City of Columbus: Division of Power

Inspection Checklist For Street Lighting Construction

MIS-4

NOTES:

1 This checklist is to be used to verify the construction details of all Street Lighting projects within the City of Columbus.

2 The Contractor and Inspector are to complete and sign each sheet of this checklist as required prior to submittal to The Division of Power.

3 The Inspector shall complete Inspection sheets (1) and (2).

4 The Contractor shall complete sheets (3) and (4), and return it to the Inspector. All testing performed by the Contractor as a requirement of this specification is to be witnessed by the Inspector. The Inspector assumes final responsibility for the contractor completing the required testing accurately as per this specification.

5 "Authorized Contractor" is defined as an electrical contractor that is certified to work on the Division of Power Street Lighting system, and who holds the Lock Out / Tag Out for the particular circuit being inspected.

6 Upon completion of construction of the project, the Inspector will send all (4) completed sheets via email to the Division of Power Project Manager.

7 The final acceptance of the project by the Division of Power will be scheduled once all (4) completed sheets of this document, and a complete set of ***AS-BUILT*** project plans are received by the Division of Power Project Manager.

8 Sheets (1) and (2) may be copied as needed to accommodate the amount of poles on the project.

9 Sheets (3) and (4) may be copied as needed to accommodate multiple circuits on a project.

MIS-4	CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF POWER		
	INSPECTION CHECKLIST		
	DRAWN BY: SAW	DATE: 12/1/23	REV:
	APPROVED BY:		
	APPROVED DATE:		SHEET 1 OF 5

City of Columbus: Division of Power

Inspection Checklist For Street Lighting Construction

Form # 1 of 4 (Poles)

To Be Completed By Inspector (City of Columbus Department of Public Service, Franklin County, ODOT, Private Co. etc.)

Project:_____ **Drawing:**_____

Contractor:_____ **Date of Installation:** _____

Inspector / Agency: _____ **Date of Inspection:** _____

MIS #	Item	Station #	Station #	Station #	Station #	Station #
	FOUNDATION					
	Location Per Plan					
	Depth of Foundation					
	Concrete Per Spec (Item 499)					
	Ground Rod 10'					
	Anchor Bolt Size					
	Cap Dimensions					
	1/2" Chamfer (Non-Flush Foundation)					
	Sidewalk / Yard Repair Complete					
	Foundation w / Top Elevation As Specified					
	LIGHT POLE					
	Location Per Plan					
	Style Per Plan					
	Hand Hole Position Corrrect					
	Pole Grounded					
	Pole Plumb					
	POLE WIRING					
	# 6 AWG Ground Wire (Soft Drawn)					
	3 Amp KTK Fuse (Up to 250 Watt)					
	6 Amp KTK Fuse (400 Watt)					
	(1) YC2C4 Crimp (2-Wire)					
	(2) YC4C4 Crimp (2-Wire)					
	(1) YC4C4 Crimp (3-Wire)					
	Luminaire Wire ***Black*** #10 AWG Type XHHW					
	Luminaire Wire ***White*** #10 AWG Type XHHW					
	Luminaire Wire ***Green*** #10 AWG Type XHHW					
	LUMINAIRE					
	Luminaire Works					
	Style Per Plan					
	Luminaire is Plumb					
	Luminaire Aimed Correctly					
	TESTING					
	OHMS Reading (obtained with a clamp on Ohms meter placed on the # 6 AWG ground wire below the lowest crimp connector)					
	Tic-Trace Completed By Contactor					

By placing check marks within this document, the person performing the inspection is confirming that all material within the installation conforms to the latest version of both the City of Columbus CMS book, and MIS specifications.

City of Columbus: Division of Power

Form # 2 of 4
(Material)

Inspection Checklist For Street Lighting Construction

To Be Completed By Inspector (City of Columbus Department of Public Service, Franklin County, ODOT, Private Co.etc.)

Project:_____ **Drawing:**_____

Contractor:_____ **Date of Installation:** _____

Inspector / Agency: _____ **Date of Inspection:** _____

MIS #	Item	Per Spec	Inspectors Comments
	CONDUIT		
	Schedule 40 PVC		
	Concrete Encased		
	Cable-in-Duct 1-1/2"		
	3" Steel (w/ 2" PVC Insert)		
	Depth of Conduit		
	Schedule 80 PVC (For Risers Only)		
	480 VOLT CIRCUIT		
	(2) # 4 5 KV Cables (w/ White Stripe on Neutral Cable)		
	Hot Wire Marked w/ Red Tape		
	Neutral w/ White Stripe & Tape		
	#8 600V Green cable (per MIS-404/501 - 3 wire installation)		
	Neutral Bonded (per MIS-403/ 500 (2 wire installation)		
	In Line Fuse Installed In Pull Box		
	PULL BOXES		
	Penta Head Bolts		
	Set To Grade Level		
	Gravel Installed For Drainage		
	Gravel Compacted		
	Gravel Size		
	CONTROLLER		
	Controller Meets Specification		
	Location Per Plan		
	Meter installed per MIS-57/59		
	Ground Rod Installed		
	Ground Conductor Installed		
	Fused Per MIS-600/601/602 (Overhead)		
	Fused Per MIS-603/604 (Underground)		
	Pull Box Installed (Undergound)		
	Sch. 80 Riser (Underground)		
	Photocontrol In Correct Location		
	Photocontrol Functions Properly		

COMMENTS:_____

By placing check marks within this document, the person performing the inspection is confirming that all material within the installation conforms to the latest version of both the City of Columbus CMS book, and MIS specifications.

City of Columbus: Division of Power

Electrical Testing For Street Lighting Construction

(To Be Completed By Electrical Contractor)

Project:_____ **Drawing:**_____

Contractor:_____ **Date of Installation:** _____

Inspector / Agency: _____ **Date of Inspection:** _____

1. **Ground Test:** Measure each ground rod and ground grid for earth resistance immediately after installation and before attaching the ground wire. Do not exceed an earth resistance measurement of 25 ohms.

Testing is complete as specified

_____
Authorized Contractor Signature **Date**

2. **Cable Continuity Test:** Prior to cable insulation tests, perform a continuity test with a volt-ohmmeter or other approved instrument. Conduct continuity tests with electrical loads, power sources, and grounds, including earth grounds, disconnected

   Measure each conductor against every other conductor and ground, including earth ground, to ensure that no short circuits, cross circuits, or other improper connections exist. Ensure that no voltage exists between any conductor and another conductor, including ground. One at a time, temporarily short each circuit branch at its termination and measure for continuity to ensure no open circuits exist, the circuit branch complies with the plan, no high resistance connections exist, and proper identification of each circuit.

Testing is complete as specified

_____
Authorized Contractor Signature **Date**

3. **Cable Insulation Test:** Measure the insulation resistance for each insulated cable of the circuit, including duct-cable. Perform the test on each cable of each circuit with all ballasts disconnected and all connections to earth grounds, including ground rods and grounding connections to light poles, disconnected. Express the units of measure for reporting in megohms. Ensure the cable insulation resistance exceeds 10 megohms.

Testing is complete as specified

_____
Authorized Contractor Signature **Date**

4. **OHMS Testing:** OHMS testing is to be performed on each light pole after installation. The pole being tested must be connected to the electrical system to obtain an OHMS reading. When working with an existing street lighting circuit, the contractor must have obtained a Lock-Out-Tag-Out of that existing circuit following the requirements of MIS-1.

   OHMS testing is to be performed with a "clamp on" style OHMS meter. The clamp must be placed on the #6 AWG solid copper ground wire attached to the ground rod below the lowest crimp connector of the pole wiring. See MIS-500 series specifications for appropriate wiring cofiguration. The OHMS reading for each pole is not to exceed 25 OHMS. The OHMS reading for each pole is to be recorded by the inspector on **Inspection Sheet 1** of this document.

Testing is complete as specified

_____
Authorized Contractor Signature **Date**

City of Columbus: Division of Power

Electrical Testing For Street Lighting Construction

(To Be Completed By Electrical Contractor)

Project:_____ **Drawing:**_____

Contractor:_____ **Date of Installation:** _____

Inspector / Agency: _____ **Date of Inspection:** _____

Voltage Regulation and Current Balance:

NOTE: **Voltage regulation and current balance must be completed prior to any new lights being connected to an existing street lighting circuit. This applies to existing circuits only.**

The readings below were taken prior to new lighting being installed on existing Circuit # _____

	A	B	C
Amperage Reading for Each Phase:			
Circuit Voltage at End of Phase :			
Circuit Voltage at Controller :			
Fuse Size and Type:			

Testing is complete as specified

_____
Authorized Contractor Signature **Date**

The readings below were taken AFTER new lighting was installed on Circuit # _____

(This section is used for both EXISTING circuits where new lights were added and for NEW circuits with new lighiting installed.)

	A	B	C
Amperage Reading for Each Phase:			
Circuit Voltage at End of Phase :			
Circuit Voltage at Controller :			
Fuse Size and Type:			

Testing is complete as specified

_____
Authorized Contractor Signature **Date**