120V–1ø CIRCUIT LENGTH TABLE

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	MAXIMUM LENGTH IN FEET				
		NO.12	NO.10	NO.8	NO.6	NO.4
20	4	220	349	556	882	–
	8	110	174	278	441	701
	12	73	116	185	294	467
	16	55	87	139	221	350
30	24	–	58	93	147	234
40	32	–	–	70	110	175
50	40	–	–	–	88	140
60	48	–	–	–	–	117

208V–1ø Circuit Length Table

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	MAXIMUM LENGTH IN FEET				
		NO.12	NO.10	NO.8	NO.6	NO.4
20	4	380	605	964	–	–
	8	190	302	482	765	–
	12	127	202	321	510	810
	16	95	151	241	382	607
30	24	–	101	161	255	405
40	32	–	–	121	191	304
50	40	–	–	–	153	243
60	48	–	–	–	–	202

208V–3ø CIRCUIT LENGTH TABLE

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	MAXIMUM LENGTH IN FEET				
		NO.12	NO.10	NO.8	NO.6	NO.4
20	4	439	698	1113	–	–
	8	220	349	557	883	–
	12	127	233	371	589	935
	16	95	175	278	442	701
30	24	–	116	186	294	468
40	32	–	–	139	221	351
50	40	–	–	–	177	281
60	48	–	–	–	–	234

FEEDER & BRANCH CIRCUIT SIZING SCHEDULE – NONLINEAR LOADS

OVERCURRENT DEVICE RATING (AMPERES)	WIRE SIZE – AWG OR KCMIL			CONDUIT SIZE			NOTE
	PHASE & NEUTRAL	E.G.	4 WIRE+G (2PH & 2N)	5 WIRE+G (NOTE–7)	6 WIRE+G (3PH & 3N)		
15–20	12	12	3/4"	3/4"	3/4"		
25–30	10	10	3/4"	3/4"	3/4"		
35–40	8	10	3/4"	1"	1"		
45–50	8(6)	10	3/4"(1")	1"	1"(1 1/4")		
60	6(4)	10	1"(1 1/4")	1"(1 1/4")	1 1/4"		
70	6(4)	8	1"(1 1/4")	1"(1 1/4")	1 1/4"		
80–90	4(2)	8	1 1/4"	1 1/4"(1 1/2")	1 1/4"(1 1/2")		
100	3(2)	8	1 1/4"	1 1/2"	1 1/2"		
110	2(1)	6	1 1/2"	2"	2"		
125	1(1/0)	6	1 1/2"(2")	2"	2"		
150	1/0	6	2"	2"	2"		
175	2/0	6	2"	2"	2 1/2"		
200	3/0	6	2"	2 1/2"	2 1/2"		
225	4/0	4	2 1/2"	2 1/2"	3"		
250	250	4	3"	3"	3"		
300	350	4	3"	3 1/2"	3 1/2"		
350	500	3	3 1/2"	4"	4"		
400	500	3	3 1/2 "	4"	4"		
450	2–4/0	2–2	2–2 1/2"	2–2 1/2"	2–3"		
500	2–250	2–2	2–3"	2–3"	2–3"		
600	2–350	2–1	2–3"	2–3 1/2"	2–3 1/2"		
700	2–500	2–1/0	2–3 1/2"	2–4"	2–4"		
800	2–500	2–1/0	2–3 1/2"	2–4"	2–4"		
1000	3–400	3–2/0	3–3"	3–3 1/2"	3–4"		
1200	4–350	4–3/0	4–3"	4–3 1/2"	4–3 1/2"		
1600	5–400	5–4/0	5–3"	5–3 1/2"	5–4"		
2000	6–400	6–250	6–3"	6–3 1/2"	6–4"		

FEEDER & BRANCH CIRCUIT SIZING SCHEDULE – GENERAL PURPOSE

OVERCURRENT DEVICE RATING (AMPERES)	WIRE SIZE – AWG OR KCMIL			CONDUIT SIZE		NOTE
	PHASE & NEUTRAL	E.G.	2 WIRE+G	3 WIRE+G	4 WIRE+G (3PH & 1N)	
15–20	12	12	3/4"	3/4"	3/4"	
25–30	10	10	3/4"	3/4"	3/4"	
35–40	8	10	3/4"	3/4"	3/4"	
45–50	8(6)	10	3/4"	3/4"	3/4"(1")	
60	6(4)	10	3/4"(1")	3/4"(1")	1"(1 1/4")	
70	6(4)	8	3/4"(1")	3/4"(1")	1"(1 1/4")	
80–90	4(2)	8	1"	1"(1 1/4")	1 1/4"	
100	3(2)	8	1"(1 1/4")	1 1/4"	1 1/4"	
110	2(1)	6	1 1/4"	1 1/4"(1 1/2")	1 1/4"(1 1/2")	
125	1(1/0)	6	1 1/4"	1 1/2"	1 1/2"(2")	
150	1/0	6	1 1/4"	1 1/2"	2"	
175	2/0	6	1 1/2"	2"	2"	
200	3/0	6	1 1/2"	2"	2"	
225	4/0	4	2"	2"	2 1/2"	
250	250	4	2"	2 1/2"	2 1/2"	
300	350	4	2 1/2"	3"	3"	
350	500	3	3"	3"	3 1/2"	
400	500	3	3"	3"	3 1/2 "	
450	2–4/0	2–2	2–2"	2–2"	2–2 1/2"	
500	2–250	2–2	2–2"	2–2 1/2"	2–2 1/2"	
600	2–350	2–1	2–2 1/2"	2–3"	2–3"	
700	2–500	2–1/0	2–3"	2–3"	2–3 1/2"	
800	2–500	2–1/0	2–3"	2–3"	3–3 1/2"	
1000	3–400	3–2/0	3–2 1/2"	3–3"	3–3"	
1200	4–350	4–3/0	4–2 1/2"	4–3"	4–3"	
1600	5–400	5–4/0	5–2 1/2"	5–3"	5–3"	
2000	6–400	6–250	6–2 1/2"	6–3"	6–3"	

GENERAL NOTES: (APPLY TO ALL ELECTRICAL DRAWINGS)

1. FEEDER SIZES NOTED ARE FOR COPPER CONDUCTORS. IF ALUMINUM CONDUCTORS ARE USED FOR FEEDERS RATED 100A AND LARGER, CONTRACTOR SHALL PROVIDE FEEDERS WITH EQUAL AMPACITIES AND ADJUST WIRE AND CONDUITS SIZES ACCORDINGLY.
2. REFER TO ARCHITECTURAL SPECIFICATIONS FOR SCHEDULE OF ALTERNATES, COORDINATE ALL DEDUCT AND ADD ALTERNATE WORK REQUIREMENTS WITH ARCHITECT AND OTHER TRADES PRIOR TO BID.
3. COORDINATE WORK WITH ARCHITECTURAL, MECHANICAL, CIVIL, STRUCTURAL AND INTERIOR DESIGN DOCUMENTS.
4. REFER TO LOW VOLTAGE SPECIFICATIONS AND PLANS LV SERIES FOR EXACT LOCATIONS, QUANTITIES AND REQUIREMENTS OF TELECOMM, SECURITY, ETC. DEVICES SHOWN ON THESE PLANS ARE FOR REFERENCE ONLY. COORDINATE COMPLETE SCOPE OF WORK FOR THESE SYSTEMS WITH LOW VOLTAGE CONSULTANT.
5. COORDINATE ELECTRICAL ALL WORK REQUIREMENTS WITH ALL OTHER TRADES AND OWNER PRIOR TO BID.
6. PRIOR TO ELECTRICAL INSTALLATIONS COORDINATE WITH ALL OTHER TRADES FOR EXACT EQUIPMENT LOCATIONS, FEEDER ROUTINGS TO MAINTAIN CODE REQUIRED DEDICATED EQUIPMENT SPACE, WORKING CLEARANCES AND AVOID INTERFERENCES WITH OTHER EQUIPMENT, PIPES, DUCTS, STRUCTURAL ELEMENTS, ETC.

CIRCUIT MAXIMUM DISTANCE TABLES

NOTES:
1. CIRCUIT MAXIMUM DISTANCE IS BASED ON NEC CHAPTER 9, TABLE 8 CONDUCTOR PROPERTIES FOR COATED COPPER CONDUCTORS AT 75 DEGREES CELSIUS.
2. MAXIMUM CIRCUIT LOAD FOR DISTANCE IS BASED ON NEC 220–10(b)
3. FOR 208Y, THREE PHASE MAXIMUM DISTANCE MULTIPLY 480V DISTANCE IN TABLE ABOVE BY 0.43; AND FOR 240V, THREE PHASE MULTIPLY 480V DISTANCE IN TABLE ABOVE BY 0.5.

CIRCUIT SIZING SCHEDULES NOTES:

1. BASED ON THHN/THWN, 90°., 600V, INSULATED, COPPER WIRE APPLIED AT 75° FOR TERMINATIONS RATED AT 60°C/75°C AND 75°C. FOR TERMINATIONS RATED AT 60°C PROVIDE WIRE AND CONDUIT SIZES INDICATED IN PARENTHESIS.
2. BASED ON WIRE OUTSIDE DIAMETERS AND RIGID METALLIC CONDUIT INSIDE DIAMETERS AS PROVIDED IN THE NEC. DO NOT REDUCE CONDUIT SIZE FOR NON–RIGID METALLIC APPLICATION. REFER TO NEC FOR CONDUIT TYPES MORE RESTRICTIVE THAN RIGID METALLIC.
3. BASED ON MOTOR FULL LOAD AMPERES AS PROVIDED BY THE NEC.
4. BASED ON MOTOR RUNNING OVERLOAD PROTECTION PROVIDED BY THERMAL OVERLOAD RELAYS.
5. MOTOR STARTING TYPE BASED ON 460V, 3 PHASE, FULL VOLTAGE NON– REVERSING EXCEPT FOR MOTORS SIZED 75HP OR GREATER WHICH ARE BASED ON 460V, 3 PH, PART WINDING REDUCED VOLTAGE STARTING.
6. TRANSFORMER CIRCUITS BASED ON 480V TO 208/120V, 3 PH, 4 WIRE, DRY TYPE.
7. FOR ALL CONDUITS AND WIRES INSTALLED EXPOSED IN DIRECT SUNLIGHT ON OR ABOVE ROOFTOPS, APPLY THE CORRECTION FACTORS PER NEC 20B TABLE 310.15(B)(2)(c) FOR AMBIENT TEMPERATURE ADJUSTMENTS.

CONDUIT & WIRE SCHEDULE (600V & BELOW)

3–WIRE SYSTEM			4–WIRE SYSTEM		
WIRE TAG	CU/AL	CONDUIT & WIRE	WIRE TAG	CU/AL	CONDUIT & WIRE
20X	CU	3/4"C. 3#12 + 1#12G.	20	CU	3/4"C. 4#12 + 1#12G.
25X	CU	3/4"C. 3#10 + 1#10G.	25	CU	3/4"C. 4#10 + 1#10G.
30X	CU	3/4"C. 3#10 + 1#10G.	30	CU	3/4"C. 4#10 + 1#10G.
35X	CU	3/4"C. 3#8 + 1#10G.	35	CU	3/4"C. 4#8 + 1#10G.
40X	CU	3/4"C. 3#8 + 1#10G.	40	CU	3/4"C. 4#8 + 1#10G.
50X	CU	1"C. 3#6 + 1#10G.	50	CU	1"C. 4#6 + 1#10G.
55X	CU	3/4"C. 3#6 + 1#10G.	55	CU	3/4"C. 4#6 + 1#10G.
60X	CU	1 1/4"C. 3#4 + 1#10G.	60	CU	1 1/4"C. 4#4 + 1#10G.
70X	CU	1 1/4"C. 3#4 + 1#8G.	70	CU	1 1/4"C. 4#4 + 1#8G.
85X	CU	1 1/4"C. 3#4 + 1#8G.	85	CU	1 1/4"C. 4#4 + 1#8G.
100X	CU	1 1/4"C. 3#2 + 1#8G.	100	CU	1 1/4"C. 4#2 + 1#8G.
	AL	2"C. 3#1/0 + 1#6G.		AL	2"C. 4#1/0 + 1#6G.
110X	CU	1 1/2"C. 3#1 + 1#6G.	110	CU	1 1/2"C. 4#1 + 1#6G.
	AL	2"C. 3#10 + 1#4G.		AL	2"C. 4#10 + 1#4G.
125X	CU	2"C. 3#1/0 + 1#6G.	125	CU	2"C. 4#1/0 + 1#6G.
	AL	2"C. 3#2/0 + 1#4G.		AL	2"C. 4#2/0 + 1#4G.
150X	CU	2"C. 3#1/0 + 1#6G.	150	CU	2"C. 4#1/0 + 1#6G.
	AL	2"C. 3#3/0 + 1#4G.		AL	2"C. 4#3/0 + 1#4G.
175X	CU	2"C. 3#2/0 + 1#6G.	175	CU	2"C. 4#2/0 + 1#6G.
	AL	2 1/2"C. 3#4/0 + 1#4G.		AL	2 1/2"C. 4#4/0 + 1#4G.
200X	CU	2"C. 3#3/0 + 1#6G.	200	CU	2"C. 4#3/0 + 1#6G.
	AL	3"C. 3#250KCMIL + 1#4G.		AL	3"C. 4#250KCMIL + 1#4G.
225X	CU	2 1/2"C. 3#4/0 + 1#4G.	225	CU	2 1/2"C. 4#4/0 + 1#4G.
	AL	3"C. 3#300KCMIL + 1#2G.		AL	3"C. 4#300KCMIL + 1#2G.
250X	CU	3"C. 3#250KCMIL + 1#4G.	250	CU	3"C. 4#250KCMIL + 1#4G.
	AL	3"C. 3#350KCMIL + 1#2G.		AL	3"C. 4#350KCMIL + 1#2G.
300X	CU	3"C. 3#350KCMIL + 1#4G.	300	CU	3"C. 4#350KCMIL + 1#4G.
	AL	4"C. 3#500KCMIL + 1#2G.		AL	4"C. 4#500KCMIL + 1#2G.
350X	CU	4"C. 3#500KCMIL + 1#3G.	350	CU	4"C. 4#500KCMIL + 1#3G.
	AL	(2) 2 1/2"C. EA/W 3#4/0 + 1#1G.		AL	(2) 2 1/2"C. EA/W 4#4/0 + 1#1G.
400X	CU	4"C. 3#600KCMIL + 1#3G.	400	CU	4"C. 4#600KCMIL + 1#3G.
	AL	(2) 3"C. EA/W 3#250KCMIL + 1#1G.		AL	(2) 3"C. EA/W 4#250KCMIL + 1#1G.
450X	CU	(2) 2 1/2"C. EA/W 3#4/0 + 1#2G.	450	CU	(2) 2 1/2"C. EA/W 4#4/0 + 1#2G.
	AL	(2) 3"C. EA/W 3#300KCMIL + 1#1/0G.		AL	(2) 3"C. EA/W 4#300KCMIL + 1#1/0G.
500X	CU	(2) 3"C. EA/W 3#250KCMIL + 1#2G.	500	CU	(2) 3"C. EA/W 4#250KCMIL + 1#2G.
	AL	(2) 3"C. EA/W 3#350KCMIL + 1#1/0G.		AL	(2) 3"C. EA/W 4#350KCMIL + 1#1/0G.
600X	CU	(2) 4"C. EA/W 3#350KCMIL + 1#1G.	600	CU	(2) 4"C. EA/W 4#350KCMIL + 1#1G.
	AL	(2) 4"C. EA/W 3#500KCMIL + 1#2/0G.		AL	(2) 4"C. EA/W 4#500KCMIL + 1#2/0G.
700X	CU	(2) 4"C. EA/W 3#500KCMIL + 1#1/0G.	700	CU	(2) 4"C. EA/W 4#500KCMIL + 1#1/0G.
	AL	(3) 4"C. EA/W 3#350KCMIL + 1#3/0G.		AL	(3) 4"C. EA/W 4#350KCMIL + 1#3/0G.
800X	CU	(2) 4"C. EA/W 3#600KCMIL + 1#1/0G.	800	CU	(2) 4"C. EA/W 4#600KCMIL + 1#1/0G.
	AL	(3) 4"C. EA/W 3#500KCMIL + 1#3/0G.		AL	(3) 4"C. EA/W 4#500KCMIL + 1#3/0G.
1000X	CU	(3) 4"C. EA/W 3#400KCMIL + 1#2/0G.	1000	CU	(3) 4"C. EA/W 4#400KCMIL + 1#2/0G.
	AL	(3) 4"C. EA/W 3#600KCMIL + 1#4/0G.		AL	(3) 4"C. EA/W 4#600KCMIL + 1#4/0G.
1200X	CU	(3) 4"C. EA/W 3#600KCMIL + 1#3/0G.	1200	CU	(3) 4"C. EA/W 4#600KCMIL + 1#3/0G.
	AL	(4) 4"C. EA/W 3#500KCMIL + 1#250KCMIL G.		AL	(4) 4"C. EA/W 4#500KCMIL + 1#250KCMIL G.
1600X	CU	(4) 4"C. EA/W 3#600KCMIL + 1#4/0G.	1600	CU	(4) 4"C. EA/W 4#600KCMIL + 1#4/0G.
	AL	(5) 4"C. EA/W 3#600KCMIL & 1#350KCMIL G.		AL	(5) 4"C. EA/W 4#600KCMIL & 1#350KCMIL G.
2000X	CU	(5) 4"C. EA/W 3#600KCMIL + 1#250KCMIL G.	2000	CU	(5) 4"C. EA/W 4#600KCMIL + 1#250KCMIL G.
	AL	(6) 4"C. EA/W 3#600KCMIL & 1#400KCMIL G.		AL	(6) 4"C. EA/W 4#600KCMIL & 1#400KCMIL G.
2500X	CU	(6) 4"C. EA/W 3#600KCMIL + 1#350KCMIL G.	2500	CU	(6) 4"C. EA/W 4#600KCMIL + 1#350KCMIL G.
	AL	(8) 4"C. EA/W 3#600KCMIL & 1#600KCMIL G.		AL	(8) 4"C. EA/W 4#600KCMIL & 1#600KCMIL G.
3000X	CU	(8) 4"C. EA/W 3#500KCMIL + 1#400KCMIL G.	3000	CU	(8) 4"C. EA/W 4#500KCMIL + 1#400KCMIL G.
	AL	(8) 5"C. EA/W 3#750KCMIL & 1#600KCMIL G.		AL	(8) 5"C. EA/W 4#750KCMIL & 1#600KCMIL G.

GENERAL WIRING NOTES:
1. FOR 2–WIRE SYSTEMS USE Y AS SUFFIX, SIMILAR TO X FOR THE 3–WIRE SYSTEM.
2. THE USE OF ALUMINUM WIRES HAVE TO BE APPROVED BY THE ENGINEER AND OWNER PRIOR TO BID, NO ALUMINUM WIRES ALLOWED FOR 100A AND LESS.

ELECTRICAL LEGEND

- TWIN POLE MOUNTED SITE LIGHTING FIXTURE
- SINGLE POLE MOUNTED SITE LIGHTING FIXTURE
- "A" FIXTURE TYPE
- WALL MOUNTED LIGHT FIXTURE
- DOWN LIGHT FIXTURE
- HALF SHADED LIGHTING FIXTURES WIRED TO THE EMERGENCY GENERATOR – TYPICAL FOR ALL HALF SHADED LIGHTING SYMBOLS
- RECESSED LIGHT FIXTURE
- STRIP LIGHT FIXTURE
- EXIT LIGHT FIXTURE – WITH TWIN EMERGENCY HEADS
- EXIT LIGHT FIXTURE – ARROWS AS INDICATED
- REMOTE BATTERY OPERATED EMERGENCY LIGHTING UNIT
- TWIN HEAD BATTERY OPERATED EMERGENCY LIGHTING UNIT
- DUPLEX RECEPTACLE – GROUNDING TYPE
- SPECIAL PUROPSE OUTLET – SIZE AS INDICATED
- DUPLEX RECEPTACLE – W/GFR
- DUPLEX RECEPTACLE – W/GFR ABOVE COUNTER OR AT 42"AFF
- DUPLEX RECEPTACLE – ABOVE COUNTER OR AT 42"AFF
- DOUBLE DUPLEX RECEPTACLE
- DOUBLE DUPLEX RECEPTACLE – ABOVE COUNTER OR AT 42"AFF
- DUPLEX RECEPTACLE CONNECTED TO GENERATOR EMERGENCY POWER
- QUAD RECEPTACLE CONNECTED TO GENERATOR EMERGENCY
- GFR DUPLEX RECEPTACLE CONNECTED TO GENERATOR EMERGENCY POWER
- S S2 SINGLE AND TWO POLE SWITCH
- S3 S4 THREE AND FOUR WAY SWITCH
- SK KEY SWITCH
- SP SWITCH WITH PILOT LIGHT
- ST SWITCH WITH TIMER WITH MIN. 1 HOUR SETTING
- SM WALL SWITCH DECORATOR SENSOR–PASSIVE DUAL TECHNOLOGY SENSOR SWITCH = WSXA PDT SA WH, OR APPROVED EQUAL
- SM2 WALL SWITCH DECORATOR SENSOR–PASSIVE DUAL TECHNOLOGY 2 BUTTON SENSOR SWITCH = WSXA PDT SA 2P WH, OR APPROVED EQUAL
- SMD DIMMING WALL SWITCH DECORATOR SENSOR–PASSIVE DUAL TECHNOLOGY SENSOR SWITCH = WSXA PDT D SA WH, OR APPROVED EQUAL
- SL 3 WAY LOW VOLTAGE WALL SWITCH: SINGLE CHANNEL nLIGHT = nPODMA, OR APPROVED EQUAL
- SLD 3 WAY LOW VOLTAGE DIMMER WALL SWITCH: SINGLE CHANNEL nLIGHT = nPODMA DX WH, OR APPROVED EQUAL
- SLD2 3 WAY LOW VOLTAGE DIMMER WALL SWITCH: TWO CHANNELS nLIGHT = nPODMA 2P DX WH, OR APPROVED EQUAL
- LIGHTING AND/OR RECEPTACLE PANEL
- J JUNCTION BOX
- TELEPHONE OUTLET
- TELEPHONE/DATA OUTLET
- DATA OUTLET
- ∇_C DATA OUTLET – CEILING MOUNTED
- TV TELEVISION OUTLET 4–SQUARE BOX – SINGLE GANG, 60" AFF EXCEPT AS NOTED; 1"CONDUIT TO BOX FROM ABOVE SUSPENDED CEILING.
- P MANUAL MOTOR STARTER (P=PILOT)
- F DISCONNECT SWITCH (F=FUSED)
- SIZE 1 COMBINATION MOTOR STARTER
- SINGLE PHASE MOTOR
- THREE PHASE MOTOR
- T TRANSFORMER
- C CONTACTOR
- TS TIME SWITCH
- SD SMOKE DETECTOR
- DSD DUCT MOUNTED SMOKE DETECTOR
- CD CARBON MONOXIDE DETECTOR
- CS CARBON MONOXIDE/SMOKE DETECTOR
- F FIRE ALARM PULL STATION
- F FIRE ALARM HORN/STROBE
- F FIRE ALARM STROBE
- F FIRE ALARM HORN/STROBE – CEILING OR PENDANT MOUNTED
- FACP FIRE ALARM CONTROL PANEL – FLUSH
- FAAP FIRE ALARM ANNUNCIATOR PANEL – FLUSH
- OS OCCUPANCY SENSOR MULTI–TECHNOLOGY CEILING MOUNTED
- OS OCCUPANCY SENSOR MULTI–TECHNOLOGY WALL MOUNTED WITH LIGHT SWITCH
- OCCUPANCY SENSOR POWER PACK
- PC PHOTOCELL
- 48" INDICATES 48" ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- AFF ABOVE FINISHED FLOOR
- EF EXHAUST FAN
- EC OR ET ELECTRICAL TRADES CONTRACTOR
- EWC ELECTRIC WATER COOLER
- GFR GROUND FAULT INTERRUPTER
- NEC NATIONAL ELECTRIC CODE
- MC OR MT MECHANICAL TRADES CONTRACTOR
- P PUMP
- SD SERVICE DISCONNECT
- TS TIME SWITCH
- WP WEATHERPROOF

LEGEND NOTES:
1. ALL OCCUPANCY SENSORS SHALL HAVE ISOLATED AUXILIARY CONTACTS FOR USE BY MECHANICAL TRADES TO CONTROL MECHANICAL EQUIPMENT.
2. THIS IS STANDARD SYMBOL LIST – SOME OF THESE SYMBOL MAY NOT APPEAR ON DRAWINGS.

MOUNTING HEIGHTS

EQUIPMENT OR OUTLETS	ELEVATIONS
WALL SWITCHES	4'–0" AFF
RECEPTACLES	1'–6" AFF
TELECOMMUNICATIONS OUTLETS	1'–6" AFF
TELECOMMUNICATIONS OUTLETS – WALL PHONE	4'–6" AFF
CLOCK OUTLETS	7'–6" AFF
TV OUTLETS	1'–6" AFF
FIRE ALARM – PULL STATIONS	4'–0" AFF
FIRE ALARM – SPEAKERS, VISUAL UNITS, HORNS	7'–0" AFF
PUSHBUTTONS	4'–0" AFF
DISCONNECT SWITCHES	5'–6" AFF
MOTOR STARTERS	5'–6" AFF
PANELS & CABINETS	6'–0" TO TOP
VOLUME CONTROLS	4'–0" AFF
NURSE CALL STATIONS	4'–0" AFF
DIMMERS	4'–0" AFF
INDIVIDUAL CIRCUIT BREAKERS	5'–6" TO TOP
ACCESS CONTROL DEVICES	4'–0" AFF

MOUNTING HEIGHT NOTES:

1. ALL ELEVATIONS ARE TO CENTER LINE OF DEVICE, UNLESS OTHERWISE NOTED.
2. REFER TO ARCHITECTURAL ELEVATION DRAWINGS FOR COORDINATION WITH CASEWORK.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE SUCH THAT ALL LIGHT SWITCHES AND OTHER OPERABLE PARTS ARE INSTALLED IN ACCORDANCE WITH ICC A117.1.–2009 (NEC ANNEX J) AS FOLLOWS:
   (a) 308.2.1 UNOBSTRUCTED.
   (b) 308.2.2 OBSTRUCTED HIGH REACH.
   (c) 308.3.1 UNOBSTRUCTED.
   (d) 308.3.2 OBSTRUCTED HIGH REACH.

ELECTRICAL DRAWING INDEX

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Architect of Record

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Job No. 483–21061

Owner

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Project

Apartment Renovation
LINWOOD APARTMENTS
2295 W Grand Blvd
Detroit, MI 48208

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Drawing Title

Electrical Cover Sheet

2021-248 Project No.
JLW Drawn By
EK Checked By
As Noted Scale

E0.1 Drawing No.

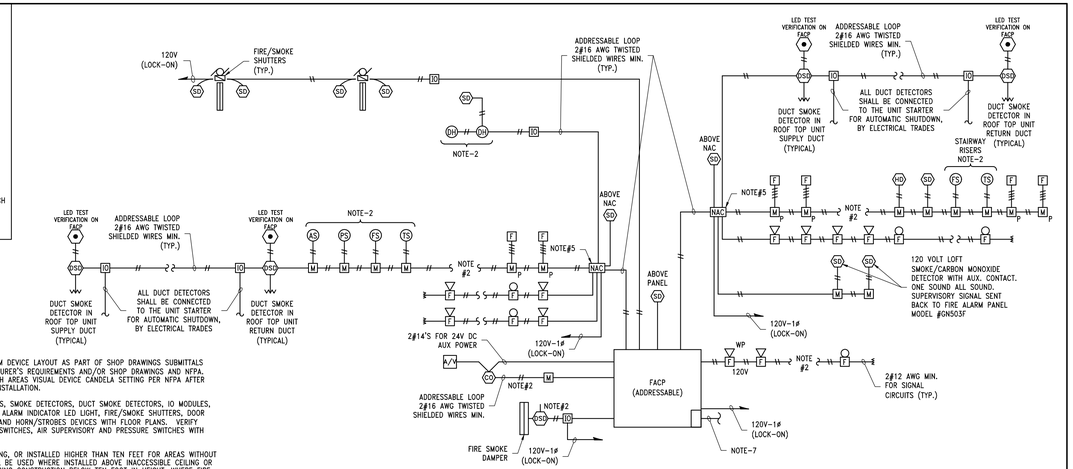
H:\EAM-MAIN\Projects\2021\483 Shelter Design\21061 Linwood Apts\CAD\ELEC\E0.1 Electrical Cover Sheet.dwg, 6/2/2026 11:55:38 AM, jwatson

SYMBOL LIST:

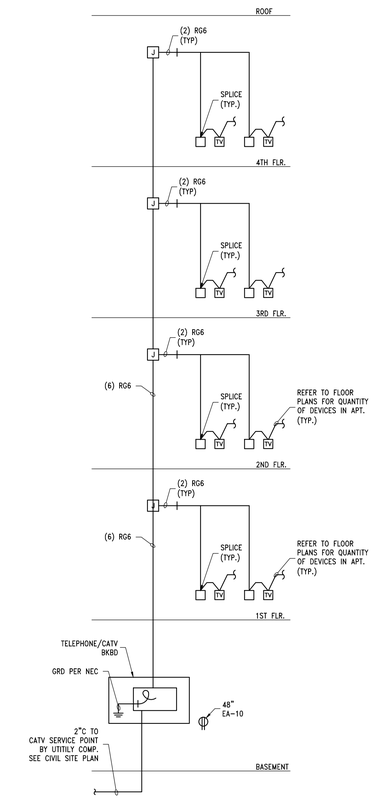
SD	SMOKE DETECTOR	F	PULL STATION
HD	HEAT DETECTOR	F	HORN/STROBE
CO	WALL MOUNTED CARBON MONOXIDE 18"AFF WITH AUDIBLE ALARM	F	STROBE
DSD	DUCT SMOKE DETECTOR	M	RESIDENT MINI HORN
M_P	MINI MODULE		SINGLE PAIR OF WIRES
M	MONITOR MODULE		EOL RESISTOR
NAC	REMOTE NOTIFICATION APPLIANCE CIRCUIT PANEL	TS	TAMPER SWITCH
S	SIGNAL MODULE (MOUNTED OUTSIDE OF ADA UNITS).	FS	FLOW SWITCH
IO	CONTROL IN/OUT MODULE	AS	AIR SUPPERVISORY SWITCH
		PS	PRESSURE SWITCH

FIRE ALARM NOTES:

1. ELECTRICAL CONTRACTOR SHALL PROVIDE MANUFACTURER FIRE ALARM DEVICE LAYOUT AS PART OF SHOP DRAWINGS SUBMITTALS AND PROVIDE ALL REQUIRED FIRE ALARM EQUIPMENT PER MANUFACTURER'S REQUIREMENTS AND/OR SHOP DRAWINGS AND NFPA. ALL VISUAL DEVICES SHALL ALSO BE SIZED AND FIELD ADJUST EACH AREAS VISUAL DEVICE CANDELA SETTING PER NFPA AFTER INSTALLATION. MAKE ALL NECESSARY REVISIONS FOR A COMPLETE INSTALLATION.
2. VERIFY EXACT QUANTITY AND LOCATIONS OF ALL CARBON MONOXIDES, SMOKE DETECTORS, DUCT SMOKE DETECTORS, IO MODULES, SIGNAL MODULES, FIRE SMOKE DAMPERS, SAMPLING TUBES, REMOTE ALARM INDICATOR LED LIGHT, FIRE/SMOKE SHUTTERS, DOOR HOLDERS, SPRINKLER SHUT OFF VALVES, PULL STATIONS, STROBES AND HORN/STROBES DEVICES WITH FLOOR PLANS. VERIFY EXACT QUANTITY AND LOCATIONS OF ALL FLOW SWITCHES, TAMPER SWITCHES, AIR SUPERVISORY AND PRESSURE SWITCHES WITH FIRE PROTECTION CONTRACTOR IF REQUIRED.
3. FIRE ALARM SYSTEM WIRING INSTALLED ABOVE AN ACCESSIBLE CEILING, OR INSTALLED HIGHER THAN TEN FEET FOR AREAS WITHOUT CEILINGS DOES NOT REQUIRE THE USE OF CONDUIT, CONDUIT SHALL BE USED WHERE INSTALLED ABOVE INACCESSIBLE CEILING OR WHERE INSTALLED WITHIN OR SURFACE MOUNTED TO WALL OR BUILDING CONSTRUCTION BELOW TEN FOOT IN HEIGHT. WHERE FIRE ALARM CABLE IS USED WITHOUT CONDUIT IT SHALL BE PLENUM RATED.
4. DUCT DETECTORS SHALL BE WIRED TO THEIR RESPECTIVE FAN STARTERS FOR AUTOMATIC SHUT DOWN. THE SMOKE DETECTORS SHALL BE FURNISHED & INSTALLED BY ELECTRICAL/FIRE ALARM TRADES. AS FULLY COMPATIBLE WITH AND ADDRESSABLE BY THE FIRE ALARM SYSTEM AND INTERLOCKED WITH THE FIRE ALARM SYSTEM AS REQUIRED PER CODE.
5. PROVIDE REMOTE NOTIFICATION APPLIANCE CIRCUIT PANEL AS REQUIRED. CONNECT TO SPARE CIRCUIT BREAKER IN RECEPTACLE PANEL. ADD LOCK-ON DEVICES. FIRE ALARM MANUFACTURER MUST SUPPLY SMOKE DETECTOR FOR EACH REMOTE POWER SUPPLY.
6. INTERLOCK ELEVATOR FIRE ALARM SYSTEM PER SPECIFICATION SECTION 16720.
7. PROVIDE A SYSTEM EMPLOYING A DACT THAT EMPLOYS ONE TELEPHONE LINE (NUMBER) PER NFPA 72, LATEST EDITION SECTION 26.6.3.2.1.4 AND PROVIDE IP (INTERNET)/ CELLULAR COMMUNICATOR PER SECTION 26.6.3.1.



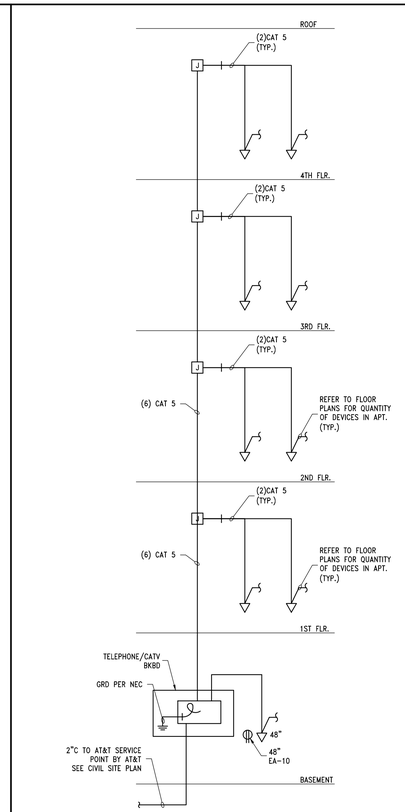
1 E0.2 Fire Alarm Riser Diagram
SCALE: None



2 E0.2 Typical Apartment CATV Riser
SCALE: None

CATV NOTES:

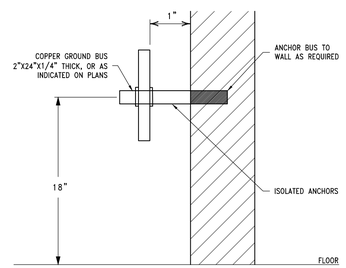
1. RISER INDICATES DESIGN INTENT. ALL CABLES/CONDUITS SHALL BE SIZED IN ACCORDANCE WITH CATV REQUIREMENTS.
2. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT AND CABLE ROUTING.
3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIRE STOPPING AFTER THE INSTALLATION OF ALL CABLES.



3 E0.2 Typical Apartment Telephone Riser
SCALE: None

TELEPHONE NOTES:

1. RISER INDICATES DESIGN INTENT. ALL CABLES/CONDUITS SHALL BE SIZED IN ACCORDANCE WITH AT&T REQUIREMENTS.
2. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT AND CABLE ROUTING.
3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIRE STOPPING AFTER THE INSTALLATION OF ALL CABLES.



4 E0.2 Ground Bus Detail
SCALE: None

LIGHTING CONTROL MATRIX SCHEDULE

TAG	ROOM/SPACE TYPE	CONTROLS	AUTOMATIC LIGHTING CONTROL	LOCAL CONTROL	MANUAL ON	PARTIAL AUTO ON	BI-LEVEL	DAYLIGHT SIDE LIGHT	DAYLIGHT TOP LIGHT	AUTOMATIC PARTIAL OFF (H APPLIES)	AUTOMATIC FULL OFF	SCHEDULED FULL OFF
BASED ON ASHRAE 90.1-2013 TABLE 9.6.1 - CONTROL FUNCTIONS				a	b	c	d	e	f	g	h	i
LC1	UTILITY ROOM	LOCAL		YES	YES							
LC2	RESTROOM/OFFICE	LOCAL/OS	OCCUPANCY SENSOR (OS)	YES	YES						YES	
LC3a	CORRIDOR	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES		YES					YES
LC3b	CORRIDOR	LOCAL/OS	OCCUPANCY SENSOR (OS)	YES	YES						YES	
LC4	MULTIPURPOSE	LOCAL/DIM/OS	OCCUPANCY SENSOR (OS)	YES	YES		YES				YES	
LC5	STAIRS	OS/ON/DIM	OCCUPANCY SENSOR (OS)				YES			AUTO REDUCE 50% AFTER 20 MIN.		
LC6	STORAGE	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES							YES

LIGHTING CONTROL NOTES:

1. CONTRACTOR TO PROVIDE MOTION SENSORS, DAYLIGHT SENSORS, ROOM CONTROLLERS, AND ACCESSORIES AS REQUIRED FOR A FULLY OPERATIONAL INSTALLATION PER 2015 MICHIGAN ENERGY CODE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO REVIEW MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL ROOM CONTROLLERS/POWER PACKS AND ASSOCIATED WIRING FOR MULTIPLE SWITCH LEG LOCATIONS. SEE PLANS FOR EXACT SWITCH LEGS WITH-IN EACH AREA OR ROOM. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHTING CONTROL MANUFACTURER'S DEVICE LAYOUT AS PART OF SHOP DRAWINGS SUBMITTALS.
2. ELECTRICAL CONTRACTOR IS TO INCLUDE THE SCOPE OF A LIGHTING CONTROLS DESIGNER/INSTALLER AS SUBCONTRACTOR TO ELECTRICAL CONTRACTOR TO PROVIDE FINAL DESIGN, DOCUMENTATION, PROGRAMMING, AND INSTALLATION OF THE LIGHTING CONTROLS. CONTRACT DOCUMENTS INCLUDE INTENDED FUNCTIONALITY ONLY.
3. TO PREVENT FALSE ACTIVATION, MOUNT CEILING MOUNT SENSORS AWAY FROM DIFFUSERS AND THE PATH OF STRONG AIR TURBULENCE A MINIMUM OF FOUR FEET FOR STANDARD SENSITIVITY AND SIX FEET FOR MAXIMUM SENSITIVITY.
4. LOCATE AND AIM SENSORS IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER VOLUMETRIC COVERAGE WITHIN THE RANGE OF COVERAGE(S) OF CONTROLLED AREAS PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE ONE HUNDRED (100%) PERCENT COVERAGE TO COMPLETELY COVER THE CONTROLLED AREA TO ACCOMMODATE ALL OCCUPANCY HABITS OF SINGLE OR MULTIPLE OCCUPANTS AT ANY LOCATION WITHIN THE ROOM(S).
5. PROVIDE THE QUANTITY OF ROOM CONTROLLERS AND POWER PACKS NEEDED TO CONTROL SWITCH LEGS AND VOLTAGES INDICATED.
6. UNLESS OTHERWISE INDICATED, ADJUST MOTION SENSOR TIME TO TURN OFF CONTROLLED LIGHTING AFTER 20 MINUTES.
7. INCLUDE TESTING BY AN INDEPENDENT THIRD PARTY TESTING AGENCY OR INDEPENDENT COMMISSIONING AGENT AS REQUIRED BY THE MICHIGAN ENERGY CODE (ASHRAE 90.1-2013). TEST, CERTIFY AND PROVIDE DOCUMENTATION OF LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANSI/ASHRAE/IES STANDARD 90.1-2013, SECTION 9.4.3 FUNCTION TESTING).
8. PROVIDE DAY LIGHT SENSORS WHERE LIGHTING FIXTURES FALL WITHIN TOP/SIDE LIGHTED AREAS FOR BOTH PRIMARY AND SECONDARY ZONES AS DEFINED BY ASHRAE 90.1-2013, SECTION 9.4.1.1-e AND SECTION 9.4.1.1-f.
9. INTEGRATE CONTROLS FOR UNDERCABINET LIGHTING TO PROVIDE AS MANUAL ON/AUTOMATIC OFF BY SAME SENSOR(S) SERVING GENERAL LIGHTING IN SPACE/ROOM.
10. IN ROOMS WITH PARTIAL ON CONTROL, PROGRAM ASSOCIATED SWITCH FOR FULL ON AND MANUAL OFF IN ADDITION TO AUTOMATIC OFF VIA OCCUPANCY SENSOR.
11. FOR AUTOMATIC DAYLIGHT RESPONSIVE CONTROLS SET DAYLIGHT SENSOR TO MAINTAIN THE SAME LIGHTING LEVELS AS THE LEVELS OUTSIDE THE DAYLIGHT AREA.

COMMON AREA LIGHTING FIXTURE SCHEDULE

ITEM #	LAMP	DESCRIPTION	MANUFACTURER	TOTAL WATTS
A	LED 3000K 2,622 lumens	SURFACE MOUNTED GLASS BOWL FIXTURE WITH SATIN NICKEL FINISH, 120V	PROGRESS LIGHTING: P350008-009-30 OR APPROVED EQUAL	30
B	LED	1'X4' FLAT PANEL, BACKLIT WITH FIELD ADJUSTABLE LUMENS ANC COLOR TEMPERATURE, DIMMING, MVOLT, FLANGE KIT FOR GYP BOARD INSTALLATION	ORACLE: 14-FPL-BL-LED-4000/5000/6000L-DIM10-MVOLT-30K/35K/40K-85-14FK OR APPROVED EQUAL	50
C	LED	2'X2' FLAT PANEL, BACKLIT WITH FIELD ADJUSTABLE LUMENS ANC COLOR TEMPERATURE, DIMMING, MVOLT	ORACLE: 22-FPL-BL-LED-4000/5000/6000L-DIM10-MVOLT-30K/35K/40K-85 OR APPROVED EQUAL	50
F	LED	4' STRIP CHAIN MOUNTED WITH FIELD ADJUSTABLE LUMENS ANC COLOR TEMPERATURE, WHITE FINISH, DIMMING, MVOLT, WITH V-HOOK AND CHAIN	ORACLE: 22-FPL-BL-LED-4000/5000/6000L-DIM10-MVOLT-30K/35K/40K-85-OCVH OR APPROVED EQUAL	50
G	LED 3500K 5,760 lumens	4' STAIRWELL LIGHT FIXTURE, 3500K, HIGH LUMEN OUTPUT, FROSTED ACRYLIC LENS, WIDE DISTRIBUTION, DIMMABLE, MVOLT, BUILT-IN OCCUPANCY SENSOR	COLUMBIA: ESL-4'-35-HL-FA-W-ED-U-BTSO12F OR APPROVED EQUAL	50
H	LED 4000K 2,000 lumens	SURFACE MOUNTED DOWNLIGHT, 4000K, WHITE FINISH, 120V, DIMMABLE	ELITE: RL870-2000L-DIMTR-120-40K-90+-WH OR APPROVED EQUAL	27
K	LED	DECORATIVE PENDANT, BRUSHED NICKEL, ETCHED GLASS BOWL, 120V, STEM MOUNTED, WITH (3) MED. BASE SCREW-IN LED	PROGRESS LIGHTING: P3450-09 OR APPROVED EQUAL	30
J	LED 4000K 8299 lumens	4' VAPOR TIGHT FIXTURE WITH INJECTION MOLDED ACRYLIC LENS, MEDIUM DISTRIBUTION, 120/277 MVOLT, 0-10V DIMMING DRIVER, 85 CRI, WHITE FINISH.	ELITE: ORACLE #4-OW1IP-LED-8000L-DIM10-MVOLT-40K-85-MD-OW1IPL, OR APPROVED EQUAL	65
X	LED	UNIVERSAL MOUNT LED EXIT LIGHT, RED LETTERS, WHITE FINISH, 120/277 VOLT, INTEGRAL TEST SWITCH	COMPASS: CER OR APPROVED EQUAL	2
XM	LED	TWIN HEAD EMERGENCY LED LIGHT FIXTURE, 120/277V, NICAD BATTERY, FINISHED IN WHITE. (ADD "RC" FOR REMOTE CAPABILITY (XR) WHERE NECESSARY)	COMPASS: CU2HLHO OR APPROVED EQUAL	5.4
XR	LED	REMOTE EGRESS LIGHT FIXTURE, SINGLE HEAD, WET LISTED	COMPASS: CORS OR APPROVED EQUAL	5

EXTERIOR LIGHTING FIXTURE SCHEDULE

OA	LED 3000K 932 lumens	EXTERIOR DECORATIVE WALL SCONCE, 18", BLACK FINISH, HAMMERED GLASS SHADE, 120V	MODERN FORMS: WS-W41918 OR APPROVED EQUAL	15
OB	LED 4000K 2,190 lumens	EXTERIOR WALL PACK, WET LISTED, BLACK FINISH	LITHONIA: WSR-LED-P1-SR4-40K-MVOLT OR APPROVED EQUAL	20
OC	LED 5000K 10893 lumens	EXTERIOR AREA LIGHT FIXTURE ON 16' SQUARE POLE, FORWARD THROW, HIGH OUTPUT, BRONZE FINISH WITH HOUSE SHIELD	LITHONIA: RSX1-LED-P4-50K-R4-HS OR APPROVED EQUAL	133
OD	LED 5000K 5010 lumens (Max)	EXTERIOR AREA FLOOD LIGHT FIXTURE, ADJUSTABLE LUMEN OUTPUT, SWITCHTABLE CCT, DUSK TO DAWN PE, MVOLT, 80CRI, BRONZE FINISH, KNUCKLE MOUNT	LITHONIA: ESXF1-ALO-SWW2-KY-DDB OR APPROVED EQUAL	34 (Max)

APARTMENT LIGHTING FIXTURE SCHEDULE

ITEM #	LAMP	DESCRIPTION	LOCATION	MODEL	EST WATTS
L1	LED	4'-0" SURFACE MOUNTED CEILING FIXTURE	KITCHEN	PROGRESS LIGHTING: P7300012-030-30	30
L2	LED	6" LED LOW PROFILE DISK LIGHT, BRUSHED NICKEL FINISH, SELECTABLE CCT, 90 CRI, 929 LUMENS, 120V, WET LISTED	BATHROOM/ CLOSET / DINING / HALL / KITCHEN OVER SINK	RP LIGHTING: 8556--BN-90-5CCT-RP	15
L3	LED	SURFACE MOUNTED BOWL FIXTURE, NICKEL FINISH WITH (2) MED. BASE SCREW-IN LEDS	BEDROOM	PROGRESS LIGHTING: PP3925-09RY	20
L4	LED	VANITY LIGHT FIXTURE, (3) A19 MED LED SCREW-INS	BATHROOM OVER MIRROR	PROGRESS LIGHTING: P2708-09	30

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Electrical Schedules and Details

2021-248
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As Noted
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E0.2
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H:\EAM-MAIN\Projects\2021\483 Shelter Design\21061 Linwood Apts\CAD\ELEC\E0.2 Electrical Schedules & Details.dwg, 6/2/2026 11:55:38 AM, jwatson

GENERAL RISER NOTES:

A. REFER TO SHEET E0.1 FOR ELECTRICAL LEGEND AND E0.2 FOR DETAILS.

B. REFER TO SHEETS E0.4 AND E0.5 FOR PANELBOARD SCHEDULES AND LOAD CALCULATIONS.

C. REFER TO VOLTAGE DROP SCHEDULE ON SHEET E0.1 AND ADJUST FEEDERS ACCORDINGLY NOT TO EXCEED 2% VOLTAGE DROP FOR FEEDERS AND 3% VOLTAGE DROP FOR BRANCH CIRCUITS.

D. RUN ALL UNDERGROUND CONDUITS MIN. 4" UNDER SLAB.

E. ALL FLOOR AND GROUND MOUNTED EQUIPMENT (SWITCHBOARDS, DISTRIBUTION PANELS, TRANSFORMERS, POWER PANELS, ETC.) TO BE PAD MOUNTED, PROVIDE CONCRETE PAD AS REQUIRED PER APPROVED EQUIPMENT SUBMITTAL, COORDINATE WITH ARCHITECT.

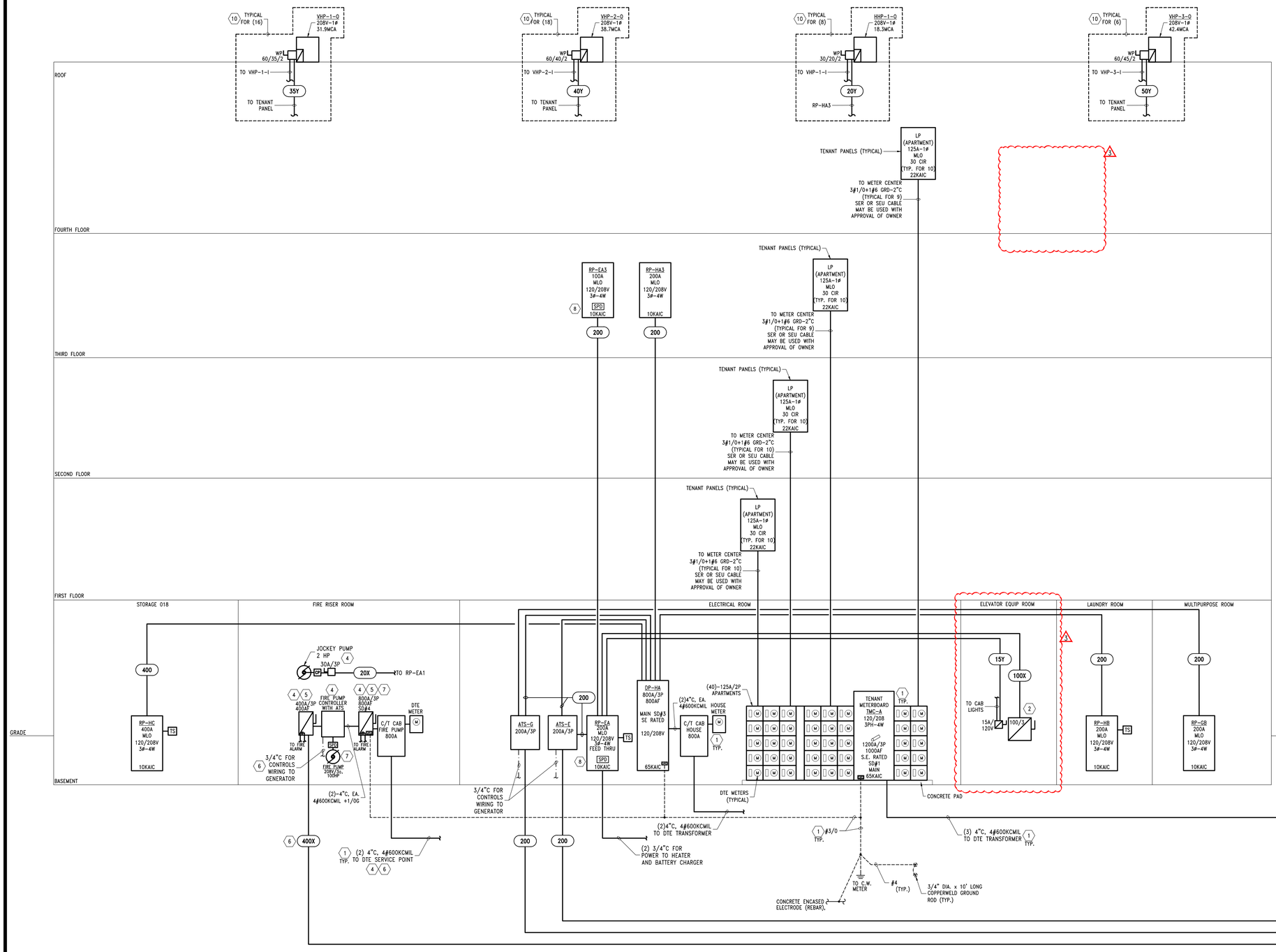
F. COORDINATE WITH UTILITY COMPANY FOR NEW PRIMARY SERVICE REQUIREMENTS, INCLUDING FOR FUTURE EXPANSIONS AND UTILITY UPGRADES.

G. COORDINATE WITH MECHANICAL FOR ALL INTERWIRING REQUIREMENTS OF FANS, HOODS, RTU'S, FIRE SUPPRESSION, ETC. PROVIDE AUXILARY CONTACTS AND/OR CONTACTORS AS DIRECTED.

H. EXACT REQUIREMENT FOR ALL EQUIPMENT TO BE VERIFIED, PROVIDE PER APPROVED EQUIPMENT SUBMITTAL AND COORDINATE WITH SUPPLIER FOR EXACT REQUIREMENTS, INFORMATION INDICATED IS FOR REFERENCE ONLY.

RISER KEY NOTES:

1. COORDINATE WITH DTE FOR NEW ELECTRICAL SERVICES, EXACT REQUIREMENTS AND SERVICE POINT LOCATION.
2. COORDINATE FINAL SELECTION OF ELEVATOR WITH OWNER.
3. DUPLEX RECEPTACLE SHALL BE WIRED TO LINE SIDE OF DISCONNECT SWITCH PER N.E.C.
4. EXACT REQUIREMENTS FOR FIRE PUMP TO BE PROVIDED PER APPROVED FIRE PUMP SUBMITTALS, INFORMATION INDICATED ON THESE DOCUMENTS ARE FOR REFERENCE ONLY, VERIFY ALL REQUIREMENTS WITH FIRE SUPPRESSION SYSTEM PROVIDER. PROVIDE FIRE PUMP WITH REDUCED VOLTAGE TYPE WYE DELTA CLOSED STARTER, FOR 100HP INDICATED APPROXIMATELY 273.0A FLA AND 529A LRA (33%LRC OF 1603A). PROVIDE 4 SETS OF CONDUCTORS AND SPD DEVICES AS REQUIRED FOR WIRING WYE DELTA MOTOR.
5. SERVICE DISCONNECT SD#1 FIRE PUMP NORMAL POWER MAIN DISCONNECT AND EMERGENCY POWER DISCONNECT BOTH PADLOCKED IN THE "ON" POSITION AND SERVICE ENTRANCE RATED WITH N.O. AUXILIARY CONTACTS WIRED TO THE FIRE ALARM SYSTEM FOR REMOTE MONITORING.
6. ROUTE FIRE PUMP FEEDER IN CONCRETE ENCASED ENCLOSURE AS A SERVICE PER NEC. MAX 5% VOLTAGE DROP. PROVIDE COPPER CONDUCTORS. SIZING AND RATINGS TYPICAL FROM SOURCE PUMP. PROVIDE ALL CONTROL WIRING, 2 HOUR FIRE RATED, FROM FIRE PUMP CONTROLLER TO GENERATOR AND FIRE ALARM SYSTEM AS REQUIRED, PROVIDE FIRE RATED INSTALLATION.
7. PROVIDE PERMANENT PLACARDS ON ALL SERVICE DISCONNECTING MEANS TO IDENTIFY LOCATION PER NEC.
8. PROVIDE SURGE PROTECTIVE DEVICE SPD FOR ALL PANELBOARDS CONNECTED DOWNSTREAM OF ATS-1.
9. PROVIDE MANUAL TRANSFER SWITCH WITH WITH CAM-LOCK RECEPTACLES, KEY INTERLOCK, REMOTE GENERATOR START/STOP, PHASE ROTATION MONITOR, NEMA 3R, STRIP HEATER WITH THERMOSTAT, ASCO 300 SERIES OR EQUAL TO COMPLY WITH NEC 700.3 (F) AS APPLIES FOR TEMPORARY SOURCE OF POWER FOR MAINTENANCE/REPAIR, PERMANENTLY MARK CONNECTION CABINET WITH PHASE ROTATION AND SYSTEM BONDING REQUIREMENTS AND PROVIDE ANNUNCIATION WHEN THE PERMANENT EMERGENCY GENERATOR IS DISCONNECTED FROM THE EMERGENCY SYSTEM.
10. PROVIDE BREAKERS, FEEDERS, DISCONNECTS ETC. FOR MULTIPLE EQUIPMENT, INDICATED ONLY ONE FOR TYPICAL INSTALLATION, TOTAL NUMBER AS NOTED, REFER TO PLANS AND PANEL SCHEDULES AND VERIFY EXACT QUANTITIES.



Electrical Riser Diagram

No Scale (120/208V-3Ø-4W)

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Electrical Riser Diagram

2021-248
Project No.

JLW	EK
Drawn By	Checked By

As Noted
Scale

E0.3
Drawing No.

APARTMENTS - TOTAL BUILDING		
		TOTAL BUILDING
UNIT TYPE	NO.	CONNECTED LOAD (VA)
1 BED	16	307,840
2 BED	18	383,472
2 BED W/SITTING ROOM	6	134,844
		0
TOTAL UNITS	40	
TOTAL CONN. (VA)		826,156
DEMAND PERCENTAGE % (PER N.E.C. 220.84)		28
DEMAND (VA)		231,324
DEMAND (AMP)		643
SERVICE SIZE AT 208V.3PH.		1,000

APARTMENTS LOAD CALCULATIONS

	1 BED	2 BED	2 BED W/SITTING
AREA (SQUARE FT.)	567	854	1,026
LIGHTING AT 3VA/SQ. FT.	1,701	2,562	3,078
SMALL APPLIANCE	3,000	3,000	3,000
RANGE	7,700	7,700	7,700
DISHWASHER	1,200	1,200	1,200
LAUNDRY			
WATER HEATER+GAS DRYER			
HVAC	5,639	6,842	7,496
EV CHARGER			
TOTAL VOLT AMP (VA)	19,240	21,304	22,474

DEMAND LOAD PER NEC220

AIR CONDITIONING	5,639	6,842	7,496
REMAINING LOAD	13,601	14,462	14,978
FIRST 10,000 VA AT 100%	10,000	10,001	10,002
BALANCE AT 40%	1,440	1,784	1,990
TOTAL VOLT AMP (VA)	17,079	18,627	19,488
DEMAND AMPS AT 208V.1PH.	71	90	94
APARTMENT PANEL SIZE AT 208V.1PH.(A)	125	125	125

DISTRIBUTION PANEL SCHEDULE DP-HA
120/208V, 3PH,4W+G, 800A/3P 800A MCB

POSITION	CIRCUIT BREAKER FRAME	CIRCUIT BREAKER TRIP	EQUIPMENT		CONNECTED LOAD (KVA)	DEMAND LOAD (KVA)	FEEDER SIZE (COPPER) (SEE RISER FOR AL)
1	200A/3P	200 A	ATS-E		38.4	34.6	2"C, 4#3/0 & 1#6 G
2	200A/3P	200 A	ATS-G		18.9	17.2	2"C, 4#3/0 & 1#6 G
3	200A/3P	200 A	RP-HB		50.6	41.7	2"C, 4#3/0 & 1#6 G
4	400A/3P	400 A	RP-HC		45.4	37.8	4"C, 4-600 kcmil & 1#3 G
5	200A/3P	200 A	RP-HA3		33.3	28.1	2"C, 4#3/0 & 1#6 G
6	30A/2P	20 A	SPARE				
7	30A/2P	30 A	SPARE				
8	30A/2P	30 A	HHP-3-I / HHP-3-O	20.8 MCA	3.7	2.9	3/4"C, 2#10 & 1#10 G
9	60A/2P	45 A	VHP-3-I / VHP-3-O	42.4 MCA	7.5	6.0	1"C, 2#6 & 1#10 G
10	60A/2P	45 A	VHP-3-I / VHP-3-O	42.4 MCA	7.5	6.0	1"C, 2#6 & 1#10 G
11	30A/3P	20 A	EH-2	4 KW	4.0	3.2	3/4"C, 3#12 & 1#12 G
12	30A/3P	20 A	SP-2	6.4 A	2.3	1.8	3/4"C, 3#12 & 1#12 G
13	60A/3P	35 A	DWBP-1	21.2 FLA	7.6	6.1	3/4"C, 3#8 & 1#10 G
14	100A/3P	-	SPACE				
15	100A/3P	-	SPACE				
16	100A/3P	-	SPACE				
17	100A/2P	-	SPACE				
			TOTAL DEMAND LOAD:		**219 KVA**	**188 KVA**	
					609 A	**516 A**	

PROJECT: **Linwood Apts** | **200** MLO | CLASS: **120/208V-3PH-4W+G** | **RP-EA**
PROJ NO: **21061** | **10 KAIC; FEED THRU** | MOUNTING: **SURFACE**

BRANCH CIRC. NO.	POLES	BKR.	WATTS BUS A	BUS B	BUS C	CODE L	R	E	REMARKS			
1	1	20	900			L			Lighting	Stairs/Electrical Rm		
3	1	20		1200		L			Lighting	Corridor Basement		
5	1	20			1200	L			Lighting	Corridor Basement		
7	1	20	1400			L			Lighting	Corridor 1st floor		
9	1	20		1400		L			Lighting	Corridor 1st floor		
11	1	20			1200	L			Lighting	Corridor 2nd floor		
13	1	20	1200			L			Lighting	Corridor 2nd floor		
15	1	20		600		L			Lighting	Exterior Building Mtd		
17	1	20			400	L			Elevator cab Lights			
19	1	20	400					E	Elevator cab A/C			
21	1	20							spare			
23	1	20							spare			
25	1	20							spare			
27	1	20							spare			
29	1	20							spare			
31	1	20							spare			
33	1	20							spare			
35	1	20							spare			
37	3	50	3504					E				
39				3504				E	Elevator 29.2 FLA			
41					3504			E				
2	1	20	635			L			Lighting	Parking/Sign		
4	1	20		1800				E	SP-1			GFCI
6	1	20			500		R		BDA/DAS Cabinet	Elec Rm.		P20
8	1	20	500				R		FACP	LOCK-ON		
10	1	20		800			R		TELE BKBD			
12	1	20			1500		R		Gen Heater			
14	1	20	1500				R		Gen Battery Charger			
16	1	20		1440				E	LIFT	Grade Entry		GFCI
18	1	20			200			E	Fire Smoke Dampers			
20	1	20							spare			
22	1	20							spare			
24	1	20							spare			
26	1	20							spare			
28	1	20							spare			
30	1	20							spare			
32	1	20							spare			
34	1	20							spare			
36	1	20							spare			
38	3	20	940					E				
40				940				E	JOCKEY PUMP	**2 HP ESTIMATED**		
42					940			E				

LIGHTING LOAD	4,135	3,200	2,800	10135 W		= 10135 W
RECEPTACLE LOAD	2,000	800	2,000	4800 W	NEC 220	= 4800 W
EQUIPMENT LOAD	4,844	7,684	6,144	18672 W	80%	= 14938 W
RP-EA3	2,400	1,200	1,200	4800 W	100%	= 4800 W
TOTAL LOAD	13,379	12,884	12,144	38407 W		= 34673 W
				107 A		96 A
				CONNECTED LOAD		DEMAND LOAD

PROJECT: **Linwood Apts** | **200A** MLO | CLASS: **120/208V-3PH-4W+G** | **RP-GB**
PROJ NO: **21061** | **10 KAIC** | MOUNTING: **SURFACE**

BRANCH CIRC. NO.	POLES	BKR.	WATTS BUS A	BUS B	BUS C	L	CODE R	E	REMARKS			
1	1	20	1200				R		Receptacles	Multipurpose		
3	1	20		800			R		Refrigerator	Multipurpose	GFCI	P4
5	1	20			800		R		Disposal	Multipurpose		P5
7	1	20	1200				R		Counter Receptacle	Multipurpose		P6
9	1	20		1200			R		Counter Receptacle	Multipurpose		P6
11	1	20			1200		R		Counter Receptacle	Multipurpose		P6
13	1	20	500			L			EF-1 (2) / Lighting	Multipurpose RR		
15	1	20		400			R		Receptacles	Multipurpose RR		P6
17	1	20			200		R		Receptacle	Elev In Pit		
19	1	20	200				R		Receptacle	Elev Equip Rm		
21	1	20							spare			
23	1	20							spare			
25	-	-							SPACE			
27	-	-							SPACE			
29	-	-							SPACE			
31	-	-							SPACE			
33	-	-							SPACE			
35	-	-							SPACE			
37	-	-							SPACE			
39	-	-							SPACE			
41	-	-							SPACE			
2	1	20	875			L			Lighting & EF-3	Multipurpose		
4	1	20		1200				E	Dishwasher	Multipurpose	GFCI	P7
6	1	20			1000		R		Receptacles	Leasing		
8	1	20	400			L			Lighting	Leasing		
10	1	20		200		L			Lighting	Elev In Pit		
12	1	20			200	L			Lighting	Elev/Hoistway		
14	1	20							spare			
16	1	20							spare			
18	1	20							spare			
20	1	20							spare			
22	1	20							spare			
24	1	20							spare			
26	-	-							SPACE			
28	-	-							SPACE			
30	-	-							SPACE			
32	2	30						E	HHP-1-I / HHP-1-O			
34								E				
36	2	30			1838			E	HHP-3-I / HHP-3-O			
38			1838					E				
40	2	30		1838				E	HHP-3-I / HHP-3-O			
42					1838			E				

LIGHTING LOAD	1,775	200	200	2175 W		= 2175 W
RECEPTACLE LOAD	2,600	2,400	3,200	8200 W	NEC 220	= 8200 W
EQUIPMENT LOAD	1,838	3,038	3,676	8552 W	80%	= 6842 W
TOTAL LOAD	6,213	5,638	7,076	18927 W		= 17217 W
				53 A		48 A
				CONNECTED LOAD		DEMAND LOAD

PROJECT: **Linwood Apts** | **200A** MLO | CLASS: **120/208V-3PH-4W+G** | **RP-HB**
PROJ NO: **21061** | **10 KAIC** | MOUNTING: **FLUSH**

BRANCH CIRC. NO.	POLES	BKR.	WATTS BUS A	BUS B	BUS C	CODE L	R	E	REMARKS			
1	1	20	800				R		Receptacles	Basement		Leasing
3	1	20		600			R		Receptacles	Basement		Laundry/Corr
5	1	20			400	L			Lighting	Basement		
7	1	20	1200					E	Washer	Basement	GFCI	Laundry
9	1	20		1200				E	Washer	Basement	GFCI	Laundry
11	1	20			1200			E	Washer	Basement	GFCI	Laundry
13	1	20	1200					E	Washer	Basement	GFCI	Laundry
15	2	30		2500				E	Dryer	Basement		Laundry
17					2500			E				
19	2	30	2500					E	Dryer	Basement		Laundry
21				2500				E				
23	2	30			2500			E	Dryer	Basement		Laundry
25			2500					E				
27	2	30		2500				E	Dryer	Basement		Laundry
29					2500			E				
31	3	20	1334					E				
33				1334				E	EH-2	1st Flr		Stair 112
35					1334			E				
37	3	20	1100					E				
39				1100				E	EUH-1			
41					1100			E				
43	1								SPACE			
45	1								SPACE			
47	1								SPACE			
49	1								SPACE			
51	1								SPACE			
53	1								SPACE			
2	1	20	600				R		Receptacles	Exterior		
4	2	20		1667				E	EUH-2			
6					1667			E				
8			1667					E				
10	2	20		1100				E	EUH-1			
12					1100			E				
14			1100					E				
16	1	20		1800				E	SP-1			GFCI
18	1	20			1000		R		Receptacles	Basement		
20	1	20	700					E	EF-2			
22	1	20		1400			R		Receptacles	1st Flr		Corr/Mech
24	1	20			1200		R		Receptacles	2nd Flr		Corr/Mech
26	1	20	225			L			Lighting	1st & 2nd Flr		Mech
28	1	20		1500				E	EH-1	Basement		Elec 013
30	1	20							spare			
32	1	20							spare			
34	1	20							spare			
36	1	20							spare			
38	1	20							spare			
40	1	20							spare			
42	1	20							spare			
44	1								SPACE			
46	1								SPACE			
48	1								SPACE			
50	1								SPACE			
52	1								SPACE			
54	1								SPACE			

LIGHTING LOAD	225		400	625 W		625 W
RECEPTACLE LOAD	1,400	2,000	2,200	5600 W	NEC 220	= 5600 W
EQUIPMENT LOAD	13,301	17,201	13,901	44403 W	80%	= 35522 W
TOTAL LOAD	14,926	19,201	16,501	50628 W		= 41747 W
				141 A		116 A
				CONNECTED LOAD		DEMAND LOAD

PROJECT: **Linwood Apts** | **125A** MLO | CLASS: **120/208V-1PH-3W+GRD.** | **PANEL LP**
PROJ NO: **21061** | **22 KAIC** | MOUNTING: **FLUSH** | **(3 BED UNIT)**

BRANCH CIRC. NO.	POLES	BKR.	WATTS BUS A	BUS B	CODE L	A	E	REMARKS	
1	1	15	1200		L			General Lighting & Receptacle	Arc-Fault Breaker
3	1	15		1200	L			General Lighting & Receptacle	Arc-Fault Breaker
5	2	45	3748				E	VHP-3-I/O (or VHP-1-I/O = 35A MOCP)	HACR Breaker
7				3748			E		
9	1	20	1500		L			Small Appliance	GFCI
11	1	20		1500	L			Small Appliance	GFCI
13	1	20	1500			A		Microwave/Hood (Hood only-Type A Unit)	GFCI
15	1	20		1200		A		Dishwasher	GFCI
17	1	20	1200					Microwave (Type A Unit Only)	GFCI
19	1	20						Space	
21	1							Space	
23	1							Space	
25	1							Space	
27	1							Space	
29	1							Space	
2	1	15	1200		L			(Bedroom) General Lighting & Rec	Arc-Fault Breaker
4	1	15		1200	L			(Bedroom) General Lighting & Rec	Arc-Fault Breaker
6	1	15	300		L			Bathroom (only)	Arc-Fault Breaker
8	2	50		3850				Range	
10			3850						
12	1							Space	
14	1							Space	
16	1							Space	
18	1							Space	
20	1							Space	
22	1							Space	
24	1							Space	
26	1							Space	
28	1							Space	
30	1							Space	

LTG/RECEPT LOAD	4,200	3,900	8100 W	NEC 220.42	4785 W
APPLIANCE LOAD	1,500	1,200	1200 W	NEC 220.53	900 W
HVAC	3,748	3,748	7496 W	100%	7496 W
RANGE	3,850	3,850	7700 W	NEC 220.55	6160 W
TOTAL LOAD	9,448	8,848	24496 W		19341 W
			118 A		93 A
			CONNECTED LOAD		DEMAND LOAD

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LINWOOD APARTMENTS
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1"=1'-0" 1/2"=1'-0" 1/8"=1'-0" 3" 3/8"=1'-0" 0" 1 1/2"=1'-0" 3/4"=1'-0" 1/4"=1'-0"

Issued For	Date
Preliminary Review	01.31.2023
Review & Bids	02.27.2023
Bids & Permits	08.12.2024
Plan Review Revisions	03.20.2025
1 MSHDA Revisions	05.07.2026

Drawing Title
Electrical Panelboard Schedules

2021-248 Project No.
JLW Drawn By | EK Checked By
As Noted Scale

E0.4 Drawing No.

RP-HC

PROJECT: **Linwood Apts** | **400A** MLO | CLASS: **120/208V-3PH-4W+G**
PROJ NO: **21061** | **10 KAIC** | MOUNTING: **SURFACE**

BRANCH CIRC. NO.	POLES	BKR.	BUS A	BUS B	BUS C	CODE L	CODE R	CODE E	REMARKS		
1	1	20	1700			L			Lighting	Basement	Storage
3	1	20		1000			R		Receptacles	Basement	Storage
5	1	20			800		R		Receptacles	Exterior	
7	1	20							Receptacles	Basement	
9				1334				E			
11	2	20			1334			E	EUH-3		
13			1334					E			
15				1334				E			
17	2	20			1334			E	EUH-3		
19			1334					E			
21				1100				E			
23	2	20			1100			E	EUH-1		
25			1100					E			
27				1334				E			
29	3	20			1334			E	EUH-3		
31			1334					E			
33	1	20		1500				E	EH-1	1st Flr	Stair 111
35	1	20			800			E	CP-1	Basement	Storage 015
37			1333					E			
39	3	20		1333				E	EH-2	1st Flr	Stair 112
41					1333			E			
43	1	20							spare		
45	1	20							spare		
47	1	20							spare		
49	1								SPACE		
51	1								SPACE		
53	1								SPACE		
2	1	20	600					E	DWH-1		
4	1	20		600				E	DWH-2		
6	1	20			600			E	DWH-3		
8	1	20	1500					E	EH-1	1st Flr	Gate Entry 114
10				1334				E			
12	3	20			1334			E	EUH-3		
14			1334					E			
16				3024				E			
18	3	35			3024			E	DOAS-1		
20			3024					E			
22	2	15							SPARE		
24											
26	2	15							SPARE		
28											
30	2	15							SPARE		
32											
34	1	20		1600			R		Receptacles	1st Flr	Corr/Mech
36	1	20			1600		R		Receptacles	2nd Flr	Corr/Mech
38	1	20	350			L			Lighting	1st & 2nd Flr	Mech
40	1	20		400			R		Receptacles	1st Flr	Corr
42	1	20							spare		
44	1	20							spare		
46	1								SPACE		
48	1								SPACE		
50	1								SPACE		
52	1								SPACE		
54	1								SPACE		

LIGHTING LOAD	2,050			2050 W		2050 W
RECEPTACLE LOAD		3,000	2,400	5400 W	NEC 220 =	5400 W
EQUIPMENT LOAD	12,893	12,893	12,193	37979 W	80% =	30383 W
TOTAL LOAD	14,943	15,893	14,593	45429 W	=	37833 W
				126 A		105 A
				CONNECTED LOAD		DEMAND LOAD

RP-HA3

PROJECT: **Linwood Apts** | **200A** MLO | CLASS: **120/208V-3PH-4W+G**
PROJ NO: **21061** | **10 KAIC** | MOUNTING: **SURFACE**

BRANCH CIRC. NO.	POLES	BKR.	BUS A	BUS B	BUS C	CODE L	CODE R	CODE E	REMARKS		
1	2	20	1617					E	HHP-1-I / HHP-1-O	Roof	Serves 4th Flr
3				1617				E			
5	2	20			1617			E	HHP-1-I / HHP-1-O	Roof	Serves 4th Flr
7			1617					E			
9	2	20		1617				E	HHP-1-I / HHP-1-O	Roof	Serves 3rd Flr
11					1617			E			
13	2	20	1617					E	HHP-1-I / HHP-1-O	Roof	Serves 3rd Flr
15				1617				E			
17	2	20			1617			E	HHP-1-I / HHP-1-O	Roof	Serves 2nd Flr
19			1617					E			
21	2	20		1617				E	HHP-1-I / HHP-1-O	Roof	Serves 2nd Flr
23					1617			E			
25	2	20	1617					E	HHP-1-I / HHP-1-O	Roof	Serves 1st Flr
27				1617				E			
29	2	20			1617			E	HHP-1-I / HHP-1-O	Roof	Serves 1st Flr
31			1617					E			
33	1	-							SPACE		
35	1	-							SPACE		
37	1	-							SPACE		
39	1	-							SPACE		
41	1	-							SPACE		
2	1	20	1600				R		Receptacles	3rd Flr	Corr/Mech
4	1	20		1200			R		Receptacles	3rd Flr	Corr/Mech
6	1	20			1200		R		Receptacles	4th Flr	Corr/Mech
8	1	20	1600				R		Receptacles	4th Flr	Corr/Mech
10	1	20		300		L			Lighting	3rd Flr	Mech
12	1	20			300	L			Lighting	4th Flr	Mech
14	1	20	1200				R		Receptacles	Exterior	Roof
16	1	20							spare		
18	1	20							spare		
20	1	20							spare		
22	1	20							spare		
24	1	20							spare		
26	1	20							spare		
28	1	20							spare		
30	1	20							spare		
32	1								SPACE		
34	1								SPACE		
36	1								SPACE		
38	1								SPACE		
40	1								SPACE		
42	1								SPACE		

LIGHTING LOAD			300	300	600 W	600 W
RECEPTACLE LOAD	4,400	1,200	1,200	6800 W	NEC 220 =	6800 W
EQUIPMENT LOAD	9,702	8,085	8,085	25872 W	80% =	20698 W
TOTAL LOAD	14,102	9,585	9,585	33272 W	=	28098 W
				92 A		78 A
				CONNECTED LOAD		DEMAND LOAD

RP-EA3

PROJECT: **Linwood Apts** | **200A** MLO | CLASS: **120/208V-3PH-4W+G**
PROJ NO: **21061** | **10 KAIC** | MOUNTING: **SURFACE**

BRANCH CIRC. NO.	POLES	BKR.	BUS A	BUS B	BUS C	CODE L	CODE R	CODE E	REMARKS	
1	1	20	1200			L			Lighting	Corridor 3rd floor
3	1	20		1200		L			Lighting	Corridor 3rd floor
5	1	20			1200	L			Lighting	Corridor 4th floor
7	1	20	1200			L			Lighting	Corridor 4th floor
9	1	20							spare	
11	1	20							spare	
13	1								SPACE	
15	1								SPACE	
17	1								SPACE	
19	1								SPACE	
21	1								SPACE	
23	1								SPACE	
25	1								SPACE	
27	1								SPACE	
29	1								SPACE	
31	1								SPACE	
33	1								SPACE	
35	1								SPACE	
37	1								SPACE	
39	1								SPACE	
41	1								SPACE	
2	1	20							spare	
4	1	20							spare	
6	1	20							spare	
8	1	20							spare	
10	1	20							spare	
12	1	20							spare	
14	1								SPACE	
16	1								SPACE	
18	1								SPACE	
20	1								SPACE	
22	1								SPACE	
24	1								SPACE	
26	1								SPACE	
28	1								SPACE	
30	1								SPACE	
32	1								SPACE	
34	1								SPACE	
36	1								SPACE	
38										
40	3	90							SPARE	
42										

LIGHTING LOAD	2,400	1,200	1,200	4800 W		4800 W
RECEPTACLE LOAD					NEC 220 =	
EQUIPMENT LOAD					80% =	
TOTAL LOAD	2,400	1,200	1,200	4800 W	=	4800 W
				13 A		13 A
				CONNECTED LOAD		DEMAND LOAD

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Detroit, MI 48208

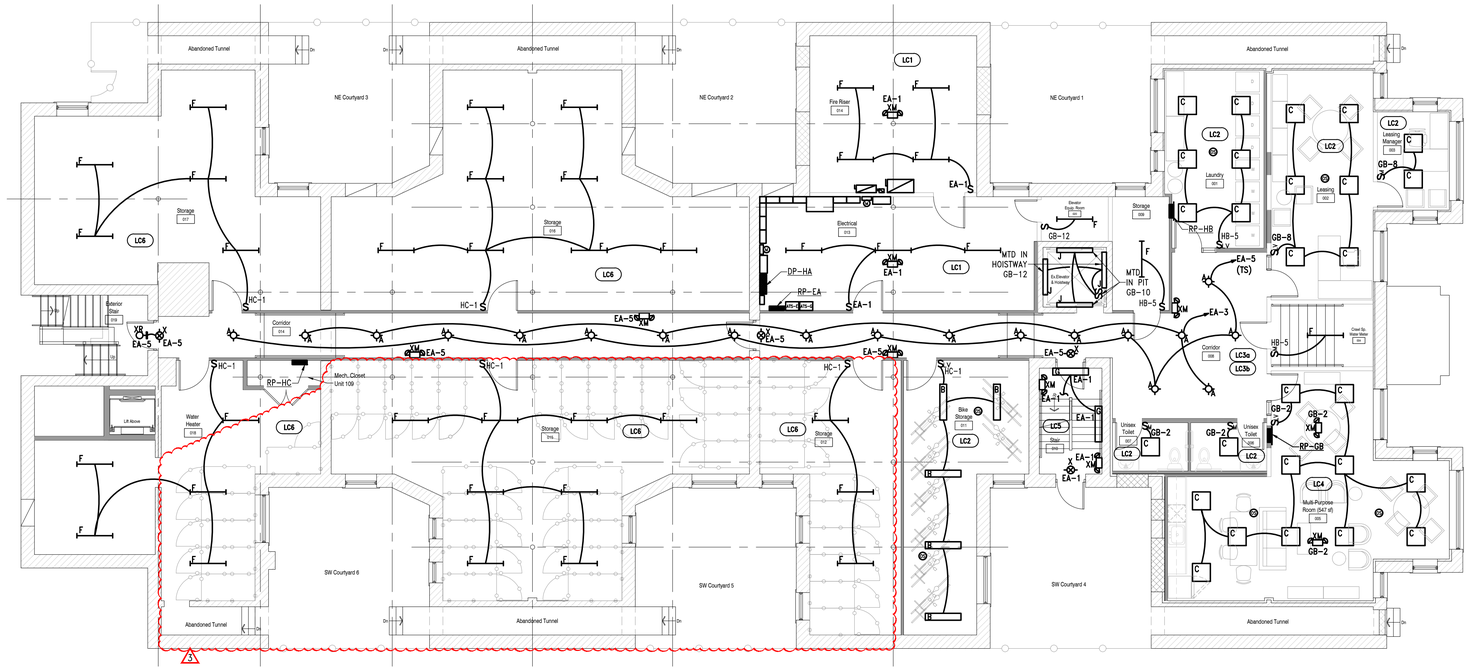
1"=1'-0" 1/2"=1'-0" 1/8"=1'-0" 3" 3/8"=1'-0" 0" 1 1/2"=1'-0" 3/4"=1'-0" 1/4"=1'-0"

Issued For	Date
Preliminary Review	01.31.2023
Review & Bids	02.27.2023
Bids & Permits	08.12.2024
Plan Review Revisions	03.20.2025
3 MSHDA Revisions	05.07.2026

Drawing Title
Electrical Panelboard Schedules

2021-248 Project No.
JLW Drawn By | EK Checked By
As Noted Scale

E0.5
Drawing No.



1 E1.0 **Basement Floor Plan - Lighting**

Scale: 1/8" = 1'-0"

North

GENERAL LIGHTING NOTES:

A. REFER TO SHEET E0.1 FOR ELECTRICAL LEGEND.

B. REFER TO SHEET E0.2 FOR LIGHTING FIXTURE SCHEDULE AND LIGHTING CONTROL MATRIX.

C. REFER TO SHEET E0.3 FOR EXTERIOR SITE LIGHTING.

D. REFER TO SHEETS POWER PLANS FOR SWITCHED RECEPTACLES.

E. REFER TO SHEET E0.4 FOR TYPICAL APARTMENT LP PANEL AND CIRCUITING.

F. REFER TO BOOK SPEC FOR SPECIFICATIONS FOR ADDITIONAL LAMP AND BALLAST REQUIREMENTS.

G. COORDINATE LIGHTING LAYOUT WITH ARCHITECTURAL REFLECTED CEILING PLANS, ELEVATIONS, SECTIONS, MECHANICAL FLOOR PLANS AND MECHANICAL DUCT WORK PRIOR TO ROUGH-IN FOR EXACT LOCATIONS AND MOUNTING OF ALL CEILING, PENDANT & WALL MOUNTED LIGHT FIXTURES.

H. IN ADDITION TO THE LOCAL SWITCHES SHOWN, PROVIDE A COMPLETE OCCUPANCY SENSOR AND RELAY PANEL BASED AUTOMATIC LIGHTING CONTROL SYSTEM. NOT ALL DEVICES ARE INDICATED ON THESE PLANS. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS, TYPICAL FOR ALL ROOMS/AREAS AS SPECIFIED. REFER TO LIGHTING CONTROL MATRIX AND SPECIFICATIONS.

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J. ALL EXIT AND EMERGENCY LIGHT FIXTURES SHALL BE CONNECTED TO ROOM LIGHT CIRCUIT AHEAD OF LOCAL CONTROLS.

K. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL LAMPS FOR ALL TYPES OF LIGHTING FIXTURES.

L. ALL FIXTURE FINISHES/COLORS TO BE COORDINATED WITH ARCHITECT.

M. DIMMERS TO BE COMPATIBLE WITH THE DIMMING DRIVERS, PROVIDE TYPES AND RATINGS AS REQUIRED FOR THE LOADS CONTROLLED.

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P. ALL WIRING SHALL BE SIZED PROPERLY FOR FULL COMPLIANCE WITH THE NEC REQUIREMENTS FOR AMPACITY AND MAXIMUM VOLTAGE DROP LIMITATIONS, REFER TO SHEET E0.10 FOR CIRCUIT LENGTH TABLES.

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S. CONTRACTOR TO CONDUCT A COORDINATION MEETING WITH ALL OTHER TRADES PRIOR TO START OF THE WORK TO DETERMINE EQUIPMENT LOCATIONS AND PATHWAYS TO AVOID INTERFERENCES WITH OTHER SYSTEMS AND TO MAINTAIN THE CODE REQUIRED, DEDICATED EQUIPMENT SPACE, WORKING CLEARANCES AND ACCESS.

T. ALL 120-VOLT, SINGLE PHASE, 15A AND 20A BRANCH CIRCUITS SUPPLYING LIGHTING INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT, IN ACCORDANCE WITH THE 2008 N.E.C., ARTICLE 210.12 INCLUDING SMOKE DETECTORS.

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KEYED NOTES:

1 REFER TO SITE PLAN, SHEET E3.0 FOR MORE EXTERIOR LIGHTING.

TAG	DESCRIPTION
–	REFER TO LIGHTING CONTROL MATRIX SCHEDULE ON SHEET E0.2 FOR MORE INFORMATION ON SPACE SPECIFIC LIGHTING CONTROLS.

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Plan Review Revisions	03.20.2025
3 MSHDA Revisions	05.07.2026

Drawing Title

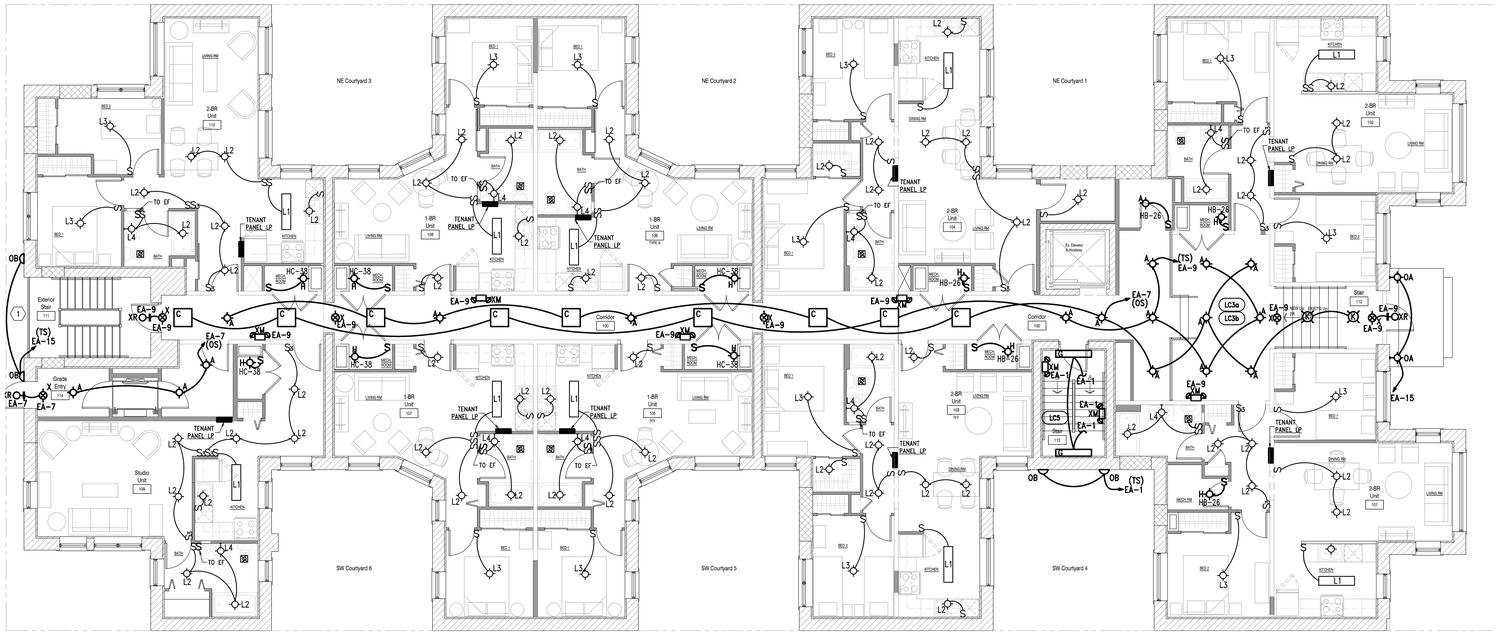
Basement Floor Plan - Lighting

2021-248
Project No.

JLW Drawn By
EK Checked By

As Noted
Scale

E1.0
Drawing No.



1 E1.1 First Floor Plan - Lighting

Scale: 1/8" = 1'-0"

North

GENERAL LIGHTING NOTES:

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B. REFER TO SHEET E0.2 FOR LIGHTING FIXTURE SCHEDULE AND LIGHTING CONTROL MATRIX.

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KEYED NOTES:

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2 MSHDA Revisions	05.07.2026

Drawing Title

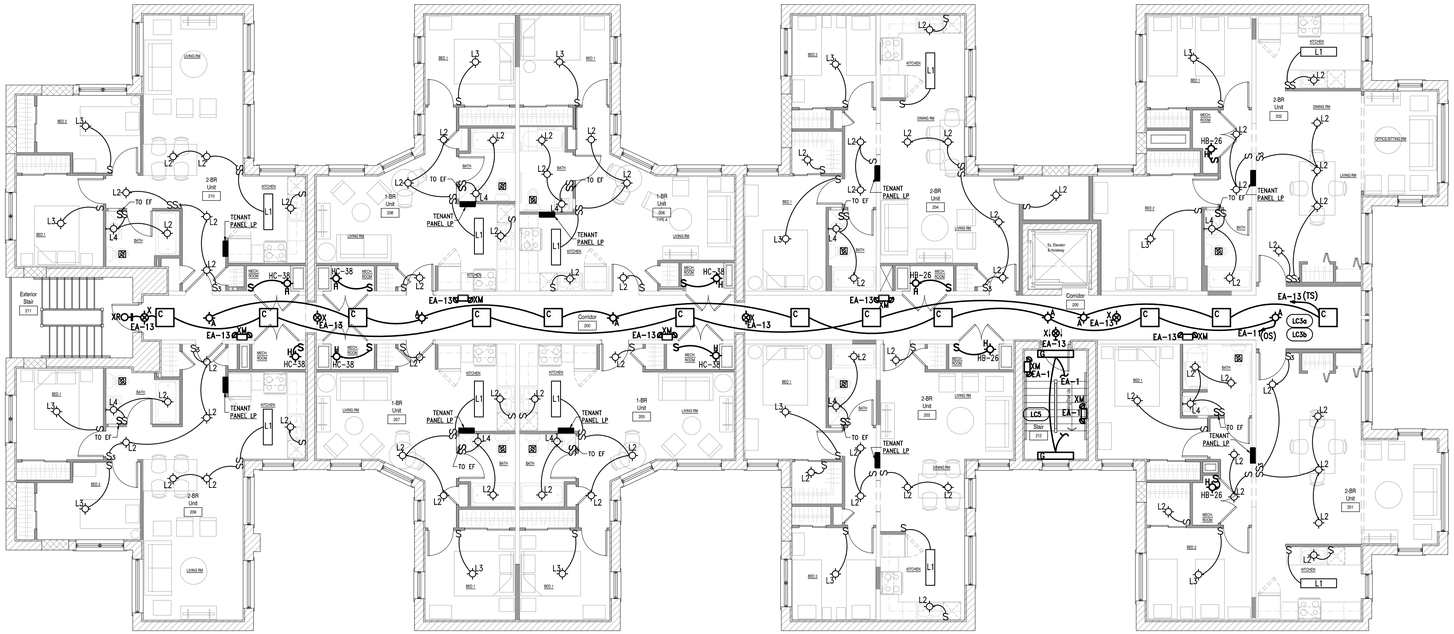
First Floor Plan
- Lighting

2021-248
Project No.

JLW	EK
Drawn By	Checked By

As Noted
Scale

3 E1.1
Drawing No.



1 E1.2 Second Floor Plan - Lighting

Scale: 1/8" = 1'-0"

North

GENERAL LIGHTING NOTES:

A. REFER TO SHEET E0.1 FOR ELECTRICAL LEGEND.

B. REFER TO SHEET E0.2 FOR LIGHTING FIXTURE SCHEDULE AND LIGHTING CONTROL MATRIX.

C. REFER TO SHEET E0.3 FOR EXTERIOR SITE LIGHTING.

D. REFER TO SHEETS POWER PLANS FOR SWITCHED RECEPTACLES.

E. REFER TO SHEET E0.4 FOR TYPICAL APARTMENT LP PANEL AND CIRCUITING.

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Drawing Title

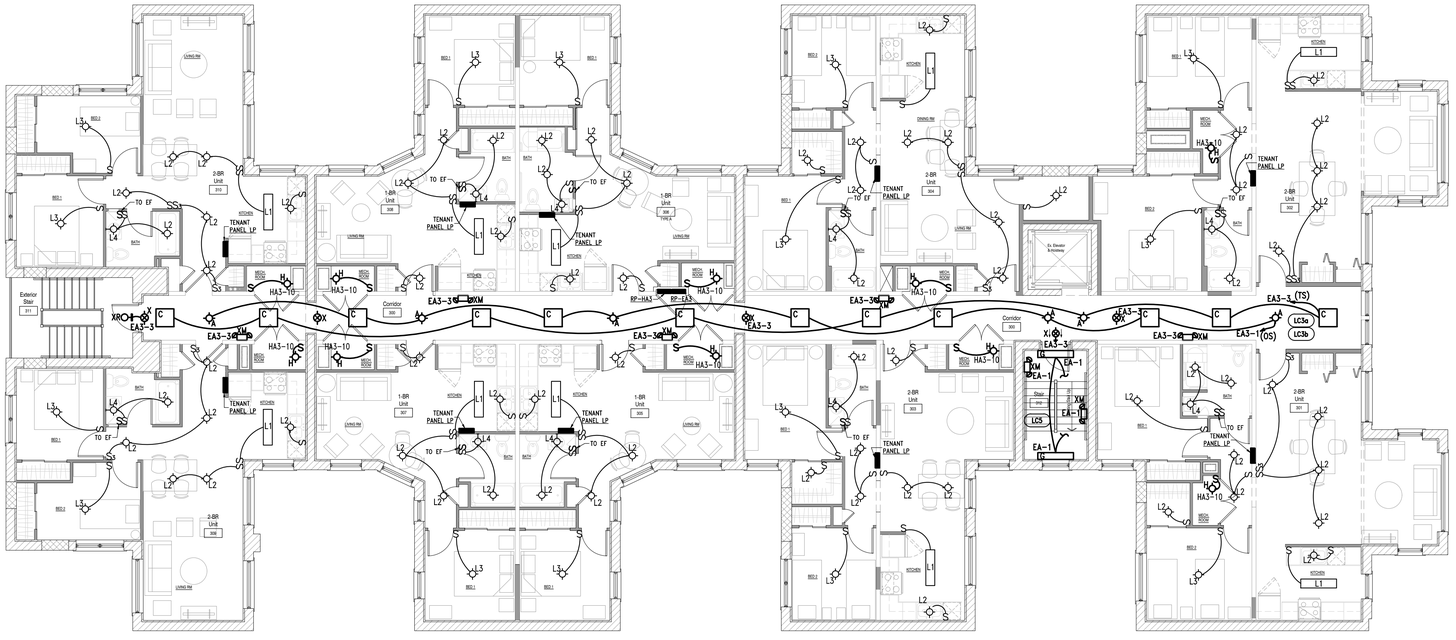
Second Floor Plan - Lighting

2021-248
Project No.

JLW Drawn By | EK Checked By

As Noted
Scale

3 E1.2
Drawing No.



1 / E1.3 Third Floor Plan - Lighting

Scale: 1/8" = 1'-0"

North

GENERAL LIGHTING NOTES:

A. REFER TO SHEET E0.1 FOR ELECTRICAL LEGEND.

B. REFER TO SHEET E0.2 FOR LIGHTING FIXTURE SCHEDULE AND LIGHTING CONTROL MATRIX.

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1452 Randolph Street, Suite 300
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Project

Apartment Renovation
LINWOOD APARTMENTS
2295 W Grand Blvd
Detroit, MI 48208

1"=1'-0" 1/2"=1'-0" 1/8"=1'-0"
3" 3/8"=1'-0" 0"
1 1/2"=1'-0" 3/4"=1'-0" 1/4"=1'-0"

Issued For	Date
Preliminary Review	01.31.2023
Review & Bids	02.27.2023
Bids & Permits	08.12.2024
Plan Review Revisions	03.20.2025
3 MSHDA Revisions	05.07.2026

Drawing Title

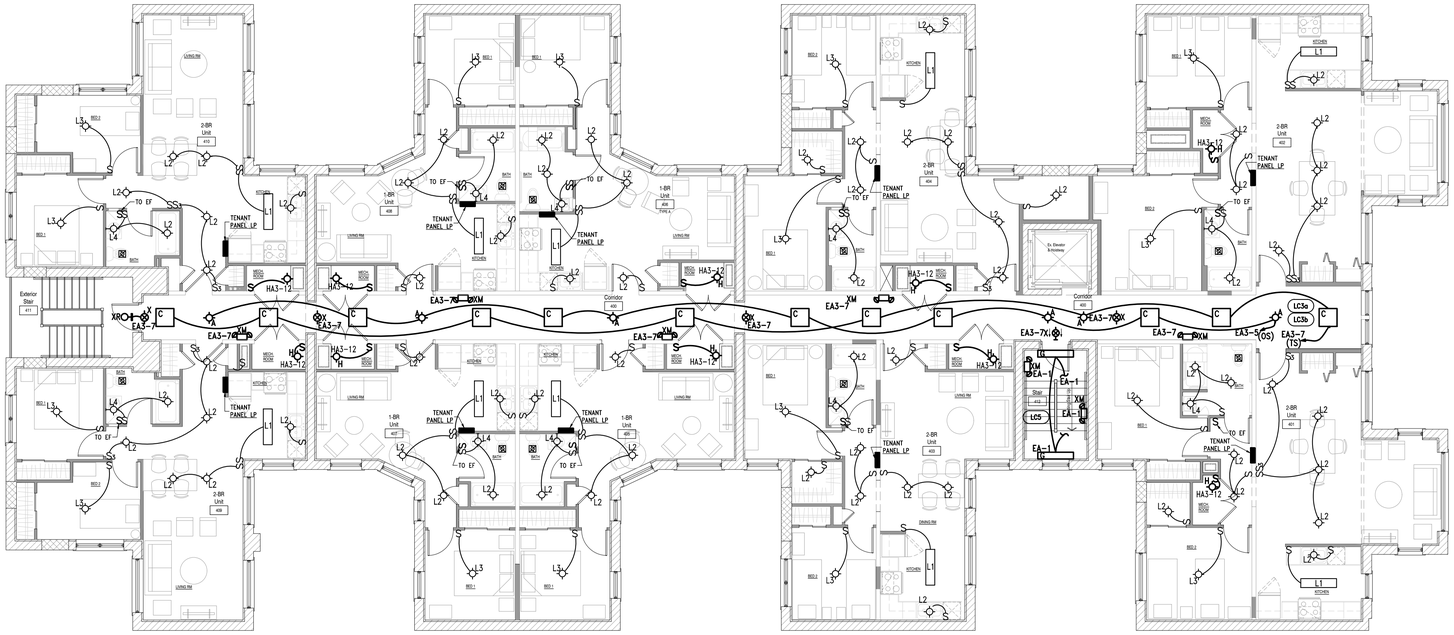
Third Floor Plan
- Lighting

2021-248
Project No.

JLW	EK
Drawn By	Checked By

As Noted
Scale

3
E1.3
Drawing No.



1 E1.4 Fourth Floor Plan - Lighting

Scale: 1/8" = 1'-0"

North

GENERAL LIGHTING NOTES:

A. REFER TO SHEET E0.1 FOR ELECTRICAL LEGEND.

B. REFER TO SHEET E0.2 FOR LIGHTING FIXTURE SCHEDULE AND LIGHTING CONTROL MATRIX.

C. REFER TO SHEET E0.3 FOR EXTERIOR SITE LIGHTING.

D. REFER TO SHEETS POWER PLANS FOR SWITCHED RECEPTACLES.

E. REFER TO SHEET E0.4 FOR TYPICAL APARTMENT LP PANEL AND CIRCUITING.

F. REFER TO BOOK SPEC FOR SPECIFICATIONS FOR ADDITIONAL LAMP AND BALLAST REQUIREMENTS.

G. COORDINATE LIGHTING LAYOUT WITH ARCHITECTURAL REFLECTED CEILING PLANS, ELEVATIONS, SECTIONS, MECHANICAL FLOOR PLANS AND MECHANICAL DUCT WORK PRIOR TO ROUGH-IN FOR EXACT LOCATIONS AND MOUNTING OF ALL CEILING, PENDANT & WALL MOUNTED LIGHT FIXTURES.

H. IN ADDITION TO THE LOCAL SWITCHES SHOWN, PROVIDE A COMPLETE OCCUPANCY SENSOR AND RELAY PANEL BASED AUTOMATIC LIGHTING CONTROL SYSTEM. NOT ALL DEVICES ARE INDICATED ON THESE PLANS. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS, TYPICAL FOR ALL ROOMS/AREAS AS SPECIFIED. REFER TO LIGHTING CONTROL MATRIX AND SPECIFICATIONS.

I. ALL LAY-IN FIXTURE SHALL BE FURNISHED WITH SAFETY CLIPS AND MECHANICALLY ATTACHED TO CEILING GRID SYSTEM, SUPPORTED INDEPENDENTLY FROM BUILDING STEEL.

J. ALL EXIT AND EMERGENCY LIGHT FIXTURES SHALL BE CONNECTED TO ROOM LIGHT CIRCUIT AHEAD OF LOCAL CONTROLS.

K. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL LAMPS FOR ALL TYPES OF LIGHTING FIXTURES.

L. ALL FIXTURE FINISHES/COLORS TO BE COORDINATED WITH ARCHITECT.

M. DIMMERS TO BE COMPATIBLE WITH THE DIMMING DRIVERS, PROVIDE TYPES AND RATINGS AS REQUIRED FOR THE LOADS CONTROLLED.

N. COORDINATE LOCATIONS OF ALL SWITCHES WITH DOOR LOCATIONS SHOWN ON THE ARCHITECTURAL PLANS. AT ALL SWITCHING LOCATIONS OF MULTIPLE SWITCHES, PROVIDE A SINGLE MULTI-GANG BOX WITH SINGLE COVERPLATE.

O. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER PACKS AND VERIFY WIRING FOR THE CEILING MOUNTED MOTION SENSOR WITH THE MANUFACTURER'S REQUIREMENTS. INSTALL MOTION SENSOR POWER PACKS ABOVE ACCESSIBLE CEILINGS.

P. ALL WIRING SHALL BE SIZED PROPERLY FOR FULL COMPLIANCE WITH THE NEC REQUIREMENTS FOR AMPACITY AND MAXIMUM VOLTAGE DROP LIMITATIONS, REFER TO SHEET E0.10 FOR CIRCUIT LENGTH TABLES.

Q. PROPOSED EQUAL LIGHTING FIXTURES SHALL HAVE EQUAL DELIVERED LUMENS AND SHALL BE SUBMITTED FOR ARCHITECT/OWNER REVIEW AND APPROVAL PRIOR TO BID.

R. ALL ELECTRICAL DEVICES SHALL BE LISTED FOR THE INTENDED USE.

S. CONTRACTOR TO CONDUCT A COORDINATION MEETING WITH ALL OTHER TRADES PRIOR TO START OF THE WORK TO DETERMINE EQUIPMENT LOCATIONS AND PATHWAYS TO AVOID INTERFERENCES WITH OTHER SYSTEMS AND TO MAINTAIN THE CODE REQUIRED, DEDICATED EQUIPMENT SPACE, WORKING CLEARANCES AND ACCESS.

T. ALL 120-VOLT, SINGLE PHASE, 15A AND 20A BRANCH CIRCUITS SUPPLYING LIGHTING INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT, IN ACCORDANCE WITH THE 2008 N.E.C., ARTICLE 210.12 INCLUDING SMOKE DETECTORS.

U. USE #10 WIRE FOR LIGHTING CIRCUIT HOMERUNS LONGER THAN 150 FEET FROM PANEL.

V. PROVIDE COMPLETE LIGHTING CONTROL SYSTEM CAPABLE OF COMPLYING WITH ALL 2017 MICHIGAN ENERGY CODE REQUIREMENTS. ONLY SCHEMATIC DEVICE LOCATIONS ARE SHOWN ON PLAN TO CONVEY CONTROL LOCATIONS INTENT, PROVIDE ALL DEVICES, WIRING, HARDWARE, AND PROGRAMMING AS REQUIRED FOR FULLY FUNCTIONAL LIGHTING CONTROL SYSTEM PER MANUFACTURER'S RECOMMENDATIONS. SYSTEM IS PERFORMANCE-BASED DESIGN BUILD BY ELECTRICAL CONTRACTOR AND THE CONTRACTOR'S SUPPLIER. TYPICAL FOR ALL ROOMS/AREAS.

W. ALL LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS MUST BE FUNCTIONALLY TESTED FOR PROPER OPERATION BY AN INDEPENDENT PARTY THAT IS NOT DIRECTLY INVOLVED WITH EITHER THE DESIGN OR THE CONSTRUCTION OF THE LIGHTING SYSTEM. (REFER TO ASHRAE 90.1-2013, SECTION 9.4.3 FUNCTION TESTING).

KEYED NOTES:

1 REFER TO SITE PLAN, SHEET E3.0 FOR MORE EXTERIOR LIGHTING.

TAG	DESCRIPTION
–	REFER TO LIGHTING CONTROL MATRIX SCHEDULE ON SHEET E0.2 FOR MORE INFORMATION ON SPACE SPECIFIC LIGHTING CONTROLS.

3 ALL APARMENT LAYOUTS REVISED

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Fourth Floor Plan
- Lighting

2021-248
Project No.

JLW Drawn By
EK Checked By

As Noted
Scale

E1.4 3
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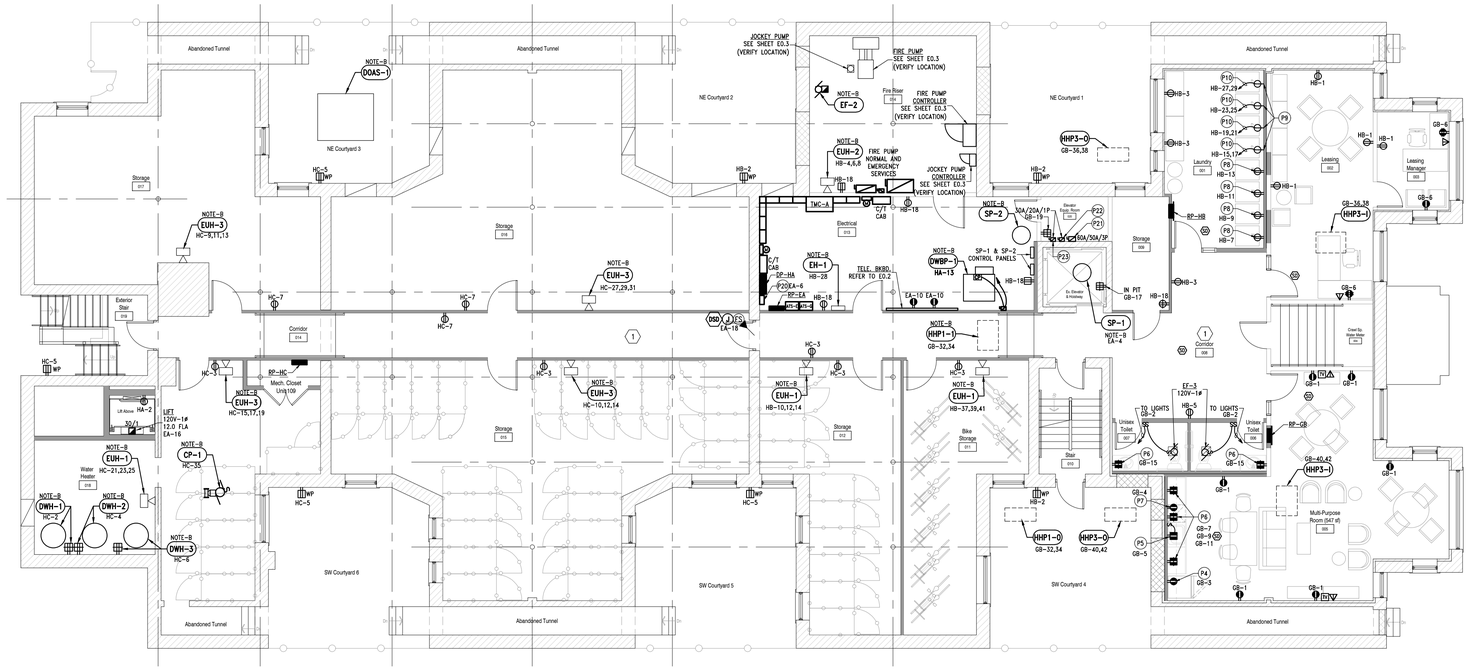

1 E2.0

Basement Floor Plan - Power

Scale: 1/8" = 1'-0"

North

GENERAL KEYED NOTES:

1. PROVIDE COMMUNICATION FEATURES WITHIN ALL PUBLIC AND COMMON USE AREAS AND WITHIN DESIGNATED HEARING OR VISUALLY IMPAIRED UNITS TO COMPLY WITH THE REQUIREMENTS ABA 809.5, INCLUDING FIRE ALARM, ALARM APPLIANCES, COMMUNICATION FEATURES AT UNIT ENTRY, HARDWIRED DOORBELL, ETC. COORDINATE WITH OWNER FOR EXACT DESIGNATED UNITS.

GENERAL POWER NOTES:

A. REFER TO TYPICAL APARTMENT LP PANELBOARD SCHEDULE SHEET E0.4 FOR TYPICAL APARTMENT CIRCUITS.

B. REFER TO E2.5 FOR MECHANICAL EQUIPMENT WIRING SCHEDULES; COORDINATE WITH MECHANICAL CONTRACTOR.

C. COORDINATE LOCATION OF ALL ELECTRICAL PANELS IN ROOMS WITH ARCHITECTURAL PLANS AND OTHER TRADES TO MAINTAIN REQUIRED CLEARANCES. NO MECHANICAL DUCTS, PIPING OR EQUIPMENT SHALL BE INSTALLED IN OR ABOVE ELECTRICAL EQUIPMENT SPACE PER N.E.C.

D. REFER TO MECHANICAL FLOOR PLANS, SCHEDULES AND DIAGRAMS FOR EXACT LOCATION OF EQUIPMENT AND WIRING REQUIREMENTS.

E. ELECTRICAL TRADES CONTRACTOR SHALL VERIFY FUSE AND WIRE SIZES FOR ALL MECHANICAL AND MISCELLANEOUS EQUIPMENT, ETC., PER MANUFACTURER'S REQUIREMENTS AND/OR SHOP DRAWINGS. PROVIDE ALL NECESSARY STARTERS, THERMAL OVERLOADS, INTERLOCKING, 120 VOLT CONTROL WIRING, DISCONNECT SWITCHES, ETC. REQUIRED FOR A COMPLETE INSTALLATION. MAKE ALL NECESSARY REVISIONS. FOR THE EXACT LOCATION OF ALL ROOF MOUNTED MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS. VERIFY EXACT CONDUIT STUB-UP LOCATIONS IN FIELD. ALL ROOF MOUNTED EQUIPMENT TO BE NEMA 3R WEATHERPROOF RATED, INCLUDING STARTERS, DISCONNECTS, ETC.

F. EXACT LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT AND OUTLETS FOR THE EQUIPMENT SHALL BE VERIFIED WITH OWNER, EQUIPMENT SUPPLIER AND ARCHITECT PRIOR TO INSTALLATION AND ALL EQUIPMENT SHALL BE PER MANUFACTURER'S INSTALLATION REQUIREMENTS INCLUDING FLOOR OUTLETS. LOCATE DISCONNECT SWITCHES FOR MECHANICAL AND BUILDING EQUIPMENT TO MAINTAIN WORKING CLEARANCES. LOCATIONS ON THESE PLANS ARE FOR REFERENCE ONLY.

G. PROVIDE ALL REQUIRED POWER BRANCH CIRCUITING, BACK BOXES, RACEWAYS, CONDUIT, CABLE TRAYS, BACK BOARDS, SUPPORTS, ETC. FOR THE SECURITY, LOW VOLTAGE, AV, TELECOMMUNICATION AND ACCESS CONTROL SYSTEMS. DEVICES AND EQUIPMENT ARE PROVIDED BY OWNER. DEVICES SHOWN ON PLANS ARE FOR REFERENCE ONLY, COORDINATE EXACT REQUIREMENTS WITH OWNER AND SYSTEM VENDORS. FIRE ALARM TO BE CONNECTED TO THE AV RACK. PROVIDE FIRE ALARM CABLE AND COMPONENTS, COORDINATE WITH AV VENDOR FOR CONNECTION AND EXACT REQUIREMENTS.

H. COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS & REQUIREMENTS FOR ALL DEVICES WITH LATEST ARCHITECTURAL AND INTERIOR DESIGN PLANS, FURNITURE PLANS & EQUIPMENT LAYOUTS & ELEVATIONS.

I. MAINTAIN A MINIMUM OF 24" HORIZONTAL SEPARATION BETWEEN BOXES INSTALLED ON OPPOSITE SIDES OF FIRE RATED WALLS TO COMPLY WITH NEC 300.21.

J. PROVIDE FIRE STOPPING SYSTEM WHERE REQUIRED TO MAINTAIN THE FIRE RESISTANCE RATINGS OF THE NEW AND EXISTING ASSEMBLIES.

K. CONTRACTOR TO CONDUCT A COORDINATION MEETING WITH ALL OTHER TRADES PRIOR TO START OF THE WORK TO DETERMINE EQUIPMENT LOCATIONS AND PATHWAYS TO AVOID INTERFERENCES WITH OTHER SYSTEMS AND TO MAINTAIN THE CODE REQUIRED, DEDICATED EQUIPMENT SPACE, WORKING CLEARANCES AND ACCESS.

L. ALL 20 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #10 WIRES FOR VOLTAGE DROP. ALL 30 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #8 WIRES FOR VOLTAGE DROP. MAXIMUM OF 3% AT DESIGN LOAD.

K. PROVIDE GROUND FAULT INTERRUPTER TYPE RECEPTACLES FOR ALL RECEPTACLES WITHIN 6'-0" OF WATER SOURCES AND SINKS, INCLUDING ALL RECEPTACLES AT MILLWORK, KITCHEN AND BARS. GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL SHALL BE PROVIDED AS REQUIRED IN 210.8 (A) THROUGH (E). THE GROUND-FAULT CIRCUIT-INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. OTHER THAN DWELLING UNITS, ALL SINGLE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS INSTALLED IN BATHROOMS, KITCHENS, ROOFTOPS, OUTDOORS, SINKS, INDOOR WET LOCATIONS, LOCKER ROOMS, GARAGES, CRAWLSPACES, AND UNFINISHED PORTIONS OF BASEMENTS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. PROVIDE GROUND FAULT BLANK FACE DEVICE AT ACCESSIBLE LOCATION OR PROVIDE GFCI BRANCH BREAKER IN PANELBOARD IF NOT READILY ACCESSIBLE.

L. A CEILING PLENUM SYSTEM MAY BE USED THROUGHOUT. ALL MECHANICAL & ELECTRICAL WORK LOCATED IN THE PLENUM CEILING SHALL BE INSTALLED USING PLENUM RATED MATERIALS.

M. ALL DEVICES AT COUNTER LOCATIONS TO BE MOUNTED ABOVE THE COUNTER AT 42"AFF OR AS NOTED ON THESE PLANS. COORDINATE WITH ARCHITECT/OWNER AND MILLWORK CONTRACTOR FOR EXACT LOCATIONS.

N. ALL RECEPTACLES IN COUNTER AREA TO BE MOUNTED ON INSIDE WALLS OF CABINETS. ROUTE CONDUIT AND BRANCH WIRING THRU BASE CONCEALED.

O. PROVIDE A COMPLETE MANUAL/AUTOMATIC ADDRESSABLE FIRE ALARM DETECTION AND NOTIFICATION SYSTEM. INCLUDE ALL WORK FOR A COMPLETE, FUNCTIONING AND APPROVED INSTALLATION. DEVICES ARE NOT SPECIFICALLY INDICATED ON THESE PLANS. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS BY A CERTIFIED DESIGNER. EMPLOY THE SERVICES OF A QUALIFIED CERTIFIED FIRE ALARM CONTRACTOR/CONSULTANT TO PREPARE THE SYSTEM DESIGN AND RELATED CONSTRUCTION DOCUMENTS INCLUDING ALL RELATED CALCULATIONS, DEVICE PLACEMENT, ALL CONTROL, MONITORING, POWER SUPPLIES, INITIATING DEVICES, INDICATING APPLIANCES, CONTROL MODULES AND WIRING AS REQUIRED; AND INCLUDE COORDINATION WITH OTHER SUPPLIERS/CONTRACTORS SUCH AS DESIGN-BUILD FIRE PROTECTION INSTALLER FULLY COMPLETE WITH ALL INFORMATION AND RELATED DATA, AS REQUIRED, TO OBTAIN SYSTEM APPROVAL BY THE AUTHORITIES HAVING JURISDICTION. DETERMINE THE APPLICABLE AUTHORITIES HAVING JURISDICTION FOR PROJECT AND INCLUDE ALL IN PLAN REVIEW, PERMITTING, AND INSPECTION. FIRE ALARM SYSTEM SHALL BE CAPABLE OF COMMUNICATING WITH THE EMERGENCY NURSE CALL SYSTEM.

P. VERIFY EXACT QUANTITY AND LOCATION OF FLOW SWITCHES, TAMPER SWITCHES, AIR SUPERVISORY AND PRESSURE SWITCHES WITH FIRE PROTECTION CONTRACTOR IF REQUIRED.

Q. ON ALL EXHAUST FANS (EF'S), 120 VOLT SERVICE DISCONNECT SWITCHES SHALL BE FURNISHED AND INSTALLED BY MECHANICAL TRADES AND WIRED BY ELECTRICAL TRADES.

R. ALL 120-VOLT, SINGLE PHASE, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT, IN ACCORDANCE WITH THE LATEST N.E.C., ARTICLE 210.12 INCLUDING SMOKE DETECTORS.

S. FOR ALL LOW VOLTAGE SYSTEMS: SECURITY, ACCESS CONTROL, SOUND, PAGING, TWO-WAY, ETC. COORDINATE WITH ALL OWNER FOR EXACT SCOPE OF WORK TO BE INCLUDED IN THE BIDS. THESE SYSTEM ARE NOT SPECIFICALLY INDICATED ON THESE PLANS, PROVIDE ALL REQUIRED BRANCH CIRCUITS, BACK BOXES, RACEWAYS, CONDUITS, SLEEVES AS DIRECTED BY OWNER AND OWNER VENDORS. VERIFY DEVICE LOCATIONS, QUANTITIES AND ALL REQUIREMENTS.

T. IF REQUIRE BY THE LOCAL AHJ PROVIDE AREA OF REFUGE SYSTEM. REFER TO ARCHITECTURAL LIFE SAFETY PLANS FOR DESIGNATED AREAS. PROVIDE MASTER STATION CONTROL PANEL, POWER, REMOTE CALL STATIONS AND SIGNAGE, AS REQUIRED AND CONNECTED TO THE FIRE ALARM SYSTEM, INCLUDE ALL COMPONENTS FOR A COMPLETE AND APPROVED INSTALLATION.

U. IF REQUIRE BY THE LOCAL AHJ PROVIDE TWO-WAY COMMUNICATION ENHANCEMENT SYSTEMS PER THE REQUIREMENTS OF NFPA 1 TO MAINTAIN THE FIRE DEPARTMENT COMMUNICATIONS AT THE LEVEL DETERMINED BY THE AHJ. SYSTEM TO INCLUDE UL LISTED FCC COMPLIANT COMPONENTS, BDA AMPLIFIERS, INDOOR AND OUTDOOR ANTENNAS, ATTENUATORS, SPLITTERS, BACK BOXES, RACEWAYS, SUPPORTS, WIRING, ETC. AS REQUIRED BY AUTHORITIES HAVING JURISDICTION FOR COMPLETE COVERAGE AND APPROVED INSTALLATION. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS. DEVICES ARE NOT INDICATED ON PLANS. COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODE REQUIREMENTS, INCLUDING NFPA 72, NFPA 1221 FOR MARKINGS, PATHWAY SURVIVABILITY, DEDICATED STORAGE BATTERY SYSTEMS, ETC.

KEYED EQUIPMENT POWER NOTES:

(P1) MICROWAVE/HOOD: 120V; GFCI BREAKER, ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

(P2) RANGE: 50A-125/250V-3P-4W, NEMA 14-50 REC (VERIFY).

(P3) 3#8+1#10 GRD-3/4"C (50A-2P C.B.)

(P4) REFRIGERATOR: 120V, GFCI BREAKER

(P5) DISPOSAL: 120V; GFCI

(P6) +42"A.F.F.; GFCI

(P7) DISHWASHER: 120V; GFCI

(P8) WASHER: 120V-1ø

(P9) ELECTRIC DRYER: 208V-1ø

(P10) 2#10+1#10 GRD-3/4"C (30A-2P C.B.)

(P11) GAS WATER HEATER: 120V PLUG & CORD (DWH-1, DWH-2, DWH-3)

(P12) COMBINATION FIRE/SMOKE DAMPER, 120V, TIE INTO FIRE ALARM SYSTEM.

(P13) RANGE HOOD (ADA UNIT): 120V; ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL ELEVATION FOR RANGEHOOD AND LIGHT SWITCHES LOCATIONS.

(P14) MICROWAVE (ADA UNIT): 120V; ON COUNTER, COORDINATE WITH ARCHITECTURAL; VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

(P15) DOORBELL, REFER TO KEY NOTE 1.

(P16) DOORBELL TRANSFORMER, REFER TO KEY NOTE 1.

(P17) VISUAL DOORBELL STROBE, REFER TO KEY NOTE 1.

(P18) SMOKE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.

(P19) CARBON MONOXIDE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.

(P20) TWO-WAY COMMUNICATION SYSTEM BDA/DAS CABINET ABD BATTERY CABINET, EXACT LOCATION AND REQUIREMENTS TO BE VERIFIED, REFER TO GENERAL NOTE-C THIS SHEET.

(P21) ELEVATOR: 208V-3ø, 29.2 FLA, 3 #4 +1 #10GRD-1 1/4"C, (60A/50AFU/3P C.B.), EA-37,39,41. VERIFY REQUIREMENTS WITH SUBMITTAL. 3 #6 +1 #10GRD-1"C.

(P22) ELEVATOR CAB LIGHT, 120V-1ø, GFI, (20A-1P C.B.), EA-17

(P23) ELEVATOR CAB A/C, 120V-1ø, GFI, (20A-1P C.B.), EA-19

(HHP1-1) (HHP1-0) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(HHP2-1) (HHP2-0) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(HHP3-1) (HHP3-0) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP1-1) (VHP1-0) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP2-1) (VHP2-0) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP3-1) (VHP3-0) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(DOAS-1) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

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Basement Floor Plan - Power

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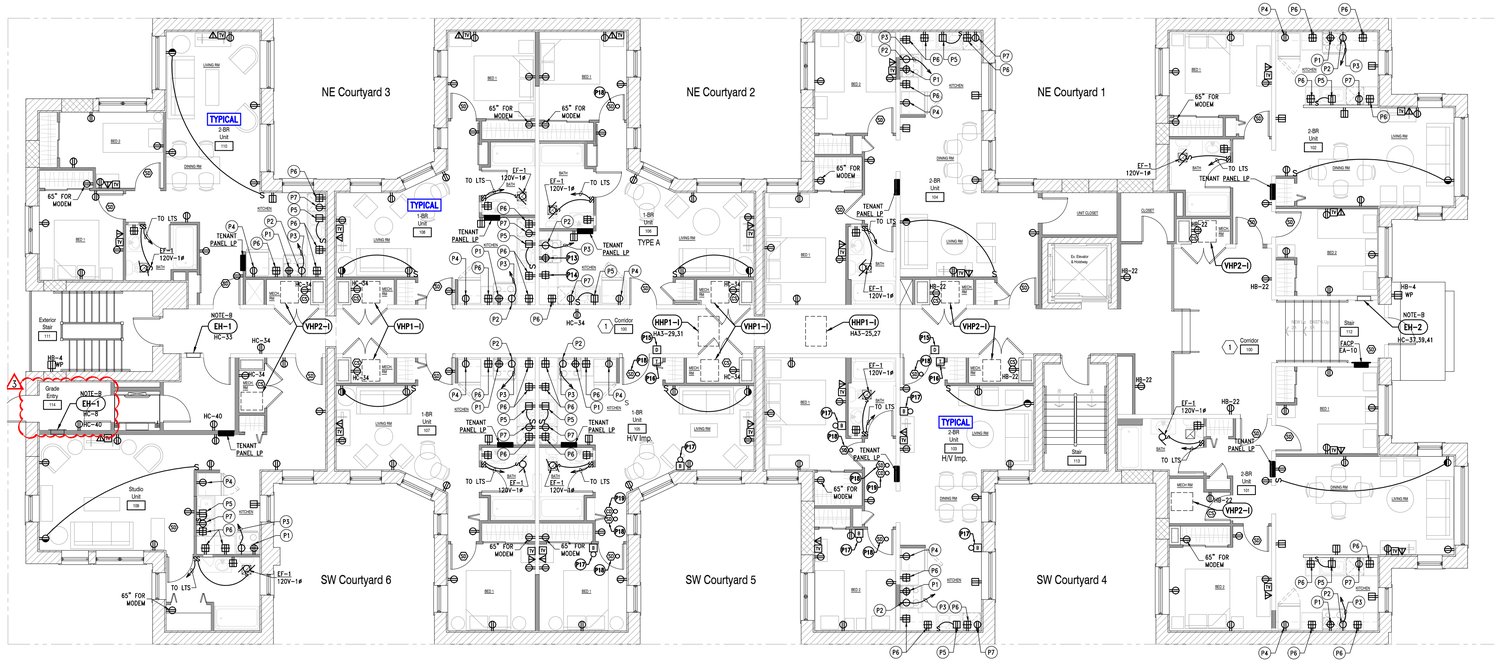

1 E2.1 First Floor Plan - Power

Scale: 1/8" = 1'-0"

North

GENERAL KEYED NOTES:

1. PROVIDE COMMUNICATION FEATURES WITHIN ALL PUBLIC AND COMMON USE AREAS AND WITHIN DESIGNATED HEARING OR VISUALLY IMPAIRED UNITS TO COMPLY WITH THE REQUIREMENTS ABA 809.5, INCLUDING FIRE ALARM, ALARM APPLIANCES, COMMUNICATION FEATURES AT UNIT ENTRY, HARDWIRED DOORBELL, ETC. COORDINATE WITH OWNER FOR EXACT DESIGNATED UNITS.

1 ALL APARMENT LAYOUTS REVISED

2 REFER TO FIRST AND SECOND FLOOR FOR TYPICAL LAYOUTS

GENERAL POWER NOTES:

A. REFER TO TYPICAL APARTMENT LP PANELBOARD SCHEDULE SHEET E0.4 FOR TYPICAL APARTMENT CIRCUITS.

B. REFER TO E2.5 FOR MECHANICAL EQUIPMENT WIRING SCHEDULES; COORDINATE WITH MECHANICAL CONTRACTOR.

C. COORDINATE LOCATION OF ALL ELECTRICAL PANELS IN ROOMS WITH ARCHITECTURAL PLANS AND OTHER TRADES TO MAINTAIN REQUIRED CLEARANCES. NO MECHANICAL DUCTS, PIPING OR EQUIPMENT SHALL BE INSTALLED IN OR ABOVE ELECTRICAL EQUIPMENT SPACE PER N.E.C.

D. REFER TO MECHANICAL FLOOR PLANS, SCHEDULES AND DIAGRAMS FOR EXACT LOCATION OF EQUIPMENT AND WIRING REQUIREMENTS.

E. ELECTRICAL TRADES CONTRACTOR SHALL VERIFY FUSE AND WIRE SIZES FOR ALL MECHANICAL AND MISCELLANEOUS EQUIPMENT, ETC., PER MANUFACTURER'S REQUIREMENTS AND/OR SHOP DRAWINGS. PROVIDE ALL NECESSARY STARTERS, THERMAL OVERLOADS, INTERLOCKING, 120 VOLT CONTROL WIRING, DISCONNECT SWITCHES, ETC. REQUIRED FOR A COMPLETE INSTALLATION. MAKE ALL NECESSARY REVISIONS FOR THE EXACT LOCATION OF ALL ROOF MOUNTED MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS. VERIFY EXACT CONDUIT STUB-UP LOCATIONS IN FIELD. ALL ROOF MOUNTED EQUIPMENT TO BE NEMA 3R WEATHERPROOF RATED, INCLUDING STARTERS, DISCONNECTS, ETC.

F. EXACT LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT AND OUTLETS FOR THE EQUIPMENT SHALL BE VERIFIED WITH OWNER, EQUIPMENT SUPPLIER AND ARCHITECT PRIOR TO INSTALLATION AND ALL EQUIPMENT SHALL BE PER MANUFACTURER'S INSTALLATION REQUIREMENTS INCLUDING FLOOR OUTLETS. LOCATE DISCONNECT SWITCHES FOR MECHANICAL AND BUILDING EQUIPMENT TO MAINTAIN WORKING CLEARANCES. LOCATIONS ON THESE PLANS ARE FOR REFERENCE ONLY.

G. PROVIDE ALL REQUIRED POWER BRANCH CIRCUITING, BACK BOXES, RACEWAYS, CONDUIT, CABLE TRAYS, BACK BOARDS, SUPPORTS, ETC. FOR THE SECURITY, LOW VOLTAGE, AV, TELECOMMUNICATION AND ACCESS CONTROL SYSTEMS. DEVICES AND EQUIPMENT ARE PROVIDED BY OWNER. DEVICES SHOWN ON PLANS ARE FOR REFERENCE ONLY. COORDINATE EXACT REQUIREMENTS WITH OWNER AND SYSTEM VENDORS. FIRE ALARM TO BE CONNECTED TO THE AV RACK. PROVIDE FIRE ALARM CABLE AND COMPONENTS, COORDINATE WITH AV VENDOR FOR CONNECTION AND EXACT REQUIREMENTS.

H. COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS & REQUIREMENTS FOR ALL DEVICES WITH LATEST ARCHITECTURAL AND INTERIOR DESIGN PLANS, FURNITURE PLANS & EQUIPMENT LAYOUTS & ELEVATIONS.

I. MAINTAIN A MINUMUM OF 24" HORIZONTAL SEPARATION BETWEEN BOXES INSTALLED ON OPPOSITE SIDES OF FIRE RATED WALLS TO COMPLY WITH NEC 300.21.

J. PROVIDE FIRE STOPPING SYSTEM WHERE REQUIRED TO MAINTAIN THE FIRE RESISTANCE RATINGS OF THE NEW AND EXISTING ASSEMBLIES.

K. CONTRACTOR TO CONDUCT A COORDINATION MEETING WITH ALL OTHER TRADES PRIOR TO START OF THE WORK TO DETERMINE EQUIPMENT LOCATIONS AND PATHWAYS TO AVOID INTERFERENCES WITH OTHER SYSTEMS AND TO MAINTAIN THE CODE REQUIRED, DEDICATED EQUIPMENT SPACE, WORKING CLEARANCES AND ACCESS.

L. ALL 20 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #10 WIRES FOR VOLTAGE DROP. ALL 30 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #8 WIRES FOR VOLTAGE DROP. MAXIMUM OF 3% AT DESIGN LOAD.

K. PROVIDE GROUND FAULT INTERRUPTER TYPE RECEPTACLES FOR ALL RECEPTACLES WITHIN 6'-0" OF WATER SOURCES AND SINKS, INCLUDING ALL RECEPTACLES AT MILLWORK, KITCHEN AND BARS. GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL SHALL BE PROVIDED AS REQUIRED IN 210.8 (A) THROUGH (C). THE GROUND-FAULT CIRCUIT-INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. OTHER THAN DWELLING UNITS, ALL SINGLE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS INSTALLED IN BATHROOMS, KITCHENS, ROOFTOPS, OUTDOORS, SINKS, INDOOR WET LOCATIONS, LOCKER ROOMS, GARAGES, CRAWLSPACES, AND UNFINISHED PORTIONS OF BASEMENTS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. PROVIDE GROUND FAULT BLANK FACE DEVICE AT ACCESSIBLE LOCATION OR PROVIDE GFCI BRANCH BREAKER IN PANELBOARD IF NOT READILY ACCESSIBLE.

L. A CEILING PLENUM SYSTEM MAY BE USED THROUGHOUT. ALL MECHANICAL & ELECTRICAL WORK LOCATED IN THE PLENUM CEILING SHALL BE INSTALLED USING PLENUM RATED MATERIALS.

M. ALL DEVICES AT COUNTER LOCATIONS TO BE MOUNTED ABOVE THE COUNTER AT 42"AFF OR AS NOTED ON THESE PLANS. COORDINATE WITH ARCHITECT/OWNER AND MILLWORK CONTRACTOR FOR EXACT LOCATIONS.

N. ALL RECEPTACLES IN COUNTER AREA TO BE MOUNTED ON INSIDE WALLS OF CABINETS. ROUTE CONDUIT AND BRANCH WIRING THRU BASE CONCEALED.

O. PROVIDE A COMPLETE MANUAL/AUTOMATIC ADDRESSABLE FIRE ALARM DETECTION AND NOTIFICATION SYSTEM, INCLUDE ALL WORK FOR A COMPLETE, FUNCTIONING AND APPROVED INSTALLATION. DEVICES ARE NOT SPECIFICALLY INDICATED ON THESE PLANS. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS BY A CERTIFIED DESIGNER. EMPLOY THE SERVICES OF A QUALIFIED CERTIFIED FIRE ALARM CONTRACTOR/CONSULTANT TO PREPARE THE SYSTEM DESIGN AND RELATED CONSTRUCTION DOCUMENTS INCLUDING ALL RELATED CALCULATIONS, DEVICE PLACEMENT, ALL CONTROL, MONITORING, POWER SUPPLIES, INITIATING DEVICES, INDICATING APPLIANCES, CONTROL MODULES AND WIRING AS REQUIRED; AND INCLUDE COORDINATION WITH OTHER SUPPLIERS/CONTRACTORS SUCH AS DESIGN-BUILD FIRE PROTECTION INSTALLER FULLY COMPLETE WITH ALL INFORMATION AND RELATED DATA, AS REQUIRED. TO OBTAIN SYSTEM APPROVAL BY THE AUTHORITIES HAVING JURISDICTION. DETERMINE THE APPLICABLE AUTHORITIES HAVING JURISDICTION FOR PROJECT AND INCLUDE ALL IN PLAN REVIEW, PERMITTING, AND INSPECTION. FIRE ALARM SYSTEM SHALL BE CAPABLE OF COMMUNICATING WITH THE EMERGENCY NURSE CALL SYSTEM.

P. VERIFY EXACT QUANTITY AND LOCATION OF FLOW SWITCHES, TAMPER SWITCHES, AIR SUPERVISORY AND PRESSURE SWITCHES WITH FIRE PROTECTION CONTRACTOR IF REQUIRED.

Q. ON ALL EXHAUST FANS (EF'S), 120 VOLT SERVICE DISCONNECT SWITCHES SHALL BE FURNISHED AND INSTALLED BY MECHANICAL TRADES AND WIRED BY ELECTRICAL TRADES.

R. ALL 120-VOLT, SINGLE PHASE, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT, IN ACCORDANCE WITH THE LATEST N.E.C., ARTICLE 210.12 INCLUDING SMOKE DETECTORS.

S. FOR ALL LOW VOLTAGE SYSTEMS: SECURITY, ACCESS CONTROL, SOUND, PAGING, TWO-WAY, ETC. COORDINATE WITH ALL OWNER FOR EXACT SCOPE OF WORK TO BE INCLUDED IN THE BIDS. THESE SYSTEM ARE NOT SPECIFICALLY INDICATED ON THESE PLANS. PROVIDE ALL REQUIRED BRANCH CIRCUITS, BACK BOXES, RACEWAYS, CONDUITS, SLEEVES AS DIRECTED BY OWNER AND OWNER VENDORS. VERIFY DEVICE LOCATIONS, QUANTITIES AND ALL REQUIREMENTS.

T. IF REQUIRE BY THE LOCAL AHJ PROVIDE AREA OF REFUGE SYSTEM. REFER TO ARCHITECTURAL LIFE SAFETY PLANS FOR DESIGNATED AREAS. PROVIDE MASTER STATION CONTROL PANEL, POWER, REMOTE CALL STATIONS AND SIGNAGE, AS REQUIRED AND CONNECTED TO THE FIRE ALARM SYSTEM, INCLUDE ALL COMPONENTS FOR A COMPLETE AND APPROVED INSTALLATION.

U. IF REQUIRE BY THE LOCAL AHJ PROVIDE TWO-WAY COMMUNICATION ENHANCEMENT SYSTEMS PER THE REQUIREMENTS OF NFPA 1 TO MAINTAIN THE FIRE DEPARTMENT COMMUNICATIONS AT THE LEVEL DETERMINED BY THE AHJ. SYSTEM TO INCLUDE UL LISTED FCC COMPLIANT COMPONENTS, BDA AMPLIFIERS, INDOOR AND OUTDOOR ANTENNAS, ATTENUATORS, SPLITTERS, BACK BOXES, RACEWAYS, SUPPORTS, WIRING, ETC. AS REQUIRED BY AUTHORITIES HAVING JURISDICTION FOR COMPLETE COVERAGE AND APPROVED INSTALLATION. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS, DEVICES ARE NOT INDICATED ON PLANS. COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODE REQUIREMENTS, INCLUDING NFPA 72, NFPA 1221 FOR MARKINGS, PATHWAY SURVIVABILITY, DEDICATED STORAGE BATTERY SYSTEM, ETC.

KEYED EQUIPMENT POWER NOTES:

(P1) MICROWAVE/HOOD: 120V; GFCI BREAKER, ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

(P2) RANGE: 50A-125/250V-3P-4W, NEMA 14-50 REC (VERIFY).

(P3) 3#8+1#10 GRD-3/4"C (50A-2P C.B.)

(P4) REFRIGERATOR: 120V, GFCI BREAKER

(P5) DISPOSAL: 120V; GFCI

(P6) +42"A.F.F.; GFCI

(P7) DISHWASHER: 120V; GFCI

(P8) WASHER: 120V-1ø

(P9) ELECTRIC DRYER: 208V-1ø

(P10) 2#10+1#10 GRD-3/4"C (30A-2P C.B.)

(P11) GAS WATER HEATER: 120V PLUG & CORD (DWH-1, DWH-2, DWH-3)

(P12) COMBINATION FIRE/SMOKE DAMPER, 120V, TIE INTO FIRE ALARM SYSTEM.

(P13) RANGE HOOD (ADA UNIT): 120V; ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL ELEVATION FOR RANGEHOOD AND LIGHT SWITCHES LOCATIONS.

(P14) MICROWAVE (ADA UNIT): 120V; ON COUNTER, COORDINATE WITH ARCHITECTURAL; VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

(P15) DOORBELL, REFER TO KEY NOTE 1.

(P16) DOORBELL TRANSFORMER, REFER TO KEY NOTE 1.

(P17) VISUAL DOORBELL STROBE, REFER TO KEY NOTE 1.

(P18) SMOKE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.

(P19) CARBON MONOXIDE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.

(P20) TWO-WAY COMMUNICATION SYSTEM BDA/DAS CABINET ABD BATTERY CABINET, EXACT LOCATION AND REQUIREMENTS TO BE VERIFIED, REFER TO GENERAL NOTE-C THIS SHEET.

(P21) ELEVATOR: 208V-3ø, 29.2 FLA, 3 #4 +1 #10GRD-1 1/4"C, (60A/50AFU/3P C.B.), EA-37,39,41. VERIFY REQUIREMENTS WITH SUBMITTAL. 3 #6 +1 #10GRD-1"C.

(P22) ELEVATOR CAB LIGHT, 120V-1ø, GFI, (20A-1P C.B.), EA-17

(P23) ELEVATOR CAB A/C, 120V-1ø, GFI, (20A-1P C.B.), EA-19

(HHP1-I) (HHP1-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(HHP2-I) (HHP2-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(HHP3-I) (HHP3-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP1-I) (VHP1-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP2-I) (VHP2-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP3-I) (VHP3-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(DOAS-1) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

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1"=1'-0" 1/2"=1'-0" 1/8"=1'-0"
3" 3/8"=1'-0" 0"
1 1/2"=1'-0" 3/4"=1'-0" 1/4"=1'-0"

Issued For	Date
Preliminary Review	01.31.2023
Review & Bids	02.27.2023
Bids & Permits	08.12.2024
Plan Review Revisions	03.20.2025
1 MSHDA Revisions	05.07.2026

Drawing Title

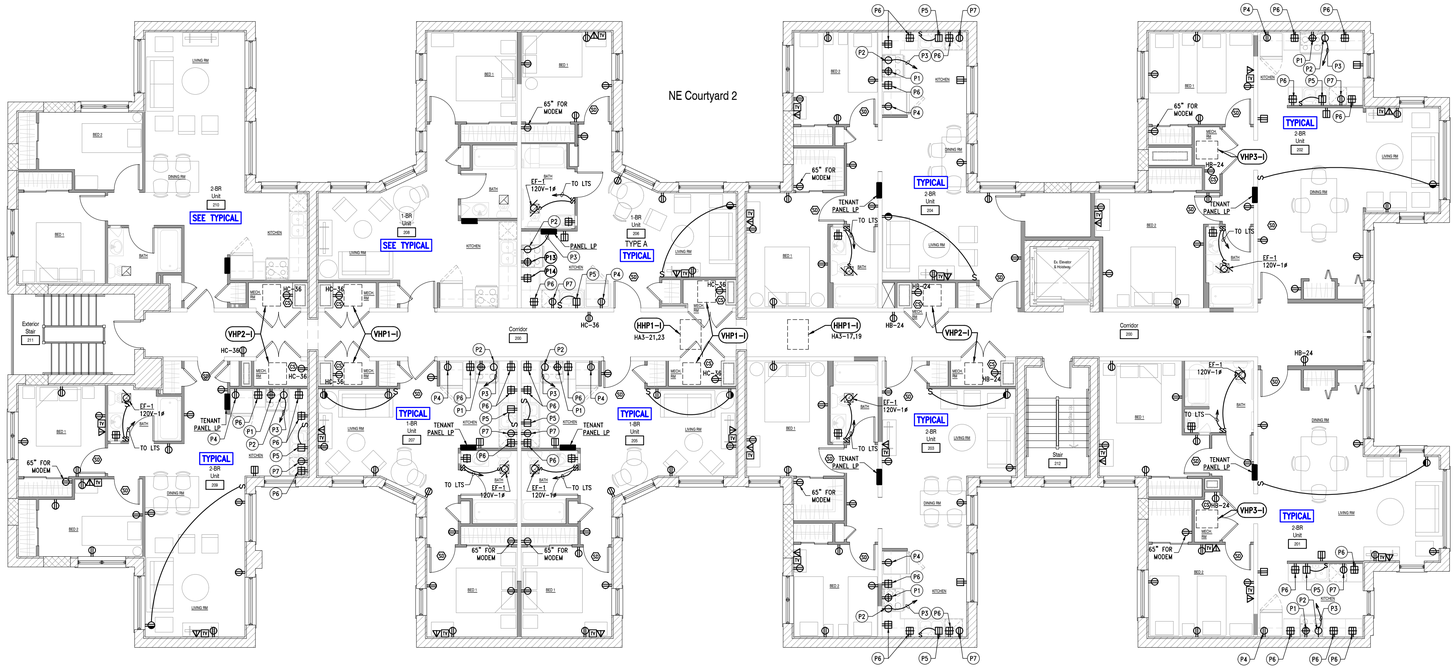
First Floor Plan - Power

2021-248 Project No.

JLW Drawn By | EK Checked By

As Noted Scale

E2.1 1 Drawing No.



1 E2.2 **Second Floor Plan - Power**

Scale: 1/8" = 1'-0"

North

GENERAL POWER NOTES:

A. REFER TO TYPICAL APARTMENT LP PANELBOARD SCHEDULE SHEET E0.4 FOR TYPICAL APARTMENT CIRCUITS.

B. REFER TO E2.5 FOR MECHANICAL EQUIPMENT WIRING SCHEDULES; COORDINATE WITH MECHANICAL CONTRACTOR.

C. COORDINATE LOCATION OF ALL ELECTRICAL PANELS IN ROOMS WITH ARCHITECTURAL PLANS AND OTHER TRADES TO MAINTAIN REQUIRED CLEARANCES. NO MECHANICAL DUCTS, PIPING OR EQUIPMENT SHALL BE INSTALLED IN OR ABOVE ELECTRICAL EQUIPMENT SPACE PER N.E.C.

D. REFER TO MECHANICAL FLOOR PLANS, SCHEDULES AND DIAGRAMS FOR EXACT LOCATION OF EQUIPMENT AND WIRING REQUIREMENTS.

E. ELECTRICAL TRADES CONTRACTOR SHALL VERIFY FUSE AND WIRE SIZES FOR ALL MECHANICAL AND MISCELLANEOUS EQUIPMENT, ETC., PER MANUFACTURER'S REQUIREMENTS AND/OR SHOP DRAWINGS. PROVIDE ALL NECESSARY STARTERS, THERMAL OVERLOADS, INTERLOCKING, 120 VOLT CONTROL WIRING, DISCONNECT SWITCHES, ETC. REQUIRED FOR A COMPLETE INSTALLATION. MAKE ALL NECESSARY REVISIONS, FOR THE EXACT LOCATION OF ALL ROOF MOUNTED MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS. VERIFY EXACT CONDUIT STUB-UP LOCATIONS IN FIELD. ALL ROOF MOUNTED EQUIPMENT TO BE NEMA 3R WEATHERPROOF RATED, INCLUDING STARTERS, DISCONNECTS, ETC.

F. EXACT LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT AND OUTLETS FOR THE EQUIPMENT SHALL BE VERIFIED WITH OWNER, EQUIPMENT SUPPLIER AND ARCHITECT PRIOR TO INSTALLATION AND ALL EQUIPMENT SHALL BE PER MANUFACTURER'S INSTALLATION REQUIREMENTS INCLUDING FLOOR OUTLETS. LOCATE DISCONNECT SWITCHES FOR MECHANICAL AND BUILDING EQUIPMENT TO MAINTAIN WORKING CLEARANCES. LOCATIONS ON THESE PLANS ARE FOR REFERENCE ONLY.

G. PROVIDE ALL REQUIRED POWER BRANCH CIRCUITING, BACK BOXES, RACEWAYS, CONDUIT, CABLE TRAYS, BACK BOARDS, SUPPORTS, ETC. FOR THE SECURITY, LOW VOLTAGE, AV, TELECOMMUNICATION AND ACCESS CONTROL SYSTEMS. DEVICES AND EQUIPMENT ARE PROVIDED BY OWNER. DEVICES SHOWN ON PLANS ARE FOR REFERENCE ONLY. COORDINATE EXACT REQUIREMENTS WITH OWNER AND SYSTEM VENDORS. FIRE ALARM TO BE CONNECTED TO THE AV RACK. PROVIDE FIRE ALARM CABLE AND COMPONENTS, COORDINATE WITH AV VENDOR FOR CONNECTION AND EXACT REQUIREMENTS.

H. COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS & REQUIREMENTS FOR ALL DEVICES WITH LATEST ARCHITECTURAL AND INTERIOR DESIGN PLANS, FURNITURE PLANS & EQUIPMENT LAYOUTS & ELEVATIONS.

I. MAINTAIN A MINIMUM OF 24" HORIZONTAL SEPARATION BETWEEN BOXES INSTALLED ON OPPOSITE SIDES OF FIRE RATED WALLS TO COMPLY WITH NEC 300.21.

J. PROVIDE FIRE STOPPING SYSTEM WHERE REQUIRED TO MAINTAIN THE FIRE RESISTANCE RATINGS OF THE NEW AND EXISTING ASSEMBLIES.

K. CONTRACTOR TO CONDUCT A COORDINATION MEETING WITH ALL OTHER TRADES PRIOR TO START OF THE WORK TO DETERMINE EQUIPMENT LOCATIONS AND PATHWAYS TO AVOID INTERFERENCES WITH OTHER SYSTEMS AND TO MAINTAIN THE CODE REQUIRED, DEDICATED EQUIPMENT SPACE, WORKING CLEARANCES AND ACCESS.

L. ALL 20 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #10 WIRES FOR VOLTAGE DROP. ALL 30 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #8 WIRES FOR VOLTAGE DROP. MAXIMUM OF 3% AT DESIGN LOAD.

K. PROVIDE GROUND FAULT INTERRUPTER TYPE RECEPTACLES FOR ALL RECEPTACLES WITHIN 6'-0" OF WATER SOURCES AND SINKS, INCLUDING ALL RECEPTACLES AT MILLWORK, KITCHEN AND BARS. GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL SHALL BE PROVIDED AS REQUIRED IN 210.8 (A) THROUGH (E). THE GROUND-FAULT CIRCUIT-INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. OTHER THAN DWELLING UNITS, ALL SINGLE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS INSTALLED IN BATHROOMS, KITCHENS, ROOFTOPS, OUTDOORS, SINKS, INDOOR WET LOCATIONS, LOCKER ROOMS, GARAGES, CRAWLSPACES, AND UNFINISHED PORTIONS OF BASEMENTS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. PROVIDE GROUND FAULT BLANK FACE DEVICE AT ACCESSIBLE LOCATION OR PROVIDE GFCI BRANCH BREAKER IN PANELBOARD IF NOT READILY ACCESSIBLE.

L. A CEILING PLENUM SYSTEM MAY BE USED THROUGHOUT. ALL MECHANICAL & ELECTRICAL WORK LOCATED IN THE PLENUM CEILING SHALL BE INSTALLED USING PLENUM RATED MATERIALS.

M. ALL DEVICES AT COUNTER LOCATIONS TO BE MOUNTED ABOVE THE COUNTER AT 42"AFF OR AS NOTED ON THESE PLANS. COORDINATE WITH ARCHITECT/OWNER AND MILLWORK CONTRACTOR FOR EXACT LOCATIONS.

N. ALL RECEPTACLES IN COUNTER AREA TO BE MOUNTED ON INSIDE WALLS OF CABINETS. ROUTE CONDUIT AND BRANCH WIRING THRU BASE CONCEALED.

O. PROVIDE A COMPLETE MANUAL/AUTOMATIC ADDRESSABLE FIRE ALARM DETECTION AND NOTIFICATION SYSTEM, INCLUDE ALL WORK FOR A COMPLETE, FUNCTIONING AND APPROVED INSTALLATION. DEVICES ARE NOT SPECIFICALLY INDICATED ON THESE PLANS. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS BY A CERTIFIED DESIGNER. EMPLOY THE SERVICES OF A QUALIFIED CERTIFIED FIRE ALARM CONTRACTOR/CONSULTANT TO PREPARE THE SYSTEM DESIGN AND RELATED CONSTRUCTION DOCUMENTS INCLUDING ALL RELATED CALCULATIONS, DEVICE PLACEMENT, ALL CONTROL, MONITORING, POWER SUPPLIES, INITIATING DEVICES, INDICATING APPLIANCES, CONTROL MODULES AND WIRING AS REQUIRED; AND INCLUDE COORDINATION WITH OTHER SUPPLIERS/CONTRACTORS SUCH AS DESIGN-BUILD FIRE PROTECTION INSTALLER FULLY COMPLETE WITH ALL INFORMATION AND RELATED DATA, AS REQUIRED, TO OBTAIN SYSTEM APPROVAL BY THE AUTHORITIES HAVING JURISDICTION. DETERMINE THE APPLICABLE AUTHORITIES HAVING JURISDICTION FOR PROJECT AND INCLUDE ALL IN PLAN REVIEW, PERMITTING, AND INSPECTION. FIRE ALARM SYSTEM SHALL BE CAPABLE OF COMMUNICATING WITH THE EMERGENCY NURSE CALL SYSTEM.

P. VERIFY EXACT QUANTITY AND LOCATION OF FLOW SWITCHES, TAMPER SWITCHES, AIR SUPERVISORY AND PRESSURE SWITCHES WITH FIRE PROTECTION CONTRACTOR IF REQUIRED.

Q. ON ALL EXHAUST FANS (EF'S), 120 VOLT SERVICE DISCONNECT SWITCHES SHALL BE FURNISHED AND INSTALLED BY MECHANICAL TRADES AND WIRED BY ELECTRICAL TRADES.

R. ALL 120-VOLT, SINGLE PHASE, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT, IN ACCORDANCE WITH THE LATEST N.E.C., ARTICLE 210.12 INCLUDING SMOKE DETECTORS.

S. FOR ALL LOW VOLTAGE SYSTEMS: SECURITY, ACCESS CONTROL, SOUND, PAGING, TWO-WAY, ETC. COORDINATE WITH ALL OWNER FOR EXACT SCOPE OF WORK TO BE INCLUDED IN THE BIDS. THESE SYSTEM ARE NOT SPECIFICALLY INDICATED ON THESE PLANS. PROVIDE ALL REQUIRED BRANCH CIRCUITS, BACK BOXES, RACEWAYS, CONDUITS, SLEEVES AS DIRECTED BY OWNER AND OWNER VENDORS. VERIFY DEVICE LOCATIONS, QUANTITIES AND ALL REQUIREMENTS.

T. IF REQUIRE BY THE LOCAL AHJ PROVIDE AREA OF REFUGE SYSTEM. REFER TO ARCHITECTURAL LIFE SAFETY PLANS FOR DESIGNATED AREAS. PROVIDE MASTER STATION CONTROL PANEL, POWER, REMOTE CALL STATIONS AND SIGNAGE, AS REQUIRED AND CONNECTED TO THE FIRE ALARM SYSTEM, INCLUDE ALL COMPONENTS FOR A COMPLETE AND APPROVED INSTALLATION.

U. IF REQUIRE BY THE LOCAL AHJ PROVIDE TWO-WAY COMMUNICATION ENHANCEMENT SYSTEMS PER THE REQUIREMENTS OF NFPA 1 TO MAINTAIN THE FIRE DEPARTMENT COMMUNICATIONS AT THE LEVEL DETERMINED BY THE AHJ. SYSTEM TO INCLUDE UL LISTED FCC COMPLIANT COMPONENTS, BDA AMPLIFIERS, INDOOR AND OUTDOOR ANTENNAS, ATTENUATORS, SPLITTERS, BACK BOXES, RACEWAYS, SUPPORTS, WIRING, ETC. AS REQUIRED BY AUTHORITIES HAVING JURISDICTION FOR COMPLETE COVERAGE AND APPROVED INSTALLATION. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS, DEVICES ARE NOT INDICATED ON PLANS, COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODE REQUIREMENTS, INCLUDING NFPA 72, NFPA 1221 FOR MARKINGS, PATHWAY SURVIVABILITY, DEDICATED STORAGE BATTERY SYSTEM, ETC.

KEYED EQUIPMENT POWER NOTES:

(P1) MICROWAVE/HOOD: 120V; GFCI BREAKER, ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

(P2) RANGE: 50A-125/250V-3P-4W, NEMA 14-50 REC (VERIFY).

(P3) 5ø8+1ø10 GRD-3/4"C (50A-2P C.B.)

(P4) REFRIGERATOR: 120V, GFCI BREAKER

(P5) DISPOSAL: 120V; GFCI

(P6) +42"A.F.F.; GFCI

(P7) DISHWASHER: 120V; GFCI

(P8) WASHER: 120V-1ø

(P9) ELECTRIC DRYER: 208V-1ø

(P10) 2ø10+1ø10 GRD-3/4"C (30A-2P C.B.)

(P11) GAS WATER HEATER: 120V PLUG & CORD (DWH-1, DWH-2, DWH-3)

(P12) COMBINATION FIRE/SMOKE DAMPER, 120V, TIE INTO FIRE ALARM SYSTEM.

(P13) RANGE HOOD (ADA UNIT): 120V; ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL ELEVATION FOR RANGEHOOD AND LIGHT SWITCHES LOCATIONS.

(P14) MICROWAVE (ADA UNIT): 120V; ON COUNTER, COORDINATE WITH ARCHITECTURAL; VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

(P15) DOORBELL, REFER TO KEY NOTE 1.

(P16) DOORBELL TRANSFORMER, REFER TO KEY NOTE 1.

(P17) VISUAL DOORBELL STROBE, REFER TO KEY NOTE 1.

(P18) SMOKE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.

(P19) CARBON MONOXIDE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.

(P20) TWO-WAY COMMUNICATION SYSTEM BDA/DAS CABINET ABD BATTERY CABINET, EXACT LOCATION AND REQUIREMENTS TO BE VERIFIED, REFER TO GENERAL NOTE-C THIS SHEET.

(P21) ELEVATOR: 208V-3ø, 29.2 FLA, 3 #4 +1 #10GRD-1 1/4"C, (60A/50AFU/3P C.B.), EA-37,39,41. VERIFY REQUIREMENTS WITH SUBMITTAL. 3 #6 +1 #10GRD-1"C.

(P22) ELEVATOR CAB LIGHT, 120V-1ø, GFI, (20A-1P C.B.), EA-17

(P23) ELEVATOR CAB A/C, 120V-1ø, GFI, (20A-1P C.B.), EA-19

(HHP1-I) (HHP1-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(HHP2-I) (HHP2-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(HHP3-I) (HHP3-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

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(VHP2-I) (VHP2-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP3-I) (VHP3-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(DOAS-1) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

GENERAL KEYED NOTES:

1 PROVIDE COMMUNICATION FEATURES WITHIN ALL PUBLIC AND COMMON USE AREAS AND WITHIN DESIGNATED HEARING OR VISUALLY IMPAIRED UNITS TO COMPLY WITH THE REQUIREMENTS ABA 809.5, INCLUDING FIRE ALARM, ALARM APPLIANCES, COMMUNICATION FEATURES AT UNIT ENTRY, HARDWIRED DOORBELL, ETC. COORDINATE WITH OWNER FOR EXACT DESIGNATED UNITS.

3 ALL APARMENT LAYOUTS REVISED

3 REFER TO FIRST AND SECOND FLOOR FOR TYPICAL LAYOUTS

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1"=1'-0" 1/2"=1'-0" 1/8"=1'-0"
3" 3/8"=1'-0" 0"
1 1/2"=1'-0" 3/4"=1'-0" 1/4"=1'-0"

Issued For	Date
Preliminary Review	01.31.2023
Review & Bids	02.27.2023
Bids & Permits	08.12.2024
Plan Review Revisions	03.20.2025
3 MSHDA Revisions	05.07.2026

Drawing Title

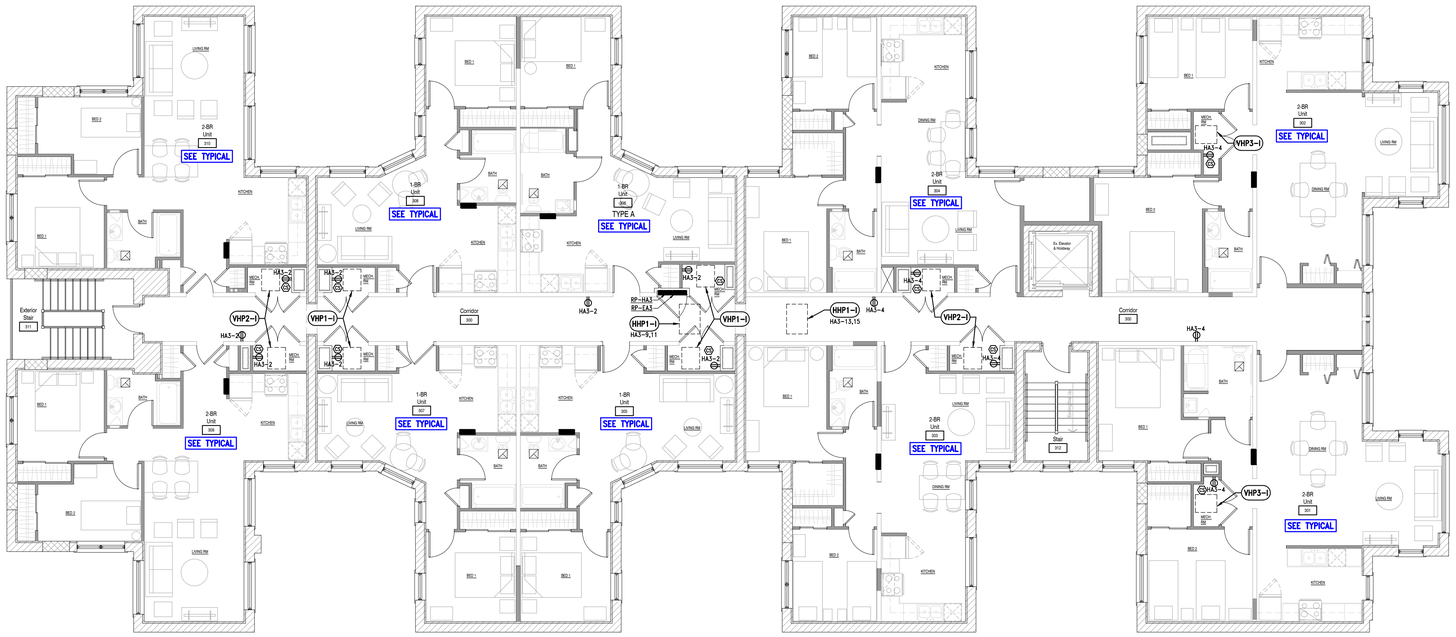
Second Floor Plan - Power

2021-248 Project No.

Drawn By	Checked By
JLW	EK

As Noted Scale

E2.2 3 Drawing No.



1 E2.3 **Third Floor Plan - Power**

Scale: 1/8" = 1'-0"

North

GENERAL KEYED NOTES:

1. PROVIDE COMMUNICATION FEATURES WITHIN ALL PUBLIC AND COMMON USE AREAS AND WITHIN DESIGNATED HEARING OR VISUALLY IMPAIRED UNITS TO COMPLY WITH THE REQUIREMENTS ABA 809.5, INCLUDING FIRE ALARM, ALARM APPLIANCES, COMMUNICATION FEATURES AT UNIT ENTRY, HARDWIRED DOORBELL, ETC. COORDINATE WITH OWNER FOR EXACT DESIGNATED UNITS.

△2 ALL APARMENT LAYOUTS REVISED

△3 REFER TO FIRST AND SECOND FLOOR FOR TYPICAL LAYOUTS

GENERAL POWER NOTES:

A. REFER TO TYPICAL APARTMENT LP PANELBOARD SCHEDULE SHEET E0.4 FOR TYPICAL APARTMENT CIRCUITS.

B. REFER TO E2.5 FOR MECHANICAL EQUIPMENT WIRING SCHEDULES; COORDINATE WITH MECHANICAL CONTRACTOR.

C. COORDINATE LOCATION OF ALL ELECTRICAL PANELS IN ROOMS WITH ARCHITECTURAL PLANS AND OTHER TRADES TO MAINTAIN REQUIRED CLEARANCES. NO MECHANICAL DUCTS, PIPING OR EQUIPMENT SHALL BE INSTALLED IN OR ABOVE ELECTRICAL EQUIPMENT SPACE PER N.E.C.

D. REFER TO MECHANICAL FLOOR PLANS, SCHEDULES AND DIAGRAMS FOR EXACT LOCATION OF EQUIPMENT AND WIRING REQUIREMENTS.

E. ELECTRICAL TRADES CONTRACTOR SHALL VERIFY FUSE AND WIRE SIZES FOR ALL MECHANICAL AND MISCELLANEOUS EQUIPMENT, ETC., PER MANUFACTURER'S REQUIREMENTS AND/OR SHOP DRAWINGS. PROVIDE ALL NECESSARY STARTERS, THERMAL OVERLOADS, INTERLOCKING, 120 VOLT CONTROL WIRING, DISCONNECT SWITCHES, ETC. REQUIRED FOR A COMPLETE INSTALLATION. MAKE ALL NECESSARY REVISIONS FOR THE EXACT LOCATION OF ALL ROOF MOUNTED MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS. VERIFY EXACT CONDUIT STUB-UP LOCATIONS IN FIELD. ALL ROOF MOUNTED EQUIPMENT TO BE NEMA 3R WEATHERPROOF RATED, INCLUDING STARTERS, DISCONNECTS, ETC.

F. EXACT LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT AND OUTLETS FOR THE EQUIPMENT SHALL BE VERIFIED WITH OWNER, EQUIPMENT SUPPLIER AND ARCHITECT PRIOR TO INSTALLATION AND ALL EQUIPMENT SHALL BE PER MANUFACTURER'S INSTALLATION REQUIREMENTS INCLUDING FLOOR OUTLETS. LOCATE DISCONNECT SWITCHES FOR MECHANICAL AND BUILDING EQUIPMENT TO MAINTAIN WORKING CLEARANCES. LOCATIONS ON THESE PLANS ARE FOR REFERENCE ONLY.

G. PROVIDE ALL REQUIRED POWER BRANCH CIRCUITING, BACK BOXES, RACEWAYS, CONDUIT, CABLE TRAYS, BACK BOARDS, SUPPORTS, ETC. FOR THE SECURITY, LOW VOLTAGE, AV, TELECOMMUNICATION AND ACCESS CONTROL SYSTEMS. DEVICES AND EQUIPMENT ARE PROVIDED BY OWNER, DEVICES SHOWN ON PLANS ARE FOR REFERENCE ONLY, COORDINATE EXACT REQUIREMENTS WITH OWNER AND SYSTEM VENDORS. FIRE ALARM TO BE CONNECTED TO THE AV RACK. PROVIDE FIRE ALARM CABLE AND COMPONENTS, COORDINATE WITH AV VENDOR FOR CONNECTION AND EXACT REQUIREMENTS.

H. COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS & REQUIREMENTS FOR ALL DEVICES WITH LATEST ARCHITECTURAL AND INTERIOR DESIGN PLANS, FURNITURE PLANS & EQUIPMENT LAYOUTS & ELEVATIONS.

I. MAINTAIN A MINUMUM OF 24" HORIZONTAL SEPARATION BETWEEN BOXES INSTALLED ON OPPOSITE SIDES OF FIRE RATED WALLS TO COMPLY WITH NEC 300.21.

J. PROVIDE FIRE STOPPING SYSTEM WHERE REQUIRED TO MAINTAIN THE FIRE RESISTANCE RATINGS OF THE NEW AND EXISTING ASSEMBLIES.

K. CONTRACTOR TO CONDUCT A COORDINATION MEETING WITH ALL OTHER TRADES PRIOR TO START OF THE WORK TO DETERMINE EQUIPMENT LOCATIONS AND PATHWAYS TO AVOID INTERFERENCES WITH OTHER SYSTEMS AND TO MAINTAIN THE CODE REQUIRED, DEDICATED EQUIPMENT SPACE, WORKING CLEARANCES AND ACCESS.

L. ALL 20 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #10 WIRES FOR VOLTAGE DROP. ALL 30 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #8 WIRES FOR VOLTAGE DROP. MAXIMUM OF 3% AT DESIGN LOAD.

K. PROVIDE GROUND FAULT INTERRUPTER TYPE RECEPTACLES FOR ALL RECEPTACLES WITHIN 6'-0" OF WATER SOURCES AND SINKS, INCLUDING ALL RECEPTACLES AT MILLWORK, KITCHEN AND BARS. GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL SHALL BE PROVIDED AS REQUIRED IN 210.8 (A) THROUGH (E). THE GROUND-FAULT CIRCUIT-INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. OTHER THAN DWELLING UNITS, ALL SINGLE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS INSTALLED IN BATHROOMS, KITCHENS, ROOFTOPS, OUTDOOR SPACES, OUTDOOR SINKS, INDOOR WET LOCATIONS, LOCKER ROOMS, GARAGES, CRAWLSPACES, AND UNFINISHED PORTIONS OF BASEMENTS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. PROVIDE GROUND FAULT BLANK FACE DEVICE AT ACCESSIBLE LOCATION OR PROVIDE GFCI BRANCH BREAKER IN PANELBOARD IF NOT READILY ACCESSIBLE.

L. A CEILING PLENUM SYSTEM MAY BE USED THROUGHOUT. ALL MECHANICAL & ELECTRICAL WORK LOCATED IN THE PLENUM CEILING SHALL BE INSTALLED USING PLENUM RATED MATERIALS.

M. ALL DEVICES AT COUNTER LOCATIONS TO BE MOUNTED ABOVE THE COUNTER AT 42"AFF OR AS NOTED ON THESE PLANS. COORDINATE WITH ARCHITECT/OWNER AND MILLWORK CONTRACTOR FOR EXACT LOCATIONS.

N. ALL RECEPTACLES IN COUNTER AREA TO BE MOUNTED ON INSIDE WALLS OF CABINETS. ROUTE CONDUIT AND BRANCH WIRING THRU BASE CONCEALED.

O. PROVIDE A COMPLETE MANUAL/AUTOMATIC ADDRESSABLE FIRE ALARM DETECTION AND NOTIFICATION SYSTEM, INCLUDE ALL WORK FOR A COMPLETE, FUNCTIONING AND APPROVED INSTALLATION. DEVICES ARE NOT SPECIFICALLY INDICATED ON THESE PLANS, SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS BY A CERTIFIED DESIGNER. EMPLOY THE SERVICES OF A QUALIFIED CERTIFIED FIRE ALARM CONTRACTOR/CONSULTANT TO PREPARE THE SYSTEM DESIGN AND RELATED CONSTRUCTION DOCUMENTS INCLUDING ALL RELATED CALCULATIONS, DEVICE PLACEMENT, ALL CONTROL, MONITORING, POWER SUPPLIES, INITIATING DEVICES, INDICATING APPLIANCES, CONTROL MODULES AND WIRING AS REQUIRED; AND INCLUDE COORDINATION WITH OTHER SUPPLIERS/CONTRACTORS SUCH AS DESIGN-BUILD FIRE PROTECTION INSTALLER FULLY COMPLETE WITH ALL INFORMATION AND RELATED DATA, AS REQUIRED, TO OBTAIN SYSTEM APPROVAL BY THE AUTHORITIES HAVING JURISDICTION. DETERMINE THE APPLICABLE AUTHORITIES HAVING JURISDICTION FOR PROJECT AND INCLUDE ALL IN PLAN REVIEW, PERMITTING, AND INSPECTION. FIRE ALARM SYSTEM SHALL BE CAPABLE OF COMMUNICATING WITH THE EMERGENCY NURSE CALL SYSTEM.

P. VERIFY EXACT QUANTITY AND LOCATION OF FLOW SWITCHES, TAMPER SWITCHES, AIR SUPERVISORY AND PRESSURE SWITCHES WITH FIRE PROTECTION CONTRACTOR IF REQUIRED.

Q. ON ALL EXHAUST FANS (EF'S), 120 VOLT SERVICE DISCONNECT SWITCHES SHALL BE FURNISHED AND INSTALLED BY MECHANICAL TRADES AND WIRED BY ELECTRICAL TRADES.

R. ALL 120-VOLT, SINGLE PHASE, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT, IN ACCORDANCE WITH THE LATEST N.E.C., ARTICLE 210.12 INCLUDING SMOKE DETECTORS.

S. FOR ALL LOW VOLTAGE SYSTEMS; SECURITY, ACCESS CONTROL, SOUND, PAGING, TWO-WAY, ETC. COORDINATE WITH ALL OWNER FOR EXACT SCOPE OF WORK TO BE INCLUDED IN THE BIDS. THESE SYSTEM ARE NOT SPECIFICALLY INDICATED ON THESE PLANS. PROVIDE ALL REQUIRED BRANCH CIRCUITS, BACK BOXES, RACEWAYS, CONDUITS, SLEEVES AS DIRECTED BY OWNER AND OWNER VENDORS. VERIFY DEVICE LOCATIONS, QUANTITIES AND ALL REQUIREMENTS.

T. IF REQUIRE BY THE LOCAL AHJ PROVIDE AREA OF REFUGE SYSTEM. REFER TO ARCHITECTURAL LIFE SAFETY PLANS FOR DESIGNATED AREAS. PROVIDE MASTER STATION CONTROL PANEL, POWER, REMOTE CALL STATIONS AND SIGNAGE, AS REQUIRED AND CONNECTED TO THE FIRE ALARM SYSTEM, INCLUDE ALL COMPONENTS FOR A COMPLETE AND APPROVED INSTALLATION.

U. IF REQUIRE BY THE LOCAL AHJ PROVIDE TWO-WAY COMMUNICATION ENHANCEMENT SYSTEMS PER THE REQUIREMENTS OF NFPA 1 TO MAINTAIN THE FIRE DEPARTMENT COMMUNICATIONS AT THE LEVEL DETERMINED BY THE AHJ. SYSTEM TO INCLUDE UL LISTED FCC COMPLIANT COMPONENTS, BDA AMPLIFIERS, INDOOR AND OUTDOOR ANTENNAS, ATTENUATORS, SPLITTERS, BACK BOXES, RACEWAYS, SUPPORTS, WIRING, ETC. AS REQUIRED BY AUTHORITIES HAVING JURISDICTION FOR COMPLETE COVERAGE AND APPROVED INSTALLATION. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS, DEVICES ARE NOT INDICATED ON PLANS, COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODE REQUIREMENTS, INCLUDING NFPA 72, NFPA 1221 FOR MARKINGS, PATHWAY SURVIVABILITY, DEDICATED STORAGE BATTERY SYSTEM, ETC.

KEYED EQUIPMENT POWER NOTES:

- (P1) MICROWAVE/HOOD: 120V; GFCI BREAKER, ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
- (P2) RANGE: 50A-125/250V-3P-4W, NEMA 14-50 REC (VERIFY).
- (P3) 3#8+1#10 GRD-3/4"C (50A-2P C.B.)
- (P4) REFRIGERATOR: 120V, GFCI BREAKER
- (P5) DISPOSAL: 120V; GFCI
- (P6) +42"A.F.F.; GFCI
- (P7) DISHWASHER: 120V; GFCI
- (P8) WASHER: 120V-1ø
- (P9) ELECTRIC DRYER: 208V-1ø
- (P10) 2#10+1#10 GRD-3/4"C (30A-2P C.B.)
- (P11) GAS WATER HEATER: 120V PLUG & CORD (DWH-1, DWH-2, DWH-3)
- (P12) COMBINATION FIRE/SMOKE DAMPER, 120V, TIE INTO FIRE ALARM SYSTEM.
- (P13) RANGE HOOD (ADA UNIT): 120V; ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL ELEVATION FOR RANGEHOOD AND LIGHT SWITCHES LOCATIONS.
- (P14) MICROWAVE (ADA UNIT): 120V; ON COUNTER, COORDINATE WITH ARCHITECTURAL; VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
- (P15) DOORBELL, REFER TO KEY NOTE 1.
- (P16) DOORBELL TRANSFORMER, REFER TO KEY NOTE 1.
- (P17) VISUAL DOORBELL STROBE, REFER TO KEY NOTE 1.
- (P18) SMOKE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.
- (P19) CARBON MONOXIDE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.
- (P20) TWO-WAY COMMUNICATION SYSTEM BDA/DAS CABINET ABD BATTERY CABINET, EXACT LOCATION AND REQUIREMENTS TO BE VERIFIED, REFER TO GENERAL NOTE-C THIS SHEET.
- (P21) ELEVATOR: 208V-3ø, 29.2 FLA, 3 #4 +1 #10GRD-1 1/4"C, (60A/50AFU/3P C.B.), EA-37,39,41. VERIFY REQUIREMENTS WITH SUBMITTAL. 3 #6 +1 #10GRD-1"C.
- (P22) ELEVATOR CAB LIGHT, 120V-1ø, GFI, (20A-1P C.B.), EA-17
- (P23) ELEVATOR CAB A/C, 120V-1ø, GFI, (20A-1P C.B.), EA-19

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1"=1'-0" 1/2"=1'-0" 1/8"=1'-0" 3" 3/8"=1'-0" 0"
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△3 MSHDA Revisions	05.07.2026

Drawing Title

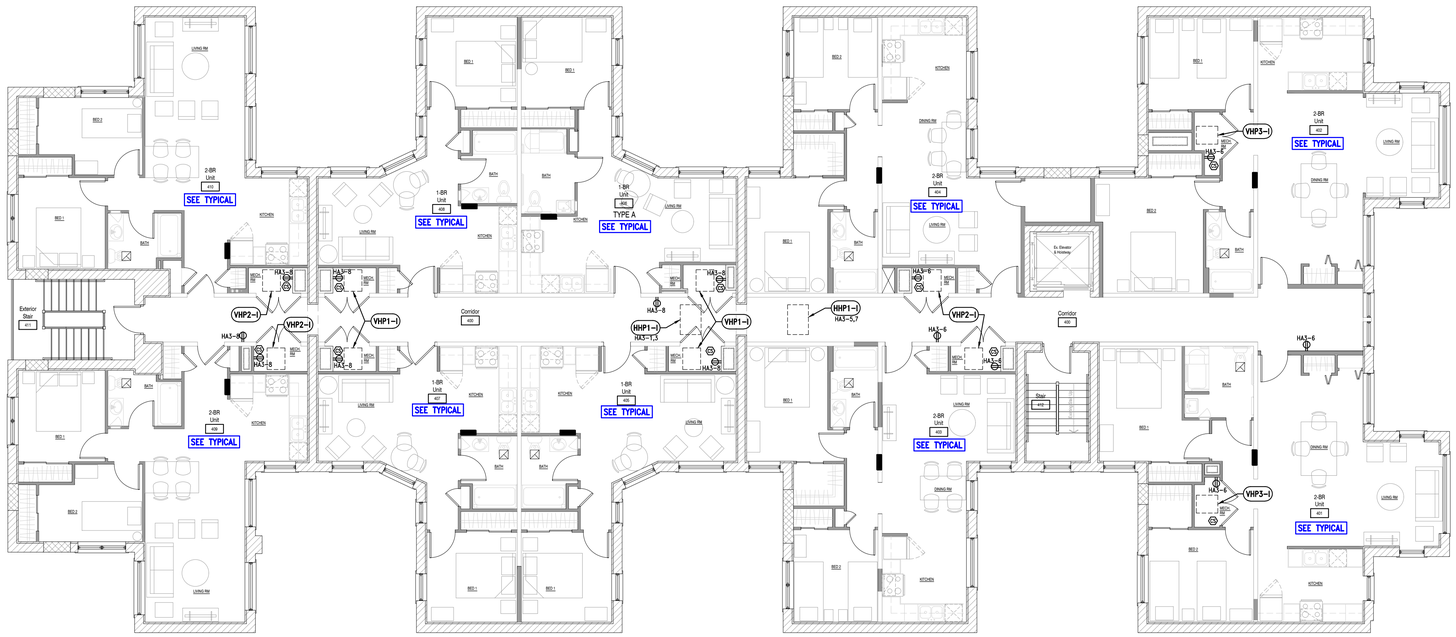
Third Floor Plan - Power

2021-248
Project No.

JLW	EK
Drawn By	Checked By

As Noted
Scale

E2.3 △3
Drawing No.



1 E2.4 **Fourth Floor Plan - Power**

Scale: 1/8" = 1'-0"

North

GENERAL KEYED NOTES:

1. PROVIDE COMMUNICATION FEATURES WITHIN ALL PUBLIC AND COMMON USE AREAS AND WITHIN DESIGNATED HEARING OR VISUALLY IMPAIRED UNITS TO COMPLY WITH THE REQUIREMENTS ABA 809.5, INCLUDING FIRE ALARM, ALARM APPLIANCES, COMMUNICATION FEATURES AT UNIT ENTRY, HARDWIRED DOORBELL, ETC. COORDINATE WITH OWNER FOR EXACT DESIGNATED UNITS.

3 ALL APARMENT LAYOUTS REVISED

3 REFER TO FIRST AND SECOND FLOOR FOR TYPICAL LAYOUTS

GENERAL POWER NOTES:

A. REFER TO TYPICAL APARTMENT LP PANELBOARD SCHEDULE SHEET E0.4 FOR TYPICAL APARTMENT CIRCUITS.

B. REFER TO E2.5 FOR MECHANICAL EQUIPMENT WIRING SCHEDULES; COORDINATE WITH MECHANICAL CONTRACTOR.

C. COORDINATE LOCATION OF ALL ELECTRICAL PANELS IN ROOMS WITH ARCHITECTURAL PLANS AND OTHER TRADES TO MAINTAIN REQUIRED CLEARANCES. NO MECHANICAL DUCTS, PIPING OR EQUIPMENT SHALL BE INSTALLED IN OR ABOVE ELECTRICAL EQUIPMENT SPACE PER N.E.C.

D. REFER TO MECHANICAL FLOOR PLANS, SCHEDULES AND DIAGRAMS FOR EXACT LOCATION OF EQUIPMENT AND WIRING REQUIREMENTS.

E. ELECTRICAL TRADES CONTRACTOR SHALL VERIFY FUSE AND WIRE SIZES FOR ALL MECHANICAL AND MISCELLANEOUS EQUIPMENT, ETC., PER MANUFACTURER'S REQUIREMENTS AND/OR SHOP DRAWINGS. PROVIDE ALL NECESSARY STARTERS, THERMAL OVERLOADS, INTERLOCKING, 120 VOLT CONTROL WIRING, DISCONNECT SWITCHES, ETC. REQUIRED FOR A COMPLETE INSTALLATION. MAKE ALL NECESSARY REVISIONS FOR THE EXACT LOCATION OF ALL ROOF MOUNTED MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS. VERIFY EXACT CONDUIT STUB-UP LOCATIONS IN FIELD. ALL ROOF MOUNTED EQUIPMENT TO BE NEMA 3R WEATHERPROOF RATED, INCLUDING STARTERS, DISCONNECTS, ETC.

F. EXACT LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT AND OUTLETS FOR THE EQUIPMENT SHALL BE VERIFIED WITH OWNER, EQUIPMENT SUPPLIER AND ARCHITECT PRIOR TO INSTALLATION AND ALL EQUIPMENT SHALL BE PER MANUFACTURER'S INSTALLATION REQUIREMENTS INCLUDING FLOOR OUTLETS. LOCATE DISCONNECT SWITCHES FOR MECHANICAL AND BUILDING EQUIPMENT TO MAINTAIN WORKING CLEARANCES. LOCATIONS ON THESE PLANS ARE FOR REFERENCE ONLY.

G. PROVIDE ALL REQUIRED POWER BRANCH CIRCUITING, BACK BOXES, RACEWAYS, CONDUIT, CABLE TRAYS, BACK BOARDS, SUPPORTS, ETC., FOR THE SECURITY, LOW VOLTAGE, AV, TELECOMMUNICATION AND ACCESS CONTROL SYSTEMS. DEVICES AND EQUIPMENT ARE PROVIDED BY OWNER. DEVICES SHOWN ON PLANS ARE FOR REFERENCE ONLY. COORDINATE EXACT REQUIREMENTS WITH OWNER AND SYSTEM VENDORS. FIRE ALARM TO BE CONNECTED TO THE AV RACK. PROVIDE FIRE ALARM CABLE AND COMPONENTS, COORDINATE WITH AV VENDOR FOR CONNECTION AND EXACT REQUIREMENTS.

H. COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS & REQUIREMENTS FOR ALL DEVICES WITH LATEST ARCHITECTURAL AND INTERIOR DESIGN PLANS, FURNITURE PLANS & EQUIPMENT LAYOUTS & ELEVATIONS.

I. MAINTAIN A MINUMUM OF 24" HORIZONTAL SEPARATION BETWEEN BOXES INSTALLED ON OPPOSITE SIDES OF FIRE RATED WALLS TO COMPLY WITH NEC 300.21.

J. PROVIDE FIRE STOPPING SYSTEM WHERE REQUIRED TO MAINTAIN THE FIRE RESISTANCE RATINGS OF THE NEW AND EXISTING ASSEMBLIES.

K. CONTRACTOR TO CONDUCT A COORDINATION MEETING WITH ALL OTHER TRADES PRIOR TO START OF THE WORK TO DETERMINE EQUIPMENT LOCATIONS AND PATHWAYS TO AVOID INTERFERENCES WITH OTHER SYSTEMS AND TO MAINTAIN THE CODE REQUIRED, DEDICATED EQUIPMENT SPACE, WORKING CLEARANCES AND ACCESS.

L. ALL 20 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #10 WIRES FOR VOLTAGE DROP. ALL 30 AMP BRANCH CIRCUITS LONGER THAN 100'-0" SHALL UTILIZE A MINIMUM OF #8 WIRES FOR VOLTAGE DROP. MAXIMUM OF 3% AT DESIGN LOAD.

K. PROVIDE GROUND FAULT INTERRUPTER TYPE RECEPTACLES FOR ALL RECEPTACLES WITHIN 6'-0" OF WATER SOURCES AND SINKS, INCLUDING ALL RECEPTACLES AT MILLWORK, KITCHEN AND BARS. GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL SHALL BE PROVIDED AS REQUIRED IN 210.8 (A) THROUGH (F). THE GROUND-FAULT CIRCUIT-INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. OTHER THAN DWELLING UNITS: ALL SINGLE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS INSTALLED IN BATHROOMS, KITCHENS, ROOFTOPS, OUTDOORS, SINKS, INDOOR WET LOCATIONS, LOCKER ROOMS, GARAGES, CRAWLSPACES, AND UNFINISHED PORTIONS OF BASEMENTS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. PROVIDE GROUND FAULT BLANK FACE DEVICE AT ACCESSIBLE LOCATION OR PROVIDE GFCI BRANCH BREAKER IN PANELBOARD IF NOT READILY ACCESSIBLE.

L. A CEILING PLENUM SYSTEM MAY BE USED THROUGHOUT. ALL MECHANICAL & ELECTRICAL WORK LOCATED IN THE PLENUM CEILING SHALL BE INSTALLED USING PLENUM RATED MATERIALS.

M. ALL DEVICES AT COUNTER LOCATIONS TO BE MOUNTED ABOVE THE COUNTER AT 42"AFF OR AS NOTED ON THESE PLANS. COORDINATE WITH ARCHITECT/OWNER AND MILLWORK CONTRACTOR FOR EXACT LOCATIONS.

N. ALL RECEPTACLES IN COUNTER AREA TO BE MOUNTED ON INSIDE WALLS OF CABINETS. ROUTE CONDUIT AND BRANCH WIRING THRU BASE CONCEALED.

O. PROVIDE A COMPLETE MANUAL/AUTOMATIC ADDRESSABLE FIRE ALARM DETECTION AND NOTIFICATION SYSTEM, INCLUDE ALL WORK FOR A COMPLETE, FUNCTIONING AND APPROVED INSTALLATION. DEVICES ARE NOT SPECIFICALLY INDICATED ON THESE PLANS. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS BY A CERTIFIED DESIGNER. EMPLOY THE SERVICES OF A QUALIFIED CERTIFIED FIRE ALARM CONTRACTOR/CONSULTANT TO PREPARE THE SYSTEM DESIGN AND RELATED CONSTRUCTION DOCUMENTS INCLUDING ALL RELATED CALCULATIONS, DEVICE PLACEMENT, ALL CONTROL, MONITORING, POWER SUPPLIES, INITIATING DEVICES, INDICATING APPLIANCES, CONTROL MODULES AND WIRING AS REQUIRED; AND INCLUDE COORDINATION WITH OTHER SUPPLIERS/CONTRACTORS SUCH AS DESIGN-BUILD FIRE PROTECTION INSTALLER FULLY COMPLETE WITH ALL INFORMATION AND RELATED DATA, AS REQUIRED, TO OBTAIN SYSTEM APPROVAL BY THE AUTHORITIES HAVING JURISDICTION. DETERMINE THE APPLICABLE AUTHORITIES HAVING JURISDICTION FOR PROJECT AND INCLUDE ALL IN PLAN REVIEW, PERMITTING, AND INSPECTION. FIRE ALARM SYSTEM SHALL BE CAPABLE OF COMMUNICATING WITH THE EMERGENCY NURSE CALL SYSTEM.

P. VERIFY EXACT QUANTITY AND LOCATION OF FLOW SWITCHES, TAMPER SWITCHES, AIR SUPERVISORY AND PRESSURE SWITCHES WITH FIRE PROTECTION CONTRACTOR IF REQUIRED.

Q. ON ALL EXHAUST FANS (EF'S), 120 VOLT SERVICE DISCONNECT SWITCHES SHALL BE FURNISHED AND INSTALLED BY MECHANICAL TRADES AND WIRED BY ELECTRICAL TRADES

R. ALL 120-VOLT, SINGLE PHASE, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT, IN ACCORDANCE WITH THE LATEST N.E.C., ARTICLE 210.12 INCLUDING SMOKE DETECTORS.

S. FOR ALL LOW VOLTAGE SYSTEMS; SECURITY, ACCESS CONTROL, SOUND, PAGING, TWO-WAY, ETC. COORDINATE WITH ALL OWNER FOR EXACT SCOPE OF WORK TO BE INCLUDED IN THE BIDS. THESE SYSTEM ARE NOT SPECIFICALLY INDICATED ON THESE PLANS. PROVIDE ALL REQUIRED BRANCH CIRCUITS, BACK BOXES, RACEWAYS, CONDUITS, SLEEVES AS DIRECTED BY OWNER AND OWNER VENDORS. VERIFY DEVICE LOCATIONS, QUANTITIES AND ALL REQUIREMENTS.

T. IF REQUIRE BY THE LOCAL AHJ PROVIDE AREA OF REFUGE SYSTEM, REFER TO ARCHITECTURAL LIFE SAFETY PLANS FOR DESIGNATED AREAS. PROVIDE MASTER STATION CONTROL PANEL, POWER, REMOTE CALL STATIONS AND SIGNAGE, AS REQUIRED AND CONNECTED TO THE FIRE ALARM SYSTEM, INCLUDE ALL COMPONENTS FOR A COMPLETE AND APPROVED INSTALLATION.

U. IF REQUIRE BY THE LOCAL AHJ PROVIDE TWO-WAY COMMUNICATION ENHANCEMENT SYSTEMS PER THE REQUIREMENTS OF NFPA 1 TO MAINTAIN THE FIRE DEPARTMENT COMMUNICATIONS AT THE LEVEL DETERMINED BY THE AHJ. SYSTEM TO INCLUDE UL LISTED FCC COMPLIANT COMPONENTS, BDA AMPLIFIERS, INDOOR AND OUTDOOR ANTENNAS, ATTENUATORS, SPLITTERS, BACK BOXES, RACEWAYS, SUPPORTS, WIRING, ETC. AS REQUIRED BY AUTHORITIES HAVING JURISDICTION FOR COMPLETE COVERAGE AND APPROVED INSTALLATION. SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS, DEVICES ARE NOT INDICATED ON PLANS. COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODE REQUIREMENTS, INCLUDING NFPA 72, NFPA 1221 FOR MARKINGS, PATHWAY SURVIVABILITY, DEDICATED STORAGE BATTERY SYSTEM, ETC.

KEYED EQUIPMENT POWER NOTES:

(P1) MICROWAVE/HOOD: 120V; GFCI BREAKER, ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

(P2) RANGE: 50A-125/250V-3P-4W, NEMA 14-50 REC (VERIFY).

(P3) 3#8+1#10 GRD-3/4"C (50A-2P C.B.)

(P4) REFRIGERATOR: 120V, GFCI BREAKER

(P5) DISPOSAL: 120V; GFCI

(P6) +42"A.F.F.; GFCI

(P7) DISHWASHER: 120V; GFCI

(P8) WASHER: 120V-1ø

(P9) ELECTRIC DRYER: 208V-1ø

(P10) 2#10+1#10 GRD-3/4"C (30A-2P C.B.)

(P11) GAS WATER HEATER: 120V PLUG & CORD (DWH-1, DWH-2, DWH-3)

(P12) COMBINATION FIRE/SMOKE DAMPER, 120V, TIE INTO FIRE ALARM SYSTEM.

(P13) RANGE HOOD (ADA UNIT): 120V; ABOVE RANGE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL ELEVATION FOR RANGEHOOD AND LIGHT SWITCHES LOCATIONS.

(P14) MICROWAVE (ADA UNIT): 120V; ON COUNTER, COORDINATE WITH ARCHITECTURAL; VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

(P15) DOORBELL, REFER TO KEY NOTE 1.

(P16) DOORBELL TRANSFORMER, REFER TO KEY NOTE 1.

(P17) VISUAL DOORBELL STROBE, REFER TO KEY NOTE 1.

(P18) SMOKE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.

(P19) CARBON MONOXIDE DETECTOR WITH VISUAL SIGNAL, REFER TO KEY NOTE 1.

(P20) TWO-WAY COMMUNICATION SYSTEM BDA/DAS CABINET ABD BATTERY CABINET, EXACT LOCATION AND REQUIREMENTS TO BE VERIFIED, REFER TO GENERAL NOTE-C THIS SHEET.

(P21) ELEVATOR: 208V-3ø, 29.2 FLA, 3 #4 +1 #10GRD-1 1/4"C, (60A/50AFU/3P C.B.), EA-37,39,41. VERIFY REQUIREMENTS WITH SUBMITTAL. 3 #6 +1 #10GRD-1"C.

(P22) ELEVATOR CAB LIGHT, 120V-1ø, GFI, (20A-1P C.B.), EA-17

(P23) ELEVATOR CAB A/C, 120V-1ø, GFI, (20A-1P C.B.), EA-19

(HHP1-I) (HHP1-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(HHP2-I) (HHP2-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(HHP3-I) (HHP3-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP1-I) (VHP1-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP2-I) (VHP2-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(VHP3-I) (VHP3-O) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

(DOAS-1) REFER TO SCHEDULE SHEET E1.5 FOR ELECTRICAL REQUIREMENTS AND OUTDOOR UNIT LOCATION (EXCEPT BASEMENT OUTDOOR UNIT LOCATIONS, REFER TO SHEET E1.0). COORDINATE WITH MECHANICAL CONTRACTOR. PROVIDE WEATHERPROOF DISCONNECT SWITCH AND WEATHERPROOF RECEPTACLE ON OUTSIDE UNIT. INDOOR UNIT POWERED VIA OUTDOOR UNIT.

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Bids & Permits	08.12.2024
Plan Review Revisions	03.20.2025
3 MSHDA Revisions	05.07.2026

Drawing Title

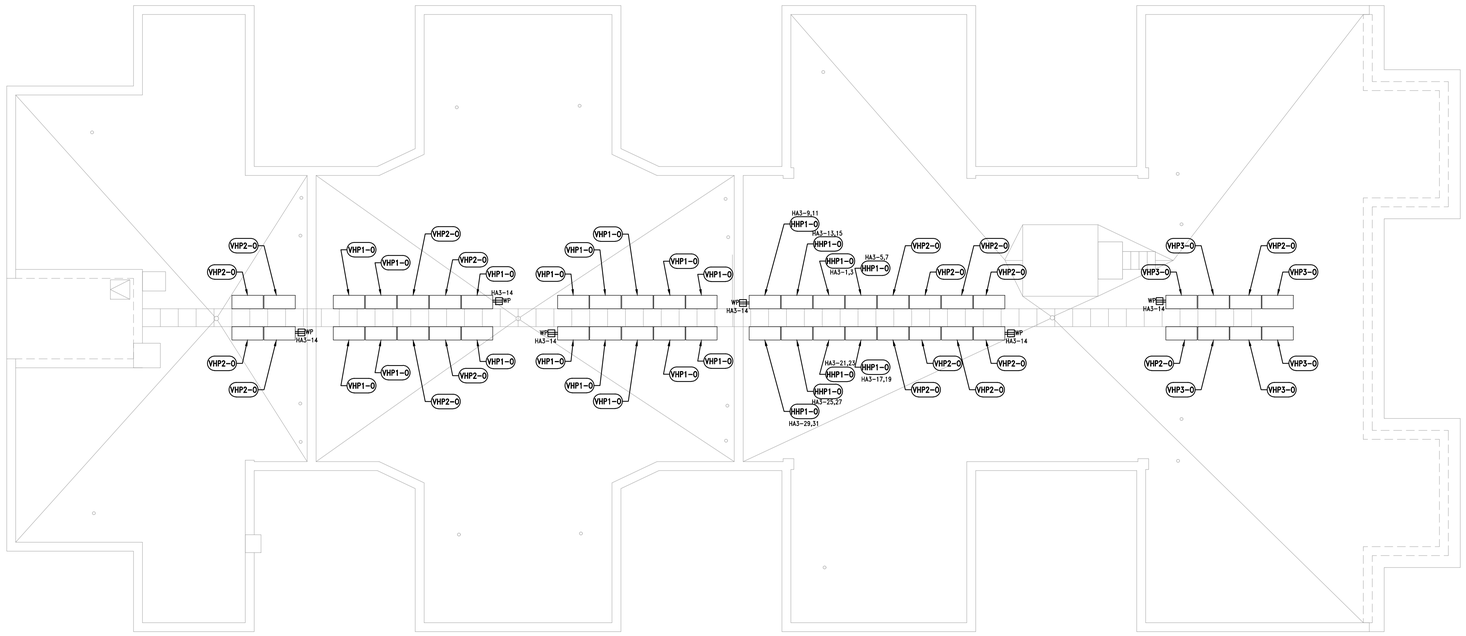
Fourth Floor Plan - Power

2021-248
Project No.

JLW	EK
Drawn By	Checked By

As Noted
Scale

E2.4 3
Drawing No.



1 / E2.5 Roof Plan - Power

Scale: 1/8" = 1'-0"

North

GENERAL POWER NOTES:

A. REFER TO SHEET E0.1 FOR ELECTRICAL LEGEND AND GENERAL NOTES.

B. REFER TO SHEET E0.3 FOR ELECTRICAL RISER DIAGRAM.

C. REFER TO SHEET E0.4 FOR PANELBOARD SCHEDULES.

D. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH MECHANICAL DRAWINGS AND MANUFACTURER SPECIFICATIONS.

MECHANICAL EQUIPMENT WIRING SCHEDULES

-COORDINATE WITH MECHANICAL DRAWINGS-

SPLIT HEAT PUMPS

TAG	ELECTRICAL DATA				NOTES	FED FROM	FEEDER SIZE
	VOLT	Ø	MOCP	MCA			
HHP-1-I/HHP-1-O	208	1	20	18.3	30/20/2 DISC.	HOUSE AND TENANT PANELS	20Y
HHP-2-I/HHP-2-O	208	1	30	20.8	30/30/2 DISC.	NONE ON PLANS	30Y
HHP-3-I/HHP-3-O	208	1	30	20.8	30/30/2 DISC.	HOUSE AND TENANT PANELS	30Y
VHP-1-I/VHP-1-O	208	1	35	31.9	60/35/2 DISC.	HOUSE AND TENANT PANELS	35Y
VHP-2-I/VHP-2-O	208	1	40	38.7	60/40/2 DISC.	HOUSE AND TENANT PANELS	40Y
VHP-3-I/VHP-3-O	208	1	45	42.4	60/45/2 DISC.	HOUSE AND TENANT PANELS	50Y

EXHAUST FANS

TAG	AREA SERVED	MOTOR			NOTES	FED FROM	FEEDER SIZE
		HP(W)	VOLT	Ø			
EF-1	BATHROOMS	(80)	120	1	LIGHT SWITCH BY E.T.	TENANT PANEL	20Y
EF-2	FIRE RISER ROOM	1/4	120	1	HOA STARTER	HB-20	20Y
EF-3	BASEMENT TOILETS	(80)	120	1	LIGHT SWITCH BY E.T.	GB-2	20Y

ELECTRIC HEATERS

TAG	AREA SERVED	MOTOR			NOTES	FED FROM	FEEDER SIZE
		HP(W)	VOLT	Ø			
EH-1	CORR 100, GATE ENTRY 114, STUDIO 109	1.5	120	1	DISC. BY M.F.	SEE PLAN	20Y
EH-2	STAIR 112	4.0	208	3	DISC. BY M.F.	SEE PLAN	20X
EUH-1	BASEMENT	3.3	208	3	DISC. BY M.F.	SEE PLAN	20X
EUH-2	BASEMENT	5.0	208	3	DISC. BY M.F.	SEE PLAN	20X
EUH-3	BASEMENT	7.5	208	3	DISC. BY M.F.	SEE PLAN	20X

WATER HEATERS

TAG	LOCATION	MOTOR			NOTES	FED FROM	FEEDER SIZE
		AMPS	VOLT	Ø			
DWH-1	WATER HEATER 018	5.0	120	1	PLUG & CORD	HC-2	20Y
DWH-2	WATER HEATER 018	5.0	120	1	PLUG & CORD	HC-4	20Y
DWH-3	WATER HEATER 018	5.0	120	1	PLUG & CORD	HC-6	20Y

DOMESTIC WATER BOOSTER PUMP

TAG	LOCATION	MOTOR			NOTES	FED FROM	FEEDER SIZE
		AMPS	VOLT	Ø			
DWBP-1	ELEC RM	21.2	208	3	60/35/3 DISC.	HA-13	35X

SUMP PUMP

TAG	LOCATION	MOTOR			NOTES	FED FROM	FEEDER SIZE
		AMPS	VOLT	Ø			
SP-1	ELEVATOR	15	120	1	30/2 DISC.	EA-4	20Y
SP-2	ELEC RM	6.4	208	3	30/3 DISC.	DP-HA	20X

RECIRCULATION PUMP

TAG	LOCATION	MOTOR			NOTES	FED FROM	FEEDER SIZE
		HP	VOLT	Ø			
CP-1	STORAGE 015	1/6	120	1	–	HC-35	20Y

DOAS-1

TAG	ELECTRICAL DATA				NOTES	FED FROM	FEEDER SIZE
	VOLT	Ø	MOCP	MCA			
DOAS-1	208	3	35A	31.5	60/35/3 DISC.	HC-16,18,20	35X

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Drawing Title

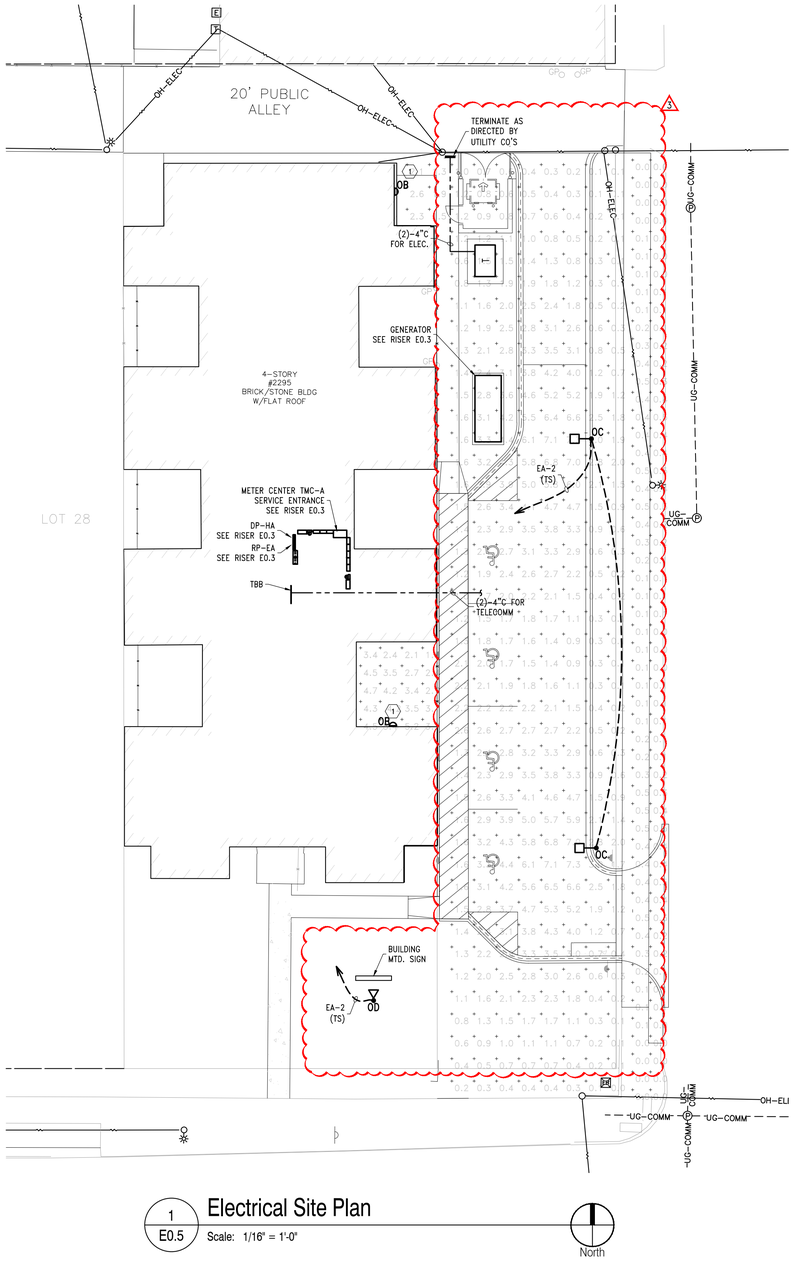
Roof Plan
- Power

2021-248
Project No.

JLW Drawn By
EK Checked By

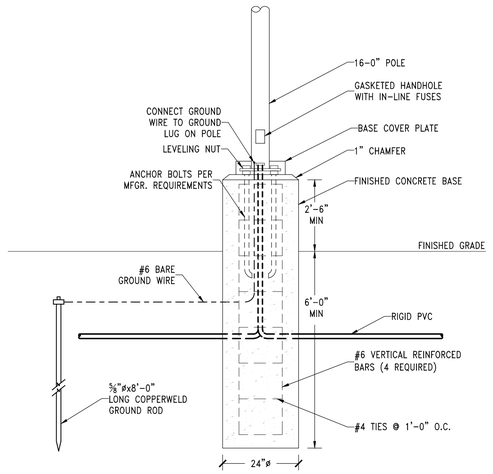
As Noted
Scale

E2.5
Drawing No.



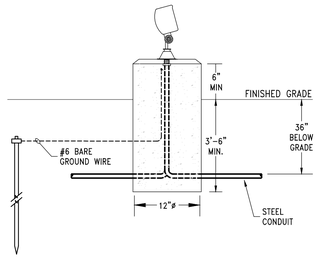
1 E0.5 **Electrical Site Plan**

Scale: 1/16" = 1'-0"



CONCRETE BASE DETAIL (OC)

NO SCALE



FLOOD LIGHT BASE DETAIL (OD)

NO SCALE

SITE PLAN NOTES:

1. THIS CONTRACTOR SHALL INCLUDE IN HIS BID PRICE ALL COSTS ASSESSED BY THE UTILITY COMPANIES FOR THE NEW ELECTRICAL AND TELEPHONE SERVICE.
2. COORDINATE ALL NEW MECHANICAL AND ELECTRICAL UNDERGROUND WORK WITH NEW AND EXISTING UNDERGROUND UTILITIES BEFORE INSTALLATION.
3. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT "811" FOR THE LOCATION OF UNDERGROUND UTILITIES AND SHALL NOTIFY REPRESENTATIVE OF OTHER UTILITIES LOCATED IN THE VICINITY OF THE WORK. EXTRAS WILL NOT BE ALLOWED SHOULD THE CONTRACTOR DISREGARD THIS VERIFICATION.
4. CONTRACTOR SHALL FIELD VERIFY EXACT SERVICE POINTS WITH THE UTILITY COMPANY PRIOR TO SUBMITTING HIS BID PRICE.
5. UNDERGROUND SERVICE CONDUITS SHALL BE DIRECT BURIED PLASTIC CONDUIT, CARLON TYPE 40 OR EQUAL, MINIMUM COVER REQUIREMENTS 24" BELOW GRADE.
6. REFER TO CIVIL SITE PLAN DRAWING FOR ADDITIONAL INFORMATION.

KEYED NOTES:

1. REFER TO SHEET E2.1 FOR BUILDING MOUNTED LIGHTING CIRCUITS.
2. REFER TO SHEET E0.2 FOR COMPLETE LIGHTING FIXTURE SCHEDULES.

811 Know what's **below.** **Call** before you dig.

UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF FACILITIES ONLY, AS DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANY'S RECORDS. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATION AND DEPTHS OF EXISTING OVERHEAD AND UNDER-GROUND UTILITIES IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROVEMENTS SHALL BE VERIFIED IN THE FIELD.

DURING CONSTRUCTION, CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR OVERHEAD AND/OR BURIED UTILITIES.

Site Photometric Schedule

Symbol	Label	Quantity	Catalog Number	Manufacturer	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
	OB	3	WSR LED P1 SR4 40K MVOLT	Lithonia Lighting	WSR LED WITH P1-PERFORMANCE PACKAGE, 4000K, AND SR4 OPTIC TYPE	1	2190	0.9	19.56
	OC	2	RSX1 LED P4 50K R4 HS	Lithonia Lighting	RSX LED Area Luminaire Size 1 P4 Lumen Package 5000K CCT Type R4 Distribution with HS shield	1	10893	0.9	133.14

Statistics

Description	Symbol	Max	Min	Max/Min	Avg/Min	Avg
Behind Parking	+	0.5 fc	0.0 fc	N/A	N/A	0.2 fc
Side Entry	+	5.4 fc	1.9 fc	2.8:1	1.9:1	3.6 fc
West Parking	+	7.3 fc	0.0 fc	N/A	N/A	2.1 fc

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E3.0
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