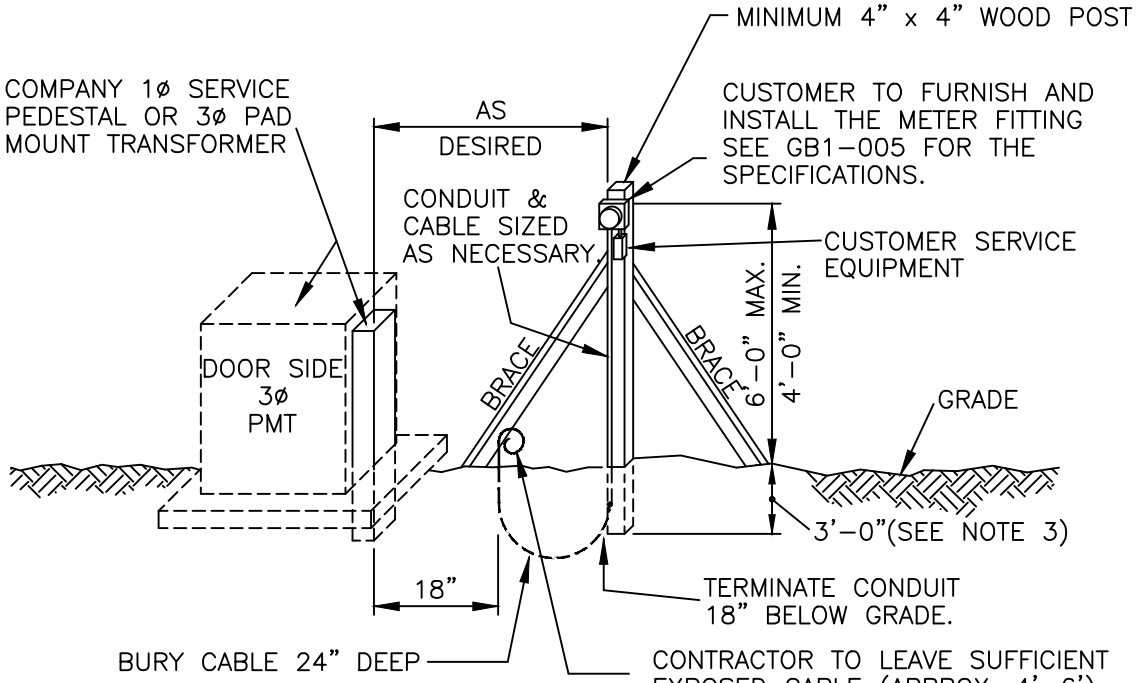
GB5-060

aes Indiana



BRACING DETAIL

PLAN VIEW



3Ø PAD OR 1Ø PEDESTAL

NOTES

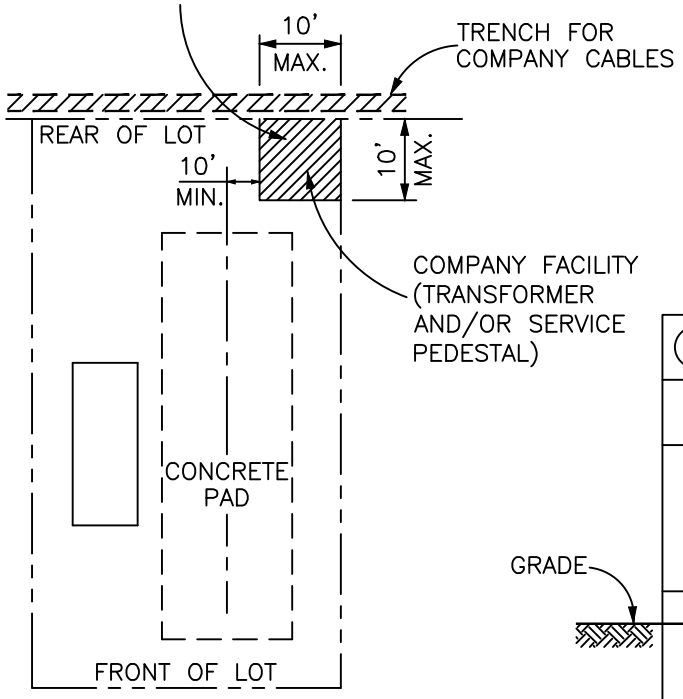
1. THE COMPANY WILL COMPLETE CABLE INSTALLATION AND CONNECT IN SERVICE PEDESTAL OR 3ø PMT.
2. TEMPORARY SERVICE SHOULD NOT BE IN PROPOSED PERMANENT SERVICE ROUTE.
3. 4" X 4" POST MUST BE SET 3' DEEP IN SOLID GROUND OR BRACING WILL BE REQUIRED.
4. FOR DEFINITION OF "TEMPORARY", SEE SECTION 107.

TEMPORARY UNDERGROUND CONSTRUCTION
120/240 VOLT, 1 PHASE, 3 WIRE
120/208 VOLT, 3 PHASE, 4 WIRE
225 A MAXIMUM SERVICE

120/208 VOLT, 1 PHASE, 3 WIRE
125 A MAXIMUM SERVICE

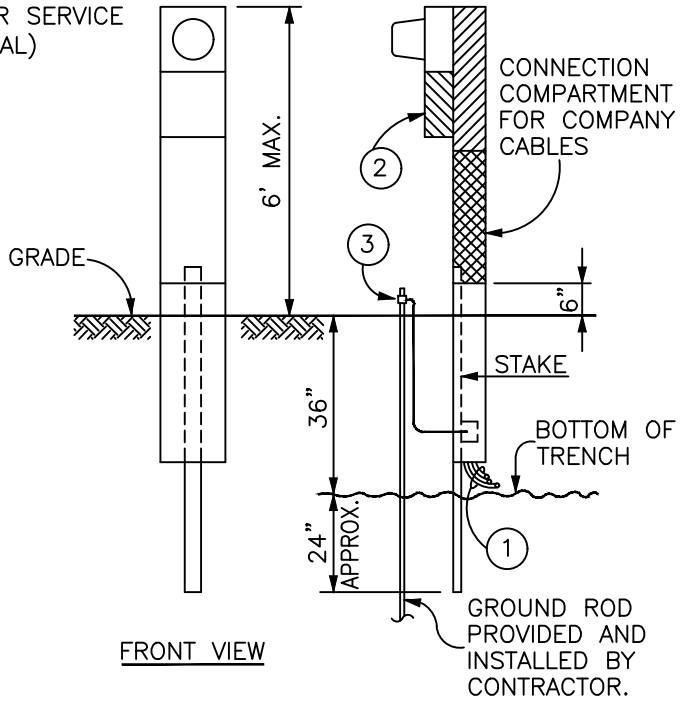
aes Indiana

SINGLE METER PEDESTAL, FACE METER TOWARDS FRONT OF LOT. THE DEVELOPER IS RESPONSIBLE FOR LOCATING METER PEDESTAL IN CROSS-HATCHED AREA TO MEET THE REQUIREMENTS AS SHOWN BELOW.



PLAN VIEW

DANGER: DO NOT DRILL OR TAP HOLES IN PEDESTAL.



FRONT VIEW

SIDE VIEW

NOTES:

1. COMPANY SERVICE CABLE, 3 WIRE, 120/240V.
2. COMPARTMENT FOR CUSTOMER'S SERVICE EQUIPMENT.
3. THE CONTRACTOR SHALL GROUND THE SERVICE FACILITIES. THE CONTRACTOR SHALL DRIVE THE GROUND ROD(S) ON METER SIDE OF PEDESTAL TO AVOID COMPANY CABLES. THE COMPANY WILL CONNECT THE GROUNDING ELECTRODE CONDUCTOR TO THE NEUTRAL AND EQUIPMENT GROUND IN CONNECTION COMPARTMENT.
4. THE METER PEDESTAL TO BE SUPPLIED BY CUSTOMER.
5. THIS INSTALLATION IS FOR MOBILE HOME PARKS AND MOBILE HOMES THAT ARE NOT APPROVED FOR THE INSTALLATION OF A METER ON THE SIDE.
6. ▶ WHERE NEEDED, THE CUSTOMER MAY INSTALL BLACK OR BLACK WITH A RED STRIPE 2-1/2" HDPE CONDUIT FOR THE COMPANY SERVICE CABLE. MAXIMUM LENGTH SHALL BE LIMITED TO 100 FEET AND NO MORE THAN 270 DEGREE OF BENDS.

SINGLE METER PEDESTAL INSTALLATION FOR MOBILE HOME 120/240 VOLT, 1 PHASE, 3 WIRE 225 A MAXIMUM SERVICE

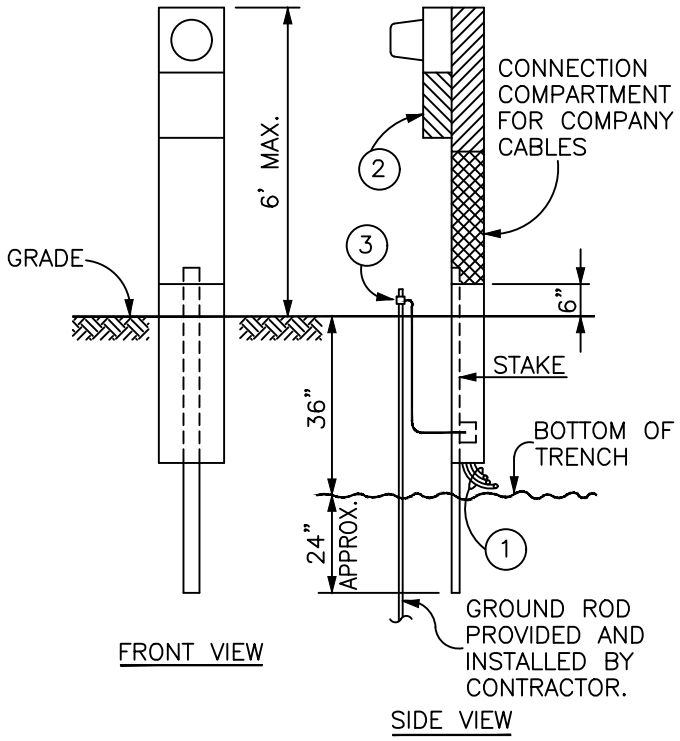
REV 11-20-21

▶ = REVISION MARK

GB5-080

aes Indiana

DANGER: DO NOT DRILL OR TAP HOLES IN PEDESTAL.



NOTES:

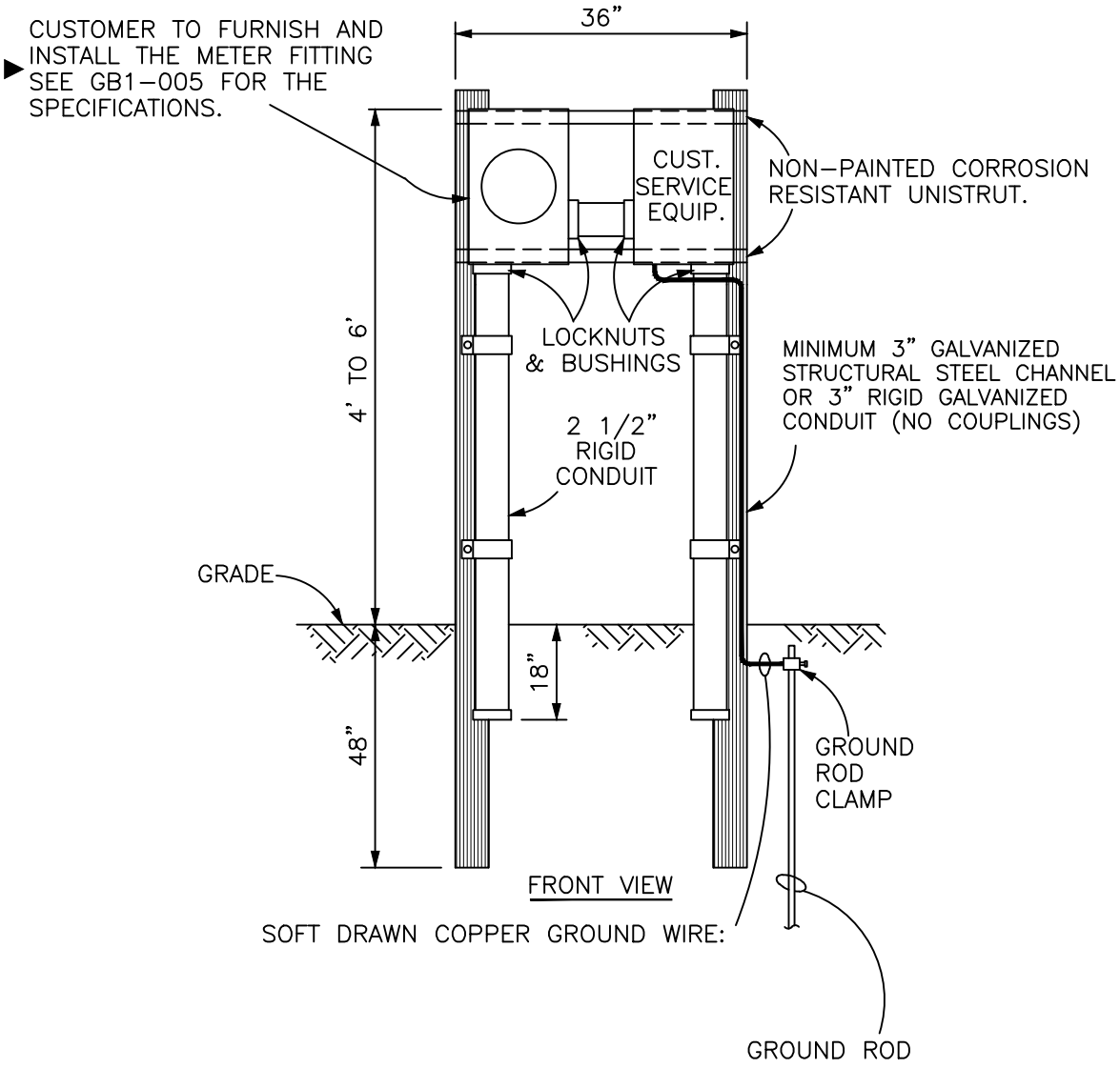
1. COMPANY SERVICE CABLE, 3 WIRE, 120/240V.
2. COMPARTMENT FOR CUSTOMER'S SERVICE EQUIPMENT.
3. THE CONTRACTOR SHALL GROUND THE SERVICE FACILITIES. THE CONTRACTOR SHALL DRIVE THE GROUND ROD(S) ON METER SIDE OF PEDESTAL TO AVOID COMPANY CABLES. THE COMPANY WILL CONNECT THE GROUNDING ELECTRODE CONDUCTOR TO THE NEUTRAL AND EQUIPMENT GROUND IN CONNECTION COMPARTMENT.
4. THE METER PEDESTAL TO BE SUPPLIED BY CUSTOMER.
5. 230.7 OF THE INDIANA ELECTRICAL CODE STATE, "CONDUCTORS OTHER THAN SERVICE CONDUCTORS SHALL NOT BE INSTALLED IN THE SAME SERVICE RACEWAY." SERVICE CABLE SHALL BE SEPARATED FROM THE CUSTOMER'S CONDUCTORS BY A FACTORY INSTALLED BARRIER.
6. ▶ WHERE NEEDED, THE CUSTOMER MAY INSTALL BLACK OR BLACK WITH A RED STRIPE 2–1/2" HDPE CONDUIT FOR THE COMPANY SERVICE CABLE. MAXIMUM LENGTH SHALL BE LIMITED TO 100 FEET AND NO MORE THAN 270 DEGREE OF BENDS.

SINGLE METER PEDESTAL INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
225 A MAXIMUM SERVICE

REV 11–20–21

▶ = REVISION MARK

GB5-085



NOTES

1. THE CONTRACTOR SHALL GROUND THE SERVICE FACILITIES. THE CONTRACTOR SHALL DRIVE THE GROUND ROD(S) TO AVOID COMPANY CABLES.
2. THIS INSTALLATION IS AN ALTERNATE FOR MOBILE HOME PARKS AND MOBILE HOMES THAT ARE NOT APPROVED FOR THE INSTALLATION OF A METER ON THE SIDE.
3. CONDUIT SHALL BE TERMINATED WITH A BUSHING OR BOX ADAPTER.
4. SEE SECTION 220A2d FOR THE DEFINITION OF RIGID CONDUIT.

200 A METER FITTING
FREE STANDING - UNDERGROUND INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
225 A MAXIMUM SERVICE

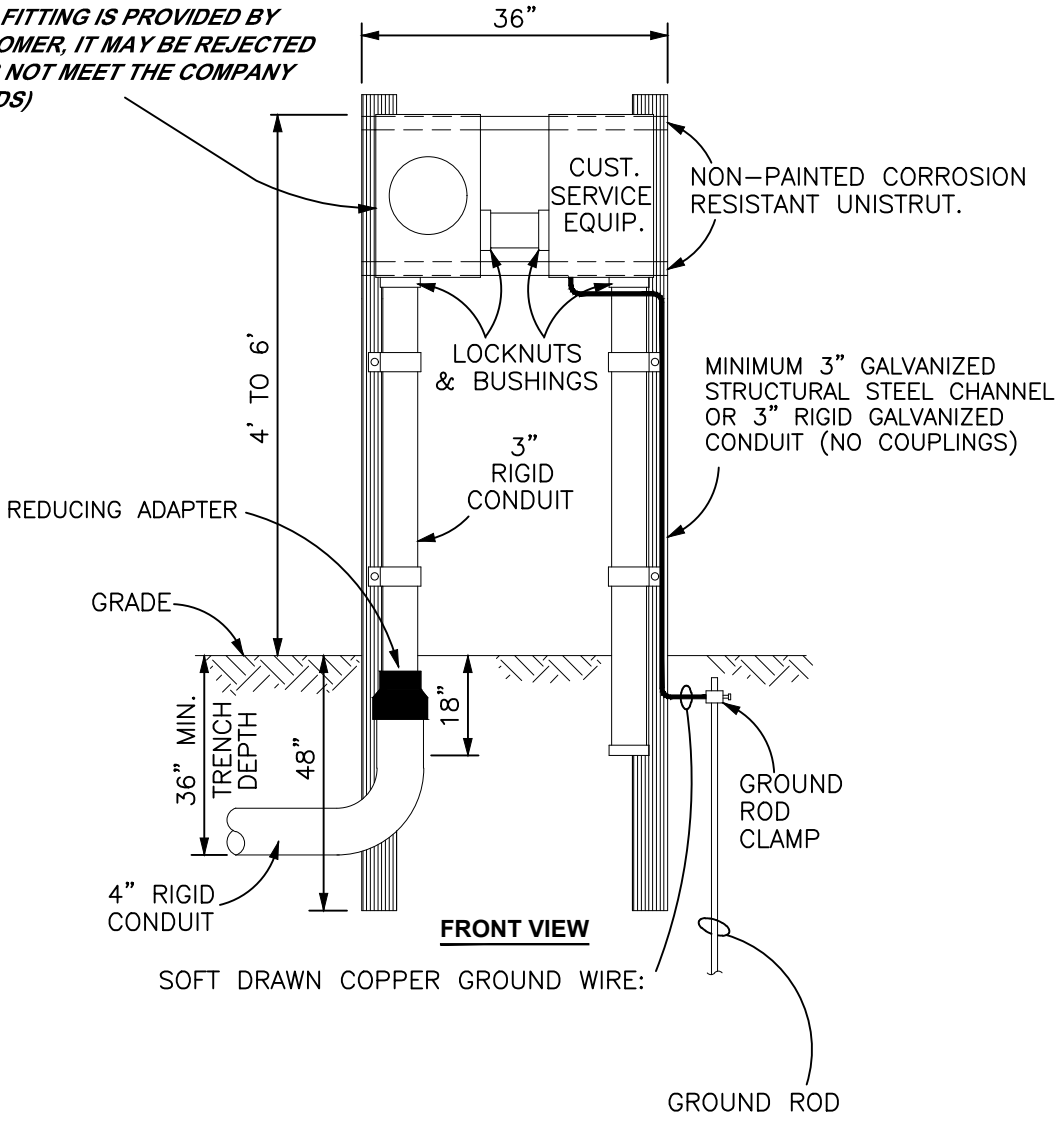
REV 10–10–11

GB5-090

aes Indiana

▶ 3 PHASE METER FITTING STOCK CODE #4008–035 FURNISHED BY COMPANY, INSTALLED BY CONTRACTOR.

(IF METER FITTING IS PROVIDED BY THE CUSTOMER, IT MAY BE REJECTED IF IT DOES NOT MEET THE COMPANY STANDARDS)



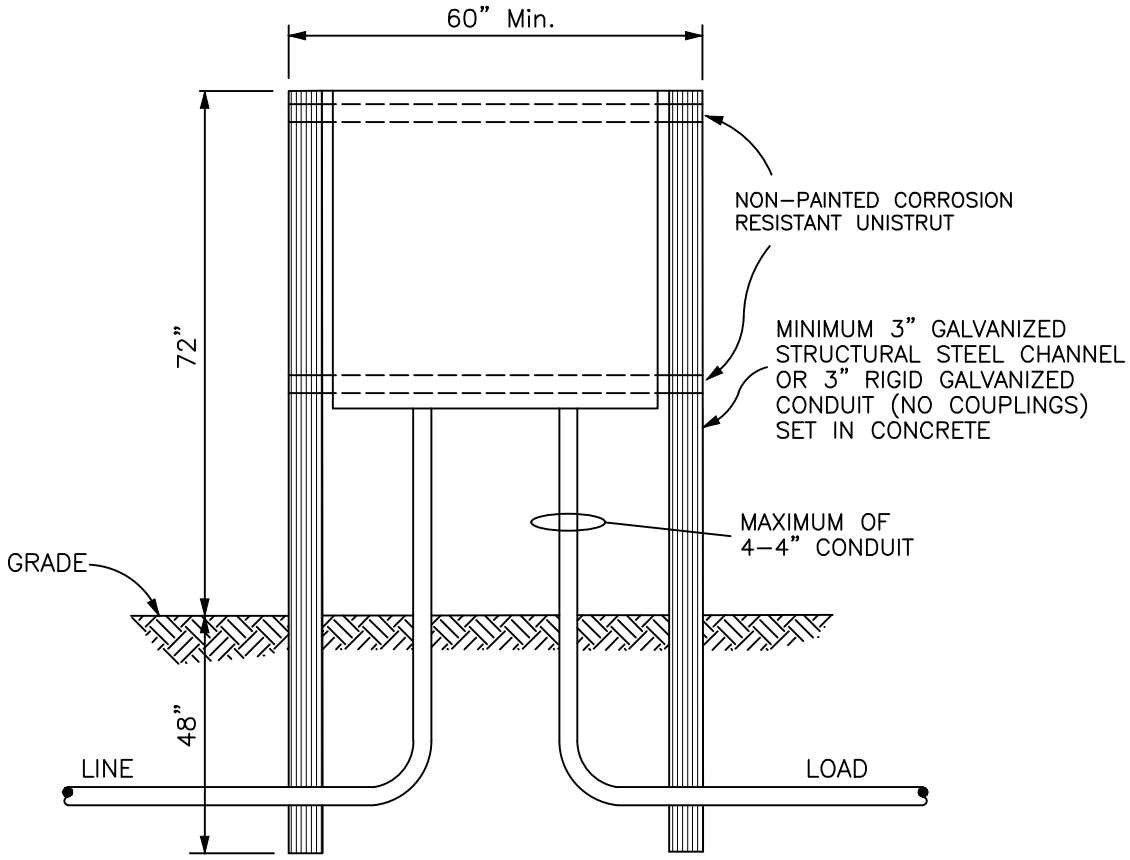
NOTES

1. THE CONTRACTOR SHALL GROUND THE SERVICE FACILITIES. THE CONTRACTOR SHALL DRIVE THE GROUND ROD(S) TO AVOID COMPANY CABLES.
2. THIS INSTALLATION IS AN ALTERNATE METHOD FOR MOBILE HOME PARKS AND MOBILE HOMES THAT ARE NOT APPROVED FOR THE INSTALLATION OF A METER FITTING ON THE SIDE OF THE MOBILE HOME.
3. 4"X3" REDUCING ADAPTER, IPL STOCK #1201–662.
4. CONTINUOUS CONDUIT REQUIRED ON ALL 3 PHASE SERVICES.
5. SEE SECTION 220A2d FOR THE DEFINITION OF RIGID CONDUIT.

200 A METER FITTING
FREE STANDING - UNDERGROUND INSTALLATION
120/240 VOLT, 3 PHASE, 4 WIRE
120/208 VOLT, 3 PHASE, 4 WIRE
225 A MAXIMUM SERVICE

REV 10–10–11

GB5-095



FRONT VIEW

NOTES

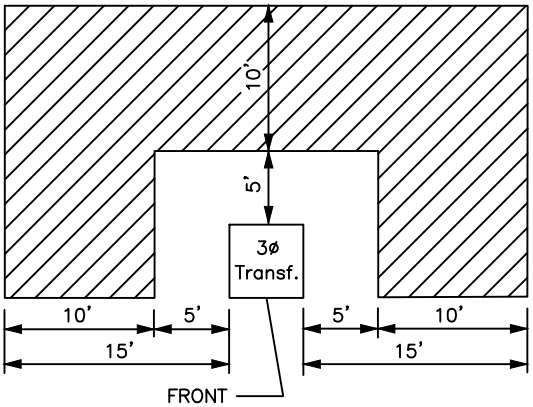
1. SEE APPROPRIATE GOLD BOOK DRAWING FOR THE METER CABINET BEING USED.

FREE STANDING STRUCTURE FOR CT METERING CABINET - UNDERGROUND INSTALLATION 120/208, 120/240, 277/480 VOLT 3Ø 4 WIRE 250A TO 1200A SERVICE

REV 6–19–03

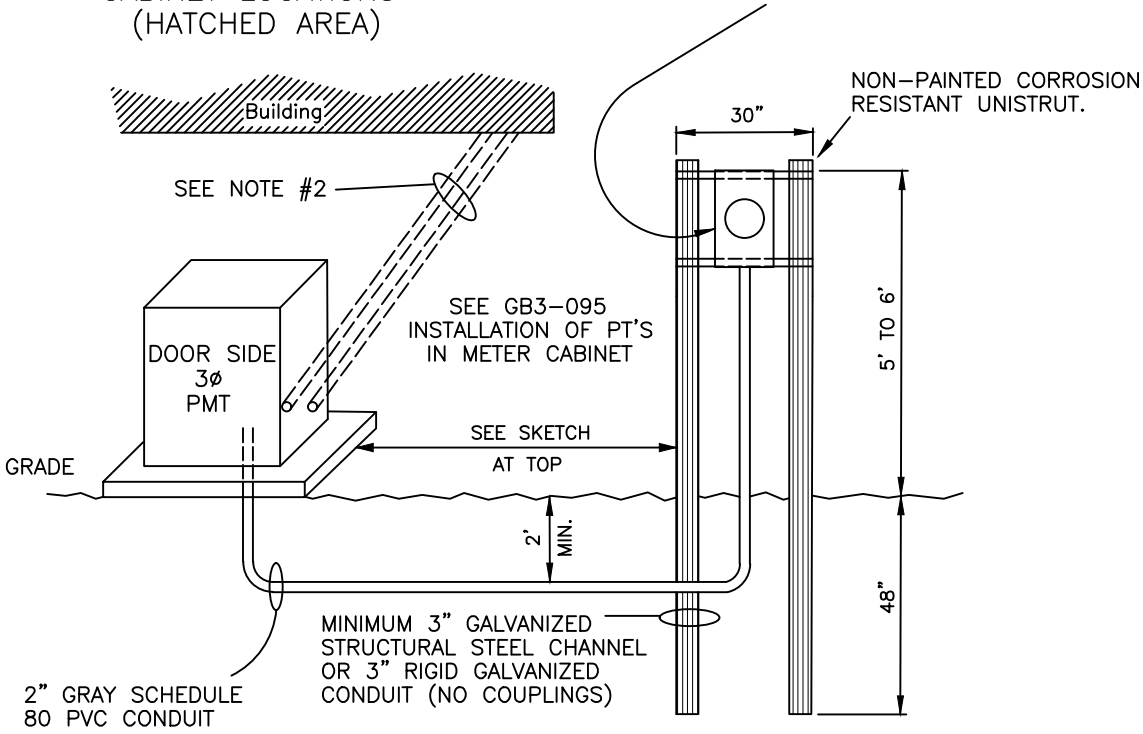
GB5-100

aes Indiana



ACCEPTABLE METER CABINET LOCATIONS (HATCHED AREA)

▶ METER FITTING STOCK CODE #4008–321 (120/208) (GB3–096) AND #4008–190 (277/480) (GB3–095) FURNISHED BY COMPANY, INSTALLED BY CONTRACTOR



NOTES

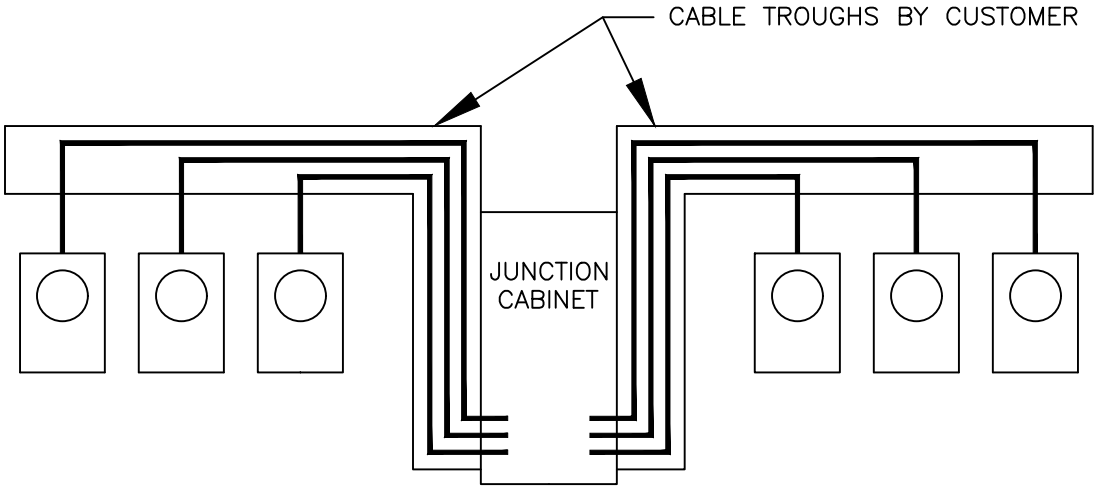
1. USE CENTER KNOCKOUT FOR METERING CONDUIT.
2. ALL SECONDARY CONDUIT AND CABLE SHALL BE CUSTOMER OWNED.
3. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.

TRANSFORMER MOUNTED CT METERING ONLY
FREE STANDING - UNDERGROUND INSTALLATION
120/208 VOLT 3Ø 4 WIRE
277/480 VOLT 3Ø 4 WIRE
450A TO 3000A SERVICE

GB6 SERIES OF DRAWINGS

(GENERALLY COVERS JUNCTION CABINETS AND BOXES FOR SERVICE LATERALS)

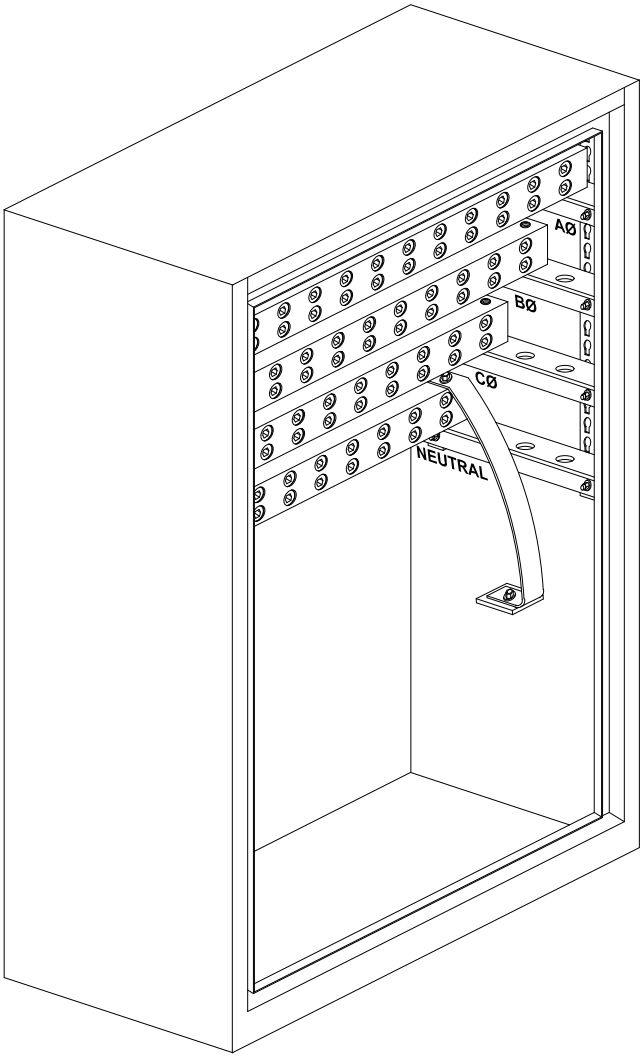
aes Indiana



NOTES:

1. FOR LOCATIONS WHERE THERE WILL BE THREE OR MORE METERS INITIALLY OR IN THE FUTURE.
2. MAXIMUM COMBINED RATING OF ALL SERVICES CONNECTED IN EACH JUNCTION CABINET SHALL NOT EXCEED 1600 AMPS.
3. A MAXIMUM OF EIGHT CABLES PER PHASE WILL BE PERMITTED TO ENTER THE JUNCTION CABINET FOR CONNECTION.
4. THE MAXIMUM CABLE SIZE CONNECTED IN THE JUNCTION CABINET SHALL BE 750 KCMIL.
5. THE COMPANY SHALL MAKE ALL CONNECTIONS IN THE JUNCTION CABINET.
6. THE COMPANY SHALL SUPPLY THE JUNCTION CABINET, STK. #1703–743, AND IT SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
7. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL CABLE TROUGHS. THE HORIZONTAL TROUGHS SHALL BE RATED NEMA 3R, MINIMUM 14 GAUGE, AND THE VERTICAL TROUGHS SHALL HAVE A GASKETED COVER OR MAY BE CONDUIT.
8. ALL SERVICE CONDUCTORS SHALL BE BROUGHT TO THE JUNCTION CABINET FOR TERMINATION. NO TAPS ARE PERMITTED IN THE TROUGH.
9. THE CUSTOMER'S CABLES MAY EXIT THE CABINET ON EITHER SIDE OR THE BOTTOM. SEE DRAWING GB6–030 FOR DIMENSIONS.
10. THE COMPANY ENGINEER SHALL DETERMINE THE NUMBER OF JUNCTION CABINETS THAT WILL BE USED AND THEIR LOCATIONS.
11. ▶ ALL METALLIC RACEWAYS AND WIREWAYS SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH THE INDIANA ELECTRICAL CODE, ARTICLE 250.

TYPICAL JUNCTION CABINET FOR MULTIPLE SERVICES UNDERGROUND INSTALLATION 600 VOLTS AND BELOW, 3 PHASE, 4 WIRE 400 A MAXIMUM SERVICE PER POSITION



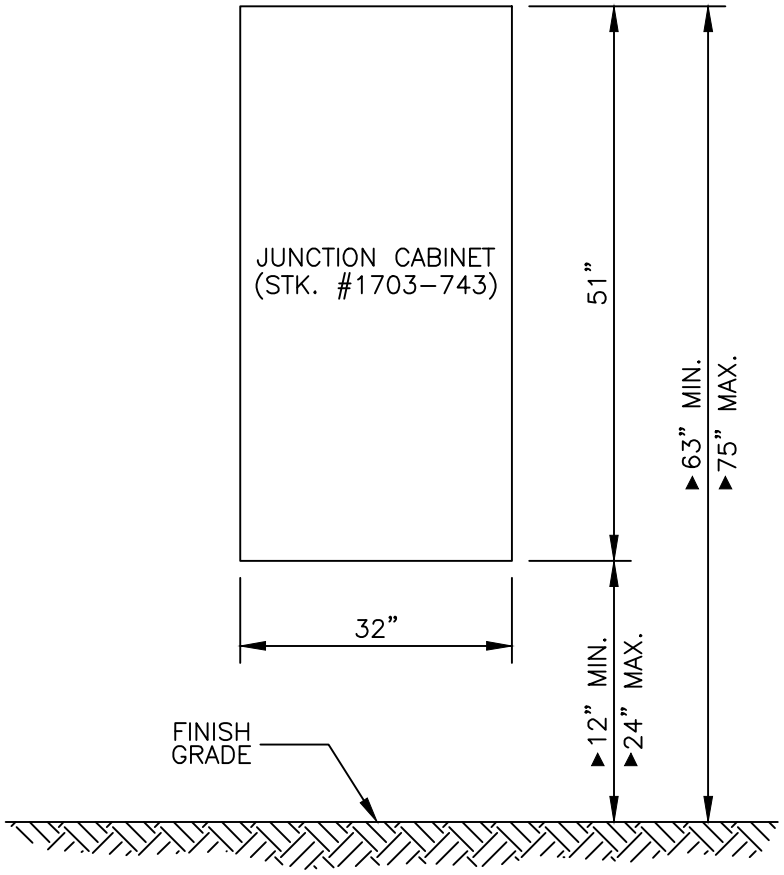
NOTES:

1. THE TERMINAL BARS MAY BE REMOVED TO FACILITATE THE MOUNTING OF THE CABINET.
2. THE TERMINAL BARS SHALL BE REINSTALLED WITH A IN THE TOP FORWARD POSITION, THE NEUTRAL IN THE BOTTOM REAR POSITION, AND THE REST STAGGERED AS SHOWN.
3. THE GROUNDING STRAP SHALL BE REATTACHED AS SHOWN.

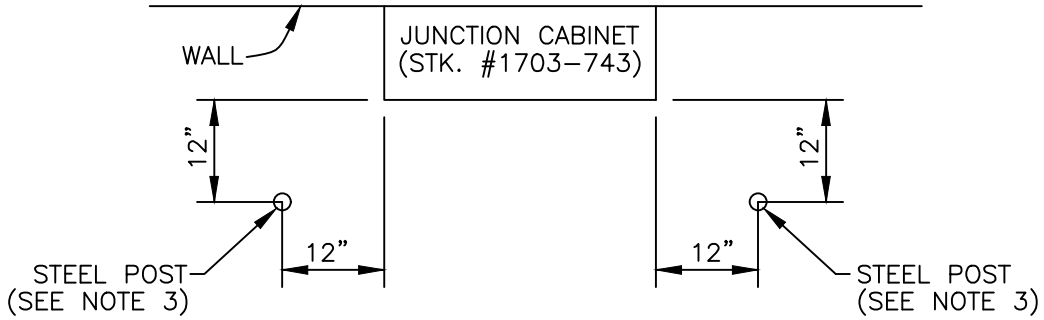
TERMINAL BAR ARRANGEMENT FOR JUNCTION CABINET

REV NEW 10-27-05

GB6-015



ELEVATION



PLAN

NOTES:

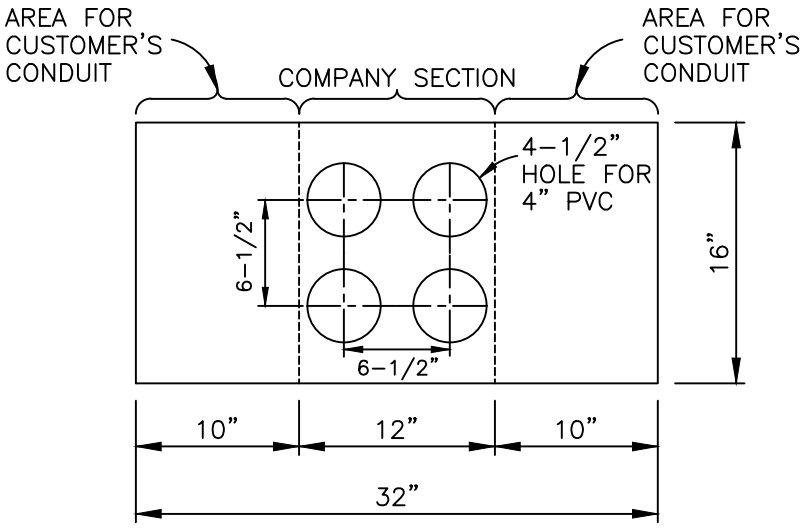
1. CONTRACTOR SHALL INSTALL JUNCTION CABINET AT LOCATIONS APPROVED BY THE COMPANY ENGINEERING.
2. CABINET WEIGHS APPROXIMATELY 60 POUNDS.
3. CUSTOMER TO FURNISH AND INSTALL 7' CONCRETE FILLED 6" STEEL POST 4' ABOVE GRADE SET IN CONCRETE WHEN EXPOSED TO VEHICULAR TRAFFIC.

MOUNTING DETAILS FOR JUNCTION CABINET

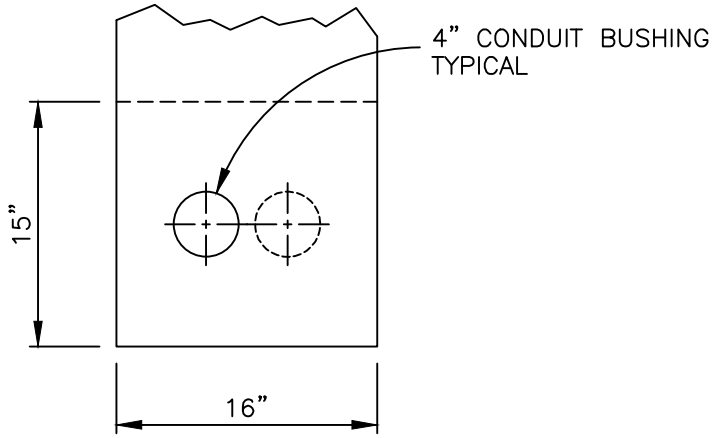
REV 7–10–97

GB6-020

aes Indiana



CONDUIT LAYOUT
BOTTOM OF JUNCTION CABINET



CONDUIT LAYOUT FOR LEFT OR RIGHT
SIDE OF JUNCTION CABINET

NOTES:

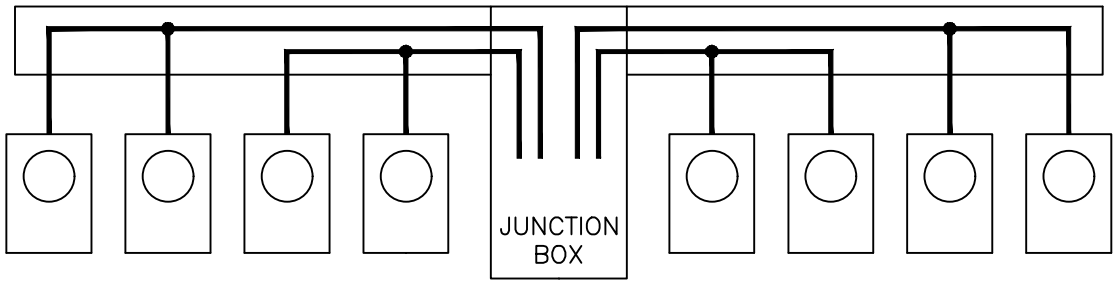
1. CONTRACTOR SHALL INSTALL 4–4" GRAY PVC CONDUITS FOR THE COMPANY USE.
2. CUSTOMER'S SERVICE CABLES MAY EXIT CABINET THROUGH THE BOTTOM OR SIDES AS SHOWN.

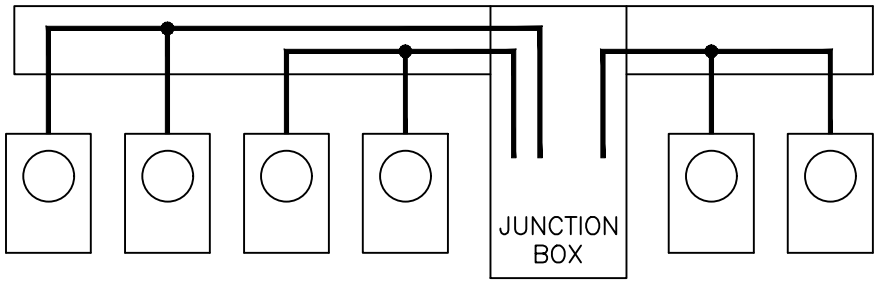
CONDUIT LOCATIONS IN JUNCTION CABINET FOR MULTIPLE UNDERGROUND SERVICES

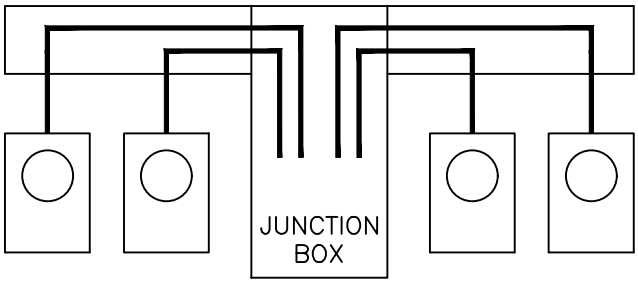
REV 12–19–03

GB6-030

aes Indiana







TYPICAL MULTIPLE SERVICES

NOTES :

1. A TOTAL OF FOUR CABLES PER PHASE WILL BE PERMITTED TO ENTER JUNCTION BOX FOR CONNECTION TO COMPANY CABLES.
2. WHEN A GENERAL AND HEATING SERVICE IS REQUIRED FOR A CUSTOMER THE CONTRACTOR SHALL CONNECT THEM TOGETHER IN THEIR WIREWAY. (SEE LAYOUTS ABOVE)
3. MAXIMUM COMBINED RATING OF ALL SERVICES CONNECTED IN EACH JUNCTION BOX SHALL NOT EXCEED 1600 A. (SEE LAYOUTS ABOVE)
4. MAXIMUM SIZE CABLE CONNECTED IN JUNCTION BOX SHALL BE 500 KCMIL.
5. THE COMPANY SHALL MAKE ALL CONNECTIONS IN THE SERVICE JUNCTION BOX.
6. CUSTOMER TO FURNISH AND INSTALL 7' CONCRETE FILLED 6" STEEL POST 4' ABOVE GRADE SET IN CONCRETE WHEN EXPOSED TO VEHICULAR TRAFFIC.

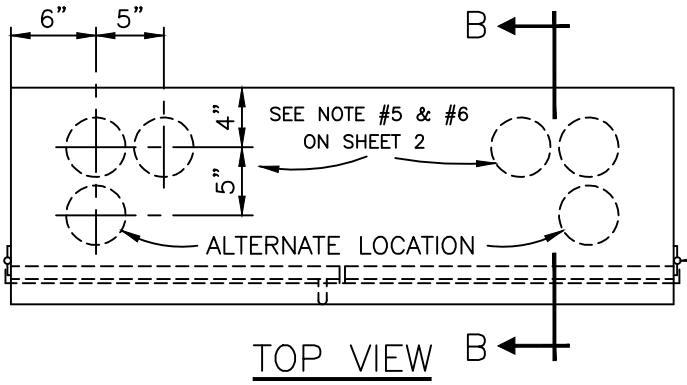
NOT FOR NEW CONSTRUCTION
FOR MAINTENANCE ONLY

TYPICAL CUSTOMER'S JUNCTION BOX FOR THREE PHASE MULTIPLE 100 A AND 200 A UNDERGROUND SERVICES

REV 2–5–95

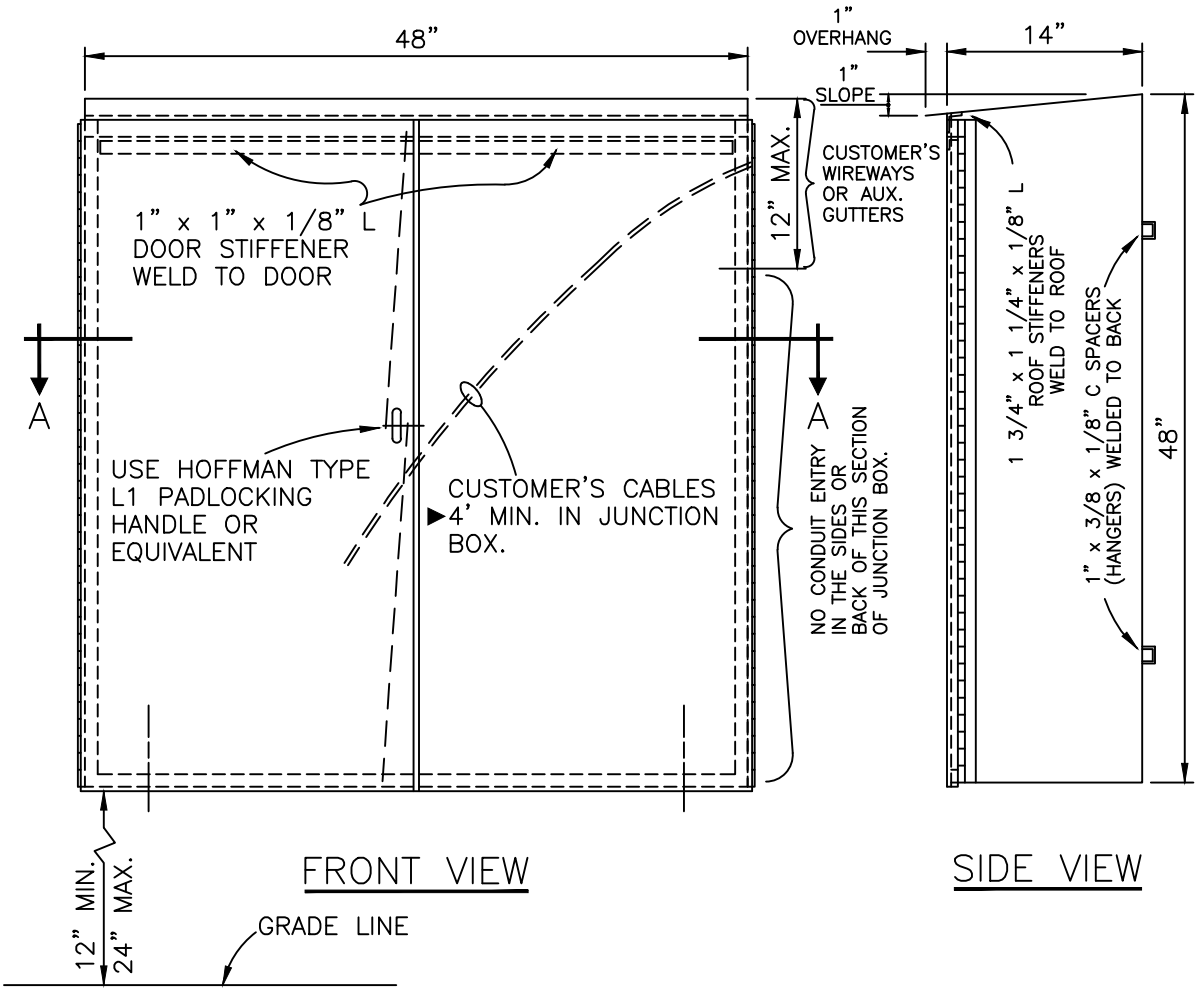
GB6-040

aes Indiana



TOP VIEW

USE CONTINUOUS STAINLESS STEEL HINGES (WITH STAINLESS STEEL PIN) MARLBORO HINGE SS4024 WITH HOLES OR EQUIVALENT. INSTALL AFTER GALVANIZING, SPACE BOLTS AND NUTS MAXIMUM OF 6" APART AND PEEN BOLTS TO NUTS. DRILL HOLES IN CABINET BEFORE GALVANIZING.



FRONT VIEW

SIDE VIEW

NOTES:

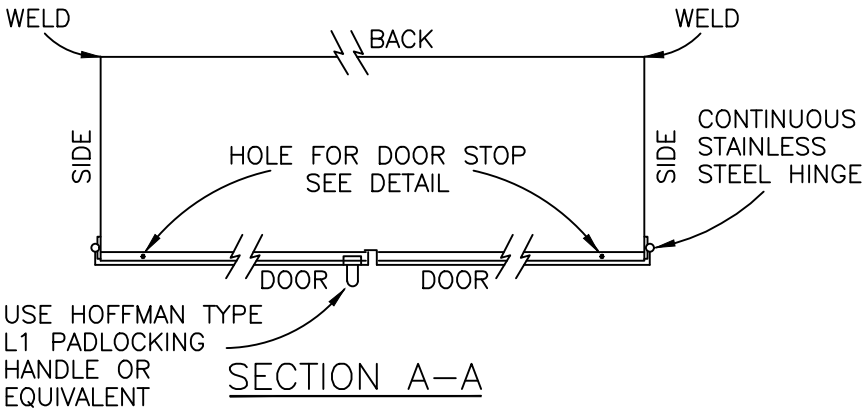
1. SEE DRAWING GB6-040 FOR LAYOUT.
2. SEE DRAWING GB6-060 FOR NOTES AND DETAILS.

NOT FOR NEW CONSTRUCTION
FOR MAINTENANCE ONLY

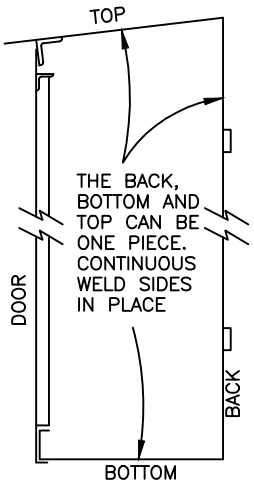
TYPICAL CUSTOMER'S JUNCTION BOX FOR MULTIPLE UNDERGROUND SERVICES

REV 2-7-95

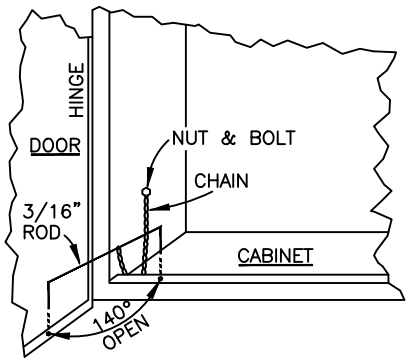
GB6-050



SECTION A–A



SECTION B–B



DOOR STOP DETAIL

NOTES:

1. FRONT DOORS SHALL BE HINGED ON THE SIDES. USE HOFFMAN TYPE L1 PADLOCKING HANDLE OR EQUIVALENT (USE 2–POINT LATCHING SYSTEM).

2. 12 GAUGE M.S.G. SHEET METAL (ALUMINUM OR STEEL) SHALL BE USED.

3. STEEL JUNCTION BOX SHALL BE GALVANIZED OR SHOP–PAINTED WITH RUST INHIBITING PAINT INSIDE AND OUTSIDE AFTER FABRICATION. IF CABINET IS SHOP PAINTED USE SS4024 WITHOUT HOLES OR EQUIVALENT HINGE AND CONTINUOUS WELD IN PLACE. ANY HOLE OR HOLES DRILLED AFTER GALVANIZING OR PAINTING SHALL BE TREATED WITH RUST INHIBITING PAINT.

4. LOCATION AND SIZE OF JUNCTION BOX SHALL BE APPROVED BY THE ENGINEERING DEPARTMENT.

5. 4" CONDUITS IN BOTTOM OF JUNCTION BOX BY CUSTOMER, FOR COMPANY CABLES, AS FOLLOWS;
   2 CONDUITS REQUIRED FOR 800 A OR LESS OF CONNECTED SERVICES.
   3 CONDUITS REQUIRED FOR 801 A TO 1200 A OF CONNECTED SERVICES.
   4 CONDUITS REQUIRED FOR 1201 A TO 1600 A OF CONNECTED SERVICES. (MAXIMUM)

6. CUSTOMER'S WIRES MAY ENTER BOTTOM OF THE JUNCTION BOX AT THE DISCRETION OF THE COMPANY.

7. BONDING LUG AND JUMPER PROVIDED AND INSTALLED BY CONTRACTOR.

8. CUSTOMER TO FURNISH AND INSTALL 7' CONCRETE FILLED 6" STEEL POST 4' ABOVE GRADE SET IN CONCRETE WHEN EXPOSED TO VEHICULAR TRAFFIC.

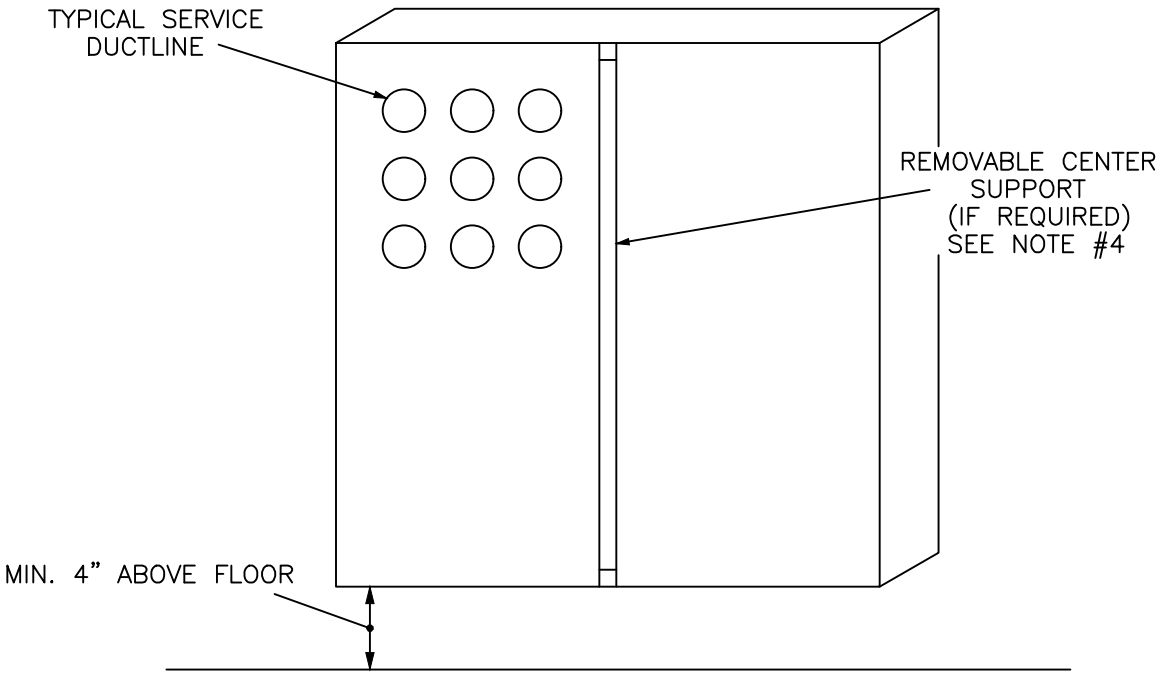
9. LEFT HAND DOOR OVERLAPS THE RIGHT HAND DOOR.

NOT FOR NEW CONSTRUCTION
FOR MAINTENANCE ONLY

TYPICAL CUSTOMER'S JUNCTION BOX FOR MULTIPLE UNDERGROUND SERVICES

REV 2–5–95

GB6-060



NOTES:

1. LOCATION AND SIZE OF JUNCTION BOX SHALL BE APPROVED BY THE ENGINEERING DEPARTMENT.
2. 12 GAGE SHEET METAL SHALL BE USED.
3. STEEL JUNCTION BOX SHALL BE GALVANIZED OR SHOP PAINTED WITH A RUST INHIBITING PAINT INSIDE AND OUTSIDE AFTER FABRICATION. ANY HOLE OR HOLES DRILLED AFTER GALVANIZING OR PAINTING SHALL BE TREATED WITH RUST INHIBITING PAINT.
4. COVER MAY BE ATTACHED WITH SHEET METAL SCREWS. JUNCTION BOXES REQUIRING COVERS OVER 16 SQ. FT. SHALL BE CONSTRUCTED WITH A REMOVABLE CENTER SUPPORT TO ACCOMMODATE A 2 PIECE COVER.
5. JUNCTION BOX SHALL BE LOCATED IN SUCH A MANNER TO ALLOW THE INCOMING SERVICE DUCTLINE TO BE IN A SINGLE QUADRANT WITH CUSTOMER'S WIRES TO ENTER ANY OF THE OTHER THREE QUADRANTS.
6. BONDING LUG AND JUMPER PROVIDED AND INSTALLED BY CONTRACTOR.

TYPICAL CUSTOMERS JUNCTION BOX UNDERGROUND NETWORK SERVICE

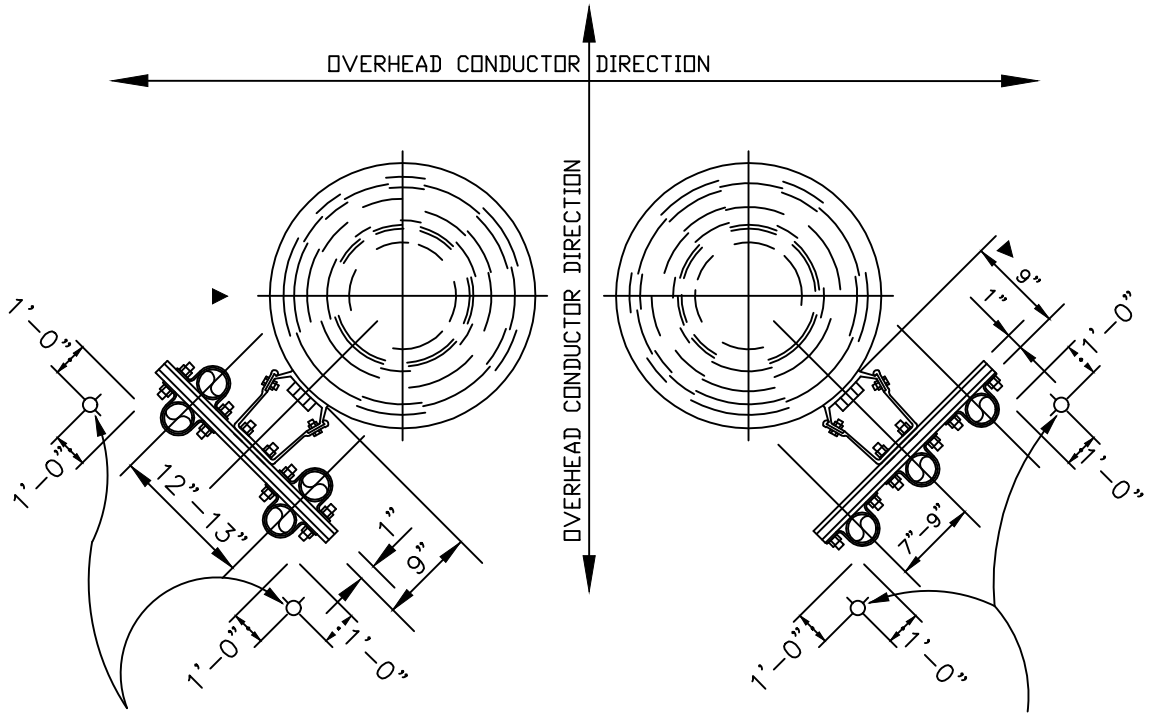
REV 4-4-95

GB6-070

GB7 SERIES OF DRAWINGS

(GENERALLY COVERS PADS, RISERS, FAULT CURRENT, ETC.)

aes Indiana



7' CONCRETE FILLED 6" STEEL POST 4'-0" ABOVE GRADE, SET IN CONCRETE. (SEE NOTE 4) ◄

TOP VIEW

4 CONDUITS CONFIGURATION

7' CONCRETE FILLED 6" STEEL POST 4'-0" ABOVE GRADE, SET IN CONCRETE. (SEE NOTE 4) ◄

TOP VIEW

1, 2, AND 3 CONDUIT CONFIGURATIONS

NOTES:

►1. FOUR 4" CONDUITS ARE THE MAXIMUM THAT MAY BE PLACED ON A POLE (2 CONDUITS MAXIMUM IF NO TRUCK ACCESS).

2. ENGINEERING DEPARTMENT TO BE CONTACTED FOR PROPER PLACEMENT OF CONDUITS.

3. PLACE CONDUIT STUBS A MINIMUM OF (6") TO A MAXIMUM OF (12") ABOVE GRADE. (USE 4" X 36" MINIMUM RADIUS ELBOW).

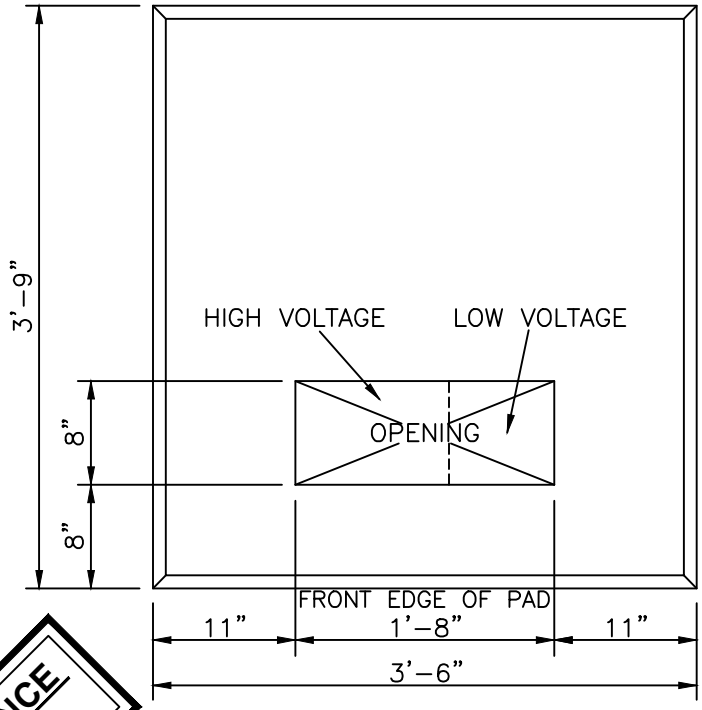
►4. IF EXPOSED TO VEHICULAR TRAFFIC, CUSTOMER SHALL PROVIDE AND INSTALL PROTECTIVE POSTS, AS APPROVED BY THE COMPANY.

STANDARD STANDOFF SPACING AND RISER ARRANGEMENTS 1600 A MAXIMUM

REV 6-13-97

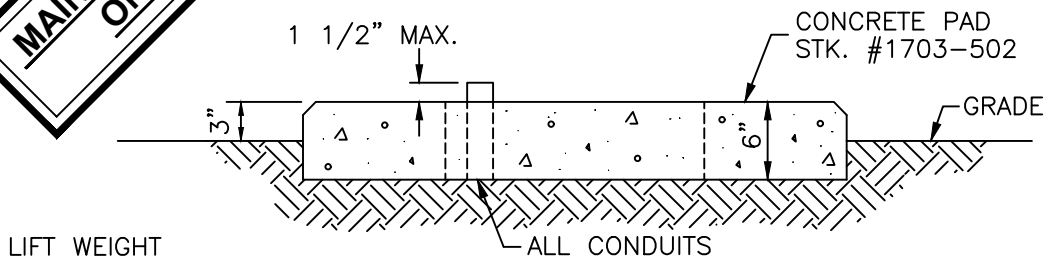
GB7-010

aes Indiana



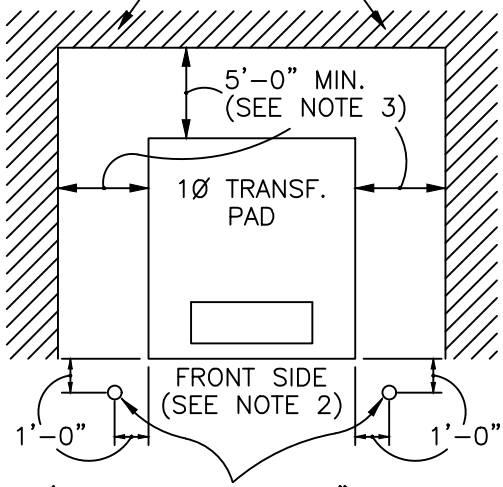
PLAN VIEW

MAINTENANCE ONLY



LIFT WEIGHT
900 LB.

CROSS SECTION



7' CONCRETE FILLED 6" STEEL POST 4'–0" ABOVE GRADE SET IN CONCRETE. (SEE NOTE 1)

NOTES:

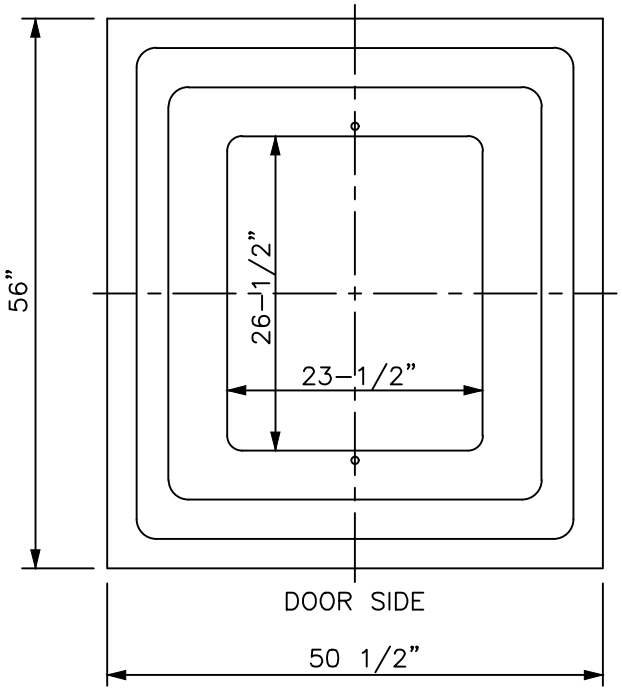
1. CUSTOMER SHALL FURNISH AND INSTALL POSTS TO PROTECT TRANSFORMER WHEN EXPOSED TO VEHICULAR TRAFFIC.
2. FOR OPERATION OF THE TRANSFORMER WITH A HOTSTICK, 10 FT. CLEARANCE SHALL BE MAINTAINED ON FRONT SIDE OF PAD, SEE SECTION 225.
3. IF ADJACENT TO WINDOW, DOOR, COMBUSTIBLE WALL OR OVERHANG, THE MINIMUM DISTANCE SHALL BE TEN FEET.
4. ALL BACKFILL UNDER PAD TO BE THOROUGHLY COMPACTED IN SOLID LAYERS NOT TO EXCEED 6 IN.
5. TRANSFORMER PAD SHALL NOT BE SET ON PAVEMENT.
6. METALLIC CONDUITS SHALL NOT BE INSTALLED IN PAD MOUNTED TRANSFORMERS.
7. NO CUSTOMERS GROUNDING GRIDS OR GROUNDING ELECTRODE CONDUCTORS MAY BE CONNECTED AT PAD MOUNTED TRANSFORMER LOCATIONS.
8. MAXIMUM – 4 CONDUITS, ONE CIRCUIT PER CONDUIT, REFER TO SECTION 220A3c EXCEPTION.

CONCRETE PAD FOR SINGLE PHASE TRANSFORMER 25-250 KVA

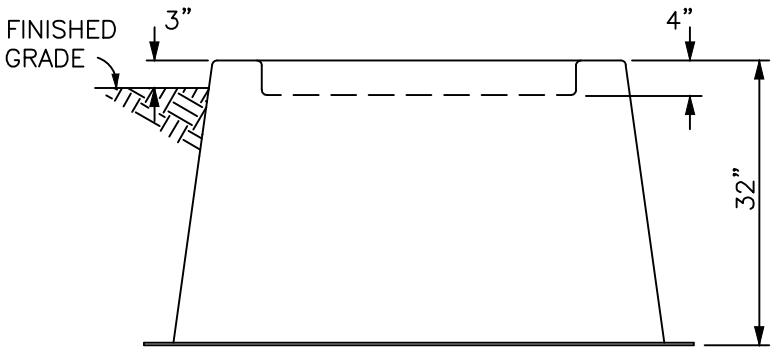
REV 10–9–09

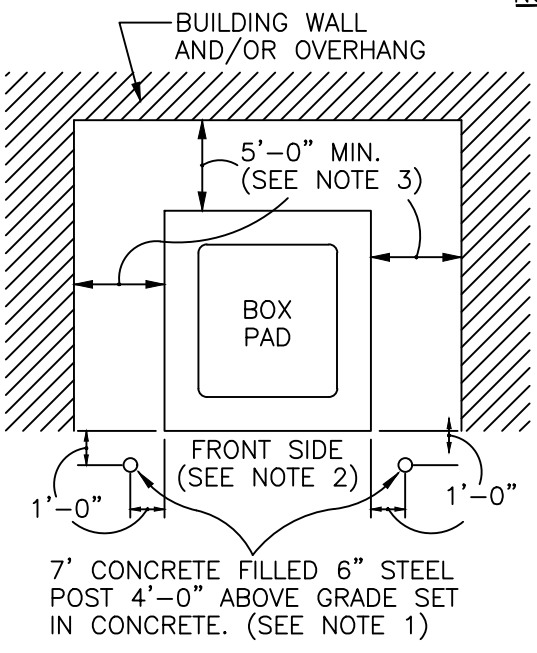
GB7-020

aes Indiana



BOX PAD
STOCK #1203–101





NOTES:

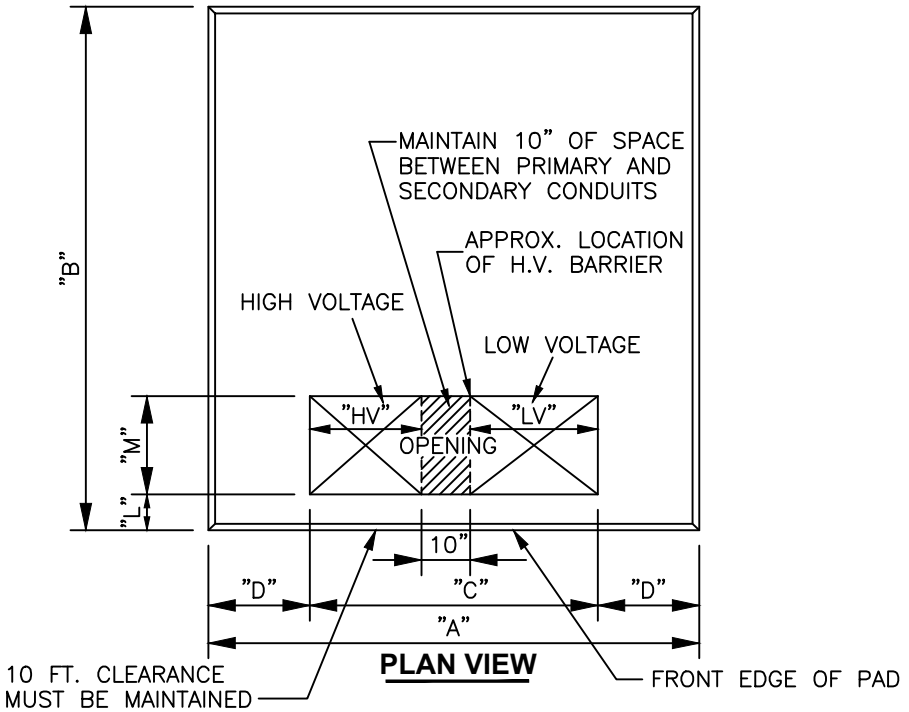
1. CUSTOMER SHALL FURNISH AND INSTALL POSTS TO PROTECT TRANSFORMER WHEN EXPOSED TO VEHICULAR TRAFFIC.
2. FOR OPERATION OF THE TRANSFORMER WITH A HOTSTICK, 10 FT. CLEARANCE SHALL BE MAINTAINED ON FRONT SIDE OF PAD, SEE SECTION 225.
3. IF ADJACENT TO WINDOW, DOOR, COMBUSTIBLE WALL OR OVERHANG, THE MINIMUM DISTANCE SHALL BE TEN FEET.
4. ALL BACKFILL UNDER PAD TO BE THOROUGHLY COMPACTED IN SOLID LAYERS NOT TO EXCEED 6”.
5. METALLIC CONDUITS SHALL NOT BE INSTALLED IN PAD MOUNTED TRANSFORMERS.
6. NO CUSTOMERS GROUNDING GRIDS OR GROUNDING ELECTRODE CONDUCTORS MAY BE CONNECTED AT PAD MOUNTED TRANSFORMER LOCATIONS.
7. MAXIMUM – 4 CONDUITS, ONE CIRCUIT PER CONDUIT, REFER TO SECTION 220A3c EXCEPTION.
8. UNDER NO CIRCUMSTANCES IS THE BOX PAD PERMITTED TO BE DRILLED, CUT, OR OTHERWISE MODIFIED. SEE SECTION 220A3a.

TRANSFORMER BOX PAD FOR SINGLE PHASE TRANSFORMER 25-250 KVA

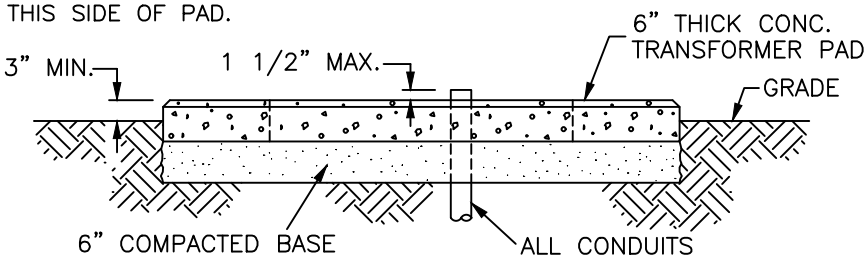
REV 10–9–09

GB7-030

aes Indiana



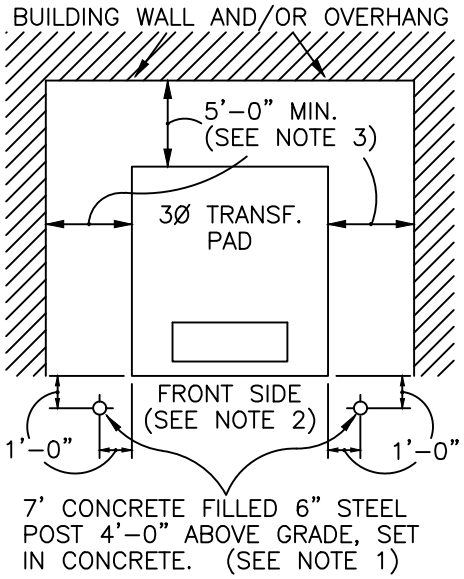
PLAN VIEW



CROSS SECTION

STOCK NO.	KVA	TRANSF. WEIGHT	A	B	C	D	L	M	LV	HV
1703–506	75–300	5800	75	80	44	15 1/2	5 1/2	15	19 1/2	14 1/2
1703–507	500–1000	10,100	84	84	44	20	5 1/2	15	19 1/2	14 1/2
1703–508	1500–2500	12,600	84	84	48	18	9	17	23 1/2	14 1/2

ALL DIMENSIONS ARE IN INCHES



NOTES:

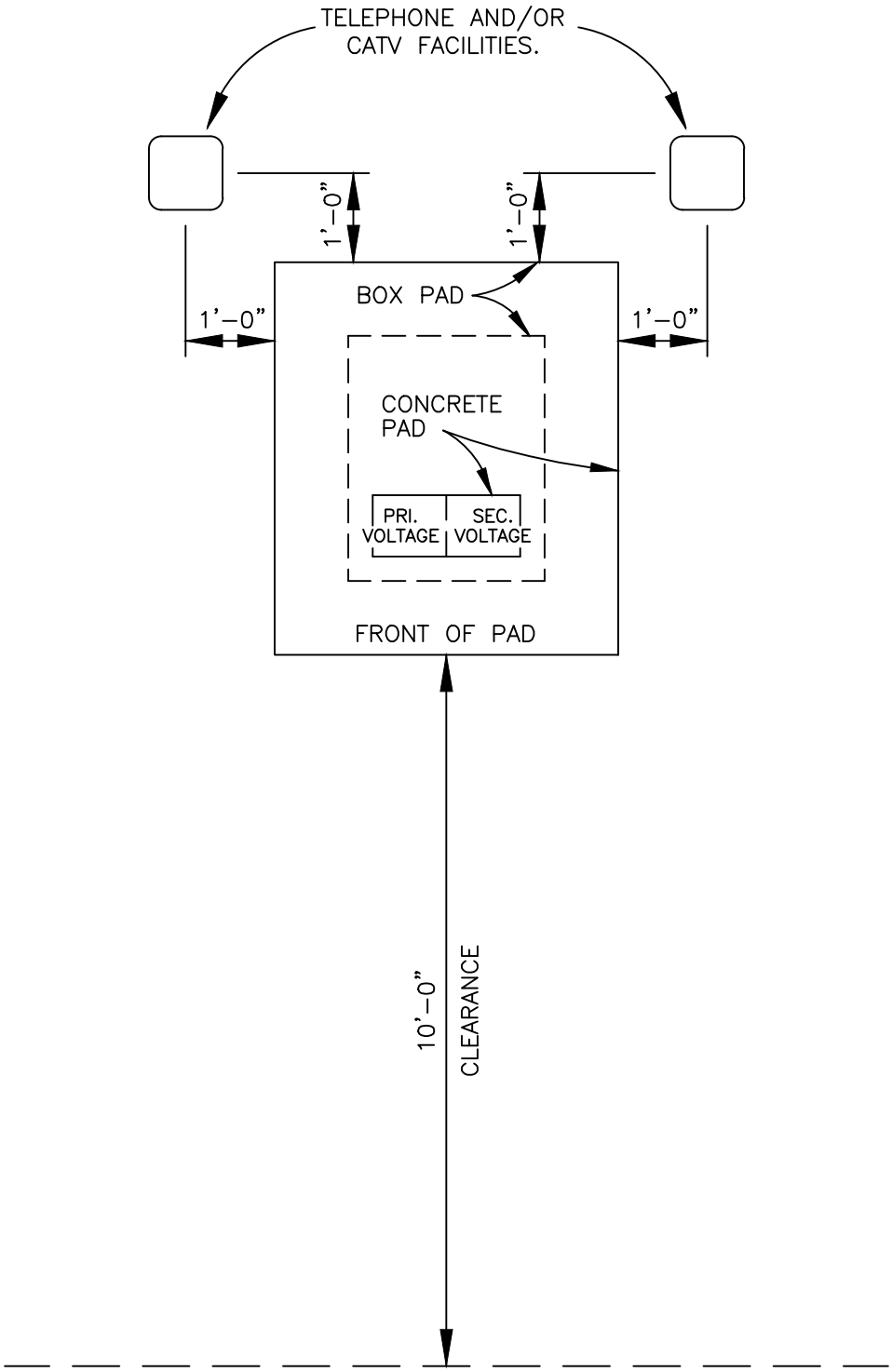
1. CUSTOMER SHALL FURNISH AND INSTALL POSTS TO PROTECT TRANSFORMER WHEN EXPOSED TO VEHICULAR TRAFFIC.
2. FOR OPERATION OF THE TRANSFORMER WITH A HOTSTICK, 10 FT. CLEARANCE SHALL BE MAINTAINED ON FRONT SIDE OF PAD, SEE SECTION 225.
3. IF ADJACENT TO WINDOW, DOOR, COMBUSTIBLE WALL OR OVERHANG, THE MINIMUM DISTANCE SHALL BE TEN FEET.
4. ALL BACKFILL UNDER PAD TO BE THOROUGHLY COMPACTED IN SOLID LAYERS NOT TO EXCEED 6 IN.
5. TRANSFORMER PAD SHALL NOT BE SET ON PAVEMENT.
6. METALLIC CONDUITS SHALL NOT BE INSTALLED IN PAD MOUNTED TRANSFORMERS.
7. NO CUSTOMERS GROUNDING GRIDS OR GROUNDING ELECTRODE CONDUCTORS MAY BE CONNECTED AT PAD MOUNTED TRANSFORMER LOCATIONS.
8. THE TRANSFORMER PAD SHALL BE WITHIN 12' OF PAVEMENT
9. MAXIMUM – 8 CONDUITS, ONE CIRCUIT PER CONDUIT. REFER TO SECTION 220A3c EXCEPTION
10. ▶ THE COMPANY WILL FURNISH AND SET THE PRECAST TRANSFORMER PAD. PAD AND TRANSFORMER SHALL BE SET BEFORE ANY CONDUCTORS ARE INSTALLED BY THE CUSTOMER. THE DIMENSIONS ARE FOR LOCATING THE PAD AND CONDUIT.

CONCRETE PAD FOR THREE PHASE TRANSFORMER 75-2500 KVA

REV 11–22–11

GB7-040

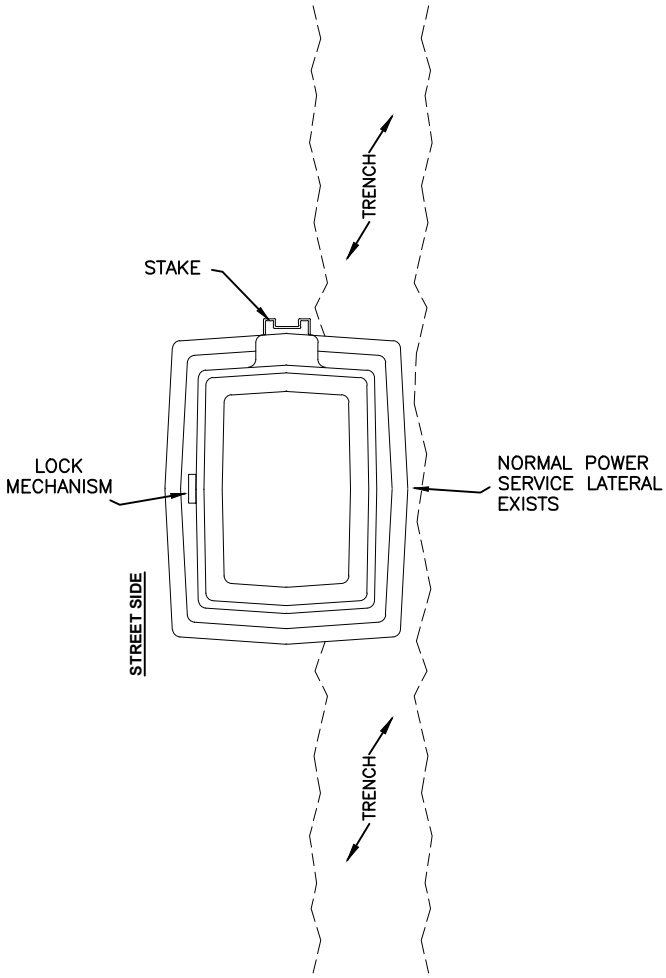
aes Indiana



CLEARANCE OF TELEPHONE AND/OR CABLE TV FACILITIES FROM COMPANY PAD MOUNTED GEAR

REV 2–6–95

GB7-050



TOP VIEW

NOTE:

1. COMMUNICATION PEDESTAL LOCATIONS MAY NOT BE ANY CLOSER THAT 2 FEET OFF THE FOUR CORNERS OF THE POWER SERVICE PEDESTAL AND MUST BE INSTALLED ON THE DIAGONAL.

NORMAL SPACING FOR AES INDIANA, TELEPHONE AND COMMUNICATIONS FACILITIES

REV NEW 12–21–22

GB7-055

aes Indiana

Pole Mounted Transformers						
Single Phase			Three Phase			
kVA	120/240	240/480	208Y/120	240Δ/120	480Y/277	kVA
10	4,700/3,500					10
15	6,500/4,800					15
25	11,000/7,700	6,000/4,200				25
37.5	18,200/11,000					37.5
50	24,900/16,700	9,600/8,700				50
75	32,900/21,600	17,300/11,400	14,800	12,800		75
100	45,600/29,800	28,800/18,800				100
112.5			22,300	21,200		112.5
150			29,800	25,800	14,600	150
167.5	64,100/41,000	36,400/23,200				167.5
225			43,100	37,400		225
250	86,500/55,200	35,600/22/700				250
300			59,500	51,600	27,800	300
333	97,700/62,300	63,400/40,400				333
500		95,700/61,000	70,800	70,800	46,300	500
750			45,500	95,500	40,300	750
1000			107,900	107,900	81,900	1000
1500					131,700	1500

Pad Mounted Transformers						
Single Phase			Three Phase			
kVA	120/240	240/480	208Y/120	240Δ/120 OH on Pad	480Y/277	kVA
25	11,600/8,100	4,700/3,300				25
50	22,100/14,800	11,500/7,700				50
75	33,100/21,700		13,600	12,800	6,900	75
100	49,100/32,100					100
112.5				21,200		112.5
150			27,400	25,800	11,500	150
167.5	66,900/42,700					167.5
225				37,400		225
250	100,400/63,900					250
300			47,600	51,600	21,900	300
500			70,500	70,800	35,000	500
750			39,200	95,500	17,000	750
1000			52,200	107,900	22,700	1000
1500					34,000	1500
2000					45,300	2000
2500					56,600	2500

The maximum available calculated fault currents are given in amperes, RMS symmetrical, at the secondary bushings of the Company's transformer, assuming an infinite bus and a bolted fault. The intent of these values is to serve as a guide in the selection of the proper service and downstream equipment. These are of no value for the use in determining the proper personal protection equipment. For PPE selection in compliance with NFPA 70E, see Section 112.

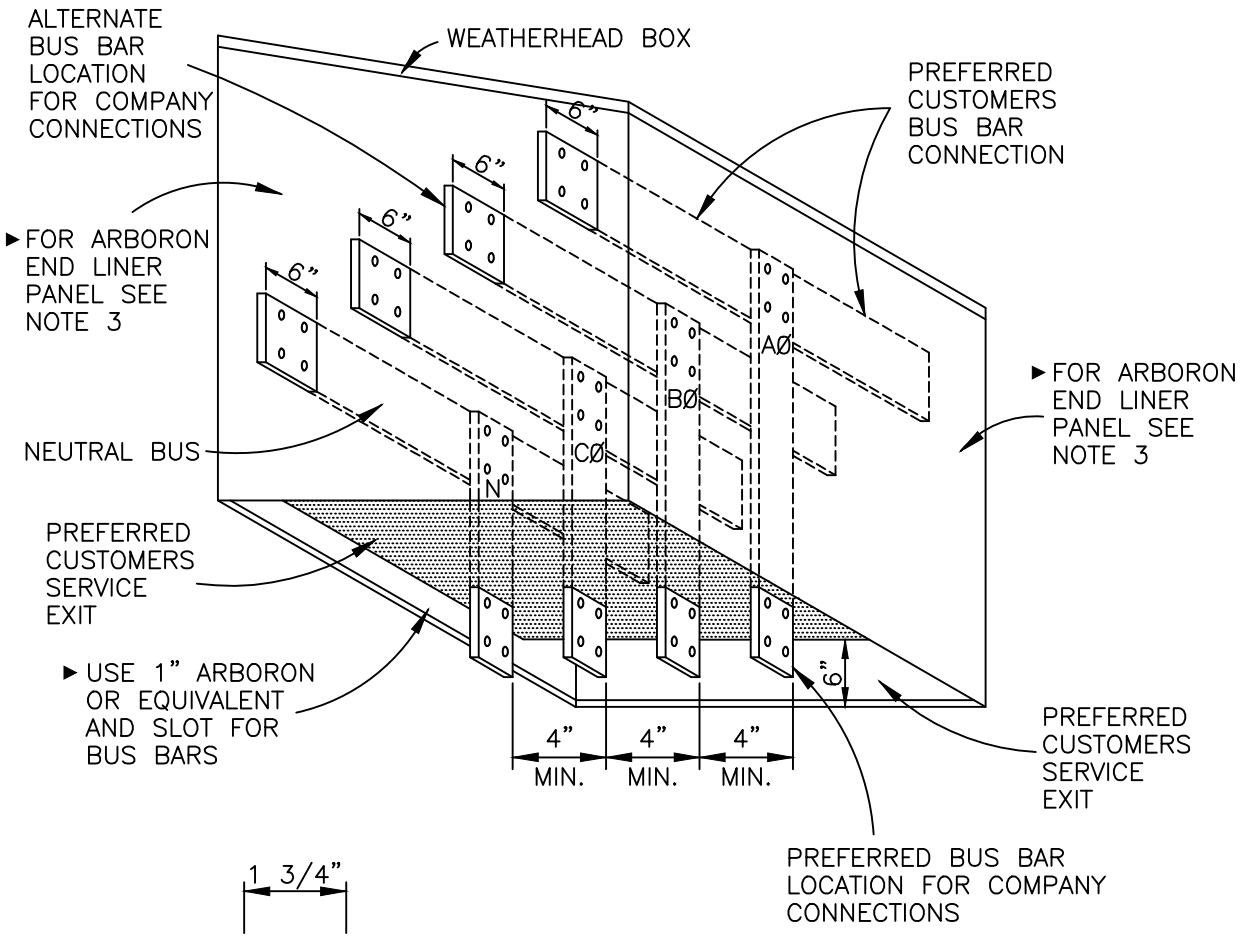
The single phase fault values are calculated from phase-to-neutral **/** phase-to-phase (phase to neutral is shown first).

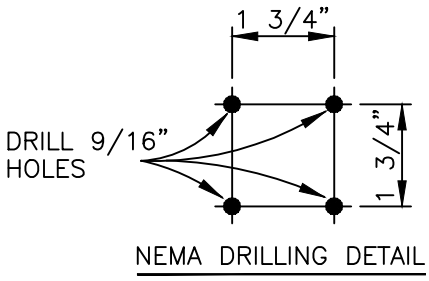
MAXIMUM AVAILABLE CALCULATED FAULT CURRENTS

REV 6-6-17

GB7-060

aes Indiana





NEMA DRILLING DETAIL

NOTES:

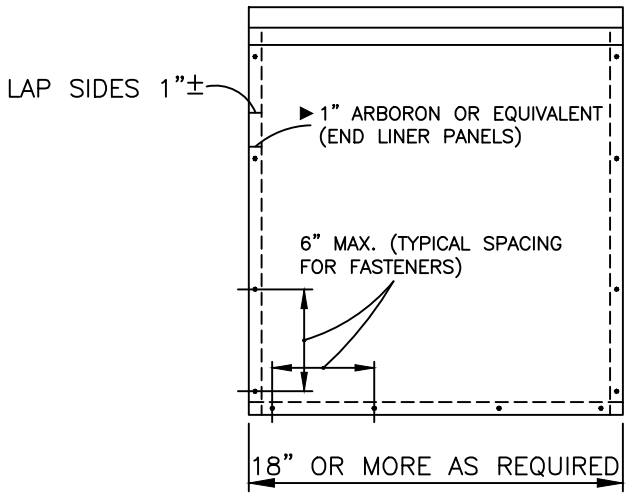
1. MINIMUM SIZE 1/4" x 3" BUS BAR PER PHASE OR AS REQUIRED.
2. PROVIDE NEMA DRILLING IN BUS BARS FOR CONNECTION OF CABLE LUGS. SEE DETAIL.
3. ▶ USE 1" ARBORON OR EQUIVALENT ON END LINER PANELS. IF BUS BARS PROTRUDE THRU BOTTOM OR SIDE OF CABINET THEY SHALL BE ADEQUATELY FASTENED TO PREVENT MOVEMENT.
4. SPREAD LOAD CONDUCTORS ON BUS BARS TO EQUALIZE CURRENT FLOW. LARGE SERVICES CAN BE IN METAL DUCTS, CONDUIT OR BUS DUCT AS REQUIRED. COMPANY TO FURNISH CONNECTORS TO ATTACH COMPANY SERVICE TO BUS.
5. FOR BOX FABRICATION DETAILS SEE DRAWING GB7–080
6. DESIGN FOR AVAILABLE FAULT CURRENT.
7. THE COMPLETE INSTALLATION SHALL BE SUBJECT TO APPROVAL OF THE COMPANY'S ENGINEERING DEPARTMENT.

TYPICAL WEATHERHEAD BOX INTERIOR DETAILS 600 VOLTS AND BELOW, 3 PHASE ONLY

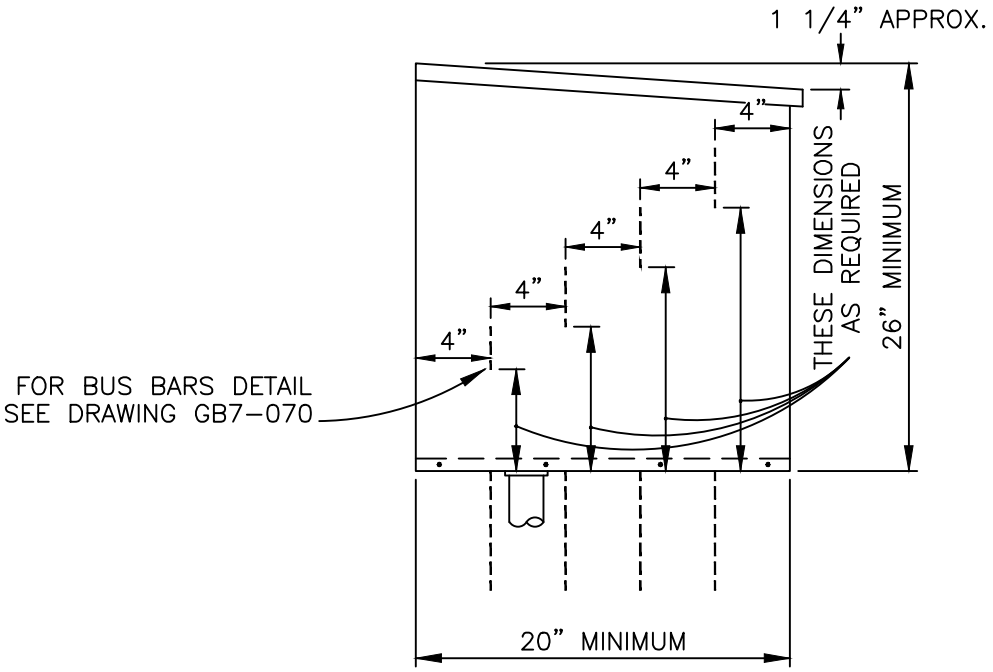
REV 2–27–96

GB7-070

aes Indiana



FRONT FACE



END VIEW

NOTES :

▶1. 1" ARBORON OR EQUIVALENT END LINER PANELS. SLOT TO 3/4" DEPTH TO RECEIVE BUS BARS.

2. 12 GAGE SHEET METAL SHALL BE USED.

3. STEEL JUNCTION BOX SHALL BE GALVANIZED OR SHOP PAINTED WITH A RUST INHIBITING PAINT INSIDE AND OUTSIDE AFTER FABRICATION. ANY HOLE OR HOLES DRILLED AFTER GALVANIZING OR PAINTING SHALL BE TREATED WITH RUST INHIBITING PAINT.

4. IF REMOVABLE FRONT, IT MUST BE SUITABLE FOR WET LOCATIONS.

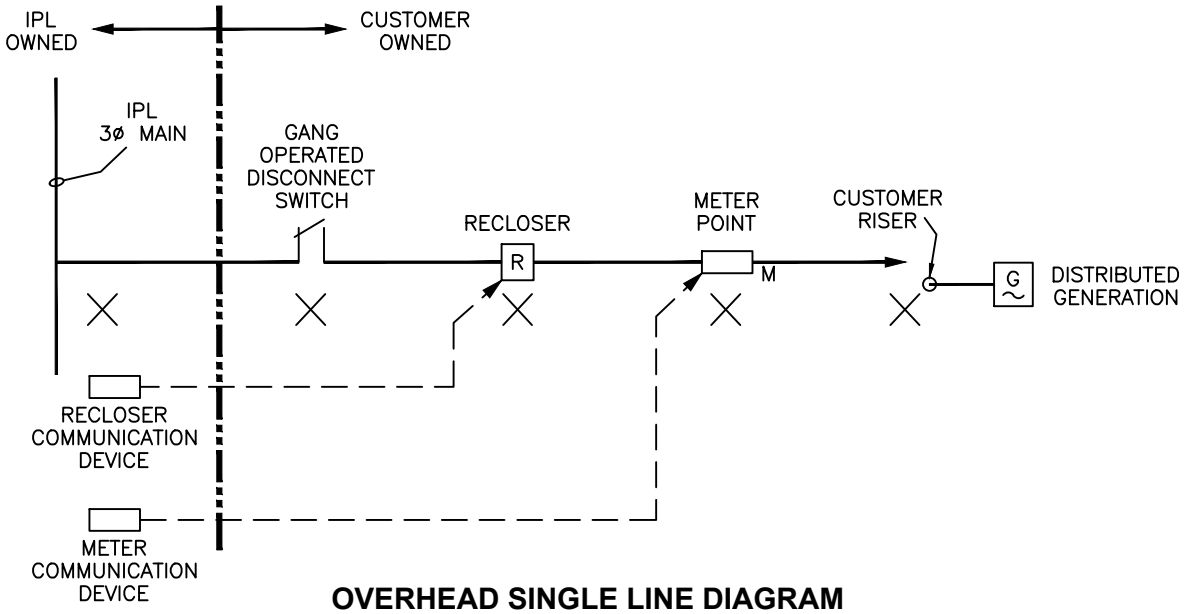
5. DESIGN FOR AVAILABLE FAULT CURRENTS.

6. IDENTIFY RISERS FOR VARIOUS CUSTOMERS BY SERVICE ADDRESS WITH WEATHER PROOF MARKINGS.

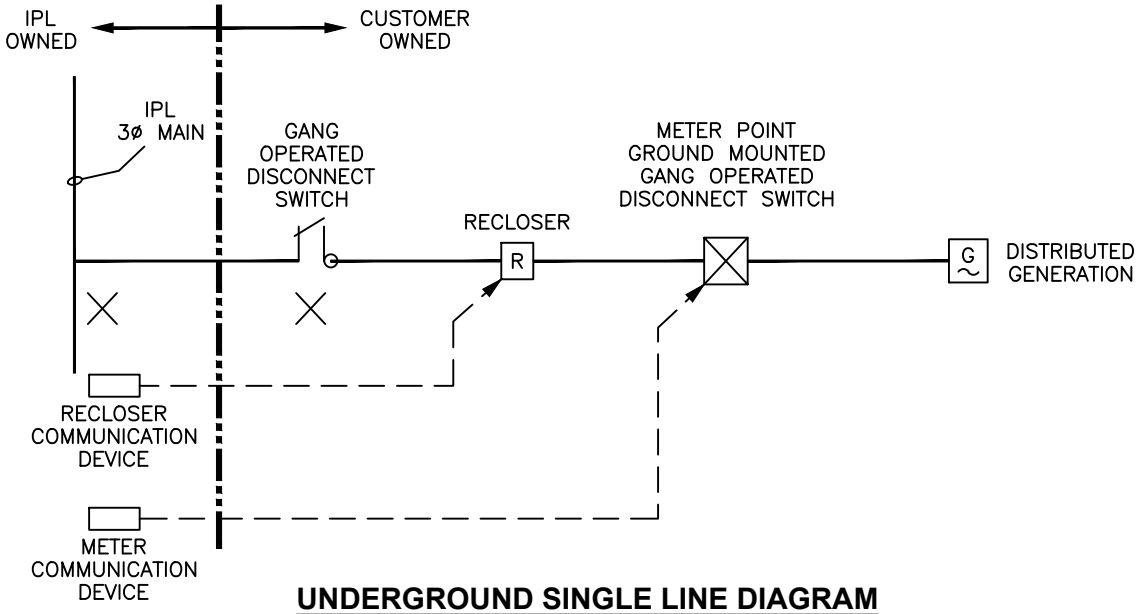
TYPICAL WEATHERHEAD BOX FABRICATION DETAILS 600 VOLTS AND BELOW, 3 PHASE ONLY

ALL RENEWABLE ENERGY GENERATORS WITH 4.1KV OR 13.2KV INTERCONNECTIONS MUST HAVE A GANG OPERATED DISCONNECT SWITCH, RECLOSER, AND A 4.1KV OR 13.2KV METER POINT, BETWEEN THE IPL DISTRIBUTION CIRCUIT AND THE RENEWABLE GENERATION.

SEE ELECTRIC SERVICE AND METER MANUAL SECTION 175



OVERHEAD SINGLE LINE DIAGRAM



UNDERGROUND SINGLE LINE DIAGRAM

NOTES:

1. DISTRIBUTED GENERATION INTERCONNECTION GREATER THAN 1500KVA MUST BE CONNECTED AT PRIMARY VOLTAGE LEVEL.
2. DISTRIBUTED GENERATION INTERCONNECTION 500KVA OR GREATER MAY HAVE A FIBER COMMUNICATIONS TIE TO AN IPL SUBSTATION.

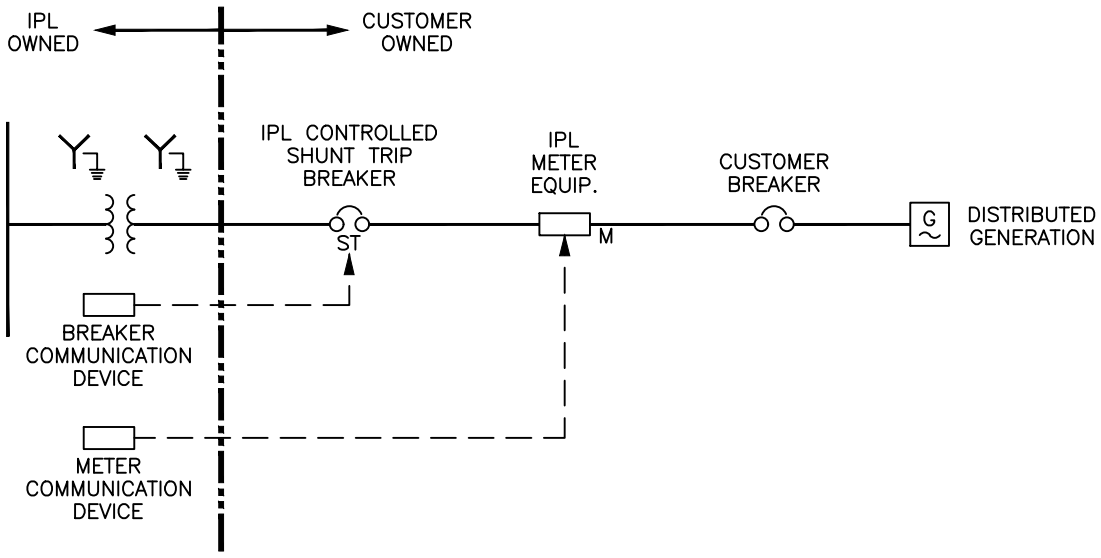
4.1 KV OR 13.2 KV DISTRIBUTION INTERCONNECTION ONE-LINE

REV 2–20–13

GB7-090

ALL RENEWABLE ENERGY GENERATORS 500KVA TO 1500KVA WITH SECONDARY 208V Y OR 480V Y INTERCONNECTIONS MUST HAVE A REMOTELY OPERATED SHUNT TRIP BREAKER, METER POINT AND CUSTOMER CONTROLLED DISCONNECT BREAKER.

SEE ELECTRIC SERVICE AND METER MANUAL SECTION 175



UNDERGROUND/OVERHEAD SINGLE LINE DIAGRAM

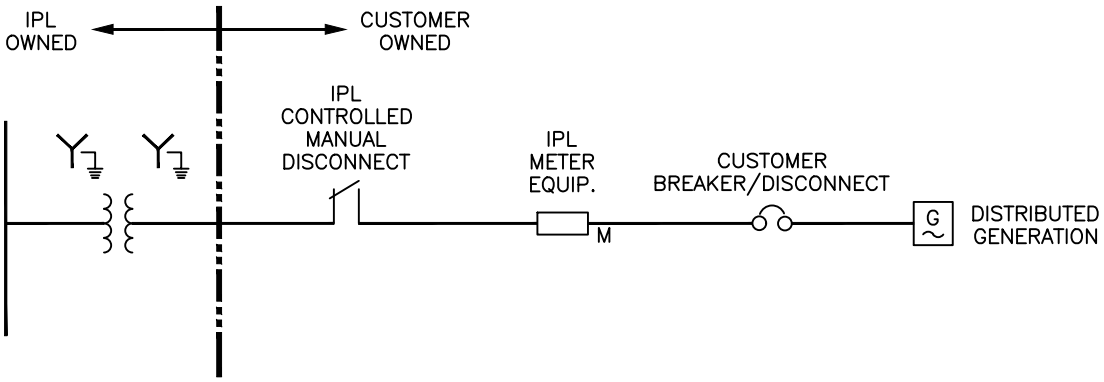
NOTES:

1. ANY DISTRIBUTED GENERATION INTERCONNECTION GREATER THAN 1500KVA MUST BE CONNECTED AT PRIMARY VOLTAGE LEVEL.
2. NO DISTRIBUTED GENERATION INTERCONNECTION SHALL BE MADE TO DELTA CONNECTED SECONDARY TRANSFORMER CONFIGURATIONS.
3. THE TRANSFORMER, ASSOCIATED LINES AND COMMUNICATIONS DEVICES, SPECIFICALLY FOR SOLAR GENERATION, WILL BE LEASED TO THE CUSTOMER.

208V OR 480V 3-PHASE SECONDARY DISTRIBUTION INTERCONNECTION ONE-LINE 500KVA TO 1500KVA

ALL RENEWABLE ENERGY GENERATORS LESS THAN 500KVA WITH SECONDARY 208V Y OR 480V Y INTERCONNECTIONS MUST HAVE AN IPL CONTROLLED MANUAL DISCONNECT, METER POINT AND CUSTOMER CONTROLLED DISCONNECT BREAKER.

SEE ELECTRIC SERVICE AND METER MANUAL SECTION 175



UNDERGROUND/OVERHEAD SINGLE LINE DIAGRAM

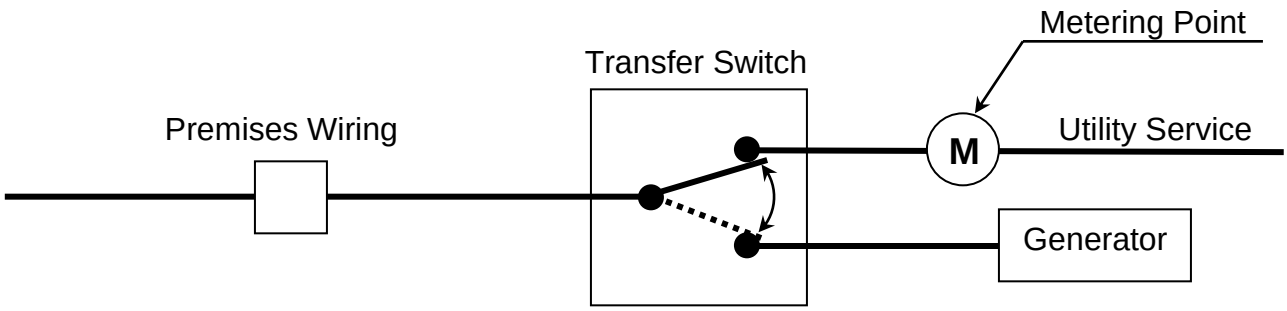
NOTES:

1. ANY DISTRIBUTED GENERATION INTERCONNECTION GREATER THAN 1500KVA MUST BE CONNECTED AT PRIMARY VOLTAGE LEVEL.
2. NO DISTRIBUTED GENERATION INTERCONNECTION SHALL BE MADE TO DELTA CONNECTED SECONDARY TRANSFORMER CONFIGURATIONS.
3. THE TRANSFORMER, ASSOCIATED LINES AND COMMUNICATIONS DEVICES, SPECIFICALLY FOR SOLAR GENERATION, WILL BE LEASED TO THE CUSTOMER.

208V OR 480V 3-PHASE SECONDARY DISTRIBUTION INTERCONNECTION ONE-LINE LESS THAN 500KVA

All systems that have a generator connection shall have a transfer switch to positively eliminate feedback into the source system. The switch shall not allow both sources to be connected together. However, Section 175B may be used for Auxiliary Power Installations for Interconnected Operation if the proper approval and agreements are obtained. This requirement is in accordance with the Indiana Electrical Code, Sections 700.6, 701.7, and 702.6.

See the Electric Service and Meter Manual Section 175



Single Line Diagram
(This is for a typical installation)

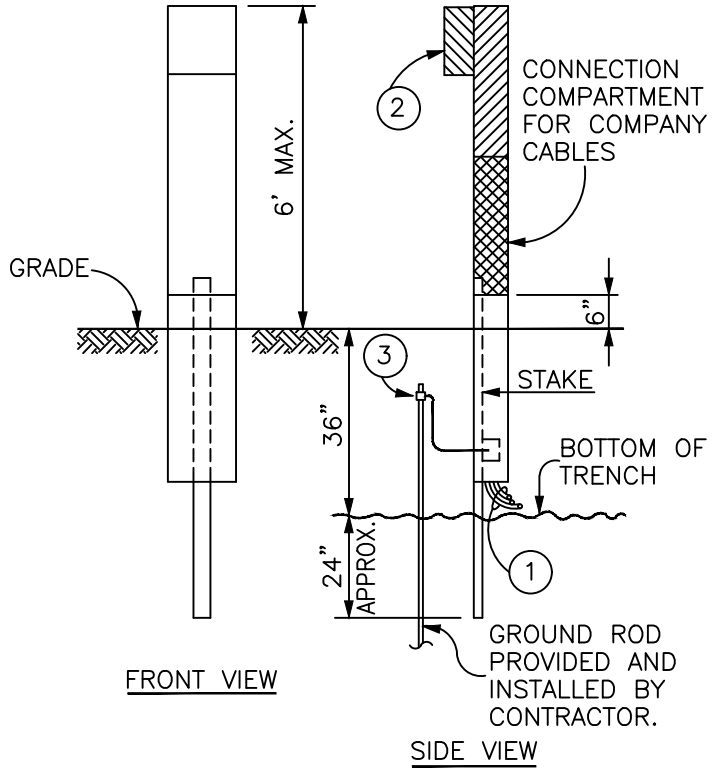
A sign shall be placed at the service-entrance equipment indicating the type and location of on-site standby power sources. Indiana Electrical Code, Sections 700.8, 701.9, and 702.8.

TRANSFER SWITCH REQUIRED FOR BACKUP GENERATION

GB8 SERIES OF DRAWINGS

(FOR THE USE OF GOVERNMENT AGENCIES ONLY)

DANGER: DO NOT DRILL OR TAP HOLES IN PEDESTAL.

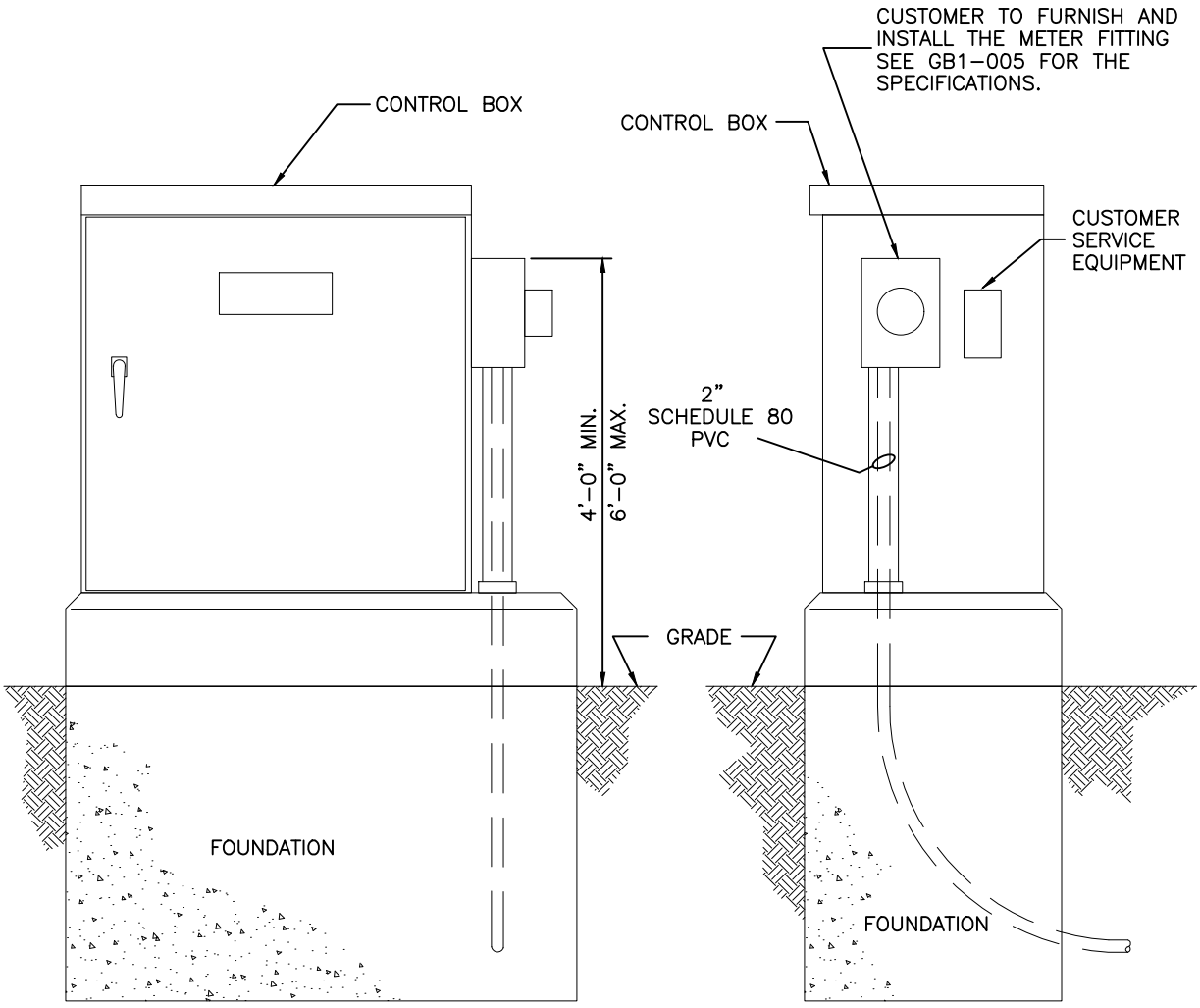


NOTES:

1. COMPANY SERVICE CABLE.
2. COMPARTMENT FOR CUSTOMER'S SERVICE EQUIPMENT WITH SERVICE SIZED FOR THE MAXIMUM LOAD.
3. THE CONTRACTOR SHALL GROUND THE SERVICE FACILITIES. THE CONTRACTOR SHALL DRIVE THE GROUND ROD(S) ON SERVICE SIDE OF PEDESTAL TO AVOID COMPANY CABLES. THE COMPANY WILL CONNECT THE GROUNDING ELECTRODE CONDUCTOR TO THE NEUTRAL AND EQUIPMENT GROUND IN CONNECTION COMPARTMENT.
4. THE PEDESTAL TO BE SUPPLIED BY CUSTOMER.

NON-METERED
1 PHASE SERVICE INSTALLATION
120/240 V, 1 PHASE, 3 WIRE
225 A MAXIMUM SERVICE
120/208 V, 1 PHASE, 3 WIRE
125 A MAXIMUM SERVICE

aes Indiana



FRONT VIEW **SIDE VIEW**

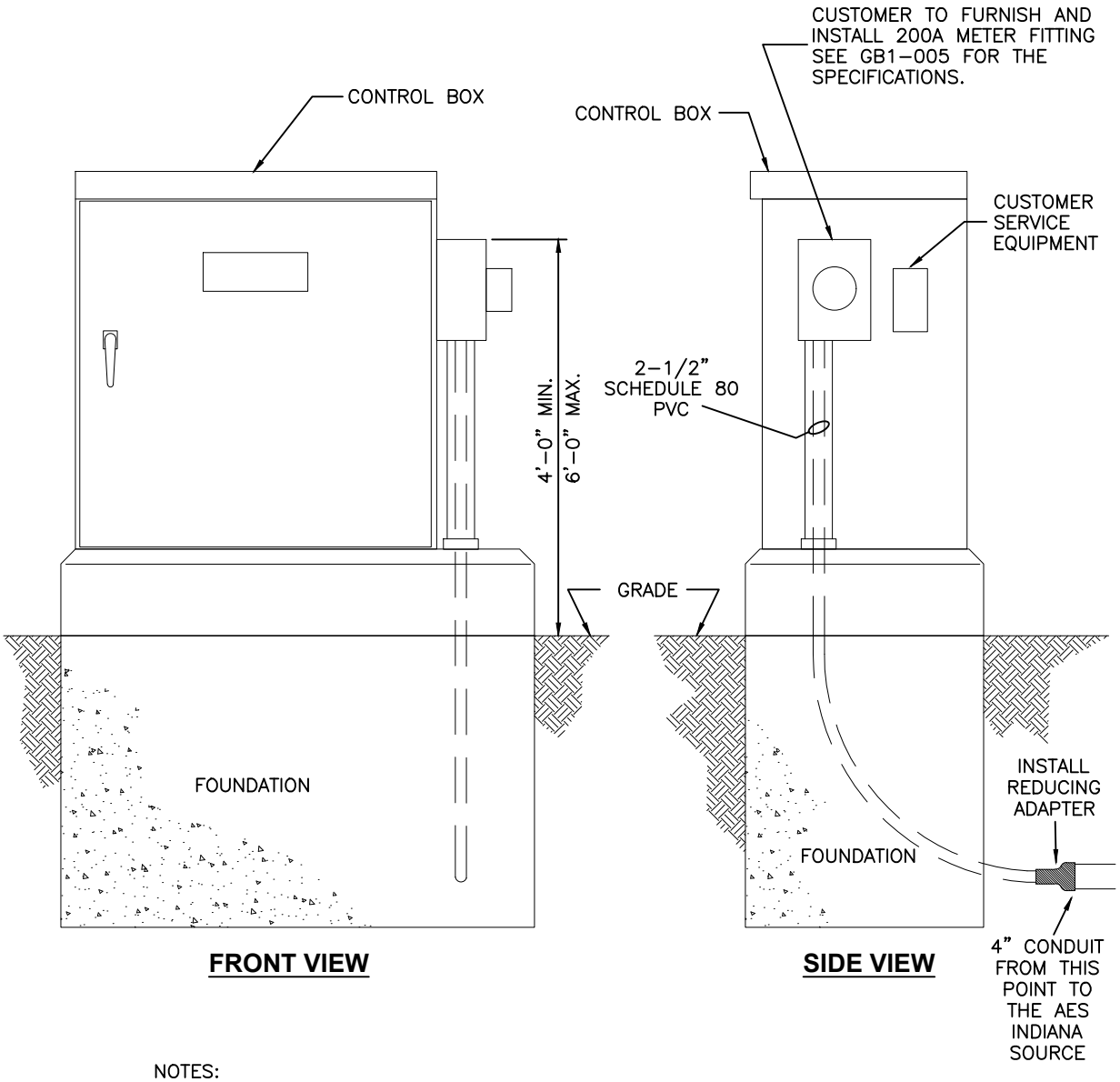
NOTES:

1. ALL EQUIPMENT EXCEPT THE SERVICE CABLE SHALL BE PROVIDED BY THE CUSTOMER.
2. ALL EQUIPMENT EXCEPT THE SERVICE CABLE SHALL BE INSTALLED BY THE CUSTOMER.
3. ▶ CONDUIT IS TO BE EXTENDED TO THE AES INDIANA SOURCE WITH NO MORE THAN 360° OF BENDS.
   * 2" CONDUIT MAXIMUM LENGTH = 200'
   * PULLSTRING TO BE INSTALLED BY CUSTOMER.
4. ▶ SERVICE CABLE WILL BE #6AL, 3/C.
5. ▶ DO NOT USE THE CENTER POSITION FOR AES INDIANA CABLE.

SINGLE METER INSTALLATION
▶ 3 WIRE, 120/240 V, 60 A ONLY
▶ 3 WIRE, 120/208 V, 60 A ONLY

REV 12-19-22

GB8-020



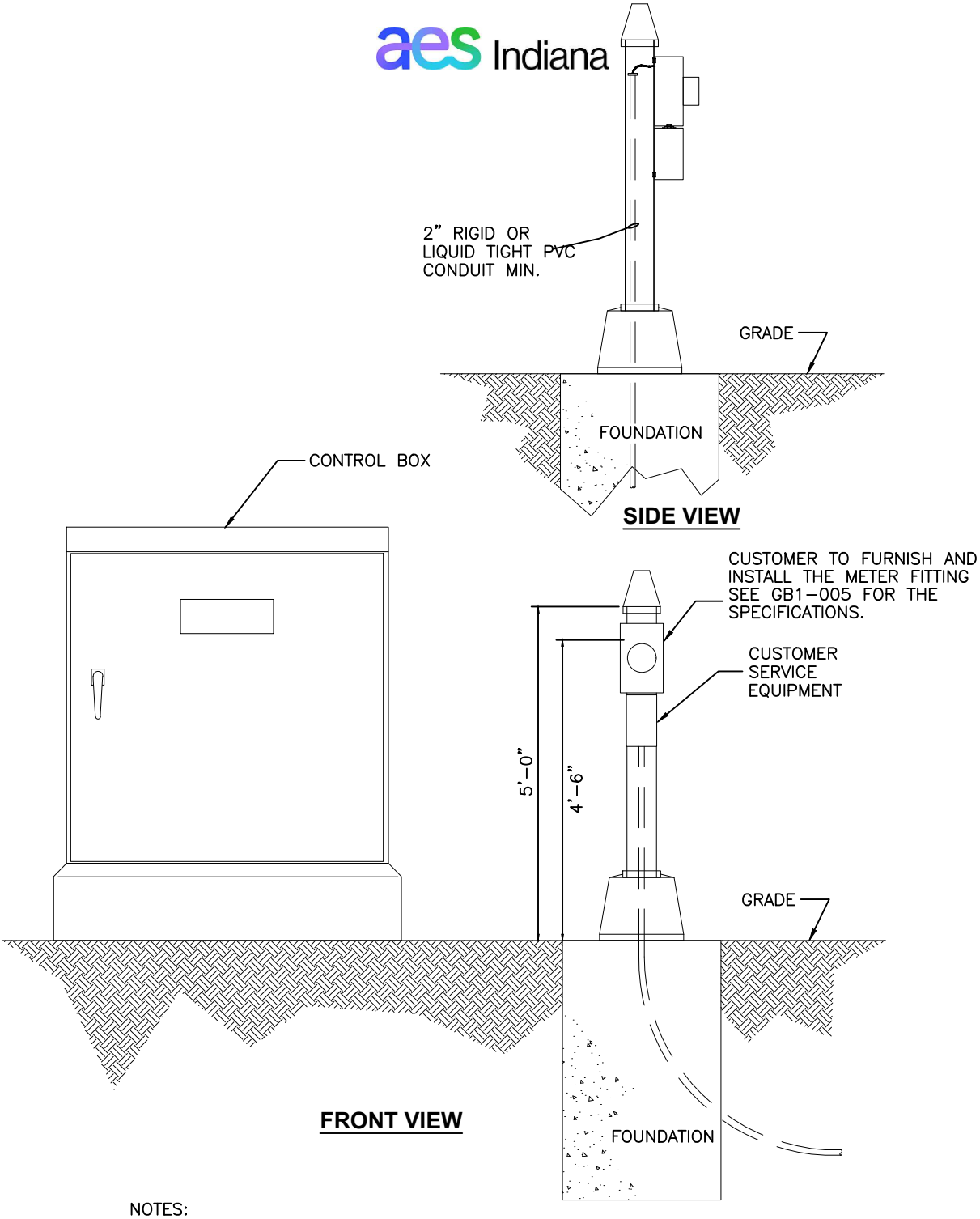
NOTES:

1. ALL EQUIPMENT EXCEPT THE SERVICE CABLE SHALL BE PROVIDED BY THE CUSTOMER.
2. ALL EQUIPMENT EXCEPT THE SERVICE CABLE SHALL BE INSTALLED BY THE CUSTOMER.
3. CONDUIT IS TO BE EXTENDED TO THE AES INDIANA SOURCE WITH NO MORE THAN 360° OF BENDS.
   * 4" CONDUIT MAXIMUM LENGTH = 200'
   * PULLSTRING TO BE INSTALLED BY CUSTOMER.
4. SERVICE CABLE WILL NORMALLY BE #2AL,3 /C.
5. DO NOT USE THE CENTER POSITION FOR AES INDIANA CABLE.

SINGLE METER INSTALLATION
3 WIRE, 120/240 V, 100 A MAX.
3 WIRE, 120/208 V, 100 A MAX.

REV NEW 12–19–22

GB8-021



NOTES:

1. ALL EQUIPMENT EXCEPT THE SERVICE CABLE SHALL BE PROVIDED BY THE CUSTOMER.

2. ALL EQUIPMENT EXCEPT THE SERVICE CABLE SHALL BE INSTALLED BY THE CUSTOMER.

▶ 3. CONDUIT IS TO BE EXTENDED TO THE AES INDIANA SOURCE WITH NO MORE THAN 360° OF BENDS.
   * 2" CONDUIT MAXIMUM LENGTH = 200'
   * PULLSTRING TO BE INSTALLED BY CUSTOMER.

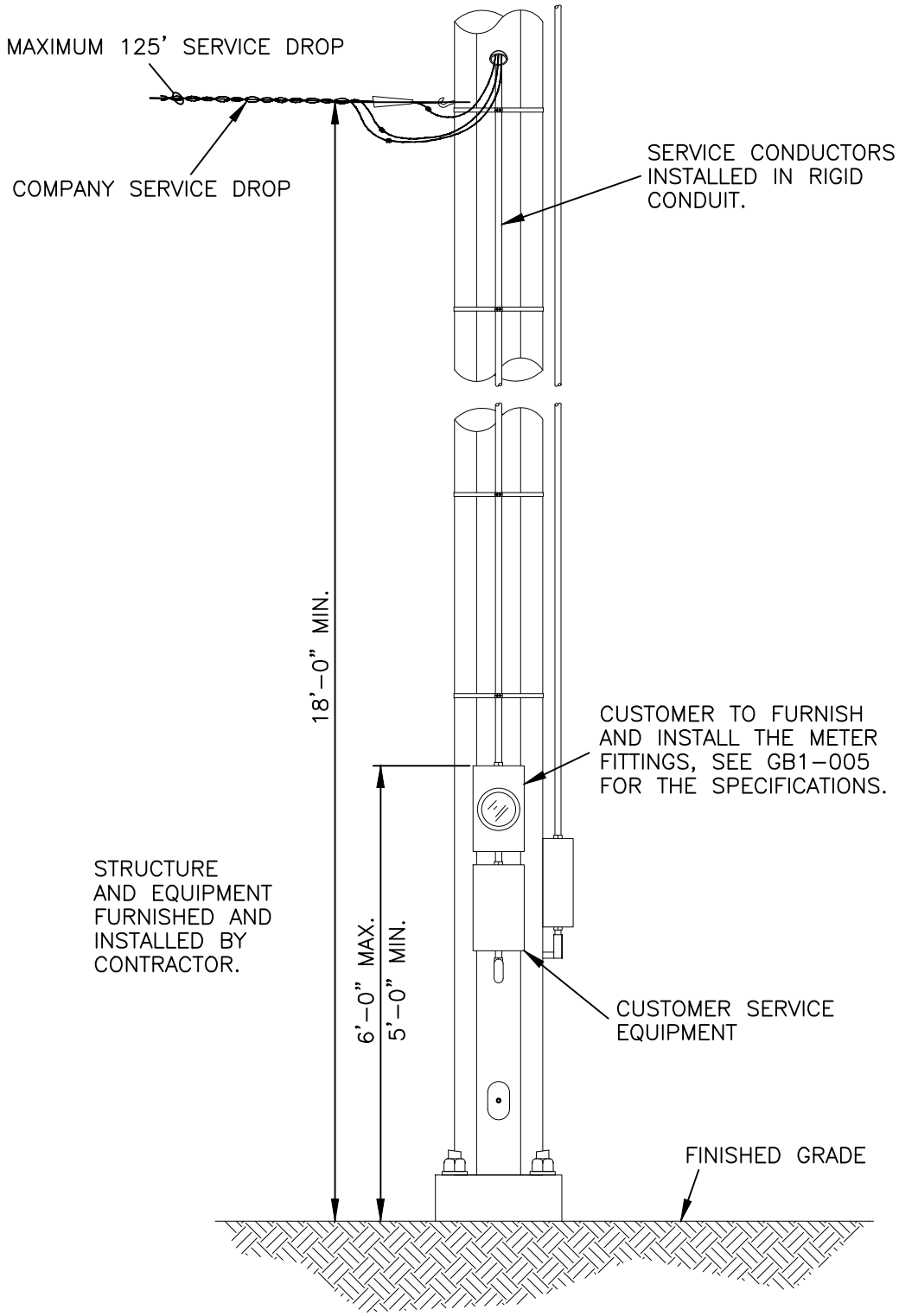
▶ 4. SERVICE CABLE WILL BE #6AL, 3/C.

SINGLE METER INSTALLATION
▶3 WIRE, 120/240 V, 60 A ONLY
▶3 WIRE, 120/208 V, 60 A ONLY

REV 12-19-22

GB8-030

aes Indiana

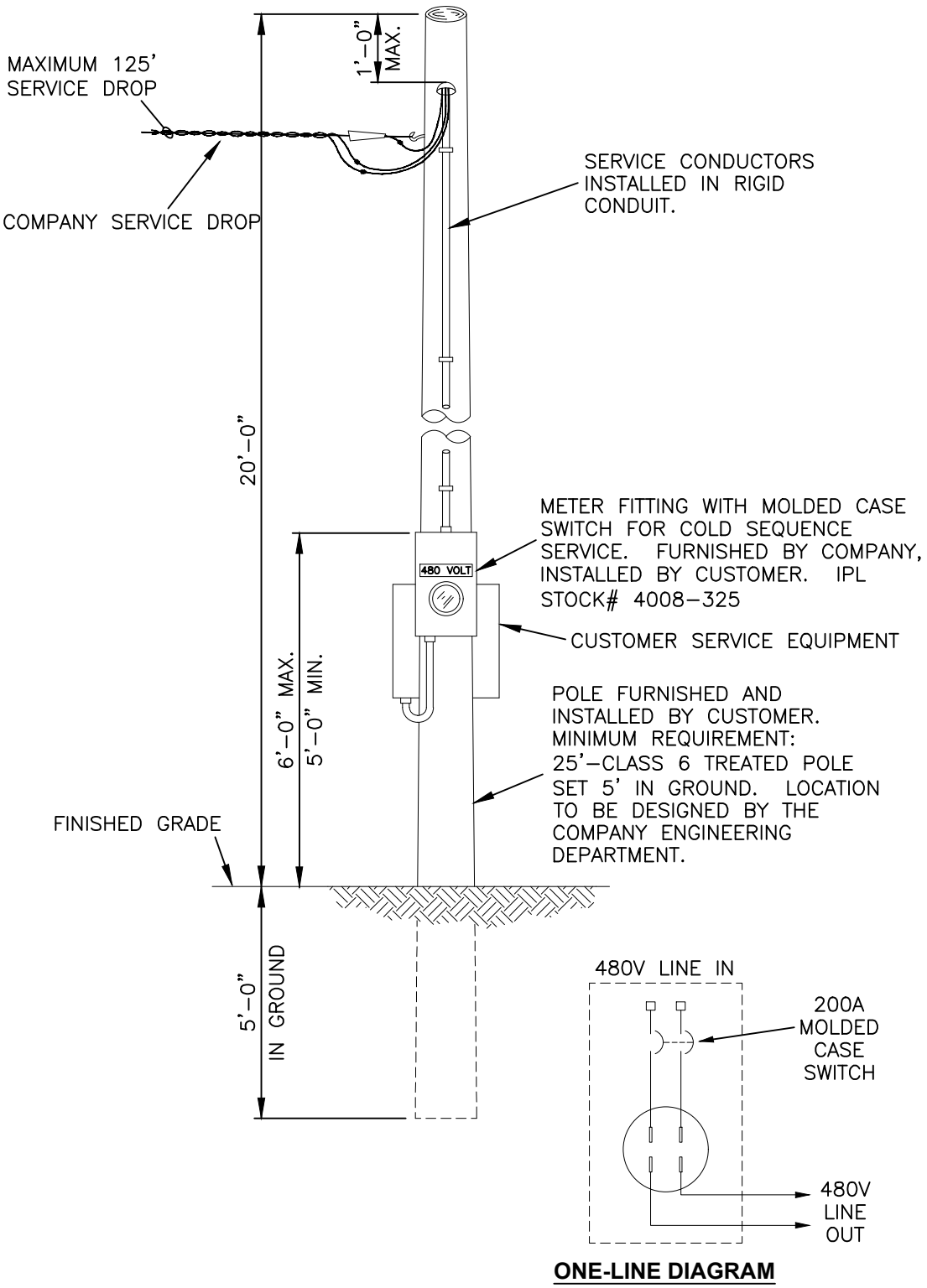


PERMANENT TRAFFIC SIGNAL METER INSTALLATION FOR ONE SERVICE 120/240 VOLT, 1 PHASE, 3 WIRE 200 A MAXIMUM SERVICE

REV NEW 5-21-12

GB8-035

aes Indiana



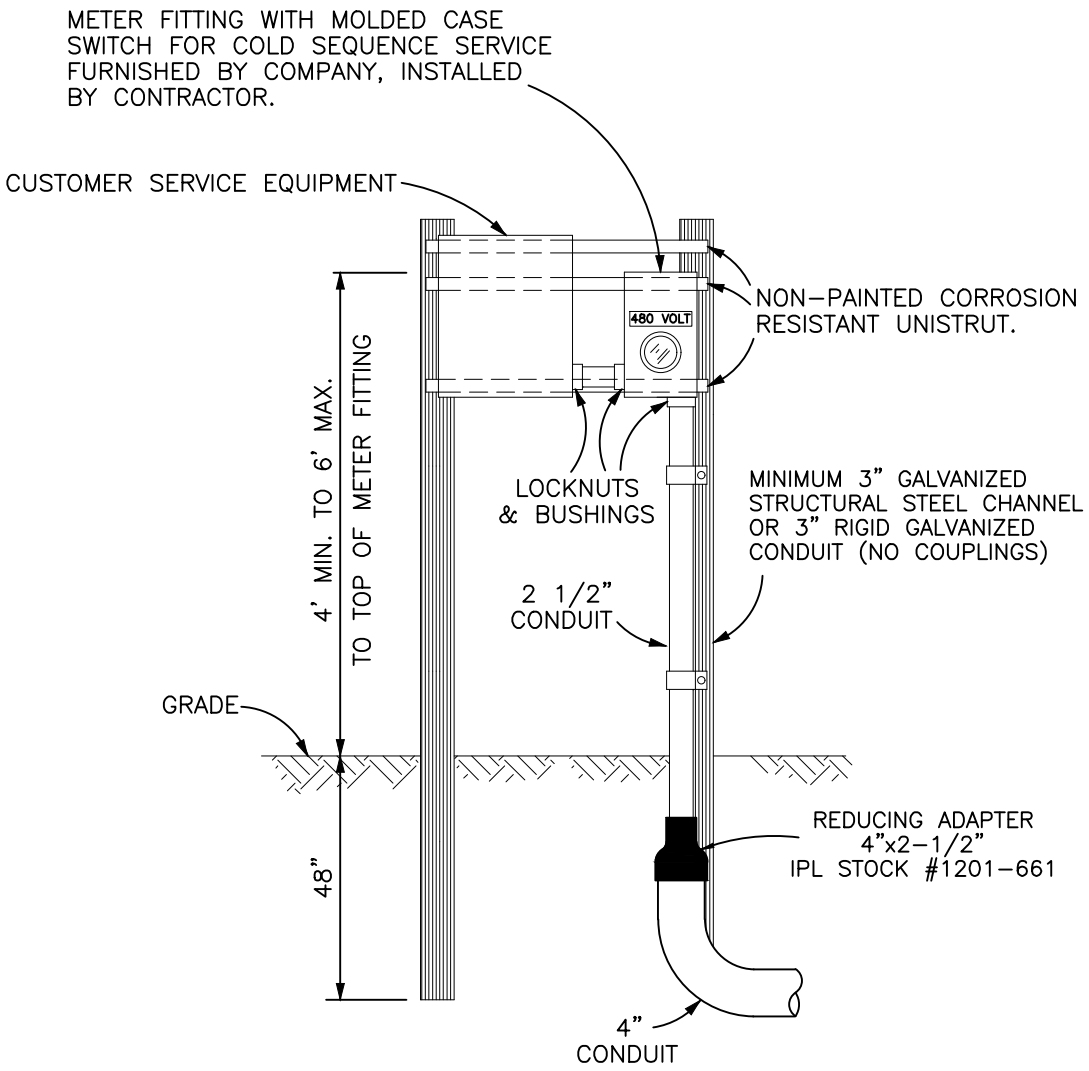
ONE-LINE DIAGRAM

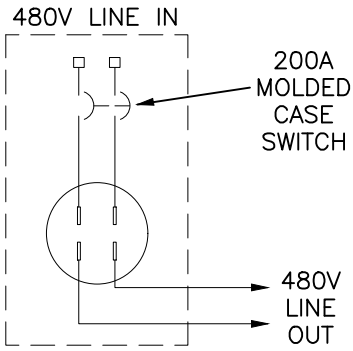
PERMANENT POLE METER INSTALLATION
200 A, 240/480 V, 1 PHASE, 3 WIRE

REV 3-7-22

GB8-040

aes Indiana





ONE-LINE DIAGRAM

NOTES:

1. THE CONTRACTOR SHALL GROUND THE SERVICE FACILITIES. THE CONTRACTOR SHALL DRIVE THE GROUND ROD(S) TO AVOID COMPANY CABLES.

FREE STANDING - UNDERGROUND INSTALLATION FOR 200 A, 240/480 VOLT, 1 PHASE, 3 WIRE

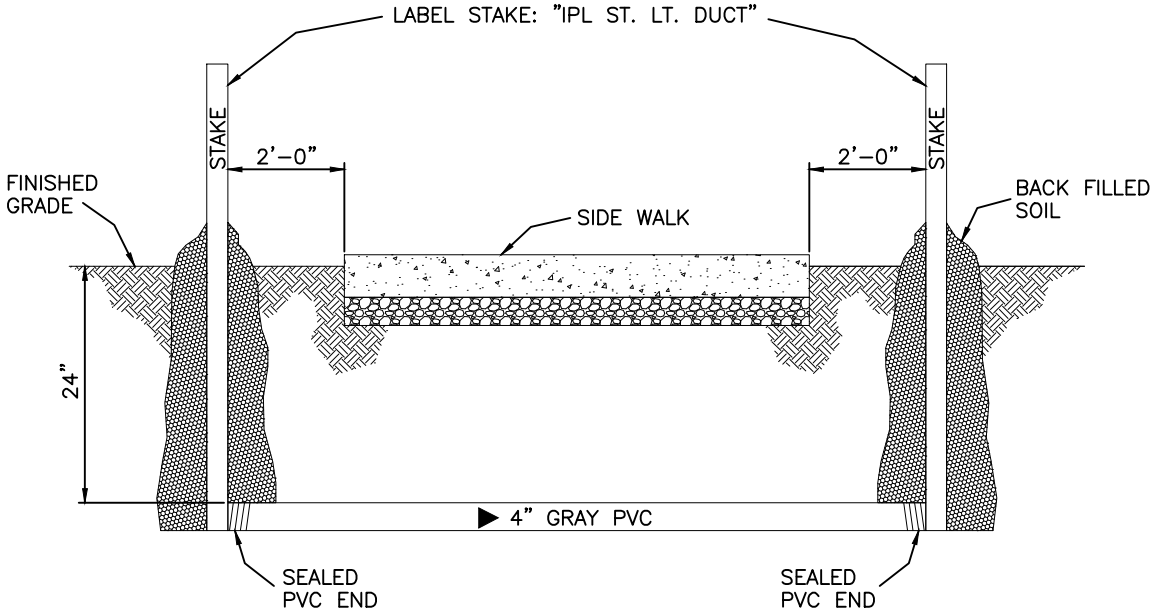
REV 3–7–22

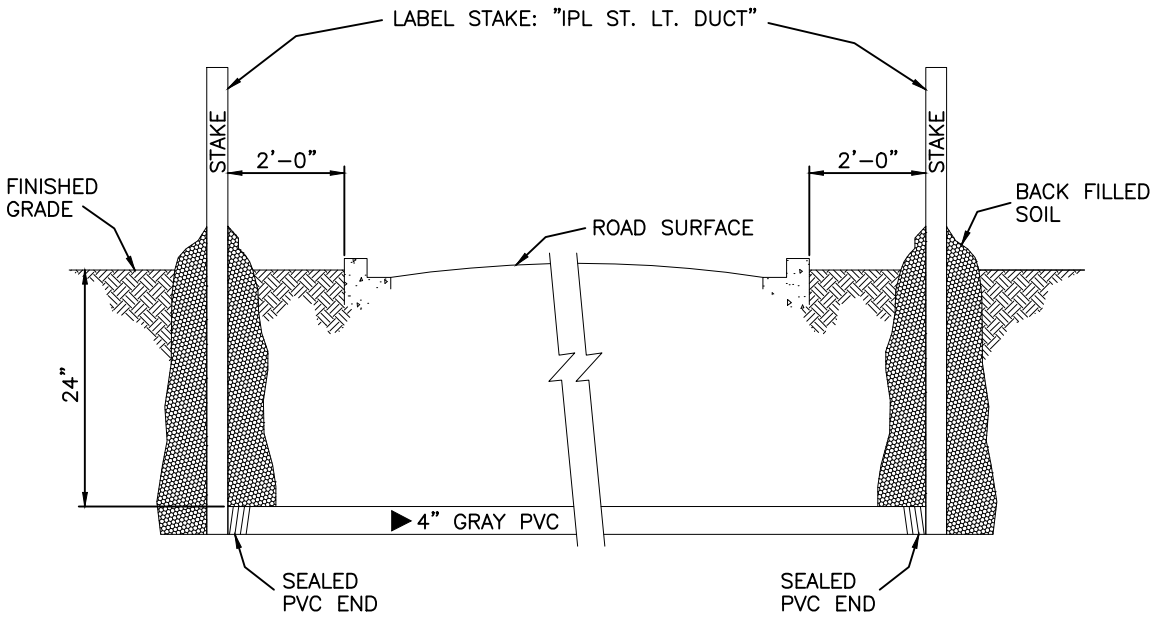
GB8-050

aes Indiana

▼

THE CONDUITS SHALL BE 4 INCH GRAY PVC BURIED AT A MINIMUM OF 24 INCHES, UNLESS A CONFLICT WITH OTHER UNDERGROUND FACILITIES FORCE IT TO A MINIMUM OF 18 INCHES. SEAL THE ENDS OF THE CONDUIT TO KEEP DIRT OUT. THE CONDUIT SHALL EXTEND 1 FOOT BEYOND THE EDGE OF THE OBSTRUCTING SURFACE AT EACH END. ALSO, MARK EACH END OF THE CONDUITS WITH A STAKE LABELED "IPL ST. LT. DUCT". (SEE EXAMPLES PICTURED BELOW)



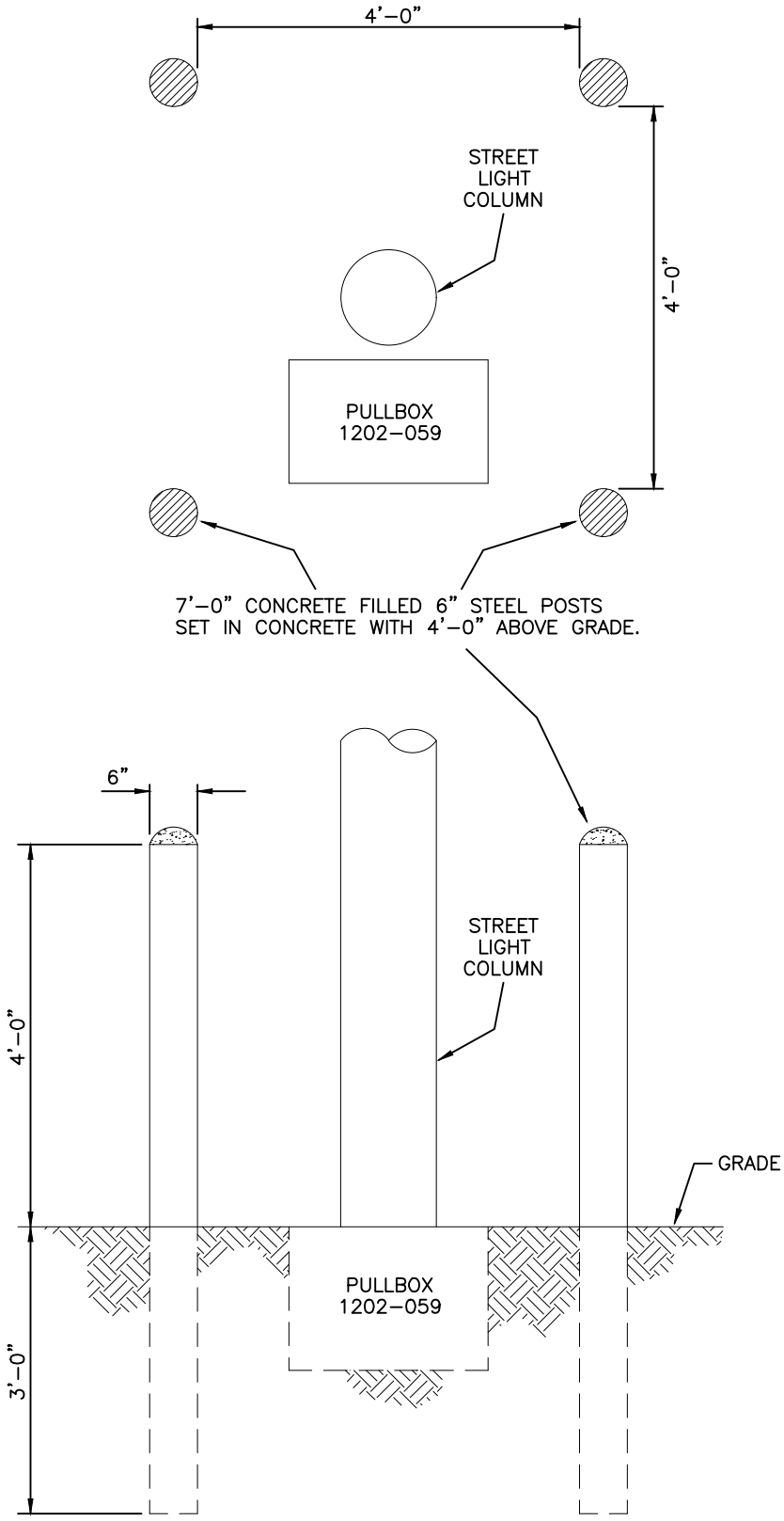


STREET LIGHT DUCTS INSTALLED FOR IPL USE

REV 12–8–14

GB8-070

aes Indiana



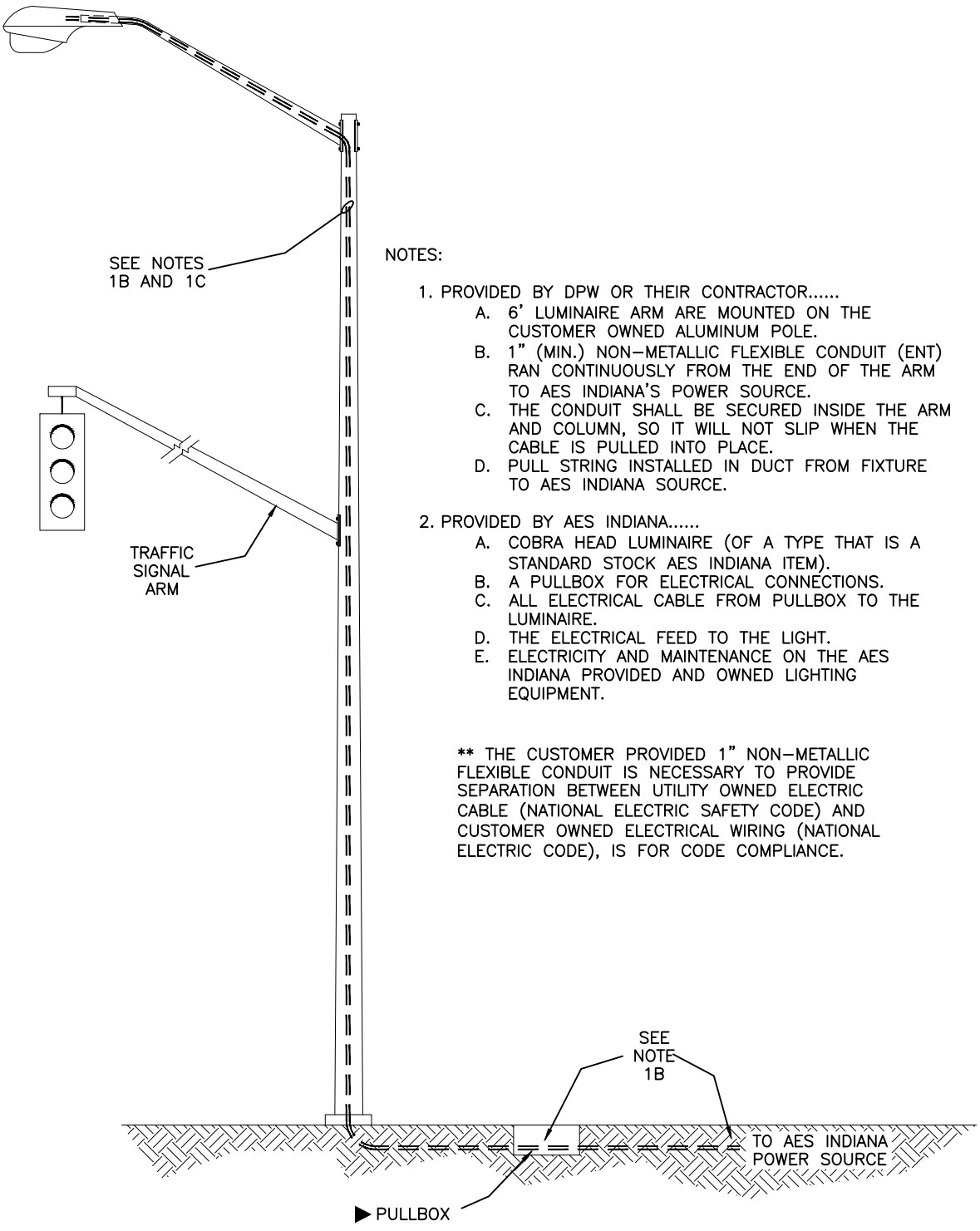
NOTE:

CUSTOMER SHALL FURNISH, INSTALL AND MAINTAIN PROTECTIVE POSTS WHERE COLUMN IS EXPOSED TO VEHICULAR DAMAGE.

PROTECTIVE POSTS FOR LIGHT COLUMNS

REV NEW 4–26–10

GB8-080



NOTES:

1. PROVIDED BY DPW OR THEIR CONTRACTOR.....
   - A. 6' LUMINAIRE ARM ARE MOUNTED ON THE CUSTOMER OWNED ALUMINUM POLE.
   - B. 1" (MIN.) NON-METALLIC FLEXIBLE CONDUIT (ENT) RAN CONTINUOUSLY FROM THE END OF THE ARM TO AES INDIANA'S POWER SOURCE.
   - C. THE CONDUIT SHALL BE SECURED INSIDE THE ARM AND COLUMN, SO IT WILL NOT SLIP WHEN THE CABLE IS PULLED INTO PLACE.
   - D. PULL STRING INSTALLED IN DUCT FROM FIXTURE TO AES INDIANA SOURCE.

2. PROVIDED BY AES INDIANA.....
   - A. COBRA HEAD LUMINAIRE (OF A TYPE THAT IS A STANDARD STOCK AES INDIANA ITEM).
   - B. A PULLBOX FOR ELECTRICAL CONNECTIONS.
   - C. ALL ELECTRICAL CABLE FROM PULLBOX TO THE LUMINAIRE.
   - D. THE ELECTRICAL FEED TO THE LIGHT.
   - E. ELECTRICITY AND MAINTENANCE ON THE AES INDIANA PROVIDED AND OWNED LIGHTING EQUIPMENT.

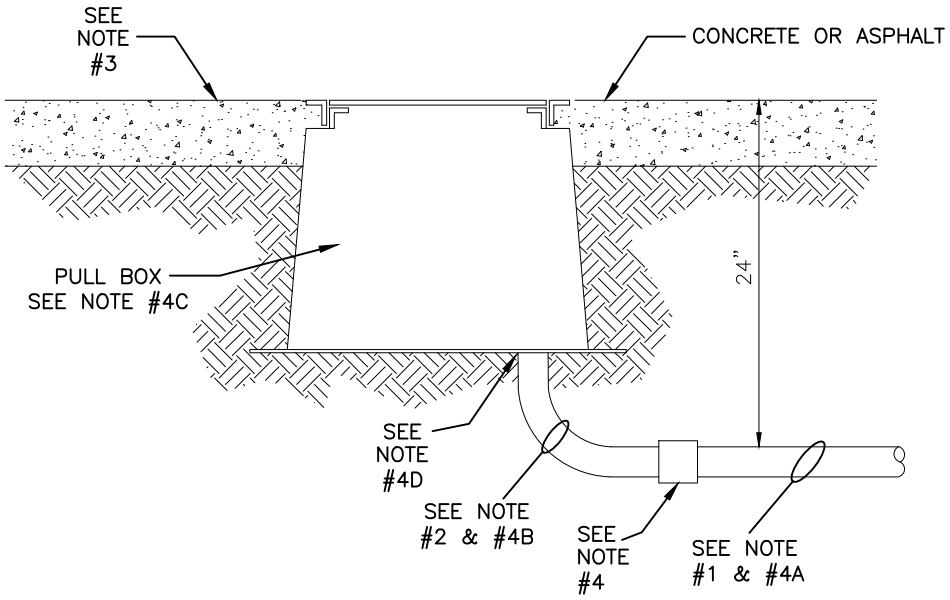
** THE CUSTOMER PROVIDED 1" NON-METALLIC FLEXIBLE CONDUIT IS NECESSARY TO PROVIDE SEPARATION BETWEEN UTILITY OWNED ELECTRIC CABLE (NATIONAL ELECTRIC SAFETY CODE) AND CUSTOMER OWNED ELECTRICAL WIRING (NATIONAL ELECTRIC CODE), IS FOR CODE COMPLIANCE.

DPW TRAFFIC SIGNAL COMBINATION POLES

▶ = REVISION MARK

REV 1-26-23

GB8-085



NOTES:

1. ANY DIRECT BURIED CABLE IS TO BE AT A MINIMUM DEPTH OF 24" UNLESS A CONFLICT WITH OTHER UNDERGROUND FACILITIES FORCES IT TO A MINUMUM OF 18".

2. MAXIMUM OF 4 360° TOTAL BENDS IN THE CONDUIT RUN.

3. IN APPLICATIONS WHERE THE PULL BOX WILL BE SET IN SOIL, THE TOP OF THE PULL BOX SHALL BE AT FINISHED GRADE.

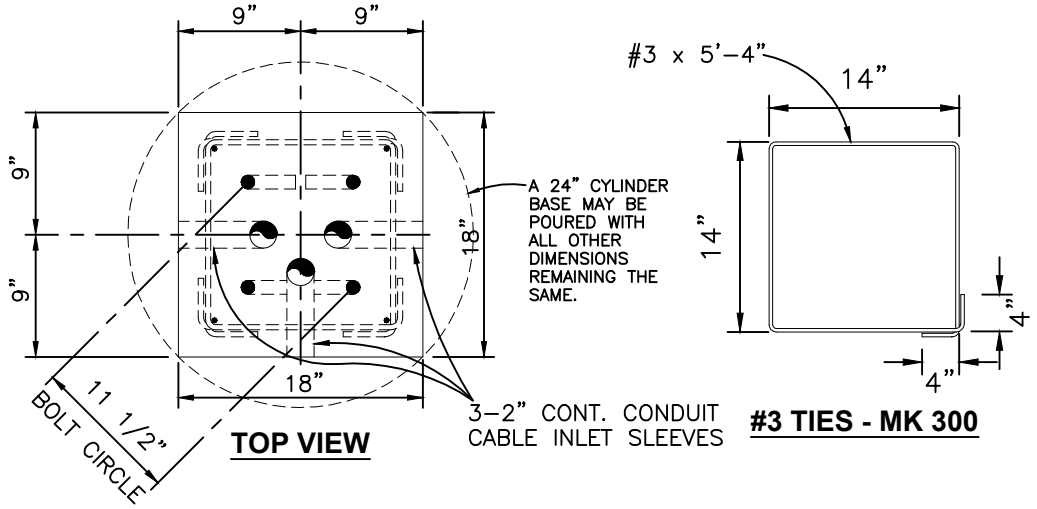
4. ALL JOINTS SHALL BE GLUED IN PLACE WITH A PVC RATED ADHESIVE.
   - A. 2" PVC, PROVIDED AND INSTALLED BY THE CUSTOMER.
   - B. ONLY 18" OR 24" ELBOWS SHALL BE USED.
   - ▶ C. PULL BOX OWNED AND INSTALLED BY AES INDIANA.
   - D. THE END OF THE CONDUIT SHALL BE SEALED TO KEEP DIRT OUT.

INSTALLATION OF CUSTOMER OWNED CONDUIT ▶ INTO AN AES INDIANA PULLBOX

REV 12–19–22

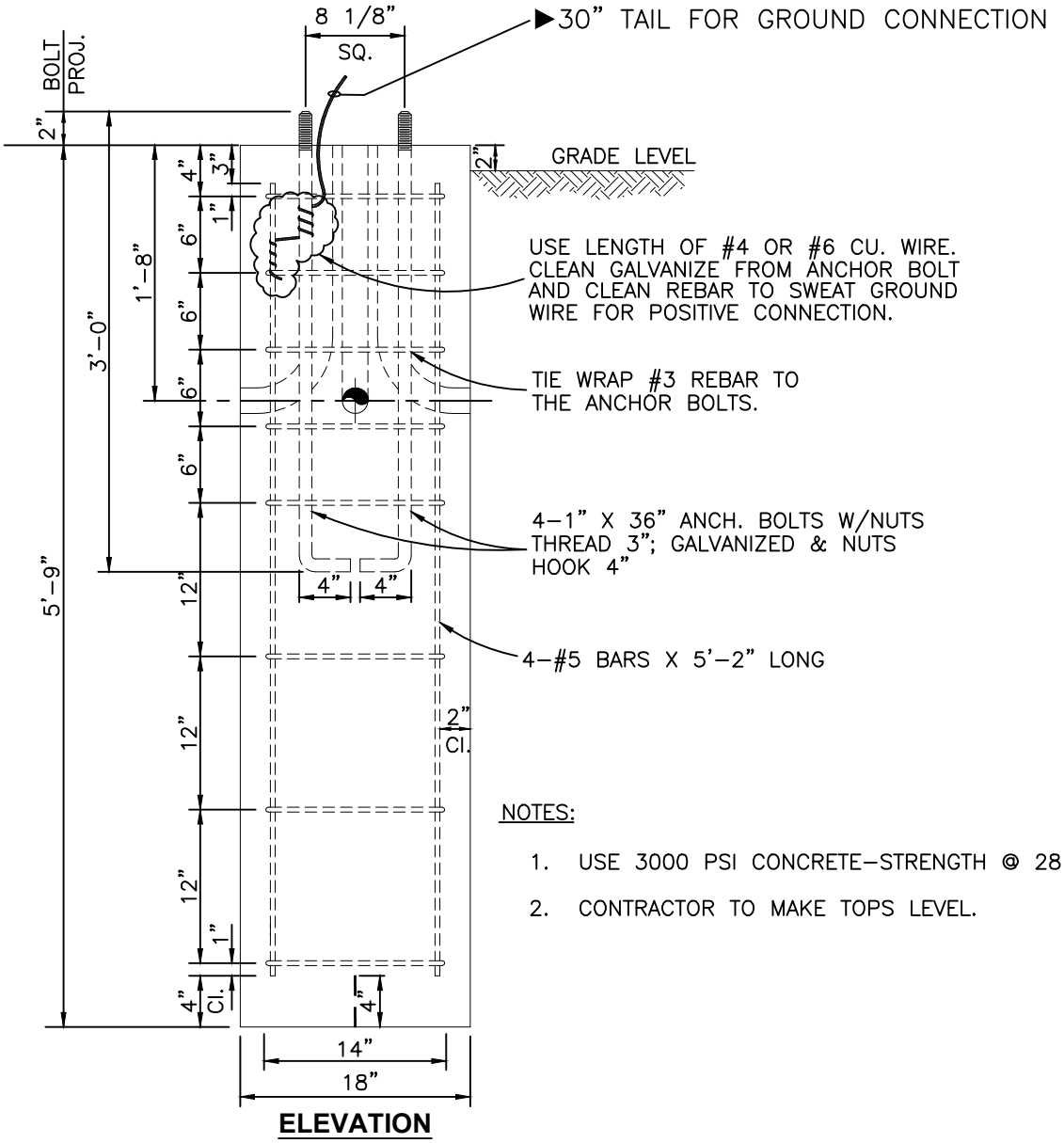
GB8-090

aes Indiana



TOP VIEW

#3 TIES - MK 300



ELEVATION

NOTES:

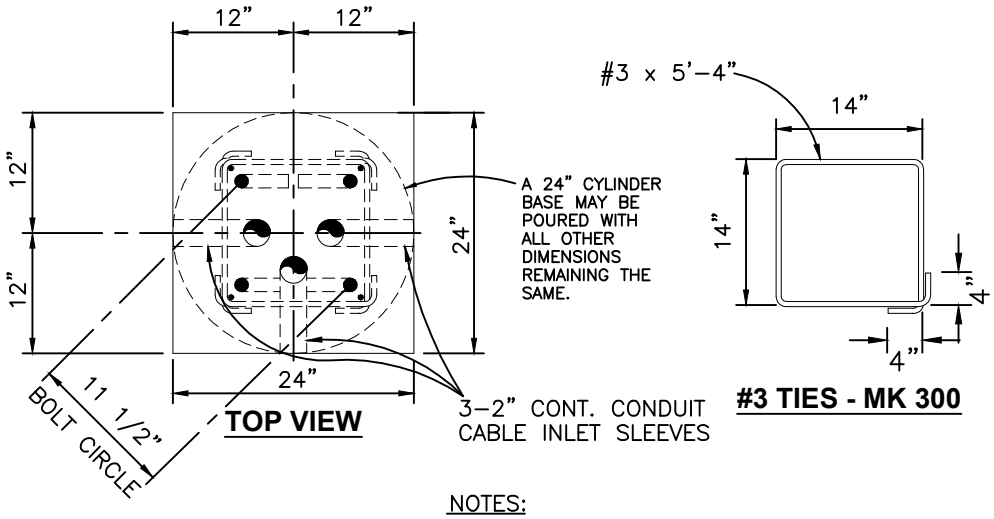
1. USE 3000 PSI CONCRETE-STRENGTH @ 28 DAYS
2. CONTRACTOR TO MAKE TOPS LEVEL.

CONCRETE BASE INSTALLED BY CONTRACTOR 40 FT. AL. COLUMN

REV 12-22-15

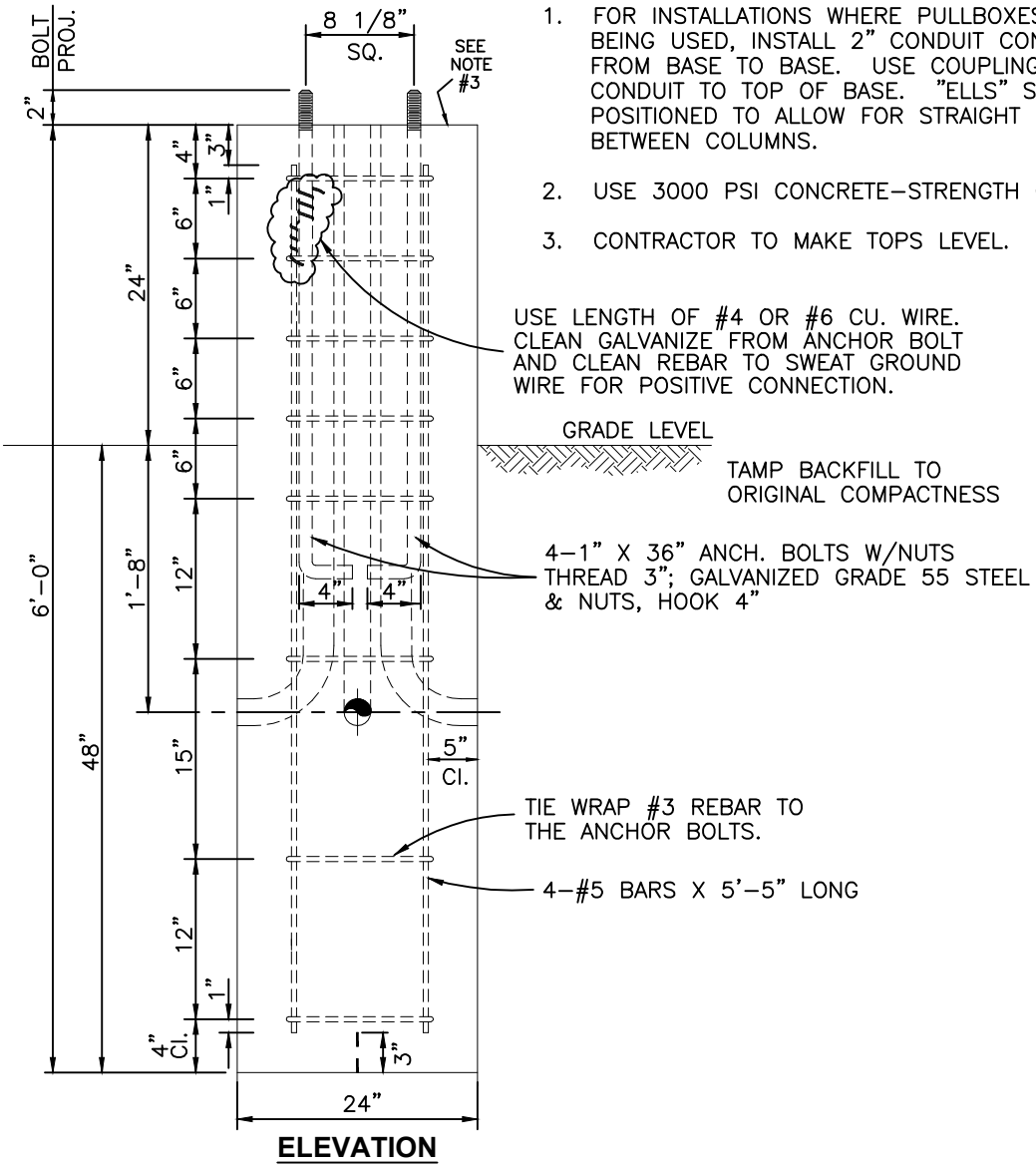
GB8-100

aes Indiana



TOP VIEW

#3 TIES - MK 300



ELEVATION

NOTES:

1. FOR INSTALLATIONS WHERE PULLBOXES ARE NOT BEING USED, INSTALL 2" CONDUIT CONTINUOUS FROM BASE TO BASE. USE COUPLINGS AND EXTEND CONDUIT TO TOP OF BASE. "ELLS" SHOULD BE POSITIONED TO ALLOW FOR STRAIGHT RUNS BETWEEN COLUMNS.
2. USE 3000 PSI CONCRETE–STRENGTH @ 28 DAYS
3. CONTRACTOR TO MAKE TOPS LEVEL.

CONCRETE BASE INSTALLED BY CONTRACTOR WASHINGTON COLUMN, SINGLE OR TWIN

Electric Service & Meter Manual (Goldbook)
Change Request Form

Charlie Eldridge
AES Indiana
1230 W. Morris St.
Indianapolis, IN 46221-1744

Date _____ Name _____ Tel. No. (___)_____

Company _____

Address _____

City, State, and Zip Code _____

1. Location in Electric Service & Meter Manual (Section/Paragraph/Drawing): _____

2. Proposal (proposed wording, include supporting documentation, drawings, etc.):

3. Statement of Problem and Reason for the Proposed Change:

I hereby grant AES Indiana the non-exclusive, royalty-free rights, including non-exclusive, royalty-free rights in copyright, in this comment and I understand that I acquire no rights in any publication of AES Indiana in which this proposal in this or another similar or analogous form is used.

Signature (required) _____

Acknowledgment of receipt or a written reply cannot be made. However, all serious comments will be considered.