

3.0 Method of Measurement. Existing power supply/controller modification shall be measured for payment per each (EA).

4.0 Basis of Payment. All costs for materials, equipment, labor and installation shall be included in the cost for "Existing Power Supply/Controller Modification", for a fully functional power supply/controller, and be paid at the contract unit price per each. Additional electrical equipment, breakers, hardware, and connections may be required for a fully functional system. No additional payment will be made for any incidental items necessary to obtain a fully functional system for the new decorative lighting.

Pay Item No. 901-99.02, Existing Power Supply/Controller Modification, per each.

BB. DECORATIVE POLE AND LUMINAIRE FIXTURES

1.0 Description. This work shall cover all labor and materials necessary to furnish and install decorative pole and luminaire fixtures at locations shown on the plans.

2.0 Construction Requirements. Work shall be in accordance with Section 901 and the manufacturer's recommendations.

3.0 Materials. The type of pole and luminaires required shall be as shown in the plans. The pole shall be a Holophane 14' nominal height, 12' pole height, with a 48" direct burial foundation, Catalog # ~~SMA12S4J00P07DBBBK~~ and shall be black finish. The luminaires shall be an American Revolution 45 Watt LED Series 247L, Catalog # 247L 20LEDE70 XXXX 4K R2 AY and Catalog # 247L 20LEDE70 XXXX 4K R5 AY and shall be black finish. The specified pole and luminaire has an approved public interest finding letter from the Missouri Department of Transportation. For a copy of this approval letter, please contact the City. The Contractor shall submit shop drawings to the City for their review and approval, prior to ordering the decorative luminaires and poles.

4.0 Method of Measurement. Decorative pole and luminaire fixtures shall be measured for payment per each (EA).

5.0 Basis of Payment. All costs for materials, equipment, labor and installation shall be included in the cost for "Decorative Pole and Luminaire Fixture, Type R2", and be paid at the contract unit price per each. The unit price shall include all materials, excavation, backfill, foundations, labor, electrical hook-up, equipment, and incidentals for a fully functional pole and luminaire.

All costs for materials, equipment, labor and installation shall be included in the cost for "Decorative Pole and Luminaire Fixture, Type R5", and be paid at the contract unit price per each. The unit price shall include all materials, excavation, backfill, foundations, labor, electrical hook-up, equipment, and incidentals for a fully functional pole and luminaire.

Pay Item No. 901-99.02, Decorative Pole and Luminaire Fixture, Type R2, per each.

SMA 12 L4E 09 P07 DBB BK

ADDENDUM NO. 1

003_Quantities-11.dgn

DECORATIVE POLE AND LUMINAIRE FIXTURES						
LUMINAIRE POLE NO.	STATION	OFFSET	LOCATION	TYPE R2	TYPE R5	CIRCUIT
A101	13+69.80	120.4' LT	ACKERT WALKWAY		1	A1
A102	13+70.22	67.0' LT	ACKERT WALKWAY	1		A1
A103	13+70.65	12.0' LT	ACKERT WALKWAY	1		A1
A104	13+96.70	6.9' RT	ACKERT WALKWAY	1		A1
A105	14+46.70	6.8' RT	ACKERT WALKWAY	1		A1
A106	14+96.70	6.7' RT	ACKERT WALKWAY	1		A1
A107	15+46.70	6.8' RT	ACKERT WALKWAY	1		A1
A108	15+96.70	6.5' RT	ACKERT WALKWAY	1		A1
A109	16+46.70	6.4' RT	ACKERT WALKWAY	1		A1
A110	16+96.70	6.3' RT	ACKERT WALKWAY	1		A1
A111	17+46.70	6.1' RT	ACKERT WALKWAY	1		A1
A112	17+96.70	6.0' RT	ACKERT WALKWAY	1		A1
A113	18+46.70	5.9' RT	ACKERT WALKWAY	1		A1
A114	18+96.70	5.8' RT	ACKERT WALKWAY	1		A1
A115	19+46.66	6.1' RT	ACKERT WALKWAY	1		A1
A116	19+96.66	5.8' RT	ACKERT WALKWAY	1		A1
A117	20+39.19	54.6' LT	ACKERT WALKWAY		1	A1
A118	20+39.03	88.7' LT	ACKERT WALKWAY		1	A1
A119	20+39.10	135.3' LT	ACKERT WALKWAY		1	A1
A120	21+05.87	134.9' LT	ACKERT WALKWAY		1	A1
A121	21+05.79	87.8' LT	ACKERT WALKWAY		1	A1
A122	21+08.88	54.6' LT	ACKERT WALKWAY		1	A1
A201	20+46.69	5.7' RT	ACKERT WALKWAY	1		A2
A202	20+96.69	5.9' RT	ACKERT WALKWAY	1		A2
A203	21+11.07	41.0' RT	ACKERT WALKWAY	1		A2
A204	21+10.67	96.8' RT	ACKERT WALKWAY	1		A2
A205	21+10.27	152.5' RT	ACKERT WALKWAY	1		A2
A206	21+46.69	5.7' RT	ACKERT WALKWAY	1		A2
A207	21+96.69	5.8' RT	ACKERT WALKWAY	1		A2
A208	22+46.69	5.8' RT	ACKERT WALKWAY	1		A2
A209	22+96.69	5.9' RT	ACKERT WALKWAY	1		A2
A210	23+46.69	5.9' RT	ACKERT WALKWAY	1		A2
A211	23+96.69	5.9' RT	ACKERT WALKWAY	1		A2
A212	24+39.79	5.9' RT	ACKERT WALKWAY	1		A2
A213	24+39.53	16.6' LT	ACKERT WALKWAY	1		A2
A214	24+87.12	17.3' LT	ACKERT WALKWAY	1		A2
A215	24+89.80	5.8' RT	ACKERT WALKWAY	1		A2
A216	25+43.14	5.7' RT	ACKERT WALKWAY	1		A2
A217	25+96.68	5.6' RT	ACKERT WALKWAY	1		A2
A218	26+46.68	5.6' RT	ACKERT WALKWAY	1		A2
A219	26+96.68	5.7' RT	ACKERT WALKWAY	1		A2
A220	27+46.68	5.6' RT	ACKERT WALKWAY	1		A2
A221	27+96.69	5.6' RT	ACKERT WALKWAY	1		A2
A222	28+46.69	5.6' RT	ACKERT WALKWAY	1		A2
A223	28+96.68	6.3' RT	ACKERT WALKWAY	1		A2
TOTAL EACH:				38	7	

RIGID CONDUIT										
CIR	TRENCHED				PUSHED				FROM	TO
	2"	3"	4"	5"	2"	3"	4"	5"		
A1 & A2		20							P/S "A"	PB A1
A1					36				PB A1	A103
A1	63								A103	A102
A1	61								A102	A101
A1					41				A103	A104
A1	58								A104	A105
A1	58								A105	A106
A1	58								A106	A107
A1	58								A107	A108
A1	58								A108	A109
A1	58								A109	A110
A1	58								A110	A111
A1	62								A111	A112
A1	63								A112	A113
A1	58								A113	A114
A1	58								A114	A115
A1	58								A115	A116
A1					85				A116	A117
A1					43				A117	A118
A1	55								A118	A119
A1	75								A118	A121
A1	56								A121	A120
A1					42				A121	A122
A2	658				39				PB A1	PB A2
A2					38				PB A2	A201
A2	126								PB A2	A203
A2	63								A203	A204
A2	64								A204	A205
A2					58				A201	A202
A2					54				A202	A206
A2	58								A206	A207
A2	58								A207	A208
A2	58								A208	A209
A2	63								A209	A210
A2	63								A210	A211
A2	52								A211	A212
A2					31				A212	A213
A2	56								A213	A214
A2	67								A212	A215
A2	68								A215	A216
A2	62								A216	A217
A2	58								A217	A218
A2	58								A218	A219
A2	58								A219	A220
A2	58								A220	A221
A2	58								A221	A222
A2	58								A222	A223
TOTAL	2879	20			467				=====	

DISCLAIMER
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THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

JOHN R. KEEVEN
PROFESSIONAL ENGINEER
MO. P.E. LICENSE • 2010000836

REVISIONS

NUMBER	BY	DATE
1	CMT	06/05/2019

PULL BOXES							
STATION	OFFSET	LOCATION	P.B.	PERFORM	DRAIN TYPE		
			NO.	CLASS 1	I	II	III
13+40.61	25.4' LT	ACKERT WALKWAY	A1	1	1		
20+12.78	8.7' RT	ACKERT WALKWAY	A2	1	1		
				2	EACH		

SUMMARY OF QUANTITIES

SHEET 5 OF 6

UNIVERSITY CITY, MISSOURI
ACKERT WALKWAY IMPROVEMENTS
TAP-5402(617)

1 INCH CABLE-CONDUIT 2 COND. & 1 B.N. #8 AWG			
CIRCUIT	FROM	TO	FEET
A1	P/S "A"	PB A1	34
A1	PB A1	A103	44
A1	A103	A102	65
A1	A102	A101	63
A1	A103	A104	63
A1	A104	A105	60
A1	A105	A106	60
A1	A106	A107	60
A1	A107	A108	60
A1	A108	A109	60
A1	A109	A110	60
A1	A110	A111	60
A1	A111	A112	63
A1	A112	A113	65
A1	A113	A114	60
A1	A114	A115	60
A1	A115	A116	60
A1	A116	A117	87
A1	A117	A118	45
A1	A118	A119	57
A1	A118	A121	77
A1	A121	A120	57
A1	A121	A122	44
SUBTOTAL :			1364
SUBTOTAL (+5% FOR SNAKING) :			1432
TOTAL:			1430

1 INCH CABLE-CONDUIT 2 COND. & 1 B.N. #6 AWG			
CIRCUIT	FROM	TO	FEET
A2	P/S "A"	PB A1	34
A2	PB A1	PB A2	711
A2	PB A2	A203	134
A2	A203	A204	65
A2	A204	A205	66
A2	PB A2	A201	46
A2	A201	A202	60
A2	A202	A206	60
A2	A206	A207	60
A2	A207	A208	60
A2	A208	A209	60
A2	A209	A210	65
A2	A210	A211	65
A2	A211	A212	53
A2	A212	A213	33
A2	A213	A214	58
A2	A212	A215	69
A2	A215	A216	70
A2	A216	A217	63
A2	A217	A218	63
A2	A218	A219	60
A2	A219	A220	60
A2	A220	A221	60
A2	A221	A222	60
A2	A222	A223	60
SUBTOTAL :			2195
SUBTOTAL (+5% FOR SNAKING) :			2305
TOTAL:			2300

EXISTING POWER SUPPLY/CONTROLLER MODIFICATION								
STATION	OFFSET	LOCATION	CONTROL LETTER	BREAKER (AMPS)				MODIFY MULTI CIR. 240V
				MAIN	1	2	3	4
13+34	36.4' LT	ACKERT WALKWAY	A	100	15	15		
TOTALS EACH:								1

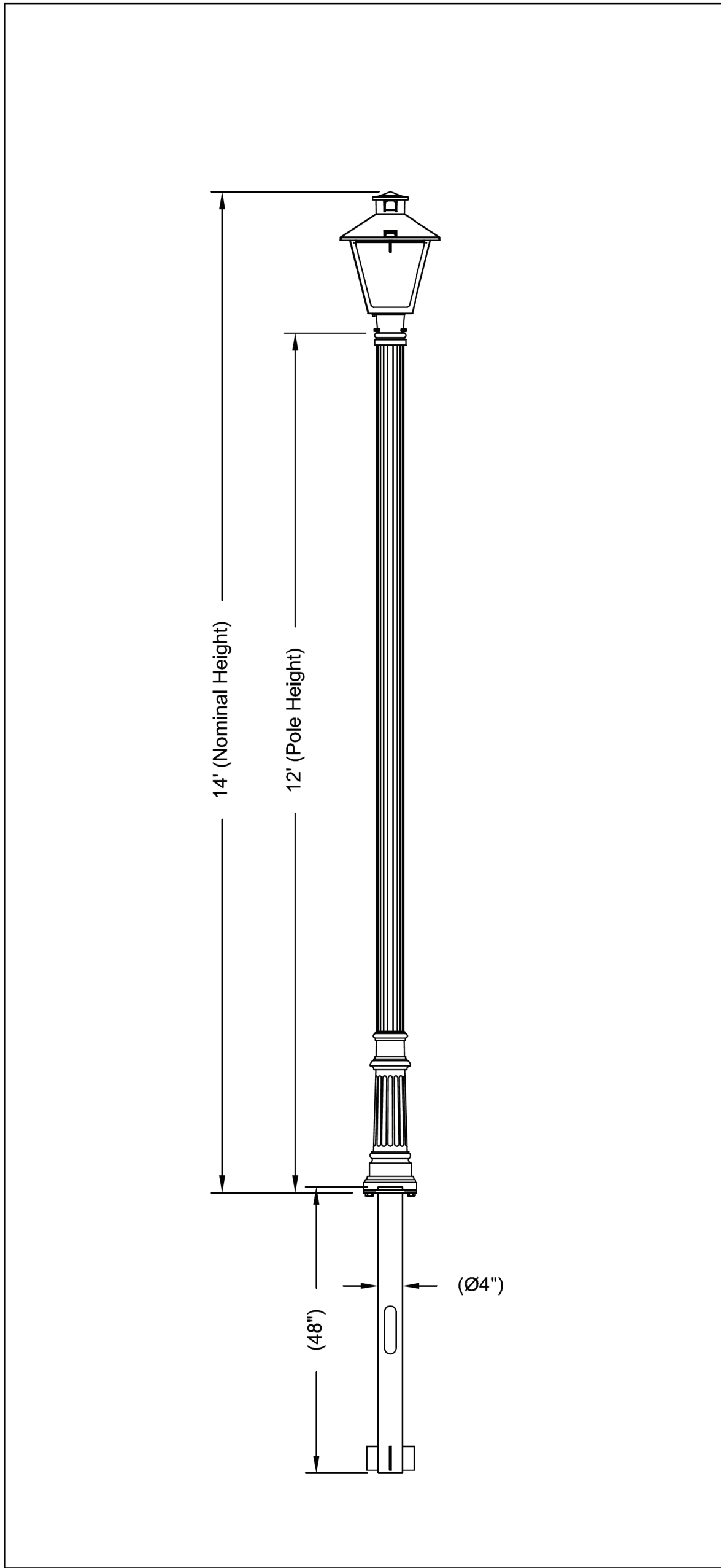
NOTE: THE CONTRACTOR SHALL MODIFY THE EXISTING POWER SUPPLY / CONTROLLER LOCATED ON THE EXISTING WOOD POLE FOR USE WITH THE NEW DECORATIVE LIGHTING FIXTURES. THIS INCLUDES DISCONNECTING AND REMOVING THE EXISTING WIRING, HOOKING UP THE NEW WIRING FOR NEW CIRCUITS A1 & A2, ANY NECESSARY NEW CIRCUIT BREAKERS, AND ANY NECESSARY HARDWARE AND MATERIALS NEEDED FOR A FULLY FUNCTIONAL POWER SUPPLY / CONTROLLER. SEE JSPTS FOR MORE DETAILS.

1" CABLE-CONDUIT IS LISTED AS THE PAY ITEMS FOR BOTH 2 COND. & 1 B.N. #6 AWG & #8 AWG. THE INTENTION WAS TO JUST USE THE WIRES AND NOT THE CONDUIT, SINCE THE WIRES WILL BE LOCATED IN A RIGID CONDUIT SYSTEM.

THE PAY ITEMS WILL REMAIN THE SAME AS CABLE-CONDUIT, BUT ONLY THE 3 WIRES FOR #6 AWG & #8 AWG WILL BE REQUIRED IN THE RIGID CONDUIT SYSTEM (NO CABLE-CONDUIT).

ADDENDUM #1

ADDENDUM #1



Specifications

DESCRIPTION
The lighting post shall be all aluminum or cast aluminum, one-piece construction, with a classic square base design. The post is shown with direct burial base.

MATERIALS
The base shall be heavy wall, cast aluminum produced from certified ASTM 355.1 ingot per ASTM B-179-95a or ASTM B26-95. The straight shafts shall be extruded from aluminum, ASTM 6061 alloy. All hardware shall be stainless steel. Anchor bolts to be completely hot dip galvanized.

CONSTRUCTION
The shaft shall be double welded to the base casting and shipped as one piece for maximum structural integrity. The shaft shall be welded inside the base casting at the top of the access door, and externally where the shaft exits the base. All welding shall be per ANSI/AWS

DIMENSIONS
The post shall be 12'-0" in height with a 9" base. The shaft diameter shall be Ø4". At the top of the post, a Ø3"x3" tall tenon with a transitional donut shall be provided for luminaire mounting.

INSTALLATION
The post shall use four, hot dip galvanized L-type anchor bolts. A door shall be provided in the base for anchorage and wiring access. A grounding screw shall be provided inside the base opposite the door.

FINISH
The entire post assembly shall have a Holophane black finish.

LUMINAIRE
American Revolution Series 247L
(*Please see sales rep for standard luminaire cut sheet.)

NOTES:
1. APPROVED AND COMPLETED SUBMITTAL SHALL ACCOMPANY PO

Anchorage Detail

Catalog #'s:
Pole: SMA12L4E09P07DBBBK
Fixture: 247L 20LEDE10 MVOLT 4K R5 AY PCLL
(Please see sales rep for standard cut sheet.)

Customer Signature _____ **Date** _____



THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE ON THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE PROVIDED. THIS PRINT IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO OUR INTERESTS, AND ONLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.

UCity Ackert Walkway
Missouri

ORDER #: 2377-18-10345-2	TYPE:	DRAWING #:
REVISION:	REVISION DATE:	TSG011494
DRAWN: WWB	ORIGIN DATE: 6-7-19	PAGE: 1 of 1



American Revolution LED
Series 247L

PRODUCT OVERVIEW

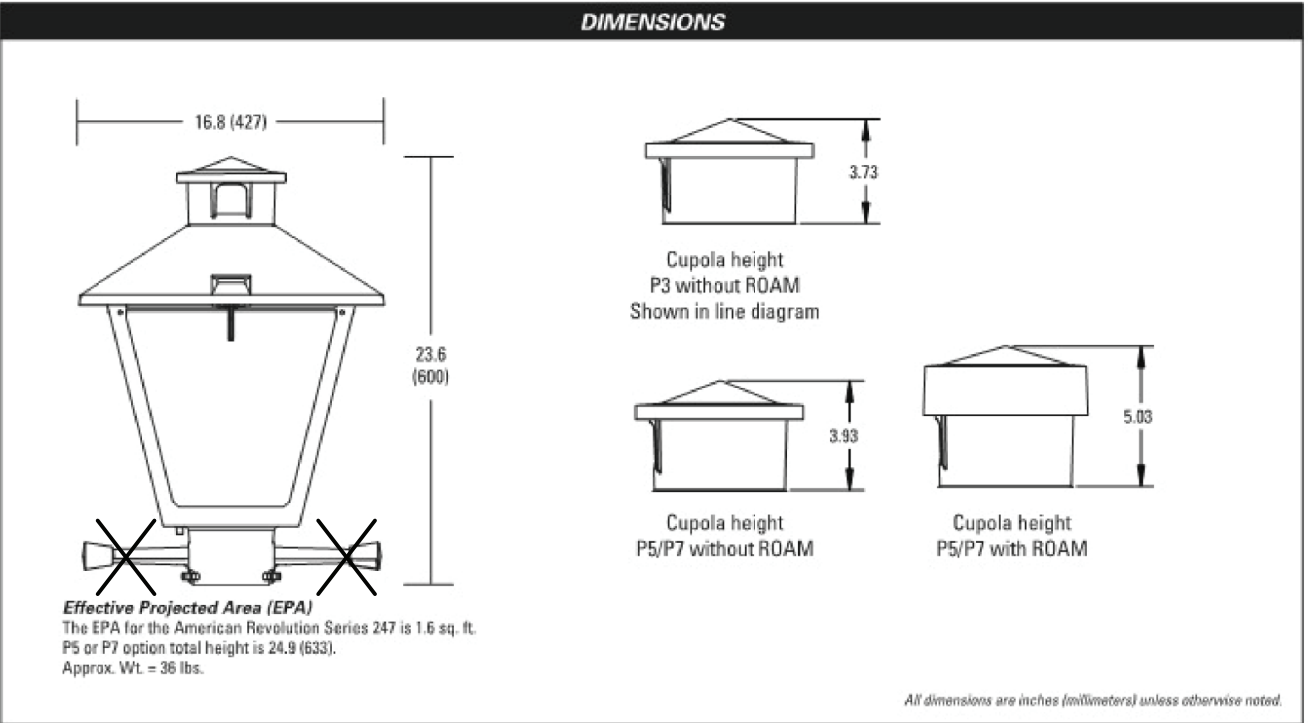


Applications:

Streetscapes
Walkways
Pathways
Parks

Features:

- Die-cast aluminum housing and hood for long-life performance
- Die-cast trigger latch (TL) and captive thumb screws option available for easy access to internal components
- Optical assembly designed for maximum performance, available in Type II, Type III and Type V
- Hinged hood and captive thumb screws provision afford quick, easy access to electrical and optical area for servicing
- Slipfitter with three set screws allows secure installation to pole sizes 2-3/8" or 3" O.D.
- Surge protection device (standard) exceeds ANSI C62.41 Category C1 criteria (surge tested at 10kV/5kA)
- Complies with ANSI: C136.2, C136.10, C136.15
- CSA listed and suitable for up to 30°C ambient
- Rated L70, LED life greater than 100,000 hours at 25°C
- Replaces up to 150W HPS light source incumbent models
- LED electronic 0V-10V dimmable driver
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/DPL to confirm which versions are qualified.



Note: Specifications subject to change without notice.
American Revolution Series 247L LED



Schedule									
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp
⬢	A	38	American Electric Lighting	247L 20LEDE70 XXXX 4K R2 AY	247L AMERICAN REVOLUTION LED, 20 LED, R2, 4000K, ACRYLIC CLEAR RAIN PANELS	LED	1	247L_20LED E70_XXXX_4 K_R2_AY.ies	4407
⬢	B	7	American Electric Lighting	247L 20LEDE70 XXXX 4K R5 AY	247L AMERICAN REVOLUTION LED, 20 LED, R5, 4000K, ACRYLIC CLEAR RAIN PANELS	LED	1	247L_20LED E70_XXXX_4 K_R5_AY.ies	4867

LIGHTING NOTES:

- THE PLAN SHEETS SHOW THE LOCATIONS FOR LIGHTING FIXTURES AND CONDUIT.
- ALL LIGHTING WORK SHALL CONFORM TO THE MODOT STANDARD PLANS AND SPECIFICATIONS, AND THE MANUFACTURER'S RECOMMENDATIONS.
- SEE JSP'S FOR MORE DETAILS AND REQUIREMENTS FOR DECORATIVE POLE AND LUMINAIRE FIXTURE.
- CONDUIT, TRENCHING, PUSHING, AND CABLE-CONDUIT TO BE INSTALLED / COMPLETED PER MODOT STANDARD PLAN 901.02B.
- PULL BOXES SHALL BE INSTALLED / COMPLETED PER MODOT STANDARD PLAN 902.20G.

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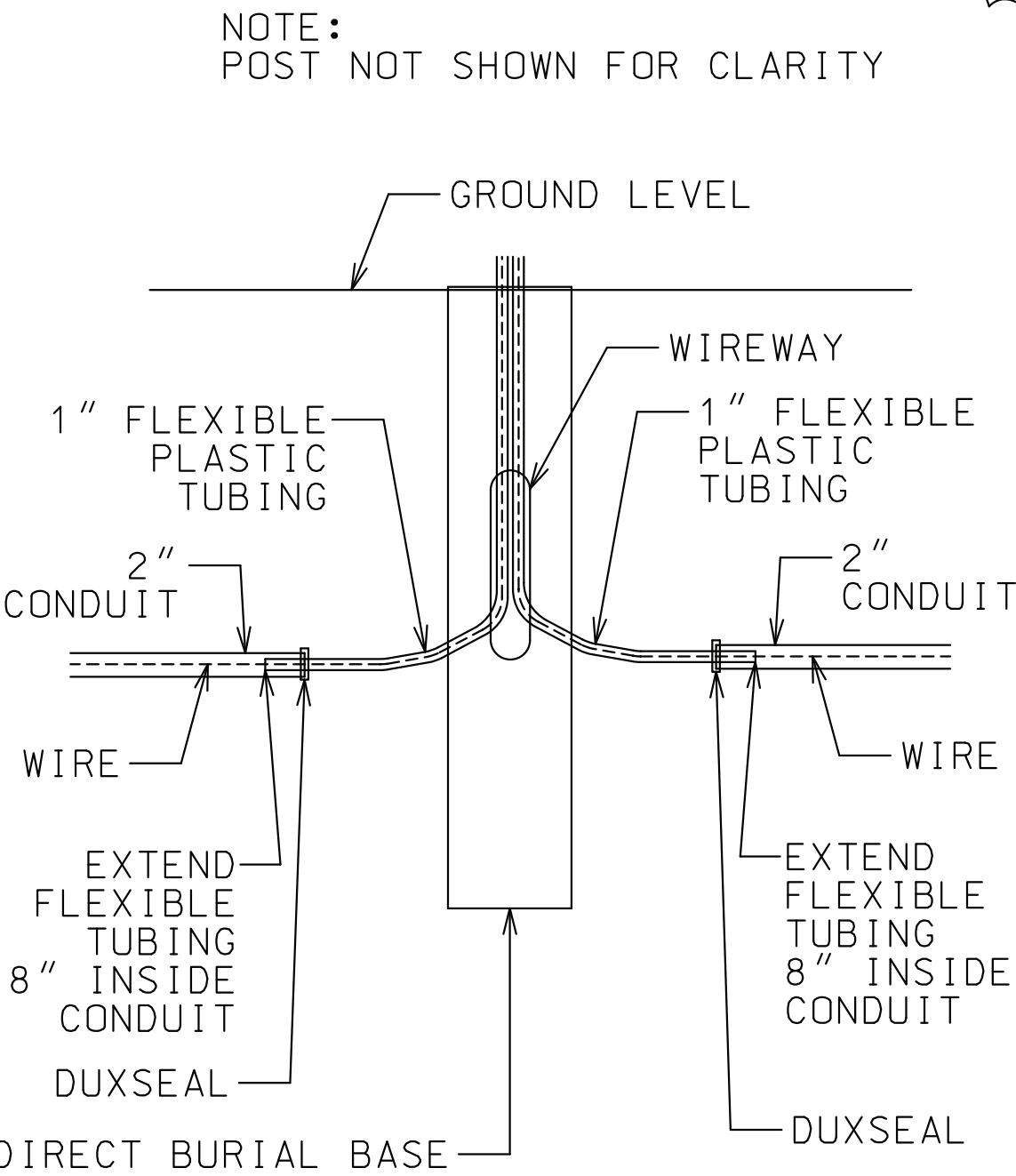
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

JOHN R. KEEVEN
PROFESSIONAL ENGINEER
MO. P.E. LICENSE • 2010000836

REVISIONS

NUMBER	BY	DATE
1	CMT	06/07/2019

ADDENDUM #1



NOTES:

EXTEND NEW 1" DIAMETER NON-METALLIC FLEXIBLE TUBING INTO BASE OF POST FROM THE NEW 2" DIAMETER CONDUIT. INSTALL DUXSEAL WHERE FLEXIBLE TUBING MEETS THE 2" DIAMETER CONDUIT. EXTEND THE FLEXIBLE TUBING WITHIN THE POST TO ABOVE GRADE, AS DIRECTED BY THE CITY.

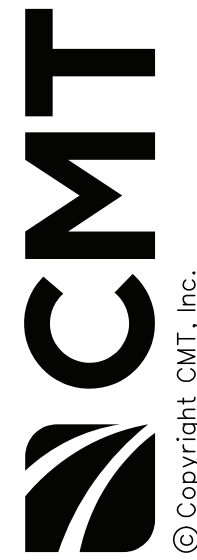
FLEXIBLE TUBING IS INCLUDED IN THE COST FOR 2" RIGID CONDUIT, NO SEPARATE PAYEMENT WILL BE MADE.

ALTERNATE METHODS OF BRINGING THE CONDUIT/WIRE INTO THE WIREWAY TO THE POST MAY BE ALLOWED, AS APPROVED BY THE CITY.

1 FLEXIBLE PLASTIC TUBING BETWEEN POST & CONDUIT AT THE DIRECT BURIAL BASE
NOT TO SCALE

LIGHTING
SHEET 1 OF 4

UNIVERSITY CITY, MISSOURI
ACKERT WALKWAY IMPROVEMENTS
TAP-5402(617)



CRAWFORD, MURPHY & TILLY, INC.
ONE MEMORIAL DRIVE, SUITE 500
ST. LOUIS, MO 63102 (314) 436-5500
ENGINEERING CORPORATION - 000631

DATE: 6/7/2019

JOB No: 18401-10-00

SHEET 15 OF 25