

SYMBOLS AND ABBREVIATIONS LEGEND

POWER		LIGHT FIXTURES	
	NEW CONCEALED RACEWAY AND WIRE. NUMBER OF SLASHES INDICATES NUMBER OF CONDUCTORS IF MORE THAN TWO. SIZE OTHER THAN #12 AS NOTED. (APPLIES TO ALL WIRING SYMBOLS)		FIXTURE IDENTIFIER. FIXTURE TYPE "AI" SEE LIGHTING FIXTURE SCHEDULE.
	UNDERGROUND OR UNDERFLOOR RACEWAY		SURFACE MOUNT FLUORESCENT - DRAWN TO SCALE WHERE POSSIBLE
	HOMERUN		RECESSED FLUORESCENT
	SIGNAL WIRING: F = FIRE ALARM, I = INTERCOM, G = LOW VOLTAGE CONTROL, T = TELEPHONE, D = DATA, TV = TELEVISION, P = CLOCK PROGRAM, PC = PHOTO CONTROL		FLUORESCENT LUMINAIRE IN 4', 8', & 12' LENGTHS, MOUNTED END-TO-END WHERE SHOWN
	CONDUIT UP		EXTERIOR FLOOR LIGHT
	CONDUIT DOWN		LIGHT LEVEL SENSOR, PHOTO CELL
	PANELBOARD		CEILING MOUNTED MOTION SENSOR COMPLETE SYSTEM WITH POWER PACK.
	SWITCH. "a" = CIRCUITS CONTROLLED, "k" = KEY SWITCH, "P" = W/PILOT LIGHT, "2" = DOUBLE POLE, "3" = THREE-WAY, "M" = AUTOMATIC WALL SWITCH, "D" = DIMMING SWITCH, "TS" = DIGITAL TIMER SWITCH		POWER PACK
	JUNCTION BOX		WALL MOUNT FIXTURE
	DUPLEX RECEPTACLE - "WP" = WEATHERPROOF, "GFI" = GROUND FAULT INTERRUPTER TYPE, "M" = MOUNTING HEIGHT, "a" = CIRCUIT a, "ISO" = WITH ISOLATED GROUND, "SRB" = WITH SURGE SUPPRESSION, "TP" = TAMPER PROOF COVER, "L" = LOCKING	GENERAL	
	DOUBLE DUPLEX (QUAD) RECEPTACLE		EQUIPMENT IDENTIFIER, EXHAUST FAN I SHOWN
	COMBINATION PHONE/DATA PORT EACH WITH 2-DATA AND 1-PHONE ACTIVE JACKS		SHEET REFERENCE NOTE
	TV OUTLET		PLAN OR DETAIL NUMBER SHEET NUMBER
	GROUNDING STUD		ROOM NUMBER
			EXISTING WORK SHOWN
			NEW WORK SHOWN
			EXISTING TO BE REMOVED

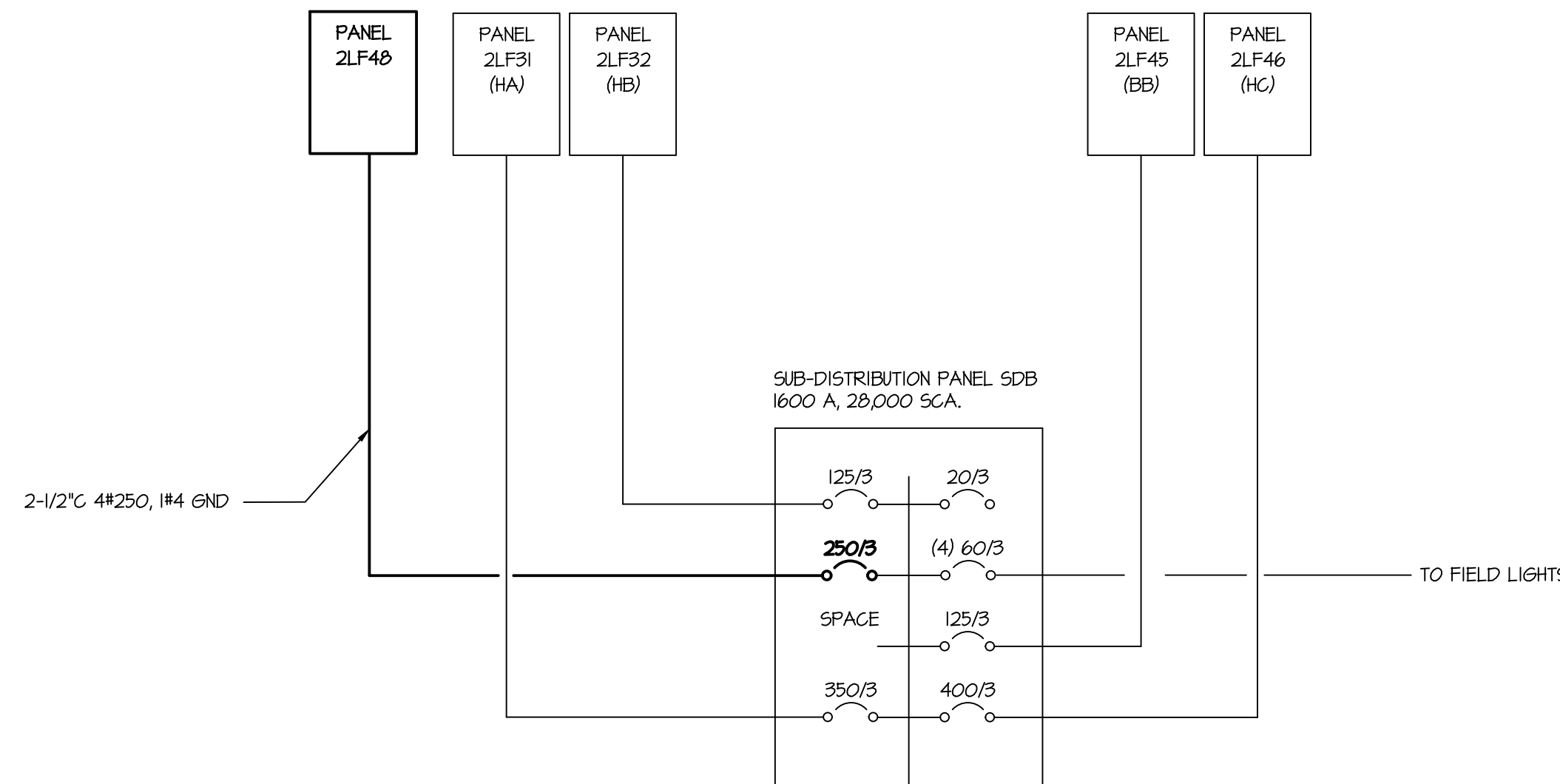
ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	IDF	INTERMEDIATE DISTRIBUTION FRAME
BLDG	BLDG	L.V.	LOW VOLTAGE
C	CONDUIT	MDF	MAIN DISTRIBUTION FRAME
cd	CANDELA	MECH	MECHANICAL
CKT	CIRCUIT	(N)	NEW
DIM	0-10V DIMMING	PNL	PANEL
DSP	DIGITAL SIGNAL PROCESSOR	PRS	PROGRAM RAPID START
(E)	EXISTING	SHED	SWITCHBOARD
ELEC	ELECTRICAL	TTB	TELEPHONE TERMINAL BOARD
EMERG	EMERGENCY	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
FAM	FIRE ALARM MASTER	TYP	TYPICAL
GFI	GROUND FAULT INTERRUPTER	WG	WIREGUARD
GND	GROUND	WP	WEATHERPROOF
HVAC	HEATING, VENTILATING, & AIR CONDITIONING		

GENERAL NOTES:

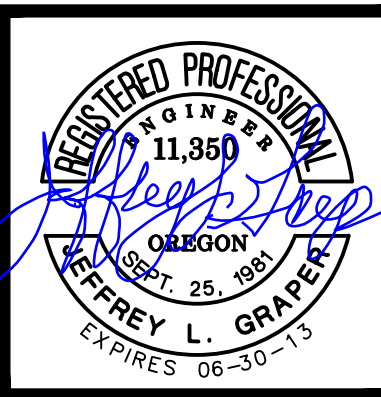
- THE FACILITY WILL REMAIN IN OPERATION DURING CONSTRUCTION. COORDINATE ALL SHUTDOWNS AND CONSTRUCTION ACTIVITY WITH FACILITIES STAFF.
- SIZE AND LOCATION OF ALL EXISTING ELECTRICAL EQUIPMENT IS APPROXIMATE. CONTRACTOR SHALL SITE VERIFY THE EXACT LOCATION OF EXISTING AND CONSTRUCT ALL WORK FROM FIELD DIMENSIONS. CONTRACTOR SHALL MAKE ADJUSTMENTS NECESSARY TO ACCOMMODATE MINOR DEVIATIONS AT NO COST TO OWNER.
- LIGHT LINE WORK INDICATES EXISTING ELECTRICAL CIRCUITRY AND OTHER ELECTRICAL EQUIPMENT. DASHED LINE WORK INDICATES ELECTRICAL DEVICES AND EQUIPMENT TO BE REMOVED.
- WHERE EXISTING EQUIPMENT IS REMOVED AND NOT REPLACED IN THE SAME LOCATION, PATCH AND PAINT SURFACES TO MATCH ORIGINAL CONDITION.
- REMOVE ALL ABANDONED RACEWAY AND WIRING.
- RECONNECT ALL CIRCUITRY TO REMAINING DEVICES AND EQUIPMENT.
- REMOVE ALL COMMUNICATIONS/DATA CABLING.
- PROVIDE BLANK FACE PLATES FOR ALL SWITCHES AND COMMUNICATIONS/DATA BEING REMOVED.
- WHERE ALL LOAD IS REMOVED FROM A BREAKER, PROVIDE NEW TYPED PANEL SCHEDULE IDENTIFYING BREAKER AS "SPARE"

LUMINAIRE SCHEDULE				
TYPE	DESCRIPTION	EXAMPLE MANUFACTURER	LAMP	NOTES
'A'	HIGH BAY GYMNASIUM LED SURFACE/PENDANT	HOLOPHANE HLH SERIES OWNER FURNISHED CONTRACTOR INSTALLED	18 BOARD LED 5000K 80+ CRI (...222_W)	MOUNTING :RECESSED HOUSING :STEEL LENS/REFL :SEM-DIFFUSE LENS VOLTAGE :120V BALLAST :ELECTRONIC PRS < 10% THD MISC :MATCH EXISTING MOUNTING
'B'	2 X 4 RECESSED LED DIRECT/INDIRECT	METALUX ACCORD 24AC-LD3-3I-HV-L840-GDI-U	LED 3106 LUMENS (...475_W)	MOUNTING :RECESSED HOUSING :STEEL LENS/REFL :SEM-DIFFUSE LENS VOLTAGE :120V BALLAST :ELECTRONIC PRS < 10% THD MISC :AMBIENT LIGHT SENSOR DIMMING

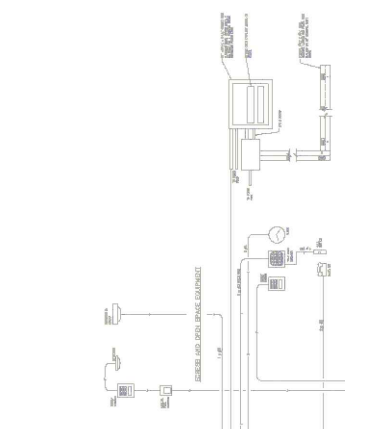


PARTIAL ONE - LINE DIAGRAM

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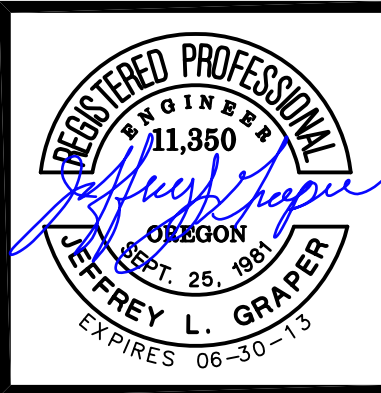


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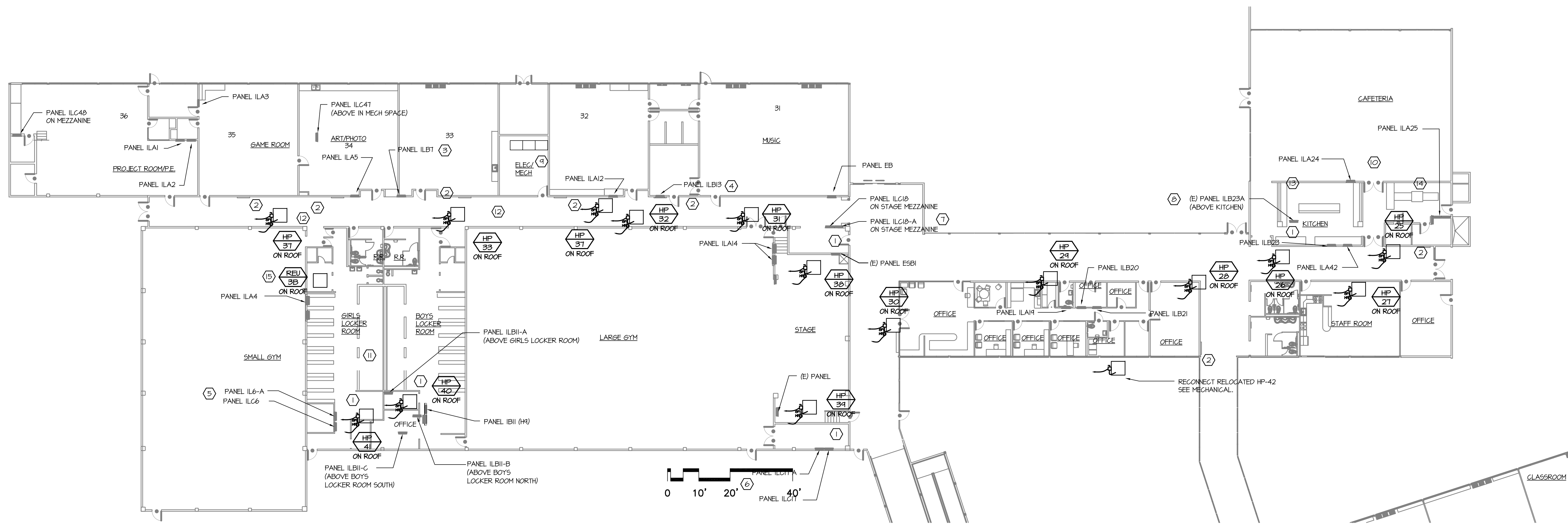
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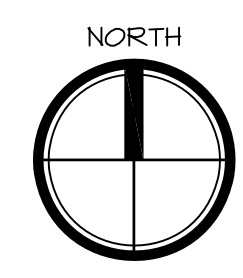


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POWER PLAN - SPENCER BUTTE

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REFERENCE NOTES:

- ① DISCONNECT EXISTING MECHANICAL EQUIPMENT. REMOVE CONDUCTORS BACK TO SERVING PANEL. REFER TO DEMOLITION PLANS FOR EXACT LOCATIONS.
- ② DISCONNECT EXISTING WALL HEATERS. REMOVE CONDUCTORS BACK TO SERVING PANEL. REFER TO DEMOLITION PLANS FOR EXACT LOCATIONS.
- ③ ILB1 - DISCONNECT (5) ELEG HEATERS. MARK BREAKERS AS SPARE. PROVIDE NEW BREAKER FOR HP-31.
- ④ ILB13 - DISCONNECT (4) HEATING UNITS. CONNECT HP-31, 32, 33, AND 31 TO EXISTING BREAKERS.
- ⑤ ILC6 & 6A - DISCONNECT ELEG HEATERS. REMOVE EXISTING BREAKERS AND PROVIDE NEW.
- ⑥ ILC17 & 17A - DISCONNECT ELEG HEATERS. REMOVE EXISTING BREAKERS AND PROVIDE NEW.
- ⑦ ILC18 & 18A - DISCONNECT ELEG HEATERS. REMOVE EXISTING BREAKERS AND PROVIDE NEW.
- ⑧ ILB23A - DISCONNECT ELEG HEATERS. REMOVE EXISTING BREAKERS AND PROVIDE NEW.
- ⑨ MDP - PROVIDE NEW BREAKER FOR HP-25.
- ⑩ CAFETERIA HVAC IS PART OF ALTERNATE #2.
- ⑪ GYMLOCKER HVAC IS PART OF ALTERNATE #3.
- ⑫ NORTH HALL HVAC IS PART OF ALTERNATE #1.
- ⑬ RELOCATE EXISTING CIRCUITRY IN CONFLICT WITH NEW DUCT PENETRATION. SEE MECHANICAL FOR EXACT LOCATIONS.
- ⑭ RELOCATE EXISTING SWITCH, J-BOX, AND CIRCUITRY IN CONFLICT WITH NEW DUCT PENETRATION. SEE MECHANICAL FOR EXACT LOCATIONS.
- ⑮ RECONNECT (E) REU VIA NEW VFD WITH 3/4" - 3#12, #10 GND. SEE MECHANICAL FOR EXACT LOCATIONS.

GENERAL NOTES

1. CONCEAL RACEWAYS WHERE POSSIBLE. REFER TO ARCHITECTURAL FOR CUTTING AND PATCHING AT FLUSH PANELBOARDS.
2. WHERE MECHANICAL UNITS ARE REMOVED AND UNDERFLOOR RACEWAY REMAINS. CUT FLUSH WITH FLOOR AND CAP WITH FLUSH FLOOR PLUG.
3. WHERE EXISTING CEILING TILE IS REMOVED. DETACH EXISTING SURFACE WIREWAY. RE-ATTACH TO NEW SURFACE WHEN INSTALLED.
4. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR PANEL CONNECTIONS AND FEEDER SIZES.

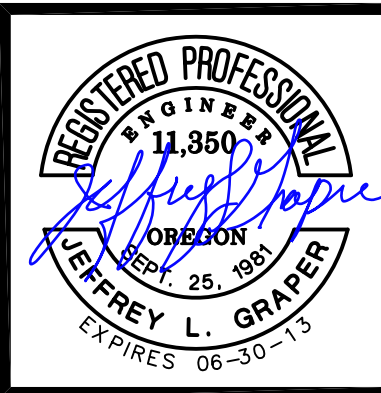
EQUIPMENT CONNECTION SCHEDULE						
Unit	Ratings		Connection			
	Voltage	Phase	Panel	Breaker	Feeder	
HP-25	208	3	MDP	225	2-1/2"-4#4/0 & 1#2G	
HP-26 (ID)	208	3	11B23	70	1-1/4"-4#4 & 1#8G	
HP-26 (OD)	208	3	11B23	30	1/2"-4#10 & 1#12G	
HP-27	208	3	11C18	70	1-1/4"-4#4 & 1#8G	
HP-28	208	1	11C18	70	1-1/4"-3#4 & 1#8G	
HP-29	208	1	11C18	70	1-1/4"-3#4 & 1#8G	
HP-30(OD)	208	1	11C18	40	3/4"-3#8 & 1#10G	
HP-31(ID)	208	1	11B13	20	1/2"-3#12 & 1#12G	
HP-31	208	3	11B13	100	1-1/2"-4#2 & 1#8G	
HP-32	208	3	11B13	80	1-1/2"-4#2 & 1#8G	
HP-33	208	3	11B13	70	1-1/4"-4#4 & 1#8G	
HP-37	208	1	11B7	70	1-1/4"-3#4 & 1#8G	
HP-38 (ID)	208	3	11C18A	200	2"-4#3/0 & 1#4G	
HP-38 (OD)	208	3	11C18A	60	1-1/4"-4#4 & 1#8G	
HP-39 (ID)	208	3	11C17A	200	2"-4#3/0 & 1#4G	
HP-39 (OD)	208	3	11C17A	60	1-1/4"-4#4 & 1#8G	
HP-40	208	3	11C6	70	1-1/4"-4#4 & 1#8G	
HP-41	208	3	11C6	225	2-1/2"-4#4/0 & 1#2G	
HP-42G	208	1	11C6	20	1/2"-3#12 & 1#12G	
EF-25	120	1	11B23	20	1/2"-3#12 & 1#12G	

Notes: Connect associated receptacles to spare 20/1 in panel serving Unit.

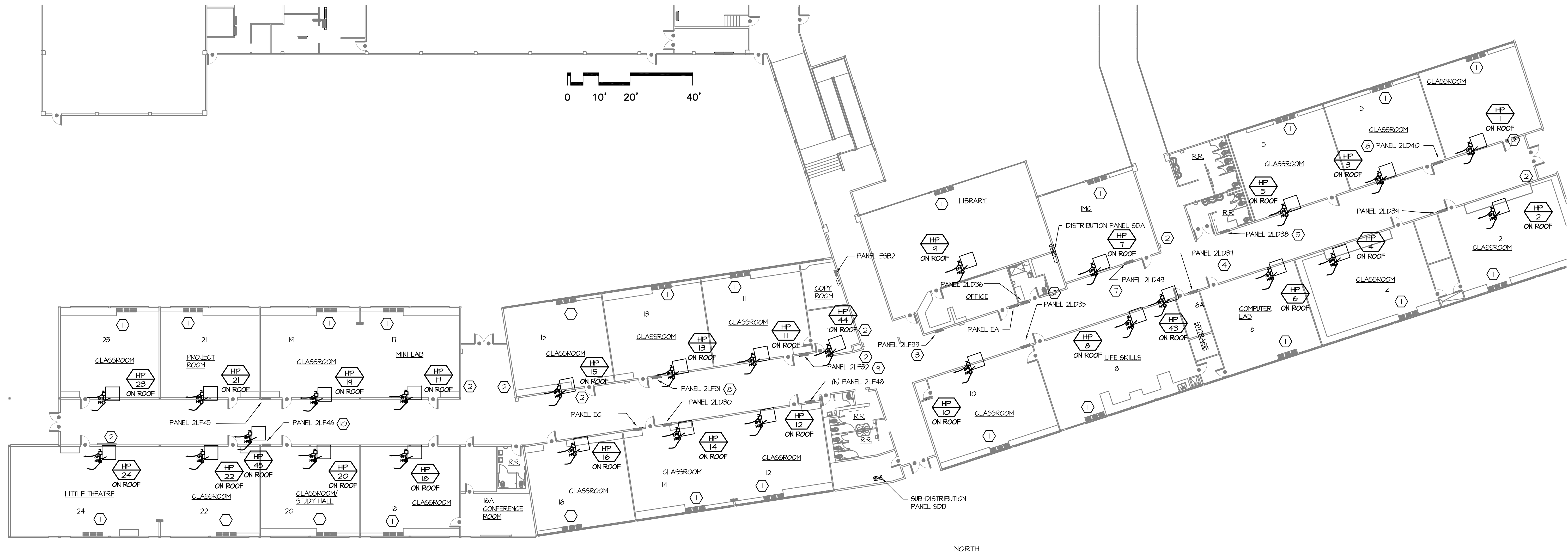
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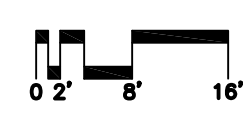
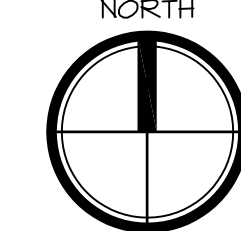


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POWER PLAN - SPENCER BUTTE

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REFERENCE NOTES:

- ① DISCONNECT EXISTING MECHANICAL EQUIPMENT. REMOVE CONDUCTORS BACK TO SERVING PANEL. REFER TO DEMOLITION PLANS FOR EXACT LOCATIONS.
- ② DISCONNECT WALL HEATERS. REMOVE CONDUCTORS BACK TO SERVING PANEL. REFER TO DEMOLITION PLANS FOR EXACT LOCATIONS.
- ③ 2LD33 - DISCONNECT (4) ELEC HEATERS. MARK BREAKERS AS SPARE.
- ④ 2LD31 - DISCONNECT (3) HEATING UNITS. CONNECT HP-6, 8, AND 10 TO EXISTING BREAKERS. PROVIDE NEW BREAKER FOR HP-44.
- ⑤ 2LD38 - DISCONNECT (3) HEATING UNITS. CONNECT HP-5, 7, AND 9 TO EXISTING BREAKERS. PROVIDE NEW BREAKER FOR HP-43.
- ⑥ 2LD40 - DISCONNECT (4) HEATING UNITS. CONNECT HP-2, AND 4 TO EXISTING BREAKERS. PROVIDE NEW BREAKER FOR HP-3.
- ⑦ 2LD43 - DISCONNECT (3) ELEC HEATERS. MARK BREAKERS AS SPARE.
- ⑧ 2LF31 - DISCONNECT (6) HEATING UNITS, REMOVE (E) BREAKERS. PROVIDE NEW BREAKERS AND CONNECT HP 15, 16, 17, 18, AND 45 TO NEW BREAKERS.
- ⑨ 2LF32 - DISCONNECT (3) ELEC HEATERS. MARK BREAKERS AS SPARE.
- ⑩ 2LF46 - DISCONNECT (8) HEATING UNITS AND (1) ELEC HEATER. REMOVE (E) BREAKERS. PROVIDE NEW BREAKERS AND CONNECT HP-19, 20, 21, 22, 23, AND 24.

GENERAL NOTES

- 1. CONCEAL RACEWAYS ABOVE NEW CEILING. REFER TO ARCHITECTURAL FOR CUTTING AND PATCHING AT FLUSH PANELBOARDS.
- 2. WHERE MECHANICAL UNITS ARE REMOVED AND UNDERFLOOR RACEWAY REMAINS. CUT FLUSH WITH FLOOR AND GAP WITH FLUSH FLOOR PLUS.
- 3. WHERE EXISTING CEILING TILE IS REMOVED. DETACH EXISTING SURFACE WIREWAY. RE-ATTACH TO NEW SURFACE WHEN INSTALLED.
- 4. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR PANEL CONNECTIONS AND FEEDER SIZES.

EQUIPMENT CONNECTION SCHEDULE					
Unit	Ratings Voltage	Phase	Panel	Connection Breaker	Feeder
HP-1	208	3	2LD40	70	1-1/4"-4#4 & 1#8G
HP-2	208	3	2LD40	80	1-1/2"-4#2 & 1#8G
HP-3	208	3	2LD40	70	1-1/4"-4#4 & 1#8G
HP-4	208	3	2LD40	80	1-1/2"-4#2 & 1#8G
HP-5	208	3	2LD38	70	1-1/4"-4#4 & 1#8G
HP-6	208	3	2LD37	70	1-1/4"-4#4 & 1#8G
HP-7	208	3	2LD38	70	1-1/4"-4#4 & 1#8G
HP-8	208	3	2LD37	80	1-1/2"-4#2 & 1#8G
HP-9	208	3	2LD38	100	1-1/2"-4#2 & 1#8G
HP-10	208	3	2LD37	70	1-1/4"-4#4 & 1#8G
HP-11	208	3	2LF48	70	1-1/4"-4#4 & 1#8G
HP-12	208	3	2LF48	70	1-1/4"-4#4 & 1#8G
HP-13	208	3	2LF48	70	1-1/4"-4#4 & 1#8G
HP-14	208	3	2LF48	70	1-1/4"-4#4 & 1#8G
HP-15	208	3	2LF31	70	1-1/4"-4#4 & 1#8G
HP-16	208	3	2LF31	70	1-1/4"-4#4 & 1#8G
HP-17	208	3	2LF31	70	1-1/4"-4#4 & 1#8G
HP-18	208	3	2LF31	70	1-1/4"-4#4 & 1#8G
HP-19	208	3	2LF46	70	1-1/4"-4#4 & 1#8G
HP-20	208	3	2LF46	70	1-1/4"-4#4 & 1#8G
HP-21	208	3	2LF46	70	1-1/4"-4#4 & 1#8G
HP-22	208	3	2LF46	70	1-1/4"-4#4 & 1#8G
HP-23	208	3	2LF46	70	1-1/4"-4#4 & 1#8G
HP-24	208	3	2LF46	80	1-1/2"-4#2 & 1#8G
HP-43	208	3	2LD38	70	1-1/4"-4#4 & 1#8G
HP-44	208	3	2LD37	70	1-1/4"-4#4 & 1#8G
HP-45	208	3	2LF31	70	1-1/4"-4#4 & 1#8G

Notes: Connect associated receptacles to spare 20/1 in panel serving Unit.

DESCRIPTION	LOAD (AMP)	BREAKER (AMP/POLE)	CIRCUIT AND PHASE	BREAKER (AMP/POLE)	LOAD DESCRIPTION
HP-11	52.0	70/3	1A 2A	70/3	52.0 HP-12
	52.0		3B 4B		52.0
	52.0		5C 6C		52.0
HP-13	47.0	70/3	7A 8A	70/3	47.0 HP-14
	47.0		9B 10B		47.0
	47.0		11C 12C		47.0
SPARE	0.0	40/3	13A 14A	40/3	0.0 SPARE
	0.0		15B 16B		0.0
	0.0		17C 18C		0.0
SPACE			19A 20A		SPACE
SPACE			21B 22B		SPACE
SPACE			23C 24C		SPACE
SPACE			25A 26A		SPACE
SPACE			27B 28B		SPACE
SPACE			29C 30C		SPACE
SPACE			31A 32A		SPACE
SPACE			33B 34B		SPACE
SPACE			35C 36C		SPACE
SPACE			37A 38A		SPACE
SPACE			39B 40B		SPACE
SPACE			41C 42C		SPACE

SUMMARY:			
AMP LOAD	A	B	C
CONNECTED	198.0	198.0	198.0
DEMAND	198.0	198.0	198.0
DEMAND LOAD			198.0
SPARE LOAD			29.7
CONT LOAD			49.5
TOTAL LOAD			277.2
GROWTH			27.7
DESIGN LOAD			304.9

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NOTES THIS SHEET

- ① REMOVE EXISTING FIXTURE AND PROVIDE NEK. RECONNECT TO EXISTING CIRCUITRY AND SWITCHING.
- ② REMOVE (E) LIGHTING CONTROL PANEL AND REPLACE WITH RELAY PANEL. 32 RELAYS RATED 20A 120/277V WITH BARRIER TO SEPARATE EMERGENCY FROM NORMAL. RECONNECT EXISTING SENSOR CONTROLS AND CONNECT AUTOMATIC CONTROLLER FURNISHED BY OWNER.



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PARTIAL LOWER LEVEL LIGHTING PLAN - SPENCER BUTTE

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GENERAL NOTES

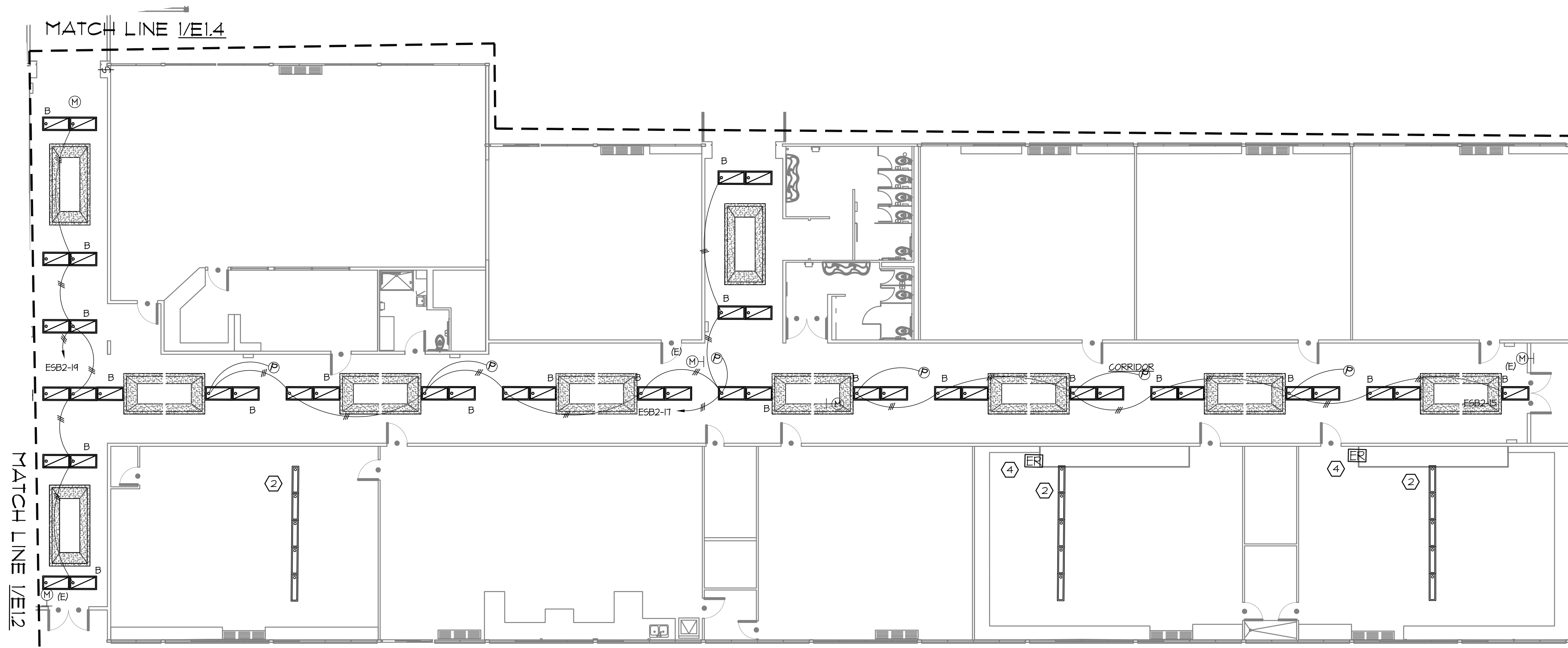
1. RECONNECT EXISTING SWITCHING AND OCCUPANCY CONTROLS TO NEW FIXTURES.

NOTES THIS SHEET

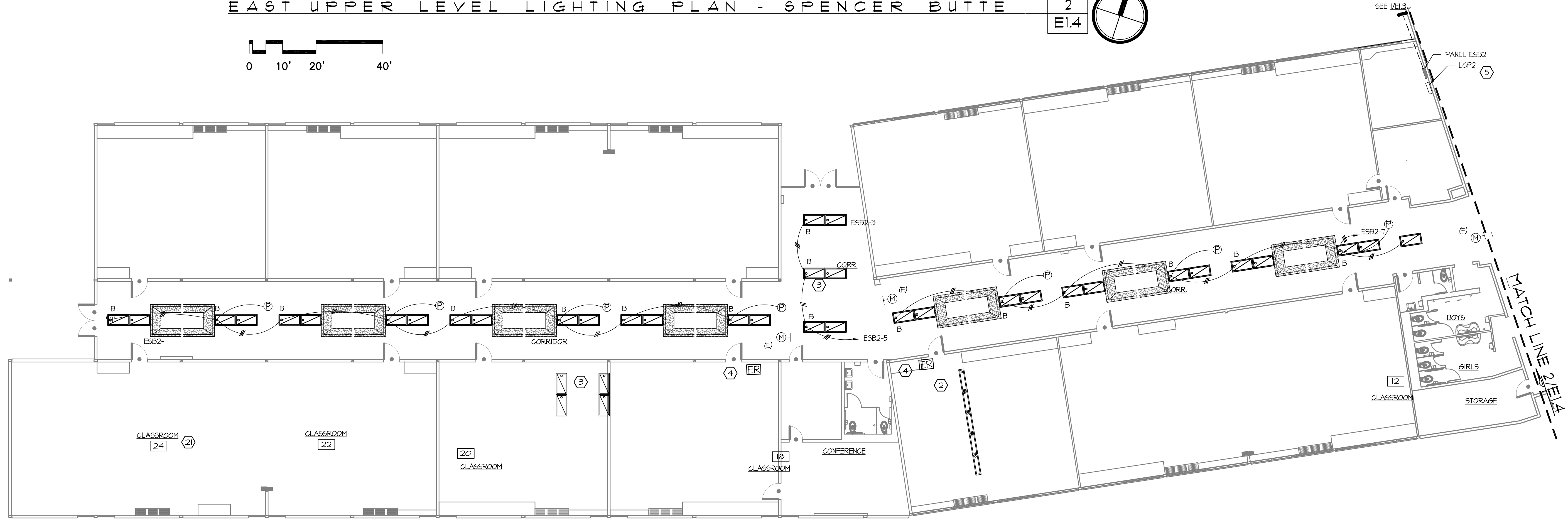
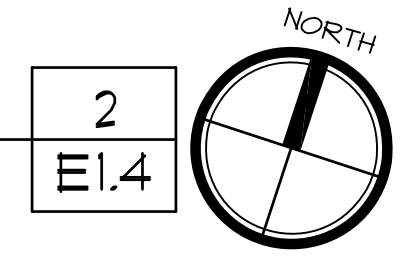
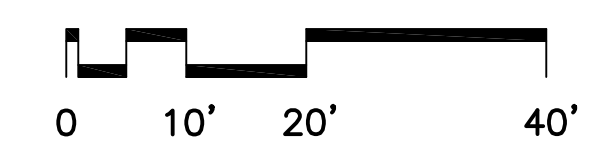
1. REMOVE EXISTING FIXTURE AND PROVIDE NEW. EXTEND AND RECONNECT EXISTING CIRCUITRY AND SWITCHING.
2. LOWER ENTIRE ROW OF FIXTURES APPROXIMATELY 2" TO CLEAR DUCTWORK. RELOCATE FEED TO CLEAR DUCTWORK AND RECONNECT. SEE MECHANICAL.
3. RELOCATE FIXTURES TO CLEAR MECHANICAL.
4. RELOCATE EMERGENCY POWER RELAY TO CLEAR MECHANICAL. EXTEND CIRCUITRY AND RECONNECT.
5. REMOVE (E) LIGHTING CONTROL PANEL AND REPLACE WITH RELAY PANEL. 32 RELAYS RATED 20A 120/277V WITH BARRIER TO SEPARATE EMERGENCY FROM NORMAL. RECONNECT EXISTING SENSOR CONTROLS AND CONNECT AUTOMATIC CONTROLLER FURNISHED BY OWNER.



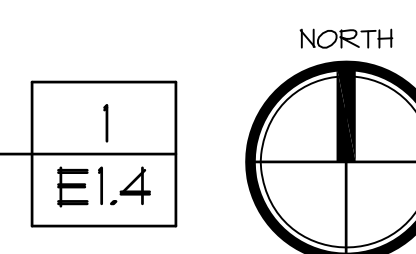
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EAST UPPER LEVEL LIGHTING PLAN - SPENCER BUTTE



WEST UPPER LEVEL LIGHTING PLAN - SPENCER BUTTE



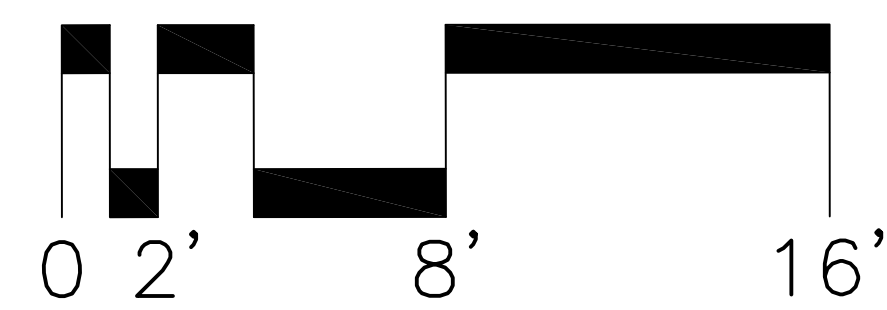
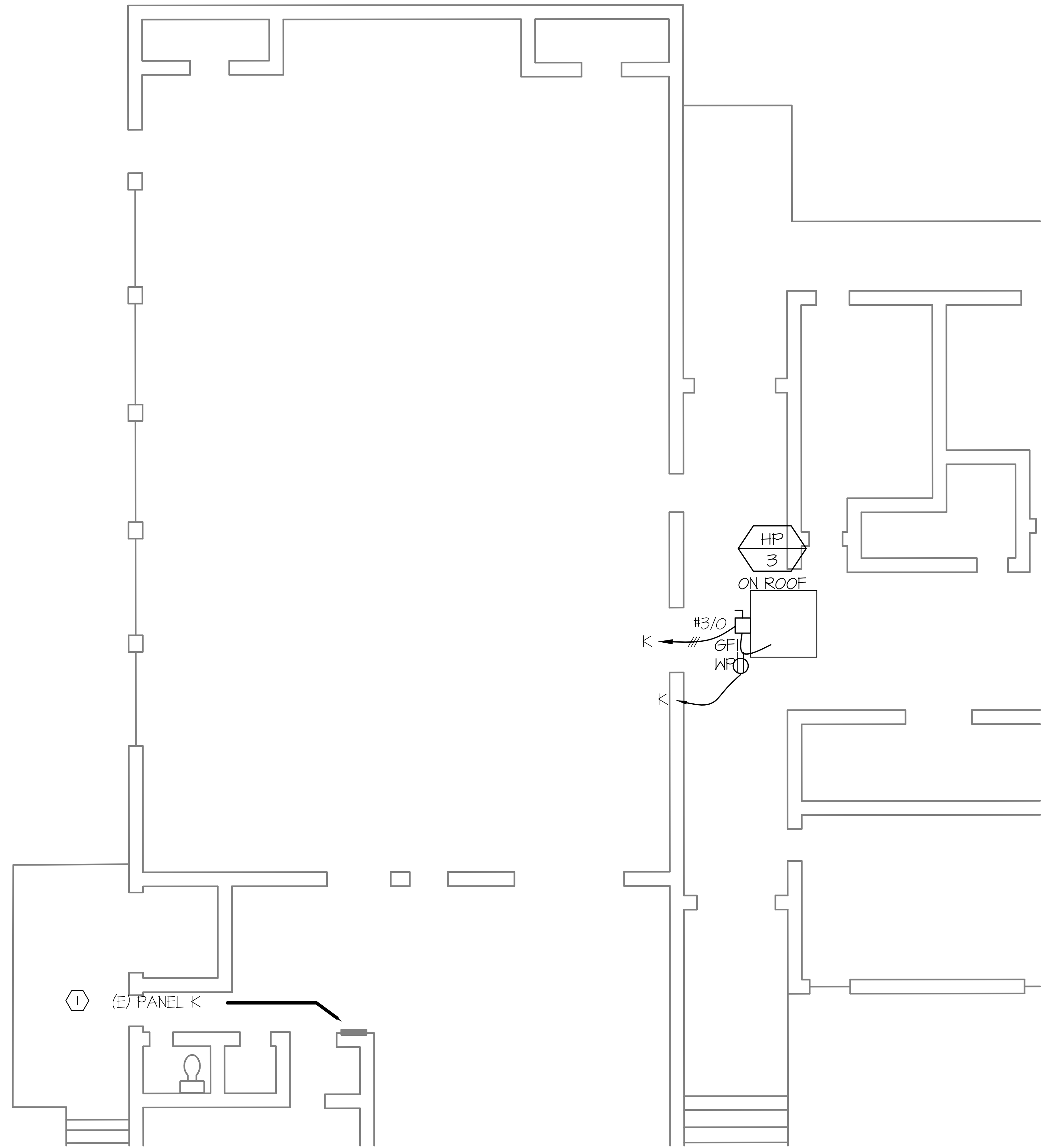
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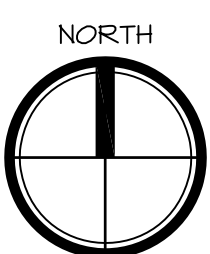
REFERENCE NOTES:

- ① REMOVE EXISTING EXTERNALLY MOUNTED 200/2 AND PROVIDE NEW 150/3 FOR NEW HVAC UNIT. PROVIDE NEW TAP CONDUCTORS TO NEW BREAKER, SIZED FOR 200 AMP FEED.
- ② WORK IS PART OF ALTERNATE #5.



② PARTIAL POWER PLAN PLAN - EDGEWOOD

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