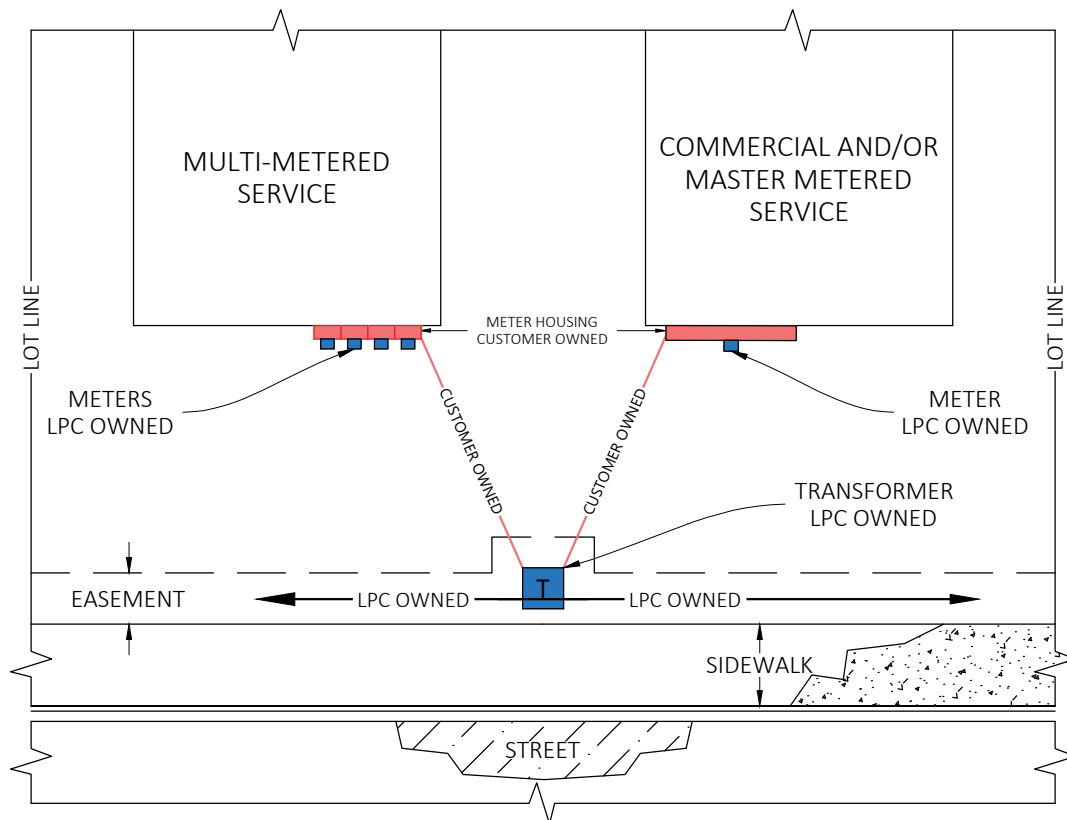
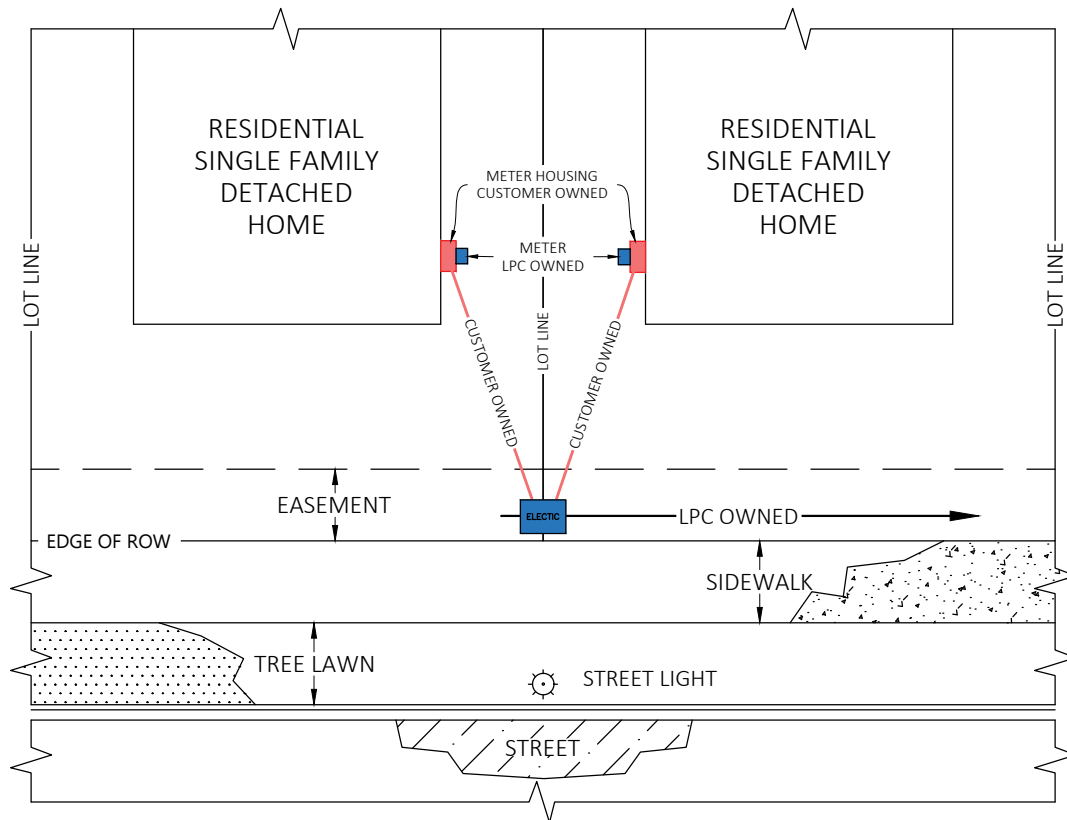


SECTION 700 – LONGMONT POWER & COMMUNICATIONS
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ELECTRIC SERVICES

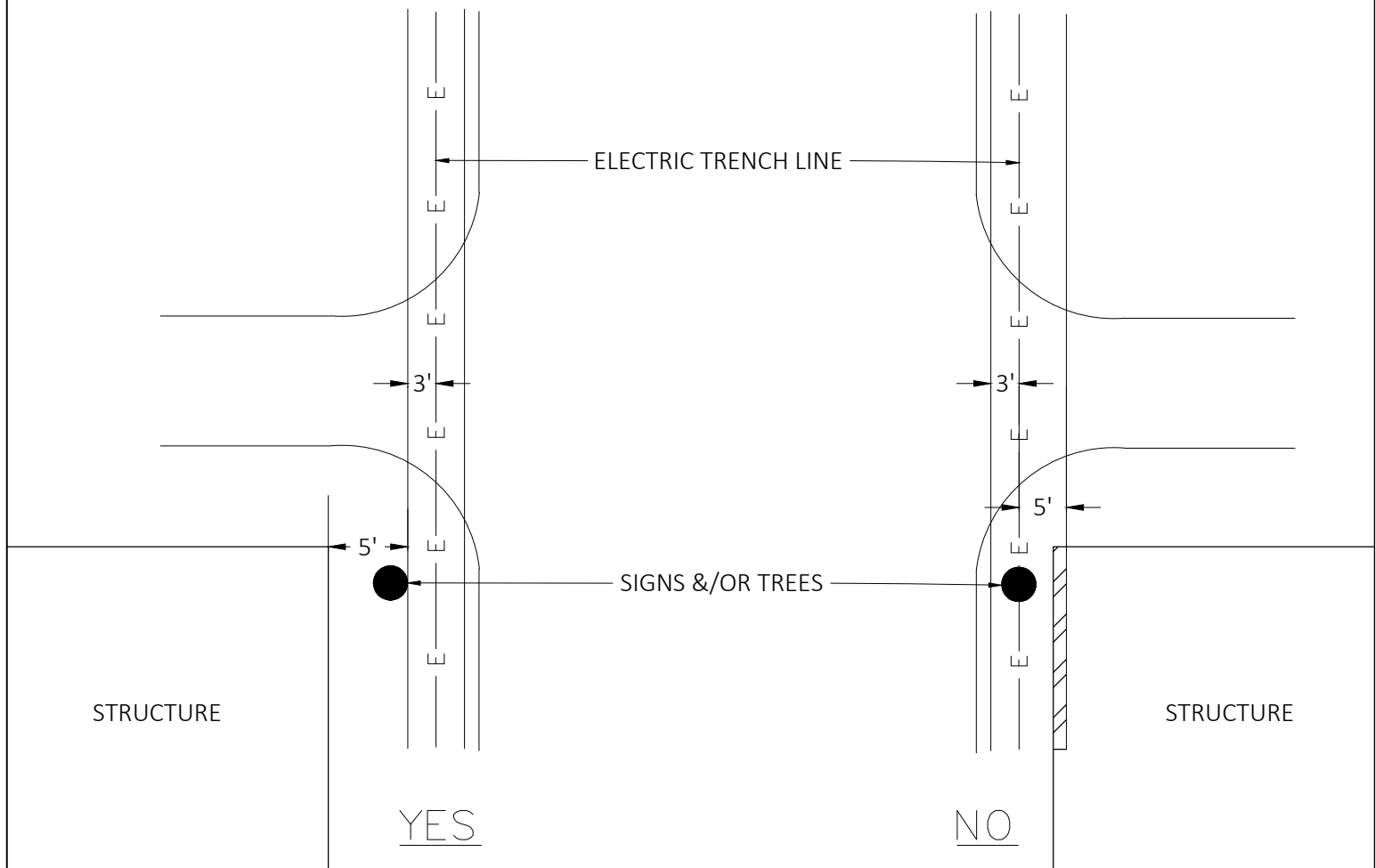
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DETAIL

700-00



MINIMUM CLEARANCES;

- 3' FROM TREES
- 3' HORIZONTAL & 18" VERTICAL FROM COMMUNICATION CABLES/CONDUITS/EQUIPMENT
- 3' FROM POLES; STREET LIGHT/UTILITY/SIGNAL/ETC.
- 5' HORIZONTAL & 18" VERTICAL FROM WATER LINES
- 5' FROM HYDRANTS
- 5' FROM STRUCTURES (EXCLUDING TRASH ENCLOSURES)
- 10' HORIZONTAL & 18" VERTICAL FROM STORM/SEWER

NOTE:

1. MINIMUM CLEARANCES, AS NOTED ABOVE, MUST BE MAINTAINED WHEN THE INFRASTRUCTURE'S EXACT LOCATION HAS BEEN DETERMINED VIA POT-HOLING

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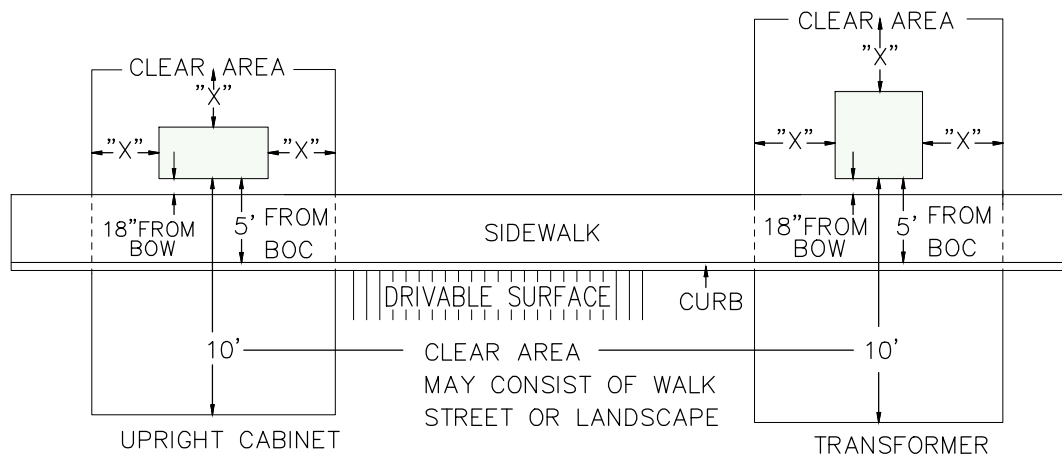
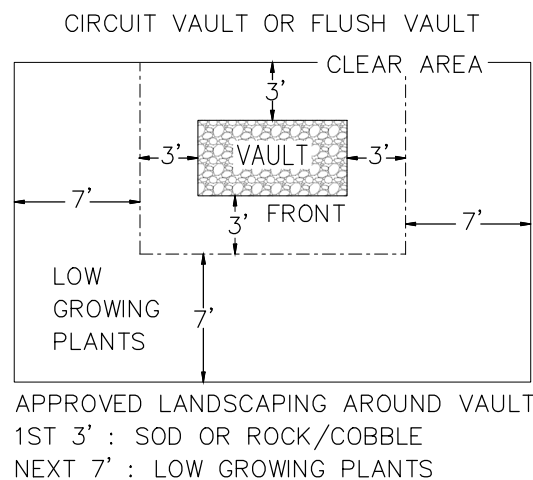
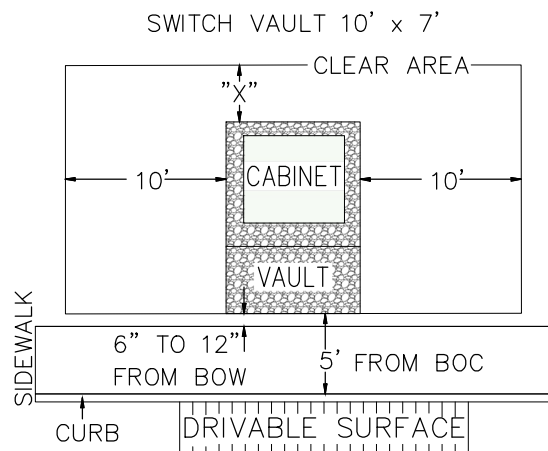
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TRENCH CLEARANCE

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700-01



CLEARANCES "X"

- 3' FROM LANDSCAPE MATERIAL
- 5' MINIMUM FROM STRUCTURES
- 3' ADJACENT TO RESIDENTIAL DRIVEWAYS
- 3' MINIMUM FROM A DRIVING SURFACE WITH THE USE OF BOLLARDS
- 5' FROM A DRIVING SURFACE BEHIND A CURB OR PROTECTIVE FEATURE
- 10' FROM A DRIVING SURFACE WHERE NO PROTECTIVE FEATURE IS PROPOSED

NOTES:

1. MAINTAIN MINIMUM CLEARANCES AS NOTED ABOVE
2. BOLLARDS WILL BE INSTALLED AT THE DEVELOPER/OWNER'S EXPENSE WHEN EQUIPMENT IS NOT PROTECTED FROM VEHICULAR TRAFFIC
3. TRANSFORMER LOCATIONS SHALL BE ESTABLISHED BY THE OWNER TO MEET LPC'S MINIMUM CLEARANCES AND ALL FIRE CLEARANCES REQUIRED BY APPLICABLE CODES
4. CLEAR AREAS: 1ST 3' CONTAINING SOD, MULCH, OR ROCKS/COBBLE; MAX. 1.5" DIA.
5. NEXT 7' AREA CAN CONTAIN LOW GROWING PLANTS; MAX. 1 FT. HEIGHT
6. REPOSITIONING EQUIPMENT IS ONLY ALLOWED AT CUSTOMER EXPENSE.
7. ANY DEVIATIONS TO LANDSCAPE MATERIALS WITHIN CLEAR ZONES MUST BE APPROVED BY LPC.

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CLEARANCES

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700-02



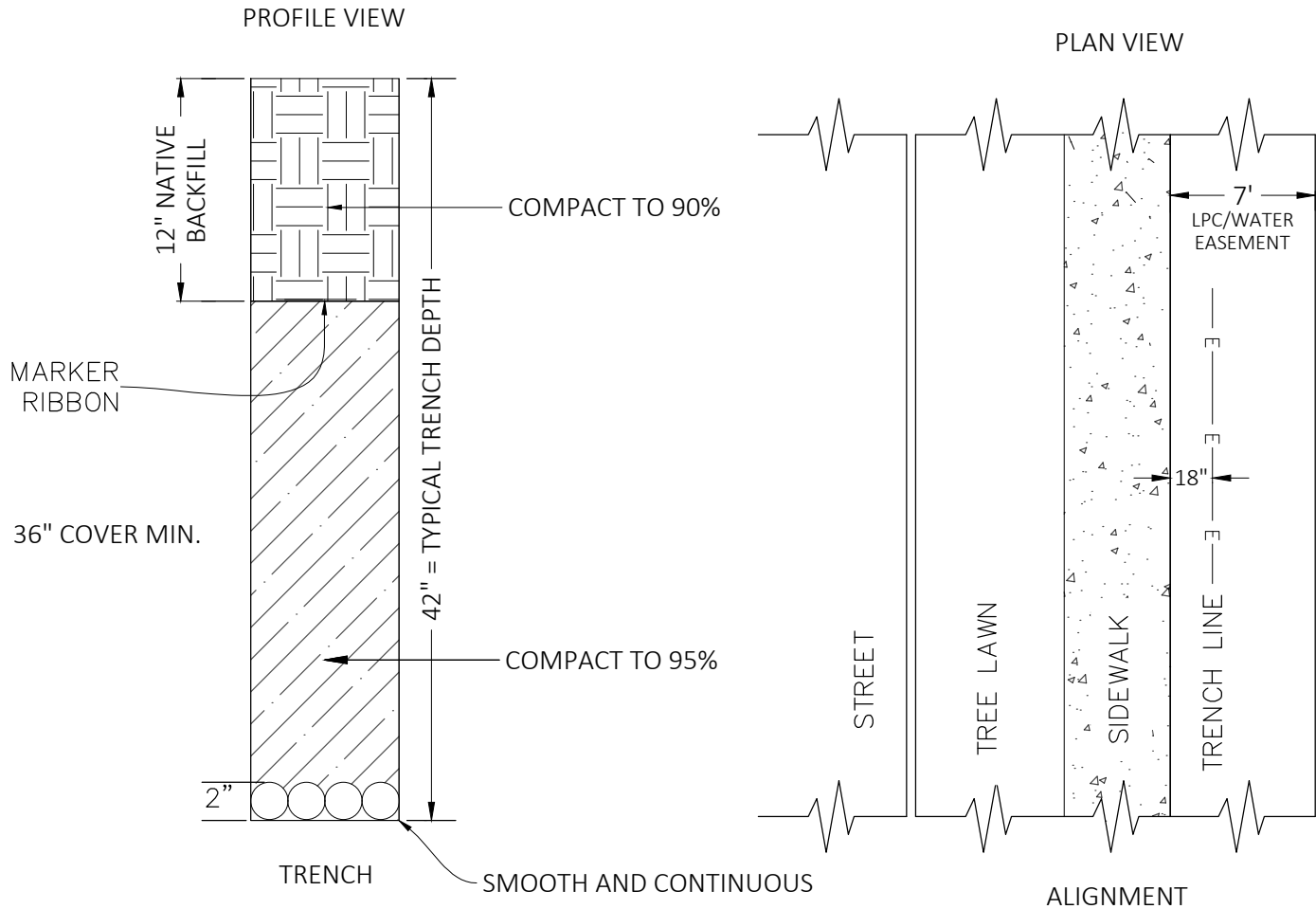
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CUSTOMER INSTALLED SLEEVE

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DETAIL
700-03



NOTES:

1. MINIMUM TRENCH WIDTH: 8"
2. MINIMUM COVER: 36"
3. MAXIMUM TRENCH DEPTH: 48"
4. THE BOTTOM OF THE TRENCH MUST BE SMOOTH AND CONTINUOUS.
5. ALL TRENCH MUST REMAIN OPEN UNTIL INSPECTED BY LPC.
6. MARKER RIBBON TO BE INSTALLED BEFORE FINAL 12".
7. 95% COMPACTION IS REQUIRED TO A POINT 12" BELOW FINAL GRADE AND 90% FOR THE LAST 12".
8. 95% COMPACTION IS REQUIRED ALL THE WAY TO THE TOP OF THE TRENCH WHEN LOCATED BELOW A HARD SURFACE.
9. THE TRENCH ALIGNMENT SHOWN ABOVE IS FOR SINGLE FAMILY DETACHED LOTS WITH A DETACHED SIDEWALK
10. THE TRENCH ALIGNMENTS FOR ALL OTHER TYPES OF DEVELOPMENTS ARE DETERMINED BY THEIR FINAL ELECTRIC DESIGN PROVIDED BY A LPC FIELD ENGINEER.

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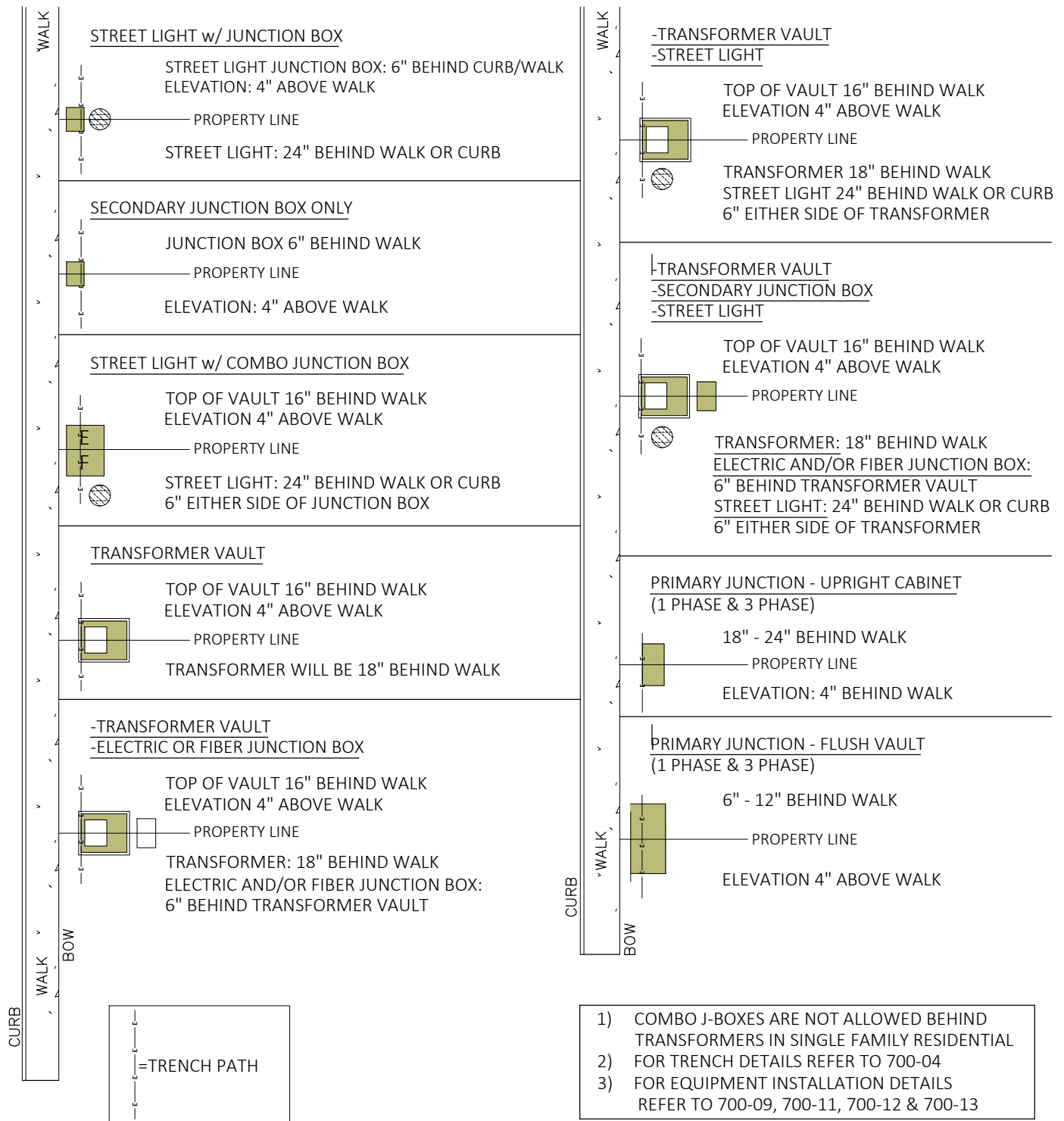
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TRENCH DETAIL

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700-04



- 1) COMBO J-BOXES ARE NOT ALLOWED BEHIND TRANSFORMERS IN SINGLE FAMILY RESIDENTIAL
- 2) FOR TRENCH DETAILS REFER TO 700-04
- 3) FOR EQUIPMENT INSTALLATION DETAILS REFER TO 700-09, 700-11, 700-12 & 700-13

ELECTRIC SERVICES

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EQUIPMENT ALIGNMENT ON TRENCH

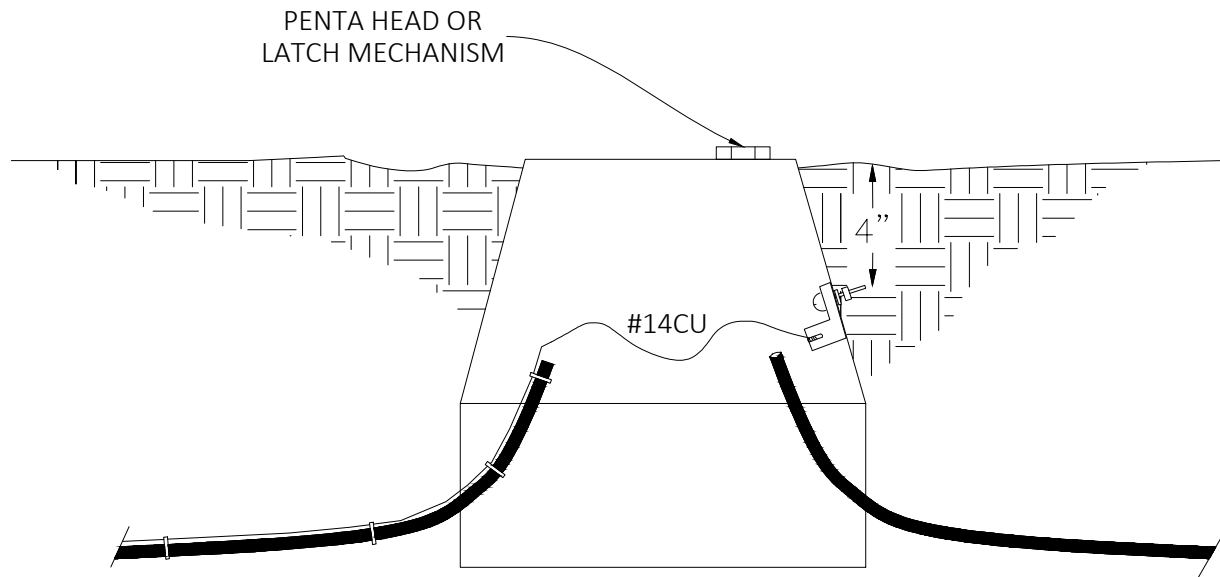
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700-05



NOTES:

A. DEVELOPER / CONTRACTOR RESPONSIBILITIES:

1. TAPE #14 COPPER WIRE TO THE TOP OF THE EMPTY CONDUIT
2. COIL 3 FEET OF WIRE IN METAL AND FIBERGLASS VAULTS
3. COIL 10 FEET OF WIRE IN CONCRETE VAULTS
4. PROVIDE AS-BUILT DRAWINGS WITH THE LENGTH OF THE CONDUIT AND LOCATION OF THE TRENCH FROM THE BACK OF THE WALK, CURB OR SURFACE FEATURE WHERE THE END OF THE CONDUIT IS BURIED. THE TRACER WIRE SHALL EXTEND TO THE END OF THE CONDUIT.

B. LPC CREW RESPONSIBILITY:

1. METAL ENCLOSURES: CONNECT THE #14 TO THE GROUND BUSS
2. FIBERGLASS ENCLOSURES: DRILL A HOLE 4" BELOW THE PENTA HEAD OR LATCH MECHANISM TO INSTALL THE GROUND LUG ASSEMBLY
3. CONCRETE VAULT: ROUTE THE #14 COPPER WIRE OUT THE TOP OF THE VAULT IN THE DIRECTION OF THE EMPTY CONDUIT

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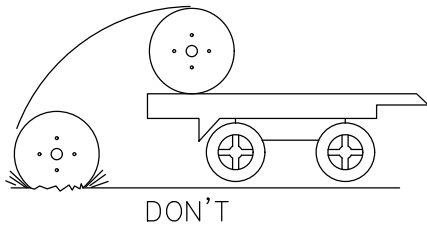
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TRACER WIRE INSTALLATION

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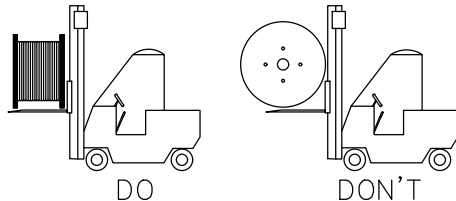
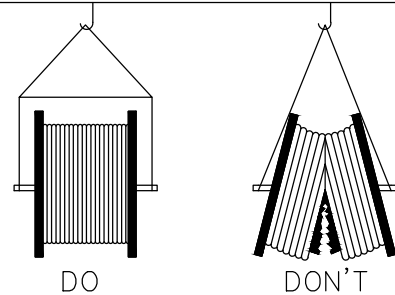
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DETAIL

700-06



When off loading reels from a truck, lower reels carefully using a hydraulic gate, hoist or fork lift truck. Never drop reels. If reels must be rolled, roll in opposite direction of the cable wraps to prevent cable from loosening or unraveling on the reel

When using a hoist, install a mandrel through the reel arbor holes and attach a sling. Use a spreader bar approximately 6 inches longer than the overall reel width placed between the sling ends just above the reel flanges. This will prevent bending the reel flanges and mashing the cable.

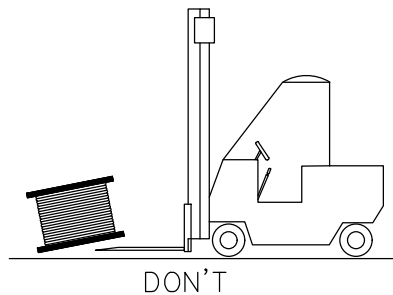


If a fork lift is used, approach the reel from the flange side. Position the forks such that the reel is lifted by both reel flanges. Do not allow the forks to contact the cable. Care must be taken by the Fork lift operator not to make sudden turns or stops.

Cable shipped on wooden or metal reels may be stored outdoors.

When selecting a storage site, consideration should be given to:

- * Traffic patterns during off-loading
- * Grade and condition of the soil or pavement
- * Protection from vehicle damage during the time in storage.
- * Environmental conditions such as exposure to heat, corrosive chemicals, etc.



Cable reels should be stored on hard surfaces resting on the flanges edge (flanges vertical). Align reels flange to flange and, if possible, arrange so that first in is first out. Multiple reels stacked on top of each other (Pancake storage), or storing reels flat (flanges horizontal) is not acceptable. The weight of the stack can total thousands of pounds creating an enormous load on the bottom reel. Also, damage to the reel and/or cable will likely occur when the reel is flipped for transit. A concentration of stress on the reel flange may cause it to break and subsequently damage the cable.

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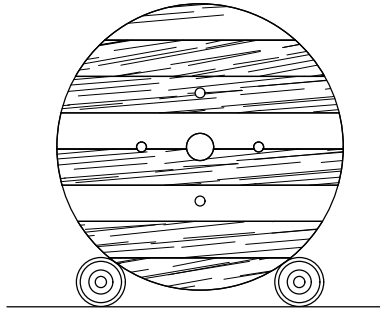
CABLE HANDLING AND STORAGE PROCEDURES

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DETAIL
700-07A

For extended storage:

Reels should be stored cradled between railroad ties, power poles or cross arms. Size and spacing of the supports should raise the flange above the ground. This helps keep the flanges from decaying and prevents the reels from rolling.



At temporary storage sites where soil may be soft, preservative treated plywood sheets may be used to keep reel flanges from sinking into the ground.

To prevent entrance of water, cable ends should be sealed with plastic end caps. Electrical tape does not offer a sufficient seal. When lengths are cut, cable ends should be immediately resealed and secured.

Refer to Cold Shrink Installation Detail 700-08

ELECTRIC SERVICES

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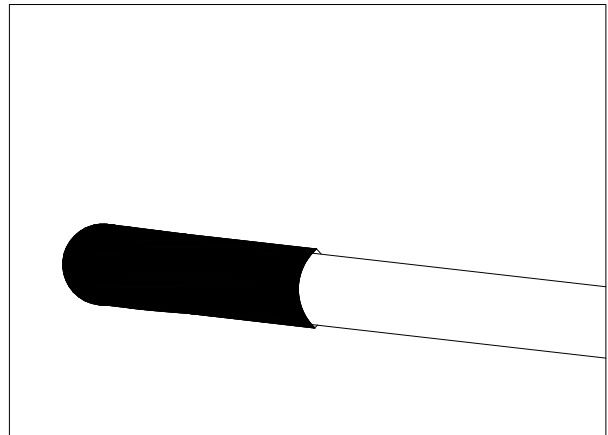
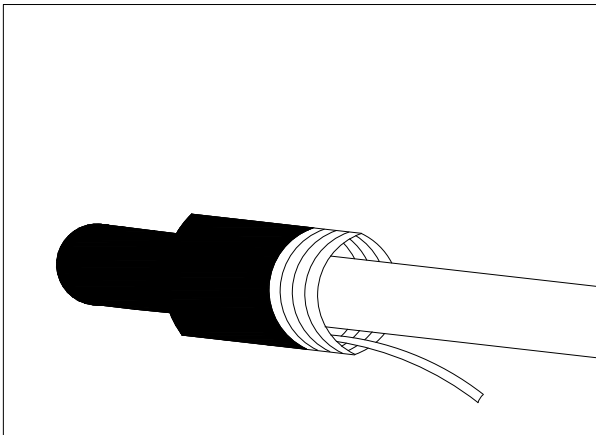
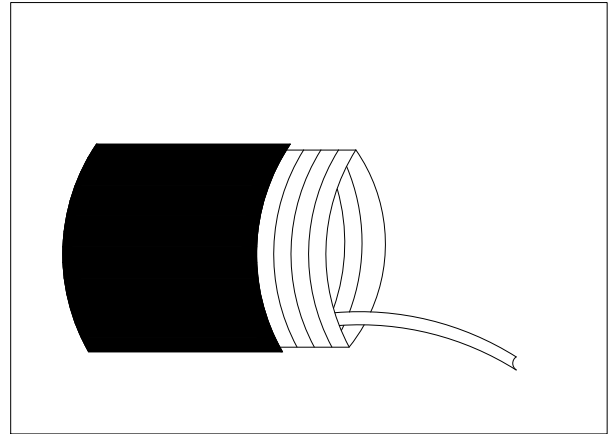
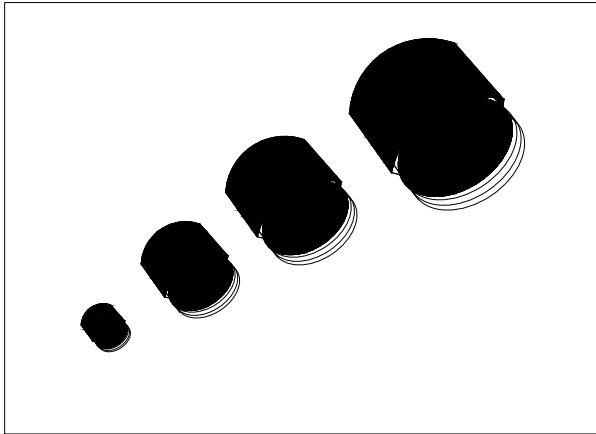
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CABLE HANDLING AND STORAGE PROCEDURES

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DETAIL
700-07B



- * COLD SHRINK SHALL BE INSTALLED ON THE ENDS OF ALL PRIMARY CONDUCTORS IN ORDER TO PREVENT THE ENTRANCE OF WATER INTO THE CABLE.
- * ELECTRICAL TAPE DOES NOT OFFER A SUFFICIENT SEAL.
- * WHEN LENGTHS ARE CUT, CABLE ENDS SHOULD BE IMMEDIATELY RESEALED AND SECURED

ELECTRIC SERVICES

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COLD SHRINK INSTALLATION

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DETAIL
700-08

PRIMARY: 45 DEG PVC COUPLERS
4" FROM INSIDE EDGE

PROFILE
VIEW

4”

36"
MIN

COMPACT TO 95%
— WITH APPROVED
SLURRY MIX

SCH40 PVC

AREA BELOW VAULT COMPACTED TO 95%
AND FILLED WITH 4" OF $\frac{3}{4}$ " WASHED ROCK

8' GROUND ROD
- BACK LEFT CORNER OF VAULT OPENING
6" EXPOSED IN THE VAULT

45 DEG PVC COUPLER
w/ 48" RADIUS

1. VAULT MUST BE LEVEL
2. SET 4" ABOVE FINAL GRADE
3. PROVIDE 95% COMPACTION UNDER AND AROUND THE VAULT
4. MINIMUM OF 4" WASHED ROCK TO BE INSTALLED UNDER THE VAULT
5. CABLE LENGTH SHALL BE 15' AND MEASURED FROM THE BASE OF THE VAULT
6. THE CABLE DUCT SHALL HAVE 6" EXPOSED IN THE VAULT
7. USE 45 DEG COUPLERS w/ 48 IN RADIUS TO SWEEP THE PRIMARY AND SECONDARY PVC CONDUITS INTO THE VAULT
8. AN 8' GROUND ROD SHALL BE PLACED IN THE BACK LEFT CORNER OF THE VAULT OPENING LEAVING 6" EXPOSED ABOVE THE ROCK
9. ORIENTATION OF THE VAULT/TRANSFORMER SHALL BE ESTABLISHED BY LPC
10. TRANSFORMER LOCATIONS REQUIRE THE FOLLOWING MINIMUM CLEARANCES
 - 10.1. 5' ON THE SIDES AND BACK FROM LANDSCAPING AND STRUCTURES - CONFIRM LOCAL CODES INCLUDING FIRE FOR GREATER CLEARANCE REQUIREMENTS
 - 10.2. 10' IN THE FRONT WHERE ACCESS DOORS ARE LOCATED
 - 10.3. 5' FROM A DRIVING SURFACE BEHIND A CURB OR PROTECTIVE FEATURE. RESIDENTIAL DRIVEWAY CLEARANCE MAY BE REDUCED TO 3'
 - 10.4. 3' MINIMUM FROM A DRIVING SURFACE WITH THE USE OF BOLLARDS
 - 10.5. 10' FROM A DRIVING SURFACE WHERE NO PROTECTIVE FEATURE IS PROPOSED
 - 10.6. 15' MAXIMUM SETBACK FROM A DRIVABLE SURFACE, MEASURED FROM THE CENTER, FOR LPC TRUCK/LIFTING ACCESS
 - 10.7. FOR MORE EQUIPMENT CLEARANCE DETAILS REFERENCE 700-02
11. FOR BOLLARD PROTECTION REFERENCE DETAIL 700-18
12. THE MAX NUMBER AND SIZE OF SECONDARY CONDUCTORS CAN BE FOUND IN DETAIL 700-19 - SECONDARY CABINETS

NOT TO SCALE



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SINGLE PHASE TRANSFORMER VAULT

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DETAIL
700-09

(SCC) SECONDARY CONNECTION CABINET
 (CCR) CONCRETE CABLE RACEWAY
 (LPC) LONGMONT POWER AND COMMUNICATIONS

3PH TRANSFORMER

75 - 225Kva

MAX# OF 4 INCH SECONDARY PVC = 6

MAX# OF SECONDARY CONNECTIONS = 6

MAX SIZE OF SECONDARY CABLE = 500cu

CCR & SCC REQUIRED FOR 7+ CONNECTIONS

REFER TO CCR DETAIL 700-20 & SCC DETAIL 700-21

3PH TRANSFORMER

300 - 2500Kva

MAX# OF 4 INCH SECONDARY PVC = 6

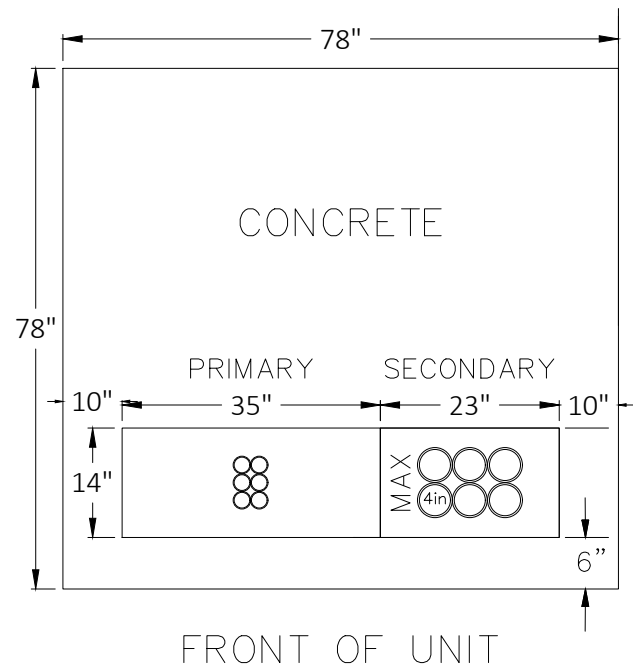
MAX# SECONDARY CONNECTIONS = 10

MAX SIZE SECONDARY CABLE = 750cu

CCR REQUIRED FOR 7 - 10 CONNECTIONS

CCR & SCC REQUIRED FOR 11+ CONNECTIONS

REFER TO CCR DETAIL 700-20 & SCC DETAIL 700-21



THE CUSTOMER SHALL FURNISH A LEVEL CONCRETE PAD IN ACCORDANCE WITH THE SPECIFICATIONS OUTLINED BELOW. THE PAD REMAINS THE PROPERTY OF THE CUSTOMER AND ANY DEFICIENCY IN THE PAD IS THE SOLE RESPONSIBILITY OF THE CUSTOMER TO REPAIR.

1. THE PAD AND ELECTRIC CONDUCTOR BLOCK OUT DIMENSIONS ARE INDICATED ON THE DRAWING.
2. THE PAD SHALL BE A MINIMUM OF 6" THICK, REINFORCED WITH WIRE MESH OR REBAR THROUGHOUT AND ABLE TO SUPPORT UP TO 17,000 LBS.
3. THE ELEVATION OF THE TOP OF THE PAD SHALL BE 4" ABOVE THE SURROUNDING FINISHED GRADE.
4. THE PAD SHALL BE INSTALLED LEVEL
5. COMPACTION BENEATH THE PAD MUST BE 95% OF STANDARD PROCTOR, ASTM D698, AT A PLUS OR MINUS 2% OPTIMUM MOISTURE CONTENT. TEST RESULTS SHALL BE PROVIDED TO THE LPC INSPECTOR.
6. TRANSFORMER LOCATIONS SHALL BE SURVEYED BY THE OWNER
7. ORIENTATION OF THE PAD/TRANSFORMER SHALL BE ESTABLISHED BY LPC
8. MINIMUM CLEARANCE REQUIREMENTS:
 - 8.1. 5' ON THE SIDES AND BACK OF THE PAD FROM SURROUNDING STRUCTURES;
 - 8.2. 5' ON THE SIDES AND BACK FROM LANDSCAPING, FENCES, ETC.
 - 8.3. 10' IN THE FRONT WHERE ACCESS DOORS ARE LOCATED
 - 8.4. 3' MINIMUM FROM A DRIVING SURFACE WITH THE USE OF BOLLARDS
 - 8.5. 5' FROM A DRIVING SURFACE BEHIND A CURB OR PROTECTIVE FEATURE
 - 8.6. 10' FROM A DRIVING SURFACE WHERE NO PROTECTIVE FEATURE IS PROPOSED
 - 8.7. MAXIMUM 15' MEASURED FROM THE CENTER OF THE UNIT TO A TRUCK RATED DRIVING SURFACE FOR LPC TRUCK/LIFTING ACCESS
9. FOR ADDITIONAL EQUIPMENT CLEARANCES REFERENCE DETAIL 700-02
10. FOR BOLLARD PROTECTION REFERENCE DETAIL 700-18

ELECTRIC SERVICES

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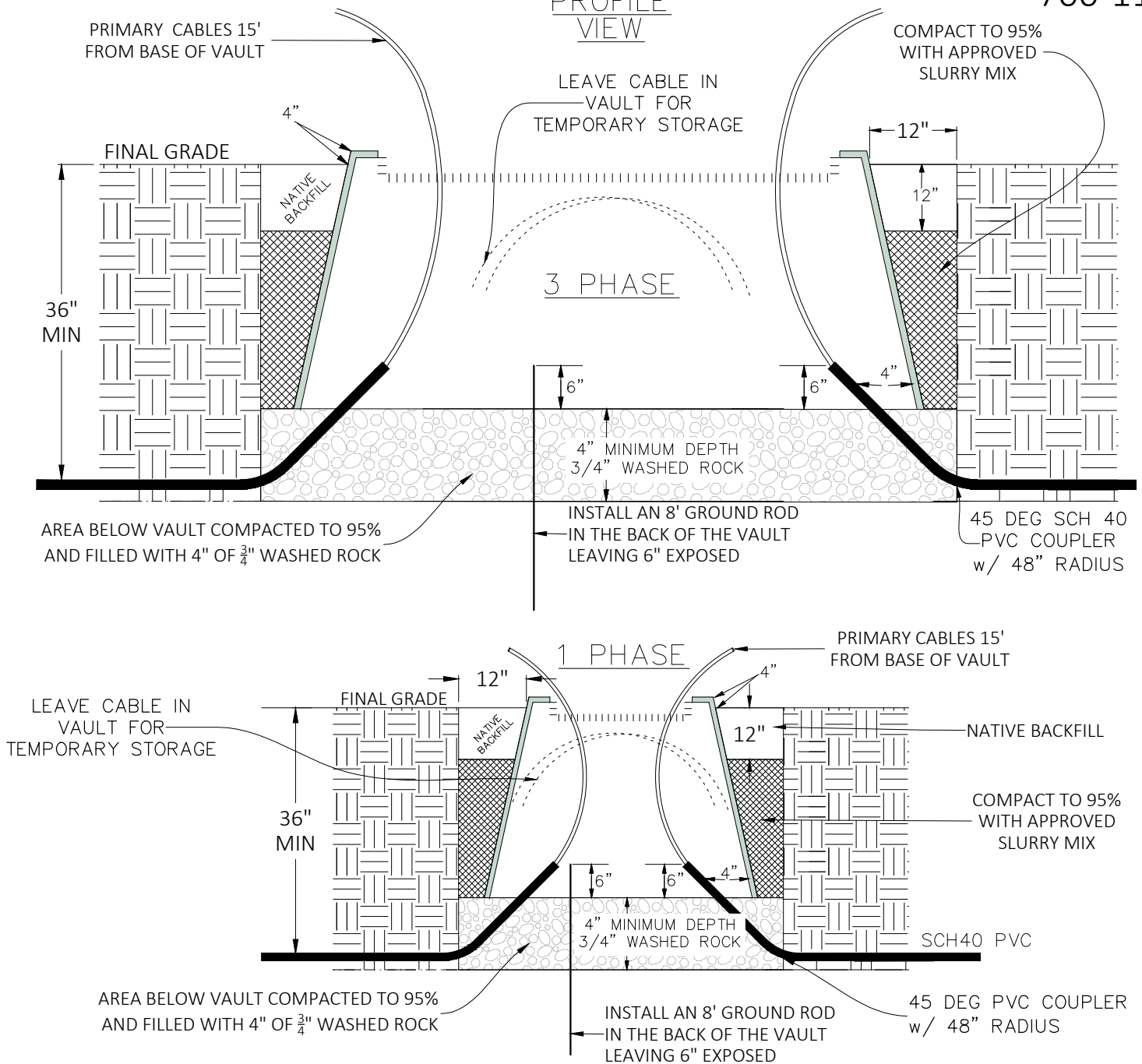
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THREE PHASE TRANSFORMER PAD

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FAX: 303-651-8796

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File: UG Drawings_2025
DETAIL
700-10

PROFILE VIEW



NOTES:

1. VAULT MUST BE LEVEL AND SET 4" ABOVE FINAL GRADE
2. PROVIDE 95% COMPACTION UNDER AND AROUND THE VAULT
3. MINIMUM OF 4" WASHED ROCK TO BE INSTALLED UNDER THE VAULT
4. CABLE LENGTH SHALL BE 15' AND MEASURED FROM THE BASE OF THE VAULT
5. THE CABLE DUCT SHALL HAVE 6" EXPOSED IN THE VAULT
6. USE 45 DEG COUPLERS w/ 48 IN RADIUS TO SWEEP THE PRIMARY PVC CONDUITS INTO THE VAULT
7. AN 8' GROUND ROD SHALL BE PLACED IN THE BACK OF THE VAULT OPENING LEAVING 6" EXPOSED ABOVE THE ROCK
8. REFER TO DETAIL 700-02 FOR MINIMUM CLEARANCE REQUIREMENTS

ELECTRIC SERVICES

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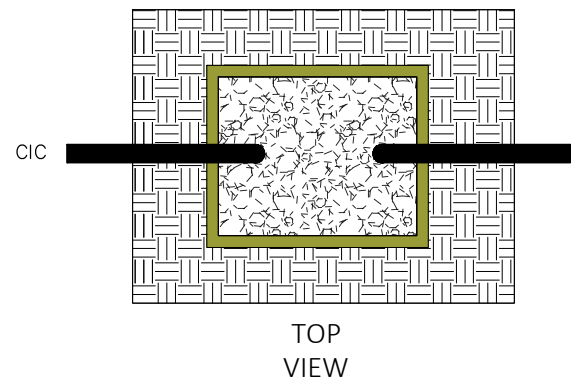
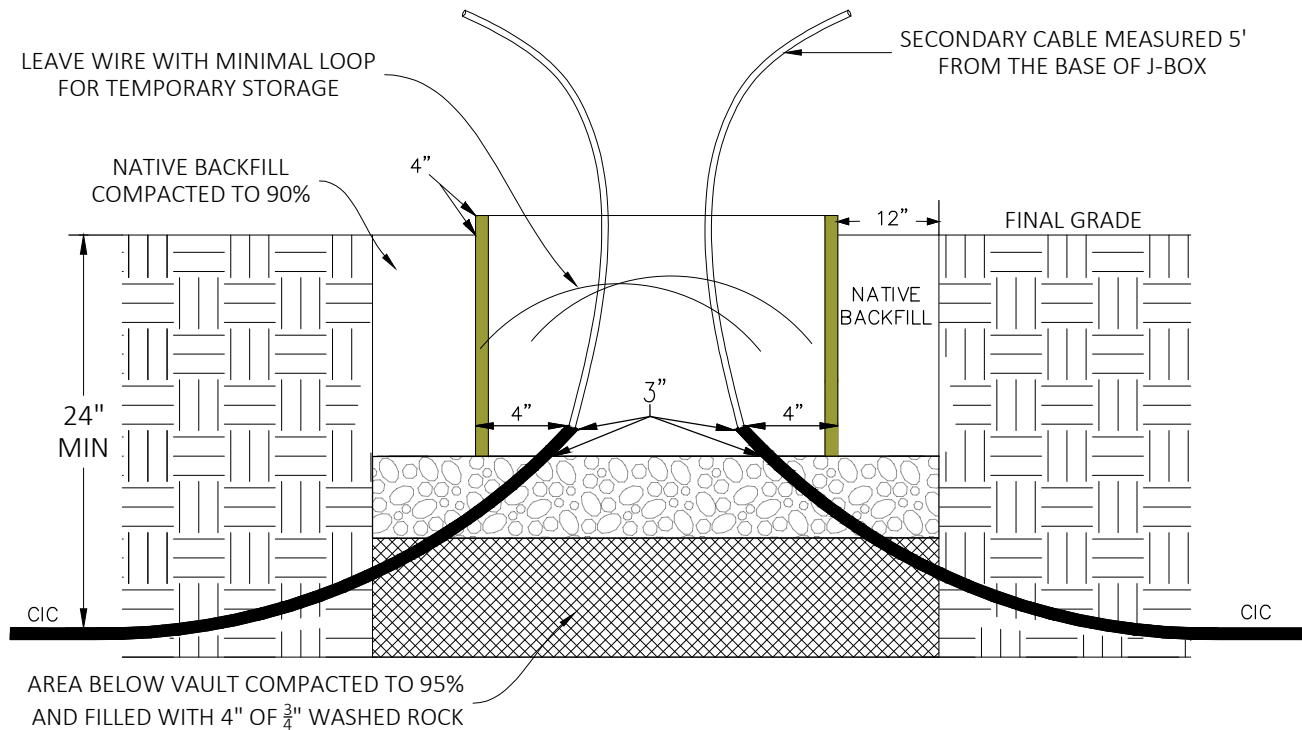
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PRIMARY JUNCTION VAULT

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FAX: 303-651-8796

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DETAIL

700-11



NOTES:

1. J-BOX MUST BE LEVEL AND SET 4" ABOVE FINAL GRADE
2. PROVIDE 95% COMPACTION UNDER AND AROUND THE J-BOX
3. CABLE LENGTH SHALL BE 5' AND MEASURED FROM THE BASE OF THE J-BOX
4. THE CABLE DUCT SHALL HAVE 3" EXPOSED IN THE J-BOX
5. CABLE SWEEPS INTO J-BOX MUST BE GRADUAL AND HAVE A MINIMUM 48" RADIUS
6. TRAFFIC RATED J-BOXES ARE TO BE USED WHEN THE MINIMUM CLEARANCES CANNOT BE MET FROM VEHICLES
7. FOR EQUIPMENT CLEARANCES REFERENCE DETAIL 700-02
8. FOR EQUIPMENT ALIGNMENT ON TRENCH REFERENCE DETAIL 700-05

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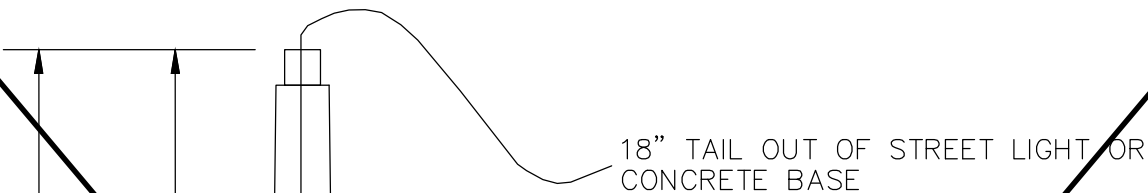
1100 S SHERMAN ST
LONGMONT, CO 80501

SECONDARY JUNCTION BOX (J-BOX)

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL

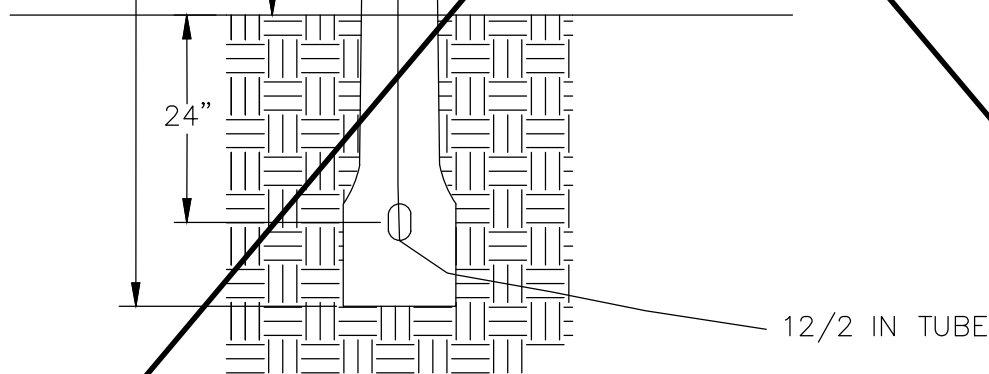
700-12



POLE HEIGHT	POLE MOUNT HEIGHT	BURY DEPTH
14' PT	11' PT	3.0' PT
20' PT	16' PT	4.0' PT
34.5'	30'	4.5'
39.5'	35'	4.5'

NOTES:

1. SET POLE STRAIGHT
2. 95% COMPACTION IS REQUIRED AROUND THE POLE BY USE OF FLOWABLE FILL (LPC SPEC: FLOW FILL)
3. 20' FIBERGLASS POLES SHALL HAVE 12/2 IN DUCT INSTALLED TO THE TOP OF THE POLE
4. 30' - 35' FIBERGLASS POLES SHALL HAVE #12 ROMEX FROM THE SECONDARY J-BOX
5. KEEP THE INSIDE OF THE POLE FREE OF BACKFILL MATERIAL BY TAPING THE OPENINGS CLOSED



ELECTRIC SERVICES

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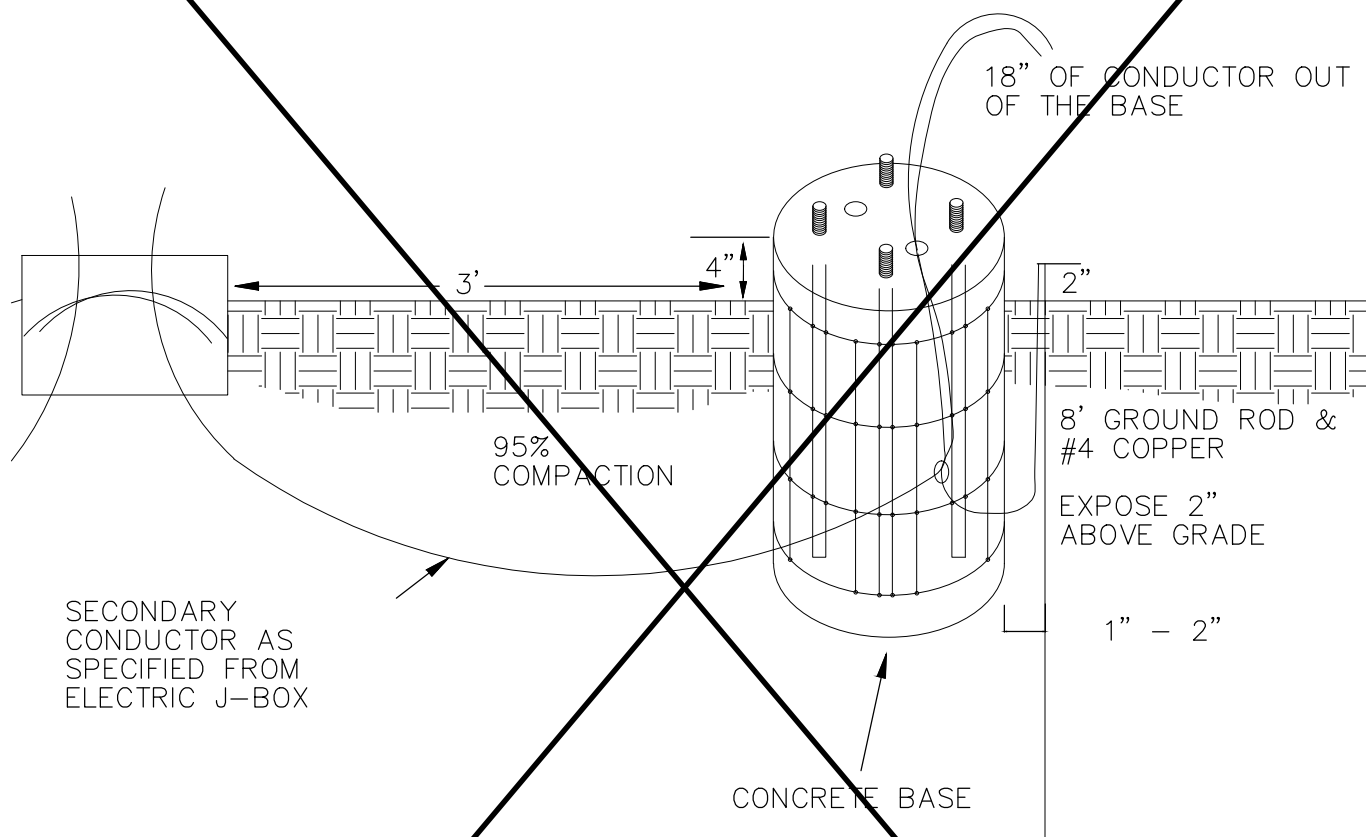
CITY OF
LONGMONT
COLORADO

1100 S SHERMAN ST
LONGMONT, CO 80501

STREET LIGHT POLE

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL
700-13



1. CONCRETE BASE MUST BE LEVEL
2. SET 4" ABOVE FINAL GRADE
3. INSTALL AN 8' GROUND ROD & #4 COPPER
4. PROVIDE 95% COMPACTION UNDER AND AROUND THE CONCRETE BASE
5. FOR STREET LIGHT POLE DETAIL REFERENCE 700-13
6. FOR SECONDARY J-BOX DETAIL REFERENCE 700-12

ELECTRIC SERVICES

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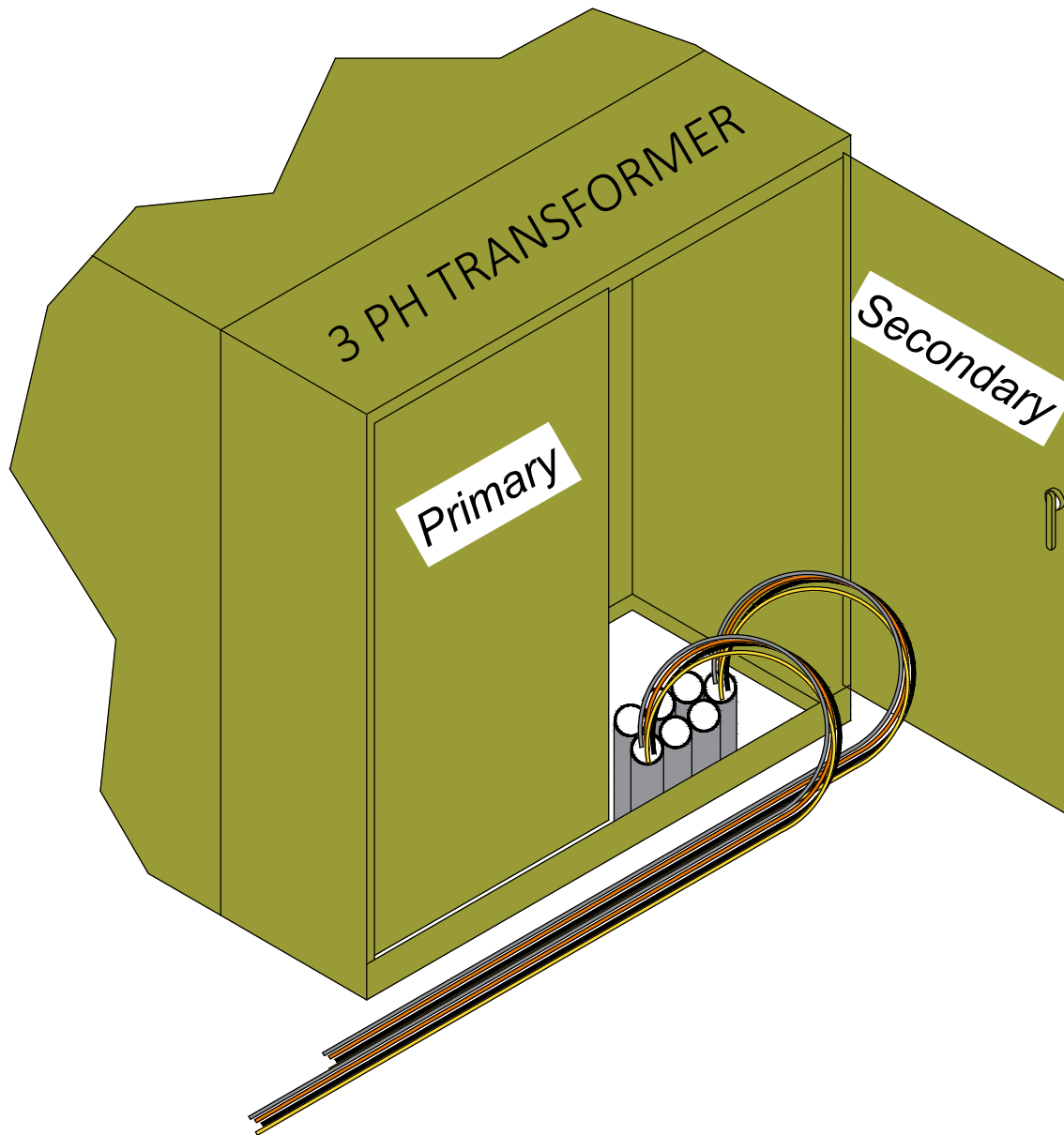
1100 S SHERMAN ST
LONGMONT, CO 80501

STREET LIGHT BASE

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL

700-14



NOTES:

1. MULTI-FAMILY AND COMMERCIAL DEVELOPMENT SERVICE CONDUCTORS AND CONDUITS ARE INSTALLED, OWNED AND MAINTAINED BY THE CUSTOMER. THEY MUST MEET THE NATIONAL ELECTRIC CODE AND BE APPROVED BY THE BUILDING INSPECTION & PERMITS DIVISION. THE CUSTOMER WILL INSTALL CABLE OF SUFFICIENT LENGTH FOR TERMINATION.
2. IN MULTI-FAMILY OR COMMERCIAL DEVELOPMENTS WHERE THREE PHASE SERVICE IS REQUIRED, THE USE OF SECONDARY CONDUCTORS WITH CONTINUOUS JACKET COLORS MUST BE USED TO DELINEATE EACH PHASE AND THE NEUTRAL SEPERATELY.

ELECTRIC SERVICES

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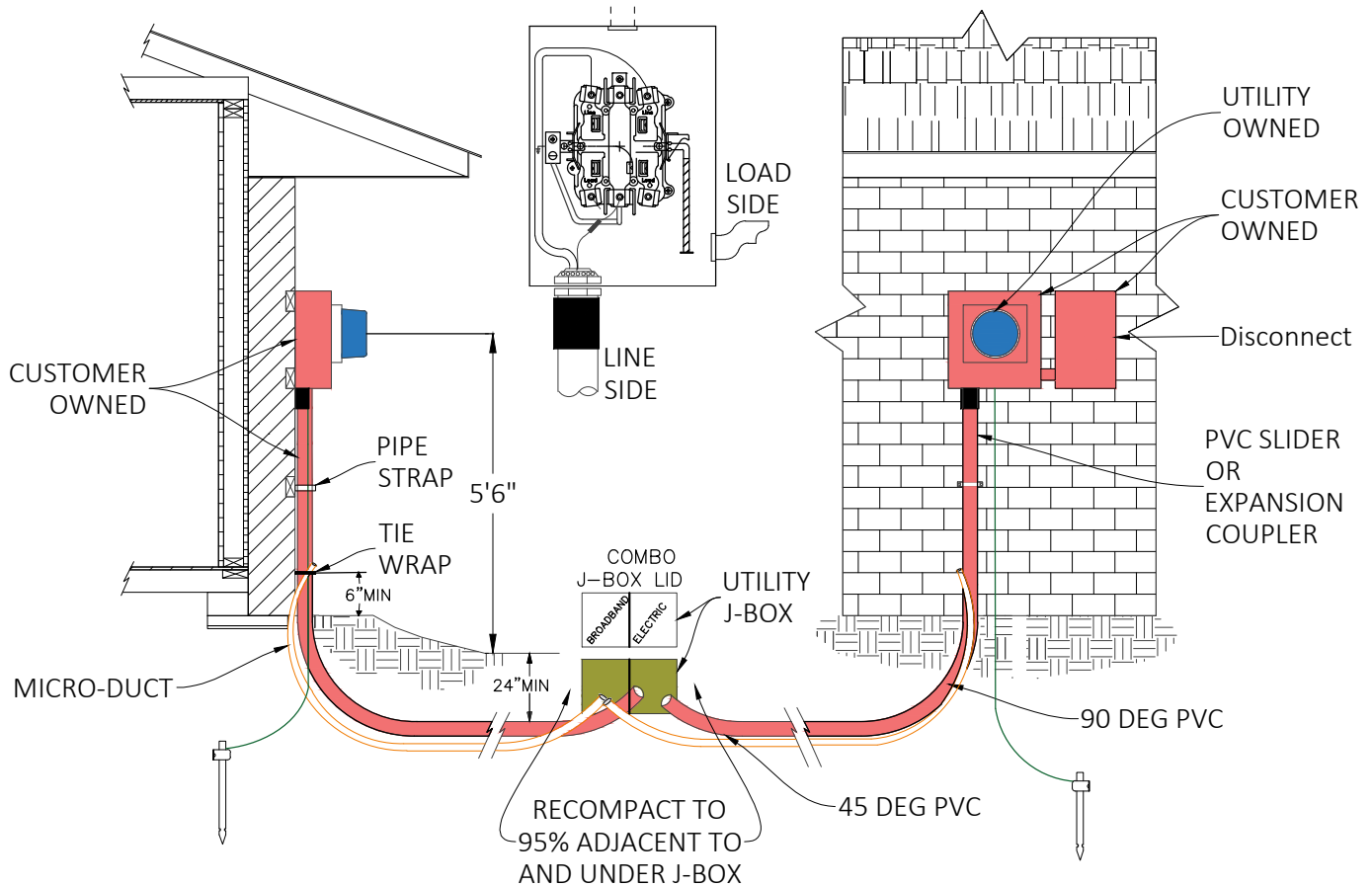
3 PHASE SERVICE LINE IDENTIFICATION

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL

700-15

PROVIDE AS MUCH SLACK AS POSSIBLE IN METER HOUSING



NOTES:

1. METER SHALL BE LOCATED IN THE NEAREST 1/4 OF THE STRUCTURE TO THE SOURCE AND NOT FENCED IN.
2. ALL SERVICES 400 AMP OR LESS REQUIRE A LEVER BYPASS METER BASE
3. ALL ELECTRIC CONDUIT TO BE 2" SCH 40 PVC WITH 24" RADIUS SWEEPS
4. MICRODUCT CONDUIT (PROVIDED BY LPC) SHALL BE INSTALLED IN THE ELECTRIC TRENCH BY THE BUILDER
5. THE MICRODUCT SHALL EXTEND 6" ABOVE GRADE AT THE SERVICE ENTRANCE, BE TIE WRAPPED TO THE ELECTRIC SERVICE CONDUIT, AND LAND INSIDE OF THE UTILITY J-BOX LABELED "BROADBAND" ON THE LID. YOU MAY SEE 2 SEPARATE J-BOXES, ONE FOR FIBER AND ONE FOR ELECTRIC, OR A SINGLE COMBO J-BOX. THE LIDS IN BOTH SCENARIOS ARE LABELED AS "ELECTRIC" OR "BROADBAND".
6. METER HOUSING AND ONE PIPE STRAP SHALL BE ATTACHED WITH AN APPROPRIATE ANCHORING METHOD SO AS NOT TO BECOME DETACHED OVER TIME.
7. USE PVC SLIDER OR EXPANSION COUPLING AT THE ENTRANCE TO THE METER HOUSING
8. SERVICE LATERAL CONDUCTORS SHALL BE CUT TO A LENGTH THAT ALLOWS THEM TO EXTEND 30" ABOVE THE J-BOX LID OR 48" ABOVE THE TRANSFORMER VAULT AND COILED WITHIN

ELECTRIC SERVICES

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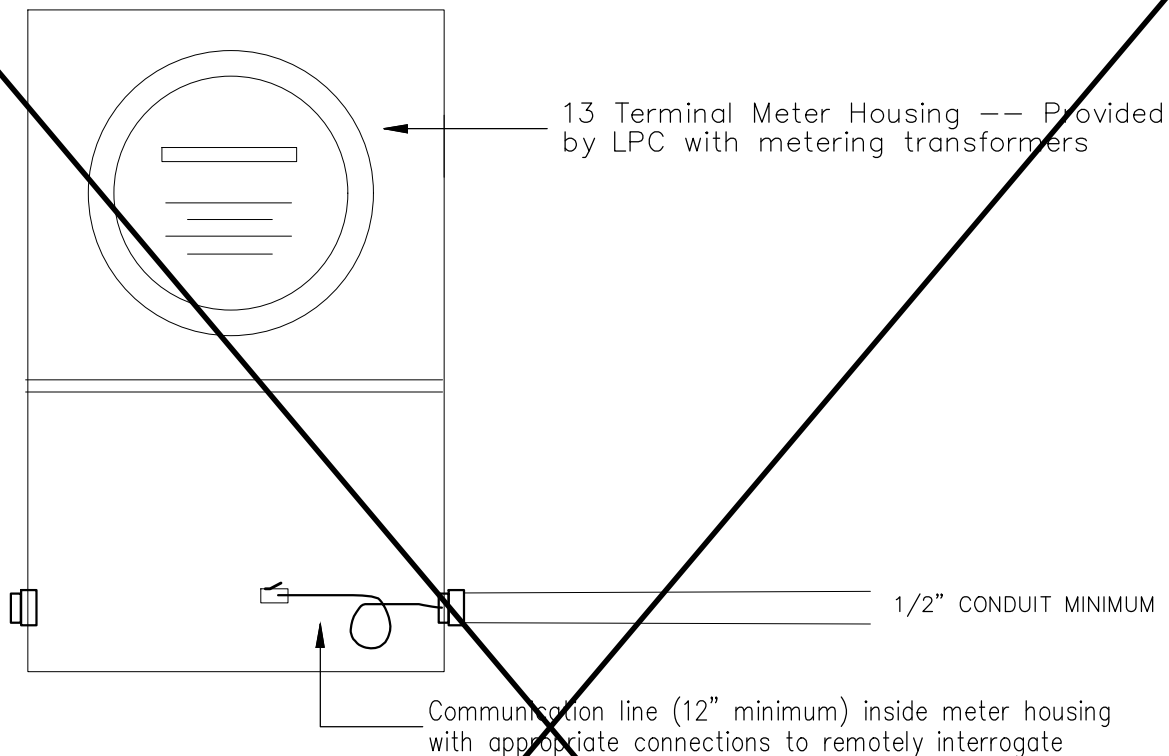
1100 S SHERMAN ST
LONGMONT, CO 80501

METERING SINGLE FAMILY

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
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DETAIL

700-16



LOAD SURVEY METERING / COMMUNICATION LINE SPECIFICATION

- Services at 1000 amp 277/480 volt or 2000 amp 120/208 volts and greater require the customer to provide a dedicated CAT5E or equivalent communication line, for remote interrogation of each electric meter, providing minimum of 12" in length for connections inside the meter housing.
- Conduit for communication line(s) must be installed in accordance with NEC and be a minimum of 1/2". The conduit is required to link the communication room directly to each electric meter and connected into the lower portion of the meter housing.
- The communication line is activated when energy peak demand for two (2) consecutive months reaches 800 kW per LPC's requirements.
- This specification has been approved by the City of Longmont's Electrical Inspector and no additional City Inspection is required.
- LPC Metering Staff are available to open energized services that require the addition of a communication line and will confirm the specification has been followed. If this requirement has not been followed, then LPC, at its discretion, may disconnect the electric service.
- Call (303) 651-8386 to schedule an appointment with LPC Metering Staff.

ELECTRIC SERVICES

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

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CITY OF
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COLORADO

1100 S SHERMAN ST
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METERING COMMUNICATION LINE

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL

700-17

BOLLARD PROTECTION MEASURES

ELECTRICAL EQUIPMENT REQUIRES CLEARANCES OR SETBACKS ON ALL SIDES FROM VEHICULAR TRAFFIC. THIS INCLUDES DRIVEWAYS, ALLEYS, PARKING LOTS, ETC. BOLLARDS WILL BE INSTALLED BY THE DEVELOPER WHEN ELECTRICAL EQUIPMENT IS LOCATED IN AREAS WHERE LESS THAN THE RECOMMENDED CLEARANCES EXIST OR IS AT RISK TO VEHICULAR DAMAGE.

BOLLARD POSITIONS AND CRITERIA

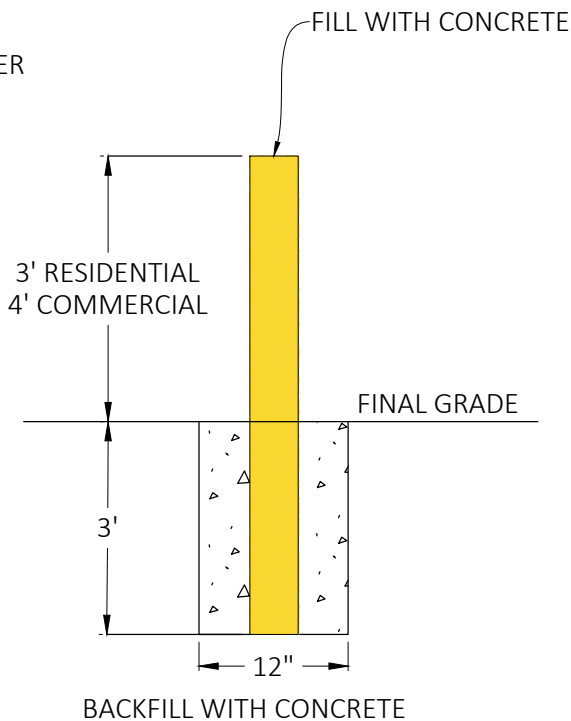
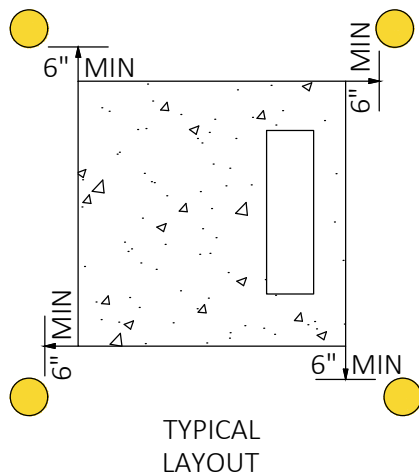
- 10' CLEAR ZONE IN FRONT OF ALL EQUIPMENT DOORS
- 6" MINIMUM DISTANCE FROM THE CONCRETE PAD
- 3' MINIMUM DEPTH

RESIDENTIAL:

- 4" MINIMUM DIAMETER
- 3' MINIMUM HEIGHT

COMMERCIAL:

- 6" MINIMUM DIAMETER
- 4' MINIMUM HEIGHT



NOTES:

- 1) QUANTITY AND LOCATION OF BOLLARDS REQUIRED IS SUBJECT TO SITE CONDITIONS. LPC OPERATIONS WILL SPECIFY PLACEMENT.
- 2) FOR EQUIPMENT CLEARANCES REFER TO DETAIL 700-02

ELECTRIC SERVICES

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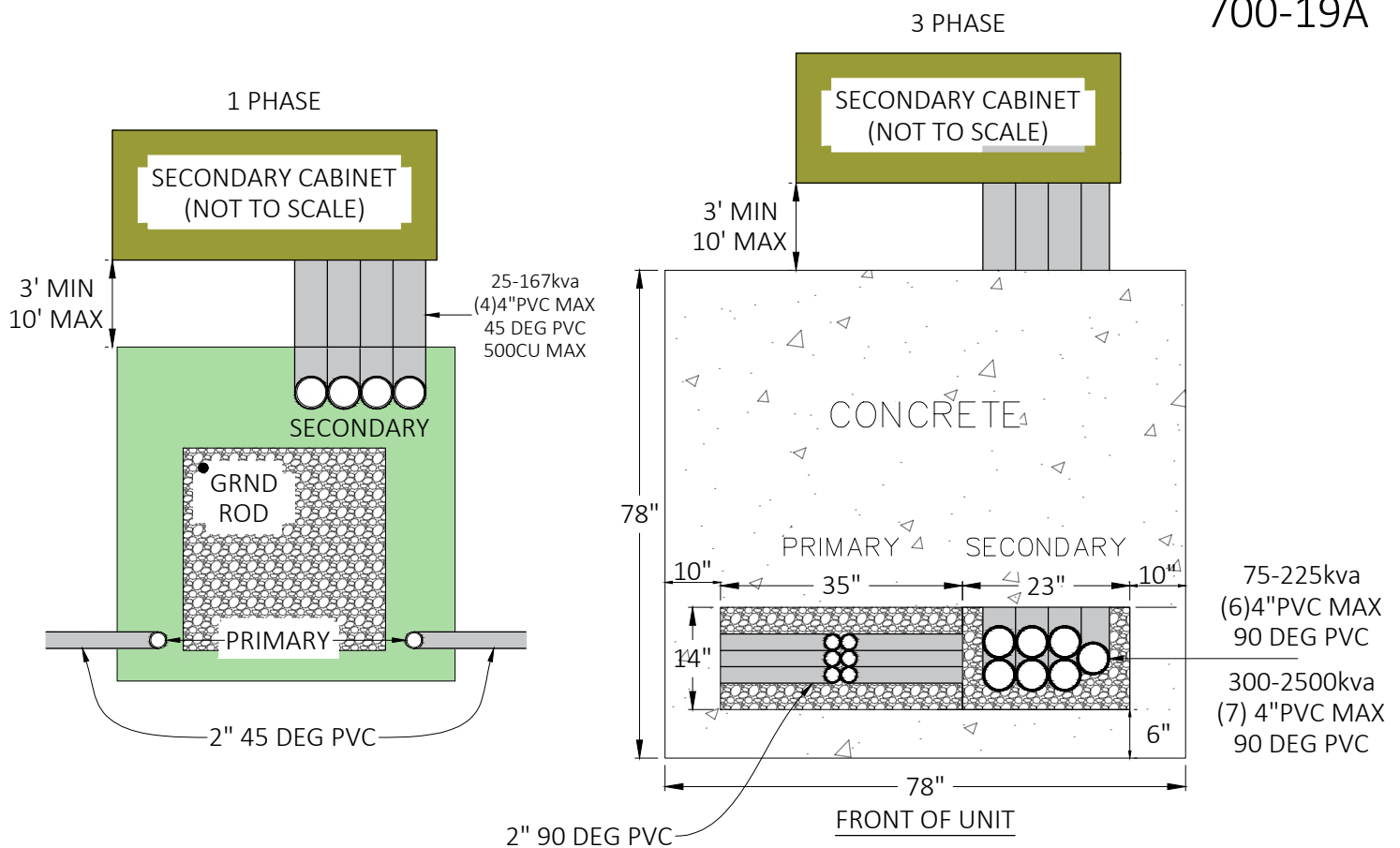
1100 S SHERMAN ST
LONGMONT, CO 80501

BOLLARD INSTALLATION

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL

700-18



NOTES:

1. SECONDARY CABINETS ARE REQUIRED WHEN THE NUMBER OF SECONDARY CABLE RUNS NEEDED, PER THE ONE-LINE, EXCEEDS THE NUMBER OF CABLES ALLOWED WITHIN A TRANSFORMER TYPE DESCRIBED BELOW
2. SECONDARY CABINETS ARE SUPPLIED, INSTALLED, OWNED, AND MAINTAINED BY THE DEVELOPER
3. SECONDARY CABINETS CAN BE INSTALLED A MINIMUM OF 3 FT AND A MAXIMUM OF 10 FT FROM THE SERVICING UTILITY TRANSFORMER
4. THE DEVELOPER / CONTRACTOR IS RESPONSIBLE FOR INSTALLING (X) 4 INCH PVC CONDUITS INTO THE SECONDARY WINDOW OF THE TRANSFORMER PAD.
 - 4.1. (X) IS DETERMINED BY THE SIZE AND PHASE OF THE TRANSFORMER
 - 4.2. USE 45 DEG ELBOWS WHEN ENTERING A 1PH TRANSFORMER
 - 4.3. USE 90 DEG ELBOWS OR A CONCRETE CABLE TRAY WHEN ENTERING A 3PH TRANSFORMER
5. MAXIMUM NUMBER OF 4 INCH SECONDARY CONDUITS ALLOWED ACCORDING TO TRANSFORMER TYPE:
 - 5.1. 4 - 4 INCH: ALL 1PH TRANSFORMERS
 - 5.2. 6 - 4 INCH: 25 KVA - 225 KVA 3PH TRANSFORMERS
 - 5.3. 7 - 4 INCH: 300 KVA - 2500 KVA 3PH TRANSFORMERS
6. MAXIMUM NUMBER AND SIZE OF SECONDARY CABLES ACCORDING TO TRANSFORMER TYPE:
 - 6.1. 4 RUNS OF 500CU: ALL 1 PHASE TRANSFORMERS
 - 6.2. 6 RUNS OF 750CU: 25 KVA - 225 KVA TRANSFORMERS
 - 6.3. 7 RUNS OF 750CU: 300 KVA - 2500 KVA TRANSFORMERS
7. LPC WILL BE RESPONSIBLE FOR INSTALLING THE CABLES BETWEEN THE TRANSFORMER AND THE SECONDARY CABINET
8. LPC WILL BE RESPONSIBLE FOR TERMINATING THE CABLES WITHIN THE TRANSFORMER
9. THE CONTRACTOR IS RESPONSIBLE FOR TERMINATING THE CABLES WITHIN THE SECONDARY CABINET
10. FOR EQUIPMENT CLEARANCE DETAILS REFERENCE 700-02
11. FOR THREE PHASE TRANSFORMER PAD DETAILS REFERENCE 700-10

ELECTRIC SERVICES

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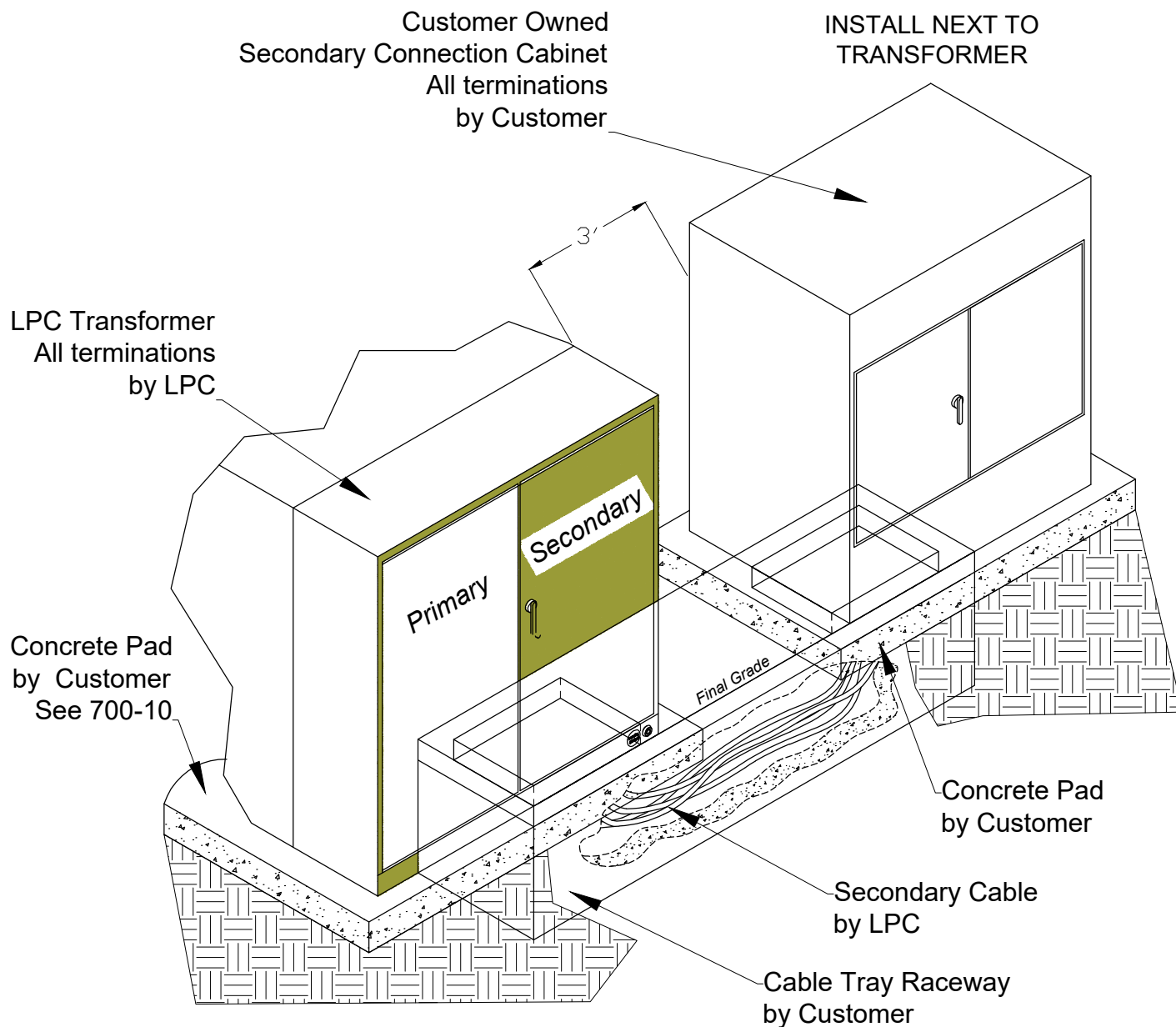
1100 S SHERMAN ST
LONGMONT, CO 80501

SECONDARY CONNECTION CABINET (SCC) PART 1

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL

700-19A



NOTES:

1. Install next to transformer with three feet minimum clearance.
2. Customer shall furnish, install, own, and maintain Concrete Transformer Pad, Secondary Connection Tray, Secondary Connection Pad, and Secondary Connection Cabinet including all internal components within the Secondary Connection Cabinet.

ELECTRIC SERVICES

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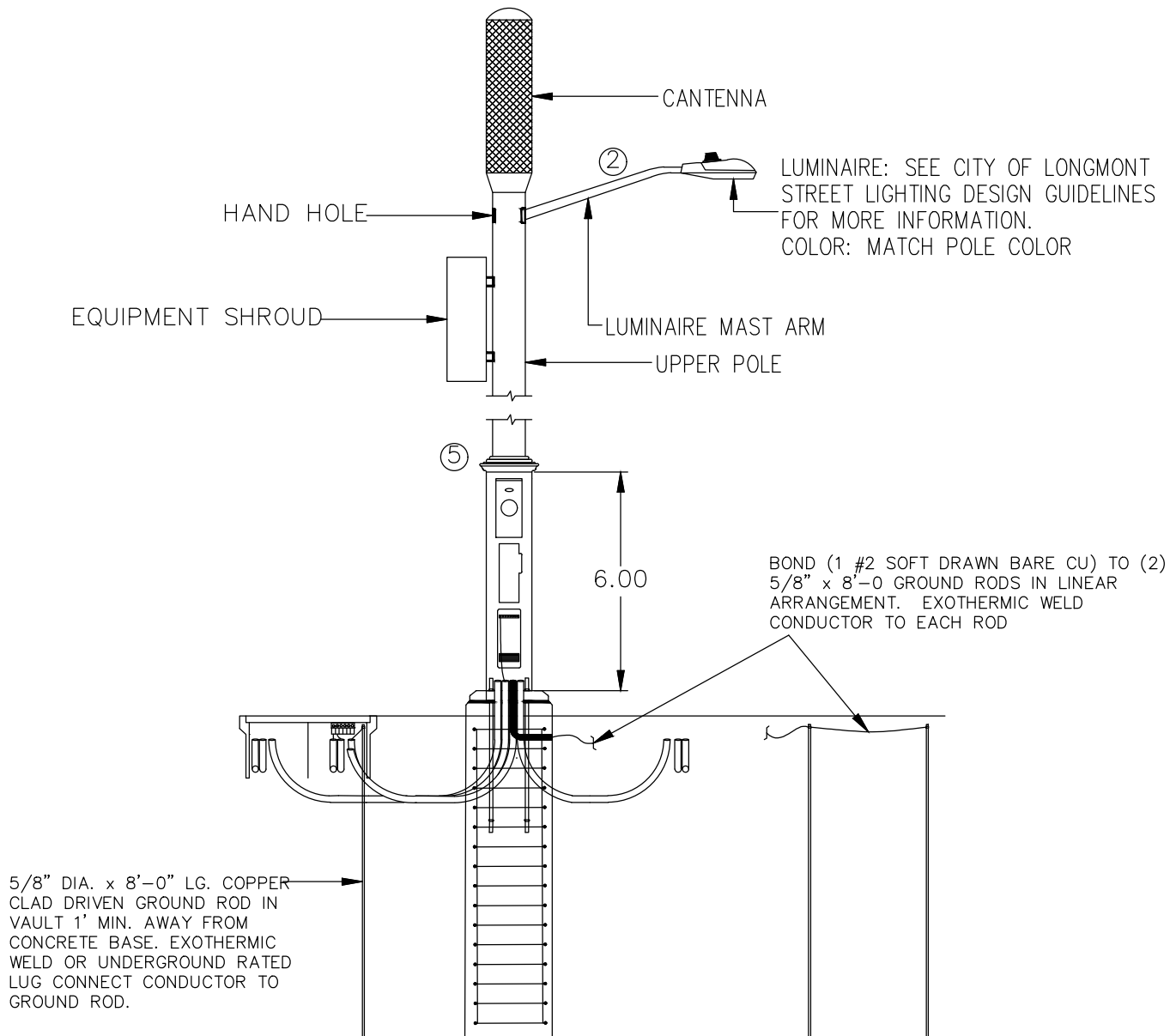
1100 S SHERMAN ST
LONGMONT, CO 80501

SECONDARY CONNECTION CABINET (SCC) PART 2

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
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File: UG Drawings_2024.dwg
DETAIL

700-19B



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1100 S SHERMAN ST
LONGMONT, CO 80501

SMALL CELL FACILITIES LPC STREET LIGHT POLES

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL

700-20A

DETAIL NOTES

- ① POLE SHALL BE ROUND, STRAIGHT, GALVANIZED STEEL WITH A 12.75-INCH (MAX.) OUTER DIAMETER. POLE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111. POLE SHALL EITHER MATCH SURROUNDING STREET LIGHT POLE COLORS (IF APPLICABLE) OR BE DARK BROWN. OTHER COLORS MAY BE APPROVED BY LPC. PAINT SHALL BE POWDER COATED OVER ZINC PAINT. POLE SHALL BE DESIGNED TO WITHSTAND A MINIMUM WIND VELOCITY OF 110 MPH PER TIA-222 REVISION G AND IBS 2012 WITH ASCE/SEI 7-10. A MINIMUM OF 15% OF THE POLE STRUCTURAL CAPACITY SHALL BE RESERVED FOR FUTURE CITY OF LONGMONT INTERNET-OF-THINGS INSTALLATIONS. WEATHERPROOF GROMMETS SHALL BE INTEGRATED INTO THE POLE DESIGN TO ALLOW FOR CABLE TO EXIT. A HANDHOLE SHALL BE PROVIDED TO MAINTAIN CURRENT AND FUTURE LPC/CITY OF LONGMONT FACILITIES. AN OPTIONAL HANDHOLE MAY BE PROVIDED ABOVE THE BASE. POLE SHALL BE ARCHITECTURALLY COMPATIBLE WITH THE EQUIPMENT CABINET.
- ② LUMINAIRE MAST ARMS SHALL BE GALVANIZED STEEL AND PAINTED TO MATCH THE POLE. THE LUMINAIRE MAST ARM LENGTH SHALL MATCH THAT OF THE EXISTING POLE UNLESS OTHERWISE DIRECTED BY LPC. ALL LUMINAIRES SHALL BE MOUNTED AT THE SAME HEIGHT AS SURROUNDING STREETLIGHTS UNLESS OTHERWISE DIRECTED BY LPC. ALL LUMINAIRES SHALL BE PROVIDED BY LPC.
- ③ CANTENNA SHALL BE 16-INCH MAXIMUM OUTER DIAMETER WITH SHROUD. THE HEIGHT OF THE CANTENNA – INCLUDING ALL ASSOCIATED EQUIPMENT AND HARDWARE REQUIRED FOR INSTALLATION – FROM THE TOP OF THE MAST ARM CONNECTION TO THE TOP OF THE CANTENNA SHALL NOT EXCEED 8-FEET. A TAPERED TRANSITION BETWEEN THE UPPER POLE AND CANTENNA SHALL BE INCLUDED.
- ④ ANTENNAS LOCATED ON THE SIDE OF THE POLE, ALONG WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION, SHALL FIT WITHIN A 38"H X 16"W X 12"D (MAXIMUM) SHROUD AND SECURELY STRAPPED TO THE POLE. THE SHROUD SHALL BE COLORED TO MATCH THE POLE.
- ⑤ RADIO FREQUENCY WARNING LABELS SHALL BE MOUNTED EXTERIOR TO THE POLE. A 4" X 6" (MAXIMUM) PLATE WITH CARRIER'S NAME, LOCATION IDENTIFYING INFORMATION, AND EMERGENCY TELEPHONE NUMBER SHALL BE PERMANENTLY FIXED TO THE POLE.
- ⑥ EQUIPMENT CABINET SHALL BE ROUND, GALVANIZED STEEL WITH A PREFERRED 16" DIAMETER (20" DIAMETER MAXIMUM) AND A 5'-8" MAXIMUM HEIGHT. EQUIPMENT CABINET AND POLE SHALL MATCH COLOR. ALL EQUIPMENT SHALL BE LOCATED INTERNAL TO THE EQUIPMENT CABINET OR RECESSED AS MUCH AS POSSIBLE. A 100 AMP METER HOUSING (WITH LEVER BYPASS) FOR CARRIER ELECTRIC SERVICE SHALL BE RECESSED INTO THE EQUIPMENT CABINET. METER DISCONNECT SHALL BE RECESSED INTO THE CABINET. METER SHALL BE PROPERLY GROUNDED PER NEC. A HANDHOLE FOR STREETLIGHT ELECTRICAL SERVICE SHALL BE PROVIDED. AT EACH EQUIPMENT CABINET HANDHOLE, PROVIDE A SUBMERSIBLE, WATERPROOF, IN-LINE FUSE HOLDER WITH FNQ-15a FUSE FOR EACH HOT AND A SUBMERSIBLE, WATERPROOF CONNECTOR ON NEUTRAL (IF REQUIRED). A PASSIVE VENTILATION SYSTEM SHALL BE PROVIDED FOR TEMPERATURE CONTROL. POLE AND EQUIPMENT SHALL BE GROUNDED TO MEET APPLICABLE NEC SECTIONS INCLUDING (BUT NOT LIMITED TO) 410.30(B)(5), 250.118, AND 250.122. ALL HARDWARE ATTACHMENTS SHALL BE HIDDEN.
- ⑦ PRECAST CONCRETE FOUNDATIONS DESIGNED TO MEET ACI 318-14 ARE PREFERRED AND SHOULD BE INSTALLED WHENEVER POSSIBLE. A MINIMUM OF FOUR (4) 2" PVC SCHEDULE 40 CONDUIT SWEEPS SHALL BE INSTALLED. CONDUIT SHALL ACCOMMODATE LPC ELECTRICAL, CARRIER ELECTRICAL, AND FIBER. ANY ADDITIONAL CONDUIT SWEEPS ARE FOR FUTURE LPC USE. ANCHOR BOLTS SHALL BE HIDDEN FROM VIEW. TOP OF FOUNDATION SHALL BE 4 INCHES ABOVE FINAL GRADE. FOUNDATION DEPTH, EMBEDMENT DEPTH, DIMENSIONS AND REINFORCEMENT SHALL BE DESIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF COLORADO.
- ⑧ FIBERGLASS PULL/SPLICE BOXES ARE REQUIRED FOR SEPARATE ELECTRICAL AND FIBER SERVICES. REFER TO NEC ARTICLE "PULL AND JUNCTION BOXES AND CONDUIT BODIES MINIMUM SIZE" FOR BOX SIZE REQUIREMENTS BASED ON CONDUIT AND WIRE SIZES. FIBERGLASS PULL/SPLICE BOXES SHALL BE SET 1' – 3' FROM THE CONCRETE FOUNDATION. THE WIRE TERMINATIONS IN THIS BOX SHALL BE MADE USING SUBMERSIBLE INSULATED PEDESTAL LUG CONNECTIONS. PROVIDE ONE MULTI-LUG CONNECTOR FOR EACH PHASE, NEUTRAL, AND GROUND CONNECTOR TO BE SPLICED IN THIS IN-GRADE SPLICE BOX.

ELECTRIC SERVICES

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

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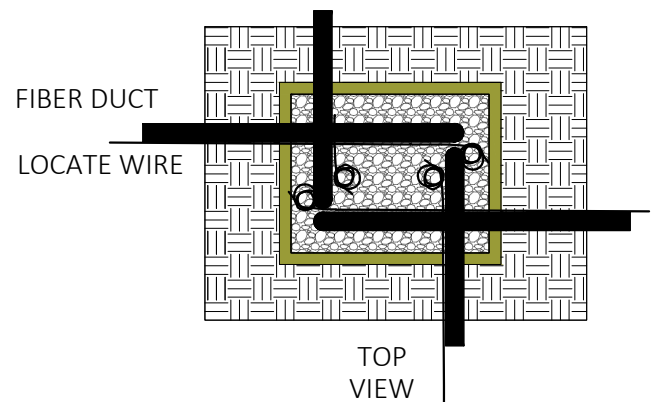
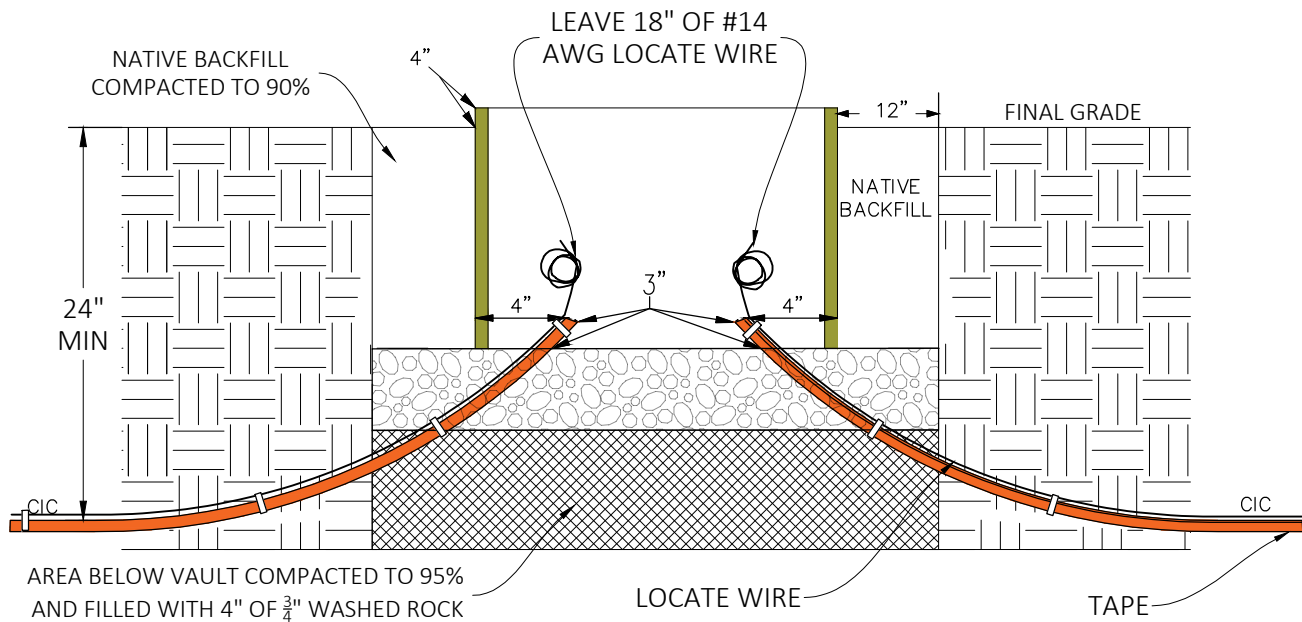
1100 S SHERMAN ST
LONGMONT, CO 80501

**SMALL CELL FACILITIES
LPC STREET LIGHT POLES
(CONTINUED)**

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL

700-20B



NOTES:

1. J-BOX MUST BE LEVEL AND SET 4" ABOVE FINAL GRADE
2. PROVIDE 95% COMPACTION UNDER AND AROUND THE J-BOX
3. THE CONDUIT SHALL HAVE 3" EXPOSED IN THE J-BOX
4. CABLE SWEEPS INTO J-BOX MUST BE GRADUAL AND HAVE A MINIMUM 48" RADIUS
5. #14 AWG LOCATE WIRE SHALL BE TAPED TO EVERY BROADBAND CONDUIT
6. LEAVE 18 INCHES OF LOCATE WIRE AT EACH END OF THE BROADBAND CONDUIT.
7. TRAFFIC RATED J-BOXES ARE TO BE USED WHEN THE MINIMUM CLEARANCES CANNOT BE MET FROM VEHICLES
8. FOR EQUIPMENT CLEARANCES REFERENCE DETAIL 700-02
9. FOR EQUIPMENT ALIGNMENT ON TRENCH REFERENCE DETAIL 700-05

ELECTRIC SERVICES

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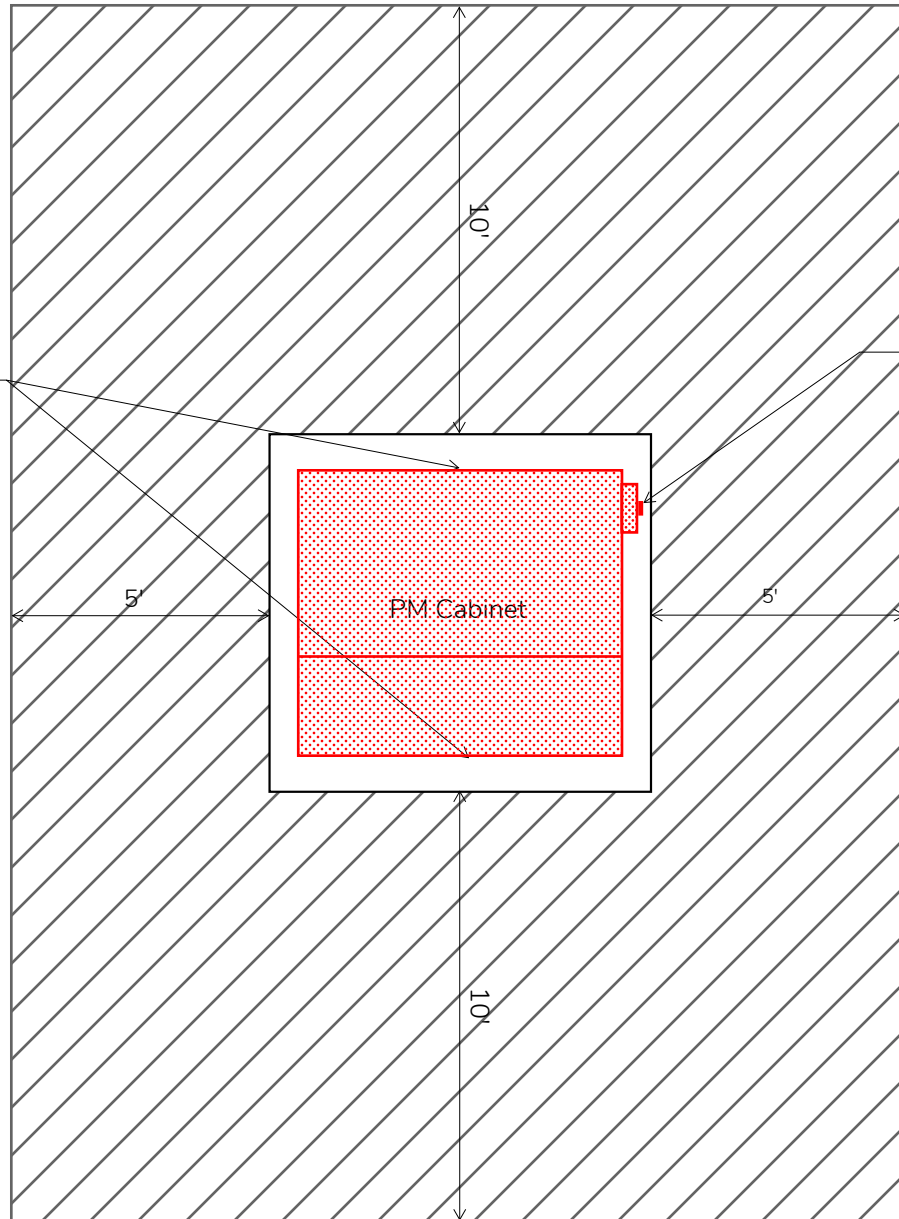
BROADBAND J-BOX WITH LOCATE WIRE

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved: 2024
File: UG Drawings_2024.dwg
DETAIL

700-21

10' clearance required
for accessible doors
on front and back.



Meter housing

ELECTRIC SERVICES

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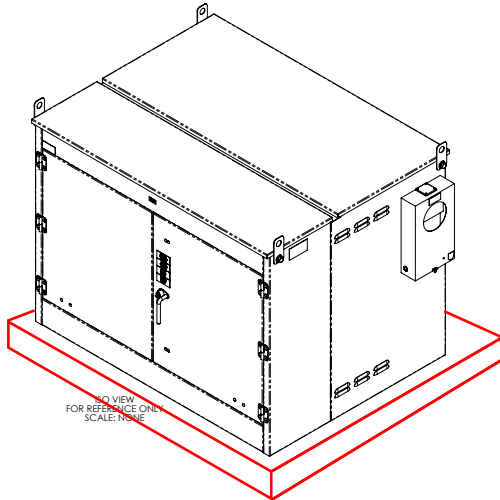
1100 S SHERMAN ST
LONGMONT, CO 80501

PM Cabinet Clearances (use notes from updated detail 700-02)

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
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DETAIL
700-22

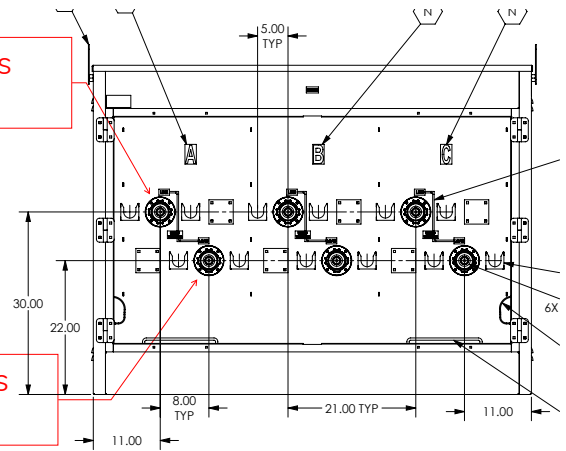
PM cabinet dims: 72"W x 54"D x 54"H



PM cabinet iso view. Shown on 3 phs. xfmr pad.

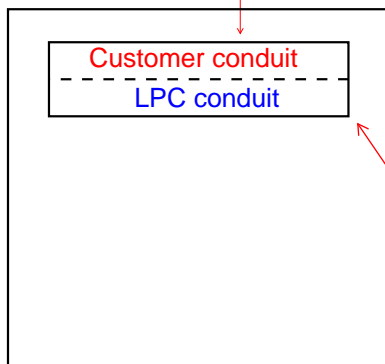
Line Side bushings
(200A or 600A)

Load Side bushings
(200A or 600A)



PM cabinet termination compartment front view, doors open. Typical - single bushing line and load.

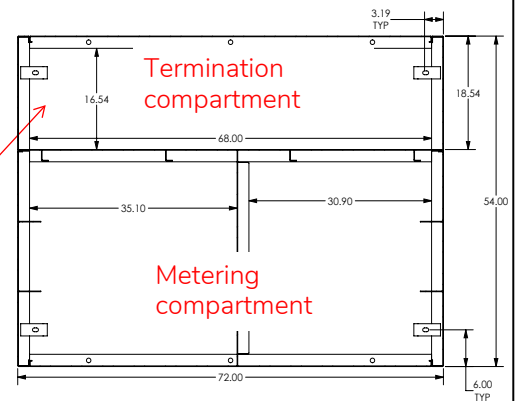
Conduit block-out - 58"W x 14"D
Divided horizontally due to bushing layout



LPC std 3phs xfmr pad - 78"x78"

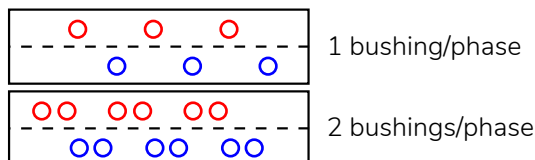
68"W x 16"D PM cabinet
conduit window.

Cabinet can mount on
stock 3 phase
transformer pad



PM cabinet top down interior section view. Typical dimensions.

Conduit Configuration - LPC, Customer



ELECTRIC SERVICES

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Primary Metering cabinet construction details

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
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700-22B

Primary Metering Installation

700-22C

Responsibility Table

Item, Material, or Work Description	Party to Furnish & Own	Party to Install & Maintain
Permits & Inspections	Customer	N/A
Primary Metering Cabinet	LPC Specified / Customer Purchased	LPC
Concrete Equipment Pad	Customer	Customer
Line Side Conduit & 15kV Cable	LPC	LPC
Line Side Terminations	LPC	LPC
Load Side Conduit & 15kV Cable	Customer	Customer
Load Side Terminations ¹	LPC	LPC
Instrument Transformers	LPC	LPC
Meter Socket & Revenue Meter	LPC	LPC
Meter Circuit Wiring	LPC	LPC
Ground Rod, Ground Conductor	LPC	LPC

Point of Demarcation - Primary metering point of demarcation is the load side terminations. The customer is responsible for the purchase, installation, and maintenance of material and equipment after the point of demarcation.

Primary Metering Installations - Primary metering installations must be approved in writing by the LPC Director of Electrical Engineering. The customer is responsible for all costs associated with the primary metering installation.

Primary Metering Materials - LPC will specify the primary metering cabinet, instrument transformers, meter socket, and revenue meter. The customer will purchase and have the primary metering cabinet delivered to LPC. Contact the LPC Electric Meter Shop Supervisor for the latest specification prior to purchasing.

Primary Metering Testing & Certification - LPC will test and certify the primary meter installation when energizing the service.

Primary Metering Cabinet Access - The customer must coordinate access to the primary metering cabinet with the LPC Electric Meter Shop Supervisor.

Replacement of Primary Metering Equipment - Any replacement of the primary metering cabinet and equipment must be coordinated with LPC. Replacement of the instrument transformers will be performed by LPC. The customer is responsible for the cost of the primary metering cabinet, exclusive of LPC owned equipment, and is responsible for all labor costs associated with the replacement.

¹ Customer supplied cable must fit standard LPC termination kits. Contact LPC Field Engineering for compatible cable insulation dimensions.

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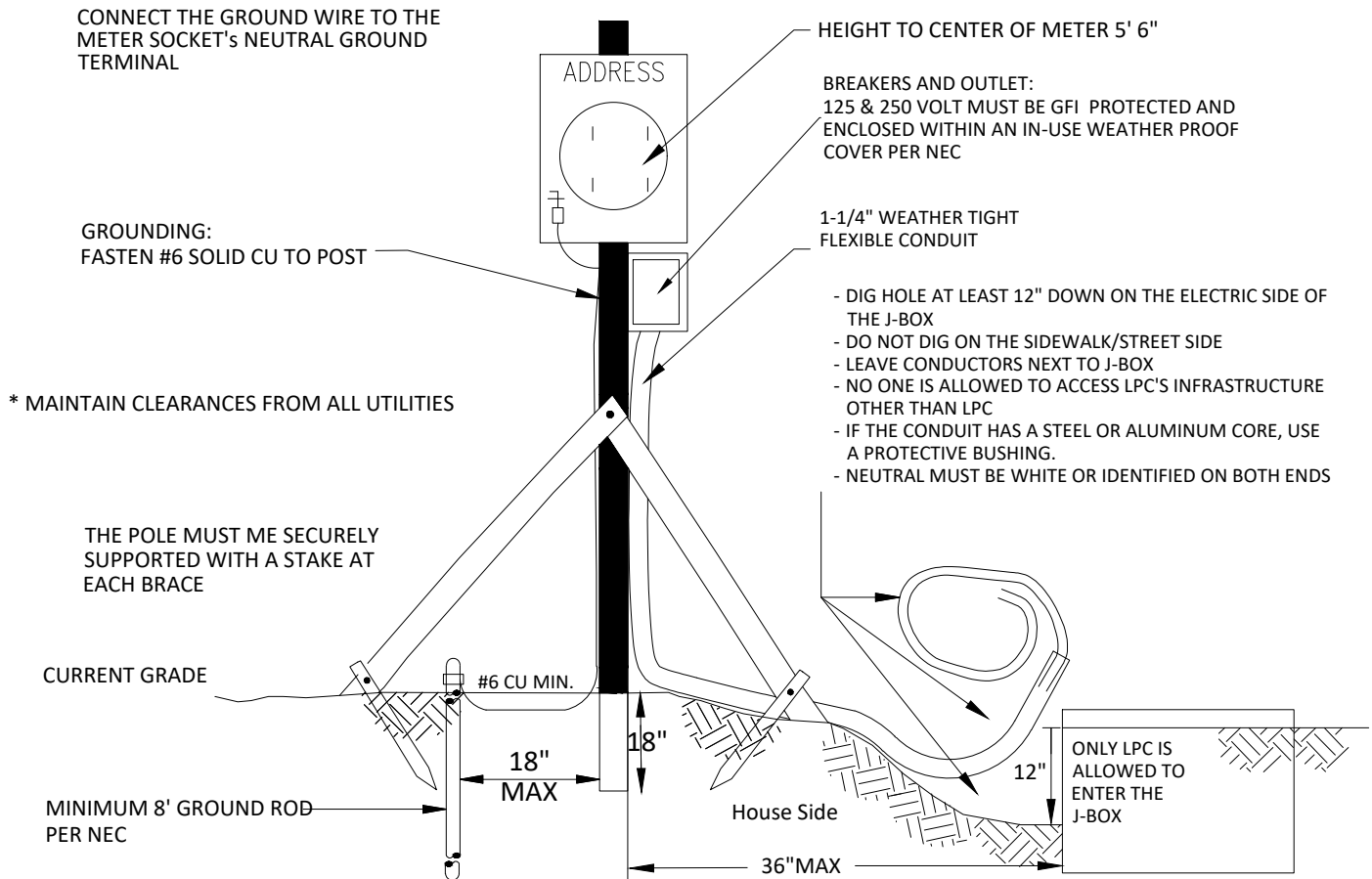
1100 S SHERMAN ST
LONGMONT, CO 80501

Primary Metering Responsibility Table

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
Approved by:
Date Approved:
File:
DETAIL
700-22C

ALL NON-CURRENT CARRYING METALLIC PARTS TO BE BONDED TO
NEUTRAL AND EFFECTIVELY GROUND PER NEC.



NOTES:

1. ALL CONNECTIONS TO CITY-OWNED FACILITIES MUST BE MADE BY CITY PERSONNEL
2. A 3 WIRE, 240 VOLT METER SOCKET AND BREAKER IS REQUIRED AND SHALL MEET NEC REQUIREMENTS
3. ALL EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CUSTOMER
4. TEMPORARY METERING SHALL FOLLOW THE NEC DISCONNECT GUIDELINES.
5. ALL SERVICES 400 AMPS OR LESS REQUIRE A LEVER-OPERATED BYPASS.
6. REFER TO BYPASS DETAILS WITHIN MTR-14, MTR-16, AND MTR-17
7. SINGLE PHASE 120/208v TEMP POWER REQUIRES 5TH JAW AT 9 O'CLOCK POSITION IN METER HOUSING SOCKET
8. THE ADDRESS FOR TEMPORARY SERVICES FOR SINGLE FAMILY RESIDENTIAL AND COMMERCIAL MUST BE PROMINENTLY POSTED, WITH COMMERCIAL REQUIRING A PHENOLIC BADGE.
9. REFER TO SECTION 703.01 FOR LABELING REQUIREMENTS
10. THE CONTRACTOR IS REQUIRED TO EXPOSE THE SIDE OF THE TRANSFORMER GROUND VAULT TO A DEPTH OF 12" BELOW GRADE AND LEAVE THE FOLLOWING LENGTHS OF CONDUCTOR FOR LPC TO CONNECT TO
 - 10.1. 24" OF CONDUCTOR SHALL STICK OUT OF THE FLEX DUCT WHEN CONNECTING TO A J-BOX
 - 10.2. 48" OF CONDUCTOR SHALL STICK OUT OF THE FLEX DUCT WHEN CONNECTING TO A TRANSFORMER
11. THIS METER WILL BE RELOCATED TO THE BUILDING STRUCTURE UPON FINAL RELEASE.
12. REFER TO SECTION 700 FOR ALL OTHER DETAILS

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

NOT TO SCALE



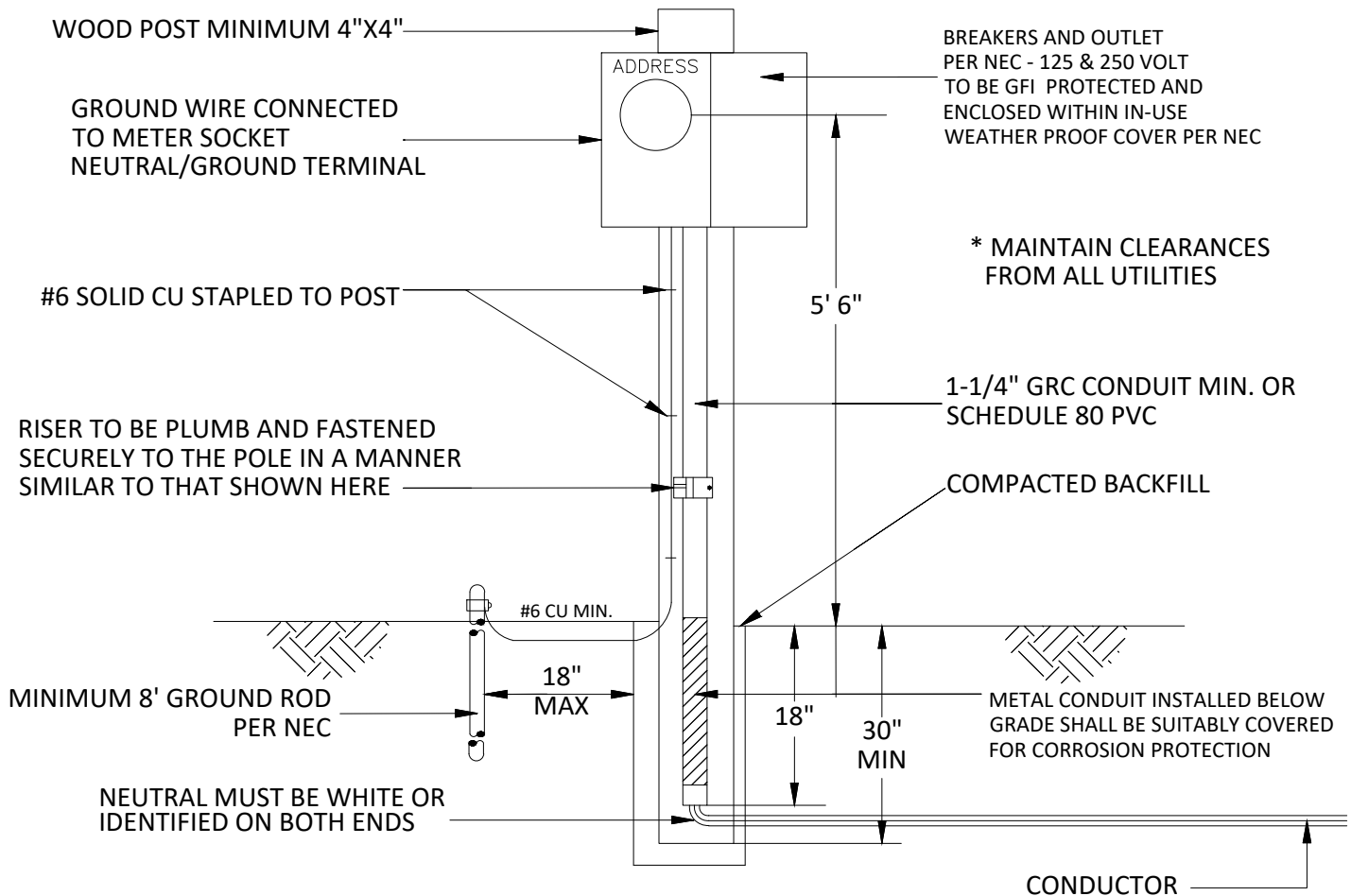
CITY OF
LONGMONT
COLORADO

1100 S SHERMAN ST
LONGMONT, CO 80501

TEMPORARY POWER 1 - 6 MONTHS USE

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
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DATE APPROVED: 2025
File: MTR DRAWINGS_2025.dwg
DETAIL
MTR-1



NOTES:

1. ALL CONNECTIONS TO CITY-OWNED FACILITIES MUST BE MADE BY CITY PERSONNEL
2. METER SOCKET AND BREAKER ARE REQUIRED AND SHALL MEET NEC REQUIREMENTS FOR SIZING OF SERVICE.
3. ALL EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CUSTOMER.
4. TEMPORARY METERING SHALL FOLLOW THE NEC DISCONNECT GUIDELINES.
5. ALL SERVICES 400 AMPS OR LESS REQUIRE A LEVER OPERATED BYPASS.
6. REFER TO BYPASS DETAILS WITHIN MTR-14, MTR-16 AND MTR-17
7. THE ADDRESS FOR TEMPORARY SERVICES FOR SINGLE FAMILY RESIDENTIAL AND COMMERCIAL MUST BE PROMINENTLY POSTED, WITH COMMERCIAL REQUIRING A PHENOLIC BADGE.
8. REFER TO SECTION 703.01 FOR LABELING REQUIREMENTS
9. REFER TO MTR-1 FOR CONNECTIONS TO J-BOX/TRANSFORMERS
10. REFER TO SECTION 700 FOR ALL OTHER DETAILS

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

NOT TO SCALE



CITY OF
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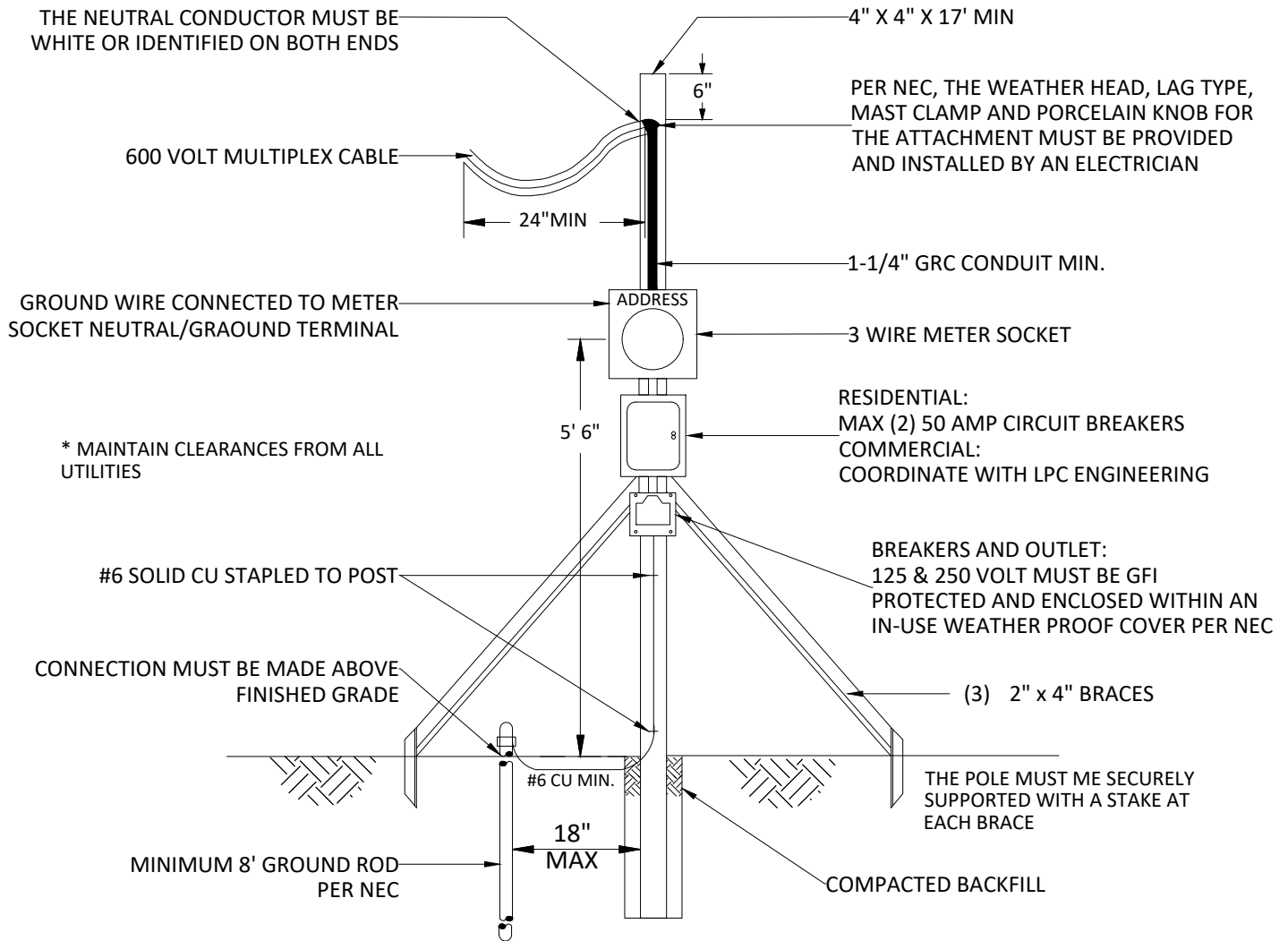
1100 S SHERMAN ST
LONGMONT, CO 80501

TEMPORARY POWER 1 - 12 MONTHS USE

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
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DETAIL
MTR-2

ALL NON-CURRENT CARRYING METALLIC PARTS TO BE BONDED TO
NEUTRAL AND EFFECTIVELY GROUND
PER NEC



NOTES:

1. ALL CONNECTIONS TO CITY-OWNED FACILITIES MUST BE MADE BY CITY PERSONNEL
2. METER SOCKET AND BREAKER ARE REQUIRED AND SHALL MEET NEC REQUIREMENTS FOR SIZING OF SERVICE.
3. ALL EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CUSTOMER
4. COMMERCIAL TEMPORARY METERING SHALL FOLLOW THE NEC DISCONNECT GUIDELINES.
5. ALL SERVICES 400 AMPS OR LESS, REQUIRE A LEVER OPERATED BYPASS. REFER TO BYPASS DETAILS WITHIN MTR-14, MTR-16 AND MTR-17
6. SINGLE PHASE 120/208v TEMP POWER REQUIRES 5TH JAW AT 9 O'CLOCK POSITION IN METER HOUSING SOCKET
7. THE ADDRESS FOR TEMPORARY SERVICES FOR SINGLE FAMILY RESIDENTIAL AND COMMERCIAL MUST BE PROMINENTLY POSTED, WITH COMMERCIAL REQUIRING A PHENOLIC BADGE.
8. REFER TO SECTION 703.01 FOR LABELING REQUIREMENTS
9. THIS METER WILL BE RELOCATED TO THE BUILDING STRUCTURE UPON FINAL RELEASE.
10. REFER TO SECTION 700 FOR ALL OTHER DETAILS

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

NOT TO SCALE

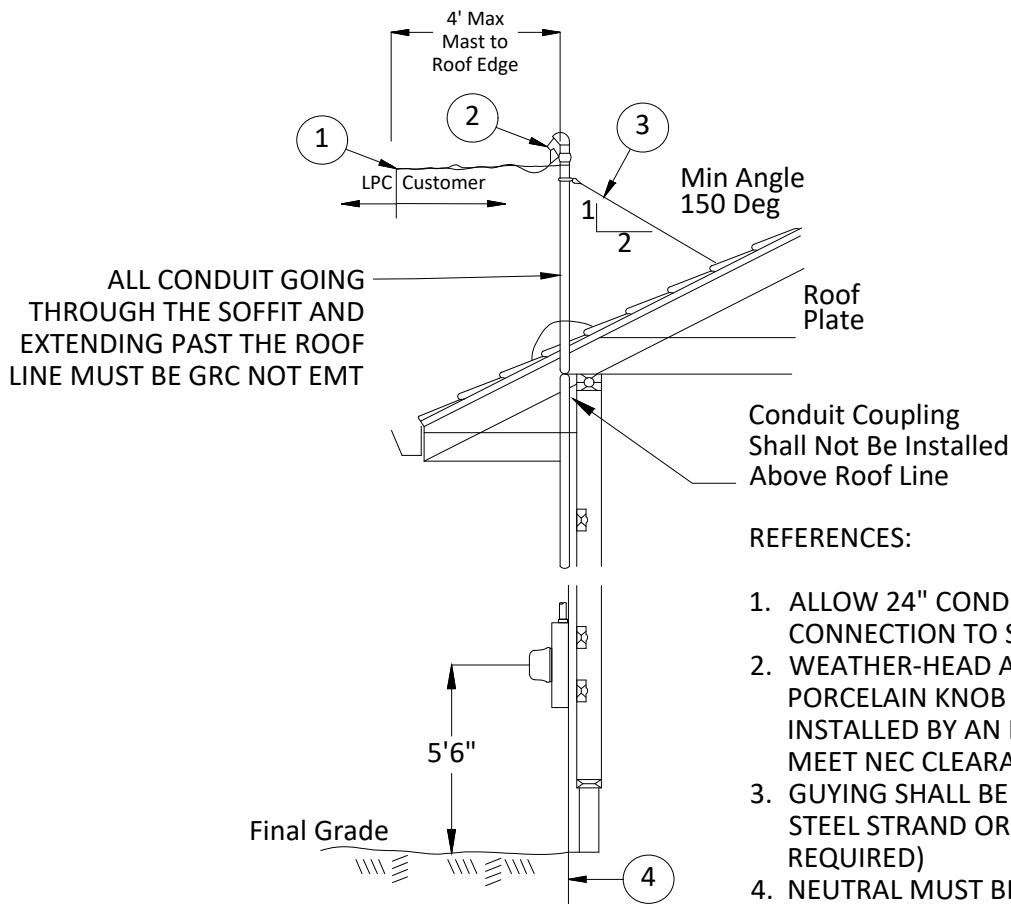


1100 S SHERMAN ST
LONGMONT, CO 80501

TEMPORARY POWER OVERHEAD

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
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DATE APPROVED: 2025
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DETAIL
MTR-3



CONDUIT SIZE GUYING RECOMMENDATIONS FOR
THROUGH ROOF APPLICATIONS ONLY

SERVICE MAST GRC	SERVICE SIZE	UTILITY SERVICE LENGTH	LENGTH OF UNSUPPORTED MAST
2"	200 AMP OR LESS	LESS THAN 100'	24"
2 1/2"	201-400 AMP SERVICE	LESS THAN 60'	24"

NOTES:

1. MOUNT SERVICE MAST ON SIDE NEAREST DISTRIBUTION POLE. AVOID SERVICE WIRE OVERHANG OR PROVIDE CLEARANCE REQUIRED OVER ROOF.
2. FOR BRICK VENEER OR CONCRETE BLOCK, USE 1/4" X 3 1/4" LEAD SLEEVE EXPANSION BOLT IN JOINT PLACE OF LAG SCREWS ON ANCHOR STRAPS.
3. IF NOT GOING THROUGH ROOF LINE EMT CONDUIT IS ACCEPTABLE & A LAG TYPE PORCELAIN KNOB WILL BE SECURELY ATTACHED TO THE STRUCTURE

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

NOT TO SCALE



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LONGMONT, CO 80501

OVERHEAD BUILDING ATTACHMENT

PHONE: 303-651-8386
FAX: 303-651-8796

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DETAIL
MTR-4

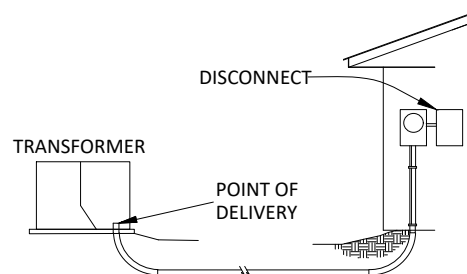
EFFECTIVE JANUARY 1, 2019 LONGMONT POWER & COMMUNICATIONS ACCEPTED 320 CLASS METERING FOR 201-400 AMP 120/240v, 120/208v SINGLE-PHASE, AND 120/208v THREE-PHASE SERVICES

1. REFERENCE LPC'S APPROVED MATERIALS; SPECIFICATION FOR 320 AMP, METER HOUSING.
2. MUST BE IN ACCORDANCE TO NESC AND NEC REGULATIONS.
3. THE CUSTOMER INSTALLS, OWNS, AND MAINTAINS THE CONDUIT, CONDUCTOR, AND EQUIPMENT BEYOND THE POINT OF DELIVERY.
4. LPC INFRASTRUCTURE WILL BE INSTALLED TO ACCOMMODATE THE ELECTRIC SERVICE AT THE CUSTOMER'S EXPENSE.
5. ALL 1PH, STANDALONE RESIDENTIAL SERVICES REQUIRE A HOT SEQUENCE NEXT TO THE METER.

LPC'S POINT OF DELIVERY:

SINGLE UNDERGROUND CUSTOMER

POINT OF DELIVERY IS AT THE SECONDARY
CONNECTIONS WITHIN THE TRANSFORMER

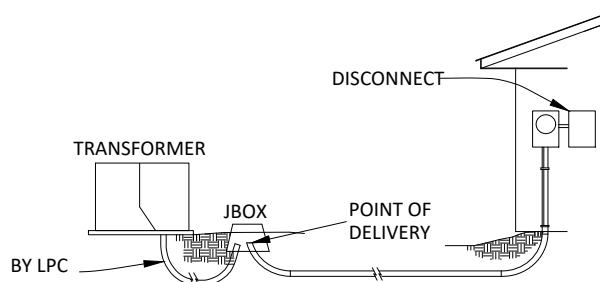


TRANSFORMERS SERVING MULTIPLE CUSTOMERS

LPC WILL INSTALL THE CONDUCTORS FROM THE
TRANSFORMER TO, AND INCLUDING, THE VAULT/JBOX.

- INSTALL OR BORE IN A NEW 3" CONDUIT
- FOR (1)200A SVC & (1)400A SVC USE 350AL
- FOR (2)400A SVC'S USE 500CU
- *UPGRADE TO 5WAYS IN JBOX

POINT OF DELIVERY IS THE CONNECTION WITHIN
THE GROUND VAULT/J-BOX

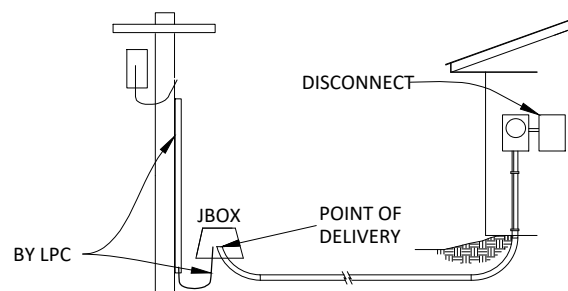


OVERHEAD LPC TO UNDERGROUND CUSTOMER

LPC WILL INSTALL THE CONDUCTORS FROM THE TRANSFORMER TO, AND
INCLUDING, THE VAULT/JBOX.

- INSTALL OR BORE IN A NEW 3" CONDUIT
- FOR (1)200A SVC & (1)400A SVC USE 350AL
- FOR (2)400A SVC'S USE 500CU
- *UPGRADE TO 5WAYS IN JBOX

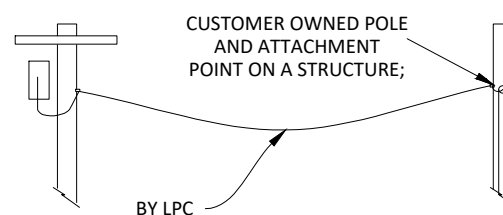
POINT OF DELIVERY IS THE CONNECTION WITHIN
THE GROUND VAULT/J-BOX



OVERHEAD INSTALLATIONS

POINT OF DELIVERY WILL BE AT THE CUSTOMER OWNED POLE OR
BUILDING ATTACHMENT.

REFER TO MTR-4 FOR OVERHEAD BUILDING ATTACHMENTS



* MAINTAIN CLEARANCES FROM ALL UTILITIES

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

NOT TO SCALE



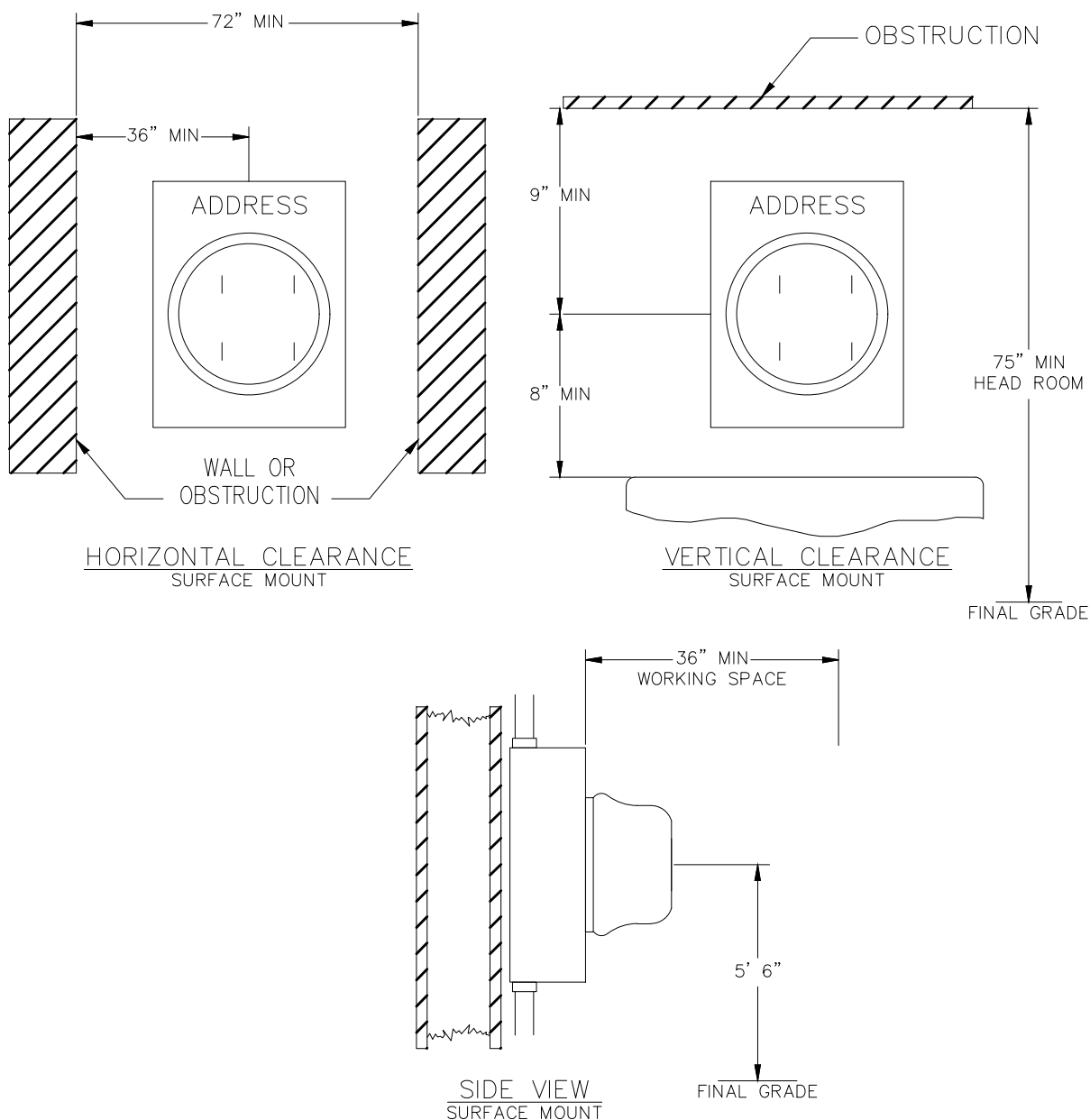
POINT OF DELIVERY FOR RESIDENTIAL SERVICES 201 - 400 AMPS

1100 S SHERMAN ST
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PHONE: 303-651-8386
FAX: 303-651-8796

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MTR-5

METER HOUSING CLEARANCE REQUIREMENTS



** A 36" CLEAR ZONE MUST BE MAINTAINED AROUND AND IN FRONT OF THE METER FOR SAFETY
 ** A CLEAR PATH TO THE METER MUST BE MAINTAINED AT ALL TIMES.

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

NOT TO SCALE



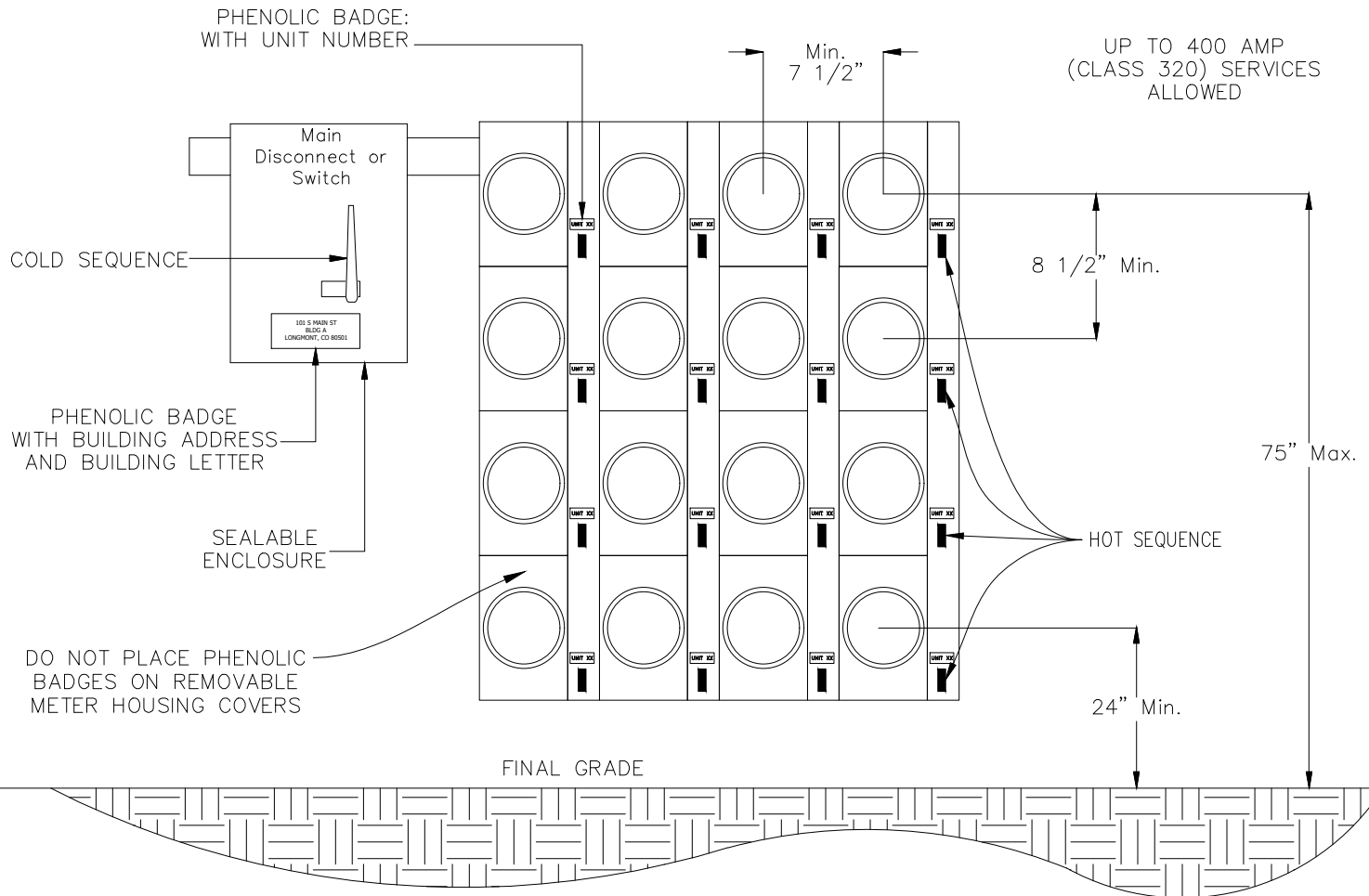
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**METER HOUSING
CLEARANCES**

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
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DETAIL
MTR-8

TYPICAL COMBINATION SERVICE TERMINATION ENCLOSURE AND METER SOCKET PANELS FOR MULTI-METER APPLICATIONS (GREATER THAN 1)



NOTES:

1. THE LINE SIDE OF THE METER BANK WILL BE COLD SEQUENCED AND SHALL INCLUDE PROVISIONS FOR AN LPC SEAL.
2. SEALS WILL BE USED BY LPC TO SECURE THE ENCLOSURE FROM UNAUTHORIZED ENTRY BUT ALLOW THE CUSTOMER EMERGENCY ACCESS FOR FUSE REPLACEMENT.
3. THE MAIN DISCONNECT SHALL BE COLD SEQUENCED AND LABELED WITH THE BUILDING ADDRESS AND BUILDING LETTER.
4. ALL METERED SERVICES, EXCLUDING CT RATED SERVICES, SHALL BE EQUIPPED WITH A LEVER-OPERATED BYPASS.
5. REFER TO MTR-14 DETAILS FOR SINGLE PHASE METER HOUSING 400 AMP OR LESS
6. EACH INDIVIDUAL METER WILL HAVE AN APPROPRIATELY SIZED LOAD SIDE DISCONNECT BREAKER. EACH METER AND IT'S ASSOCIATED DISCONNECT MUST BE PERMANENTLY LABELED TO IDENTIFY THE CUSTOMER UNIT NUMBER.
7. ALL LABELS MUST BE CONSTRUCTED OF ENGRAVED PHENOLIC BADGES AND PERMANENTLY RIVETED TO THE ELECTRICAL EQUIPMENT. NOTE: THEY SHOULD NOT BE ATTACHED TO REMOVABLE METER HOUSING COVERS.
8. PHENOLIC BADGES SHALL BE A MINIMUM OF 1" BY 2" WITH TEXT A MINIMUM OF 3/8" IN HEIGHT.
9. METERS SHALL NOT BE INSTALLED UNTIL A RING OUT INSPECTION HAS BEEN APPROVED VIA THE METERING DEPT.
10. ENSURE ITEMS 1-9 ABOVE ARE COMPLETED AND THE DOOR OF THE PHYSICAL UNIT IS LABELED PRIOR TO SCHEDULING THE RING OUT INSPECTION.
11. A SWITCHED LIGHT OR TEMP OUTLET MUST BE PRESENT AT THE TIME OF THE RING OUT INSPECTION TO VERIFY THE ELECTRICAL FEEDER GOES FROM THE METER TO THE INTENDED UNIT.
12. REFER TO METERING REQUIREMENTS SECTION 703.00
13. NO GUTTER OR TROUGHS WILL BE ALLOWED ON THE LINE SIDE OF THE METER(S)

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

NOT TO SCALE

MULTIPLE METER SOCKET INSTALLATIONS FOR INDIVIDUAL SERVICE SIZES 400 AMPS (CLASS 320) OR LESS



1100 S SHERMAN ST
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PHONE: 303-651-8386
FAX: 303-651-8796

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DETAIL
MTR-9

Minimum Dimensions for CT Cabinets

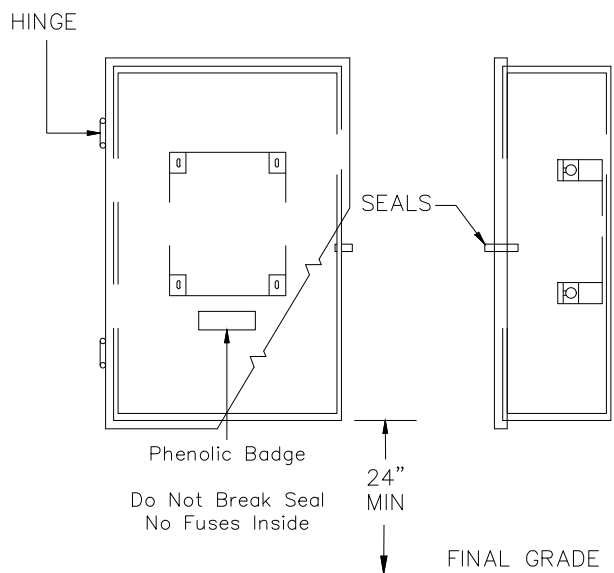
3-Phase 4-Wire 120/208V or 240V

Amps	Height	Width	Depth
400	N/A	N/A	N/A
600	40	30	8-1/4
800	48	30	11
1200	48	33	11
1600	60	33	11
2000	60	39	15
3000	75	39	24

DIFFERENT VARIATIONS EXIST BETWEEN MANUFACTURERS

3-Phase 4-Wire 277/480V
with dedicated PT mounting provisions

Amps	Height	Width	Depth
400	48	36	15
600	48	36	15
800	48	36	15
1200	60	51	24
1600	75	63	24
2000	75	63	24
3000	75	63	24



NOTES:

- 277/480 VOLT SERVICES 201 AMPS OR MORE REQUIRE PT'S, AND A CABINET WITH MANUFACTURED, FACTORY-INSTALLED PROVISIONS FOR UNOBSTRUCTED MOUNTING OF THE PT'S INSIDE THE SAME COMPARTMENT AS THE CT'S.
- HOT SEQUENCE SERVICE DISCONNECT MUST BE OUTSIDE OF THE BUILDING AND CONTINUOUSLY ACCESSIBLE. AN EXCEPTION IS ALLOWED FOR INTERNAL MOUNTING OF DISCONNECTS FOR FIRE PUMPS AS REQUIRED BY NFPA 20, APPENDIX A.3.
- INSTRUMENT TRANSFORMERS (CT'S/PT'S) SHALL ONLY BE INSTALLED IN APPROVED NEMA TYPE 3R CT CABINETS WITH A HINGED DOOR, LOCKABLE HASP (KEYED DOORS ARE NOT ALLOWED), AND FASTENERS THAT CANNOT BE REMOVED FROM THE EXTERIOR AND SHALL BE OF SUFFICIENT SIZE FOR LOAD AND VOLTAGE CONDITIONS.
- THE METER SOCKET SHALL BE MOUNTED SO THAT IT IS NOT OBSTRUCTED WITH THE CABINET DOOR IN THE FULLY OPEN POSITION AND IF POSSIBLE, ATTACHED TO THE CT CABINET.
- METERS WILL NOT BE INSTALLED UNTIL ALL SOCKETS AND INSTRUMENT TRANSFORMER CABINETS ARE BADGED AS SHOWN ON THE ONE-LINE DIAGRAM WITH PHENOLIC BADGES RIVETED PERMANENTLY TO THE ASSOCIATED ELECTRIC EQUIPMENT.
- REFER TO MTR-11 FOR CT & PT METERING SPECIFICATIONS
- REFER TO MTR-13 FOR COMMERCIAL SWITCHGEAR SPECIFICATIONS
- REFER TO SECTION 703.00 FOR METERING REQUIREMENTS

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

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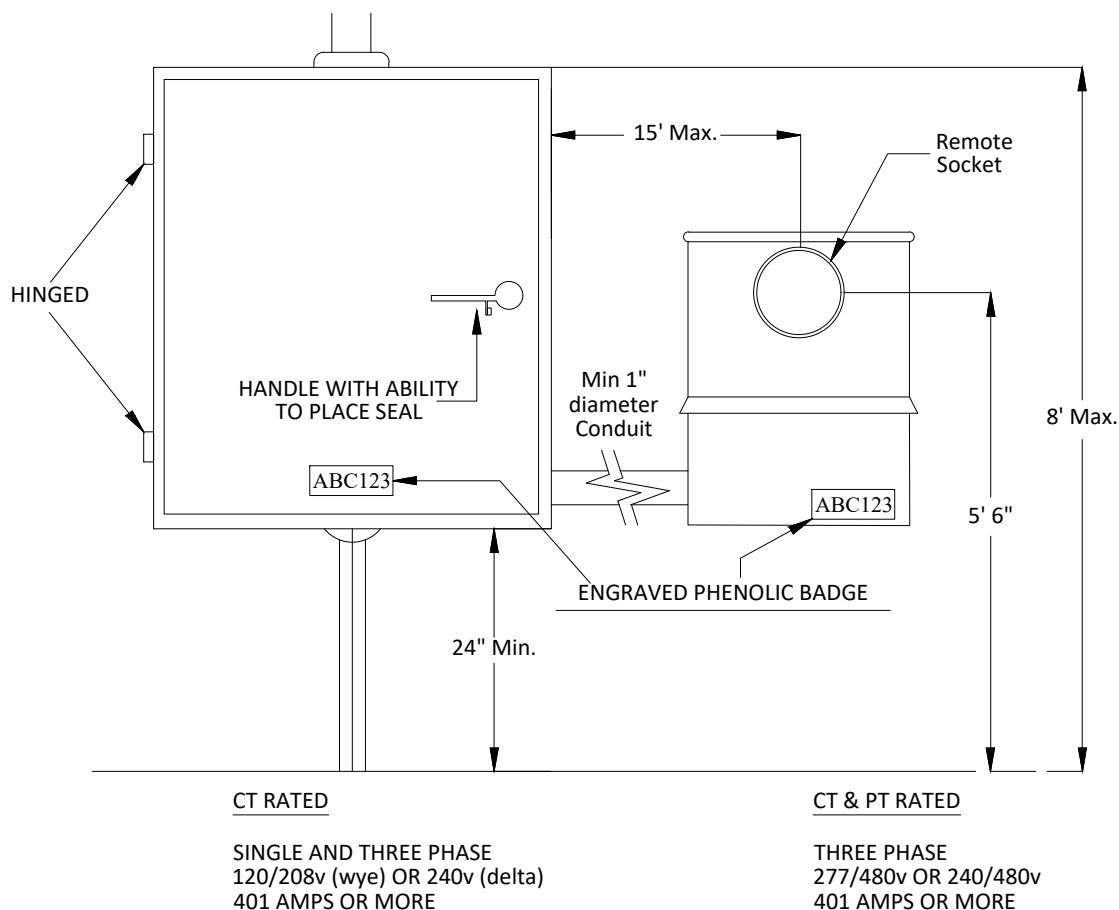
1100 S SHERMAN ST
LONGMONT, CO 80501

CT CABINET SPECIFICATIONS

PHONE: 303-651-8386
FAX: 303-651-8796

Revision #:
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MTR-10



NOTES:

1. TRANSFORMERS AND TRANSFORMER RATED METER HOUSINGS MUST BE PURCHASED FROM LPC AT 1100 S. SHERMAN STREET DURING NORMAL BUSINESS HOURS. PLEASE CALL 303-651-8386 BEFORE COMING IN. THIS WILL ENSURE PERSONNEL IS AVAILABLE TO ISSUE THE EQUIPMENT.
2. TRANSFORMERS AND HOUSINGS SHALL BE MOUNTED BY THE CUSTOMER. ASSOCIATED WIRING WILL BE DONE BY LPC. A MINIMUM 24 HOUR NOTICE MUST BE GIVEN TO LPC 303-651-8386 BEFORE A SERVICE CAN BE ENERGIZED.
3. THE METER HOUSING, CT CABINET, AND IT'S ASSOCIATED DISCONNECT SHALL BE LOCATED OUTSIDE OF THE BUILDING, ACCESSIBLE TO LPC, AND HAVE AN ENGRAVED PHENOLIC BADGE WITH ADDRESS, A MINIMUM BADGE SIZE = 1"x 2" WITH A MINIMUM TEXT SIZE OF 3/8" IN HEIGHT.
4. METER HOUSING AND CT CABINET SHALL BE NO MORE THAN 15 FT APART FROM EACH OTHER. LPC'S PREFERENCE IS TO HAVE THEM ATTACHED TO EACH OTHER.
5. THE CONDUIT BETWEEN THE CT CABINET AND THE METER HOUSING SHALL BE EMT. THERE SHALL BE A BONDING BUSHING ON THE CONDUIT IN THE CT CABINET AND A PLASTIC OR METAL BUSHING IN THE METER HOUSING SIDE.
6. REFER TO MTR-10 FOR CT CABINET DETAILS
7. REFER TO MTR-13 FOR COMMERCIAL/MIXED USE SWITCHGEAR SPECIFICATIONS
8. REFER TO SECTION 703.1 FOR METERING REQUIREMENTS

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

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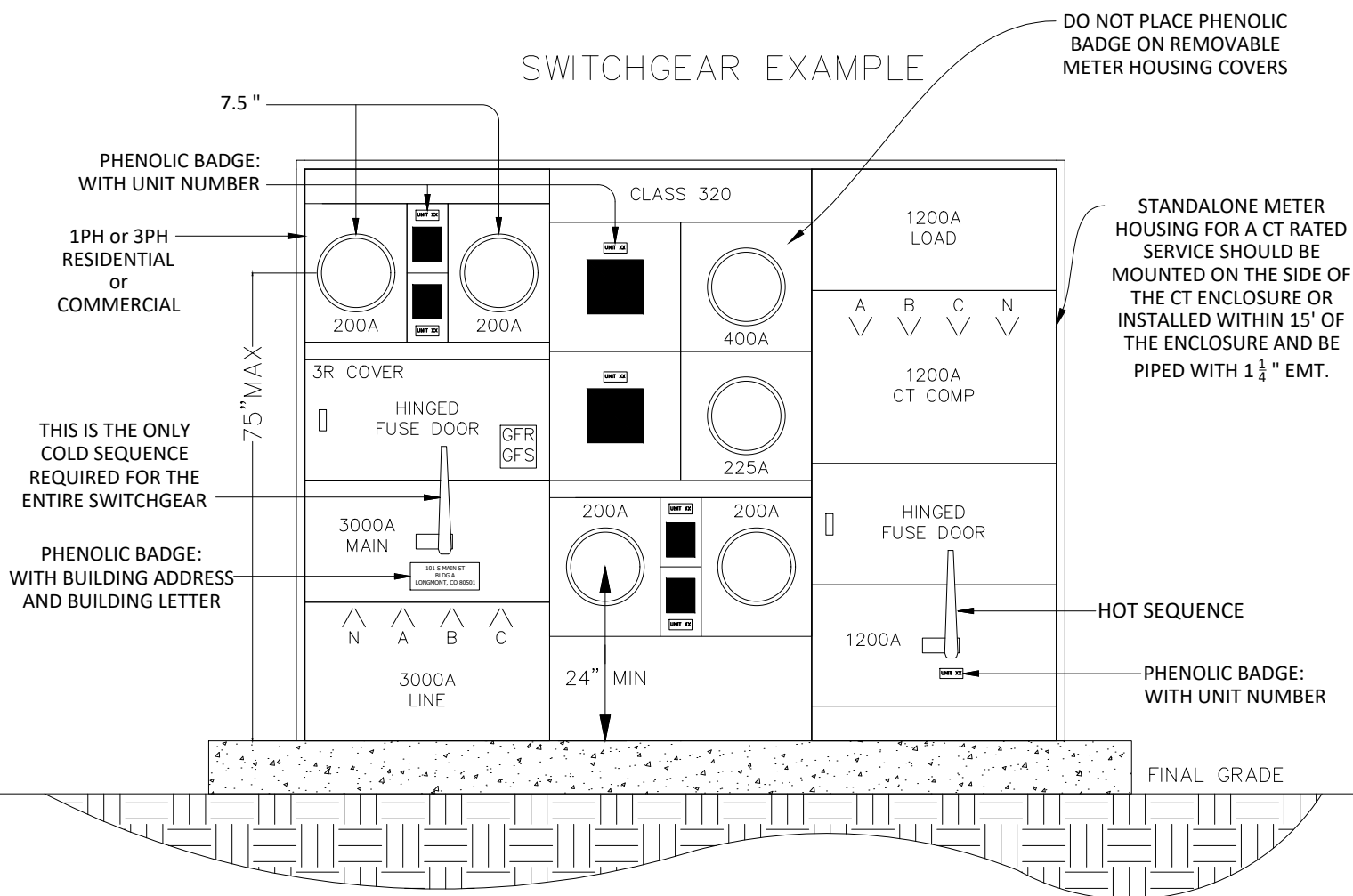
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CT & PT METERING SPECIFICATIONS

PHONE: 303-651-8386
FAX: 303-651-8796

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MTR-11

SWITCHGEAR EXAMPLE



1. WHENEVER SWITCHGEAR METERING IS DESIRED, CUT SHEETS MUST BE SUBMITTED TO LPC FOR THE METER DEPARTMENTS REVIEW PRIOR TO PURCHASE. UNAPPROVED SWITCHGEAR WILL NOT BE ACCEPTED.
2. THE MAIN DISCONNECT REQUIRES A FAULT-LIMITING CURRENT DEVICE AND SHALL INCLUDE PROVISIONS FOR AN LPC SEAL.
3. ALL METERING POINTS, SELF CONTAINED AND/OR CT RATED, WITHIN A SWITCHGEAR, MUST HAVE AN INDIVIDUAL, FUSED, HOT-SEQUENCED DISCONNECT.
4. SWITCHGEAR CT COMPARTMENTS MUST HAVE BARRIERS ON ALL 4 SIDES OF COMPARTMENT AND A HINGED SEALABLE DOOR. ALL PANELS PROVIDING ACCESS TO UN-METERED CONDUCTORS SHALL HAVE FASTENERS THAT CANNOT BE REMOVED FROM THE EXTERIOR.
5. NOTE: WHEN ORDERING A CABINET THAT REQUIRES WINDOW-TYPE CTs, THE CUSTOMER IS REQUIRED TO SUPPLY BARS AND MOUNTING BRACKETS.
6. LABELING OF SINGLE, COMMERCIAL, AND MULTIPLE METER SOCKETS ARE THE CUSTOMER'S RESPONSIBILITY. EACH METER OF A MULTIPLE METER SOCKET AND ALL INDIVIDUAL METER SOCKETS WILL HAVE A PERMANENT PHENOLIC BADGE SHOWING WHICH APARTMENT, OFFICE, OR ROOM IS METERED BY EACH METER. REFERENCE 703.1.5 FOR ADDITIONAL INFORMATION.
7. METERS WILL NOT BE INSTALLED UNTIL A RING OUT INSPECTION HAS BEEN APPROVED VIA THE METERING DEPT.
8. ENSURE ITEMS 1-9 ABOVE ARE COMPLETED AND THE DOOR OF THE PHYSICAL UNIT IS LABELED PRIOR TO SCHEDULING THE RING OUT INSPECTION.
9. A SWITCHED LIGHT OR TEMP OUTLET MUST BE PRESENT AT THE TIME OF THE RING OUT INSPECTION TO VERIFY THE ELECTRICAL FEEDER GOES FROM THE METER TO THE INTENDED UNIT.
10. REFER TO METERING REQUIREMENTS SECTION 703.00

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

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1100 S SHERMAN ST
LONGMONT, CO 80501COMMERCIAL / MIXED USE
SWITCHGEAR SPECIFICATIONSPHONE: 303-651-8386
FAX: 303-651-8796

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MTR-13

METER SOCKET DESCRIPTION

5 TERMINAL, NON-CT RATED, LEVER BYPASS SOCKETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ANSI PUBLICATIONS. THE NEUTRAL TERMINAL SHALL BE ELECTRICALLY BONDED TO THE ENCLOSURE. A BONDING JUMPER IN THE FORM OF A SEPARATE SCREW, STRAP OR OTHER MEANS SHALL BOND THE ENCLOSURE TO THE GROUNDED NEUTRAL USING #4 AWG COPPER JUMPER.

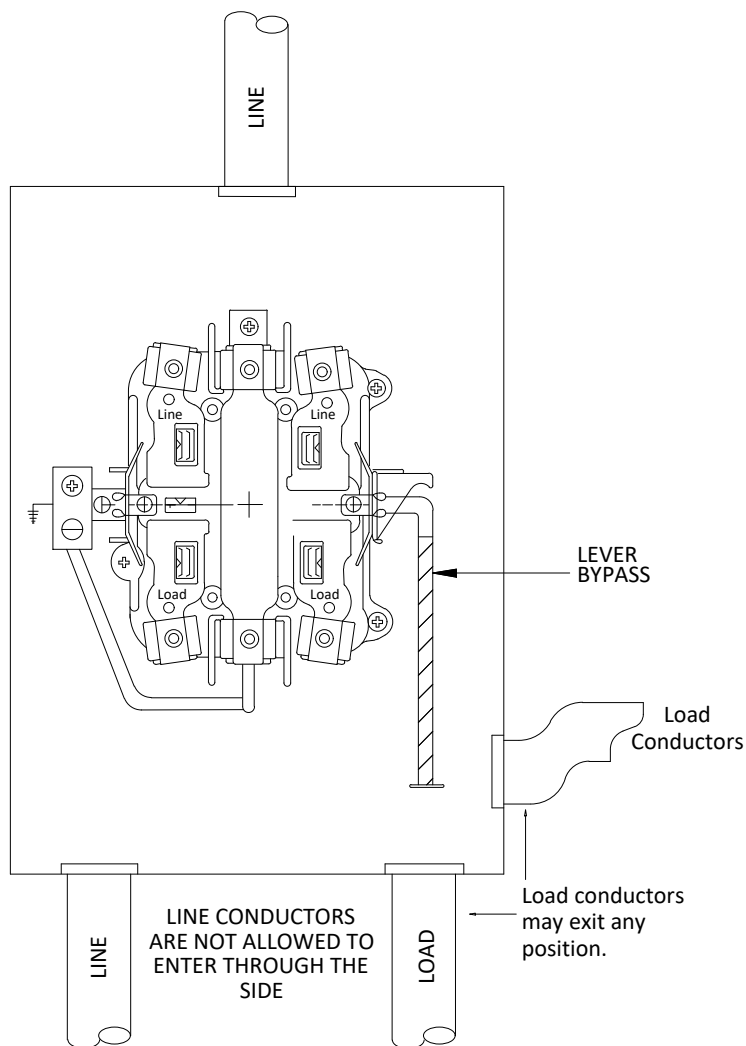
*CT RATED SERVICES ARE NOT ALLOWED IN SINGLE PHASE SERVICES 400 AMPS OR LESS

*ALL NEW METERING INSTALLATIONS 226 - 400 AMPS, REQUIRE A CLASS 320 METER. REFER TO MTR-17

*A LEVER OPERATED BYPASS IS REQUIRED ON ALL SERVICES 400 AMPS OR LESS,

*THE COVER SHALL BE A ONE PIECE, RINGLESS DESIGN WITH A SUITABLE DEVICE FOR CLOSING AND SEALING

*REFER TO SECTION 703.01 FOR BADGING DETAILS



ALL NEW COMMERCIAL METERING INSTALLATIONS REQUIRE THE INSTALLATION OF FAULT LIMITING DISCONNECTS ON THE LOAD SIDE OF THE METER. THE FUSED DISCONNECT SHALL BE PURCHASED, INSTALLED, AND OWNED BY THE CUSTOMER.

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

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CITY OF
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1100 S SHERMAN ST
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SINGLE PHASE METER HOUSING 400 AMPS (CL320) OR LESS

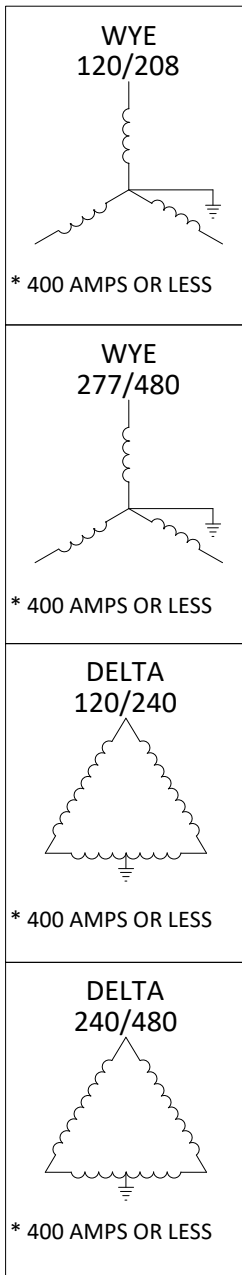
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DETAIL

MTR-14

* ALL COMMERCIAL METERING INSTALLATIONS ARE REQUIRED TO HAVE A HOT SEQUENCED DISCONNECT SWITCH



*277/480V 401 AMPS AND ABOVE WILL REQUIRE CT'S AND PT'S

*THE USE OF SECONDARY CONDUCTORS WITH CONTINUOUS JACKET COLORS MUST BE USED.

*LEVER OPERATED BYPASS REQUIRED ON ALL SERVICES 400 AMPS OR LESS

*7TH TERMINAL FOR NEUTRAL SHALL BE CONNECTED ON THE LOAD SIDE OF THE METER SOCKET BETWEEN B&C PHASES.

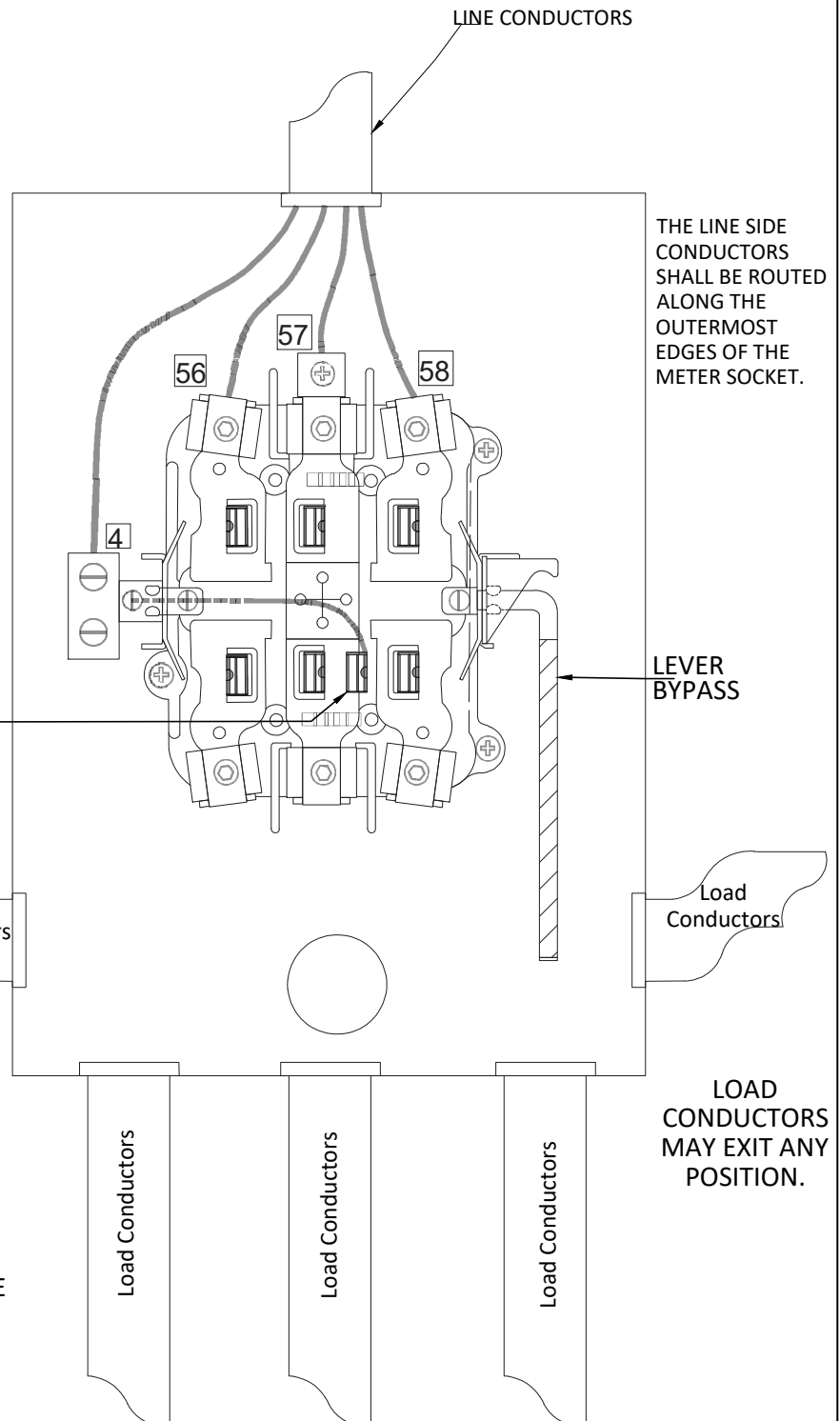
DELTA IS FOR EXISTING SERVICES ONLY

*HIGH-LEG MARKING. THE SERVICE ENTRANCE CONDUCTOR INTENDED TO BE CONNECTED TO THE HIGH-LEG OF A 3-PHASE, 4 WIRE, DELTA-CONNECTED SYSTEM SHALL BE DURABLY AND PERMANENTLY MARKED AT BOTH ENDS OF THE CONDUCTOR BY AN OUTER FINISH THAT IS ORANGE IN COLOR AND SHALL BE INSTALLED IN THE FAR RIGHT-HAND C PHASE POSITION OF THE METER MOUNTING BLOCK.

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

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WIRING CONFIGURATION FOR 3 PHASE NON CT RATED



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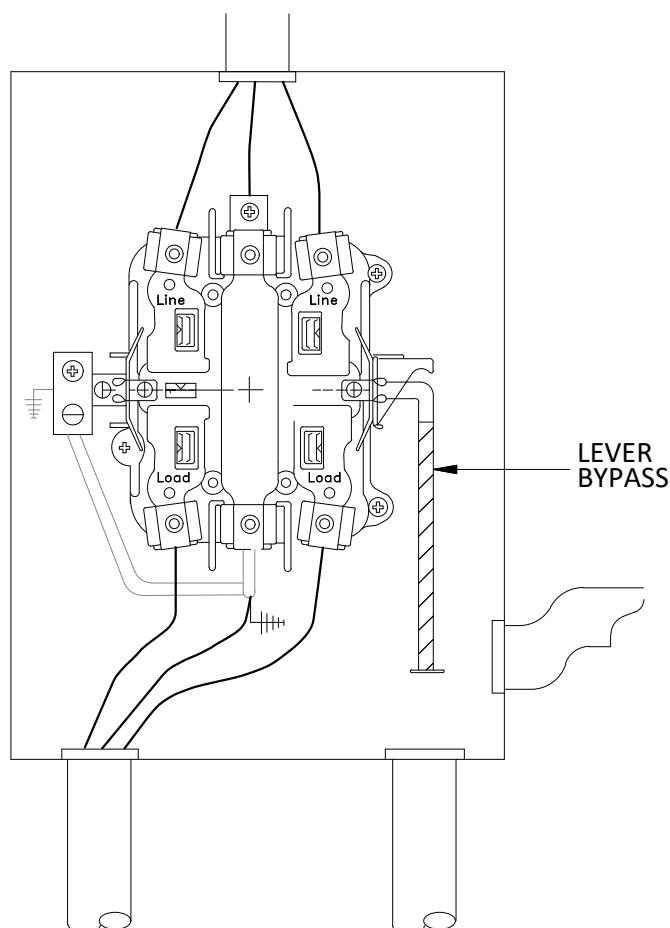
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DETAIL
MTR-16

METER SOCKET DESCRIPTION

5 TERMINAL, CLASS 320 METER, LEVER-OPERATED BYPASS SOCKETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ANSI PUBLICATIONS AND RATED NEMA TYPE 3R. THE NEUTRAL TERMINAL SHALL BE ELECTRICALLY BONDED TO THE ENCLOSURE. A BONDING JUMPER IN THE FORM OF A SEPARATE SCREW, STRAP OR OTHER MEANS SHALL BOND THE ENCLOSURE TO THE GROUNDED NEUTRAL USING #4 AWG COPPER JUMPER.

- CT RATED SERVICES ARE NOT ALLOWED IN SINGLE PHASE SERVICES 400 AMPS OR LESS
- SOCKETS SHALL BE CONSTRUCTED TO CURRENT UL STANDARD.
- LEVER OPERATED BYPASS REQUIRED ON ALL SERVICES 400 AMPS OR LESS
- ALL NEW METERING INSTALLATIONS 226 - 400 AMPS, REQUIRE A CLASS 320 METER
- THE METER HOUSING MUST BE RATED AT 400 AMPS



ALL NEW COMMERCIAL METERING INSTALLATIONS REQUIRE THE INSTALLATION OF FAULT LIMITING DISCONNECTS ON THE LOAD SIDE OF THE METER. THE FUSED DISCONNECT SHALL BE PURCHASED, INSTALLED AND OWNED BY THE CUSTOMER.

CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

NOT TO SCALE

WIRING CONFIGURATION FOR 1 PHASE 120/240 OR 208 VOLT SERVICES 400 AMP (CLASS 320 METER)

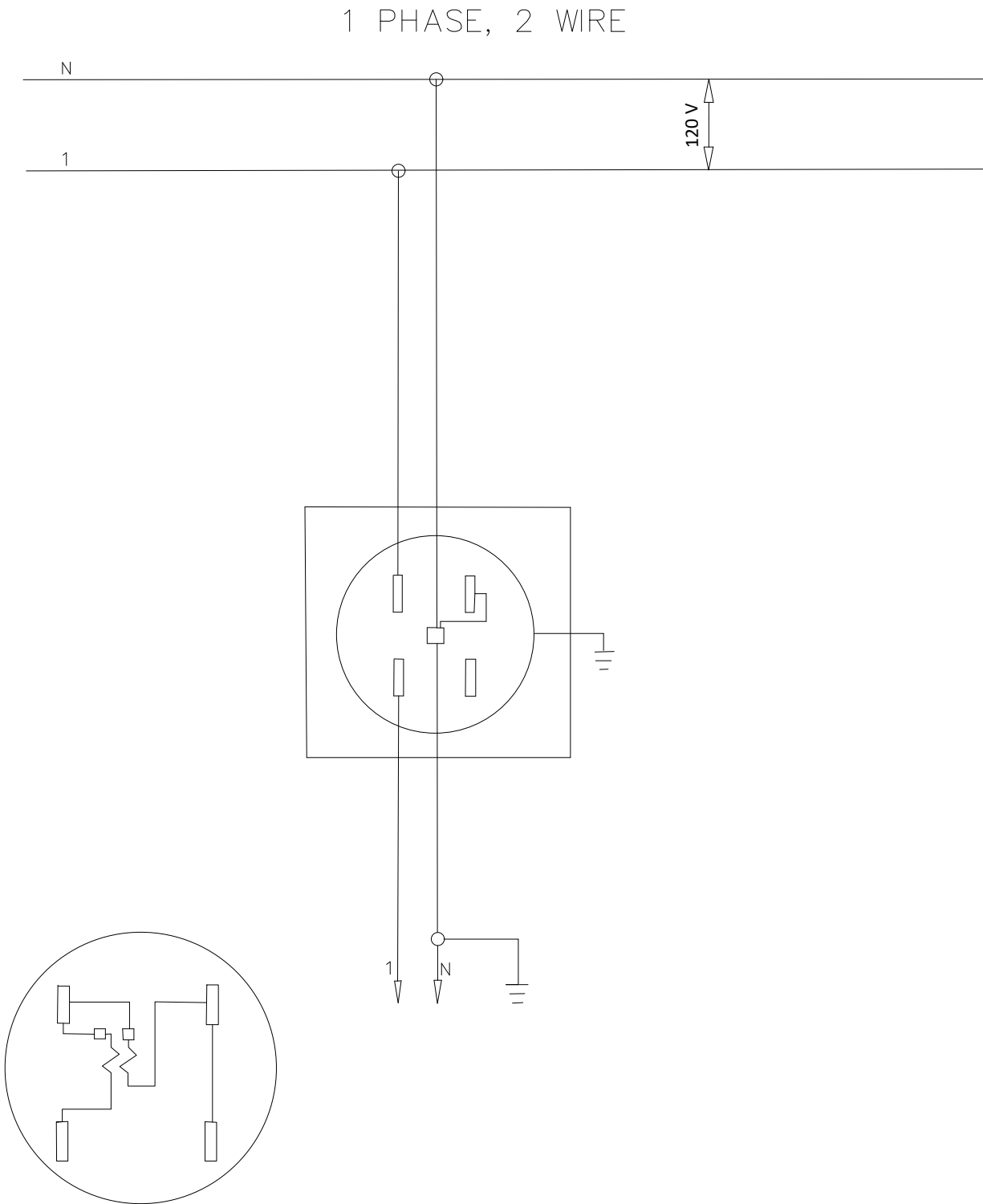
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MTR-17



1100 S SHERMAN ST
LONGMONT, CO 80501

PHONE: 303-651-8386
FAX: 303-651-8796



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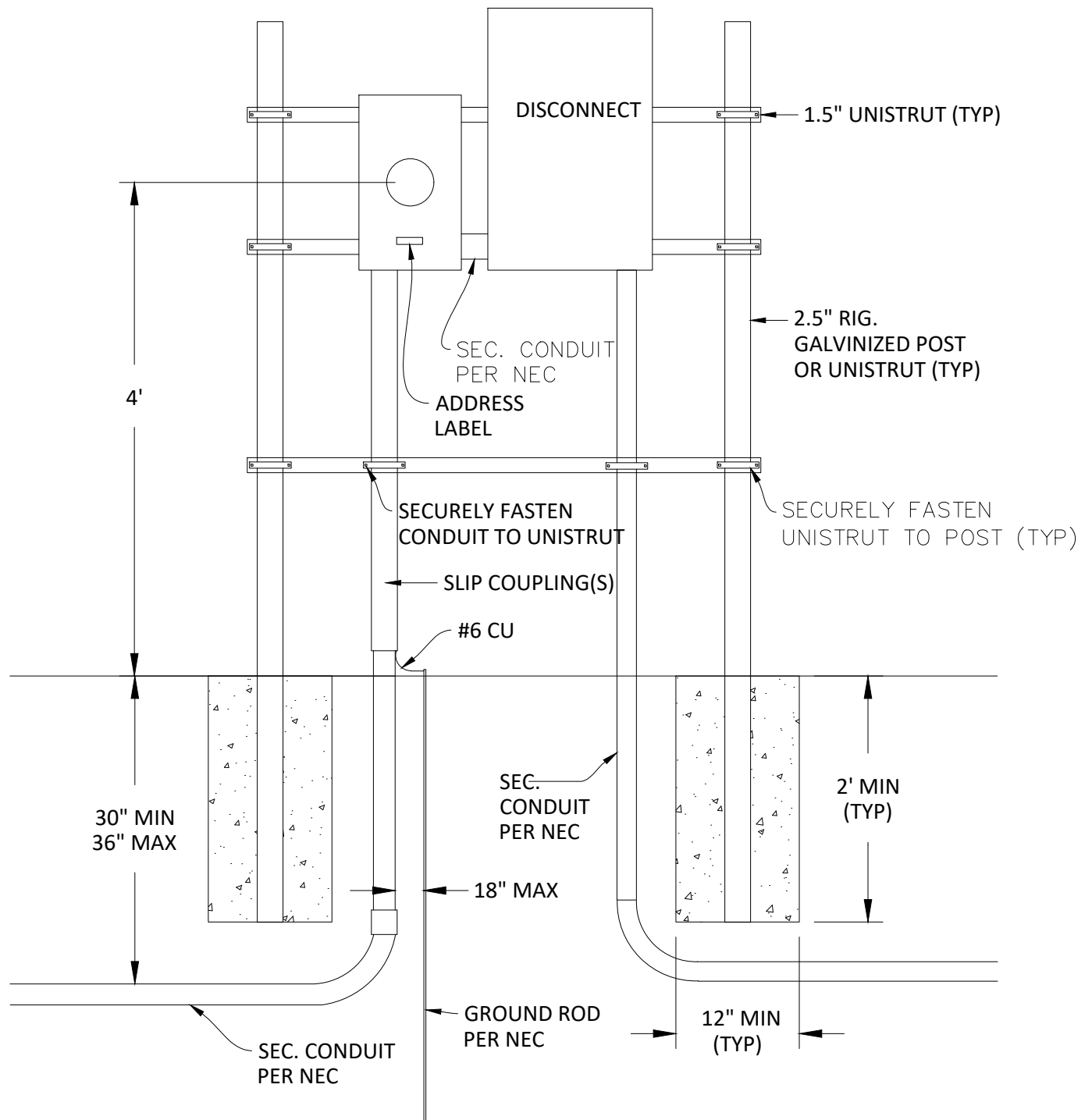
CITY OF
LONGMONT
COLORADO

1100 S SHERMAN ST
LONGMONT, CO 80501

Form 1S Diagram, 2-Wire, 120 Volts

PHONE: 303-651-8386
FAX: 303-651-8796

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CALL 1-800-922-1987 TO OBTAIN UTILITY LOCATES

NOT TO SCALE

UNISTRUT METER STAND



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MTR 19