

# PROCEDURES AND SPECIFICATIONS FOR ELECTRIC SERVICES

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# 1. General Information

#### 1.1 Purpose

It is the intent of these procedures and specifications to compile and convey the current requirements of the Lafayette Utilities System (LUS), with regard to electric service. These are subject to change. Please consult latest edition of these procedures and specifications. The content of this manual is based on:

- National Electrical Safety Code
- National Electrical Code
- Occupational Safety and Health Association
- City of Lafayette Code of Ordinances
- City of Lafayette Unified Development Code (UDC)

Certain requirements contained in these procedures and specifications are subject to automatic changes due to changes in the national electric code or national electric safety code. The City of Lafayette will not be responsible for the owner's failure to familiarize himself with such changes.

The requirements contained in these procedures and specifications are intended solely for the purpose of obtaining electrical service from the Lafayette Utilities System. Procedures concerning any other departments within The City of Lafayette and/or LCG Development and Planning must be obtained from said department(s).

### 2. Definitions

<u>Apartment</u> - A building or group of buildings each composed of individual residences.

**<u>Commercial</u>** - All services not characterized as being either residential or apartment shall be classified as commercial.

**<u>LCG</u>** - Lafayette City-Parish Consolidated Government.

<u>LCG Codes Division</u> - A division from LCG Development and Planning Department, visit http://www.lafayettela.gov

**Owner** - The Owner and those in his employ such as contractors, architects or engineers.

**<u>Pad mount Transformer</u>** - A single phase or three phase transformer for the connection to an underground primary line and mounted on a concrete pad.

<u>Pole mount Transformer</u> – This apparatus is used for connection to an overhead primary line and mounted on a pole. Single phase configuration consists of one transformer. Three phase consists of either two or three transformers, depending on the required voltage needed.

**<u>Primary Service</u>** – Service provided directly from the LUS primary distribution system.

<u>**Residence**</u> - Single family dwelling for the sole purpose of providing a place to live. This does not include an out-dwelling which has residential facilities, on the same lot.

**<u>Roof Mast</u>** -A length of two inch (2") or larger rigid conduit or other approved facility used for attachment of the service conductors to maintain required clearances.

**<u>Roof Jack</u>** -A sleeve that fits around mast and secured to the roof.

<u>Service</u> - The conductors and equipment for delivering energy from the electric supply system to the wiring system of the premises served.

<u>Service Conductors</u> - The supply conductors that extend from the electric supply system to the service equipment of the premises supplied.

**Service Drop** -the overhead service conductors from the last pole or other aerial support to and including the splices, if any, connecting to the service-entrance conductors at the building or other structure.

<u>Service - Entrance Conductors (Overhead System)</u> - The service conductors between the terminals of the service equipment and a point usually outside the building, clear of the building walls, where joined by tap or splice to the service drop.

<u>Service - Entrance Conductors (Underground System)</u> - The service conductors between the terminals of the service equipment and the point of connection to the service lateral.

<u>Service Equipment</u> - The necessary equipment, usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the point of entrance of supply conductors to a building or other structure, or an otherwise defined area, and intended to constitute the main control and means of cutoff of the supply.

<u>Secondary Service</u> -Service provided from the low voltage side of an LUS distribution transformer.

<u>**Temporary Service**</u> –Service specifically for use during construction, any service to nonpermanent structure such as portable signs, portable buildings, buildings on skids, tents, etc., or any other service of a transient nature.

<u>UDC</u> – Unified Development Code <u>www.lafayettela.gov</u>

## 3. General Requirements and Procedures

- 1. All multi-family (Apartment, condominiums and townhouses) and commercial service requests shall be directed to the LUS Engineering Division. Residential services will conform to the permitting process of LCG Codes Division.
- 2. The following requirements must be met before any service will be connected:
  - a. A satisfactory final inspection from LCG Codes Division.
  - b. A deposit received by the Lafayette City-Parish Consolidated Government Revenue Collections Division.
  - c. A certificate of occupancy from LCG Codes Division.
- 3. Service connections will not be made to a service where there is a disconnecting means between the meter and the source, unless approved by LUS prior to construction.
- 4. The customer shall consult with the City of Lafayette Code of Ordinances for mandatory regulations, revisions, amendments or additions.
- 5. Payment of deposit(s) shall be made at the Lafayette City-Parish Consolidated Government Revenue Collections office.
- 6. For electric meters that are the property of LUS, it is required that only an authorized representative of LUS break a seal or remove a meter whether the meter is in service or not. Jumpers provided by LUS are to be used for no more than ten days.
- 7. The LUS Electric Operations Division will supply all individual meter bases. Gang meter bases must be furnished by the Owner after approval of LUS. All meter bases shall be installed by the Owner.
- 8. All commercial and residential service requests must be permitted, and must comply with the requirements of LCG Development and Planning Department. Final inspections for connect orders must be in accordance with the requirements of LCG Codes Division.
- 9. Electrical service requests shall comply with the requirements as dictated in the City of Lafayette Code of Ordinances, Chapter 94 Article IV.
- 10. All above ground electrical devices (cabinets, transformers, and pedestals) shall be protected from traffic of any type using appropriate barriers (see details), where there are vehicles passing within a certain proximity of said devices.
- 11. All transformers and pedestals that are requested to be unlocked shall be locked by the requesting electrician prior to leaving the site that day.
- 12. Services that do not have a main disconnect beyond the meter and have the meter pulled because of a delinquent account shall be required to install a main disconnect prior to reconnection of service by LUS.

13. Meter bases are issued at 1210 Walker Road, at the warehouse division, between the hours of 7:00am and 3:30pm Weekdays. Meter bases will be issued at the Meter Department at the rear of the Warehouse. After hours, on an emergency basis, call the Dispatcher at (337)291-5700. Upon issuance of bases, customer to provide the following information: address, type of the base and contractor's name.

Gang meter bases must be provided by the owner subsequent to LUS approval. All meter bases are installed by the owner.

- 14. Upon approval of inspection from Development and Planning, Codes Division, the Owner shall contact LUS Engineering to request the connection/reconnection of service. LUS Engineering will notify the Lafayette Consolidated Government Revenue Collection Division to issue a connect order to LUS Field Operations to connect service. The Revenue Collection Division will not issue a connect order until the necessary deposit(s) have been paid by the Owner.
- 15. The Customer is advised to provide protection for three-phase systems against single phasing or reverse phasing. LUS is not responsible to guarantee against these conditions.
- 16. The Customer must contact LUS Engineering before installing any privately owned generators to feed a service.

#### 4. Boundary Line Adjustment

- 1. Owner/Developer shall relocate electric facilities to new adjusted lots at his/her expense prior to final plat approval by LUS.
  - a. The owner shall contact LUS Engineering to request relocation of electrical facilities to the new property lot lines.
  - b. The owner shall submit to LUS Engineering, a site plan of the proposed adjusted lines. The following shall be shown on the plat:
    - 1) All property owners' names, addresses and contact information
    - 2) Lot addressing, current, proposed lot lines, north arrow and scale
    - 3) Existing and new easements and road right-of-way dimensions
    - 4) Existing underground and overhead utility facilities (Electric, water, wastewater, drainage, communication, gas etc.)
- 2. The LUS Engineering Division will revise the layout of the existing electrical distribution system, to relocate the electrical facilities (transformers, pedestals, public streetlights) to the new property line. LUS will submit a design package to the owner, including a set of LUS specifications, construction standard details and a list of LUS approved contractors.
- 3. The Owner shall hire one of LUS approved contractors to relocate the underground electrical facilities and coordinate with the Lafayette Utilities System for all required service reconnections.
- 4. Provide 10' utility servitudes along all lots bordering public roadways and 15' utility servitudes along all lots bordering private roadways and 10'X10' niche at all property corners.

## 5. Residential Services

#### 5.1 General

- 1. The standard service provided by LUS for residential use is 200A, 120/240V single phase.
- 2. LUS shall provide one point of service at the front corner of the property line. The type of service point (overhead or underground) and its location will be determined by LUS.
- 3. The owner shall contact LUS Dispatcher at 337-291-5700 to determine the property's service point prior to construction.
- 4. Each individual service (overhead or underground) to the meter must not cross a neighbor's property without legally granted utility easements.
- 5. It shall be the Owner's responsibility to install all service equipment and service entrance conductors with the exception of the meter base which will be supplied by the LUS Electric Operations Division with the center of the base five and one-half feet (5-1/2') above final grade.
- 6. All requirements for temporary service including inspection, deposit, and connection of service shall be the same as for permanent service.
- 7. All permanent connections to the LUS facilities shall be supplied and made by LUS personnel.
- 8. The Owner is required to contact LUS Electric Operations Dispatcher to determine the source of electric supply prior to construction.
- 9. Contact LUS Engineering for services over 200A, the size of the meter base(s) supplied by LUS will be determined, based on the load information supplied by the Owner.

Meter base size 1Φ, 120/240V	Information needed	Current transformers	Enclosure
200A	n/a	n/a	
320A	Provide feeder load calculation	n/a	
>320A	Provide feeder load calculation	CT are required and provided by LUS.	CT cabinet to be supplied and installed by customer. Customer shall provide a 30"X30"X12" outdoor CT enclosure, with proper handle and locking mechanism, in compliance with NEC. Customer shall contact LUS metering for approval of other enclosure sizes.

#### 5.2 Overhead Residential Service

1. LUS shall provide one service point to each property and also provide up to 50ft of service drop. The overhead service cable will be limited to 4/0AWG, aluminum. The service mast shall be of adequate strength to accommodate the utility service. (Refer to LUS construction standard "ESO").

- 2. Overhead electric service lengths exceeding 50ft up to 100ft, the service mast shall be supported by guys to safely withstand the tension imposed by the service drop cable. Overhead service lengths exceeding 100' will require an additional pole at owner's cost.
- 3. All service attachments to the building with the exception of the meter base must be furnished by the Owner.
- 4. It shall be the responsibility of the Owner to supply LUS with sufficient information to size the conductor for the permanent service drop at the time the request for temporary construction service is made.
- 5. Where electric service is provided from facilities located in front of a residence, the electric meter must be placed on the front of the residence or no further than half way toward the back on the side of the residence. It shall be the Owner's responsibility to meet this requirement.
- 6. Overhead electric service shall be attached to the Owner's roof/structure at a minimum of twelve feet (12') above final grade. It shall be the responsibility of the Owner to provide a roof jack or other approved means of meeting this requirement. In no case shall the minimum height above grade of the service drop conductors be less than sixteen feet (16') in areas accessible to pedestrians only, eighteen feet (18') across all roads, driveways and parking lots, and twenty-two feet (22') above State highways. It shall be the Owner's responsibility to supply attachment facilities adequate to allow LUS to maintain proper clearance.
- 7. The Electric Operations Division will direct the Owner in the placement of the temporary service pole such that the temporary service drop conductor can be used to make the permanent service.

Service drop size	Span length	Span length with support guy
2 AWG-1/0AWG	50'	100'
4/0AWG-336MCM	15'	25'

#### 5.3 Underground Residential Service to a Utility Pole

- 1. The Owner shall be responsible for all conduit, weatherhead and conductors from the service entrance to and up the utility pole (refer to LUS construction standard "ESU").
- 2. All conduit shall be Schedule 40 PVC or heavier below grade and Schedule 80 from a minimum of eight feet (8') above grade to one foot (1') below grade. All conduits shall be placed on the utility pole using six inch (6") standoffs.
- 3. Conduit shall be extended up the utility pole with the approval of and as directed by LUS and shall be attached to the utility pole by approved methods.
- 4. An approved weatherproof termination shall be installed on the end of the conduit at the utility pole.
- 5. Conduit at the utility pole shall be extended below grade with a minimum of twenty-four inches (24") of cover across utility easements and public rights-of-way one foot (1') into the Owners property. Conduit and conductors from that point to the residence shall comply with the requirements of Development and Planning, Codes Division.

- 6. Provide a minimum six (6) feet length of cable at the utility pole to reach LUS secondary conductors or transformer bushings and provide a drip loop as directed by LUS.
- 7. Overhead temporary construction service shall be provided from the nearest point of attachment at the utility pole to the contractor's power pole as directed by LUS.

#### 5.4 Underground Residential Service in a Subdivision with Underground Utilities

- 1. The Owner shall be responsible for all conduit and conductors from his service entrance to the LUS secondary pedestal or transformer bushing.
- 2. Sufficient length of cable shall be provided to reach the connections in the secondary pedestal or transformer as directed by the LUS Electric Operations Division.
- 3. The general policy of LUS is to provide two inch (2") conduit at the pedestal or transformer for service connections. The Owner shall be responsible for all additional expenses if larger than two inch (2") service conduit is required.
- 4. Temporary construction service shall be provided as directed by the Electric Operations Division through the conduit at the pedestal or transformer provided for this purpose.

# 6. Multi-Family Residential Projects (Apartments, Condominiums, Attached Townhouses)

#### 6.1 General

- 1. All requests for service to multi-family projects will be directed to the LUS Engineering Division.
- 2. All permits and inspections shall be obtained in accordance with the requirements of LCG Codes Division.
- 3. It shall be the responsibility of the Owner to contact the LUS Engineering Division to determine the type and location of service.
- 4. All requirements for temporary service shall be the same as for permanent service including inspection, deposit and connection of service.
- 5. In general, LUS will furnish one temporary service drop without charge to the complex and additional temporary services may be furnished providing such service can be provided from existing facilities. Any additional services and/or charges for such will be determined by LUS.
- 6. Distribution service voltages:
  - a. 120/208V, 4 Wire, Three Phase
  - b. 277/480V, 4 Wire, Three Phase
  - c. 120/240V, 3 Wire, Single Phase

- 7. Maximum allowed conduit risers up to terminal poles shall be determined by LUS.
- 8. The following table outlines the number of conduits and cable size allowed on the load side of the transformers.

Pad -Mount Utility Transformer Rating	Electric Service Classifications	Max. Allowable Secondary Conduit Runs	Max Allowable Cable Size
25-167kVA	1Ф,120/240,3W	7-2"	500MCM
75-500kVA	3Φ,208/120,4W	6-4"	750MCM
750-1000kVA	3Ф,208/120,4W	8-4"	750MCM
75-500kVA	3Ф,480/277,4W	6-4"	750MCM
750-2000kVA	3Ф,480/277,4W	8-4"	750MCM

Contact LUS Engineering if greater number of conduits and larger conductors are required.

### 6.2 Pad-mount Transformer Clearances

- a. Pad-mount transformer shall be installed outdoor, in accessible areas to utility truck for inspection and maintenance. Transformer front (window side) shall face open areas (roadways, driveways and parking lot areas).
- b. Entrance to and egress from the location of pad-mount transformer shall be free of any other above ground obstructions. There shall not be any overhangs, platform or roof extending over the transformer.
- c. Pad-mounted transformer shall not be placed directly in front of doors, windows, openings, air intakes and other customer owned equipment. See Table Below
- d. Pad-mounted transformer shall not be installed on top of other underground utilities (communications, gas, water, sewer, drainage etc.).
- e. Pad-mounted transformer shall be installed in recorded utility servitudes.
- f. Pad-mounted transformer shall be located not less than 4 ft. from fire hydrants.
- g. Prior to installing the transformer, the owner/developer shall be responsible to comply with any building codes, local ordinances and insurance regulations for fire hazard prevention.

From	Horizontal clearance (ft.)
2hr fire rated wall	5
Non-combustible building wall	15
Combustible wall	25
Fire escapes, exit doors, windows, air intakes and	20
fuel tanks	

# 6.3 Minimum Clearance from LUS Overhead Distribution Electrical Lines (NESC 234 and Louisiana law LRS 45:141-145)

	0 to 300V	>300 to 600V	>600 to 13, 800V
	(ft.)	(ft.)	(ft.)
Buildings			
1. Horizontal			
a) to walls, projections and windows	4.5	5.0	10.0
b) to balconies and areas readily	4.5	5.0	10.0
accessible to pedestrians			
2. Vertical			
a) over or under roofs or projections	3.0	3.5	12.5
not readily accessible to			
pedestrians			
b) over or under roofs, balconies,	10.5	11.0	13.5
decks readily accessible to			
pedestrian			
c) over roofs, ramps, decks, and	10.5	11.5	13.5
loading docks accessible to vehicle			
but not subject to traffic			
d) over roofs, ramps, decks, and	15.5	16.5	18.5
loading docks accessible to truck			
traffic			
Signs, chimneys, billboards, radio			
and television antennas, flagpoles			
and flags, banners, tanks			
1. Horizontal			10.0
a) to portions that are readily	4.5	5.5	10.0
accessible to pedestrians			10.0
b) to portions that are not readily	3.0	5.5	10.0
accessible to pedestrians			
2. Vertical			10.5
a) over or under catwalks or other	10.5	11.5	13.5
surfaces upon which people walk			10.0
b) over and under other portions of	3.0	6.0	10.0
such installations			

3. Swimming pools			
1. Horizontal			
a) clearance in any direction from	22.0	23.0	25.0
the water level, edge of pool, base			
of diving platform, or anchored raft			
b) clearance in any direction to the	14.0	15.0	17.0
diving platform, tower, water slide,			
or other fixed, pool-related			
structures			
2.Vertical	14.0	15.0	17.0

### 6.4 Individually Metered Residential Units

- 1. Standard service to apartments will be handled as follows:
  - a. LUS will provide the Owner with the electrical layout and specifications for the underground primary electrical system to serve the apartments.
  - b. LUS will supply the pad-mount transformers and the termination poles. Delivery of the transformers to the job site is the responsibility of the Owner.
  - c. The Owner will be responsible for the supply and installation of all other electrical facilities including but not limited to all transformer pads, primary cable, terminations, conduit, conduit support brackets, cable supports, secondary facilities and connectors.
  - d. The owner shall sign the electrical agreement and furnish utility easements for the electrical utility facilities.
  - e. LUS will reimburse the Owner based on the number of residential units in the complex and will assume ownership and maintenance responsibility for the primary electrical cable and transformers.
- 2. Customer shall pick up standard meter bases at LUS warehouse from 7:00AM to 3:30PM. The job number, contractor's name, addresses and type of meter base shall be provided, upon issuance of the meter bases.
- 3. Ganged meter bases shall be supplied by the Owner subject to approval by LUS.
- 4. The Owner will install all meter bases.
- 5. All meter bases will be clearly marked to indicate the unit served, using permanent tags affixed to the meter. Tags shall be l" x 3". Tags shall be screwed or riveted onto the meter bases. Lettering shall be inscribed or engraved.

- 6. Pads for pad-mount transformers and underground conduit runs shall be inspected by the LUS Electric Operations Division prior to pouring concrete for the pads or backfilling trenches (refer to the LUS Procedures for Underground Contractors)
- 7. For small apartment complexes, where it is determined by the LUS Engineering Division that underground service is not feasible, overhead service may be provided. In this case, no reimbursement applies.

### 6.5 Primary Metering Residential Services

- 1. The LUS Engineering Division will furnish detailed drawings for all pad, pole framing, pad grounding and trenching details. These details are subject to variations with each individual job and, therefore, typical details are not included with this publication.
- 2. The Owner shall supply, install and maintain all equipment on the load side of the metering point.
- 3. The metering point will be determined by the LUS Engineering Division.
- 4. All primary (High Voltage) equipment, materials and installation procedures on the load side of the meter shall be coordinated with LUS.
- 5. LUS will supply and install all primary metering equipment.

# All transformer pads and primary conduit installations will be inspected by LUS electric operations division prior to pouring the pad or backfilling trenches.

## 7. Commercial Electrical Services

### 7.1 General

- 1. All requests for commercial service will be directed to the LUS Engineering Division.
- 2. All requests for commercial service must be accompanied by an electrical riser, a complete description of all electrical load, a site plan adequately describing the location of the project, and the voltage requested.
- 3. All permits and inspections shall be obtained in accordance with the requirements of Metro Code.

- 4. It shall be the responsibility of the Owner to contact the LUS Engineering Division to determine the type and location of service.
- 5. All requirements for temporary service with respect to inspection, deposit, and connection of service shall be same as for permanent service.
- 6. The size of the meter base, supplied by LUS and installed by the Owner, shall be determined by the LUS Engineering Division.
- 7. Location, type, and voltage of the service will be determined by the LUS Engineering Division after considering the Owner's requests.
- 8. Current transformers for metering will be furnished by LUS, however; where there is more than one service from a pad-mount transformer, the Owner will be required to supply and install a C.T. can or other approved housing (wire trough not acceptable) to house the current transformers, and install the current transformers.
- 9. For all current transformers secondary voltage metering installations, the Owner shall supply and install one inch (1") conduit from the current transformers to the meter base. The LUS Electric Operations Division will supply and terminate the metering cable and the Owner shall be responsible to pull the metering cable in the one inch (1") conduit.
- 10. When remodeling and/or adding load to an existing building, the riser diagram, requested voltage, and load information shall be submitted to Metro Code for approval and forwarded to the LUS Engineering Division.

#### 7.2 Overhead Commercial Services

- 1. Service that is to be furnished by LUS will be at the nearest point of attachment on the building from the utility pole. Overhead electric services will be limited to #4/0 AWO aluminum conductors or equivalent. Overhead electric services exceeding #4/0 AWG aluminum conductors may be allowed only where adequate support is provided at the building and LUS can adequately support the load at the pole. This alternate shall be allowed only by approval of LUS. All service attachments to the building with the exception of the meter base must be furnished by the Owner.
- 2. It shall be the responsibility of the Owner to supply LUS with sufficient information to size the conductors for the permanent service drop at the time the request for temporary construction service is made. The Engineering Division will direct the Owner in the placement of the temporary service pole such that the temporary service drop conductor can be used to make the permanent service. Temporary service will not be provided until these requirements have been met.

#### 7.3 Underground Secondary Commercial Service to a Utility Pole

- 3. The Owner shall be responsible for all conduit and conductors from the service entrance to and up the utility pole.
- 4. A minimum of Schedule 40 PVC shall be provided for the entire length of all underground commercial service below grade and Schedule 80 from a minimum of eight feet (8') above grade to two feet (2') below grade.

- 5. Conduit shall be extended up the utility pole to within one foot (1') of the lowest LUS facility (transformer or secondary conductor) and shall be attached with 6" standoff brackets. or as otherwise directed by the LUS Engineering Division. All work shall be inspected and approved by LUS.
- 6. An approved weatherproof termination shall be installed on the end of the conduit at the utility pole.
- 7. A minimum of twenty-four inches (24") of cover to final grade shall be maintained on all underground commercial services, or as required by Metro Code.
- 8. Sufficient length of cable shall be provided at the utility pole to reach LUS secondary conductors or transformer bushings and provide a drip loop as directed by the LUS Engineering Division.
- 9. Overhead temporary construction service shall be provided from the nearest point of attachment at the utility pole to the contractor's power pole as directed by the LUS Engineering Division.

#### 7.4 Underground Secondary Commercial Service to a Pad-mount Transformer

- 1. At the request of the Owner, a pad-mount transformer may be installed with the following requirements:
  - a. The LUS Engineering Division will design the appropriate layout and will provide the proper specifications and details for the installation of the raceway system which includes a conduit riser, buried conduit and a concrete transformer pad (refer to the LUS Procedures for Underground Contractors). The riser pole will be framed by LUS. Pads for pad-mount transformers and underground conduit runs shall be inspected by the LUS Electric Operations Division prior to pouring concrete for the pads or backfilling trenches (refer to the LUS Procedures for Underground Contractors). Details are subject to variations with each individual job.
  - b. The Owner will supply and install the raceway system. It is the Owner's responsibility to obtain details for such. The Owner will terminate to the secondary connectors.
- 2. LUS will be responsible for:
  - a. Supplying, installing and terminating the primary high voltage cable at the riser pole and at the pad-mount transformer.
  - b. Supplying and installing the transformer, as well as delivering same to the site.
- 3. Low voltage secondary metering for pad-mount transformers shall meet the following conditions:
  - a. LUS will supply the current transformers, metering cable and meter base, as required.

- b. The Owner will install the meter base, and will supply and install a one inch (1") metering conduit from the transformer to the meter base. The Owner will install the metering cable in the one inch (1") conduit, where C.T. metering is required.
- c. The Owner will supply and install a current transformer enclosure if more than one customer is supplied from the pad-mount transformer and C.T. metering is required.
- d. LUS will terminate the metering cable and install the meter.

### 7.5 Primary Metered for Commercial Services

- 1. The LUS Engineering Division will furnish detailed drawings for all pads, pole framing, pad grounding and trenching details. These details are subject to variations with each individual job and therefore typical details are not included with this publication. Pad details are limited up to 2000 KVA transformers.
- 2. The Owner shall supply, install and maintain all equipment on the load side of the metering point.
- 3. The metering point will be determined by the LUS Engineering Division.
- 4. All primary (High Voltage) equipment, materials and installation procedures on the load side of the meter shall be coordinated with LUS.
- 5. LUS will supply and install all primary metering equipment.

# All transformer pads and primary conduit installations will be inspected by LUS Electric Operations division prior to pouring the pad or backfilling trenches.

### 8. Color Coding of Service Conductors

The following is the listing of color codes for marking service conductors as set forth by the national electrical code and adopted by LUS.

- 1. Single-Phase Services
  - a. 120/240v services shall have the neutral marked with a white or gray tape, or have the outer covering of the conductor colored white or gray. The other conductors need not be identified, however, if they are identified, they shall be either black or red only.
- 2. Three-Phase Services
  - a. 120/240V three phase four wire services shall have the neutral marked with a white or gray tape, or have the outer covering of the conductor colored white or gray. The wye leg shall be identified by an orange conductor or an orange tape at its termination. In the meter base, the wye leg shall be the C phase or the right leg in the meter base. After the meter stage the wye leg

shall be transposed to the B phase or the center leg in the service panel or disconnect.

- b. 120/208V three phase four wire services shall have the neutral identified by a gray or white outer covering, or by gray or white tape. The other conductors shall be identified as such: phase A, black; phase B, red; and phase C, blue, left to right, respectively.
- c. 277/480V three phase four wire services shall have the neutral identified by a gray or white outer covering, or by gray or white tape. The other conductors are identified as: phase A, brown; phase B, orange; and phase C, yellow, left to right, respectively.
- d. 480V three phase three wire systems: The B phase (the grounded phase) shall be identified by a yellow conductor covering or yellow tape at the termination point. The other two conductors need not be identified.
- 3. Grounding Conductor
  - a. The grounding conductor in all cases shall be identified by green coloring.
- 4. For any system where parallel service conductors are used, all conductors shall adhere to the requirements of the type of system being served. Tapings shall occur on the conductors at location as shown below:
  - a. In the meter base and in the service panel, 2' before the lugs.
  - b. At the transformers and pedestals, 12" before the terminations

#### 9. Security Lighting

1. LUS standards for street lighting for all major and arterial street are available at

https://lus.org/information-library/developers-a-builders/development-guidelines

2. Information on private security light is available at <u>https://lus.org/electric/security-lighting</u>

#### 10. Renewable Energy Sources- Net Metering Program

- 1. Renewable energy sources may operate in parallel with LUS electrical secondary delivery system, subject to LUS approval.
- 2. LUS net metering standards are available online at <u>https://www.lus.org/electric/net-metering</u>.

### **11. Electrical Details**

1. Refer to Appendix A

# **12. Telephone Directory**

LUS Engineering	(337) 291-5858
LUS Electric Operations	(337) 291-5700
LUS Customer Service	(337) 291-8280
LCG Development and Planning	(337) 291-8000
	(337) 291-8445
LCG Codes Division	(337) 291-8461

# Appendix A Forms and Electrical Details

BARRIERS WILL BE INSTALLED WHERE INDICATED BY THE CITY OF LAFAYETTE UTILITIES DEPARTMENT.

BARRIERS SHALL BE INSTALLED ACCORDING TO THE FOLLOWING SPECIFICATIONS:

- I. EACH BARRIER SHALL BE 10' LENGTHS OF 6" (O.D.) GALVANIZED STEEL PIPE WITH 1/4" WALL THICKNESS.
- 2. HEIGHT OF BARRIER SHALL BE FOUR FEET (4') FROM TOP TO GROUND.
- 3. ALL BARRIERS, SHALL HAVE A TWELVE INCH (12") DIAMETER FOUNDATION AND BARRIER SHALL BE FILLED WITH FIVE BAG MIX OF PORTLAND CEMENT MIX.
- 4. BARRIERS SHALL BE WASHED WITH VINEGAR AND PRIMED WITH RUSTO GALVA GRIP PRIMER OR EQUAL PRIMER WITH APPROVAL BY CITY OF LAFAYETTE PRIOR TO QUOTE SUBMITTAL.
- 5. BARRIERS SHALL BE PAINTED WITH RUSTOLEUM (SAFETY YELLOW) RUST PROOF PAINT OR PAINT APPROVED BY CITY OF LAFAYETTE PRIOR TO QUOTE SUBMITTAL.

LAFA UTILITIE	YETTE S SYSTEM	SPECIFICATIONS FOR	DWG. NO.
ENGINEERI	NG DIVISION	SAFETY BARRIERS	FSBC
DATE: 12/28/1995	SCALE: NTS		
DRAWN BY: ELO REVISION: 04/10/2019	CHECKED: T & D APPROVED: ENGINEERING		1 OF 4







BARRIERS WILL BE INSTALLED WHERE INDICATED BY THE CITY OF LAFAYETTE UTILITIES DEPARTMENT.

BARRIERS SHALL BE INSTALLED ACCORDING TO THE FOLLOWING SPECIFICATIONS:

- I. EACH BARRIER SHALL BE 6' LENGTHS (FOR TRANSFORMER PROTECTION) AND 5' LENGTHS (FOR PEDESTAL PROTECTION) OF 4" (0.D.) GALVANIZED STEEL PIPE WITH 1/4" WALL THICKNESS.
- 2. HEIGHT OF BARRIER SHALL BE THREE FEET (3') FROM TOP TO GROUND FOR TRANSFORMER PROTECTION AND TWO FEET (2') FROM TOP TO GROUND FOR PEDESTAL PROTECTION.
- 3. ALL BARRIERS, SHALL HAVE A TWELVE INCH (12") DIAMETER FOUNDATION AND BARRIER SHALL BE FILLED WITH FIVE BAG MIX OF PORTLAND CEMENT MIX.
- 4. BARRIERS SHALL BE WASHED WITH VINEGAR AND PRIMED WITH RUSTO GALVA GRIP PRIMER.
- 5. BARRIERS SHALL BE PAINTED WITH RUSTOLEUM (SAFETY YELLOW) RUST PROOF PAINT.

LAFA UTILITIF	YETTE S SYSTEM	SPECIFICATIONS FOR	DWG. NO.
ENGINEERI	NG DIVISION	SAFETY BARRIERS	ESBR
DATE: 12/28/1995	SCALE: NTS	(RESIDENTIAL)	
<b>REVISION:</b> 04/10/2019	APPROVED: I & D APPROVED: ENGINEERING		1 OF 6







![](_page_26_Figure_0.jpeg)

![](_page_27_Figure_0.jpeg)

GROUNDING CONDUCTORS AND RODS ARE INSTALLED FOR THE PURPOSE OF PROVIDING A GROUND CONNECTION FOR THE SECONDARY NEUTRAL AND THE METALLIC BASES OF EQUIPMENT. PROPER GROUND CONNECTIONS ARE ESSENTIAL TO ENSURE LOW IMPEDANCE PATHS TO GROUND FOR FAULT CURRENTS, LIGHTNING, AND STRAY CURRENTS FOR NORMALLY DE-ENERGIZED METALLIC PARTS WHICH, IF ACCIDENTALLY ENERGIZED, MAY BECOME HAZARDOUS TO THE PUBLIC OR UTILITY PERSONNEL.

ALL GROUNDING ELECTRODE SYSTEMS SHALL BE INSTALLED AS DESCRIBED IN THE NATIONAL ELECTRIC CODE (NEC) LATEST VERSION. THE SIZE OF THE GROUNDING ELECTRODE CONDUCTOR SHALL NOT BE LESS THAN GIVEN IN THE NEC, TABLE 250–94. THE GROUNDING ELECTRODE SHALL BE OF THE TYPE AS DESCRIBED IN THE NEC, ART. 250–83(C). SUFFICIENT GROUND RODS SHALL BE DRIVEN TO ACHIEVE A RESISTANCE TO GROUND OF 25 OHMS OR LESS. WHERE MULTIPLE GROUND RODS ARE INSTALLED TO MEET THE REQUIREMENTS OF NEC, ART. 250–84, THEY SHALL BE NOT LESS THAN 6 FEET APART. EACH ADDITIONAL ROD INSTALLED SHALL BE BONDED TO THE FIRST GROUND ROD.

![](_page_28_Figure_2.jpeg)

![](_page_29_Figure_0.jpeg)

![](_page_30_Figure_0.jpeg)

![](_page_31_Figure_0.jpeg)

![](_page_32_Figure_0.jpeg)

![](_page_33_Figure_0.jpeg)

![](_page_34_Figure_0.jpeg)

![](_page_35_Figure_0.jpeg)

![](_page_36_Figure_0.jpeg)

![](_page_37_Figure_0.jpeg)