# **Commercial Electric Policy**



7/19/16

# **Table of Contents**

General Information	3
Construction	
Ownership/Repairs	
Multi-Unit/Multi-Service Buildings4	
	_
Secondary Termination Enclosures	5
Decorative Street Lighting	6
Meter Bases	7
	•••••
Temporary Boards	8
Guidelines	
Diagram9	
Specifications	10
Underground Primary/Secondary10	
Decorative Street Lighting	
Final Inspection Check List	
Diagrams for Contractors	13
Three Phase Transformer Pad	13
Single Phase Transformer Ground Sleeve	
Primary Vault Ground Sleeve	
Pad-Mount Transformer Spacing	
Labeling for Multi Metered Installations17	
Decorative Steet Light Footing Detail18	

\*All meter bases shall be Gallatin Dept. of Electric (GDE) approved meter bases, see GDE meter base policy. All meter base locations must be approved by GDE's Engineering Dept.

# \*Aid to construction costs and fees are subject to change without notice. Please contact the GDE Engineering Dept. for updated cost.

### **Construction**

The complete use of underground (UG) electric facilities is required in all new commercial developments and for all new commercial electric services unless specifically waived by the Gallatin Department of Electricity (GDE) Engineering Department. Overhead (OH) exceptions may be granted for major feeder lines on a caseby-case basis, but GDE's standard is underground. Exceptions will only be granted in letter form. All new commercial services shall be installed underground. The developer will submit a City of Gallatin (COG)approved FMDP CAD site file utilizing the Tennessee State Plane Coordinate and request an electrical layout from GDE, pay aid to construction cost, provide all ditching and conduit, transport and place all vaults and required ground sleeves with a gravel base, pour all pads required as per GDE specs, call GDE for inspection of all ditching and conduit, backfill one foot, place marking tape, email pictures of marking tape installed, and complete backfill (See **GDE's Specifications**, pg.10 for requirements). Aid to construction cost is \$45 per linear foot of underground/overhead feeder within development plus 75% of the transformer cost plus \$170 per connected KW.

Provisions shall be made by the developer to loop feed each primary line where practical. GDE will provide and install underground primary wire, transformers, primary connections and switching cabinets. The developer/owner will install, own, and maintain all conduits (secondary & primary) that are necessary to serve their facilities/development, and all service wire. GDE will own all primary wire.

When the development requires the main line to be more than 200 amps on the primary lines as determined by GDE, the developer will pay an aid to construction charge that will be calculated per job and consist of the full cost of materials and labor.

Overhead exceptions may be granted for major feeder lines as determined by GDE's Engineering Department on a case-by-case basis, but the standard will still be underground utilities. Exceptions will only be granted in letter form. Overhead lines require a 30' clear easement provided by the developer/owner.

The developer shall be responsible for the cost of any line extension required to serve a development that is not within or adjacent to the current footprint of the Gallatin City limits and/or GDE's current service territory. Extension costs shall include: any expense of acquiring easements and needed right-of-way clearing as well as all construction labor and material necessary to reach the proposed development.

Any cost associated with a development that is above and beyond the GDE standard construction shall be at the expense of the developer. Costs could be back-feed or redundant service requirements by the developer or below-grade switchgear, or the like. GDE will maintain ownership of all primary infrastructures, such as wires and transformers, and be responsible for any replacement costs.

Underground service conductors installed on GDE poles will be all aluminum and limited to 2 runs and a maximum of 750kcmils. No compressed conductors may be used. GDE will assist in installing the conductor up the pole. GDE labor cost during this time onsite will be paid by the customer/developer.

### **Ownership/Repairs**

Meter bases/CT cabinets/Tap boxes/etc., service conduit/wire from GDE's secondary equipment, and risers are the customer's property and the customer's responsibility to repair, maintain, and locate. This includes tree trimming for overhead services. GDE does not own, locate/mark (TN811 Call Before You Dig), maintain, or repair commercial underground service conduits or cables. GDE owns and maintains (does not include tree trimming) service wire and service connections on overhead services.

Any meter bases with obstructed access or that have been enclosed by porches, decks, patios, fences, walls, screens, etc., will be required to be relocated by the customer. Failure to do so during the allotted time provided by GDE will result in termination of service until work has been completed. GDE reserves the right, at its sole discretion, to disconnect electric service and require the customer to upgrade any customer-owned metering equipment if such equipment is determined to be not readily accessible, faulty or malfunctioning, or presenting a potential safety hazard. Upon receipt of written notice from GDE, the customer shall promptly undertake and complete all required upgrades in compliance with applicable GDE requirements and the National Electrical Code (NEC) and National Electric Safety Code (NESC). Reconnection of service shall occur only after the required upgrades have been completed and have passed a Gallatin Codes Dept. electric inspection. Commercial customers changing out meter bases, risers, service entrance wires, or doing any major electrical work will be required to update service to GDE specs, pass any required Gallatin Codes Dept. electric installation must be approved by GDE's Engineering Department. A 30' clear path will be required for all overhead services.

### Multi-Unit/Multi-Service Buildings

Multi-unit buildings and buildings with multiple services shall have meter bases numbered to GDE specs (See **Labeling for Multi Metered Installations**, pg. 17). Multi-gang meter bases must be approved by GDE's Metering Dept. Meter troughs will not be allowed (see Secondary Termination Enclosures, pg. 5).

# **Secondary Termination Enclosures**

GDE shall not connect to any new troughs. Secondary termination enclosures (provided by the Customer) will be used on all new services requiring multiple meters where ganged meter bases are not used. Existing troughs shall be replaced with secondary termination enclosures under the following circumstances: adding new load, upgrading service, adding a new service, or replacing GDE's line-side conductors.

Each individual service in the termination cabinet shall be labeled by unit number, suite number, or space number on the service cable for disconnect/reconnect purposes. The labeling must be approved by GDE's Engineering Department. All conductors shall be routed behind the termination cabinet busbars.

Enclosures are the property of the Customer. There is a requirement for a GDE lock on these enclosures. A GDE employee will unlock the enclosure for the Customer when necessary and upon request.

The following are acceptable part numbers for termination enclosures. Any enclosure not listed must be approved by GDE's Engineering Department.

CMC (Connector Manufacturing Company) Wall Mounted Three Phase							
		# of Cond. Per Dimensions - Inches		Dimensions - Inches		U.L. Liste	d Amp Rating
Catalog Number	Max Wire Size	Phase	W	D	Н	Copper	Aluminum
LWTE21-500	500 kcmil	21	32	16	51	3800	3100
LWTE14-750	750 kcmil	14	32	16	51	3325	2695
LWTE14-1000	1000 kcmil	14	32	16	51	3815	3115
Milbank Multi-Position Tap Box							
		# of Cond. Per	Dimen	ensions - Inches			
Catalog Number	Max Wire Size	Phase	W	D	Н	U.L. Listed Amp Rating	
UAP6094-O-NES	500 kcmil	16	25 5/8	16	43	3000	
UAP6095-O-NES	500 kcmil	22	32 3/8	16	43	4000	
UAP6096-O-NES	1000 kcmil	14	25 15/16	16	51	3300	

A disconnect is allowed in front of the termination enclosure. A disconnect is not allowed between the termination enclosure and the meter base.

# **Decorative Street Lighting**

The following guidelines are for use by the subdivision/development developer to assist with the installation of decorative street lighting on the Gallatin Department of Electricity (GDE) system.

## Standards

Decorative street lighting designed and serviced by GDE will only be allowed in areas with underground electric primary and City roads. If the road is private, GDE will not design or service street lighting. Any private road street lighting will be metered according to GDE specs.

GDE's Engineering Department will design and show the street lighting layout on GDE's conduit plan. The following general standards will be followed for the street lighting design.

- 1. A light will be placed at all public street intersections, roundabouts, and 90° turns.
- 2. A light will be placed in all cul-de-sacs.
- 3. Standard spacing between lights will be approximately 300' with a max spacing of 400'.
- 4. Public alleys in residential neighborhoods will not have public street lighting provided.

### Overview

The developer is responsible for the installation of all lights, foundations, conduit, and wire. The developer will choose lights from GDE-approved lights and provide GDE with one (1) spare decorative streetlight for each fifty (50) installed. The cost of the lights will be charged as an aid to construction costs. This cost must be paid before GDE will release any material. Decorative lights can be picked up from GDE's warehouse once received. Decorative streetlights must pass a Gallatin Codes Dept. electrical inspection, meet GDE's specs listed in **GDE Decorative Light Specs**, pg.11, and meet GDE's inspections listed in **GDE Decorative Light Inspections**, pg.11, before being energized. The developer will be responsible for repairs during the first year when the light is energized.

### Procedure to have lights energized.

A decorative streetlight will not be energized until passing a Gallatin Codes Dept. final electrical inspection and GDE's final inspection. After inspections have been completed, the developer or HOA may have the lights turned on to utilize the outdoor lighting. The lights will be billed monthly according to GDE's Outdoor Lighting Rate to the developer or HOA until lights are converted to the City of Gallatin account. Lights in residential developments will be converted to the City of Gallatin account once a permanent resident has service turned on to a house feeding from the same transformer as the decorative light. In commercial developments, the lights will be converted to the City of Gallatin account once the commercial building has been energized in the final tenant's name. However, the developer or HOA may choose not to use the decorative streetlights and wait until the lights have been converted to the City of Gallatin account before being energized.



#### Approved Self Contained Meter Bases

Size	Phases	Туре	Milbank	Durham	Slemens	Eaton
200 Amp	Single	OH	U7021-DL-TG-BL	RS213N	UAT3 / HQU4	UTRS202BCH
200 Amp	Single	UG	U1980-0-BL	UTRS223A	UAS8/UAS9 / HQW4	UTRS223ACH
225 Amp	Single	House Module			WCL204081T1RJ	
320 Amp	Single	OH	U1079-R-BL		HQST 4	UTH4300TCH
320 Amp	Single	UG	U1797-0-K3L-K2L-BL		HQDSW/SWD 4	UTH43369UCH
320 Amp	Single	OH/UG	U2448-X	H4330T		UTH4330TCH
200 Amp	Three	OH/UG	U7423-RXL	H7213T	HQND 5	
200 Amp	Three	OH/UG	U9701-RRL-BL		HQST 7 / HQW 7	
225 Amp	Three	Module			WCL2040B2T1RJ	
225 Amp	Three	Module			WCL2442B3T1RJ	
320 Amp	Three	OH/UG	U2120-X	UT-H7330-U	HQST 7	
320 Amp	Three	OH/UG	U2594-X		HQDSW/SWD 7	
600 Amp	Three	OH/UG	U4667-xt-9506		(K-7T) 9817-9506	CH9506K7

#### Approved Instrument Rated Meter Bases

Size	Terminals		Milbank	Durham	Slemens	Meter Devices
20 Amp *	8	Single Phase	UC7235-RL	R6821-8K	9804-8542	
20 Amp **	13	Three Phase	Must be purchased	from GDE. Co	ontact ghooge@gdetn.com	for purchase
Approved Pedestal Service Entrance						
Size	Terminals		Midwest			

200 Amp 4 R281C1P6H

\*8 Terminal Base Requires Automatic Bypass Switch

\*\* 13 Terminal Base Requires test switch Durham # 1058 or Milbank # TS10-0111 (10 Pole)

\*\* 13 Terminal Base Must be prewired with test switch

#### Specifications and Notes

#### "NON-APPROVED METER BASES WILL NOT BE ENERGIZED BY GDE.

\*Multi Ganged, Stacked meterbases, and Module Bases are APPROVED on a case by case bases. Submit information to ghooge@gdetn.com

1. Steel Construction and UL Approved with Label

Location shall be approved by GDE's Engineering Dept.

3. Shall be surface mounted and on a permanent structure controlled by the Customer.

4. Shall not be in areas that are closed off by porches, decks, patios, fences, walls, screens, etc.

5. GDE shall have unobstructed access to meter base.

6. Shall have a 6' clearance from any obstruction in front of meter base.

7. Single and horizontal mounted gang bases shall be mounted 5'6' from final grade to center of meter opening.

8. Vertical mounted gang bases shall be 6' from final grade to center of top meter opening, with a 3' minimum from final grade to center of bottom meter opening.

GDE/Customer service wire will enter left side of meter base, customer load wires will exit right side facing meter base

10. Shall be installed to National Electric Code (NEC) requirements.

11. Instrument Rated bases shall have shorting ability to remove meter

12. 600 Amp and above services REQUIRE advance notice to be given to GDE Meter Department.

Call 615-527-7006 or email ghooge@gdetn.com.

#### Instrument Transformers

1. All CT and PT's shall be provided by GDE.

2. Single Phase CT cabinet size shall be 36" x 36" x 12" with a 3/4" plywood backing for mounting of Instrument Transformers. Steel or aluminum construction.

3. Three Phase CT cabinet size shall be 48" x 48" x 12" with a 3/4" plywood backing for mounting of Instrument Transformers. Steel or aluminum construction.

4. CT cabinet must have provisions for a padlock. There shall be no conduits through top of CT cabinet

5. Single Phase - Electrician shall provide 5 wires, (BLACK, RED, BROWN, ORANGE, WHITE)

6. Three Phase - Electrician shall provide 7 wires (BLACK, RED, BLUE, BROWN, ORANGE, YELLOW, WHITE)

7. No marking tape shall be used on wires.

 All CT and PT wires, 100' or less, shall be #12 stranded copper conductor. Distances over 100' require approval from GDE.

# **Temporary Electric Service Policy**

The Gallatin Department of Electricity (GDE) will provide electricity to customer-owned temporary boards according to the following guidelines:

# 1. Labeling and Inspection:

- Temporary boards must be clearly labeled with the address and lot number of the property.
- Each time the temporary board is installed or relocated; it must pass an electrical inspection conducted by the Gallatin Codes Dept..

# 2. Underground Feed Requirement:

• Temporary boards must be fed underground unless otherwise approved by the GDE Engineering Department.

# 3. Location Approval:

• The location of the temporary board must be approved by GDE's Engineering Department prior to installation.

# 4. Overhead Installation Requirements:

- If approved for overhead installation, the temporary board must be installed rigidly in the ground with a minimum of 2 feet for the post and braces.
- The temporary board must include braces or guys that adequately support the overhead service conductors and the weight of a 250lb person on a ladder leaned against the temporary board.
- The overhead temporary board must include an eyebolt attachment for GDE's service conductors.
- The attachment point and ground clearance to the service wire must comply with the National Electric Code (NEC) and National Electric Safety Code (NESC).
- The overhead temporary board should not be installed more than 100 feet from GDE's approved pole.

# 5. Temporary Board Fee:

- A \$100.00 temporary board fee will be charged by GDE. This fee covers the installation and removal of the service wire. The meter service charge and deposit are separate from this fee.
- Additional charges will apply for extra trips or work beyond the standard scope.

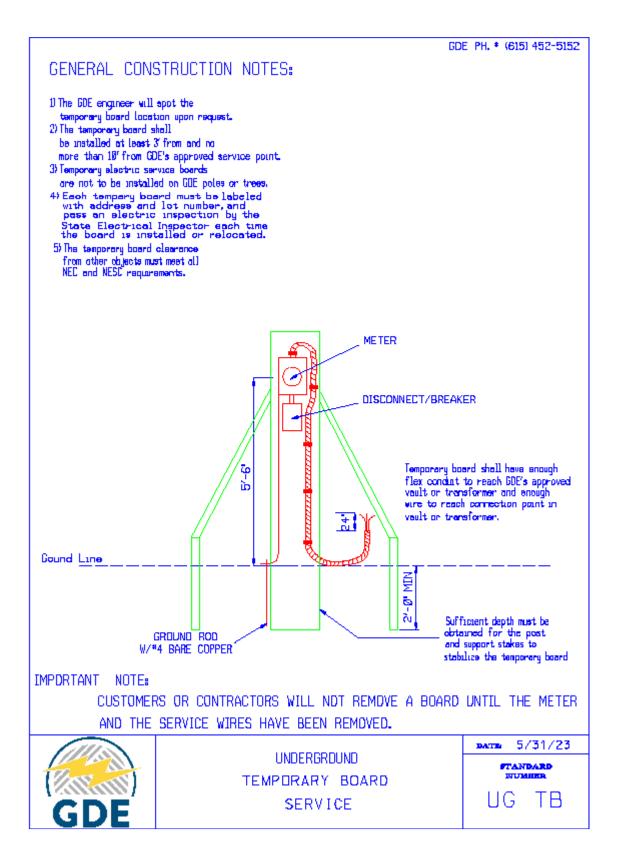
### 6. Additional Costs for Overhead Service:

- Temporary boards requiring more than 100 feet of overhead service wire or requiring temporary construction will incur additional costs.
- The total installation and removal costs will be paid by the customer before work begins.
- The cost to install a transformer to feed a temporary board is \$400.00.

# 7. Removal of Temporary Boards:

• Customers or contractors must not remove a temporary board until the meter and service wires have been disconnected and/or removed by GDE.

# \*Aid to construction costs and fees are subject to change without notice. Please contact the GDE Engineering Dept. for updated cost.



# **GDE Underground Primary/Secondary Specifications**

Inspection	Requirements
Conduit	*Conduit will be inspected and approved prior to the backfilling of the ditch.
	*All work shall be performed in accordance with GDE's approved conduit
	drawings and details.
	*Primary conduit
	- Minimum installation depth: 48 inches.
	- Minimum horizontal separation from communications conduits: <b>12 inches</b> .
	- Minimum vertical separation from other utilities at crossings: <b>12 inches</b> .
	- Minimum separation when paralleled with other utilities: 5 feet.
	*Secondary conduit
	- Minimum installation depth: <b>30 inches.</b>
	- Minimum vertical and horizontal separation from other utilities: <b>12 inches</b> .
	*Elbow Requirements
	- Secondary 2" and 3" Sch. 80 24-inch radius for 90-degree elbows.
	- Primary 2" and 3" Galvanized Conduit: 24-inch radius for 90-degree elbows.
	- Primary 4" Galvanized Conduit: 36-inch radius for 90-degree elbows.
	*Backfill Specifications
	- Backfill material must be free of any substances that may damage the conduit.
	- If clean backfill is unavailable, <b>#67 gravel</b> will be used as an alternative.
	- Marking tape shall be installed over the first 12" of backfill. Emailed pictures
	can be utilized for marking tape inspection.
	*Conduit damaged
	- Any conduit that is damaged before the wire is installed must be replaced or
	repaired by the developer.
	*Coordination with GDE
	- All conduit installation within existing GDE equipment must be coordinated with
	GDE for approval and proper execution.
	*GDE's Final Inspection Check List (pg. 12) must be completed, signed, and
Final	returned to GDE before final inspection will be scheduled.

# **GDE Decorative Light Specifications**

Material	GDE Specs
Conduit	*1" schedule 40 PVC (unless otherwise specified) with 24" radius elbows
<b>Decorative Fixtures</b>	*See Approved Light Fixtures
Decorative Pole	*See Approved Light Poles
Lamps	*See specs listed in Approved Light Fixtures
Photocell	*See specs listed in Approved Light Fixtures
Conductor	*NEMA Listed THHN/THWN Copper, 600v, 90° C
	#12, #4, or #6 AWG (must maintain less than 5% voltage drop from source).
Pole Base Fuses	
and Fuse Blocks	*Fuse link with fuse installed required in pole base.

# **GDE Decorative Light Inspections**

Note: The conduit, footing, and final inspections below are done by GDE and not by Gallatin Codes Dept..

Inspection	Requirements
Conduit	*Conduit will be inspected by GDE prior to backfilling ditch. *All work shall be performed to GDE's conduit drawings and details.
	*2'-0" depth with minimum of 12" separation (vertical and horizontal) from other utilities.
	*Backfill shall be soil free of material that may damage conduit or gravel.
	*Conduit damaged before lights are energized must be replaced by developer. *All conduit installed in existing GDE equipment must be coordinated with GDE.
Footing	*Shall be built to GDE Decorative Street Light Footing Detail (pg.18). *First GDE footing inspection shall be scheduled <b>before</b> concrete has been poured. Rebar, anchor bolts, ground wire, and ground rods shall be installed. *Second GDE footing inspection shall be scheduled <b>after</b> concrete has been poured. *Poles shall not be installed until second inspection has been completed.
	*Light must pass a City Codes electrical inspection before scheduling
Final	<ul> <li>the final GDE inspection.</li> <li>*All wiring, connectors, and fuses installed.</li> <li>*Poles plumb, level, and securely mounted.</li> <li>*Fixture oriented correctly with street. ("street side" embossed on fixture must be turned toward the street)</li> </ul>

GALLATIN DEPARTMENT OF ELECTRICITY

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# **GDE Final Conduit Inspection Check List**

This checklist is to assist developers with the requirements for a GDE final conduit inspection. Please ensure the requirements have been met before signing, dating, and returning form to GDE for a final conduit inspection. This list is meant to be a guide and is subject to change without notice. Specifications available <a href="http://www.gallatinelectric.com/engineering">www.gallatinelectric.com/engineering</a>.

- \_\_\_\_1. Property Pins installed and labeled.
- \_\_\_\_\_ 2. Curbs installed.
- 3. Grade within 6" of final grade from back of utility easement to curb.
- 4. All GDE conduits and ground sleeves installed in utility easement.
- 5. All secondary vaults installed per GDE Secondary Vault Detail.
- 6. Ground sleeves installed per GDE Ground Sleeve Details.
  - 6A. Ground sleeves backfield to within 6" of top of pad.
  - \_\_\_\_\_ 6B. Ground sleeves level.
    - 6C. Conduits cut 12" below top of ground sleeve.
    - 6D. Conduits arranged in ground sleeve per the GDE Ground Sleeve Details.
    - 6E. No trash inside of ground sleeve.
- Conduits arranged per GDE Underground Distribution spec for underground primary construction, or

GDE Underground Secondary Conduit System spec for overhead primary construction.

- \_\_\_\_\_7A. 36" minimum spacing between GDE 3" secondary conduit and communication conduits.
- \_\_\_\_7B. 18" minimum spacing between GDE ground sleeve and communication conduits on underground primary construction.
- \_\_\_\_\_7C. 24" minimum spacing between pole and GDE 3" secondary conduit on overhead primary construction.
- 8. 1800lb minimum pull tape/mule tape in all conduits with 6' tail on each end.
- 9. All conduits installed per GDE Conduit Layout.
- 10. Any work done to unstop, repair, etc. after final inspection will be billed to developer at full cost.

Signature:

Date:

LIGHTING THE WAY FOR THE CITY OF GALLATIN SINCE 1939

