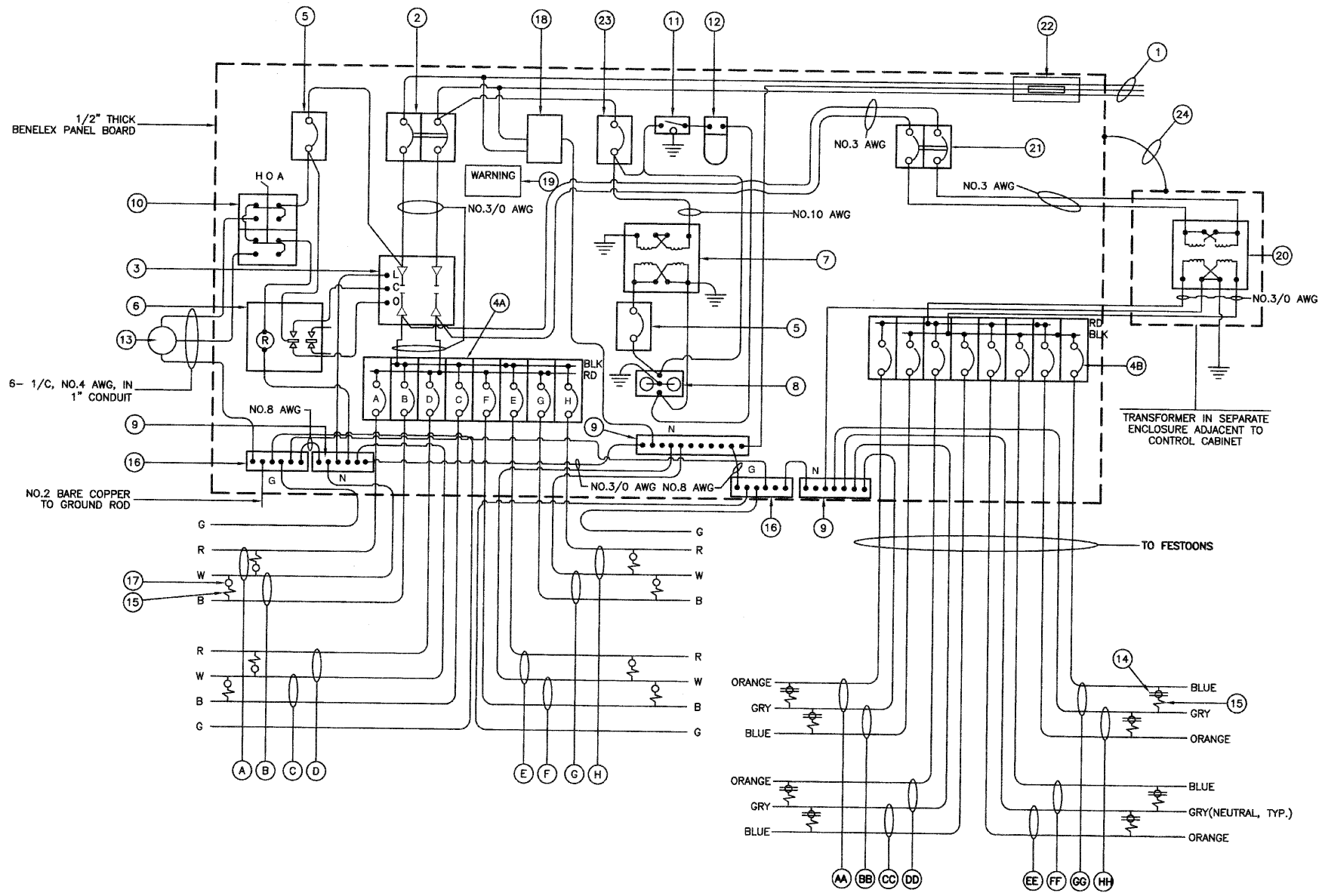


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CONTROLLER WIRING DIAGRAM
CONTROLLER NO. 1 THROUGH 4

CONTROLLER WIRING DIAGRAM LEGEND

- ① 3-1/2" DIA GALVANIZED STEEL CONDUIT FOR 240/480 VOLT, 1Ø, 3 WIRE, 60HZ. SERVICE.
 - ② (1) 225 AMP MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT, 250 AMP FRAME, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 480 V.
 - ③ (1) 225 AMP CONTACTOR SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, 600 VOLT
 - ④A (8) 30 AMP CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP FRAME, NON-INTERCHANGEABLE TRIP RATING NEMA - 14000 AMP AT 240 VOLTS. MAIN PANEL TO BE RATED AT 225 AMPS AT 480 VOLTS;
 - ④B (8) 30 AMP CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP FRAME, NON-INTERCHANGEABLE TRIP RATING NEMA - 14000 AMP AT 240 VOLTS. FESTOON PANEL TO BE RATED AT 150 AMPS AT 240 VOLTS;
 - ⑤ (2) 20 AMP CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP FRAME, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA 14000 AMP AT 240 V.
 - ⑥ (1) 25 AMP, 1 POLE DOUBLE THROW, 240 VOLT RELAY
 - ⑦ (1) 1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480/120 X 240 VOLT, 60HZ.
 - ⑧ (1) 20 AMP, 120 VOLT DUPLEX GFCI RECEPTACLE MOUNTED IN BOX.
 - ⑨ (3) NEUTRAL BUS BAR, 1/4"x1"x12" MINIMUM LENGTH MOUNTED ON PANEL WITH LUGS.
 - ⑩ 3 POSITION SELECTOR SWITCH, 240V, 30 AMP.
 - ⑪ SWITCH FOR LIGHTING FIXTURE MOUNTED IN BOX, 20 AMP.
 - ⑫ WEATHER-PROOF INCANDESCENT LIGHTING FIXTURE WITH 60 WATT, 120 V LAMP.
 - ⑬ PHOTOCCELL MOUNTED TO CABINET, 240 V, 1000 VA. BALLAST RATING, 1-4 FC ON, 3-12 FC OFF, 30 SECOND DELAY, MIN.
 - ⑭ 20 AMP, 120 VOLT DUPLEX GFCI RECEPTACLE MOUNTED TO POLE.
 - ⑮ IN-LINE FUSEHOLDER WITH FUSE AS NOTED IN FUSE TABLE
 - ⑯ (2) GROUND BUS BAR 1/4"x1"x12" MINIMUM LENGTH MOUNTED ON PANEL WITH LUGS.
 - ⑰ LUMINAIRE
 - ⑱ SURGE ARRESTOR, UL LISTED, NEC 280 COMPLIANT, 1Ø, 3 WIRE, 60HZ MAX. 3,405 JOULES @ 240 VOLTS.
 - ⑲ WARNING PLATE TO READ: WARNING, MAINTENANCE CIRCUIT IS LIVE WHEN MAIN BREAKER IS SWITCHED OFF.
 - ⑳ 25.0 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240x480/120x240 V, 60HZ, MOUNTED ADJACENT TO CONTROLLER.
 - ㉑ 70 AMP CIRCUIT BREAKER, 2 POLE, 600 VOLT, 100 AMP FRAME, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 277 VOLTS.
 - ㉒ MILBANK 1Ø, 3 WIRE, 225A METER SOCKET
 - ㉓ 15 AMP CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP FRAME, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA 14000 AMP AT 240 V.
 - ㉔ BONDING JUMPER
-
- Ⓐ CIRCUIT (RED) Ⓔ CIRCUIT (RED) ⒶⒶ CIRCUIT (ORANGE) ⒺⒺ CIRCUIT (ORANGE)
 - Ⓑ CIRCUIT (BLACK) Ⓕ CIRCUIT (BLACK) ⒷⒷ CIRCUIT (BLUE) ⒻⒻ CIRCUIT (BLUE)
 - Ⓒ CIRCUIT (BLACK) Ⓖ CIRCUIT (BLACK) ⒸⒸ CIRCUIT (BLUE) ⒼⒼ CIRCUIT (BLUE)
 - Ⓓ CIRCUIT (RED) Ⓗ CIRCUIT (RED) ⒹⒹ CIRCUIT (ORANGE) ⒽⒽ CIRCUIT (ORANGE)

GENERAL NOTES FOR CONTROL CABINET

1. ENTIRE CONTROL CABINET SHALL BE GROUNDED.
2. ALL WIRING SHALL BE TAGGED WITH SELF-STICKING WIRE MARKERS.
3. GROUND BUS TO BE COLOR CODED GREEN, NEUTRAL BUS WHITE, AND BONDED TO CABINET ENCLOSURE, BY LISTED PRESSURE CONNECTORS OR LISTED CLAMPS.
4. ALL INTERNAL CONTROLLER WIRING TO BE NO.12 AWG UNLESS OTHERWISE SPECIFIED.
5. CABINET WIRING INSULATION TO BE TYPE XHHW OR APPROVED EQUAL.
6. THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR WIRE MARKERS AND SHALL TAG ALL WIRE ACCORDINGLY.
7. EQUIPMENT GROUND CONDUCTORS SHALL BE SPLICED AND BONDED AT EACH LIGHT POLE OR OTHER PIECE OF EQUIPMENT.
8. THE CONTROLLER SHALL BE UL LISTED, NEMA 3R, AND BE SUITABLE FOR USE AS SERVICE ENTRANCE RATED.



FILE NAME = 08301-LGHT-02 - P03	USER NAME =	DESIGNED -- PAP	REVISED -- 07-15-10	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HARLEM AVENUE 71ST STREET TO 93RD STREET STREET LIGHTING DETAILS	F.A.P. RTE. 348	SECTION 06-00054-00-LT	COUNTY COOK	TOTAL SHEETS 19	SHEET NO. 13		
	PLOT SCALE = N/A	CHECKED -- PKB	REVISED -- 07-30-10			SCALE: N/A	SHEET NO. 13 OF 19 SHEETS	STA. N/A	TO STA. N/A	CONTRACT NO. 63477		
	PLOT DATE = 04-28-10	DRAWN -- MJD	REVISED -- 08-20-10			FED. ROAD DIST. NO. 1 ILLINOIS			FED. AID PROJECT ARE-TE-0001(808)			
		CHECKED -- DWS	REVISED --									