

LIGHTING STANDARDS

2023 EDITION
(FIRST EDITION)

LIGHTING STANDARDS

The Lighting Standards contained in the 2023 edition have been reviewed and approved by the following Electric Construction Standards Committee members:



Russell Lindsey, P.E., Manager – Electric Line Engineering

3/24/23

Date



Matt Norman., Manager – Electric Line Operations

3/30/2023

Date



Spencer Shepherd, Supervisor – Electric Line Operations

3/30/2023

Date



George Caccioppo, Electric Line Worker – Electric Line

3/31/2023


Date



Kevin Bollinger, Supervisor – Inventory Control

4/4/2023

Date



Brad Butler, Supervisor – Electric Line Operations

3/30/2023

Date



Tom Arnall, P.E., Engineer IV – Electric Line Engineering

3/16/23

Date

.....
APPROVED BY:



Warren Brooks, P.E., Director – Electric Transmission & Distribution

4/4/23

Date



Chris Jones, P.E., V.P. – Chief Electric Op Officer – Electric Supply

4/5/23

Date

Scope

City Utilities of Springfield, Missouri must ensure its electric distribution system is designed, constructed, operated, and maintained in accordance with all applicable provisions of the most current and accepted criteria of the National Electrical Safety Code (NESC) and all applicable electrical and safety requirements of State and local governmental entities. All electrical standards established by City Utilities are in addition to, and not in substitution for or a modification of, the most current and accepted criteria of the NESC and all applicable electrical and safety requirements of State and local governmental entities.

The specifications herein cover the material and construction details for lighting for City Utilities and are intended to meet or exceed the minimum requirements of the most current and accepted criteria of the NESC. The text and drawings are intended to coordinate with and supplement each other, and to establish consistency in the design of additions and modifications to the City Utilities electric distribution system.

Application

These specifications and standards of construction shall be followed without deviation for all new construction and renewals or replacements of existing lighting facilities. When conditions require deviation from standard construction, approval must be obtained from Electric Line Engineering.

Existing lighting shall not be changed solely to conform to these specifications unless required to eliminate hazardous conditions, or when specifically directed. Generally, when new lighting is installed, or when existing lighting facilities are being replaced, all construction shall conform to these specifications.

Every project design package shall include drawings and construction details referencing these specifications, indicating the required materials to be used, and provide any other information necessary to adequately represent the construction to be performed.

Any details of these specifications not clearly understood shall be referred to Electric Line Engineering. These standards shall be reviewed and updated regularly by the Electric T&D Standards Committee. Suggestions for changes to these specifications should be submitted in writing to the Manager – Electric Line Engineering. If further review indicates a suggestion will achieve improvements in safety, operations, and/or economics, the suggestion will be considered for incorporation into these standards. Updates will be made to the standards biennially and provided in bound and/or electronic format.

LIGHTING STANDARDS

(GENERAL - FUTURE SECTION)

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FOUNDATIONS AND HARDWARE

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LIGHTING CONSTRUCTION STANDARDS

City Utilities of Springfield, MO

POLES AND BREAKAWAY BASES - INDEX

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BAB-2	LARGE BREAKAWAY BASE
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CP30-6-JAD	30' CONCRETE POLE WITH 6' ARM, JADE PAINT/FINISH
CP30-6-SND	30' CONCRETE POLE WITH (DESERT SAND)LT. BROWN PAINT/FINISH
GP28-*-1	28' GALVANIZED STEEL POLE WITH SINGLE STREETLIGHT ARM
GP28-*-2	28' GALVANIZED STEEL POLE WITH DUAL STREETLIGHT ARMS
GP37-*-1	37' GALVANIZED STEEL POLE WITH SINGLE STREETLIGHT ARM
GP37-*-2	37' GALVANIZED STEEL POLE WITH DUAL STREETLIGHT ARMS
PP10	10' DECORATIVE POLE WITH L.E.D. LUMINAIRE
PP14	14' DECORATIVE POLE WITH L.E.D. LUMINAIRE
PP27-*-1	27' GALVANIZED STEEL POLE WITH SINGLE STREETLIGHT ARM
PP30-*-*	30' DECORATIVE PAINTED STEEL POLE W/STREETLIGHT ARM AND CLAMSHELL BASE
PP39	39' ROUND TAPERED PAINTED POLE
SSA35-DBZ	DARK BRONZE STRAIGHT SQUARE ALUMINUM 35' POLE
WPSLA-**-	WOOD POLE STREETLIGHT ARM

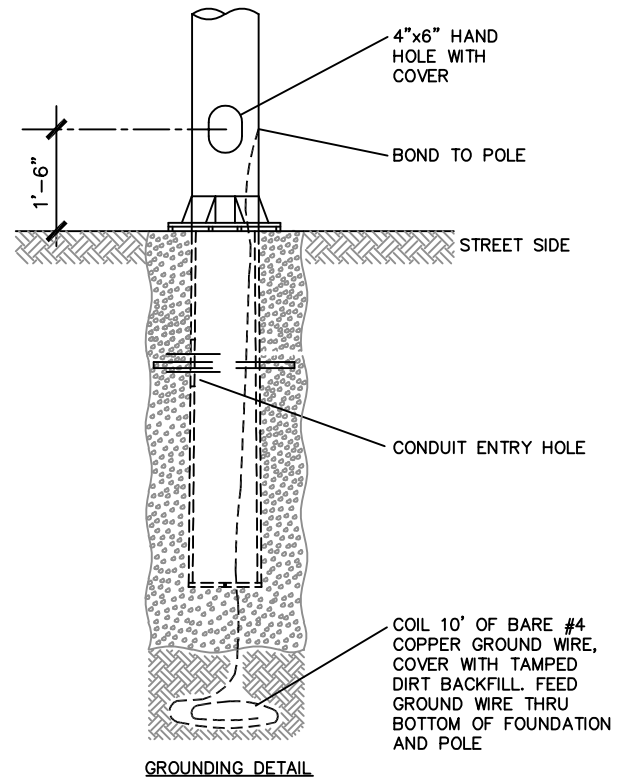
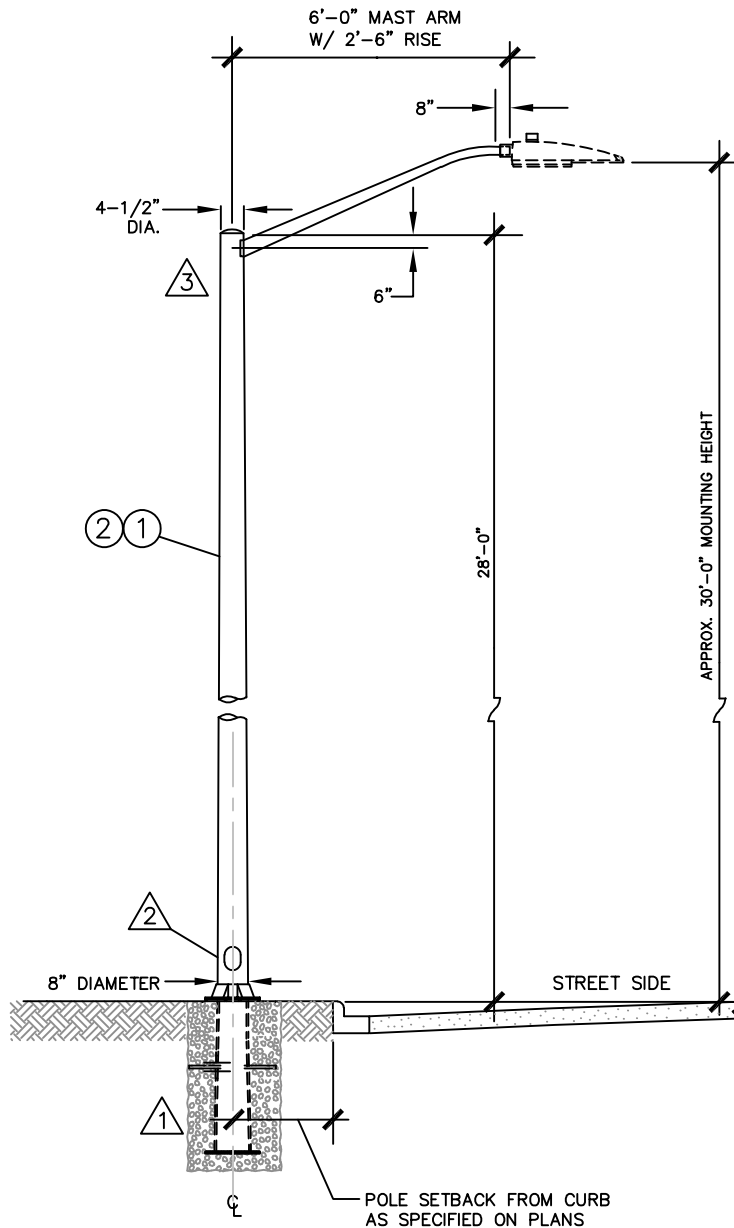
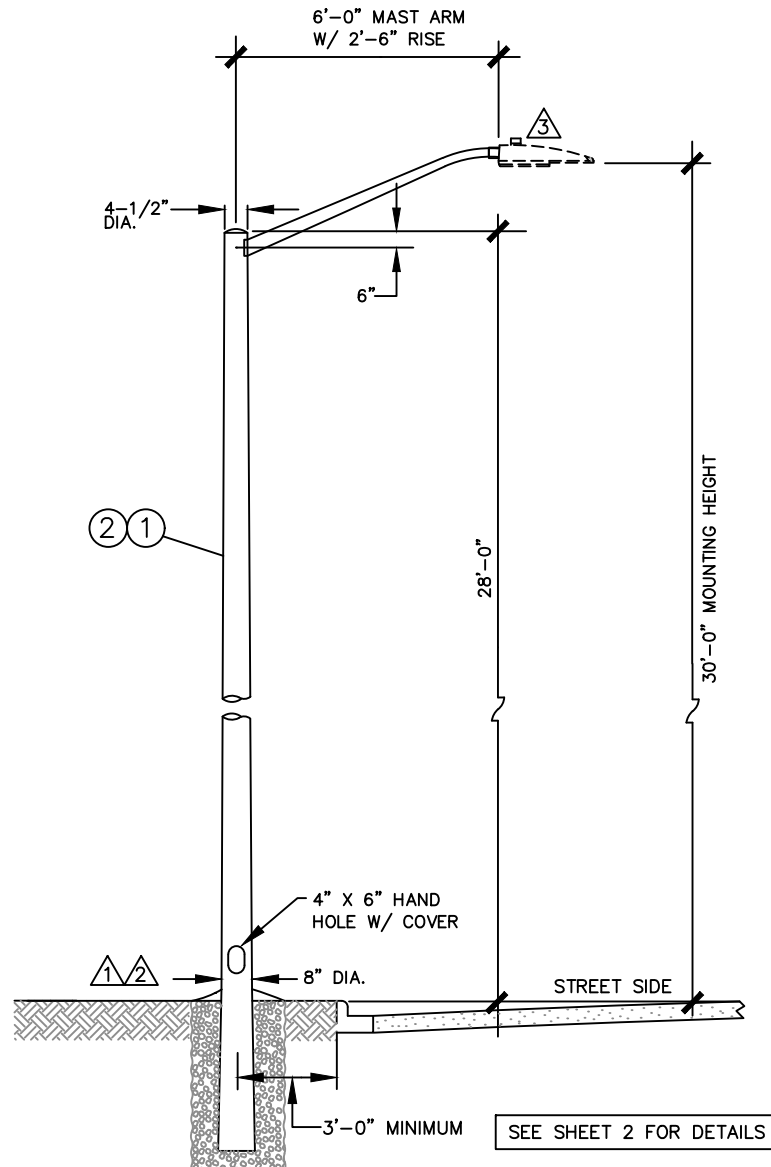


TABLE A		
AP28-6-1	STRUCTURE FOUNDATION	
	NON-BREAKAWAY	BREAKAWAY
CONCRETE	CF24-6-115	CF24-6-115-B
STEEL	SLSB	SLSB

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	28' BRUSHED ALUMINUM STREETLIGHT POLE WITH 6' MAST ARM. BASE PLATE WITH AN 11.5"±0.50" BOLT CIRCLE TO ACCOMMODATE 1" ANCHOR BOLTS. BASE PLATE IS 0.75" THICK.	117296			
2	55' 12/2 COPPER CONDUCTOR, TYPE UF, WITH GROUND.	101415			

GENERAL NOTES			ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	STEEL OR CONCRETE STREETLIGHT FOUNDATION SHOULD BE SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.		DRAWN BY: E.C.	28' BRUSHED ALUMINUM POLE WITH 6' MAST ARM		
2.	LIGHT, HARDWARE KIT, BREAKAWAY BASE, BREAKAWAY "Y" CONNECTOR, FUSES, CONTROL & SPLIT BOLT CONNECTOR SHOULD BE SPECIFIED SEPARATELY.		REV BY: E.C.			
3.	STOCK ITEMS FOR OVERHEAD WIRING SHOULD BE SPECIFIED SEPARATELY.		FILE: AP28-6-1			
4.	REFER TO TABLE "A" FOR SUITABLE CONCRETE OR STEEL FOUNDATION.		APPROVED: R.L.	REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. AP28-6-1



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	ALUMINUM STREET LIGHT POLE WITH 6' MAST ARM, DIRECT EMBEDMENT TYPE, 30' MOUNTING HEIGHT.	107105			
2 55FT	#12/2 UF COPPER WIRE WITH GROUND	101415			
3 AS REQ'D	CRUSHED 1/2" ROCK BACKFILL	N/S			
4 AS REQ'D	#4 BARE COPPER GROUND WIRE	101173			
5 1	2" PVC END BELL	109016			
6 5 FT	FLEXIBLE 2" CONDUIT	109080			
7 1	2" PVC COUPLING	109161			



GENERAL NOTES

- DISTANCE FROM CURB (OR ROAD) TO POLE WILL BE SPECIFIED ON CONSTRUCTION DRAWING.
- BLACK COATING ON OUTSIDE OF POLE SHALL BE A MINIMUM OF 1" TO A MAXIMUM OF 3" ABOVE FINAL GRADE.
- CONTROL AND LIGHT SHOULD BE SPECIFIED ON CONSTRUCTION DRAWING.
- UNDERGROUND WIRING AND CONDUIT SHOULD BE SPECIFIED ON CONSTRUCTION DRAWING.
- CONNECT TO SECONDARY PEDESTAL. PEDESTAL SHOULD BE SPECIFIED ON CONSTRUCTION DRAWING.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

AC

REV BY:

J.P., E.C.

FILE:

AP33-6-1

APPROVED:

R.L.

REVISED:

3-9-22

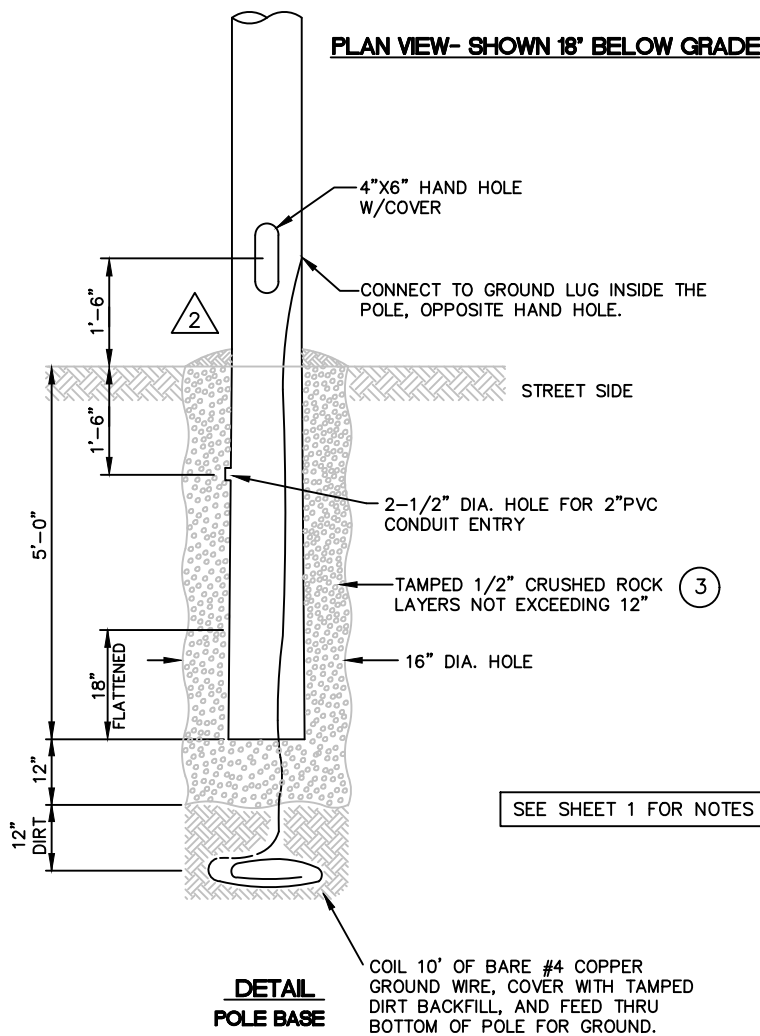
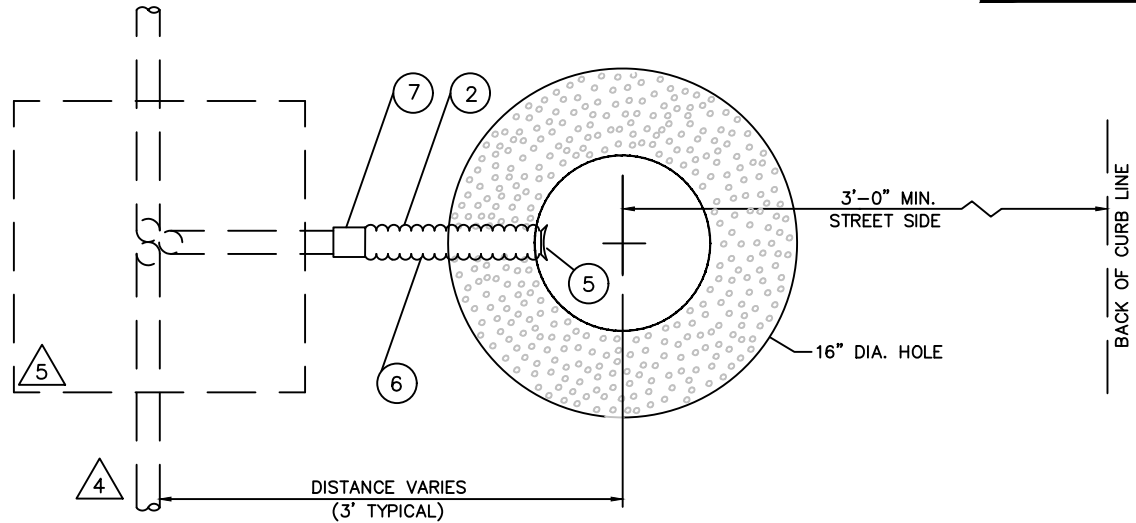
SHEET

1 OF 2

STD. NO.

AP33-6-1

33' BRUSHED ALUMINUM
DIRECT-BURY POLE
WITH 6' MAST ARM



GENERAL NOTES

**ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.**

DRAWN BY:

AC

REV BY:

J.P.

FILE:

AP33-6-1

APPROVED:

R.L.

33' BRUSHED ALUMINUM
DIRECT-BURY POLE
WITH 6' MAST ARM

REVISED:

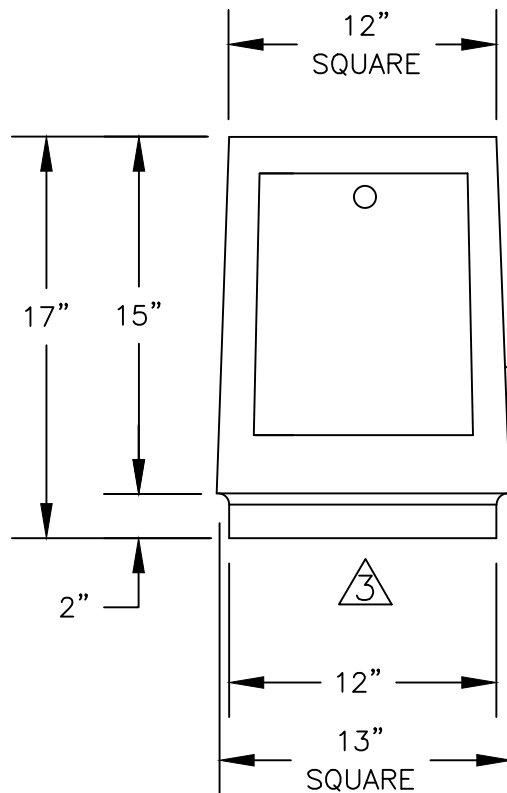
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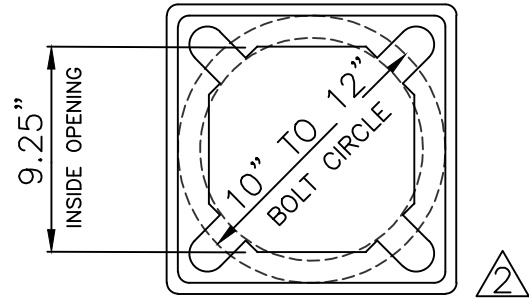
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STD. NO.

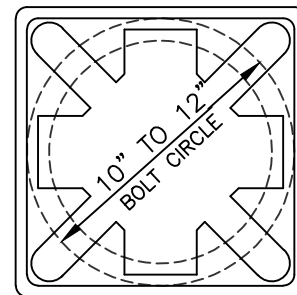
AP33-6-1



SIDE VIEW



TOP VIEW



BOTTOM VIEW

COMPATIBLE WITH:

BASE	POLE STD.	DESCRIPTION
BAB-1	AP28-*	28' ALUM. ROUND POLE
	GP28-*	28' GALV. STEEL POLE
	PP27-*	27' PAINTED OCT. POLE

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	BASE, ALUMINUM BREAKAWAY (VALMONT TB2-17)	107046			
2	TRANSFORMER GROUND, VISE TYPE	2508564			



GENERAL NOTES

- DO NOT USE LEVELING NUTS OR WASHERS UNDER BREAKAWAY BASE. REFERENCE YELLOW CAUTION STICKER FOR INSTALLATION INSTRUCTIONS.
- 1" BOLTS, NUTS, WASHERS AND LOCK WASHERS TO CONNECT POLE TO BREAK-AWAY BASE ARE INCLUDED WITH B/A BASE.
- SURFACE UNDER ALL SIDES OF BASE SHALL BE SMOOTH AND LEVEL.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

C.K.

REV BY:

J.P.

FILE:

BAB-1

APPROVED:

R.L.

REVISED:

3-9-22

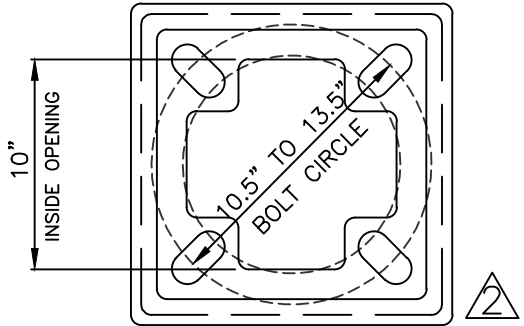
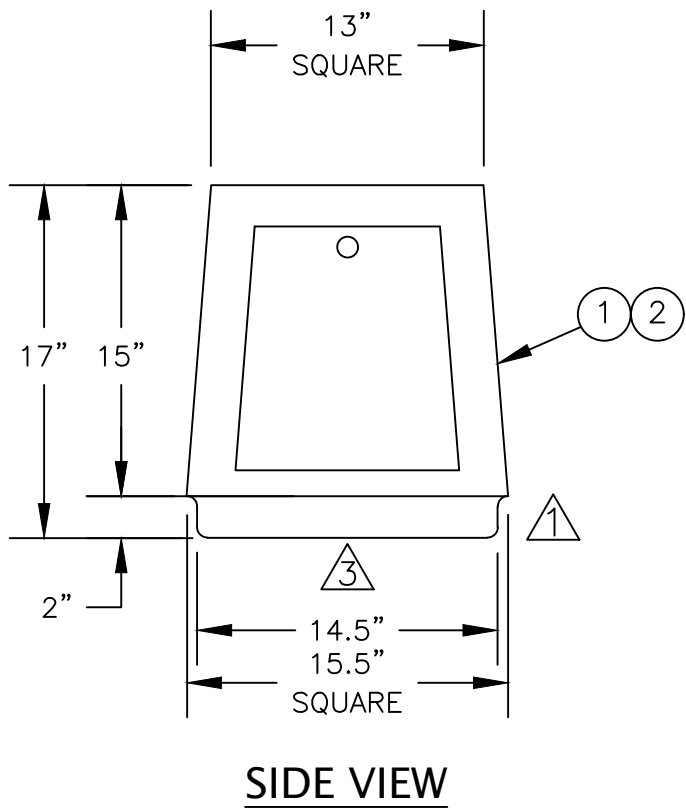
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1 OF 1

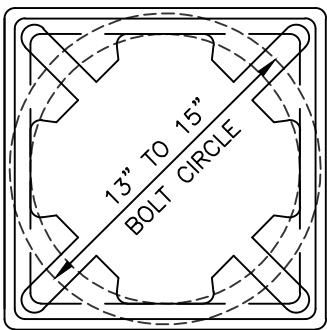
STD. NO.

BAB-1

STREETLIGHT
SMALL BREAKAWAY
BASE



TOP VIEW



BOTTOM VIEW 1

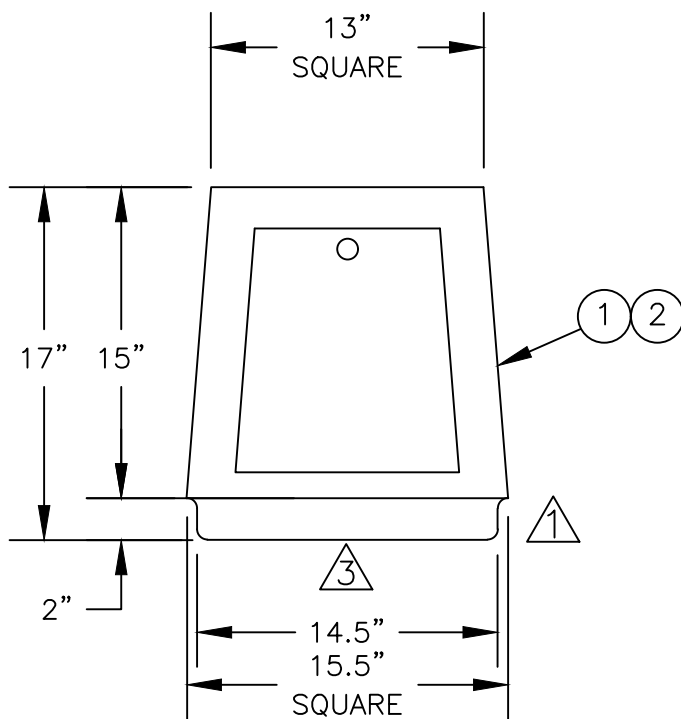
COMPATIBLE WITH:		
BASE	POLE STD.	DESCRIPTION
BAB-2	GP37-*	37' GALV. STEEL POLE

MATERIAL LIST

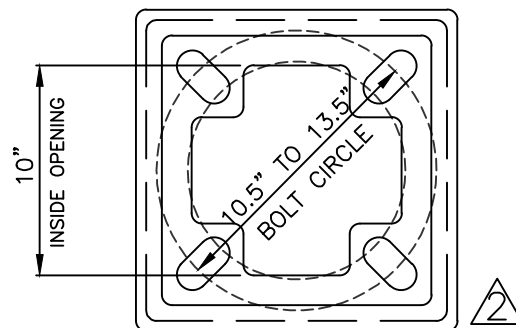
QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	BASE, ALUMINUM BREAKAWAY	107052			
2	TRANSFORMER GROUND, VISE TYPE	2508564			

GENERAL NOTES
1. DO NOT USE LEVELING NUTS OR WASHERS UNDER BREAKAWAY BASE. REFERENCE YELLOW CAUTION STICKER FOR INSTALLATION INSTRUCTIONS.
2. 1" BOLTS, NUTS, WASHERS AND LOCK WASHERS TO CONNECT POLE TO BREAK-AWAY BASE ARE INCLUDED WITH B/A BASE.
3. SURFACE UNDER ALL SIDES OF BASE SHALL BE SMOOTH AND LEVEL.

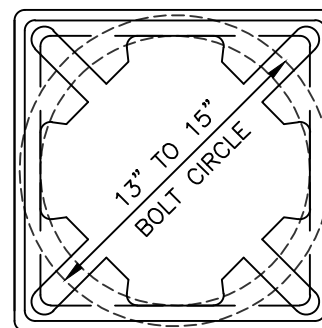
ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
DRAWN BY: C.K.	STREETLIGHT LARGE BREAKAWAY BASE		
REV BY: J.P.			
FILE: BAB-2			
APPROVED: R.L.	REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. BAB-2



SIDE VIEW



TOP VIEW




BOTTOM VIEW

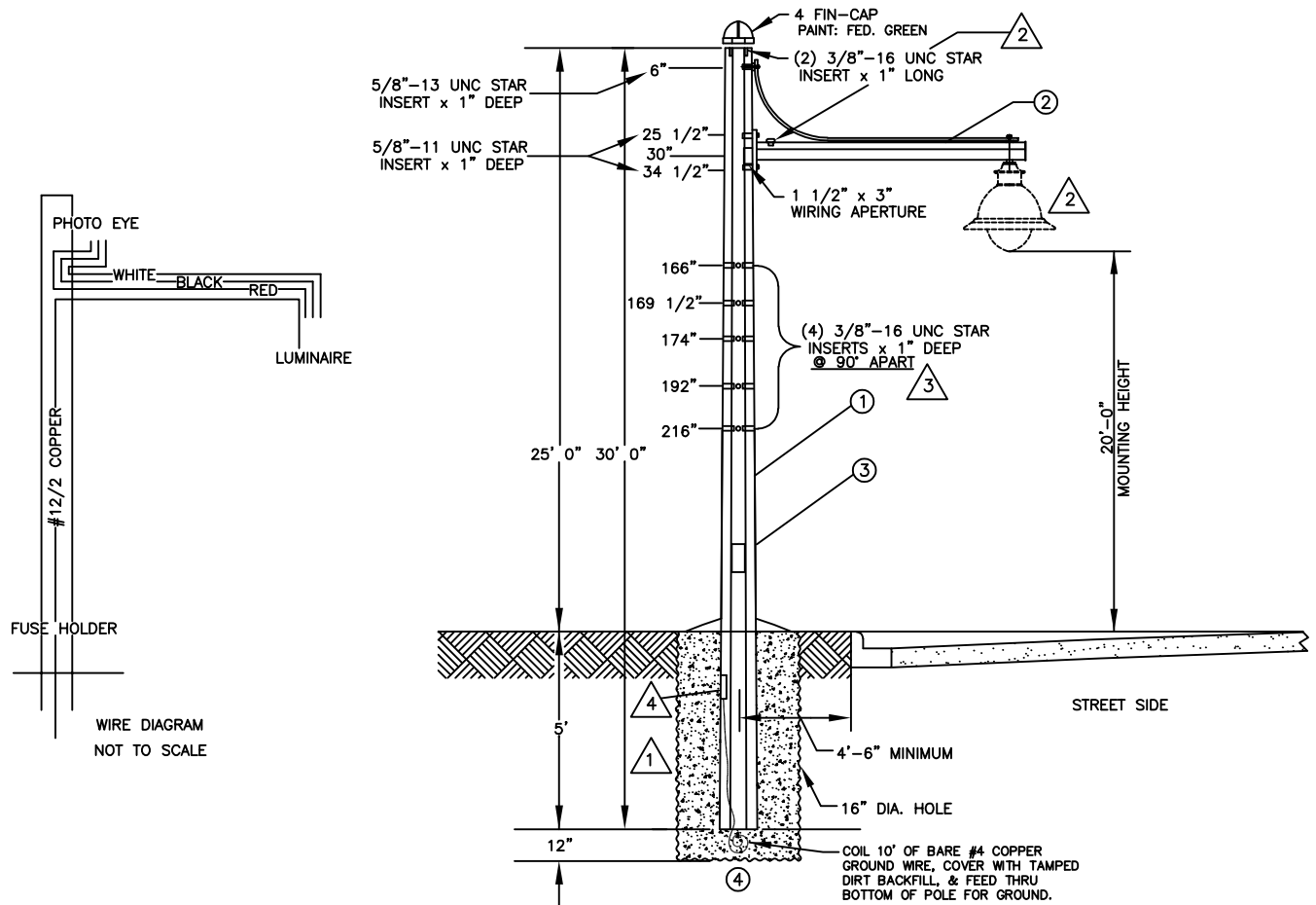
COMPATIBLE WITH:

BASE	POLE STD.	DESCRIPTION
BAB-2-DBZ	SSA35-*	35' SQ. ALUM. BRZ. POLE
	PP39-*	39' RND. STEEL BRZ. POLE

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	BASE, ALUMINUM BREAKAWAY, PAINTED BRONZE	2510276			
2	TRANSFORMER GROUND, VISE TYPE	2508564			

	GENERAL NOTES		ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	DO NOT USE LEVELING NUTS OR WASHERS UNDER BREAKAWAY BASE. REFERENCE YELLOW CAUTION STICKER FOR INSTALLATION INSTRUCTIONS.		DRAWN BY: J.P.		DARK BRONZE STREETLIGHT LARGE BREAKAWAY BASE	
2.	1" BOLTS, NUTS, WASHERS AND LOCK WASHERS TO CONNECT POLE TO BREAK-AWAY BASE ARE INCLUDED WITH B/A BASE.		REV BY:			
3.	SURFACE UNDER ALL SIDES OF BASE SHALL BE SMOOTH AND LEVEL.		FILE: BAB-2-DBZ			
			APPROVED: R.L.			
				REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. BAB-2-DBZ



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
	CP30-6-JAD				
1	30' CONCRETE OCTAGONAL POLE WITH TWO 4" X 6" HAND HOLE WITH COVERS, COLOR: E51 AZTEC JADE	137843			
2	6' MAST ARM, COLOR: SW2238 BLACK FOREST	137789			
3	55FT. #12/2 UF COPPER WIRE WITH GROUND	101415			
4	20FT. #4 BARE COPPER WIRE	101163			



GENERAL NOTES

1. PLACE 1/2" BASESTONE IN 12" COMPACTED LAYERS BEFORE PLACING THE NEXT LAYER.
2. LED-PEN1-FOR AND CONTROL SPECIFIED ON CONSTRUCTION DRAWING BY DESIGNER.
3. STREET AND STOP SIGNS.
4. WIRE APERTURE 2'-6" X 5".
5. FUSE INSTALLED IN POWER SOURCE.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

FILE:

CP30-6-JAD

APPROVED:

R.L.

REVISED:

3-9-22

SHEET

1 OF 1

STD. NO.

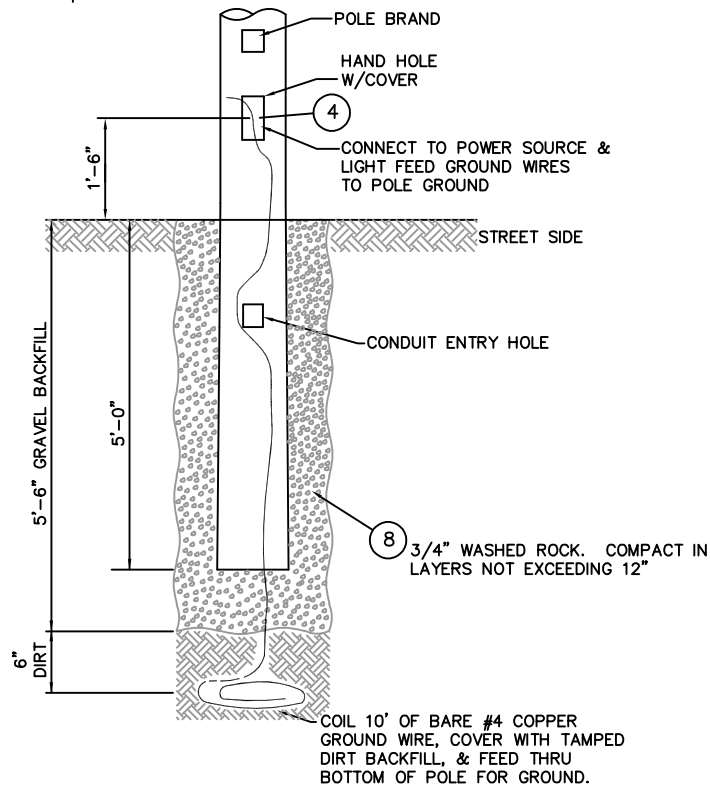
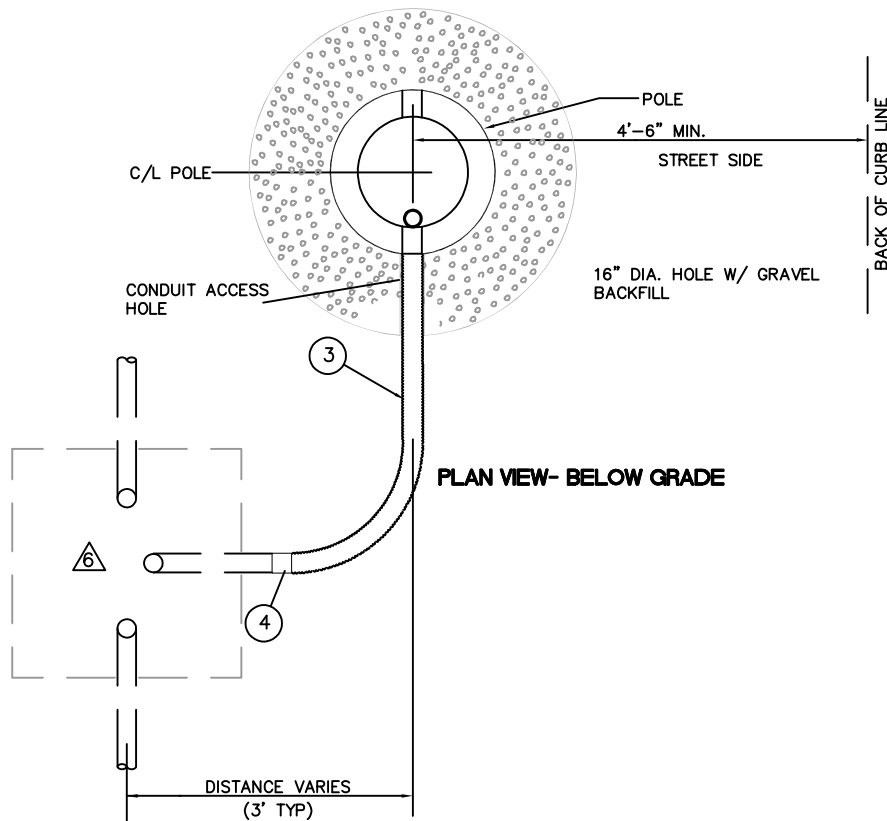
CP30-6-JAD

30' CONCRETE POLE
WITH 6' ARM
20' MOUNTING HEIGHT

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
	CP30-6-SND				
1	30' CONCRETE ROUND POLE COLOR, ETCHED, SHERWIN WILLIAMS, ACRYLIC, E70 DESERT SAND LIGHT BROWN-4-00-LS. 10 3/16" DIAMETER AT BUTT WITH A 4 3/4" DIAMETER AT THE TOP. TENON POLE TOP 1.9" DIAMETER X 2 3/4" LONG.	141029			
2	6' MAST ARM AND FIXTURE TO BE PAINTED, COLOR: SHERWIN WILLIAMS, ACRYLIC, SW 2174 DOWN-TO-EARTH (MATCH).	141002			
3	20FT. #4 BARE COPPER WIRE	101163			
4	1 TAPE	111208			
5	1 END BELL, 2" PVC	109010			
6	10FT. CONDUIT, 2" FLEXIBLE	109080			
7	1 COUPLING, 2" PVC	109161			
8	0.25 YDS 3/4" WASHED ROCK	NONE			

	<i>GENERAL NOTES</i>
1.	PLACE 1/2" BASESTONE IN 12" COMPACTED LAYERS BEFORE PLACING THE NEXT LAYER.
2.	LED-PEN2-SND AND CONTROL SPECIFIED ON CONSTRUCTION DRAWING.
3.	POLE TO BE PAINTED (ETCHED) W/ SHERWIN WILLIAMS ACRYLIC, E70 DESERT SAND LIGHT BROWN-4-00-LS.
4.	ARM & FIXTURE TO BE PAINTED W/ SHERWIN WILLIAMS ACRYLIC, SW 2174 DOWN-TO-EARTH (MATCH). PLUMBIZER ASSEMBLY COMES WITH ARM.

DRAWN BY: J.P.	30' CONCRETE POLE WITH 6' ARM 25' MOUNTING HEIGHT		
REV BY:			
FILE: CP30-6-SND			
APPROVED: R.L.	REVISED: 3-9-22	SHEET 1 OF 2	STD. NO. CP30-6-SND



GENERAL NOTES

5. FLEX CONDUIT CONNECTS TO SP1-* OR CU TRANSFORMER.
6. POLE SETBACK FROM CURB WILL BE SPECIFIED ON DRAWING.
7. UNDERGROUND SOURCE WIRING WILL BE SPECIFIED ON DRAWING.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

FILE:

CP30-6-SND

APPROVED:

R.L.

30' CONCRETE POLE
WITH 6' ARM
25' MOUNTING HEIGHT

REVISED:

3-9-22

SHEET

2 OF 2

STD. NO.

CP30-6-SND

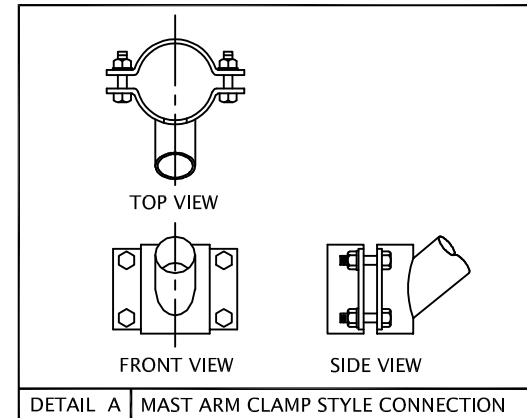
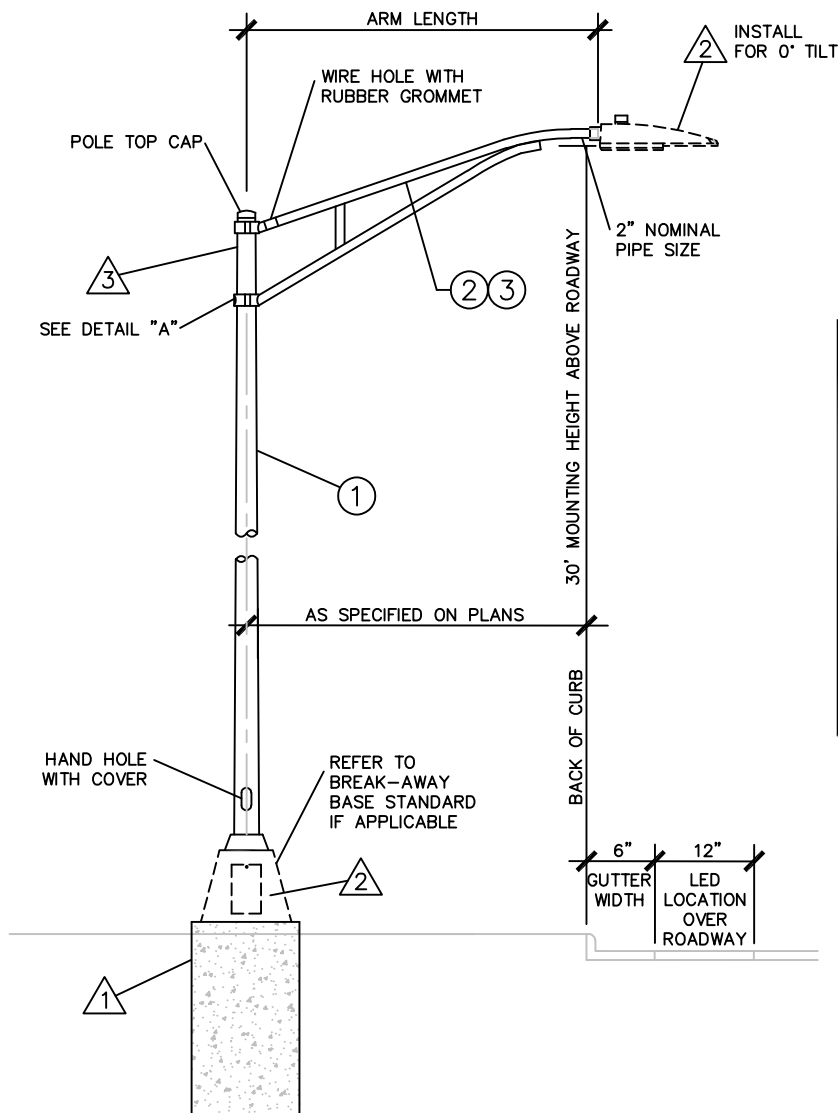



TABLE A		
GP28-* -1	STRUCTURE FOUNDATION	
	NON-BREAKAWAY	BREAKAWAY
CONCRETE	CF24-6-105	CF24-6-115-B
STEEL	SLSB	SLSB

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	GP28-*-1 (1) GALVANIZED STEEL POLE AND ACCESSORIES. APPROXIMATE DIMENSIONS 8"x4.1"x28'. 12" BASE PLATE WITH A 10.5" BOLT CIRCLE TO ACCOMMODATE 1" ANCHOR BOLTS. PLATE 1" THK. (1) POLE TOP CAP (4) ANCHOR BOLT COVERS	107024	3	STANDARD GP28-6-1 6' GALVANIZED STEEL MAST ARM (SINGLE MAST ARM)	107021
2	AS REQ'D. #12/2 UF CU WIRE WITH GROUND	101415	3	STANDARD GP28-8-1 8' GALVANIZED STEEL MAST ARM (SINGLE MAST ARM)	107022
			3	STANDARD GP28-10-1 10' GALVANIZED STEEL MAST ARM (TRUSS MAST ARM)	107023
			3	STANDARD GP28-12-1 12' GALVANIZED STEEL MAST ARM (TRUSS MAST ARM)	107020
			3	STANDARD GP28-15-1 15' GALVANIZED STEEL MAST ARM (TRUSS MAST ARM)	107025

	GENERAL NOTES	ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	STEEL OR CONCRETE STREETLIGHT FOUNDATION SHOULD BE SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.	DRAWN BY: J.P.	28' GALVANIZED STEEL POLE WITH SINGLE STREETLIGHT ARM		
2.	LIGHT, HARDWARE KIT, BREAKAWAY BASE, BREAKAWAY "Y" CONNECTOR, FUSES, AND SPLIT BOLT CONNECTOR SHOULD BE SPECIFIED SEPARATELY.	REV BY: E.C.			
3.	STOCK ITEMS FOR OVERHEAD WIRING SHOULD BE SPECIFIED SEPARATELY.	FILE: GP28-X-1			
4.	REFER TO TABLE "A" FOR SUITABLE CONCRETE OR STEEL FOUNDATION.	APPROVED: R.L.	REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. GP28-#-1

GP28-* -2

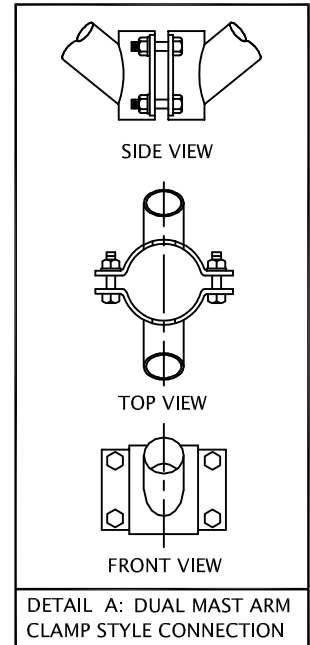
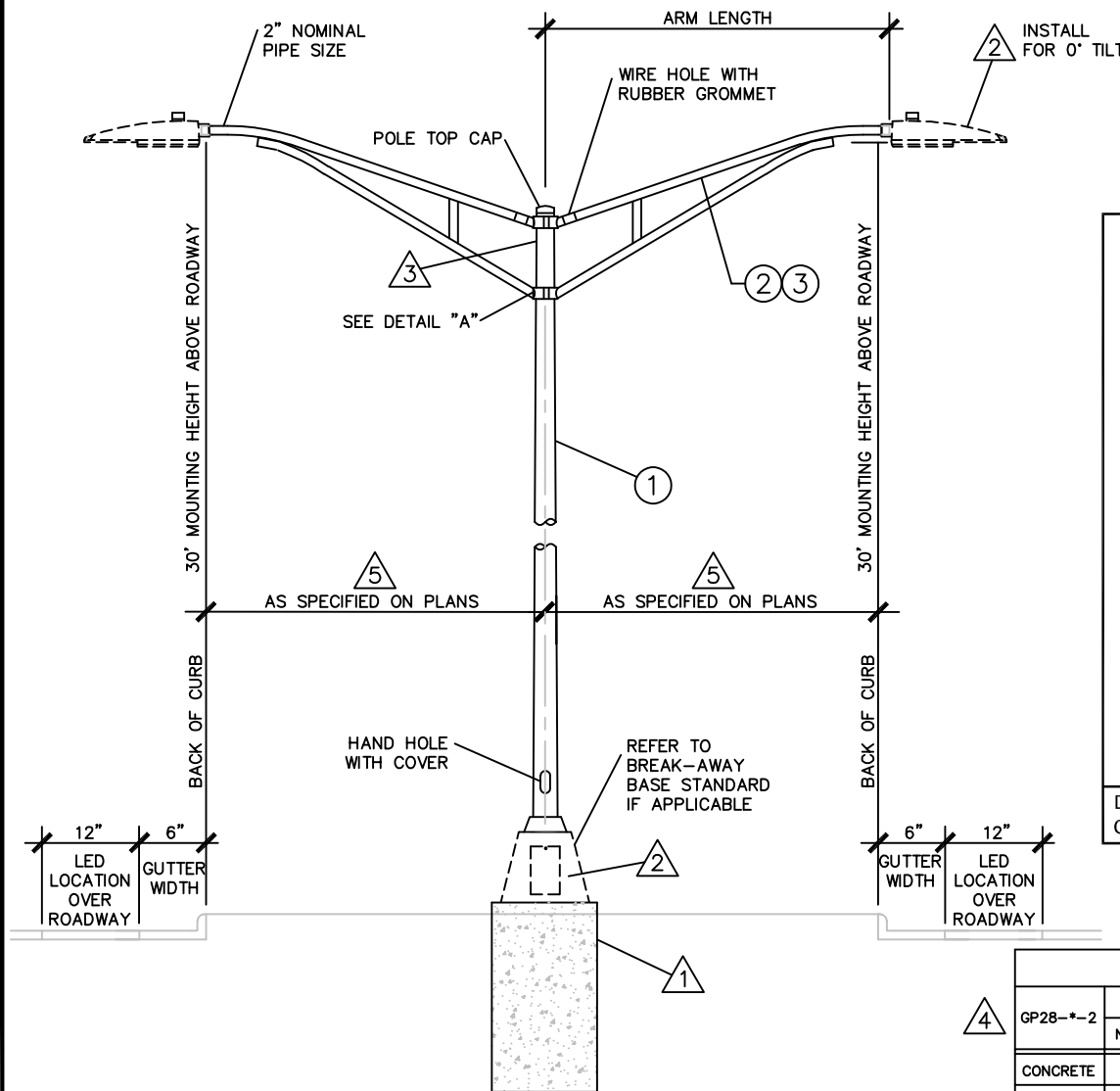


TABLE A		
GP28-* -2	STRUCTURE FOUNDATION	
	NON-BREAKAWAY	BREAKAWAY
CONCRETE	CF24-6-105	CF24-6-115-B
STEEL	SLSB	SLSB

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	(1) GALVANIZED STEEL POLE AND ACCESSORIES. APPROXIMATE DIMENSIONS 8"x4.1"x28'. 12" BASE PLATE WITH A 10.5" BOLT CIRCLE TO ACCOMMODATE 1" ANCHOR BOLTS. PLATE 1" THK.	107024	3	STANDARD GP28-6-2 6' GALVANIZED STEEL MAST ARM (TWO SINGLE MAST ARMS)	107021
	(1) POLE TOP CAP		3	STANDARD GP28-8-2 8' GALVANIZED STEEL MAST ARM (TWO SINGLE MAST ARMS)	107022
	(4) ANCHOR BOLT COVERS		3	STANDARD GP28-10-2 10' GALVANIZED STEEL MAST ARM (TWO TRUSS MAST ARMS)	107023
2	#12/2 UF CU WIRE WITH GROUND	101415	3	STANDARD GP28-12-2 12' GALVANIZED STEEL MAST ARM (TWO TRUSS MAST ARMS)	107020
			3	STANDARD GP28-15-2 15' GALVANIZED STEEL MAST ARM (TWO TRUSS MAST ARMS)	107025

<div>△</div>	GENERAL NOTES		ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.				
	1.	STEEL OR CONCRETE STREETLIGHT FOUNDATION SHOULD BE SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.	DRAWN BY: J.P.		28' GALVANIZED STEEL POLE WITH DUAL STREETLIGHT ARMS		
	2.	LIGHT, BREAKAWAY BASE, HARDWARE KIT, BREAKAWAY "Y" CONNECTOR, FUSES, AND SPLIT BOLT CONNECTOR SHOULD BE SPECIFIED SEPARATELY.	REV BY: E.C.				
	3.	STOCK ITEMS FOR OVERHEAD WIRING SHOULD BE SPECIFIED SEPARATELY.	FILE: GP28-X-2				
	4.	REFER TO TABLE "A" FOR SUITABLE CONCRETE OR STEEL FOUNDATION.	APPROVED: R.L.		REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. GP28-#-2
	5.	POLE TO BE CENTERED IN THE MEDIAN UNLESS OTHERWISE NOTED.					

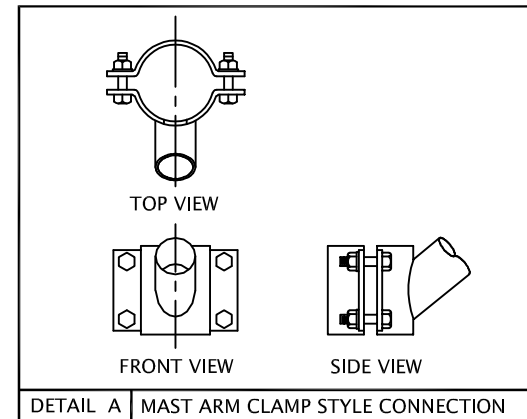
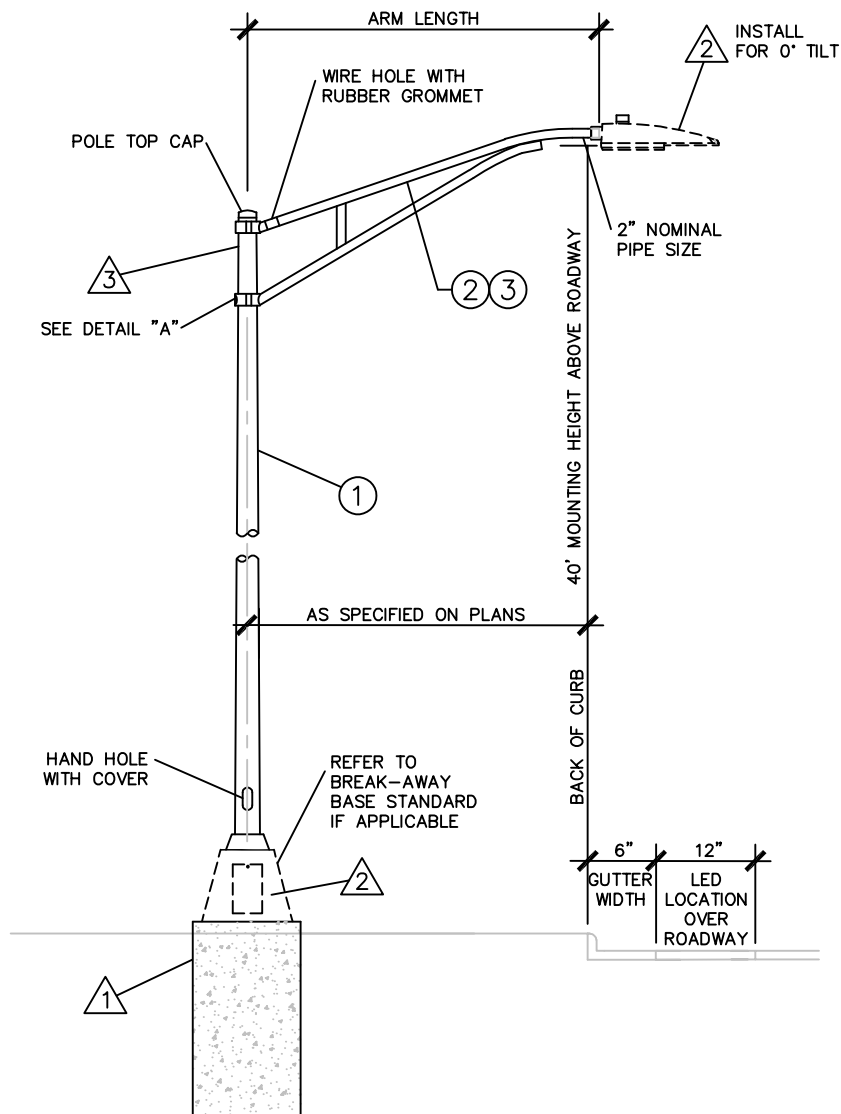

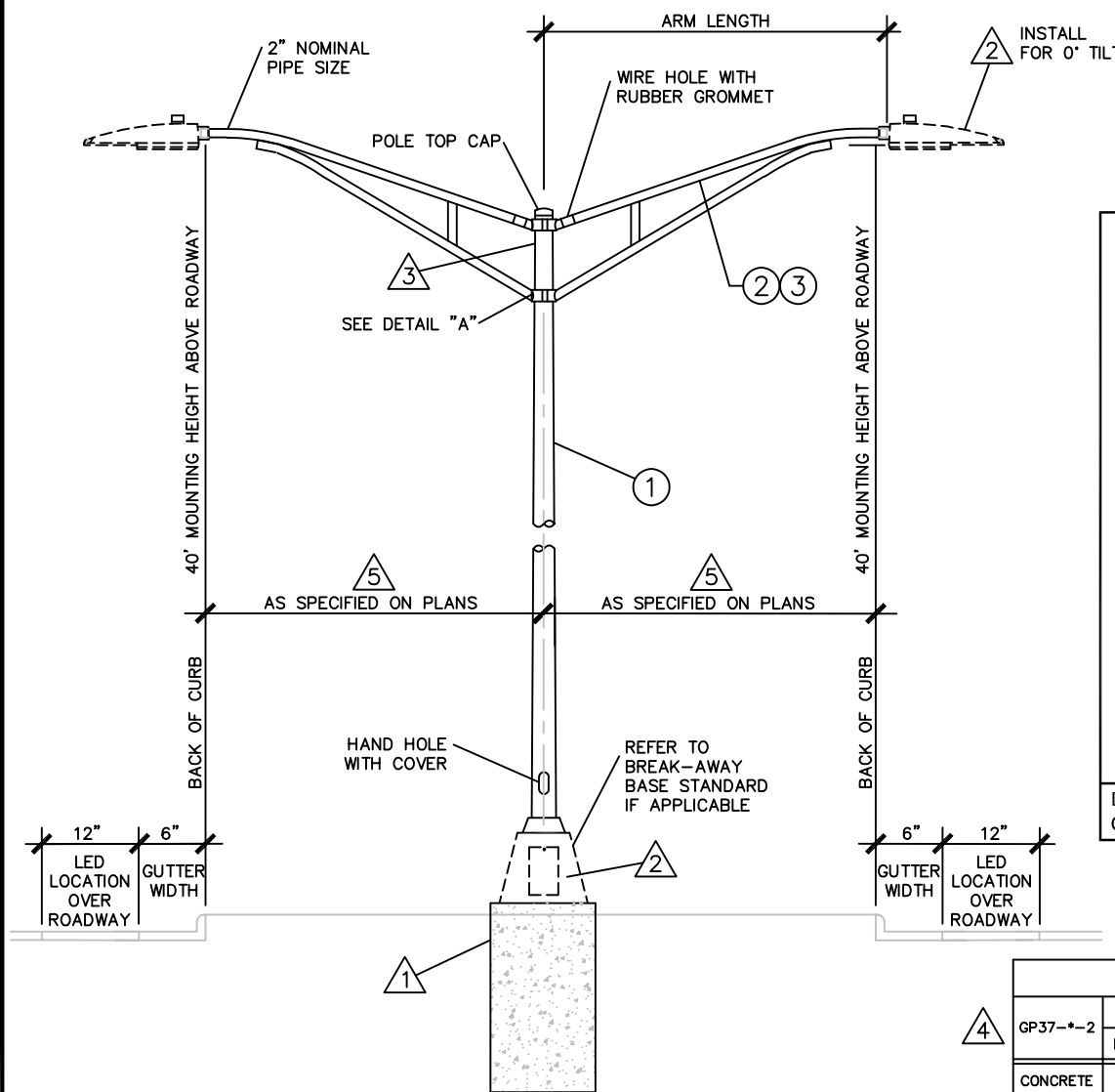


TABLE A		
GP37-*-1	STRUCTURE FOUNDATION	
	NON-BREAKAWAY	BREAKAWAY
CONCRETE	CF24-6-125	CF24-6-145-B
STEEL	WWSB	WWSB

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	(1) GALVANIZED STEEL POLE AND ACCESSORIES. APPROXIMATE DIMENSIONS 9.5"x4.3"x37'. 13" BASE PLATE WITH A 12.5" BOLT CIRCLE TO ACCOMMODATE 1" ANCHOR BOLTS. PLATE 1.25" THK.	107126	3	(1) STANDARD GP37-6-1 6' GALVANIZED STEEL MAST ARM (SINGLE MAST ARM)	107021
	(1) POLE TOP CAP		3	(1) STANDARD GP37-8-1 8' GALVANIZED STEEL MAST ARM (SINGLE MAST ARM)	107022
	(4) ANCHOR BOLT COVERS		3	(1) STANDARD GP37-10-1 10' GALVANIZED STEEL MAST ARM (TRUSS MAST ARM)	107023
2	AS REQ'D. #12/2 UF CU WIRE WITH GROUND	101415	3	(1) STANDARD GP37-12-1 12' GALVANIZED STEEL MAST ARM (TRUSS MAST ARM)	107020
			3	(1) STANDARD GP37-15-1 15' GALVANIZED STEEL MAST ARM (TRUSS MAST ARM)	107025

	GENERAL NOTES	ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	STEEL OR CONCRETE STREETLIGHT FOUNDATION AS SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.	DRAWN BY: J.P.	37' GALVANIZED STEEL POLE WITH SINGLE STREETLIGHT ARM		
2.	LIGHT, BREAKAWAY BASE, HARDWARE KIT, BREAKAWAY "Y" CONNECTOR, FUSES, AND SPLIT BOLT CONNECTOR SHOULD BE SPECIFIED SEPARATELY.	REV BY: E.C.			
3.	STOCK ITEMS FOR OVERHEAD WIRING SHOULD BE SPECIFIED SEPARATELY.	FILE: GP37-X-1			
4.	REFER TO TABLE "A" FOR SUITABLE CONCRETE OR STEEL FOUNDATION.	APPROVED: R.L.			
		REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. GP37- 0 -1	



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	GP37-*-2 (1) GALVANIZED STEEL POLE AND ACCESSORIES. APPROXIMATE DIMENSIONS 9.5"x4.3"x37'. 13" BASE PLATE WITH A 12.5" BOLT CIRCLE TO ACCOMMODATE 1" ANCHOR BOLTS. PLATE 1.25" THK. (1) POLE TOP CAP (4) ANCHOR BOLT COVERS	107126	3	STANDARD GP37-6-2 6' GALVANIZED STEEL MAST ARM (TWO SINGLE MAST ARMS)	107021
2	AS REQ'D. #12/2 UF CU WIRE WITH GROUND	101415	3	STANDARD GP37-8-2 8' GALVANIZED STEEL MAST ARM (TWO SINGLE MAST ARMS)	107022
			3	STANDARD GP37-10-2 10' GALVANIZED STEEL MAST ARM (TWO TRUSS MAST ARMS)	107023
			3	STANDARD GP37-12-2 12' GALVANIZED STEEL MAST ARM (TWO TRUSS MAST ARMS)	107020
			3	STANDARD GP37-15-2 15' GALVANIZED STEEL MAST ARM (TWO TRUSS MAST ARMS)	107025



GENERAL NOTES

- STEEL OR CONCRETE STREETLIGHT FOUNDATION AS SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.
- LIGHT, BREAKAWAY BASE, BREAKAWAY "Y" CONNECTOR, FUSES, AND SPLIT BOLT CONNECTOR SHOULD BE SPECIFIED SEPARATELY.
- STOCK ITEMS FOR OVERHEAD WIRING SHOULD BE SPECIFIED SEPARATELY.
- REFER TO TABLE "A" FOR SUITABLE CONCRETE OR STEEL FOUNDATION.
- POLE TO BE CENTERED IN THE MEDIAN UNLESS OTHERWISE NOTED.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

E.C.

FILE:

GP37-X-2

APPROVED:

R.L.

37' GALVANIZED STEEL POLE
WITH DUAL
STREETLIGHT ARMS

REVISED:

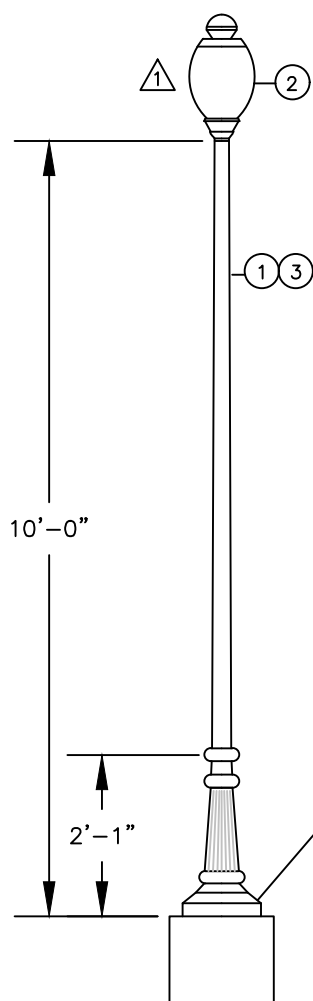
3-9-22

SHEET

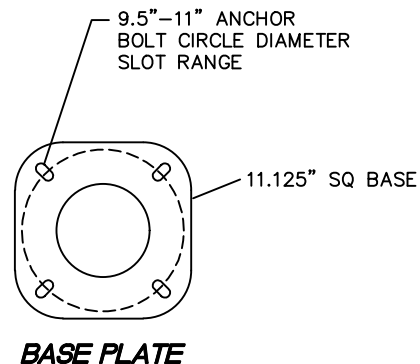
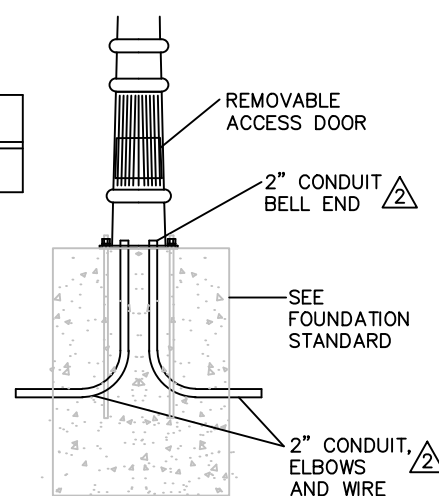
1 OF 1

STD. NO.

GP37-*-2



PP10	FOUNDATION
CONCRETE	CF18-3-095

**BASE PLATE****POLE BASE****MATERIAL LIST**

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1.	1	TAPERED ROUND ALUMINUM POLE, PAINTED BLACK, 3" TOP, 4" BOTTOM, 10' MOUNTING HEIGHT, 0.125" WALL THICKNESS) WITH LEVELING SHIMS AND BASE COVER.	02511315		
2.	1	L.E.D. LUMINAIRE WITH PHOTOCCELL INCLUDED.	02511316		
3.	APPROX 15 FT.	#12/2 COPPER CONDUCTOR, TYPE UF, WITH GROUND.	101415		

**GENERAL NOTES**

- DECORATIVE STREET LIGHTING IS ONLY INSTALLED BY THE CUSTOMER; CITY UTILITIES WILL MAINTAIN THE LIGHT AFTER THE ORIGINAL INSTALLATION, HOWEVER CUSTOMER IS RESPONSIBLE FOR ANY RELOCATIONS DUE TO FUTURE CONFLICTS.
- CONDUIT, CONDUIT ELBOWS, FUSE(S), WIRING, AND WIRING CONNECTORS SHOULD BE SPECIFIED ON CONSTRUCTION DRAWING.

**ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.**

DRAWN BY:

S.N.

REV BY:

E.C.

FILE:

PP10.DWG

APPROVED:

R.L.

10' DECORATIVE
PEDESTRIAN HEIGHT POLE
WITH LUMINAIRE

REVISED:

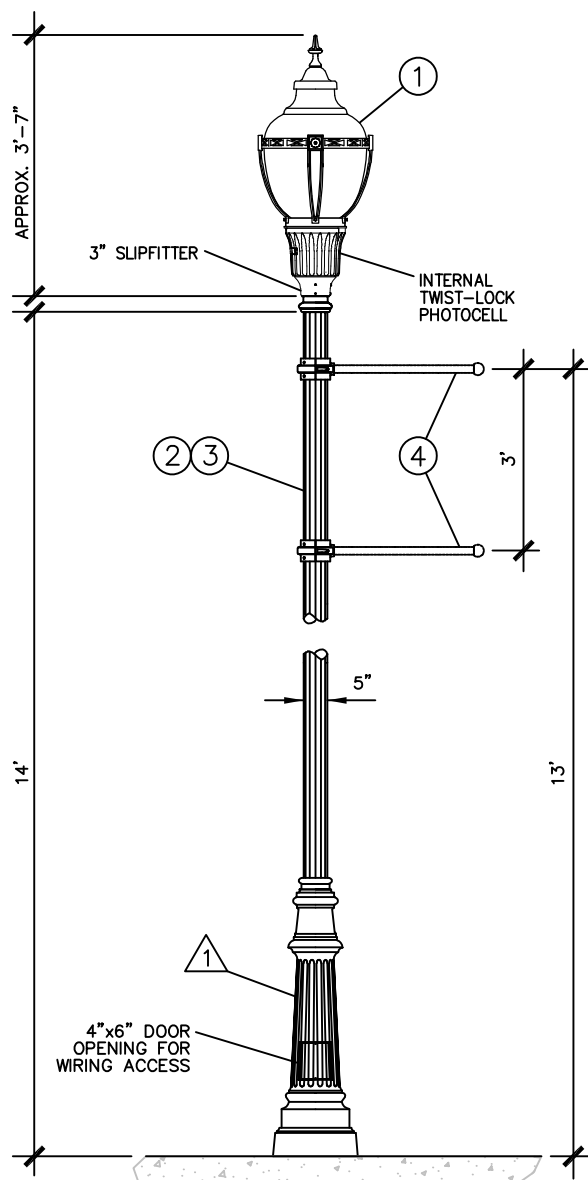
3-9-22

SHEET

1 OF 1

STD. NO.

PP10



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	1 DECORATIVE L.E.D. LUMINAIRE, WITH MULTIVOLT AUTOSENSING DRIVER, 3000K COLOR TEMPERATURE L.E.D., ADJUSTABLE OUTPUT, TOP REFLECTOR WITHIN THE DECORATIVE ACRYLIC OPTIC. BLACK FINISH. PROVIDED WITH SLIP-FITTER THAT WILL ACCEPT 3" HIGH BY 2-7/8" TO 3-1/8" O.D. POLE TENON. PROVIDED WITH RIBS AND BAND TRIM, AND PROVIDED WITH LONG-LIFE PHOTOCONTROL.	02510325	4	AS REQ'D. BANNER ARM	140840
2	1 14' POLE/POST OF EXTRUDED ALUMINUM (ASTM 6061 ALLOY), 5" DIAMETER FLUTED, 0.25" WALL THICKNESS, BLACK FINISH, WITH INTEGRAL 3" O.D. TENON AT TOP OF POST, SHAFT DOUBLE-WELDED TO THE 13" SQUARE ALUMINUM BASE CASTING.	02510326			
3	20' 12/2 COPPER CONDUCTOR, TYPE UF, WITH GROUND.	101415			



GENERAL NOTES

1. CONCRETE FOUNDATION, BASE HARDWARE KIT, FUSE(S), AND WIRING CONNECTORS SHOULD BE SPECIFIED SEPARATELY.
2. 24" BANNER ARM IS OPTIONAL. DESIGNER SHOULD SPECIFY BANNER ARM IF REQUIRED.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

E.C.

REV BY:

E.C.

FILE:

PP14.DWG

APPROVED:

R.L.

REVISED:

3-9-22

SHEET

1 OF 1

STD. NO.

PP14

14' DECORATIVE
PEDESTRIAN HEIGHT POLE
WITH L.E.D. LUMINAIRE

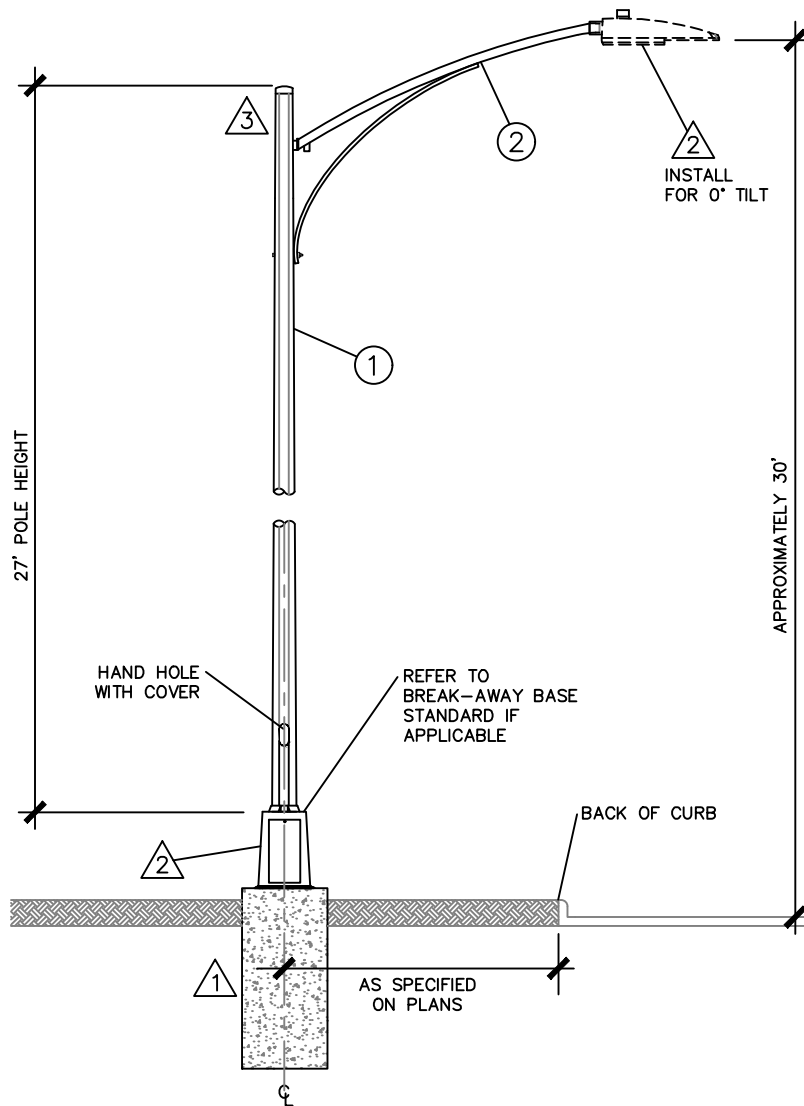


TABLE A		
PP27-*	STRUCTURE FOUNDATION	
	NON-BREAKAWAY	BREAKAWAY
CONCRETE	CF24-6-120	CF24-6-115-B
STEEL	SLSB	SLSB

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	PP27-* 27' OCTAGONAL STEEL POLE, 12" BASE PLATE WITH A 12" ANCHOR BOLT CIRCLE TO ACCOMMODATE 1" ANCHOR BOLTS. BASE PLATE 1" THICK. PAINTED BLACK WITH ACCESSORY BAGS AS SHOWN BELOW:	2511086	3	STANDARD PP27-6-1 6' SCROLL ARM	2511085
5	POLE CAP W/ HARDWARE 2190C (CU #2511284) MAST ARM HARDWARE 2101 (CU #02511281) ARM SCROLL HARDWARE 2167 (CU #2511286) HANDHOLE COVER W/ HARDWARE 164035 (CU #2511282) POLE BASE COVER W/ HARDWARE 2185A (CU #2511283) GROUNDING KIT HARDWARE 2100 (CU #2511285)		3	STANDARD PP27-8-1 8' SCROLL ARM	2511083
2	AS REQ'D. #12/2 UF CU WIRE WITH GROUND	101415	3	STANDARD PP27-10-1 10' SCROLL ARM	2511084

GENERAL NOTES		ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	STEEL OR CONCRETE STREETLIGHT FOUNDATION SHOULD BE SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.	DRAWN BY: E.C.	27' PAINTED STEEL POLE		
2.	LIGHT, HARDWARE KIT, BREAKAWAY BASE, BREAKAWAY "Y" CONNECTOR, FUSES, AND SPLIT BOLT CONNECTOR SHOULD BE SPECIFIED SEPARATELY.	REV BY: E.C.			
3.	STOCK ITEMS FOR OVERHEAD WIRING SHOULD BE SPECIFIED SEPARATELY.	FILE: PP27-X			
4.	REFER TO TABLE "A" FOR SUITABLE CONCRETE OR STEEL FOUNDATION.	APPROVED: R.L.			
5.	HARDWARE LISTED COMES WITH COMPATIBLE UNIT PP27-X. SPARE PARTS ARE LOCATED IN STOREROOM. REFERENCE CU STOCK NUMBER IN PARENTHESIS.	REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. PP27-*⁻¹	

(4)-0.500" DIAMETER
HEX BOLT WITH
(1)HEAVY HEX NUT,
(2)FLAT WASHERS &
(1)LOCK WASHER PER
BOLT

0.229" THICK MINIMUM

1.25" DIAMETER WIRING
ACCESS HOLE - ARM CLAMP
ONLY

WIRE ACCESS HOLE IN POLE
SHAFT TO BE FIELD DRILLED.

CLAMP ATTACHMENT

0.250" THK X 1.50" WIDE
STEEL SCROLL BAR.

0.500"-13UNC X 0.750"
SCREW FOR SCROLL
MTG.

0.500"-13UNC SQ. NUT
FOR SCROLL MOUNTING.

ARM SHAFT OR
POLE SHAFT

NUT HOLDER MADE FROM
COMM. GR. HOT ROLLED
MILD STEEL.

LUM. ARM SCROLL ATTACHMENT

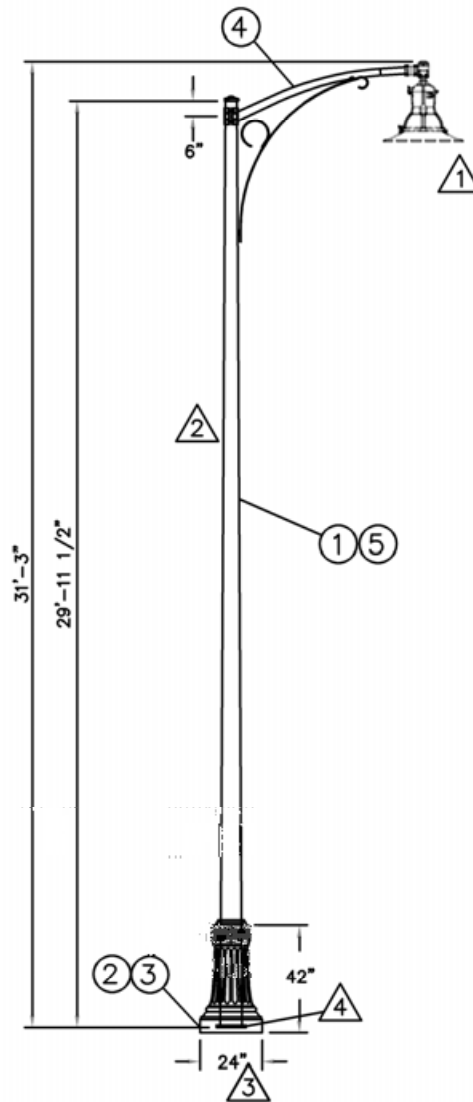


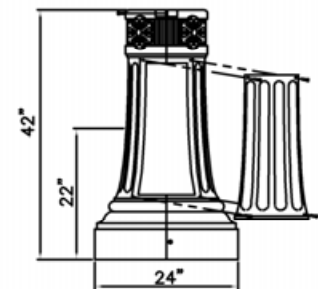
TABLE A

PP30-***	STRUCTURE FOUNDATION	
	NON-BREAKAWAY	BREAKAWAY
CONCRETE	CF24-6-110-C	N/A
STEEL	SLSB	N/A

TABLE B

ARM LENGTH	STANDARD NUMBER	
	BLACK POLE	
6'	PP30-6-BLK	
8'	PP30-8-BLK	
10'	PP30-10-BLK	

TOP OPENING 8"
HANDHOLD LOCATION 16"-26"



NY24CI CLAMSHELL BASE

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
	PP30-**-BLK				
1	(1) BLACK PAINTED STEEL POLE. APPROXIMATE DIMENSIONS 8"x3.8"x30'. 7 GA, 12" BASE PLATE WITH AN 11" BOLT CIRCLE TO ACCOMMODATE 1" DIAMETER ANCHOR BOLTS.	02510992			
	(1) POLE TOP CAP				
	(8) FLAT WASHER				
	(4) LOCK WASHER, HEX NUT, AND HEX BOLT FOR MAST ARM ATTACHMENT.				
2	POLE LEVELING SHIM	W/HW-**-*			
3	DECORATIVE CLAMSHELL BASE BLACK (2 PIECES)	02510989			
	<u>SEE TABLE "B" FOR:</u>				
4	6' PAINTED BLACK STEEL MAST ARM WITH SCROLL	02510987			
	8' PAINTED BLACK STEEL MAST ARM WITH SCROLL	TBD			
	10' PAINTED BLACK STEEL MAST ARM WITH SCROLL	TBD			
5	#12/2 UF CU WIRE WITH GROUND	101415			
AS REQ'D.					

GENERAL NOTES

- LIGHT, FOUNDATION, FOUNDATION HARDWARE, BREAKAWAY "Y" CONNECTOR WITH FUSING, SPLIT BOLT CONNECTOR, AND CONTROLS AS SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.
- DECORATIVE CLAMP-ON BANNER ARMS AND HARDWARE AS SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING. RESERVE TWO PER BANNER. BLACK OR OLIVE DRAB GREEN. SEE SHEET 2 OF 2 FOR DETAILS.
- NOT TO BE MOUNTED ON A BREAKAWAY TRANSFORMER BASE.
- 12" SQUARE BASE PLATE WITH A 1.0" THICKNESS, BOLT CIRCLE $\pm 0.50"$ SLOT.

ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

FILE:

PP30-X-X

APPROVED:

R.L.

REVISED:

3-9-22

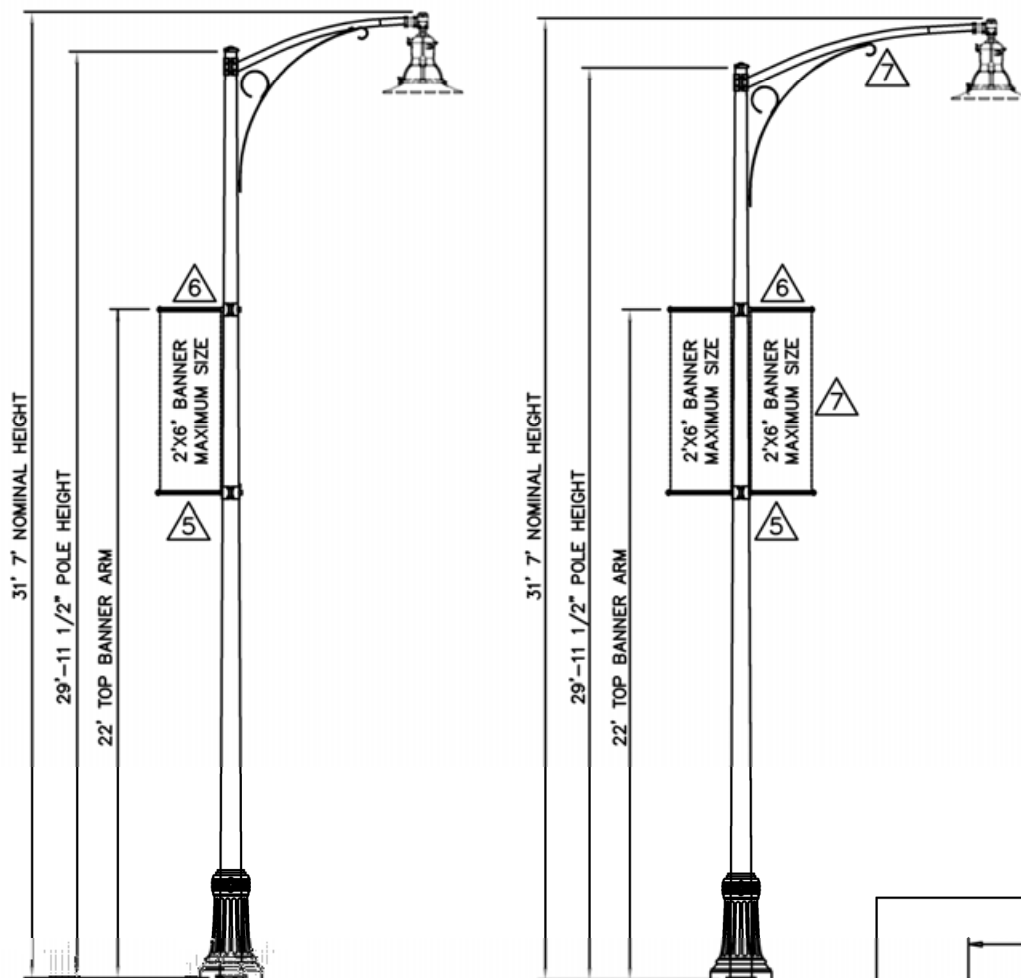
SHEET

1 OF 2

STD. NO.

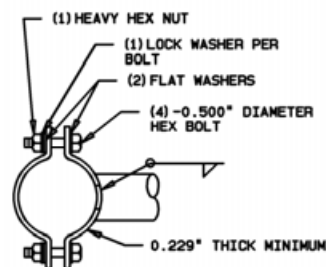
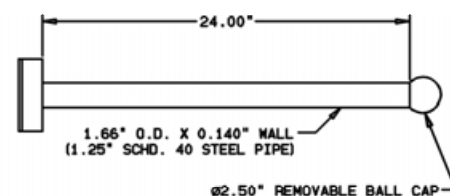
PP30-***

DECORATIVE 30'
PAINTED STEEL POLE
WITH STREETLIGHT ARM
AND CLAMSHELL BASE



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.
1	CLAMP-ON BANNER ARM (BLACK) (1) 1.25" SCHEDULE 40 STEEL PIPE 24" LENGTH (1) 2.50" DIAMETER REMOVABLE BALL CAP (1) ARM POLE ATTACHMENT CLAMP (2 PIECES) (8) FLAT WASHERS (4) LOCK WASHERS (4) 0.50" DIAMETER HEX BOLT (4) HEAVY HEX NUT	02510990



BANNER ARM ATTACHMENT



GENERAL NOTES

- MINIMUM VERTICAL CLEARANCE OVER ALL AREAS TO THE BOTTOM BANNER ARM SHALL BE 7'-0". MINIMUM VERTICAL CLEARANCE OVER AREAS SUSCEPTIBLE TO VEHICULAR TRAFFIC OR WITHIN 4'-0" OF SAID AREA SHALL BE 16'-0".
- MAXIMUM MOUNTING HEIGHT FOR TOP BANNER ARM ON ALL POLES IS 22'-0".
- 10' MAST ARM NOT APPROVED FOR DOUBLE BANNER ATTACHMENTS.
- BANNER ARMS SHALL HAVE AN EXECUTED BANNER ATTACHMENT AGREEMENT WITH CITY UTILITIES PRIOR TO INSTALLATION OF BANNER ARMS.

ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

FILE:

PP30-X-X

APPROVED:

R.L.

REVISED:

3-9-22

SHEET

2 OF 2

STD. NO.

PP30-***

DECORATIVE 30'
PAINTED STEEL POLE
WITH STREETLIGHT ARM
AND CLAMSHELL BASE

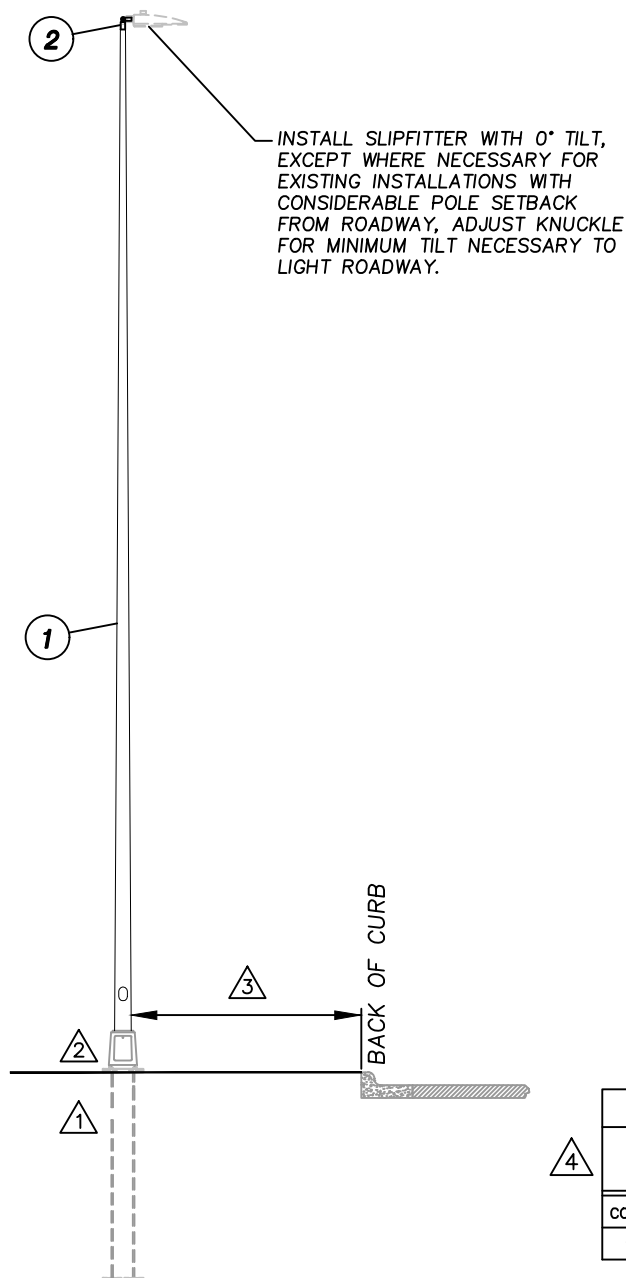


TABLE A		
PP39	STRUCTURE FOUNDATION	
	NON-BREAKAWAY	BREAKAWAY
CONCRETE	CF24-6-120	CF24-6-145-B
STEEL	WWSB	WWSB

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	39' ROUND TAPERED BRONZE PAINTED STEEL POLE, 12" NOMINAL BOLT CIRCLE.	107106			
2	HEAVY DUTY, ADJUSTABLE FITTER (BRONZE), SLIP-FITS ONTO A 2-3/8" O.D. TENON	02511302			
3	#12/2 UF COPPER WITH GROUND	101415			

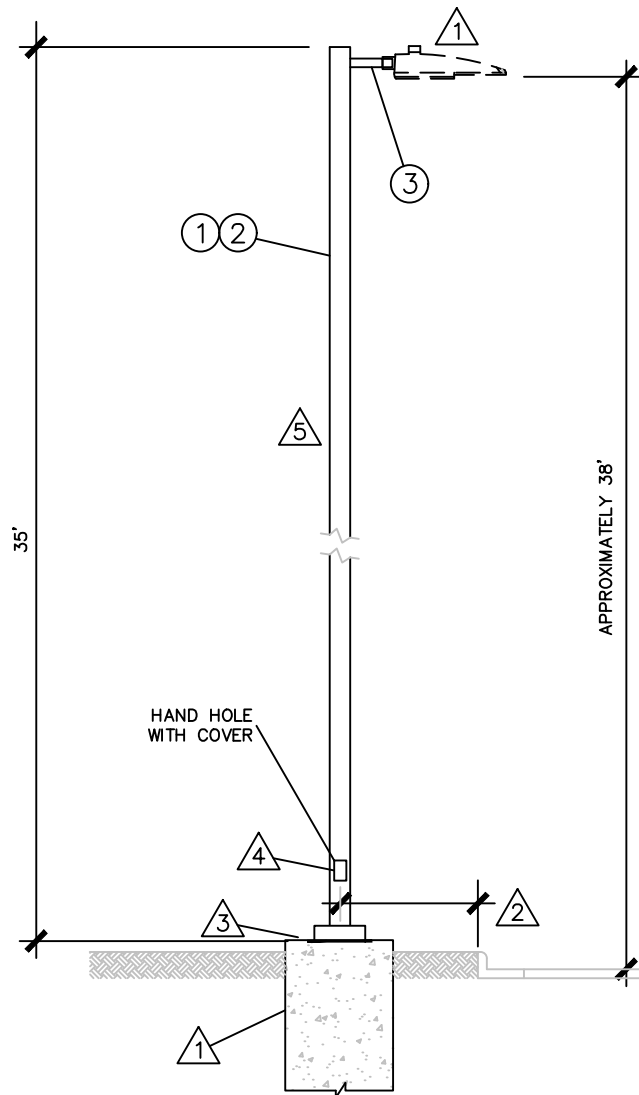


GENERAL NOTES

- STEEL OR CONCRETE STREETLIGHT FOUNDATION SHOULD BE SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.
- LIGHT, HARDWARE KIT, BREAKAWAY BASE, BREAKAWAY "Y" CONNECTOR, FUSES, AND SPLIT BOLT CONNECTOR SHOULD BE SPECIFIED SEPARATELY.
- DISTANCE FROM BACK OF CURB (OR ROAD) WILL BE SPECIFIED ON CONSTRUCTION DRAWING.
- REFER TO TABLE "A" FOR SUITABLE CONCRETE OR STEEL FOUNDATION.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY: GKS	39' ROUND TAPERED PAINTED POLE		
REV BY: E.C.			
FILE: PP39			
APPROVED: R.L.			
REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. PP39	



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1 AS REQD	#12/2 UF CU WIRE WITH GROUND.	101415			
2 1	(1) DARK BRONZE STRAIGHT SQUARE ALUMINUM POLE. APPROXIMATE DIMENSIONS 6"x6"x35', 12.5" BASE PLATE WITH A THICKNESS OF 2.625". A BOLT CIRCLE OF 12.5" TO ACCOMMODATE 1" DIAMETER ANCHOR BOLTS. (1) POLE PLASTIC POLE TOP CAP (2) ACCESS COVER SCREW (4) PRESSURE MOUNTED NUT COVER DISC	2510278			
3 1	DARK BRONZE, 1.5" DIAMETER, 10" LENGTH ALUMINUM ALLOY ARM WITH HARDWARE. (2) 1/2"-13x2" LG. SS HEX HEAD BOLT (2) 1/2" S/L SS PLAIN WASHER (4) 1/2" I.D. SS FLAT WASHER (2) 1/2"-13 SS NUT	2510277			



GENERAL NOTES

- STREETLIGHT POLE FOUNDATION, DARK BRONZE LED LIGHT, CONTROL, SHALL BE AS SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.
- DISTANCE FROM CENTER OF POLE BASE TO BACK OF CURB, SHALL BE AS NOTED ON ELECTRIC LINE ENGINEERING DRAWING.
- DO NOT STACK LEVELING SHIMS.
- GROUNDING LUG WITH 3/8"-16 HOLE OPPOSITE OF HANDHOLE.
- FACTORY INSTALLED VIBRATION DAMPENER 21'-0" FROM BASE.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

E.C.

REV BY:

FILE:

SSA35-DBZ

APPROVED:

R.L.

DARK BRONZE
STRAIGHT SQ. ALUMINUM 35'
POLE WITH 10" PIPE ARM

REVISED:

3-9-22

SHEET

1 OF 1

STD. NO.

SSA35-DBZ

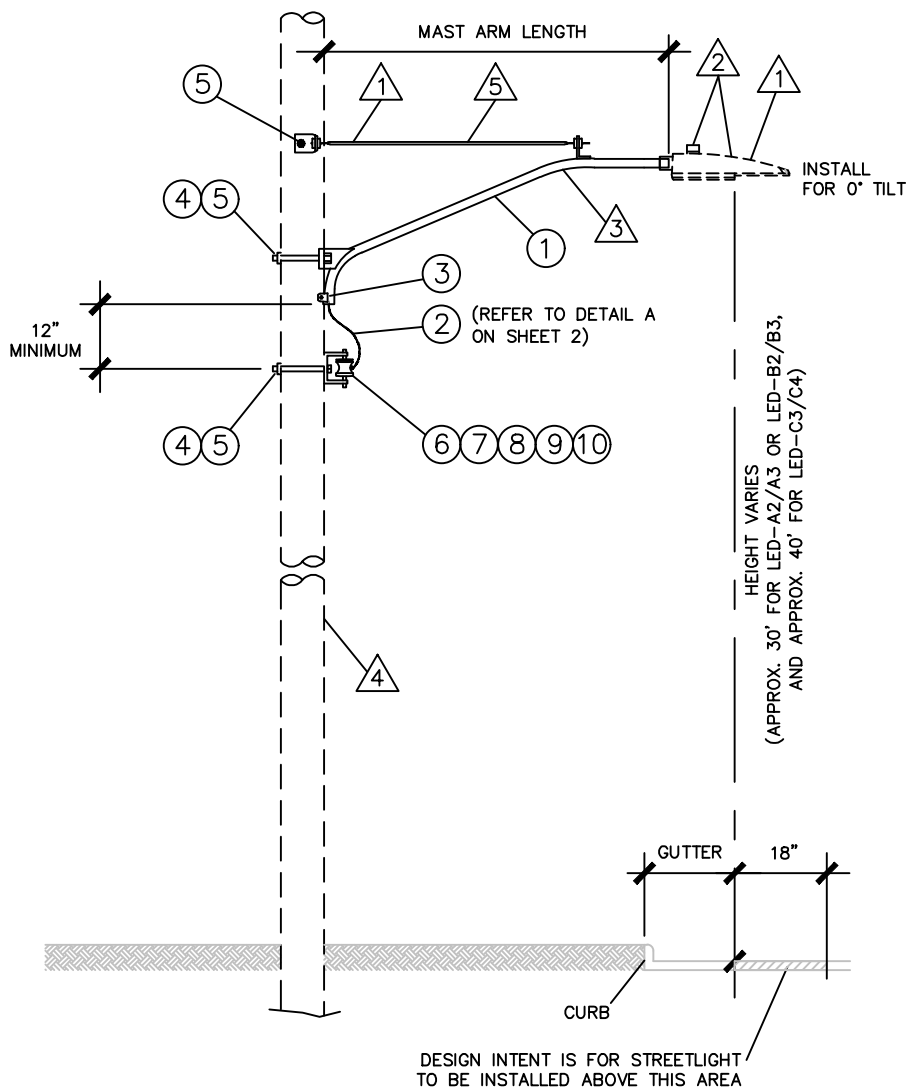


TABLE A	
ARM LENGTH	STANDARD NUMBER
2.5'	WPSLA-2
6'	WPSLA-6
10'	WPSLA-10
12'	WPSLA-12
14'	WPSLA-14
16'	WPSLA-16

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	SEE TABLE A FOR: 2.5' GALVANIZED STEEL MAST ARM 6' GALVANIZED STEEL MAST ARM 10' GALVANIZED STEEL MAST ARM 12' GALVANIZED STEEL MAST ARM 14' GALVANIZED STEEL MAST ARM 16' GALVANIZED STEEL MAST ARM	149156 107005 107010 107015 107016 107017	6	INSULATED NEUTRAL CLEVIS	102170
2	AS REQD #12/2 UF CU WIRE WITH GROUND	101415	7	#2 ACSR SPOOL TIE	102368
3	1/2" x 4" LAG SCREW	102350	8	SPLIT BOLT CONNECTOR WITH INHIBITOR #4 AL/#12 CU.	103230
4	2" x 2" x 5/8" FLAT WASHER	102439	9	PARALLEL GROOVE CLAMP WITH INHIBITOR #2 ACSR/#12 CU.	103070
5	5/8" NUT AND BOLT LENGTH (AS REQUIRED)	102XXX	10	#4 ALUMINUM INSULATED SPLICE (INSULINK)	103370



GENERAL NOTES

1. MAINTAIN A MINIMUM OF 3' CLEARANCE FROM ANY PRIMARY CONDUCTORS.
2. LED STREETLIGHT AND CONTROL SHOULD BE SPECIFIED SEPARATELY.
3. FOR POLES NOT ACCESSIBLE TO BUCKET TRUCKS, ONLY USE 2.5' MAST ARM.
4. MINIMUM POLE HEIGHT FOR 30' MOUNTING HEIGHT IS A 35' POLE.
5. MAST ARM SUPPORT FOR 12', 14', AND 16' LENGTHS.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

E.C.

REV BY:

J.P.

FILE:

WPSLA-XX

APPROVED:

R.L.

WOOD POLE STREETLIGHT ARM

REVISED:

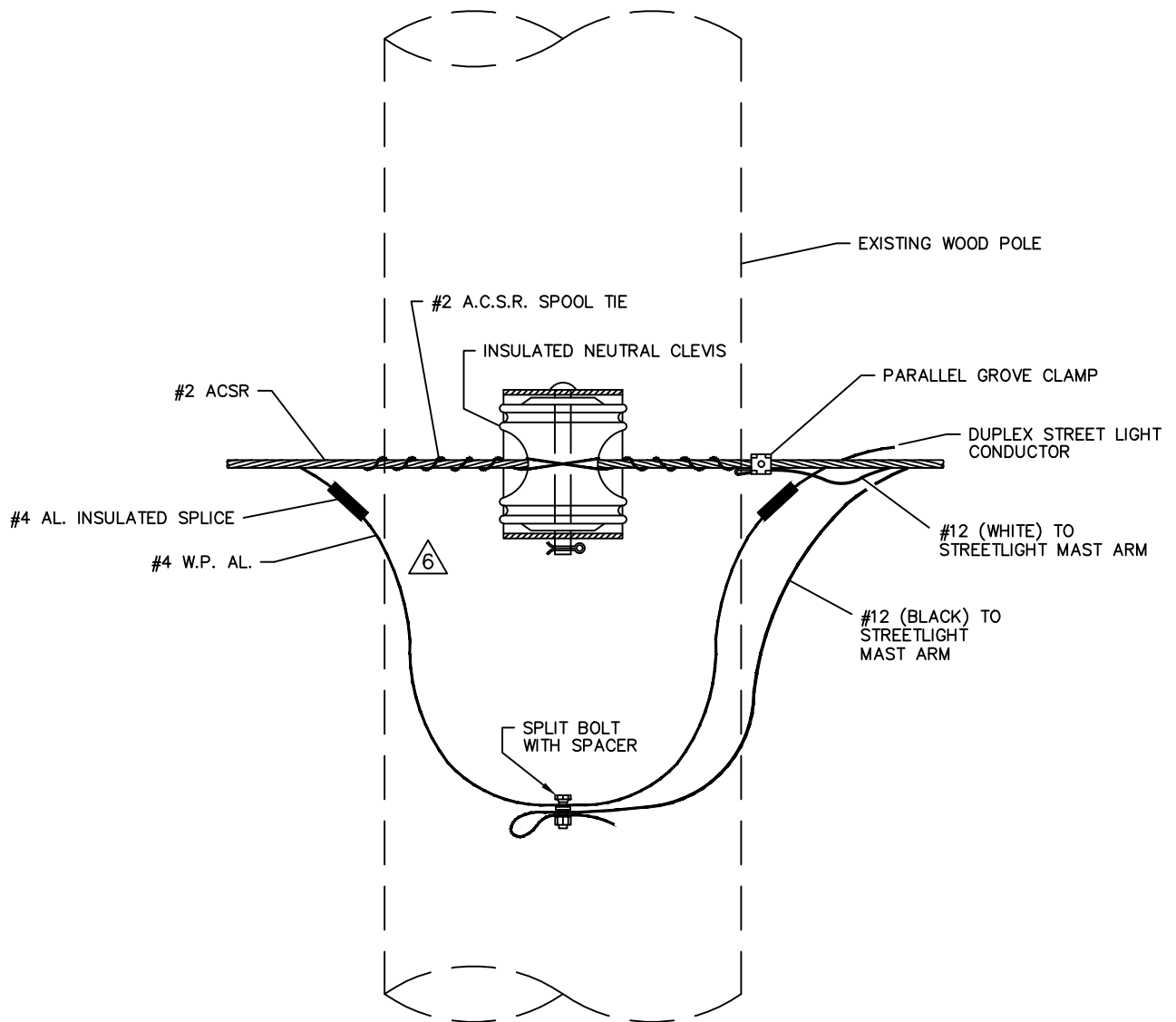
3-9-22

SHEET

1 OF 2

STD. NO.

WPSLA-***



DETAIL A
OVERHEAD WIRING ATTACHMENT

△	GENERAL NOTES	ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
6.	CUT #4 W.P. ALUMINUM CONDUCTOR AND INSTALL AN ADDITIONAL 12" MINIMUM LENGTH OF #4 W.P. ALUMINUM CONDUCTOR.	DRAWN BY: E.C.	WOOD POLE STREETLIGHT ARM		
		REV BY: J.P.			
		FILE: WPSLA-XX			
		APPROVED: R.L.	REVISED: 3-9-22	SHEET 2 OF 2	STD. NO. WPSLA-**

LIGHTING STANDARDS

(GENERAL - FUTURE SECTION)

1

POLES AND BREAKAWAY BASES

2

FOUNDATIONS AND HARDWARE

3

LIGHTS

4

PROTECTION AND CONNECTORS

5

LIGHTING CONTROL

6

MISCELLANEOUS COMPONENTS

7

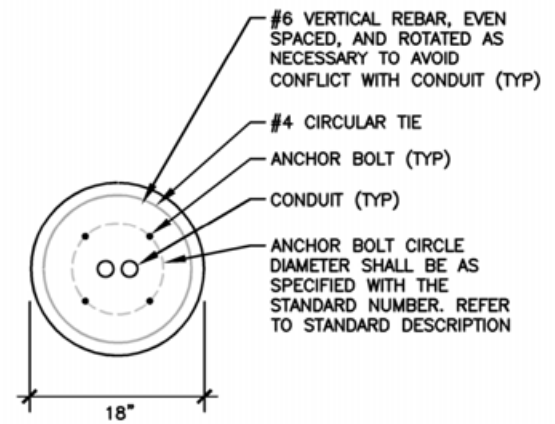
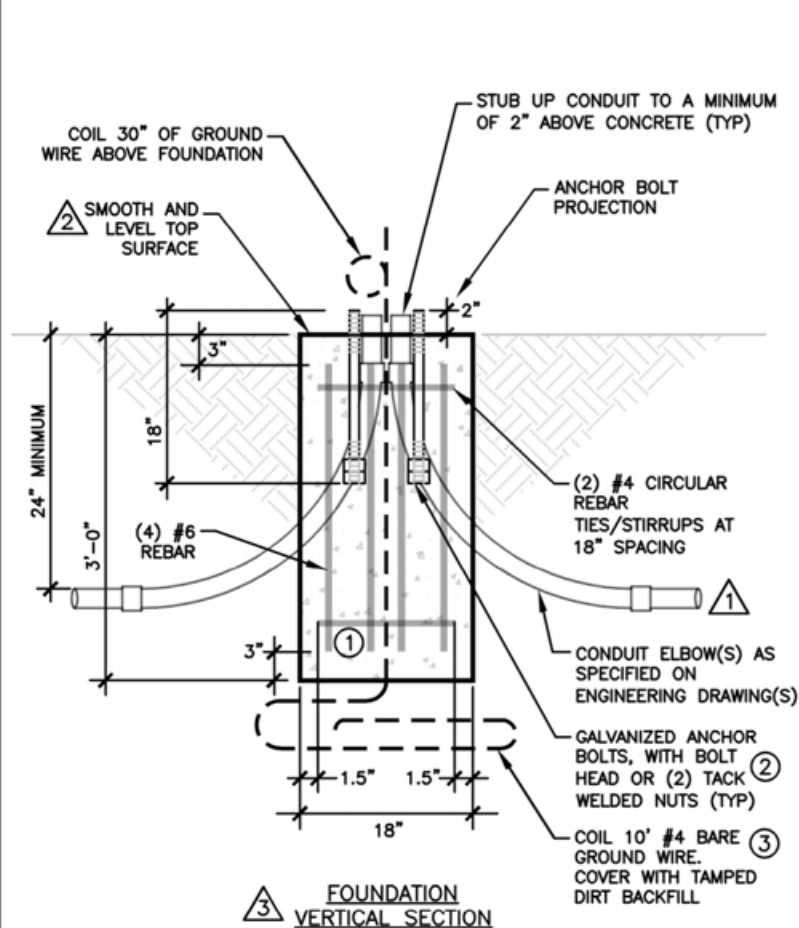


LIGHTING CONSTRUCTION STANDARDS

City Utilities of Springfield, MO

FOUNDATIONS AND HARDWARE - INDEX

CF18-3-095	18" DIAMETER x 3' DEPTH CONCRETE FOUNDATION
CF20-4-1**	20" DIAMETER x 4' DEPTH CONCRETE FOUNDATION
CF24-6-1**	24" DIAMETER x 6' DEPTH CONCRETE FOUNDATION
CF24-6-1**-B	24" DIAMETER x 6' DEPTH CONCRETE FOUNDATION WITH 4" ANCHOR BOLT PROJECTION
CF24-6-1**-C	24" DIAMETER x 6' DEPTH CONCRETE FOUNDATION WITH 2.5" ANCHOR BOLT PROJECTION
CF24-8-1**-B	24" DIAMETER x 8' DEPTH CONCRETE FOUNDATION WITH 4" ANCHOR BOLT PROJECTION
HW-C-010	CONNECTING HARDWARE FOR 1" ANCHOR BOLT AND <i>CONCRETE</i> FOUNDATION
HW-S-010	CONNECTING HARDWARE FOR 1" ANCHOR BOLT AND <i>STEEL</i> FOUNDATION
SLSB	STEEL FOUNDATION - 30' MAXIMUM POLE HEIGHT
WWSB	STEEL FOUNDATION - 40' MAXIMUM POLE HEIGHT



HORIZONTAL SECTION

REQUIREMENTS:

1. FAILURE TO COMPLY WITH THESE REQUIREMENTS AND THIS STANDARD WILL RESULT IN REJECTION BY C.U. INSPECTOR.
2. CONTRACTOR SHALL USE SONOTUBE OR APPROVED CONCRETE FORM. CONTRACTOR SHALL HAVE ANCHOR BOLT FORM METHOD APPROVED BY C.U. INSPECTOR, PRIOR TO CONCRETE POUR.
3. CONCRETE FOUNDATIONS SHALL BE LEVEL, WITH A SMOOTH TOP FINISH.
4. ANCHOR BOLT THREADS SHALL BE COVERED TO BE KEPT FREE FROM DEBRIS.
5. ANCHOR BOLTS SHALL BE PERPENDICULAR TO THE TOP CONCRETE SURFACE AND PROPERLY SUPPORTED DURING CONCRETE POUR TO ELIMINATE ANY MOVEMENT. A SINGLE FORM FOR THE ANCHOR BOLTS WILL NOT BE ACCEPTABLE. ANCHOR BOLTS THAT ARE NOT PERPENDICULAR WILL BE REJECTED.
6. ANCHOR BOLT SQUARE PATTERN SHALL HAVE THE NEAREST SIDE PARALLEL TO THE NEAREST ROADWAY BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED ON THE PLANS.
7. CONTRACTOR SHALL REMOVE ALL FORMS, NUTS, AND WASHERS FROM ANCHOR BOLTS.

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	<u>CF18-3-095</u> CONCRETE PER MODOT CLASS B-1 SPECIFICATION. 3500PSI MINIMUM. APPROX. 0.2 CUBIC YARDS.	NONSTOCK	1	<u>STANDARD CF18-3-095</u> 18" DIA., 3' DEPTH, 9.5" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 2.0"(1/8" TOLERANCE)	NONSTOCK
2	4 0.5" X 18" GALVANIZED ANCHOR BOLT. MINIMUM YIELD STRENGTH OF 50,000 PSI.	NONSTOCK			
3	18FT #4 AWG SOLID COPPER CONDUCTOR FOR GROUND	101163			
4	- #6 REBAR	NONSTOCK			
5	- #4 REBAR (CIRCULAR TIES)	NONSTOCK			



GENERAL NOTES

1. CONDUIT ELBOWS SHALL BE AS SPECIFIED ON ENGINEERING DRAWINGS.
2. TOP SURFACE SHALL BE SMOOTH AND LEVEL OR WILL BE REJECTED.
3. PRECAST FOUNDATIONS ARE ALLOWED, BUT SHOP DRAWINGS MUST BE SUBMITTED FOR APPROVAL. PRECAST FOUNDATIONS SHALL HAVE LIFTING EYES. FOUNDATIONS SHALL NOT BE LIFTED BY ANCHOR BOLTS FOR ANY REASON.
4. IF BACKFILL IS NECESSARY AROUND A FOUNDATION, PLACE BASE STONE IN 12" COMPACTED LAYERS BEFORE PLACING THE NEXT LAYER.
5. REFER TO CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS, SECTION 7 (MISCELLANEOUS) AND COMPLY WITH BACKFILL REQUIREMENTS WHEN WITHIN 2' OF BACK OF CURB OR IN AN AREA TO BE PAVED.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

E.C.

FILE:

CF18-3-095

APPROVED:

R.L.

REVISED:

3-9-22

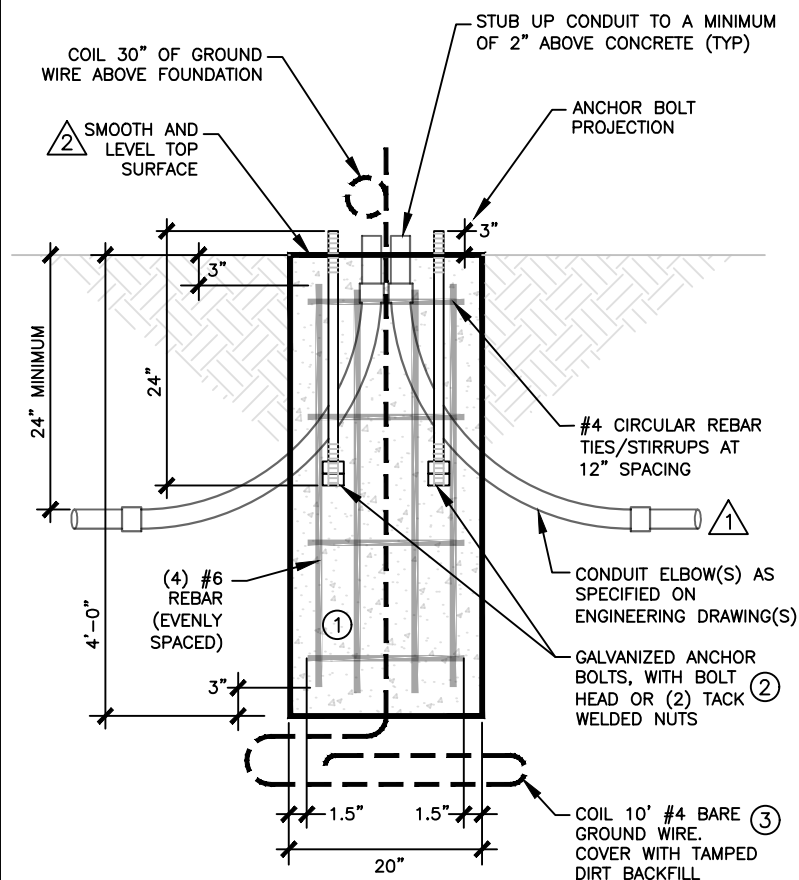
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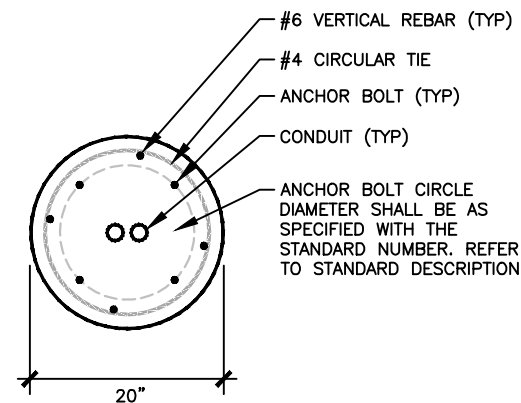
STD. NO.

CF18-3-095

CONCRETE FOUNDATION
FOR STREETLIGHT
18" DIAMETER
3' DEPTH



△ 3 FOUNDATION VERTICAL SECTION



HORIZONTAL SECTION

REQUIREMENTS:

1. FAILURE TO COMPLY WITH THESE REQUIREMENTS AND THIS STANDARD WILL RESULT IN REJECTION BY C.U. INSPECTOR.
2. CONTRACTOR SHALL USE SONOTUBE OR APPROVED CONCRETE FORM. CONTRACTOR SHALL HAVE ANCHOR BOLT FORM METHOD APPROVED BY C.U. INSPECTOR, PRIOR TO CONCRETE POUR.
3. CONCRETE FOUNDATIONS SHALL BE LEVEL, WITH A SMOOTH TOP FINISH.
4. ANCHOR BOLT THREADS SHALL BE COVERED TO BE KEPT FREE FROM DEBRIS.
5. ANCHOR BOLTS SHALL BE PERPENDICULAR TO THE TOP CONCRETE SURFACE AND PROPERLY SUPPORTED DURING CONCRETE POUR TO ELIMINATE ANY MOVEMENT. A SINGLE FORM FOR THE ANCHOR BOLTS WILL NOT BE ACCEPTABLE. ANCHOR BOLTS THAT ARE NOT PERPENDICULAR WILL BE REJECTED.
6. ANCHOR BOLT SQUARE PATTERN SHALL HAVE THE NEAREST SIDE PARALLEL TO THE NEAREST ROADWAY BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED ON THE PLANS.
7. CONTRACTOR SHALL REMOVE ALL FORMS, NUTS, AND WASHERS FROM ANCHOR BOLTS.

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	CONCRETE PER MODOT CLASS B-1 SPECIFICATION. 3500PSI MINIMUM. APPROX. 0.32 CUBIC YARDS.	NONSTOCK	1	20" DIA., 4' DEPTH, 14.0" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 3.0"(1/8" TOLERANCE)	NONSTOCK
2	0.75" X 24" (19" MINIMUM) GALVANIZED ANCHOR BOLT. MINIMUM YIELD STRENGTH OF 50,000 PSI.	NONSTOCK			
3	20FT #4 AWG SOLID COPPER CONDUCTOR FOR GROUND	101163			
4	#6 REBAR	NONSTOCK			
5	#4 REBAR (CIRCULAR TIES)	NONSTOCK			



GENERAL NOTES

1. CONDUIT ELBOWS SHALL BE AS SPECIFIED ON ENGINEERING DRAWINGS.
2. TOP SURFACE SHALL BE SMOOTH AND LEVEL OR WILL BE REJECTED.
3. PRECAST FOUNDATIONS ARE ALLOWED, BUT SHOP DRAWINGS MUST BE SUBMITTED FOR APPROVAL. PRECAST FOUNDATIONS SHALL HAVE LIFTING EYES. FOUNDATIONS SHALL NOT BE LIFTED BY ANCHOR BOLTS FOR ANY REASON.
4. IF BACKFILL IS NECESSARY AROUND A FOUNDATION, PLACE BASE STONE IN 12" COMPACTED LAYERS BEFORE PLACING THE NEXT LAYER.
5. REFER TO CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS, SECTION 7 (MISCELLANEOUS) AND COMPLY WITH BACKFILL REQUIREMENTS WHEN WITHIN 2' OF BACK OF CURB OR IN AN AREA TO BE PAVED.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

E.C.

FILE:

CF20-4-1XX

APPROVED:

R.L.

REVISED:

3-9-22

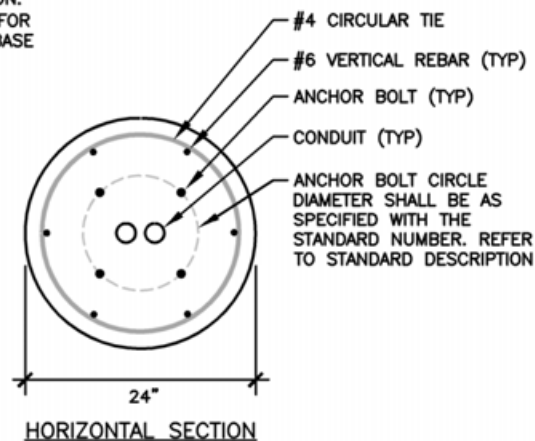
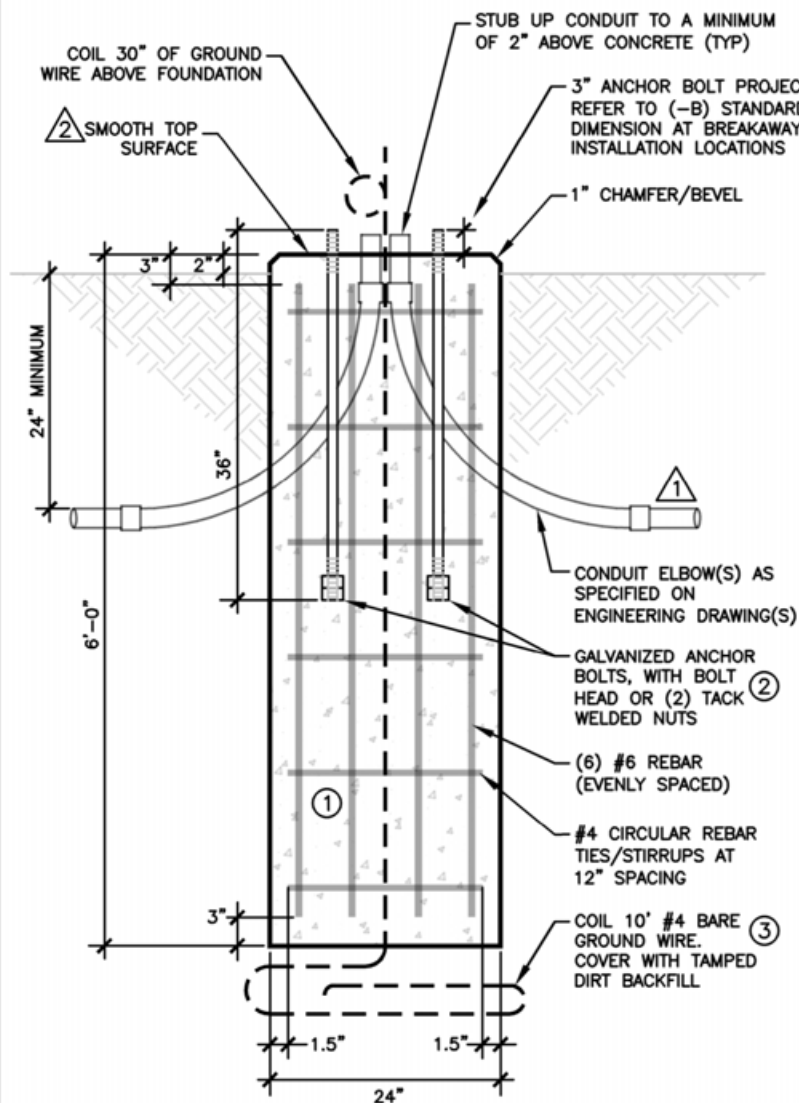
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STD. NO.

CF20-4-1**

CONCRETE FOUNDATION
FOR STREETLIGHT
20" DIAMETER
4' DEPTH



REQUIREMENTS:

1. FAILURE TO COMPLY WITH THESE REQUIREMENTS AND THIS STANDARD WILL RESULT IN REJECTION BY C.U. INSPECTOR.
2. CONTRACTOR SHALL USE SONOTUBE OR APPROVED CONCRETE FORM. CONTRACTOR SHALL HAVE ANCHOR BOLT FORM METHOD APPROVED BY C.U. INSPECTOR, PRIOR TO CONCRETE POUR.
3. CONCRETE FOUNDATIONS SHALL BE LEVEL, WITH A SMOOTH TOP FINISH.
4. ANCHOR BOLT THREADS SHALL BE COVERED TO BE KEPT FREE FROM DEBRIS.
5. ANCHOR BOLTS SHALL BE PERPENDICULAR TO THE TOP CONCRETE SURFACE AND PROPERLY SUPPORTED DURING CONCRETE POUR TO ELIMINATE ANY MOVEMENT. A SINGLE FORM FOR THE ANCHOR BOLTS WILL NOT BE ACCEPTABLE. ANCHOR BOLTS THAT ARE NOT PERPENDICULAR WILL BE REJECTED.
6. ANCHOR BOLT SQUARE PATTERN SHALL HAVE THE NEAREST SIDE PARALLEL TO THE NEAREST ROADWAY BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED ON THE PLANS.
7. CONTRACTOR SHALL REMOVE ALL FORMS, NUTS, AND WASHERS FROM ANCHOR BOLTS.

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	CONCRETE PER MODOT CLASS B-1 SPECIFICATION. 3500PSI MINIMUM. APPROX 0.7 CUBIC YARDS.	NONSTOCK	1	STANDARD CF24-6-105 24" DIA., 6' DEPTH, 10.5" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 3.0"(1/8" TOLERANCE)	NONSTOCK
4	1" X 36" GALVANIZED ANCHOR BOLT PER MODOT SPECIFICATIONS. MINIMUM YIELD STRENGTH OF 50,000 PSI.	NONSTOCK	1	STANDARD CF24-6-110 24" DIA., 6' DEPTH, 11.0" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 3.0"(1/8" TOLERANCE)	NONSTOCK
20FT	#4 AWG SOLID COPPER CONDUCTOR FOR GROUND	101163	1	STANDARD CF24-6-115 24" DIA., 6' DEPTH, 11.5" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 3.0"(1/8" TOLERANCE)	NONSTOCK
-	#6 REBAR	NONSTOCK	1	STANDARD CF24-6-120 24" DIA., 6' DEPTH, 12.0" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 3.0"(1/8" TOLERANCE)	NONSTOCK
-	#4 REBAR (CIRCULAR TIES)	NONSTOCK	1	STANDARD CF24-6-125 24" DIA., 6' DEPTH, 12.5" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 3.0"(1/8" TOLERANCE)	NONSTOCK



GENERAL NOTES

1. CONDUIT ELBOWS SHALL BE AS SPECIFIED ON ENGINEERING DRAWINGS.
2. TOP SURFACE SHALL BE SMOOTH AND LEVEL OR WILL BE REJECTED.
3. PRECAST FOUNDATIONS ARE ALLOWED, BUT SHOP DRAWINGS MUST BE SUBMITTED FOR APPROVAL. PRECAST FOUNDATIONS SHALL HAVE LIFTING EYES. FOUNDATIONS SHALL NOT BE LIFTED BY ANCHOR BOLTS FOR ANY REASON.
4. IF BACKFILL IS NECESSARY AROUND A FOUNDATION, PLACE BASE STONE IN 12" COMPACTED LAYERS BEFORE PLACING THE NEXT LAYER.
5. REFER TO CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS, SECTION 7 (MISCELLANEOUS) AND COMPLY WITH BACKFILL REQUIREMENTS WHEN WITHIN 2' OF BACK OF CURB OR IN AN AREA TO BE PAVED.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

E.C.

FILE:

CF24-6-1XX

APPROVED:

R.L.

REVISED:

3-9-22

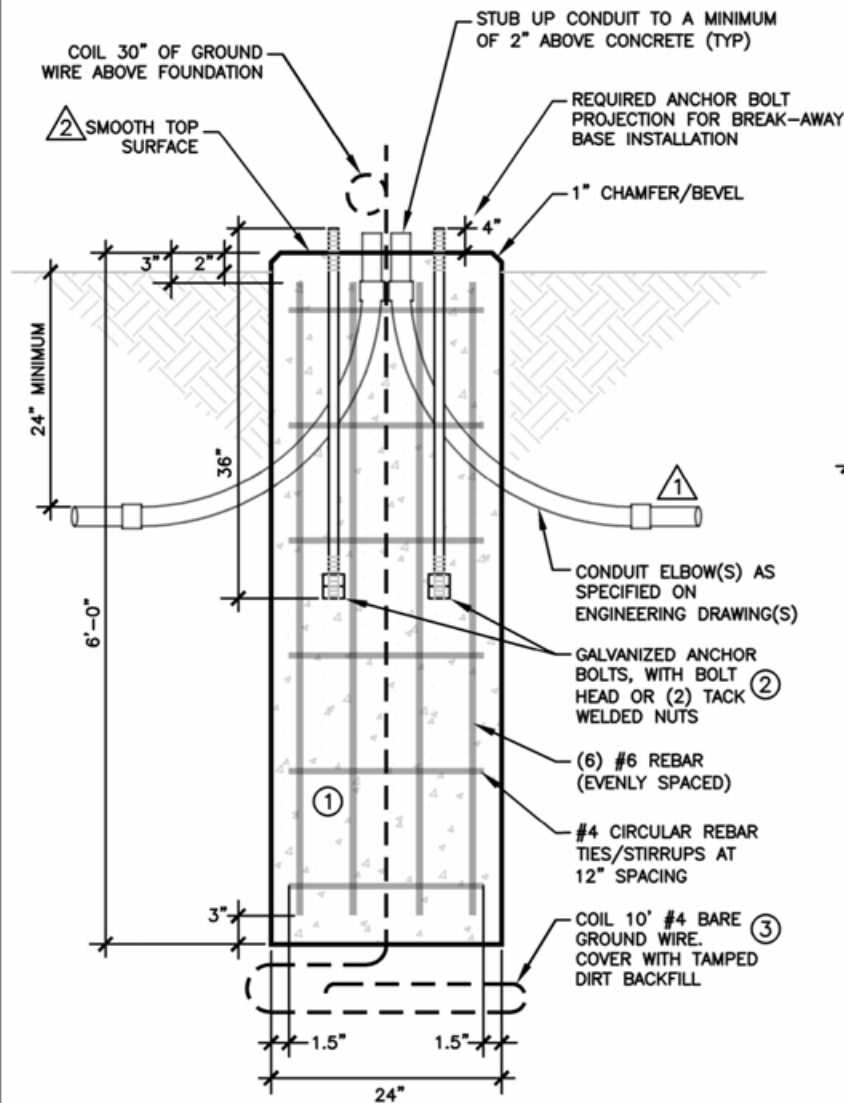
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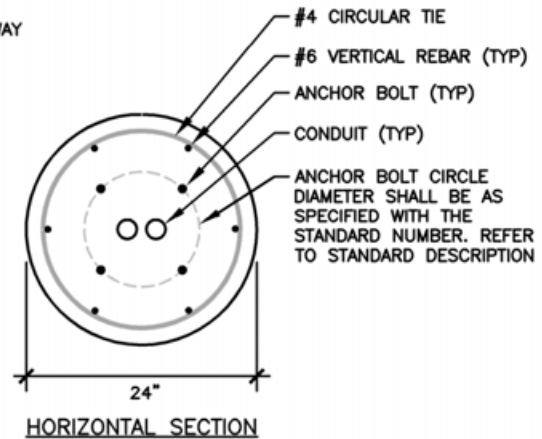
CONCRETE FOUNDATION
FOR STREETLIGHT
24" DIAMETER
6' DEPTH

STD. NO.

CF24-6-1**



③ FOUNDATION VERTICAL SECTION



HORIZONTAL SECTION

REQUIREMENTS:

1. FAILURE TO COMPLY WITH THESE REQUIREMENTS AND THIS STANDARD WILL RESULT IN REJECTION BY C.U. INSPECTOR.
2. CONTRACTOR SHALL USE SONOTUBE OR APPROVED CONCRETE FORM. CONTRACTOR SHALL HAVE ANCHOR BOLT FORM METHOD APPROVED BY C.U. INSPECTOR, PRIOR TO CONCRETE POUR.
3. CONCRETE FOUNDATIONS SHALL BE LEVEL, WITH A SMOOTH TOP FINISH.
4. ANCHOR BOLT THREADS SHALL BE COVERED TO BE KEPT FREE FROM DEBRIS.
5. ANCHOR BOLTS SHALL BE PERPENDICULAR TO THE TOP CONCRETE SURFACE AND PROPERLY SUPPORTED DURING CONCRETE POUR TO ELIMINATE ANY MOVEMENT. A SINGLE FORM FOR THE ANCHOR BOLTS WILL NOT BE ACCEPTABLE. ANCHOR BOLTS THAT ARE NOT PERPENDICULAR WILL BE REJECTED.
6. ANCHOR BOLT SQUARE PATTERN SHALL HAVE THE NEAREST SIDE PARALLEL TO THE NEAREST ROADWAY BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED ON THE PLANS.
7. CONTRACTOR SHALL REMOVE ALL FORMS, NUTS, AND WASHERS FROM ANCHOR BOLTS.

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	CF24-6-1**-B CONCRETE PER MODOT CLASS B-1 SPECIFICATION. 3500PSI MINIMUM. APPROX 0.7 CUBIC YARDS.	NONSTOCK	1	STANDARD CF24-6-115-B 24" DIA., 6' DEPTH, 11.5" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 4.0"(1/8" TOLERANCE)	NONSTOCK
2	1" X 36" GALVANIZED ANCHOR BOLT PER MODOT SPECIFICATIONS. MINIMUM YIELD STRENGTH OF 50,000 PSI.	NONSTOCK	1	STANDARD CF24-6-145-B 24" DIA., 6' DEPTH, 14.5" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 4.0"(1/8" TOLERANCE)	NONSTOCK
3	20FT #4 AWG SOLID COPPER CONDUCTOR FOR GROUND	101163			
4	#6 REBAR	NONSTOCK			
5	#4 REBAR (CIRCULAR TIES)	NONSTOCK			



GENERAL NOTES

1. CONDUIT ELBOWS SHALL BE AS SPECIFIED ON ENGINEERING DRAWINGS.
2. TOP SURFACE SHALL BE SMOOTH AND LEVEL OR WILL BE REJECTED.
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4. IF BACKFILL IS NECESSARY AROUND A FOUNDATION, PLACE BASE STONE IN 12" COMPACTED LAYERS BEFORE PLACING THE NEXT LAYER.
5. REFER TO CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS, SECTION 7 (MISCELLANEOUS) AND COMPLY WITH BACKFILL REQUIREMENTS WHEN WITHIN 2' OF BACK OF CURB OR IN AN AREA TO BE PAVED.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

E.C.

FILE:

CF24-6-1XX-B

APPROVED:

R.L.

REVISED:

3-9-22

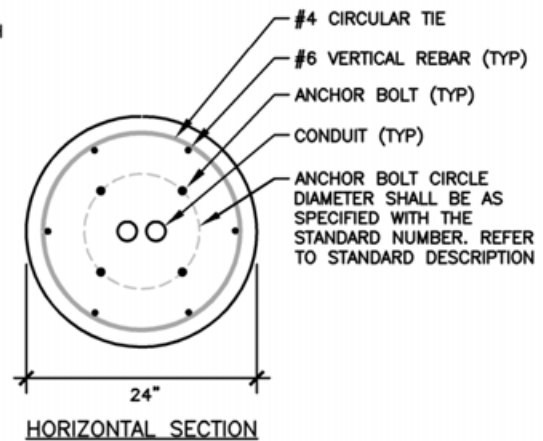
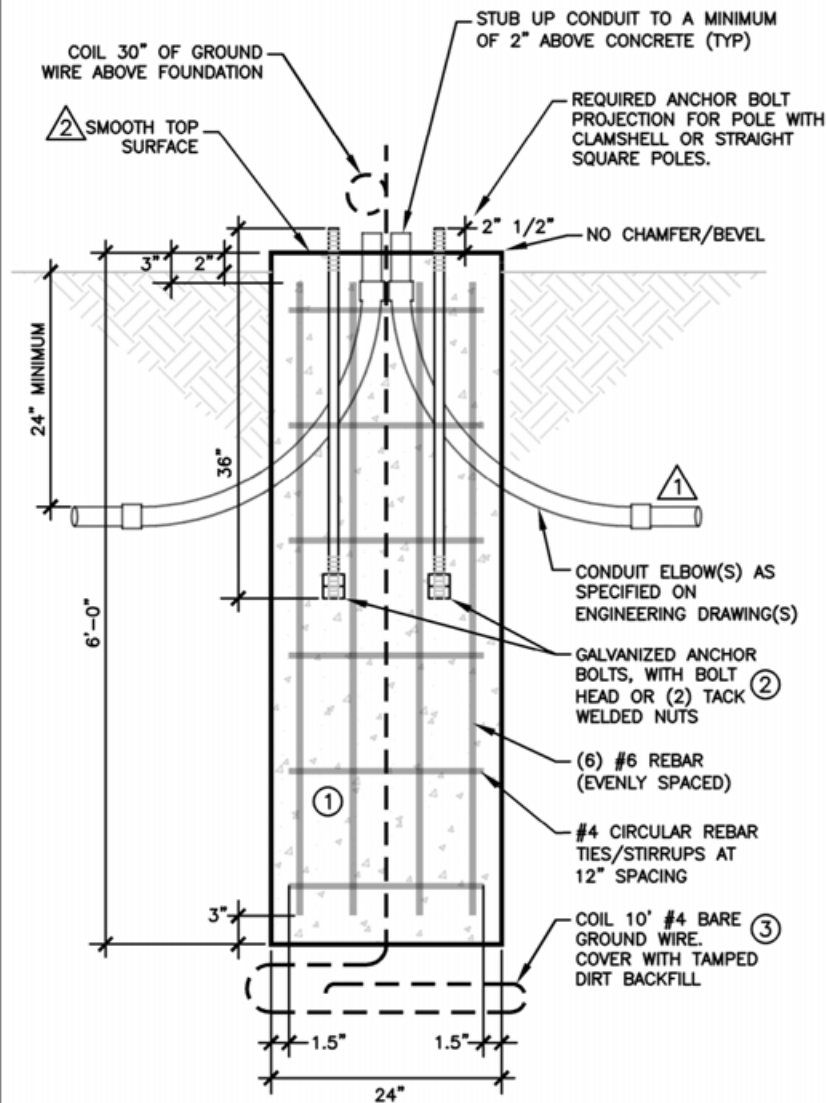
SHEET

1 OF 1

STD. NO.

CF24-6-1**-B

CONCRETE FOUNDATION
FOR STREETLIGHT
WITH BREAKAWAY BASE
24" DIAMETER, 6' DEPTH



REQUIREMENTS:

1. FAILURE TO COMPLY WITH THESE REQUIREMENTS AND THIS STANDARD WILL RESULT IN REJECTION BY C.U. INSPECTOR.
2. CONTRACTOR SHALL USE SONOTUBE OR APPROVED CONCRETE FORM. CONTRACTOR SHALL HAVE ANCHOR BOLT FORM METHOD APPROVED BY C.U. INSPECTOR, PRIOR TO CONCRETE POUR.
3. CONCRETE FOUNDATIONS SHALL BE LEVEL, WITH A SMOOTH TOP FINISH.
4. ANCHOR BOLT THREADS SHALL BE COVERED TO BE KEPT FREE FROM DEBRIS.
5. ANCHOR BOLTS SHALL BE PERPENDICULAR TO THE TOP CONCRETE SURFACE AND PROPERLY SUPPORTED DURING CONCRETE POUR TO ELIMINATE ANY MOVEMENT. A SINGLE FORM FOR THE ANCHOR BOLTS WILL NOT BE ACCEPTABLE. ANCHOR BOLTS THAT ARE NOT PERPENDICULAR WILL BE REJECTED.
6. ANCHOR BOLT SQUARE PATTERN SHALL HAVE THE NEAREST SIDE PARALLEL TO THE NEAREST ROADWAY BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED ON THE PLANS.
7. CONTRACTOR SHALL REMOVE ALL FORMS, NUTS, AND WASHERS FROM ANCHOR BOLTS.

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	CF24-6-1**-C CONCRETE PER MODOT CLASS B-1 SPECIFICATION. 3500PSI MINIMUM. APPROX 0.7 CUBIC YARDS.	NONSTOCK	1	STANDARD CF24-6-110-C 24" DIA., 6' DEPTH, 11.0" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 2.5"(1/8" TOLERANCE)	NONSTOCK
2	4 1" X 36" GALVANIZED ANCHOR BOLT PER MODOT SPECIFICATIONS. MINIMUM YIELD STRENGTH OF 50,000 PSI.	NONSTOCK	1	STANDARD CF24-6-125-C 24" DIA., 6' DEPTH, 12.5" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 2.5"(1/8" TOLERANCE)	NONSTOCK
3	20FT #4 AWG SOLID COPPER CONDUCTOR FOR GROUND	101163			
4	- #6 REBAR	NONSTOCK			
5	- #4 REBAR (CIRCULAR TIES)	NONSTOCK			



GENERAL NOTES

1. CONDUIT ELBOWS SHALL BE AS SPECIFIED ON ENGINEERING DRAWINGS.
2. TOP SURFACE SHALL BE SMOOTH AND LEVEL OR WILL BE REJECTED.
3. PRECAST FOUNDATIONS ARE ALLOWED, BUT SHOP DRAWINGS MUST BE SUBMITTED FOR APPROVAL. PRECAST FOUNDATIONS SHALL HAVE LIFTING EYES. FOUNDATIONS SHALL NOT BE LIFTED BY ANCHOR BOLTS FOR ANY REASON.
4. IF BACKFILL IS NECESSARY AROUND A FOUNDATION, PLACE BASE STONE IN 12" COMPACTED LAYERS BEFORE PLACING THE NEXT LAYER.
5. REFER TO CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS, SECTION 7 (MISCELLANEOUS) AND COMPLY WITH BACKFILL REQUIREMENTS WHEN WITHIN 2' OF BACK OF CURB OR IN AN AREA TO BE PAVED.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

E.C.

FILE:

CF24-6-1**-C

APPROVED:

R.L.

REVISED:

3-9-22

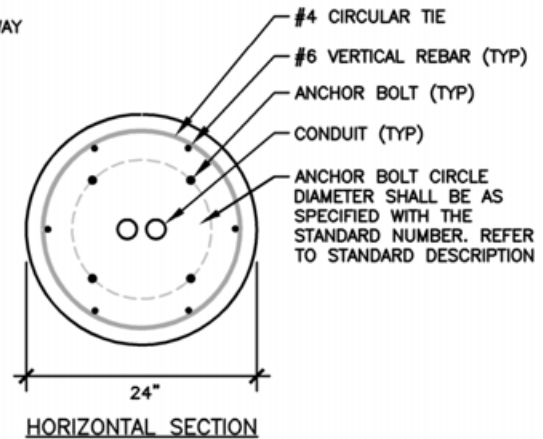
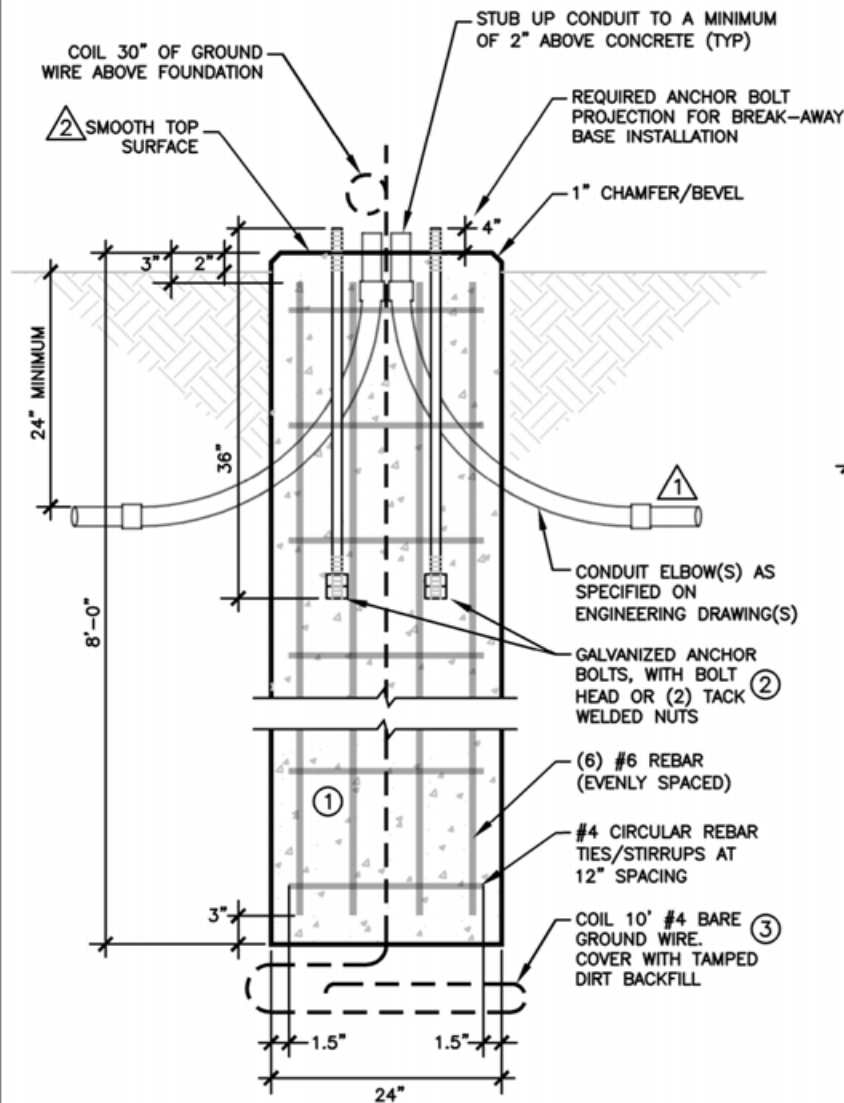
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STD. NO.

CF24-6-1**-C

CONCRETE FOUNDATION
FOR STREETLIGHT
WITH CLAMSHELL
24" DIAMETER, 6' DEPTH



REQUIREMENTS:

1. FAILURE TO COMPLY WITH THESE REQUIREMENTS AND THIS STANDARD WILL RESULT IN REJECTION BY C.U. INSPECTOR.
2. CONTRACTOR SHALL USE SONOTUBE OR APPROVED CONCRETE FORM. CONTRACTOR SHALL HAVE ANCHOR BOLT FORM METHOD APPROVED BY C.U. INSPECTOR, PRIOR TO CONCRETE POUR.
3. CONCRETE FOUNDATIONS SHALL BE LEVEL, WITH A SMOOTH TOP FINISH.
4. ANCHOR BOLT THREADS SHALL BE COVERED TO BE KEPT FREE FROM DEBRIS.
5. ANCHOR BOLTS SHALL BE PERPENDICULAR TO THE TOP CONCRETE SURFACE AND PROPERLY SUPPORTED DURING CONCRETE POUR TO ELIMINATE ANY MOVEMENT. A SINGLE FORM FOR THE ANCHOR BOLTS WILL NOT BE ACCEPTABLE. ANCHOR BOLTS THAT ARE NOT PERPENDICULAR WILL BE REJECTED.
6. ANCHOR BOLT SQUARE PATTERN SHALL HAVE THE NEAREST SIDE PARALLEL TO THE NEAREST ROADWAY BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED ON THE PLANS.
7. CONTRACTOR SHALL REMOVE ALL FORMS, NUTS, AND WASHERS FROM ANCHOR BOLTS.

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	CF24-8-1**-B CONCRETE PER MODOT CLASS B-1 SPECIFICATION. 3500PSI MINIMUM. APPROX. 0.95 CUBIC YARDS.	NONSTOCK	1	STANDARD CF24-8-145-B 24" DIA., 8' DEPTH, 14.5" DIA. ANCHOR BOLT CIRCLE, W/ANCHOR BOLT PROJECTION OF 4.0"(1/8" TOLERANCE)	NONSTOCK
2	1" X 36" GALVANIZED ANCHOR BOLT PER MODOT SPECIFICATIONS. MINIMUM YIELD STRENGTH OF 50,000 PSI.	NONSTOCK			
3	22FT #4 AWG SOLID COPPER CONDUCTOR FOR GROUND	101163			
4	#6 REBAR	NONSTOCK			
5	#4 REBAR (CIRCULAR TIES)	NONSTOCK			



GENERAL NOTES

1. CONDUIT ELBOWS SHALL BE AS SPECIFIED ON ENGINEERING DRAWINGS.
2. TOP SURFACE SHALL BE SMOOTH AND LEVEL OR WILL BE REJECTED.
3. PRECAST FOUNDATIONS ARE ALLOWED, BUT SHOP DRAWINGS MUST BE SUBMITTED FOR APPROVAL. PRECAST FOUNDATIONS SHALL HAVE LIFTING EYES. FOUNDATIONS SHALL NOT BE LIFTED BY ANCHOR BOLTS FOR ANY REASON.
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5. REFER TO CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS, SECTION 7 (MISCELLANEOUS) AND COMPLY WITH BACKFILL REQUIREMENTS WHEN WITHIN 2' OF BACK OF CURB OR IN AN AREA TO BE PAVED.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

E.C.

FILE:

CF24-8-1XX-B

APPROVED:

R.L.

REVISED:

3-9-22

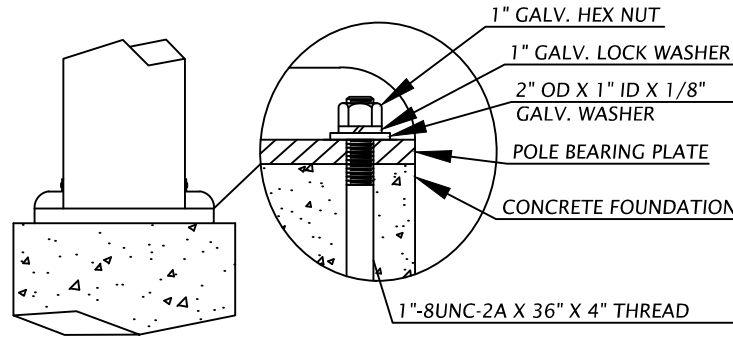
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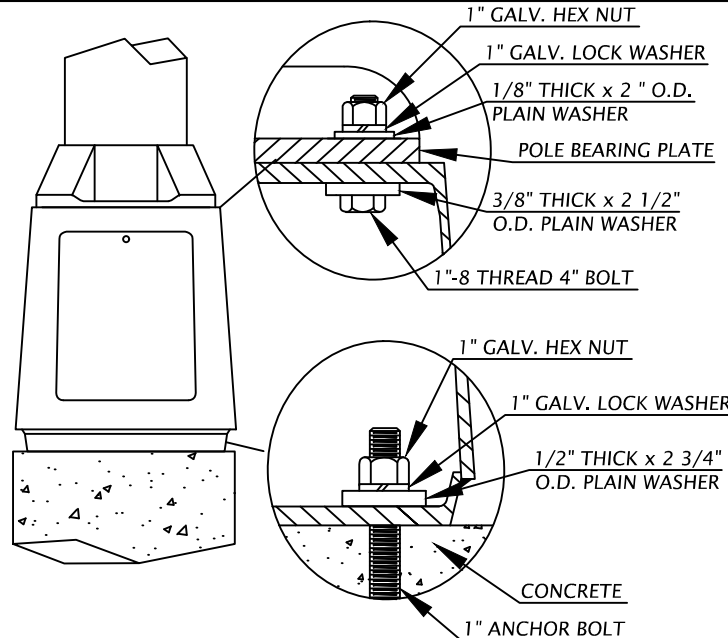
STD. NO.

CF24-8-1**-B

CONCRETE FOUNDATION
FOR STREETLIGHT
WITH BREAKAWAY BASE
24" DIAMETER, 8' DEPTH



CONCRETE FOUNDATION (HW-C-010)

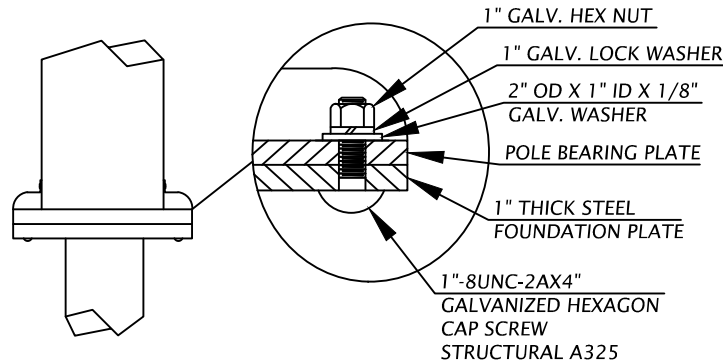


CONCRETE FOUNDATION WITH BREAKAWAY BASE
(HW-C-010-B)

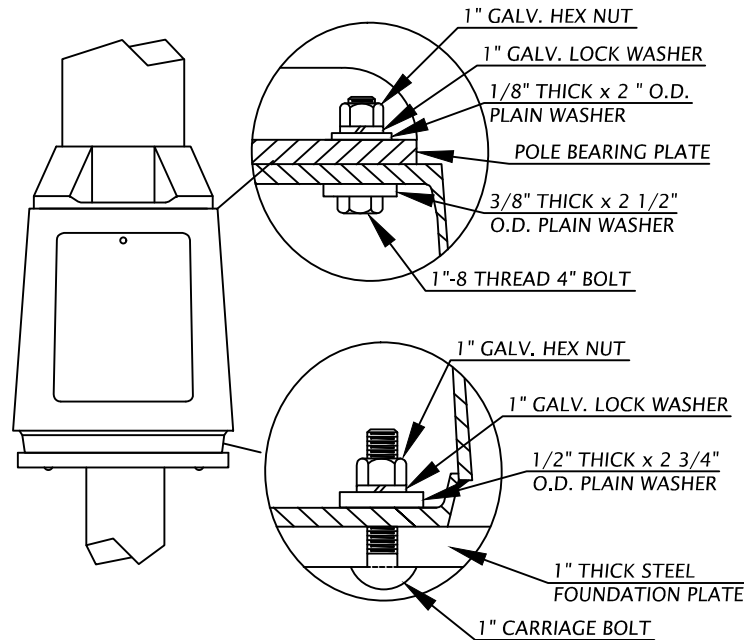
MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
STANDARD HW-C-010			STANDARD HW-C-010-B		
4	1" GALVANIZED HEX NUT	107096	8	1" GALVANIZED HEX NUT	107096
4	1" GALVANIZED LOCK WASHER	119483	8	1" GALVANIZED LOCK WASHER	119483
4	2" OD X 1" ID GALVANIZED PLAIN WASHER	02511071	4	2" OD X 1" ID GALVANIZED PLAIN WASHER	W/BAB-X
2	16 GA LEVELING SHIM	02511070	4	2-1/2" OD X 1" ID GALVANIZED PLAIN WASHER	W/BAB-X
			4	2-3/4" OD X 1" ID GALVANIZED PLAIN WASHER	W/BAB-X
			2	16 GA LEVELING SHIM	02511070

GENERAL NOTES		ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	TORQUE NUTS TO 150 FT. LBS.	DRAWN BY:	CONNECTING HARDWARE 1" DIAMETER ANCHOR BOLT CONCRETE FOUNDATION		
	USE TWO LEVELING SHIMS AS NEEDED, RETURN UNUSED. DO NOT STACK SHIMS.	J.P.			
	PLACE POLE DIRECTLY ON STEEL OR CONCRETE WITH NO LEVELING NUTS.	REV BY:			
	1" GALVANIZED ANCHOR BOLTS SPECIFIED WITH FOUNDATION DETAIL.	FILE:			
		HW-C-010			
		APPROVED:	REVISED:	SHEET	STD. NO.
		R.L.	3-9-22	1 OF 1	HW-C-010



STEEL FOUNDATION (HW-S-010)

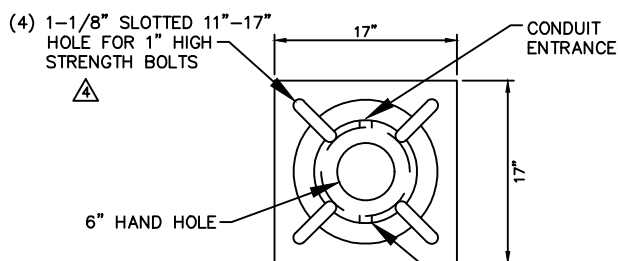


STEEL FOUNDATION WITH BREAKAWAY BASE
(HW-S-010-B)

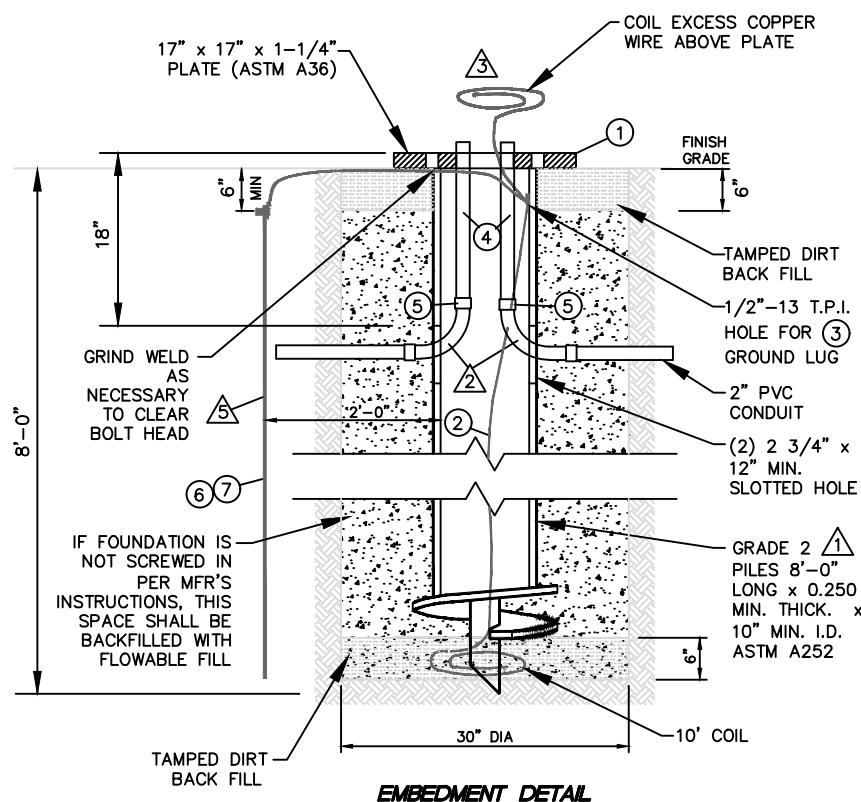
MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
STANDARD HW-S-010			STANDARD HW-S-010-B		
4	1" GALVANIZED LOCK WASHER	119483	4	1" GALVANIZED HEX NUT	107096
4	2" OD X 1" ID GALVANIZED PLAIN WASHER	02511071	8	1" GALVANIZED LOCK WASHER	119483
2	16 GA LEVELING SHIM	02511070	4	2" OD X 1" ID GALVANIZED PLAIN WASHER	W/BAB-*
4	1" GALVANIZED CARRIAGE BOLT	W/**SB	4	2-1/2" OD X 1" ID GALVANIZED PLAIN WASHER	W/BAB-*
4	1" GALVANIZED HEX NUT	W/**SB	4	2-3/4" OD X 1" ID GALVANIZED PLAIN WASHER	W/BAB-*
			4	16 GA LEVELING SHIM	02511070
			2	1" GALVANIZED CARRIAGE BOLT	W/**SB
			4	1" GALVANIZED HEX NUT	W/**SB

<div>△</div>	GENERAL NOTES	ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1. 2. 3.	TORQUE NUTS TO 150 FT. LBS. USE TWO LEVELING SHIMS AS NEEDED, RETURN UNUSED. DO NOT STACK SHIMS. PLACE BREAKAWAY BASE DIRECTLY ON STEEL OR CONCRETE WITH NO LEVELING NUTS.	DRAWN BY: J.P.	CONNECTING HARDWARE 1" DIAMETER ANCHOR BOLT STEEL FOUNDATION		
		REV BY:			
		FILE: HW-S-010			
		APPROVED: R.L.	REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. HW-S-010



TOP VIEW



EMBEDMENT DETAIL

INSTALLATION REQUIREMENTS:

- FAILURE TO COMPLY WITH THESE REQUIREMENTS AND THIS STANDARD WILL RESULT IN REJECTION BY C.U. INSPECTOR.
- ALLOWABLE STEEL FOUNDATION INSTALLATION METHODS:
 - USE TRUCK AND/OR EQUIPMENT AS NECESSARY TO SCREW IN THE FOUNDATION/PILE PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - EXCAVATION BY AUGER— CONTRACTOR SHALL AUGER HOLE OF MINIMUM DIAMETER AND DEPTH. BACKFILL WITH FLOWABLE FILL. SOIL OR ROCK BACKFILL WILL NOT BE ALLOWED.
 - EXCAVATION BY METHOD OTHER THAN AUGER REQUIRES PRIOR APPROVAL BY C.U. INSPECTOR— IF ALLOWED, CONTRACTOR SHALL INSTALL STEEL FOUNDATION WITHIN A SONOTUBE (MINIMUM 18"Ø x 54"). BACKFILL WITHIN SONOTUBE WITH FLOWABLE FILL. BACKFILL AROUND OUTSIDE OF SONOTUBE WITH COMPACTED SOIL/ROCK AS INSTRUCTED BY C.U. INSPECTOR.
- FOUNDATION SHALL BE SUPPORTED AS NECESSARY, DURING ALL BACKFILL, TO ENSURE THAT TOP PLATE OF FOUNDATION IS LEVEL.
- TOP PLATE OF STEEL FOUNDATION SHALL BE FLUSH WITH FINISH GRADE. HOWEVER, IF POLE IS LOCATED BEHIND A CRASHWORTHY BARRIER AS DETERMINED BY FHWA, AND IF ALLOWED BY INSPECTOR, A MAXIMUM OF 3" OF SHAFT MAY BE EXPOSED ABOVE FINISH GRADE.
- FLOWABLE BACKFILL REQUIREMENTS:
 - CONTRACTOR SHALL PROVIDE INSPECTOR WITH A MIX DESIGN WITH PROPORTIONS AND SOURCE OF MATERIAL AND 28-DAY COMPRESSIVE TEST RESULTS. THE 28-DAY COMPRESSIVE STRENGTH OF THE MIXTURE SHALL EXCEED 50 PSI.
 - APPROVED COMMERCIAL BRAND MIXTURES INTENDED SPECIFICALLY FOR USE AS FLOWABLE BACKFILL MAY BE USED, PROVIDED THE SPECIFIED STRENGTH IS OBTAINED.
 - THE MATERIAL SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. A COPY OF MANUFACTURER'S RECOMMENDATIONS SHALL BE FURNISHED TO THE C.U. INSPECTOR.

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	CIRCULAR GALVANIZED STEEL PILE STREET LIGHT FOUNDATION WITH FOUR (4) 1" x 4" HIGH STRENGTH GALVANIZED BOLTS (ASTM A-325), WASHERS AND LOCKWASHERS. HELIX STYLE BASE	105443	5	2" PVC COUPLING	109161
2	25' WIRE, #4 B. SOLID COPPER	101163	6	GROUND ROD CLAMP	103005
3	1 GROUND LUG	2508564	7	5/8" X 8' GROUND ROD	102341
4	4' 2" PVC CONDUIT	109066			



GENERAL NOTES

- ALL MATERIAL SHALL BE GALVANIZED PER ASTM 123 AFTER FABRICATION.
- 2" PVC, 9.5" RADIUS CONDUIT ELL(S) SHOULD BE SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWINGS.
- EXCESS COPPER WIRE TO BE ATTACHED TO BREAK-AWAY BASE AND STEEL LIGHT POLE.
- MINIMUM BOLT CIRCLE FOR EQUIPMENT ATTACHED TO THIS FOUNDATION IS APPROXIMATELY 12.5"
- FOR SCREWED-IN FOUNDATIONS, A GROUND ROD (G1) SHALL BE SUBSTITUTED FOR THE GROUND WIRE INSTALLED WITH THE STEEL FOUNDATION.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

GKS

REV BY:

E.C.

FILE:

WWSB

APPROVED:

R.L.

STREETLIGHT POLE
STEEL FOUNDATION
40' MAXIMUM POLE HEIGHT

REVISED:

2-1-23

SHEET

1 OF 1

STD. NO.

WWSB

LIGHTING STANDARDS

(GENERAL - FUTURE SECTION)

1

POLES AND BREAKAWAY BASES

2

FOUNDATIONS AND HARDWARE

3

LIGHTS

4

PROTECTION AND CONNECTORS

5

LIGHTING CONTROL

6

MISCELLANEOUS COMPONENTS

7

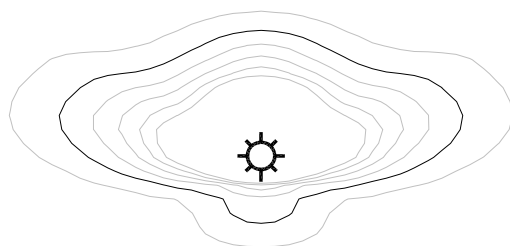
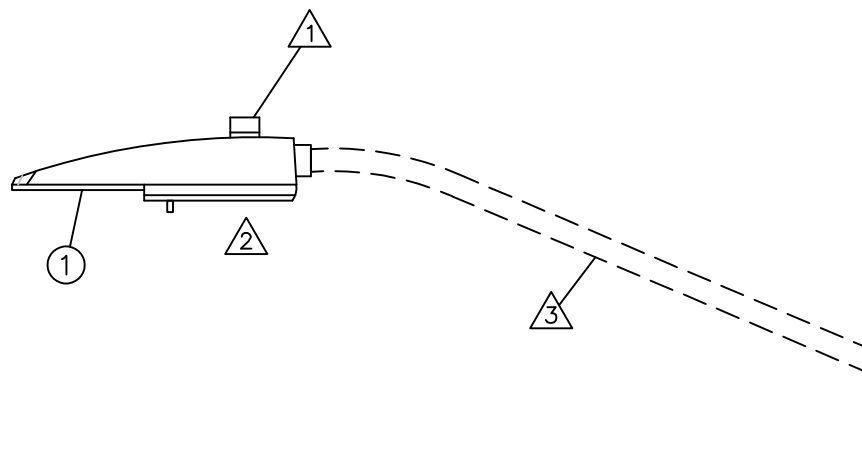
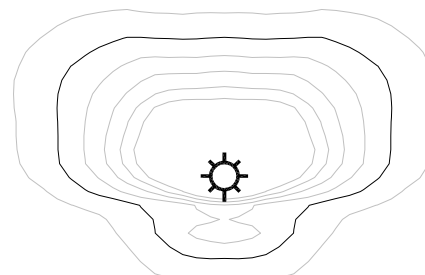


LIGHTING CONSTRUCTION STANDARDS

City Utilities of Springfield, MO

LIGHTS - INDEX

LED-**	ROADWAY/STREETLIGHTS
LED-S*	SECURITY LIGHT
LED-PEN1	DECORATIVE PENDANT ROADWAY LIGHT
LED-PEN2	DECORATIVE PENDANT ROADWAY LIGHT
LED-PEN4	DECORATIVE PENDANT (TYPE B L.E.D.) WITH SLIPFITTER ATTACHMENT

TYPE II DISTRIBUTIONTYPE III DISTRIBUTION*MATERIAL LIST*

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	<u>STANDARD LED-A2</u> TYPE II DISTRIBUTION, 3000K COLOR TEMPERATURE, DARK-SKY COMPLIANT LED STREETLIGHT (WITH COMPARABLE OUTPUT TO 150W HPS). MFR.-PROVIDED "A2" LABEL ON DOOR & PROVIDED W/SHORTING CAP.	02510096	1	<u>STANDARD LED-A3</u> TYPE III DISTRIBUTION, 3000K COLOR TEMPERATURE, DARK-SKY COMPLIANT LED STREETLIGHT (WITH COMPARABLE OUTPUT TO 150W HPS). MFR.-PROVIDED "A3" LABEL ON DOOR & PROVIDED W/SHORTING CAP.	02510097
1	<u>STANDARD LED-B2</u> TYPE II DISTRIBUTION, 3000K COLOR TEMPERATURE, DARK-SKY COMPLIANT LED STREETLIGHT (WITH COMPARABLE OUTPUT TO 250W HPS). MFR.-PROVIDED "B2" LABEL ON DOOR & PROVIDED W/SHORTING CAP.	02510098	1	<u>STANDARD LED-B3</u> TYPE III DISTRIBUTION, 3000K COLOR TEMPERATURE, DARK-SKY COMPLIANT LED STREETLIGHT (WITH COMPARABLE OUTPUT TO 250W HPS). MFR.-PROVIDED "B3" LABEL ON DOOR & PROVIDED W/SHORTING CAP.	02510099
1	<u>STANDARD LED-C2</u> TYPE II DISTRIBUTION, 3000K COLOR TEMPERATURE, DARK-SKY COMPLIANT LED STREETLIGHT (WITH COMPARABLE OUTPUT TO 400W HPS). MFR.-PROVIDED "C2" LABEL ON DOOR & PROVIDED W/SHORTING CAP.	02510100	1	<u>STANDARD LED-C3</u> TYPE III DISTRIBUTION, 3000K COLOR TEMPERATURE, DARK-SKY COMPLIANT LED STREETLIGHT (WITH COMPARABLE OUTPUT TO 400W HPS). MFR.-PROVIDED "C3" LABEL ON DOOR & PROVIDED W/SHORTING CAP.	02510101
1	<u>STANDARD LED-A2-DBZ</u> DARK BRONZE LED-A2	02510225	1	<u>STANDARD LED-C3-DBZ</u> DARK BRONZE LED-C3	02510226

*GENERAL NOTES*

- LED LONG-LIFE PHOTOCELL (INDIVIDUAL CONROL) OR SHORTING CAP (FOR CONTROLLED CIRCUITS). DESIGNER SHOULD ADD LED-PC IF NECESSARY.
- STREETLIGHT IS DESIGNED TO ALLOW FOR UP TO 5' ADJUSTMENT (UP OR DOWN). FOR SITUATIONS WHERE STREETLIGHT ARM IS NOT LEVEL, ADJUST PER MANUFACTURER'S INSTRUCTIONS FOR STREETLIGHT TO BE LEVEL, OR AS NEAR AS POSSIBLE TO LEVEL.
- POLE, ARM, AND WIRING ARE SPECIFIED BY SEPARATE CONSTRUCTION STANDARD(S) ON ELECTRIC LINE ENGINEERING DRAWINGS.

**ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.**

DRAWN BY:

E.C.

REV BY:

J.P.

FILE:

LED-XX

APPROVED:

R.L.

LED ROADWAY STREETLIGHTS

REVISED:

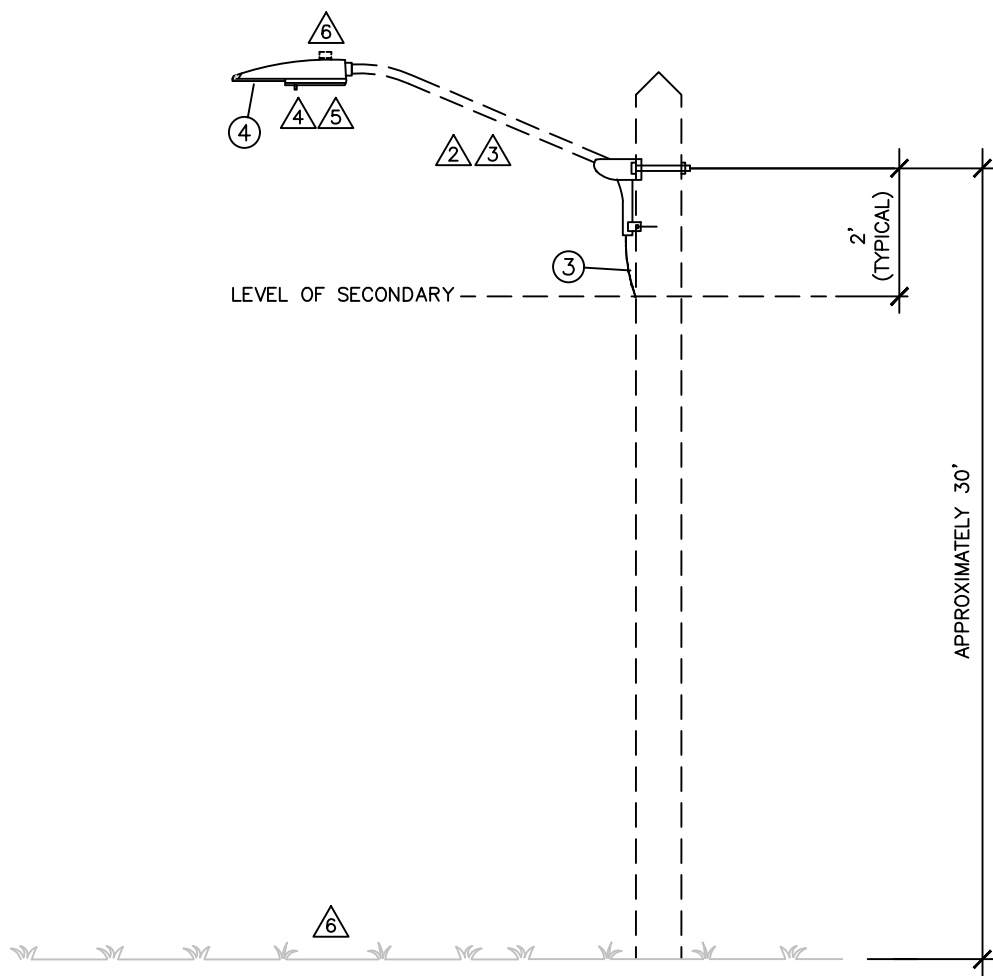
3-9-22

SHEET

1 OF 1

STD. NO.

LED-***



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	PLASTIC TAG HOLDER	109241	4	STANDARD LED-S1	02509349
2 AS REQD	PLASTIC TAGS	1094XX	1	TYPE V DISTRIBUTION, 3000K, L.E.D. AREA LIGHT (APPROXIMATELY 50W INPUT, WITH DELIVERED LUMEN OUTPUT EQUIVALENT TO 100W HPS)	
3 12FT	#12/2 COPPER WITH GROUND, TYPE UF.	101415	4	STANDARD LED-S2	02509350
			1	TYPE III DISTRIBUTION, 3000K, APPROXIMATELY 80W INPUT, WITH DELIVERED LUMEN OUTPUT EQUIVALENT TO 150W HPS. (SET ADJUSTABLE OUTPUT TO 4)	
			4	STANDARD LED-S3	02509350
			1	TYPE III DISTRIBUTION, 3000K, APPROXIMATELY 145W INPUT, WITH DELIVERED LUMEN OUTPUT EQUIVALENT TO 250W HPS. (SET ADJUSTABLE OUTPUT TO 10)	



GENERAL NOTES

- USE ITEMS #1 & #2 FOR PRIVATE INSTALLATIONS ONLY.
- ENGINEERING TO SPECIFY 2.5' GALVANIZED STEEL MAST ARM WPSLA-2 FOR ALL INSTALLATIONS THAT ARE NOT TRUCK ACCESSIBLE.
- ENGINEERING CAN SPECIFY A LONGER GALVANIZED STEEL MAST ARM WPSLA-X IF INSTALLATION IS TRUCK ACCESSIBLE.
- DOOR LABEL ON LIGHT IS "POL" FOR LED-S1.
- NO FIELD ADJUSTABLE OUTPUT REQUIRED. USES (LED-A3) OR (LED-B3) LIGHTS.
- ENGINEERING TO SPECIFY PHOTOCONTROL ON DRAWING.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

E.C.

REV BY:

J.P.

FILE:

LED-S*

APPROVED:

9-27-19

REVISED:

3-9-22

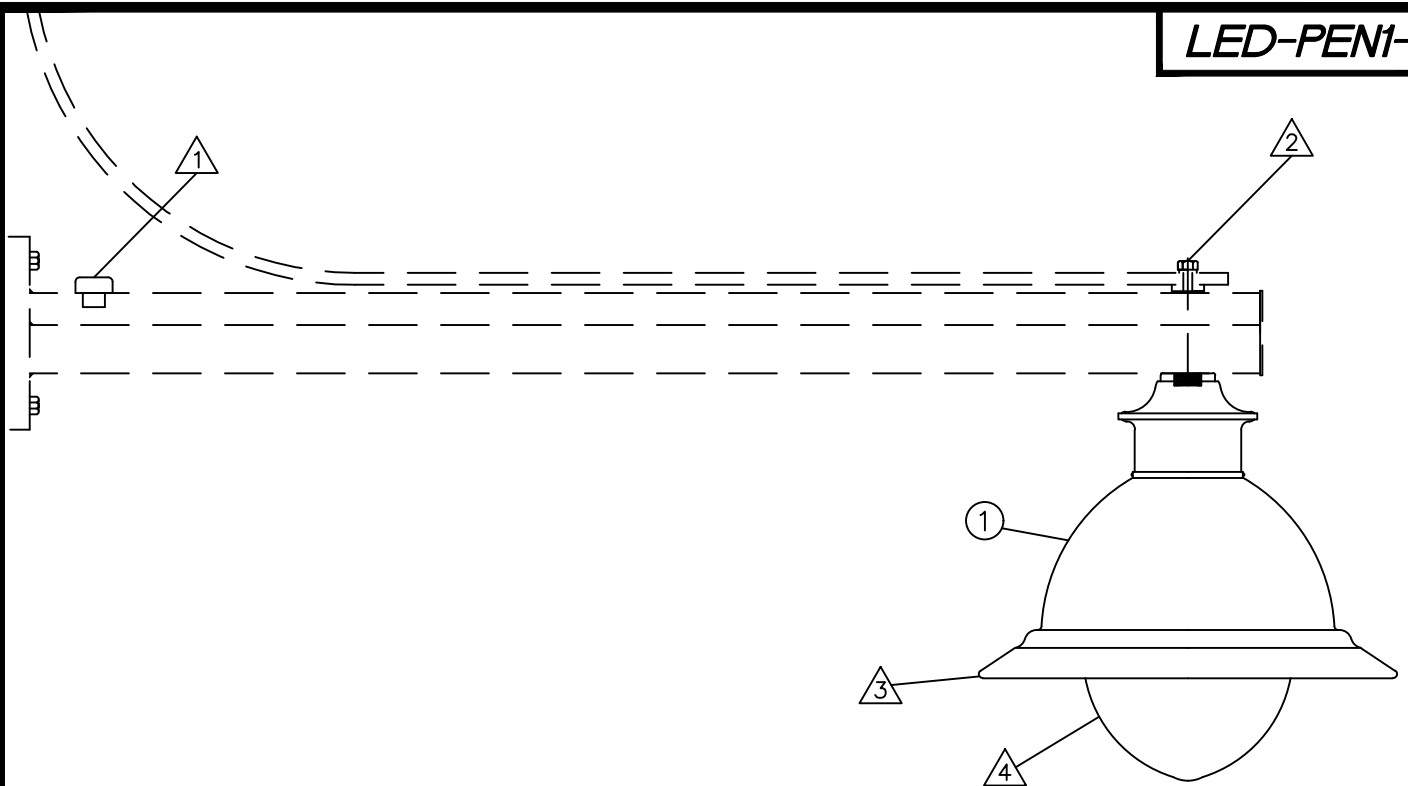
SHEET

1 OF 1

STD. NO.

LED-S*

SECURITY LIGHT
PRIVATE OUTDOOR LIGHT



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	<u>STANDARD LED-PEN1-FOR</u> PAINTED BLACK FOREST GREEN (FOR) LED LIGHT <ul style="list-style-type: none"> • 3000K COLOR TEMPERATURE • TYPE III DISTRIBUTION • 75 WATTS • P4 RIPPLED GLASS SHALLOW LENS • LINE VOLTAGE 120V (120-277V) 	2511006			



GENERAL NOTES

- CONTROL AND POLE WITH MAST ARM TO BE SPECIFIED ON CONSTRUCTION DRAWING.
- PENDANT LIGHT SCREWS INTO MAST ARM AND IS SECURED WITH A BOLT THAT IS SUPPLIED WITH THE POLE.
- HIGH PRESSURE SODIUM LED CONVERSION KIT IS AVAILABLE FOR OLD LATCH (#2510349) STYLE AND NEW LATCH (#2510351) STYLE.
- HOUSE SIDE/STREET SIDE ORIENTATION NOTE.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

FILE:

LED-PEN1-*

APPROVED:

R.L.

REVISED:

3-9-22

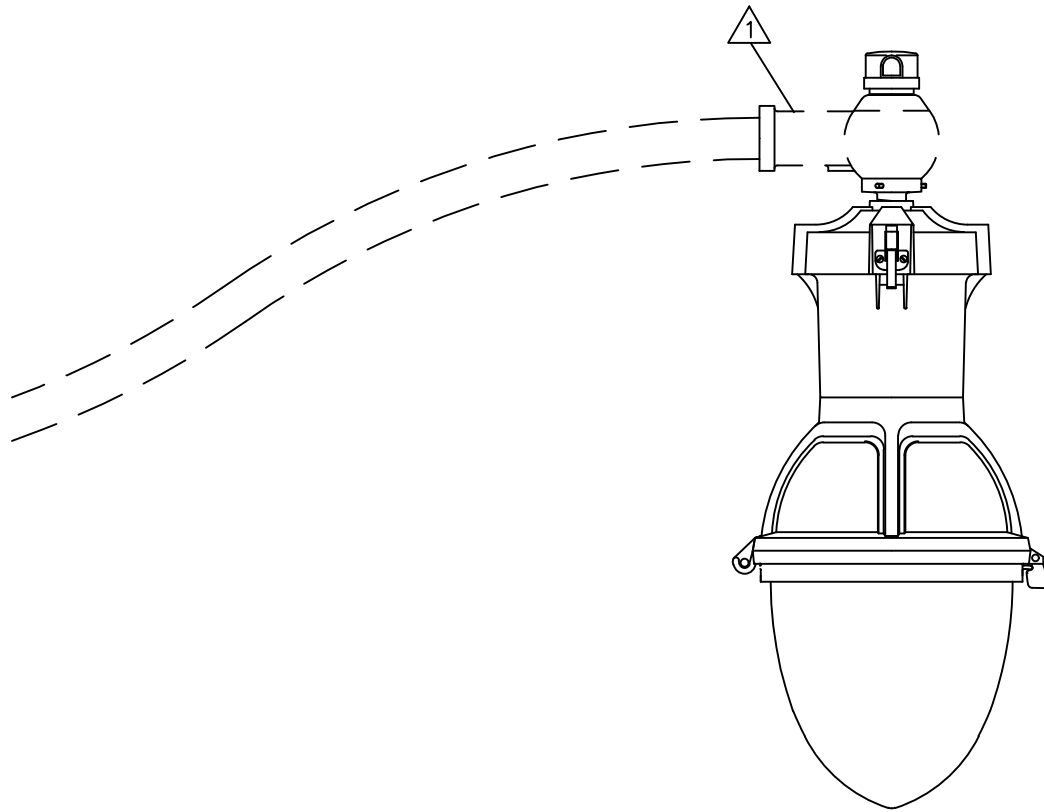
SHEET

1 OF 1

STD. NO.

LED-PEN1-*

 DECORATIVE PENDANT
 ROADWAY LIGHT
 20' MOUNTING HEIGHT



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	<u>STANDARD LED-PEN2-SND</u> LED LIGHT, 75W, 9,646 LUMEN OUTPUT, 3000K COLOR TEMPERATURE WITH SAG GLASS AND SHALLOW SKIRT. PAINTED DOWN-TO-EARTH BROWN.	2510350			



GENERAL NOTES

1. PLUMBIZER ASSEMBLY COMES WITH THE MAST ARM FOR THE CP30-6-SND.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

J.P.

REV BY:

FILE:

LED-PEN2-*

APPROVED:

R.L.

REVISED:

3-9-22

SHEET

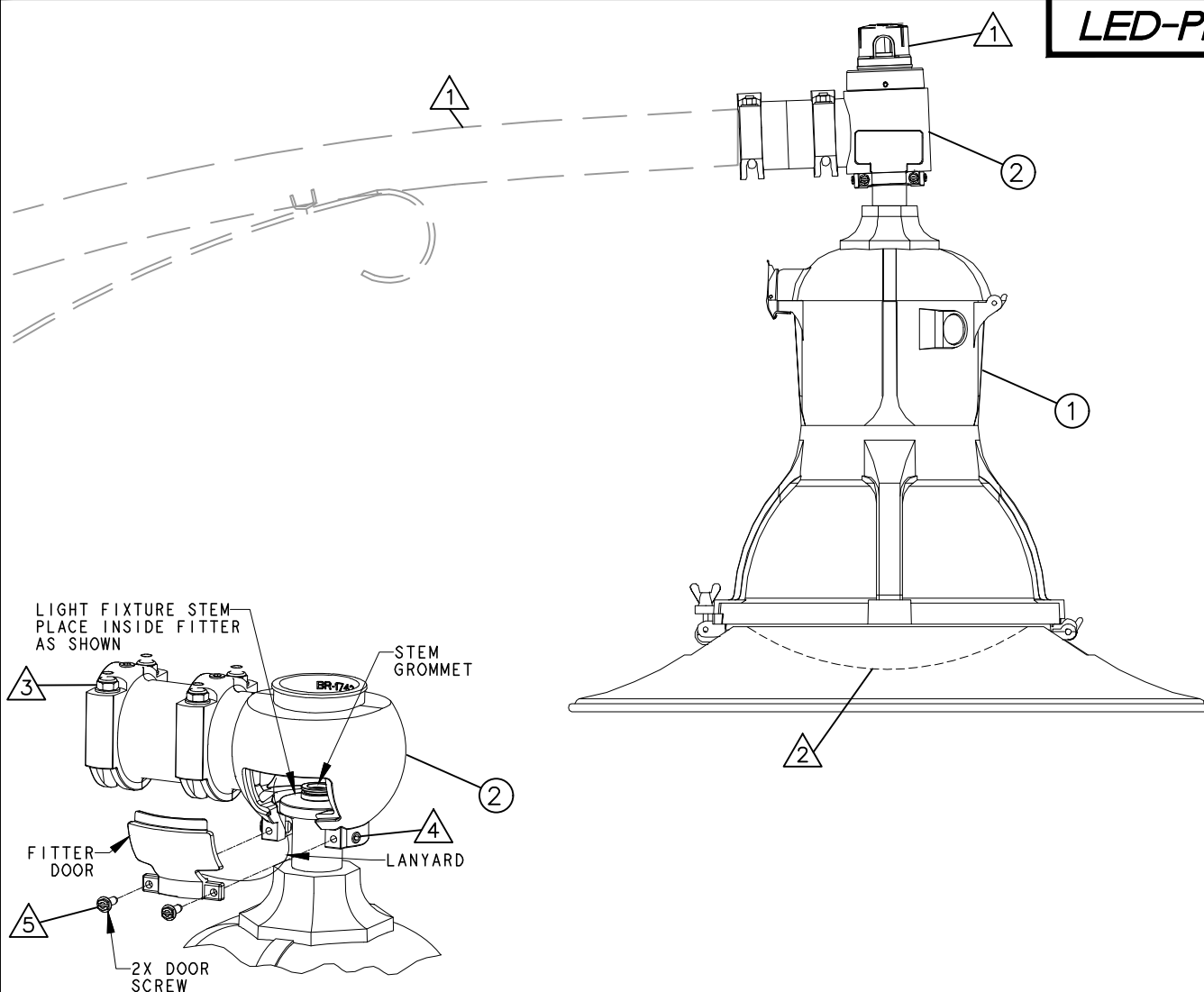
1 OF 1

STD. NO.

LED-PEN2-*

DECORATIVE PENDANT
ROADWAY LIGHT

LED-PEN4



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	LED-PEN4-BLK BLACK PAINTED DECORATIVE PENDANT LED LIGHT SHALLOW SKIRT SAG GLASS WITH TYPE III DISTRIBUTION. 3000K COLOR TEMPERATURE P30S PERFORMANCE PACKAGE MVOLT 120V-277V MOUNTING WITH QUICK LOCK STEM MOUNT.	02510988			
2	BLACK PAINTED DECORATIVE ARM LEVELING FITTER QUICK STEM MOUNT NEMA TWIST LOCK DIMMING RECEPTACLE 7 PIN.	02510991			

GENERAL NOTES			ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	PP30-**-** POLE AND MAST ARM AND CONTROLS AS SPECIFIED ON ELECTRIC LINE ENGINEERING DRAWING.		DRAWN BY: J.P.	DECORATIVE PENDANT TYPE B LED LIGHT WITH SLIP FITTER ATTACHMENT		
2.	OPTIC SAG (SHALLOW) GLASS AND DOOR.		REV BY:			
3.	TIGHTEN NUTS ON U-BOLTS TO 30-40 FT LBS.		FILE: LED-PEN4-*			
4.	TIGHTEN THREE SWIVEL SET SCREWS TO 10-12 FT LBS.		APPROVED: R.L.	REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. LED-PEN4-*
5.	TIGHTEN TWO DOOR SCREWS TO 5-6 FT LBS.					
6.	LIGHT SIMILAR TO LED-B3 LUMEN OUTPUT.					

LIGHTING STANDARDS

(GENERAL - FUTURE SECTION)

1

POLES AND BREAKAWAY BASES

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MISCELLANEOUS COMPONENTS

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LIGHTING CONSTRUCTION STANDARDS
City Utilities of Springfield, MO

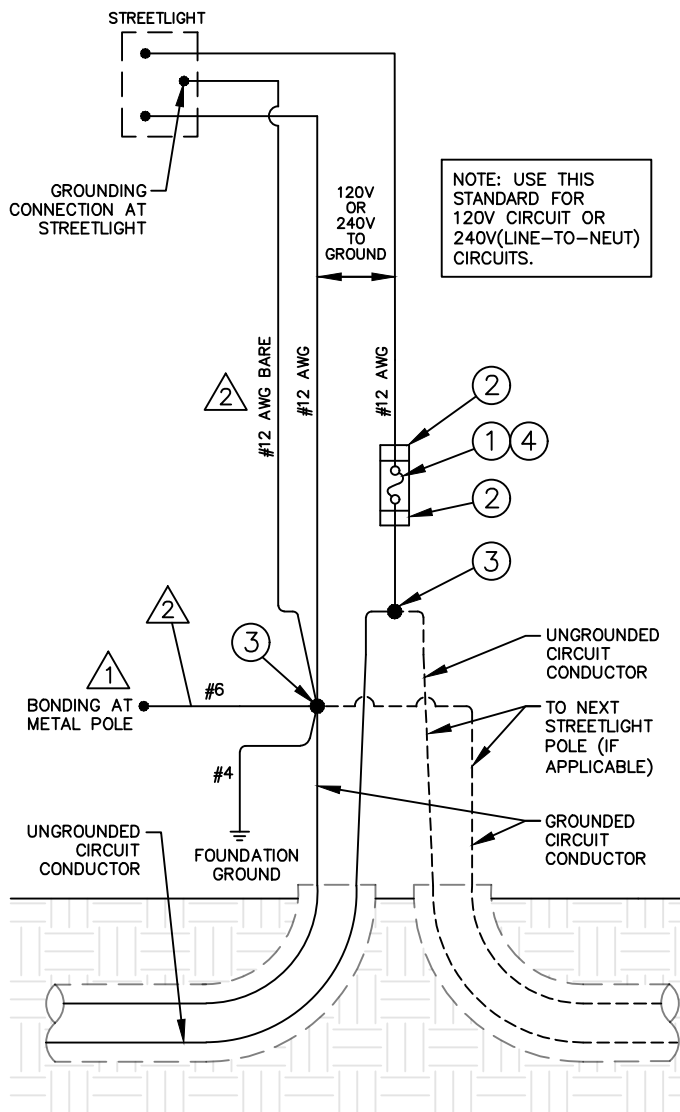
PROTECTION AND CONNECTORS - INDEX

FUSE-N-*

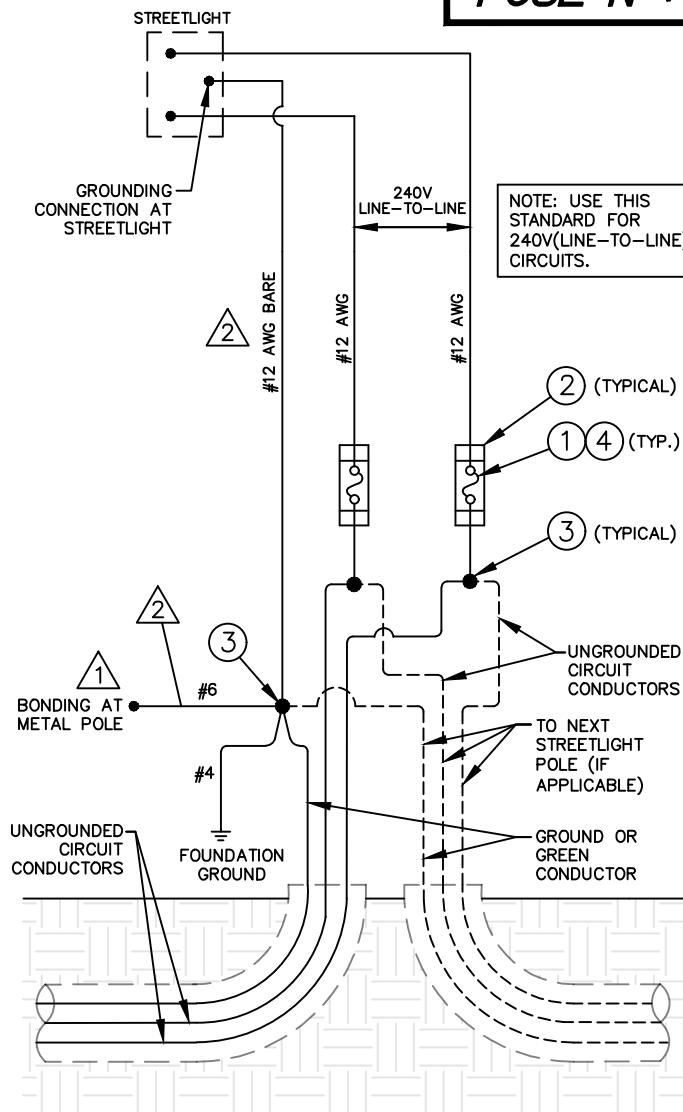
INLINE FUSEHOLDER(S) WITH FNM FUSE(S)

FUSE-Y-*

FUSED BREAKWAY Y-CONNECTOR KIT(S) WITH FNM FUSE(S)



FUSE-N-1 - WIRE SCHEMATIC

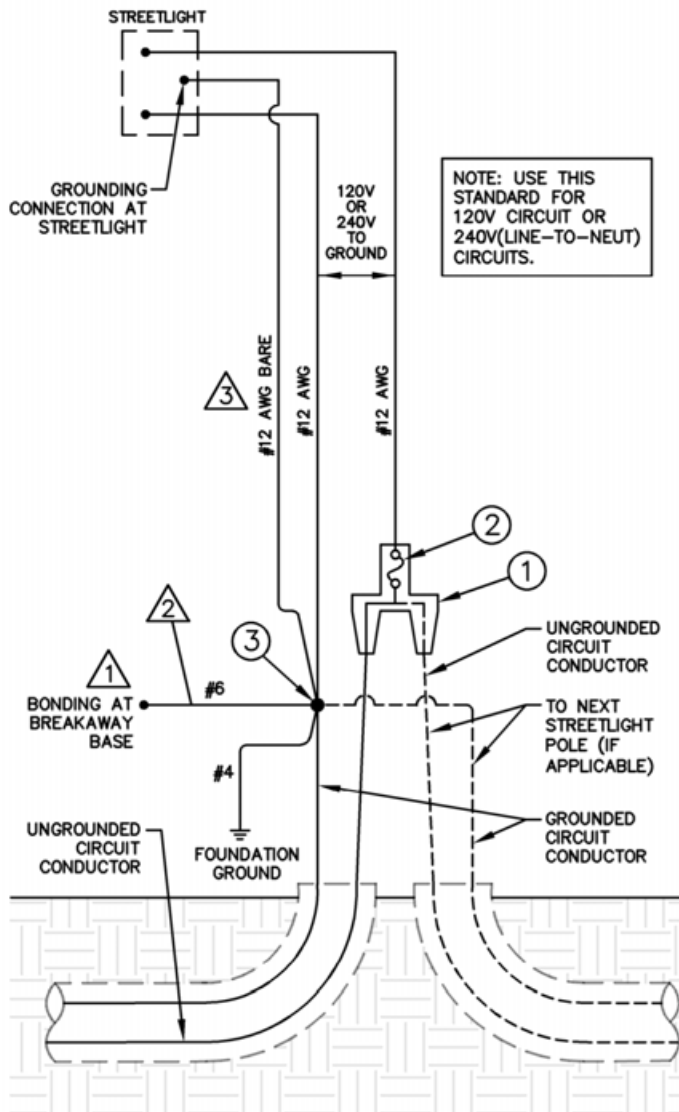


FUSE-N-2 - WIRE SCHEMATIC

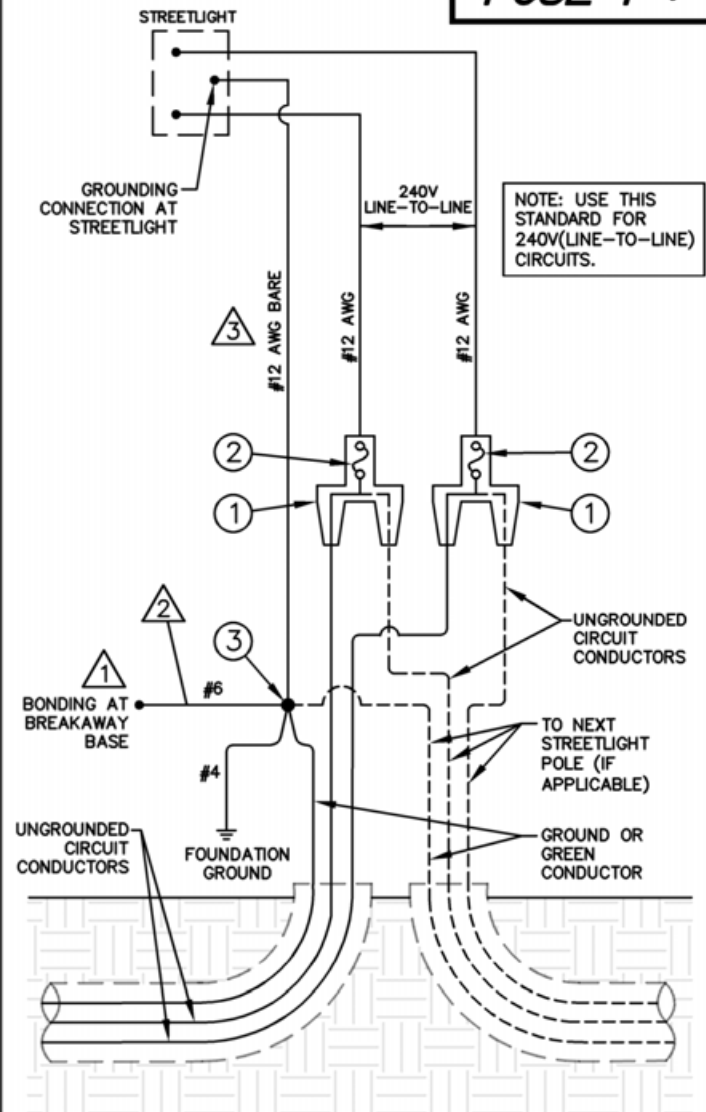
MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
STANDARD FUSE-N-1					
1	10 AMP FNM FUSE	107068	1	10 AMP FNM FUSE	107068
2	RUBBER INSULATING BOOTS FOR FUSEHOLDER	107061	2	RUBBER INSULATING BOOTS FOR FUSEHOLDER	107061
2	STREETLIGHT CONNECTOR KIT	107059	3	STREETLIGHT CONNECTOR KIT	107059
4	IN-LINE FUSEHOLDER	122831	4	IN-LINE FUSEHOLDER	122831
STANDARD FUSE-N-2					
1	10 AMP FNM FUSE	107068	1	10 AMP FNM FUSE	107068
2	RUBBER INSULATING BOOTS FOR FUSEHOLDER	107061	2	RUBBER INSULATING BOOTS FOR FUSEHOLDER	107061
2	STREETLIGHT CONNECTOR KIT	107059	3	STREETLIGHT CONNECTOR KIT	107059
4	IN-LINE FUSEHOLDER	122831	4	IN-LINE FUSEHOLDER	122831

<div>△</div>	GENERAL NOTES	ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	ENSURE THAT THERE IS A BONDING JUMPER FROM THE METAL POLE GROUNDING CONNECTOR TO THE ASSOCIATED LIGHTING CIRCUITS GROUND CONDUCTOR OR (FOR TWO-WIRE CIRCUITS) TO THE GROUNDED CIRCUIT CONDUCTOR TO CREATE AN EFFECTIVE GROUND-FAULT CURRENT PATH AND COMPLY WITH NESC 092B(1).	DRAWN BY:	IN-LINE FUSEHOLDER WITH FNM FUSE		
		E.C.			
		REV BY:			
		FILE:			
		FUSE-N-X			
2.	<u>DO NOT INSTALL FUSE ON GROUND WIRE.</u>	APPROVED:	REVISED:	SHEET	STD. NO.
		R.L.	3-9-22	1 OF 1	FUSE-N-*



FUSE-Y-1 - WIRE SCHEMATIC



FUSE-Y-2 - WIRE SCHEMATIC

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
STANDARD FUSE-Y-1					
1	FUSED BREAKAWAY "Y" CONNECTOR	107063	1	FUSED BREAKAWAY "Y" CONNECTOR	107063
2	10 AMP FNM FUSE	107068	2	10 AMP FNM FUSE	107068
3	STREETLIGHT CONNECTOR KIT	107059	3	STREETLIGHT CONNECTOR KIT	107059

- GENERAL NOTES**
- SCREW THE GROUNDING CLAMP/CONNECTOR INTO BREAKAWAY BASE'S THREADED GROUNDING PROVISION. THE GROUNDING CONNECTOR IS INCLUDED WITH BAB-1 AND BAB-2 MATERIAL. CONNECTOR(STOCK #2508564) IS ALSO AVAILABLE IN EXPENSE BIN STRO1.
 - ENSURE THAT THERE IS A BONDING JUMPER FROM THE BREAKAWAY BASE GROUNDING CONNECTOR TO THE ASSOCIATED LIGHTING CIRCUITS GROUND CONDUCTOR OR (FOR TWO-WIRE CIRCUITS) TO THE GROUNDED CIRCUIT CONDUCTOR TO CREATE AN EFFECTIVE GROUND-FAULT CURRENT PATH AND COMPLY WITH NESC 092B(1).
 - DO NOT INSTALL FUSE ON GROUND WIRE.

ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
DRAWN BY: J.P.	FUSED BREAKAWAY Y CONNECTOR KIT WITH FNM FUSE		
REV BY: E.C.			
FILE: FUSE-Y-X			
APPROVED: R.L.	REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. FUSE-Y-*

LIGHTING STANDARDS

(GENERAL - FUTURE SECTION)

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FOUNDATIONS AND HARDWARE

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7

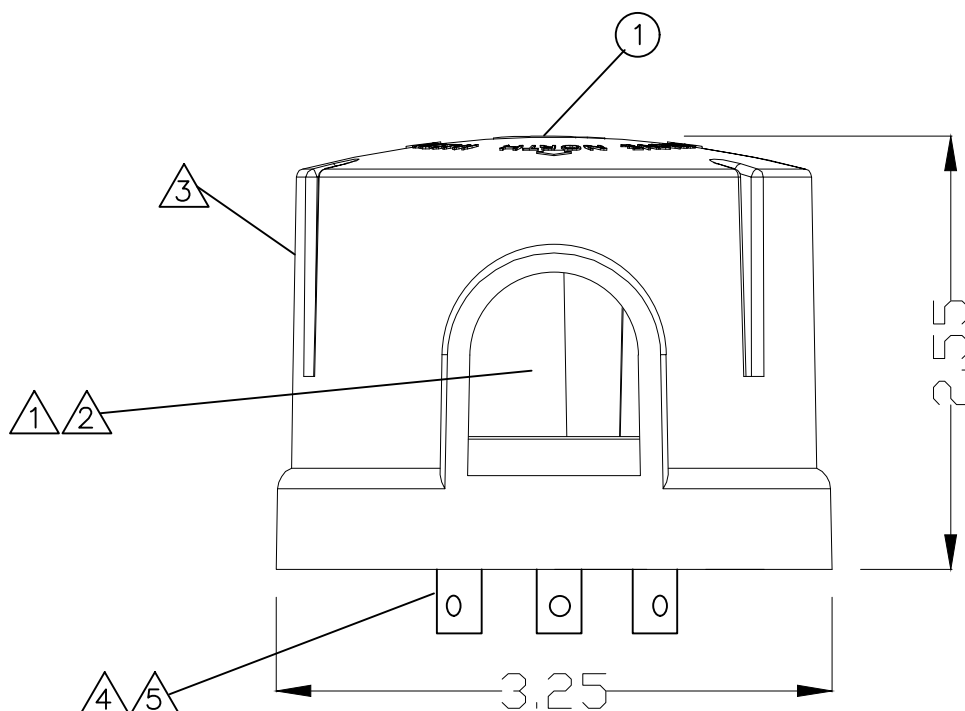


LIGHTING CONSTRUCTION STANDARDS

City Utilities of Springfield, MO

LIGHTING CONTROL - INDEX

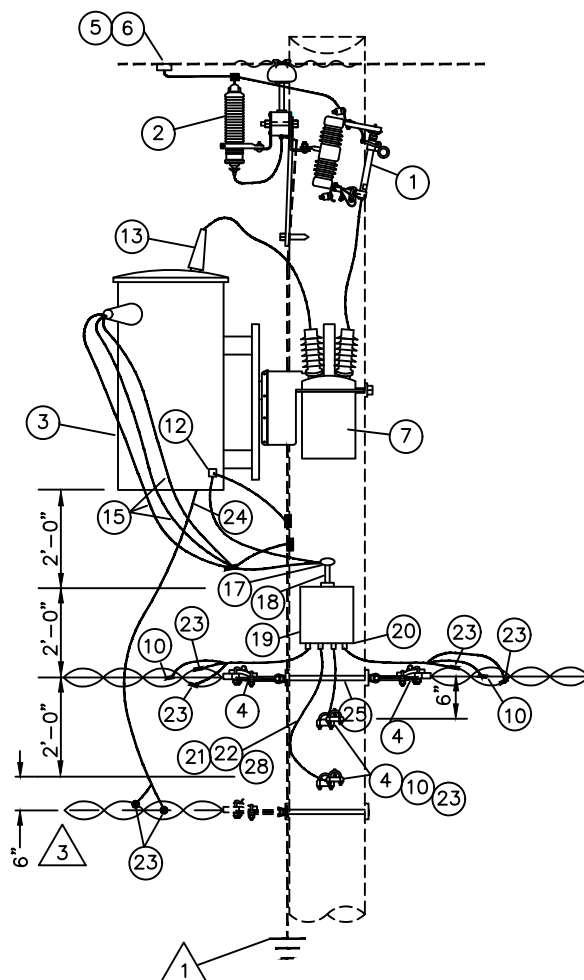
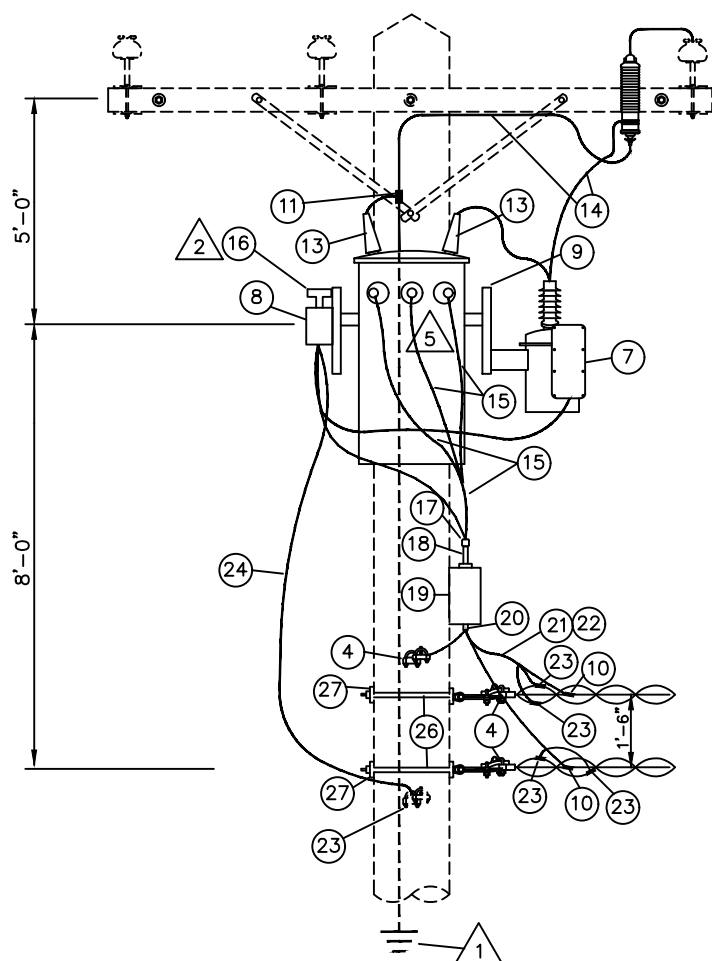
LED-PC	LED PHOTOCONTROL
WWC-P	WHITEWAY LIGHTING CONTROLLER - PRIMARY SWITCHED
WWC-S	WHITEWAY LIGHTING CONTROLLER - SECONDARY SWITCHED
WWC-U	WHITEWAY LIGHTING CONTROLLER - UNDERGROUND



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	STANDARD LED-PC LONG LIFE LED PHOTOCONTROL 120V-277V • LOAD RATING: 1000W-1800VA BALLAST • SURGE RATING: 1280J/40kA • HIGH INRUSH CURRENT APPLICATIONS	2509348			

GENERAL NOTES			ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	FAILURE MODE: FAIL-OFF		DRAWN BY:	LED PHOTOCONTROL 120V-277V		
2.	OPERATION LEVEL: TURN-ON 1.5 FOOTCANDLE, TURN-OFF 2.5 FOOTCANDLE.		J.P.			
3.	STANDARD COLOR FOR 120V-277V: GREEN		REV BY:			
4.	PLUG INTO RECEPTACLE ENSURING GASKET IS FIRMLY SEATED. TWIST CLOCKWISE UNTIL IT LOCKS INTO POSITION.		FILE:	LED-PC		
5.	IF PHOTOCONTROL RECEPTACLE ROTATION IS REQUIRED, ROTATE A MAXIMUM OF 90, 180, OR 270 DEGREES. TORQUE SCREWS USING 20-25 IN-LBS OF TORQUE.		APPROVED:			
			R.L.	REVISED:	3-9-22	SHEET 1 OF 1
						STD. NO. LED-PC



MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	CUTOUT 100 AMP	104082	17	WEATHER HEAD	N/S
2	ARRESTOR 10KV	104010	18	1-INCH GALV CONDUIT, 6-INCHES LONG	108058
3	TRANSFORMER, 2 BUSH., AS SPECIFIED ON CONSTRUCTION DRAWING	130XXX	19	RAINFOOF BREAKER LOAD CENTER WITH 4-40 AMP LIGHTING BREAKERS, 2-POLE, 240 VOLTS	N/S
4	NDE	102170	20	4 CONDUCTOR SEALS	N/S
5	CLAMP HOT LINE STIRRUP	103030	21	WIRE #4 STRAND, COPPER, TYPE THW, BLACK	101520
6	CLAMP HOT LINE	103015	22	WIRE #4 STRAND, COPPER, TYPE THW, RED	101522
7	REMOTE CONTROL OIL SWITCH	103021	23	10 SPLIT BOLT CONNECTOR #4AL/#8 CU.	103230
8	WHITEWAY LIGHTING RELAY WITH CONTROL CABLE TO OIL SWITCH	104260	24	12/2 U.F. COPPER	101415
9	UNIVERSAL TRANSFORMER MT. WITH KICKER	107146	25	1 DOUBLE ARM BOLT 5/8" X REQUIRED LENGTH	1020XX
10	4 CLAMP PARALLEL GROOVE	102178	26	2 EYE BOLT 5/8" X REQUIRED LENGTH	1021XX
11	AS REQ'D SPLIT BOLT CONNECTOR #4	103XXX	27	2 WASHER 2 X 2 X 5/8 FLAT	102439
12	1 TRANSFORMER GROUND LUG	103200	28	AS REQ WIRE #6 STRAND, COPPER TYPE THW GREEN	101515
13	2 WILDLIFE GUARD	103001			
14	AS REQ'D WIRE #4 COPPER BARE	102233			
15	AS REQ'D WIRE #4 COPPER W.P.	101163			
16	1 105-285 VOLT PHOTOELECTRIC CELL	101195			
		107065			

GENERAL NOTES

- SEE STANDARD G1 FOR GROUND.
- FACE PHOTO ELECTRIC CELL TO THE NORTH.
- SEPARATE 120 VOLT SOURCE.

ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

A.C.

REV BY:

S.N.

FILE:

WWC-P

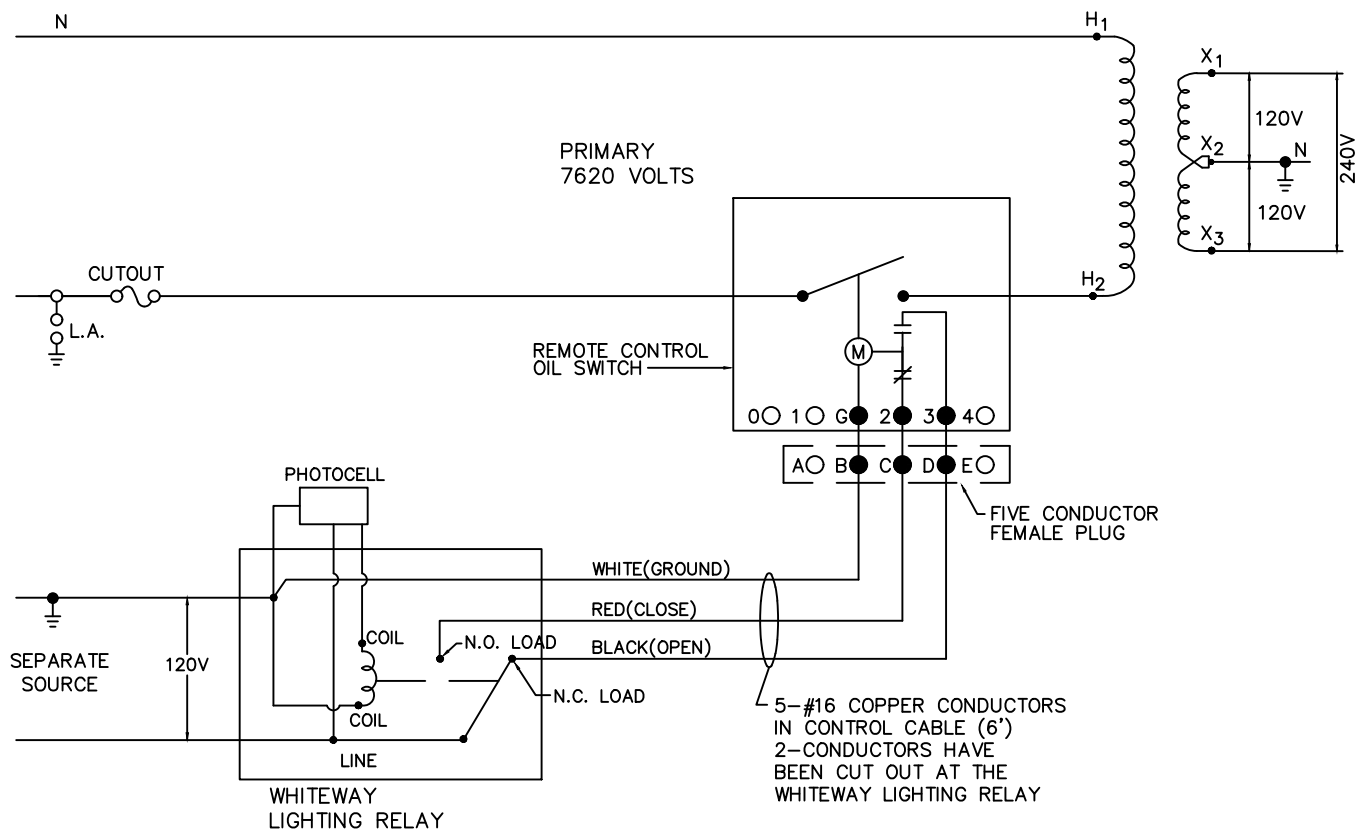
APPROVED:

WHITEWAY CONTROLLER
PRIMARY SWITCHED

REVISED:
5-25-94

SHEET
1 OF 2

STD. NO.
WWC-P



CONNECTION DIAGRAM



GENERAL NOTES

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

R. W.

REV BY:

FILE:

WWC-P

APPROVED:

WHITWAY CONTROLLER
PRIMARY SWITCHED

REVISED:

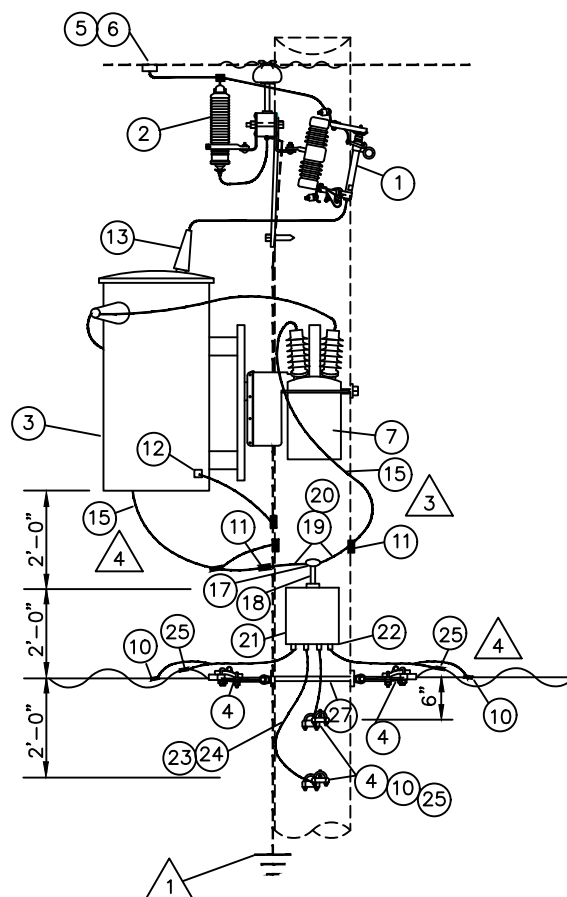
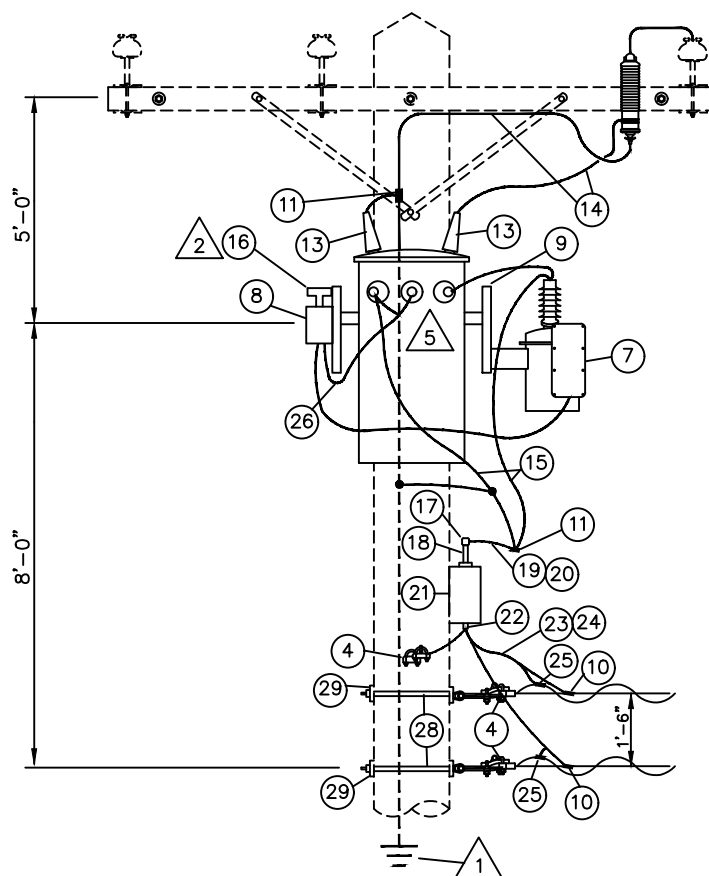
5-14-94

SHEET

2 OF 2

STD. NO.

WWC-P



NOTE: ONLY TO BE USED WITH ELECTRIC
LINE ENGINEERING MANAGER'S APPROVAL.

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1	CUTOUT 100 AMP	104082	17	WEATHER HEAD	N/S
2	ARRESTOR 10KV	104010	18	1-INCH GALV CONDUIT, 6-INCHES LONG	108058
3	TRANSFORMER, 2 BUSH., AS SPECIFIED ON CON- STRUCTION DRAWING	130XXX	19	WIRE #4 STRAND COPPER, TYPE THW, BLACK	101520
4	NDE	102170	20	WIRE #4 STRAND COPPER, TYPE THW, RED	101522
5	CLAMP HOT LINE STIRRUP	103030	21	RAINFOOD BREAKER LOAD CENTER WITH 4-30 AMP LIGHTING BREAKERS, 2-POLE, 240 VOLTS	N/S
6	CLAMP HOT LINE	103015	22	CONDUCTOR SEALS	N/S
7	REMOTE CONTROL OIL SWITCH	103021	23	WIRE #8 STRAND, COPPER, TYPE THHN-THWN, BLACK	101505
8	WHITEWAY LIGHTING RELAY WITH CONTROL CABLE TO OIL SWITCH	104260	24	WIRE #8 STRAND, COPPER, TYPE THHN-THWN, WHITE	101510
9	TRANSFORMER MOUNT	107146	25	SPLIT BOLT CONNECTOR #4AL/#8 CU.	103230
10	CLAMP PARALLEL GROOVE	120860	26	12/2 U.F. COPPER	101415
11	AS REQ'D SPLIT BOLT CONNECTOR #4	103XXX	27	DOUBLE ARM BOLT 5/8" X REQUIRED LENGTH	1020XX
12	TRANSFORMER GROUND LUG	103200	28	EYE BOLT 5/8" X REQUIRED LENGTH	1021XX
13	WILDLIFE GUARD	103001	29	WASHER 2 X 2 X 5/8 FLAT	102439
14	AS REQ'D WIRE #4 COPPER BARE	102233			
15	AS REQ'D WIRE #4 COPPER W.P.	101163			
16	105-285 VOLT PHOTOELECTRIC CELL	101195			
		107065			



GENERAL NOTES

- SEE STANDARD G1 FOR GROUND.
- FACE PHOTO ELECTRIC CELL TO THE NORTH.
- CONNECT LEAD FROM OIL SWITCH TO THE NON-GROUNDED CONDUCTOR.
- CONNECT OTHER LEAD FROM TRANSFORMER TO THE GROUNDED CONDUCTOR.
- REMOVE GROUND STRAP FROM CENTER BUSHING.

ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

A.C.

REV BY:

FILE:

WWC-S

APPROVED:

WHITEWAY CONTROLLER
SECONDARY SWITCHED

WITH ELEC. LINE ENG. MGR. APPROVAL

REVISED:

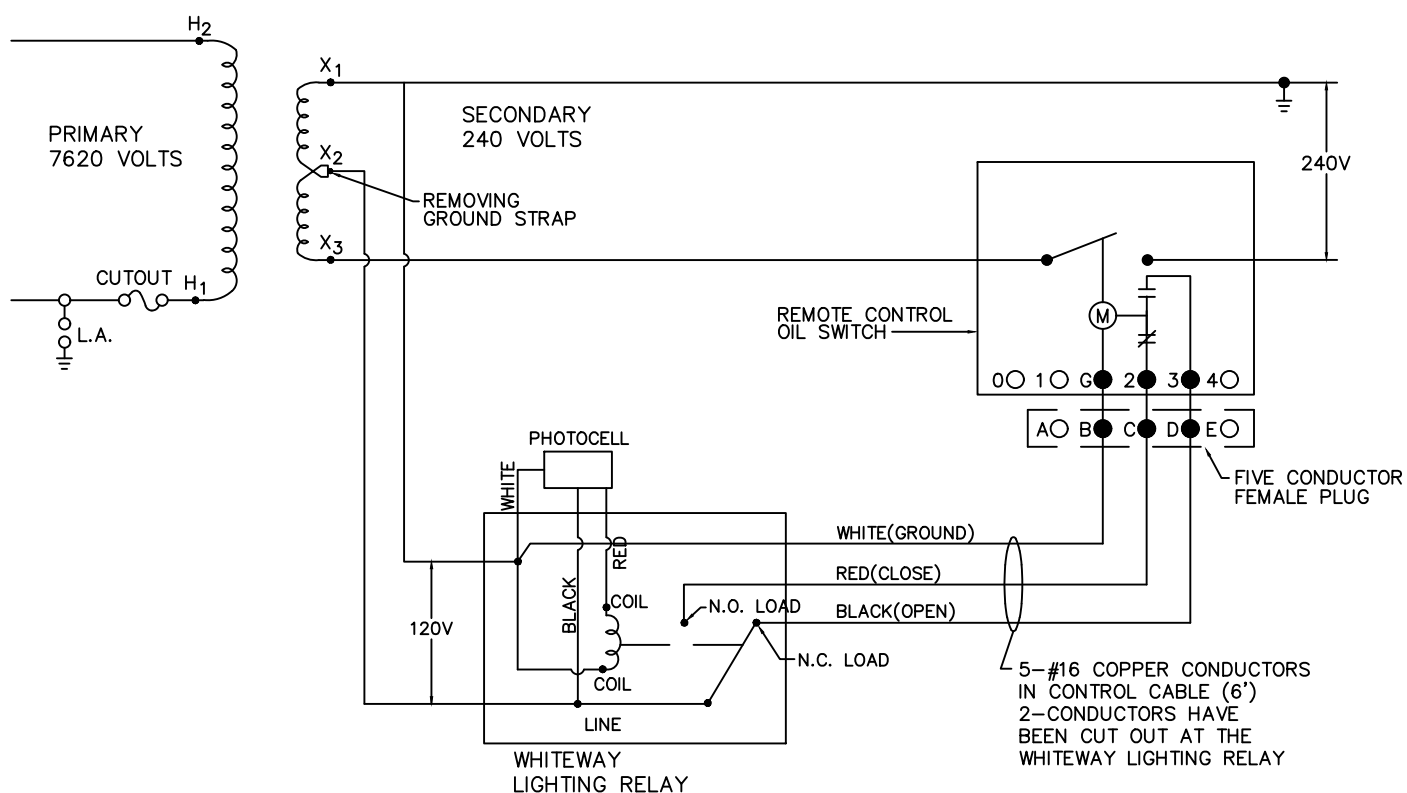
3-9-22

SHEET

1 OF 2

STD. NO.

WWC-S



CONNECTION DIAGRAM



GENERAL NOTES

**ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.**

DRAWN BY:

A.C.

REV BY:

FILE:

WWC-S

APPROVED:

WHITEWAY CONTROLLER
SECONDARY SWITCHED
CONNECTION DIAGRAM
WITH ELEC. LINE ENG. MGR. APPROVAL

REVISED:

3-9-22

SHEET

2 OF 2

STD. NO.

WWC-S



QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
1.	PREWIRED WHITEWAY LIGHTING CONTROL PANEL TO INCLUDE FOLLOWING:	2508921	17.	(CONTINUED) CONTROL PANEL TO INCLUDE FOLLOWING:	
2.	ENCLOSURE- DUST-TIGHT, WATER-TIGHT GALVANIZED STEEL, PAINTED ANSI 61 GRAY		1.	DIN RAIL. LENGTH AS REQUIRED TO ALLOW FOR (4) DIN-RAIL MOUNTED CONTACTORS	
3.	MOUNTING PAN-MINIMUM 31.5"x12"x1/4" AL. OR STAINLESS STEEL, WITH 2" SPACERS		18.	WEATHERPROOF ADHESIVE LABEL. VINYL RAISED LETTERING (OR EQUIVALENT. SEE DETAIL)	
4.	PANELBOARD INTERIOR ('SQUARE D' #NQ181L) TO INCLUDE FOLLOWING:			<u>Items below, provided by contractor (except as noted below):</u>	
5.	100A/2-POLE (240V) BRANCH-MTD. MAIN BREAKER		19.	BASE MOUNTING PLATE (FURNISHED BY C.U.). ENCASE IN CONCRETE BASE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE DUCT SEAL BETWEEN BASE AND THE ENCLOSURE FOR A WATERTIGHT SEAL.	
6.	40A/2P BOLT-ON BREAKER ('SQUARE D' #QOB240H)		20.	1/2-13 HEX HEAD BOLTS WITH LOCK WASHERS, FLAT WASHER AND NUTS TO MOUNT ENCLOSURE TO BASE PLATE. (FURNISHED WITH BASE MOUNTING PLATE, BY C.U.)	
7.	15-AMP/1-POLE CONTROL CIRCUIT BREAKER		21.	5/8" x 8' GROUND ROD.	
8.	SURGE BREAKER ('SQUARE D' #Q02175SB)		22.	10' #4 AWG GROUND WIRE (TO GROUND ROD). COIL ABOVE BASE.	
9.	NEUTRAL BAR (100-AMP)		23.	3/4" PVC CONDUIT (FOR GROUND WIRE).	
10.	GROUND BAR, BONDED TO ENCLOSURE & NEUTR. BAR		24.	2" PVC CONDUIT.	
11.	PRE-WIRED "ON/AUTO" SELECTOR SWITCH. LABEL SWITCH PLATE.		25.	CLASS B CONCRETE.	
12.	TWISTLOCK PHOTOCELL RECEPTACLE (120-VOLT, 1000W) FOR USE BEHIND TRANSPARENT WINDOW.			CU YD.	
13.	METAL/FLANGE GUARD OVER CLEAR WINDOW.				
14.	CLEAR LEXAN #9034 WINDOW; MIN. 1/4" THICK.				
15.	STAINLESS STEEL PIANO HINGE.				
16.	60-AMP, 3P DIN-RAIL MOUNTED CONTACTOR				

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

1. CONDUITS SHOWN IN STANDARD ARE SHOWN FOR PLACEMENT ONLY. CONDUIT LOCATIONS SHALL NOT INTERFERE WITH BASE PLATE. STUB-UP INCOMING CONDUIT ON SUPPLY SIDE (INCOMING LUGS SIDE). REFER TO CITY UTILITIES ELECTRIC LINE ENGINEERING DRAWINGS FOR QUANTITY OF CONDUITS ON LOAD-SIDE.
2. SCHEMATIC DIAGRAM SHALL BE INSERTED IN A PLASTIC PROTECTOR. INSTALL PLASTIC PROTECTOR INSIDE ENCLOSURE, ON THE PANEL DOOR.
3. BASE MOUNTING PLATE (STOCK #2509605) WILL BE FURNISHED TO CONTRACTOR, FOR CONTRACTOR INSTALLATION.

DRAWN BY:

F.C.

REV BY:

FILE:

WWC-U

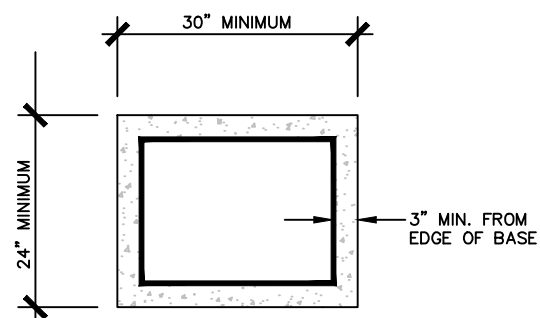
APPROVED:

WHITEWAY CONTROLLER
UNDERGROUND

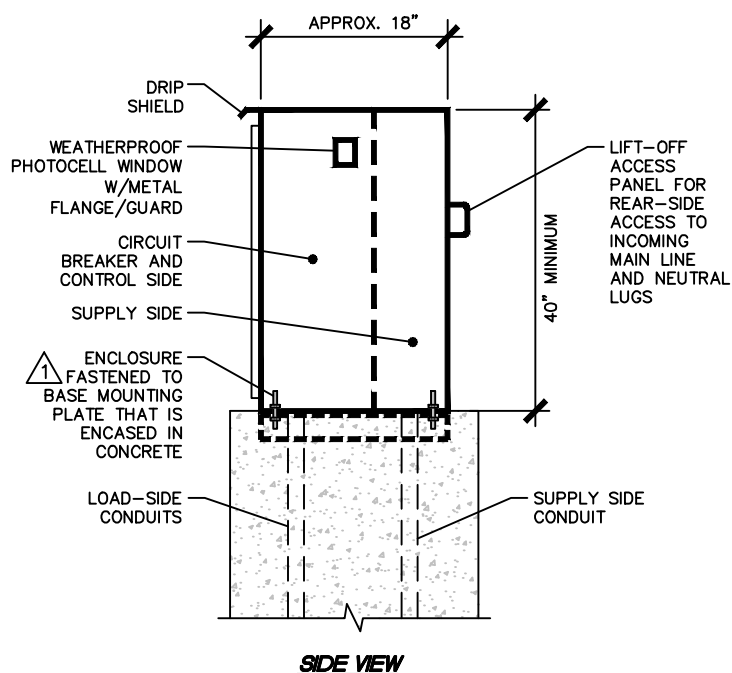
REVISED:	9-27-19
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SHEET
1 OF 2

STD. NO.
WWC-U



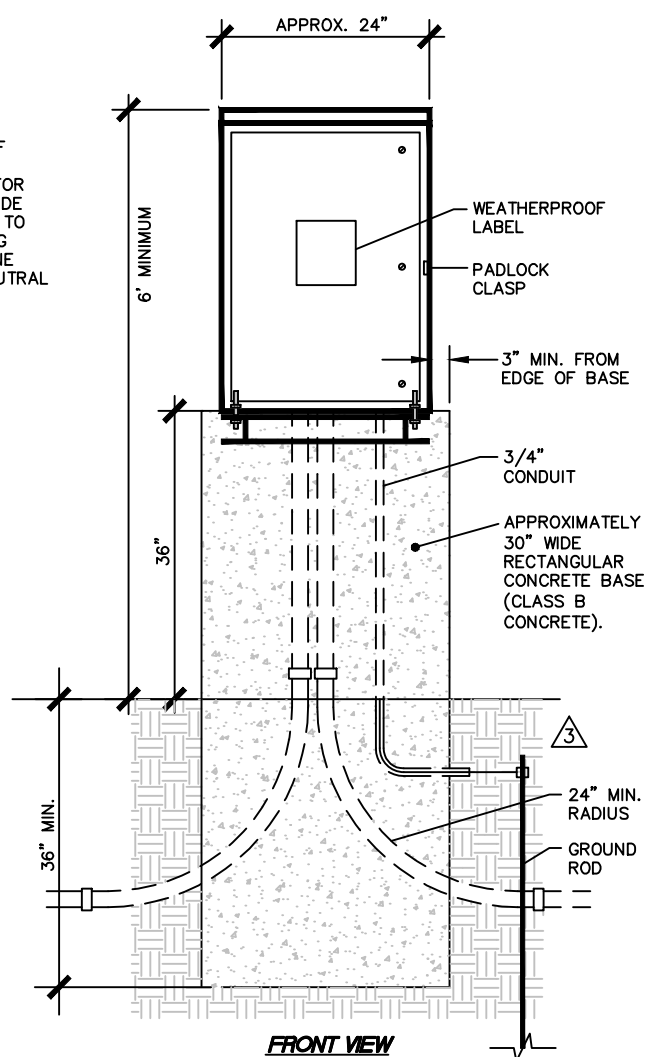
TOP VIEW



SIDE VIEW



WEATHERPROOF LABEL DETAIL



FRONT VIEW



GENERAL NOTES

1. BASE MOUNTING PLATE (MANUFACTURED BY CONTROLLER MFR.) SHALL BE ENCASED IN CONCRETE BASE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE DUCT SEAL BETWEEN BASE AND PEDESTAL FOR WATERTIGHT SEAL.
2. CABINET SHALL BE LOCATED AWAY FROM TRAFFIC. SIDE-FACING PHOTOCONTROL SHALL BE UNOBSTRUCTED.
3. CONNECTION TO GROUND ROD SHALL BE BY AN IRREVERSIBLE CADWELD.

ELECTRIC CONSTRUCTION STANDARD
CITY UTILITIES OF SPRINGFIELD, MO.

DRAWN BY:

E.C.

REV BY:

E.C.

FILE:

WWC-U

APPROVED:

WHITEWAY CONTROLLER
UNDERGROUND

REVISED:
9-27-19

SHEET
2 OF 2

STD. NO.
WWC-U

LIGHTING STANDARDS

(GENERAL - FUTURE SECTION)

1

POLES AND BREAKAWAY BASES

2

FOUNDATIONS AND HARDWARE

3

LIGHTS

4

PROTECTION AND CONNECTORS

5

LIGHTING CONTROL

6

MISCELLANEOUS COMPONENTS

7

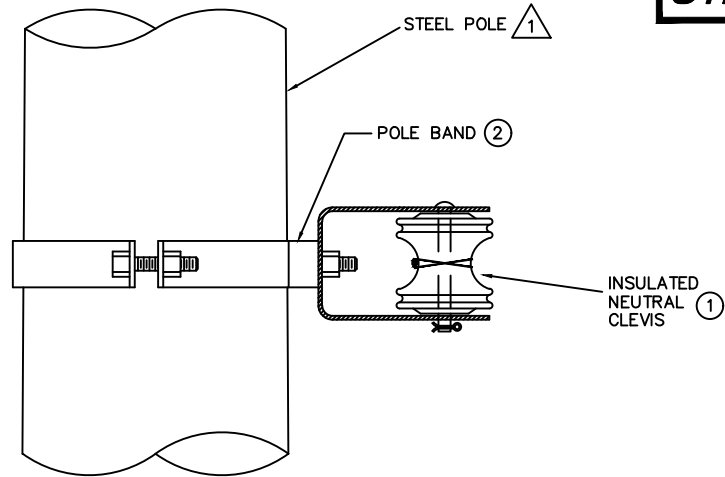


LIGHTING CONSTRUCTION STANDARDS
City Utilities of Springfield, MO

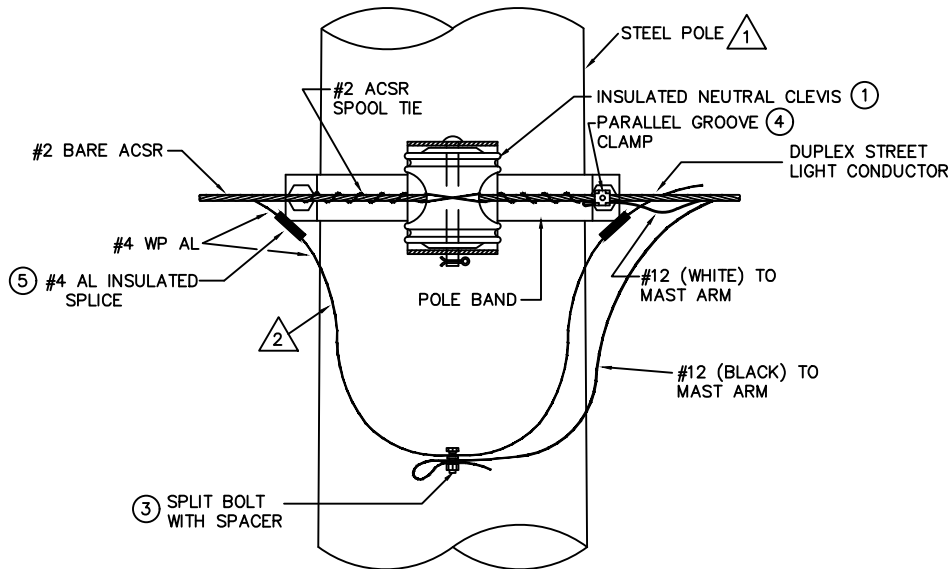
MISCELLANEOUS COMPONENTS - INDEX

STLT-CLMP

STEEL POLE OVERHEAD ATTACHMENT (POLE BAND CLAMP)



SIDE VIEW



FRONT VIEW

MATERIAL LIST

QTY.	DESCRIPTION	STOCK NO.	QTY.	DESCRIPTION	STOCK NO.
STANDARD STLT-CLMP					
1	INSULATED NEUTRAL CLEVIS	102170			
1	POLE BAND CLAMP	103035			
1	SPLIT BOLT CONNECTOR WITH INHIBITOR	103230			
	#4AL/ #12 CU				
1	PARALLEL GROOVE CLAMP WITH INHIBITOR	103070			
2	#4 ALUMINUM INSULATED SPLICE (INSULINK)	103370			

GENERAL NOTES		ELECTRIC CONSTRUCTION STANDARD CITY UTILITIES OF SPRINGFIELD, MO.			
1.	ONLY TO BE USED ON STEEL POLES WITH PROVISION IN MAST ARM FOR CONNECTIONS.	DRAWN BY: J.P. REV BY: FILE: STLT CLMP APPROVED: R.L.		OVERHEAD ATTACHMENT POLE BAND CLAMP STEEL POLE ONLY	
2.	CUT #4 W.P. ALUMINUM CONDUCTOR AND INSTALL AN ADDITIONAL 12" MINIMUM LENGTH OF #4 W.P. ALUMINUM CONDUCTOR.				
		REVISED: 3-9-22	SHEET 1 OF 1	STD. NO. STLT-CLMP	