People first. Safety always.

TECHNICAL BULLETIN

TB-25-003

Title: Minimum Clearances and Connection of Service Drops to a Building and to a Concrete Column

Issue Date: 10/10/2025

Effective Date: 10/15/2025 Department: Distribution Standards and Materials

Addressed to:

Engineers, Designers, Consultants, Developers, Contractors, Master Electricians, Puerto Rico Electrical Contractors Association, Electrical Equipment Manufacturers, Electrical Engineers Institute, Electrical Engineers Society, Engineers and Surveyors Professional College, Master Electricians Professional College Directors, Managers, Supervisors, Inspectors, and the public.

Approval:

Approved by: Ricardo Castro Manager, Distribution Standards and Materials	Signature and Date: 10/14/2025
Approved by: Reinaldo Baretty Director, System Standards and Records	Signature and Date: Reinaldo Baretty 10/15/2025

This Bulletin annuls and replaces the following Bulletin(s): N/A

Referenced Documents

Document Number	Title	Version	Date
4301.095	Standard no. K-7-3-1 - Connection of Secondary Triplex Cable Service Drop to Customer's Concrete Column	7	February 7, 2024
4301.09.095	Standard no. K-7-3-1 – Connection of Secondary Triplex Cable Service Drop to Customer's Concrete Colum	8	September 30, 2025
4301.098	Standard no. M-5-A - Minimum Clearances Required for Service Drop and Between Power Lines and Structures	8	December 19, 2023
4301.09.098	Standard no. M-5-A - Minimum Clearances Required for Service Drop and Between Power Lines and Structures	9	September 30, 2025
4301.097	Standard no. M-5 - Minimum Vertical Clearances Required for Power Lines Above Ground or Roadway	8	December 19, 2023
4301.09.176	Standard no. K-7-5, Connection of Secondary Triplex Cable Service Drop to a Building	1	October 10, 2025

Table of Contents

1. Introduction

As the responsible entity, **LUMA Energy** establishes and updates the norms, standards, and regulations that guarantee the construction and installation of equipment in the transmission and distribution system. The regulations are adjusted according to the technological changes that affect our system through releases and technical bulletins. These documents provide immediate guidelines for the construction and installation of technical equipment.

To address the continually changing requirements related to safety, design, materials, construction, and operations, the electrical distribution standards require ongoing enhancements. In this instance, specific standards for the connection of secondary triplex cable service drop to customer's concrete column, and the minimum clearances required for service drop between power lines and structures have been updated to align with current best practices. In addition, a new standard for the connection of secondary triplex cable service drop to a building has been developed. An overview of these standards is included, along with their applicability. They are included as appendixes to this bulletin.

2. Technical Norms or Provisions

A. The following standards have been revised:

- Standard no. K-7-3-1, *Connection of Secondary Triplex Cable Service Drop to Customer's Concrete Column* (document no. 4301.095), version 7, dated February 7, 2024
- Standard no. M-5-A, *Minimum Clearances Required for Service Drop and Between Power Lines and Structures* (document no. 4301.098), version 8, dated December 19, 2023

Modifications to standard no. K-7-3-1 were made to add design instructions and maintain compliance with current applicable industry standards. Among the most significant changes are:

a. Provision to extend the reinforced concrete column's height if additional clearance is required.
b. Option to install a reinforced concrete column without a meter socket box in backyards for the service drop connection in the event of any obstacle, clearance, or distance challenges.
c. Extension of the concrete column's dimension to ensure it fits a meter bank.
d. Material options for the working space surface.

Modifications to standard no. M-5-A were made to broaden instructions about minimum vertical and horizontal clearances according to the height of the structure and the adjacent installations. Among the most significant changes are:

a. Inclusion of visual aids showing vertical and horizontal clearances.
b. Specification of clearance requirements when V (vertical) is greater than H (horizontal) and vice versa.

c. Addition of two new supplemental sheets with drawings showing minimum vertical clearances for a service drop connected to a building and to a customer's concrete column. These minimum vertical clearances will be permitted only for service drops where the height of the structure or adjacent installations does not allow to comply with the required minimum clearances included in current standard no. M-5, *Minimum Vertical Clearances Required for Power Lines Above Ground or Roadway* (document no. 4301.097).

These documents supersede any previous versions of standards no. K-7-3-1 and M-5-A issued by LUMA prior to the effective date of this bulletin.

B. A new standard was developed to provide detailed instructions for connecting a secondary triplex cable service drop directly to a building: standard no. K-7-5, *Connection of Secondary Triplex Cable Service Drop to a Building* (document no. 4301.09.176), dated October 10, 2025.

This standard aims to provide specific guidelines for safe and compliant installation. Some of the most significant guidelines are:

a. Detailed instructions for connecting the secondary triplex cable service drop directly to a building, based on the type of material used.
b. Specific location to install the meter base.
c. Working space requirement for safe operation and maintenance.
d. Visual aids and diagrams to support proper implementation.

The revisions to standards no. K-7-3-1 and M-5-A, along with the introduction of the new standard no. K-7-5, are intended to maintain compliance with current industry requirements and to support consistent application across all relevant projects and operations. The requirements and drawings outlined in these standards are effective immediately and must be applied to all future installations.

3. Appendixes

- Standard no. K-7-3-1 (V8) – Connection of Secondary Triplex Cable Service Drop to Customer's Concrete Column
- Standard no. M-5-A (V9) – Minimum Clearances Required for Service Drop and Between Power Lines and Structures
- Standard no. K-7-5 (V1) – Connection of Secondary Triplex Cable Service Drop to a Building

DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO CUSTOMER'S CONCRETE COLUMN MAXIMUM VOLTAGE: 240 V

STANDARD NO.	K-7-3-1 VERSION 8
DOCUMENT NO.	4301.09.095
PAGE	1 OF 8 DATE SEP 30, 2025
SUBMITTED	LUIS R. SOTO LIC. 11658
REVIEWED	IVETTE D. SANCHEZ LIC. 13837
APPROVED	RICARDO CASTRO LIC. 12135
DIGITIZED	EMILIO CUADRADO LIC. 3000
	VICTOR R. FEBRES LIC. 3412

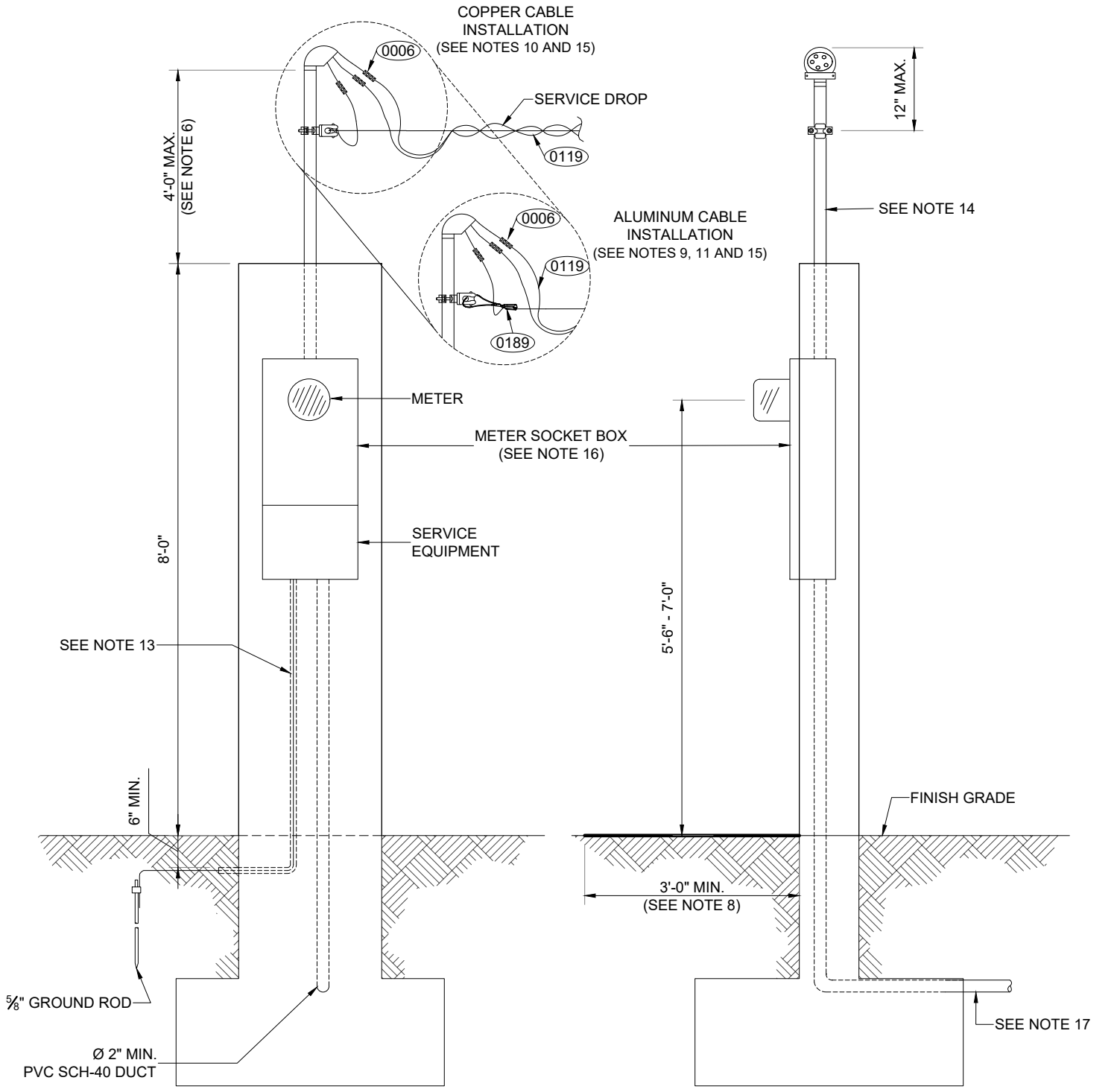


FIGURE A
ELEVATION VIEW

FIGURE B
SIDE VIEW

REINFORCED CONCRETE COLUMN
(SEE NOTE 6)

DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO CUSTOMER'S CONCRETE COLUMN MAXIMUM VOLTAGE: 240 V

STANDARD NO.	K-7-3-1
VERSION	8
DOCUMENT NO.	4301.09.095
PAGE	2 OF 8
DATE	SEP 30, 2025
SUBMITTED	LUIS R. SOTO LIC. 11658
REVIEWED	IVETTE D. SANCHEZ LIC. 13837
APPROVED	RICARDO CASTRO LIC. 12135
DIGITIZED	EMILIO CUADRADO LIC. 3000
	VICTOR R. FEBRES LIC. 3412

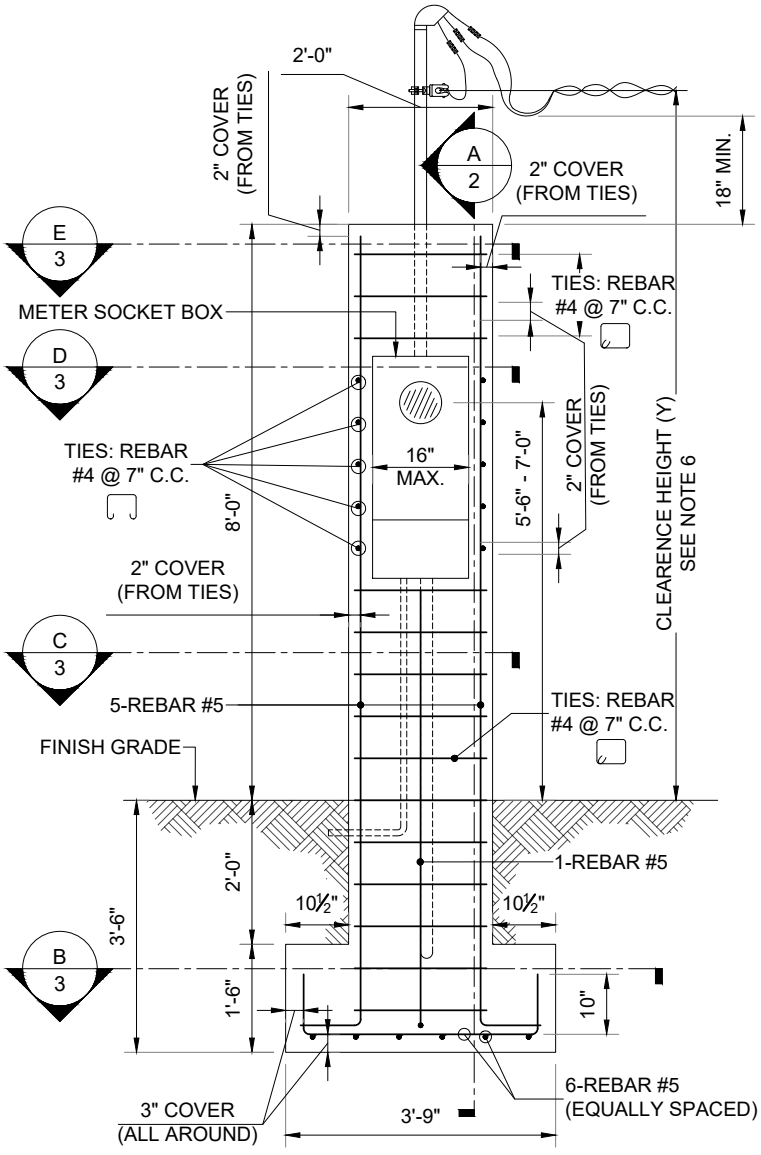
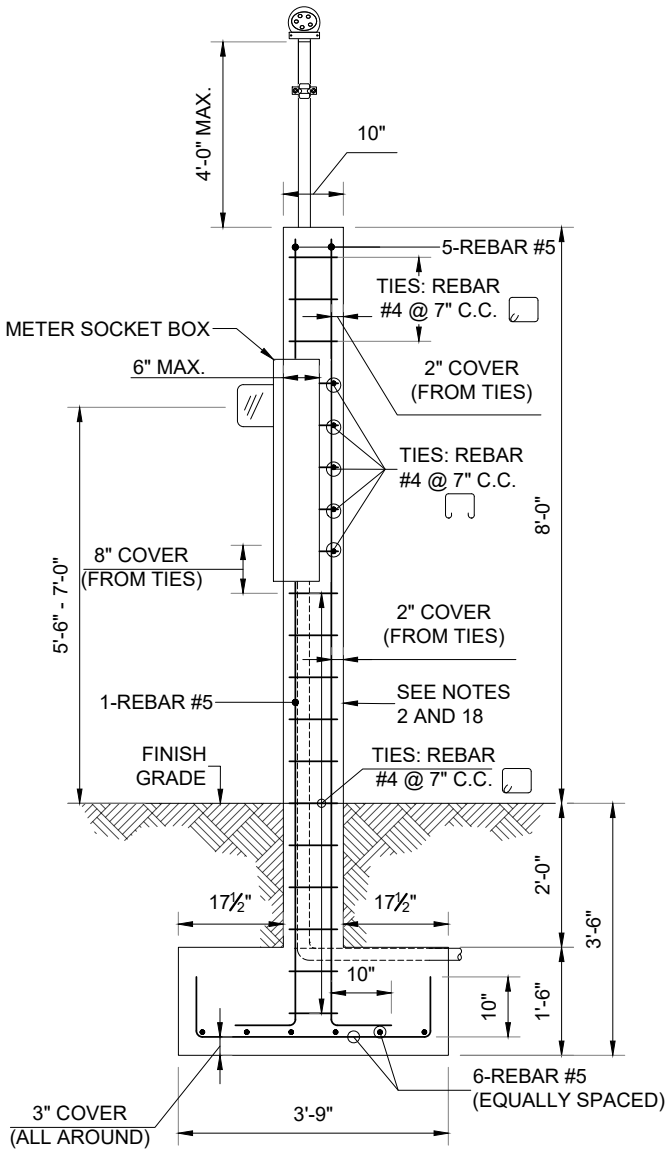


FIGURE C
FRONT VIEW



SECTION A

REINFORCING STEEL DETAIL FOR CONCRETE COLUMN

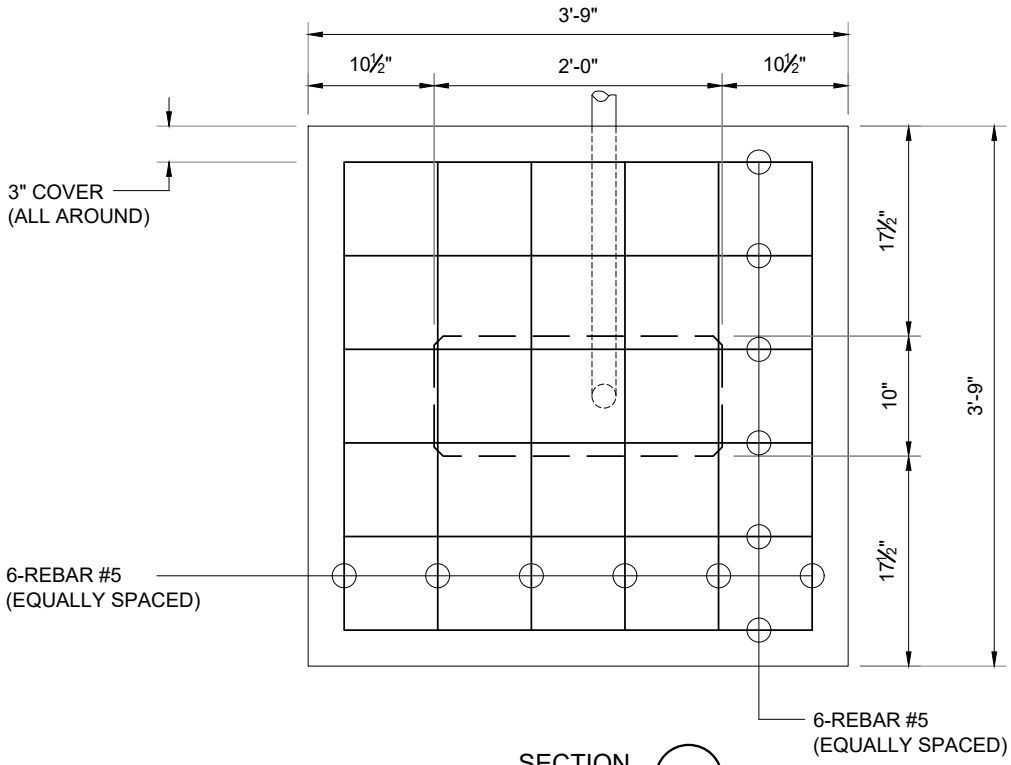
DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

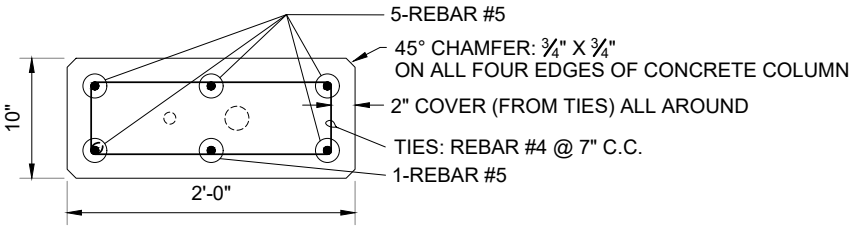
TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO CUSTOMER'S CONCRETE COLUMN MAXIMUM VOLTAGE: 240 V

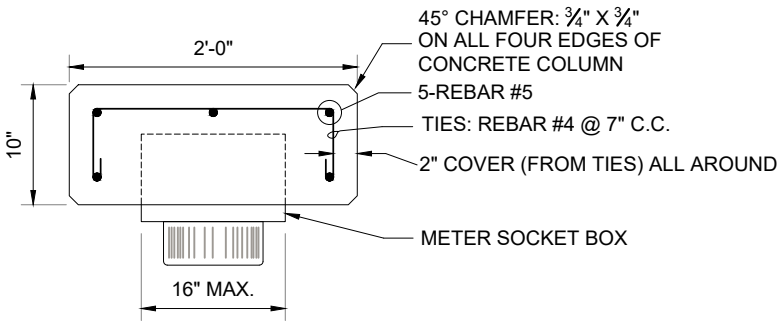
STANDARD NO.	K-7-3-1 VERSION 8
DOCUMENT NO.	4301.09.095
PAGE	3 OF 8 DATE SEP 30, 2025
SUBMITTED	LUIS R. SOTO LIC. 11658
REVIEWED	IVETTE D. SANCHEZ LIC. 13837
APPROVED	RICARDO CASTRO LIC. 12135
DIGITIZED	EMILIO CUADRADO LIC. 3000
	VICTOR R. FEBRES LIC. 3412



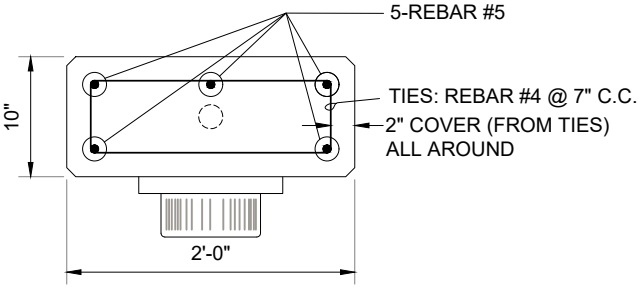
SECTION B
FOOTING DETAIL FOR CONCRETE COLUMN



SECTION C



SECTION D



SECTION E

REINFORCING STEEL DETAIL FOR CONCRETE COLUMN

DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO CUSTOMER'S CONCRETE COLUMN MAXIMUM VOLTAGE: 240 V

STANDARD NO. K-7-3-1 VERSION 8
DOCUMENT NO. 4301.09.095
PAGE 4 OF 8 DATE SEP 30, 2025
SUBMITTED LUIS R. SOTO LIC. 11658
REVIEWED IVETTE D. SANCHEZ LIC. 13837
APPROVED RICARDO CASTRO LIC. 12135
DIGITIZED EMILIO CUADRADO LIC. 3000
VICTOR R. FEBRES LIC. 3412

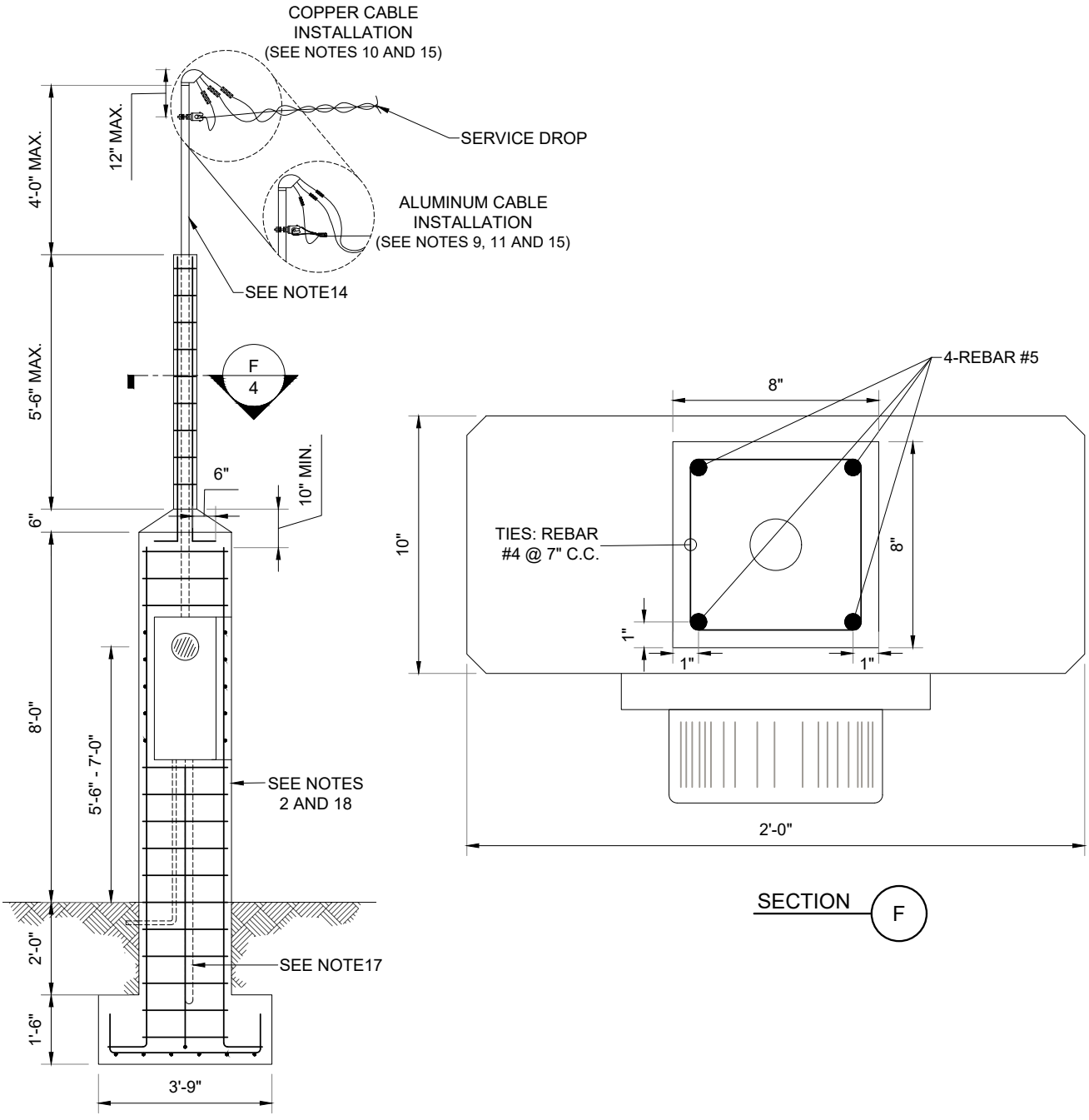


FIGURE D
FRONT VIEW

EXTENDED HEIGHT REINFORCED CONCRETE COLUMN
(SEE NOTE 6)

TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO CUSTOMER'S CONCRETE COLUMN MAXIMUM VOLTAGE: 240 V

STANDARD NO. K-7-3-1 VERSION 8
DOCUMENT NO. 4301.09.095
PAGE 5 OF 8 DATE SEP 30, 2025
SUBMITTED LUIS R. SOTO LIC. 11658
REVIEWED IVETTE D. SANCHEZ LIC. 13837
APPROVED RICARDO CASTRO LIC. 12135
DIGITIZED EMILIO CUADRADO LIC. 3000
VICTOR R. FEBRES LIC. 3412

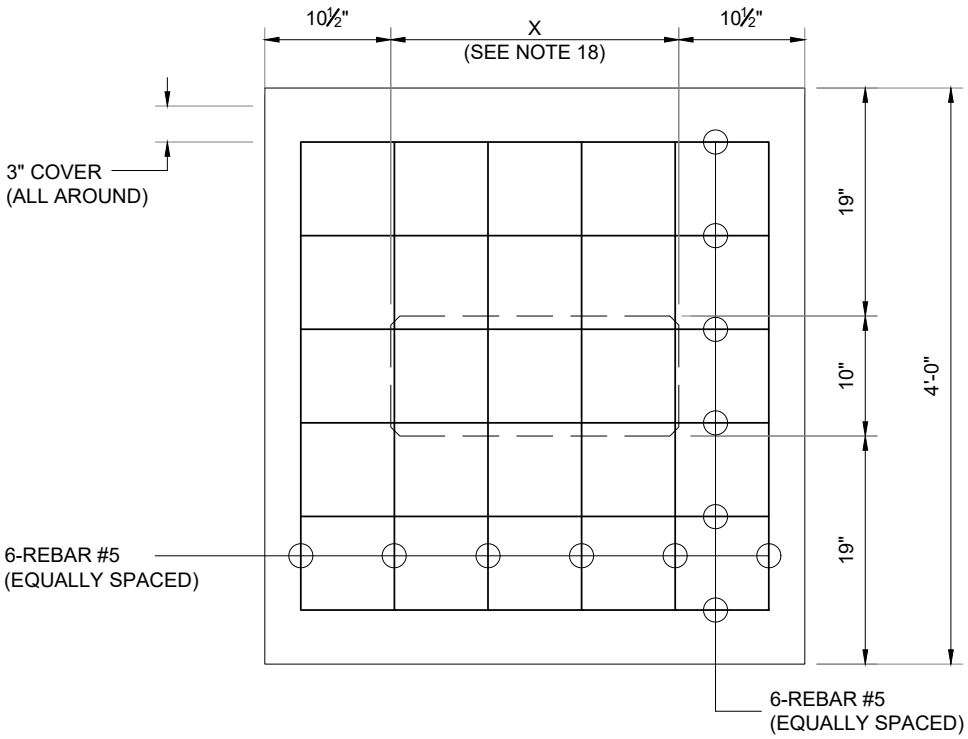


FIGURE E
FOOTING DETAIL FOR CONCRETE COLUMN
SUPPORTING MULTIPLE METERS

TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP
TO CUSTOMER'S CONCRETE COLUMN
MAXIMUM VOLTAGE: 240 V

STANDARD NO. K-7-3-1 VERSION 8
DOCUMENT NO. 4301.09.095
PAGE 6 OF 8 DATE SEP 30, 2025
SUBMITTED LUIS R. SOTO LIC. 11658
REVIEWED IVETTE D. SANCHEZ LIC. 13837
APPROVED RICARDO CASTRO LIC. 12135
DIGITIZED EMILIO CUADRADO LIC. 3000
VICTOR R. FEBRES LIC. 3412

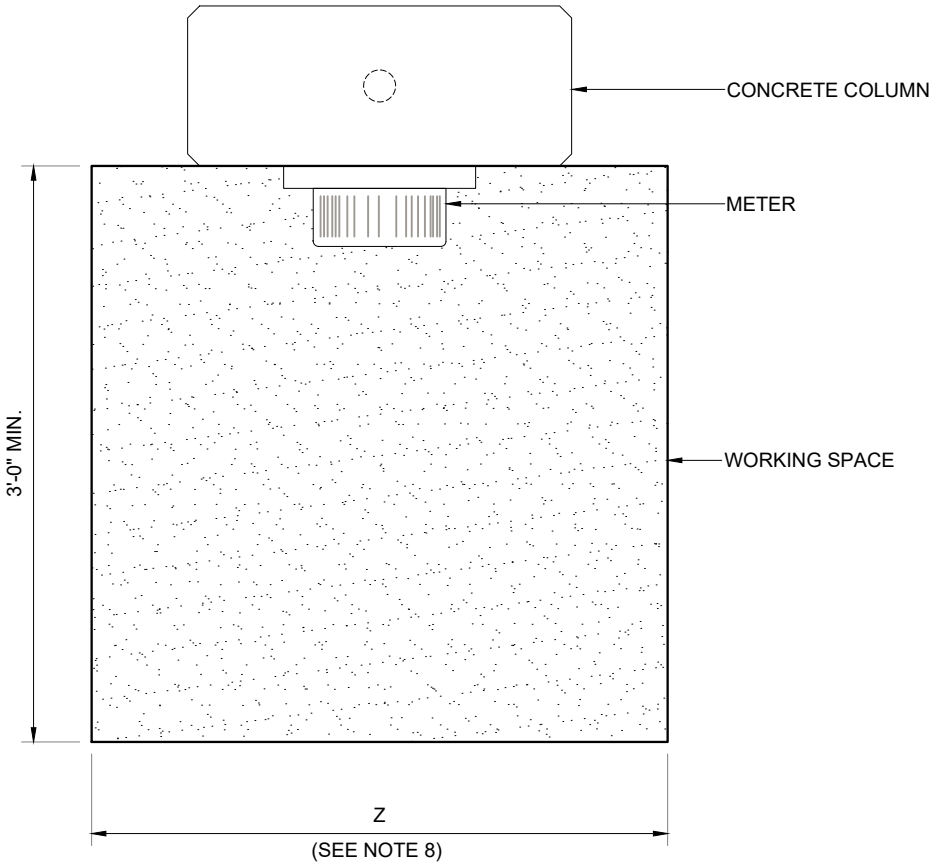


FIGURE F
WORKING SPACE

DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO CUSTOMER'S CONCRETE COLUMN MAXIMUM VOLTAGE: 240 V NOTES

STANDARD NO.	K-7-3-1 VERSION 8
DOCUMENT NO.	4301.09.095
PAGE	7 OF 8 DATE SEP 30, 2025
SUBMITTED	LUIS R. SOTO LIC. 11658
REVIEWED	IVETTE D. SANCHEZ LIC. 13837
APPROVED	RICARDO CASTRO LIC. 12135
DIGITIZED	EMILIO CUADRADO LIC. 3000
	VICTOR R. FEBRES LIC. 3412

NOTES:

1. THE OWNER MUST ASSUME FULL RESPONSIBILITY FOR ANY MODIFICATIONS MADE TO THE DESIGN DETAILS, DESIGN CRITERIA, OR MATERIALS SPECIFIED FOR THE CONCRETE COLUMN.
2. REINFORCING STEEL SHALL CONSIST OF NEW GRADE 60 DEFORMED BARS.
3. WATER AND ALL AGGREGATES FOR THE CONCRETE MIX SHALL BE CLEAN AND FREE FROM SOFT AND DISINTEGRATED PIECES, CLAY, ORGANIC OR OTHER DELETERIOUS MATTER.
4. EXISTING GROUND AT THE BOTTOM OF THE EXCAVATION SHALL BE WELL COMPACTED BEFORE THE CONSTRUCTION OF THE CONCRETE COLUMN.
5. THE BACKFILL SHALL BE PLACED IN LAYERS NOT EXCEEDING 6" AND SHALL BE WELL COMPACTED. THE BACKFILL SHOULD BE HOMOGENEOUS MATERIAL AND SHALL BE FREE OF ORGANIC OR OTHER DELETERIOUS MATTER.
6. THE REINFORCED CONCRETE COLUMN SHOWN IN FIGURE A SHALL BE USED AS LONG AS THE SERVICE DROP CLEARANCE REQUIREMENTS OF STANDARD NO. M-5-A ARE MET. IF ADDITIONAL CLEARANCE IS REQUIRED, THE COLUMN MAY BE EXTENDED TO A HEIGHT OF UP TO 18'-0". FOR THIS PURPOSE, THE EXTENDED HEIGHT REINFORCED CONCRETE COLUMN SHOWN IN FIGURE D SHALL BE USED.
7. DESIGN CRITERIA:
   A. UNIT WEIGHT OF SOIL = 110 POUNDS PER CUBIC FEET (DRY)
   B. UNIT WEIGHT OF CONCRETE = 150 POUNDS PER CUBIC FEET
   C. MINIMUM ALLOWABLE BEARING CAPACITY, qa = 2,500 POUNDS PER SQUARE FEET
   D. THE MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE, f'c = 3,000 POUNDS PER SQUARE INCHES AT 28 DAYS
   E. THE MINIMUM YIELD STRENGTH OF REINFORCING STEEL, fy = 60,000 POUNDS PER SQUARE INCHES
8. A WORKING SPACE OF AT LEAST 3'-0" X 3'-0" WITH A MAXIMUM SLOPE OF 2% AND A MAXIMUM HEIGHT OF 7" MUST BE AVAILABLE IN FRONT OF THE METER SIDE OF THE CONCRETE COLUMN TO GUARANTEE A SAFE OPERATION AND MAINTENANCE. THE WORKING SPACE SHALL BE BUILT WITH CONCRETE, ASPHALT, COMPACTED SOIL OR GRAVEL. LUMA RESERVES THE RIGHT TO DECLINE A COLUMN OR REQUIRE ADDITIONAL SAFETY FEATURES IN AREAS WITH UNEVEN SURFACES OR INSUFFICIENT CLEARANCES. THE WORKING SPACE WIDTH (Z) SPECIFIED IN FIGURE F SHALL BE INCREASED ACCORDING TO THE CONCRETE COLUMN SIZE TO PROVIDE AN ADEQUATE WORKING SPACE.
9. FOR ALUMINUM TRIPLEX CABLE (ITEM 0119) SERVICE DROP INSTALLATION, A DEAD-END WEDGE (ITEM 0189) SHALL BE USED TO ATTACH THE BARE NEUTRAL CONDUCTOR TO THE INSULATOR AT THE SERVICE MAST .
10. FOR COPPER TRIPLEX CABLE (ITEM 0119), IT IS REQUIRED TO ATTACH THE BARE NEUTRAL CONDUCTOR DIRECTLY TO THE INSULATOR AT THE SERVICE MAST.
11. ALUMINUM DEAD-END WEDGE (ITEM 0189) CAN HAVE A RIGID BAIL OR FLEXIBLE BAIL, AS APPROPRIATE.
12. VINYL INSULATING TAPE (ITEM 0077) SHALL BE USED ON CONNECTORS (ITEM 0006).
13. THE MINIMUM SIZE OF THE GROUNDING ELECTRODE CONDUCTOR SHALL COMPLY WITH THE NEC TABLE 250.66 REQUIREMENTS. GROUNDING ELECTRODE DUCT SHALL COMPLY WITH THE NEC. THE MATERIAL OF THE DUCT IN WHICH THE GROUNDING CONDUCTOR IS INSTALLED MUST COMPLY WITH THE SPECIFICATIONS IN SECTION 250 OF THE NEC.
14. A 2" MINIMUM DIAMETER RIGID STEEL DUCT SHALL BE USED AS SERVICE MAST.
15. THE MINIMUM GAUGE FOR SERVICE ENTRANCE CONDUCTORS SHALL BE #2 AWG COPPER.
16. THE METER SOCKET BOX SHALL BE GALVANIZED STEEL, RING TYPE, AND IN COMPLIANCE WITH NEMA STANDARDS FOR OUTDOOR INSTALLATION. STAINLESS STEEL OR ALUMINUM MATERIAL SHALL BE USED WITHIN 1 MILE OF SALTWATER BODIES.
17. A 2" MINIMUM DIAMETER DUCT SHALL BE USED FROM THE METER SOCKET BOX TO THE STRUCTURE AND INSTALLED AT A MINIMUM DEPTH OF 2'-0".
18. THE DESIGN OF THE REINFORCING STEEL DETAILED ON SECTION A OF FIGURE C USED FOR A CONCRETE COLUMN WITH A SINGLE METER CAN BE REPLICATED TO THE NECESSARY SIZE FOR A CONCRETE COLUMN WITH MULTIPLE METERS (METER BANK). THE CONCRETE COLUMN FOOTING DIMENSION X SHALL BE INCREASED ACCORDING TO THE NECESSARY SIZE TO INSTALL THE REQUIRED METERS (SEE FOOTING DETAIL ON FIGURE E).
19. A REINFORCED CONCRETE COLUMN CAN BE USED WITHOUT A METER SOCKET BOX FOR THE SERVICE DROP CONNECTION WHEN THERE ARE BACKYARD OVERHEAD ELECTRICAL LINES AND THE SERVICE DROP CANNOT BE EXTENDED TO THE STRUCTURE WITH THE METER DUE TO ANY OBSTACLE, CLEARANCE OR DISTANCE REQUIREMENTS. THE SERVICE ENTRANCE CONDUCTORS SHALL BE EXTENDED UNDERGROUND FROM THE REINFORCED CONCRETE COLUMN TO THE METER. THE REINFORCED CONCRETE COLUMN SHALL BE INSTALLED IN THE BACKYARD, NEAR THE OVERHEAD ELECTRICAL LINES AND IN COMPLIANCE WITH THE MINIMUM VERTICAL CLEARANCES ESTABLISHED IN STANDARD NO. M-5-A.
20. THE SERVICE ENTRANCE CONDUCTORS SHALL BE CONTINUOUS FROM THE DELIVERY POINT TO THE METER SOCKET. CONDUCTORS SHALL NOT PASS THROUGH ANY JUNCTION BOX OR CONDULET.
21. THE SERVICE DROP CONNECTED TO A CONCRETE COLUMN SHALL HAVE A MAXIMUM LENGTH OF 50'-0".
22. A PROVISION FOR FUTURE RENEWABLE SYSTEM SHALL BE INSTALLED FOR NEW CONSTRUCTION OF ONE- OR TWO-FAMILY DWELLING UNITS AS REQUIRED BY THE CURRENT PR CODES.

DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP
TO CUSTOMER'S CONCRETE COLUMN
MAXIMUM VOLTAGE: 240 V
BILL OF MATERIALS

STANDARD NO. K-7-3-1 VERSION 8
DOCUMENT NO. 4301.09.095
PAGE 8 OF 8 DATE SEP 30, 2025
SUBMITTED LUIS R. SOTO LIC. 11658
REVIEWED IVETTE D. SANCHEZ LIC. 13837
APPROVED RICARDO CASTRO LIC. 12135
DIGITIZED EMILIO CUADRADO LIC. 3000
VICTOR R. FEBRES LIC. 3412

MATERIALS			
NO.	GENERAL DESCRIPTION	WAREHOUSE ITEM	QTY.
0006	COMPRESSION SPLICES AND CONNECTORS	VARIES	3
0077	VINYL INSULATING TAPE	VARIES	AS REQ.
0119	TRIPLEX CABLE	VARIES	AS REQ.
0189	ALUMINUM DEAD-END WEDGE	VARIES	AS REQ.

DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO A BUILDING MAXIMUM VOLTAGE: 240 V

STANDARD NO. K-7-5 VERSION 1
DOCUMENT NO. 4301.09.176
PAGE 1 OF 2 DATE OCT 10, 2025
SUBMITTED LUIS R. SOTO LIC. 11658
REVIEWED IVETTE D. SANCHEZ LIC. 13837
APPROVED RICARDO CASTRO LIC. 12135
DIGITIZED EMILIO CUADRADO LIC. 3000
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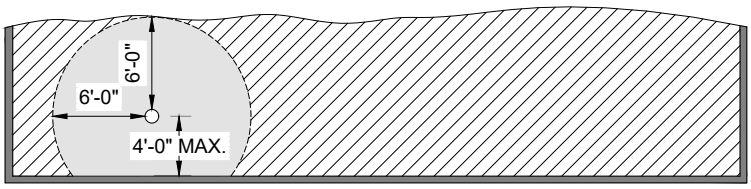
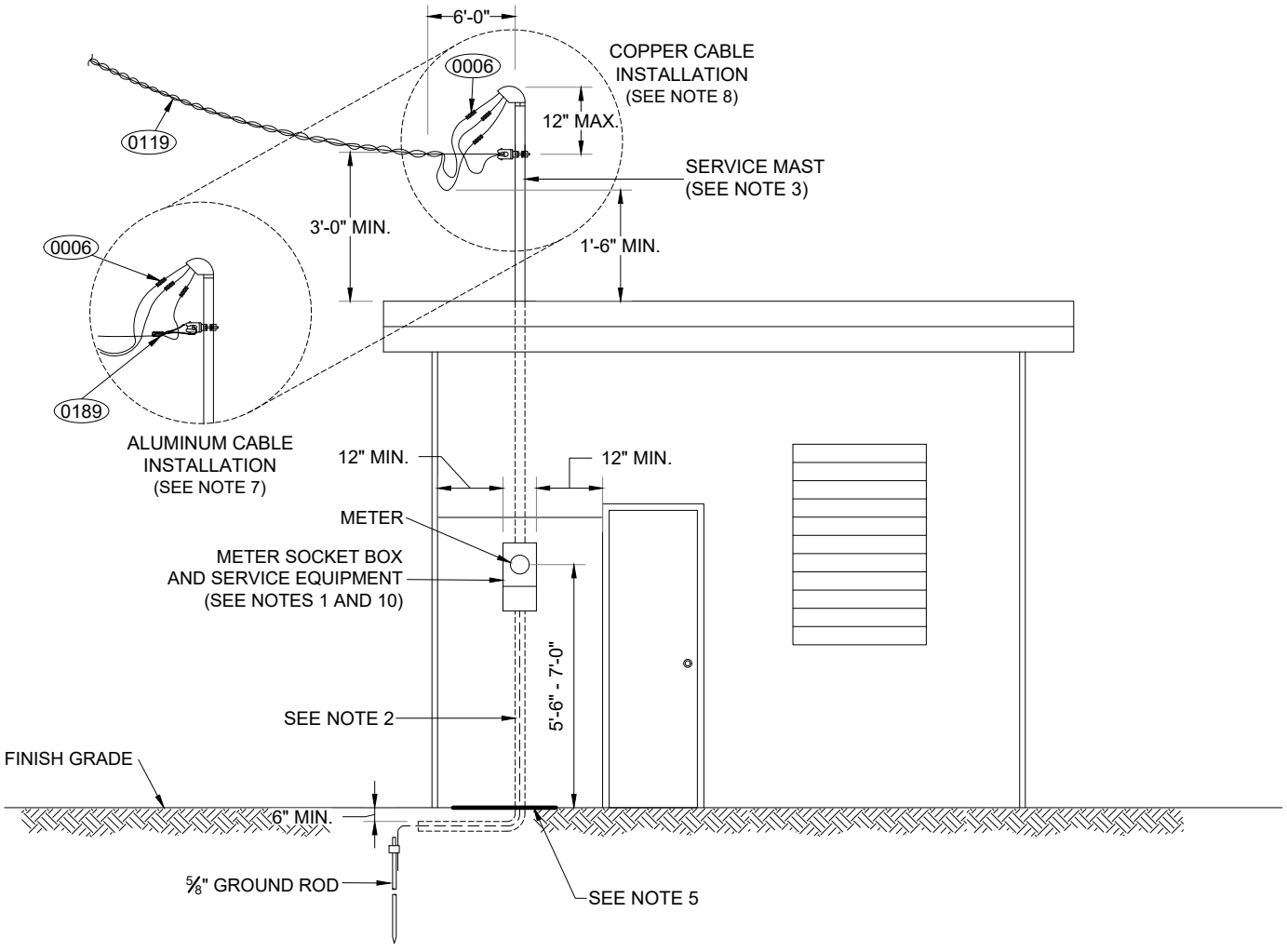
LEGEND:

- 1'-6" MINIMUM VERTICAL CLEARANCE AREA
- 3'-0" MINIMUM VERTICAL CLEARANCE AREA



PLAN VIEW FOR NOT READILY ACCESSIBLE ROOF

(SEE NOTE 6)



ELEVATION VIEW

DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO A BUILDING MAXIMUM VOLTAGE: 240 V NOTES AND BILL OF MATERIALS

STANDARD NO. K-7-5 VERSION 1
DOCUMENT NO. 4301.09.176
PAGE 2 OF 2 DATE OCT 10, 2025
SUBMITTED LUIS R. SOTO LIC. 11658
REVIEWED IVETTE D. SANCHEZ LIC. 13837
APPROVED RICARDO CASTRO LIC. 12135
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VICTOR R. FEBRES LIC. 3412

MATERIALS			
NO.	GENERAL DESCRIPTION	WAREHOUSE ITEM	QTY.
0006	COMPRESSION SPLICES AND CONNECTORS	VARIES	3
0077	VINYL INSULATING TAPE	VARIES	AS REQ.
0119	TRIPLEX CABLE	VARIES	AS REQ.
0189	ALUMINUM DEAD-END WEDGE	VARIES	AS REQ.

NOTES:

1. THE METER SOCKET BOX SHALL BE GALVANIZED STEEL, RING TYPE, AND IN COMPLIANCE WITH NEMA STANDARDS FOR OUTDOOR INSTALLATION. STAINLESS STEEL OR ALUMINUM MATERIAL SHALL BE USED WITHIN 1 MILE OF SALTWATER BODIES.
2. THE MINIMUM SIZE OF THE GROUNDING ELECTRODE CONDUCTOR SHALL COMPLY WITH THE NEC TABLE 250.66 REQUIREMENTS. THE MATERIAL OF THE DUCT IN WHICH THE GROUNDING CONDUCTOR IS INSTALLED MUST COMPLY WITH SPECIFICATIONS IN SECTION 250 OF THE NEC.
3. A 2" MINIMUM DIAMETER RIGID STEEL DUCT SHALL BE USED AS SERVICE MAST.
4. THE MINIMUM GAUGE FOR SERVICE ENTRANCE CONDUCTORS SHALL BE #2 AWG COPPER.
5. A WORKING SPACE OF AT LEAST 3'-0" X 3'-0" WITH A MAXIMUM SLOPE OF 2% AND A MAXIMUM HEIGHT OF 7" MUST BE AVAILABLE IN FRONT OF THE METER TO GUARANTEE SAFE OPERATION AND MAINTENANCE. THE WORKING SPACE SHALL BE BUILT WITH CONCRETE, ASPHALT, COMPACTED SOIL OR GRAVEL.
6. REFER TO STANDARD NO. M-5-A FOR MINIMUM CLEARANCES REQUIRED FOR SERVICE DROP AND BETWEEN POWER LINES AND STRUCTURES.
7. FOR ALUMINUM TRIPLEX CABLE (ITEM 0119) SERVICE DROP INSTALLATION, A DEAD-END WEDGE (ITEM 0189) SHALL BE USED TO ATTACH THE BARE NEUTRAL CONDUCTOR TO THE INSULATOR AT THE SERVICE MAST.
8. FOR COPPER TRIPLEX CABLE (ITEM 0119), IT IS REQUIRED TO ATTACH THE BARE NEUTRAL CONDUCTOR DIRECTLY TO THE INSULATOR AT THE SERVICE MAST.
9. VINYL INSULATING TAPE (ITEM 0077) SHALL BE USED ON CONNECTORS (ITEM 0006).
10. THE METER SOCKET BOX SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION, PREFERABLY ON THE FRONT WALL OF THE BUILDING OR STRUCTURE.
11. A PROVISION FOR FUTURE RENEWABLE SYSTEM SHALL BE INSTALLED FOR NEW CONSTRUCTION OF ONE- OR TWO-FAMILY DWELLING UNITS AS REQUIRED BY THE CURRENT PR CODES.

DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

MINIMUM CLEARANCES REQUIRED FOR SERVICE DROP AND BETWEEN POWER LINES AND STRUCTURES

STANDARD NO.	M-5-A VERSION 9
DOCUMENT NO.	4301.09.098
PAGE	1 OF 4 DATE SEP 30, 2025
SUBMITTED	LUIS R. SOTO LIC. 11658
REVIEWED	IVETTE D. SANCHEZ LIC. 13837
APPROVED	RICARDO CASTRO LIC. 12135
DIGITIZED	EMILIO CUADRADO LIC. 3000

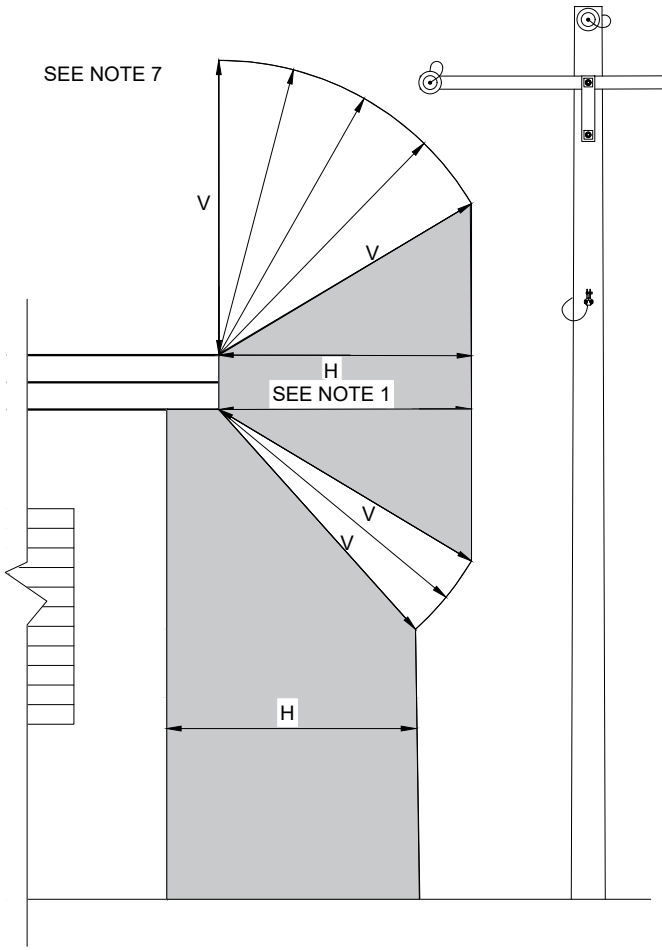


FIGURE A
TRANSITIONAL CLEARANCE WHEN V IS GREATER THAN H
(SEE NOTE 3)

H= MINIMUM HORIZONTAL CLEARANCES:

7'-6": 4,160 - 13,200 V
5'-0": 0 - 480 V
4'-6": NEUTRAL CONNECTED EFFECTIVELY TO GROUND

V= MINIMUM VERTICAL CLEARANCES OVER ROOF:

A: ROOF NOT READILY ACCESSIBLE TO PERSONS:
3'-6": 0 - 480 V SECONDARY TRIPLEX CABLE

10'-6": 0 - 480 V SECONDARY INDIVIDUAL CABLE

12'-6": 4,160 - 13,200 V

3'-0": NEUTRAL CONNECTED EFFECTIVELY TO GROUND

B: ROOF READILY ACCESSIBLE TO PERSONS:
10'-0": 0 - 480 V SECONDARY TRIPLEX CABLE

10'-6": 0 - 480 V SECONDARY INDIVIDUAL CABLE

14'-6": 4,160 - 13,200 V

9'-6": NEUTRAL CONNECTED EFFECTIVELY TO GROUND

LEGEND

TRANSITIONAL CLEARANCE

CLEARANCE

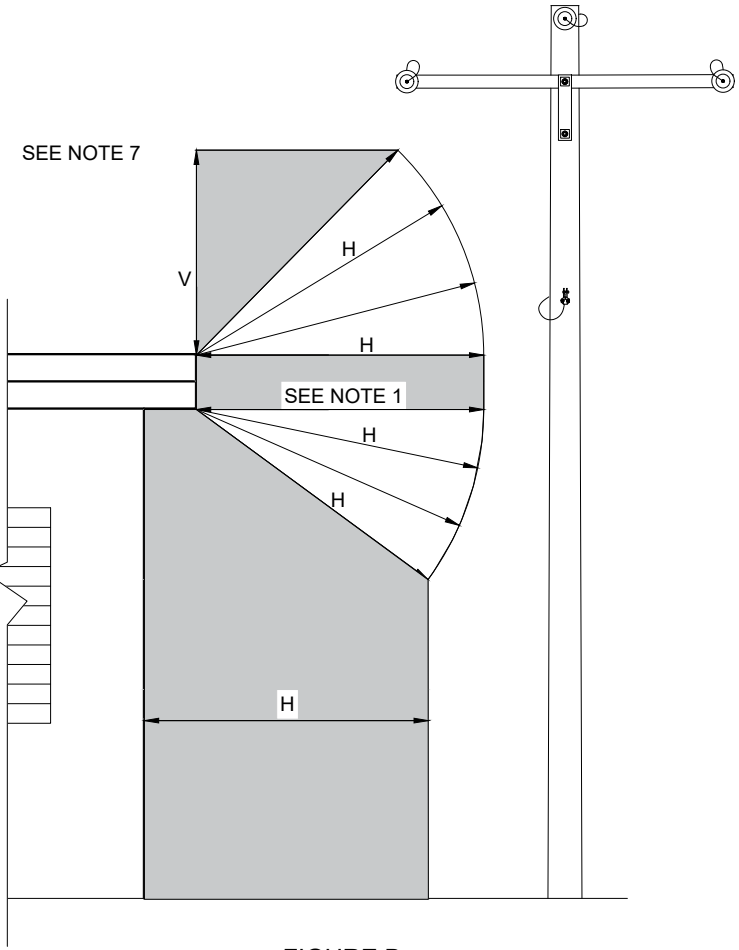


FIGURE B
TRANSITIONAL CLEARANCE WHEN H IS GREATER THAN V
(SEE NOTE 4)

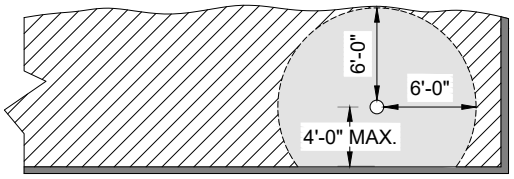
DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

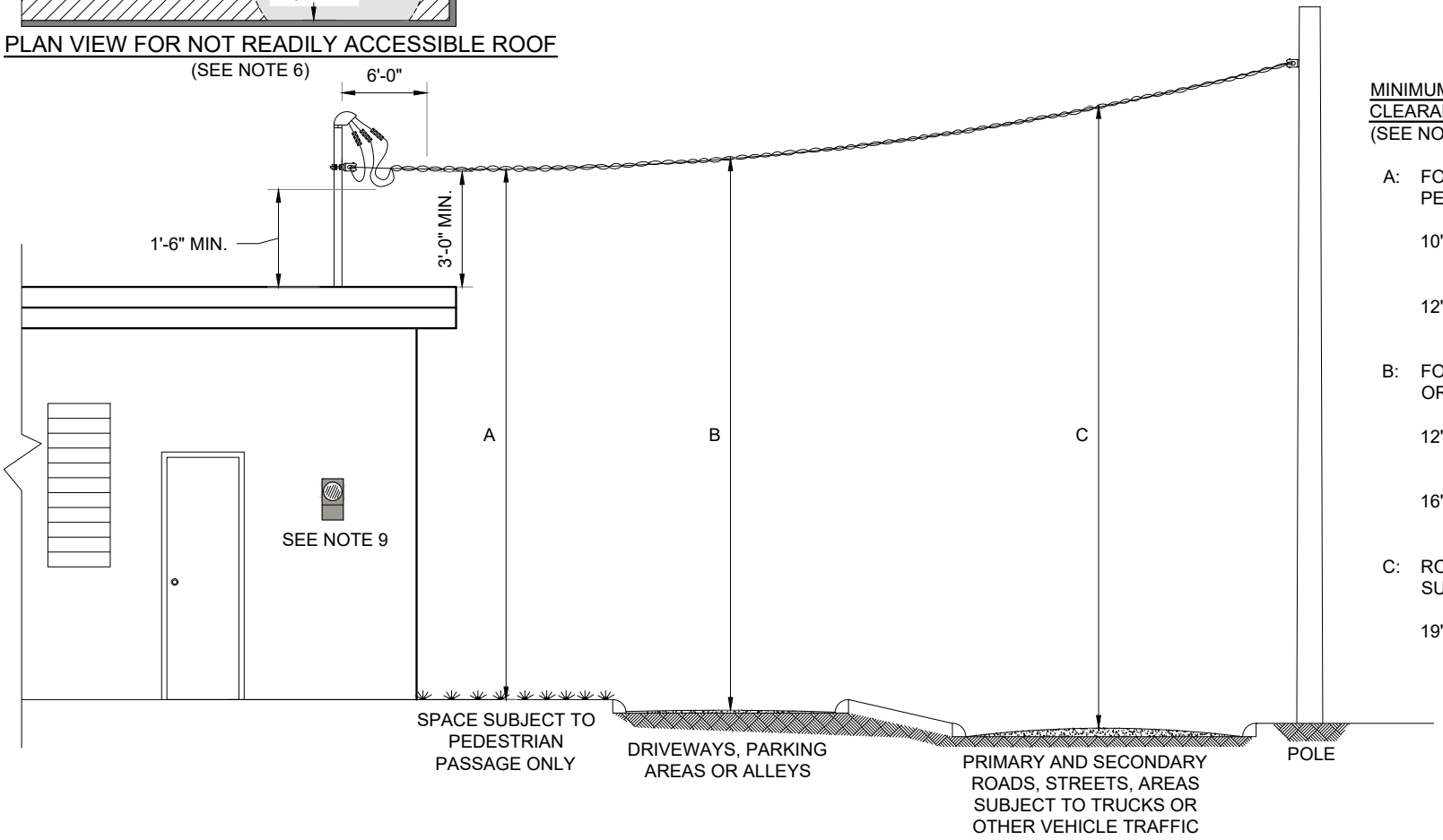
MINIMUM CLEARANCES REQUIRED FOR SERVICE DROP AND BETWEEN POWER LINES AND STRUCTURES

STANDARD NO. M-5-A VERSION 9
DOCUMENT NO. 4301.09.098
PAGE 2 OF 4 DATE SEP 30, 2025
SUBMITTED LUIS R. SOTO LIC. 11658
REVIEWED IVETTE D. SANCHEZ LIC. 13837
APPROVED RICARDO CASTRO LIC. 12135
DIGITIZED EMILIO CUADRADO LIC. 3000



PLAN VIEW FOR NOT READILY ACCESSIBLE ROOF
(SEE NOTE 6)

LEGEND:
1'-6" MINIMUM VERTICAL CLEARANCE AREA
3'-0" MINIMUM VERTICAL CLEARANCE AREA



MINIMUM VERTICAL CLEARANCES: 0 - 480 V
(SEE NOTE 2)

A: FOR SPACE SUBJECT TO PEDESTRIAN PASSAGE:

10'-6": SERVICE DROP TO RESIDENTIAL BUILDING ONLY

12'-0": SERVICE DROP FOR OTHER STRUCTURES

B: FOR DRIVEWAYS, PARKING AREAS OR ALLEYS:

12'-6": SERVICE DROP OVER RESIDENTIAL DRIVEWAY ONLY

16'-0": SERVICE DROP FOR OTHER STRUCTURES

C: ROADS, STREETS AND OTHER AREAS SUBJECT TO TRUCK TRAFFIC:

19'-0": SERVICE DROP

FIGURE C
MINIMUM VERTICAL CLEARANCES FOR A SERVICE DROP CONNECTED TO A BUILDING

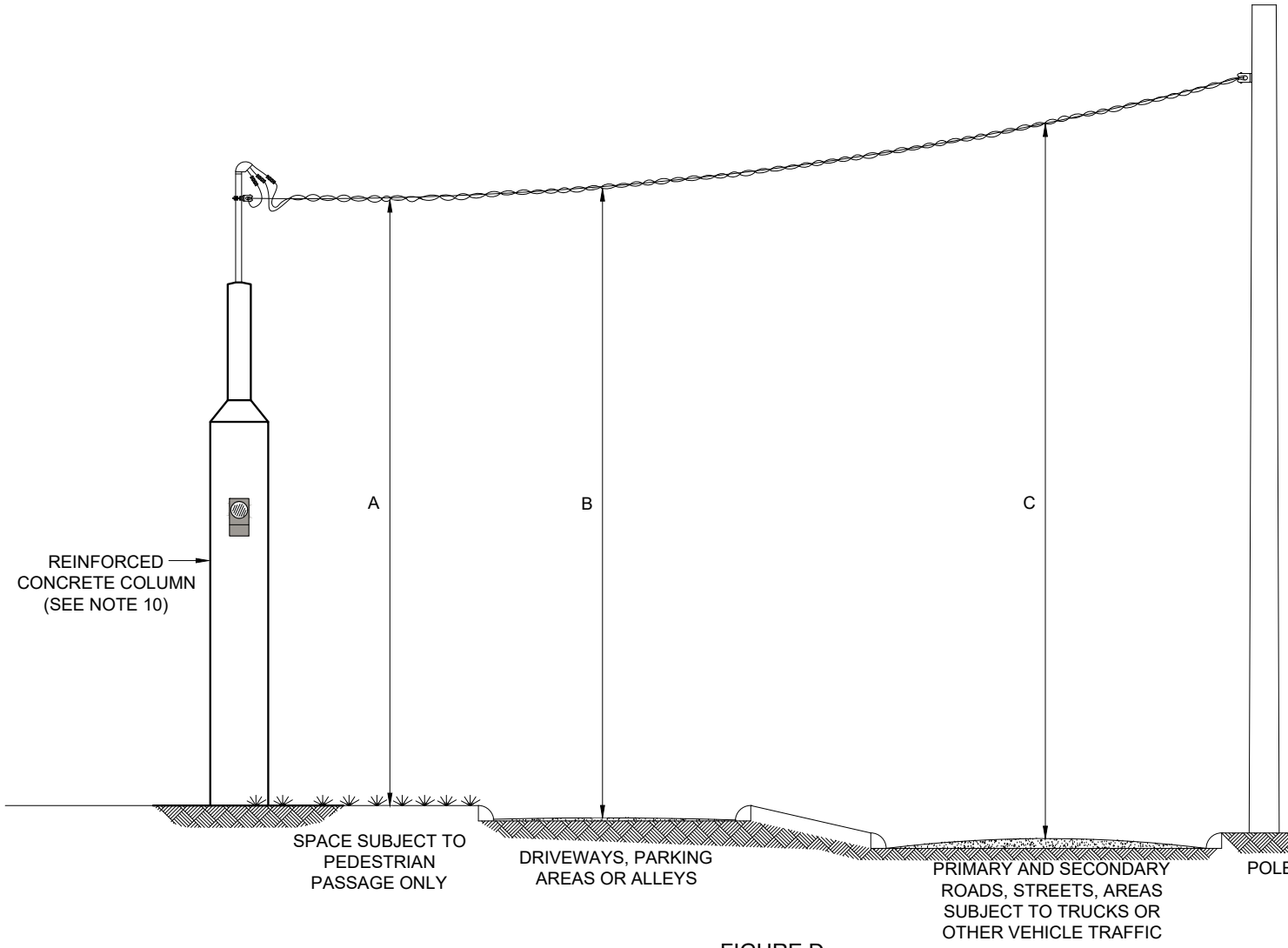
DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

MINIMUM CLEARANCES REQUIRED FOR SERVICE DROP AND BETWEEN POWER LINES AND STRUCTURES

STANDARD NO.	M-5-A VERSION 9
DOCUMENT NO.	4301.09.098
PAGE	3 OF 4 DATE SEP 30, 2025
SUBMITTED	LUIS R. SOTO LIC. 11658
REVIEWED	IVETTE D. SANCHEZ LIC. 13837
APPROVED	RICARDO CASTRO LIC. 12135
DIGITIZED	EMILIO CUADRADO LIC. 3000



MINIMUM VERTICAL CLEARANCES: 0 - 480 V
(SEE NOTE 2)

A: FOR SPACE SUBJECT TO PEDESTRIAN PASSAGE:

10'-6": SERVICE DROP TO RESIDENTIAL BUILDING ONLY

12'-0": SERVICE DROP FOR OTHER STRUCTURES

B: FOR DRIVEWAYS, PARKING AREAS OR ALLEYS:

12'-6": SERVICE DROP OVER RESIDENTIAL DRIVEWAY ONLY

16'-0": SERVICE DROP FOR OTHER STRUCTURES

C: ROADS, STREETS AND OTHER AREAS SUBJECT TO TRUCK TRAFFIC:

19'-0": SERVICE DROP

FIGURE D

MINIMUM VERTICAL CLEARANCES FOR A SERVICE DROP CONNECTED TO A COSTUMER'S CONCRETE COLUMN

DISTRIBUTION ENGINEERING

OVERHEAD DISTRIBUTION STANDARDS

TITLE:

MINIMUM CLEARANCES REQUIRED FOR SERVICE DROP AND BETWEEN POWER LINES AND STRUCTURES NOTES

STANDARD NO. M-5-A VERSION 9
DOCUMENT NO. 4301.09.098
PAGE 4 OF 4 DATE SEP 30, 2025
SUBMITTED LUIS R. SOTO LIC. 11658
REVIEWED IVETTE D. SANCHEZ LIC. 13837
APPROVED RICARDO CASTRO LIC. 12135
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NOTES:

1. THESE DESIGN HORIZONTAL CLEARANCES ARE MEASURED FROM THE ENERGIZED PART CLOSEST TO THE BUILDING, AND WITH CONDUCTORS AT REST. THE DESIGN CLEARANCES ARE BASED ON NESC TABLE 234-1. ADD A 2'-0" HORIZONTAL BUFFER, WHEN POSSIBLE, FOR ADDITIONAL CLEARANCE. FOR OTHER TYPES OF STRUCTURES AND FOR CLEARANCES WITH WIND DISPLACEMENT, SEE NESC RULE 234.
2. THESE MINIMUM VERTICAL CLEARANCES WILL BE PERMITTED ONLY FOR SERVICE DROPS WHERE THE HEIGHT OF THE STRUCTURE OR ADJACENT INSTALLATION DOES NOT ALLOW THE MINIMUM CLEARANCES REQUIRED IN STANDARD NO. M-5 TO BE MET. THESE CLEARANCES ARE THE MINIMUM PER NESC TABLE 232-1 WITH NO BUFFERS INCLUDED.
3. WHEN THE VERTICAL CLEARANCE (V) IS GREATER THAN THE HORIZONTAL CLEARANCE (H), THE HORIZONTAL CLEARANCE GOVERNS ABOVE THE LEVEL OF THE ROOF OR TOP OF AN INSTALLATION TO THE POINT WHERE THE DIAGONAL EQUALS THE VERTICAL CLEARANCE REQUIREMENTS.
4. WHEN THE HORIZONTAL CLEARANCE (H) IS GREATER THAN THE VERTICAL CLEARANCE (V), THE VERTICAL CLEARANCE GOVERNS BEYOND THE ROOF TO THE POINT WHERE THE DIAGONAL EQUALS THE HORIZONTAL CLEARANCE REQUIREMENT.
5. THE VOLTAGES DISPLAYED ARE LINE TO LINE. THE ESTABLISHED MINIMUM CLEARANCES ALSO APPLY TO THEIR CORRESPONDING LINE TO GROUND VOLTAGES.
6. CLEARANCE OF SERVICE DROP TERMINATING ON SERVICE MAST OVER ROOF NOT READILY ACCESSIBLE SHALL BE NOT LESS THAN EITHER OF THE FOLLOWING:
   A. 3'-0" VERTICAL CLEARANCE ABOVE ROOF.
   B. 1'-6" VERTICAL CLEARANCE ABOVE ROOF WITHIN 6'-0" RADIUS FROM THE SERVICE MAST, WHEN IT IS LOCATED AT NO MORE THAN 4'-0" FROM THE EDGE OF THE ROOF.

   IF THE ROOF IS READILY ACCESSIBLE, A CLEARANCE OF NOT LESS THAN 10'-0" VERTICAL CLEARANCE FOR THE SERVICE DROP INCLUDING THE DRIP LOOP.
7. PASSING OF POWER LINES OVER STRUCTURES IS NOT ALLOWED.
8. VEGETATION CLEARANCE OF 12'-0" FOR PRIMARY LINES AND 5'-0" FOR SECONDARY LINES OF AIR SPACE IS REQUIRED BETWEEN DISTRIBUTION CONDUCTORS AND THE SURROUNDING VEGETATION.
9. REFER TO STANDARD NO. K-7-5 FOR CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO A BUILDING.
10. REFER TO STANDARD NO. K-7-3-1 FOR CONNECTION OF SECONDARY TRIPLEX CABLE SERVICE DROP TO A CUSTOMER'S CONCRETE COLUMN.

TB-25-003 - Minimum Clearances and Connection of Service Drops to a Building and to a Concrete Column

Final Audit Report 2025-10-15

Created:	2025-10-13
By:	Kary Gonzalez (kary.gonzalezmonzon@lumapr.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA2cbNg_NqRIPQsgB4pWp8p7mGUhhMNNyf

"TB-25-003 - Minimum Clearances and Connection of Service D rops to a Building and to a Concrete Column" History

Document created by Kary Gonzalez (kary.gonzalezmonzon@lumapr.com)
2025-10-13 - 5:36:28 PM GMT

Document emailed to Ricardo Castro (ricardo.castro@lumapr.com) for signature
2025-10-13 - 5:36:35 PM GMT

Email viewed by Ricardo Castro (ricardo.castro@lumapr.com)
2025-10-13 - 7:29:42 PM GMT

Email viewed by Ricardo Castro (ricardo.castro@lumapr.com)
2025-10-14 - 5:50:49 PM GMT

Document e-signed by Ricardo Castro (ricardo.castro@lumapr.com)
Signature Date: 2025-10-14 - 8:04:35 PM GMT - Time Source: server

Document emailed to Reinaldo Baretty (reinaldo.baretty@lumapr.com) for signature
2025-10-14 - 8:04:37 PM GMT

Email viewed by Reinaldo Baretty (reinaldo.baretty@lumapr.com)
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