

METER INSTALLATIONS

25



METER INSTALLATIONS

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METER INSTALLATIONS

Primary Metering Installations

25 00 01 01

1 of 1

Primary metering pole mounted installations may be either Company owned, or Customer owned. These installations are generally applicable to large lighting and power loads.

1. Company Owned - Illinois

If the station being primary metered is owned by Ameren, all necessary equipment will be furnished and installed by Ameren.

2. Customer Owned - Missouri

A. If the station being primary metered is owned by the customer, the customer must furnish and install the following equipment. This equipment shall be installed in accordance with appropriate Ameren Primary Metering Standards.

- a. Pole
- b. Pole framing
- c. Switches
- d. Lightning arresters
- e. All primary wiring including electrical rated pvc conduit when required, except that Ameren will connect the customer's primary leads to the supply conductors and to the current and potential transformers. The customer must leave sufficient lengths of wire for making these connections.
- f. Secondary wiring when required; Ameren will make connections to Secondary Supply. The customer must leave sufficient lengths of wire for making these connections.

B. Ameren will furnish and install the following equipment will complete metering connections.

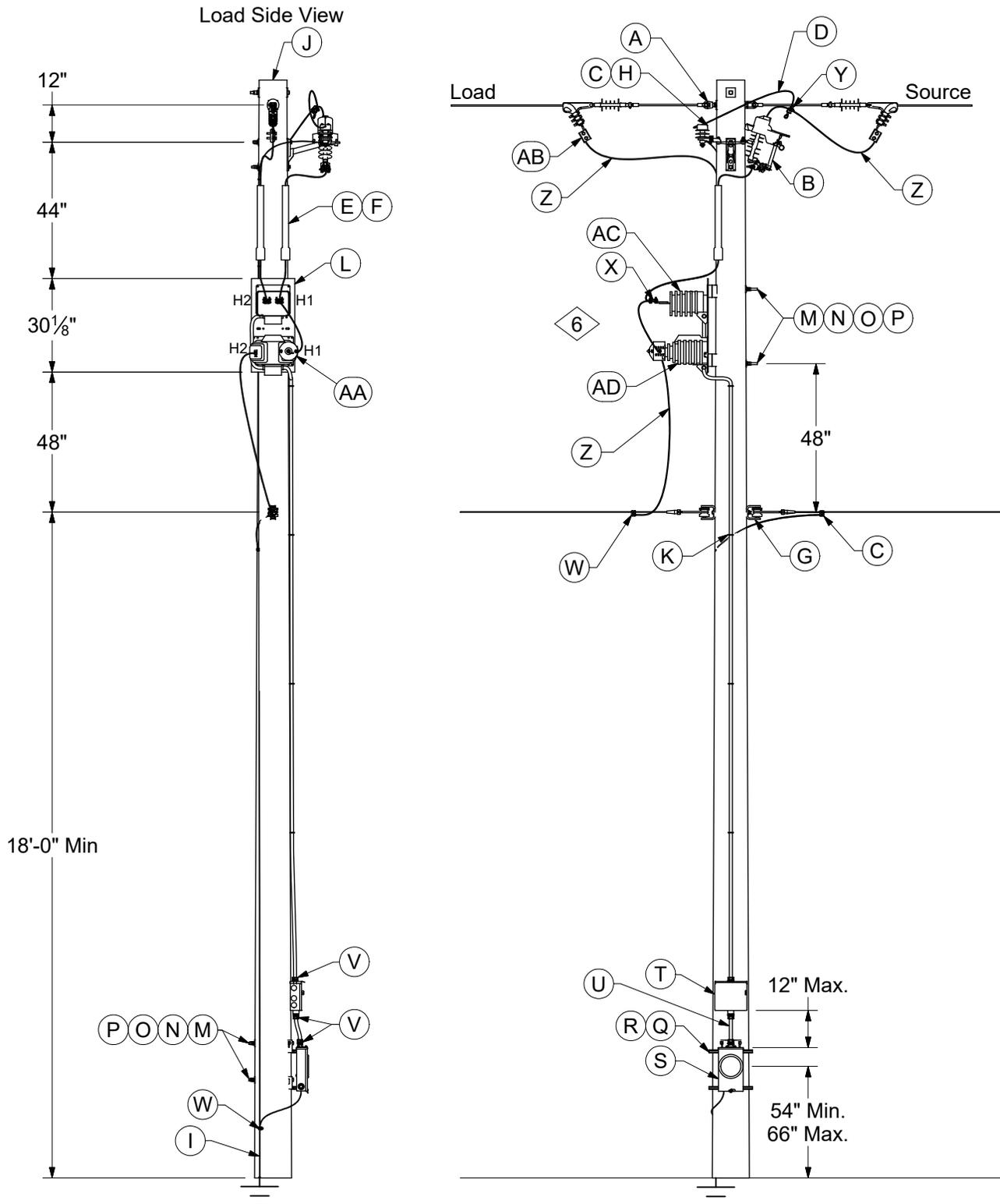
- a. Devices to connect customer's primary or secondary leads to the supply conductors.
- b. Current, potential transformers, cluster mounting, and bracket.
- c. Devices to connect customer's primary wiring to current and potential transformers.
- d. Meter enclosure, meter, and mounting framework.
- e. All metering wiring including conduit to connect current and potential transformers to the meter.

3. Ameren Meter Department

Ameren's Meter Department must be notified of job as early as possible to insure availability of equipment to be provided; includes metering enclosures and transformers - cluster mounts or units, are shop wired.

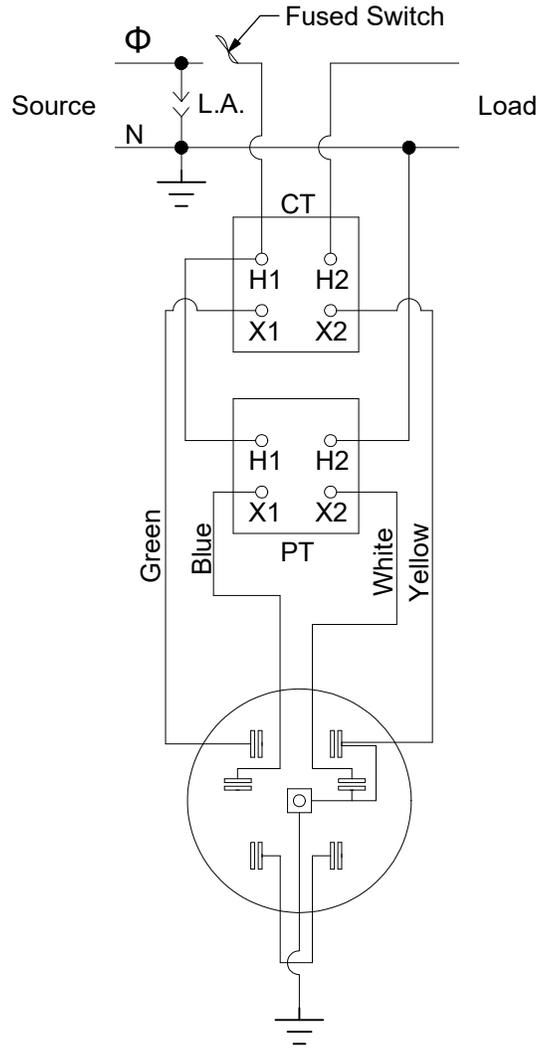
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2	09/22/11	WYW	

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REV	DATE	ENG	DESCRIPTION
9	01/01/24	WYW	Converted to new format
8	09/23/11	WYW	

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Meter Socket
Wiring Diagram

CONSTRUCTION NOTE(s):

1. Ground instrument transformer cases.
2. Metering equipment should be within reach of a 29'-0" extension ladder.
3. If metered primary exceeds 2 spans, additional arresters must be installed on first pole beyond meter pole.
4. When meter pole is on customer property, a disconnect switch shall be provided one span before.
5. Secondary wire lead on meter cluster is 30'-0" standard length. For taller poles, special order meter cluster with longer lead to meet max. height requirement for connection box.

6. CT is installed above the PT.

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9	01/01/24	WYW	Converted to new format
8	09/23/11	WYW	



METER INSTALLATIONS
 Primary Meter Structure
 1-Phase Overhead to Overhead Load Side

25 04 01 00
5kV
3 of 3

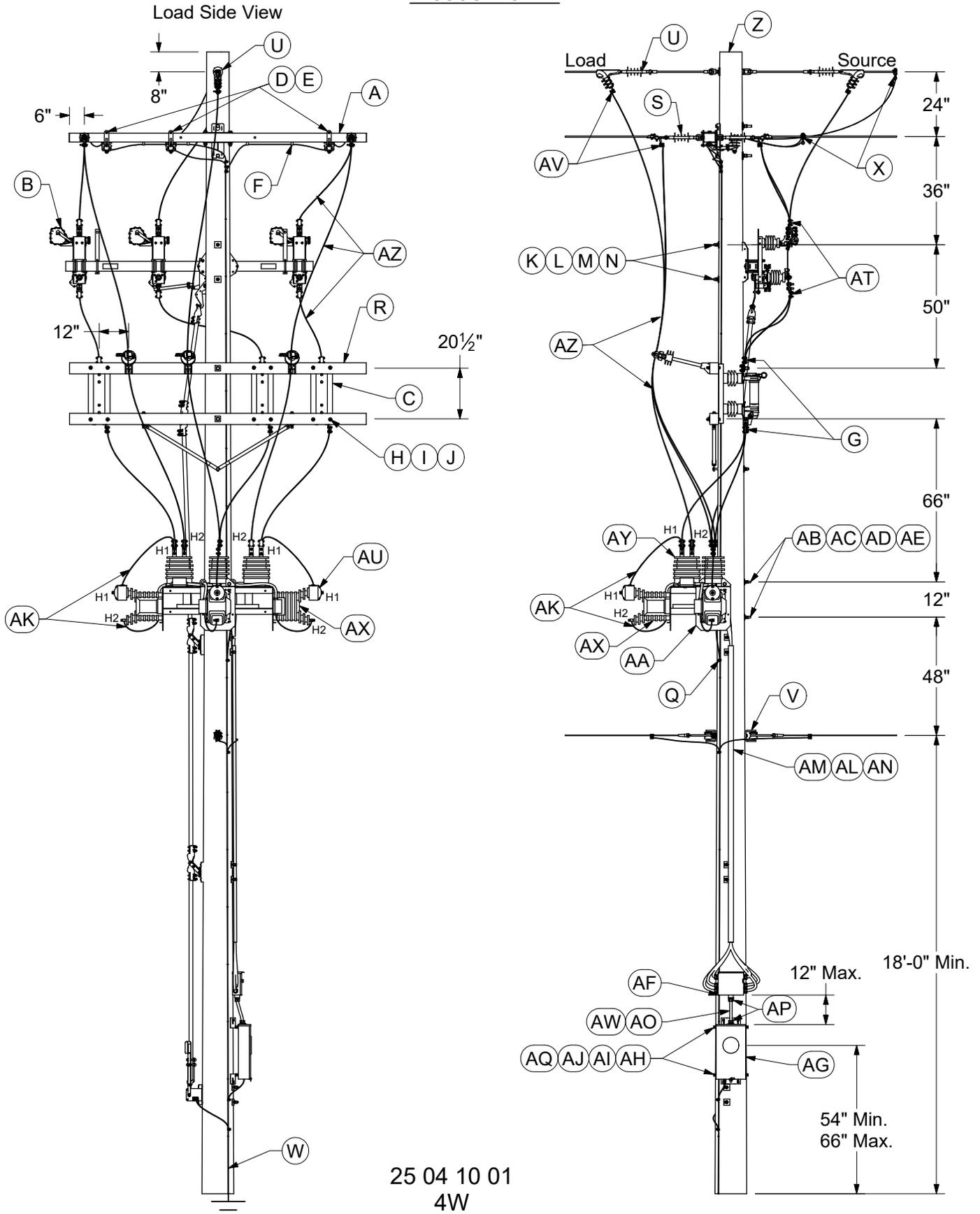
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ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs Material	25 04 01 **	00
A	06 12 30 03 @	Double Deadend with FG Extensions		1
B	10 12 01 01 @	Switch, Fused, Open Type		1
C	17 54 004	Connector - Split Bolt, #4 Sol Cu. Thru #8 Sol Cu.		2
D	18 51 021	Wire, #6 Cu. Covered, S.D. (ft.)		35
E	12 01 178	Conduit - Plastic, 2"		2
F	27 60 035	Iron Hanger (ft.)		5
G	06 01 01 02	Clevis - Secondary		2
H	10 01 133	Arrester, Lightning, 3kV		1
@ I	12 00 10 **	Grounding Unit		1
@ J	02 00 02 01	Pole		1

ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 04 01 **	00
K	23 64 033	Staple - Coated Steel 1-1/2" x 3"		4
L	69 04 112	CT/PT Metering Platform		1
M	23 52 066	Bolt, Mach., 5/8" x 14" w/ square nut		4
N	23 66 027	Washer, Flat, Square 5/8"		4
O	23 66 134	Lock Washer - 5/8" Double Coil		4
P	23 65 043	Lock Nut - 5/8" Square		4
Q	62 51 563	Bracket - Meter Socket Hanging		2
R	23 60 007	Lag Screw - 1/2" x 4"		2
S	40 04 210	Meter Enclosure		1
T	40 01 120	Box - Secondary Connection		1
U	40 02 054	Conduit 1", Flex (ft.)		1
V	40 53 612	Conduit - Connector 1" Steel		3
W	17 54 373	Connector - Split Bolt, #14 AWG Str. to #2 AWG Str.		2
X	17 54 303	Connector, Cable to Flat, #6-2/0		2
Y	23 78 394	Clamp, Hot Line		1
Z	18 53 018	Wire, #2 Cu., Covered, S.D., 5kV (ft.)		30
AA	69 58 296	Guard, Wildlife, PT (H1) Bushing		1
@ AB	07 00 25 00 @	Clamp, Parallel Groove		2
@ AC	Meter Shop	Current Transformer		1
@ AD	Meter Shop	Potential Transformer		1
	285	Op Code, Install Primary Metering		1

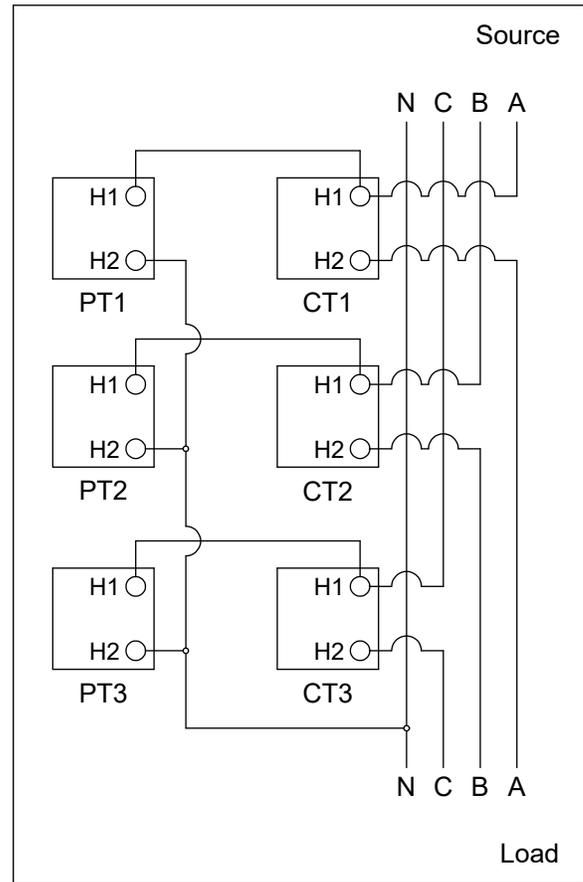
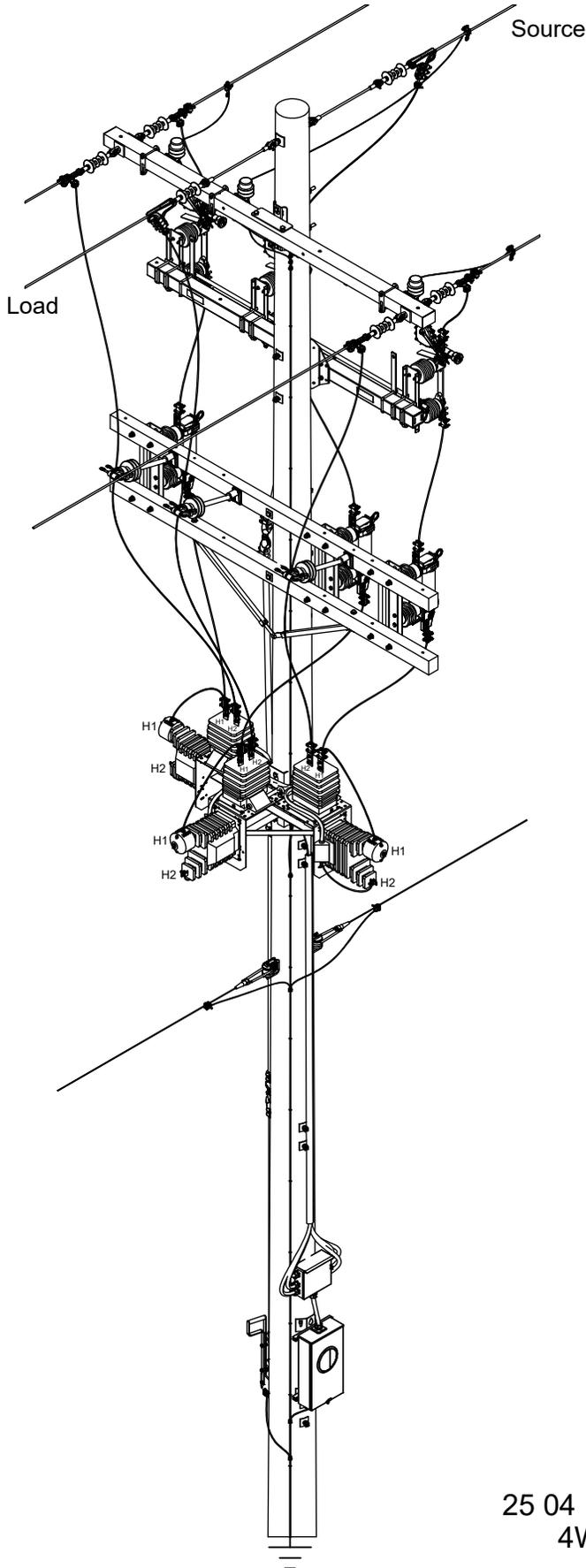
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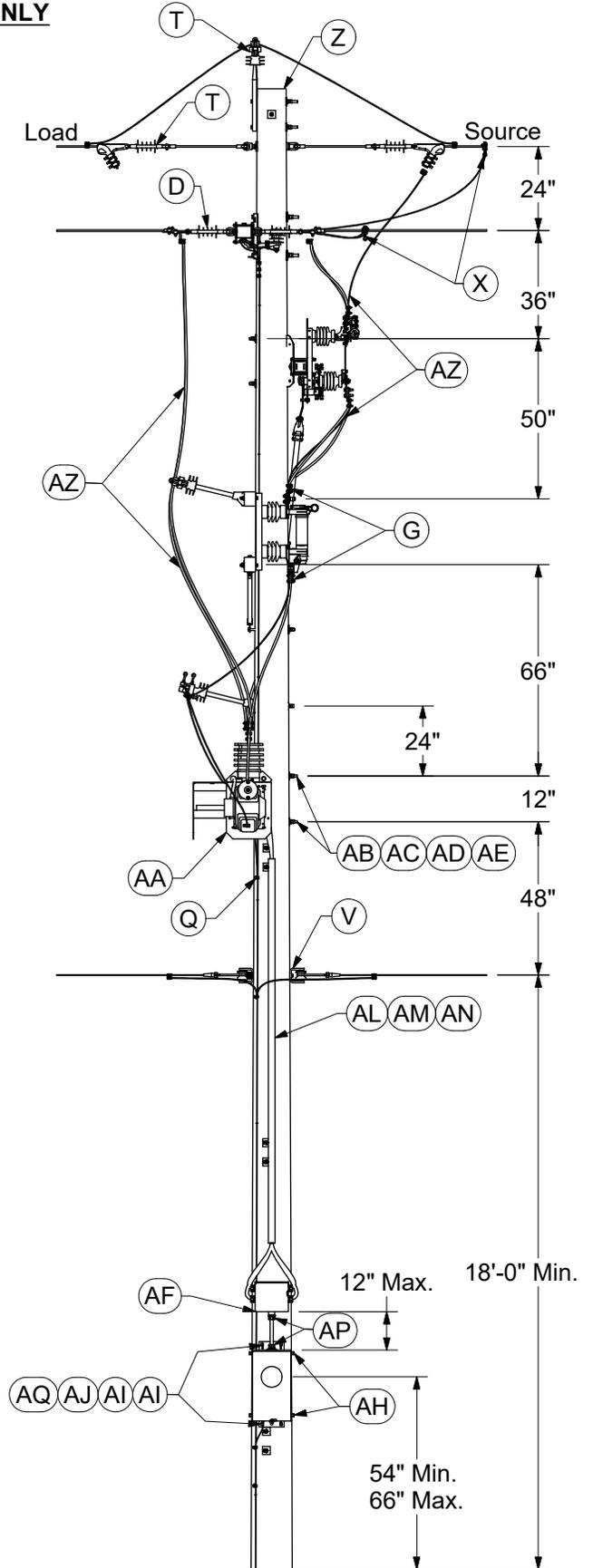
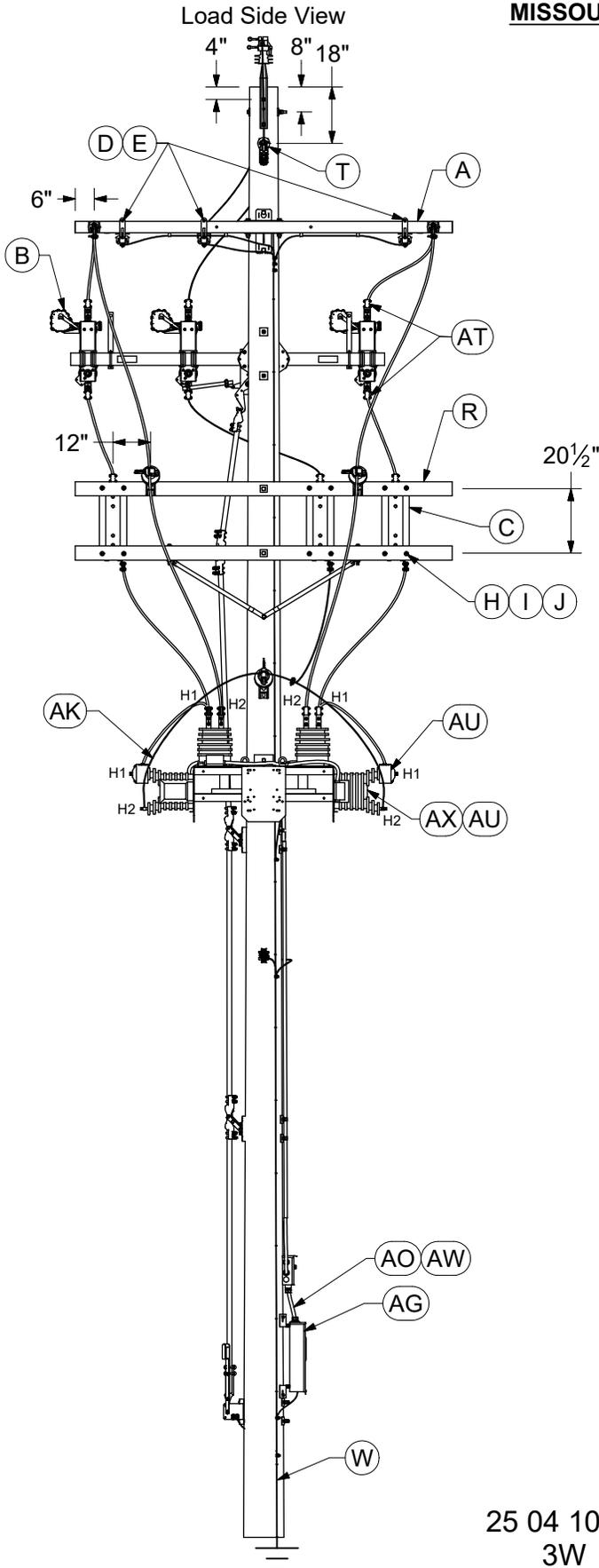
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4W

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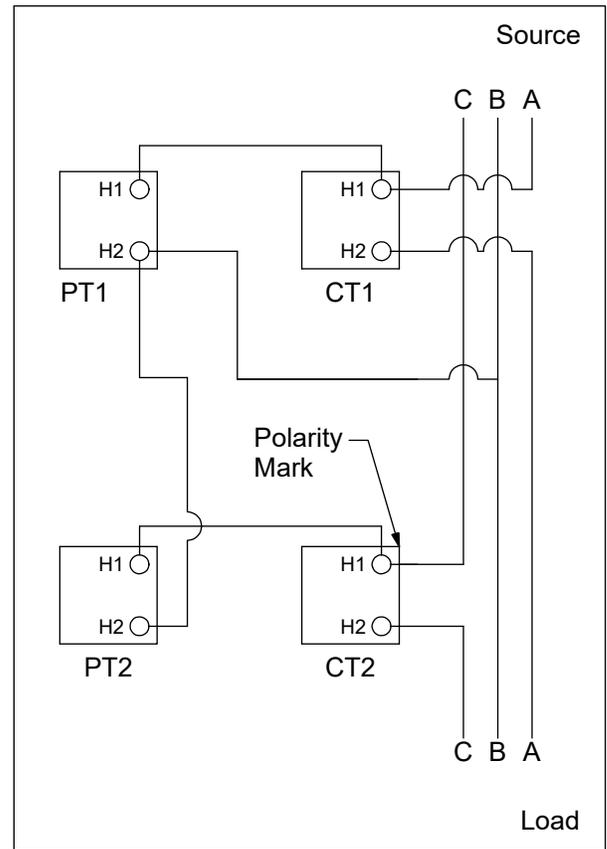
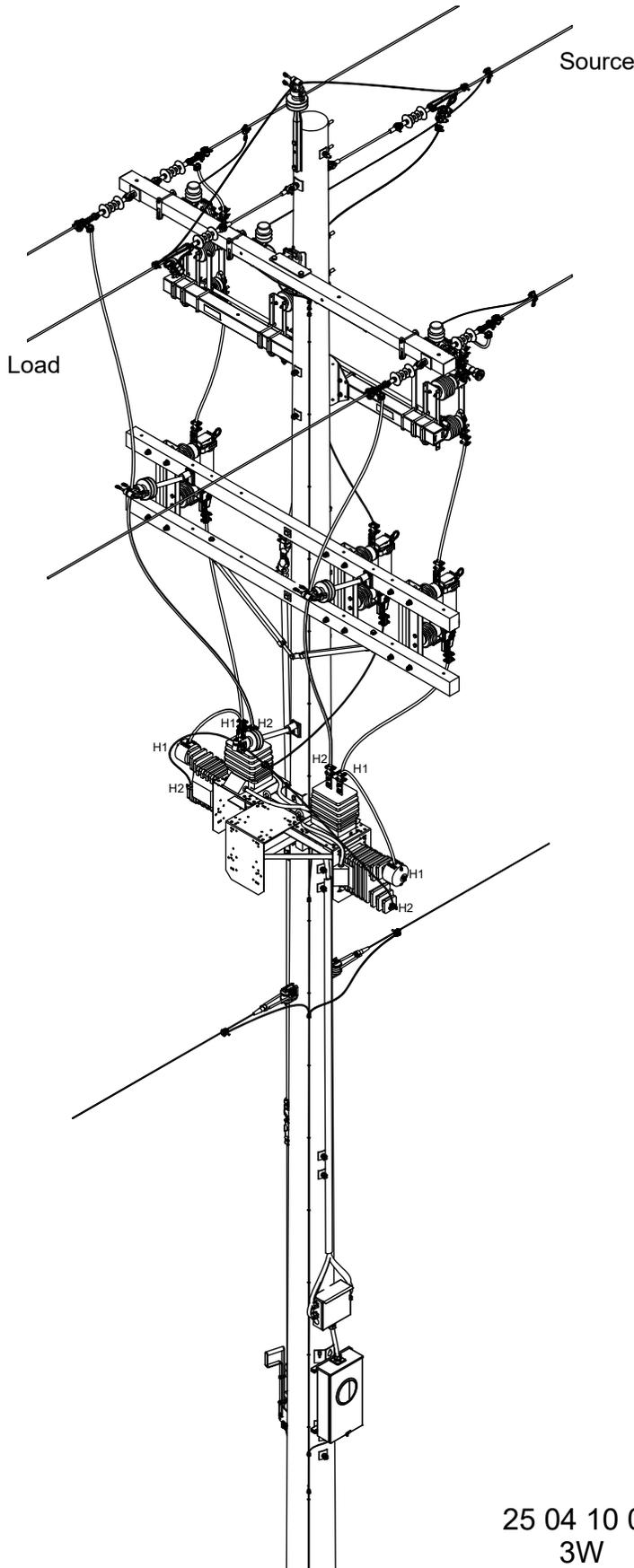
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4W

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11	05/01/12	WYW	



25 04 10 02
3W

REV	DATE	ENG	DESCRIPTION
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11	05/01/12	WYW	



25 04 10 02
3W

REV	DATE	ENG	DESCRIPTION
12	01/01/24	WYW	Converted to new format
11	05/01/12	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-Phase OH to OH Load Side 3W & 4W SM-5 Fuse

25 04 10 **

5kV

5 of 6

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DCS #	DESCRIPTION
25 04 10 01	5kV, 3-Ph, 4W
25 04 10 02	5kV, 3-Ph, 3W

CONSTRUCTION NOTE(S):

- When meter pole is on customer property, switch shall be provided one span before.
- Secondary wire lead on meter cluster is 30'-0" standard length. For tall poles, special order meter cluster with longer lead to meet maximum height requirement for connection box.

ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs Material 25 04 10 **	01	02
A	04 00 42 03 @	Crossarm, Deadend, FG, 10'	1	1
B	54 07 239	Switch - 15kV, Group Operated	1	1
C	54 03 051	Switch, 15kV, SM-5 Fuse Mounting, 400A	3	3
D	10 01 133	Arrester, Lightning, 3 kV	3	3
E	17 58 054	Bracket, Arrester/Cutout Mounting	3	3
F	23 68 746	Grounding Clip	4	4
G	17 54 303	Connector - Cable to Flat, #6-2/0	12	12
H	23 52 036	Bolt, Mach., 1/2" x 5" w/ square nut	12	12
I	23 66 133	Lock Washer - Double Coil 1/2"	12	12
J	23 65 056	Lock Nut - 1/2" Square	12	12
K	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut	2	2
L	23 66 207	Washer, Curved, Square, 5/8"	2	2
M	23 66 134	Lock Washer - 5/8" Double Coil	2	2
N	23 65 043	Lock Nut - 5/8" Square	2	2
O	17 54 127	Clamp, PG, Bronze, Cable to Flat, #8 Sol to #4 Str Wire for 3/8" bolt	1	1
P	18 51 021	Wire, #6 Cu, S.D., Covered (ft.)	35	35
Q	17 54 004	Connector - Split Bolt, #4 Sol to #8 Sol Cu	4	4
R	04 00 20 03 @	Crossarm, Wood, 10'	2	2
S	06 12 35 02 @	Double Deadend on Crossarm	2	2
T	06 12 30 04 @	Pole Top, Loopover w/ FG Extension	-	1
U	06 12 30 03 @	Double Deadend on Pole, FG Extensions	1	-
V	06 01 01 02	Double Clevis	1	1
@ W	12 00 10 **	Grounding Unit	1	1
@ X	07 00 21 00 @	Clamp, Hotline	3	3
@ Y	10 00 01 01 @	Fuse Refill for SM-5 (Size by Engineering)	3	3
@ Z	02 00 02 01	Pole	1	1

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
12	01/01/24	WYW	Converted to new format
11	05/01/12	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-Phase OH to OH Load Side 3W & 4W SM-5 Fuse

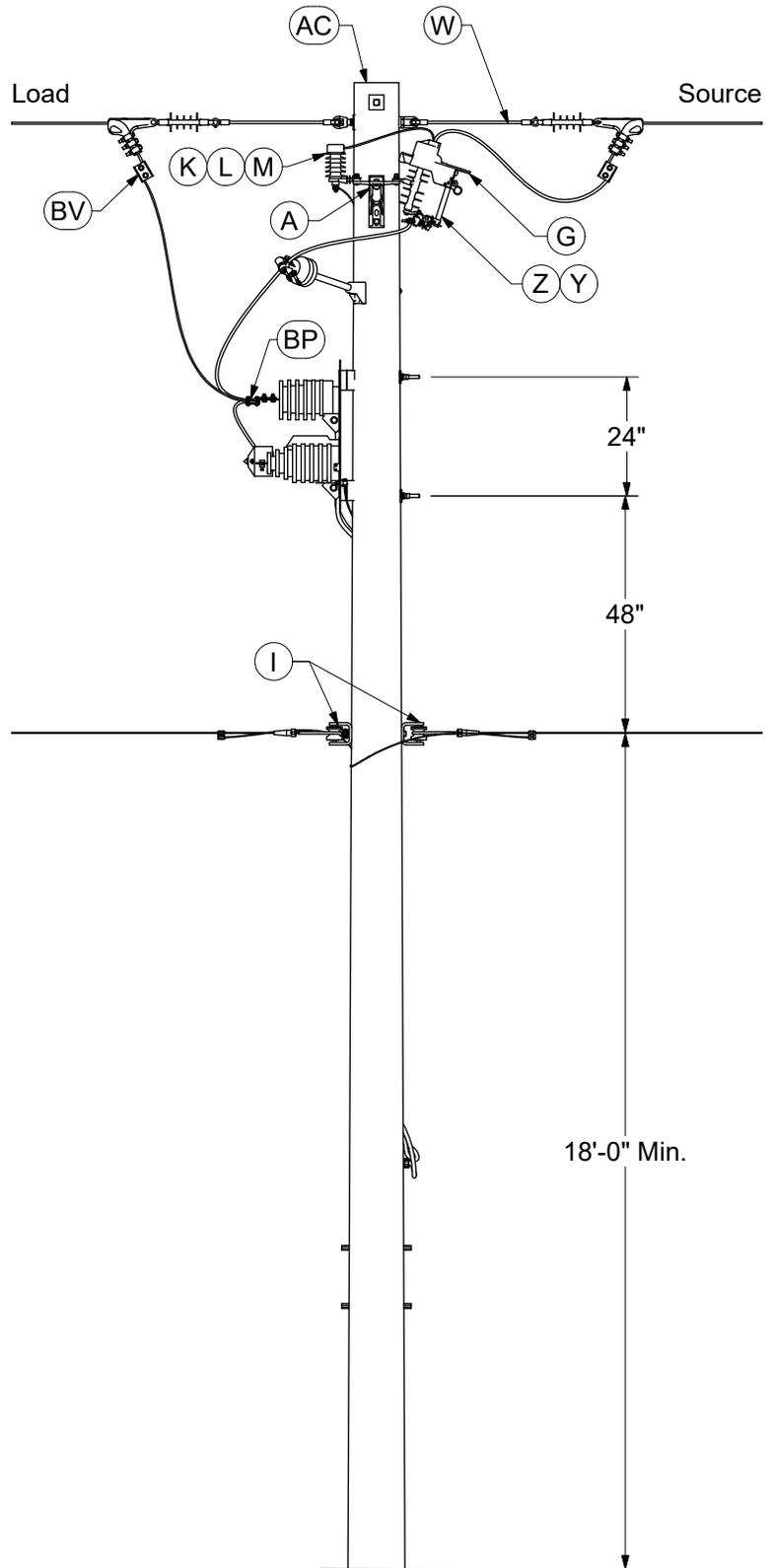
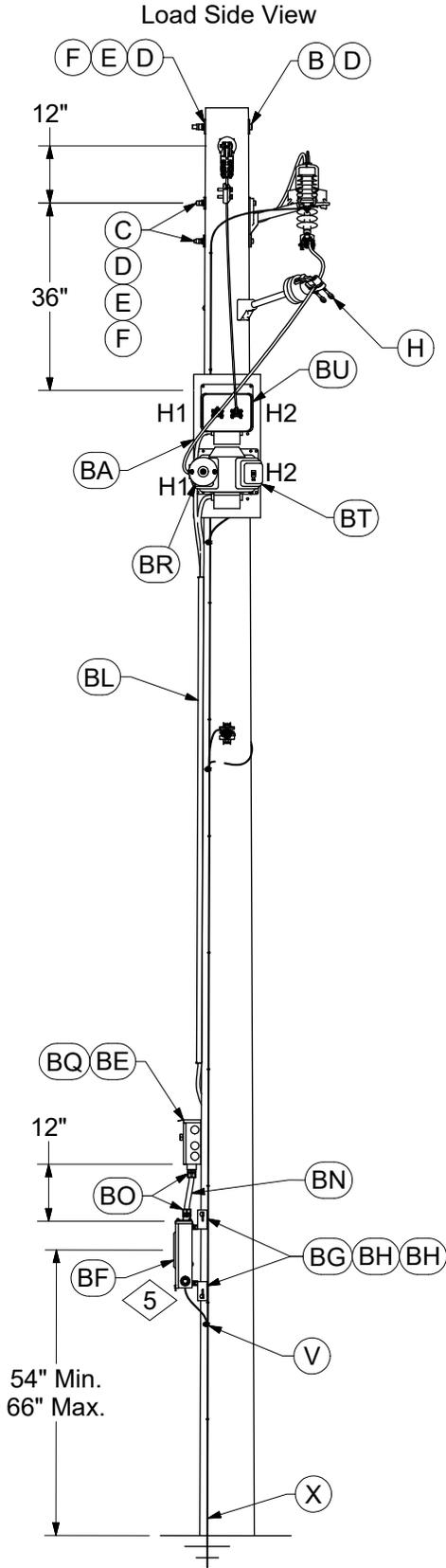
25 04 10 **
5kV
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ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 04 10 **	01	02
AA	23 17 294	Mounting - Primary Metering Unit, Cluster Mount for Three Phase		1	1
AB	23 52 068	Bolt, Mach., 5/8" x 16" w/ Square Nut		2	2
AC	23 66 207	Washer, Curved, Square, 5/8"		2	2
AD	23 66 134	Lock Washer - 5/8" Double Coil		2	2
AE	23 65 043	Lock Nut - 5/8" Square		2	2
AF	40 01 120	Enclosure - Secondary Connection		1	1
AG	40 04 245	Socket, Meter, 600 V, 3 Phase, 4 wire		1	-
	40 04 246	Socket, Meter, 600 V, 3 Phase, 3 Wire		-	1
AH	62 51 563	Bracket - Meter Socket Hanging		2	2
AI	23 60 007	Lag Screw - 1/2" x 4"		6	6
AJ	23 65 056	Lock Nut - 1/2" Square		6	6
AK	18 53 018	Wire, #2 Cu, S.D., 5kV (ft.)		30	60
AL	18 11 065	Cord, Hrd Srv, 2-#14 Cu, 600V		180	120
AM	12 51 217	Conduit - PVC, Split, 2" x 10'		1	1
AN	27 60 035	Iron Hanger, Galv., 3/4" wide (ft.)		2	2
AO	12 51 303	Conduit, Flex, 1", Steel		2	2
AP	40 53 612	Conduit - Connector 1" Steel		2	2
AQ	21 66 039	Screw, Cap, Hex Head, 3/8" - 16 TPI x 2"		2	2
AR	17 54 004	Connector, Split Bolt, #4 Sol Cu to #8 Sol Cu		4	4
AS	17 54 303	Connector, Cable to Flat #4 to 250 kcmil, Spade Type, Bronze		6	6
AT	17 05 195	Lug - Compression, 500 kcmil, 600V		6	6
AU	69 58 296	Guard, Wildlife, PT (H1) Bushing		3	5
@	AV	07 00 25 00 @ Clamp, Parallel Groove, PG*		6	5
@	AW	Meter Shop Wire Pack, Color Coded, 10-#12 (ft.)		5	2
@	AX	Meter Shop Potential Transformer		3	2
@	AY	Meter Shop Current Transformer		3	2
@	AZ	07 00 80 00 @ Lead Wire, PH (ft.)		#	#
	286	Op Code, Install Primary Metering		1	1

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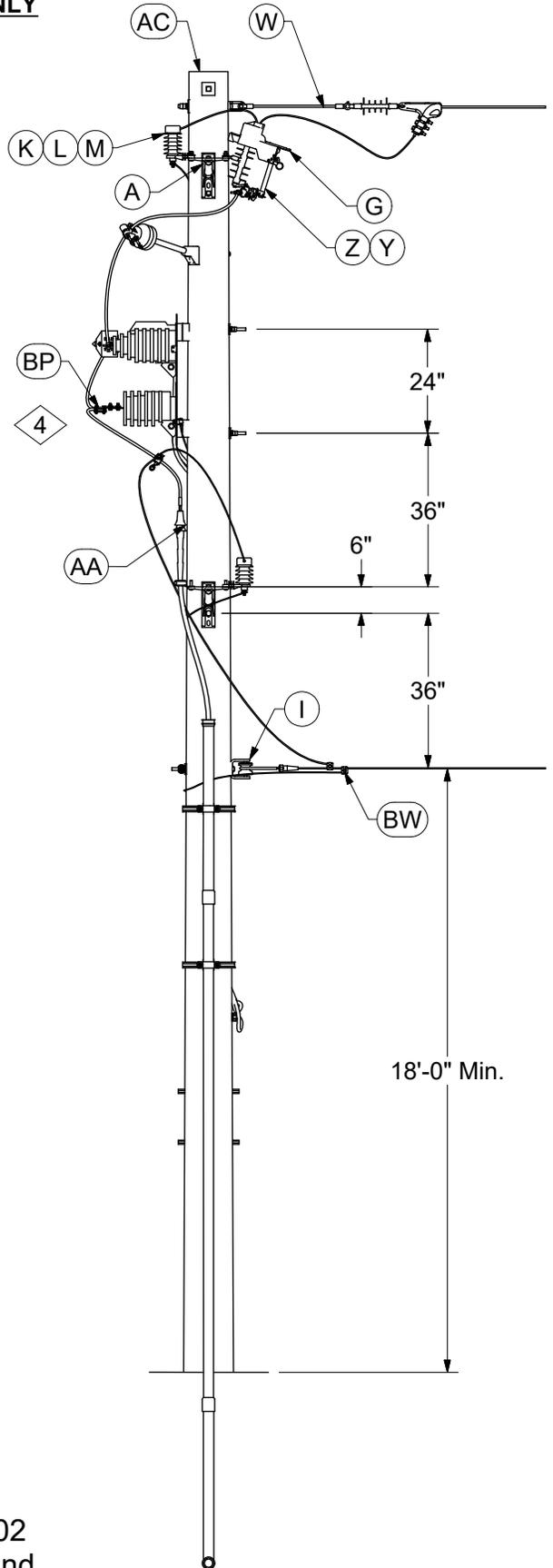
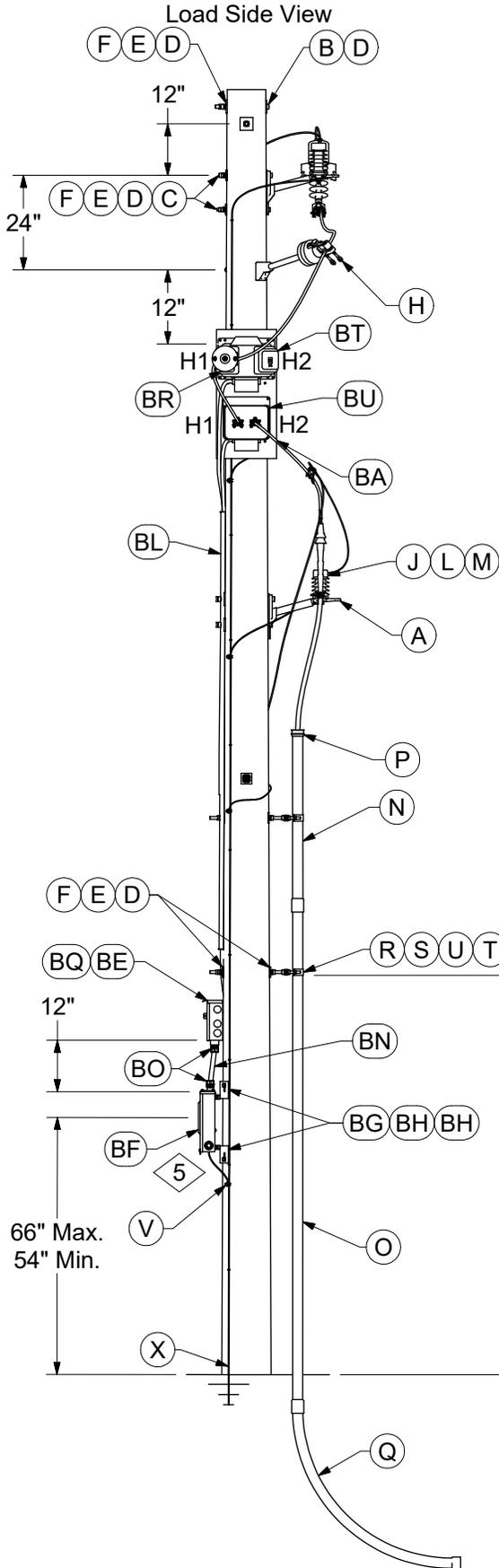
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Overhead

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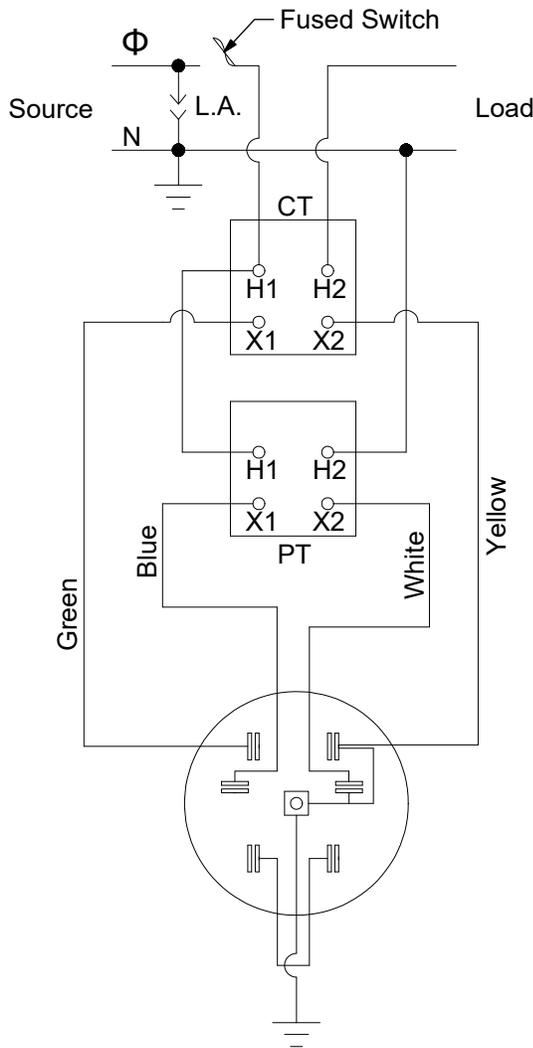
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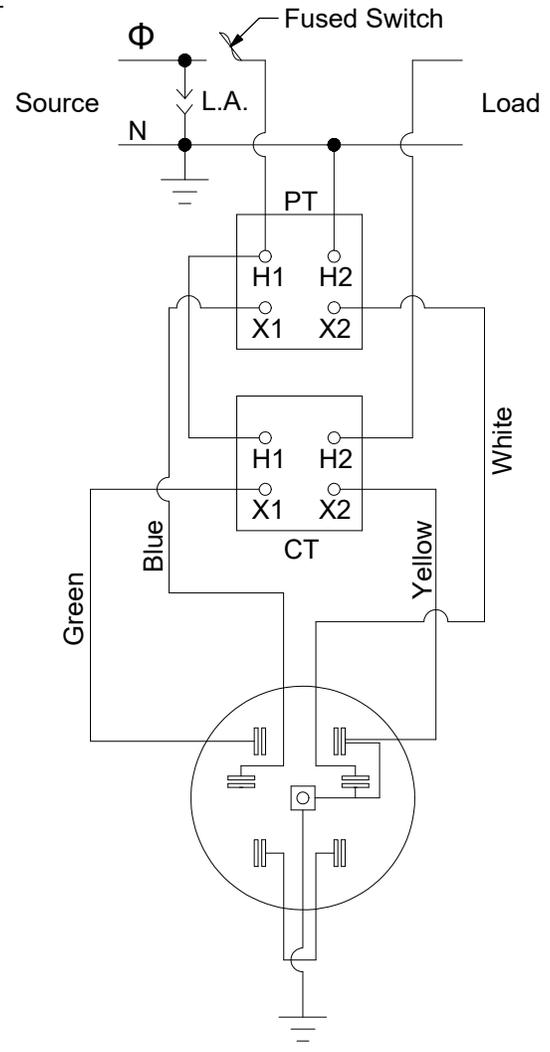
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Underground

REV	DATE	ENG	DESCRIPTION
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8	05/01/12	WYW	

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25 12 01 01



25 12 01 02

CONSTRUCTION NOTE(s):

1. Ground all instrument transformers.
2. If metered primary exceeds two spans, additional pole arresters must be installed on first pole beyond meter pole.
3. Ground clearance 4'-0". Barriers shall be installed for protection against vehicular traffic if necessary.
4. P.T. is installed above the C.T.
5. Rotate grounding unit and meter enclosure to give best clearance and climbing space.
6. When meter pole is located on customer property, disconnect switches shall be provided one span before.
7. Secondary wire lead on meter cluster is 30'-0" standard length. For tall poles, special order meter cluster with longer lead to meet max. height requirement for connection box.



METER INSTALLATIONS

Primary Metering Structure
1-Phase Overhead to Overhead & Underground Load Side

25 12 01 **
15kV
4 of 5

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ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs Material 25 12 01 **	01	02
A	23 56 063	Bracket - Equipment Mount 3 Position	1	2
B	23 52 065	Bolt, Mach., 5/8" x 12" w/ square nut	1	1
C	23 52 066	Bolt, Mach., 5/8" x 14" w/ square nut	2	5
D	23 66 207	Washer, Curved, Square, 5/8"	4	12
E	23 66 134	Lock Washer - 5/8" Double Coil	4	12
F	23 65 043	Lock Nut - 5/8" Square	4	12
G	23 17 411	Wildlife Guard - Cover Cutout	1	1
H	06 12 20 04	Insulator, Standoff, 18"	1	1
I	06 01 01 01	Clevis - Secondary	2	1
J	10 01 129	Arrester, Lightning, Terminal Pole, 9kV	-	1
K	10 01 144	Arrester, Lightning, 10kV	1	1
L	18 51 021	Wire, #6 Cu, S.D., Covered (ft.)	12	12
M	23 78 394	Clamp, Hotline, #6 to 2/0	1	2
N	12 01 280	Conduit - 2" Schedule 40 (ft.)	-	20
O	12 01 275	Conduit - 2" Schedule 80 (ft.)	-	10
P	40 83 491	Conduit - Coupling 2" Bell End	-	1
Q	12 51 180	Conduit - Bend 2", 36" Rad	-	1
R	23 67 190	Strap - Conduit 2" w/2" Bolts	-	2
S	23 65 053	Nut - 5/8" Jam	-	2
T	23 53 003	Bolt, DA, 5/8" Dia x 18" w/ 4 square nuts	-	2
U	23 06 087	Bracket - Standoff, 12"	-	2
V	17 53 003	Connector, Split Bolt, #4 Sol Cu to #8 Sol Cu	2	2
W	06 12 30 03 @	Double Deadend w/ FG Extensions	1	-
	06 12 30 01 @	Straight Deadend w/ FG Extension	-	1
@ X	12 00 10 **	Grounding Unit	1	1
@ Y	10 00 01 01 @	Fuse Sized by Engineer	1	1
@ Z	54 07 208	Switch, Fused, 100A, 15kV	1	1
	54 07 209	Switch, Fused, 200A, 15kV	1	1
@ AA	42 34 59 01	Termination, 15kV, #2	-	1
	42 34 59 03	Termination, 15kV, 4/0	-	1
@ AB	18 07 239	Cable, 15kV, 4/0 (ft.)	-	35
	18 17 238	Cable, 15kV, #2 (ft.)	-	35
@ AC	02 00 02 01	Pole	1	1

REV	DATE	ENG	DESCRIPTION
9	01/01/24	WYW	Converted to new format
8	05/01/12	WYW	



METER INSTALLATIONS

Primary Metering Structure
1-Phase Overhead to Overhead & Underground Load Side

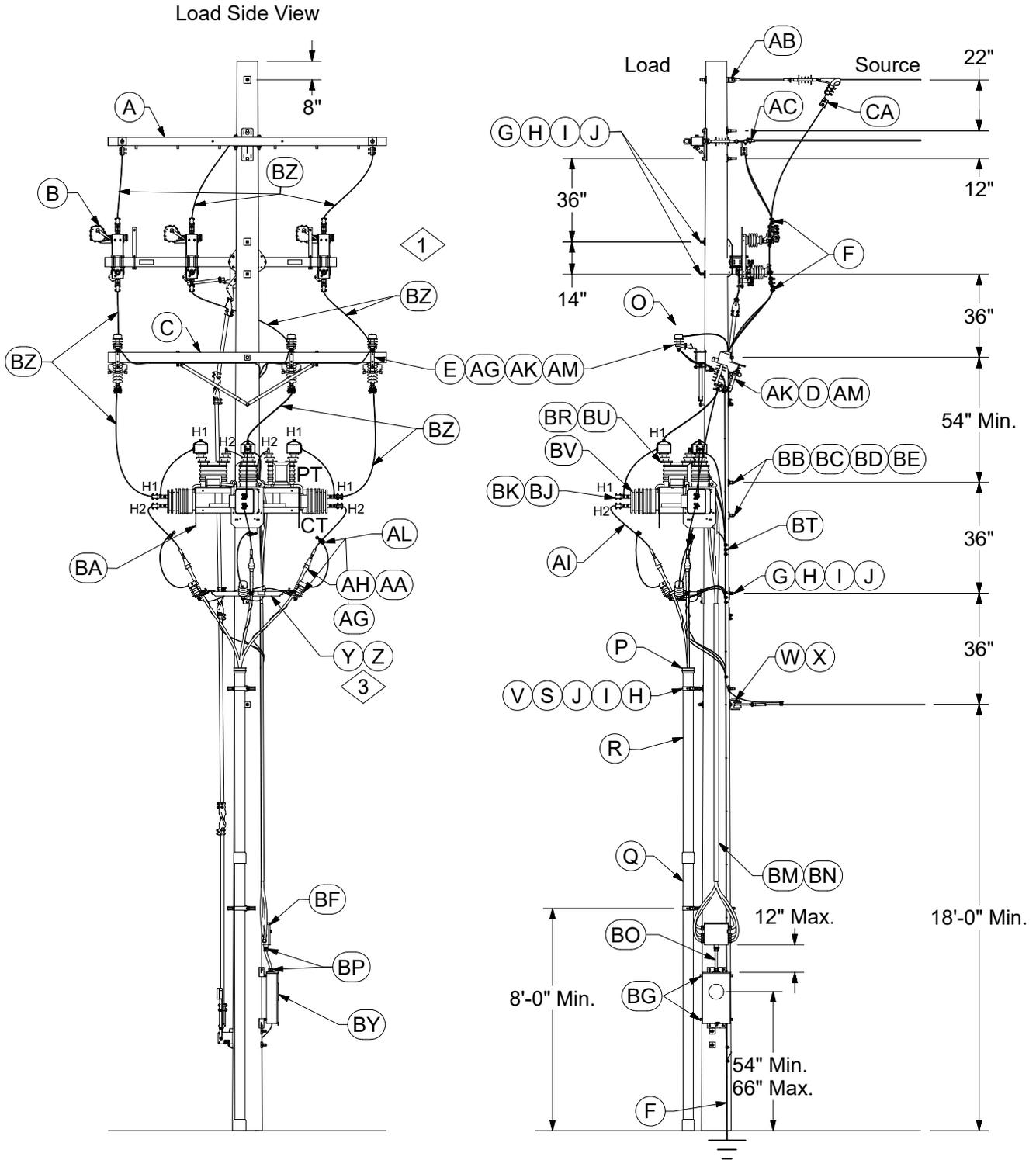
25 12 01 **
15kV
5 of 5

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ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 12 01 **	01	02
BA	69 04 112	CT/PT Metering Platform		1	1
BB	23 66 134	Lock Washer - 5/8" Double Coil		2	2
BC	23 65 043	Lock Nut - 5/8" Square		2	2
BD	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut		2	2
BE	40 01 120	Box - Secondary Connection		1	1
BF	40 04 210	Meter Enclosure		1	1
BG	62 51 563	Bracket - Meter Socket Hanging		2	2
BH	23 60 007	Lag Screw - 1/2" x 4"		4	4
BI	23 65 056	Lock Nut - 1/2" Square		2	2
BJ	18 51 019	Wire, #2 Cu, Covered, S.D., 15kV (ft.)		30	30
BK	18 11 065	Cord, Hrd Srv, 2-#14 Cu, 600V		30	30
BL	12 51 217	Conduit - 2" Split SCH 40		1	1
BM	27 60 035	Iron Hanger, Galv., 3/4" Wide (ft.)		2	2
BN	12 51 303	Conduit, Flex, 1", Non-Metallic		1	1
BO	40 53 612	Conduit - Connector 1" Steel		2	2
BP	17 54 303	Connector - Cable to Flat, #6-2/0		2	2
BQ	21 66 039	Screw, Hex Head Cap, 3/8"x2"		4	4
BR	69 58 296	Wildlife Guard - Transformer Bushing Cover		1	1
@ BS	Meter Shop	Wire Pack, Color Coded, 10-#12 (ft.)		5	5
@ BT	Meter Shop	Potential Transformer		1	1
@ BU	Meter Shop	Current Transformer		1	1
@ BV	07 00 80 00 @	Lead Wire, PH (ft.)		#	#
@ BW	07 00 25 00 @	Clamp, Parallel Groove		6	6
	285	Op Code, Install Primary Metering		1	1

REV	DATE	ENG	DESCRIPTION
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8	05/01/12	WYW	

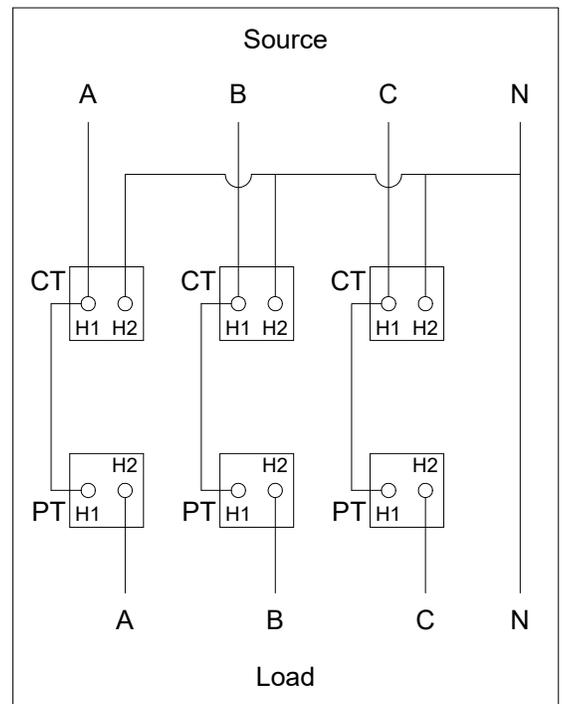
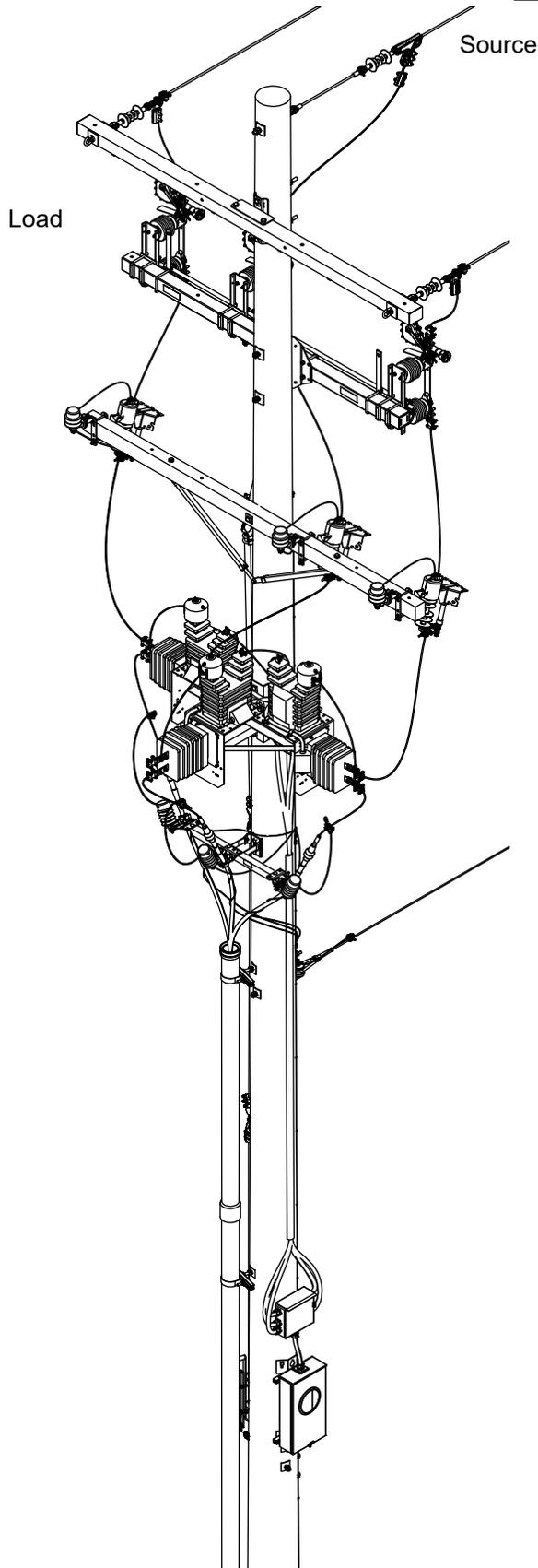
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25 12 07 02
4 Wire

REV	DATE	ENG	DESCRIPTION
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16	07/01/20	WYW	

MISSOURI ONLY

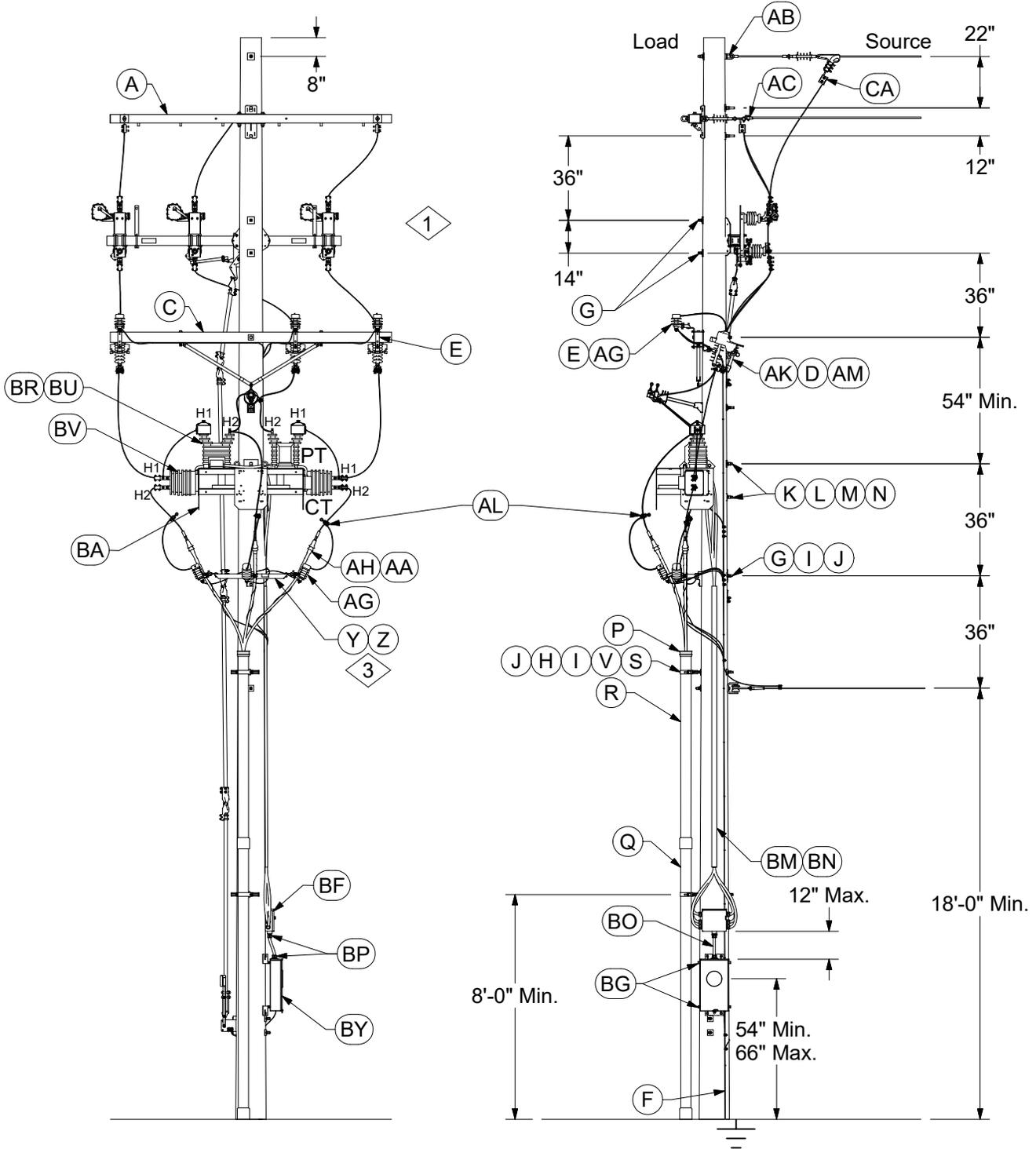


25 12 07 02
4 Wire

REV	DATE	ENG	DESCRIPTION
17	01/01/24	WYW	Converted to new format
16	07/01/20	WYW	

MISSOURI ONLY

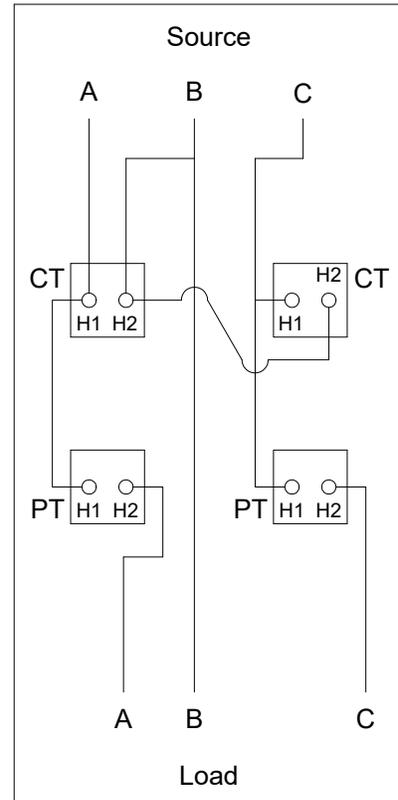
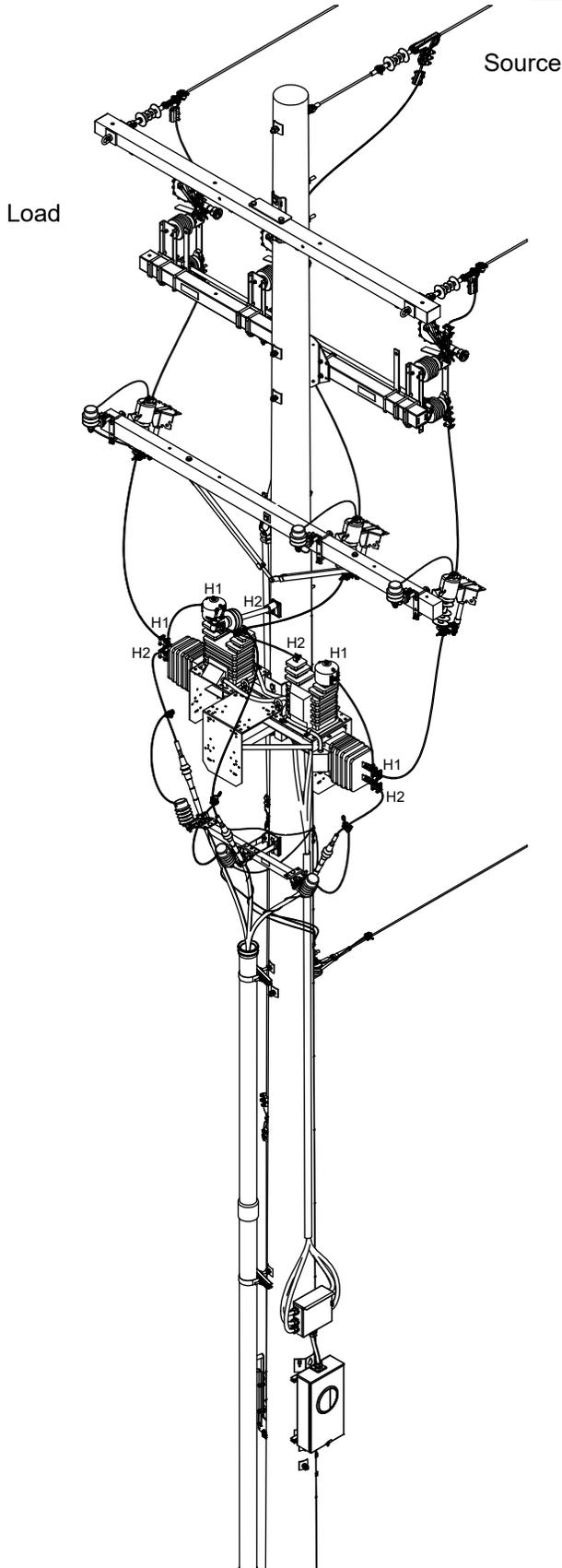
Load Side View



25 12 07 04
3 Wire

REV	DATE	ENG	DESCRIPTION
17	01/01/24	WYW	Converted to new format
16	07/01/20	WYW	

MISSOURI ONLY



25 12 07 04
3 Wire

REV	DATE	ENG	DESCRIPTION
17	01/01/24	WYW	Converted to new format
16	07/01/20	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-Phase OH to UG Load Side 3W & 4W 200 Amp

25 12 07 **

15kV

5 of 7

MISSOURI ONLY

CONSTRUCTION NOTE(s):

1. When meter pole is on customer property, switch shall be provided one span before.
2. Secondary wire lead on meter cluster is 30 ft. standard length. For tall poles, special order meter clusters with longer lead to meet max. height requirement for connection box.
3. Terminator mounting bracket is either Aluma Form (TB-EMB=1-6-PA-35-UE) or Hubbell (CBT-EMB-1-6-PA-35-UE). It is no longer stocked by Ameren.

REV	DATE	ENG	DESCRIPTION
17	01/01/24	WYW	Converted to new format
16	07/01/20	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-Phase OH to UG Load Side 3W & 4W 200 Amp

25 12 07 **
15kV
6 of 7

MISSOURI ONLY

DCS #	DESCRIPTION
25 12 07 02	5kV, 15kV, 3-Ph, 4W
25 12 07 04	5kV, 15kV, 3-Ph, 3W

ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs Material	25 12 07 **	02	04
A	04 00 42 03 @	Crossarm - Deadend, F/G 10'		1	1
B	54 07 239	Switch - 15kV, Group Operated		1	1
C	04 00 20 03 @	10' Crossarm		1	1
D	23 17 411	Wildlife Guard - Cover Cutout		3	3
E	23 56 088	Bracket - Crossarm Double Sided NEMA		3	3
F	17 54 177	Connector, Cable to Flat, Bronze, 1/0-500 kcmil		6	6
G	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut		3	3
H	23 66 207	Washer, Curved, Square, 5/8"		3	3
I	23 66 134	Lock Washer - 5/8" Double Coil		3	3
J	23 65 043	Lock Nut - 5/8" Square		3	3
K	23 52 254	Bolt, Mach., 3/4" x 16" w/ square nut		1	1
L	23 66 031	Washer, Curved, Square, 3/4"		2	2
M	23 66 135	Lock Washer - 3/4" Double Coil		1	1
N	23 65 042	Lock Nut - 3/4" Square		1	1
O	18 51 021	Wire, #6 Cu, S.D. Covered (ft.)		12	12
P	12 51 254	Conduit - Coupling 4" Bell End		1	1
Q	12 01 273	Conduit - 4" Schedule 80 (ft.)		10	10
R	12 01 278	Conduit - 4" Schedule 40 (ft.)		20	20
S	23 67 183	Strap - Conduit 4" w/ 2" Bolts		3	3
T	23 06 087	Bracket - Standoff, 12"		3	3
U	23 53 003	Bolt, DA, 5/8" Dia x 18" w/ 4 square nuts		3	3
V	23 65 053	Nut - 5/8" Jam		3	3
W	06 01 01 03	Single Clevis		1	1
X	17 54 004	Connector - Split Bolt, #4 Sol Cu. Thru #8 Sol Cu.		4	4
Y	17 08 057	Bracket, Mounting, Terminator		1	1
Z	23 60 011	Lag Screw - 5/8" x 5"		1	1
AA	23 67 193	Bracket, Cable Positioner		3	3
AB	06 12 30 03 @	Deadend on Pole with FG Extension		1	1
AC	06 12 35 01 @	Single Deadend on FG Crossarm		2	2
@	AD	18 51 024 Wire, Cu, 1/0, S.D. Covered (ft.)		20	20
		18 51 025 Wire, Cu, #4, S.D. Covered (ft.)		20	20
@	AE	17 05 197 Lug, Compression, 4/0, Cu		3	3
		17 05 215 Lug, Compression, #2, Cu		3	3
@	AF	04 00 20 02 @ Crossarm, Wood, 8' (Use 1/2 of V-Brace)		1	1
		04 00 20 03 @ Crossarm, Wood, 10' (Use 1/2 of V-Brace)		1	1
@	AG	12 00 01 01 Arrester, Lightning		6	6
@	AH	42 34 59 ** Termination, 15kV, #2 - 4/0 AWG Cable		3	3

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
17	01/01/24	WYW	Converted to new format
16	07/01/20	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-Phase OH to UG Load Side 3W & 4W 200 Amp

25 12 07 **
15kV
7 of 7

MISSOURI ONLY

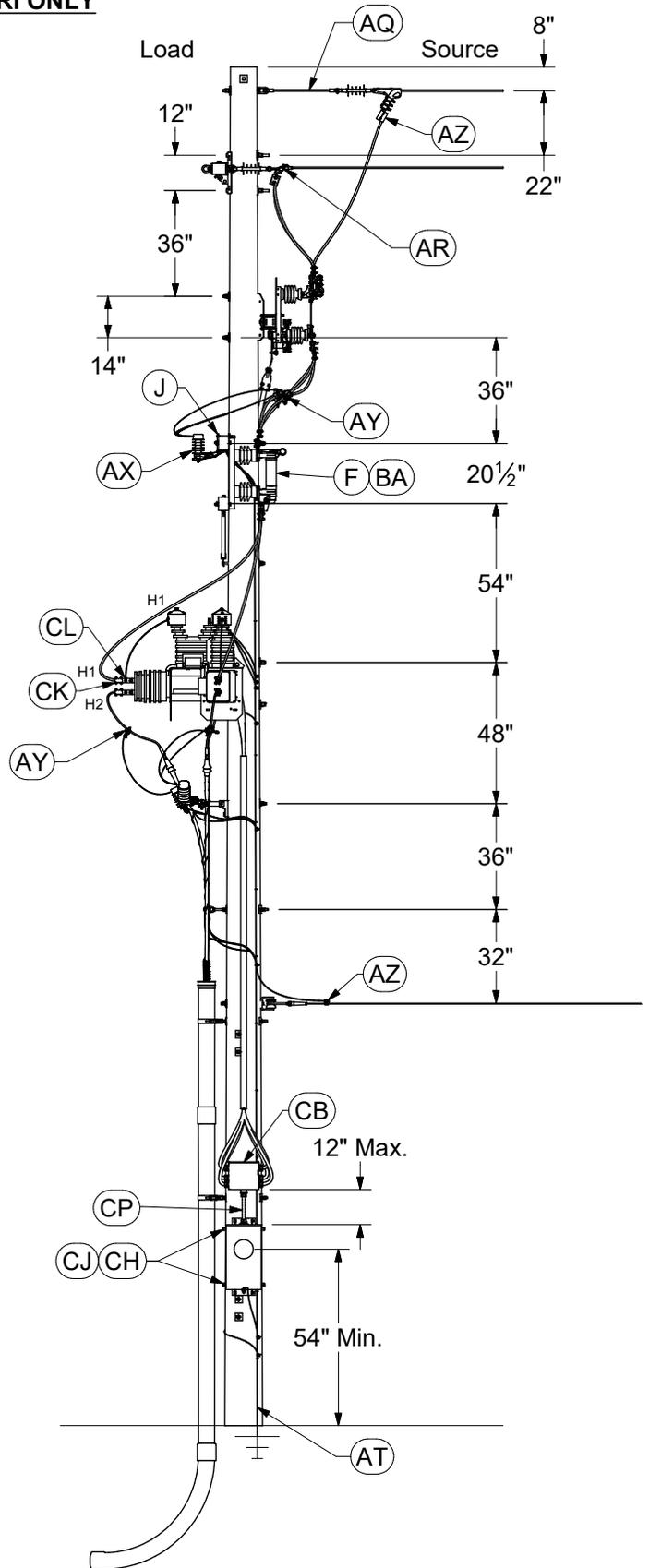
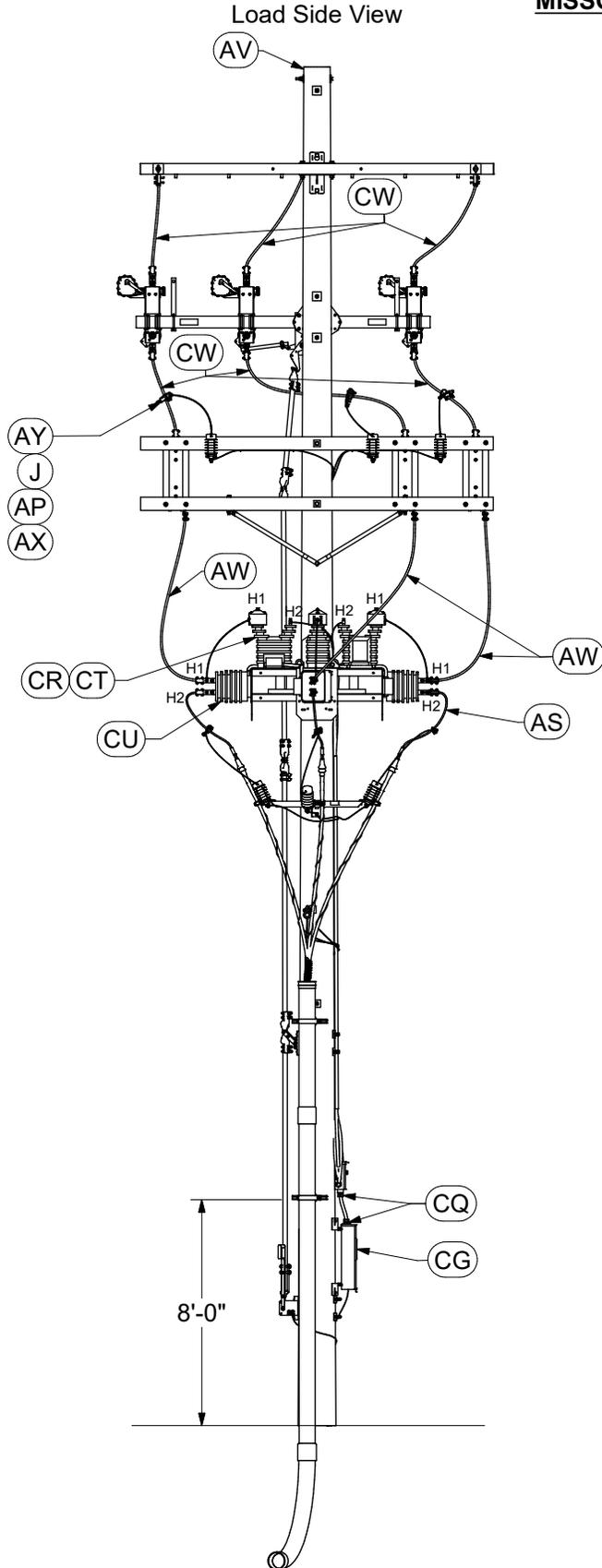
	ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs (Continued)	25 12 07 **	02	04
@	AI	18 07 237	Cable, 15kV, #2 (ft.)		35	35
		18 07 240	Cable, 15kV, #4/0 (ft.)		35	35
@	AJ	12 00 10 **	Grounding Unit		1	1
@	AK	54 07 208	Switch, Fused, 100A, 15kV		3	3
		54 07 209	Switch, Fused, 200A, 15kV		3	3
@	AL	07 00 21 00 @	Hot Line Clamp		6	6
@	AM	10 00 01 01 @	Fuse (Sized by Engineer)		3	3
@	AN	02 00 02 01	Pole		1	1

	ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 12 07 **	02	04
	BA	23 17 294	Mounting - Primary Metering Unit		1	1
	BB	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut		2	2
	BC	23 66 207	Washer, Curved, Square, 5/8"		2	2
	BD	23 66 134	Lock Washer - 5/8" Double Coil		2	2
	BE	23 65 043	Lock Nut - 5/8" Square		2	2
	BF	40 01 120	Box - Secondary Connection		1	1
	BG	62 51 563	Bracket - Meter Socket Hanging		2	2
	BH	23 60 007	Lag Screw - 1/2" x 4"		6	6
	BI	23 65 056	Lock Nut - 1/2" Square		6	6
	BJ	17 54 303	Connector - Cable to Flat, #6-2/0		6	4
	BK	17 55 121	Lug, Cu, #8 to 1/0 AWG, 5/16 in.		3	2
	BL	18 11 065	Cord, Hrd Srv, 2-#14, Cu, 600V		180	120
	BM	12 51 217	Conduit - 2" Split SCH 40, 2" x 10'		1	1
	BN	27 60 035	Iron Hanger (ft.)		2	2
	BO	40 52 468	Conduit, Flex, 1-1/2", Non-Metallic		1	1
	BP	40 52 072	Connector, Conduit, 1-1/2", Steel		2	2
	BQ	21 66 039	Screw, Hex Head Cap, 3/8"x2"		2	2
	BR	69 58 296	Wildlife Guard - Transformer Bushing Cover		3	2
	BS	17 54 145	Connector, Two Bolt, Cu, #8 - 1/0		-	1
	BT	17 54 142	Connector, PG, Cu, #8 - 750 kcmil		1	1
@	BU	Meter Shop	Potential Transformer, 15kV		3	2
@	BV	Meter Shop	Current Transformer		3	2
@	BW	Meter Shop	Wire Pack of 10 #12, Color Coded (ft.)		5	5
@	BX	18 51 019	Wire, #2 Cu, S.D., Covered (ft.)		30	60
		18 53 018	Wire, #2 Cu, S.D., Covered, 5kV, (ft.)		30	60
@	BY	40 04 245	Socket, Meter, Instrument Rated, Pre-Wired, 13-Terminal		1	-
		40 04 246	Socket, Meter, 600 V, Instrument Rated, Pre-Wired, 8-Terminal		-	1
@	BZ	07 00 80 00 @	Lead Wire, PH (ft.)		#	#
@	CA	07 00 25 00 @	Clamp, Parallel Groove		3	3
		286	Op Code, Install Primary Metering		1	1

DISTRIBUTION CONSTRUCTION STANDARDS

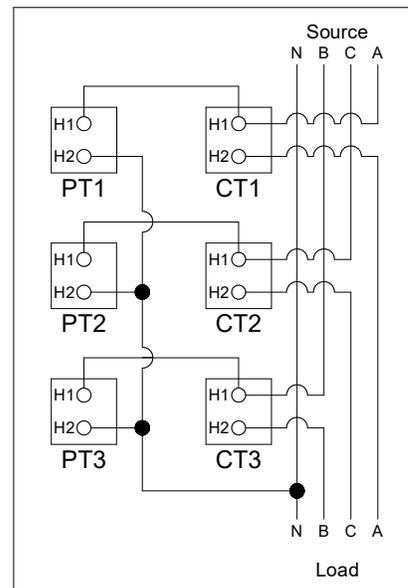
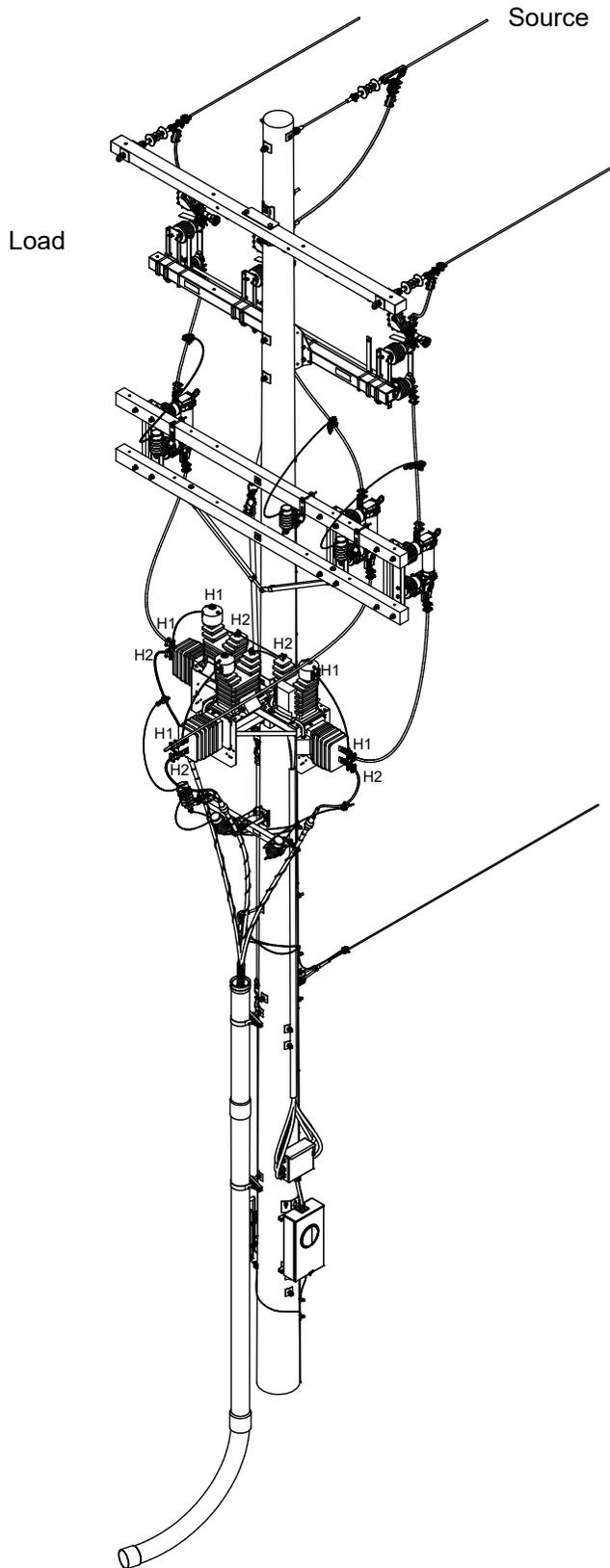
REV	DATE	ENG	DESCRIPTION
17	01/01/24	WYW	Converted to new format
16	07/01/20	WYW	

MISSOURI ONLY



REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	03/10/16	WYW	

MISSOURI ONLY



4 Wire

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	03/10/16	WYW	



METER INSTALLATIONS
Primary Meter Structure
3-Phase OH to UG Load Side 4W SM-5 Fuse

25 12 08 01
5kV, 15kV
3 of 5

MISSOURI ONLY

CONSTRUCTION NOTE(s):

1. When meter pole is on customer property, switch shall be provided one span before.
2. Secondary wire lead on meter cluster is 30 ft. standard length. For tall poles, special order meter cluster with longer lead to meet max. height requirement for connection box.
3. Terminator mounting bracket is either Aluma Form (TB-EMB-1-6-PA-35-UE) or Hubbell (CTB-EMB-1-6-PA-35-UE). It is no longer stocked by Ameren.
4. Fuse sized by Ameren Engineer.
5. Ground all instrument transformers, arresters, and mounting assembly to the grounding unit.
6. Install barriers for protection against vehicular traffic where necessary.
7. Maintain a minimum of 15" clearance between 15kV phases or phase to ground.
8. Maintain minimum of 5'-0" clearance between the aluminum mounting platform and the crossarm.
9. Maintain a minimum of 40" between the energized conductors and the pole on climbing side of the pole; maintain a minimum of 19" between the energized lateral and vertical conductors and the pole on non climbing side of the pole. Reference from NESC, Rule 239E.
10. Maintain a minimum of 40" between any part of the aluminum mounting platform and conductors of 4 or 12kV underbuild.
11. For wire color coding on PT and CT secondaries, refer to System Meter drawings.
12. If metering structure is located within a substation, the metering and L.A. ground wires must be connected to the substation ground mat.
13. To enhance the protection of the metering equipment, ensure that the tap for the phase conductor to the arrester is as short as possible in distance.

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	03/10/16	WYW	



METER INSTALLATIONS
 Primary Meter Structure
 3-Phase OH to UG Load Side 4W SM-5 Fuse

25 12 08 01
5kV, 15kV
4 of 5

MISSOURI ONLY

ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs Material	25 12 08 **	01
A	04 00 42 03 @	Crossarm - Deadend, F/G 10'		1
B	41 01 008	10' Crossarm, Wood, 3-1/2" x 4-1/2"		2
C	41 56 016	Brace - 60" V		2
D	54 07 239	Switch - 15kV, Group Operated		1
E	17 54 177	Connector, Cable to Flat, Bronze, 1/0-500 kcmil		6
F	54 03 051	Switch, 15kV, SM-5 Fuse Mounting, 400A		3
G	17 54 303	Connector - Cable to Flat, #6-2/0		12
H	23 52 248	Bolt, 1/2" X 1.5", GALV STL, HEX		12
I	12 56 053	Washer, Flat, 1/2", SS		50
J	17 58 054	Bracket, Arrester/Cutout Mounting		3
K	23 52 036	Bolt, Mach., 1/2" x 5" w/ square nut		12
L	23 52 038	Bolt, Mach., 1/2" x 6" w/ square nut		2
M	23 66 017	Washer - Round 1/2"		12
N	23 66 133	Lock Washer - Double Coil 1/2"		14
O	23 65 056	Lock Nut - 1/2" Square		2
P	23 52 065	Bolt, Mach., 5/8" x 12" w/ square nut		3
Q	23 52 066	Bolt, Mach., 5/8" x 14" w/ square nut		5
R	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut		2
S	23 66 207	Washer, Curved, Square, 5/8"		14
T	23 66 134	Lock Washer - 5/8" Double Coil		16
U	23 65 043	Lock Nut - 5/8" Square		14
V	23 52 254	Bolt, Mach., 3/4" x 16" w/ square nut		2
W	23 66 131	Washer, Square, 3/4"		2
X	23 66 031	Washer, Curved, Square, 3/4"		10
Y	23 66 135	Lock Washer - 3/4" Double Coil		7
Z	23 65 042	Nut, Locking, Square, Galvanized, 3/4"		1
AA	23 53 003	Bolt, DA, 5/8" Dia x 18" w/ 4 square nuts		2
AB	23 65 053	Nut - 5/8" Jam		2
AC	23 06 087	Bracket - Standoff, 12"		2
AD	12 01 303	Conduit - 5" Schedule 40 (ft.)		1
AE	12 01 272	Conduit - 5" Schedule 80 (ft.)		1
AF	12 51 206	Conduit - Bend 5", 36" Rad		1
AG	12 51 233	Coupling, Bell End, 5"		1
AH	23 67 184	Strap - Conduit 5" w/ 2" Bolts		2
AI	23 65 012	Eyenuit, 5/8"		1
AJ	23 68 181	Shackle - Deadend		1
AK	23 17 207	Grip - Cable 1-3/4", 2" Dia		1
AL	17 54 004	Connector - Split Bolt, #4 Sol Cu - #8 Sol Cu		1
AM	17 08 057	Bracket, Mounting, Terminator		1
AN	23 67 193	Bracket, Cable Positioner		3
AO	23 60 011	Lag Screw - 5/8" x 5"		1
AP	18 51 021	Wire, #6 Cu., Covered, S.D. (ft.)		25

**DISTRIBUTION
 CONSTRUCTION STANDARDS**

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	03/10/16	WYW	



METER INSTALLATIONS
 Primary Meter Structure
 3-Phase OH to UG Load Side 4W SM-5 Fuse

25 12 08 01
5kV, 15kV
5 of 5

MISSOURI ONLY

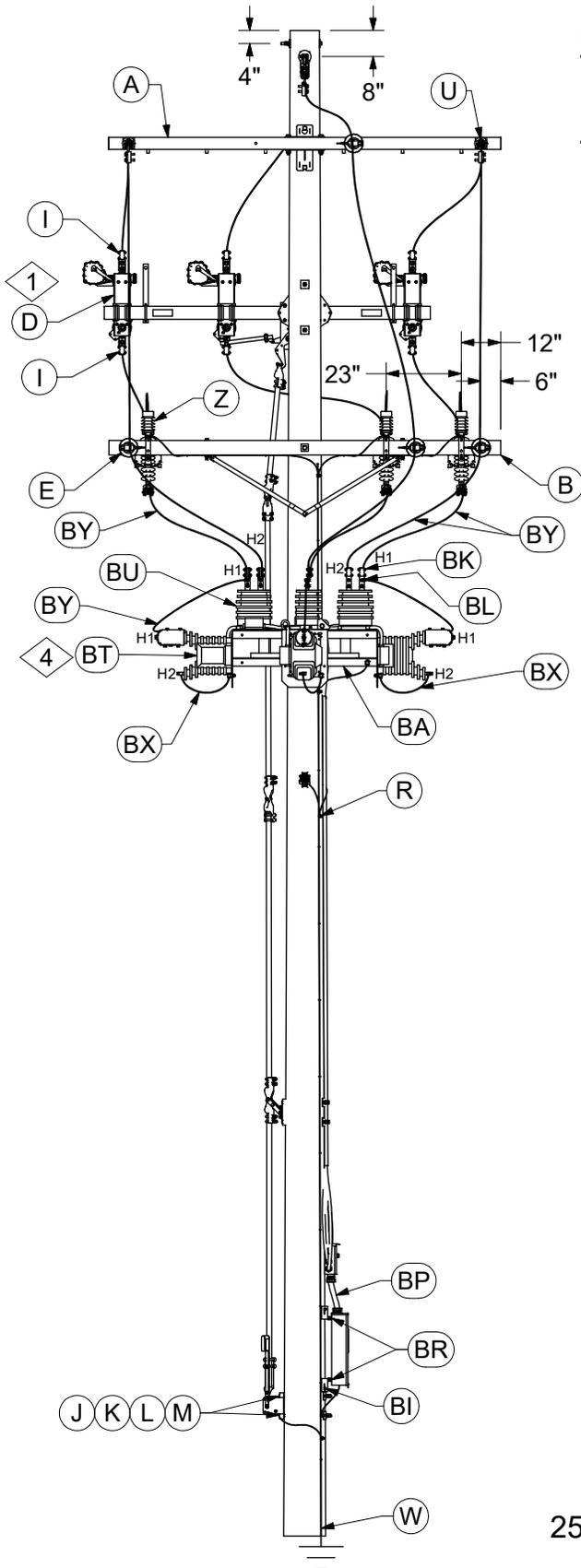
	ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs (Continued)	25 12 08 **	01
	AQ	06 12 30 03 @	Deadend on Pole, FG Extension		1
	AR	06 12 35 01 @	Single Deadend on FG Crossarm		2
@	AS	18 07 243	Cable, 750 kcmil Al, CN (ft.)		#
		18 07 244	Cable, 750 kcmil Cu, CN (ft.)		#
@	AT	42 34 61 02 @	Termination, 15kV, 750 kcmil Cu. CN		3
		42 34 61 04 @	Termination, 15kV, 750 kcmil Al. CN		3
@	AU	12 00 10 **	Grounding Unit		1
@	AV	02 00 02 01	Pole		1
@	AW	07 00 80 00 @	Lead Wire, PH (ft.)		1
@	AX	12 00 01 01 @	Arrester, Lightning		1
@	AY	07 00 21 00 @	Hot Line Clamp		1
@	AZ	07 00 25 00 @	Clamp, Parallel Groove		1
@	BA	10 00 01 01 @	Fuse Sized by Engineer		1

	ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 12 08 **	01
	CA	23 17 294	Mounting - Primary Metering Unit, Cluster Mount for Three Phase		1
	CB	40 01 120	Box - Secondary Connection		1
	CC	23 52 068	Bolt, Mach., 5/8" x 16" w/ Square Nut		1
	CD	23 66 207	Washer, Curved, Square, 5/8"		1
	CE	23 66 134	Lock Washer - 5/8" Double Coil		1
	CF	23 65 043	Lock Nut - 5/8" Square		1
	CG	40 04 245	Socket, Meter, 600 V, 3 Phase, 4 wire		1
	CH	62 51 563	Bracket - Meter Socket Hanging		2
	CI	21 66 039	Screw, Hex Head Cap, 3/8"x2"		4
	CJ	23 60 007	Lag Screw - 1/2" x 4"		4
	CK	17 54 303	Connector - Cable to Flat, #6-2/0		1
	CL	17 55 121	Lug, Cu, #8 to 1/0 AWG, 5/16 in.		3
	CM	18 11 065	Cord, Hrd Srv, 2-#14Cu, 600V		1
	CN	12 51 217	Conduit - 2" Split SCH 40		1
	CO	27 60 035	Iron Hanger, Galv., 3/4" wide (ft.)		2
	CP	40 52 468	Conduit, Flex, 1-1/2", Non-Metallic (ft.)		20
	CQ	40 52 072	Connector, Conduit, 1-1/2", Steel		2
	CR	69 58 296	Guard, Wildlife, PT (H1) Bushing		3
@	CS	18 51 019	Wire, #2 Cu, Covered S.D. (ft.)		30
		18 53 018	Wire, #2 Cu, S.D. 5kV (ft.)		30
@	CT	Meter Shop	Potential Transformer		3
@	CU	Meter Shop	Current Transformer		3
@	CV	Meter Shop	Wire Pack, Color Coded, 10-#12 (ft.)		5
@	CW	07 00 80 00 @	Lead Wire, PH (ft.)		#
@	CX	07 00 25 00 @	Clamp, Parallel Groove		6
		286	Op Code, Install Primary Metering		1

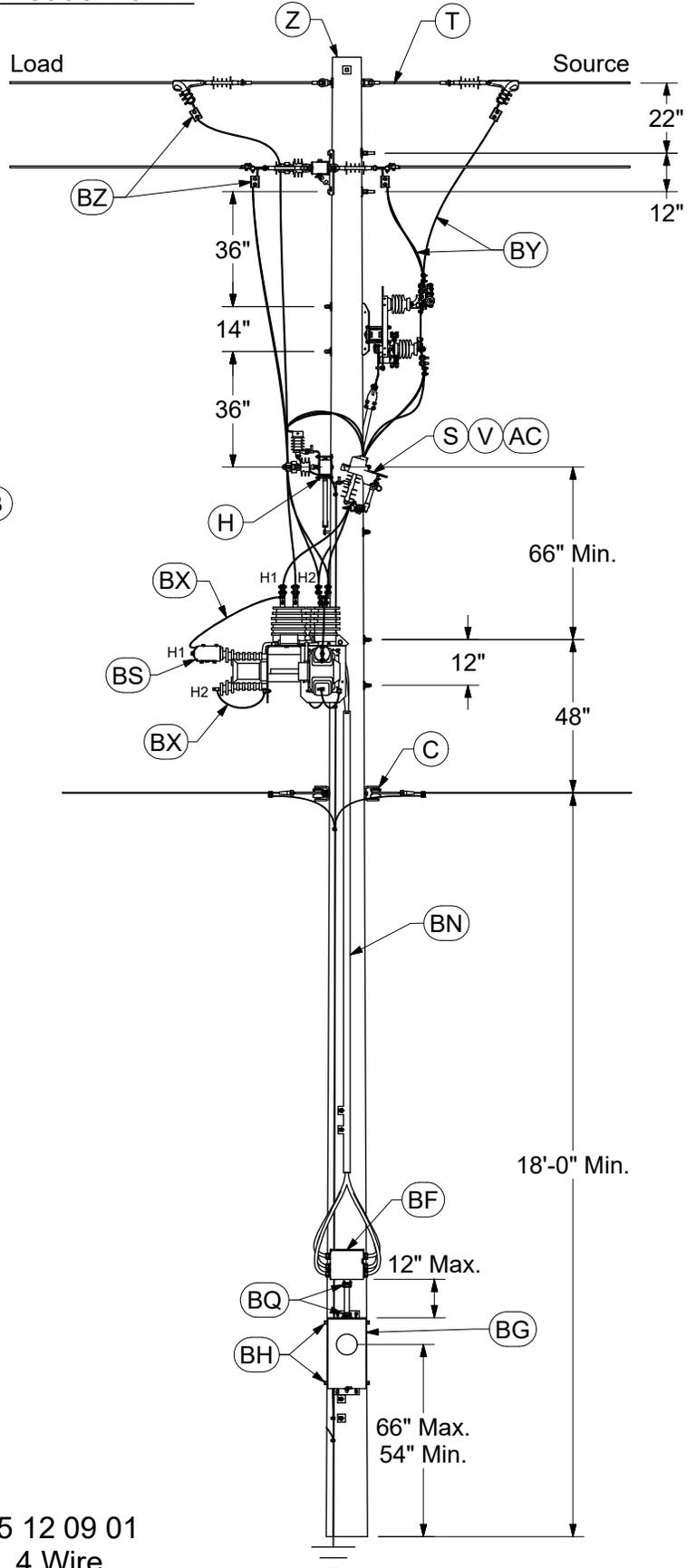
**DISTRIBUTION
 CONSTRUCTION STANDARDS**

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	03/10/16	WYW	

Load Side View



MISSOURI ONLY



25 12 09 01
4 Wire

REV	DATE	ENG	DESCRIPTION
13	01/01/24	WYW	Converted to new format
12	09/23/11		

METER INSTALLATIONS

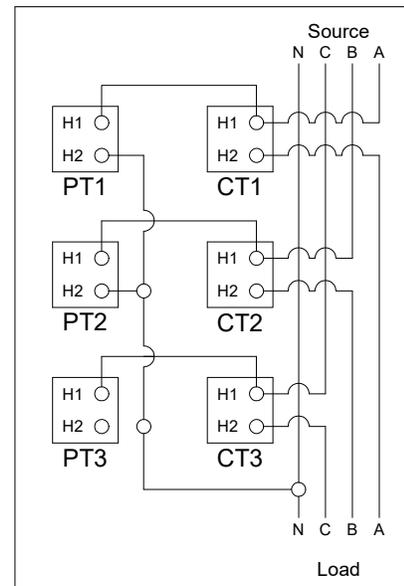
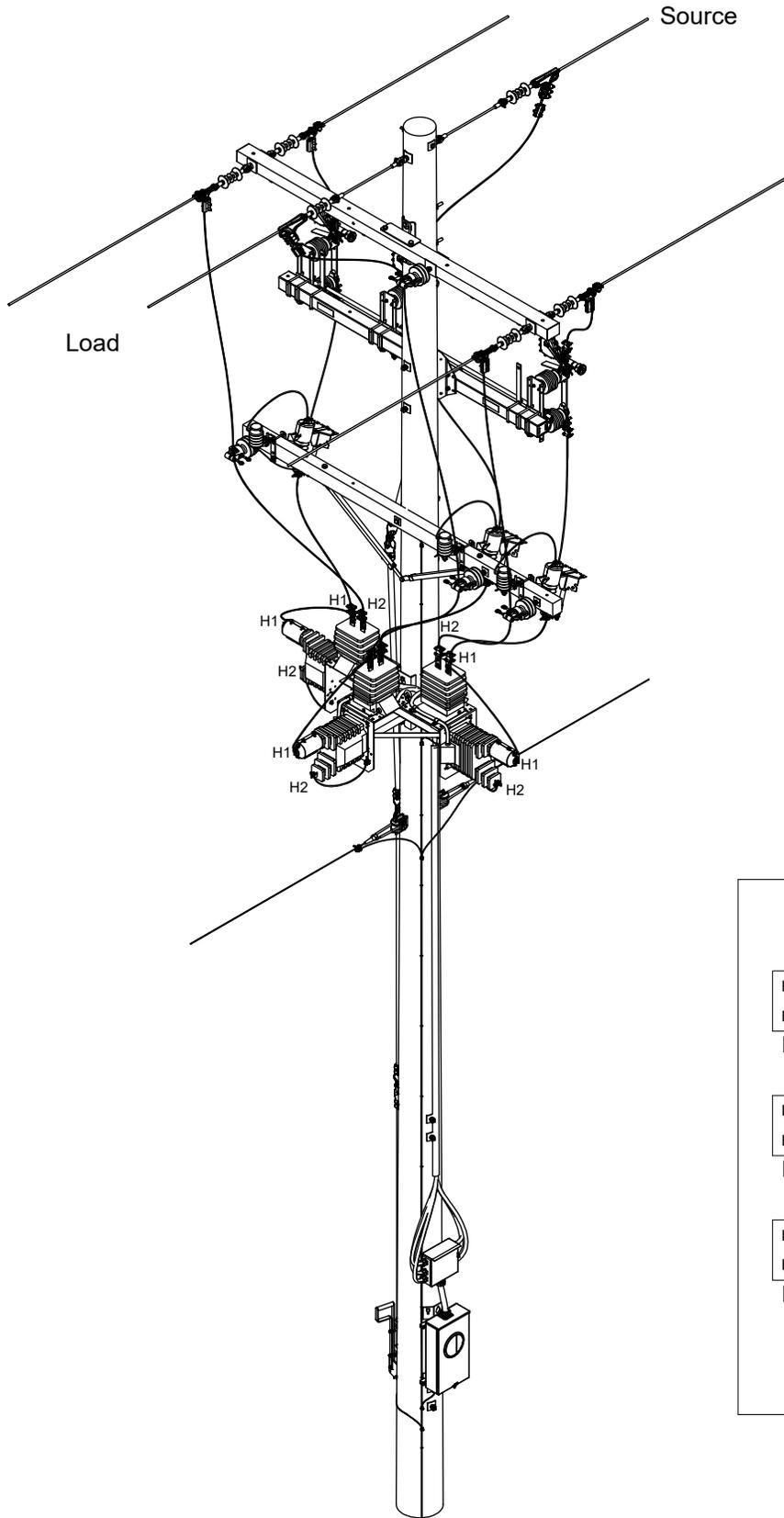
Primary Meter Structure
3-Phase OH to OH Load Side 3W & 4W 200 Amp

25 12 09 **

5kV, 15kV

2 of 6

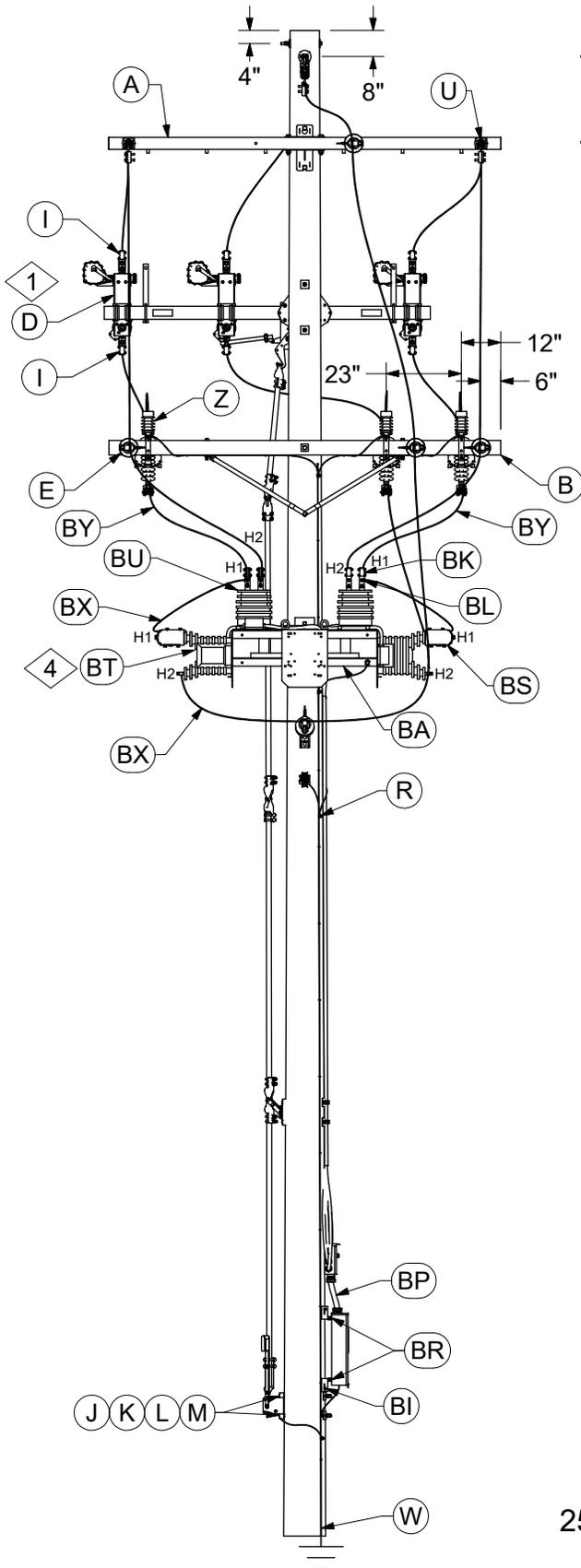
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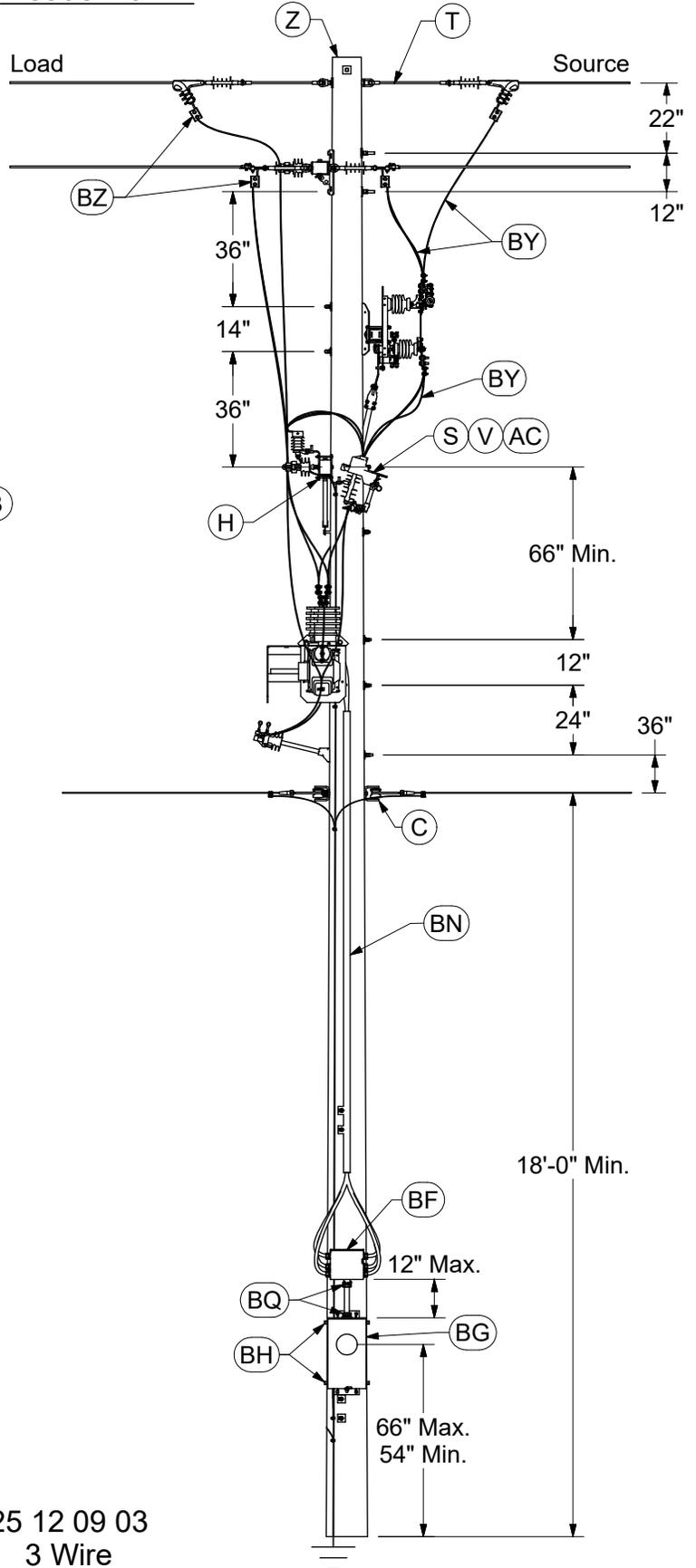
25 12 09 01
4 Wire

REV	DATE	ENG	DESCRIPTION
13	01/01/24	WYW	Converted to new format
12	09/23/11		

Load Side View



MISSOURI ONLY



25 12 09 03
3 Wire

REV	DATE	ENG	DESCRIPTION
13	01/01/24	WYW	Converted to new format
12	09/23/11		

METER INSTALLATIONS

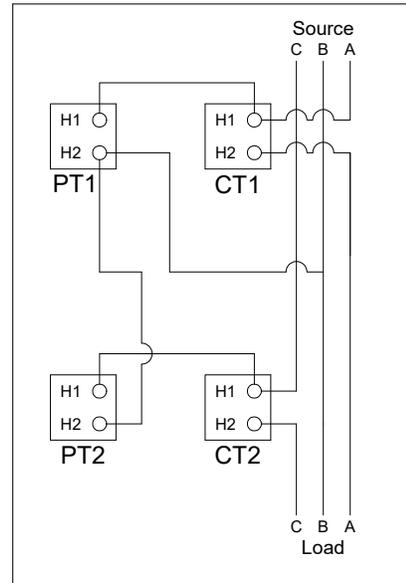
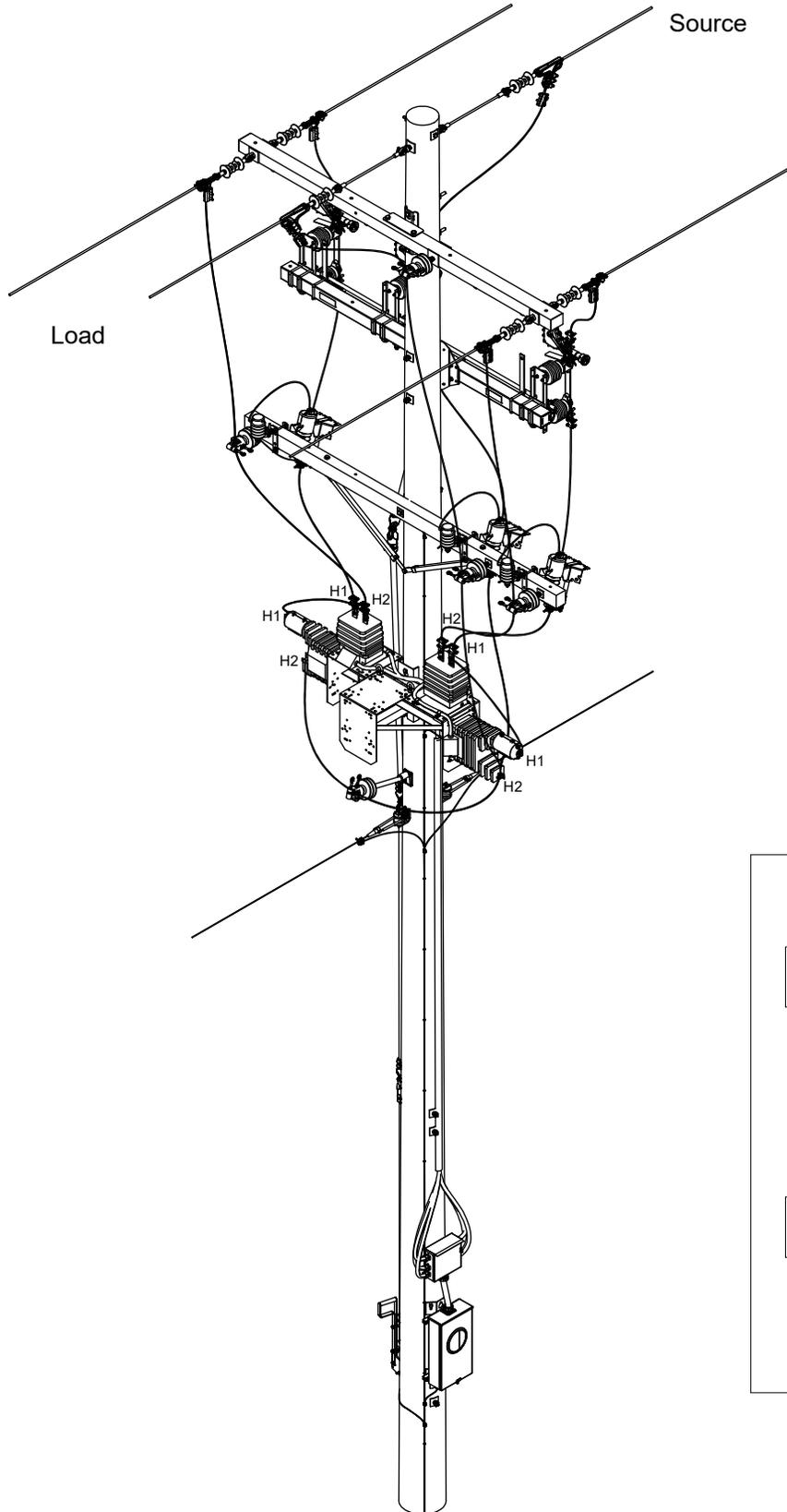
Primary Meter Structure
3-Phase OH to OH Load Side 3W & 4W 200 Amp

25 12 09 **

5kV, 15kV

4 of 6

MISSOURI ONLY



25 12 09 03
3 Wire

REV	DATE	ENG	DESCRIPTION
13	01/01/24	WYW	Converted to new format
12	09/23/11		



METER INSTALLATIONS

Primary Meter Structure
3-Phase OH to OH Load Side 3W & 4W 200 Amp

25 12 09 **
5kV, 15kV
5 of 6

MISSOURI ONLY

CONSTRUCTION NOTE(s):

1. When meter pole is on customer property, switch shall be provided one span before.
2. Secondary wire lead on meter cluster is 30 ft. standard length. For tall poles, special order meter cluster with longer lead to meet maximum height requirement for connection box.
3. Switch is to be operated with rotating or reciprocating control rod accessible from ground level. Control rod to be furnished with insulating section above handle.
4. C.T.s are installed above the P.T.s.

DCS #	DESCRIPTION
25 12 09 01	5kV, 15kV, 3-PH, 4W
25 12 09 03	5kV, 15kV, 3-PH, 3W

ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs Material	25 12 09 **	01	03
A	04 00 42 03 @	Crossarm - Deadend, F/G, 10'		1	1
B	04 00 20 03 @	Crossarm - Wood, 10'		1	1
C	06 01 01 02	Double Clevis		1	1
D	54 07 239	Switch - 15kV, Group Operated		1	1
E	25 05 143	Insulator, Vice Top, 12kV		-	2
F	23 62 028	Pin, Insulator, Long Shank		-	2
G	23 66 132	Washer, Flat, Sq., 4" x 4", w/ 13/16" Hole		-	4
H	23 56 088	Bracket - Crossarm Double Sided NEMA		3	3
I	17 54 177	Connector, Cable to Flat, Bronze, 1/0-500 kcmil		3	6
J	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut		6	4
K	23 66 207	Washer, Curved, Square, 5/8"		6	6
L	23 66 134	Lock Washer - 5/8" Double Coil		6	6
M	23 65 043	Lock Nut - 5/8" Square		6	6
N	23 52 038	Bolt, Mach., 1/2" x 6" w/ square nut		12	12
O	23 66 133	Lock Washer - Double Coil 1/2"		12	12
P	23 65 056	Lock Nut - 1/2" Square		12	12
Q	18 51 021	Wire, #6 Cu, S.D., Covered (ft.)		35	35
R	17 54 004	Connector - Split Bolt, #4 Sol CU thru #8 Sol CU		6	6
S	23 17 411	Wildlife Guard - Cover Cutout		3	3
T	06 12 30 03 @	Deadend on Pole, FG Extension		1	1
U	06 12 35 02 @	Double Deadend on FG Crossarm		2	2
@ V	54 07 208	Switch, Fused, 100A, 15kV		3	3
	54 07 209	Switch, Fused, 200A, 15kV		3	3
@ W	12 00 10 **	Grounding Unit		1	1
@ X	12 00 01 01 @	Arrester, Lightning		3	3
@ Y	07 00 80 00 @	Lead Wire, PH (ft.)		#	#
@ Z	02 00 02 01	Pole		1	1
@ AA	07 00 21 00 @	Hot Line Clamp		3	3
@ AB	07 00 25 00 @	Clamp, Parallel Groove		3	3
@ AC	10 00 01 01 @	Fuse Sized by Engineer		3	3

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
13	01/01/24	WYW	Converted to new format
12	09/23/11		



METER INSTALLATIONS

Primary Meter Structure
3-Phase OH to OH Load Side 3W & 4W 200 Amp

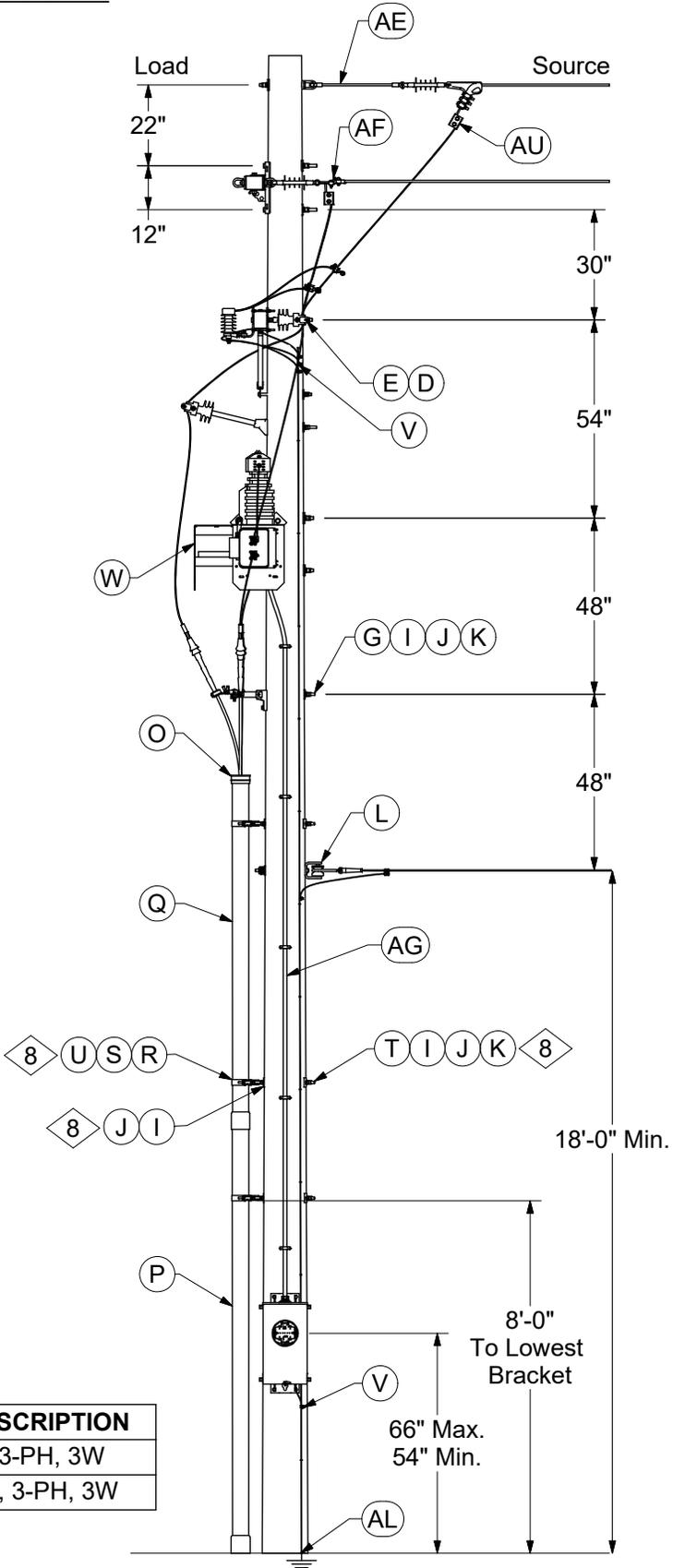
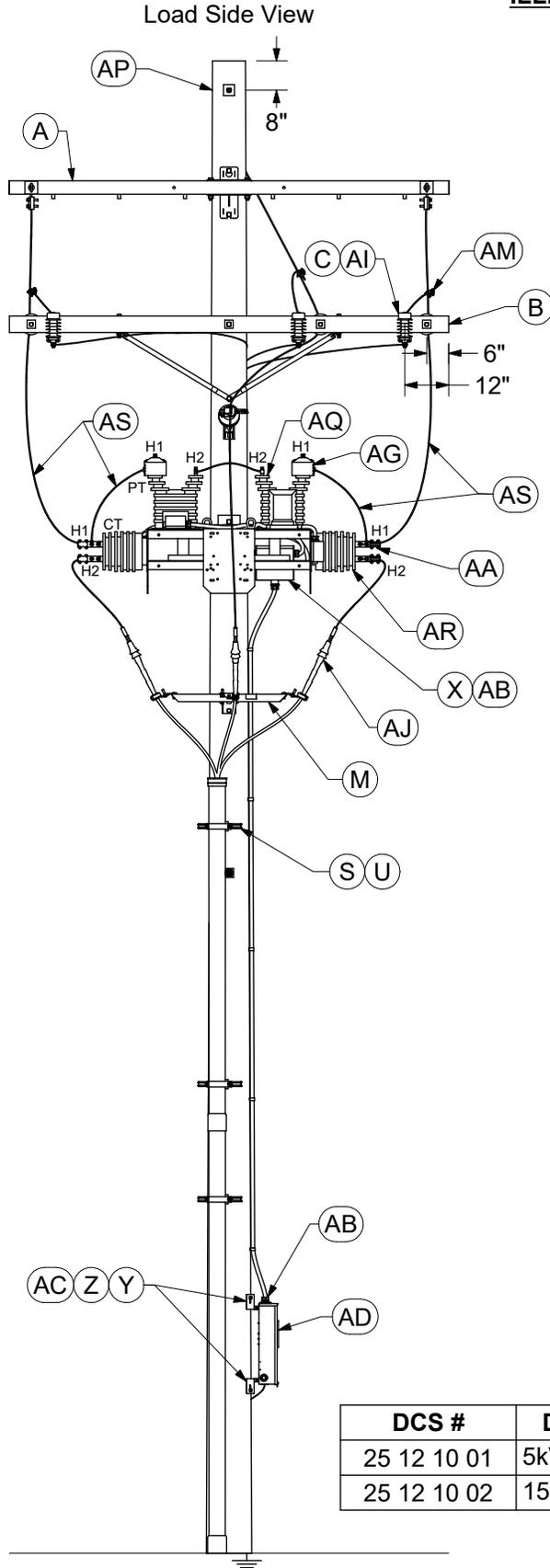
25 12 09 **
5kV, 15kV
6 of 6

MISSOURI ONLY

ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 12 09 **	01	03
BA	23 17 294	Mounting - Primary Metering Unit, Cluster Mount for 2CTs & 2PTs		1	1
BB	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut		4	4
BC	23 66 207	Washer, Curved, Square, 5/8"		4	4
BD	23 66 134	Lock Washer - 5/8" Double Coil		4	4
BE	23 65 043	Lock Nut - 5/8" Square		4	4
BF	40 01 120	Box - Secondary Connection		1	1
BG	40 04 245	Socket, Meter, Instrument Rated, 13 Terminal, 600V		1	-
	40 04 246	Socket, Meter, Instrument Rated, 8 Terminal, 600V		-	1
BH	62 51 563	Bracket - Meter Socket Hanging		2	2
BI	23 60 007	Lag Screw - 1/2" x 4"		4	4
BJ	23 65 056	Lock Nut - 1/2"		2	2
BK	17 54 303	Connector - Cable to Flat, #6-2/0		6	4
BL	17 55 121	Lug, Cu, #8 to 1/0 AWG, 5/16 in.		3	2
BM	18 11 065	Cord, Hrd Srv, 2-#14 Cu, 600V		180	120
BN	12 51 217	Conduit - 2" Split SCH 40		1	1
BO	27 60 035	Iron Hanger, Galv., 3/4" Wide (ft.)		2	2
BP	40 52 072	Conduit, Flex, 1-1/2", Non-Metallic		1	1
BQ	40 52 072	Conduit Fitting, Liquid-tight, Flex, 1-1/2"		2	2
BR	21 66 039	Screw, Cap, Hex Head, Steel, 3/8" - 16 TPI x 2"		2	2
BS	69 58 296	Guard, Wildlife, PT Bushing		3	2
@ BT	Meter Shop	Potential Transformer		3	2
@ BU	Meter Shop	Current Transformer		3	2
@ BV	Meter Shop	Wire Pack, Color Coded, 10-#12 (ft.)		5	5
@ BW	Meter Shop	Wire, #2 Cu, S.D. Covered (ft.)		20	20
@ BX	18 51 019	Wire, Cu, #2, S.D., Covered (ft.)		30	30
	18 53 018	Wire, Cu, #2, S.D., 5kV, Covered (ft.)		30	30
@ BY	07 00 80 00 @	Lead Wire, PH, (ft.)		#	#
@ BZ	07 00 25 00 @	Clamp, Parallel Groove		6	6
	286	Op Code, Install Primary Metering		1	1

REV	DATE	ENG	DESCRIPTION
13	01/01/24	WYW	Converted to new format
12	09/23/11		

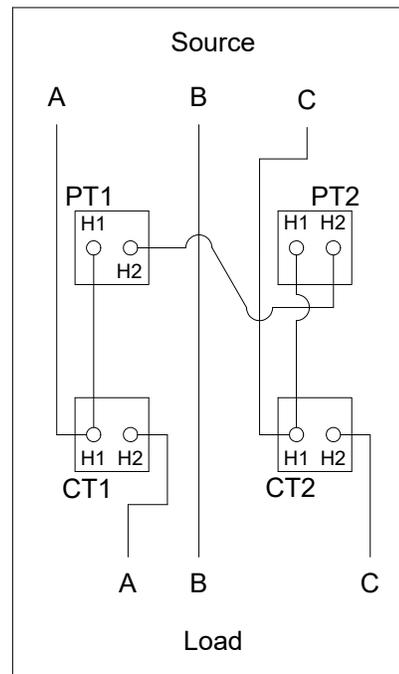
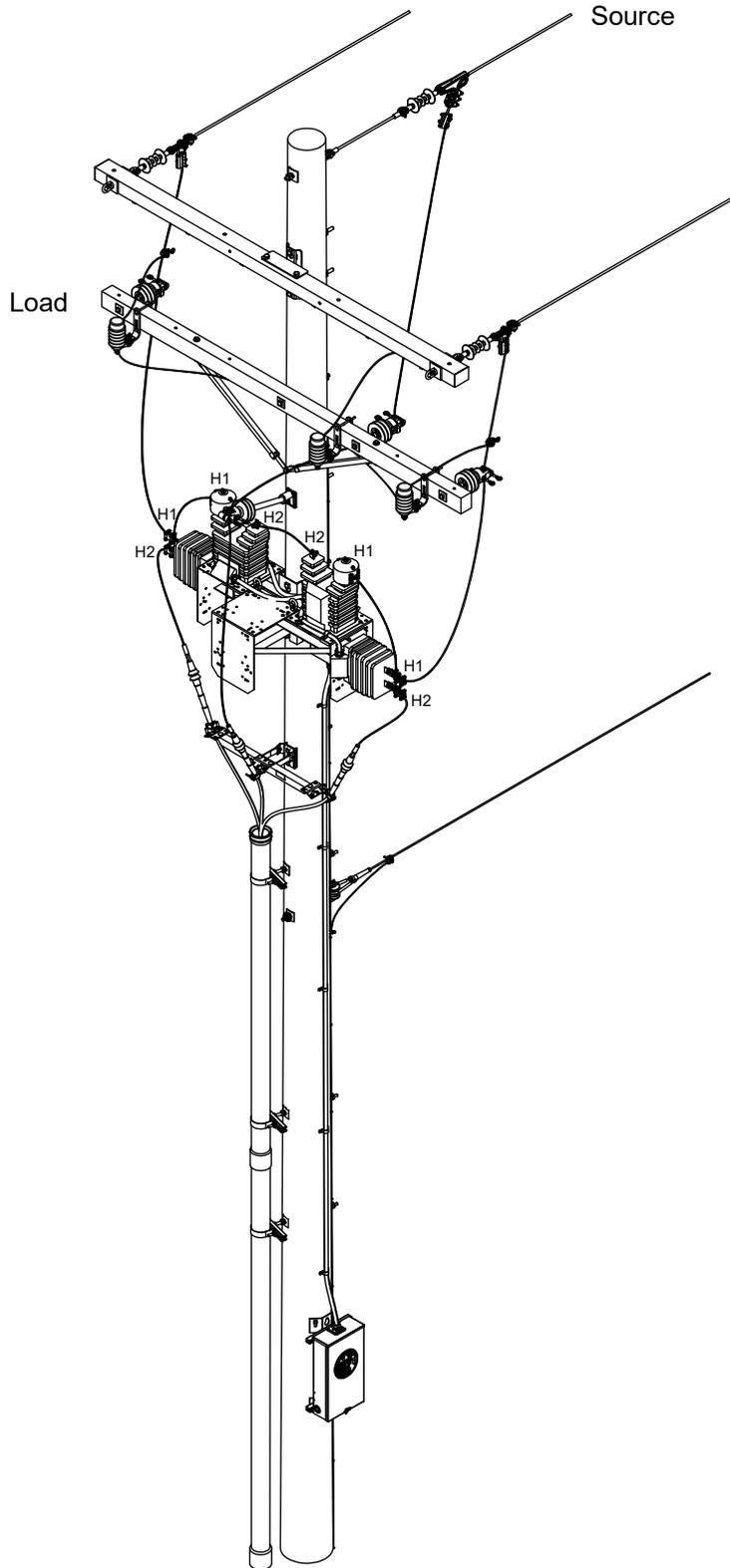
ILLINOIS ONLY



DCS #	DESCRIPTION
25 12 10 01	5kV, 3-PH, 3W
25 12 10 02	15kV, 3-PH, 3W

REV	DATE	ENG	DESCRIPTION
8	01/01/24	WYW	Combined with DCS 25 12 11 **
7	12/15/15	WYW	

ILLINOIS ONLY



REV	DATE	ENG	DESCRIPTION
8	01/01/24	WYW	Combined with DCS 25 12 11 **
7	12/15/15	WYW	



METER INSTALLATIONS

Primary Metering Structure
Underground 3-PH 3W

25 12 10 **
5kV, 15kV
3 of 4

ILLINOIS ONLY

CONSTRUCTION NOTE(s):

1. Ground all instrument transformers, arrestors, and mounting assembly to the grounding unit.
2. Install barriers for protection against vehicular traffic where necessary.
3. Maintain a minimum of 40" between the energized conductors and the pole on climbing side of the pole as per DCS **29 00 18 01**; maintain a minimum of 19" between the energized lateral and vertical conductors and the pole on non-climbing side of the pole as per DCS **29 00 17 12**.
4. A customer-owned group-operated disconnect switch shall be installed on an adjacent structure on the customer side of the meter structure. The switch or subsequent breaker shall be capable of breaking the maximum current expected on the line.
5. For wire color coding on PT and CT secondaries, refer to System Metering drawings.
6. If metering structure is located within a substation, the metering and arrestors ground wires must be connected to the substation ground mat.
7. To enhance the protection of the metering equipment ensure that the tap for the phase conductor to the arrestor is as short as possible in distance. Install arrestors to load side on the adjacent pole if multiple span exposure on the load side exists and arrestors may be installed on adjacent poles.

8. This material is provided by customer.

ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 12 10 **	01	02
A	04 00 42 03 @	Crossarm - Deadend, F/G, 10'		1	1
B	04 00 20 03 @	10' Single Wood Arm		1	1
C	17 58 054	Bracket, Arrestor/Cutout Mounting		3	3
D	23 62 128	Adapter Pin for Vice Top Insulator		3	3
E	25 05 143	Insulator, Vice Top, 12kV		4	4
F	23 52 065	Bolt, Mach., 5/8" x 12" w/ square nut		1	1
G	23 52 066	Bolt, Mach., 5/8" x 14" w/ square nut		1	1
H	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut		5	5
I	23 66 207	Washer, Curved, Square, 5/8"		10	10
J	23 66 134	Lock Washer - 5/8" Double Coil		10	10
K	23 65 043	Lock Nut - 5/8" Square		7	7
L	06 01 01 01	Single Clevis		1	1
M	17 08 057	Bracket, Mounting, Terminator		1	1
N	18 51 021	Wire, #6 Cu, Covered S.D. (ft.)		12	12
O	12 51 254	Conduit - Coupling 4" Bell End		1	1
P	12 01 273	Conduit - 4" Schedule 80 (ft.)		10	10
Q	12 01 278	Conduit - 4" Schedule 40 (ft.)		20	20
R	23 67 183	Strap - Conduit 4" w/2" Bolts		3	3
S	23 06 087	Bracket - Standoff, 12"		3	3
T	23 53 003	Bolt, DA, 5/8" Dia x 18" w/ 4 square nuts		3	3
U	23 65 053	Nut - 5/8" Jam		3	3
V	17 54 004	Connector - Split Bolt, #4 Sol CU thru #8 Sol CU		5	5
W	23 17 294	Mounting - Primary Metering Unit, Cluster Mount for Three Phase		1	1
X	40 01 120	Box - Secondary Connection		1	1

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
8	01/01/24	WYW	Combined with DCS 25 12 11 **
7	12/15/15	WYW	



METER INSTALLATIONS

Primary Metering Structure
Underground 3-PH 3W

25 12 10 **
5kV, 15kV
4 of 4

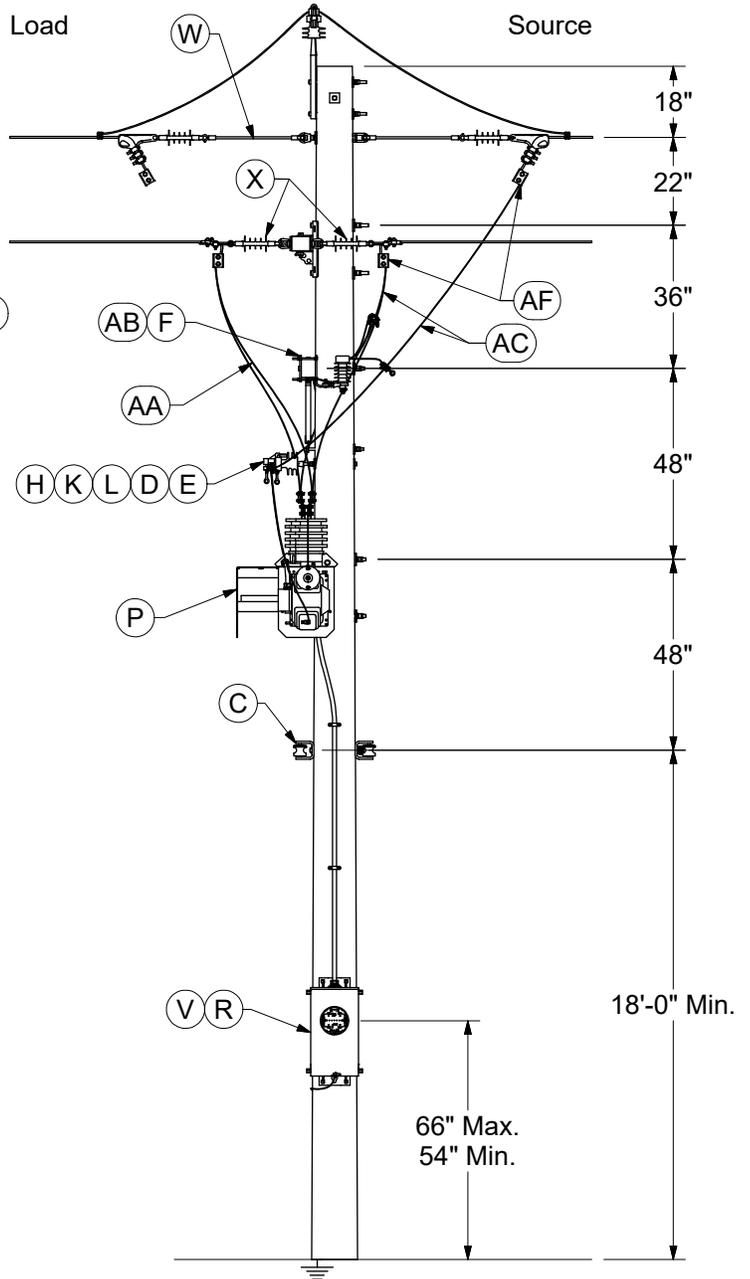
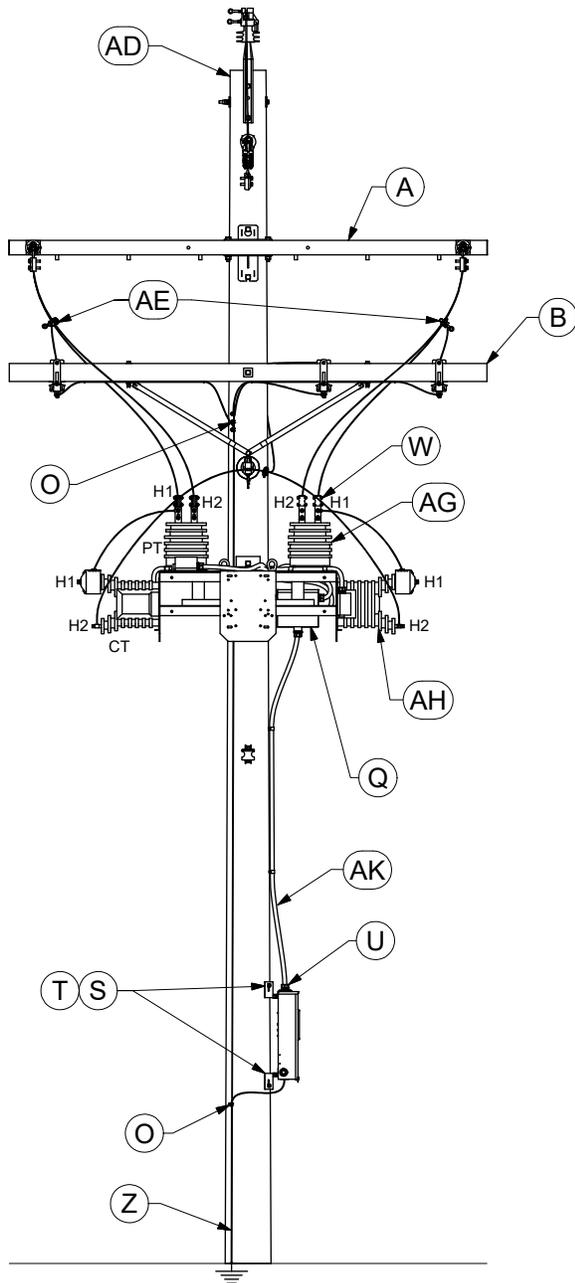
ILLINOIS ONLY

ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 12 10 **	01	02
Y	62 51 563	Bracket - Meter Socket Hanging		2	2
Z	23 60 007	Lag Screw - 1/2" x 4"		6	6
AA	17 54 303	Connector - Cable to Flat, #6-2/0		6	6
AB	40 53 612	Conduit - Connector 1" Steel		2	2
AC	21 66 039	Screw, Hex Head Cap, 3/8"x2"		4	4
AD	40 54 378	Meter Socket - 600V 8 Terminal		1	1
AE	06 12 30 03 @	Deadend on Pole, FG Extension		1	1
AF	06 12 35 01 @	Single Deadend on FG Crossarm		2	2
AG	69 58 296	Wildlife Guard - Transformer Bushing Cover		2	2
@ AH	12 51 303	Conduit, Flex, 1", Non-Metallic		#	#
@ AI	18 21 024	Wire, Cu, 1/0 S.D., Covered (ft.)		20	20
	18 21 025	Wire, Cu, #4 S.D., Covered (ft.)		20	20
@ AJ	12 00 01 01	Arrester. Lightning		6	6
@ AK	42 34 59 **	Termination, 15kV, #2 - 4/0 AWG Cable		3	3
@ AL	18 07 237	Cable, 15kV, #2 (ft.)		#	#
	18 07 240	Cable, 15kV, 4/0 (ft.)		#	#
@ AM	12 00 10 **	Grounding Unit		1	1
@ AN	07 00 21 00 @	Hot Line Clamp		6	6
@ AO	10 00 01 01 @	Fuse (Sized by Engineer)		3	3
@ AP	02 00 02 01	Pole		1	1
@ AQ	Meter Shop	Potential Transformer		2	2
@ AR	Meter Shop	Current Transformer		2	2
@ AS	Meter Shop	Wire Pack of 10 #12, Color Coded (ft.)		25	25
@ AT	18 51 019	Wire, #2 Cu, Covered, S.D. (ft.)		-	#
	18 53 018	Wire, #2 Cu, Covered, 5kV, S.D. (ft.)		#	-
@ AU	07 00 25 00 @	Clamp, Parallel Groove		6	6
	286	Op Code, Install Primary Metering		1	1

REV	DATE	ENG	DESCRIPTION
8	01/01/24	WYW	Combined with DCS 25 12 11 **
7	12/15/15	WYW	

ILLINOIS ONLY

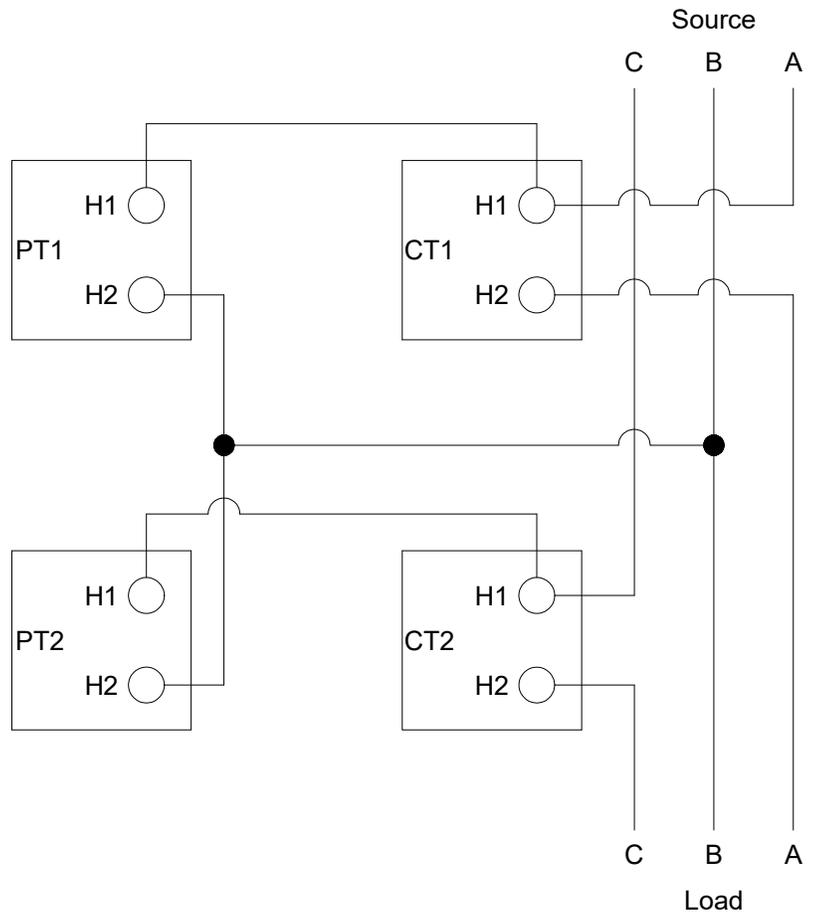
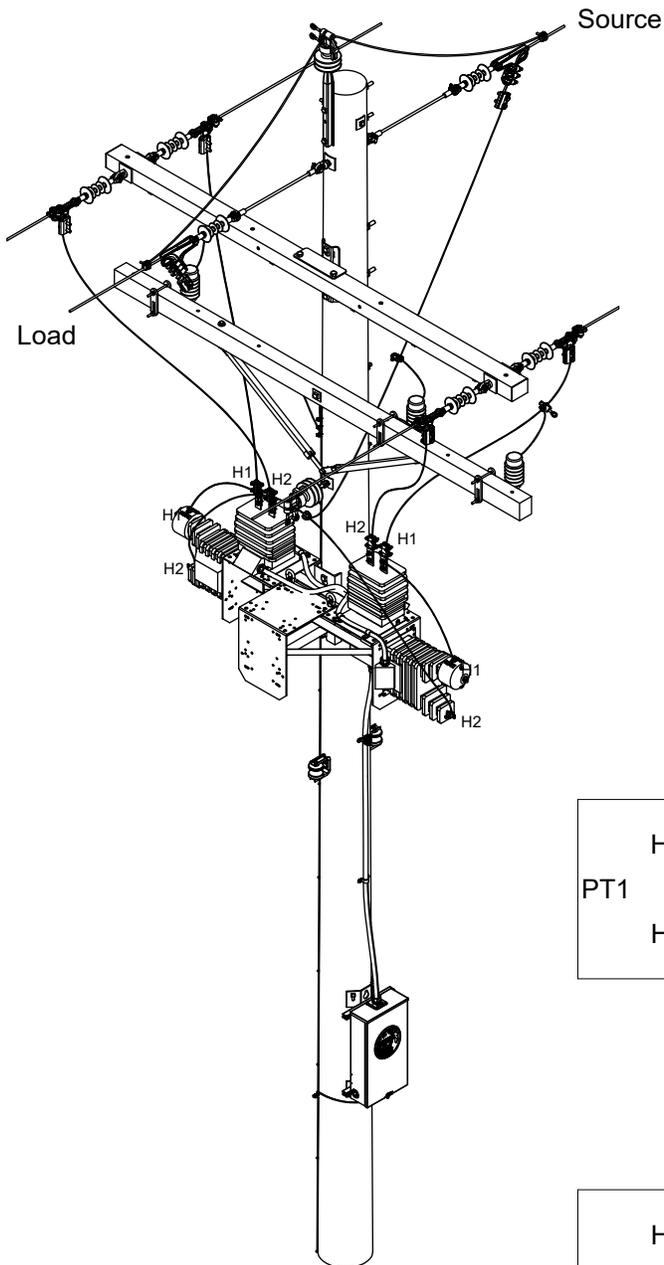
Load Side View



DCS #	DESCRIPTION
25 12 15 01	5kV, 3-PH, 3W
25 12 15 02	15kV, 3-PH, 3W

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New - Moved from DCS 25 12 12 **

ILLINOIS ONLY



REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New - Moved from DCS 25 12 12 **



METER INSTALLATIONS

Primary Metering Structure
Overhead 3-PH 3W

25 12 15 **
5kV, 15kV
3 of 4

ILLINOIS ONLY

CONSTRUCTION NOTE(s):

1. Grounding all instrument transformers, arrestors, and mounting assembly to the grounding unit.
2. Install barriers for protection against vehicular traffic where necessary.
3. Maintain a minimum of 40" between the energized conductors and the pole on climbing side of the pole as per DCS **29 00 18 01**; maintain a minimum of 19" between the energized lateral and vertical conductors and the pole on non-climbing side of the pole as per DCS **29 00 17 12**.
4. If disconnect switches are required, the switch may be installed on adjacent poles.
5. For wire color coding on PT and CT secondaries, refer to system metering drawings.
6. If metering structure is located within a substation, the metering and arrestors ground wires must be connected to the substation ground mat.
7. To enhance the protection of the metering equipment ensure that the tap for the phase conductor to the arrestor is as short as possible in distance. Install arrestors to load side on the adjacent pole if multiple span exposure on the load side exists and arrestors may be installed on adjacent poles.

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New - Moved from DCS 25 12 12 **



METER INSTALLATIONS

Primary Metering Structure
Overhead 3-PH 3W

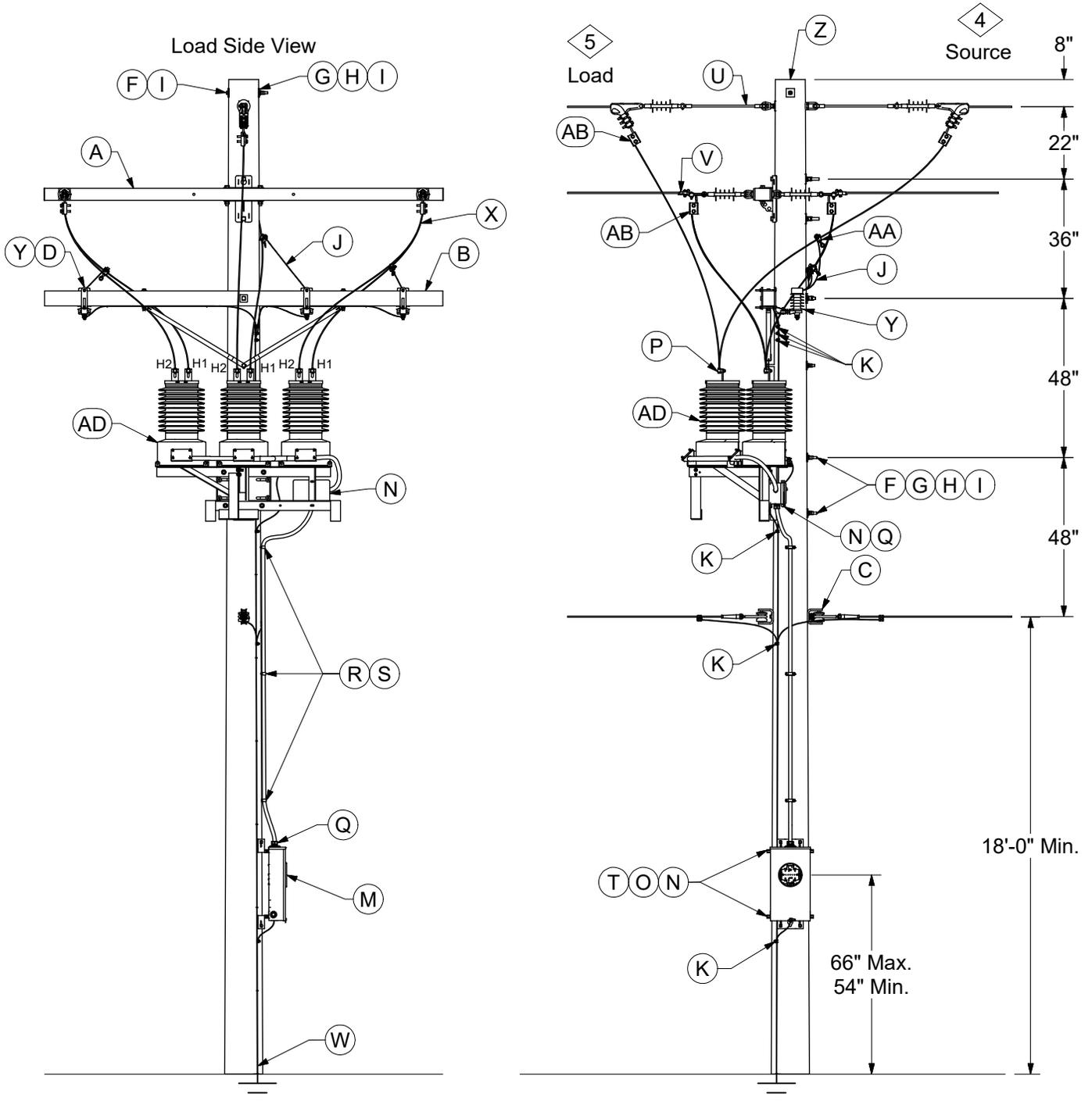
25 12 15 **
5kV, 15kV
4 of 4

ILLINOIS ONLY

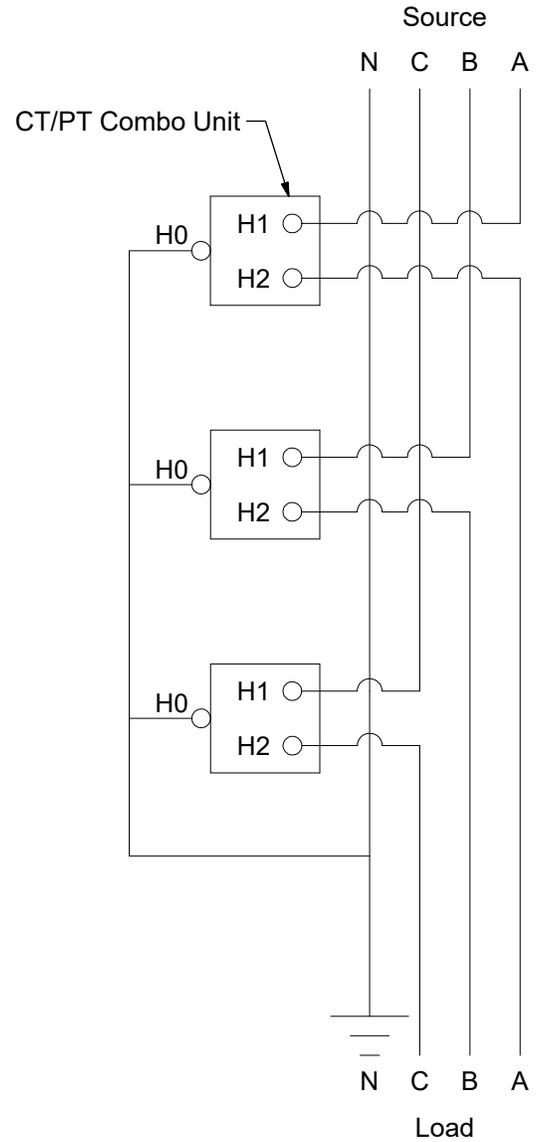
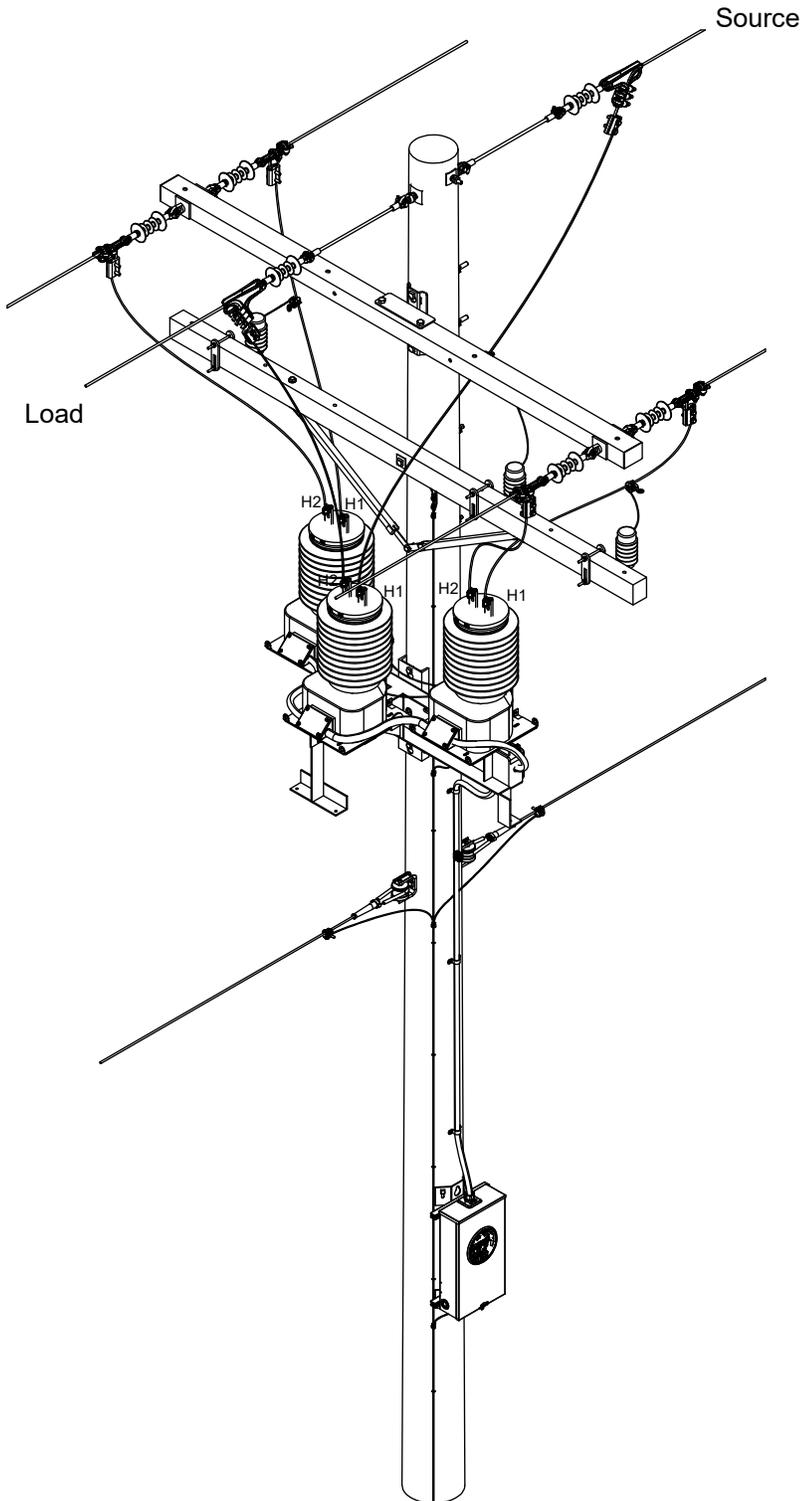
ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 12 15 **	01	02
A	04 00 42 03 @	Crossarm - Deadend, F/G 10'		1	1
B	04 00 20 03 @	Crossarm - Wood, 10'		1	1
C	06 01 01 02	Double Clevis		1	1
D	23 62 128	Adapter Pin for Vice Top Insulator		1	1
E	25 05 143	Insulator, Vice Top, 12kV		1	1
F	17 58 054	Bracket, Arrester/Cutout Mounting		3	3
G	23 52 065	Bolt, Mach., 5/8" x 12" w/ square nut		2	2
H	23 52 066	Bolt, Mach., 5/8" x 14" w/ square nut		4	4
I	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut		2	2
J	23 66 207	Washer, Curved, Square, 5/8"		6	6
K	23 66 134	Lock Washer - 5/8" Double Coil		6	6
L	23 65 043	Lock Nut - 5/8" Square		6	6
M	23 53 003	Bolt, DA, 5/8" x 18" w/ 4 square nuts		3	3
N	18 51 021	Wire, #6, Cu, S.D., Covered (ft.)		35	35
O	17 54 004	Connector - Split Bolt, #4 Sol CU thru #8 Sol CU		4	4
P	23 17 294	Mounting - Primary Metering Unit		1	1
Q	40 01 120	Box - Secondary Connection		1	1
R	40 54 378	Meter Socket - 600V 8 Terminal		1	1
S	62 51 563	Bracket - Meter Socket Hanging		2	2
T	23 60 007	Lag Screw - 1/2" x 4"		4	4
U	40 53 612	Conduit - Connector 1" Steel		10	10
V	21 66 039	Screw, Hex Head Cap, 3/8"x2"		4	4
W	06 12 30 03 @	Double Deadend on Pole with FG Extension		1	1
X	06 12 35 02 @	Double Deadend on FG Crossarm		2	2
Y	69 58 296	Guard, Wildlife, PT (H1) Bushing		2	2
@ Z	12 00 10 **	Grounding Unit		1	1
@ AA	18 51 018	Wire, #2 Cu, 5kV, Covered, S.D. (ft.)		60	-
	18 51 019	Wire, #2 Cu, Covered, S.D. (ft.)		-	60
@ AB	12 00 01 01 @	Arrester, Lightning		3	3
@ AC	07 00 80 00 @	Lead Wire, PH (ft.)		#	#
@ AD	02 00 02 01	Pole		1	1
@ AE	07 00 21 00 @	Hot Line Clamp		6	6
@ AF	07 00 25 00 @	Clamp, Parallel Groove		6	6
@ AG	Meter Shop	Current Transformer, 7.2kV		2	2
@ AH	Meter Shop	Potential Transformer, 7.2kV		2	2
@ AI	Meter Shop	Wire Pack, Color Coded, 10-#12 (ft.)		5	5
@ AJ	Meter Shop	Wire, #2 Cu, S.D., Covered (ft.)		20	20
@ AK	12 51 303	Conduit, Flex, 1" Non-Metalic (ft.)		#	#
	286	Op Code, Install Primary Metering		1	1

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New - Moved from DCS 25 12 12 **

ILLINOIS ONLY



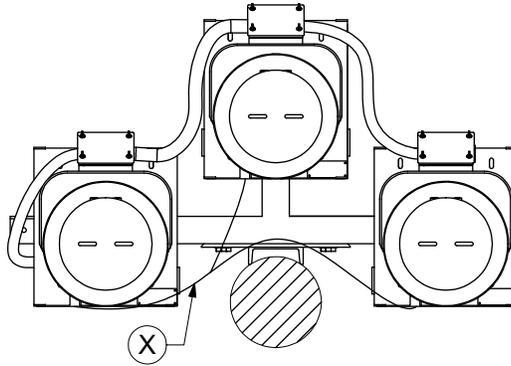
REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	10/01/20	WYW	



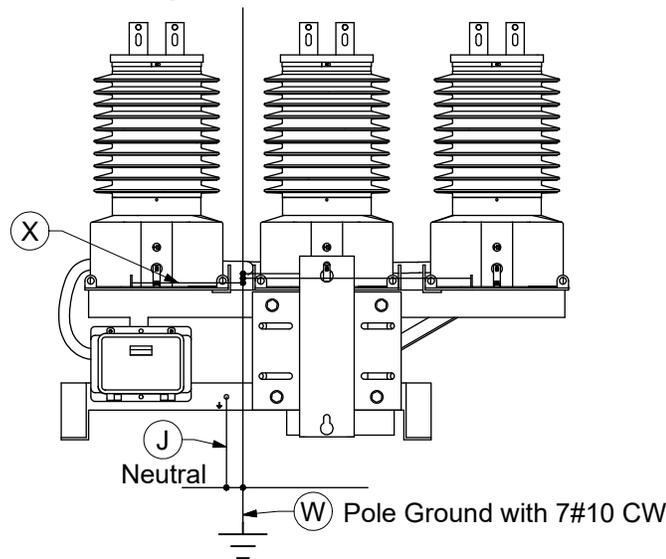
3-Phase 4 Wire

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	10/01/20	WYW	

ILLINOIS ONLY



Pole ground to extend to Arrestors



CONSTRUCTION NOTE(s):

1. Ground each CT/PT combo instrument, arrestors, and mounting assembly to the pole ground.
2. If meter structure is located within a substation, the pole ground riser must be connected to the substation ground grid.
3. Maintain a minimum of 40" between the energized conductors and the pole on climbing side of the pole as per DCS **29 00 18 01**; maintain a minimum of 19" between the energized lateral and vertical conductors and the pole on non-climbing side of the pole as per DCS **29 00 17 12**.
4. Install 2-bolted deadend, DCS 03 01 01 13 if slack span.

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	10/01/20	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-PH 4W CT/PT Combo Unit

25 12 20 01
5kV, 15kV
4 of 5

ILLINOIS ONLY

ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 12 20 **	01
4,@	A	04 00 42 03 @	Crossarm - Deadend, F/G, 10'	1
	B	04 00 20 03 @	Crossarm - Wood, 10'	1
	C	06 01 01 02	Double Clevis	1
	D	17 58 054	Bracket, Arrester/Cutout Mounting	3
	E	23 52 065	Bolt, Mach., 5/8" x 12" w/ square nut	1
	F	23 52 066	Bolt, Mach., 5/8" x 14" w/ square nut	2
	G	23 66 207	Washer, Curved, Square, 5/8"	3
	H	23 66 134	Lock Washer - 5/8" Double Coil	2
	I	23 65 043	Lock Nut - 5/8" Square	2
	J	18 51 025	Wire, #6, Cu, S.D., Covered (ft.)	35
	K	17 54 004	Connector - Split Bolt, #4 Sol CU thru #8 Sol CU	6
	L	40 01 120	Enclosure, Secondary Connection	1
	M	40 54 353	Socket, Meter, Instrument Rated, Pre-Wired, 13-Terminal	1
	N	62 51 563	Bracket - Meter Socket Hanging	2
	O	23 60 007	Lag Screw - 1/2" x 4"	4
	P	17 51 114	Connector - One Bolt #8 to 2/0	6
	Q	40 53 612	Conduit - Connector 1" Steel	2
	R	40 83 093	Clamp - Conduit 1" Two Hole Steel Strap	3
	S	23 60 032	Lag Screw - 1/4" x 1 1/2"	6
	T	21 66 039	Screw, Hex Head Cap, 3/8"x2"	4
@	U	06 12 30 03 @	Deadend on Pole, FG Extension	1
	V	06 12 35 02 @	Double Deadend on FG Crossarm	2
	W	12 00 10 **	Grounding Unit	2
	X	18 51 019	Wire, #2, Cu, S.D., Covered (ft.)	60
		18 51 018	Wire, #2, Cu, S.D., 5kV, Covered (ft.)	60
	Y	10 01 144	Arrester, Lightning, 10kV	3
		10 01 008	Arrester, Lightning, 3kV	3
	Z	02 00 02 01	Pole	1
	AA	07 00 21 00 @	Clamp, Hot Line	3
	AB	07 00 25 00 @	Clamp, Parallel Groove	3
AC	12 51 303	Conduit, Flex, 1", Non-Metallic	#	
@	AD	Meter Shop	CT/PT Combo 15kV - Contact Metering Dept.	1
		286	Op Code, Install Primary Metering	1

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	10/01/20	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-PH 4W CT/PT Combo Unit

25 12 20 01
5kV, 15kV
5 of 5

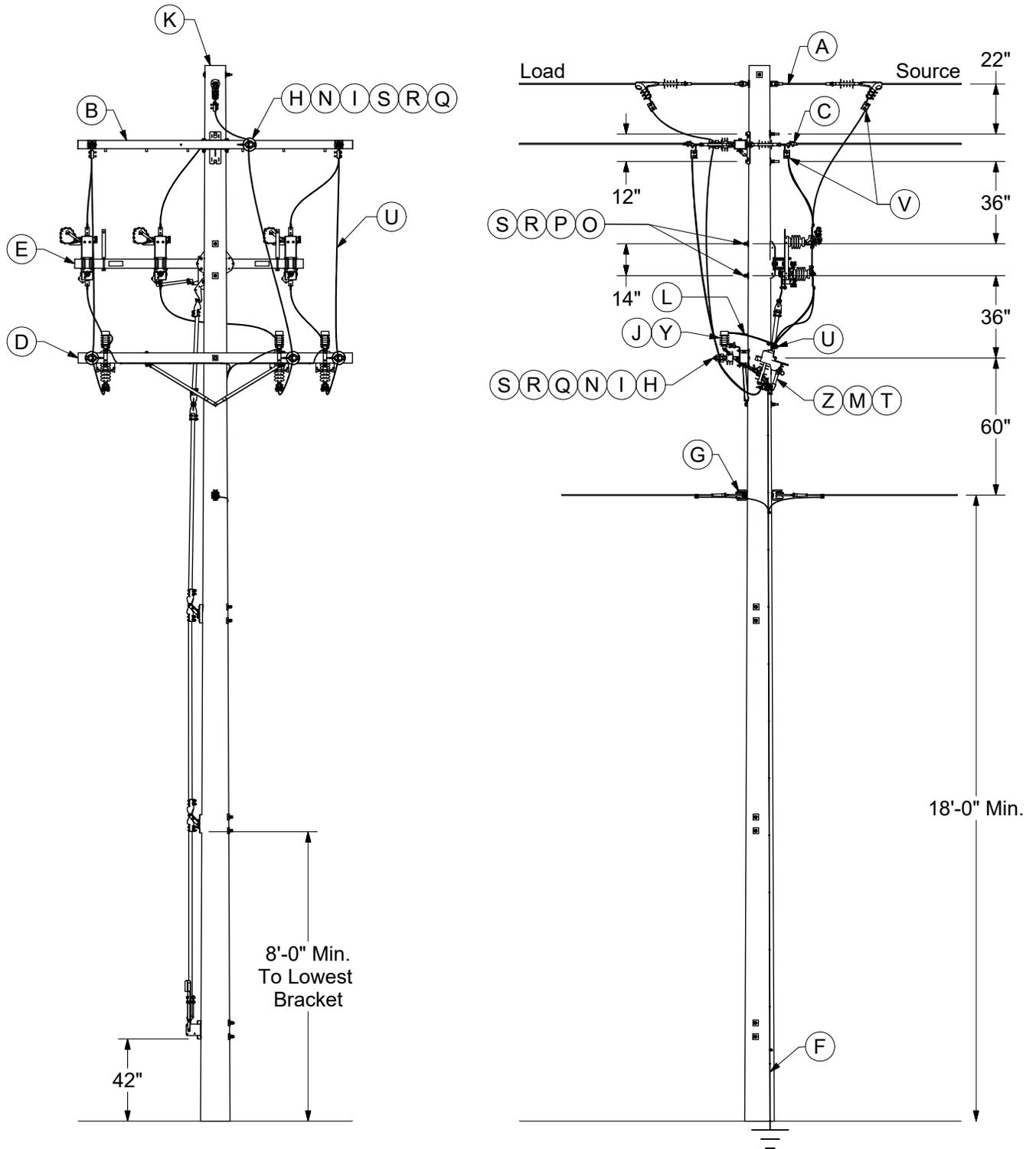
ILLINOIS ONLY

DESIGN NOTE(s):

- 4. Ameren overcurrent protection is required on source side, preferable on adjacent upstream pole.
- 5. A customer-owned group-operated disconnect switch shall be installed on an adjacent structure on the customer side of the meter structure. The switch or subsequent breaker shall be capable of breaking the maximum current expected on the line. (Refer to DCS **25 12 30 00** and DCS **25 12 30 01** for typical customer owned primary group operated switch and overcurrent protection)
- 6. Lightning arrester selection:
 4kV grounded system - Stock #10 01 133
 12.47 and 13.2kV grounded systems - Stock #10 01 144
 13.8kV grounded system - Stock #10 01 008
 (Refer to DCS **12 00 01 01** for other system ratings)
- 7. Install barriers for protection of the pole from vehicular traffic where necessary.
- 8. For wire color coding on PT and CT secondaries, contact System Metering.
- 9. If the meter pole is located within a substation or immediate outside fence, the 7 #10 ground riser needs to be upgraded to #2 copper for high fault currents and tied to substation grid. (Refer to DCS **12 00 10 04**)

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	10/01/20	WYW	

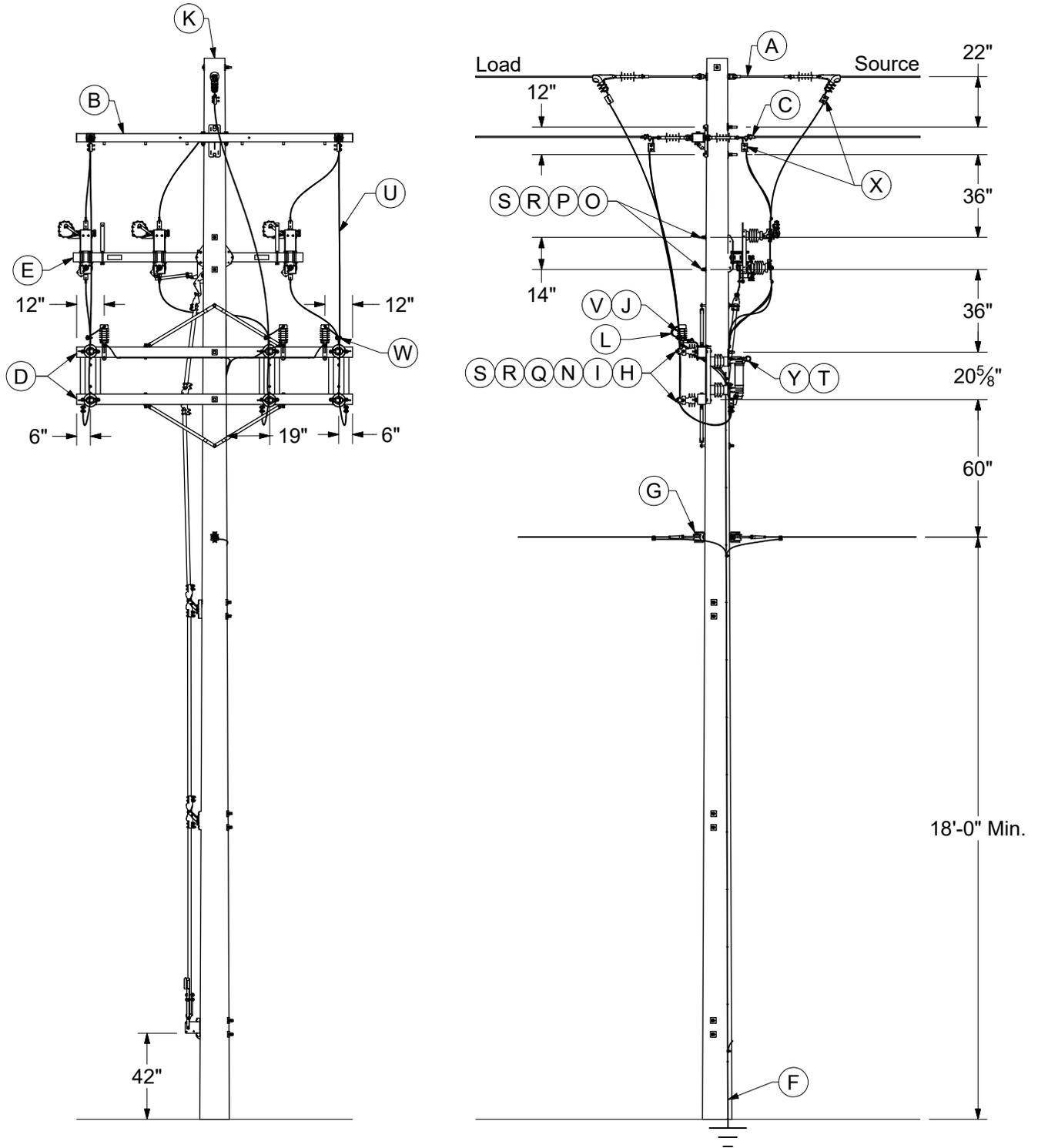
ILLINOIS ONLY 11



25 12 30 01
200 Amp Fused Switch

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	07/01/20	WYW	

ILLINOIS ONLY



25 12 30 02
SM-5 Fuse and Fuse Mounting

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	07/01/20	WYW	



METER INSTALLATIONS

Retail/Wholesale Customer Owned Primary Structure
W/Main Disconnect/Overhead Protection

25 12 30 **
5kV, 15kV
3 of 4

ILLINOIS ONLY

CONSTRUCTION NOTE(s):

1. A 15kV group operated switch rated 600 amp and associated overcurrent protection are required immediately after the Ameren meter pole.
 2. Customer may choose to install lightning arrestors and overcurrent protection on structure immediately following the group operated switch structure.
 3. For location fused at 200 amp or less, open type cutout, polymer insulator with load break hook is required.
 4. SM5 fuse device is used on 4kV system requiring 201 to 400 amp overcurrent protection.
 5. If lightning arrestors are installed on the group operated switch structure, a ground mat is required.
 6. If the pole ground riser is attached to the system neutral, a ground mat is required.
 7. If group operated switch structure does not have overcurrent or lightning protection on structure, and there is vertical pipe insulation, a driven ground rod needs to be installed and bonded to the switch handle. If there is no pole ground riser extended to the neutral, ground mat is not required.
 8. Customer's group operated switch may be operated with hook stick, no handle is located at the ground line. In this case, no ground mat is required.
 9. Lightning arrester selection:
4kV grounded system - 3kV/2.55kV MCOV
12.47kV and 13.2kV grounded systems - 10kV/8.4kV MCOV
13.8kV grounded system - 12kV/10.2kV MCOV
 10. 45ft. pole height with proposed framing ensures minimum NEC/NESC clearances are maintained.
- 11 For DER consult with IL Meter Engineering.

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	07/01/20	WYW	



METER INSTALLATIONS

Retail/Wholesale Customer Owned Primary Structure
W/Main Disconnect/Overhead Protection

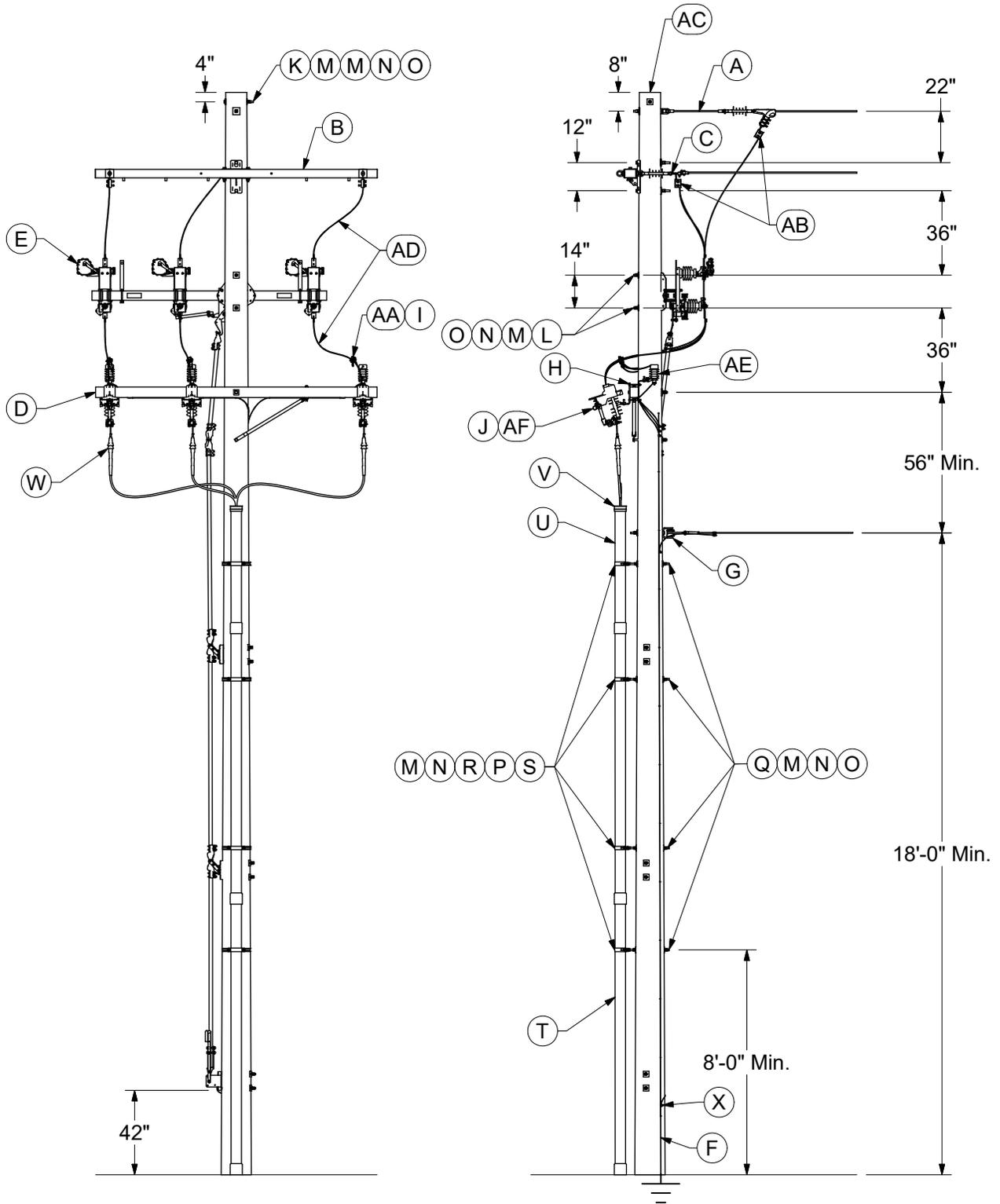
25 12 30 **
5kV, 15kV
4 of 4

ILLINOIS ONLY

ITEM	DESCRIPTION - Customer Provides and Installs Material	25 12 30 **	01	02
A	Double Deadend on Pole w/ FG Extension		1	1
B	Crossarm - Deadend, FG, 10'		1	1
C	Double Deadend on FG Crossarm w/o FG Extension		2	2
D	Single 10' Wood Arm w/ Braces		1	2
E	Switch - 15kV, Group Operated		1	1
F	Grounding Unit		1	1
G	Double Clevis, Secondary		1	1
H	Insulator, Vice Top, 12kV		4	4
I	Adapter Pin for Vice Top Insulator		4	4
J	Bracket, Crossarm, Double Sided NEMA		3	3
K	Pole (45ft and Class 3 Min.)		1	1
L	Wire, Cu, #6, S.D., Covered (ft.)		30	30
M	Wildlife Guard - Cover Cutout		3	3
N	Bolt, Mach., 5/8" x 6" w/ square nut		4	6
O	Bolt, Mach., 5/8" x 12" w/ square nut		2	2
P	Washer, Curved, Square, 5/8"		2	2
Q	Washer, Flat, Square 5/8"		8	12
R	Lock Washer - 5/8" Double Coil		6	8
S	Lock Nut - 5/8" Square		6	8
T	Fuse (Sized by Engineer)		3	3
U	Clamp, Hot Line		3	3
V	Clamp, Parallel Groove		6	6
W	Cable, 15kV, Size per Load		#	#
@	X	Wire, Cu, #2, S.D., Covered (ft.)	50	-
		Wire, Cu, 4/0, S.D., Covered (ft.)	-	50
@	Y	Arrester, Lightning, 12kV	3	3
		Arrester, Lightning, 3kV	3	3
		Arrester, Lightning, 10kV	3	3
@	Z	Switch, Fused, 200A, 15kV	3	-
		Switch, Fused, SM5	-	3

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	07/01/20	WYW	

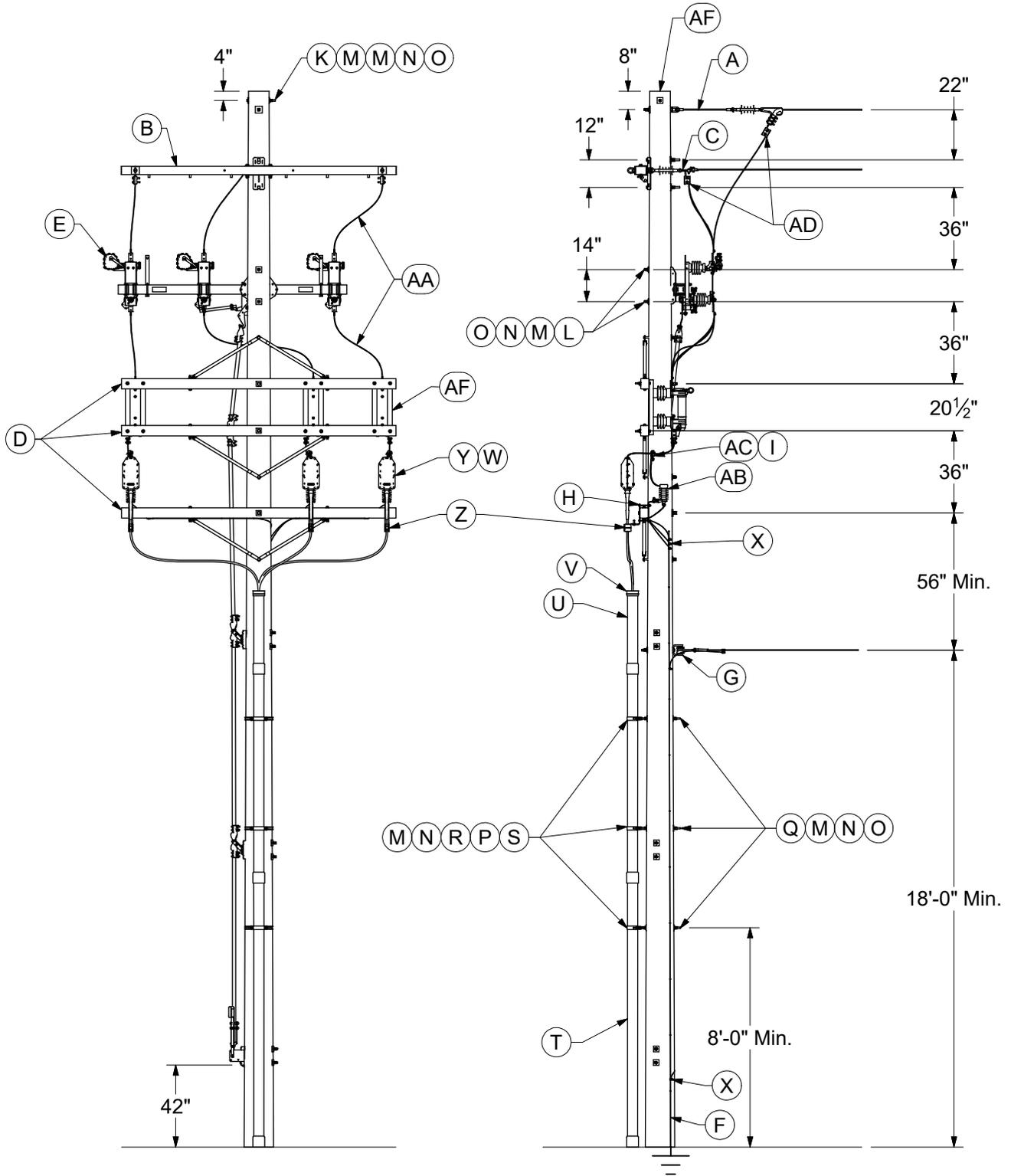
ILLINOIS ONLY 12



25 12 31 01
200 Amp Fused Switch

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New - Renumbered from DCS 25 12 30 01

ILLINOIS ONLY



25 12 31 02
SM-5 Fuse and Fuse Mounting

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New - Renumbered from DCS 25 12 30 01



METER INSTALLATIONS

Retail/Wholesale Customer Owned Primary Structure
W/Main Disconnect/Underground Protection

25 12 31 **
5kV, 15kV
3 of 4

ILLINOIS ONLY

CONSTRUCTION NOTE(s):

1. A 15kV group operated switch rated 600 amp and associated overcurrent protection are required immediately after the Ameren meter pole.
 2. Customer may choose to install lightning arrestors and overcurrent protection, and UG riser on structure immediately following the group operated switch structure.
 3. For location fused at 200 amp or less, open type cutout, polymer insulator with load break hook is required.
 4. SM5 fuse device is used on 4kV system requiring 201 to 400 amp overcurrent protection.
 5. If lightning arrestors are installed on the group operated switch structure, a ground mat is required.
 6. If the pole ground riser is attached to the system neutral, a ground mat is required.
 7. If group operated switch structure does not have overcurrent or lightning protection on structure, and there is vertical pipe insulation, a driven ground rod needs to be installed and bonded to the switch handle. If there is no pole ground riser extended to the neutral, ground mat is not required.
 8. Customer's group operated switch may be operated with hook stick, no handle is located at the ground line, In this case, no ground mat is required.
 9. Lightning arrestor selection:
4kV grounded system - 3kV/2.55kV MCOV
12.47 and 13.2kV grounded systems - 10kV/8.4kV MCOV
13.8kV grounded system - 12kV/10.2kV MCOV
 10. 45ft. pole height (0-200 Amp fuses) and 50ft. pole height (201-400 Amp fuses) with proposed framing ensures minimum NEC/NESC clearances are maintained at termination pole.
 11. Another option is for customer to install underground termination pole immediately after Ameren meter pole. Customer provided group operated switch and overcurrent protection could be located in customer's padmount switchgear provided distance between termination pole and switchgear is less than 50ft.
- ◊ 12. For DER consult with IL Meter Engineering.

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New - Renumbered from DCS 25 12 30 01



METER INSTALLATIONS

Retail/Wholesale Customer Owned Primary Structure
W/Main Disconnect/Underground Protection

25 12 31 **
5kV, 15kV
4 of 4

ILLINOIS ONLY

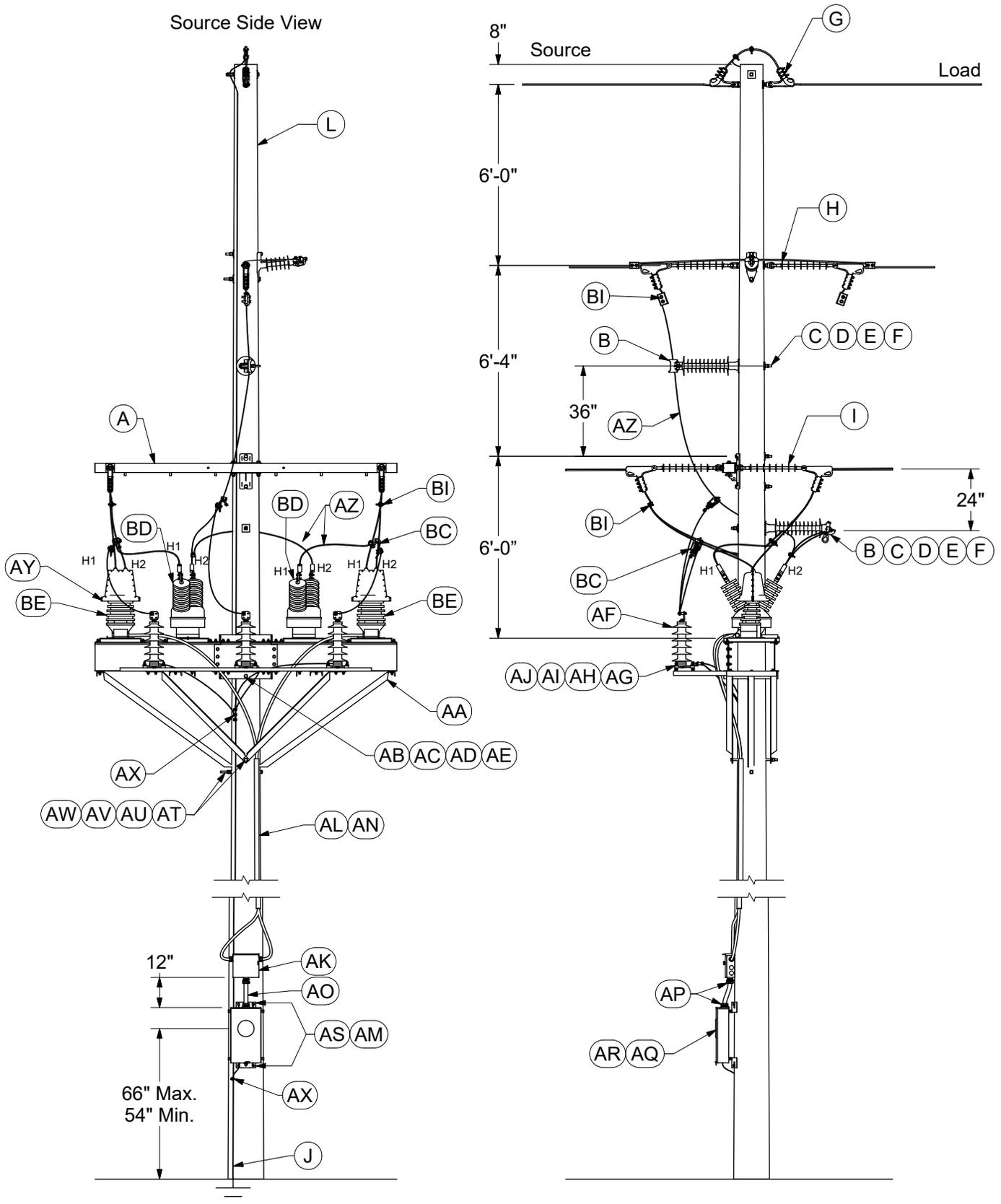
ITEM	DESCRIPTION - Customer Provides and Installs Material 25 12 31 **	01	02
A	Straight Deadend on Pole w/ FG Extension	1	1
B	Crossarm, FG, Deadend, 10'	1	1
C	Single Deadend on FG Crossarm w/o FG Extension	2	2
D	Crossarm, Wood, 10'	1	3
E	Switch - 15kV, Group Operated	1	1
F	Grounding Unit	1	1
G	Single Clevis	1	1
H	Bracket, Crossarm, Double Sided NEMA	3	3
I	Wire, Cu, #6 S.D. Covered (ft.)	30	30
J	Wildlife Guard - Cover Cutout	3	-
K	Bolt, Mach., 5/8" x 12" w/ square nut	1	1
L	Bolt, Mach., 5/8" x 14" w/ square nut	2	2
M	Washer, Curved, Square, 5/8"	11	11
N	Lock Washer - 5/8" Double Coil	11	11
O	Lock Nut - 5/8" Square	7	7
P	Bracket - Standoff, 12"	4	4
Q	Bolt, DA, 5/8" Dia x 18" w/ 4 square nuts	4	4
R	Nut - 5/8" Jam	4	4
S	Strap - Conduit 4" w/2" Bolts	4	4
T	Conduit - 4" Schedule 80 (ft.)	10	10
U	Conduit - 4" Schedule 40 (ft.)	20	20
V	Conduit - Coupling 4" Bell End	1	1
W	Termination Cable - 15kV #2 - 4/0	3	3
X	Connector - Split Bolt, #4 Sol CU thru #8 Sol CU	5	5
Y	Guard - Wildlife, Cover, Termination, #1 to 750 kcmil	-	3
Z	Bracket - Cable Support	-	1
AA	Clamp, Hot Line	3	3
AB	Clamp, Parallel Groove	6	6
AC	Pole (45ft and Class 3 Min.)	1	1
@ AD	Wire, Cu, #2, S.D., Covered (ft.)	50	-
	Wire, Cu, 4/0, S.D., Covered (ft.)	-	50
@ AE	Arrester - Lightning, 3kV/2.55kV MCOV	3	3
	Arrester - Lightning, 10kV/8.4kV MCOV	3	3
	Arrester - Lightning, 12kV/10.2kV MCOV	3	3
@ AF	Switch, Fused, 200A, 15kV	3	-
	Switch, SM-5 Fuse, 400A, 15kV	-	3
@ AG	Cable, 15kV, Size per Load	#	#

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New - Renumbered from DCS 25 12 30 01

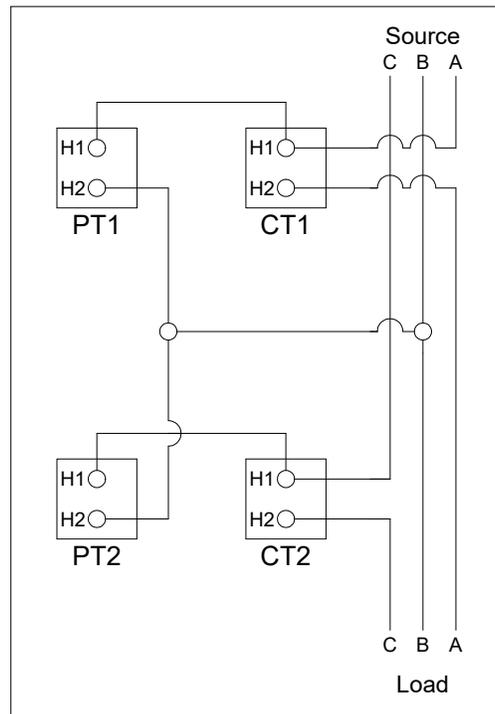
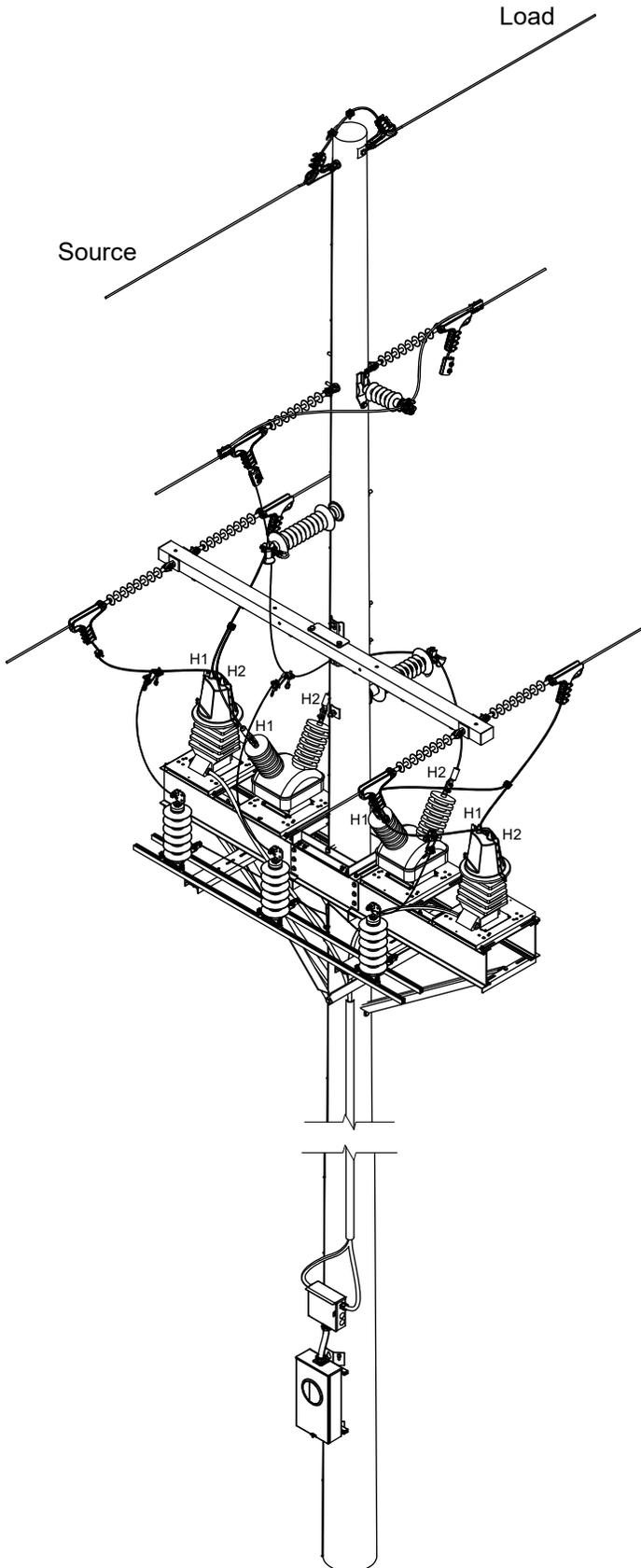
MISSOURI ONLY

Source Side View



REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	11/07/16	WYW	

MISSOURI ONLY



3 Wire

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	11/07/16	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-Phase Overhead 3W

25 34 01 00
35kV
3 of 4

MISSOURI ONLY

CONSTRUCTION NOTE(s):

1. Ground all instrument transformers, arrestors, and mounting assembly to the grounding unit.
2. Install barriers for protection against vehicular traffic where necessary.
3. Maintain a minimum of 23" clearance between 34kV phases or phase to ground.
4. Maintain minimum of 6'-0" clearance between the aluminum mounting platform and the crossarm.
5. Maintain a minimum of 40" between the energized conductors and the pole on climbing side of the pole as per DCS **29 00 18 01**; maintain a minimum of 30" between the energized lateral and vertical conductors and the pole on non-climbing side of the pole as per DCS **29 00 17 12**.
6. Maintain a minimum of 40" between any part of the aluminum mounting platform and conductors of 4 or 12kV underbuilds.
7. If disconnect switches are required, the switches may be installed on adjacent poles.
8. For wire color coding on PT and CT secondary's, refer to system meter drawings.
9. If metering structure is located within a substation, the metering and LA ground wires must be connected to the substation ground grid.
10. To enhance the protection of the metering equipment, ensure that the tap for the phase conductor to the arrestor is as short as possible. Install arrestors to load side on the adjacent pole if multiple span exposure on the load side exists.
11. Intermediate class arrestor comes with isolator disconnect and hot line clamp (bronze, up to 2/0) assembly. For lead wire if greater than 2/0 copper and all aluminum, must select a proper size of stirrup.

ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs Material	25 34 01 **	00
A	04 00 42 03 @	Crossarm - Deadend, F/G, 10'		1
B	25 05 219	Insulator, Vertical L.P., 69kV, Universal Clamptop		2
C	23 53 058	Bolt, DA, 3/4" Dia x 16" w/ 4 square nuts		2
D	23 66 031	Washer, Curved, Square, 3/4"		1
E	23 66 135	Lock Washer - 3/4" Double Coil		1
F	23 65 042	Lock Nut - 3/4" Square		1
G	06 00 11 06 @	Static Deadend Tangent w/ Pole Ground		1
H	06 34 60 25 @	35kV Double Deadend Loop		1
I	06 34 68 08 @	35kV Double Deadend on Arm		2
@ J	12 00 10 **	Grounding Unit		1
@ K	02 00 02 01	Pole		1

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	11/07/16	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-Phase Overhead 3W

25 34 01 00

35kV

4 of 4

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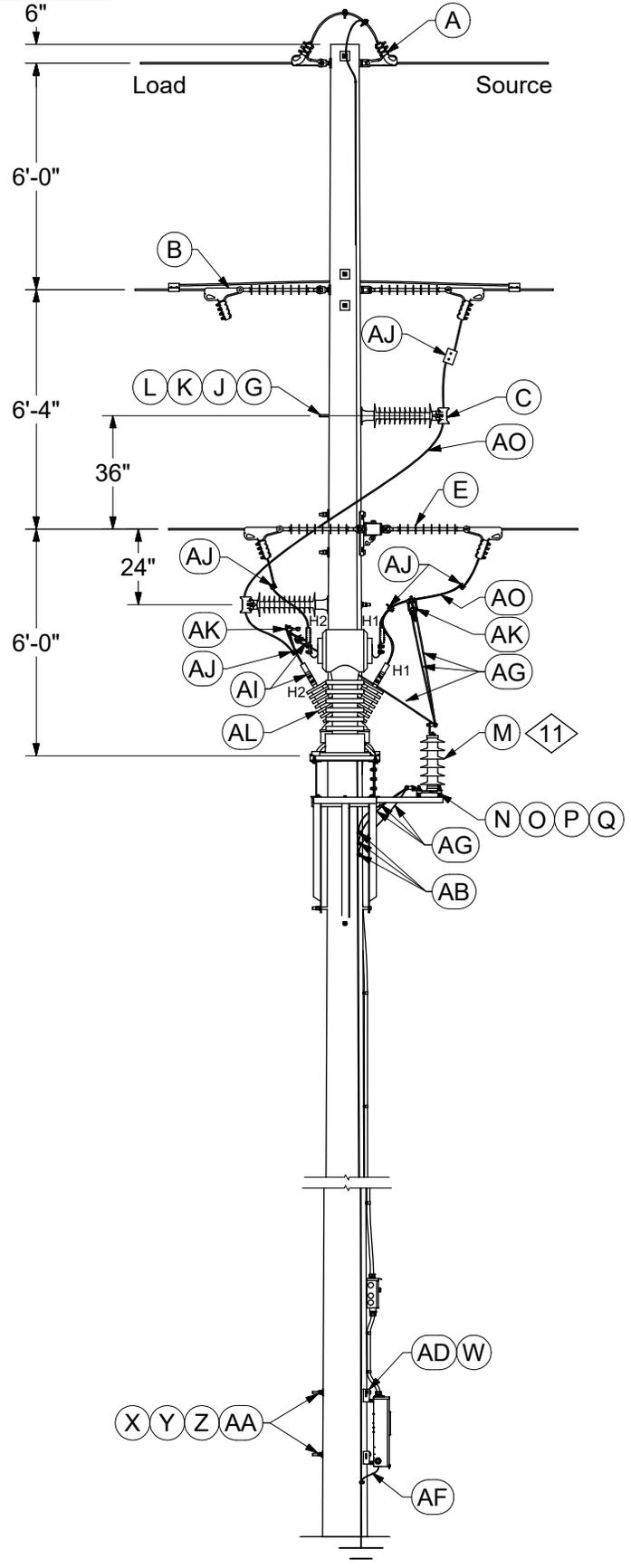
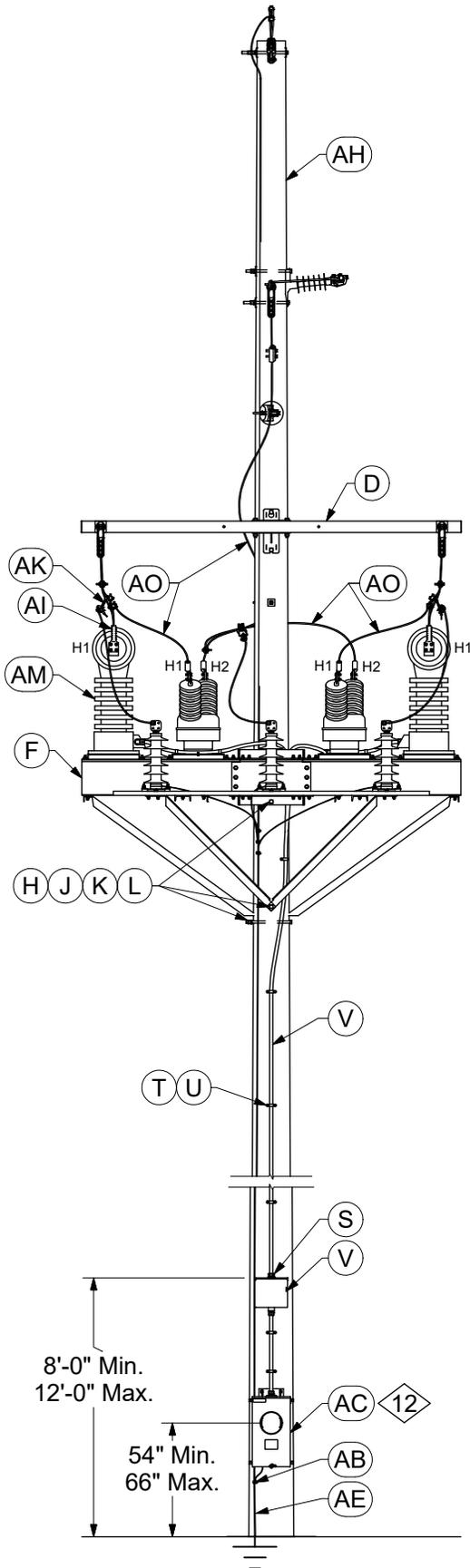
ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 34 01 **	00
AA	23 17 349	Mounting Assembly, 2CT's & 2PT's		1
AB	23 52 103	Bolt, Mach., 3/4" x 18" w/ square nut		4
AC	23 66 031	Washer, Curved, Square, 3/4"		4
AD	23 66 135	Lock Washer - 3/4" Double Coil		4
AE	23 65 042	Lock Nut - 3/4" Square		4
AF	10 01 242	Arrester, 29kV MCOV, 36kV Duty Cycle, Intermediate, Base Mount		3
AG	23 52 427	Bolt, Mach., 1/2" x 2-1/2" w/ square nut		9
AH	23 66 017	Washer - Round 1/2"		9
AI	23 66 133	Lock Washer - Double Coil 1/2"		9
AJ	23 65 056	Lock Nut - 1/2" Square		9
AK	40 01 120	Box - Secondary Connection		1
AL	12 51 217	Conduit - 2" Split, SCH 40, .2" X 10'		1
AM	23 60 007	Lag Screw - 1/2" x 4"		4
AN	27 60 035	Iron Hanger, Galv., 3/4" Wide (ft.)		3
AO	40 52 468	Conduit, Flex, 1-1/2", Non-Metallic (ft.)		1
AP	40 52 072	Conduit Fitting, Liquid-tight, Flex, 1-1/2"		2
AQ	40 04 246	Socket, Meter, Instrument Rated, 8-Terminal		1
AR	21 66 039	Screw, Hex Head Cap, 3/8"x2"		4
AS	62 51 563	Bracket - Meter Socket Hanging		2
AT	23 52 068	Bolt, Mach., 5/8" x 16" w/ square nut		2
AU	23 66 134	Lock Washer - Double Coil 5/8"		2
AV	23 66 207	Washer, Curved, Square, 5/8"		2
AW	23 65 043	Lock Nut - 5/8" Square		2
AX	17 54 005	Connector - Split Bolt, #2 Solid to #6 Solid		5
AY	69 56 039	Wildlife Cover for Ritz 34kV CT		2
@	AZ	18 51 019 Wire, #2 Cu, S.D., Covered (ft.)		#
@	BA	18 51 021 Wire, #6 Cu, S.D., Covered (ft.)		#
@	BB	18 11 065 Cord, Hrd Srv, 2-#14 Cu, 600V		#
@	BC	07 00 21 00 @ Clamp, Stirrup		3
@	BD	Meter Shop Potential Transformer		2
@	BE	Meter Shop Current Transformer		2
@	BF	Meter Shop Wire Pack, Color Coded, 10-#12 (ft.)		#
@	BG	07 00 30 00 @ Lug, Connector, 2-Hole/4-Hole Pad		8
@	BH	07 00 80 00 @ Lead Wire, PH (ft.)		#
@	BI	07 00 25 00 @ Clamp, Parallel Groove, PG*		7
		286 Op Code, Install Primary Metering		1

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	11/07/16	WYW	

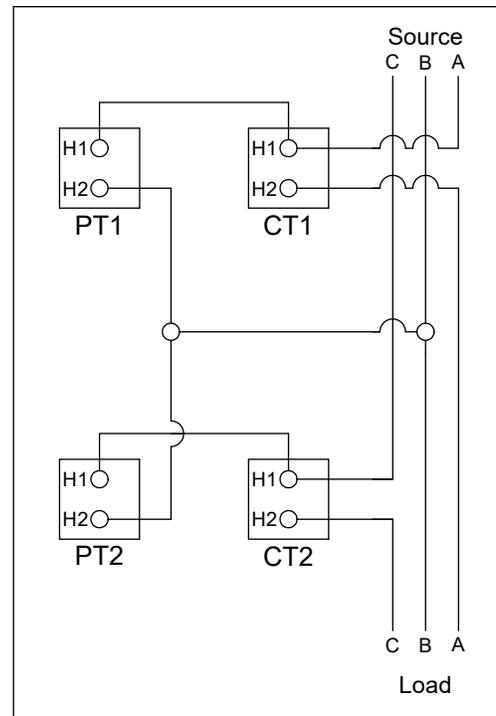
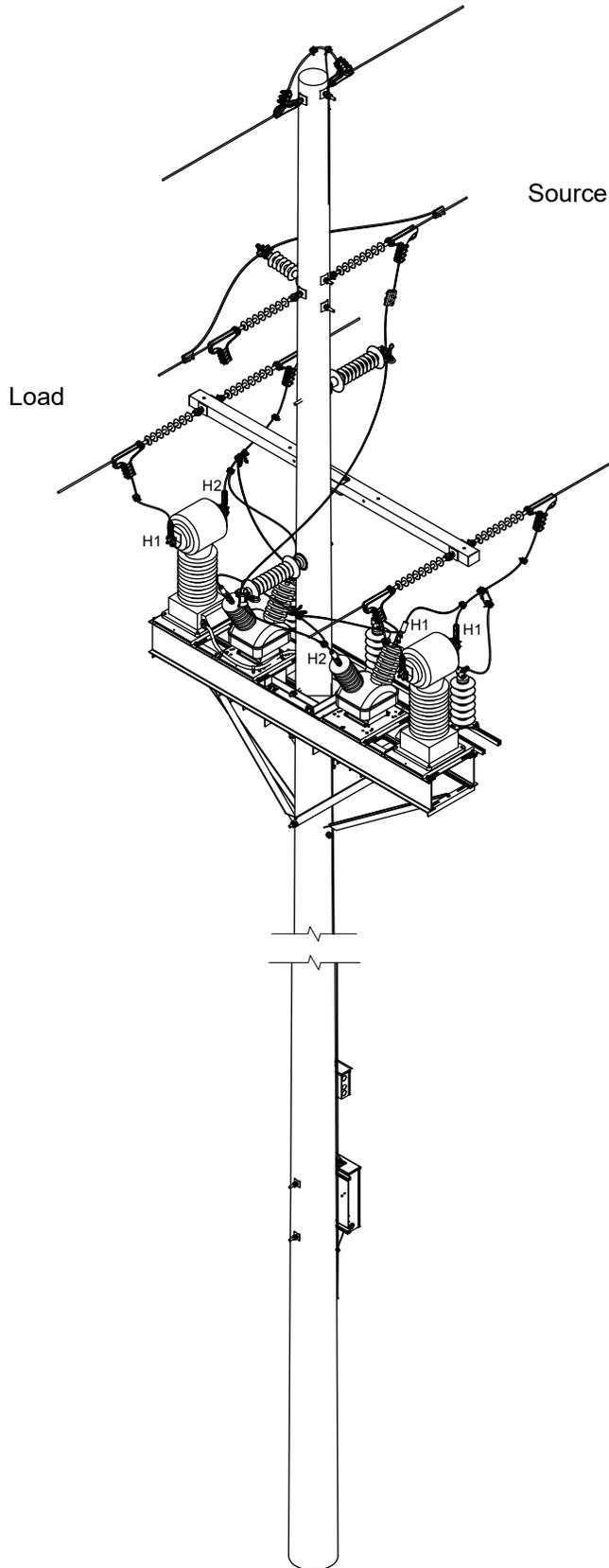
Source Side View

ILLINOIS ONLY



REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	08/14/14	WYW	

ILLINOIS ONLY



3 Wire

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	08/14/14	WYW	



METER INSTALLATIONS

Primary Meter Structure
Overhead 3-PH 3W

25 34 02 00
35kV
3 of 4

ILLINOIS ONLY

CONSTRUCTION NOTE(s):

1. Ground all instrument transformers, arrestors, and mounting assembly to the grounding unit.
2. Install barriers for protection against vehicular traffic where necessary.
3. Maintain a minimum of 23" clearance between 35kV phases or phase to ground.
4. Maintain a minimum of 6'-0" clearance between the aluminum mounting platform and the crossarm.
5. Maintain a minimum of 40" between the energized conductors and the pole on climbing side of the pole as per DCS **29 00 18 01**. Maintain a minimum of 30" between the energized lateral and vertical conductors and the pole on non-climbing side of the pole as per DCS **29 00 17 12**.
6. Maintain a minimum of 40" between any part of the aluminum mounting platform and conductors of 4 or 12kV underbuilt.
7. A customer-owned group-operated disconnect switch shall be installed on an adjacent structure on the customer side of the meter structure. The switch or subsequent breaker shall be capable of breaking the maximum current expected on the line.
8. For wire color coding on PT and CT secondaries, refer to System Meter drawings.
9. If metering structure is located within a substation, the metering and LA ground wires must be connected to the substation ground mat.
10. To enhance the protection of the metering equipment ensure that the tap for the phase conductor to the arrestor is as short as possible in distance. Install arrestors to load side on the adjacent pole if multiple span exposure on the load side exists and arrestors may be installed on adjacent poles.

- 11 Intermediate class arrestor comes with isolator disconnect & hot line clamp(Bronze, up to 2/0) assembly. For lead wire, if greater than 2/0 copper and all aluminum, must select a proper size of stirrup.
- 12 IL Meter Engineering specifies the Meter Enclosure used for the project and IL field poly-phase technicians order the meter enclosure and pole mounting bracket through the MDF. Most retail projects require a standard AMI meterbase (Stock #40 54 378) and pole mounting bracket (Stock #62 51 563). DER, Wholesale, and special retail projects (e.g. customer needs instantaneous data for load shedding scheme) require a two door cabinet (Stock #69 04 611) and other components supplied by IL Metering to house a high-end meter. Various two door cabinet manufacturers supply the MDF. Thus the required pole mounting bracket for the two door cabinet varies based on the supplier. Check the Stock #69 04 611 description in EMPRV for pole mounting bracket options.

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	08/14/14	WYW	



METER INSTALLATIONS

Primary Meter Structure
Overhead 3-PH 3W

25 34 02 00

35kV

4 of 4

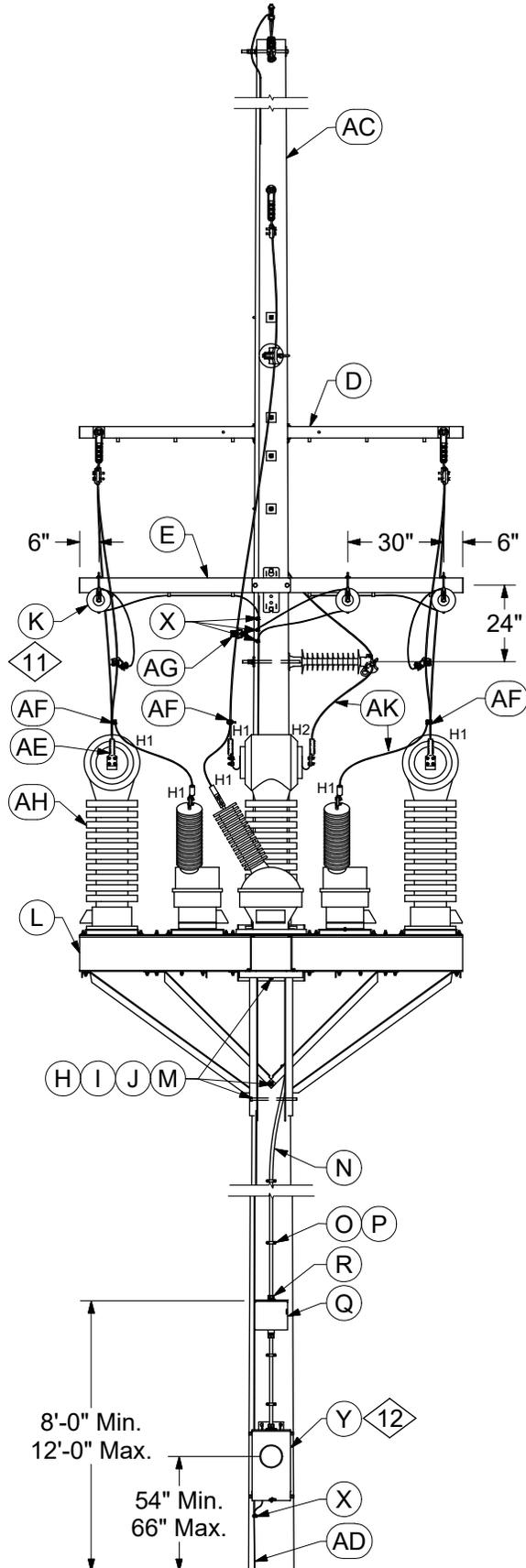
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ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 34 02 **	00
A	06 00 11 06 @	Static Deadend Tangent w/ Pole Ground		1
B	06 34 60 25 @	35kV Double Deadend Loop		1
C	25 05 219	Insulator, Vertical L.P., 69kV, Universal Clamptop		2
D	04 00 42 03 @	Crossarm - Deadend, F/G 10'		1
E	06 34 68 11 @	34kV Single Deadend on Arm		4
F	23 17 349	Mounting Assembly, 2CT's & 2PT's		1
G	23 53 059	Bolt, DA, 3/4" Dia x 18" w/ 4 square nuts		2
H	23 52 103	Bolt, Mach., 3/4" x 18" w/ square nut		3
I	23 66 031	Washer, Curved, Square, 3/4"		2
J	23 66 131	Washer, Square, 3/4"		2
K	23 66 135	Lock Washer - 3/4" Double Coil		4
L	23 65 042	Nut, Locking, Square, Galvanized, 3/4"		4
11 M	10 01 242	Arrester, 29kV MCOV, 36kV Duty Cycle, Intermediate, Base Mount		3
N	23 52 427	Bolt, Mach., 1/2" x 2-1/2" w/ square nut		9
O	23 66 017	Washer - Round 1/2"		9
P	23 66 133	Lock Washer - Double Coil 1/2"		9
Q	23 65 056	Lock Nut, 1/2"		9
R	12 51 303	Conduit, Flex, 1" Non-Metalic (ft.)		20
S	40 53 612	Conduit - Connector 1" Steel		2
T	40 83 093	Clamp - Conduit 1" Two-Hole Steel Strap		15
U	23 60 033	Lag Screw - 1/4" x 2" Hex Head		30
V	40 01 120	Box - Secondary Connection		1
W	23 60 007	Lag Screw - 1/2" x 4"		2
X	23 52 069	Bolt, Mach., 5/8" x 18" w/ square nut		2
Y	23 66 027	Washer, Flat, Square 5/8"		2
Z	23 66 134	Lock Washer - 5/8" Double Coil		2
AA	23 65 043	Lock Nut - 5/8" Square		2
AB	17 54 005	Connector - Split Bolt, #2 Solid to #6 Solid		4
12,@ AC	40 54 378	Meter, Enclosure, Instrument Rated, 8-Terminal		1
12,@ AD	62 51 563	Bracket - Meter Socket Hanging		2
@ AE	12 00 10 **	Grounding Unit		1
@ AF	18 51 019	Wire #2 Cu Covered (ft.)		#
@ AG	18 51 021	Wire #6 Cu Covered (ft.)		#
@ AH	02 00 02 01	Pole		1
@ AI	07 00 30 00 @	Lug, Connector w/ 2-Hole/4-Hole Pad		8
@ AJ	07 00 25 00 @	Clamp, Parallel Groove		7
@ AK	07 00 21 00 @	Clamp, Stirrup & Hotline		3
@ AL	Meter Shop	Potential Transformer		2
@ AM	Meter Shop	Current Transformer		2
@ AN	Meter Shop	Pack of 8C #12 Cu Wires of Individual Colors - Contact Metering Dept.		#
@ AO	07 00 80 00 @	Lead Wire, PH (ft.)		#
	286	OP Code, Install Primary Metering		1

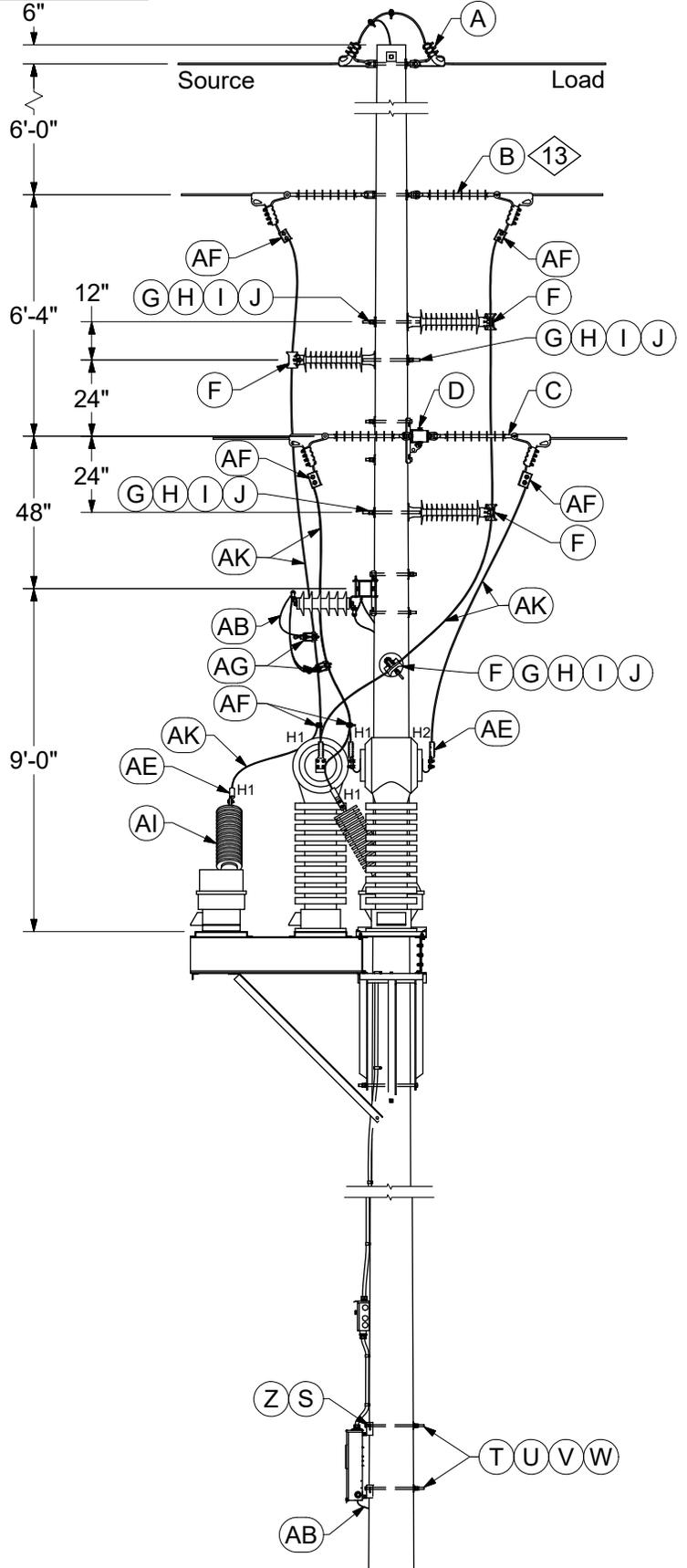
DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	08/14/14	WYW	

Source Side View

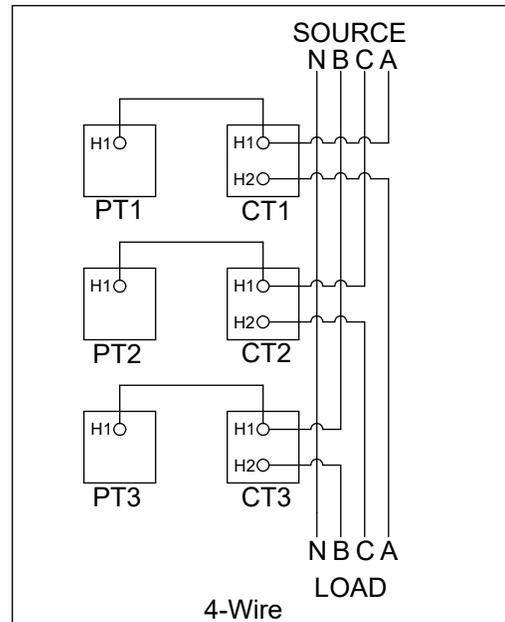
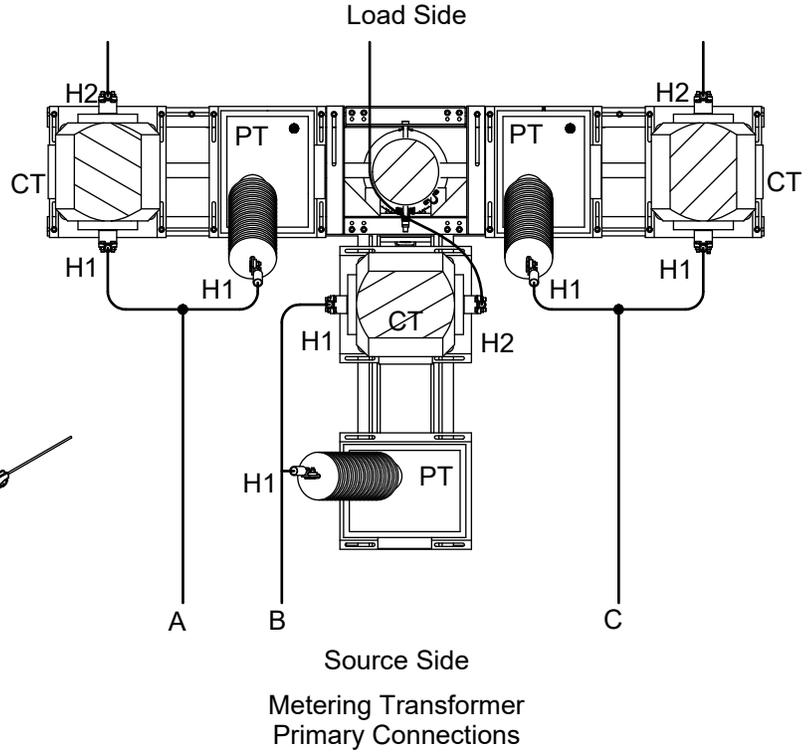
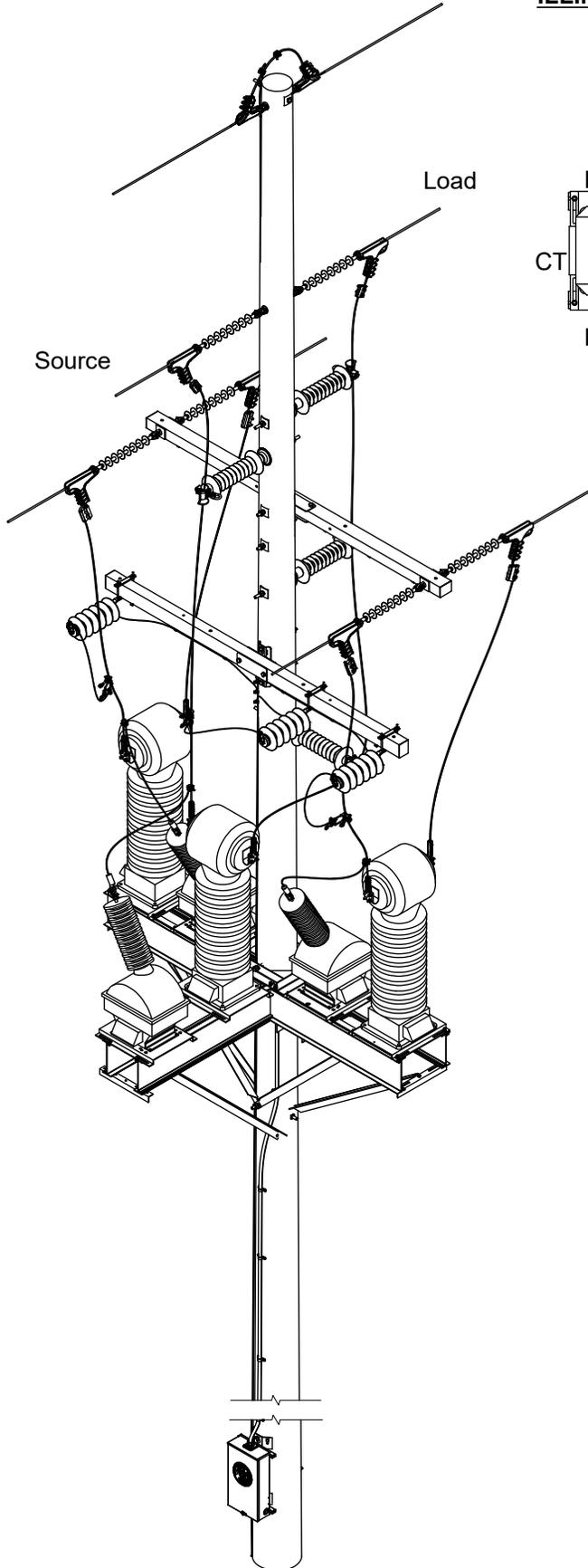


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REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	04/01/21	WYW	First Issue

ILLINOIS ONLY



REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	04/01/21	WYW	First Issue



METER INSTALLATIONS

Primary Meter Structure
Overhaed 3-PH 4W

25 34 02 01
35kV
3 of 4

ILLINOIS ONLY

CONSTRUCTION NOTE(s):

1. Ground all instrument transformers, arrestors, and mounting assembly to the grounding unit.
 2. Install barriers for protection against vehicular traffic where necessary.
 3. Maintain a minimum of 23" clearance between 35kV phases or phase to ground.
 4. Maintain minimum of 6'-0" clearance between the aluminum mounting platform and the crossarm.
 5. Maintain a minimum of 40" between the energized conductors and the pole on climbing side of the pole as per DCS **29 00 18 01**. Maintain a minimum of 19" between the energized lateral and vertical conductors and the pole on non climbing side of the pole as per DCS **29 00 17 12**.
 6. Maintain a minimum of 40" between any part of the aluminum mounting platform and conductors of 4 or 12kV underbuild.
 7. A customer-owned group-operated disconnect switch shall be installed on an adjacent structure on the customer side of the meter structure. The switch or subsequent breaker shall be capable of breaking the maximum current expected on the line.
 8. For wire color coding on PT and CT secondaries, refer to System Meter drawings.
 9. If metering structure is located within a substation, the metering LA ground wires must be connected to the substation ground mat.
 10. To enhance the protection of the metering equipment ensure that the tap for the phase conductor to the arrestor is as short as possible in distance. Install arrestors to load side on the adjacent pole if multiple span exposure on the load side exists and arrestors may be installed on adjacent poles.
- 11 Intermediate class arrestor comes with isolator disconnect & hot line clamp (bronze, up to 2/0) assembly. For lead wire if greater than 2/0 copper and all aluminum, must select a proper size of stirrup.
- 12 IL Meter Engineering specifies the Meter Enclosure used for the project and IL field poly-phase technicians order the meter enclosure and pole mounting bracket through the MDF. Most retail projects require a standard AMI meterbase (Stock #40 54 378) and pole mounting bracket (Stock #62 51 563). DER, Wholesale, and special retail projects (e.g. customer needs instantaneous data for load shedding scheme) require a two door cabinet (Stock #69 04 611) and other components supplied by IL Metering to house a high-end meter. Various two door cabinet manufacturers supply the MDF. Thus the required pole mounting bracket for the two door cabinet varies based on the supplier. Check the Stock #69 04 611 description in EMPRV for pole mounting bracket options.
- 13 Looparound is not required for 3PH 4W metering.

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	04/01/21	WYW	First Issue



METER INSTALLATIONS

Primary Meter Structure
Overhaed 3-PH 4W

25 34 02 01

35kV

4 of 4

ILLINOIS ONLY

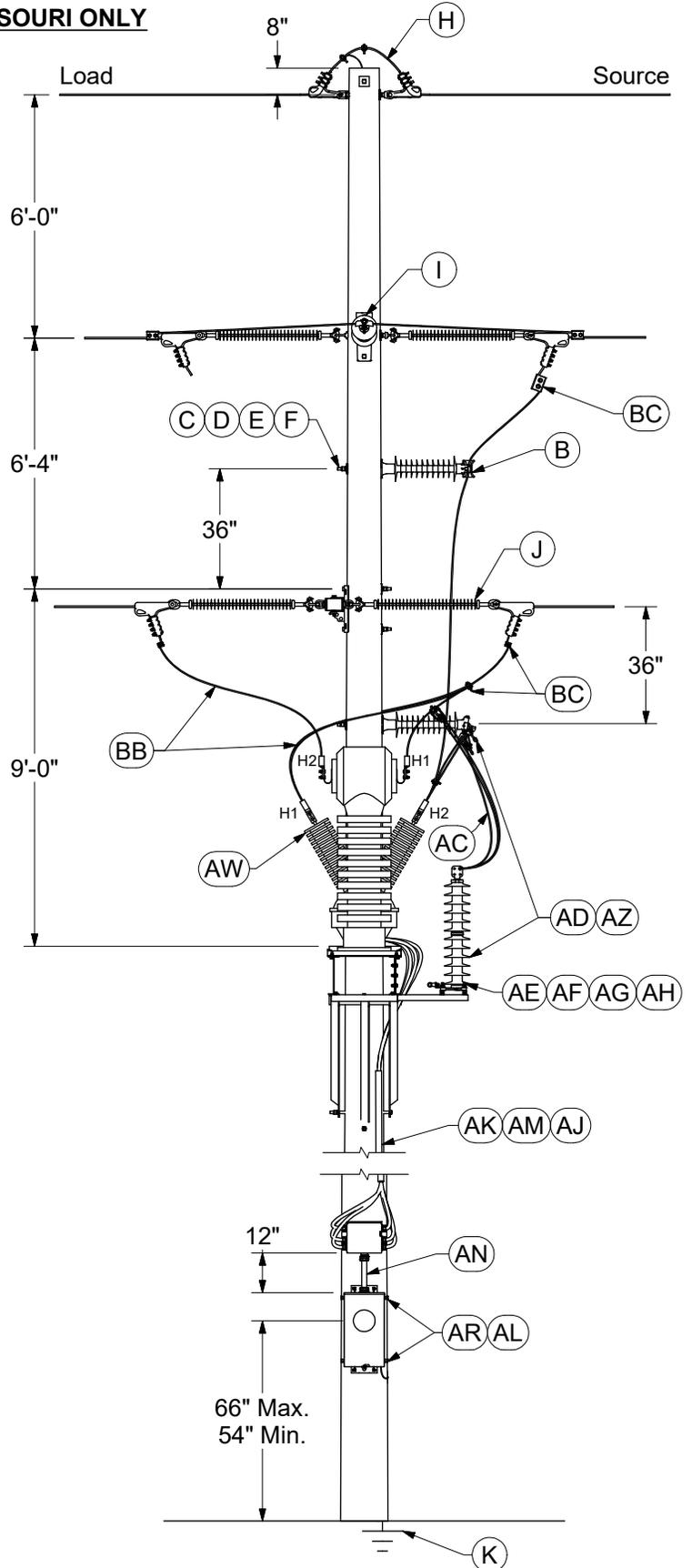
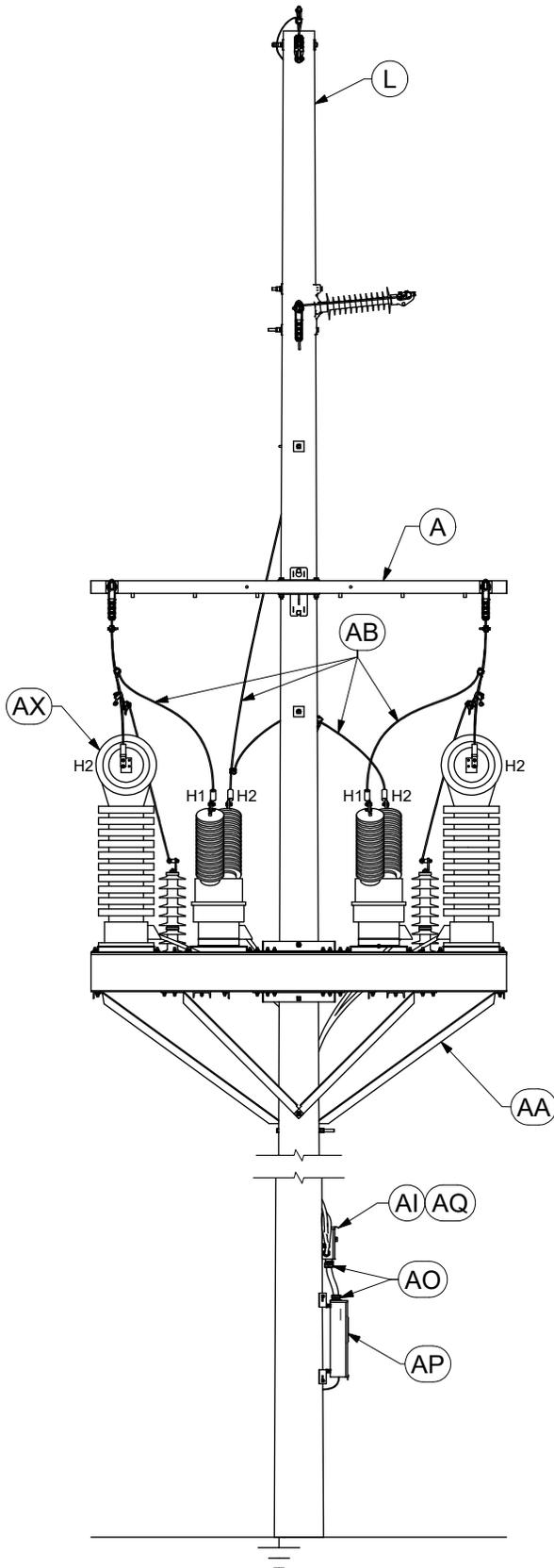
	ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 34 02 **	01	
13	A	06 00 11 06 @	Static Wire Deadend 69kV		1	
	B	06 34 60 25 @	Double Deadend 34kV Top Phase		1	
	C	06 34 68 08 @	Double Deadend 34kV on Fiberglass Arm		2	
	D	04 00 41 04 @	Crossarm - Deadend, F/G 10'		1	
	E	04 00 41 16 @	Crossarm - Tangent, F/G 10'		1	
	F	25 05 219	Insulator, Vertical L.P., 69kV, Universal Clamptop		4	
	G	23 53 059	Bolt, DA, 3/4" Dia x 18" w/ 4 square nuts		4	
	H	23 66 031	Washer, Curved, Square, 3/4"		4	
	I	23 66 135	Lock Washer - 3/4" Double Coil		8	
11	J	23 65 042	Nut, Locking, Square, Galvanized, 3/4"		8	
	K	10 01 243	Arrester, 29kV MCOV, 36kV Duty Cycle, NEMA Bracket		3	
	L	23 17 419	Mounting Assembly, 3CT's & 3PT's		1	
	M	23 52 103	Bolt, Mach., 3/4" x 18" w/ square nut		4	
	N	12 51 303	Conduit, Flex, 1" Non-Metallic (ft.)		20	
	O	40 83 093	Clamp - Conduit 1" Two Hole Steel Strap		12	
	P	23 60 033	Lag Screw - 1/4" x 2" Hex Head		24	
	Q	40 01 120	Box - Secondary Connection		1	
	R	40 53 612	Conduit - Connector 1" Steel		3	
	S	23 60 007	Lag Screw - 1/2" x 4"		2	
	T	23 52 069	Bolt, Mach., 5/8" x 18" w/ square nut		2	
12,@	U	23 66 027	Washer, Flat, Square 5/8"		2	
	V	23 66 134	Lock Washer - 5/8" Double Coil		2	
	W	23 65 043	Lock Nut - 5/8" Square		2	
	X	17 54 005	Connector - Split Bolt, #2 Solid to #6 Solid		4	
	Y	40 54 353	Meter Enclosure - 600V 13 Terminal		1	
	Z	62 51 563	Bracket - Meter Socket Hanging		2	
	@	AA	18 51 019	Wire #2 Cu Covered (ft.)		#
	@	AB	18 51 021	Wire #6 Cu Covered (ft.)		#
	@	AC	02 00 02 01	Pole		1
	@	AD	12 00 10 **	Grounding Unit New Pole		1
	@	AE	07 00 30 00 @	Lug, Connector w/ 2-Hole/4-Hole Pad		9
	@	AF	07 00 25 00 @	Clamp, Parallel Groove		11
	@	AG	07 00 21 00 @	Clamp, Stirrup & Hot Line		3
@	AH	Meter Shop	Current Transformer		3	
@	AI	Meter Shop	Potential Transformer		3	
@	AJ	Meter Shop	Pack of 8C #12 Cu Wires of Individual Colors - Contact Metering Dept.		#	
@	AK	07 00 80 00 @	Lead Wire, PH (ft.)		#	
		286	OP Code, Install Primary Metering		1	

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	04/01/21	WYW	First Issue

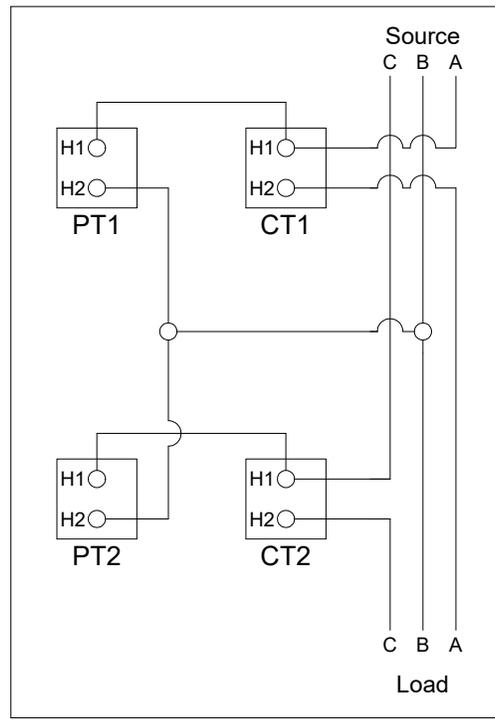
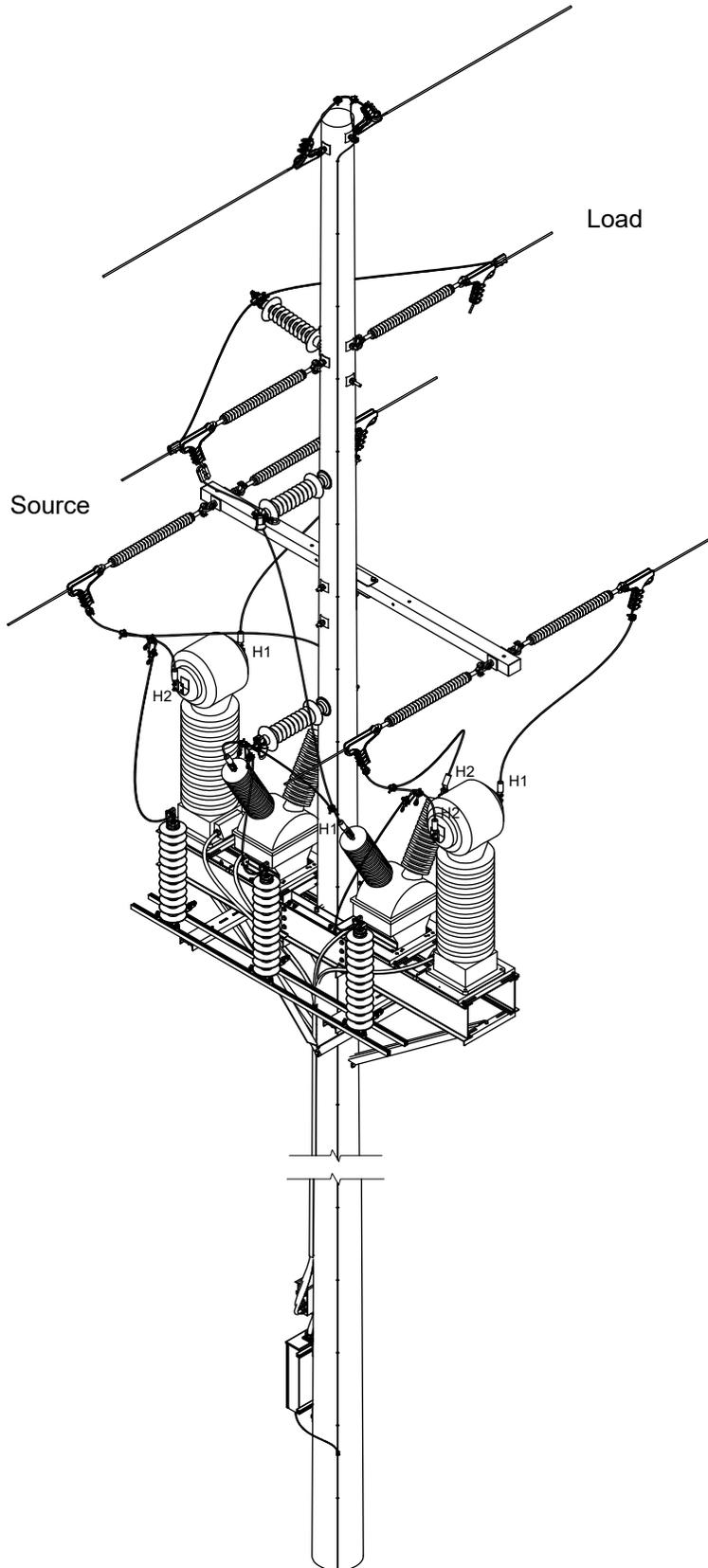
Load Side View

MISSOURI ONLY



REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	08/14/14	WYW	

MISSOURI ONLY



3 Wire

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	08/14/14	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-Phase Overhead 3W

25 69 01 00
69kV
3 of 4

MISSOURI ONLY

CONSTRUCTION NOTE(s):

1. Ground all instrument transformers, arresters, and mounting assembly to the grounding unit.
2. Install barriers for protection against vehicular traffic where necessary.
3. Maintain a minimum of 38" clearance between 69kV phases or phase to ground.
4. Maintain a minimum of 9'-0" clearance between the aluminum mounting platform and the crossarm.
5. Maintain a minimum of 54" between the energized conductors and the pole on climbing side of the pole as per DCS **29 00 18 01**; maintain a minimum of 30" between the energized conductors and the pole on non-climbing side of the pole as per DCS **29 00 17 12**.
6. Maintain a minimum of 40" between any part of the aluminum mounting platform and conductors of 4 or 12kV underbuild.
7. If disconnect switches are required, the switches may be installed on adjacent poles.
8. For wire color coding on PT and CT secondary's, refer to System Meter drawings.
9. If metering structure is located with a substation, the metering and LA ground wires must be connected to the substation ground mat.
10. To enhance the protection of the metering equipment, ensure that the tap for the phase conductor to the arrester is as short as possible. Install arrestors to load side on the adjacent pole if multiple span exposure on the load side exists.
11. Intermediate class arrester comes with isolator disconnect & hot line clamp (bronze, up to 2/0) assembly. For lead wire if greater than 2/0 copper and all aluminum, must select a proper size of stirrup.

ITEM	STK / DCS #	DESCRIPTION - Customer Provides and Installs Material	25 69 01 **	00
A	04 00 42 03 @	Crossarm - Deadend, FG, 10'		1
B	25 05 219	Insulator, Vertical L.P., 69kV, Universal Clamptop		2
C	23 53 058	Bolt, DA, 3/4" Dia x 16" w/ 4 square nuts		2
D	23 66 031	Washer, Curved, Square, 3/4"		2
E	23 66 135	Lock Washer - 3/4" Double Coil		2
F	23 65 042	Nut, Locking, Square, Galvanized, 3/4"		2
G	17 54 005	Connector - Split Bolt, #2 Solid to #6 Solid		4
H	06 00 11 06 @	Static Deadend Tangent w/ Pole Ground		1
I	06 34 60 01 @	69kV Double Deadend Loop		1
J	06 34 68 10 @	Double Deadend 69kV on FG Arm		2
@	12 00 10 **	Grounding Unit		1
@	02 00 02 01	Pole		1

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	08/14/14	WYW	



METER INSTALLATIONS

Primary Meter Structure
3-Phase Overhead 3W

25 69 01 00

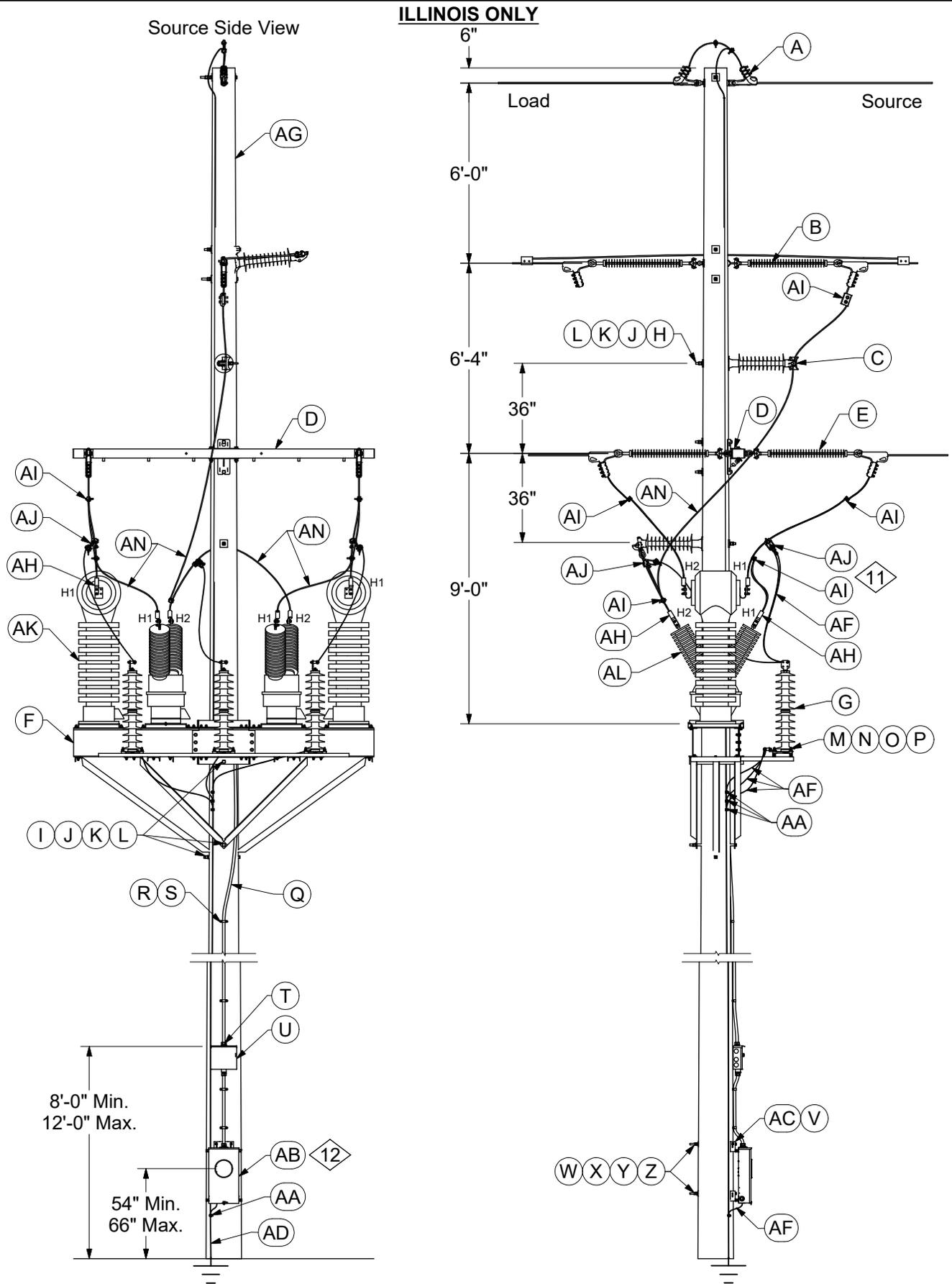
69kV

4 of 4

MISSOURI ONLY

ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 69 01 **	00
AA	23 17 349	Mounting Assembly, 2CT's & 2PT's		1
AB	18 51 019	Wire, #2 CU, S.D., Covered (ft.)		50
AC	18 51 021	Wire, #6 CU, S.D., Covered (ft.)		30
AD	10 01 269	Arrester - 57kV MCOV, 72kV Duty Cycle		3
AE	23 52 427	Bolt, Mach., 1/2" x 2-1/2" w/ square nut		9
AF	23 66 017	Washer - Round 1/2"		9
AG	23 66 133	Lock Washer - Double Coil 1/2"		9
AH	23 65 056	Lock Nut -1/2" Square		9
AI	40 01 120	Box - Secondary Connection		1
AJ	18 11 065	Cord, Hrd Srv, 2-#14 Cu, 600V		180
AK	12 51 217	Conduit - 2" Split SCH 40		1
AL	23 60 007	Lag Screw - 1/2" x 4"		4
AM	27 60 035	Iron Hanger, Galv., 3/4" Wide (ft.)		2
AN	40 52 468	Conduit, Flex, 1-1/2", Non-Metallic (ft.)		1
AO	40 52 072	Conduit Fitting, Liquid-tight, Flex, 1-1/2"		2
AP	40 04 246	Socket, Meter, Instrument Rated, Pre-Wired, Test Switches, 8-Terminal		1
AQ	21 66 039	Screw, Cap, Hex Head, Steel, 3/8" - 16 TPI x 2"		2
AR	62 51 563	Bracket - Meter Socket Hanging		2
AS	23 52 069	Bolt, Mach.,5/8" x 18" w/ square nut		2
AT	23 66 207	Washer, Curved, Square, 5/8"		2
AU	23 66 134	Lock Washer, - 5/8" Double Coil		2
AV	23 65 043	Lock Nut - 5/8" Square		2
@ AW	Meter Shop	Potential Transformer		2
@ AX	Meter Shop	Current Transformer		2
@ AY	Meter Shop	Wire Pack, Color Coded, 10-#12 (ft.)		5
@ AZ	07 00 21 00 @	Clamp, Stirrup		3
@ BA	07 00 30 00 @	Lug, Connector 4-Hole		4
@ BB	07 00 80 00 @	Lead Wire, PH (ft.)		#
@ BC	07 00 25 00 @	Clamp, Parallel Groove, PG*W		5
	286	Op Code, Install Primary Metering		1

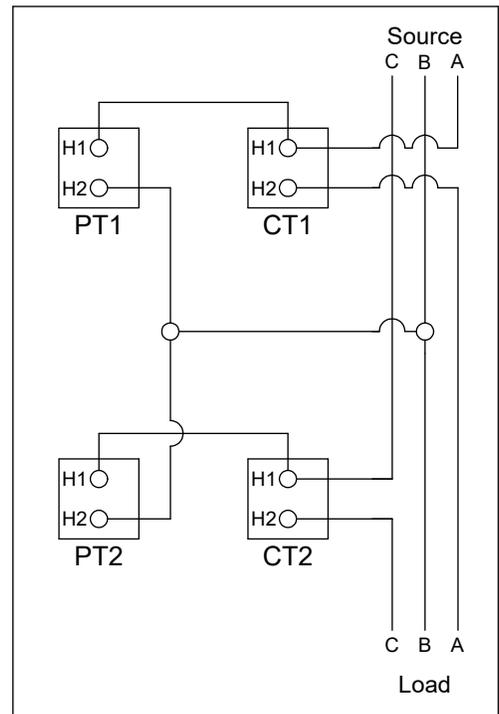
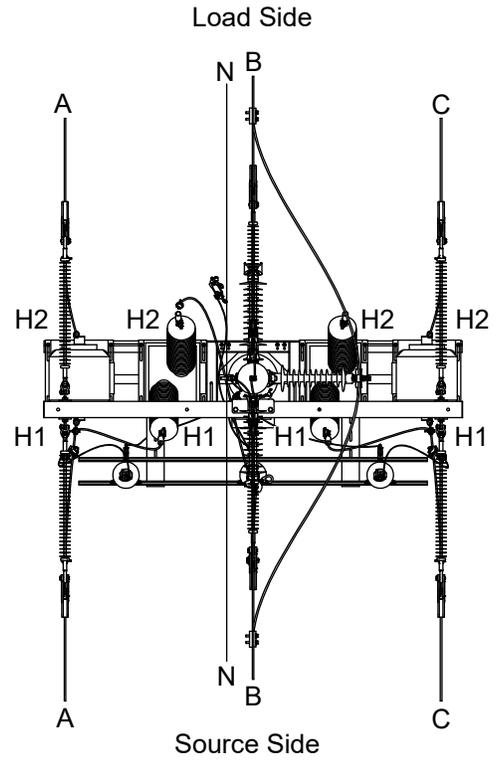
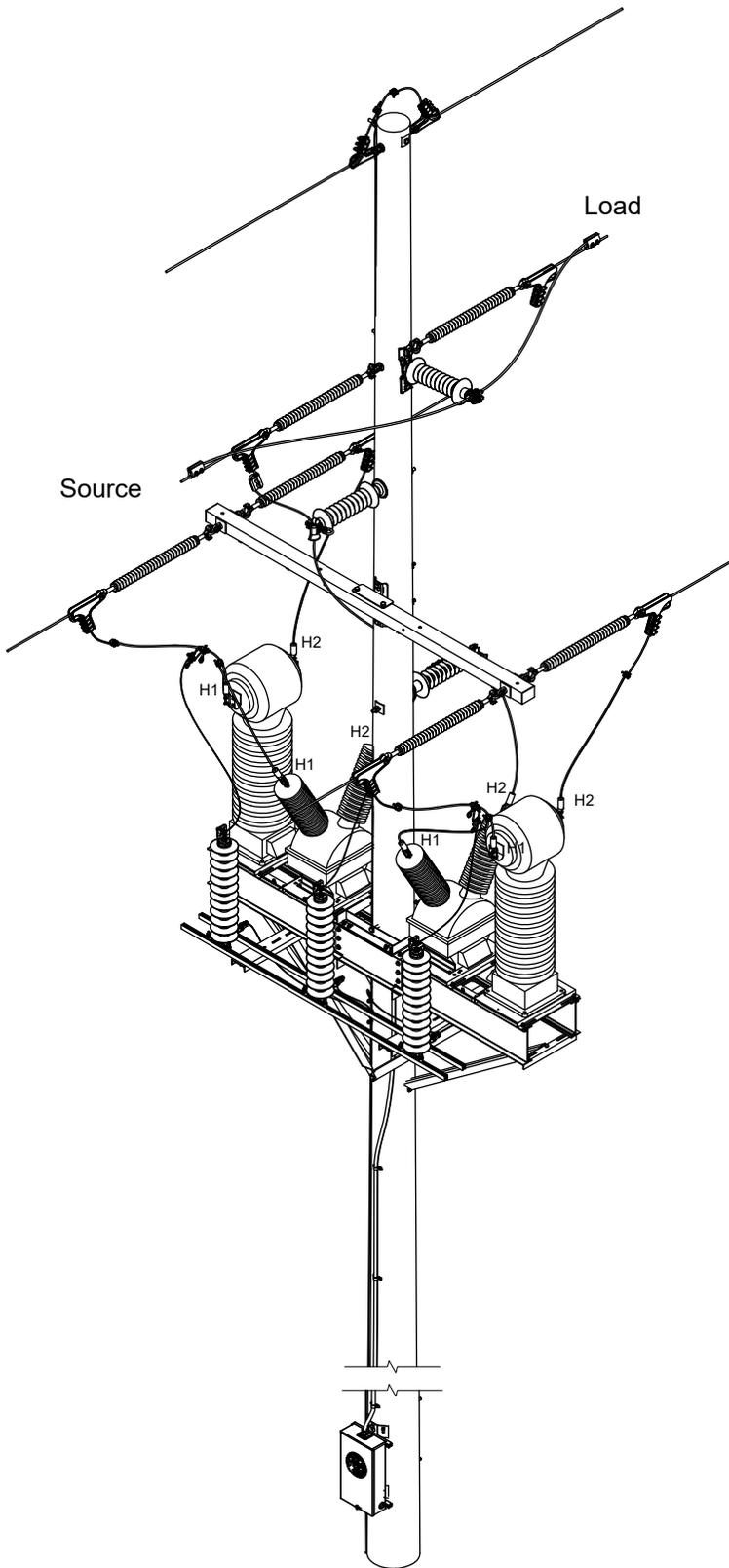
REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	08/14/14	WYW	



**DISTRIBUTION
CONSTRUCTION STANDARDS**

REV	DATE	ENG	DESCRIPTION
3	01/01/24	WYW	Converted to new format
2	09/29/17	WYW	

ILLINOIS ONLY



3 Wire

REV	DATE	ENG	DESCRIPTION
3	01/01/24	WYW	Converted to new format
2	09/29/17	WYW	



METER INSTALLATIONS

Primary Metering
3 Phase, 3 Wire

25 69 02 00
69kV
3 of 4

ILLINOIS ONLY

CONSTRUCTION NOTE(s):

1. Ground all instrument transformers, arrestors, and mounting assembly to the grounding unit.
 2. Install barriers for protection against vehicular traffic where necessary.
 3. Maintain a minimum of 38" clearance between 69kV phases or phase to ground.
 4. Maintain a minimum of 9'-0" clearance between the aluminum mounting platform and the crossarm.
 5. Maintain a minimum of 54" between the energized conductors and the pole on climbing side of the pole as per DCS **29 00 18 01**. Maintain a minimum of 30" between the energized lateral and vertical conductors and the pole on non-climbing side of the pole as per DCS **29 00 17 12**.
 6. Maintain a minimum of 40" between any part of the aluminum mounting platform and conductors of 4 or 12kV underbuilt.
 7. A customer-owned group-operated disconnect switch shall be installed on an adjacent structure on the customer side of the meter structure. The switch or subsequent breaker shall be capable of breaking the maximum current expected on the line.
 8. For wire color coding on PT and CT secondaries, refer to System Meter drawings.
 9. Due to variations in 69kV configurations, each primary metering installation should be individually designed, but this standard will serve as a general guide.
 10. To enhance the protection of the metering equipment ensure that the tap for the phase conductor to the arrestor is as short as possible in distance. Install arrestors to load side on the adjacent pole if multiple span exposure on the load side exists and arrestors may be installed on adjacent poles.
- ◊11 Intermediate class arrestor comes with isolator disconnect & hot line clamp(Bronze, up to 2/0) assembly. For lead wire, if greater than 2/0 copper and all aluminum, must select a proper size of stirrup.
- ◊12 IL Meter Engineering specifies the Meter Enclosure used for the project and IL field poly-phase technicians order the meter enclosure and pole mounting bracket through the MDF. Most retail projects require a standard AMI meterbase (Stock #40 54 378) and pole mounting bracket (Stock #62 51 563). DER, Wholesale, and special retail projects (e.g. customer needs instantaneous data for load shedding scheme) require a two door cabinet (Stock #69 04 611) and other components supplied by IL Metering to house a high-end meter. Various two door cabinet manufacturers supply the MDF. Thus the required pole mounting bracket for the two door cabinet varies based on the supplier. Check the Stock #69 04 611 description in EMPRV for pole mounting bracket options.

REV	DATE	ENG	DESCRIPTION
3	01/01/24	WYW	Converted to new format
2	09/29/17	WYW	



METER INSTALLATIONS

Primary Metering
3 Phase, 3 Wire

25 69 02 00
69kV
4 of 4

ILLINOIS ONLY

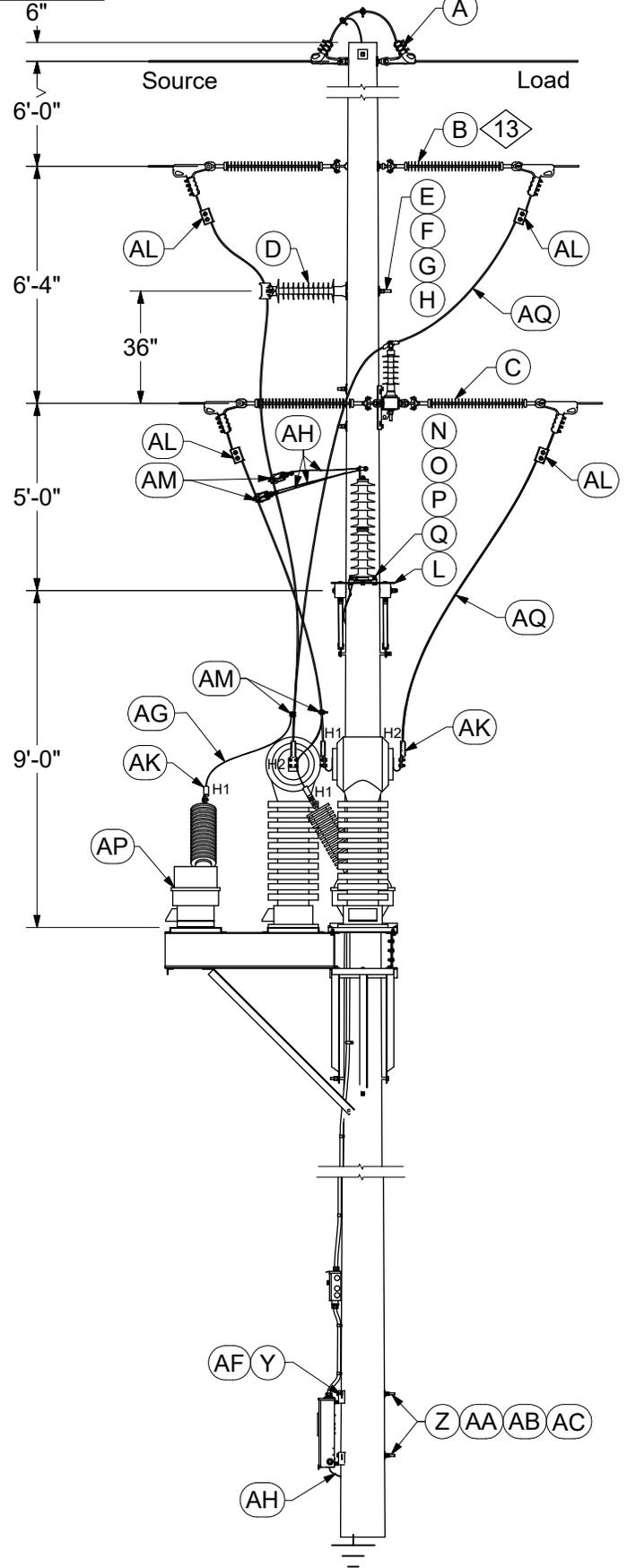
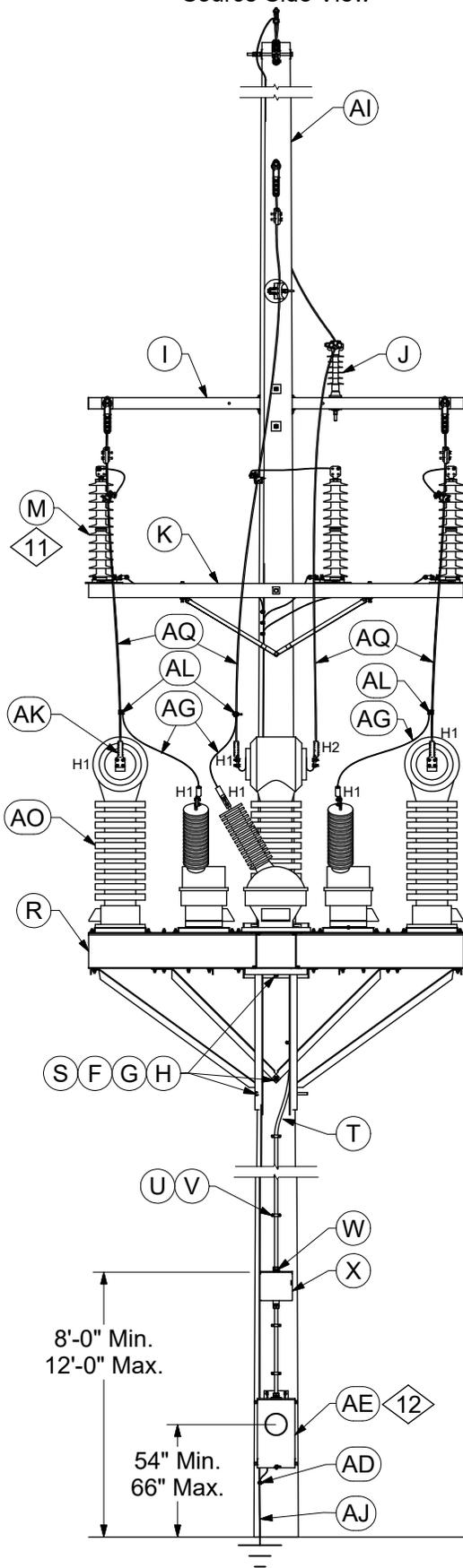
ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 69 02 **	00
A	06 00 11 06 @	69kV Static Wire Deadend		1
B	06 34 60 01 @	69kV Double Deadend Loop		1
C	25 05 219	Insulator, Vertical L.P., 69kV, Universal Clamptop		2
D	04 00 42 03 @	Crossarm, Deadend, F/G 10'		1
E	06 34 68 10 @	69kV Double Deadend on F/G Crossarm		2
F	23 17 349	Mounting Assembly, 2CT's & 2PT's		1
11 G	10 01 269	Arrester - 57kV MCOV, 72kV Duty Cycle, Interim		3
H	23 53 058	Bolt, DA, 3/4" Dia x 16" w/ 4 square nuts		2
I	23 52 103	Bolt, Mach., 3/4" x 18" w/ square nut		3
J	23 66 031	Washer, Curved, Square, 3/4"		4
K	23 66 135	Lock Washer - 3/4" Double Coil		4
L	23 65 042	Nut, Locking, Square, Galvanized, 3/4"		4
M	23 52 427	Bolt, Mach., 1/2" x 2-1/2" w/ square nut		9
N	23 66 017	Washer - Round 1/2"		9
O	23 66 133	Lock Washer - Double Coil 1/2"		9
P	23 65 056	Lock Nut, 1/2"		9
Q	12 51 303	Conduit, Flex, 1" Non-Metalic (ft.)		20
R	40 83 093	Clamp - Conduit 1" Two Hole Steel Strap		10
S	23 60 033	Lag Screw - 1/4" x 2" Hex Head		20
T	40 53 612	Conduit - Connector 1" Steel		3
U	40 01 120	Box - Secondary Connection		1
V	23 60 007	Lag Screw - 1/2" x 4"		2
W	23 52 069	Bolt, Mach., 5/8" x 18" w/ square nut		2
X	23 66 027	Washer, Flat, Square 5/8"		2
Y	23 66 134	Lock Washer - 5/8" Double Coil		2
Z	23 65 043	Lock Nut - 5/8" Square		2
AA	17 54 005	Connector - Split Bolt, #2 Solid to #6 Solid		4
12,@ AB	40 54 378	Meter, Socket, Instrument Rated, 8-Terminal		1
12,@ AC	62 51 563	Bracket - Meter Socket Hanging		2
@ AD	12 00 10 **	Grounding Unit		1
@ AE	18 51 019	Wire #2 Cu Covered (ft.)		#
@ AF	18 51 021	Wire #6 Cu Covered (ft.)		#
@ AG	02 00 02 01	Pole		1
@ AH	07 00 30 00 @	Lug, Connector w/ 2-Hole/4-Hole Pad		8
@ AI	07 00 25 00 @	Clamp, Parallel Groove		7
@ AJ	07 00 21 00 @	Clamp, Stirrup & Hot Line		3
@ AK	Meter Shop	Current Transformer		2
@ AL	Meter Shop	Potential Transformer		2
@ AM	Meter Shop	Pack of 8C #12 Cu Wires of Individual Colors - Contact Metering Dept.		#
@ AN	07 00 80 00 @	Lead Wire, PH (ft.)		#
	286	OP Code, Install Primary Metering		1

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
3	01/01/24	WYW	Converted to new format
2	09/29/17	WYW	

Source Side View

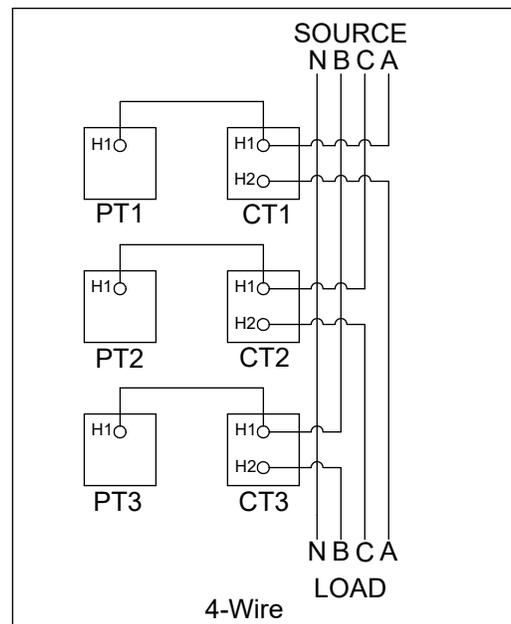
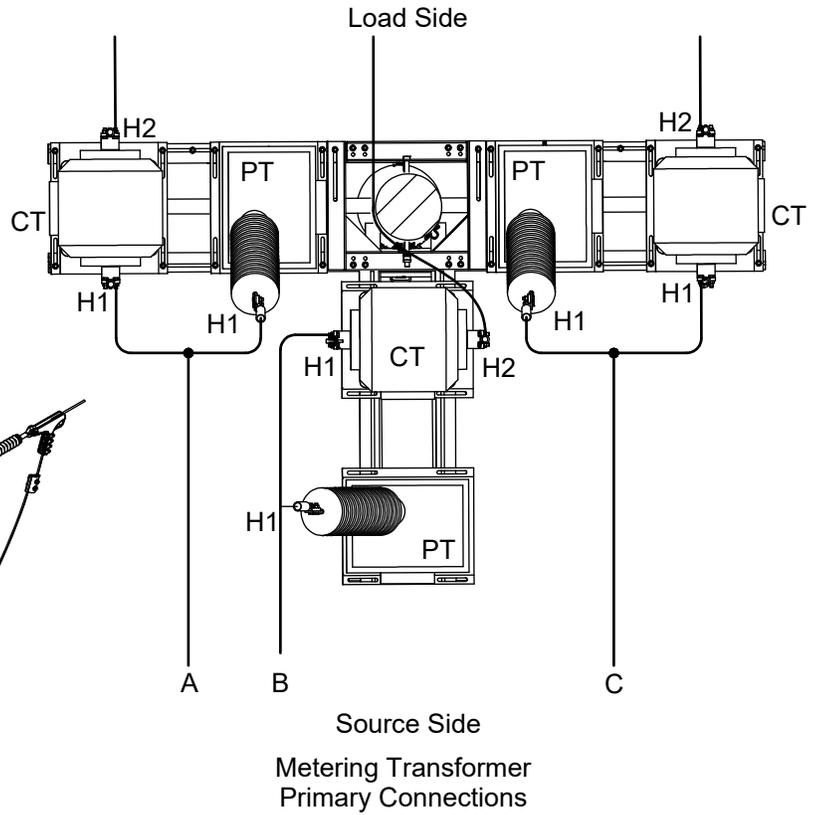
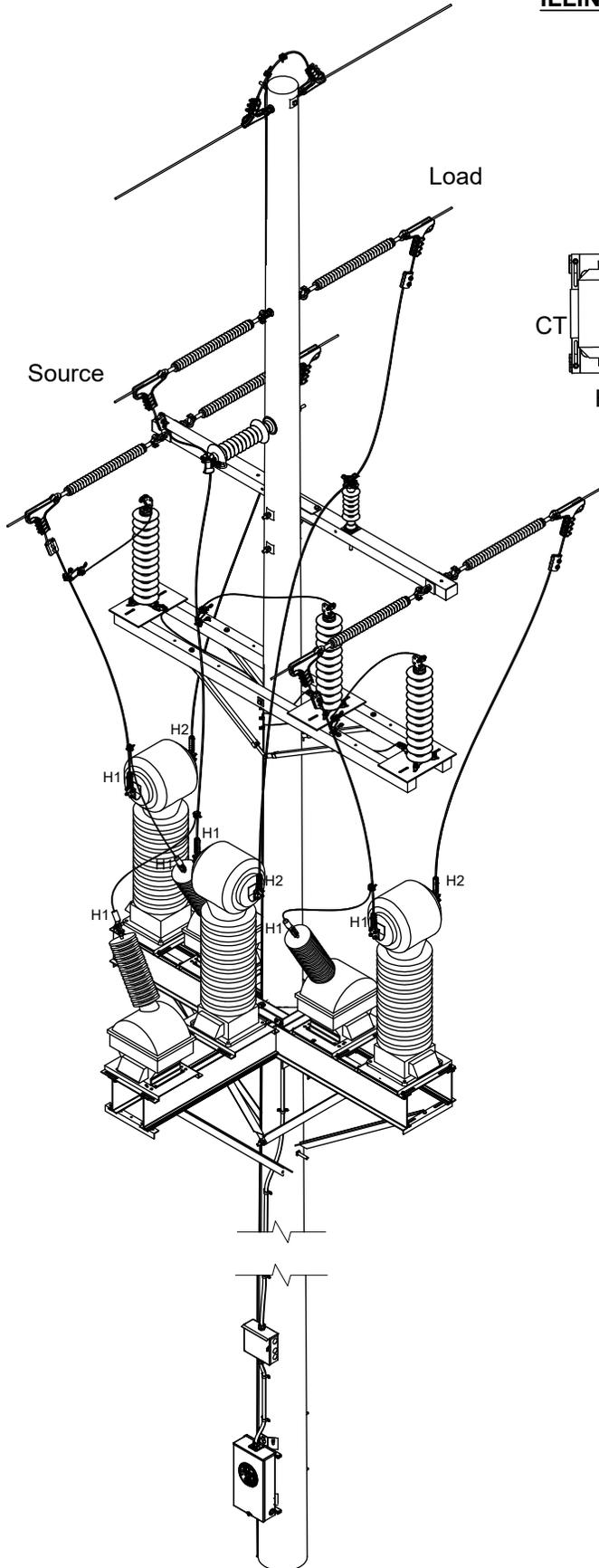
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**DISTRIBUTION
CONSTRUCTION STANDARDS**

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format

ILLINOIS ONLY



REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format



METER INSTALLATIONS

Primary Metering
3 Phase, 4 Wire

25 69 02 01
69kV
3 of 4

ILLINOIS ONLY

CONSTRUCTION NOTE(s):

1. Ground all instrument transformers, arrestors, and mounting assembly to the grounding unit.
 2. Install barriers for protection against vehicular traffic where necessary.
 3. Maintain a minimum of 38" clearance between 69kV phases or phase to ground.
 4. Maintain a minimum of 9'-0" clearance between the aluminum mounting platform and the crossarm.
 5. Maintain a minimum of 54" between the energized conductors and the pole on climbing side of the pole as per DCS **29 00 18 01**. Maintain a minimum of 30" between the energized lateral and vertical conductors and the pole on non-climbing side of the pole as per DCS **29 00 17 12**.
 6. Maintain a minimum of 40" between any part of the aluminum mounting platform and conductors of 4 or 12kV underbuilt.
 7. A customer-owned group-operated disconnect switch shall be installed on an adjacent structure on the customer side of the meter structure. The switch or subsequent breaker shall be capable of breaking the maximum current expected on the line.
 8. For wire color coding on PT and CT secondaries, refer to System Meter drawings.
 9. Due to variations in 69kV configurations, each primary metering installation should be individually designed, but this standard will serve as a general guide.
 10. To enhance the protection of the metering equipment ensure that the tap for the phase conductor to the arrestor is as short as possible in distance. Install arrestors to load side on the adjacent pole if multiple span exposure on the load side exists and arrestors may be installed on adjacent poles.
- 11 Intermediate class arrestor comes with isolator disconnect & hot line clamp(Bronze, up to 2/0) assembly. For lead wire, if greater than 2/0 copper and all aluminum, must select a proper size of stirrup.
- 12 IL Meter Engineering specifies the Meter Enclosure used for the project and IL field poly-phase technicians order the meter enclosure and pole mounting bracket through the MDF. Most retail projects require a standard AMI meterbase (Stock #40 54 378) and pole mounting bracket (Stock #62 51 563). DER, Wholesale, and special retail projects (e.g. customer needs instantaneous data for load shedding scheme) require a two door cabinet (Stock #69 04 611) and other components supplied by IL Metering to house a high-end meter. Various two door cabinet manufacturers supply the MDF. Thus the required pole mounting bracket for the two door cabinet varies based on the supplier. Check the Stock #69 04 611 description in EMPRV for pole mounting bracket options.
- 13 Looparound is not required for 3PH 4W metering.

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format



METER INSTALLATIONS

Primary Metering
3 Phase, 4 Wire

25 69 02 01
69kV
4 of 4

ILLINOIS ONLY

	ITEM	STK / DCS #	DESCRIPTION - Ameren Provides and Installs Material	25 69 02 **	01
13	A	06 00 11 06 @	Deadend, Static, with Clamp		1
	B	06 34 60 01 @	69kV Double Deadend Top Phase		1
	C	06 34 68 10 @	69kV Double Deadend on Fiberglass Arm		2
	D	25 05 219	Insulator, Vertical L.P., 69kV, Universal Clamptop		1
	E	23 53 059	Bolt, DA, 3/4" Dia x 18" w/ 4 square nuts		1
	F	23 66 031	Washer, Curved, Square, 3/4"		1
	G	23 66 135	Lock Washer - 3/4" Double Coil		4
	H	23 65 042	Nut, Locking, Square, Galvanized, 3/4"		4
	I	04 00 42 03 @	Crossarm - Deadend, F/G 10'		1
	J	06 69 01 02 @	Line Post Insulator 69kV Clamp-top		1
11	K	04 00 20 03	Crossarm, Wood with Brace, 10'		2
	L	27 06 355	Plate for DBL Arm w/Mounting Hardware on the Crossarm		3
	M	10 01 269	Arrester - 57kV MCOV, 72kV Duty Cycle, Interim		3
	N	23 52 427	Bolt, Mach., 1/2" x 2-1/2" w/ square nut		9
	O	23 66 017	Washer - Round 1/2"		9
	P	23 66 133	Lock Washer - Double Coil 1/2"		9
	Q	23 65 056	Lock Nut - 1/2" Square		9
	R	23 17 419	Mounting Assembly, 3CT's & 3PT's		1
	S	23 52 103	Bolt, Mach., 3/4" x 18" w/ square nut		3
	T	12 51 303	Conduit, Flex, 1" Non-Metallic (ft.)		20
	U	40 83 093	Clamp - Conduit 1" Two Hole Steel Strap		1
	V	23 60 033	Lag Screw - 1/4" x 2" Hex Head		20
	W	40 53 612	Conduit - Connector 1" Steel		3
	X	40 01 120	Box - Secondary Connection		1
	Y	23 60 007	Lag Screw - 1/2" x 4"		4
	Z	23 52 069	Bolt, Mach., 5/8" x 18" w/ square nut		2
	AA	23 66 027	Washer, Flat, Square 5/8"		2
	AB	23 66 134	Lock Washer - 5/8" Double Coil		2
	AC	23 65 043	Lock Nut - 5/8" Square		2
	AD	17 54 005	Connector - Split Bolt, #2 Solid to #6 Solid		4
12,@	AE	40 54 353	Meter Socket - 600V 13 Terminal		1
12,@	AF	62 51 563	Bracket - Meter Socket Hanging		2
@	AG	12 00 10 **	Grounding Unit		1
@	AH	18 51 019	Wire #2 Cu Covered (ft.)		#
@	AI	18 51 021	Wire #6 Cu Covered (ft.)		#
@	AJ	02 00 02 01	Pole		1
@	AK	07 00 30 00 @	Lug, Connector w/ 2-Hole/4-Hole Pad		7
@	AL	07 00 25 00 @	Clamp, Parallel Groove		11
@	AM	07 00 21 00 @	Clamp, Hot Line		3
@	AN	Meter Shop	Pack of 8C #12 Cu Wires of Individual Colors - Contact Metering Dept.		#
@	AO	Meter Shop	Current Transformer		3
@	AP	Meter Shop	Potential Transformer		3
@	AQ	07 00 80 00 @	Lead Wire, PH (ft.)		#
@		286	OP Code, Install Primary Metering		1

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format



METER INSTALLATIONS

AMI/AMR Installations Clearance Requirements

25 90 00 00

1 of 5

1. Antennas & AMI/AMR Devices Located in the Supply Space

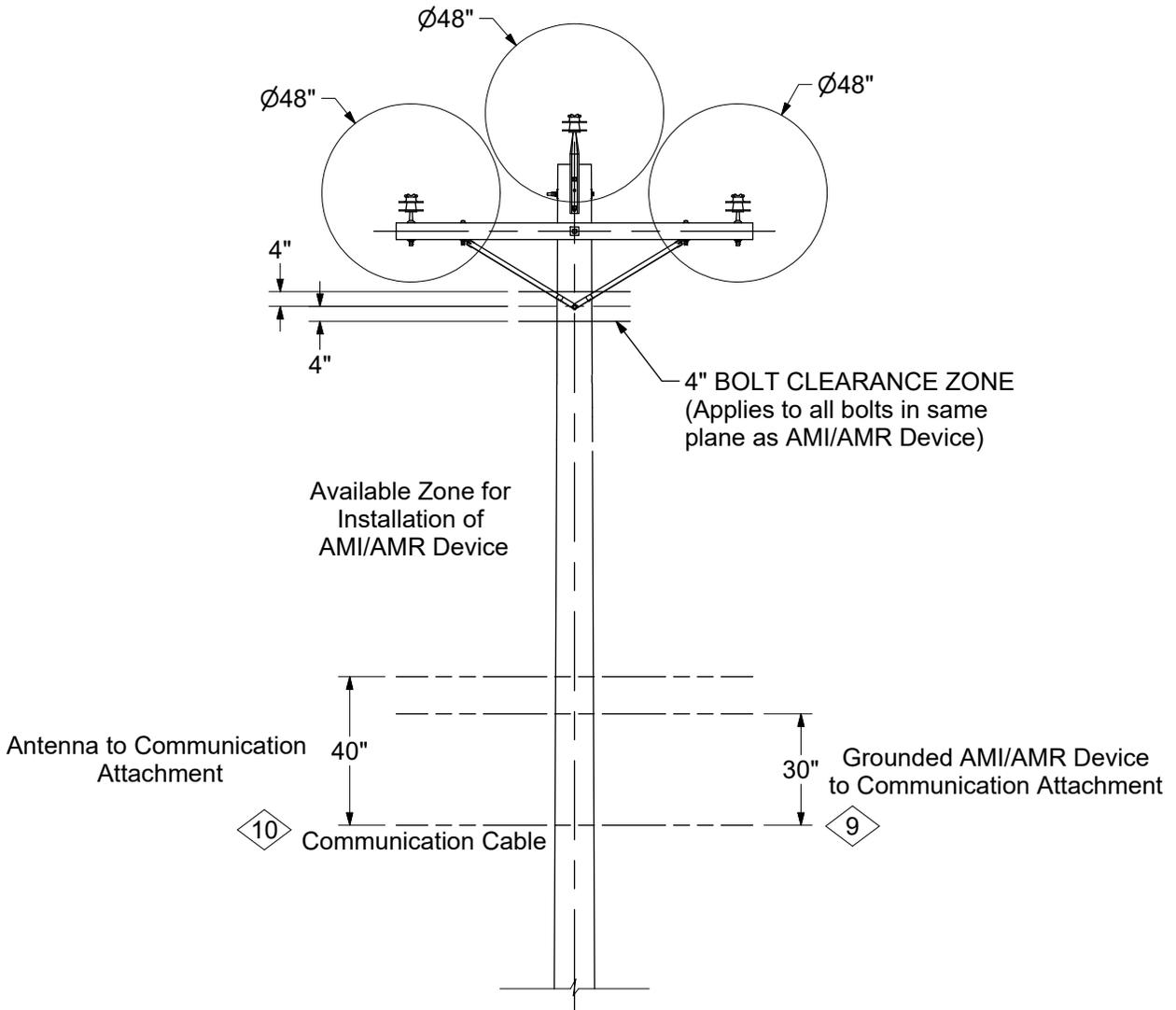
- A. Communication antennas located in the supply space shall be installed and maintained only by personnel authorized and qualified to work in the supply space. These are typically antennas on routers and collectors installed for Ameren's Advanced Metering Infrastructure (AMI) system, or Micro Cell Controllers (MCCs) installed for Ameren's Automated Meter Reading (AMR).
- B. Vertical and lateral AMI/AMR device power conductors and cables attached to a communication antenna vertical and lateral device power conductors or antenna cables should be attached to the surface of the structure enclosed in non-metallic conduit or U-guard. They shall be located so that they do not obstruct climbing spaces or lateral working spaces between line conductors at different levels or interfere with the safe use of pole steps.
- C. Communication Equipment and Antennas
The radial clearance between a communication antenna and its associated conductive mounting hardware and a supply line conductor shall be not less than the values given in the following table.

Clearance of Line Conductor From: 1	0 to 600V	>600V to 69kV
Antenna 2 3 5	12 in.	48 in.
Equipment case that supports or is adjacent to a communication antenna	6 in.	48 in.

DESIGN NOTE(s):

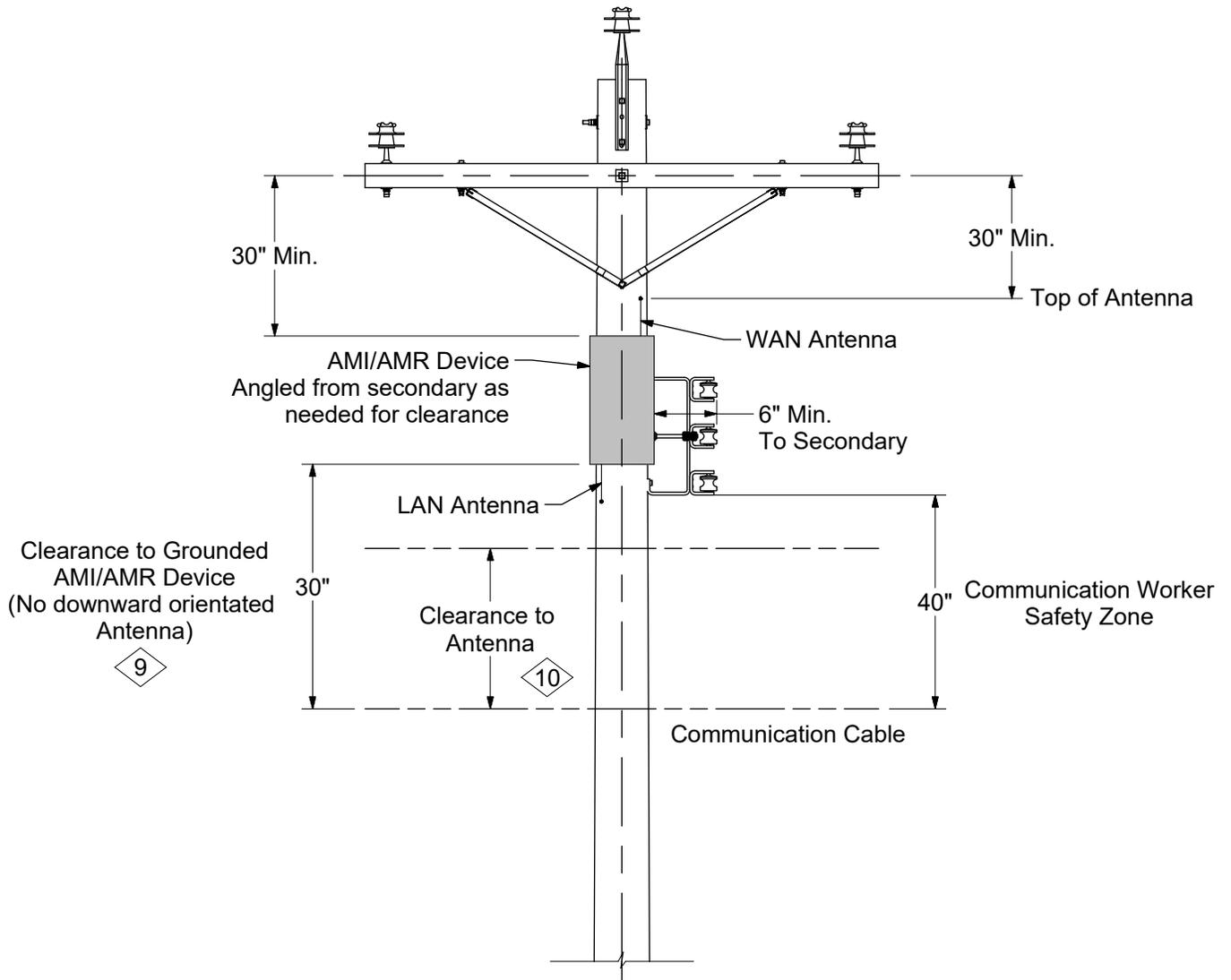
- 1. These Ameren required clearances exceed the NEĪC, 2017 Edition, Rule 235 I allowed minimum clearance.
- 2. Wide Area Network (WAN) antennas or located on the top of the AMI or AMR devices.
- 3. Local Area Network (LAN) antennas located on the bottom of the AMI or AMR devices shall have at least 40 inches vertical clearance to communication conductors.
- 4. Additional requirements for AMI or AMR devices:
 - a. The bottom of an ungrounded AMI or AMR device case shall have at least 40 inches vertical clearance to communication conductors. If the AMI or AMR device case is grounded and there is no downward oriented antenna, the vertical clearance to communication conductors may be reduced to 30 inches.
 - b. The top and bottom of the AMI or AMR device should be maintained a minimum of 4 inches from bolted connection points on the pole that are in the same place as the AMI or AMR device. This is to allow access by Ameren personnel to the bolted connection.
 - c. AMI or AMR device cases shall be at least 6 inches from conductors 0 to 600V. AMI or AMR devices may be installed at any angle from secondary rack or clevis necessary to achieve required clearance.
 - d. Ameren requires a minimum of 30 inches from center of cross-arm to top of the AMI or AMR device or its antenna whichever is closer. Greater separation may be required to achieve required clearance from line conductors.
- 5. This DCS is applicable to antennas operated at a radio frequency of 3 kHz to 300 GHz.
- 6. Collectors (AMI) / Gateway (AMI) / Routers (AMI) shall be effectively grounded.
- 7. AMI devices may be installed on transformer poles where there are no communication (telephone or CATV) attachments, and where clearance requirements to communications (if present) can be met.
- 8. AMI or AMR devices should not be installed on terminal poles, gang operated switch poles, capacitor poles, or voltage regulator poles. They may be installed on solid blade or fused switch poles as long as the AMI or AMR device does not interfere with safe operation of the switches.

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	05/12/21	DG	



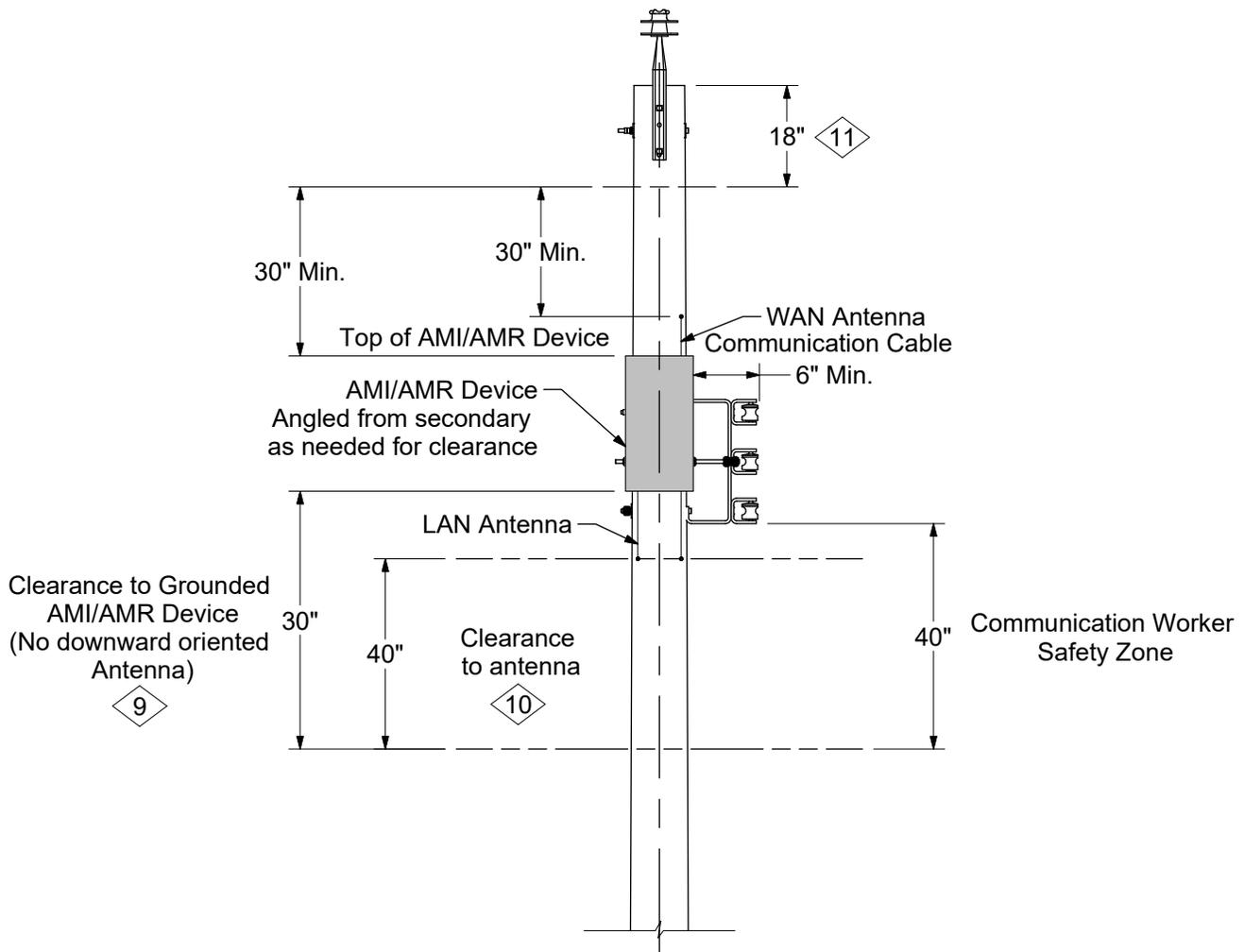
Antenna & AMI/AMR Device Supply Space Installation/Clearance Zone

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	05/12/21	DG	



Antenna & AMI/AMR Device Clearances in 3 Phase Supply Space

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	05/12/21	DG	



Antenna & AMI/AMR Device Clearances in 1 Phase Supply Space

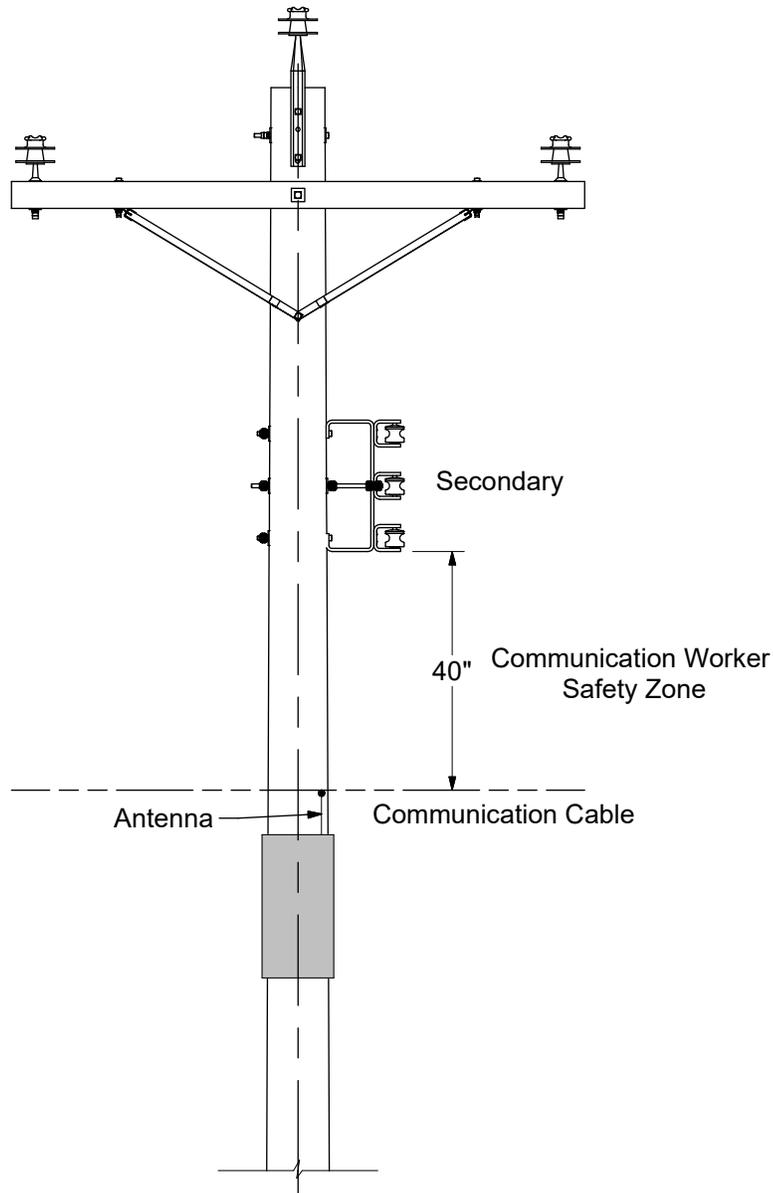
CONSTRUCTION NOTE(s):

- 9. If the AMI/AMR device case is not grounded, 40" minimum clearance to communication cable is required.
- 10. Antennas located on the bottom of the AMI/AMR device shall have at least 40" vertical clearance to communication conductors.
- 11. On single phase pole lines where future addition of crossarm for adding additional phases is not reasonably expected, this dimension can be reduced to 6" (i.e., total of 36" from the pole top to the top of the antenna).

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	05/12/21	DG	

2. Antennas Located in the Communication Space

Antennas located in the communication space shall be considered equipment for the purpose of determining minimum clearance requirements. Also see DCS **29 00 17 11**.

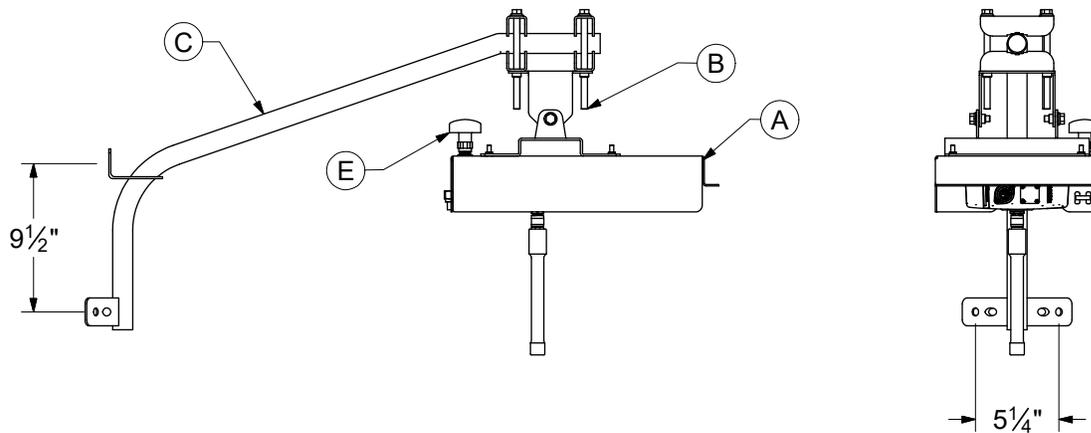


Antenna Clearance in Communication Space

CONSTRUCTION NOTE(s):

12. Reference: NESC, 2017 Edition, Rule 238

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Converted to new format
1	05/12/21	DG	

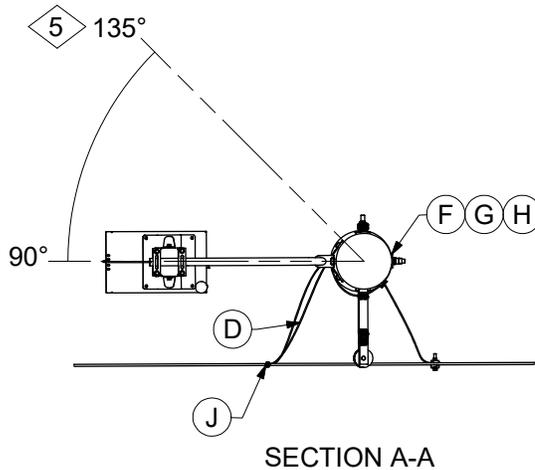
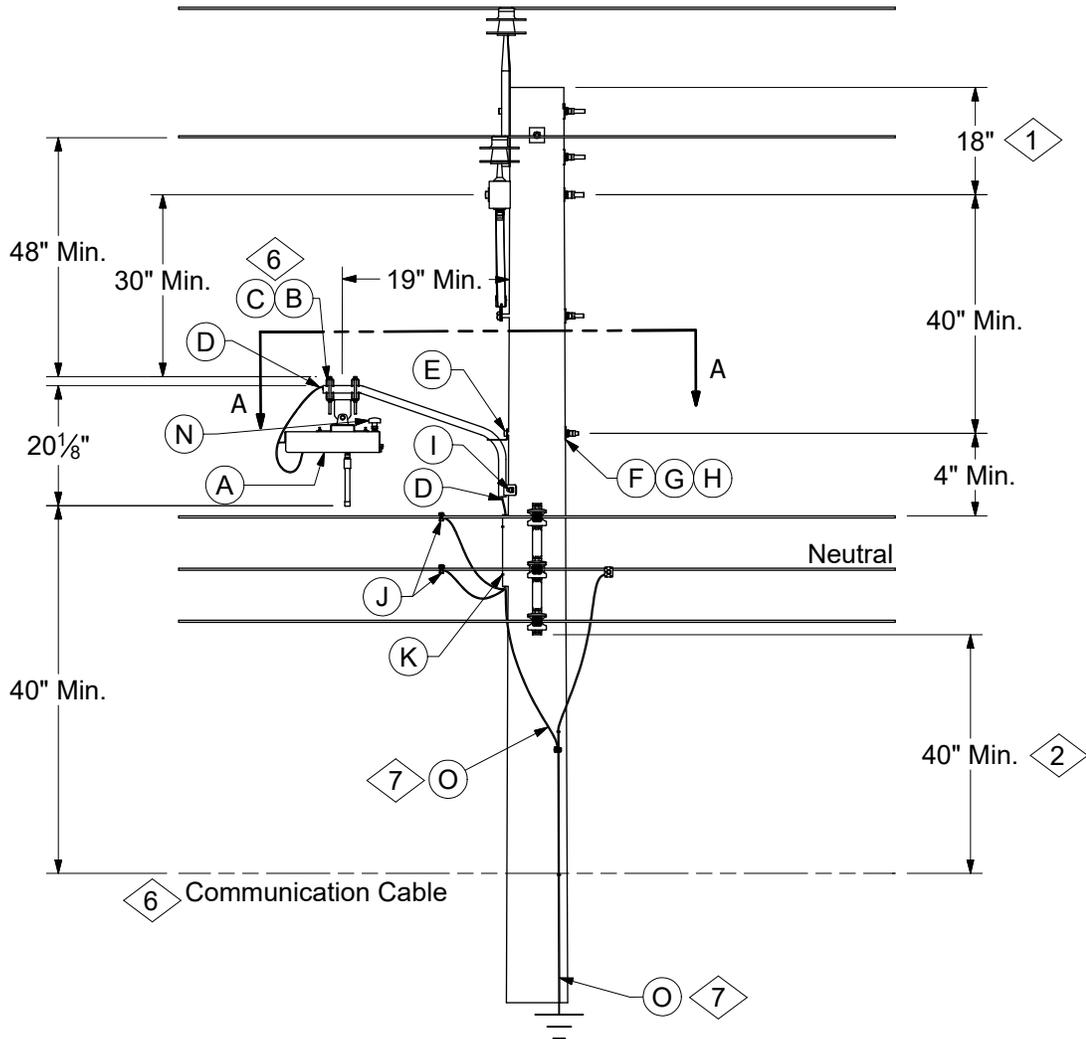


CONSTRUCTION NOTE(s):

1. Initial deployment will be done using L&G Router Mounting Kit M1217. This mounting kit includes the power cable assembly and hardware for mounting the router to the wood pole bracket. The antenna is provided with the router.
2. The router mounting kit may be preassembled for ease of installation on the wood pole bracket.
3. Assembly Instructions:
 - a. Slide a lock washer and a flat washer onto each of the two 3/8"-16 bolts and attach the swivel bracket to the mounting plate by threading these bolts into press nuts on the mounting plate.
 - b. Slide a lock washer and a flat washer onto each of the four 7" x 3/8"-16 bolts and thread these bolts through the clamps that go around the wood pole bracket mast. NOTE: To install the swivel bracket to the mast, open one side of the bracket to permit mast entry.
 - c. Hang the router mount assembly off the mast and re-install the mast clamp bolts, taking care to keep the flat washer and lock washer on the mast clamp bolts with the lock washer closer to the head of the bolt.
 - d. Install the antenna. Connect the terminated end of the power cable assembly to the router. The un-terminated end of the power cable assembly is connected directly to the 120 Volt secondary.
 - e. As the mast clamps are tightened, align the router so that the antenna does not exceed 5 degrees off perpendicular to the ground.
 - f. Secure the power supply cable to the wood pole bracket using UV resistant cable ties and trim the excess length for a clean installation.
4. Antenna Stock #16 16 105 is for maintenance replacement if the antenna provided with the router is damaged.

	ITEM	STK / DCS #	DESCRIPTION	25 91 10 **	00
	A	16 16 319	Enhanced Mesh Router Series 5		1
1	B	23 67 509	Mounting Kit - Router Wood Pole Bracket		1
1	C	38 01 417	Streetlight Bracket - 30" x 1-1/4"		1
4	D	16 16 105	Antenna - Dipole, 9"		1
	E	16 16 395	Antenna, GPS, 2.56GHz/1.57GHz/1.6GHz		1

REV	DATE	ENG	DESCRIPTION
1	01/01/23	WYW	Replaced router, converted to new format
0	11/09/15	DG	



REV	DATE	ENG	DESCRIPTION
2	01/01/23	WYW	Replaced router, converted to new format
1	04/01/19	DG	



METER INSTALLATIONS

AMI Router Installations

Wood Pole Mounting with Secondary Only

25 91 10 01

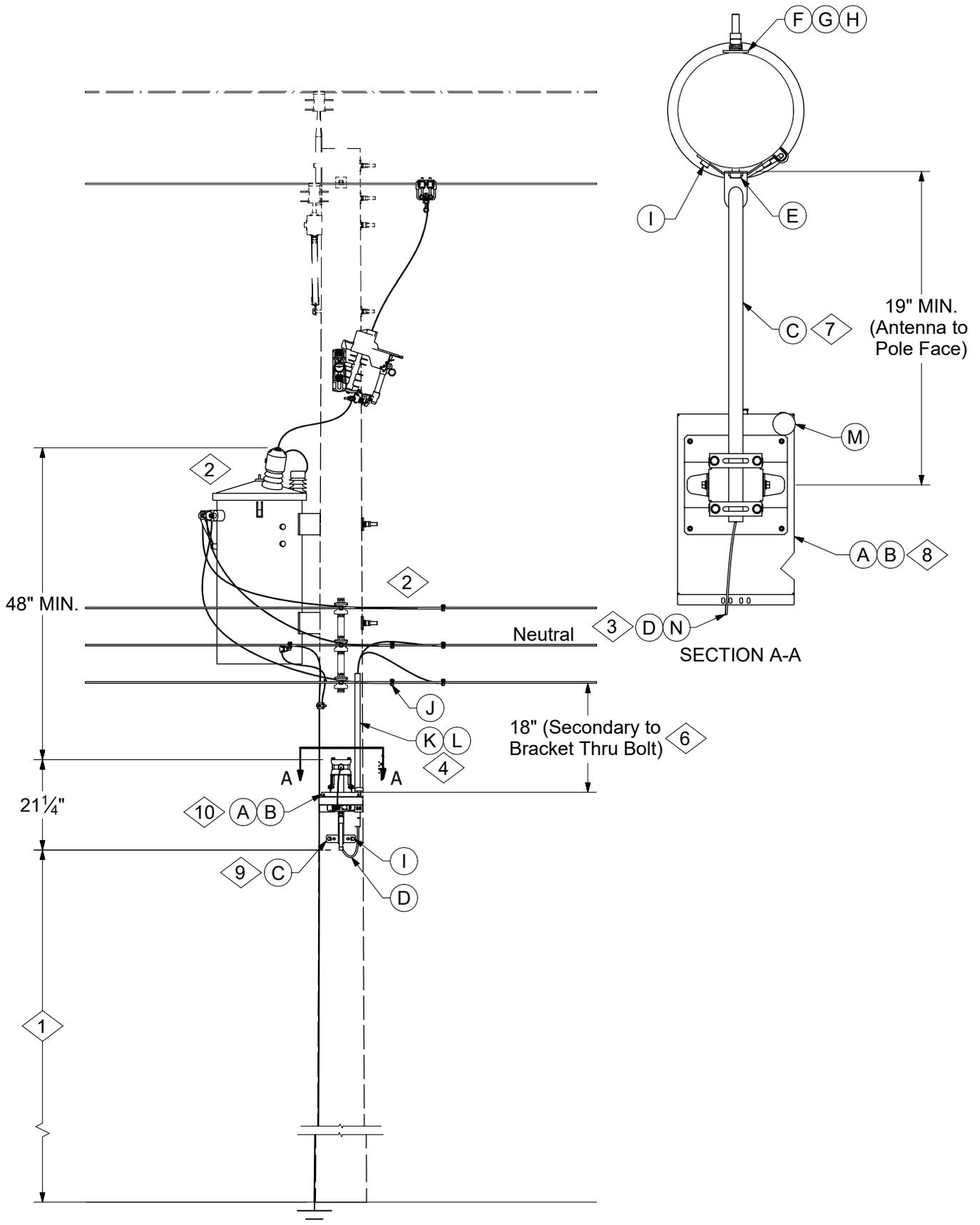
2 of 2

CONSTRUCTION NOTE(s):

1. On single-phase pole lines where future addition of crossarm for adding additional phases is not reasonably expected, this dimension can be reduced to 6" (i.e., total of 44" from the pole top to the top mounting bracket bolt).
2. The 40" minimum applies to the secondary bracket or the router cable drip loops whichever is lowest.
3. Initial deployment will be done using L&G router mounting kit M1217. This mounting kit includes the power cable assembly and hardware for mounting the router to the wood pole bracket. The antenna is provided with the router.
4. Antenna Stock #16 16 105 is for maintenance replacement if the antenna provided with the router is damaged.
5. Mounting bracket is shown at 135 degrees from secondary rack but may be installed at any angle necessary to achieve required clearances as per DCS **25 90 00 00**.
6. If there are no communications attachments on the pole, the mounting bracket may be installed below the secondary provided clearance requirements of DCS **25 90 00 00** and DCS **29 00 17 03** are met.
7. Router must be grounded. The primary method is to bond the router's ground wire to the pole ground wire. If existing pole ground wire is damaged, it must be repaired. If pole ground wire is not present on the pole, one should be installed. EXCEPTION: The device may be grounded by attaching to the neutral if there is a good pole ground not more than two spans away.

	ITEM	STK / DCS #	DESCRIPTION	25 91 10 **	01
	A	16 16 319	Enhanced Mesh Router Series 5		1
3	B	23 67 509	Mounting Kit - Router Wood Pole Bracket		1
3	C	38 01 417	Streetlight Bracket - 30" x 1-1/4"		1
	D	25 54 074	Guard, Cable, 1/2" Poly (ft)		5
	E	23 52 065	Bolt, Mach., 5/8" x 12" w/ square nut		1
	F	23 66 027	Washer, Flat, Square 5/8"		1
	G	23 66 134	Lock Washer - 5/8" Double Coil		1
	H	23 65 043	Lock Nut - 5/8" Square		1
	I	23 60 007	Lag Screw - 1/2" x 4"		2
	J	17 54 005	Split Bolt, #2 Solid to #6 Solid		3
	K	23 64 028	Staple - Coated Steel 29/32" x 2-1/2"		7
4	L	16 16 105	Antenna - Dipole, 9"		1
	M	16 16 395	Antenna, GPS, 2.56GHz,1.57GHz,1.6GHz		1
	N	40 89 493	Tie, Wire		1
	O	12 00 10 **	Grounding Unit		1

REV	DATE	ENG	DESCRIPTION
2	01/01/23	WYW	Replaced router, converted to new format
1	04/01/19	DG	



REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Added Notes 8, 9, 10 and 11
1	08/20/21	WYW	Converted to new format



METER INSTALLATIONS

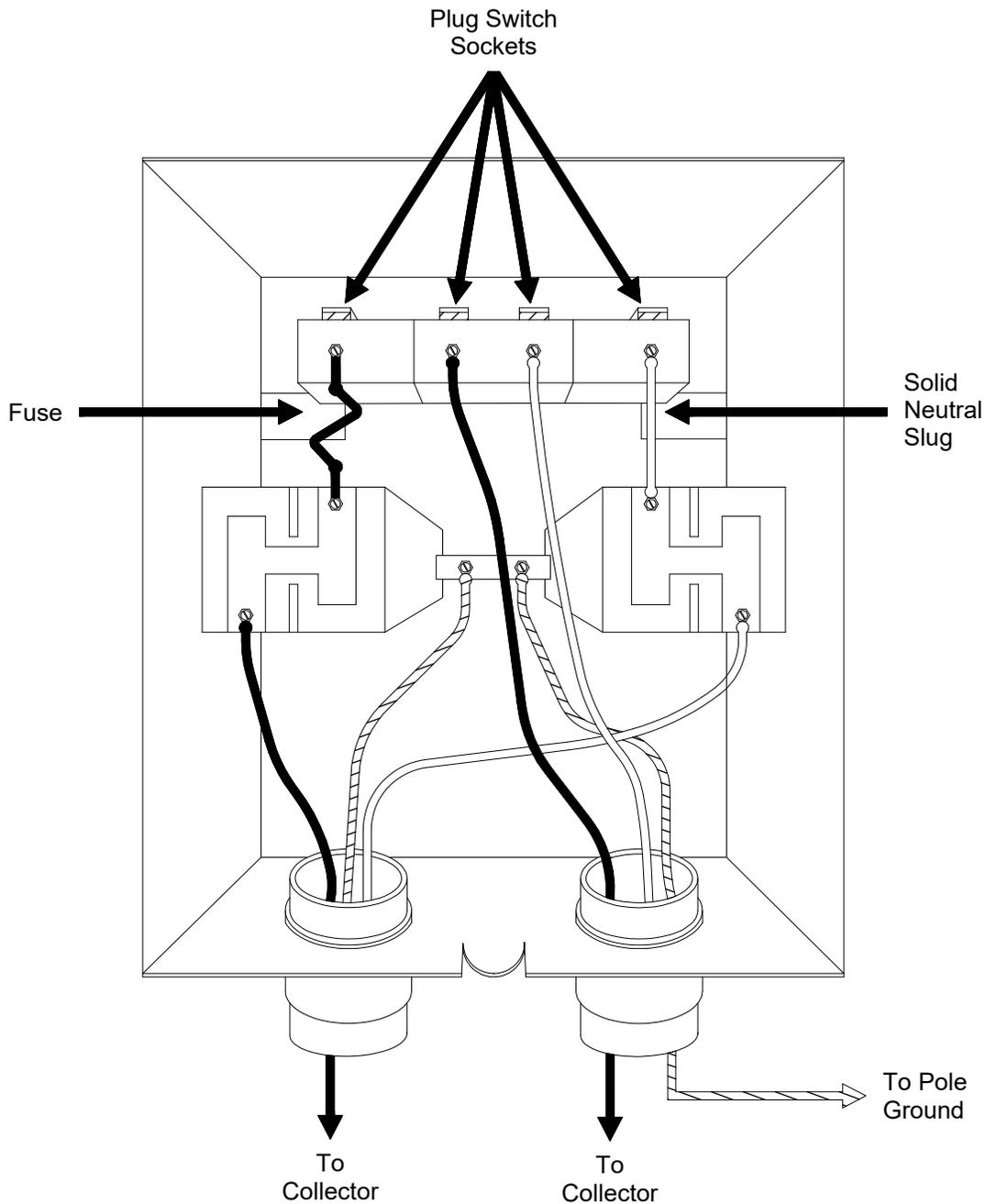
AMI Router Installations Wood Pole Mounting with Transformer

CONSTRUCTION NOTE(s):

1. See DCS **29 00 17 02** for minimum required ground clearance to bottom of antenna. Use clearances for 'Secondary & Service Conductors 0 to 750 Volts'.
2. If transformer is installed just to serve the router and no secondary exists, the router bracket can be mounted higher provided that a minimum of 48" radial clearance to any part of the router (including antenna) is maintained from the transformer primary bushings and all other primary conductors.
3. Initial deployment will be done using L&G Router Mounting Kit M1217. This mounting kit includes the power cable assembly and hardware for mounting the router to wood pole bracket. The antenna is provided with the router.
4. Cut router cable molding to required length.
5. Antenna Stock #16 16 105 is for maintenance replacement if the antenna provided with the Router is damaged.
6. 18" is recommended but may be varied provided that the 6" minimum clearance from the secondary to the router mounting bracket is met and minimum ground clearance per note 1 is met.
7. Mounting bracket is shown at 0 degrees from the secondary rack but may be installed at any angle necessary provided clearances in DCS **25 90 00 00** are met.
8. Routers may be installed on transformer poles where there are no communication (telephone or CATV) attachments, and where clearance requirements to communications (if present) can be met.
9. The 40" minimum applies to the secondary bracket or the router cable drip loops, whichever is lowest.
10. If there are no communications attachments on the pole, the mounting bracket may be installed below the secondary, provided clearance requirements of DCS **25 90 00 00** and DCS **29 00 17 03** are met.
11. Router must be grounded. The primary method is to bond the router's ground wire to the pole ground wire. If existing pole ground wire is damaged, it must be repaired. If pole ground wire is not present on the pole, a new pole ground wire shall be installed.
EXCEPTION: The device may be grounded by attaching to the system neutral, if there is an acceptable pole ground less than two spans away.

	ITEM	STK / DCS #	DESCRIPTION	25 91 10 **	02
	A	16 16 319	Enhanced Mesh Router Series 5		1
3	B	23 67 509	Mounting Kit - Router Wood Pole Bracket		1
3	C	38 01 417	Streetlight Bracket - 30" x 1-1/4"		1
3	D	18 57 111	Cable Assy., Router Power, Three Wire, 10 ft.		1
	E	23 52 066	Bolt, Mach., 5/8" x 14" w/ square nut		1
	F	23 66 027	Washer, Flat, Square 5/8"		1
	G	23 66 134	Lock Washer - 5/8" Double Coil		1
	H	23 65 043	Lock Nut - 5/8" Square		1
	I	23 60 007	Lag Screw - 1/2" x 4"		2
	J	17 54 005	Split Bolt, #2 Solid to #6 Solid		6
4	K	41 56 041	Molding - 3/4"		1
	L	23 64 028	Staple - Coated Steel 29/32" x 2-1/2"		7
	M	16 16 395	Antenna - GPS, 2.56GHz/1.57GHz/1.6GHz		1
	N	25 54 074	Guard, Cable, 1/2" Poly (ft.)		5
5,@	O	16 16 105	Antenna - Dipole, 9"		1

REV	DATE	ENG	DESCRIPTION
2	01/01/24	WYW	Added Notes 8,9, 10 and 11
1	08/20/21	WYW	Converted to new format

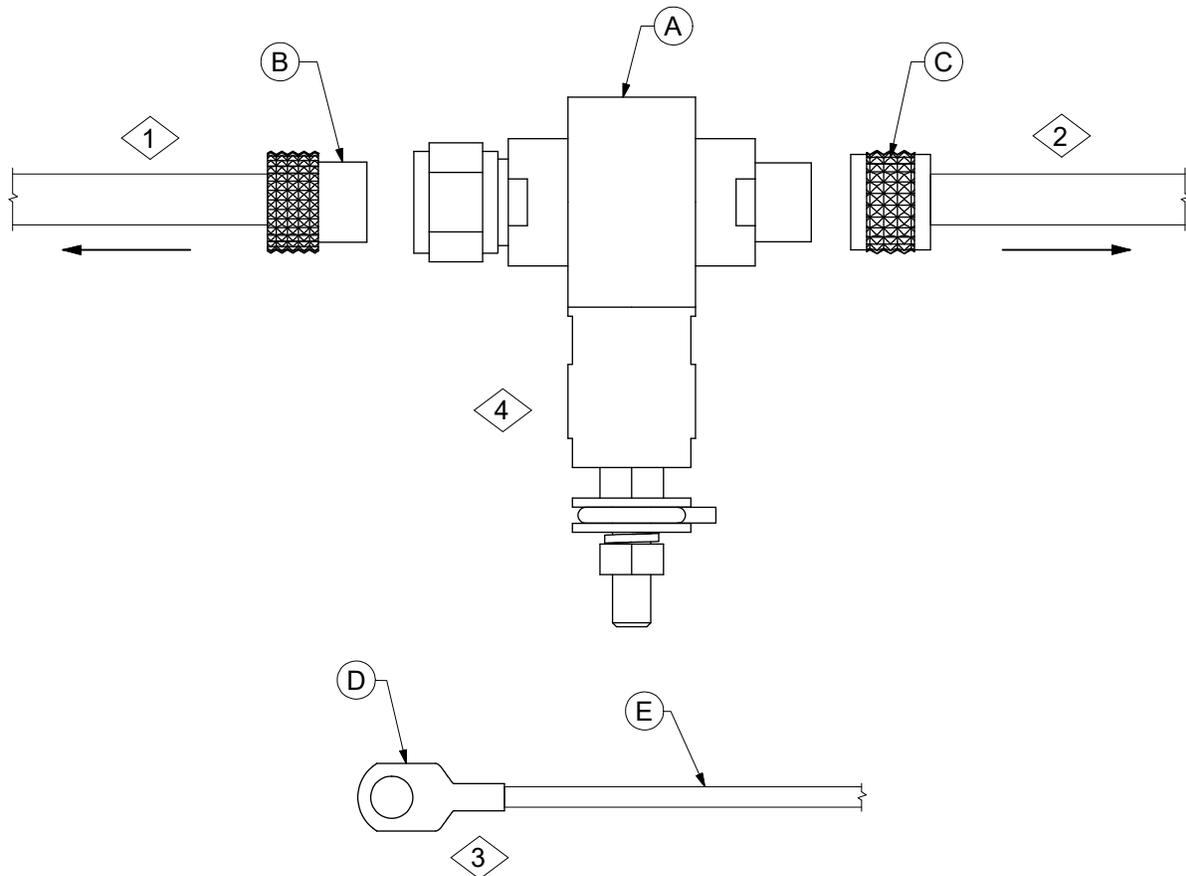


**Switch, 30A, Fused, Plug Type - C6500/C7500 Collector Wiring
Switch Stock #40 78 038**

CONSTRUCTION NOTE(s):

1. Use #6 SD CU (Stock #18 51 021) to bond safety switch box to pole ground. There must be a pole ground on poles where collectors are installed.
2. Collector and secondary wire entrances can be reversed as needed for best wire/conduit arrangement on the pole.

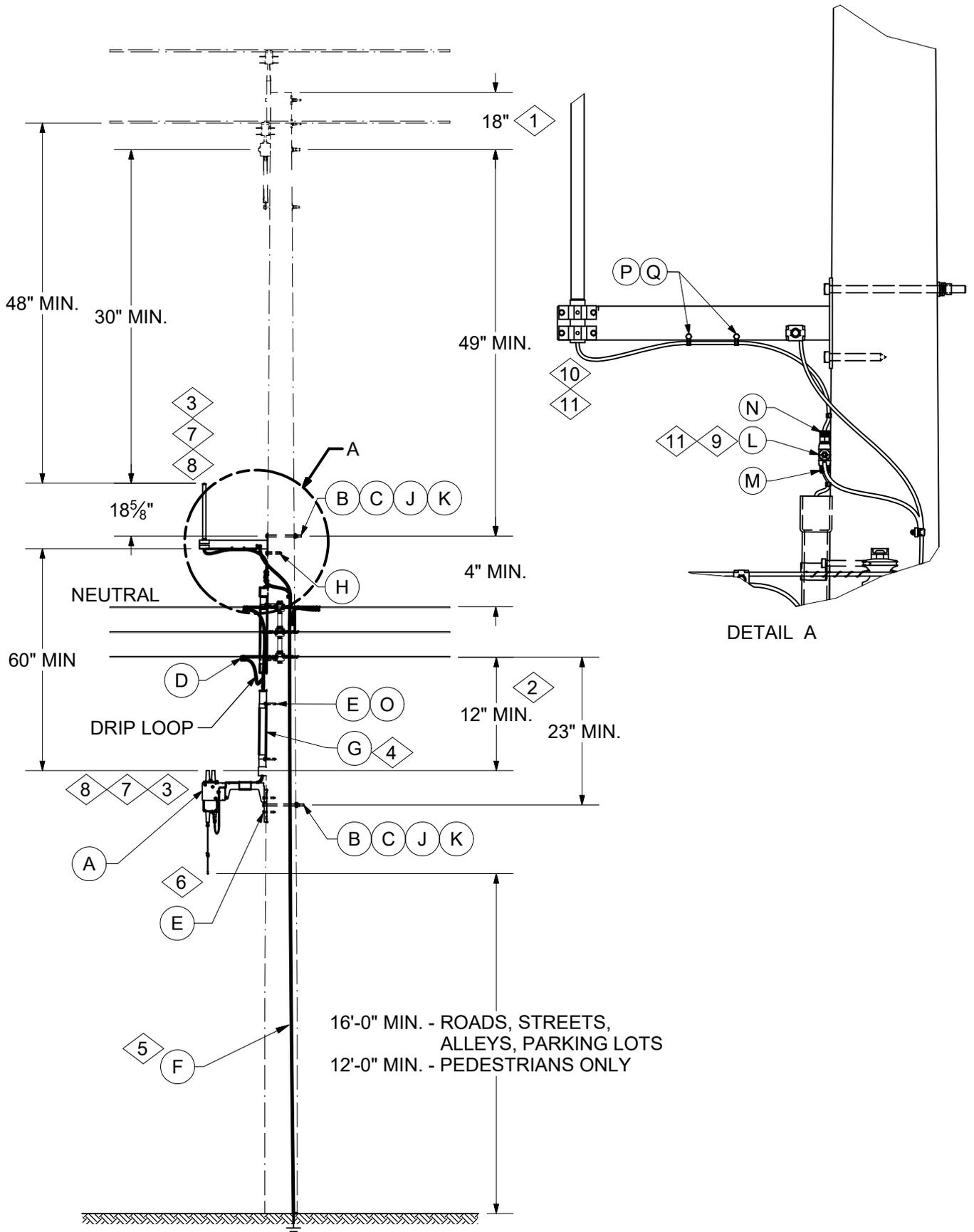
REV	DATE	ENG	DESCRIPTION
1	01/01/24	WYW	Converted to new format
0	11/09/15	DG	



CONSTRUCTION NOTE(s):

1. This end of the coax cable goes to the collector where it is terminated on that end with a male N connector stock #16 16 015. If 12'-0" coax cable assembly stock #16 16 119 is used, connectors are pre-installed on both ends.
2. This end of the coax cable goes to the pole-top antenna where it is terminated on that end with a male N connector stock #16 16 015. If 25'-0" coax cable assembly stock #16 16 120 is used, connectors are pre-installed on both ends.
3. Arrester ground wire connects to the pole ground. There must be a pole ground on poles where collectors are installed.
4. Cover the arrester and arrester connections with moisture proofing tape stock #25 54 053 with overwrapping of electrical tape stock #25 53 055.

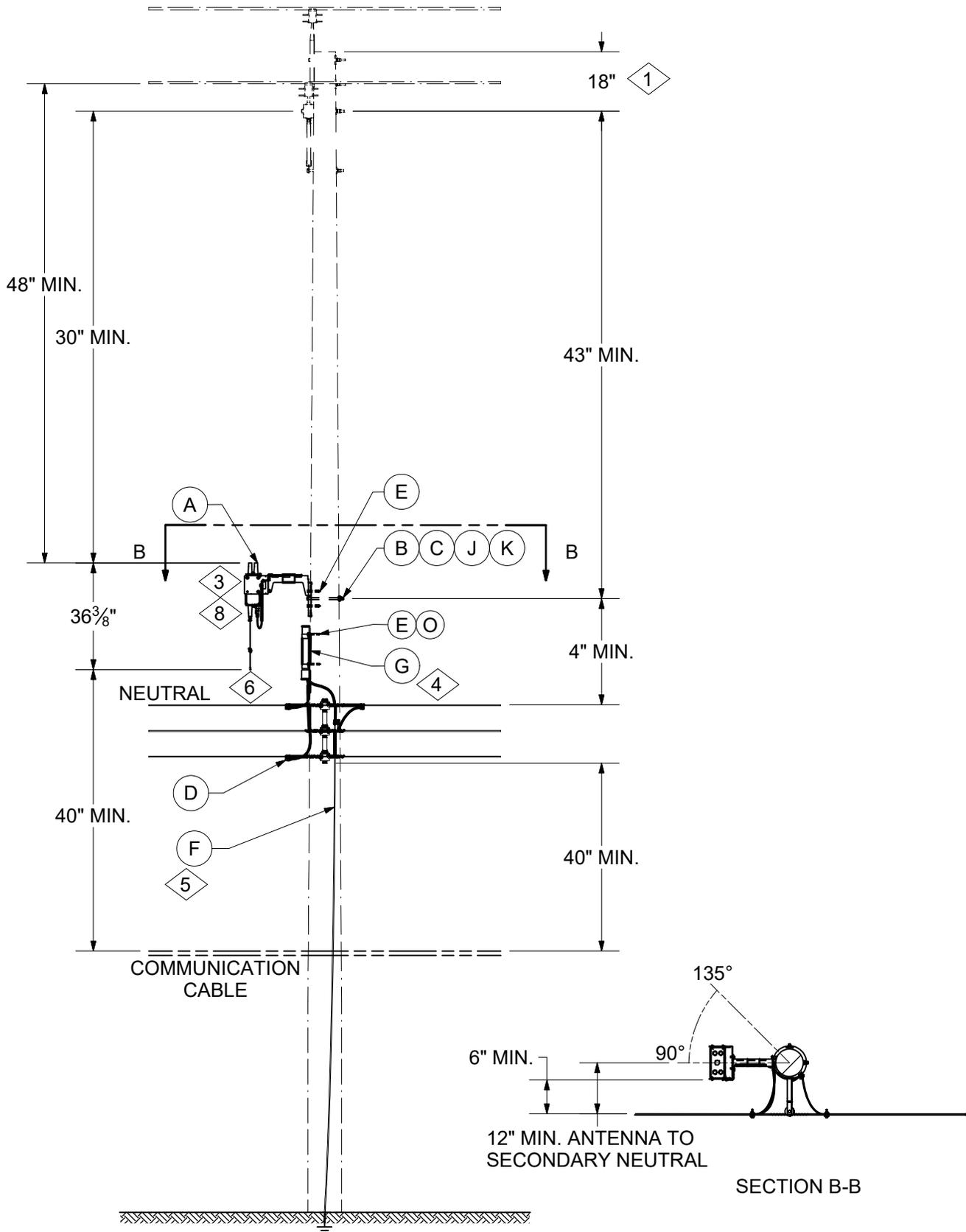
ITEM	STK / DCS #	DESCRIPTION	25 91 50 **	03
A	10 01 250	Arrester - Antenna Coax Cable		1
B	16 16 110	Connector - Coax Cable N Female		1
C	16 16 015	Connector - Coax Cable N Male		1
D	17 55 834	Lug - #10 AWG 1 Hole, Flat		1
E	18 66 375	Wire, #10 STR CU, THHN White		#



25 92 00 01

**DISTRIBUTION
CONSTRUCTION STANDARDS**

REV	DATE	ENG	DESCRIPTION
3	01/01/23	WYW	Item E and item I changed, construction note changes.
2	10/01/20	WYW	Conduit Size Change



25 92 00 02

REV	DATE	ENG	DESCRIPTION
3	01/01/23	WYW	Item E and item I changed, construction note changes.
2	10/01/20	WYW	Conduit Size Change



METER INSTALLATIONS

Smart Meter Network Gateway Installations

Wood Pole Mounting

CONSTRUCTION NOTE(s):

1. On single-phase pole lines where future addition of crossarm for adding additional phases is not reasonably expected, this dimension can be reduced to 6" (e.g., total of 55" from the pole top to the top antenna mounting bracket bolt for DCS **25 92 00 01**).
2. The 12" minimum is from the secondary conductor to the top of the Gateway device.
3. Initial deployment will be done using L&G Gateway Mounting Kit. This mounting kit includes the power cable assembly, Gateway device, wood pole bracket, and hardware for mounting the Gateway device to the wood pole bracket. It also includes the antenna, antenna cable, and antenna mounting bracket.
4. Cut Gateway device and antenna cable molding to required length.
5. Use DCS **12 00 10 01** for ground coil application on new pole installation. Use DCS **12 00 10 02** for ground rod application on existing pole installation.
6. Antenna stock #16 16 105 is for maintenance replacement if the whip antenna provided with the Gateway device is damaged.
7. Mounting bracket may be installed at any angle necessary to achieve required clearances as per DCS **25 90 00 00**. For multiple antenna installation, keep all antennas aligned vertically greater than 5ft. separation and in the same plane within ± 5 inches.
8. Every antennae and Gateway needs to be installed at the minimum height as specified by the AMI designer for that location. Install replacement at as found height.
9. Gateway Device must be grounded. The primary method to ground the remote or sector antennae is through the lightning arrestor (place a 12" radius on the bend of the ground loop on lightning arrestor going to the device) which will be attached to the ground wire. If existing pole ground wire is damaged, it must be repaired. If pole ground wire is not present on the pole, one should be installed. EXCEPTION: The device may be grounded by attaching to the neutral if there is a good pole ground not more than two spans away.
10. Fasten drip loop with minimum 12" radius below antenna mount.
11. Weather proof coaxial connection between cable assembly, lightning arrestor, and antenna using weatherproof kit (Sealer: Stock #25 54 053 and Electrical Tape: Stock #25 53 055).

REV	DATE	ENG	DESCRIPTION
3	01/01/23	WYW	Item E and item I changed, construction note changes.
2	10/01/20	WYW	Conduit Size Change



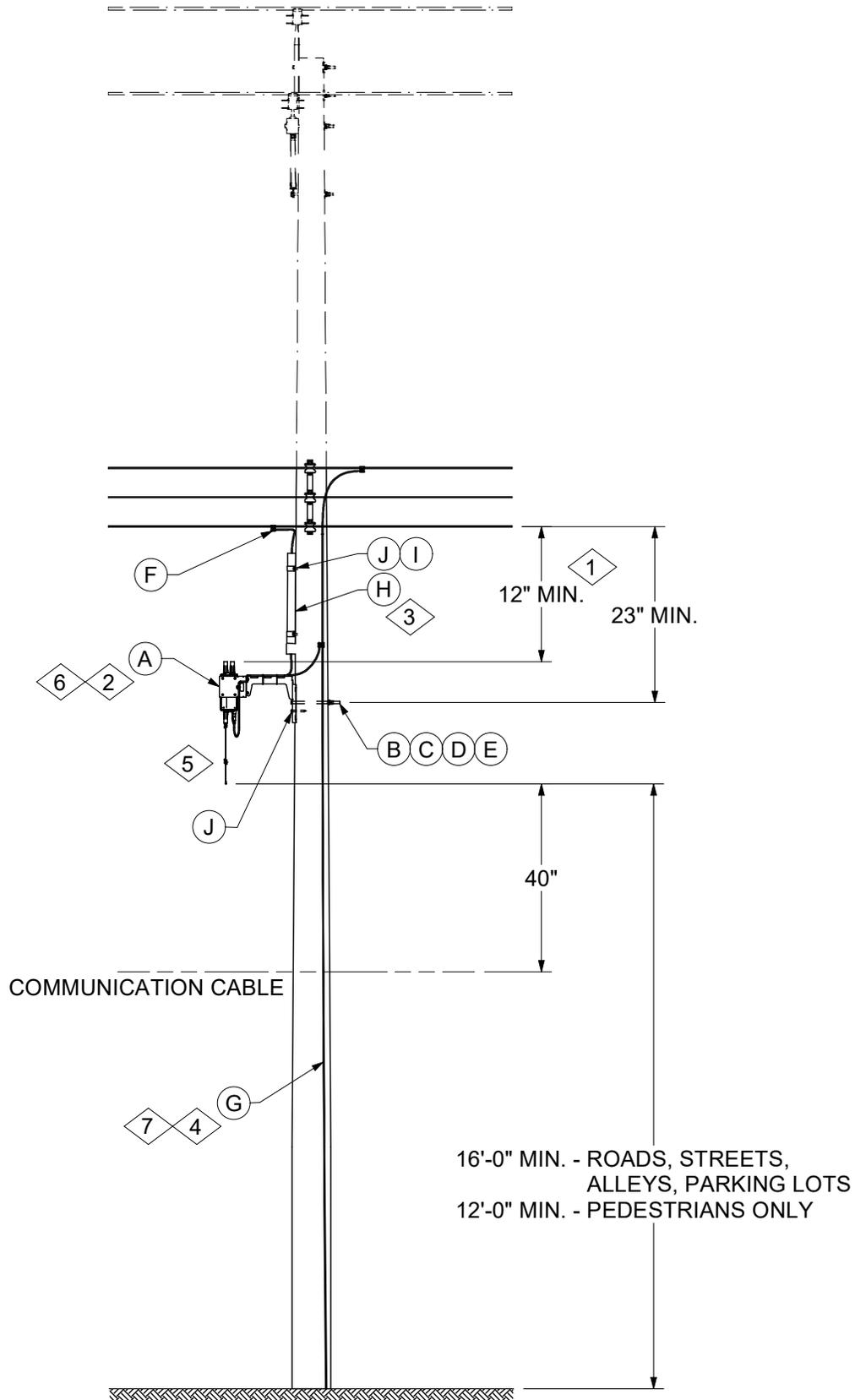
METER INSTALLATIONS

Smart Meter Network Gateway Installations
Wood Pole Mounting

ITEM	STK / DCS #	DESCRIPTION	25 92 00 **	01	02
A	16 16 317	Network Gateway - Utility Pole Mount		1	1
B	23 52 068	Bolt - 5/8" Square 16"		2	1
C	23 66 046	Washer - 5/8" Round		2	1
D	17 51 032	Clamp, Parallel Groove, for 1/0 (7) AAAC Static		5	5
E	23 60 007	Lag Screw - 1/2" x 4"		10	6
F	12 00 10 **	Grounding Unit		1	1
G	12 01 280	Conduit - 2" Schedule 40 (ft.)		2	2
H	23 60 011	Lag Screw - 5/8" x 5"		1	-
I	23 64 027	Staple, 5/8" x 2"		2	2
J	23 65 043	Lock Nut - 5/8" Square		2	1
K	23 66 134	Lock Washer - 5/8" Double Coil		2	1
L	10 01 250	Arrestor - Antenna Coax Cable		1	-
M	16 16 015	Connector - Coax Cable N Male		1	-
N	16 16 110	Connector - Coax Cable N Female		1	-
O	23 67 190	Strap - Conduit 2" w/2" Bolts		4	2
P	23 67 510	Cleat - Cable Clamp 3/8"		2	-
Q	21 53 001	Bolt - 1/4" Hex 3/4"		2	-

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
3	01/01/23	WYW	Item E and item I changed, construction note changes.
2	10/01/20	WYW	Conduit Size Change



REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard



METER INSTALLATIONS

Smart Meter Network Gateway
Wood Pole Mounting with Communication

CONSTRUCTION NOTE(s):

1. The 12" minimum is from the secondary conductor to the top of the Gateway device.

2. Initial deployment will be done using L&G Gateway Mounting Kit. This mounting kit includes the power cable assembly, Gateway device, wood pole bracket, and hardware for mounting the Gateway device to the wood pole bracket.

3. Cut conduit to required length.

4. Use DCS **12 00 10 01** for ground coil application on new pole installation. Use DCS **12 00 10 02** for ground rod application on existing pole installation.

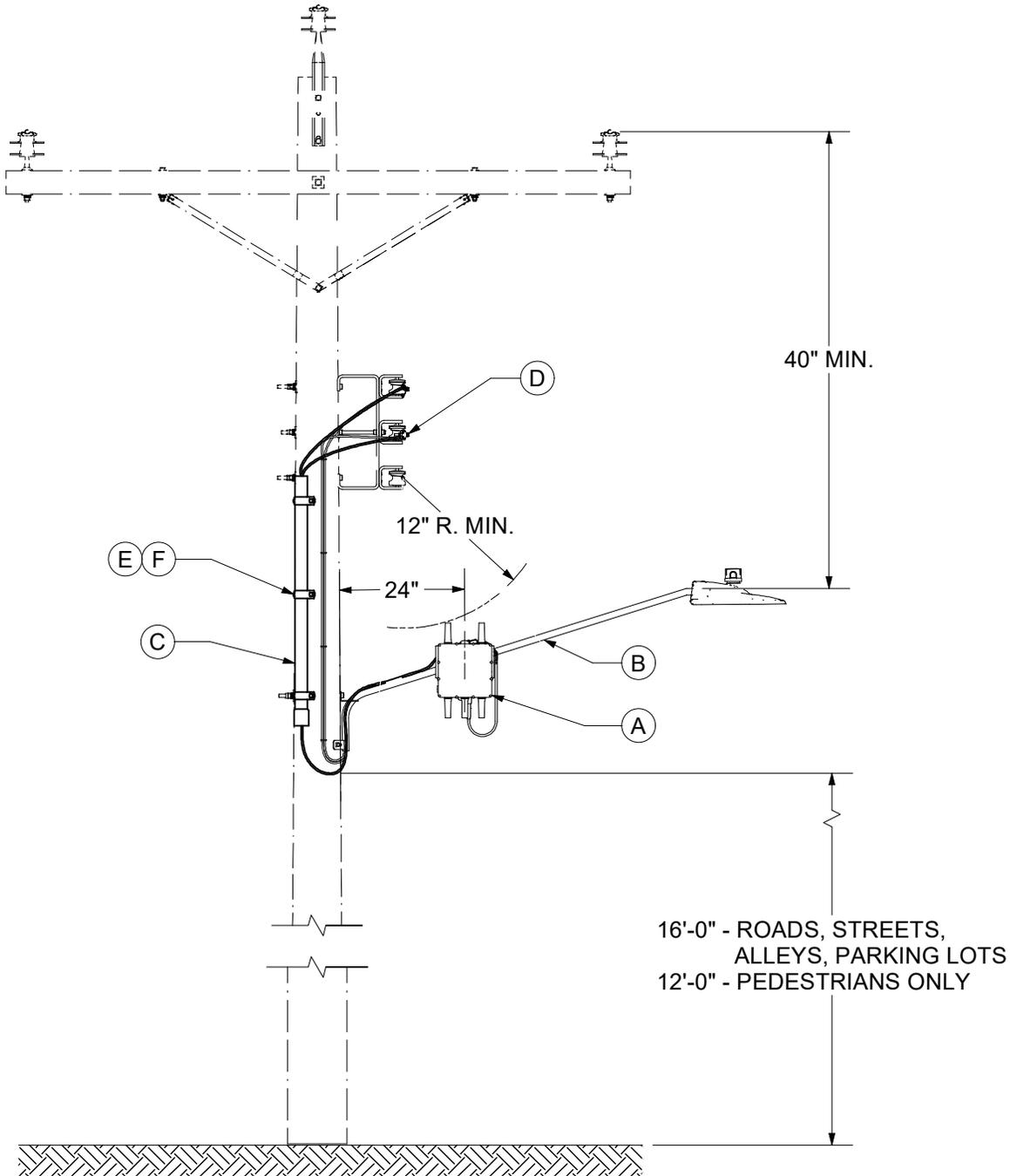
5. Antenna stock #16 16 105 is for maintenance replacement if the whip antenna provided with the Gateway device is damaged.

6. Every antennae and Gateway needs to be installed at the minimum height as specified by the AMI designer for that location. Install replacement at as found height.

7. Gateway Device must be grounded. If existing pole ground wire is damaged, it must be repaired. If pole ground wire is not present on the pole, one should be installed. **EXCEPTION:** The device may be grounded by attaching to the neutral if there is good pole ground not more than two spans away.

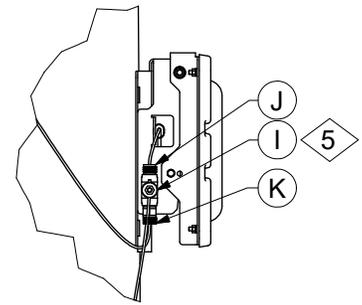
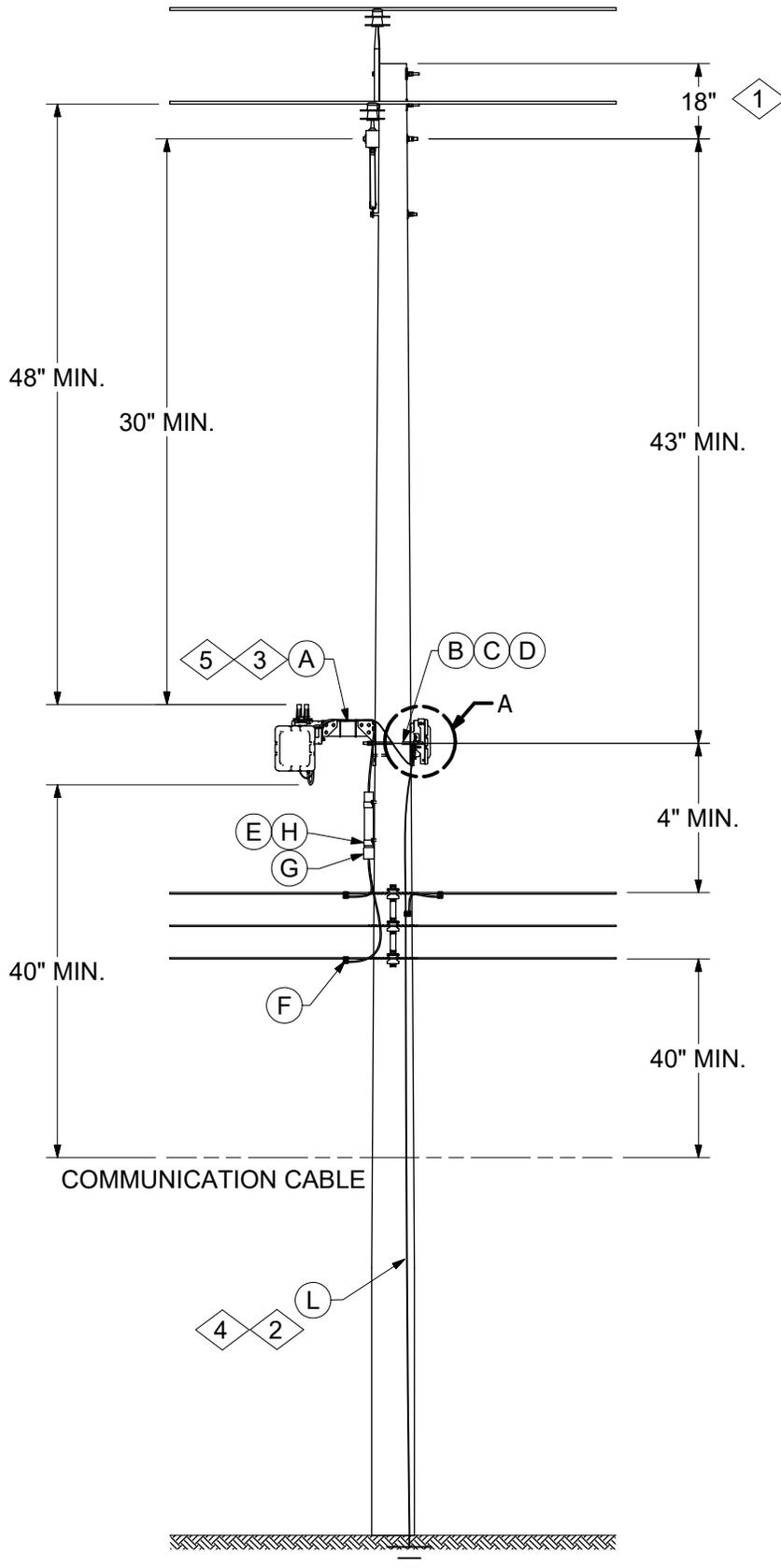
ITEM	STK / DCS #	DESCRIPTION	25 92 01 **	00
A	16 16 317	Network Gateway - Utility Pole Mount		1
B	23 52 066	Bolt, Mach., 5/8" x 14" w/ square nut		1
C	23 66 046	Washer - 5/8" Round		1
D	23 66 134	Lock Washer - 5/8" Double Coil		1
E	23 65 043	Lock Nut - 5/8" Square		1
F	17 51 032	Clamp, Parallel Groove, for 1/0 (7) AAAC Static		2
G	12 00 10 **	Grounding Unit		1
H	12 01 280	Conduit - 2" Schedule 40 (ft.)		1
I	23 67 190	Strap - Conduit 2" w/2" Bolts		2
J	23 60 007	Lag Screw - 1/2" x 4"		6

REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard



ITEM	STK / DCS #	DESCRIPTION	25 92 01 **	01
A	16 16 318	Network Gateway - Streetlight Mount		1
B	38 01 249	Streetlight Bracket - 6' x 1-1/4"		-
C	12 01 280	Conduit - 2" Schedule 40 (ft.)		1
D	17 51 032	Clamp, Parallel Groove, for 1/0 (7) AAAC Static		4
E	23 67 190	Strap - Conduit 2" w/2" Bolts		3
F	23 60 007	Lag Screw - 1/2" x 4"		6

REV	DATE	ENG	DESCRIPTION
3	01/01/23	WYW	Changed title - removed "Smart"
2	10/01/20	WYW	Changed Conduit Size to 2"



DETAIL A

REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard



METER INSTALLATIONS

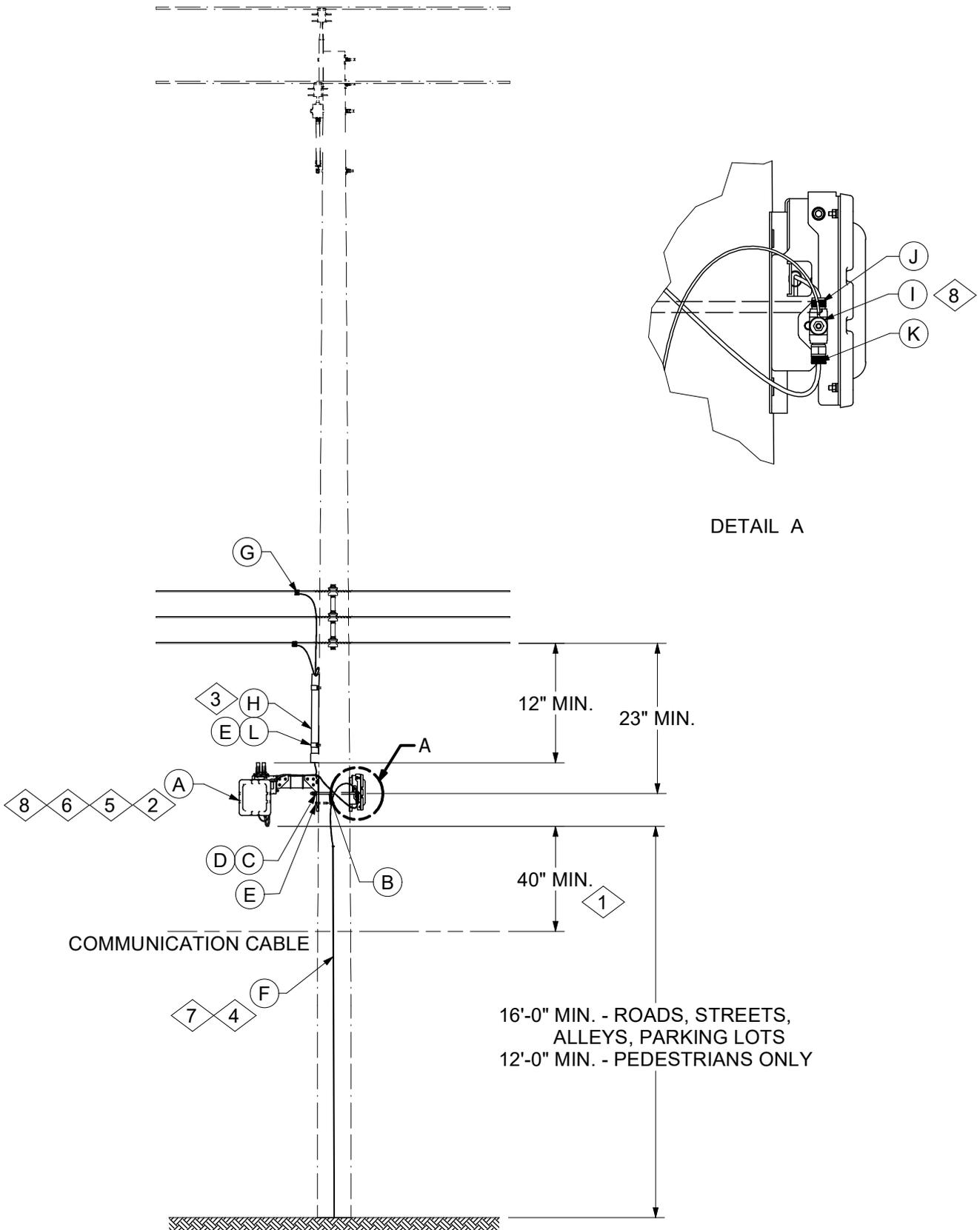
Smart Meter Network Gateway with Sector Antenna
Wood Pole Mounting

CONSTRUCTION NOTE(s):

1. On single-phase pole lines where future addition of crossarm for adding additional phases is not reasonably expected, this dimension can be reduced to 6" (e.g., total of 55" from the pole top to the top antenna mounting bracket bolt for DCS **25 92 00 01**).
2. Use DCS **12 00 10 01** for ground coil application on new pole installation. Use DCS **12 00 10 02** for ground rod application on existing pole installation.
3. Mounting bracket may be installed at any angle necessary to achieve required clearances as per DCS **25 90 00 00**.
4. Gateway Device must be grounded. The primary method to ground the remote or sector antennae is through the lightning arrestor (place a 12" radius on the bend of the ground loop on lightning arrestor going to the device) which will be attached to the ground wire. If existing pole ground wire is damaged, it must be repaired. If pole ground wire is not present on the pole, one should be installed. EXCEPTION: The device may be grounded by attaching to the neutral if there is a good pole ground not more than two spans away.
5. Weather proof coaxial connection between cable assembly, lightning arrestor, and antenna using weatherproof kit (Sealer: Stock #25 54 053 and Electrical Tape: Stock #25 53 055).

ITEM	STK / DCS #	DESCRIPTION	25 92 02 **	00
A	16 13 893	Network Gateway with Sector Antenna		1
B	23 53 002	Bolt, DA, 5/8" Dia x 16" w/ 4 square nuts		1
C	23 66 134	Lock Washer - 5/8" Double Coil		2
D	23 65 043	Lock Nut - 5/8" Square		2
E	23 60 007	Lag Screw - 1/2" x 4"		6
F	17 51 032	Clamp, Parallel Groove, for 1/0 (7) AAAC Static		4
G	12 01 280	Conduit - 2" Schedule 40 (ft.)		1
H	23 67 190	Strap - Conduit 2" w/2" Bolts		2
I	10 01 250	Arrestor - Antenna Coax Cable		1
J	16 16 015	Connector - Coax Cable N Male		1
K	16 16 110	Connector - Coax Cable N Female		1
L	12 00 10 **	Grounding Unit		1

REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard



REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard



METER INSTALLATIONS

Smart Meter Network Gateway With Sector Antenna
Wood Pole Mounting in Supply Space with Communication

25 92 02 01

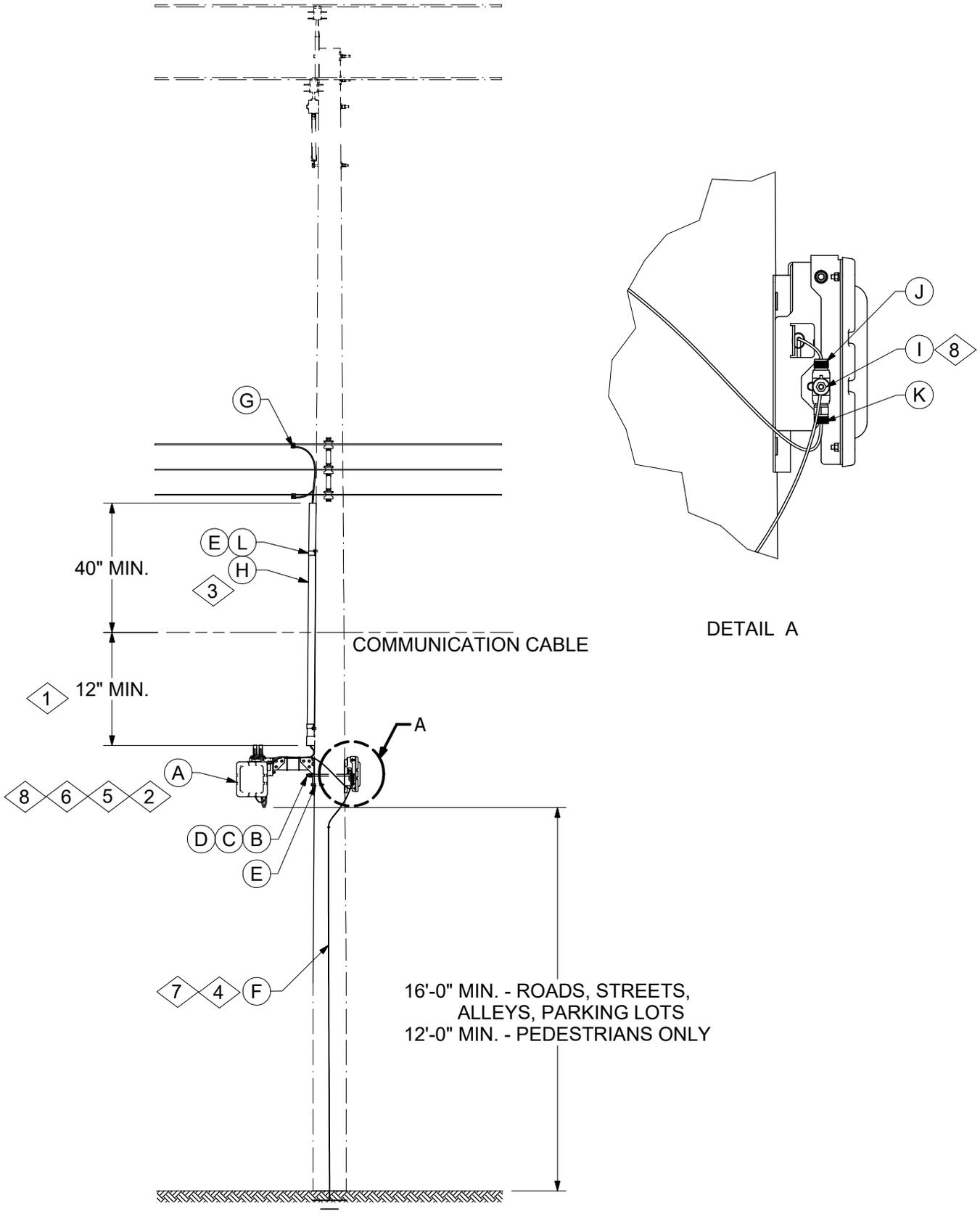
2 of 2

CONSTRUCTION NOTE(S):

1. The 40" minimum applies to the secondary bracket or the Gateway cable drip loops whichever is lowest to the communication
2. Initial deployment will be done using L&G Gateway Mounting Kit. This mounting kit includes the power cable assembly, Gateway device, wood pole bracket, and hardware for mounting the Gateway device to the wood pole bracket. It also includes the antenna, antenna cable, and antenna mounting bracket.
3. Cut conduit to required length.
4. Use DCS **12 00 10 01** for ground coil application on new pole installation. Use DCS **12 00 10 02** for ground rod application on existing pole installation.
5. Mounting bracket may be installed at any angle necessary to achieve required clearances as per DCS **25 90 00 00**.
6. Every antennae and Gateway needs to be installed at the minimum height as specified by the AMI designer for that location. Install replacement at as found height.
7. Gateway Device must be grounded. The primary method to ground the remote antennae is through the lightning arrestor which will be attached to the ground wire. If existing pole ground is damaged, it must be repaired. If pole ground wire is not present on the pole, one should be installed. EXCEPTION: The device may be grounded by attaching to the neutral if there is a good pole ground not more than two spans away.
8. Weather proof coaxial connection between cable assembly, lighting arrestor, and antenna using weatherproof kit (Sealer: Stock #25 54 053 and Electrical Tape: Stock #25 53 055).

ITEM	STK / DCS #	DESCRIPTION	25 92 02 **	01
A	16 13 893	Network Gateway with Sector Antenna		1
B	23 53 002	Bolt, DA, 5/8" Dia x 16" w/ 4 square nuts		1
C	23 66 134	Lock Washer - 5/8" Double Coil		10
D	23 65 043	Lock Nut - 5/8" Square		8
E	23 60 007	Lag Screw - 1/2" x 4"		6
F	12 00 10 **	Grounding Unit		1
G	17 51 032	Clamp, Parallel Groove, for 1/0 (7) AAAC Static		2
H	12 01 280	Conduit - 2" Schedule 40 (ft.)		1
I	10 01 250	Arrestor - Antenna Coax Cable		1
J	16 16 015	Connector - Coax Cable N Male		1
K	16 16 110	Connector - Coax Cable N Female		1
L	23 67 190	Strap - Conduit 2" w/2" Bolts		2

REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard



REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard



METER INSTALLATIONS

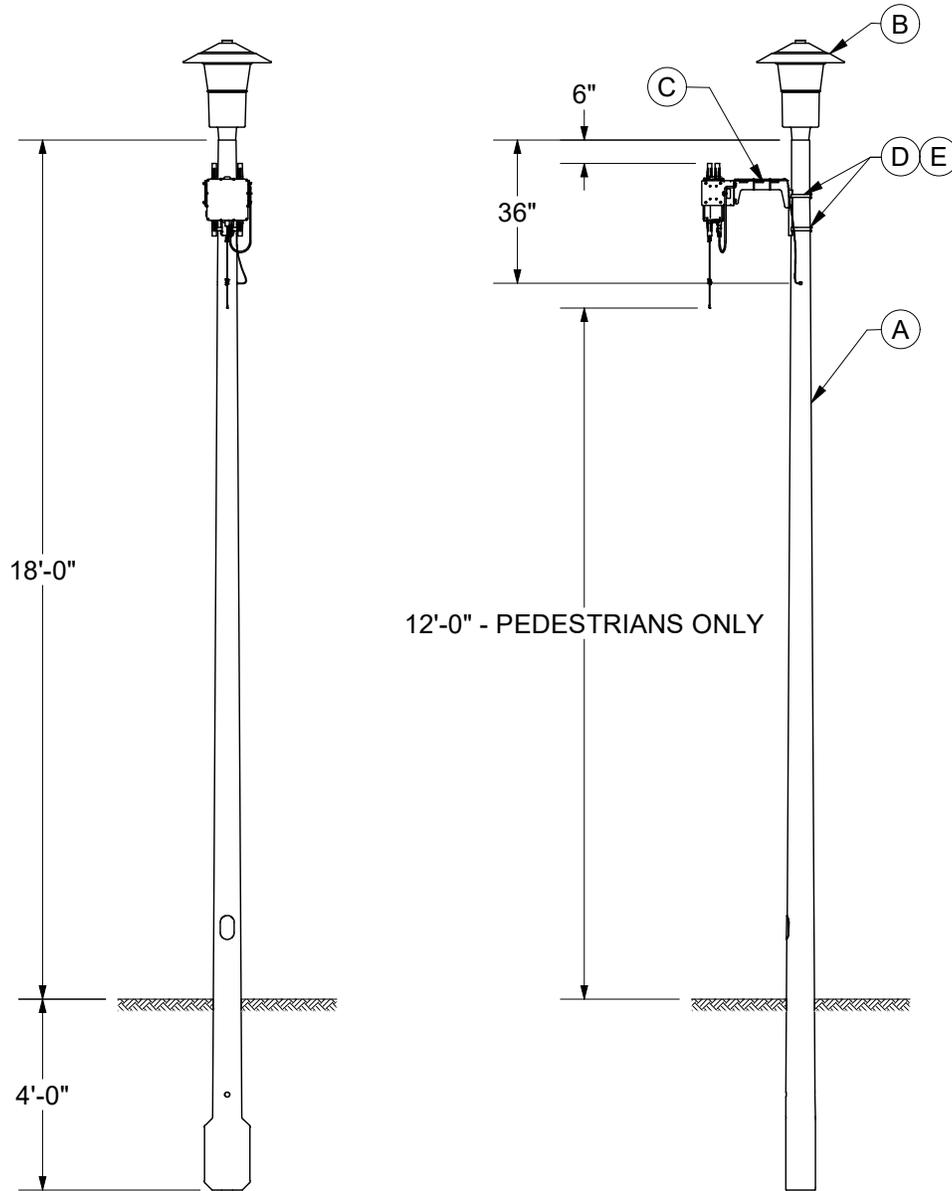
Smart Meter Network Gateway With Sector Antenna
Wood Pole Mounting Below Communication

CONSTRUCTION NOTE(s):

1. The 40" minimum is from the highest part of the gateway device to the communication attachment. The 40" minimum also applies from the end of the conduit to the communication attachment.
2. Initial deployment will be done using L&G Gateway Mounting Kit. This mounting kit includes the power cable assembly, Gateway device, wood pole bracket, and hardware for mounting the Gateway device to the wood pole bracket. It also includes the antenna, antenna cable, and antenna mounting bracket.
3. Cut conduit to required length.
4. Use DCS **12 00 10 01** for ground coil application on new pole installation. Use DCS **12 00 10 02** for ground rod application on existing pole installation.
5. Mounting bracket may be installed at any angle necessary to achieve required clearances as per DCS **25 90 00 00**.
6. Every antennae and Gateway needs to be installed at the minimum height as specified by the AMI designer for that location. Install replacement at as found height.
7. Gateway Device must be grounded. The primary method to ground the remote antennae is through the lightning arrester (place a 12" radius on the bend of the ground loop on lightning arrester going to the device) which will be attached to the ground wire. If existing pole ground is damaged, it must be repaired. If pole ground wire is not present on the pole, one should be installed. EXCEPTION: The device may be grounded by attaching to the neutral if there is a good pole ground not more than two spans away.
8. Weather proof coaxial connection between cable assembly, lighting arrester, and antenna using weatherproof kit (Sealer: Stock #25 54 053 and Electrical Tape: Stock #25 53 055).

ITEM	STK / DCS #	DESCRIPTION	25 92 03 **	01
A	16 13 893	Network Gateway with Sector Antenna		1
B	23 53 002	Bolt, DA, 5/8" Dia x 16" w/ 4 square nuts		1
C	23 66 134	Lock Washer - 5/8" Double Coil		2
D	23 65 043	Lock Nut - 5/8" Square		2
E	23 60 007	Lag Screw - 1/2" x 4"		6
F	12 00 10 **	Grounding Unit		1
G	17 51 032	Clamp, Parallel Groove, for 1/0 (7) AAAC Static		2
H	12 01 280	Conduit - 2" Schedule 40 (ft.)		1
I	10 01 250	Arrester - Antenna Coax Cable		1
J	16 16 015	Connector - Coax Cable N Male		1
K	16 16 110	Connector - Coax Cable N Female		1
L	23 67 190	Strap - Conduit 2" w/2" Bolts		2

REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard

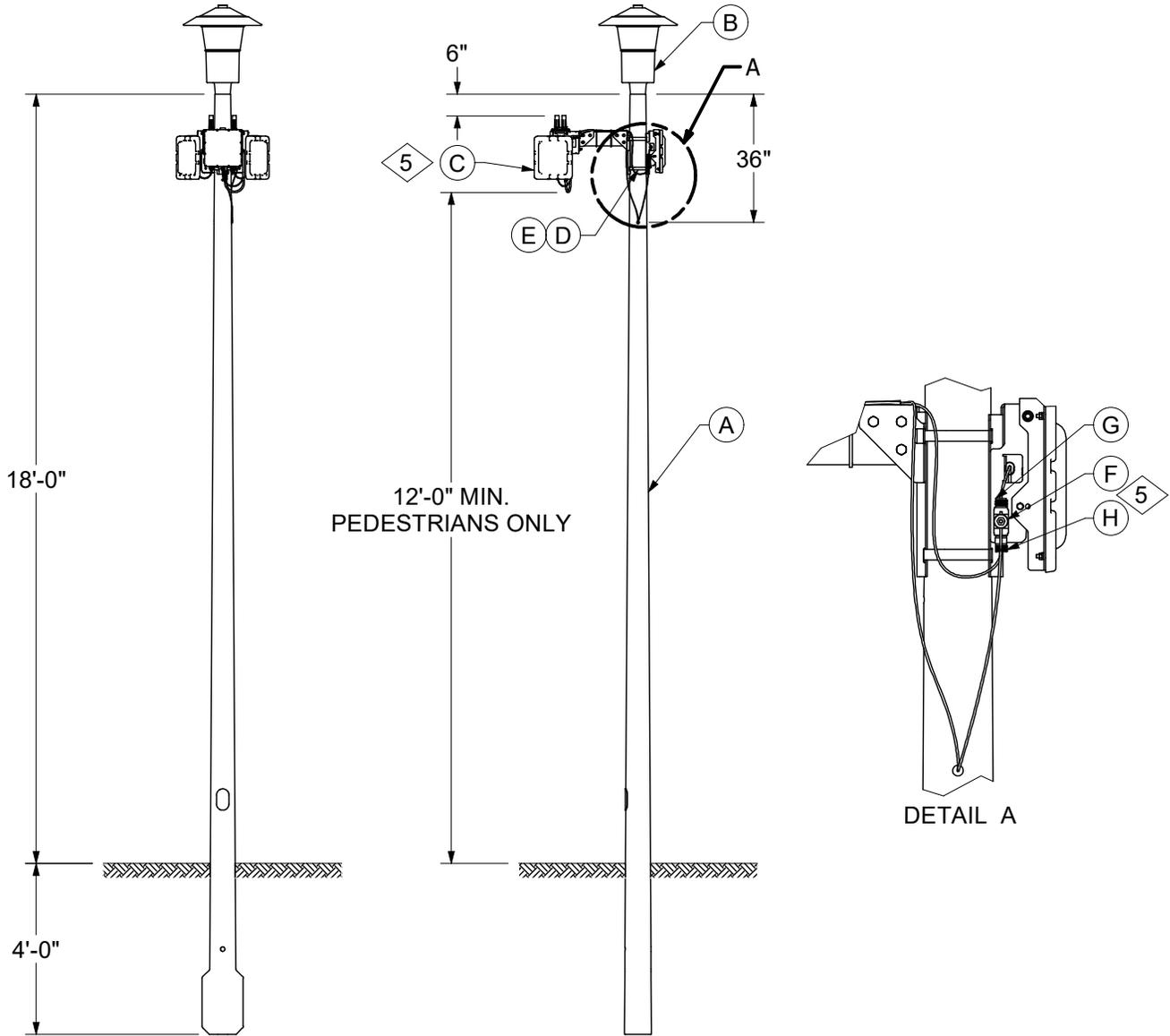


ITEM	STK / DCS #	DESCRIPTION	25 92 10 **	00
A	38 51 677	Pole - FG 22' OH 18' MH		1
B	15 76 01 **	Luminaire		1
C	16 16 317	Network Gateway - Utility Pole Mount		1
D	23 67 528	Band - 3/4in		2
E	23 67 529	Band Buckle - 3/4in		2

Construction Note(s):

1. Native soil back fill must be tamped to provide solid compaction around the pole.
2. Generally only one street light tag per street light shall be installed. The tag should be installed visibly from the ground level but not reachable by the public. Refer to DCS **15 90 01 01**.
3. In Missouri; residential developments, the contractor will install 1-1/2" conduit to within 18" of the pole. Ameren will install the pole and the cable.
4. See DCS **29 00 17 02** for minimum required ground clearance to bottom of antenna. Use clearances for "Secondary & Service Conductors 0 to 750 Volts".

REV	DATE	ENG	DESCRIPTION
1	01/01/23	WYW	Moved Gateway 6" below bottom of tenon
0	07/01/20	WYW	New Issue



CONSTRUCTION NOTE(s):

1. Native soil back fill must be tamped to provide solid compaction around the pole.
2. Generally only one street light tag per street light shall be installed. The tag should be installed visibly from the ground level but not reachable by the public. Refer to DCS **15 90 01 01**.
3. In Missouri; residential developments, the contractor will install 1-1/2" conduit to within 18" of the pole. Ameren will install the pole and the cable.
4. See DCS **29 00 17 02** for minimum required ground clearance to bottom of antenna. Use clearances for "Secondary & Service Conductors 0 to 750 Volts".

5. Weather proof coaxial connection between cable assembly, lighting arrestor, and antenna using weatherproof kit (Sealer: Stock #25 54 053 and Electrical Tape: Stock #25 53 055).

REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard



METER INSTALLATIONS

Smart Meter Network Gateway With Sector Antenna
Streetlight Mounting

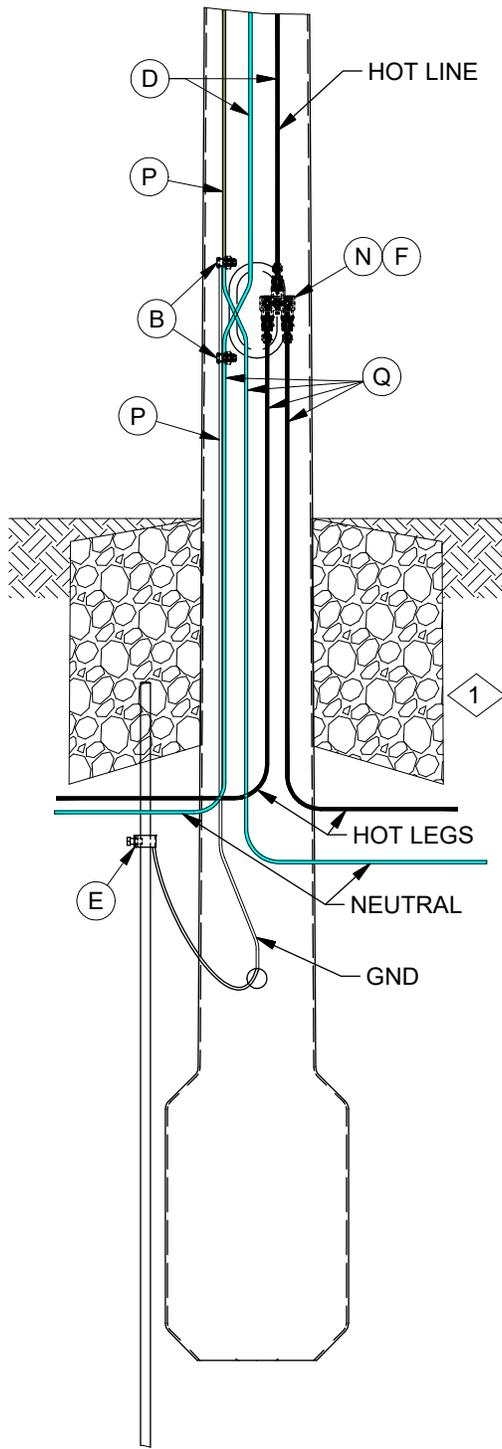
25 92 10 02

2 of 2

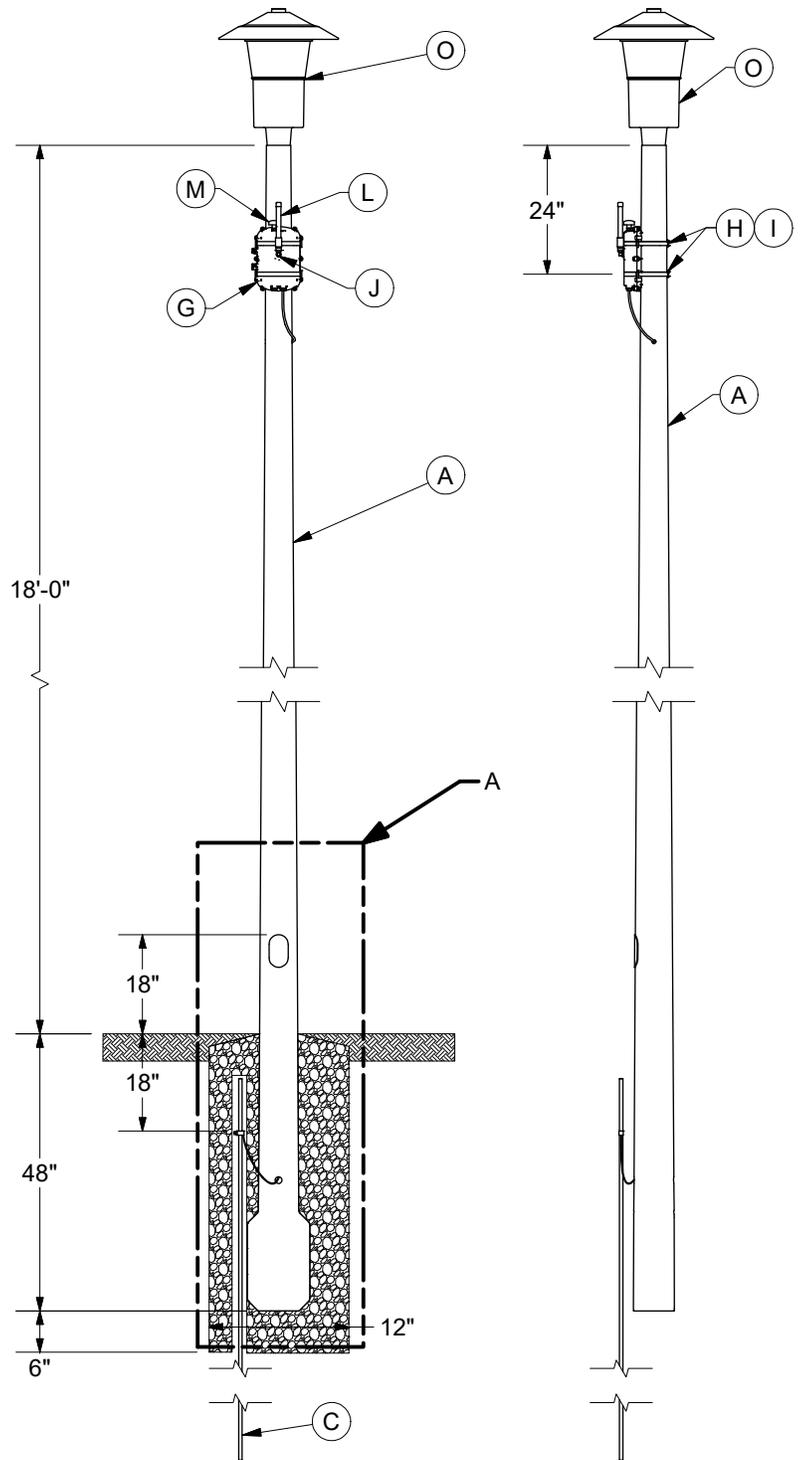
ITEM	STK / DCS #	DESCRIPTION	25 92 10 **	02
A	38 51 677	Pole - FG 22' OH 18' MH		1
B	38 51 631	Colonial, LED 100W equivalent, 120V-277V, Type V, 3000K		1
C	16 13 893	Network Gateway with Sector Antenna		1
D	23 67 528	Band - 3/4in		2
E	23 67 529	Band Buckle - 3/4in		2
F	10 01 250	Arrestor - Antenna Coax Cable		1
G	16 16 015	Connector - Coax Cable N Male		1
H	16 16 110	Connector - Coax Cable N Female		1

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
0	01/01/23	WYW	New Issued Standard

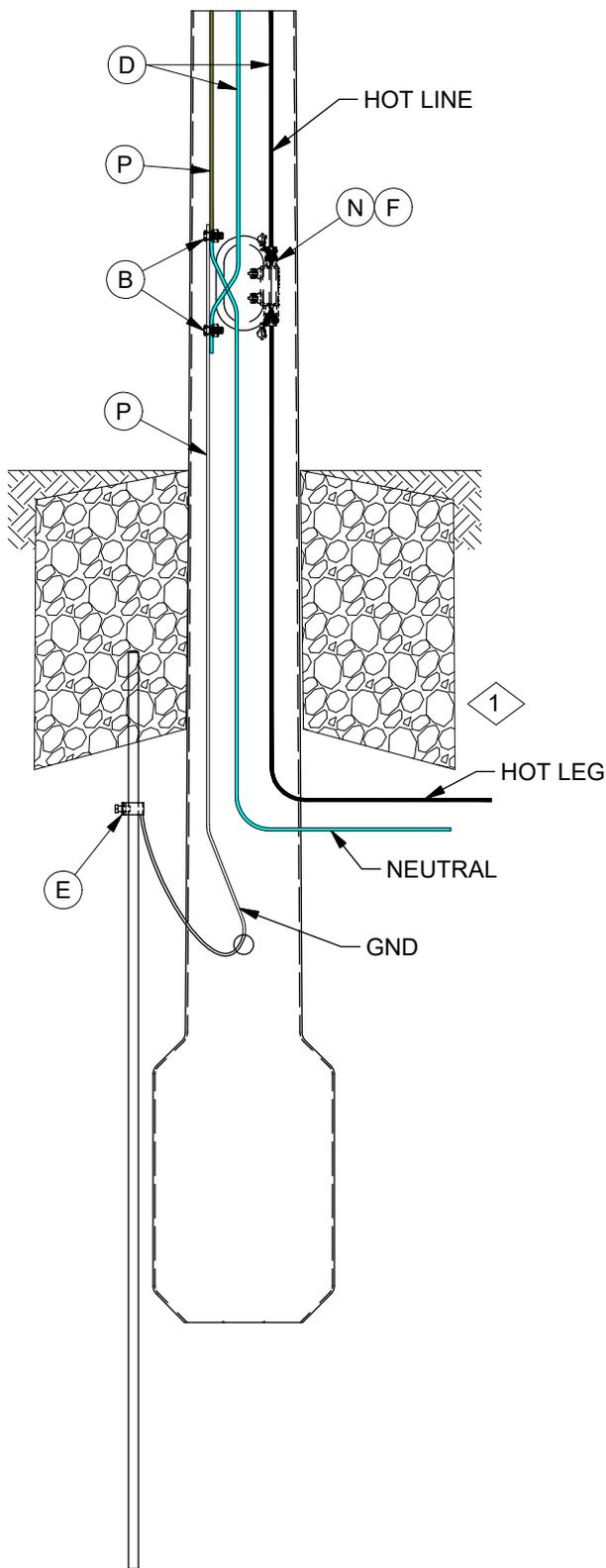


Detail A

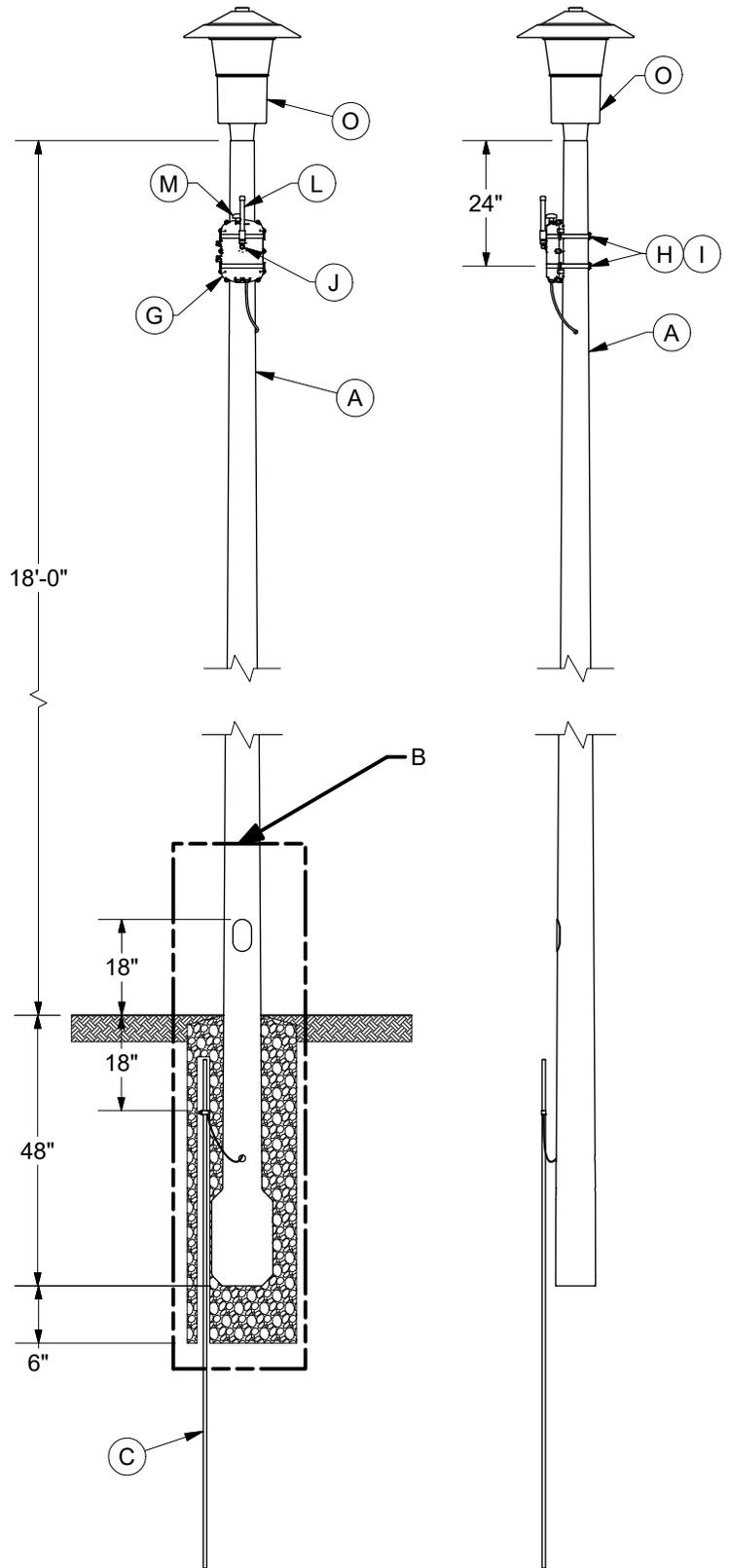


25 92 11 02

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New Standard



Detail B



25 92 11 01

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New Standard



METER INSTALLATIONS

Smart Meter Router Installation

Streetlight Mounting

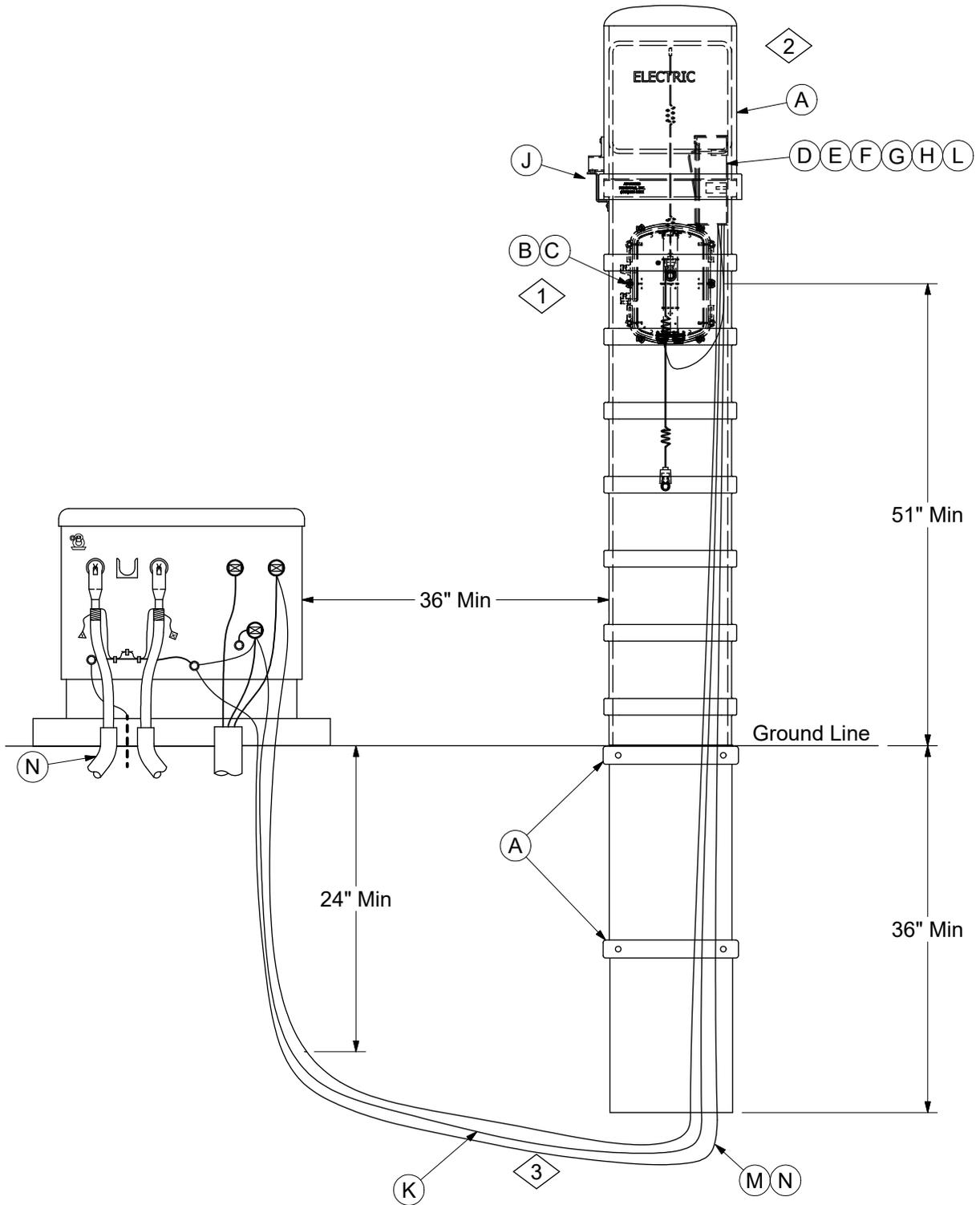
CONSTRUCTION NOTE(s):

1. 1. Rock or native soil must be tamped to provide solid compaction around the pole. Refer to DCS **02 20 05 **** for more detail.
2. Generally only one tag per street light shall be installed. If more than one street light installed on the same pole, one tag per street light is required, and each tag should be installed on the same quadrant of the light. The tag should be installed visibly from the ground level but not reachable from public. Refer to DCS **15 90 01 01** for more details.
3. In Missouri residential developments, the contractor will install 1-1/2 inch conduit to the pole site. Ameren will install the pole and the cable. In Illinois residential developments, Ameren will install direct burial unless the customer provides a complete conduit system.
4. For fuse underground streetlight cable at pad mount transformer or pedestal, Refer to DCS **52 00 01 ****. In Illinois residential developments, Ameren will install direct burial unless the customer provides a complete conduit system.
5. See DCS **29 00 17 02** for minimum required ground clearance to bottom of antenna. Use clearance "Secondary & Service Conductors 0 to 750 Volts".
6. Native soil back fill must be tamped to provide solid compaction around the pole.
7. In Missouri residential developments, the contractor will install 1-1/2" conduit to within 18" of the pole. Ameren will install the pole and the cable. In Illinois residential developments, Ameren will install direct burial unless the customer provides a complete conduit system.
8. See DCS **29 00 17 02** for minimum required ground clearance to bottom of antenna. Use clearances for "Secondary & Service Conductors 0 to 750 Volts".

DCS #	DESCRIPTION
25 92 11 01	Single Light
25 92 11 02	Multi-Lights

ITEM	STK / DCS #	DESCRIPTION	25 92 11 **	01	02
A	38 51 677	Pole - FG 22' OH 18' MH		1	1
B	17 54 004	Connector - Split Bolt, #4 Sol CU thru #8 Sol CU		2	2
C	23 13 069	5/8" Ground Rod 8ft		1	1
D	18 57 104	Cable, 2#10, Cu, Poly, ft		17	17
E	17 52 032	Clamp, Ground Rod 5/8		1	1
F	20 51 007	Fuse, 10 Amp		1	2
G	16 16 119	Enhanced Mesh Router Series 5		1	1
H	23 67 528	Band - 3/4"		2	2
I	23 67 529	Band Buckle - 3/4"		2	2
J	16 16 020	Adapter - Coax Right Angle N Male to N Female		1	1
K	18 57 111	Cable Assy, Power Cable, Three Wire, 10 ft		1	1
L	16 16 105	Antenna, Dipole, 9"		1	1
@ M	16 16 395	Antenna GPS		1	1
N	20 56 543	Connector, #14 thru 1/0 Wire, One to One Fusible Link		1	-
N	20 56 544	Connector, #14 thru 1/0 Wire, One to Two Way Fusible Link		-	1
@ O	15 70 15 **	Luminaire, Post Top		1	1
@ P	18 52 019	Wire, S.D. #6 Cu, Bare, ft		#	#
@ Q	18 07 252	Cable - Duplex #6 Al.		#	#

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New Standard



REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New Standard



METER INSTALLATIONS

Smart Meter Router - Pedestal Installations

25 92 20 00

2 of 2

CONSTRUCTION NOTE(s):

1. Fasten the router with a Lanyard with a double locking carabiner (Stock #85 26 162) to ensure the router does not fall inside the pedestal during maintenance operation.
2. Install a sticker "Property of Ameren" on the router and outside of the pedestal cover.
3. Installing cable in conduit is optional.

	ITEM	STK / DCS #	DESCRIPTION	25 92 20 **	00
	A	40 89 774	Pedestal, API PFAM1011XLST001		1
	B	16 16 117	Router - AMI, L&G Series R6500		1
	C	16 16 020	Adapter - Coax Right Angle N Male to N Female		1
	D	40 78 038	Switch, 30A, Fused, Plug Type		1
	E	16 08 301	Connector, Strain Relief, (for #10), 3 Wire		1
	F	16 08 303	Connector, Strain Relief, (for Collector Cable)		1
	G	20 51 012	Fuse, 250V, 30A, Cartridge Type		1
	H	40 59 039	Cartridge, Solid Neutral Fuse Slug, 30A, 250V		1
	J	22 13 197	Lock, Pad, Combination, 5/16" Diam x 1" W x 2-1/4" Tall		1
	K	18 07 252	Cable 2-#6 Al		#
	L	23 52 567	Hardware - Bolt, 1/4" x 1", Nut and Washer		20
3,@	M	12 01 230	Conduit, PVC, Schedule 40, 1-1/2" x 10'		#
3,@	N	19 18 572	Bend, Conduit, 1-1/2"		2

**DISTRIBUTION
CONSTRUCTION STANDARDS**

REV	DATE	ENG	DESCRIPTION
0	01/01/24	WYW	New Standard