

**PANELBOARD: L-110**

LOCATION: MAKERSPACE 135C VOLTAGE: 208Y/120 V, 3 ø 4 W  
MOUNTING: RECESSED NEMA1 A.I.C. RATING: 10,000 AMPS SYMMETRICAL  
MAIN DEVICE: 100 A MLO SPECIAL:  
BUS AMPS: 100 AMPS

LOAD DESCRIPTION	BKR	P	CHKT	PHASE A KVA	PHASE B KVA	PHASE C KVA	CHKT	P	BKR	LOAD DESCRIPTION
Receptacles	20 A	1	1	0.2	0.2		2	1	20 A	Receptacles
Receptacles	20 A	1	3				4	1	20 A	Receptacles
Receptacles	20 A	1	5				6	1	20 A	Receptacles
Receptacles	20 A	1	7	0.2	0.4		8	1	20 A	Receptacles
RCPT	20 A	1	9				10	1	20 A	RCPT
SPARE	20 A	1	11				12	1	20 A	SPARE
SPARE	20 A	1	13	0.0	0.0		14	1	20 A	SPARE
SPARE	20 A	1	15				16	1	20 A	SPARE
SPARE	20 A	1	17				18	1	20 A	SPARE
SPARE	20 A	1	19	0.0	0.0		20	1	20 A	SPARE
SPACE	--	--	21				22	--	--	SPACE
SPACE	--	--	23				24	--	--	SPACE
SPACE	--	--	25	0.0	0.0		26	--	--	SPACE
SPACE	--	--	27				28	--	--	SPACE
SPACE	--	--	29				30	--	--	SPACE
<b>TOTAL LOAD:</b>				1 kVA	1 kVA	1 kVA				
<b>TOTAL AMPS:</b>	8 A			6 A		6 A				
<b>LOAD CLASSIFICATION</b>	<b>CONNECTED</b>	<b>DEMAND</b>	<b>ESTIMATED</b>	<b>PANEL TOTALS</b>						
Other	360 VA	100.00%	360 VA	<b>CONNECTED LOAD:</b> 2380 VA						
RCPT	580 VA	100.00%	580 VA	<b>ESTIMATED DEMAND:</b> 2380 VA						
Receptacles	1440 VA	100.00%	1440 VA	<b>CONNECTED CURRENT:</b> 7 A						
				<b>EST. DEMAND CURRENT:</b> 7 A						

NOTES:

**LIGHT FIXTURE SCHEDULE**

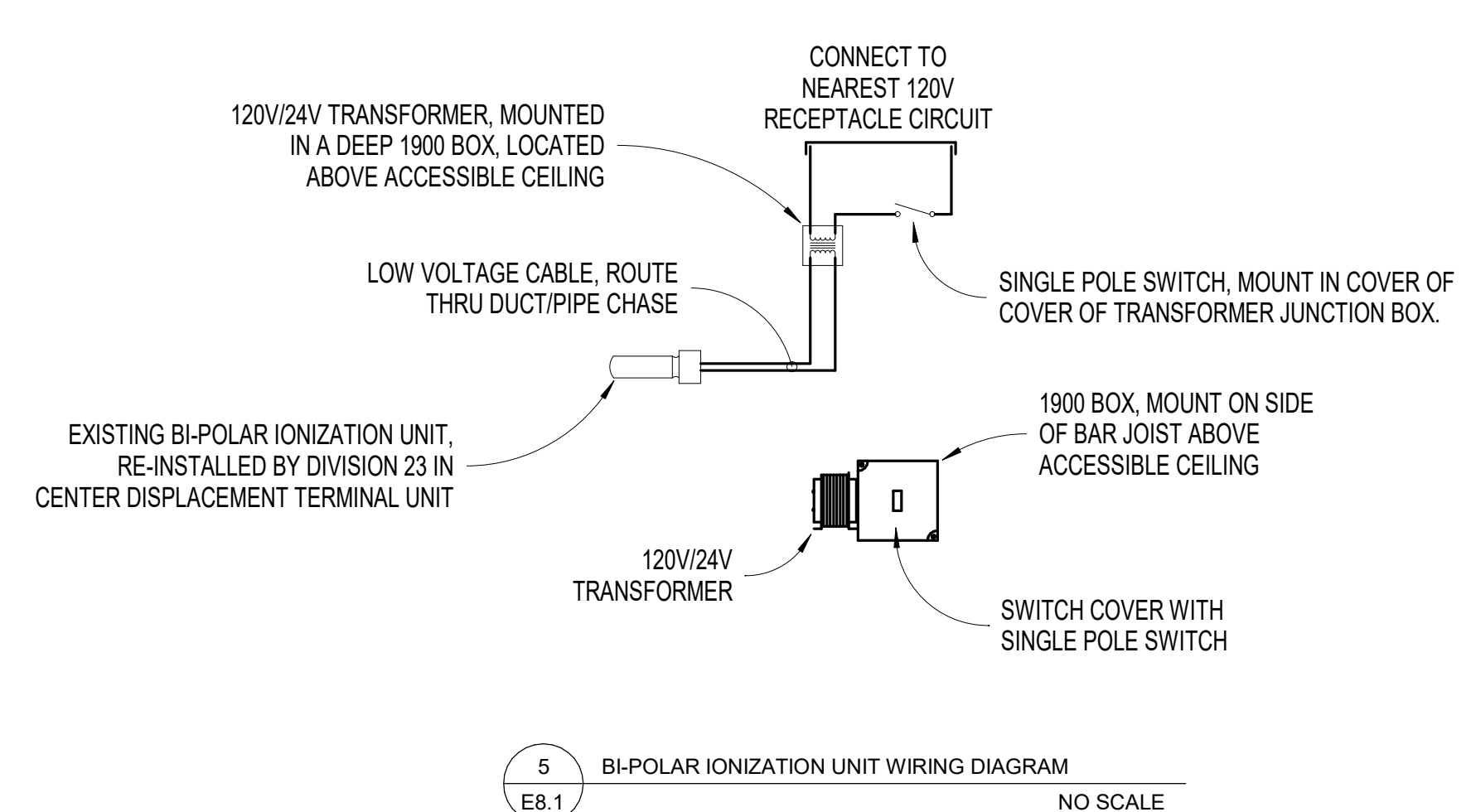
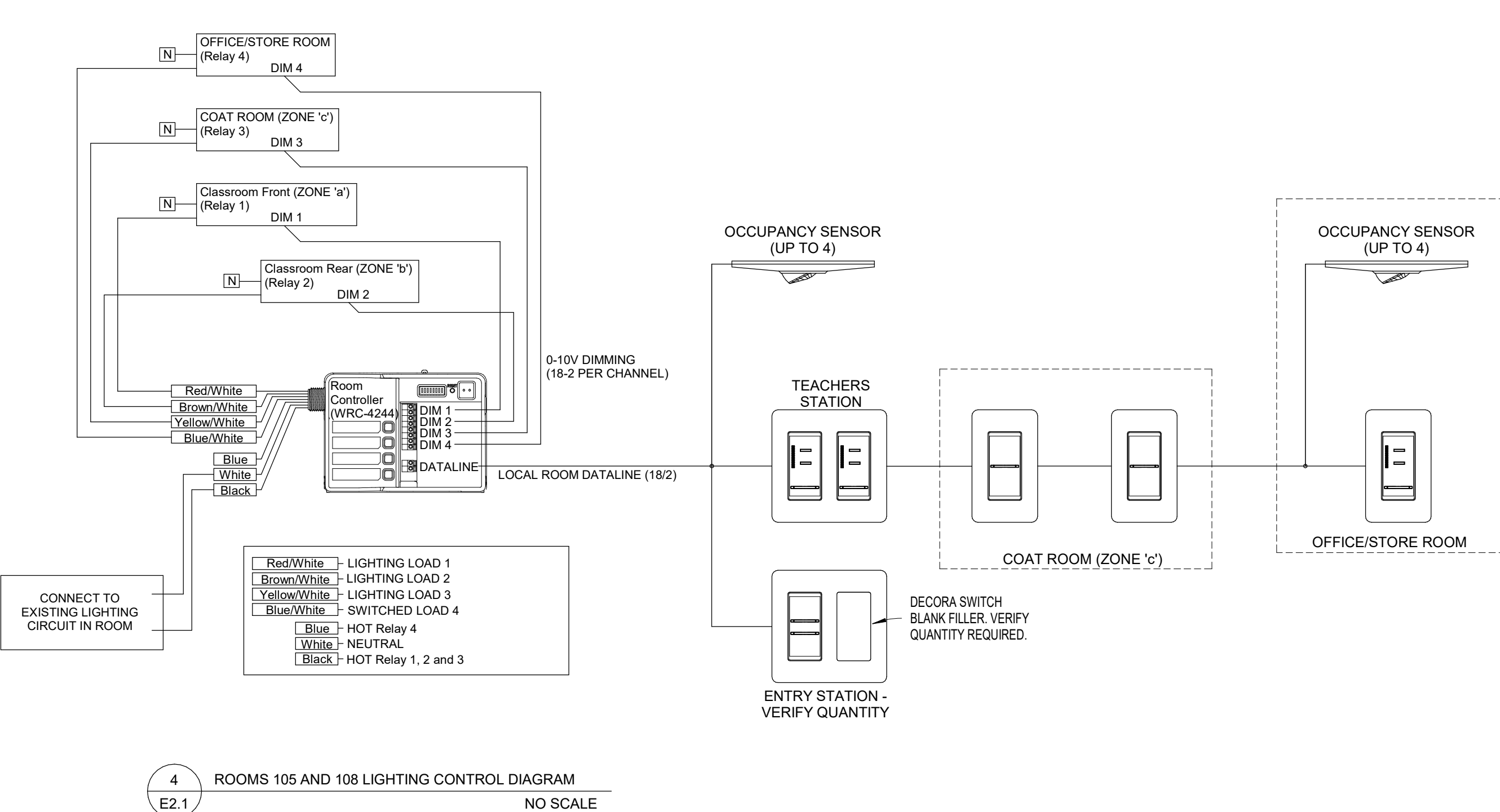
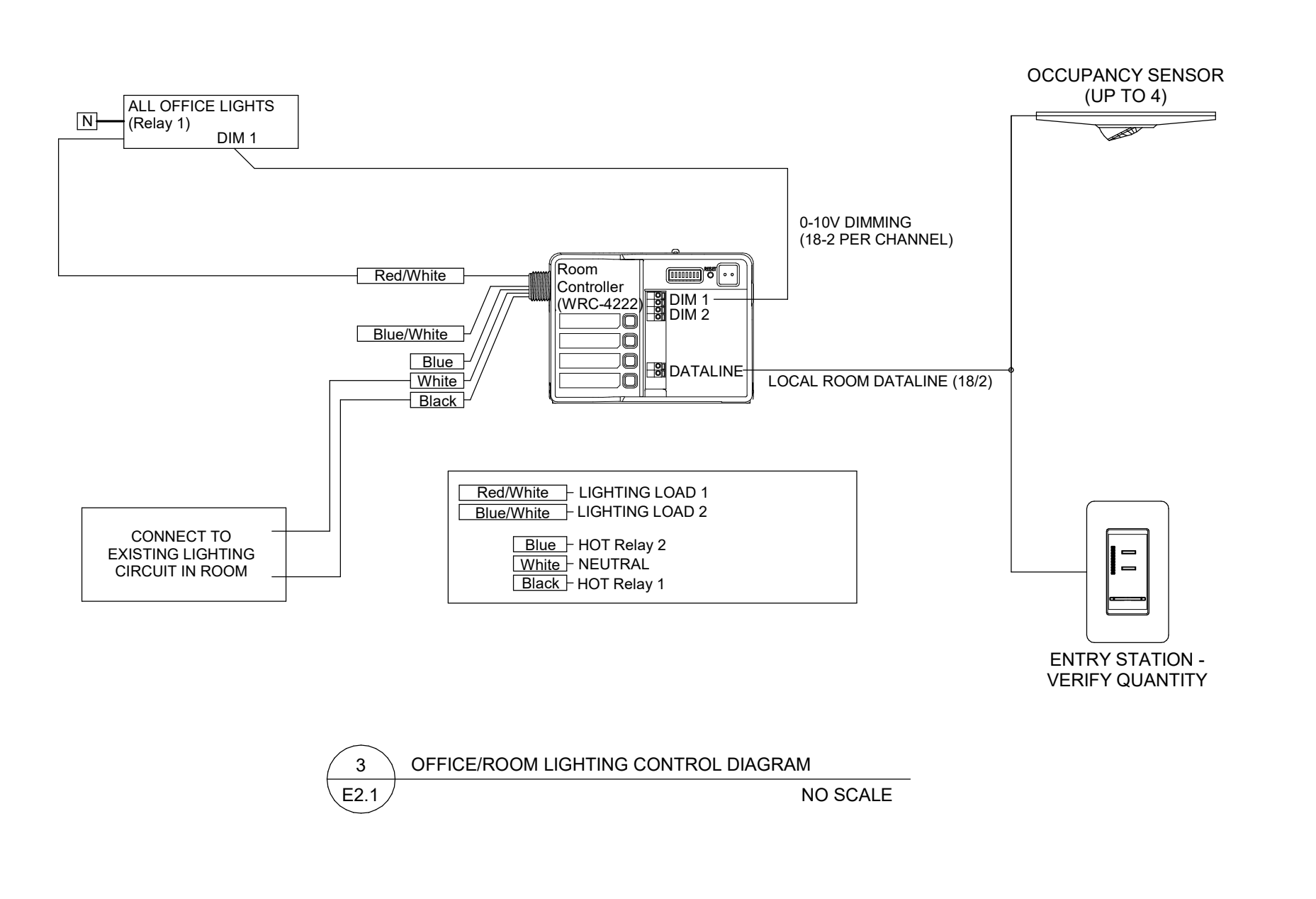
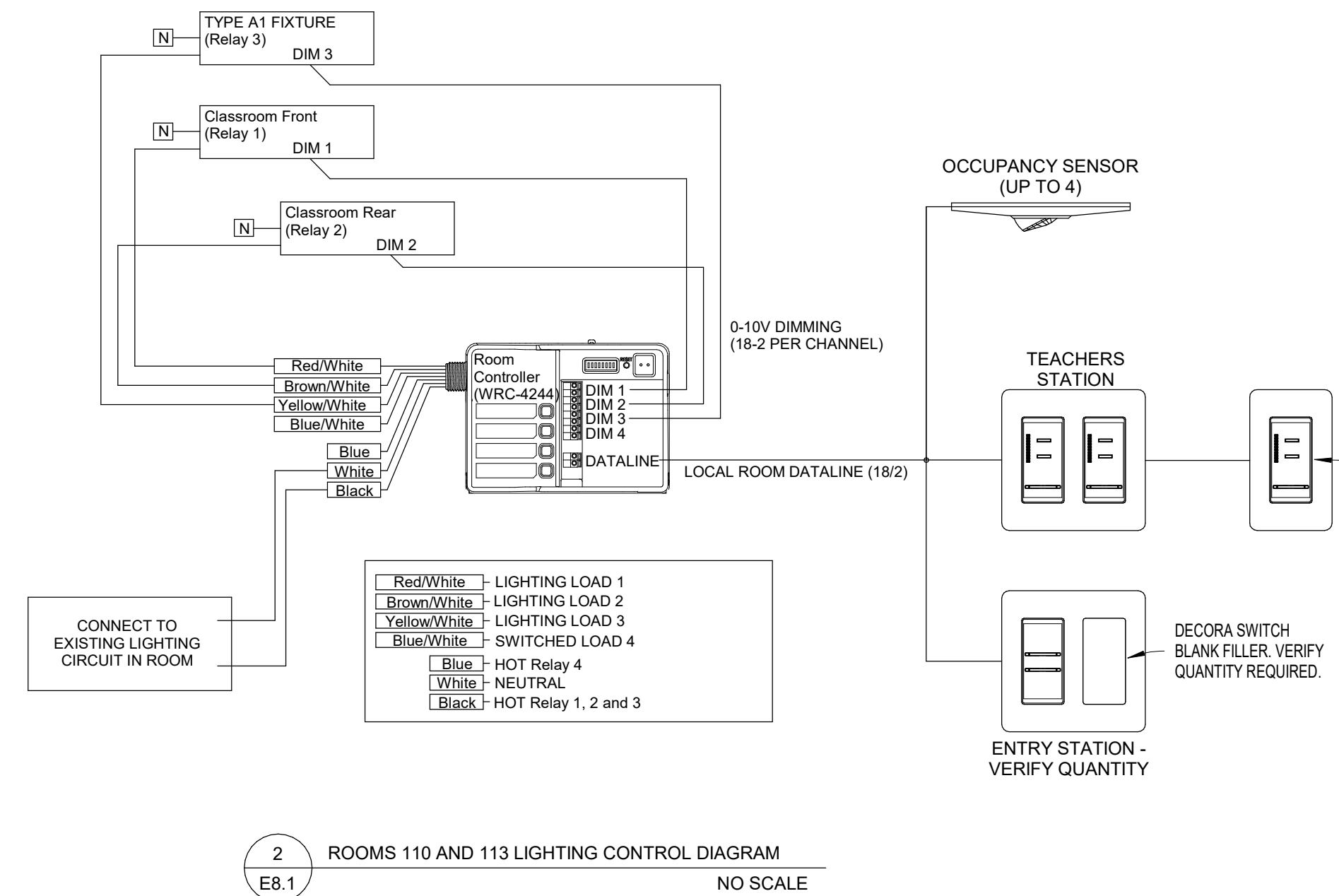
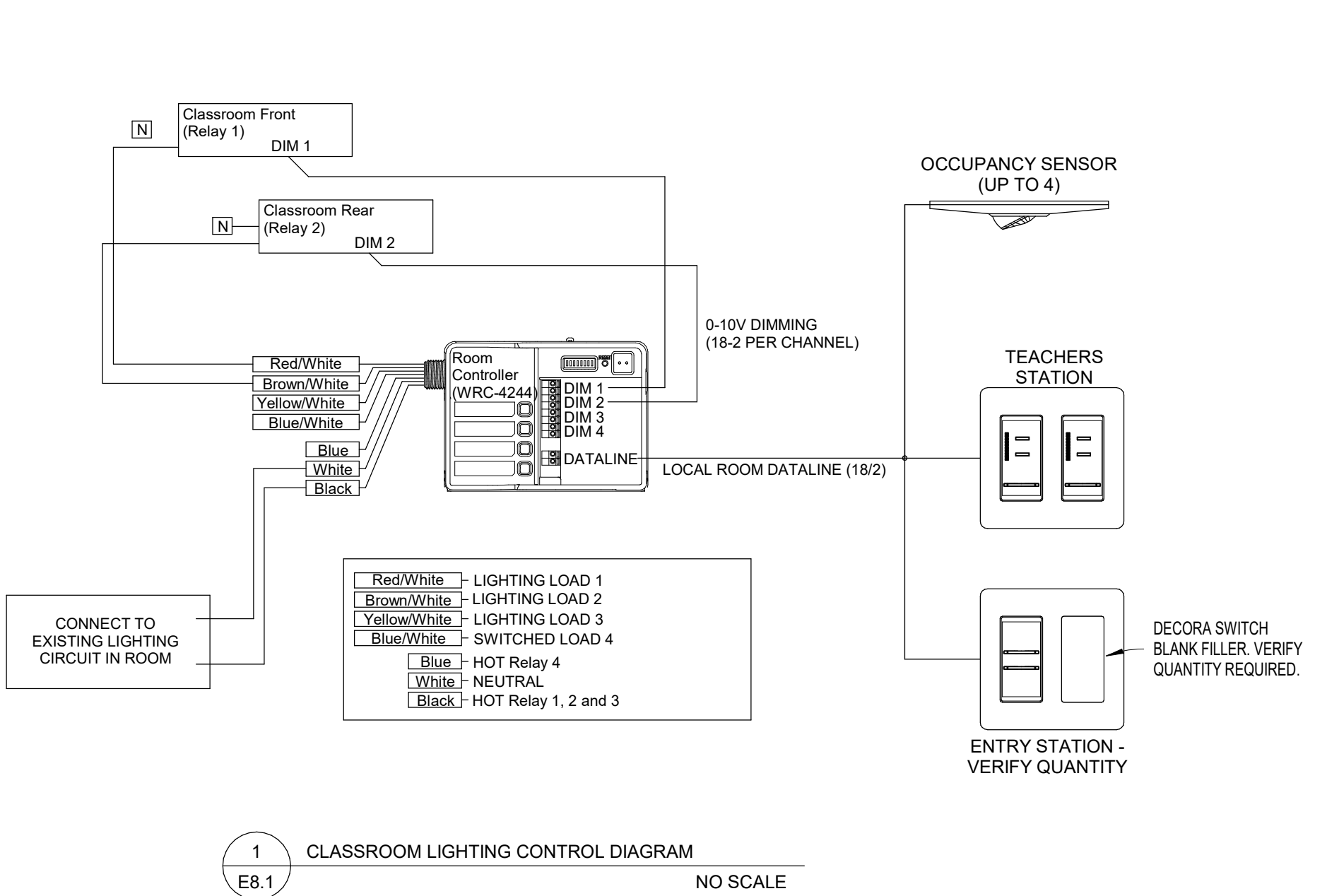
QUANTITY	TYPE	DESCRIPTION	LENS-LOUVER	MOUNTING	LAMP	DRIVER TYPE	FINISH	VOLTAGE	WATT	MANUFACTURER	APPROVED EQUALS	NOTE
141	A	2 FOOT BY 4 FOOT LED FLAT PANEL FIXTURE WITH SWITCHABLE LUMEN TECHNOLOGY	ACRYLIC BLEND LIGHT GUIDE WITH FROSTED/TEXTURED OUTER LENS	RECESSED IN EXPOSED GRID LAY-IN CEILING	LED - 5500 LUMENS 4000K	0-10V VOLT DIMMING	POST PAINTED WHITE	MVOLT	44 W	COLUMBIA CFP24-4140 SERIES	LITHONIA CPANEL 2X4 SERIES, METALUX 24FPLS23C73	FIELD SELECT 5500 LUMENS
27	A1	2 FOOT BY 4 FOOT LED FLAT PANEL FIXTURE WITH SWITCHABLE LUMEN TECHNOLOGY	ACRYLIC BLEND LIGHT GUIDE WITH FROSTED/TEXTURED OUTER LENS	RECESSED IN EXPOSED GRID LAY-IN CEILING	LED - 4100 LUMENS 4000K	ELECTRONIC LED	POST PAINTED WHITE	MVOLT	34 W	COLUMBIA CFP24-4140 SERIES	LITHONIA CPANEL 2X4 SERIES, METALUX 24FPLS23C73	FIELD SELECT 4100 LUMENS
1	B	1 FOOT BY 4 FOOT LED FLAT PANEL FIXTURE WITH SWITCHABLE LUMEN TECHNOLOGY	ACRYLIC BLEND LIGHT GUIDE WITH FROSTED/TEXTURED OUTER LENS	RECESSED IN EXPOSED GRID LAY-IN CEILING	LED - 4334 LUMENS 4000K	ELECTRONIC LED	POST PAINTED WHITE	MVOLT	37 W	COLUMBIA CFP14-55413340 SERIES	LITHONIA CPANEL 1X4 SERIES, METALUX 14FPLS13C73	FIELD SELECT 4400 LUMENS
4	C	8-INCH SQUARE LED RECESSED LIGHT FIXTURE		RECESSED IN PLASTER SOFFIT	LED - 1510 LUMENS 4000K	ELECTRONIC DRIVER	WHITE	120V	18 W	ASPECT LED HAL-RL-UTS-94-NAW		
3	D	4 INCH LED DOWNLIGHT	CLEAR ALZAK SELF TRIMMING	RECESSED IN GYPSBOARD OR TILE	LED - 1500 LUMENS @ 4000K	0-10V ELECTRONIC DIMMING DRIVER	--	MVOLT	14 W	GOTHAM EV04 SERIES	PRESCOLITE LFALED SERIES, HALO HC4HMM SERIES	HANG SO BOTTOM OF FIXTURE IS AT 7'-6" AFF. COORDINATE EXACT HEIGHT AND LOCATION.
	F	6" ROUND PENDENT HUNG LED FIXTURE - 6" DIAMETER BY 6" HIGH THICK WALLED ALUMINUM EXTRUSION.	VIRGIN WHITE ACRYLIC TOP AND BOTTOM DIFFUSERS	(4) VERTICAL FULLY ADJUSTABLE AIRCRAFT CABLES	LED - 15,300 LUMENS 4000K	0-10V ELECTRONIC DIMMING	CUSTOM COLOR AS SELECTED BY THE ARCHITECT	MVOLT	180 W	OCL T1W1 SERIES		

GENERAL NOTES:  
 1. QUANTITIES ARE SHOWN FOR REFERENCE ONLY. DIVISION 26 CONTRACTOR SHALL VERIFY ALL QUANTITIES.  
 2. ALL METAL PARTS MUST BE POST PAINTED.  
 3. ALL LEDs SHALL HAVE A MINIMUM 50,000-HOUR LAMP LIFE AT 70% OUTPUT AND BE RATED A MINIMUM OF 80 CRI.  
 4. VERIFY MOUNTING HEIGHT OF ALL WALL MOUNT AND PENDENT HUNG FIXTURES WITH ARCHITECT.  
 5. SEE SPECIFICATION SECTION 26 51.00 FOR A LIST OF SPARE FIXTURES.

**ELECTRICAL MOTOR SCHEDULE**

NO.	DESCRIPTION	ROOM	HP	A	VOLT	PHASE	PANEL	CIRCUIT BREAKER	CONDUIT & WIRE SIZE	DISCONNECT	FURNISHED BY	STARTER	FURNISHED BY	CONTROL	FURNISHED BY	NOTES
CU-3	CONDENSING UNIT 3	ROOF		129.5 A	208 V	3	MSB	150A/3P	1 1/2" C - 3 #10 & #6 GR	DIVISION 23		DIVISION 23		DIVISION 23	DIVISION 23	CONNECT TO EXISTING 150A/3P BREAKER IN PANEL MSB. MOUNT WP GFI RECEPTACLE ON SIDE OF UNIT. CONNECT TO NEAREST RECEPTACLE CIRCUIT BELOW.
CUH-2	CABINET UNIT HEATER	109B		1.1 A	120 V	1	L-109	20A/1P	1/2" C - 2 #12 & #12 GR	DIVISION 23		DIVISION 23		DIVISION 23	DIVISION 23	CONNECT TO EXISTING CABINET UNIT HEATER CIRCUIT
ERU-3	WEST CLASSROOM ERU	ROOF		84.4 A	208 V	3	MSB	125A/3P	1 1/4" C - 3 #12 & #8 GR	DIVISION 23	VFD	DIVISION 23		DIVISION 23	DIVISION 23	REPLACE EXISTING 80A BREAKER WITH NEW 125A/3P BREAKER IN EXISTING PANEL MSB. PROVIDE 120V CIRCUIT FROM A 20A/1P BREAKER IN NEAREST PANEL TO LIGHTS AND RECEPTACLES INSIDE UNIT.
PRV-1	POWER ROOF VENTILATOR	ROOF		8 A	208 V	2	SDC-2	15A/2P	1/2" C - 2 #12 & #12 GR	DIVISION 23	EC MOTOR	DIVISION 23		DIVISION 23	DIVISION 23	PROVIDE NEW BREAKER IN EXISTING PANEL SDC2. ALL WORK DONE UNDER ALTERNATE BID ONLY.
RTU-4	OFFICE ROOF TOP UNIT	ROOF		25.8 A	208 V	3	SDC-2	35A/3P	3/4" C - 3 #10 & #12 GR	DIVISION 23	VFD	DIVISION 23		DIVISION 23	DIVISION 23	PROVIDE NEW BREAKER IN EXISTING PANEL SDC2. PROVIDE 120V CIRCUIT FROM A 20A/1P BREAKER IN NEAREST PANEL TO LIGHTS AND RECEPTACLES INSIDE UNIT. ALL WORK DONE UNDER ALTERNATE BID ONLY.

GENERAL NOTES:  
 1. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL DISCONNECTS, MAGNETIC STARTERS AND MANUAL STARTERS UNLESS SPECIFICALLY NOTED IN THE SCHEDULE AS FURNISHED BY OTHERS IN WHICH CASE THIS CONTRACTOR SHALL STILL INSTALL AND CONNECT AS REQUIRED.  
 2. CONTROL DEVICES AND CONTROL WIRING SHALL BE AS SPECIFIED IN SECTION 26 51.3.  
 3. EACH MOTOR SHALL BE ON A SEPARATE CIRCUIT UNLESS SPECIFICALLY NOTED OTHERWISE.  
 4. SEE M SERIES DRAWINGS FOR LOCATIONS OF DISCONNECTS, STARTERS AND VFDs BEING SUPPLIED BY DIVISION 23.

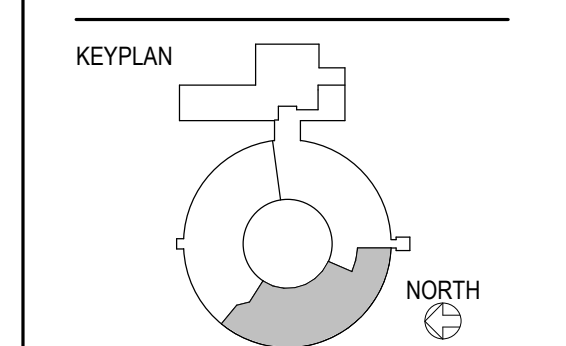


REVISIONS

REV NO	DESCRIPTION	DATE
1	Addendum #3	12/29/2021
2	Addendum #4	01/04/2022

**CROOKED LAKE ELEMENTARY SCHOOL**  
 HVAC Replacement and Deferred Maintenance - Phase 3  
 Anoka-Hennepin Schools I.S.D. No. 11  
 2939 Bunker Lake Blvd NW  
 Andover, MN 55304

SIGNATURE / SEAL  
 I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.  
 Signature: *Nicholas Achina*  
 Nicholas Achina, PE  
 Type or printed name  
 OCTOBER 27TH, 2021  
 Date  
 40408  
 License Number



DRAWN BY  
RGE

CHECKED BY  
N ACHINA

ISSUED FOR  
CONSTRUCTION DOCUMENTS

ISSUE DATE  
OCTOBER 27, 2021

SHEET NAME  
ELECTRICAL SCHEDULES AND WIRING DIAGRAMS

ATSAR PROJECT NO.  
19039.2

REVISION NO.  
2

SHEET NUMBER  
SHEET ADDED IN ADDENDUM #2 12/17/2021

E8.1