GALLATIN DEPARTMENT OF ELECTRICITY

ELECTRIC DEVELOPMENT & INFRASTRUCTURE POLICY

GDE Combined Electric Policy - Table of Contents

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General Information

Purpose

*** The purpose of this document is to provide and establish guidelines for the design, construction, and/or relocation of facilities under Gallatin Department of Electricity's (GDE's) oversight. ***

Scope

This document covers GDE's full design process for both commercial and residential development.

The policies, procedures, and requirements outlined in this document apply to all property owners, developers, contractors, subcontractors, and third parties involved with the design, construction, and relocation of (and/or provision of access to) GDE facilities.

Note: If you are looking for a high-level (not-comprehensive) description of requirements for the City Planning review process, see **"Gallatin Department of Electricity Planning Comments"** on pgs. 19-20.

Adherence to GDE Policies and Procedures

*** Compliance with the requirements outlined in this policy is mandatory and is strictly enforced. ***

GDE's policies and procedures must be adhered to by all involved parties throughout the design, construction, and operational phases.

Failure to comply with this policy may result in rejection of the owner's or developer's/contractor's electrical infrastructure and/or a delay in project approval or utility service connection. If GDE rejects any part of the electrical infrastructure, the customer or developer/contractor must replace or re-install the rejected items to GDE's satisfaction and must do so at their own expense.

Note: Compliance with GDE requirements **does not** exempt customer from adherence to all applicable building/ fire codes and standards.

DEVELOPMENT PROCESS

DEVELOPER REQUIREMENTS

*** THE DEVELOPER IS RESPONSIBLE FOR ENSURING THE COMPLETION OF EACH OF THE FOLLOWING ACTION ITEMS FOR ALL CONSTRUCTION PROJECTS (COMMERCIAL OR RESIDENTIAL). ***

- ☐ Submitting a City-of-Gallatin approved FMDP CAD site file utilizing the Tennessee State Plane Coordinate system to the GDE Engineering Department
- ☐ Providing a detailed load sheet to GDE Engineering Department
- ☐ Requesting an electrical layout from GDE
- ☐ Paying any required costs (aid to construction, relocation, etc.)
- ☐ Providing and installing all ditching and conduit
- ☐ Transporting and placing all required ground sleeves per GDE specifications
- ☐ Pouring all pads (if required) per GDE specs
- ☐ Calling GDE for inspection of all ditching and conduit
- ☐ Backfilling ditches one foot and placing GDE supplied, red marking tape
- ☐ E-mailing pictures of GDE supplied, red marking tape after installation
- ☐ Completing backfill of ditches
- ☐ Completing, signing, and returning the GDE Final Conduit Inspection Checklist
- ☐ Scheduling a final inspection by GDE

Note: For a full description of all requirements, see the **Specifications** section, pgs. 16-18, and the **GDE Final Conduit Inspection Checklist**, pg. 21.

CONSTRUCTION

*** ALL METER BASES SHALL BE GDE APPROVED METER BASES. ALL METER BASE LOCATIONS MUST BE APPROVED BY GDE'S ENGINEERING DEPARTMENT. REFER TO PGS. 12-13 FOR MORE INFORMATION. ***

The use of underground (UG) electric facilities is required in all new commercial and residential developments and for all new commercial and residential electric services unless specifically waived by the GDE Engineering Department. Provisions shall be made by the developer to loop feed each primary line where practical, as determined by GDE's Engineering Department.

Exceptions may be granted to use overhead (OH) for major feeder lines on a case-by-case basis. All exceptions will be provided in writing; no verbal exceptions will be given. Overhead lines require a 30' clear easement (15' from either center line of pole, or from nearest phase, if it is a 3-phase line) provided by the developer/owner.

Underground service conductors that are installed on GDE poles will require standoff brackets, 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 costs during this time onsite will be paid by the customer/developer.

Apartments/ Multi-Unit Dwellings/ Multi-Service Buildings

Multi-unit buildings/ dwellings and buildings with multiple services shall have meter bases numbered to GDE specifications. See **Labeling for Multi-Metered Installations**, pg. 22, for more information.

Multi-gang meter bases must be approved by GDE's Metering Department. Meter troughs will not be allowed. See **Secondary Termination Enclosures**, pg. 9, for more information.

Modular and Manufactured Homes

- ☐ **Modular Home** – House that comes in more than one piece and is assembled on a lot
- ☐ **Manufactured Home** – Prefabricated house with axles, manufactured in a factory, that is transported and installed on a lot (commonly referred to as a "trailer" or "mobile home")

Services to modular/ manufactured homes will be underground. Overhead service to risers or service poles will only be allowed if they have been pre-approved by the GDE Engineering Department. The service poles must meet GDE's specifications as well as all current National Electrical Code (NEC) and National Electric Safety Code (NESC) requirements. See GDE Pole Setting Specifications, below, for more information.

Meter bases may only be mounted on modular/ manufactured homes that have a permanent foundation (tongue removed, if applicable) and are certified by the manufacturer that the building is rated for such an installation. Homes not meeting these requirements will have underground services to a meter pedestal* no more than 20 feet from the building.

*Meter pedestal must be approved by GDE Metering Department. See **pgs. 12-13** for more information.

GDE Pole Setting Specifications

When setting poles, holes should be backfilled with dirt or other suitable material and should be adequately tamped.

Pole Height (in feet)	Set Depth (in feet)
25	5.5
30	5.5
35	6

Cost

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

Aid to construction costs are as follows:

☐ **Commercial**

- $45 per linear foot of underground/overhead feeder
- Plus 75% of the transformer cost
- Plus $200 per connected KW

☐ **Residential**

- Single-family - $3,850 per lot
- Apartments - $1,350 per unit (single phase) or full cost of construction (three phase)
- Extensions over 150 feet – additional $15/ft for each foot over 150'

  (**Ex:** Single-family extension of 175ft → $3,850+($15/ft*25ft) = $3,850+$375 = $4,225 total)

☐ **Temporary Boards**

- $100 temporary board fee
- $400 to install a transformer to feed a temporary board

Developments needing more than 200 amps on the distribution lines, as determined by GDE, will require payment of an additional aid to construction cost. This will be calculated per job and will consist of the full cost of materials and labor.

The developer shall be responsible for the cost of any line extension required to serve a development. Extension costs may include, but are not limited to, any expenses related to:

- Acquiring easements
- Clearing the right-of-way (if needed)
- Construction labor and materials necessary to extend current line to 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. Examples include but are not limited to requirements for back-feed or redundant service, use of below-grade switchgear, etc.

GDE will maintain ownership of all primary infrastructures, such as wires and transformers, and will be responsible for any replacement costs unless a separate ownership agreement is established, in writing, between GDE and the owner.

*** All costs related to the aid to construction must be paid in full by the developer prior to GDE placing any material orders for the project. Some materials can have lead times of 52+ weeks. Please ensure timely payment to avoid delays in the ordering process and to keep the project on schedule. ***

OWNERSHIP/REPAIRS

*** GDE RESERVES THE RIGHT, AT ITS SOLE DISCRETION, TO DISCONNECT ELECTRIC SERVICE AND REQUIRE THE CUSTOMER TO UPGRADE/UPDATE ANY CUSTOMER-OWNED METERING EQUIPMENT IF IT IS DETERMINED BY GDE THAT SUCH EQUIPMENT IS FAULTY/ MALFUNCTIONING/ OTHERWISE PRESENTING A POTENTIAL SAFETY HAZARD, OR IF THE EQUIPMENT IS NOT LABELED PROPERLY OR NOT READILY ACCESSIBLE. ***

GDE will provide and install UG primary wire, transformers, primary connections, and standard above-ground switching cabinets. GDE will own all primary equipment & material (unless a separate agreement is established, in writing, between GDE and the owner).

- **For Commercial Customers** – GDE owns and maintains* service wire and service connections on OH services. GDE does not own, locate/mark (TN811 Call Before You Dig), maintain, or repair commercial UG service conduits or cables.
- **For Residential Customers** – GDE will provide, install, own, and maintain all service wire for UG services that are 400 Amps and below**.

The Developer/Owner will provide and install all service conduits. Risers, meter bases/ CT cabinets/ Tap boxes/ etc. are the customer's responsibility to supply, maintain, and repair. Maintenance includes performing any tree trimming for OH services. For residential, the customer will own everything past the service connections for OH service. All OH service installations must be approved by GDE's Engineering Department. A 30' clear path (15' from either center line of pole, or from nearest phase, if it is a 3-phase line) will be required for all OH services.

- **For Commercial UG Services** – Customer will provide, install, own, maintain, and locate all service conduits and service wire that are necessary to serve their facilities/ development.
- **For Residential and Multi-tenant UG Services**
  - **400 Amps and Below** – Customer will own and maintain service conduits
  - **More than 400 Amps** – Customer will provide, install, own, maintain, and locate all service conduits and service wire

  Note: Multi-tenant developments will be required to provide, install, own, and maintain conduit and service wire to all buildings in the development if any one of the buildings exceeds the 400 Amp service size. GDE will not mix GDE service wire and customer service wire in these developments.

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**.** Customers will be required to re-label any multi-ganged meter bases found to be labeled incorrectly (See **Labeling for Multi-Metered Installations**, pg. 22). GDE will determine when direct buried service wire must be replaced. Customers with direct buried service wire in need of replacement will be responsible for all conduits and ditch work. Upon receipt of written notice from GDE, the customer shall promptly undertake and complete all required upgrades in compliance with applicable GDE requirements as well as NEC/ NESC requirements. Failure to do so during the allotted time provided by GDE will result in termination of service until work has been completed.

Reconnection of service shall occur only after the required upgrades have been completed and have passed a Gallatin Codes Department electric inspection. Commercial and residential 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 Department electric inspections, as well as meet all current NEC and NESC requirements.

*GDE's maintenance of service wire and service connections on overhead services does not include tree trimming.
** For residential, the service size is determined by the sum of all the meter bases on a building.

EMERGENCIES / ACTS OF GOD

*** GDE RESERVES THE RIGHT, AT ITS SOLE DISCRETION, TO RESTORE ELECTRIC SERVICE TO AFFECTED CUSTOMERS AS SOON AS POSSIBLE IN THE EVENT OF AN ACT OF GOD (UNFORESEEN EVENT) OR AN EVENT DEEMED TO BE AN EMERGENCY RECONNECT BY THE GALLATIN CODES DEPARTMENT THAT RESULTS IN THE DISRUPTION OF ELECTRIC SERVICE. IN THESE CASES, SERVICE MAY BE RESTORED EVEN BEFORE THE COMPLETION OF ELECTRICAL INSPECTIONS. ***

Written notice must be provided to GDE by the Gallatin Codes Department that they deem an event to be an emergency.

To expedite reconnection, affected customers and property owners are required to sign a "Release of Liability" form provided by GDE.

In signing the "Release of Liability", the following conditions are acknowledged and accepted:

- ☐ GDE is authorized to reconnect electricity without waiting for electrical inspections
- ☐ The customer and property owner understand the potential risks associated with immediate reconnection and agrees to indemnify and hold harmless GDE from any liability, damage, or injury (including injury to third-party guests or invitees of customer and property owner) that may result from the reconnection of electricity before inspections
- ☐ The customer and property owner will promptly arrange for all necessary electrical inspections and repairs to ensure compliance with local codes and safety standards
- ☐ The customer and property owner understand that an inspection by the Gallatin Codes Department must take place within three (3) business days following reconnection of electrical service or GDE reserves the right to disconnect service

Note: If the customer and property owner are not the same person, then both parties are required to sign the "Release of Liability" form.

SECONDARY TERMINATION ENCLOSURES

*** A DISCONNECT IS ALLOWED IN FRONT OF THE TERMINATION ENCLOSURE. A DISCONNECT IS NOT ALLOWED BETWEEN THE TERMINATION ENCLOSURE AND THE METER BASE. ***

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

For disconnect/ reconnect purposes, each individual service cable in the termination cabinet shall be labeled by unit number, suite number, or space number. 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. GDE requires these enclosures to be locked with a GDE lock. A GDE employee will unlock the enclosure for the customer when necessary and/or upon request.

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

CMC (Connector Manufacturing Company) Wall Mounted Three Phase							
Catalogue Number	Max Wire Size	# Cond. per Phase	Dimensions (in)			U.L. Listed Amp Rating	
			W	D	H	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						
Catalogue Number	Max Wire Size	# Cond. per Phase	Dimensions (in)			U.L. Listed Amp Rating
			W	D	H	
UAP6094-O-NES	500 kcmil	16	$25\ ^{5}/_{8}$	16	43	3000
UAP6095-O-NES	500 kcmil	22	$32\ ^{5}/_{8}$	16	43	4000
UAP6096-O-NES	1000 kcmil	14	$25\ ^{15}/_{16}$	16	51	3300

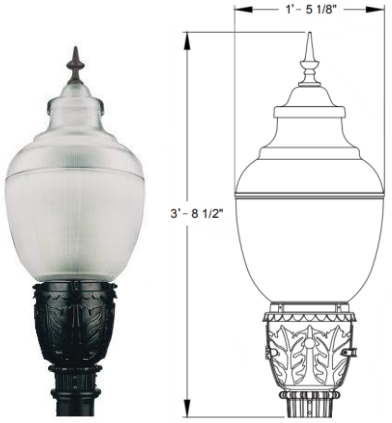
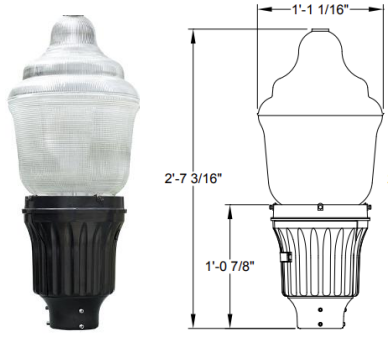
Decorative Street Lighting

*** GDE will only design and service decorative street lighting for areas with underground electric primary and City roads. If the road is private, GDE will not design or service any street lighting. Private road street lighting will be metered according to GDE specifications. ***

Approved Light Fixtures

*** All decorative light fixtures must be purchased through GDE. ***

*** Summary is for informational purposes only. ***

	DESIGN	SPECIFICATIONS
OPTION A - Deluxe		**Series:** WAE3 Washington Postlite LED3 **Housing:** Enhanced – Hinged Door, Black **Trim:** SK – Spike Finial, Black **Optics:** GL3 – Glass, Type III **LED Info:** P30 – 8,100 Nominal Lumens, Color Temp 40K – 4000K CCT **Voltage:** MVOLT – Auto-Sensing 120-277V 56/60Hz **Input Watts:** 56 **Lumens per Watt:** 145 **Control Options:** A0 – Field Adjustable Output NEMA Twistlock Dimming Photocontrol Receptacle - 7 pin
OPTION B - Standard		**Series:** GPD3 Granville Premier LED3 **Housing:** Modern – Swing Open Design, Black **Trim:** (no finial) **Optics:** GL3 – Glass, Type III **LED Info:** P30 – 8,800 Nominal Lumens, Color Temp 40K – 4000K CCT **Voltage:** MVOLT – Auto-Sensing 120-277V 56/60Hz **Input Watts:** 57 **Lumens per Watt:** 154 **Control Options:** A0 – Field Adjustable Output NEMA Twistlock Dimming Photocontrol Receptacle - 7 pin
OPTION C - Low-Cost		**Series:** GVD3 Granville Classic Utility LED3 **Housing:** Modern – Swing Open Design, Black **Trim:** (no finial) **Optics:** GL3 – Glass, Type III **LED Info:** P30 – 8,400 Nominal Lumens, Color Temp 40K – 4000K CCT **Voltage:** MVOLT – Auto-Sensing 120-277V 56/60Hz **Input Watts:** 57 **Lumens per Watt:** 148 **Control Options:** A0 – Field Adjustable Output NEMA Twistlock Dimming Photocontrol Receptacle - 7 pin

STANDARDS

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:

- A light will be placed at all public street intersections, roundabouts, and 90˚ turns
- A light will be placed in all cul-de-sacs
- Standard spacing between lights will be approximately 300' with a max spacing of 400'
- 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 may choose a fixture style from one of the GDE-approved lighting options. The developer will 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 cost. This cost must be paid before GDE will order any material. Decorative lights may be picked up by the developer once they have been received by GDE's warehouse.

The developer will be financially responsible for any repairs that are needed for a period of one (1) year after the light is energized. The City of Gallatin will assume financial responsibility for any repairs needed past the first year following energization of the light.

PROCEDURE TO HAVE LIGHTS ENERGIZED

Prior to being energized, decorative streetlights must:*

- ☐ Pass a Gallatin Codes Department electrical inspection
- ☐ Meet GDE's Decorative Light Specifications
- ☐ Pass GDE's Decorative Light Inspections

*See **GDE Decorative Light Specifications** and **GDE Decorative Light Inspections**, pg.18, for more information.

BILLING

Lights are billed according to GDE's Outdoor Lighting Rate. After inspections have been completed, the developer or HOA may have the lights turned on and begin to utilize the outdoor lighting. The lights will be billed monthly 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 that feeds from the same transformer as the decorative light.

For 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.

The developer or HOA may elect not to energize the decorative streetlights until the lights have been converted to the City of Gallatin account.

APPROVED METER BASES

*** NON-APPROVED METER BASES WILL NOT BE ENERGIZED BY GDE ***

*** ALL METERS MUST HAVE A MINIMUM RATING OF 200 AMPS. ***

SELF-CONTAINED METER BASES

	Size*	Type	Millbank	Durham	Siemens	Eaton
SINGLE PHASE	200 Amp	OH	U7021-DL-TG-BL	RS213N	UAT37HQU4	UTRS202BCH
	200 Amp	UG	U1980-D-BL	UTRS223A	UAS8 / UAS9 / HQW4	UTRS223ACH
	225 Amp	HOUSE MOD	---	---	WCL204081T1RJ	---
	320 Amp	OH	U1079-R-BL	---	HQST 4	UTH4300TCH
	320 Amp	UG	U1797-0-K3L-K2L-BL	---	HQDSW / SWD 4	UTH43369UCH
	320 Amp	OH / UG	U2448-X	H4330T	---	UTH4330TCH
THREE PHASE	200 Amp	OH / UG	U7423-RXL	H7213T	HQND5	---
	200 Amp	OH / UG	U9701-RRL-BL	---	HQST 7 / HQW 7	---
	225 Amp	MODULE	---	---	WCL2040B2T1RJ	---
	225 Amp	MODULE	---	---	WCL2442B3T1RJ	---
	320 Amp	OH / UG	U2120-X	UT-H7330-U	HQST 7	---
	320 Amp	OH / UG	U2594-X	---	HQDSW / SWD 7	---
	600 Amp	OH / UG	U4667-XT-9506	---	(K-7T) 9817-9506	CH9506K7

* Multi-ganged, stacked bases, or module bases may be approved on a case-by-case basis. *

INSTRUMENT RATED METER BASES

Size	Phase	Terminals	Millbank	Durham	Siemens	Eaton
20 Amp*	Single	8	UC7235-RL	R6821-8K	---	---
20 Amp**	Three	13	**These meter bases must be purchased from GDE. Contact ghooge@gdetn.com for purchase.**			

*8 Terminal base requires an automatic bypass switch.

**13 Terminal base requires a Durham #1058 or Millbank #TS10-0111 (10 Pole) test switch

**13 Terminal base must be pre-wired with test switch

PEDESTAL SERVICE ENTRANCE

Size	Terminals	Midwest
200 Amp	4	R281C1P6H

METER BASE SPECIFICATIONS & NOTES

*** GDE MUST HAVE UNOBSTRUCTED ACCESS TO THE METER BASE. ***

*** METER MAY NOT BE IN AN AREA CLOSED OFF BY A PORCH, DECK, PATIO, FENCE, WALL, SCREEN, ETC... ***

METER BASES

1. Meters should be steel construction and UL approved (with label).
2. Meter location must be approved by GDE's Engineering Department.
3. Meter shall be surface mounted and on a permanent structure controlled by the customer.
4. Meter may not be in an area closed off by a porch, deck, patio, fence, wall, screen, etc...
5. GDE must have unobstructed access to the meter base.
6. There must be a six (6) foot clearance from any obstruction in front of the meter base.
7. Single and horizontal mounted gang bases shall be mounted five feet six inches (5'6") from final grade to center of meter opening.
8. Vertical mounted gang bases:
    a. Shall be six (6) feet from final grade to center of top meter opening.
    b. Shall have a three (3) foot minimum from final grade to center of bottom meter opening.
9. When facing the meter, the GDE service wire will enter the left side of the meter base, and customer load wires will exit the right side of the meter base.
10. Meters must be installed to NEC requirements.
11. Instrument rated bases shall have the ability to be shorted (for meter removal).
12. For any service that will be 600 Amps or higher, advanced notice must be given to GDE's Meter Department. Notice may be given via phone call (615-527-7006) or e-mail (ghooge@gdetn.com).

Note: All multi-ganged meter bases must be labeled per **Labeling for Multi-Metered Installations**, see pg. 22). For additional information on installations, reference the **Meter Installations Page** on our website.

INSTRUMENT TRANSFORMERS

1. All CT's and PT's will be provided by GDE.
2. Single phase cabinets must be steel or aluminum construction (36"x36"x12") with a ¾" plywood backing for mounting of instrument transformers.
3. Three phase cabinets must be steel or aluminum construction (48"x48"x12") with a ¾" plywood backing for mounting of instrument transformers.
4. CT cabinets must have provisions for a padlock.
5. There must not be any conduit through the top of the CT cabinet.
6. The electrician must provide:
    a. Single Phase – 5 wires (black, red, brown, orange, white)
    b. Three Phase – 7 wires (black, red, blue, brown, orange, yellow, white)
7. Marking tape will not be used on wires.
8. All CT and PT wires that are 100' or fewer will be #12 stranded copper conductors. Distances over 100' require approval from GDE.

* **Questions?** Contact GDE's Meter Department at (615) 527-7006 or ghooge@gdetn.com. *

TEMPORARY ELECTRIC SERVICE

*** AID-TO-CONSTRUCTION COSTS AND FEES ARE SUBJECT TO CHANGE WITHOUT NOTICE.**
PLEASE CONTACT THE GDE ENGINEERING DEPARTMENT FOR UPDATED COST ESTIMATES. *

TEMPORARY BOARD SPECIFICATIONS

☐ **LOCATION, LABELING, AND INSPECTION**

- The location of the temporary board must be approved by GDE's Engineering Department prior to installation
- Temporary boards must be clearly labeled with the address and lot number of the property
- A temporary board must pass an electrical inspection conducted by the Gallatin Codes Department each time it is installed or relocated

☐ **FEED REQUIREMENTS:**

- Temporary boards must be fed underground (see **UG TB**, pg. 23)
- The post and braces for the temporary board must be installed rigidly in the ground and buried to a minimum depth of two (2) feet
- Overhead feeds must be approved by the GDE Engineering Department and have the following additional requirements:
  - 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 temporary board must include an eyebolt attachment for GDE's service conductors, and the attachment point and ground clearance to the service wire must comply with the NEC and NESC
  - The overhead temporary board should not be installed more than 100 feet from the pole that has been approved by GDE to feed the temporary service

☐ **REMOVAL OF TEMPORARY BOARDS:**

- Customers or contractors should contact GDE for the disconnection and/or removal of the meter and service wires when they no longer need the temporary board
- Customers or contractors must not remove a temporary board until the meter and service wires have been disconnected and/or removed by GDE

TEMPORARY BOARD COSTS

A fee will be charged for each temporary board. This fee only covers the installation and removal of the service wire. Meter service charges and deposits are not included in this fee. Additional charges will apply for extra trips or work beyond the standard scope.

Additional costs will apply for any transformers that need to be installed to feed a temporary board or for any overhead services that have temporary boards requiring more than 100 feet of overhead service wire and/or any temporary construction by GDE. The total installation and removal costs must be paid by the customer before work begins.

TRANSFORMER CLEARANCE AND FIRE BARRIER WALL

*** A TRANSFORMER PAD WILL NEVER BE INSTALLED LESS THAN THREE (3) FEET FROM ANY BUILDING OR STRUCTURE. ***

FAILURE TO COMPLY WITH THIS POLICY MAY RESULT IN THE REJECTION OF SITE LAYOUT DURING PLAN REVIEW, A REQUIREMENT FOR RE-INSTALLATION AT THE CUSTOMER/ CONTRACTOR'S EXPENSE, AND/OR A DELAY IN PROJECT APPROVAL OR UTILITY SERVICE CONNECTION. COMPLIANCE WITH GDE REQUIREMENTS DOES NOT EXEMPT CUSTOMER FROM ADHERENCE TO APPLICABLE BUILDING/ FIRE CODES AND STANDARDS.

MINIMUM CLEARANCE REQUIREMENTS

There must be a ten (10) foot clear, level path in front of the transformer. There must be three (3) feet of level clearance on each side and on the back of the transformer. Transformer doors must face away from all adjacent walls and fire barrier walls, including screen walls.

☐ **COMBUSTIBLE STRUCTURES**

- Combustible buildings and surfaces (e.g., houses, garages, wood-framed walls) must meet GDE's requirements for transformer spacing.*
- The clearance distance* "A" must be measured from the nearest point of the transformer to the nearest point of the structure and/or egress feature
- A ten (10) foot clearance and a clear path must always be maintained on the front side (door side) of the transformer

☐ **NON-COMBUSTIBLE STRUCTURES**

If the following conditions are met, transformers may be installed closer than the standard clearance. They must still meet the three (3) foot minimum clearance.*

- The exposed wall is constructed to 3-hour fire-rated standards (as determined by the Gallatin Codes Department. Codes must provide written fire-rating standards approval to GDE.)
- There is no exposure to combustible eaves, siding, or trim
- Any door, window, or air intake within the clearance* is protected by a 3-hour fire-rating

*See UMT-1, pg. 24, for more information.

FIRE-RESISTANT BARRIER REQUIREMENTS

When the required clearance between the transformer and any combustible materials cannot be met due to design limitations or site constraints, a **fire-resistant barrier** must be installed between the transformer and the building. The fire-resistant barrier wall and access to the transformer must remain code-compliant and serviceable. Barrier walls are owned and maintained by the property owner. Failure to maintain barrier walls may result in a disconnection of electric service.

☐ **ACCEPTABLE FIRE-RESISTANT BARRIERS MUST:**

- Be free-standing and made of non-combustible materials.
- Qualify as a **4-hour firewall**, constructed of one of the following materials:
  - Solid concrete block (CMU)
  - Reinforced concrete
  - Steel
  - Eight-inch (8") brick
- Completely shield* any combustible structure or wall openings from direct exposure to the transformer
- Allow for equipment replacement or upgrade (i.e., clearance should accommodate potential variations in transformer size).

*See UMT-1, pg. 24, for more information.

SPECIFICATIONS

GDE UNDERGROUND PRIMARY/SECONDARY SPECIFICATIONS

INSPECTION REQUIREMENTS	
CONDUIT	**ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH GDE'S APPROVED CONDUIT DRAWINGS AND DETAILS. CONDUIT MUST BE INSPECTED AND APPROVED PRIOR TO THE BACKFILLING OF THE DITCH.**
	Primary Conduit • Minimum installation depth: **48 inches** • Minimum horizontal separation from communications conduits: **12 inches** • Minimum vertical separation from other utilities at crossings: **12 inches** • Minimum separation when paralleled with other utilities: **60 inches**
	Secondary Conduit • Minimum installation depth: **30 inches** (or 24 inches for decorative street lighting) • Minimum horizontal and vertical separation from other utilities: **12 inches**
	Elbow Requirements • Secondary 3" Sch. 80: 24-inch radius for 90-degree elbows • Primary 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, #67 gravel must be used as an alternative • GDE supplied, red marking tape shall be installed over the first 12" of backfill. **Note:** Pictures may be e-mailed for marking tape inspection.
	Damaged Conduit Note Any conduit that is damaged prior to wire installation must be repaired or replaced by the developer.
	Coordination with GDE All conduit installation within existing GDE equipment must be coordinated with GDE for approval and proper execution.
FINAL	THE GDE FINAL CONDUIT INSPECTION CHECKLIST **(PG. 21)** MUST BE COMPLETED, SIGNED, AND RETURNED TO GDE BEFORE THE FINAL INSPECTION WILL BE SCHEDULED.

GDE Underground Service Specifications

These specifications only apply to GDE owned service wire. GDE does not inspect customer owned service wire. Customer owned service wire should be inspected by the Gallatin Codes Department.

All construction work shall adhere to the standards set forth by the Occupational Safety and Health Administration (OSHA).

INSPECTION REQUIREMENTS	
	ALL INSPECTION REQUIREMENTS MUST BE MET, AND GRADING MUST BE WITHIN THREE (3) INCHES OF FINAL GRADE BEFORE REQUESTING AN INSPECTION FROM GDE.
TRENCH	• **Trench** shall be free from construction debris and large, sharp rocks that could potentially damage the conduit or impede construction • **Backfill** material must be free of any substances that may damage the conduit → If clean backfill is not available, #67 gravel must be used as an alternative **Note:** Conduit installations shall be inspected prior to backfilling the ditch.
CONDUIT	• **Conduit** ○ **Must be** installed in a straight line (direct and uninterrupted path) from GDE's secondary vault to the meter base ▪ A maximum of two (2) 24-inch radius, 90°, Sch. 80 PVC elbows may be used for each conduit run ▪ Additional elbows or sharper turns must have written approval from GDE ○ **Must not be** located under any permanent structures ○ **Minimum installation depth of 30 inches** ○ **A Minimum Separation of 12 inches** (both horizontal and vertical) must be maintained between all conduit and any other utilities (except AT&T/Comcast service drops, which may be closer) ○ **200-400 Amp Services** must use 3" Sch. 40 PVC ○ **Services above 400 Amps** will be inspected by Gallatin Codes Department since the customer will provide, install, and own the service wire ○ **Above Ground Conduit** must be Sch. 80 PVC • **Pull Strings** must be installed on all conduit runs • **Expansion Joints** are required below the meter base on all services
METER BASE	• **Must meet GDE's meter base requirements** (see pgs. 12-13 for more information) • **Must be installed per NEC code requirements**
GROUND ROD/WIRE	• **Must have two (2) ground rods installed per NEC code requirements** ○ Spaced six (6) inches apart ○ Driven in undisturbed soil • This ground wire requirement is in addition to the NEC Code's ufer grounding requirements

GDE Decorative Light Specifications

MATERIAL	GDE SPECIFICATIONS
Conduit	1" sch. 40 PVC (unless otherwise specified) with 24" radius elbows
Decorative Fixtures	*See **Approved Light Fixtures** (pg. 10)
Decorative Pole	*See **Approved Light Fixtures** (pg. 10)
Lamps	*See **Approved Light Fixtures** (pg. 10)
Photocell	*See **Approved Light Fixtures** (pg. 10)
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 & Fuse Blocks	Fuse link with fuse installed required in pole base.

GDE Decorative Light Inspections

Note: The decorative light inspections outlined below are completed by GDE (not by the Gallatin Codes Department) unless otherwise noted.

INSPECTION	REQUIREMENTS
Conduit	Conduit will be inspected by GDE prior to backfilling ditch. All work shall be performed to GDE's specifications (see **GDE Underground Primary/Secondary Specifications**, pg. 16). • **24" depth** with 12" minimum separation (vertical & horizontal) from any other utilities • Backfill must be soil free of material that may damage conduit (#67 gravel may be used for backfill) • Any conduit that is damaged prior to the lights being energized must be replaced by the developer • All conduit installed in existing GDE equipment must be coordinated with GDE
Footing	Footing must be built to GDE specifications (See **SL-01**, pg. 25). Poles shall not be installed until the second inspection is complete. • **First Inspection** – Shall be scheduled after rebar, anchor bolts, ground wire, and ground rods are installed. Must be scheduled **before** concrete has been poured. • **Second Inspection** – Shall be scheduled after concrete has been poured
FINAL	**NOTE: LIGHTS MUST PASS A CITY CODES ELECTRICAL INSPECTION BEFORE THE FINAL GDE INSPECTION CAN BE SCHEDULED.** • ALL WIRING, CONNECTORS, AND FUSES ARE INSTALLED • POLE IS PLUMB, LEVEL, AND SECURELY MOUNTED • FIXTURE IS ORIENTED CORRECTLY WITH THE STREET (THE EMBOSSED "STREET SIDE" MARKING ON THE FIXTURE MUST BE TURNED TOWARD THE STREET)

REFERENCES

GALLATIN DEPARTMENT OF ELECTRICITY PLANNING COMMENTS

1. PURPOSE

These comments establish high-level guidelines for developers to use regarding the design, construction, and relocation of facilities under the Gallatin Department of Electricity's (GDE's) oversight for the City Planning review process. It also addresses the responsibilities of developers, including compliance with GDE policies, payment schedules, and access requirements, to ensure smooth project execution and the maintenance of GDE's operational standards. This document is not a comprehensive list of requirements. Please refer to the **GDE Electric Development & Infrastructure Policy** for a detailed description of policy and procedural information.

2. SCOPE

These planning comments apply to all developers, contractors, and third parties involved with the design, construction, and relocation of (and/or providing GDE employees access to) GDE facilities.

3. PLANNING COMMENTS

3.1 ADHERENCE TO GDE POLICIES AND PROCEDURES

- All developers, contractors, and associated parties must comply with and adhere to GDE's established policies and procedures throughout the entirety of the design, construction, and operational phases
- Compliance with GDE policies and procedures is mandatory for approval of any design, construction, or relocation plans and will be strictly enforced

3.2 FACILITY DESIGN APPROVAL

- GDE will design the layout for its facilities based on operational needs and industry standards
- Before GDE's facility design process can start, a City of Gallatin (COG)-approved FMDP CAD site file utilizing the Tennessee State Plane Coordinate System must be submitted by the developer to GDE's Engineering Department for review
- A detailed load sheet will be required for GDE to complete the facility design
- No design work will begin until the COG-approved FMDP CAD site file utilizing the Tennessee State Plane Coordinate System has been received and approved by GDE

3.3 PAYMENT OF CONSTRUCTION AID COSTS

- All costs related to the aid to construction must be paid in full by the developer prior to GDE placing any material orders for the project
- Some materials can have lead times of 52+ weeks. As such, the developer must ensure timely payment to avoid delays in the ordering process and to keep the project on schedule

3.4 RELOCATION OF EXISTING FACILITIES

- Any of GDE's existing facilities that need to be relocated as part of the development project will be relocated at the developer's expense
- These expenses include, but are not limited to, the cost of dismantling, transporting/ relocating, and reassembling existing GDE facilities

3.5 Maintenance of Access to GDE Facilities

- GDE must be granted access to all its facilities during the design, construction, and operational phases of any project
- The access provided must meet GDE's approval
- The developer is responsible for covering any costs associated with providing approved access to GDE facilities
- Access requirements will be reviewed as part of GDE's facility design process to ensure that operational access will not be impeded at any stage of the project

3.6 Rights of Way and Easements

- Any rights-of-way and easements needed for the development will be at the developer's expense. This includes but is not limited to roads, drives, gates, etc.
- The developer is responsible for obtaining all necessary rights-of-way and easements that will be required for the project
- Any costs incurred by GDE in facilitating access or reviewing easements will be reimbursed to GDE by the developer

4. Roles and Responsibilities

- **Developer**:
  - Submit a COG-approved FMDP CAD site file utilizing the Tennessee State Plane Coordinate System for GDE's Engineering Department to review and use in beginning facility design
  - Submit a detailed load sheet to GDE's Engineering Department
  - Pay all aid to construction in advance of any material orders
  - Assume financial responsibility for any relocation of GDE facilities
  - Ensure GDE's access needs are met, and assume any associated costs incurred in providing approved access
- **GDE**:
  - Begin facility design once the COG-approved FMDP CAD site file utilizing the Tennessee State Plane Coordinate System has been received and reviewed
  - Ensure timely material ordering upon receipt of full payment of Aid to Construction costs
  - Coordinate and communicate relocation requirements to the developer as needed
  - Ensure that its access requirements are included in the facility design review process

5. Compliance and Consequences

- Developers must comply with all aspects of these comments, including following all other GDE policies and procedures as defined in the **GDE Electric Development & Infrastructure Policy**
- Failure to meet these requirements may result in delays to the project, withholding of material orders, or delays in project approvals (perhaps we can combine project delays and project approval delays into one and there is a third consequence we can add)
- Any costs incurred by GDE due to non-compliance will be charged back to the developer

GALLATIN DEPARTMENT OF ELECTRICITY
P.O. BOX 1555 ◆ 135 JONES STREET
GALLATIN, TENNESSEE 37066
(615) 452-5152 ◆ FAX: (615) 452-6060
www.gallatinelectric.com

GDE FINAL CONDUIT INSPECTION CHECKLIST

This checklist is to assist developers in ensuring compliance with the requirements for a GDE final conduit inspection. This list is subject to change without notice. Please ensure the requirements have been met before signing and dating. All specifications can be found in the GDE Electric Development & Infrastructure Policy.

This form must be completed and returned to GDE before a final conduit inspection will be scheduled.

- ☐ **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 conduits installed per **Conduit Layout design** (provided by GDE Engineering Department)
- ☐ **5.** All GDE conduit and ground sleeves installed in utility easement
- ☐ **6.** All secondary vaults installed per **UGSECV – Secondary Vault** (pg. 26)
- ☐ **7.** Ground sleeves installed per
  - → **UMF-1P – Transformer Ground Sleeve Detail Single Phase Diagram** (pg. 27)
  - → **UPV-1P/ UPV-3P – Primary Vault Ground Sleeve Detail Single & Three Phase Drawing** (pg. 28)
  - → **UM-3P – Concrete Pad Detail Three Phase Pad Mounted Transformer Drawing** (pg. 31)
  - ☐ **7a.** Must have 10' clear and level path in front
  - ☐ **7b.** Must have 3' clear and level path on each side and around the back
  - ☐ **7c.** Must be installed 4" above grade per **UMF-1P** (pg. 27), **UPV-1P/ UPV-3P** (pg. 28), and **UM-3P** (pg. 31)
  - ☐ **7c.** Ground sleeves backfilled to within 6" of top of pad
  - ☐ **7d.** Ground sleeves level
  - ☐ **7e.** Conduits cut 12" below top of ground sleeve
  - ☐ **7f.** Conduits arranged in ground sleeve per **UMF-1P** (pg. 27), **UPV-1P/ UPV-3P** (pg. 28), and **UM-3P** (pg. 31)
  - ☐ **7g.** No trash inside of ground sleeve
- ☐ **8.** Conduits arranged per **UDIST – Underground Distribution System** (pg. 29) spec for underground primary construction or **USEC - Underground Secondary Conduit System** (pg. 30) spec for overhead primary construction
  - ☐ **8a.** 26" minimum spacing between GDE 3" secondary conduit and communications conduits
  - ☐ **8b.** 18" minimum spacing between GDE ground sleeve and communications conduits on underground primary construction
  - ☐ **8c.** 24" minimum spacing between pole and GDE 3" secondary conduit on overhead primary construction
- ☐ **9.** 1800lb minimum pull tape/ mule tape in all conduits with 6' tail on each end

Note: Any work done to unstop, repair, etc. after final inspection will be billed to developer at full cost.

Print: _____ **Sign:** _____ **Date:** _____

LABEL – LABELING FOR MULTI-METERED INSTALLATIONS

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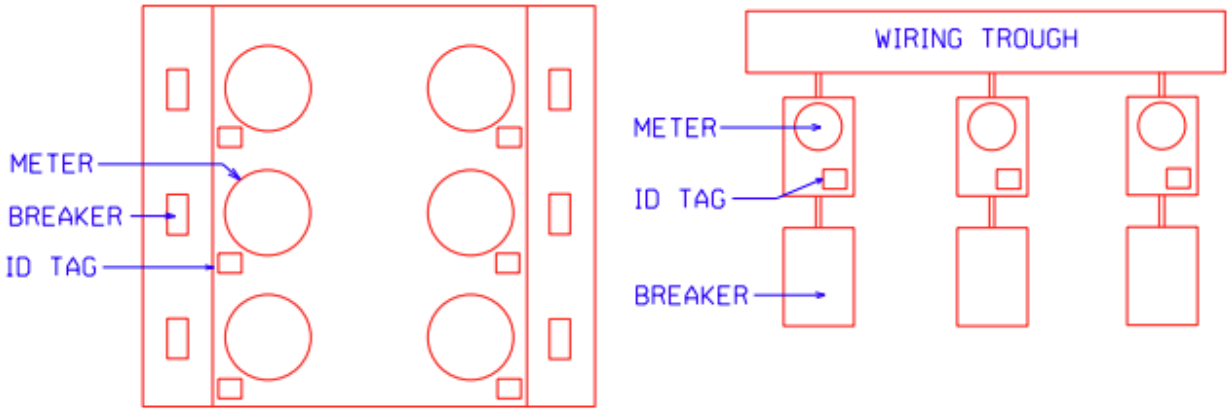
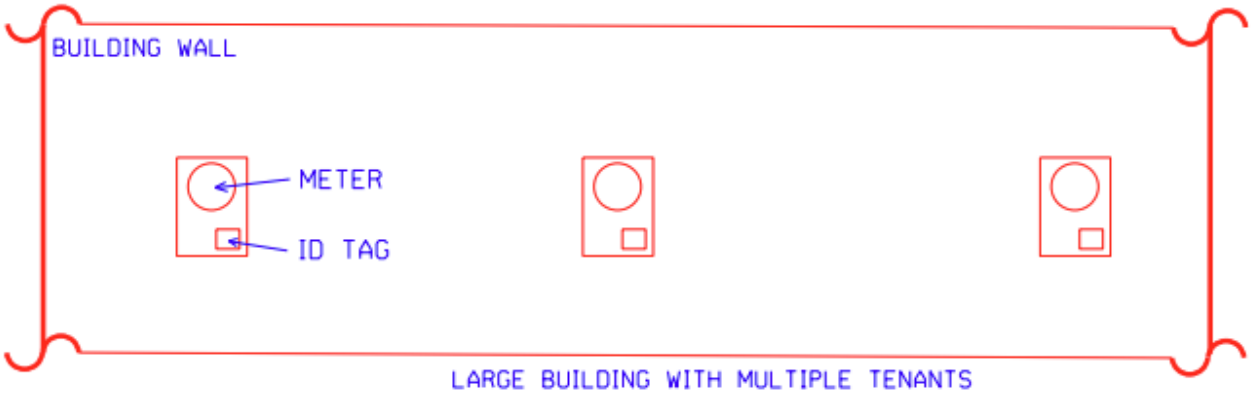
Wiring troughs are no longer allowed, must now use secondary tap boxes.





LARGE BUILDING WITH MULTIPLE TENANTS

NOTES:

1- Buildings such as apartment buildings, retail strip centers, duplexes, triplexes, town homes, and etc. which have more than one meter shall have all meters labeled to identify the premises they serve.
2- The label shall have the apartment/building number or street address.
3- The label shall be outdoor rated brass or stainless steel.
4- The labels shall be attached to the meter base with rivits or screws.
5- The identification numbers/letters shall be stamped or engraved.
6- The identification numbers/letters shall have a character size of at least ½" in height.

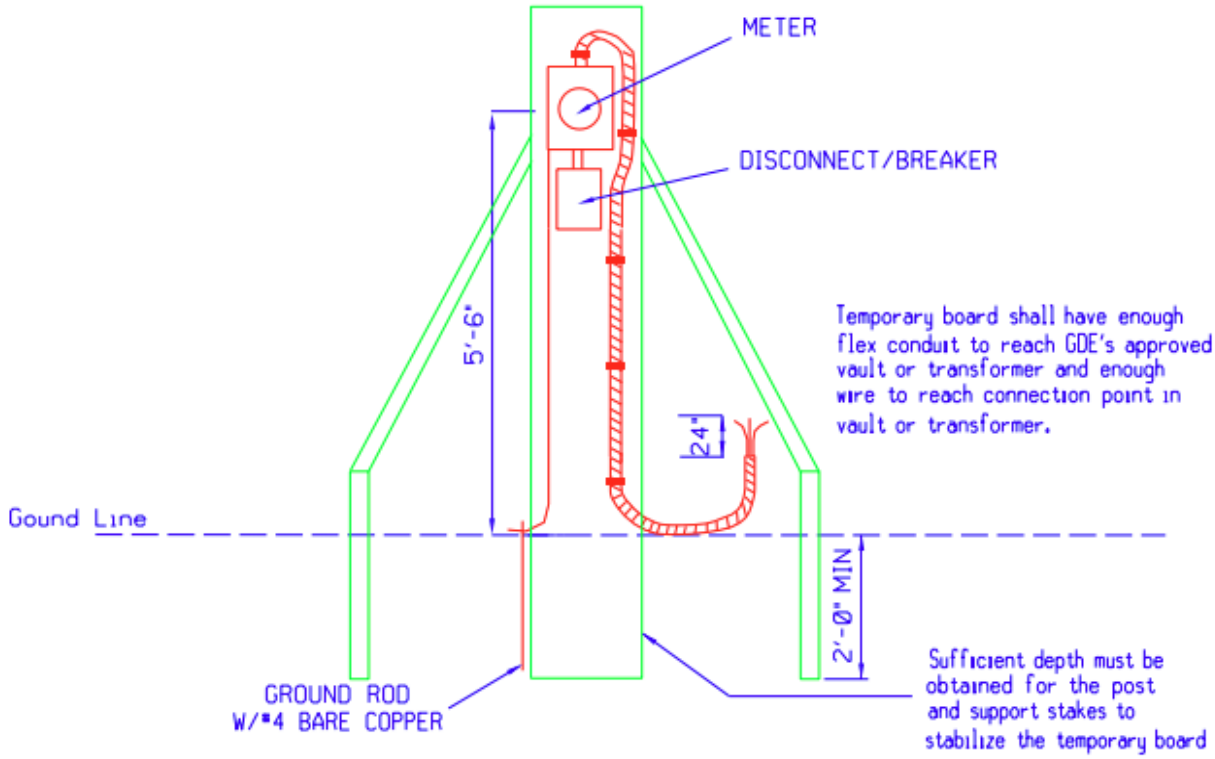
GDE	LABELING FOR MULTI-METERED INSTALLATIONS	DATE: 3/6/00 STANDARD NUMBER LABEL

UG TB – Underground Temporary Board Service Diagram

GENERAL CONSTRUCTION NOTES:

GDE PH. # (615) 452-5152

1) The GDE engineer will spot the temporary board location upon request.
2) The temporary board shall be installed at least 3' from and no more than 10' from GDE's approved service point.
3) Temporary electric service boards are not to be installed on GDE poles or trees.
4) Each tempary board must be labeled with address and lot number, and pass an electric inspection by the State Electrical Inspector each time the board is installed or relocated.
5) The temporary board clearance from other objects must meet all NEC and NESC requirements.



IMPORTANT NOTE:
CUSTOMERS OR CONTRACTORS WILL NOT REMOVE A BOARD UNTIL THE METER AND THE SERVICE WIRES HAVE BEEN REMOVED.

GDE	UNDERGROUND TEMPORARY BOARD SERVICE	DATE: 7/17/23 STANDARD NUMBER UG TB

UMT-1 – TRANSFORMER CLEARANCE REQUIREMENTS FOR PAD-MOUNT TRANSFORMER

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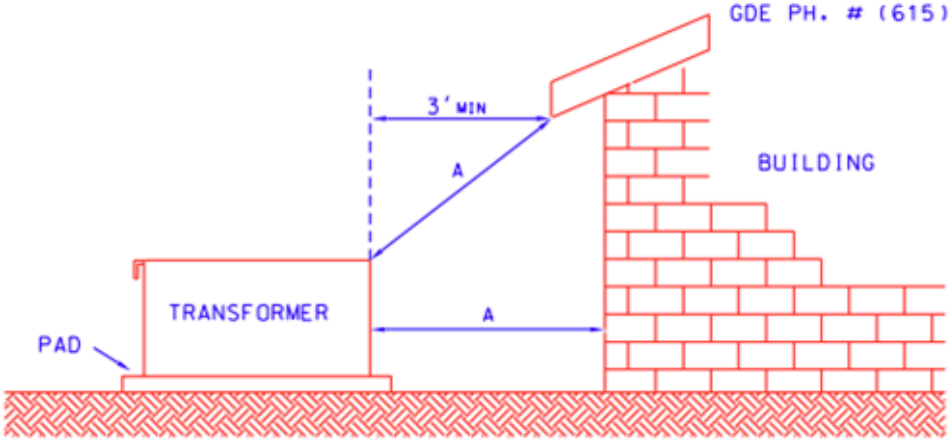
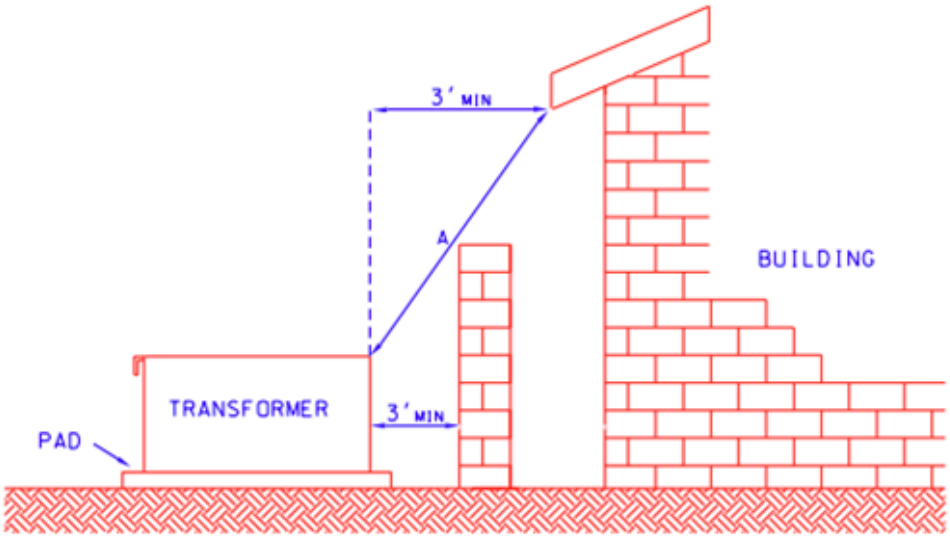


TRANSFORMER CLEARANCES

DIMENSION A	TRANSFORMER KVA	BUILDING WALL & EAVES
10'	0-75	COMBUSTIBLE
20'	76-333	COMBUSTIBLE
30'	334 AND LARGER	COMBUSTIBLE
3'	ALL SIZES	NON-COMBUSTIBLE



FIRE BARRIER WALL

GDE

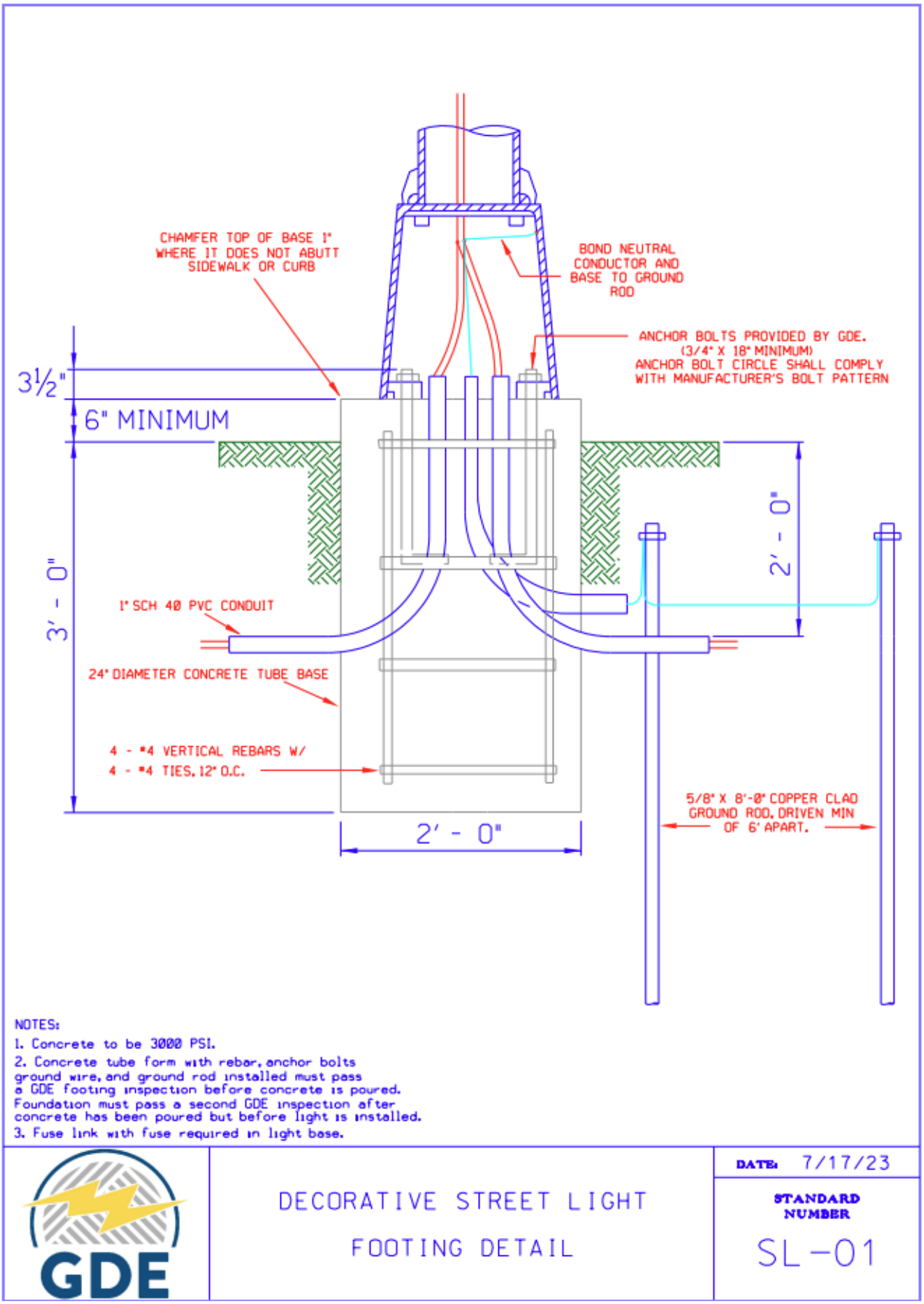
TRANSFORMER CLEARANCE REQUIREMENTS FOR PAD-MOUNT TRANSFORMER

DATE: 7/17/23

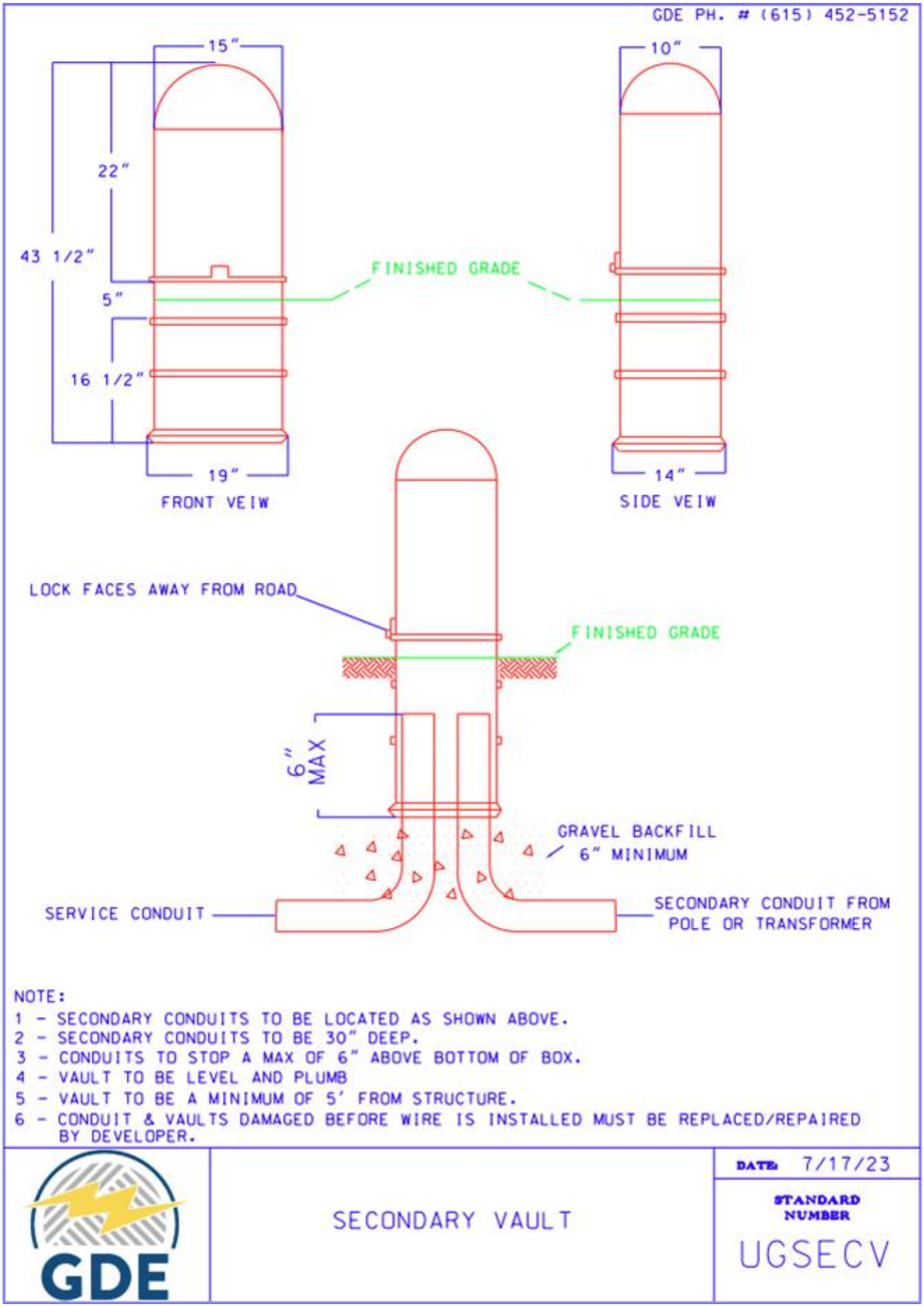
STANDARD NUMBER

UMT-1

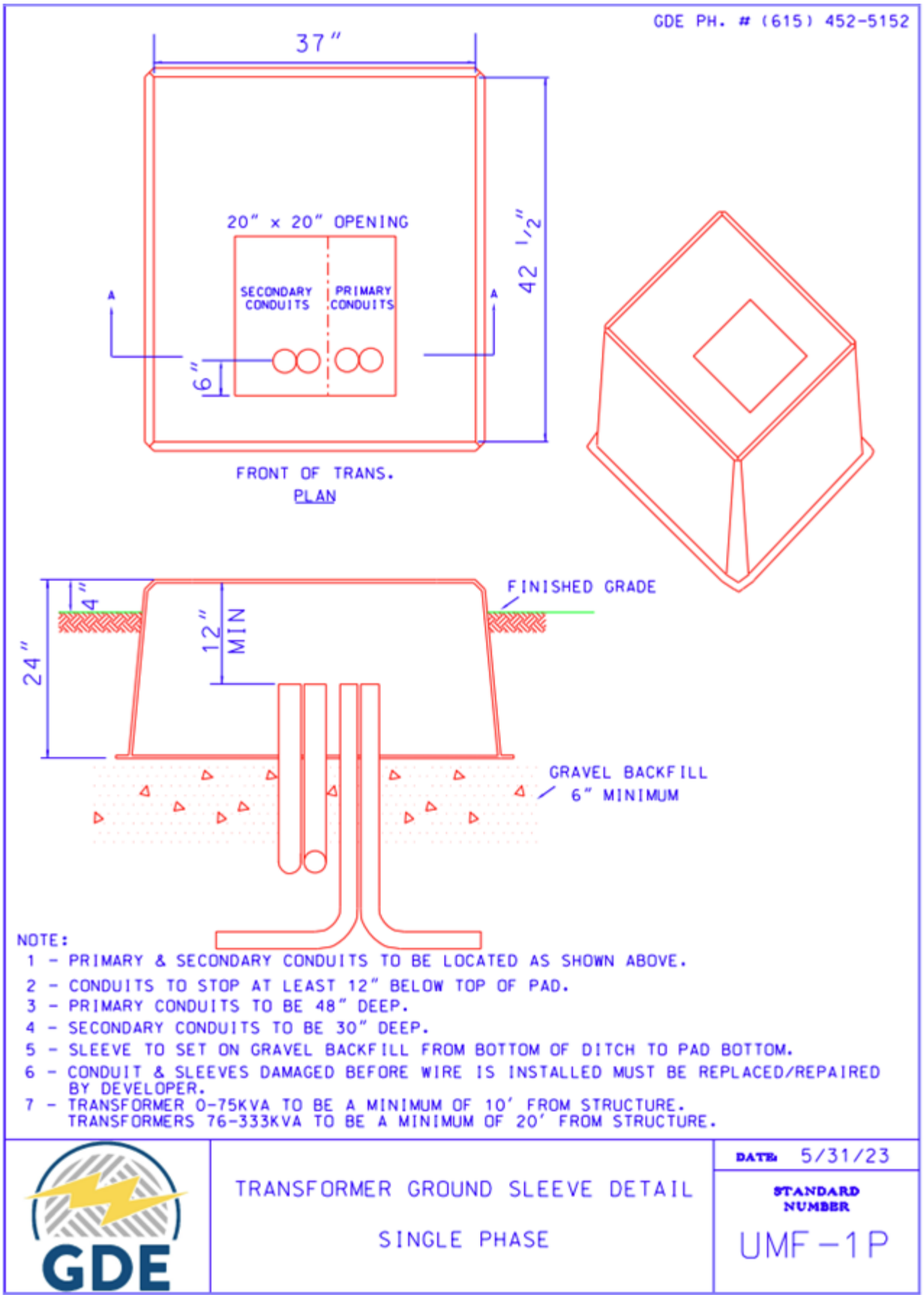
SL-01 – DECORATIVE STREET LIGHT FOOTING DETAIL



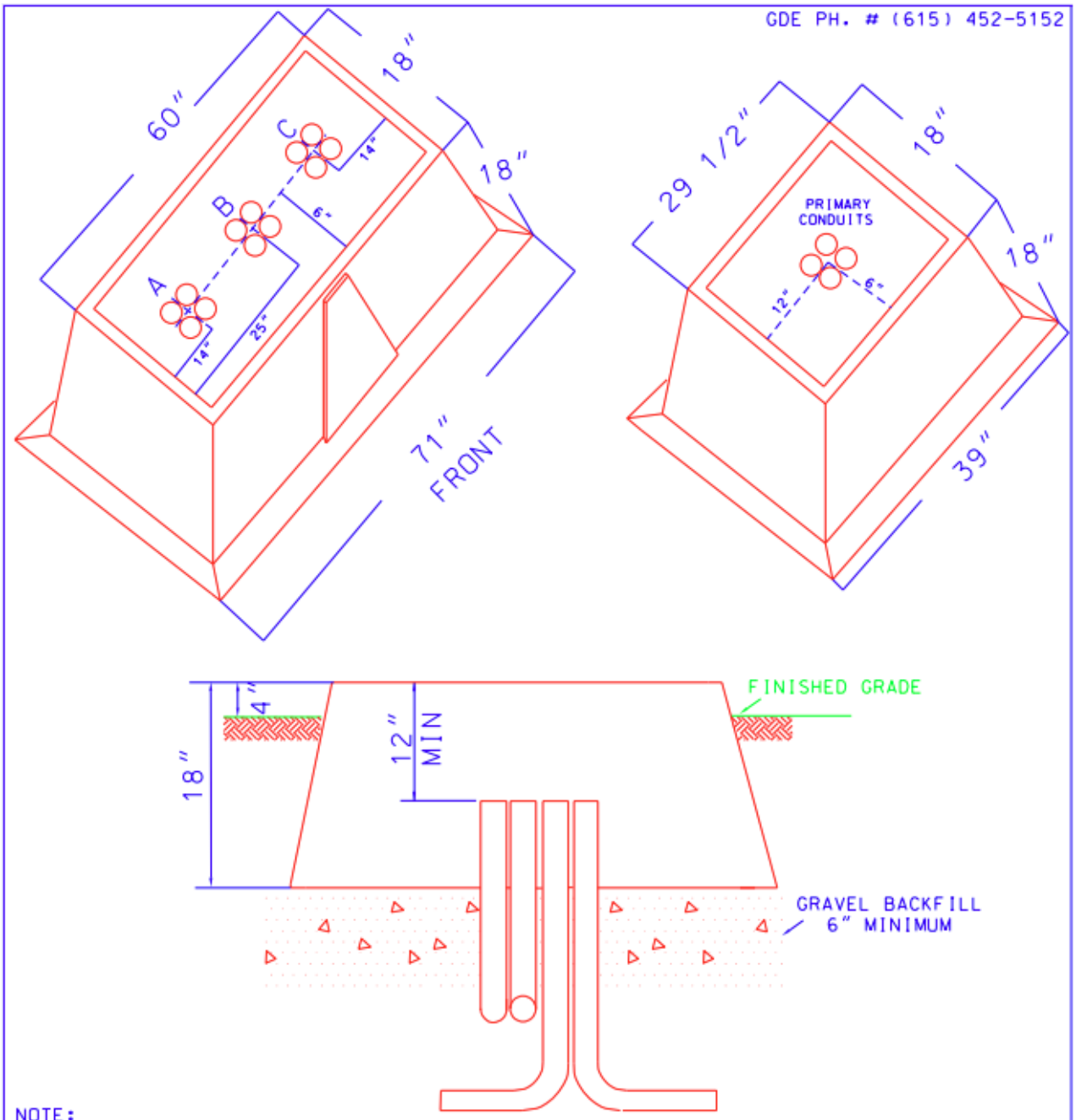
UGSECV – SECONDARY VAULT



UMF-1P – TRANSFORMER GROUND SLEEVE DETAIL SINGLE PHASE DIAGRAM



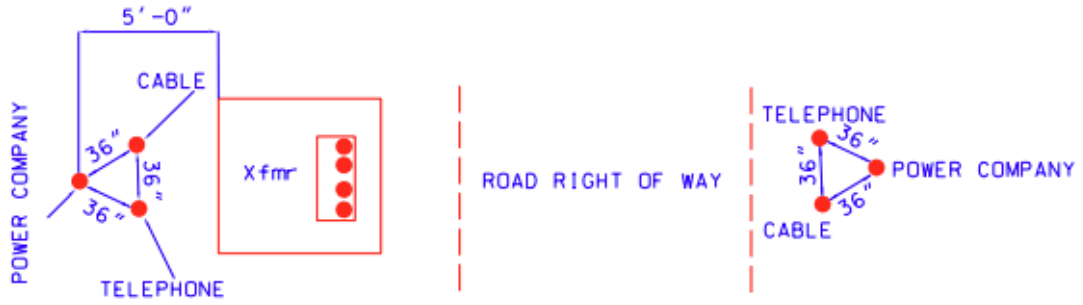
UPV-1P & UPV-3P – PRIMARY VAULT GROUND SLEEVE DETAIL SINGLE & THREE PHASE DRAWING



NOTE:
1 – PRIMARY CONDUITS TO BE LOCATED AS SHOWN ABOVE.
2 – CONDUIT FROM POLE TO VAULT SHOULD BE TURNED UP IN B AREA OF 3 PHASE SLEEVE
3 – CONDUITS TO STOP AT LEAST 12" BELOW TOP OF PAD.
4 – PRIMARY CONDUITS TO BE 48" DEEP.
5 – SLEEVES TO SET ON GRAVEL BACKFILL FROM BOTTOM OF DITCH TO PAD BOTTOM.
6 – VAULTS TO BE A MINIMUM OF 10' FROM STRUCTURE.
7 – CONDUIT & SLEEVES DAMAGED BEFORE WIRE IS INSTALLED MUST BE REPLACED/REPAIRED BY DEVELOPER.

GDE	PRIMARY VAULT GROUND SLEEVE DETAIL SINGLE AND THREE PHASE	DATE: 8/12/25 STANDARD NUMBER UPV-1P UPV-3P

GDE PH. # (615) 452-5152

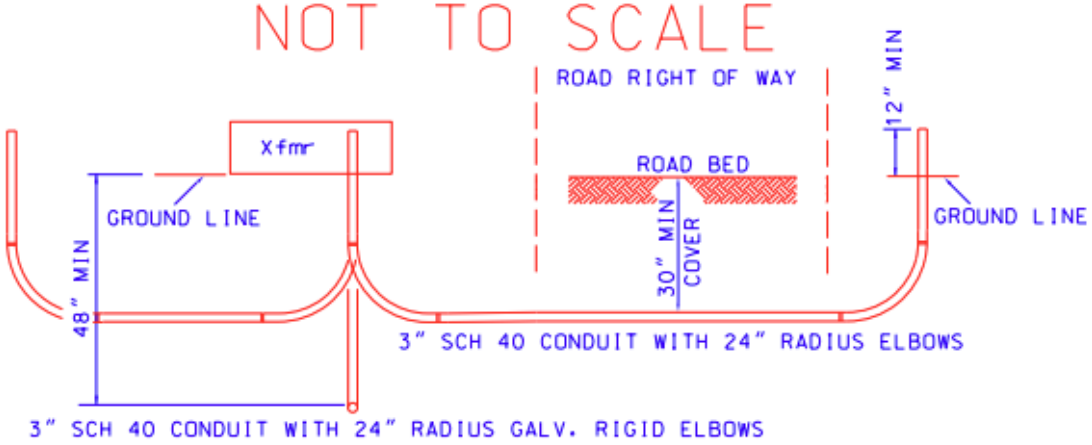


NOT TO SCALE

NOTES:

POWER COMPANY CONDUITS AND TRANSFORMER TO BE LOCATED IN THE UTILITY EASEMENT

NOT TO SCALE



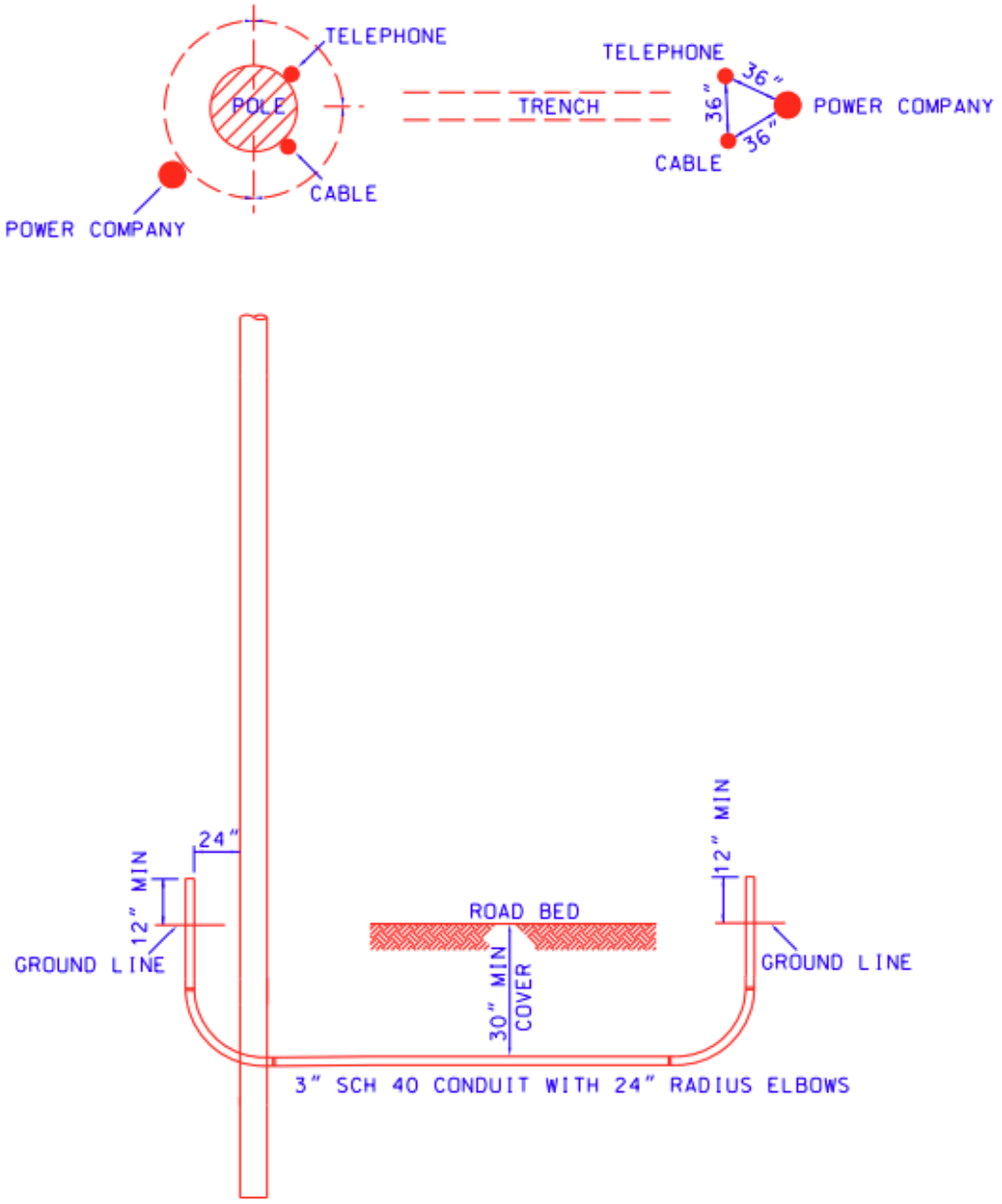
NOTES:

1) CONTRACTOR TO SUPPLY AND INSTALL CONDUIT WITH PULL STRING
2) CONTRACTOR TO SUPPLY AND INSTALL CAPS AT BOTH ENDS OF CONDUIT
3) PULL STRING TO HAVE AT LEAST 1800 LB TENSILE STRENGTH
4) ALL CONDUIT TO BE INSPECTED BY GDE PRIOR TO BACKFILLING
5) CONDUIT DAMAGED BEFORE WIRE IS INSTALLED MUST BE REPLACED/REPAIRED BY DEVELOPER

GDE	UNDERGROUND DISTRIBUTION SYSTEM	DATE: 5/31/23 STANDARD NUMBER UDIST

USEC – UNDERGROUND SECONDARY CONDUIT SYSTEM

GDE PH. # (615) 452-5152



NOTES:
1) CONTRACTOR TO SUPPLY AND INSTALL CONDUIT WITH PULL STRING
2) CONTRACTOR TO SUPPLY AND INSTALL CAPS AT BOTH ENDS OF CONDUIT
3) PULL STRING TO HAVE AT LEAST 1800 LB TENSILE STRENGTH
4) CABLE TV AND PHONE CONDUITS INSTALLED ON STREET SIDE OF POLE
5) POWER COMPANY CONDUIT TO BE INSTALLED ON SIDE OF POLE AWAY FROM STREET
6) CONDUIT DAMAGED BEFORE WIRE IS INSTALLED MUST BE REPLACED/REPAIRED BY DEVELOPER

GDE

UNDERGROUND SECONDARY CONDUIT SYSTEM

DATE: 7/17/23

STANDARD NUMBER

USEC

UM-3P – CONCRETE PAD DETAIL THREE PHASE PAD MOUNTED TRANSFORMER DRAWING

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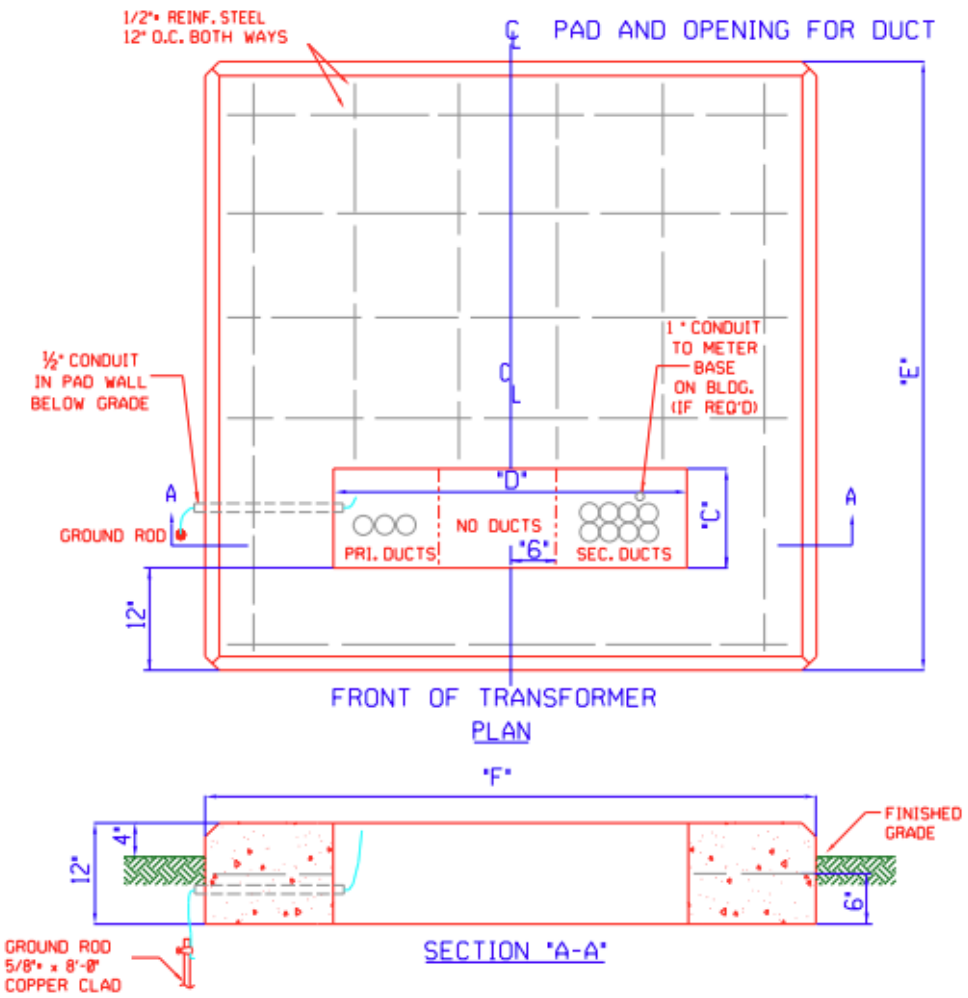

DIMENSION	C	D	E	F
75 KVA	12"	40"	84"	84"
150 KVA	12"	40"	84"	84"
225 KVA	18"	40"	84"	84"
300 KVA	18"	40"	84"	84"
500 KVA	18"	52"	84"	84"
750 KVA	18"	52"	84"	84"
1000 KVA	24"	52"	84"	84"
1500 KVA	24"	52"	84"	84"
2000 KVA	24"	60"	120"	120"
2500 KVA	24"	60"	120"	120"

NOTES:

1- Concrete testing, 2,000 lbs. psi minimum.
2- Reinforcing steel, ASTM-A615 Grade 60, placing approximately 12" O.C. each way and securely tied together.
3- Conduits to stop a maximum of 1" above pad.
4- Conduits to be placed as shown. Allow at least 12" between pri. and sec. conduits.
5- Primary conduits shall be 48" deep and have rigid galvanized elbows.
6- GDE to be notified after forming, but before pad is poured for an inspection of the pad.
7- Float finish, leaving no depressions.
8- Conduit damaged before wire is installed must be replaced/repaired by developer.

GDE

CONCRETE PAD DETAIL
THREE PHASE PAD MOUNTED
TRANSFORMER

DATE: 7/17/23

STANDARD NUMBER

UM-3P