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**PAtec** 

Supplying Electric, Natural Gas, Water and Wastewater Services to the Greenville region since 1905.



## Introduction – Section 1

Greenville Utilities (GUC) and its Electric Department have produced this guide to provide you with the most complete and current information available to assist in the connection of your new construction project to our Electric Distribution Network.

GUC realizes that any successful project -industrial, commercial, or residential- requires the cooperation and scheduling of many different entities, including property owners, developers, contractors as well as governmental agencies and utility providers. To aid in that process, this guide provides our customers with the necessary information to ensure your project's success from design to completion.

To further assist your project's Electric Utility needs, the GUC Electric Department will assign an Engineering Assistant who will serve as your main point of contact with Electric Engineering staff. Your Engineering Assistant will design and manage the installation of your Electric Utilities, as well as answer any question you may have about the process.

You can also obtain information regarding Terms and Conditions of Electric Service, as well as Electric Rate Schedules by visiting the GUC website at <u>www.guc.com</u> from here navigate to "About US", "Electric", and then "Rates and Regulations".

Department	Phone Number
Greenville Utilities Electric Engineering	252-551-1582
Greenville Utilities Customer Service	252-752-7166
Greenville Utilities 24 Hr. Dispatch	252-551-1567
City of Greenville Inspections	252-329-4466
City of Greenville Planning	252-329-4498
Pitt County Inspections	252-902-3150
Pitt County Planning	252-902-3250

Helpful contact numbers are provided here:

Our goal is to provide you with all the information you need to establish Electric services in a prompt and timely manner. At GUC, we are happy to assist you and look forward to working with you on your new development project.

## **Greenville Utilities Electric Services**

GUC Electric provides the following services within the City of Greenville and the surrounding area of Pitt County:

- Electric Service
- Outdoor Lighting Services
- Fiber Optics

## **Critical Stages of Project/Development Process**

This section provides the general outline of the steps involved in a project/development located within GUC Electric's service territory.

## 1. Plan Submittal

- Owner/Developer submits plans to local agencies.
- Plans are routed to affected entities (including GUC).

# 2. Plan Review

- Submitted plans are received and reviewed by GUC.
- Potential conflicts and/or required electrical easements are noted on the plans.
- Plans are submitted back to local agencies as: "Approved", "Approved as noted", or "Revise and Re-submit".

## 3. Plan Approval

- Reviewed plans are received back by owner/developer and local agencies.
- Owner/developer works with local agencies to acquire easements etc.
- Plans are approved.
- Approved plans are routed back to GUC.

## 4. Engineering & Design

- Once plans are approved, owner/developer contacts GUC to begin the engineering and design process.
- If necessary, owner/developer submits the site plan in accordance with GUC's digital submission policy.
- GUC develops facilities layout and associated fees to be paid by developer.
- Owner/developer pays fees to GUC Customer Service.

# 5. Construction

- GUC works with owner/developer to coordinate installation of electric facilities.
- Option 1- GUC installs conduit or duct bank system.
- Option 2- Owner/developer installs conduit or duct bank system in accordance with "Greenville Utilities Conduit Installation Specifications".
- GUC Project Manager performs periodic inspections of conduit system installation.
- GUC performs final inspections and acceptance of conduit system.
- GUC installs all associated wiring, pedestals, pads, and equipment.

• GUC energizes equipment and places in service.

## **Project/Development Phases**

Project Phase	Developer/Owner Activities	GUC Responsibilities
Project Planning & Initiation	<ul> <li>Land Acquisition</li> <li>Financing</li> <li>Zoning/Permitting</li> <li>Hire Engineers/Contractors</li> </ul>	<ul> <li>Confirm Service Territory/Type of Service Available</li> </ul>
Engineering, Design & Estimating	<ul> <li>Review GUC Terms &amp; Conditions of Electric Service @ <u>www.guc.com</u></li> <li>Plan Developments</li> <li>Permit Applications with Local Inspection Authorities (City, County, etc.)</li> <li>Apply for GUC Services (including Temporary Electric), Pay Fees</li> <li>Approve Easements (if necessary)</li> </ul>	<ul> <li>Review Preliminary Plans</li> <li>Generate Easement Agreement (if necessary)</li> <li>Begin Engineering Design/Analysis</li> <li>Calculate Additional Charges (if necessary)</li> </ul>
Construction	<ul> <li>Install conduit system (if required)</li> <li>Request Inspections by Local Inspection Authorities</li> <li>Request Permanent Electric Service</li> </ul>	<ul> <li>Project Tracking</li> <li>Support Project Schedule</li> <li>Perform Conduit System Inspections</li> <li>Provide Temporary Electric</li> <li>Install Permanent Electric Facilities</li> </ul>
Service Initiation	<ul> <li>Pass Inspection by Local Inspection Authority</li> </ul>	<ul> <li>Make Electric Connections</li> <li>Set Electric Meter</li> <li>Initiate Billing</li> </ul>

## **Obtaining Electric Service – Section 2**

GUC will approve the availability of service, point of delivery, and service characteristics for new industrial, commercial, and residential developments. Refer to the Terms & Conditions of Electric Service prior and during construction. The information can be found at <u>www.guc.com</u>. From here navigate to "About US", "Electric", and then "Rates and Regulations". The owner/developer should contact Greenville Utilities Customer Service at the earliest possible opportunity in the preliminary planning/engineering phase to ensure appropriate project design and coordination.

For all services, it will be the responsibility of the owner/developer to supply the connected load and operating characteristics of the site. Design will be based on supplied information.

The owner/developer shall be responsible for granting GUC a minimum ten-foot (10') easement for all primary facilities installed on premises.

GUC will size all services according to the owner/developer supplied connected load.

For all services there shall be a twenty-six dollar and twenty-five cent (\$26.25) connection fee at the time the meter is installed.

## **Overhead Service**

GUC provides the electric service to the weather head, including the connections at the weather head for industrial, commercial, and residential buildings. All facilities beyond the connection at the weather head shall be owned and maintained by the customer. The customer shall supply a suitable point of attachment for the overhead service.

If your electric service requires an overhead line extension, GUC will conduct a revenue analysis. Should the cost of the line extension exceed that of the revenue analysis, the customer shall be responsible for the difference. In accordance with the Terms and Conditions of Electric Service Section 22.2, GUC will make single phase overhead line extensions to residential customers without cost to the customer.

# **Underground Service**

GUC offers underground electric distribution facilities in lieu of overhead facilities for industrial, commercial, and residential developments with financial assistance from the owner/developer.

GUC will design the most economical underground distribution system compatible with existing and planned facilities. The location of all equipment including transformers, switchgear, manholes, and cable shall be specified as part of the electric service design.

The owner/developer shall provide GUC with adequate space to accommodate the necessary facilities required to supply power to the premise. Space requirements will vary dependent on the development's site and load requirements.

# Residential Subdivision

Where a development within the service area of the Commission is to be subdivided into residential lots and has been approved by the appropriate Planning & Zoning Board, the 12470Y/7200-volt electrical distribution system will be installed underground at the written request of Subdivision Developer under the following options:

Option 1: GUC installs conduit system and associated electric facilities.

Option 2: The owner/developer shall be responsible for installing the conduit system in accordance with "Greenville Utilities Conduit Installation Specifications".
 GUC shall provide a detailed conduit system design specifying the location, size, and configuration etc. of the conduit system. Upon inspection and acceptance of the conduit system, GUC will install all wires, pads, pedestals, and equipment for electric service.

The owner/developer will be responsible for the following fees:

	Option 1	Option 2
Residential Lot Fee	\$811.00 per lot	N/A

The owner/developer will also provide the electrical requirements and locations for additional services other than the residential lots themselves. Services include but are not limited to:

- Lift Stations
- Trash Compactors
- Irrigation Controllers
- Fountains
- Pools
- Signage/Lighting
- Clubhouse
- Recreational Areas

# > Individual Residential Service - Existing Distribution

Owners/developers requesting permanent underground service for single family dwellings or individually placed townhomes in subdivisions or other areas provided with existing 12470Y/7200 volt underground electric distribution systems, or requesting underground service from an existing overhead distribution system, shall have the following two options:

Option 1: GUC installs conduit system and associated electric facilities.

Option 2: The owner/developer shall have the option to install the conduit system in accordance with "Greenville Utilities Conduit Installation Specifications".
 GUC shall provide a detailed conduit system design specifying the location, size, and configuration etc. of the conduit system. Upon inspection and

acceptance of the conduit system, GUC will install all wires, pads, pedestals, and equipment for electric service.

Option 1Option 2New Underground Service\$1,378.00N/AUnderground electric service<br/>greater than 175 ft.\$12.85 per ft. for excess<br/>over 175 ft.N/AConvert existing residential service<br/>overhead to underground\$1,378.00 minimumN/A

The owner/developer will be responsible for the following fees:

## > Individual Residential Service - Underground Distribution System Extension

Owners/developers requesting permanent underground service for single family dwellings or individually placed townhomes in subdivisions or other areas, requiring Commission extension of its 12470Y/7200 volt underground electric distribution system, shall have the following two options:

Option 1: GUC installs conduit system and associated electric facilities.

Option 2: The owner/developer shall have the option to install the conduit system in accordance with "Greenville Utilities Conduit Installation Specifications".
 GUC shall provide a detailed conduit system design specifying the location, size, and configuration etc. of the conduit system. Upon inspection and acceptance of the conduit system, GUC will install all wires, pads, pedestals, and equipment for electric service.

The owner/developer will be responsible for the following fees:

	Option 1	Option 2
Single phase pad mounted transformer	\$805.00 each	\$805.00 each
Single phase primary cable	\$12.35 per ft.	N/A

Multi-Family Development Individual Service(s)- Existing Distribution

Owner/developers requesting underground electric service for multi-family units (i.e., apartments, condominiums, duplexes etc.) in complexes or other areas provided with existing 12470Y/7200 volt underground electric distribution systems, or requesting underground service from an existing overhead distribution system, shall have the following two options:

Option 1: GUC installs conduit system and associated electric facilities.

Option 2: The owner/developer shall have the option to install the conduit system in accordance with "Greenville Utilities Conduit Installation Specifications". GUC shall provide a detailed conduit system design specifying the location, size, and configuration etc. of the conduit system. Upon inspection and acceptance of the conduit system, GUC will install all wires, pads, pedestals, and equipment for electric service.

The owner/developer will be responsible for the following fees:

	Option 1	Option 2
New underground service	\$43.25 per meter	N/A

- Multi-Family Development Individual Service(s)- UG Distribution Extension Owner/developers requesting underground electric service for multi-family units (i.e., apartments, condominiums, duplexes etc.) in complexes or other areas, requiring Commission extension of its 12470Y/7200 volt underground electric distribution system, shall have the following two options:
  - Option 1: GUC installs conduit system and associated electric facilities.
  - Option 2: The owner/developer shall have the option to install the conduit system in accordance with "Greenville Utilities Conduit Installation Specifications".
     GUC shall provide a detailed conduit system design specifying the location, size, and configuration etc. of the conduit system. Upon inspection and acceptance of the conduit system, GUC will install all wires, pads, pedestals, and equipment for electric service.

The owner/developer will be responsible for the following fees:

	Option 1	Option 2
Single phase pad mounted transformer	\$805.00 each	\$805.00 each
Single phase primary cable	\$12.35 per ft.	N/A
Three phase pad mounted transformer	\$2,172.00 each	\$2,172.00 each
Three phase primary cable	\$22.65 per ft	N/A

## **Temporary Service**

GUC makes available, upon request, the use of temporary electric service for applications such as new construction, maintenance, exhibitions, etc.

In the event that GUC has to temporarily extend primary facilities in order to provide the service, the owner/developer will be responsible, in advance, for the full estimated cost of the extension. The cost will be determined by GUC Electric Department and will include all labor and materials associated with the installation and removal of the facilities.

In no instance will the owner/developer fees be less than the following:

Temporary service for new residential site	\$124.50
Temporary service for new commercial site	\$129.70
Temporary service for existing site	\$124.50
Adder temporary service requiring pole installation	\$984.00 per pole

## Light Commercial & Industrial

- Commercial Individual Service(s) –Existing Distribution System Owner/developers requesting underground electric service for commercial units in commercial developments or other areas provided with existing 12470Y/7200 volt underground electric distribution systems, or requesting underground service from an existing overhead distribution system, shall have the following two options:
  - Option 1: GUC installs conduit system and associated electric facilities.
  - Option 2: The owner/developer shall be responsible for installing the conduit system in accordance with "Greenville Utilities Conduit Installation Specifications".
     GUC shall provide a detailed conduit system design specifying the location, size, and configuration etc. of the conduit system. Upon inspection and acceptance of the conduit system, GUC will install all wires, pads, pedestals, and equipment for electric service.

		Option 1	Option 2
Underground less than 125 ft.	200A	\$1,323.00	N/A
	400A	\$1,599.00	N/A
	600A	\$1,746.00	N/A
	800A	\$1,965.00	N/A

The owner/developer will be responsible for the following fees:

Service Distribution Cabinet (multi service)		\$4,787.00	\$2,357.00
Utility Isolation Switch (multi service, >400A)	Greater than 400A	\$4,391.00	\$3,255.00
Adder for service greater than 125 ft. cable (single/parallel)		\$11.80/\$13.60 per ft.	N/A

- Commercial-Underground Distribution System Extension Owner/developers requesting underground electric service for commercial units in commercial developments or other areas, requiring Commission extension of its 12470Y/7200 volt underground electric distribution system, shall have the following two options:
  - Option 1: GUC installs conduit system and associated electric facilities.
  - Option 2: The owner/developer shall be responsible for installing the conduit system in accordance with "Greenville Utilities Conduit Installation Specifications".
     GUC shall provide a detailed conduit system design specifying the location, size, and configuration etc. of the conduit system. Upon inspection and acceptance of the conduit system, GUC will install all wires, pads, pedestals, and equipment for electric service.

The owner/developer will be responsible for the following fees:

	Option 1	Option 2
Single phase pad mounted transformer	\$805.00 each	\$805.00 each
Single phase primary cable	\$12.35 per ft.	N/A
Three phase pad mounted transformer	\$2,172.00 each	\$2,172.00 each
Three phase primary cable	\$22.65 per ft	N/A

Commercial-Underground Distribution System Extension-Meter on Transformer Applications – Owner/developers requesting, or at the discretion of the Commission, permanent underground electric service for large commercial or farm applications (typically 600 amps to 2,000 amps) requiring extension of its 12470/7200-volt underground distribution system, with the owner/developer owning and installing the transformer pad and all secondary wiring, shall have the following two options.

Option 1: GUC installs conduit system and associated electric facilities.

Option 2: The owner/developer shall be responsible for installing the conduit system in accordance with "Greenville Utilities Conduit Installation Specifications".
 GUC shall provide a detailed conduit system design specifying the location, size, and configuration etc. of the conduit system. Upon inspection and acceptance of the conduit system, GUC will install all wires, pads, pedestals, and equipment for electric service.

	Option 1	Option 2
Single phase pad mounted transformer	\$805.00 each	\$805.00 each
Single phase primary cable	\$12.35 per ft.	N/A
Three phase pad mounted transformer	\$2,172.00 each	\$2,172.00 each
Three phase primary cable	\$22.65 per ft	N/A

The owner/developer will be responsible for the following fees:

## Heavy Commercial, Institutional, and Heavy Industrial

GUC will supply primary power from the nearest 12,470/7200 Y voltage source to sites being billed under the "Large General Service Rate".

- Option 1: The owner/developer will provide, install, and maintain all cable, transformers and associated "Utility" facilities located on the premise behind the utility point of delivery.
- Option 2: GUC will provide, install, and maintain all cables, transformers and associated "Utility" facilities for a "Monthly Facilities Charge" in the amount of two percent (2%) of the newly installed cost of such facilities behind the utility point of delivery.
- Option 3: GUC will provide, install, and maintain all cables, transformers and associated "Utility" facilities for a "Monthly Facilities Charge" in the amount of one percent (1%) of the newly installed cost of facilities in addition to a onetime upfront charge in the amount of the newly installed facilities behind the utility point of delivery.

### Facility Relocations/Overhead to Underground

Any proposed development in conflict with existing GUC electric facilities must be identified during design stages of the project to ensure an orderly adjustment or relocation of the facilities in conflict. The owner/developer will be responsible for all cost, paid in advance, to affect the modifications required. GUC reserves the right to maintain its facilities in place until

conditions have been satisfied and must be given sufficient time to construct or rebuild its facilities.

Any request made to convert existing GUC facilities from overhead to underground will be paid, in full and in advance, by the requester.

## **Obtaining Lighting Service – Section 3**

GUC offers outdoor lighting services for a wide variety of applications; from industrial parks to residential developments within GUC's electric service territory. Offerings include traditional "cobra head" streetlights, floodlights, open globe, and decorative post tops.

Upon installation of the lights, GUC will own and maintain the lighting system until such time the owner requests the service to be removed.

Standard lighting designs are installed on thirty-five (35') foot wooden poles. Additional charges apply for exceptions. Special order poles are available upon request and subject to current pricing.

35 ft. concrete pole w/ cobra head or flood fixture	\$1,767.00
30 ft. aluminum pole w/ 8' arm	\$1,388.00
24 ft. black aluminum tapered pole w/ lantern fixture	\$703.00
16 ft. black aluminum tapered w/ lantern fixture	\$1,140.00
24 ft. black concrete pole w/ acorn fixture	TBD
20 ft. antique green pole w/ lantern fixture	TBD
20 ft. historic black fluted pole w/ postlite	TBD
New/existing commercial or industrial light installation	\$232.50 each
Semi-permanent or long-term temporary lighting	\$422.00 each
Adder for wiring in an underground utility area	\$5.90 per ft.
Relocation of existing light within one year of install	\$984.00
Replacement or upgrade of fixture within one year of install	\$194.00

Additional lighting fees are as follows:

# **Public Lighting**

GUC offers outdoor lighting services for municipalities and governmental agencies within GUC's electric service territory. Public lighting offerings include streetlights for public local and major roadways, housing authorities, parking lots etc.

Residential subdivisions constructed in areas with planned or anticipated annexation by a municipal entity, such as City of Greenville, should design lighting systems in accordance with said entities current lighting standards. Upon notification from a municipal entity of a "City

Street Acceptance" GUC will transfer monthly fee of lights from the current owner/developer or homeowner's association to that entity. GUC maintains no authority or influence to affect any municipal entities lighting standards and/or street acceptance policy.

Refer to Electric Rate Schedule 10 for associated fees.

## **Rural Street Lighting**

GUC offers outdoor lighting services for owner/developers of residential developments, consisting of single-family dwelling, in the form of a "Rural Street Lighting Agreement", within its service territory. GUC offers this service under the following conditions:

- New Developments Owners/developers of new residential subdivisions, or in new sections, consisting of not less than six (6) lots (as recorded in the final plat) can enter into a rural street lighting agreement as part of the restrictive covenants. The owner/developer is required to pay in advance the cost of one year's charges for the lighting services in that development. At the time permanent residence is established, a fee will apply to property owner's monthly bill.
- Existing Developments GUC will offer a rural street lighting agreement to property owners of existing subdivisions if the following conditions are met:
  - All property owners within the development have signed a notarized legal document, to be recorded at the Pitt County Courthouse, committing them to participation with GUC.
  - The development must have 75% occupancy (active permanent electric services, as recorded in the final plat).

The agreement will remain in effect until such time when the development is annexed by a municipality.

Refer to Electric Rate Schedule 4A for associated fees.

# **Private Lighting**

GUC offers private lighting (aka "area lighting") services for customers within its service territory. Private lighting includes gated residence, commercial parking lots, garages, and site lighting etc. Offerings include open globe designs for area lighting as well as floodlights, lights for commercial centers and parking lots.

Refer to Electric Rate Schedule 4 for associated fees.

## Fiber Optic Communication – Section 4

GUC offers dark fiber optic cable to customers within its service territory; providing unlimited bandwidth for point to point, point to multi-point, as well as ring applications. Upon request from the customer, GUC will meet with the customer to discuss existing facilities, site locations, and capacity requirements and develop a quote for the project.

Upon execution of a 60-month lease agreement GUC will install, terminate, and maintain fiber optic facilities serving the customer's sites.

GUC does not provide telephone, cable TV, broadband, LAN, or internet access services.

# **Greenville Utilities Commission Conduit Installation Specifications**

### **Scope**

The purpose of this document is to provide Contractors/Developers (Developer) and Greenville Utilities Commission (GUC) employees with the guidelines and specifications for Developer installed conduit for use by the GUC Electric Distribution network. As part of any new development, the Developer will be responsible for installing conduit to be used by the GUC Electric Distribution network. GUC will be responsible for installing all cable, transformers, and associated equipment needed to provide service. The Developer shall follow all specifications outlined in this document unless otherwise noted by GUC. For project specific question, please contact your GUC Project Manager. For general questions, please contact the GUC Engineering Office at 252-551-1582.

### **Conduit**

All installed conduit, fittings, and elbows shall be supplied by GUC at the time of construction. It shall be the responsibility of the Developer to inspect the conduit at the time of receipt to ensure that there is no pre-existing damage. All installed conduit shall be un-damaged and free of debris at the time of installation. All conduit ends, fittings, and elbows etc. shall be glued at the time of installation to ensure a secure connection. Pull string shall be installed in each conduit at the time of installation. When applicable, conduit ends shall be marked (e.g. "1", "2", "3" etc.) for easy identification of conduit. Conduit ends shall be capped or taped as necessary to prevent water or other debris from entering the conduit.

### **Depth**

Unless otherwise noted by GUC, all conduits shall be installed at a depth to provide no less than forty inches (40") of minimum cover to finish grade. For conduit ends of road crossings, or any other location where GUC personnel will be required excavate in order to intercept conduit, the maximum depth of installation shall be forty-eight inches (48"). Elbows shall extend to a minimum of twenty-four (24") above finish grade.

### **Trench**

Conduit shall be installed in a trench located at the centerline of the electrical easement. The bottom of the trench shall be free of loose rock and debris. It shall consist of firm, stable, and uniform material to provide support throughout the length of pipe. Multiple conduits may be installed in a "stacked" configuration with no minimum separation between conduits. Backfill within twelve inches (12") of conduit shall be clean backfill or sand. Remaining backfill shall be free of solid material greater than eight inches (8") in maximum diameter. Backfill shall be mounded over trench to allow for settlement. The trench shall not be backfilled until the GUC Project Manager has inspected and approved the installation.

### **Inspection**

After the Developer has installed the conduit system, the Developer shall arrange for an inspection with the GUC Project Manager. The GUC Project Manager shall inspect the installation to ensure that the conduit was not damaged during installation and complies with specifications. Any damage or violation shall be the sole responsibility of the Developer to repair. GUC will not accept the conduit system until all specifications have been met. Upon acceptance of the conduit system both parties shall sign the "Conduit Installation Inspection Form" and the conduit will be turned over to GUC.

### **Warranty**

The Developer shall provide a one-year (1 year) warranty for the conduit system. Any damage or defect found within the first year, that is the result of improper installation, shall be the sole responsibility of the Developer to repair or replace.

# **Appendix**

- Attachment 1 Conduit Installation Specifications Road Crossing (dwg. no. CIS.RC.1)
- Attachment 2 Conduit Installation Specifications Trench Details (dwg. no. CIS.TD.1)
- Attachment 3 Conduit Installation Specifications Single Phase Transformer Pad (dwg. no. CIS.TX.1)
- Attachment 4 Conduit Installation Specifications 75 kVA–300 kVA Transformer Pad (dwg. no. CIS.TX.2)
- Attachment 5 Conduit Installation Specifications 500 kVA–1000 kVA Transformer Pad (dwg. no. CIS.TX.3)
- Attachment 6 Conduit Installation Specifications 1500 kVA-2500 kVA Transformer Pad (dwg. no. CIS.TX.4)
- Attachment 7 Conduit Installation Specifications 1 Phase Switching Cabinet (dwg. no. CIS.SW.1)
- Attachment 8 Conduit Installation Specification 2 Phase Switching Cabinet (dwg. no. CIS.SW.2)
- Attachment 9 Conduit Installation Specification 3 Phase Switching Cabinet (dwg. no. CIS.SW.3)
- Attachment 10 Conduit Installation Specification 9" x 14" Pedestal (dwg. no. CIS.PD.1)
- Attachment 11 Conduit Installation Specification 18" x 24" Pedestal (dwg. no. CIS.PD.2)
- Attachment 12 Conduit Installation Specification Gray Bus Bar Cabinet w/ Isolation Switch (dwg. no. CIS.GC.1)
- Attachment 13 Conduit Installation Specification Isolation Switch w/ C.T. Meter (dwg. no. CIS.IS.1)
- Attachment 14 Conduit Installation Specification House Service/Self Contained Meter Base (dwg. no. CIS.HS.1)
- Attachment 15 Conduit Installation Specification Temporary Service (dwg. no. CIS.TS.1)
- Attachment 16 Conduit Installation Specification Primary Switch Gear (dwg. no. CIS.SWG.1)
- Attachment 17 Conduit Installation Specification Primary Meter Gear (dwg. no. CIS.SWG.2)



# **Greenville Utilities Commission Conduit Installation Inspection Form**

Greenville Utilities hereby accepts the conduit systems installed by the Developer named below. The Greenville Utilities representative and the Developer have agreed upon the location, integrity, and installation methods of the conduit system. Upon signature, Greenville Utilities shall assume the responsibility of ownership, operation, and maintenance of the conduit system. In accordance with the Greenville Utilities Commission Conduit Installation Specifications the Developer shall provide a one-year (1 year) warranty for the system to be free of damage or defect found to be the result of improper installation.

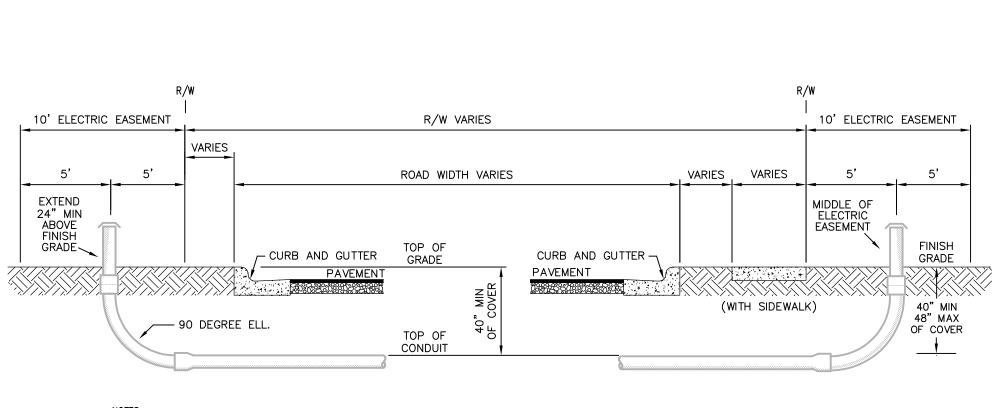
Signature of Developer (Agent) Date

Developer Name

Signature of GUC Representative Date

GUC Work Order #





- 1) ALL INSTALLED CONDUIT SHALL BE SUPPLIED BY GUC
- 2) CONDUIT SHALL BE INSTALLED AT NO LESS THAN MINIMUM DEPTH SPECIFIED, UNLESS NOTED BY GUC
- 3) CONDUIT SHALL BE UN-DAMAGED AND FREE OF DEBRIS AT TIME OF INSTALLATION
- 4) APPROPRIATE PULL STRING SHALL BE INSTALLED IN EACH PIPE AT TIME OF INSTALLATION
- 5) TRENCH BOTTOM SHALL CONSIST OF FIRM, STABLE, & UNIFORM MATERIAL TO PROVIDE SUPPORT THROUGHOUT THE LENGHT OF PIPE

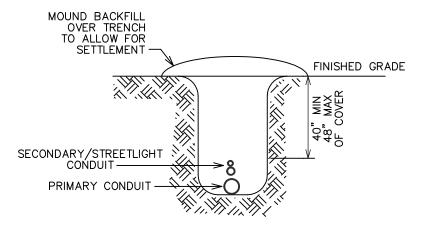
- 6) CONDUIT ENDS SHALL BE CAPPED OR TAPED AS TO PREVENT WATER OR OTHER DEBRIS FROM ENTERING THE CONDUIT
- 7) WHERE APPLICABLE, CONDUIT ENDS SHALL BE MARKED "1", "2", "3" ETC. AS TO ADEQUATELY IDENTIFY CORRESPONDING PIPE ENDS
- 8) CONDUIT SHALL BE LEFT EXPOSED UNTIL APPROPRIATE GUC STAFF HAS INSPECTED/APPROVED INSTALLATION
- 7) CONDUIT SHALL BE INSTALLED AT THE CENTERLINE OF ELECTRIC EASEMENT
- 8) ALL CONDUIT ENDS, FITTING, ELBOWS ETC. SHALL GLUED TO ENSURE SECURE CONNECTION



**Greenville Utilities** PO BOX 1847 • GREENVILLE, NC 27835 ELECTRIC ENGINEERING (252) 551–1582

## CONDUIT INSTALLATION SPECIFICATIONS - ROAD CROSSING

SCALE: NTS | LAST REV DATE: 7-1-2015 | DWN: KWB | DWG NO: CIS.RC.1





- 1) ALL INSTALLED CONDUIT SHALL BE SUPPLIED BY GUC
- 2) CONDUIT SHALL BE INSTALLED AT NO LESS THAN MINIMUM DEPTH SPECIFIED, UNLESS NOTED BY GUC
- 3) CONDUIT SHALL BE UN-DAMAGED AND FREE OF DEBRIS AT TIME OF INSTALLATION
- 4) APPROPRIATE PULL STRING SHALL BE INSTALLED IN EACH PIPE AT TIME OF INSTALLATION
- 5) TRENCH BOTTOM SHALL CONSIST OF FIRM, STABLE, & UNIFORM MATERIAL TO PROVIDE SUPPORT THROUGHOUT THE LENGHT OF PIPE

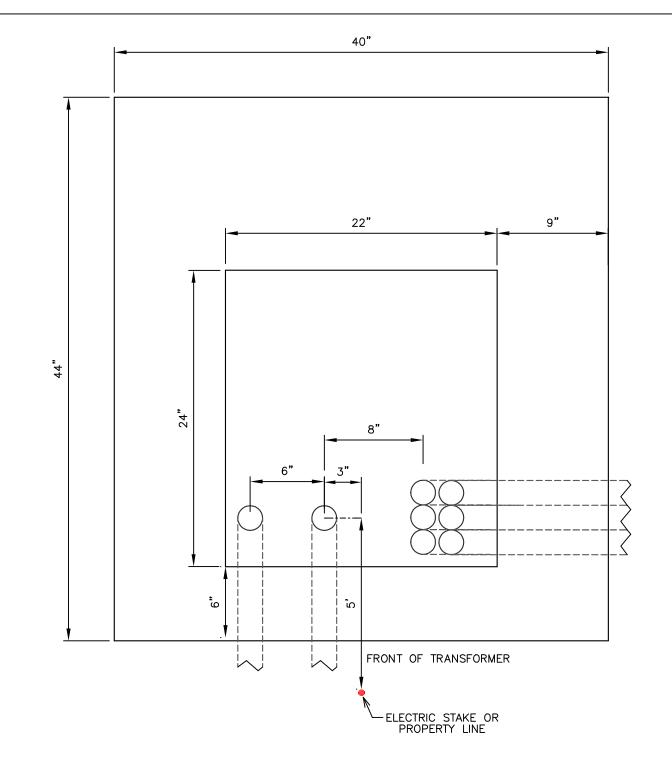
- 6) CONDUIT ENDS SHALL BE CAPPED OR TAPED AS TO PREVENT WATER OR OTHER DEBRIS FROM ENTERING THE CONDUIT
- 7) WHERE APPLICABLE, CONDUIT ENDS SHALL BE MARKED "1", "2", "3" ETC. AS TO ADEQUATELY IDENTIFY CORRESPONDING PIPE ENDS
- 8) CONDUIT SHALL BE LEFT EXPOSED UNTIL APPROPRIATE GUC STAFF HAS INSPECTED/APPROVED INSTALLATION
- 9) CONDUIT SHALL BE INSTALLED AT THE CENTERLINE OF ELECTRIC EASEMENT
- 10) ALL CONDUIT ENDS, FITTING, ELBOWS ETC. SHALL GLUED TO ENSURE SECURE CONNECTION





## CONDUIT INSTALLATION SPECIFICATIONS - TRENCH DETAILS

SCALE: NTS LAST REV DATE: 7-1-2015 | DWN: KWB | DWG NO: CIS.TD.1



- 1) 4" PVC CONDUITS WITH LONG SWEEP GALVANIZED RIGID 90s AT A DEPTH OF 3 FT FOR GREENVILLE UTILITIES AND (1) 2" PVC SLEEVE FOR GROUND ROD
- 2) CONDUIT SHALL EXTEND A MINIMUM OF 12" ABOVE FINISH GRADE
- 3) CONDUIT SHALL BE UN-DAMAGED AND FREE OF DEBRIS AT TIME OF INSTALLATION
- 4) APPROPRIATE PULL STRING SHALL BE INSTALLED IN EACH PIPE AT TIME OF INSTALLATION
- 5) ALL CONDUIT ENDS, FITTINGS, ELBOWS ETC. SHALL BE GLUED TO ENSURE SECURE CONNECTION

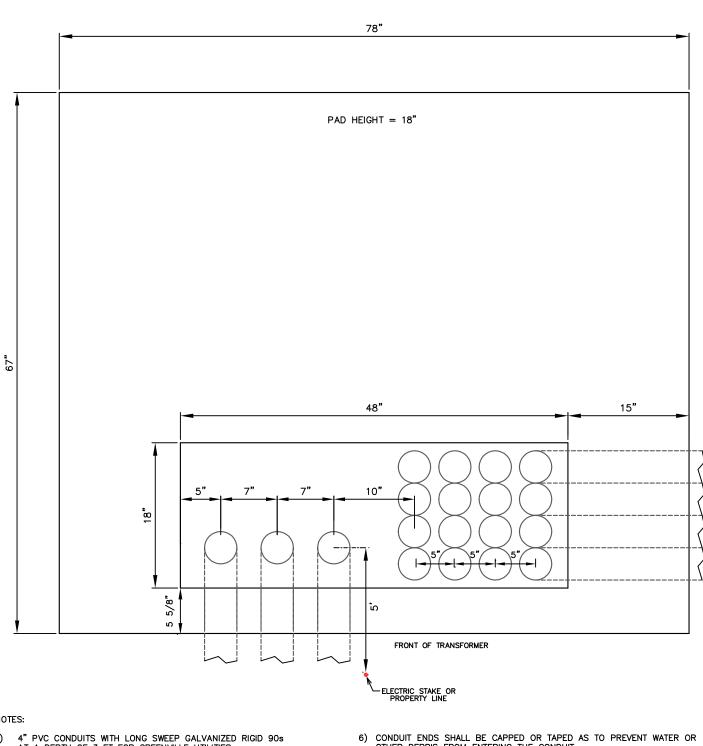
- 6) CONDUIT ENDS SHALL BE CAPPED OR TAPED AS TO PREVENT WATER OR OTHER DEBRIS FROM ENTERING THE CONDUIT
- 7) WHERE APPLICABLE, CONDUIT ENDS SHALL BE MARKED "1", "2", "3" ETC. AS TO ADEQUATELY IDENTIFY CORRESPONDING PIPE ENDS
- 8) 10 FT. MINIMUM CLEARANCE ON FRONT AND BACK OF TRANSFORMER
- 9) 5 FT. MINIMUM CLEARANCE ON SIDES OF TRANSFORMER
- 10) SIZE AND NUMBER OF CONDUITS VARIES



CONDUIT INSTALLATION SPECIFICATIONS - SINGLE PHASE TRASFORMER PAD

SCALE: NTS LAST REV DATE: 7-1-2015 DWN: KWB

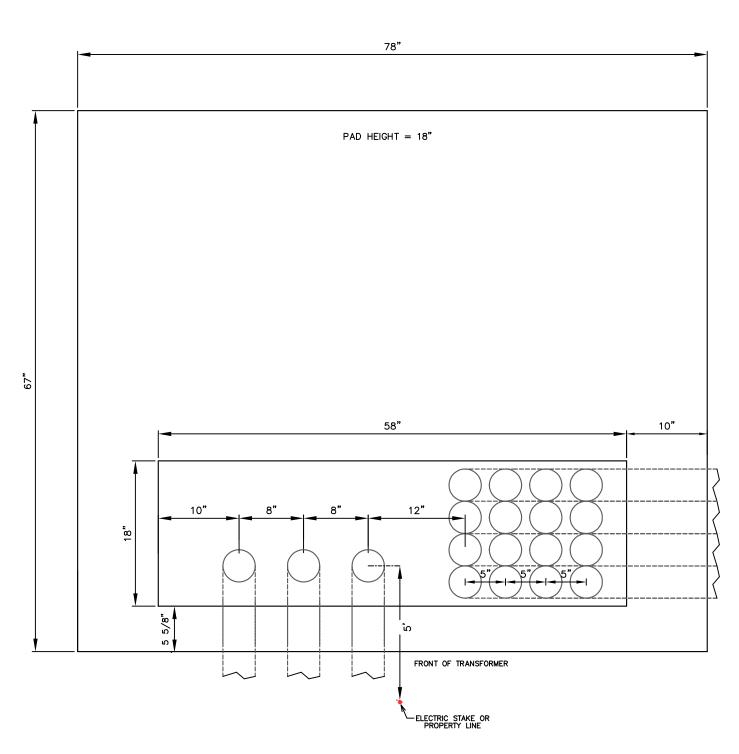
DWG NO: CIS.TX.1



- 4" PVC CONDUITS WITH LONG SWEEP GALVANIZED RIGID 90s AT A DEPTH OF 3 FT FOR GREENVILLE UTILITIES AND (1) 2" PVC SLEEVE FOR GROUND ROD 1)
- CONDUIT SHALL EXTEND A MINIMUM OF 12" ABOVE FINISH GRADE 2)
- CONDUIT SHALL BE UN-DAMAGED AND FREE OF DEBRIS AT TIME OF INSTALLATION 3)
- APPROPRIATE PULL STRING SHALL BE INSTALLED IN EACH PIPE AT TIME OF INSTALLATION 4)
- ALL CONDUIT ENDS, FITTINGS, ELBOWS ETC. SHALL BE GLUED TO ENSURE SECURE CONNECTION 5)

- 6) CONDUIT ENDS SHALL BE CAPPED OR TAPED AS TO PREVENT WATER OR OTHER DEBRIS FROM ENTERING THE CONDUIT
- 7) WHERE APPLICABLE, CONDUIT ENDS SHALL BE MARKED "1", "2", "3" ETC. AS TO ADEQUATELY IDENTIFY CORRESPONDING PIPE ENDS
- 8) 10 FT. MINIMUM CLEARANCE ON FRONT AND BACK OF TRANSFORMER
- 9) 5 FT. MINIMUM CLEARANCE ON SIDES OF TRANSFORME
- 10) SIZE AND NUMBER OF CONDUITS VARIES

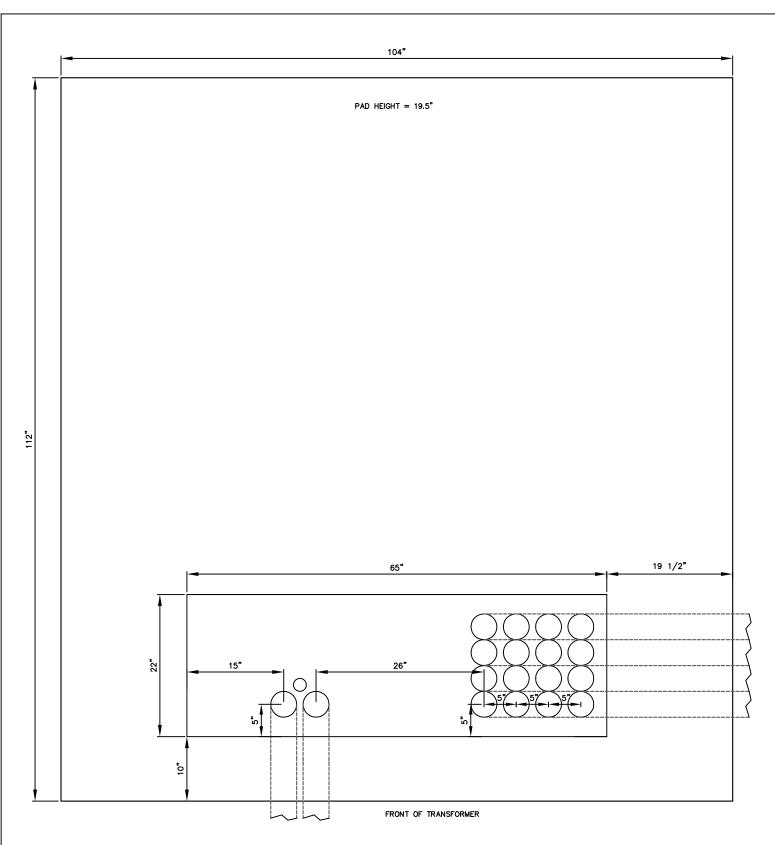




- 1) 4" PVC CONDUITS WITH LONG SWEEP GALVANIZED RIGID 90s AT A DEPTH OF 3 FT FOR GREENVILLE UTILITIES AND (1) 2" PVC SLEEVE FOR GROUND ROD
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- 4) APPROPRIATE PULL STRING SHALL BE INSTALLED IN EACH PIPE AT TIME OF INSTALLATION
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- 10) SIZE AND NUMBER OF CONDUITS VARIES

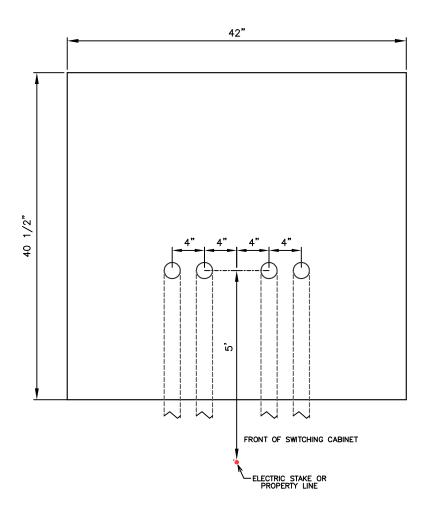




- 4" PVC CONDUITS WITH LONG SWEEP GALVANIZED RIGID 90s At a DEPTH of 3 FT FOR GREENVILLE UTILITIES AND (1) 2" PVC SLEEVE FOR GROUND ROD 1)

- CONDUIT SHALL EXTEND A MINIMUM OF 12" ABOVE FINISH GRADE 2)
- 3)
- CONDUIT SHALL BE UN-DAMAGED AND FREE OF DEBRIS AT TIME OF INSTALLATION
- APPROPRIATE PULL STRING SHALL BE INSTALLED IN EACH PIPE AT TIME OF INSTALLATION 4)
- ALL CONDUIT ENDS, FITTINGS, ELBOWS ETC. SHALL BE GLUED TO ENSURE SECURE CONNECTION 5)
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- 8) 10 FT. MINIMUM CLEARANCE ON FRONT AND BACK OF TRANSFORMER
- 9) 5 FT. MINIMUM CLEARANCE ON SIDES OF TRANSFORME
- 10) SIZE AND NUMBER OF CONDUITS VARIES
- CONDUIT INSTALLATION SPECIFICATIONS 1500 KVA-2500 KVA TRANSFORMER PAD SCALE: NTS LAST REV DATE: 5-25-2021 DWN: KWB DWG NO: CIS.TX.4

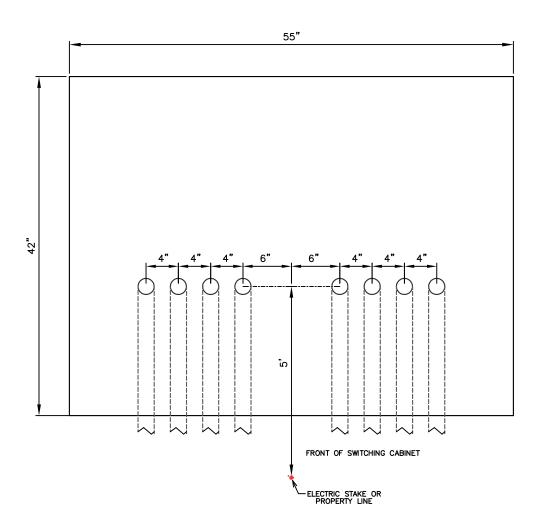
Greenville Utilities PO BOX 1847 • GREENVILE, NC 27835 ELECTRIC ENGINEERING (252) 551–1582



- 1) 4" PVC CONDUITS WITH LONG SWEEP GALVANIZED RIGID 90s AT A DEPTH OF 3 FT FOR GREENVILLE UTILITIES AND (1) 2" PVC SLEEVE FOR GROUND ROD
- 2) CONDUIT SHALL EXTEND A MINIMUM OF 12" ABOVE FINISH GRADE
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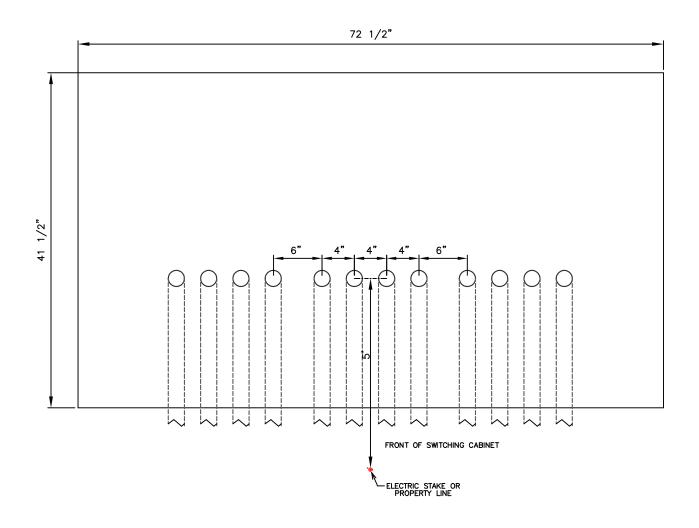




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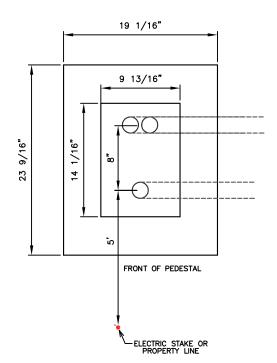




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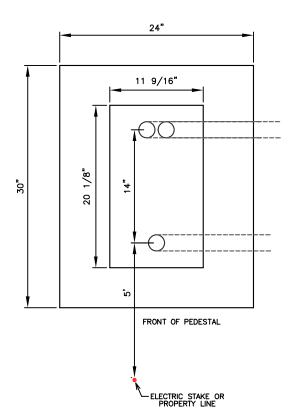
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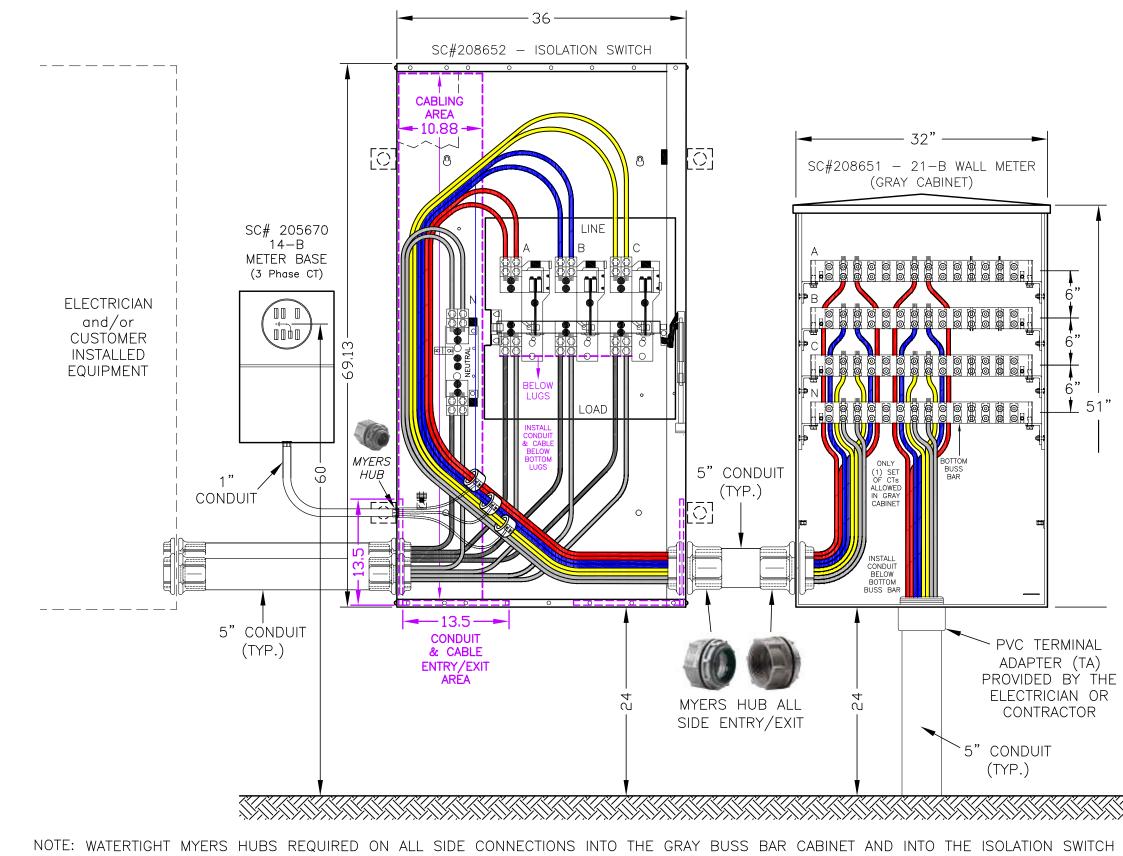
- 1) ALL INSTALLED CONDUIT SHALL BE SUPPLIED BY GUC
- 2) CONDUIT SHALL EXTEND A MINIMUM OF 24" ABOVE FINISH GRADE
- 3) CONDUIT SHALL BE UN-DAMAGED AND FREE OF DEBRIS AT TIME OF INSTALLATION
- 4) APPROPRIATE PULL STRING SHALL BE INSTALLED IN EACH PIPE AT TIME OF INSTALLATION
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NOTE: WATERTIGHT MYERS HUBS REQUIRED ON ALL SIDE CONNECTIONS INTO THE GRAY BUSS BAR CABINET AND INTO THE ISOLATION SWITCH MUST STAY BELOW THE BOTTOM LUGS ON THE ISOLATION SWITCH MUST STAY BELOW THE BOTTOM BUSS BAR ON THE GRAY CABINET

SEE HEAVY DUTY SAFETY SWITCH INSTRUCTION BULLETIN FOR MORE DETAILS ON ISOLATION SWITCH

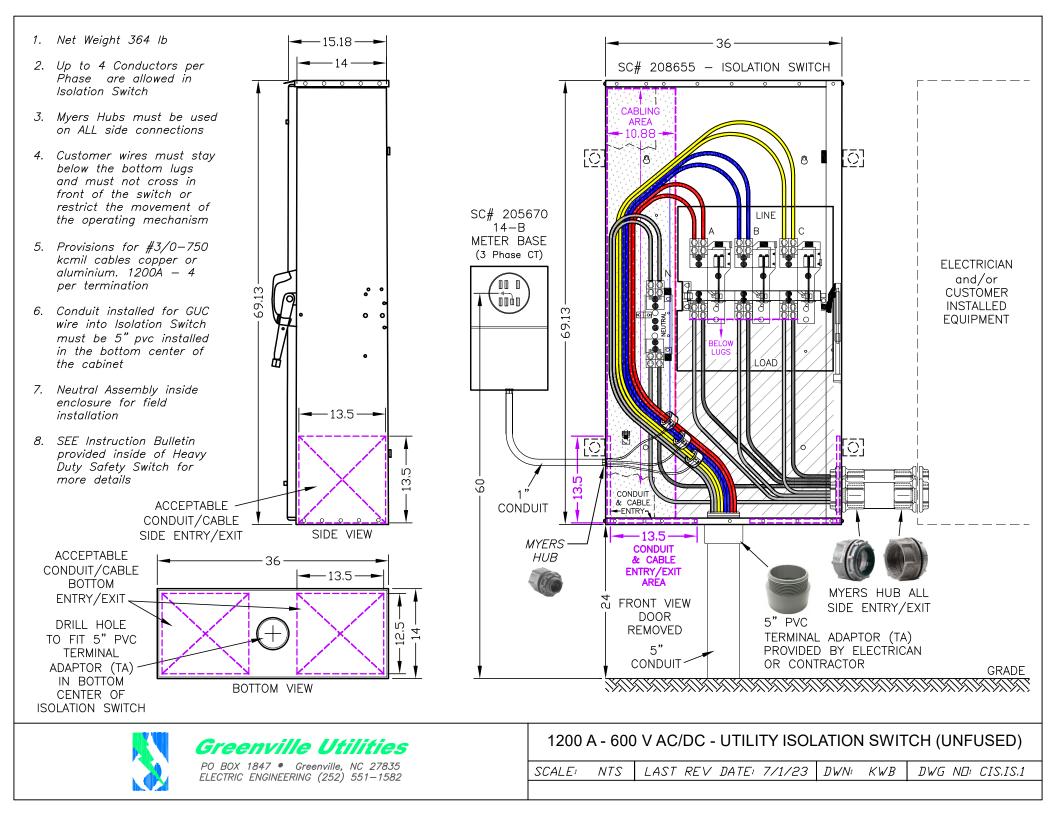


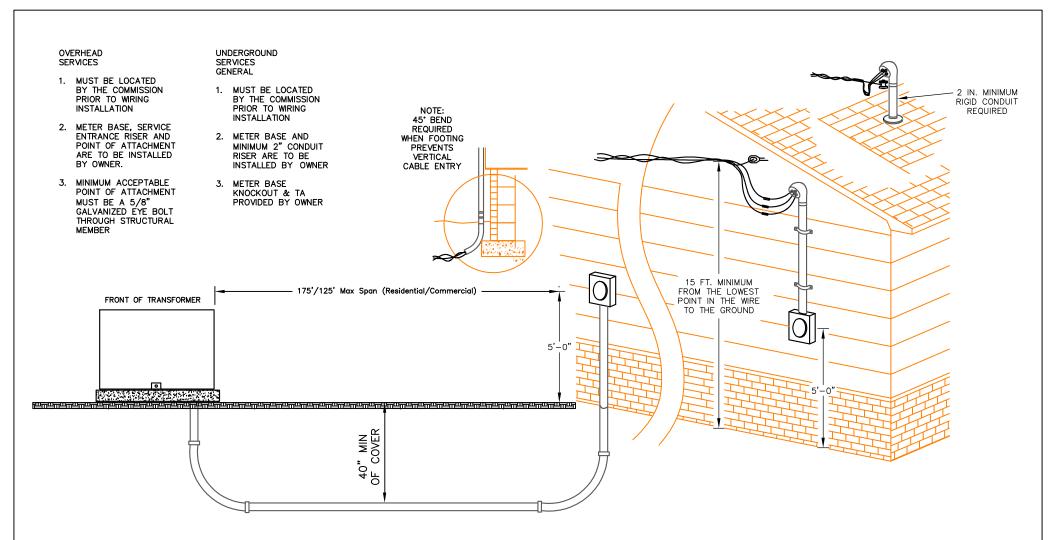
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SCALE:	NTS	LAST	REV	DATE	7/3

(GUC SUF	PLIED METE	RING E	QUIPMEI	NT)				
AY CABINET & ISOLATION SWITCH								
7/1/24	DWN;	KWB		DWG N	<i>□: CI</i> .	S.GC.1		

FINISH GRADE







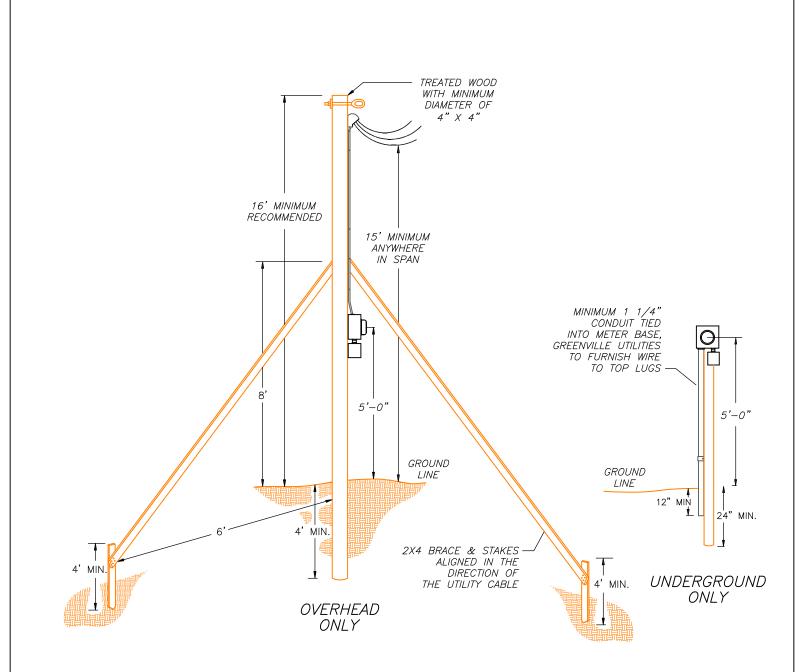
- 1) ALL INSTALLED CONDUIT SHALL BE SUPPLIED BY GUC
- 2) CONDUIT SHALL BE INSTALLED AT NO LESS THAN MINIMUM DEPTH SPECIFIED, UNLESS NOTED BY GUC
- 3) CONDUIT SHALL BE UN-DAMAGED AND FREE OF DEBRIS AT TIME OF INSTALLATION
- 4) APPROPRIATE PULL STRING SHALL BE INSTALLED IN EACH PIPE AT TIME OF INSTALLATION
- 5) TRENCH BOTTOM SHALL CONSIST OF FIRM, STABLE, & UNIFORM MATERIAL TO PROVIDE SUPPORT THROUGHOUT THE LENGHT OF PIPE

- 6) CONDUIT ENDS SHALL BE CAPPED OR TAPED AS TO PREVENT WATER OR OTHER DEBRIS FROM ENTERING THE CONDUIT
- 7) WHERE APPLICABLE, CONDUIT ENDS SHALL BE MARKED "1", "2", "3" ETC. AS TO ADEQUATELY IDENTIFY CORRESPONDING PIPE ENDS
- 8) CONDUIT SHALL BE LEFT EXPOSED UNTIL APPROPRIATE GUC STAFF HAS INSPECTED/APPROVED INSTALLATION
- 9) CONDUIT SHALL BE INSTALLED AT THE CENTERLINE OF ELECTRIC EASEMENT
- 10) ALL CONDUIT ENDS, FITTING, ELBOWS ETC. SHALL GLUED TO ENSURE SECURE CONNECTION



**Greenville Utilities** PO BOX 1847 • GREENVILLE, NC 27835 ELECTRIC ENGINEERING (252) 551-1582 CONDUIT INSTALLATION SPECIFICATIONS - HOUSE SERVICE/SELF CONTAINED METER BASE

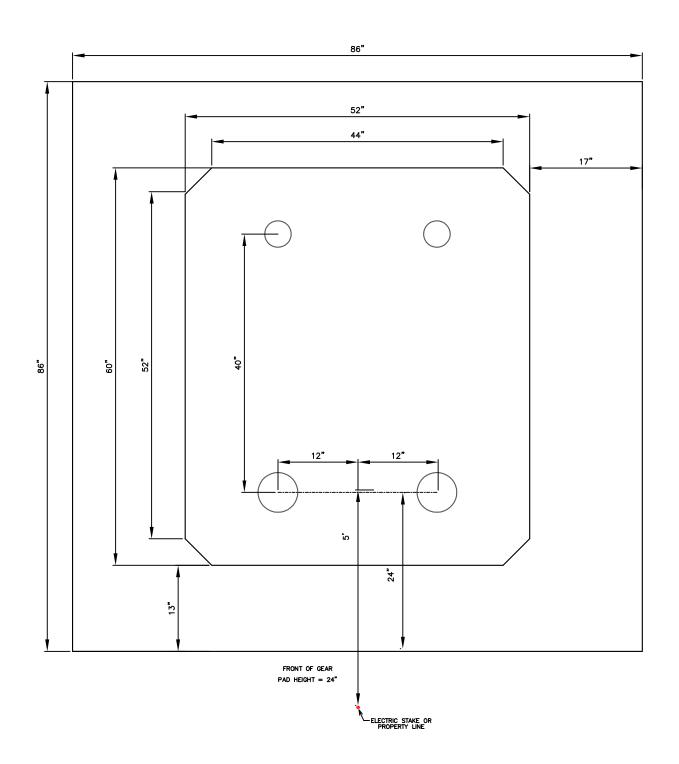
SCALE: NTS LAST REV DATE: 7–1–2015 DWN: KWB DWG NO: CIS.HS.1



- 1) ALL DIMENSIONS SHOWN ARE MINIMUM.
- 2) ADDITIONAL HEIGHT MAY BE NECESSARY TO PROVIDE PROPER SERVICE DROP CLEARANCE.
- 3) SOIL TO BE FIRMLY TAMPED AROUND POLE AND STAKES TO DRIVEN INTO FIRM EARTH.
- 4) SERVICES TO BE FED FROM UNDERGROUND UTILITIES SHOULD BE PLACED BEHIND AND WITHIN 5 FEET OF FACILITIES (TRANSFORMER, PEDESTAL, ETC.) ALL SERVICE LOCATIONS TO BE APPROVED BY GUC.
- 5) SERVICE TO BE INSPECTED BY AND MEET ALL OTHER REQUIREMENTS OF THE ELECTRICAL INSPECTOR HAVING JURISDICTION.

- 6) SERVICES AND BRACES SHALL BE MAINTAINED IN A SAFE AND WORKABLE CONDITION THROUGHOUT THEIR USE.
- 7) GREENVILLE UTILITIES CUSTOMER SERVICE: (252) 551-7166
- CITY OF GREENVILLE INSPECTION: (252) 329-4466
- PITT COUNTY INSPECTIONS: (252) 902-3150
- WANT TO BUILD AN ENERGY EFFICENT HOME? Let Greeville Utilities Energy Service Office help you build the most energy efficient home possible. Contact E-300 Program at (252) 551-1525.

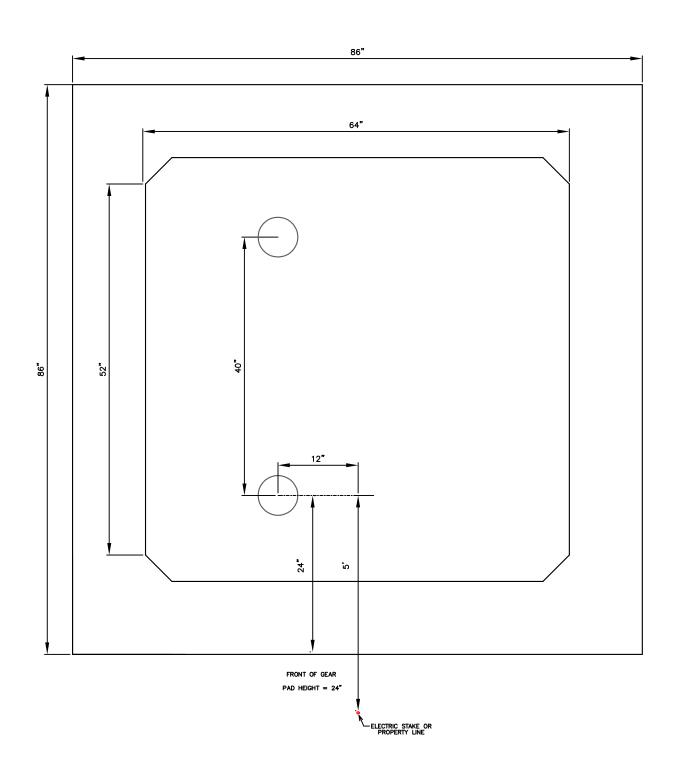




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- 8) 10 FT. MINIMUM CLEARANCE ON FRONT AND BACK OF EQUIPMENT
- 9) 5 FT. MINIMUM CLEARANCE ON SIDES OF EQUIPMENT
- 10) SIZE AND NUMBER OF CONDUITS VARIES

For additional information call 252-551-1582 Ask for an Engineering Assistant in your area





- 1) 4" PVC CONDUITS WITH LONG SWEEP GALVANIZED RIGID 90s AT A DEPTH OF 3 FT FOR GREENVILLE UTILITIES AND (1) 2" PVC SLEEVE FOR GROUND ROD
- 2) CONDUIT SHALL EXTEND A MINIMUM OF 12" ABOVE FINISH GRADE
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