

ELECTRICAL SYMBOL LIST

LIGHTING SYMBOLS

	LIGHT FIXTURE, RECESSED
	LIGHT FIXTURE, RECESSED - EMERGENCY
	LIGHT FIXTURE, SURFACE MOUNT
	LIGHT FIXTURE, SURFACE MOUNT - EMERGENCY
	LIGHT FIXTURE, STRIP
	LIGHT FIXTURE, STRIP - EMERGENCY
	LED COVE LIGHT, TAPE & CHANNEL
	DOWNLIGHT FIXTURE, RECESSED
	DOWNLIGHT FIXTURE, RECESSED, WALLWASH
	DOWNLIGHT FIXTURE, RECESSED - EMERGENCY
	LIGHT FIXTURE, WALL MOUNT
	LIGHT FIXTURE, CEILING MOUNT
	RECESSED LIGHT FIXTURE, WALL MOUNT
	LIGHT FIXTURE, WALL MOUNT
	LIGHT FIXTURE, WALL SCONCE
	LIGHT FIXTURE, TRACK W/ HEADS AS SHOWN ON PLAN
	EXIT SIGN, UNIVERSAL MOUNT, W/ DIRECTIONAL ARROW
	EXIT SIGN, WALL MOUNT, +8'-0" A.F.F.
	EMERGENCY LIGHT W/ BATTERY PACK, +8'-0" A.F.F.
	FLOOD LIGHT
	AREA LUMINAIRE
	AREA LUMINAIRE W/STANDBY LAMP
	AREA LUMINAIRE, WALL MOUNT
	AREA LUMINAIRE, POLE MOUNT

SWITCH SYMBOLS

	SWITCH, SPST +48" A.F.F.
	SWITCH, DPST +48" A.F.F.
	SWITCH, 3-WAY +48" A.F.F.
	SWITCH, 4-WAY +48" A.F.F.
	SWITCH, DIMMER +48" A.F.F.
	SWITCH, SPST, W/PILOT LIGHT +48" A.F.F.
	SWITCH, KEY-OPERATED +48" A.F.F.
	SWITCH, TIMED +48" A.F.F.
	PHOTOCELL CONTROL
	OCCUPANCY SENSOR CONTROL

FIRE RATED INSTALLATION NOTE:
ELECTRICAL ITEMS (LIGHT FIXTURES, BOXES, ETC.) WHICH ARE RECESSED INTO FIRE-RATED CEILINGS OR WALLS, SHALL BE 'ALCOVED' IN GYPSUM BOARD ENCLOSURES PER ARCHITECTURAL DETAILS, OR THE DEVICES SHALL BE 'UL' LISTED WITH FIRE-RATING EQUAL TO OR GREATER THAN THE FIRE-RATING OF THE ADJACENT CONSTRUCTION.

POWER SYMBOLS

	RECEPTACLE, DUPLEX +18" A.F.F.
	RECEPTACLE, QUAD +18" A.F.F.
	RECEPTACLE, DUPLEX +6" ABV COUNTER
	RECEPTACLE, DUPLEX +18" A.F.F. (ONE OUTLET SWITCHED)
	RECEPTACLE, DUPLEX +18" A.F.F. (BOTH OUTLETS SWITCHED)
	RECEPTACLE, DUPLEX, PEDESTAL MOUNT
	RECEPTACLE, DUPLEX, FLUSH FLOOR MOUNT
	RECEPTACLE, SPECIAL (COORDINATE WITH EQUIPMENT SERVED)
	RELAY
	TIME CLOCK CONTROL
	PUSHBUTTON STATION
	JUNCTION BOX
	THERMOSTAT
	TRANSFORMER
	DISCONNECT, NON-FUSED
	DISCONNECT, FUSED
	ELECTRICAL CONNECTION
	ELECTRICAL CONNECTION, SINGLE MOTOR
	ELECTRICAL CONNECTION, MULTI-MOTOR
	ELECTRICAL DISTRIBUTION PANEL, RECESSED
	ELECTRICAL DISTRIBUTION PANEL, SURFACE
	MISCELLANEOUS PANEL, RECESSED
	MISCELLANEOUS PANEL, SURFACE
	FLUSH FLOOR BOX (W/ DEVICES AS SHOWN ON PLAN)
	FIRE SMOKE DAMPER

WIRING SYMBOLS

	PANEL & CIRCUIT NUMBER
	HOMERUN TO PANEL
	CONDUCTOR SIZE (IF OTHER THAN #12)
	PHASE CONDUCTOR
	NEUTRAL CONDUCTOR
	GROUND CONDUCTOR
	CONCEALED CONDUIT
	CONDUIT SIZE
	CONDUIT (UNDER SLAB OR FLOOR)
	FLEXIBLE CONNECTION
	CONDUIT, STUBBED & CAPPED
	NORMAL POWER CIRCUIT LINETYPE
	EMERGENCY POWER CIRCUIT LINETYPE
	EXISTING POWER CIRCUIT LINETYPE

NOTATIONS

	DRAWING NOTE
	DETAIL REFERENCE: TOP=DETAIL NO., BOTTOM=SHEET NO.
	MECHANICAL EQUIPMENT MARK NO. (SEE EQUIPMENT SCHEDULE)
	EQUIPMENT NO. (SEE EQUIPMENT SCHEDULE)

ONE-LINE DIAGRAM SYMBOLS

	ELECTRICAL DISTRIBUTION PANELBOARD (MLO)
	ELECTRICAL DISTRIBUTION PANELBOARD (MCB)
	SUB-FEED CIRCUIT BREAKER
	CIRCUIT BREAKER (TRIP RATING & POLES AS INDICATED ON PLAN)
	MAIN SWITCH (RATING & POLES AS INDICATED ON PLAN)
	FUSE (RATING & CLASS AS INDICATED ON PLAN)
	TRANSFER SWITCH (MANUAL OR AUTOMATIC)
	GENERATOR (RATING AS INDICATED ON PLAN)
	TRANSFORMER (RATING AS INDICATED ON PLAN)
	GROUND SYSTEM (SIZE AS INDICATED ON PLAN)
	WATER PIPE GROUND ELECTRODE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	UTILITY METER & METER BASE
	UTILITY METER CURRENT TRANSFORMER
	FEEDER NO. (SEE FEEDER SCHEDULE)

ABBREVIATIONS

'A'	LIGHT FIXTURE TYPE (SEE FIXTURE LIST)	I.G.	ISOLATED GROUND
A.F.F.	ABOVE FINISHED FLOOR	LCP	LIGHTING CONTROL PANEL
A.F.G.	ABOVE FINAL GRADE	MCB	MAIN CIRCUIT BREAKER
A.F.I.	ARC FAULT INTERRUPTER	MLO	MAIN LUGS ONLY
A.T.S.	TRANSFER SWITCH, AUTOMATIC	(NP)	NEW LIGHT POLE
C	CONDUIT	N.I.C.	NOT IN CONTRACT
C.O.	CONDUIT ONLY	N.L.	NIGHT LIGHT
CATV	CABLE TELEVISION	P	POLE
CB	CIRCUIT BREAKER	PC	PARTIAL CIRCUIT
CCTV	CLOSED CIRCUIT TELEVISION	PH	PHASE
C.T.	CURRENT TRANSFORMER	(RP)	RELOCATE EXISTING LIGHT POLE
(E)	EXISTING	R.T.U.	REMOTE TELEMETRY UNIT
(EP)	EXISTING LIGHT POLE	T.V.S.S.	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FACP	FIRE ALARM CONTROL PANEL	U.G.	UNDERGROUND
FARA	FIRE ALARM REMOTE ANNUNCIATOR	U.O.N.	UNLESS OTHERWISE NOTED
GRA	GENERATOR REMOTE ANNUNCIATOR	VFD	VARIABLE FREQUENCY DRIVE
G.F.I.	GROUND FAULT INTERRUPTER	W	WIRE
GND	GROUND	W.G.	WIRE GUARD
HP	HORSEPOWER	W.P.	WEATHERPROOF

GENERAL CONSTRUCTION NOTES:

CONTRACTOR SHALL BE RESPONSIBLE FOR THOROUGHLY REVIEWING THE PLANS AND SPECIFICATION DOCUMENTS PRIOR TO THE START OF ANY WORK.

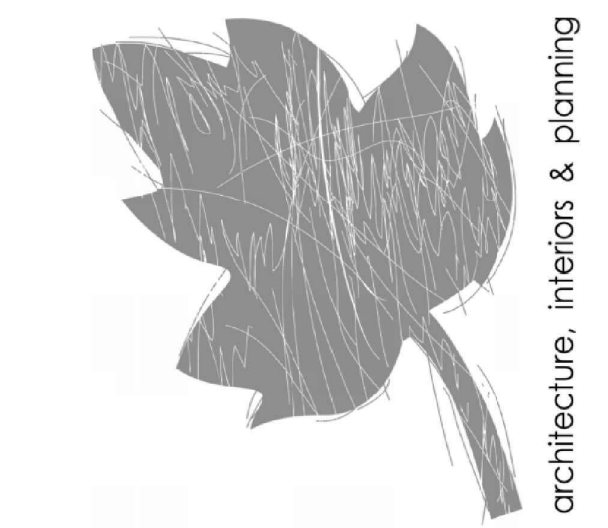
ALL DIMENSIONS ARE MEASURED TO THE CENTER OF THE DEVICE ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED AS IS STANDARD BUILDING PRACTICE.

ALL ELECTRICAL PLANS ARE DIAGRAMMATICAL AND THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF DEVICES AND FIXTURES.

THE ELECTRICAL CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTATION AND COORDINATE WITH ALL OTHER TRADES THROUGHOUT THE COURSE OF THE PROJECT.

ALL WORK SHALL BE IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL CODES. CONTRACTOR SHALL BE RESPONSIBLE TO BE INFORMED OF ALL SUCH CODES AS THEY APPLY TO THE SCOPE OF THE PROJECT.

1. SYMBOLS & ABBREVIATIONS MAY OR MAY NOT APPLY TO PROJECT
2. REFER TO LOW VOLTAGE DRAWINGS FOR ASSOCIATED SYMBOLS



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EXPIRES 12-31-2021

PERMIT SET DOCUMENTS

PROJECT #:	1617.00	
SHEET ISSUE DATE:	01/31/2020	
REVISIONS:		
#	DESCRIPTION	DATE
1	COUNTY REVIEW RESPONSES	10.09.2020
2	ADDENDUM #1	10.09.2020
3	RFI 03	11.19.2020
6	ASI #01	03.05.2021

ELECTRICAL LEGEND

E1.00



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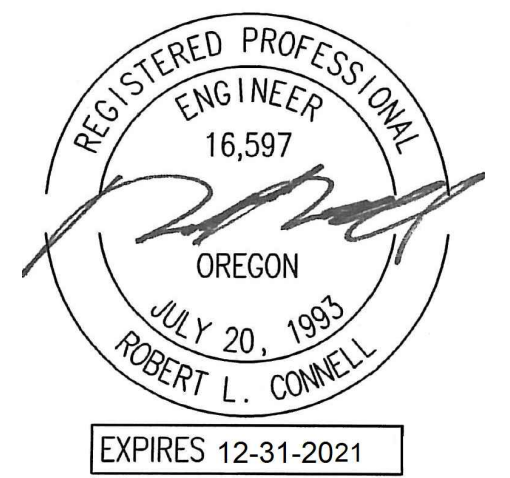
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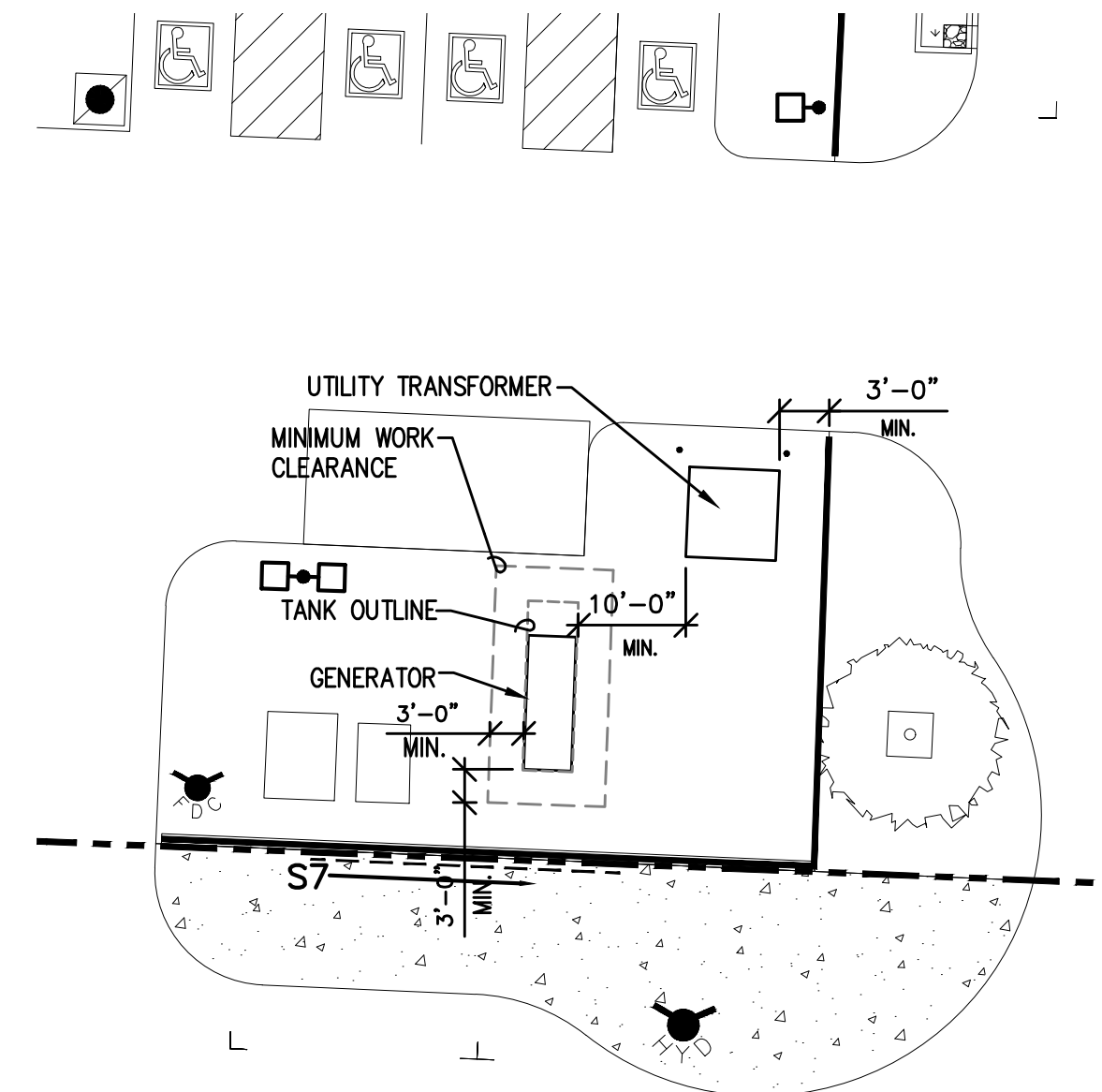
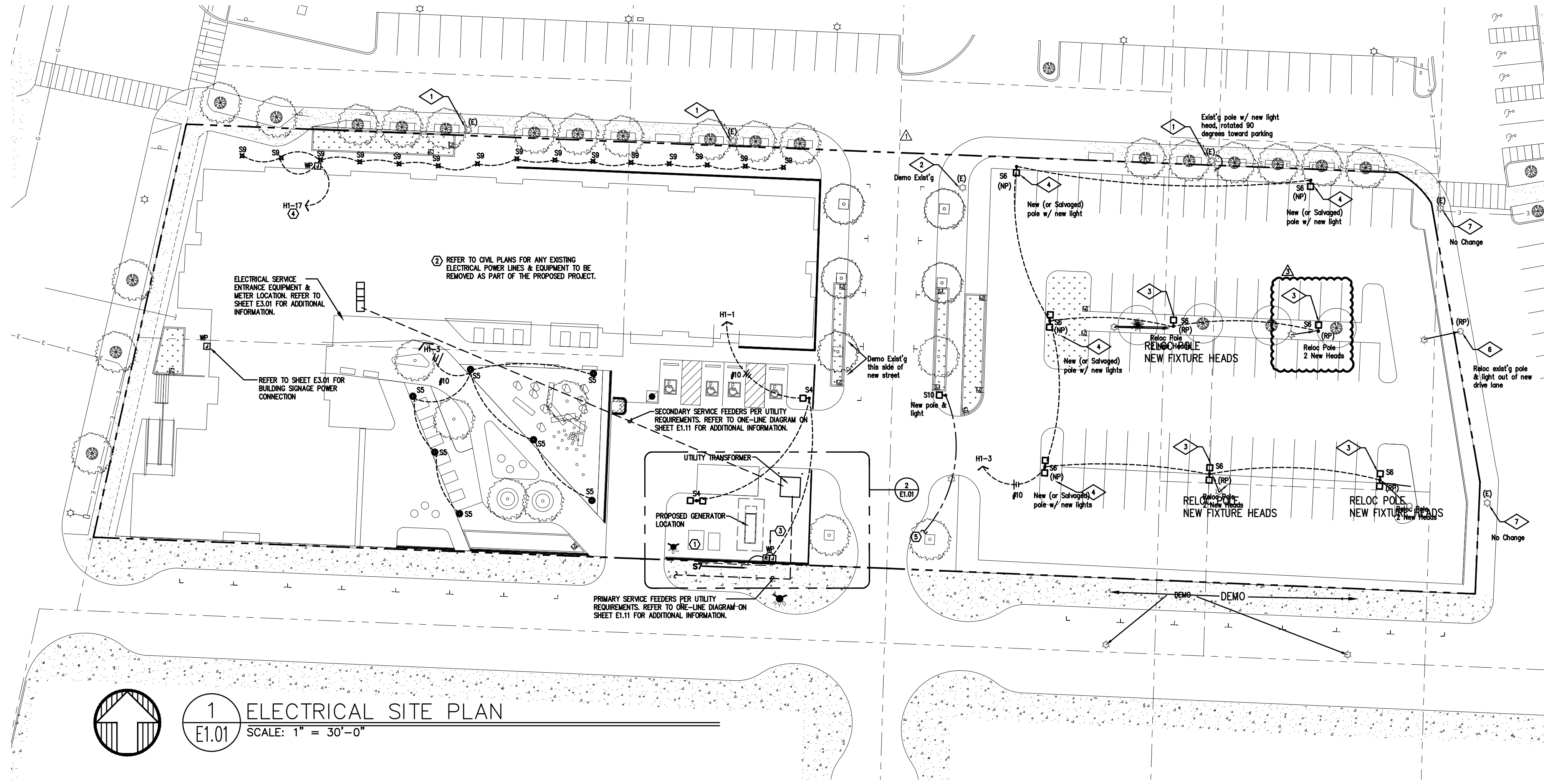
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ELECTRICAL SITE PLAN

E1.01



2 ENLARGED DETAIL
E1.01 SCALE: 1/16" = 1'-0"

1 ELECTRICAL SITE PLAN
E1.01 SCALE: 1" = 30'-0"

GENERAL POWER NOTES:

- A. ALL PLANS ARE CONSIDERED DIAGRAMMATICAL. THEREFORE ALL EQUIPMENT SIZES AND DEVICE LOCATIONS ARE APPROXIMATE AND SUBJECT TO FIELD CONDITIONS AND PRODUCT APPROVAL.
- B. ELECTRICAL SERVICE ENTRANCE EQUIPMENT DESIGN IS BASED ON SIEMENS PRODUCTS. ACTUAL PRODUCTS USED MAY DIFFER IN SIZE AND CONFIGURATION AND SHALL BE NOTED IN FINAL PROJECT DOCUMENTS.
- C. COORDINATE WITH LOCAL UTILITY PROVIDER FOR EXACT SERVICE CONDUIT AND CONDUCTORS REQUIREMENTS.
- D. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH PGE ELECTRICAL SERVICE REQUIREMENTS.
- E. U.G. PRIMARY FEEDER SHALL HAVE A MINIMUM 48 INCH BURY.
- F. U.G. SECONDARY FEEDER SHALL HAVE A MINIMUM 36 INCH BURY.
- G. REFER TO SHEET E1.11 FOR TYPICAL FEEDER SCHEDULE.
- H. SECONDARY CONDUIT SWEEPS SHALL BE MINIMUM 60 INCH RADIUS WITH A MINIMUM OR 7'-0" STRAIGHT CONDUIT RUN BETWEEN SWEEPS.
- I. LOCATION AND INSTALLATION OF THE PRIMARY AND SECONDARY CONDUITS, TRANSFORMER, ETC. SHALL BE PROVIDED PER PGE ELECTRICAL SERVICE REQUIREMENTS.
- J. REFER TO SHEET E3.01 FOR ELECTRICAL ROOM EQUIPMENT LAYOUT.
- K. SITE LIGHTING SHALL BE CONTROLLED VIA PHOTOCELL FOR DUSK-TIL-DAWN OPERATION AND PROVIDE LIGHTING REDUCTIONS FOR PERIODS OF LOW ACTIVITY.
- L. REFER TO E2 SERIES SHEETS FOR BUILDING MOUNTED LIGHT FIXTURES.
- M. REFER TO SHEET E1.21 FOR LIGHT FIXTURE SCHEDULE.

KEYED POWER NOTES:

- 1. PROVIDE ONE 20A, 120V WEATHER PROOF GFCI RATED DUPLEX RECEPTACLE IN WATER VAULT. VERIFY WITH CIVIL ENGINEER. ROUTE CIRCUIT UNDERGROUND FROM HOUSE PANEL IN 3/4" PVC CONDUIT WITH MINIMUM 36" BURY.
- 2. REFER TO ONE-LINE DIAGRAM ON SHEET E1.2 AND CONSULT CIVIL UTILITY PLANS FOR ADDITIONAL INFORMATION.
- 3. PROVIDE ONE 20A, 120V, 1P CIRCUIT, TIED INTO SITE LIGHTING CIRCUIT AS INDICATED, TO WEATHER PROOF JUNCTION BOX FOR BUILDING SIGN LIGHT FIXTURE. BUILDING SIGN TO BE PROVIDED WITH DUSK-TILL-DAWN OPERATION VIA PHOTOCELL OR MECHANICAL TIME CLOCK. CONSULT OWNER FOR PREFERRED DEVICE.
- 4. PROVIDE ONE 20A, 120V, 1P CIRCUIT TO WEATHER PROOF JUNCTION BOX FOR LOW VOLTAGE LANDSCAPE LIGHTING. REFER TO SHEET E1.21 FOR FIXTURE TYPE S8, LOW VOLTAGE PATHWAY LIGHTS. ELECTRICAL CONTRACTOR TO PROVIDE FINAL POWER CONNECTION. CONSULT ARCHITECTURAL AND/OR LANDSCAPE PLANS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. LANDSCAPE LIGHTING SHALL BE PROVIDED WITH PHOTOCELL, EITHER INTEGRAL OF REMOTE, FOR DUSK-TILL-DAWN OPERATION.
- 5. STREET LIGHTING SHOWN SHALL MEET COUNTY LIGHTING REQUIREMENTS FOR TYPE, SPACING, CONTROL AND LIGHT LEVELS. FIXTURES SHALL BE TIED INTO SAME STREET LIGHTING CIRCUIT(S) AS STREET LIGHTS ALONG NEW 'D' STREET BY COUNTY THAT RUNS PERPENDICULAR TO THE PUBLIC ACCESS STREET RUNNING THROUGH THE PROPERTY. CONSULT WITH AND COORDINATE ALL WORK WITH STREET LIGHTING CONTRACTOR AND COUNTY REPRESENTATIVE.

PGE REQUIREMENTS

- 1. CUSTOMER TO PROVIDE ALL TRENCHING AND BACKFILLING. TRENCH TO BE 36 INCHES DEEP AND 30 INCHES WIDE, MEASURED FROM FINAL GRADE.
- 2. ALL PGE CONDUCTORS TO BE INSTALLED IN GREY SCHEDULE 40, ELECTRICAL GRADE, PVC CONDUIT WITH NYLON PULL STRINGS (MIN 500 LBS. TEST). PGE TO DETERMINE THE SIZE AND NUMBER OF CONDUITS REQUIRED. ALL ELBOWS TO BE 36 INCH (MIN) RADIUS. ALL BENDS MAY BE FACTORY MADE. IF MORE THAN 270 DEGREES OF BENDS OR IF RUN IS LONGER THAN 150 FEET, BENDS MUST BE RIGID STEEL.
- 3. CONSULT WITH PGE REPRESENTATIVE 2 WEEKS BEFORE STARTING MAIN POWER TRENCHING FOR A PRECONSTRUCTION CONFERENCE. INCLUDED IN THIS CONFERENCE WILL BE EXCAVATOR, PGE, TELCO, CATV, AND GAS.
- 4. CONTRACTOR TO LOCATE ALL UNDERGROUND UTILITIES BEFORE TRENCHING. COORDINATE WITH CIVIL.

STREET LIGHTING NOTES:

- A. THE STREET LIGHTING PHOTOMETRIC STUDY ON SHEET E1.02 IS BASED ON FIXTURE INFORMATION PROVIDED BY THE COUNTY HAVING JURISDICTION, UNLESS OTHERWISE NOTED. THIS INFORMATION IS ASSUMED TO BE CORRECT. IF ACTUAL CONDITIONS DIFFER, CONTACT THE COUNTY FOR DIRECTION.
- B. ALL STREET LIGHTING SHOWN TO BE INSTALLED BY ELECTRICAL CONTRACTOR. CONTRACTOR SHALL CONSULT WITH THE CITY AND PGE TO COORDINATE INSTALLATION, CONDUIT & CONDUCTOR ROUTING, FINAL CONNECTIONS, ETC., AS IT RELATES TO THE STREET LIGHTING.
- C. EXISTING CONDUIT & CONDUCTOR INFORMATION WITH REGARDS TO THE STREET LIGHTING NOT AVAILABLE TO MFIA. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE CITY TRANSPORTATION DEPARTMENT OR OTHER ENTITY TO IDENTIFY EXISTING STREET LIGHTING CIRCUITS AND POWER SOURCE PRIOR TO THE START OF ANY WORK.

PARKING LOT LIGHTING NOTES:

- ASSUME EXISTING PARKING LOT LIGHTS TO BE REPLACED WITH LED FIXTURES WITH LIGHT OUTPUT TO MEET TRI-MET ILLUMINATION LEVEL STANDARDS.
- ALL LIGHT FIXTURES SHALL MATCH COLOR OF POLES AS CLOSELY AS POSSIBLE.
- EXISTING LIGHT POLES SHALL BE REUSED (EP) AND/OR RELOCATED (RP) AS INDICATED ON THE PLANS.
- PROVIDE NEW POLES AS INDICATED (NP). POLES SHALL MATCH EXISTING POLES AS CLOSELY AS POSSIBLE.
- PARKING LOT LIGHTING SHALL BE PROVIDED WITH PHOTOCELLS FOR DUSK-TILL-DAWN OPERATION AND DIM BY 50% DURING PERIODS OF LOW ACTIVITY.
- ALL PARKING LOT FIXTURES TO BE NIGHT SKY FRIENDLY.

PARKING LOT LIGHTING NOTES:

- 1. EXISTING TRIMET FIXTURE HEAD TO BE ROTATED 90 DEGREES.
- 2. EXISTING LIGHT FIXTURE TO BE REMOVED.
- 3. EXISTING LIGHT POLE FIXTURE TO BE RELOCATED. REPLACE LAMP HEAD AS INDICATED.
- 4. NEW LIGHT POLE TO MATCH EXISTING. PROVIDE WITH LAMP HEAD(S) AS INDICATED.
- 5. EXISTING LIGHT POLE TO REMAIN. REPLACE LAMP HEAD AS INDICATED.
- 6. EXISTING TRIMET AREA LIGHT AND POLE TO BE RELOCATED.
- 7. EXISTING TRIMET AREA LIGHT AND POLE TO REMAIN UNCHANGED.



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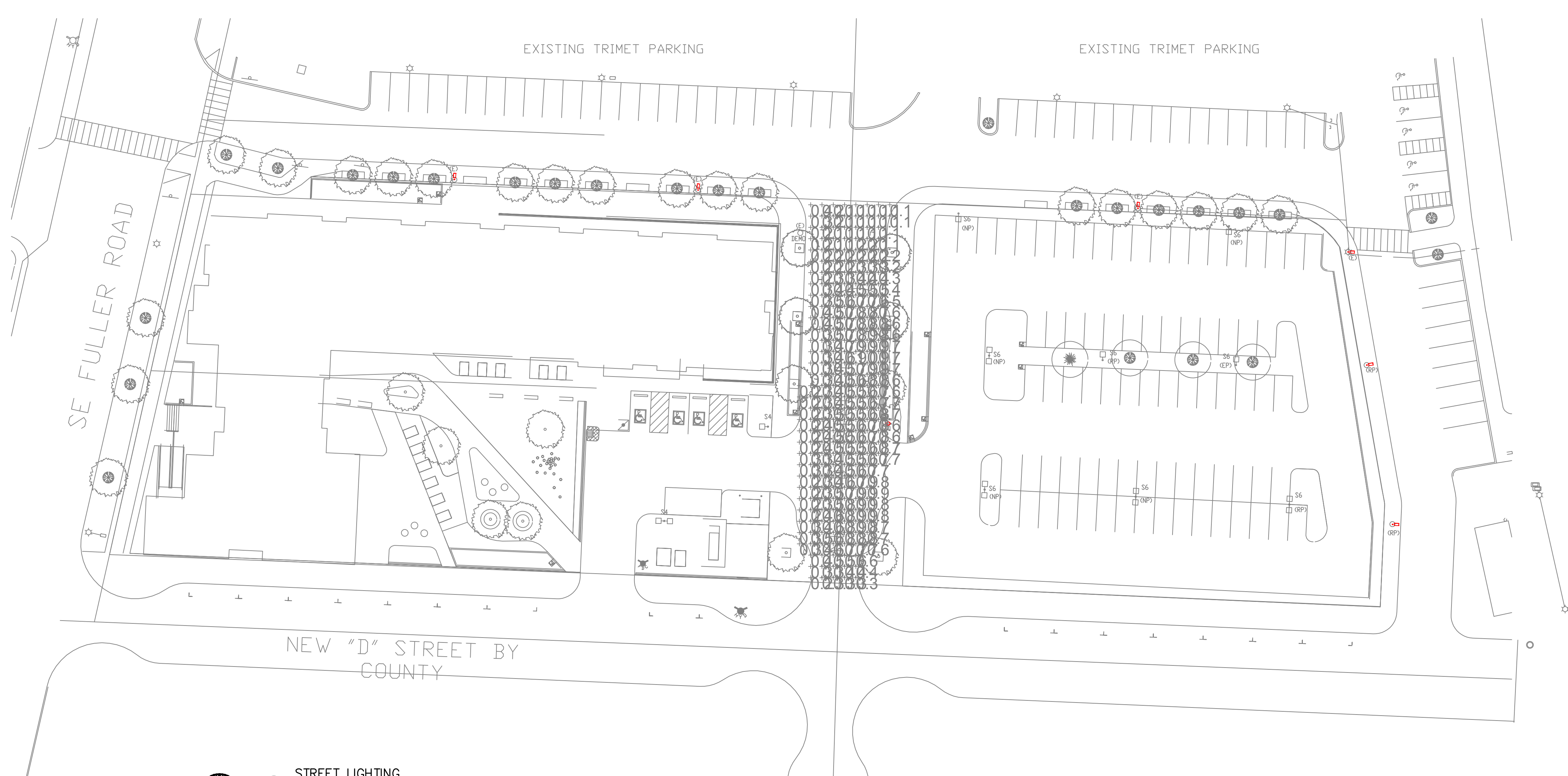
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'D' STREET
 PHOTOMETRIC STUDY

E1.02

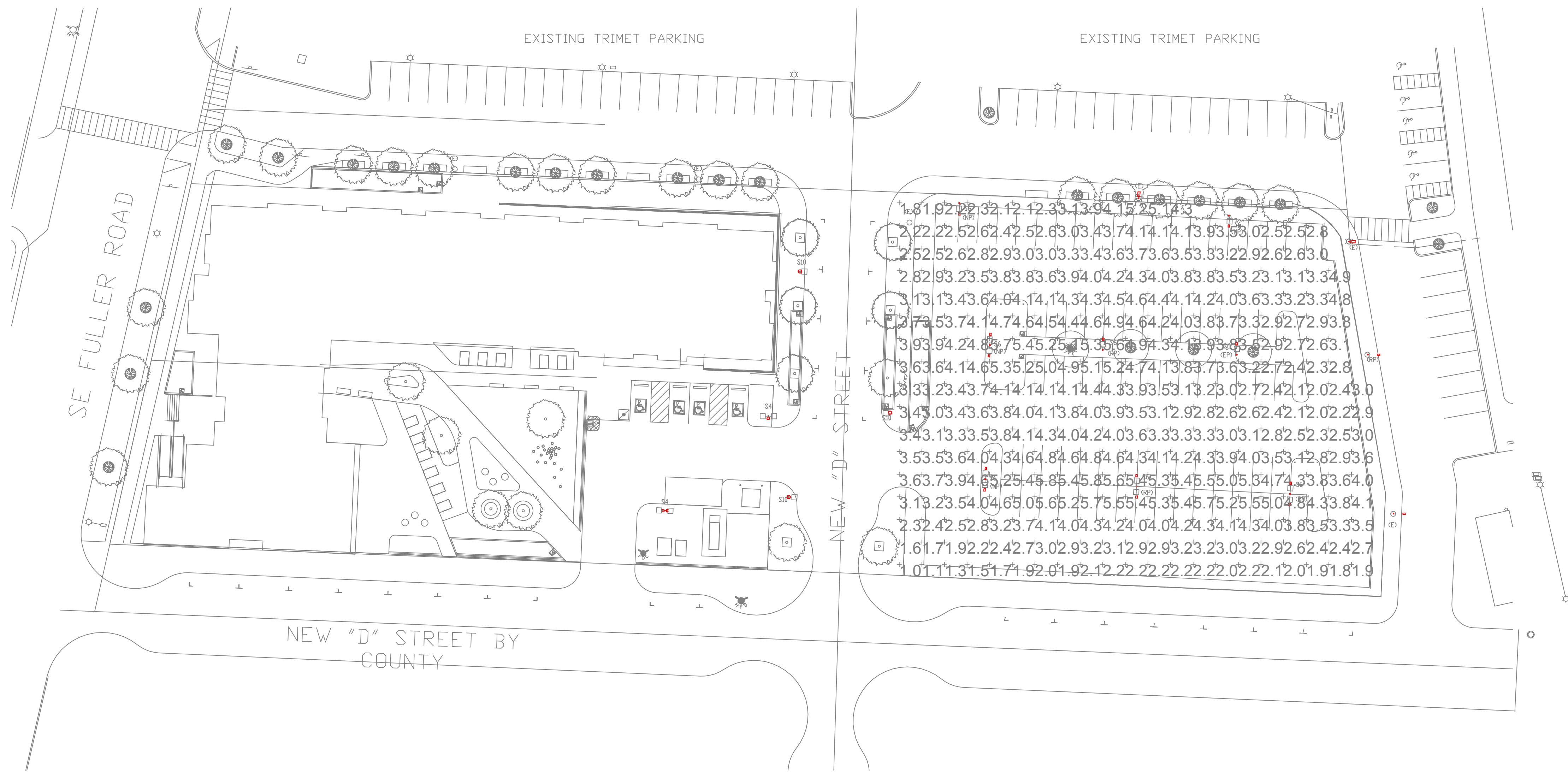


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 E1.02
 STREET LIGHTING
 PHOTOMETRIC STUDY
 SCALE: N.T.S.

LUMINAIRE SCHEDULE									
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	S10	1	AWDE2 P30 30K AS 3 N	Acrylic Washington Postfile II LED, LED Package 30, 60W, 3000K, 120-277V, Type 3 distribution, No trim	LED	AWDE2_P30_30K_AS_3_N_Ies	Absolute	1.00	60

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
'D' Street	+	0.5 fc	1.0 fc	0.1 fc	10.0:1	5.0:1

- NOTES:
1. Photometric studies are for reference only and are not intended for permitting or construction purposes.
 2. Photometric data is based on manufacture provided IES files. Calculations are approximate and may differ from actual field measurements.
 3. Calculations do not factor for existing light fixtures on adjacent properties or at the intersecting streets.
 4. Statistical data in table above to meet or exceed Clackamas County requirements, based on IES RP8 recommended light levels for roadways. IES target uniformity for for this project is 6:1 or less and requires a minimum maintained average of 0.6fc or better.
 5. Existing (E) street lights are shown for reference and may not reflect the actual fixture installed, pole height and/or location.



- NOTES:**
1. Photometric studies are for reference only and shall not be used for construction purposes. Refer to the electrical site plan sheet, E1.01 for additional information.
 2. Photometric data is based on manufacturer provided IES files. Illuminance calculations are approximate and may differ from actual field measurements.
 3. All pole mounted area lights for this study are 25'-0" tall, unless otherwise noted.
 4. Data does not factor in existing light fixtures on adjacent properties, unless otherwise noted.
 5. For the purposes of this study, areas with "0.0" lumen levels have been masked to provide the statistics shown in the table.



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W. PARKING LOT
 PHOTOMETRIC STUDY

E1.03



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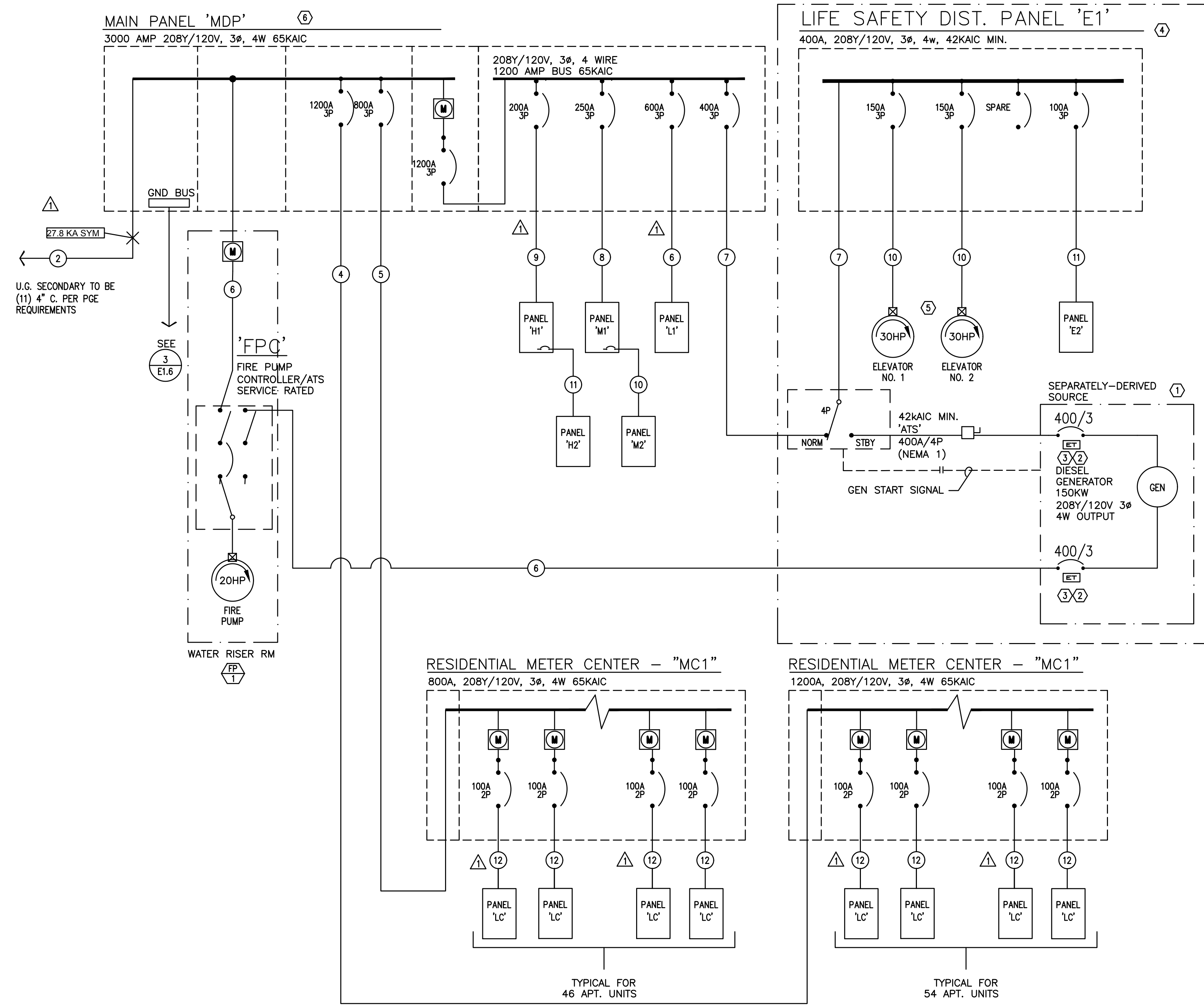
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ELECTRICAL ONE-LINE & SCHEDULES

E1.11



1 ELECTRICAL ONE-LINE DIAGRAM
 E1.11 120/208V, 3 ϕ , 4 WIRE

ONE-LINE GENERAL NOTES:

- COORDINATE ALL WORK ASSOCIATED WITH ELECTRIC SERVICE WITH LOCAL UTILITY. PROVIDE ALL CONDUIT & CONDUCTORS, GROUNDING, TRANSFORMER VAULT/PAD, ETC., IN ACCORDANCE WITH SERVING UTILITY REQUIREMENTS.
- COORDINATE METERING REQUIREMENTS WITH UTILITY.
- FOR LOAD CENTER FEEDER LENGTHS GREATER THAN 145'-0" FROM METER CENTER, INCREASE WIRE SIZE ONE SIZE UP FOR VOLTAGE DROP.

ONE-LINE NOTES:

- PROVIDE GROUND FOR SEPARATELY DERIVED SYSTEM PER NEC.
- PROVIDE ELECTRONIC TRIP CIRCUIT BREAKER. EXACT BREAKER TYPE, SETTINGS, ETC. TO BE VERIFIED AND AS DETERMINED BY SELECTIVE COORDINATION STUDY AS PERFORMED BY THE ELECTRICAL DISTRIBUTION EQUIPMENT MANUFACTURER.
- COORDINATE INSTALLATION OF OUTPUT BREAKER WITH GENERATOR MANUFACTURER TO SELECTIVELY COORDINATE WITH POWER STUDY RECOMMENDATIONS.
- 'LIFE SAFETY' BRANCH TO MEET ALL REQUIREMENTS OF NEC 700. CONTRACTOR SHALL BE AWARE THAT MFI HAS ATTEMPTED TO INDICATE EQUIPMENT AND SIZES THAT WILL SELECTIVELY COORDINATE, BUT WILL NOT BE KNOWN UNTIL ELECTRICAL EQUIPMENT MANUFACTURER PERFORMS THE REQUIRED POWER STUDIES AS SPECIFIED IN 26 05 73. CHANGES MAY BE NECESSARY AFTER THE BID.
- GENERATOR SIZED TO OPERATE ONLY ONE ELEVATOR AT A TIME. COORDINATE WITH ELEVATOR PROVIDER FOR AUTOMATIC SEQUENTIAL OPERATION AS REQUIRED UNDER ASME A17.1, SECTION 2.27.2.1 THROUGH 2.27.2.5.
- PER PGE, THE ELECTRICAL SERVICE ENTRANCE GEAR IS TO BE PROVIDED WITH A PLACARD TO STATE: "2000A MAX. AVAILABLE BY PGE".

FEEDER SCHEDULE (COPPER)

NO.	AMPS	CONDUIT	CONDUCTOR
1		* (2) 4"	PER UTILITY CO. REQ. & (1) GND
2		* (5) 4"	PER UTILITY CO. REQ. & (1) GND
3	2000A	* (5) 4"	ea w/ (4) #600Kcmil & (1) #250Kcmil
4	1200A	* (3) 4"	ea w/ (4) #600Kcmil & (1) #3/0 GND
5	800A	* (2) 4"	ea w/ (4) #600Kcmil & (1) #1/0 GND
6	600A	* (2) 3"	ea w/ (4) #350Kcmil & (1) #1 GND
7	400A	3 1/2"	(4) #500Kcmil & (1) #3 GND
8	250A	2 1/2"	(4) #250Kcmil & (1) #4 GND
9	200A	2"	(4) #3/0 & (1) #6 GND
10	150A	2"	(4) #1/0 & (1) #6 GND
11	100A	1 1/2"	(4) #1 & (1) #8 GND
12	100A	1 1/2"	(3) #1 & (1) #8 GND

* PARALLEL FEEDER

NOTES:

- REFER TO THE UTILITY PROVIDER'S DESIGN AND INCOMING SERVICE DIVISION OF RESPONSIBILITIES FOR ADDITIONAL INFORMATION.
- USE OF ALUMINUM FEEDERS SHALL BE AS ALLOWED BY THE NEC.
- ALUMINUM CONDUCTORS MAY BE USED IN LIEU OF COPPER FOR SECONDARY FEEDERS.
- ALUMINUM CONDUCTORS MAY BE USED FOR FEEDERS OVER 100A.
- REFER TO DIVISION 26 SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FEEDER AND BRANCH CIRCUIT CONDUCTORS.

Fuller Station Apartments Main Distribution 'MDP' Estimated Load Summary								
LOAD:	LIGHTS	RECEPT	HEAT	KITCHEN	MISC	EQUIP	MOTORS	LARGEST MOTOR
Panel H1/H2	6,114	27,320		11,176		1,500	4,000	
Panel M1/M2	0	500	14,000		0	10,300	43,502	
Panel L1		18,000				189,900		
Panel E1/E2	2,786	1,000	500			5,676	1,176	
Elevator (30hp)							33,120	33,120
Elevator (30hp)							33,120	
Residential Meters MC1					281,000			
Residential Meters MC2					322,000			
Fire Pump (40hp)							42,000	
SUBTOTAL	8,900	46,820	14,500	11,176	603,000	207,376	156,918	33,120
X-FACTOR	1.25	1 + .5	1	0.65	1	1	1	0.25
CODE LOAD:	11,125	28,410	14,500	7,264	603,000	207,376	156,918	8,280

CONN LOAD: 1082 KVA

VOLTS: 208 3ph
TOTAL CALC: 1037 KVA
CALC AMPS: 2878 AMPS

Fuller Station Apartments Emergency Generator Estimated Load Summary								
LOAD:	LIGHTS	RECEPT	HEAT	MISC	EQUIP	MOTORS	LARGEST MOTOR	
Panel E1/E2	2,786	500	500		5,176	1,176		
Elevator (40hp)						42,000	42,000	
Elevator (40hp)						42,000		
Fire Pump (40hp)						42,000		
SUBTOTAL	2,786	500	500	0	5,176	127,176	42,000	
X-FACTOR	1.25	1 + .5	1	1	1	1	0.25	
CODE LOAD:	3,483	500	500	0	5,176	127,176	10,500	

CONN LOAD: 178 KVA

VOLTS: 208 3ph
TOTAL CALC: 147 KVA
CALC AMPS: 409 AMPS

Fuller Station Apartments RESIDENTIAL LOAD SUMMARY - MC1																			
UNIT TYPE:	QTY PER FLOOR						TOTAL	AREA (SF)	LIG/RECEPT (3VA / SF)	SM APPL (1500VA X 2)	LAUNDRY (1500VA)	COOKING (CONNECTED)	MICROWAVE (CONNECTED)	DISHWASHER (CONNECTED)	ELECT DRYER (CONNECTED)	WATER HEATER (CONNECTED)	DISPOSAL (CONNECTED)	MOTORS (CONNECTED)	LARGEST OF: AC/HEATING (CONNECTED)
	LW 1	LW 2	LW 3	LW 4	LW 5	LW 6													
1 Bedroom	2	3	3				8	550	1650	3000	0	8500	1500	1200	0	0	900	0	3500
2 Bedroom	8	11	11				30	875	2625	3000	0	8500	1500	1200	0	0	900	0	5000
3 Bedroom		4	4				8	1000	3000	3000	1500	8500	1500	1200	3500	0	900	0	6500
TOTALS:	10	18	18	0	0	0	46	38650	115950	138000	12000	391000	69000	55200	28000	0	41400	0	230000

VOLTS: 208 3ph
TOTAL CONNECTED: 1081 KVA
DEMAND FACTOR: 0.26 Based on Total Number of Residential Units = 46-50 (See N.E.C. Article: 220.84)
TOTAL CALCULATED: 281 KVA
CALCULATED AMPS: 780 AMPS

NOTE:

Fuller Station Apartments RESIDENTIAL LOAD SUMMARY - MC2																			
UNIT TYPE:	QTY PER FLOOR						TOTAL	AREA (SF)	LIG/RECEPT (3VA / SF)	SM APPL (1500VA X 2)	LAUNDRY (1500VA)	COOKING (CONNECTED)	MICROWAVE (CONNECTED)	DISHWASHER (CONNECTED)	ELECT DRYER (CONNECTED)	WATER HEATER (CONNECTED)	DISPOSAL (CONNECTED)	MOTORS (CONNECTED)	LARGEST OF: AC/HEATING (CONNECTED)
	LW 1	LW 2	LW 3	LW 4	LW 5	LW 6													
1 Bedroom			3	3	3		9	550	1650	3000	0	8500	1500	1200	0	0	900	0	3500
2 Bedroom			11	11	11		33	875	2625	3000	0	8500	1500	1200	0	0	900	0	5000
3 Bedroom			4	4	4		12	1000	3000	3000	1500	8500	1500	1200	3500	0	900	0	6500
TOTALS:	0	0	0	18	18	18	54	45825	137475	162000	18000	459000	81000	64800	42000	0	48600	0	274500

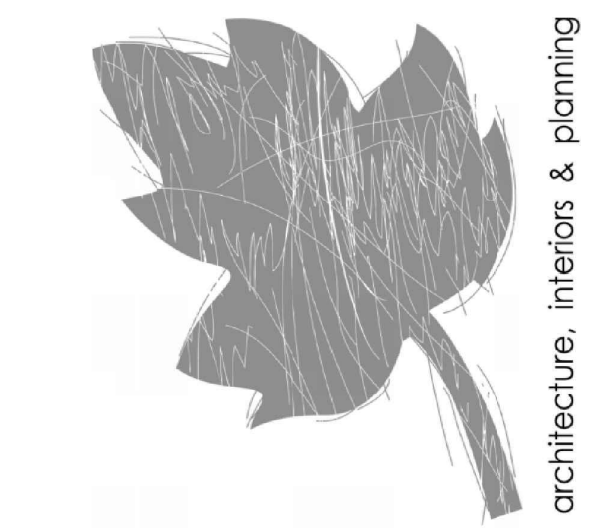
VOLTS: 208 3ph
TOTAL CONNECTED: 1287 KVA
DEMAND FACTOR: 0.25 Based on Total Number of Residential Units = 51-55 (See N.E.C. Article: 220.84)
TOTAL CALCULATED: 322 KVA
CALCULATED AMPS: 893 AMPS

NOTE:

MECHANICAL EQUIPMENT SCHEDULE									
NO.	EQUIPMENT NAME	HP/KW	VOLTS	PH	AMPS	CONDUIT	WIRE	GND	CIRCUIT
EF-1	EXHAUST FAN NO.1	11.0W	120	1		1/2"	#12	#12	SEE UNIT PLANS
EF-2	EXHAUST FAN NO.2	10.2W	120	1		1/2"	#12	#12	SEE FLOOR PLANS
EF-3	EXHAUST FAN NO.3	1/10HP	120	1		1/2"	#12	#12	M2-24
EF-4	EXHAUST FAN NO.4	1/10HP	120	1		1/2"	#12	#12	M1-21
EF-5	EXHAUST FAN NO.5	54W	120	1		1/2"	#12	#12	M1-27
EF-6	EXHAUST FAN NO.6	7.5	120	1		1/2"	#12	#12	M1-
EH-1	WALL HEATER NO.1	1.5KW	120V	1		1/2"	#12	#12	SEE E.S.O1
EH-2	WALL HEATER NO.2	500W	120	1		1/2"	#12	#12	M1-6
EH-3	WALL HEATER NO.3	3.0KW	208	1		1/2"	#12	#12	M1-27,29
FC-1	FAN COIL NO.1	15.0KW	208	1		1/2"	#12	#12	M1-8,10
FC-2	FAN COIL NO.2	15.0KW	208	1		1/2"	#12	#12	M1-12,14
FC-3	FAN COIL NO.3	15.0KW	208	1		1/2"	#12	#12	M1-16,18
FC-4	FAN COIL NO.4	15.0KW	208	1		1/2"	#12	#12	M1-20,22
FC-5	FAN COIL NO.5	15.0KW	208	1		1/2"	#12	#12	M1-24,26
HP-1	HEAT PUMP NO.1		208	1	18.1 MCA	1/2"	#10	#10	M2-7,9
HP-2	HEAT PUMP NO.2		208	1	18.1 MCA	1/2"	#10	#10	M2-11,13
HP-3	HEAT PUMP NO.3		208	1	18.1 MCA	1/2"	#10	#10	M2-15,17
HP-4	HEAT PUMP NO.4		208	1	18.1 MCA	1/2"	#10	#10	M2-8,10
HP-5	HEAT PUMP NO.5		208	1	18.1 MCA	1/2"	#10	#10	M2-12,14
HP-6	HEAT PUMP NO.6		208	1	18.1 MCA	1/2"	#10	#10	M2-16,18
HP-7	HEAT PUMP NO.7		208	1	18.1 MCA	1/2"	#10	#10	M2-20,22
IAC-1	MINI SPLIT NO. 1 (INDOOR)								INTERCONNECT W/ OAC
OAC-1	MINI SPLIT NO.1 (OUTDOOR)		208	1	12.2 MCA	1/2"	#12	#12	M2-19,21
PTHP1	PKG HEAT PUMP NO.1		208	1		1/2"	#10	#10	SEE UNIT PLANS
PTHP2	PKG HEAT PUMP NO.2		208	1		1/2"	#10	#10	SEE UNIT PLANS
PTHP3	PKG HEAT PUMP NO.3		208	1		1/2"	#10	#10	SEE UNIT PLANS
RH-1	RADIANT HEATER NO.1	1050W	120V	1		1/2"	#12	#12	SEE UNIT PLANS
RTU-1	ROOFTOP UNIT NO.1		120V	1	13.8 FLA	1/2"	#12	#12	M2-1,3,5
RTU-2	ROOFTOP UNIT NO.2		120V	1	13.8 FLA	1/2"	#12	#12	M2-2,4,6
RP-1	RECIRC PUMP NO.1	1/2HP	120V	1		1/2"	#12	#12	M1-11
SP-1	SUMP PUMP NO.1	1-1/2HP	120V	1		1/2"	#10	#10	E2-10
WH-1	WATER HEATER NO.1 (GAS)		120	1		1/2"	#12	#12	M1-19 (PC)
WH-2	WATER HEATER NO.2 (GAS)		120	1		1/2"	#12	#12	M1-19 (PC)
WH-3	WATER HEATER NO.3 (GAS)		120	1		1/2"	#12	#12	M1-19 (PC)
WH-4	WATER HEATER NO.4 (GAS)		120	1		1/2"	#12	#12	M1-19 (PC)

GENERAL EQUIPMENT NOTES:

- A. CONTRACTOR/DESIGNER SHALL VERIFY ALL MECHANICAL EQUIPMENT CONNECTION LOAD REQUIREMENTS WITH THE MECHANICAL EQUIPMENT PROVIDER PRIOR TO ROUGH IN.
- B. MECHANICAL EQUIPMENT SIZES SHOWN IN THE MECHANICAL SCHEDULE ABOVE ARE FOR REFERENCE ONLY AND MAY NOT REFLECT THE ACTUAL EQUIPMENT TO BE INSTALLED.



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FULLER STATION HOUSING
PERMIT SET
DOCUMENTS
9608 SE Fuller Road
Clackamas County, Oregon, 97086



EXPIRES 12-31-2021

PERMIT SET DOCUMENTS

PROJECT #: 1617.00
SHEET ISSUE DATE: 01/31/2020
REVISIONS:

#	DESCRIPTION	DATE
1	COUNTY REVIEW RESPONSES	10.09.2020
2	ADDENDUM #1	10.09.2020
3	RFI 03	11.19.2020
6	ASI #01	03.05.2021

ELECTRICAL SCHEDULES

E1.12



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PERMIT SET DOCUMENTS

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MFA PANEL SCHEDULE for Panel E1, 195. Table with columns for panel, mounting surface, location, connected load amps, and calculated load amps. Includes load codes for lights, heating, kitchen, equipment, motors, and miscellaneous.

MFA PANEL SCHEDULE for Panel H1, 145. Table with columns for panel, mounting surface, location, connected load amps, and calculated load amps. Includes load codes for lights, heating, kitchen, equipment, motors, and miscellaneous.

MFA PANEL SCHEDULE for Panel M1, 208. Table with columns for panel, mounting surface, location, connected load amps, and calculated load amps. Includes load codes for lights, heating, kitchen, equipment, motors, and miscellaneous.

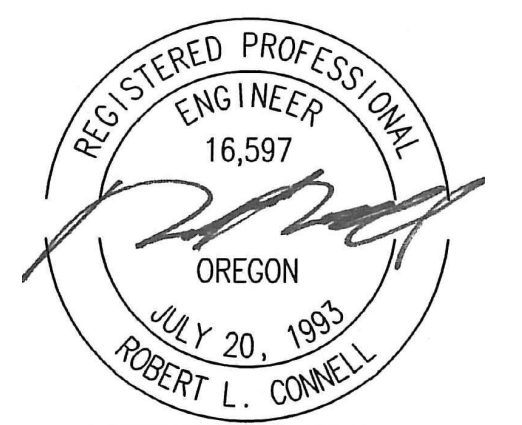
MFA PANEL SCHEDULE for Panel L1, 610. Table with columns for panel, mounting surface, location, connected load amps, and calculated load amps. Includes load codes for lights, heating, kitchen, equipment, motors, and miscellaneous.

MFA PANEL SCHEDULE for Panel E2, 40. Table with columns for panel, mounting surface, location, connected load amps, and calculated load amps. Includes load codes for lights, heating, kitchen, equipment, motors, and miscellaneous.

MFA PANEL SCHEDULE for Panel H2, 40. Table with columns for panel, mounting surface, location, connected load amps, and calculated load amps. Includes load codes for lights, heating, kitchen, equipment, motors, and miscellaneous.

MFA PANEL SCHEDULE for Panel M2, 99. Table with columns for panel, mounting surface, location, connected load amps, and calculated load amps. Includes load codes for lights, heating, kitchen, equipment, motors, and miscellaneous.

MFA PANEL SCHEDULE for Panel 19-Now-20, 578. Table with columns for panel, mounting surface, location, connected load amps, and calculated load amps. Includes load codes for lights, heating, kitchen, equipment, motors, and miscellaneous.



EXPIRES 12-31-2021

PERMIT SET DOCUMENTS

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ELECTRICAL SCHEDULES

E1.13



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EXPIRES 12-31-2021

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6	ASI #01	03.05.2021

ELECTRICAL
SCHEDULES

E1.14

DWELLING UNIT LOAD CALCULATION	
Project:	Fuller Apartments
Unit Type:	1Bed (Typical)
Area:	550 square feet(average)
Minimum Size Feeder (NEC 220.40):	
General lighting load at 3 VA / SF	1,650 VA
Small Appliance load (2 ckt at 1500VA each)	3,000 VA
Laundry Load (1 ckt at 1500VA)	0 VA
Electric Range	8,500 VA
Other Cooking Appliance Load (Microwave Oven)	1,500 VA
Dishwasher Load	1,200 VA
Electric Dryer Load	0 VA
Electric Water Heater Load	0 VA
Disposal load	900 VA
Other motor loads	0 VA
Total "General Loads"	16,750 VA
First 10 kVA of "general loads" at 100%	10,000 VA
Remainder of "general loads" at 40%	2,700 VA
Net "general load"	12,700 VA
Largest of:	3,500 VA of electric space heating (less than 4) at 65%
-or-	0 VA of electric space heating (4 or more) at 40%
-or-	0 VA of air conditioning/cooling/heat pumps at 100%
TOTAL LOAD	14,975 VA
For 120/208-volt, 3-wire, single-phase service or feeder,	14,975 VA / 208 volts = 62 Amps
Therefore, this dwelling unit shall be permitted to be served by a <u>100</u> amp service.	

DWELLING UNIT LOAD CALCULATION	
Project:	Fuller Apartments
Unit Type:	2Bed (Typical)
Area:	875 square feet(average)
Minimum Size Feeder (NEC 220.40):	
General lighting load at 3 VA / SF	2,625 VA
Small Appliance load (2 ckt at 1500VA each)	3,000 VA
Laundry Load (1 ckt at 1500VA)	0 VA
Electric Range	8,500 VA
Other Cooking Appliance Load (Microwave Oven)	1,500 VA
Dishwasher Load	1,200 VA
Electric Dryer Load	0 VA
Electric Water Heater Load	0 VA
Disposal load	900 VA
Other motor loads	0 VA
Total "General Loads"	17,725 VA
First 10 kVA of "general loads" at 100%	10,000 VA
Remainder of "general loads" at 40%	3,090 VA
Net "general load"	13,090 VA
Largest of:	5,000 VA of electric space heating (less than 4) at 65%
-or-	0 VA of electric space heating (4 or more) at 40%
-or-	0 VA of air conditioning/cooling/heat pumps at 100%
TOTAL LOAD	16,340 VA
For 120/208-volt, 3-wire, single-phase service or feeder,	16,340 VA / 208 volts = 68 Amps
Therefore, this dwelling unit shall be permitted to be served by a <u>100</u> amp service.	

DWELLING UNIT LOAD CALCULATION	
Project:	Fuller Apartments
Unit Type:	3Bed (Typical)
Area:	1,000 square feet(average)
Minimum Size Feeder (NEC 220.40):	
General lighting load at 3 VA / SF	3,000 VA
Small Appliance load (2 ckt at 1500VA each)	3,000 VA
Laundry Load (1 ckt at 1500VA)	1,500 VA
Electric Range	8,500 VA
Other Cooking Appliance Load (Microwave Oven)	1,500 VA
Dishwasher Load	1,200 VA
Electric Dryer Load	3,500 VA
Electric Water Heater Load	0 VA
Disposal load	800 VA
Other motor loads	0 VA
Total "General Loads"	23,000 VA
First 10 kVA of "general loads" at 100%	10,000 VA
Remainder of "general loads" at 40%	5,200 VA
Net "general load"	15,200 VA
Largest of:	0 VA of electric space heating (less than 4) at 65%
-or-	6,500 VA of electric space heating (4 or more) at 40%
-or-	0 VA of air conditioning/cooling/heat pumps at 100%
TOTAL LOAD	17,800 VA
For 120/208-volt, 3-wire, single-phase service or feeder,	17,800 VA / 208 volts = 74 Amps
Therefore, this dwelling unit shall be permitted to be served by a <u>100</u> amp service.	

MFIA CIRCUIT DIRECTORY		23-Sep-19	
Loadcenter Name	mounting	location	
LC-1BR/1BA (TYPICAL)	RECESSED		
voltage	phase	bus & main	
208/120	1	100A MLO	(SCCR: 22K)
service	a/p	no.	o/p
LIGHTS-KITCHEN/LIVING	20/1(A)	1	2
LTS & PLUGS - BATH	20/1	3	4
LTS - BEDROOMS	20/1(A)	5	6
SPARE	20/1	7	8
RECEPTACLES	20/1(A)	9	10
RECEPTACLES	20/1(A)	11	12
RECEPTACLES	20/1(A)	13	14
SMART PANEL (OPT)	20/1	15	16
SPARE	20/1	17	18
SPARE	20/1	19	20
SPARE	20/1	21	22
SPARE	20/1	23	24
SPARE	20/1	25	26
SPARE	20/1	27	28
SPARE	20/1	29	30
NOTES:			
1. (A) DENOTES: ARC-FAULT INTERRUPTER CIRCUIT BREAKER. INSTALL PER NEC 210.12			
2. LOADS FOR THIS PANEL ARE INDICATED ON THE "DWELLING UNIT LOAD CALCULATION".			
3. BREAKER & WIRE SHALL BE SIZED FOR EQUIPMENT INSTALLED.			
4. (G) DENOTES GFCI RATED BREAKER.			

MFIA CIRCUIT DIRECTORY		23-Sep-19	
Loadcenter Name	mounting	location	
LC-2BR/2BA (TYPICAL)	RECESSED		
voltage	phase	bus & main	
208/120	1	100A MLO	(SCCR: 22K)
service	a/p	no.	o/p
LIGHTS-KITCHEN/LIVING	20/1(A)	1	2
LTS & PLUGS - BATH	20/1	3	4
LTS - BEDROOMS	20/1(A)	5	6
SPARE	20/1	7	8
RECEPTACLES	20/1(A)	9	10
RECEPTACLES	20/1(A)	11	12
RECEPTACLES	20/1(A)	13	14
RECEPTACLES	20/1(A)	15	16
SMART PANEL (OPT)	20/1	17	18
SPARE	20/1	19	20
SPARE	20/1	21	22
SPARE	20/1	23	24
SPARE	20/1	25	26
SPARE	20/1	27	28
SPARE	20/1	29	30
NOTES:			
1. (A) DENOTES: ARC-FAULT INTERRUPTER CIRCUIT BREAKER. INSTALL PER NEC 210.12			
2. LOADS FOR THIS PANEL ARE INDICATED ON THE "DWELLING UNIT LOAD CALCULATION".			
3. BREAKER & WIRE SHALL BE SIZED FOR EQUIPMENT INSTALLED.			
4. (G) DENOTES GFCI RATED BREAKER.			

MFIA CIRCUIT DIRECTORY		07-Nov-19	
Loadcenter Name	mounting	location	
LC-3BR/2BA (TYPICAL)	RECESSED		
voltage	phase	bus & main	
208/120	1	100A MLO	(SCCR: 22K)
service	a/p	no.	o/p
LIGHTS-KITCHEN/LIVING	20/1(A)	1	2
LTS & PLUGS - BATH	20/1	3	4
LTS - BEDROOMS	20/1(A)	5	6
SPARE	20/1	7	8
RECEPTACLES	20/1(A)	9	10
RECEPTACLES	20/1(A)	11	12
RECEPTACLES	20/1(A)	13	14
RECEPTACLES	20/1(A)	15	16
RECEPTACLES	20/1(A)	17	18
SMART PANEL (OPT)	20/1	19	20
LAUNDRY	40/2	21	22
DRYER	40/2	23	24
		25	26
SPARE	20/1	27	28
SPARE	20/1	29	30
SPARE	20/1	31	32
NOTES:			
1. (A) DENOTES: ARC-FAULT INTERRUPTER CIRCUIT BREAKER. INSTALL PER NEC 210.12			
2. LOADS FOR THIS PANEL ARE INDICATED ON THE "DWELLING UNIT LOAD CALCULATION".			
3. BREAKER & WIRE SHALL BE SIZED FOR EQUIPMENT INSTALLED.			
4. (G) DENOTES GFCI RATED BREAKER.			



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ELECTRICAL SCHEDULES

E1.21

GENERAL LIGHTING NOTES:

- A. ALL LIGHT FIXTURES SHALL HAVE ENERGY EFFICIENT LAMPING AND BALLASTS.
- B. LIGHT FIXTURES FOR LIVING UNITS SHALL BE "ENERGY STAR" RATED.
- C. VERIFY ALL FIXTURE FINISHES WITH ARCHITECT PRIOR TO BID.
- D. VERIFY ALL FIXTURE MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO BID.
- E. VERIFY ALL FIXTURE LOCATIONS WITH ARCHITECT PRIOR TO ROUGH IN.
- F. ALL INTERIOR LIGHTING SHALL BE 3000 KELVIN UNLESS OTHERWISE NOTED.
- G. ALL PRODUCT SUBSTITUTIONS AND VALUE ENGINEERING SHALL BE SUBMITTED DURING BID PHASE, SHALL MEET DESIGN INTENT AND IS SUBJECT TO OWNER APPROVAL.
- H. EGRESS LIGHTING SHALL BE PROVIDED WITH EMERGENCY BATTERY BACKUP, EITHER INTEGRAL OR REMOTE AS REQUIRED.
- I. EGRESS LIGHTING IN CORRIDORS, STAIRWELLS AND OTHER COMMON AREAS SHALL BE PROVIDED TO MEET MINIMUM LIGHT LEVELS AS DESCRIBED PER OREGON STRUCTURAL SPECIALTY CODE 1006.3.
- J. BUILDING EXTERIOR LIGHTING SHALL BE CONTROLLED VIA ROOF MOUNTED PHOTOCELL FOR DUSK-TILL-DAWN OPERATION.
- K. CONTRACTOR SHALL PROVIDE ALL REQUIRED COMPONENTS FOR COMPLETE INSTALL PER MANUFACTURER'S SPECIFICATION FOR LOW VOLTAGE LIGHT FIXTURES.

KEYED LIGHTING NOTES:

- 1. ELECTRICAL CONTRACTOR TO PROVIDE ALL REQUIRED COMPONENTS FOR COMPLETE INSTALL. CONSULT ARCHITECTURAL AND/OR LANDSCAPE PLANS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. COORDINATE INSTALLATION WITH LANDSCAPER. LANDSCAPE LIGHTING SHALL BE PROVIDED WITH PHOTOCELL, EITHER INTEGRAL OR REMOTE, FOR DUSK-TILL-DAWN OPERATION.
- 2. SUSPENDED LIGHT FIXTURES LOCATED IN THE LAUNDRY ROOM & BIKE STORAGE TO BE MOUNTED SUCH THAT THE BOTTOM FOR THE FIXTURE IS AT 9'-6" A.F.F.
- 3. REFER TO SHEET E1.01 FOR PARKING LOT POLE LOCATIONS. CONTRACTOR SHALL REUSE, RELOCATE AND/OR PROVIDE NEW POLES AS INDICATED. ALL POLES SHALL MATCH EXISTING FOR HEIGHT, MOUNTING AND COLOR.

LIGHTING CONTROL DESIGN INTENT:

	DESCRIPTION
PARKING AREA	ALL SITE AREA LIGHT FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL, EITHER INTEGRAL OR REMOTE, FOR DUST-TILL-DAWN OPERATION.
BUILDING EXTERIOR	ALL EXTERIOR BUILDING LIGHT FIXTURES SHALL BE CONTROLLED VIA ROOF MOUNTED PHOTOCELL FOR DUST-TILL-DAWN OPERATION.
STAIRWELLS	STAIRWELL LIGHTING TO BE CONTINUOUSLY "ON", WITH OCCUPANCY SENSORS (INTEGRAL OR CEILING MOUNT) TO PROVIDE 50% DIMMING DURING PERIODS OF INACTIVITY. OCCUPANCY SENSORS SHALL BE SET TO DIM NO LESS THAN 15 MINUTES ONCE THE AREA IS VACANT AND SHALL BE AT 100% OUTPUT IMMEDIATELY UPON OCCUPANT DETECTION.
CORRIDORS	THE CORRIDOR LIGHTING SHALL BE CONTROLLED VIA CEILING MOUNTED OCCUPANCY SENSORS TO PROVIDE 50% LIGHTING REDUCTION DURING PERIODS OF INACTIVITY. OCCUPANCY SENSORS SHALL BE SET TO DIM NO LESS THAN 30 MINUTES ONCE THE AREA IS VACANT AND SHALL BE AT 100% OUTPUT IMMEDIATELY UPON OCCUPANT DETECTION. EGRESS LIGHTS SHALL BE CONSTANT "ON".
MAIN LOBBY	DIGITAL LIGHTING CONTROLS FOR THE MAIN LOBBY SHALL BE LOCATED NEAR THE RECEPTION DESK. COORDINATE WITH INTERIOR DESIGNER FOR THE DESIGN INTENT OF THE LOBBY LIGHTING. EGRESS LIGHTING SHALL BE CONSTANT "ON" AND AT 100% OUTPUT IN THE EVENT OF POWER OUTAGE.
OFFICE AREAS, COMMUNITY SPACES & EQUIPMENT ROOMS	PROVIDE LOCAL LIGHTING CONTROLS AS INDICATED ON THE LIGHTING PLANS. EGRESS LIGHTING AND/OR NIGHT LIGHTING SHALL BE CONSTANT "ON" AND AT 100% OUTPUT IN THE EVENT OF POWER OUTAGE.

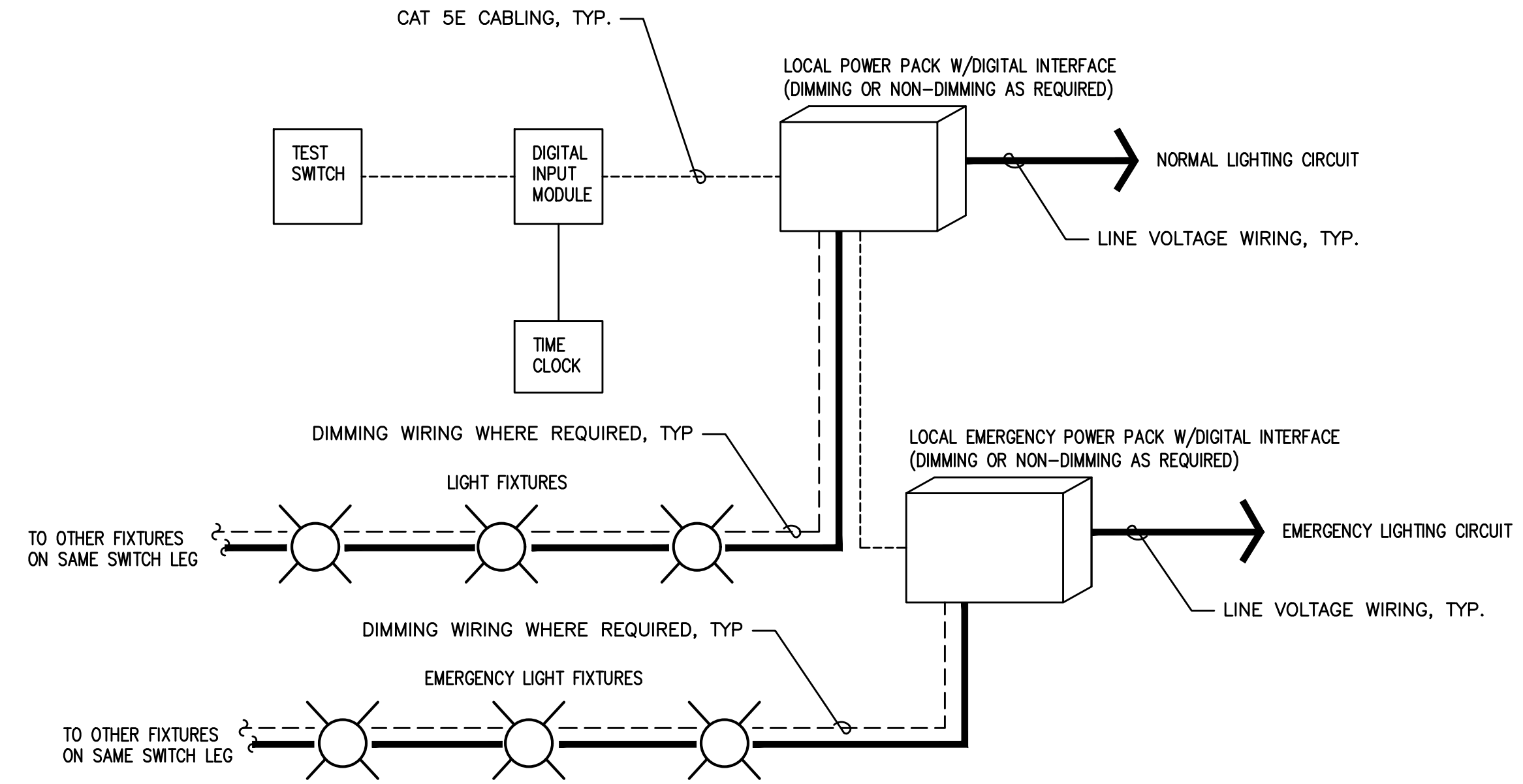
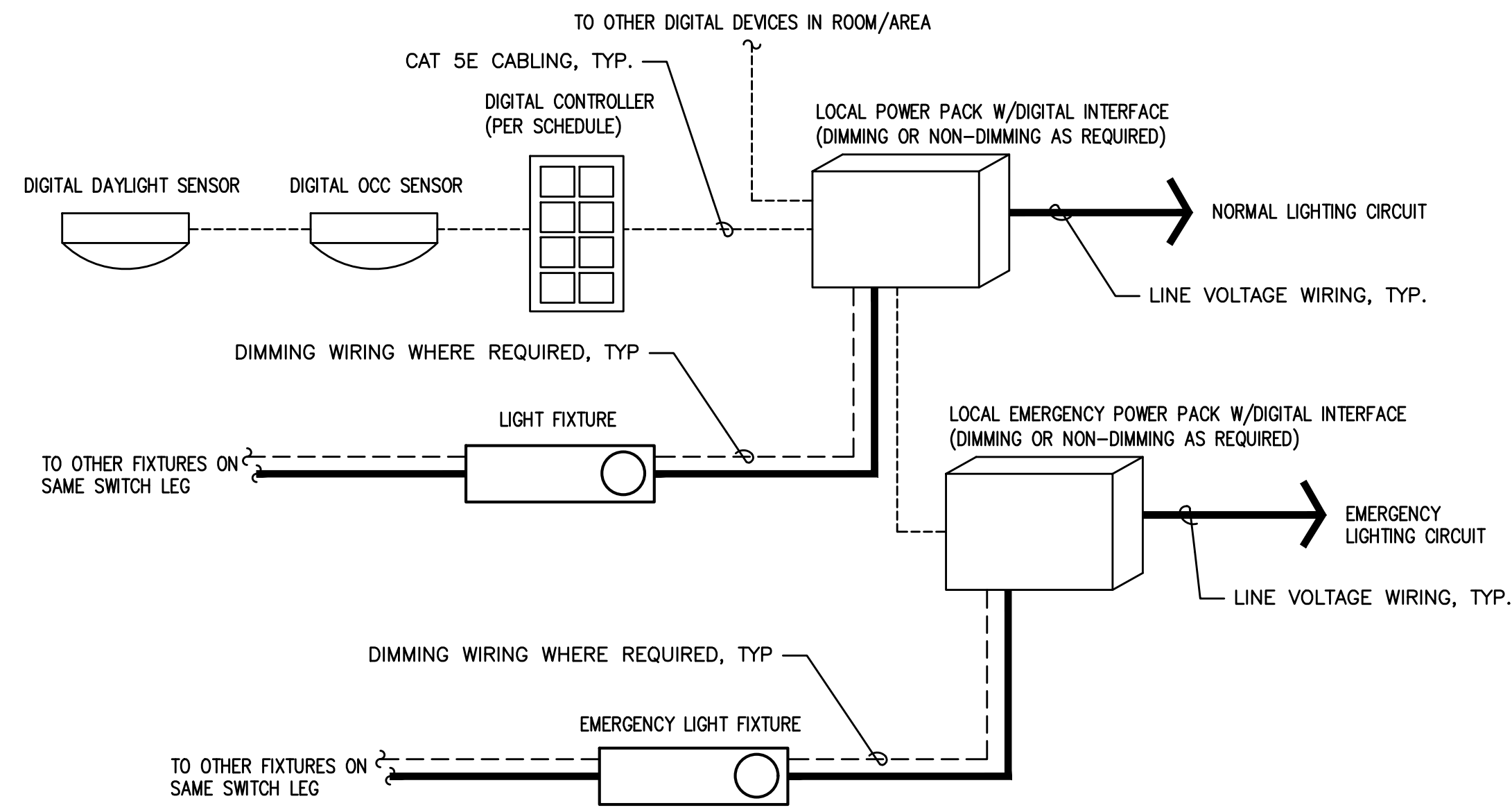
LIGHTING FIXTURE LIST - TYPICAL LIVING UNITS					
TYPE	LAMP	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	OPTIONS
U1	LED 700LM/90CRI 3000K (10W)	LIGHTOLIER JUNO (OR APPROVED EQUAL)	SD5R SERIES JSF SERIES	TYPE :5" DIA. DOWNLIGHT MOUNTING :SURFACE (J-BOX) HOUSING :ALUMINUM LENS/REFL :MOLDED POLYMER VOLTAGE :MVOLT BALLAST :LED DRIVER (0-10 DIMMING)	UL LISTED FOR WET LOCATION IN UNIT BATHROOMS. UNIT KITCHEN, HALL, BATHROOM
U3	LED 836LM 3000K (9W)	EUREKA (OR APPROVED EQUAL)	MIKA 4230 SERIES	TYPE :PENDANT LIGHT MOUNTING :SURFACE HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :120V BALLAST :LED DRIVER (0-10 DIMMING)	FINISH PER ARCHITECT. UNIT DINING
U4	LED 1800LM 3000K (20W)	JUNO (OR APPROVED EQUAL)	JSF SERIES	TYPE :13" DIA. CEILING LIGHT MOUNTING :SURFACE HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :120V BALLAST :LED DRIVER (0-10 DIMMING)	FINISH PER ARCHITECT. UNIT BEDROOM
U5	LED 1900LM 3000K (36W)	LITHONIA (OR APPROVED EQUAL)	FMVCL36 SERIES	TYPE :36" VANITY LIGHT MOUNTING :SURFACE (+6" ABOVE MIRROR) HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :120V BALLAST :LED DRIVER	UNIT BATHROOM
U6	LED 1162LM 3000K (15W)	LITHONIA (OR APPROVED EQUAL)	UCEL SERIES	TYPE :36" UNDER CABINET MOUNTING :SURFACE HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :120V BALLAST :LED DRIVER	FIXTURE TO BE HARDWIRED W/ WALL SWITCH CONTROLS. UNIT KITCHEN

LIGHTING FIXTURE LIST - EXTERIOR					
TYPE	LAMP	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	OPTIONS
S1	LED 4000K 2700 LM 20W	LITHONIA (OR APPROVED EQUAL)	OLWX1 SERIES	TYPE :EXTERIOR WALL PACK MOUNTING :SURFACE (+8"-0" AFF) HOUSING :ALUMINUM LENS/REFL :POLYCARBONATE VOLTAGE :MVOLT BALLAST :LED DRIVER	UL LISTED WET LOCATION INTEGRAL PHOTOCELL BUILDING EXTERIOR
S2	LED 3500K 1300LM 19W	TERON LIGHTING (OR APPROVED EQUAL)	CRNM SERIES	TYPE :EXTERIOR WALL SCONCE (UP/DOWN) MOUNTING :SURFACE (+8"-0" AFF) HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	UL LISTED WET LOCATION BUILDING EXTERIOR
S3	LED 3500K 1500 LM 18W	LITHONIA (OR APPROVED EQUAL)	LD4N 30/15 L04AR LD SERIES	TYPE :4" DOWNLIGHT MOUNTING :RECESSED HOUSING :STEEL LENS/REFL : VOLTAGE :MVOLT BALLAST :LED DRIVER	UL LISTED WET LOCATION BUILDING EXTERIOR
S4	LED 4000K 4250LM 38W	LITHONIA (OR APPROVED EQUAL)	DSXO SERIES	TYPE :AREA LIGHT MOUNTING :POLE MOUNT (20'-0" POLE) HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	TYPE III DISTRIBUTION INTEGRAL PHOTOCELL BI-LEVEL SWITCHED DIMMING NIGHT SKY FRIENDLY WEST SERVICE AREA
S5	LED 4000K 1200LM 18W	ARCHITECTURAL AREA LIGHTING (OR APPROVED EQUAL)	SPECTRA SMALL SERIES	TYPE :POST TOP AREA LIGHT MOUNTING :12'-0" POLE HOUSING :ALUMINUM LENS/REFL :FROSTED ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	TYPE V DISTRIBUTION INTEGRAL PHOTOCELL BI-LEVEL SWITCHED DIMMING NIGHT SKY FRIENDLY COURTYARD
S6	LED 4000K 11,995LM 97W	EATON/STREET WORKS (OR APPROVED EQUAL)	OVH LED E04 SERIES	TYPE :LED AREA LIGHT MOUNTING :POLE (+25FT) HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	TYPE III DISTRIBUTION INTEGRAL PHOTOCELL BI-LEVEL SWITCHED DIMMING NIGHT SKY FRIENDLY FINISH TO MATCH POLE WEST PARKING LOT
S7	LED 3500K 600LM/FT 6W/FT	KELVIX (OR APPROVED EQUAL)	ZOLO Z3 XX 6W 35K 30 GS S1 CLASS 2 POWER SUPPLY	TYPE :LED WALL GLAZER MOUNTING :SURFACE (1" STAND OFF) HOUSING :ALUMINUM (FINISH PER ARCH) LENS/REFL :ACRYLIC VOLTAGE :24 VOLT BALLAST :LED DRIVER	CONTRACTOR TO COORDINATE INSTALLATION WITH ARCHITECT. VERIFY EXACT FIXTURE LENGTH & MOUNTING HEIGHT W/ ARCH UL LISTED WET LOCATION EXTERIOR SIGN LIGHTING
S8	LED 3500K 507LM/FT 2.6W/FT	KELVIX (OR APPROVED EQUAL)	PQ35K SERIES LED TAPE CH-045-R-E SERIES CHANNEL HLV192 SERIES POWER PACK	TYPE :LED TAPE LIGHT & CHANNEL MOUNTING :SURFACE HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :24 VOLT BALLAST :LED DRIVER	CONTRACTOR TO COORDINATE INSTALLATION WITH ARCHITECT. VERIFY EXACT FIXTURE LENGTH W/ ARCH ENTRY CANOPY
S9	LED 3500K 3.5W	BEGA LIGHTING (OR APPROVED EQUAL)	77 263 SERIES	TYPE :PATHWAY BOLLARD MOUNTING :GROUND STAKE HOUSING :ALUMINUM LENS/REFL :SAFETY GLASS VOLTAGE :12V BALLAST :LED DRIVER	FINISH PER ARCHITECT. BUILDING LANDSCAPE
S10	LED 3000K 60W	HALOPHANE LIGHTING (OR APPROVED EQUAL)	WASHINGTON POSTLITE SERIES	TYPE :POSTTOP AREA LIGHT MOUNTING :POLE (+14'-0") HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :240V BALLAST :LED DRIVER	FINISH, POLE HEIGHT & STYLE PER COUNTY STANDARD TYPE III DISTRIBUTION STREET LIGHT

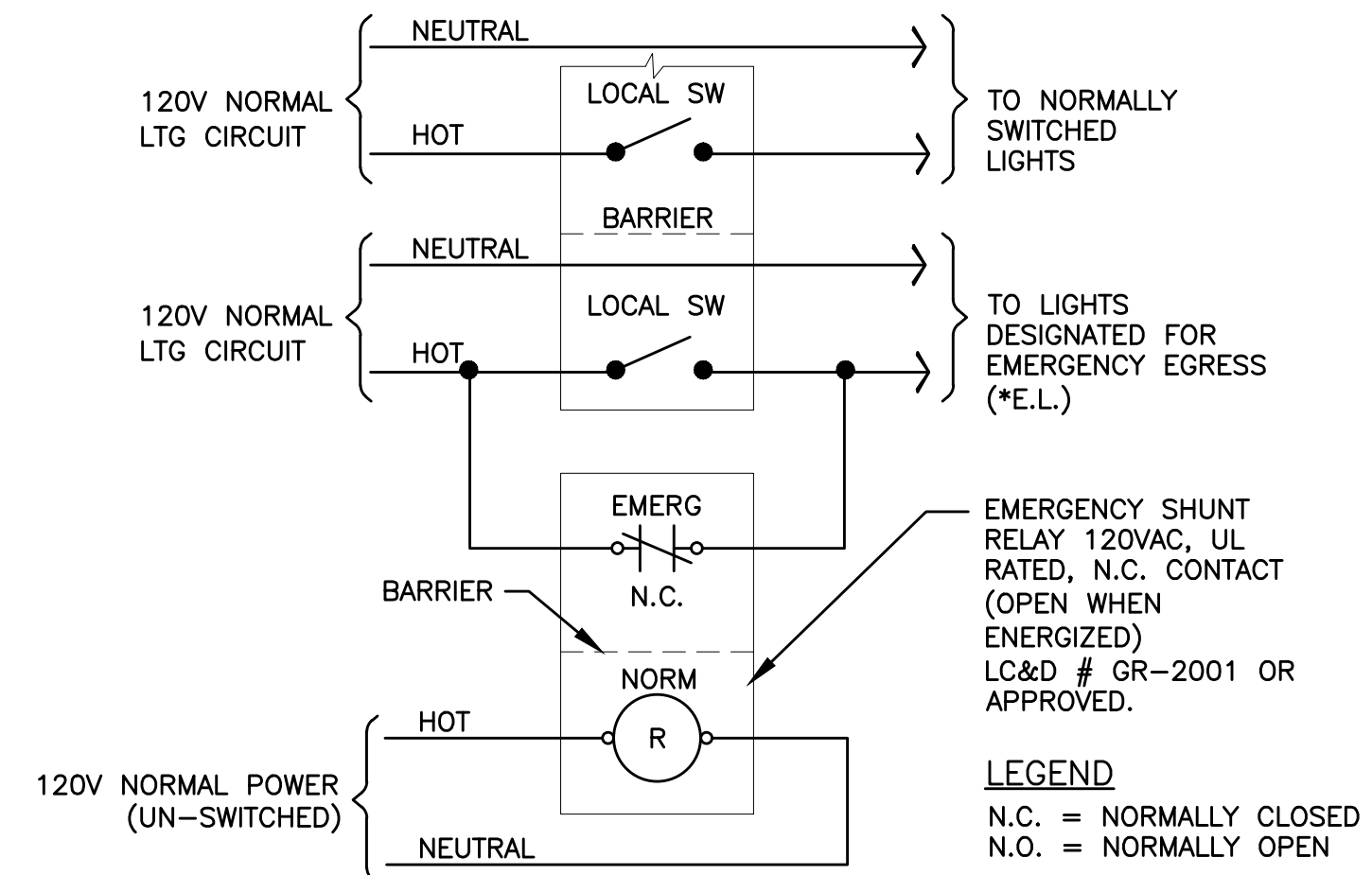
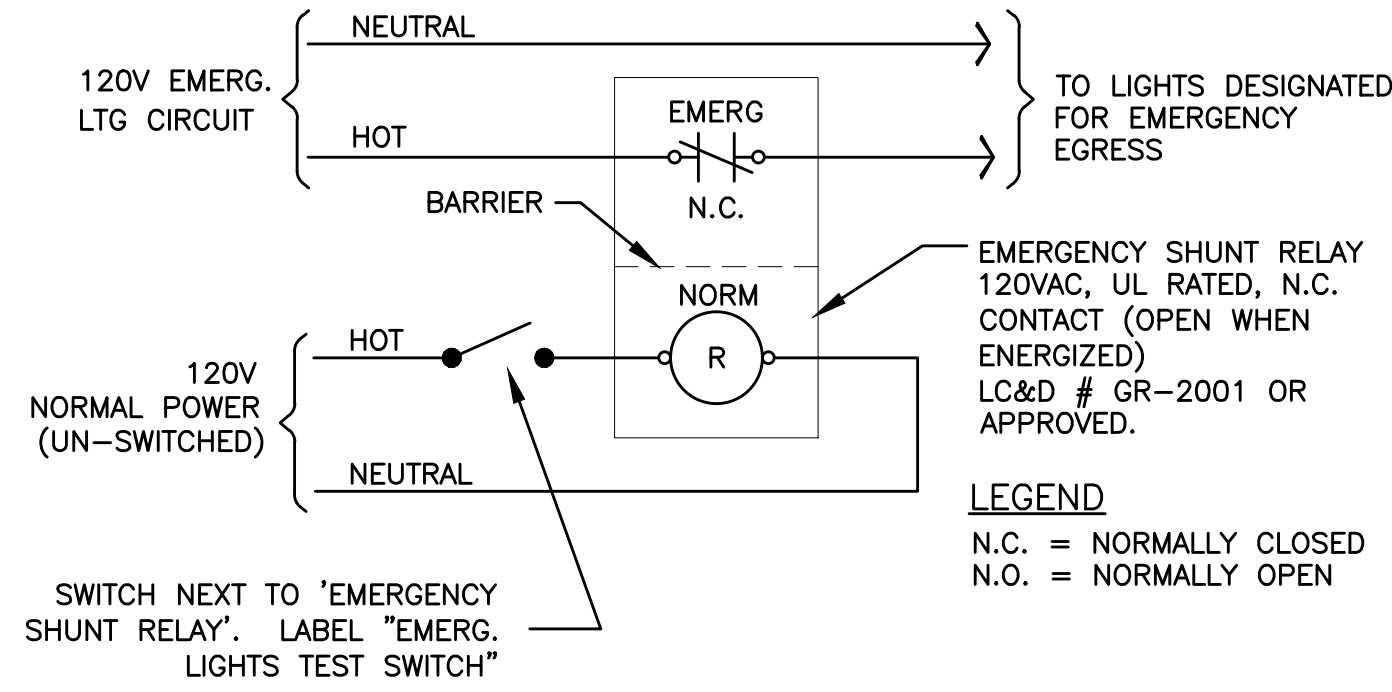
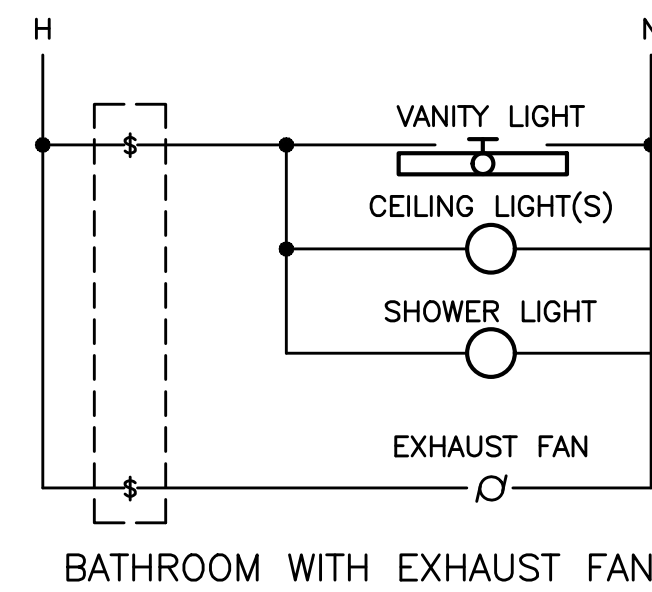
LIGHTING FIXTURE LIST					
TYPE	LAMP	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	OPTIONS
A1 A1E	LED 4260LM 4000K/80CRI 27.6W	LITHONIA (OR APPROVED EQUAL)	CLXL48SEF SERIES	TYPE :4FT GEN. PURPOSE STRIP MOUNTING :SURFACE HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	A1E WITH EMERGENCY BATTERY PACK PROVIDE W/ INTEGRAL OCC. SENSOR EQUIPMENT ROOMS
A2 A2E	LED 3800LM 4000K 32W	LITHONIA (OR APPROVED EQUAL)	FEML48 SERIES	TYPE :4' ENCLOSED STRIP MOUNTING :SURFACE HOUSING :FIBERGLASS LENS/REFL :POLYCARBONATE VOLTAGE :MVOLT BALLAST :LED DRIVER	A2E WITH EMERGENCY BATTERY PACK. PROVIDE W/ INTEGRAL OCC. SENSOR AT EA. LOCATION EXCEPT ELEVATOR PIT TRASH ROOM, ELEVATOR PIT
B1	LED 3000 LUMEN 3500K 20W	LITHONIA (OR APPROVED EQUAL)	CLX L48 SERIES	TYPE :4' LINEAR STRIP MOUNTING :SURFACE HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER (DIMMING)	PROVIDE WITH INTEGRAL OCCUPANCY SENSOR FOR 50% LIGHT REDUCTION DURING PERIODS OF UNDETECTED OCCUPANCY. STAIRWELLS
B2	LED 3000LM 3500K 20W	LITHONIA (OR APPROVED EQUAL)	CLX L48 SERIES	TYPE :LINEAR STRIP MOUNTING :SURFACE HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER (DIMMING)	STORAGE, KITCHEN
B3	LED 899LM/FT 3000K 32W	NULITE (OR APPROVED EQUAL)	RP4 4 B09 SERIES REGOLO PRODUCT FAMILY	TYPE :4' DIRECT/INDIRECT MOUNTING :SUSPENDED HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER (DIMMING)	COMPUTER RM, KITCHEN
B4 (2)	LED 724LM/FT 3000K 40W	NULITE (OR APPROVED EQUAL)	RP4 4 B06 SERIES REGOLO PRODUCT FAMILY	TYPE :6' DIRECT/INDIRECT MOUNTING :SUSPENDED HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER (DIMMING)	COMMUNITY ROOMS, LAUNDRY ROOM
B5	LED 724LM/FT 3000K 50W	NULITE (OR APPROVED EQUAL)	RP4 4 B06 SERIES REGOLO PRODUCT FAMILY	TYPE :8' DIRECT/INDIRECT MOUNTING :SUSPENDED HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER (DIMMING)	COMMUNITY ROOMS
B6	LED 3300LM 3000K 30W	MARK LIGHTING (OR APPROVED EQUAL)	WHSPR SERIES	TYPE :2X2 TROFFER MOUNTING :RECESSED HOUSING :STEEL LENS/REFL :ACRYLIC ANTI-GLARE VOLTAGE :MVOLT BALLAST :LED DRIVER (DIMMING)	OFFICES
C1	LED 1000LM 3000K 10W	LIGHTOLIER (OR APPROVED EQUAL)	L4R06 SERIES	TYPE :4" DIA. DOWNLIGHT MOUNTING :RECESSED HOUSING :STEEL LENS/REFL :CLEAR DIFFUSE VOLTAGE :MVOLT BALLAST :LED DRIVER (DIMMING)	UL LISTED FOR WET LOCATION FOR USE AT BUILDING ENTRIES. IC RATED FOR INTERIOR USE. CORRIDORS, OFFICE, COMMUNITY RMS
C2	LED 800LM 3000K 12W	LIGHTOLIER (OR APPROVED EQUAL)	L3RD SERIES	TYPE :3" DIA. DOWNLIGHT MOUNTING :RECESSED HOUSING :STEEL LENS/REFL :CLEAR DIFFUSE VOLTAGE :MVOLT BALLAST :LED DRIVER	BUILDING EXTERIOR
C3	LED 800LM 3000K 12W	LIGHTOLIER (OR APPROVED EQUAL)	L3RD SERIES	TYPE :3" DIA. DOWNLIGHT MOUNTING :RECESSED HOUSING :STEEL LENS/REFL :CLEAR DIFFUSE VOLTAGE :MVOLT BALLAST :LED DRIVER (DIMMING)	CORRIDOR, LOBBY
C4	LED 2000LM 3000K 20W	LIGHTOLIER (OR APPROVED EQUAL)	L4RD120 SERIES	TYPE :4" DIA. DOWNLIGHT MOUNTING :RECESSED HOUSING :STEEL LENS/REFL :CLEAR DIFFUSE VOLTAGE :MVOLT BALLAST :LED DRIVER (DIMMING)	IC RATED CORRIDORS
D1	LED 1900LM 3000K 34W	LITHONIA (OR APPROVED EQUAL)	FMVCL 36 SERIES	TYPE :VANITY LIGHT MOUNTING :SURFACE (6" ABOVE MIRROR) HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	RESTROOMS
D2	LED 600LM (MAX.) 3000K 11W	ALPHABET LIGHTING (OR APPROVED EQUAL)	NU3RD SERIES	TYPE :3" DIA. SEMI-FLUSH DOWNLIGHT MOUNTING :RECESSED HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	APARTMENT UNIT ENTRIES
L1	LED 1500LM 3000K 110W	EUREKA LIGHTING (OR APPROVED EQUAL)	8200/8293 SERIES ARENA SLICE PRODUCT FAMILY	TYPE :36" DIA PENDANT MOUNTING :SUSPENDED HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	VERIFY MOUNTING HEIGHT W/ ARCHITECT INCLUDE (3) TOTAL SLICE 36 MAIN LOBBY
X1 X2	LED (RED) 2.5W	SURE-LITES LITHONIA (OR APPROVED EQUAL)	TPX SERIES LQC SERIES	TYPE :EXIT SIGN MOUNTING :UNIVERSAL HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :NICKLE CADMIUM BATTERY	SINGLE OR DOUBLE SIDED AS INDICATED.



architecture, interiors & planning



LIGHTING CONTROLS LEGEND	
\$L_V1	DIGITAL CONTROLLER WITH ON/OFF PUSHBUTTONS
\$L_V2	DIGITAL CONTROLLER WITH SINGLE ZONE ON/OFF PUSHBUTTONS AND UP/DOWN DIM BUTTONS
\$L_V3	DIGITAL GRAPHIC CONTROLLER WITH MULTI ZONE ON/OFF PUSHBUTTONS AND UP/DOWN DIM BUTTONS



FULLER STATION HOUSING

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Clackamas County, Oregon, 97086



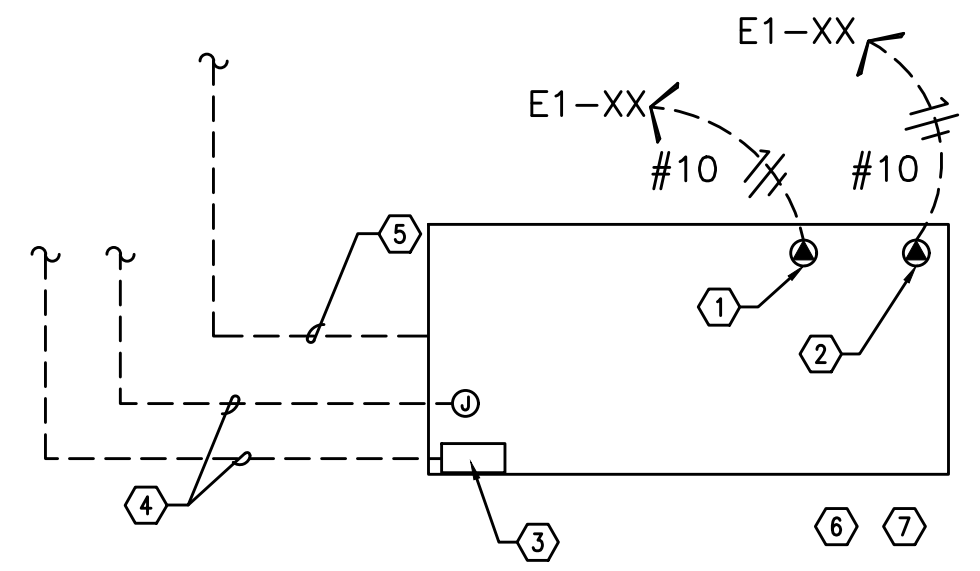
PERMIT SET DOCUMENTS

PROJECT #: 1617.00
SHEET ISSUE DATE: 01/31/2020

REVISIONS:		
#	DESCRIPTION	DATE
1	COUNTY REVIEW RESPONSES	10.09.2020
2	ADDENDUM #1	10.09.2020
3	RFI 03	11.19.2020
6	ASI #01	03.05.2021

ELECTRICAL DETAILS

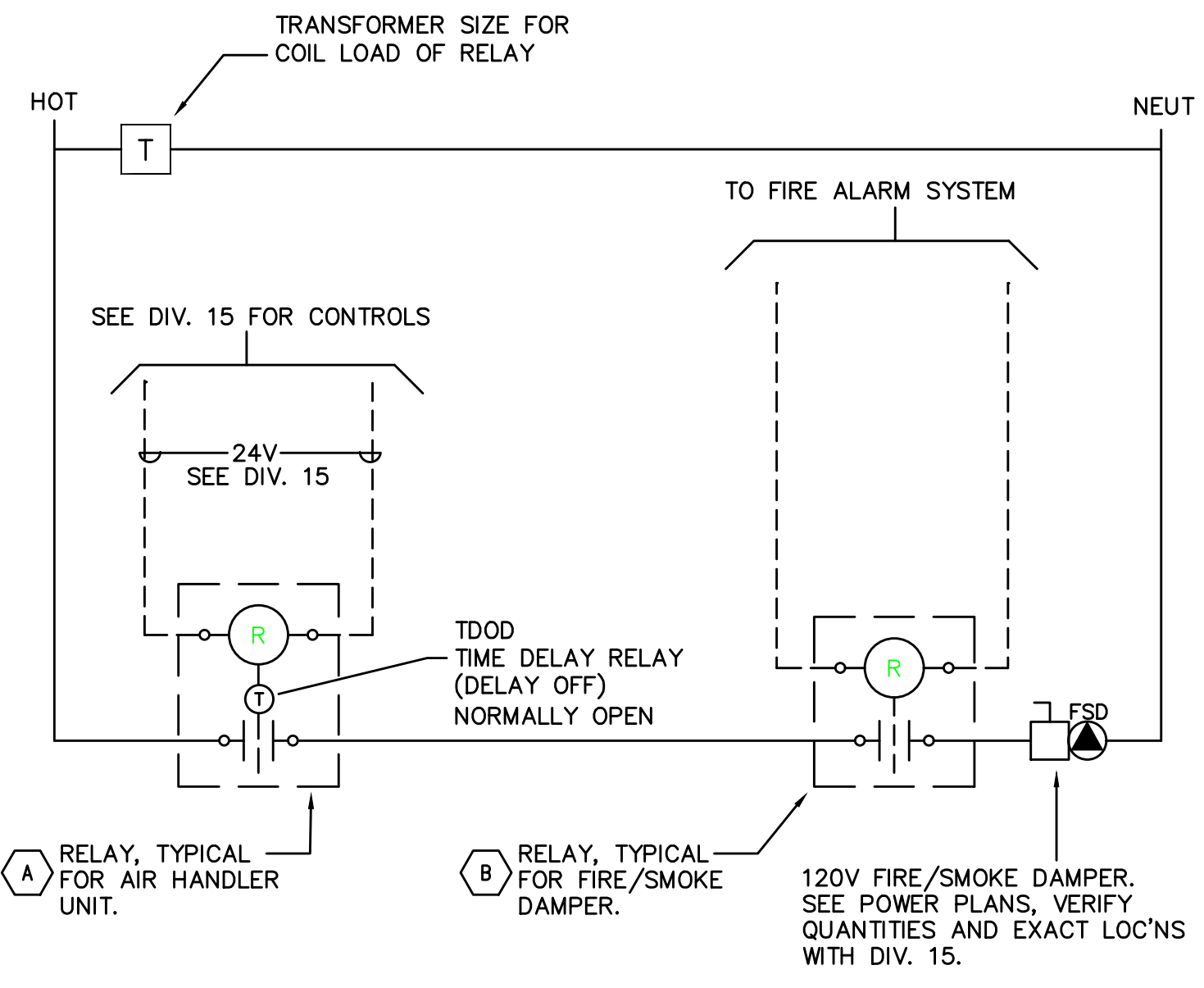
E1.22



1 GENERATOR CIRCUITING DETAIL
E1.23 NO SCALE

GENERATOR KEY NOTES:

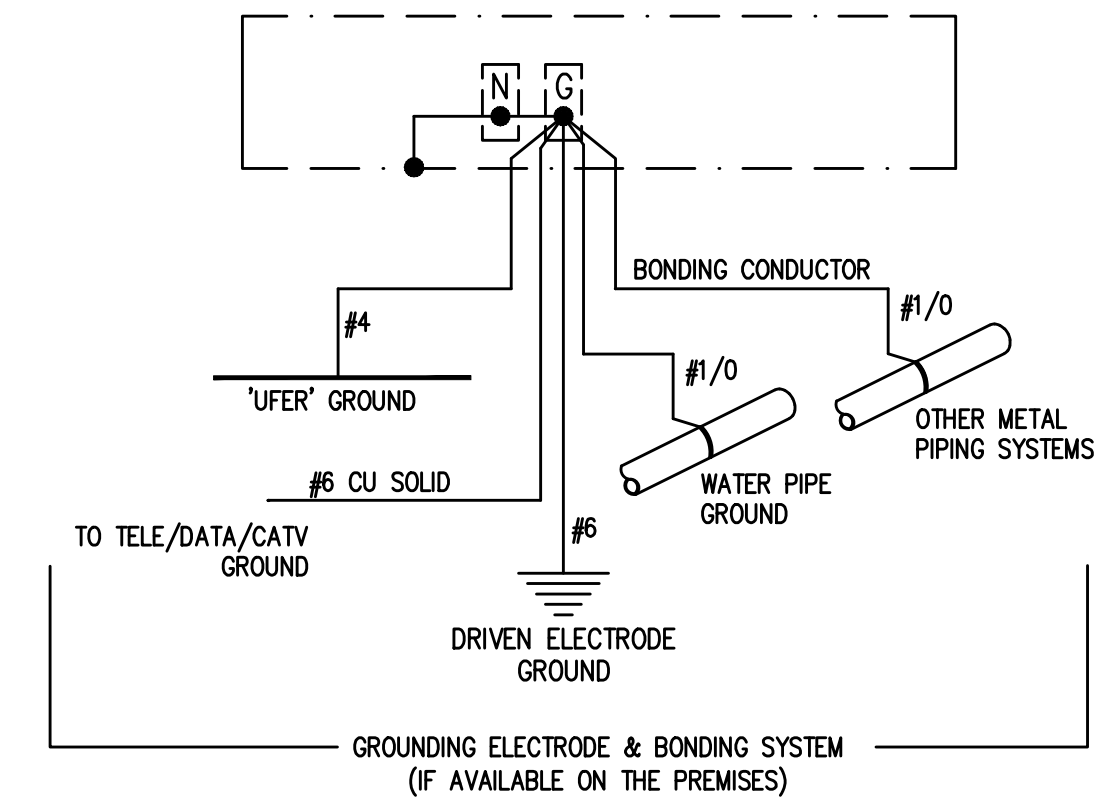
- 120V GENERATOR BLOCK HEATER. PANEL EM.
- 120V GENERATOR BATTERY CHARGER. PANEL EM.
- GENERATOR OUTPUT BREAKER AND CONTROL SECTION. PANEL EM.
- POWER AND CONTROL TO TRANSFER SWITCH AND REMOTE ANNUNCIATOR. SEE ONE-LINE DIAGRAM ON SHEET E1.11.
- TO AUTOMATIC TRANSFER SWITCH.
- DIESEL GENERATOR TO BE PROVIDED WITH DOUBLE-WALL FUEL TANK AND SPILL CONTAINMENT PER CITY OF PORTLAND REQUIREMENTS.
- DIESEL GENERATOR TANK SHALL DOUBLE WALLED AND BE EQUIPPED WITH OVERFILL PROTECTION (AUTO SHUTOFF), 5 GALLON INFILL SPILL BUCKET WITH DRAIN BACK, 12FT ABOVE GRADE TANK FUME VENTING AND ONSITE PRESSURE TESTING PER CITY REQUIREMENTS.



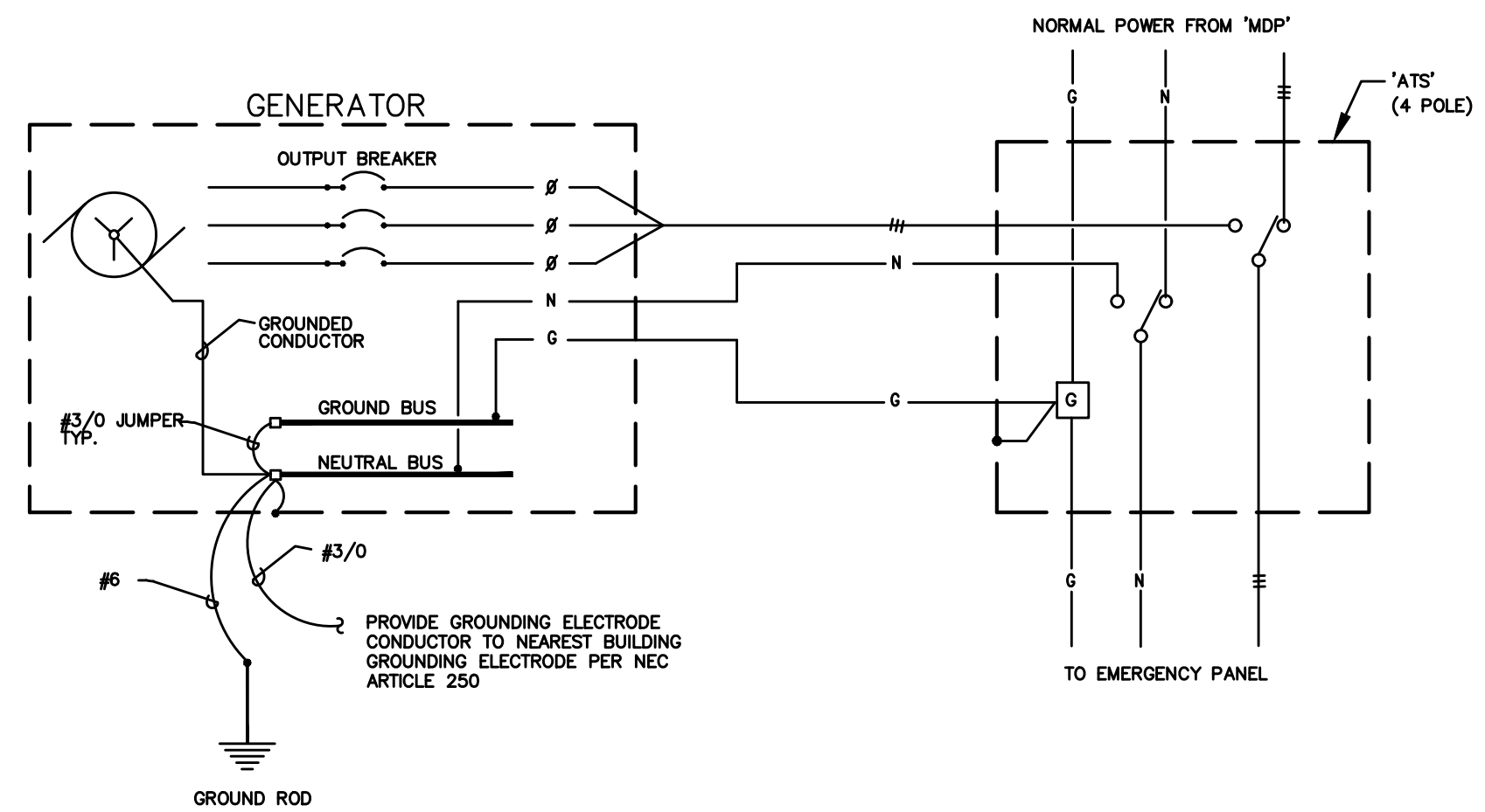
4 SMOKE/FIRE DAMPER CONTROL DIAGRAM
E1.23 NO SCALE

ADDRESSABLE DETECTOR CONTROL

- A RELAY TO BE "NORMALLY OPEN". TDOD (TIME DELAY ON DE-ENERGIZE) SET FOR 15 SECONDS. RELAY TO CLOSE UPON SIGNAL FROM HVAC CONTROL SYSTEM (ALLOWS DAMPER TO OPEN); PROVIDE WITH 20A CONTACTS AND COIL VOLTAGE AS REQ'D BY HVAC CONTROL SYSTEM. MOUNT RELAY IN NEMA 1 ENCLOSURE ADJACENT TO HVAC CONTROL PANEL.
- B RELAY TO BE "NORMALLY ENERGIZED". RELAY TO BE DE-ENERGIZED UPON SIGNAL FROM FIRE ALARM SYSTEM (ALLOWS DAMPERS TO CLOSE). PROGRAM FIRE ALARM SYSTEM FOR 15 SECOND DELAY BETWEEN SMOKE DETECTOR ACTIVATION AND FIRE/SMOKE DAMPER SHUTDOWN. PROVIDE WITH 20A CONTACTS AND COIL VOLTAGE AS REQ'D BY FIRE ALARM SYSTEM. MOUNT RELAY IN NEMA 1 ENCLOSURE ADJACENT TO FIRE/SMOKE DAMPER.

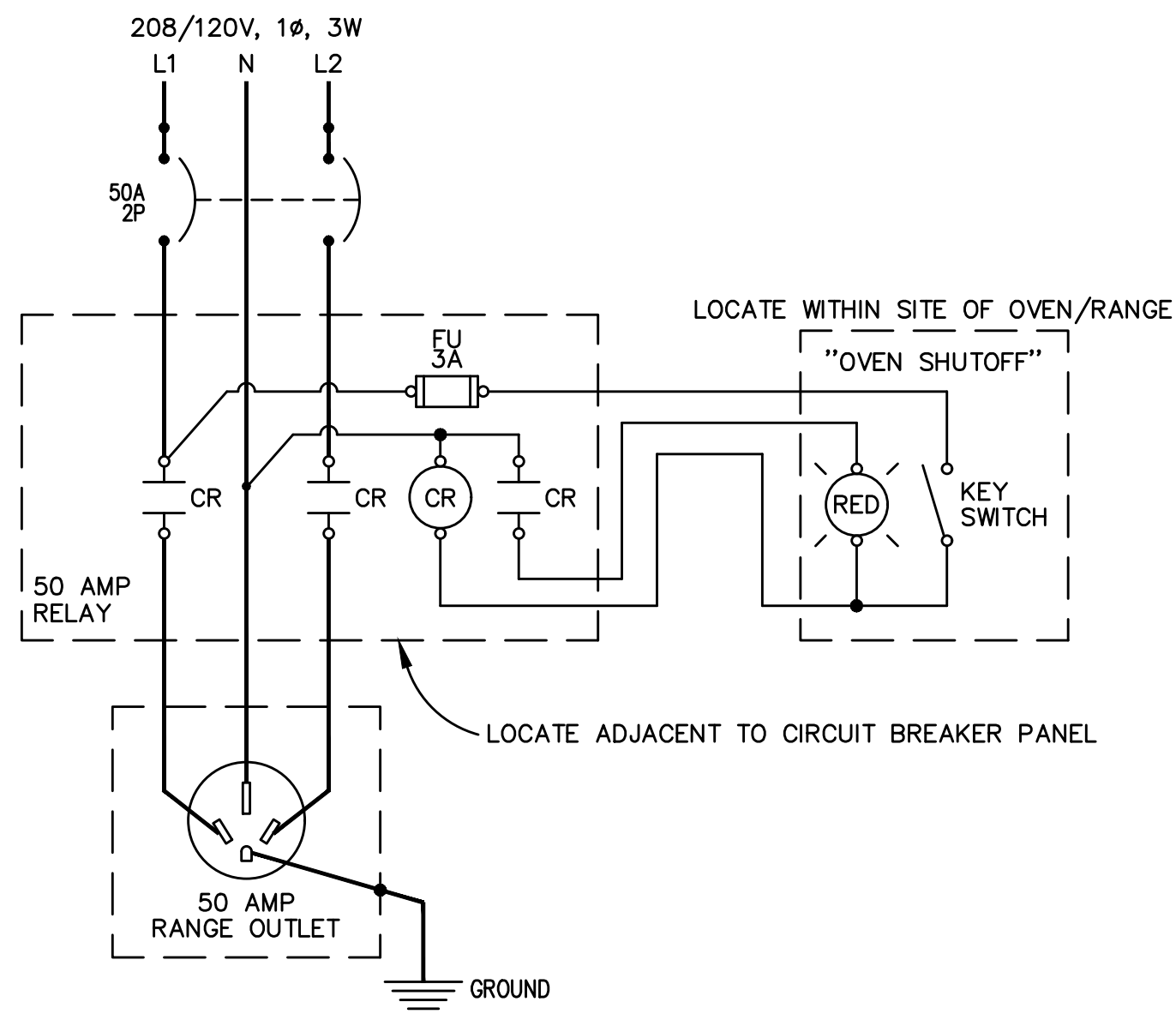


2 GROUNDING/BONDING DIAGRAM
E1.23 NO SCALE

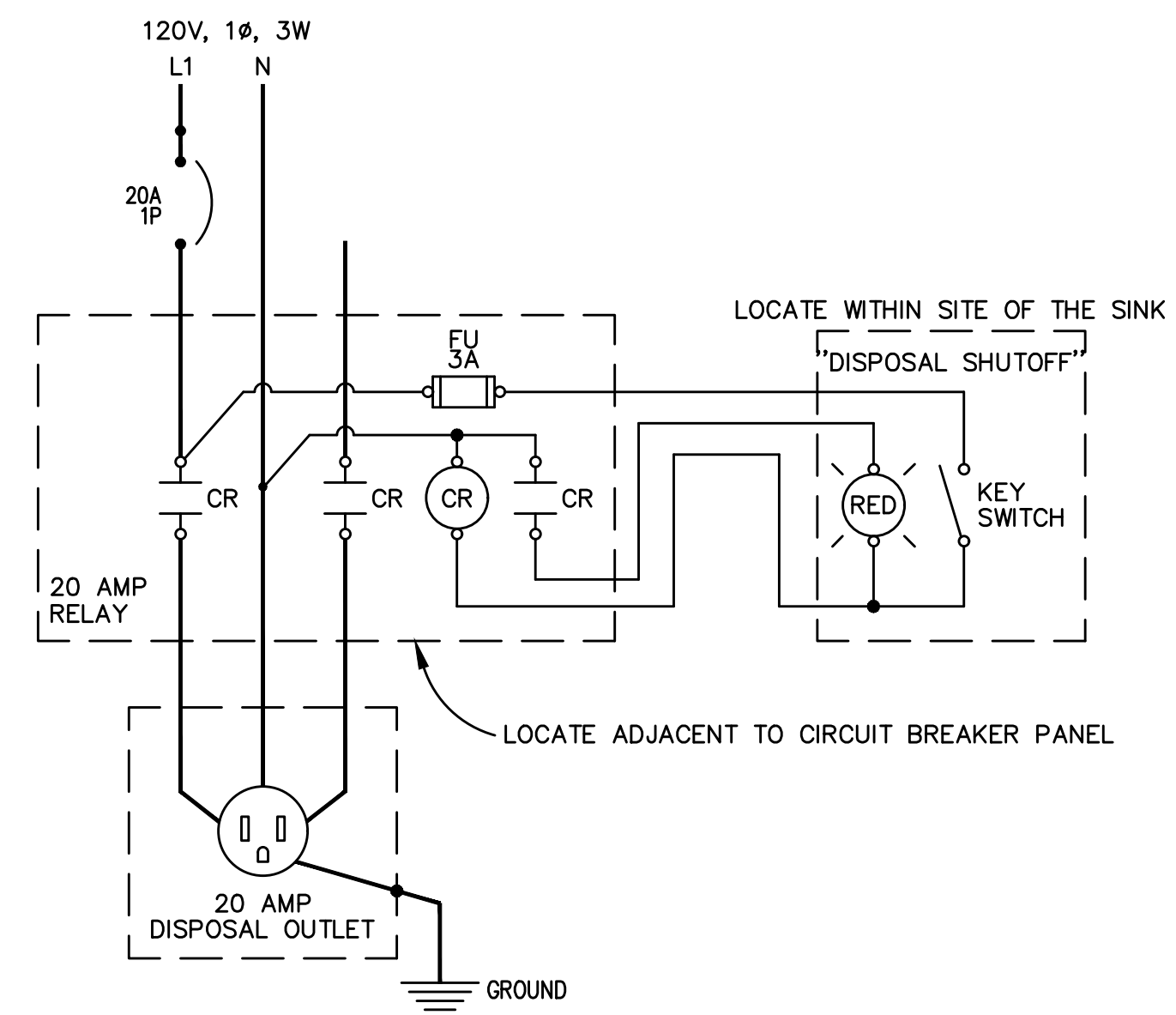


3 GENERATOR ELECTRICAL GROUNDING /BONDING DETAIL
E1.23 NO SCALE

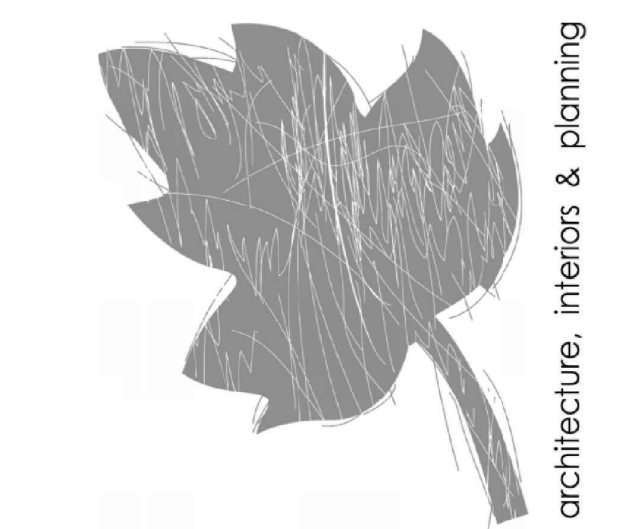
NOTE: ALL GROUNDING/BONDING CONDUCTORS ARE COPPER.



5 RANGE/OVEN CUTOFF SWITCH
E1.23 NO SCALE



6 DISPOSAL CUTOFF SWITCH
E1.23 NO SCALE



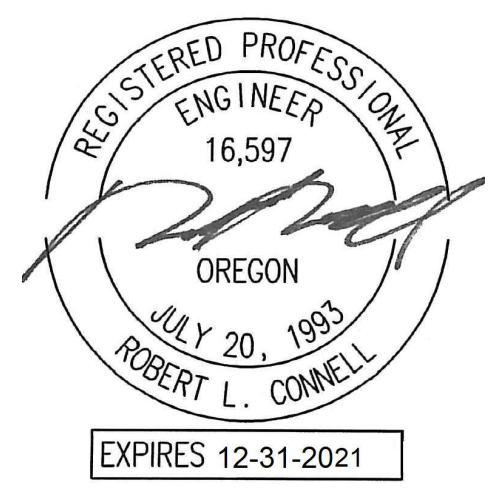
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FULLER STATION HOUSING

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ELECTRICAL DETAILS

E1.23

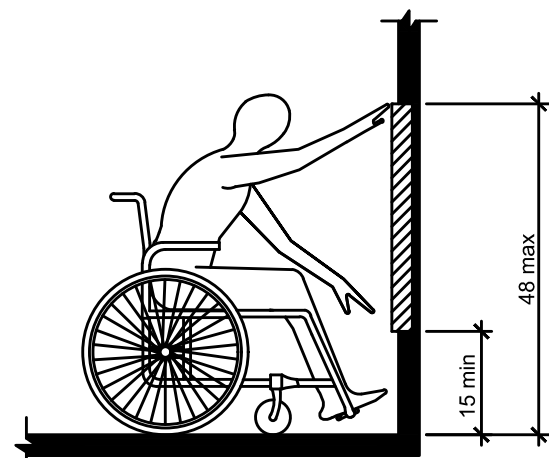


Figure 308.2.1
Unobstructed Forward Reach

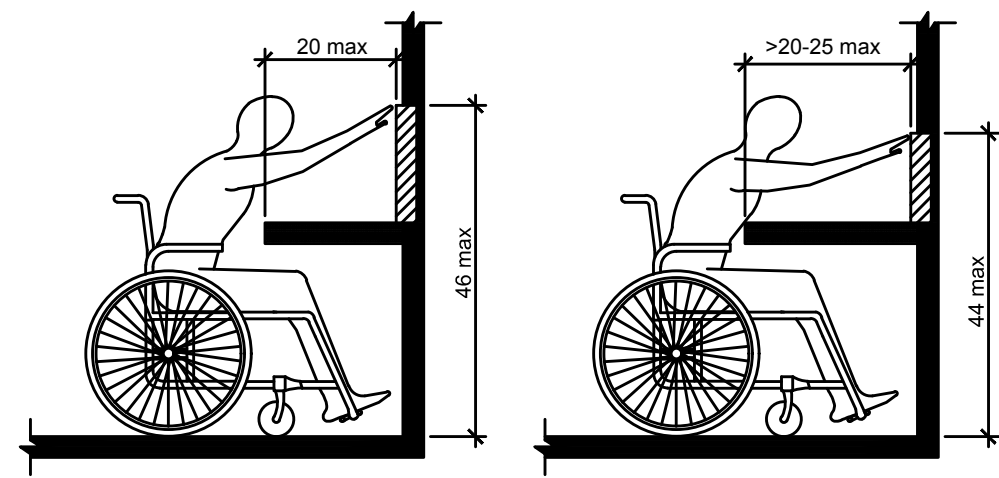


Figure 308.2.2
Obstructed High Forward Reach

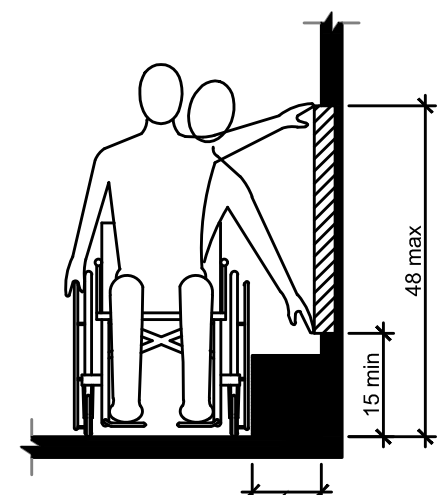


Figure 308.3.1
Unobstructed Side Reach

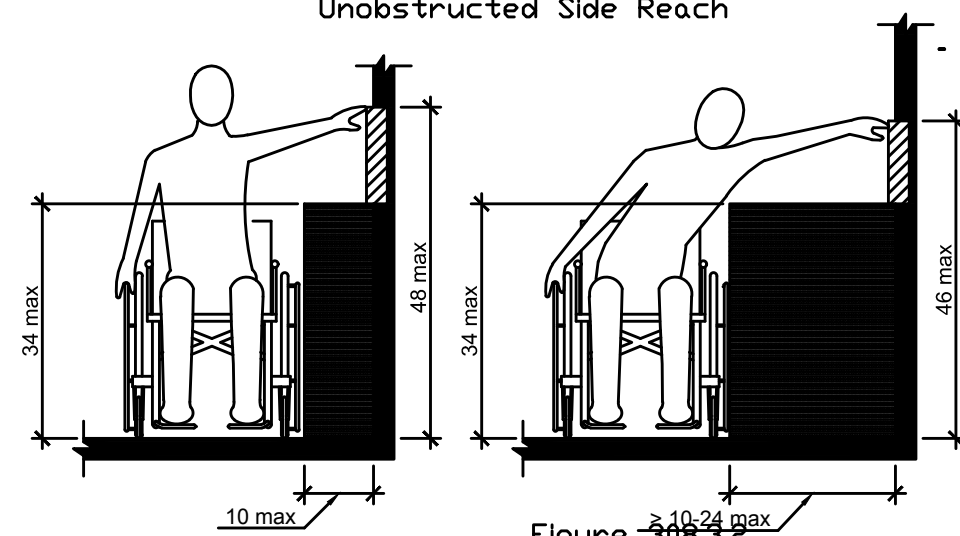


Figure 308.3.2
Obstructed High Side Reach

1 ADA REACH REQUIREMENTS
E1.24 N.T.S.

308.2 Forward Reach.

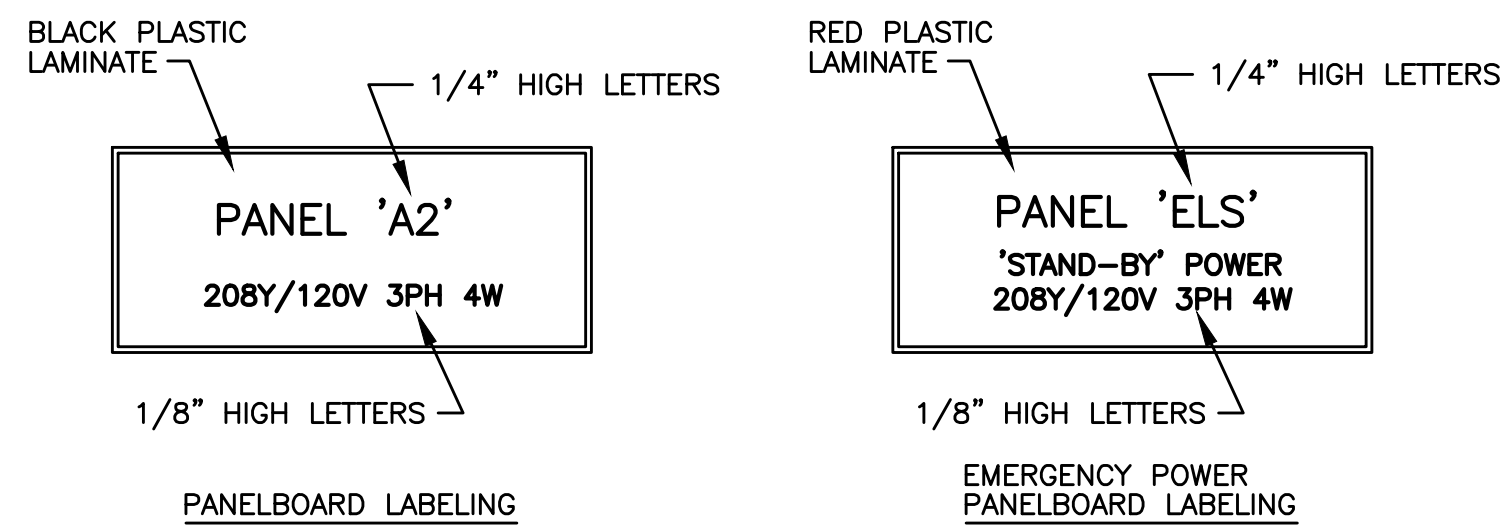
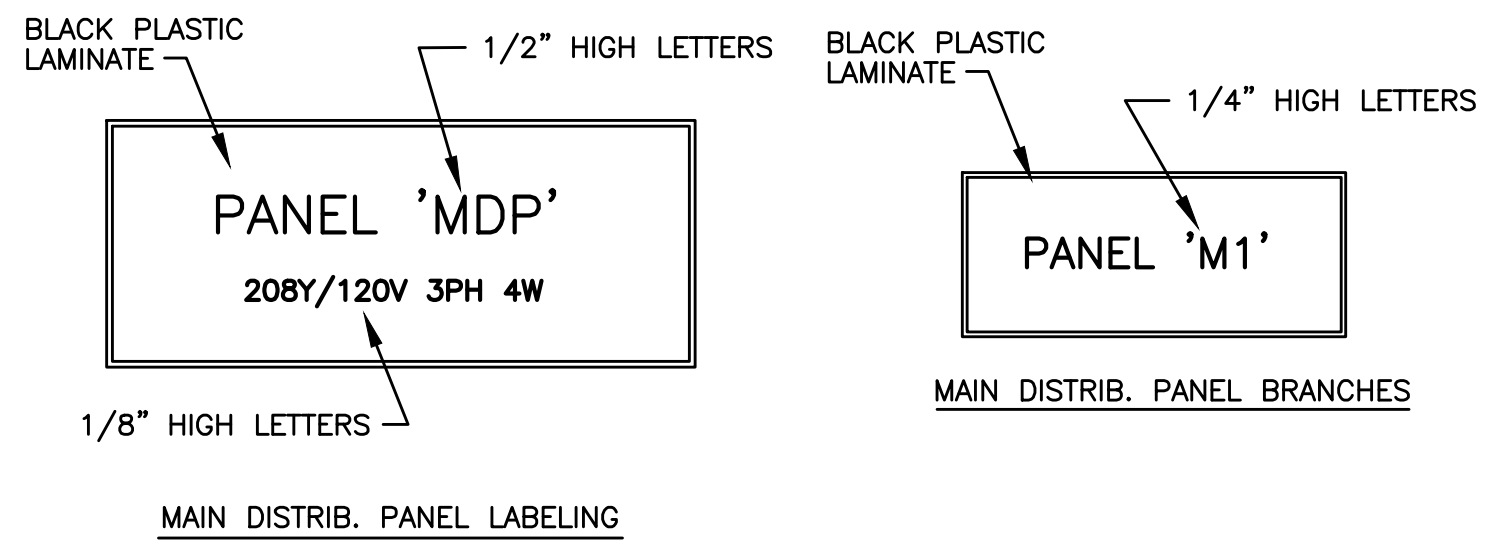
308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48" maximum and the low forward reach shall be 15" minimum above the floor or ground.

308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the clear floor or ground space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48" maximum where the reach depth is 20" maximum. Where the reach depth exceeds 20", the high forward reach shall be 44" maximum and the reach depth shall be 25" maximum.

308.3 Side Reach.

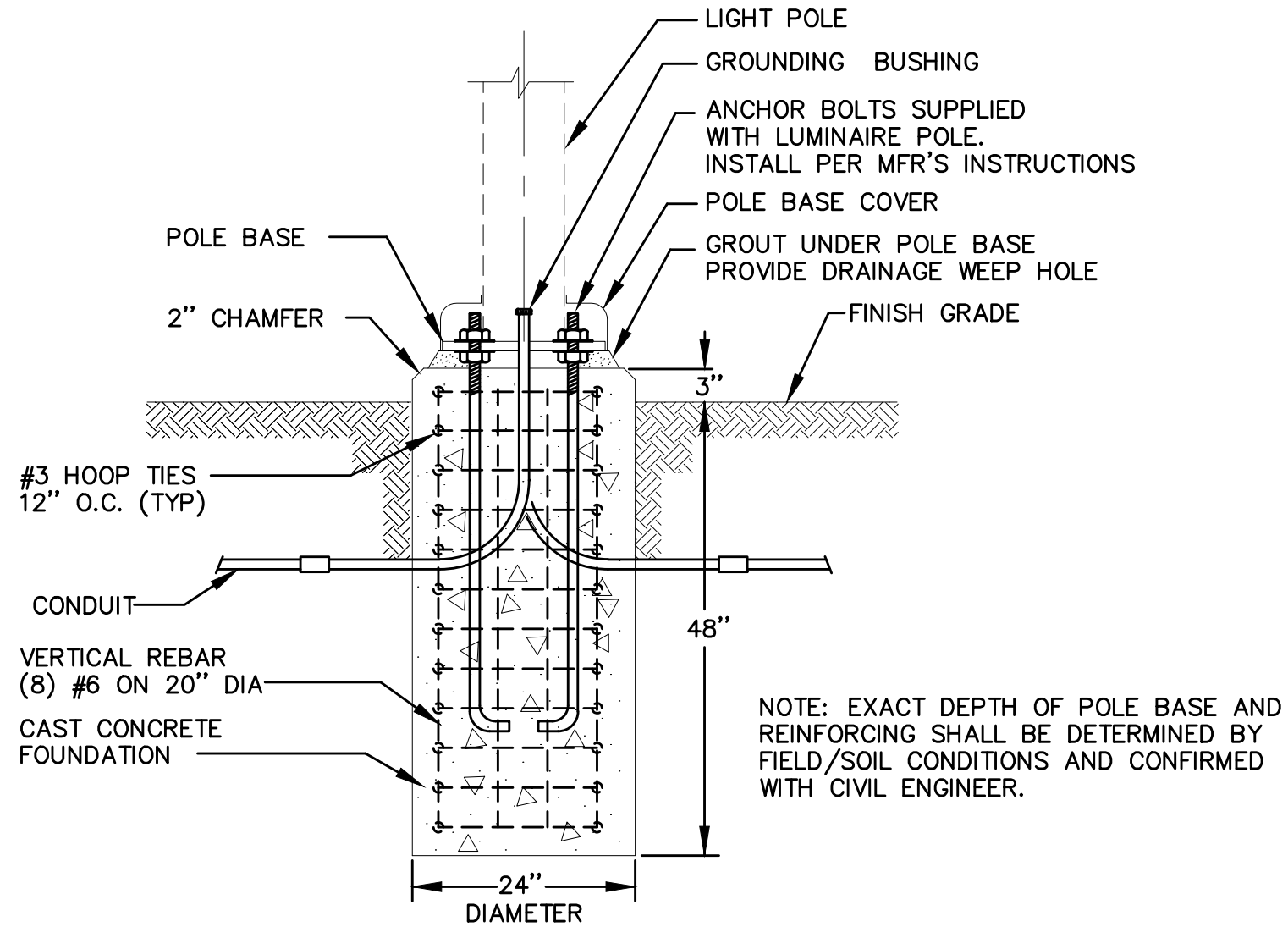
308.3.1 Unobstructed. Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48" maximum and the low side reach shall be 15" minimum above the floor or ground.
Exception: Existing elements shall be permitted at 54" maximum above the floor or ground.

308.3.2 Obstructed High Reach. Where a clear floor or ground space allows a parallel approach to an object and the high side reach is over an obstruction, the height of the obstruction shall be 34" maximum and the depth of the obstruction shall 24" maximum. The high side reach shall be 48" maximum for a reach depth of 10" maximum. Where the reach depth exceeds 10", the high side reach shall be 46" maximum for a reach depth of 24" maximum.



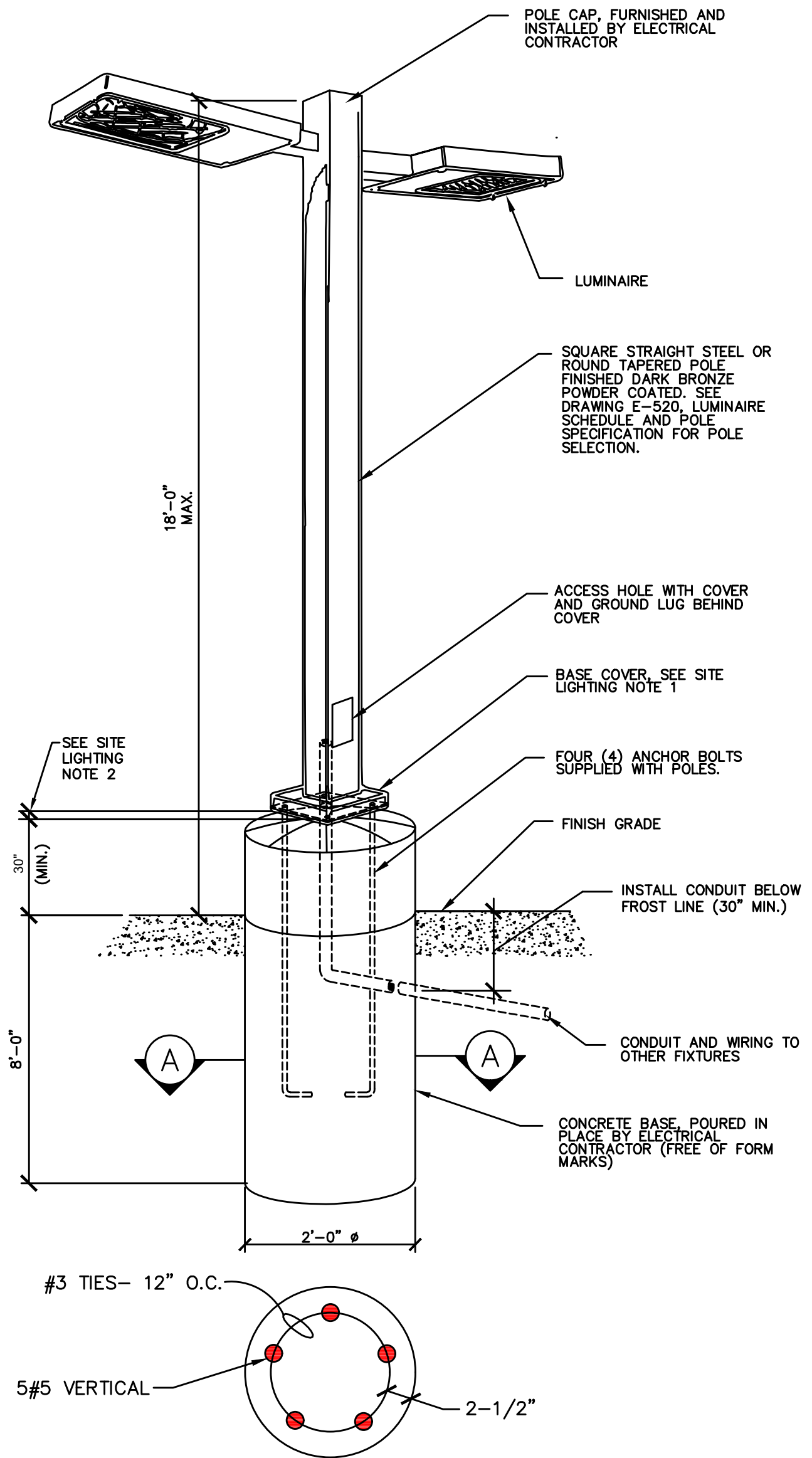
NOTE: ALL LETTERS ARE ENGRAVED WHITE

2 SWITCHBOARD/PANEL LABELING DETAIL
E1.24 NO SCALE



NOTE: EXACT DEPTH OF POLE BASE AND REINFORCING SHALL BE DETERMINED BY FIELD/SOIL CONDITIONS AND CONFIRMED WITH CIVIL ENGINEER.

3 POLE BASE MOUNTING DETAIL (AT GRADE)
E1.24 NO SCALE

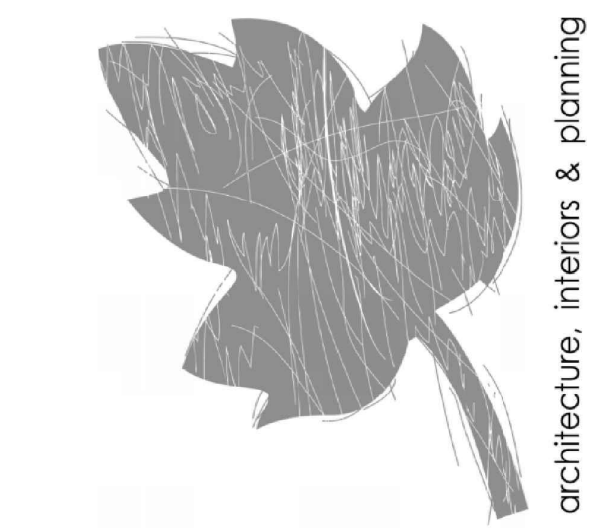


SECTION A-A
NOT TO SCALE

4 POLE BASE DETAIL (ABOVE GRADE)
E1.24 NO SCALE

NOTES

1. PROVIDE CROWN ON TOP OF CONCRETE BASE TO COMPLETELY SHED WATER.
2. 1/2" (MIN) AIRGAP SPACE BETWEEN TOP OF CONCRETE CROWN AND BOTTOM OF POLE BASE PLATE FOR VENTILATION.



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FULLER STATION HOUSING

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Clackamas County, Oregon, 97086



EXPIRES 12-31-2021

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ELECTRICAL
DETAILS

E1.24



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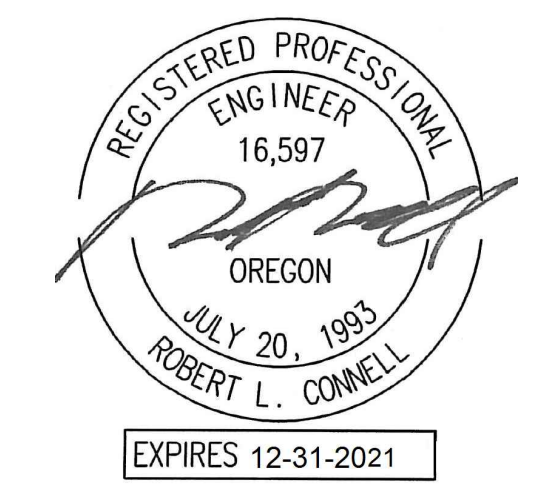
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FULLER STATION HOUSING

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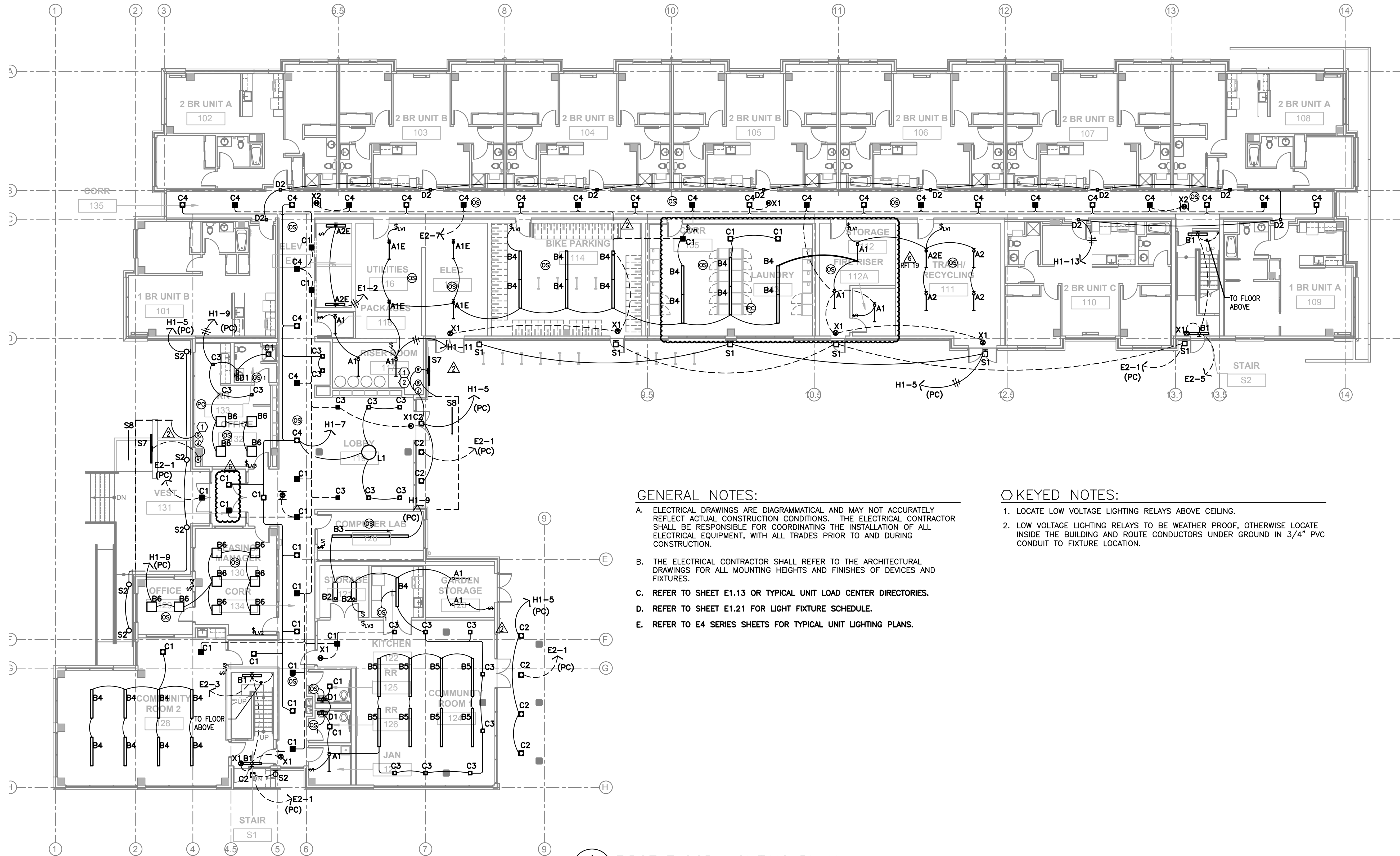
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PROJECT #: 1617.00
SHEET ISSUE DATE: 01/31/2020

#	DESCRIPTION	DATE
1	COUNTY REVIEW RESPONSES	10.09.2020
2	ADDENDUM #1	10.09.2020
3	RFI #3	11.19.2020
6	ASI #01	03.05.2021

FIRST FLOOR LIGHTING PLAN

E2.01



GENERAL NOTES:

- A. ELECTRICAL DRAWINGS ARE DIAGRAMMATICAL AND MAY NOT ACCURATELY REFLECT ACTUAL CONSTRUCTION CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT, WITH ALL TRADES PRIOR TO AND DURING CONSTRUCTION.
- B. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL MOUNTING HEIGHTS AND FINISHES OF DEVICES AND FIXTURES.
- C. REFER TO SHEET E1.13 OR TYPICAL UNIT LOAD CENTER DIRECTORIES.
- D. REFER TO SHEET E1.21 FOR LIGHT FIXTURE SCHEDULE.
- E. REFER TO E4 SERIES SHEETS FOR TYPICAL UNIT LIGHTING PLANS.

KEYED NOTES:

- 1. LOCATE LOW VOLTAGE LIGHTING RELAYS ABOVE CEILING.
- 2. LOW VOLTAGE LIGHTING RELAYS TO BE WEATHER PROOF, OTHERWISE LOCATE INSIDE THE BUILDING AND ROUTE CONDUCTORS UNDER GROUND IN 3/4" PVC CONDUIT TO FIXTURE LOCATION.

1 FIRST FLOOR LIGHTING PLAN
E2.01 SCALE: 3/32" = 1'-0"



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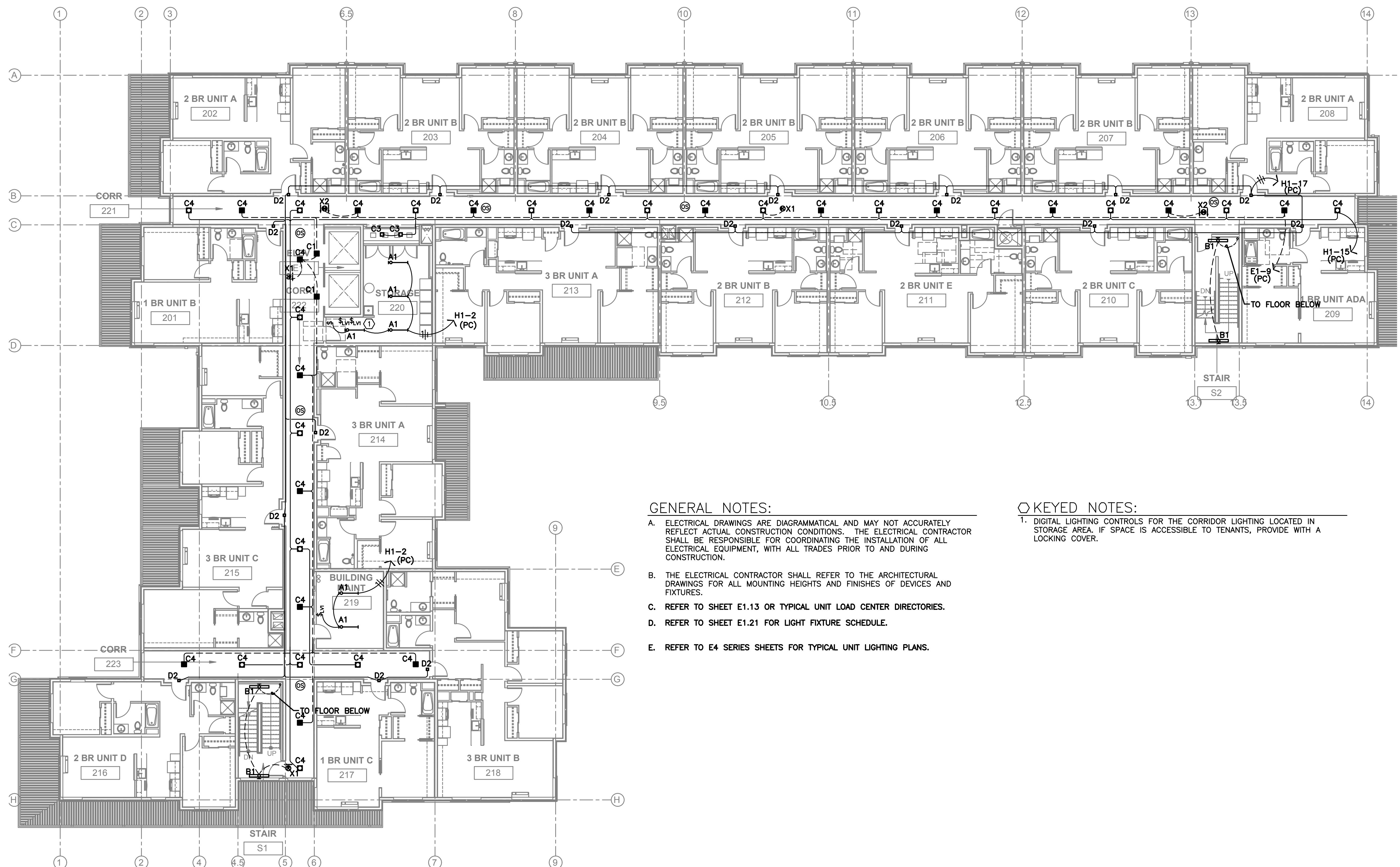


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- D. REFER TO SHEET E1.21 FOR LIGHT FIXTURE SCHEDULE.
- E. REFER TO E4 SERIES SHEETS FOR TYPICAL UNIT LIGHTING PLANS.

KEYED NOTES:

- 1. DIGITAL LIGHTING CONTROLS FOR THE CORRIDOR LIGHTING LOCATED IN STORAGE AREA. IF SPACE IS ACCESSIBLE TO TENANTS, PROVIDE WITH A LOCKING COVER.

1 SECOND FLOOR LIGHTING PLAN
E2.02 SCALE: 3/32" = 1'-0"

SECOND FLOOR LIGHTING PLAN

E2.02



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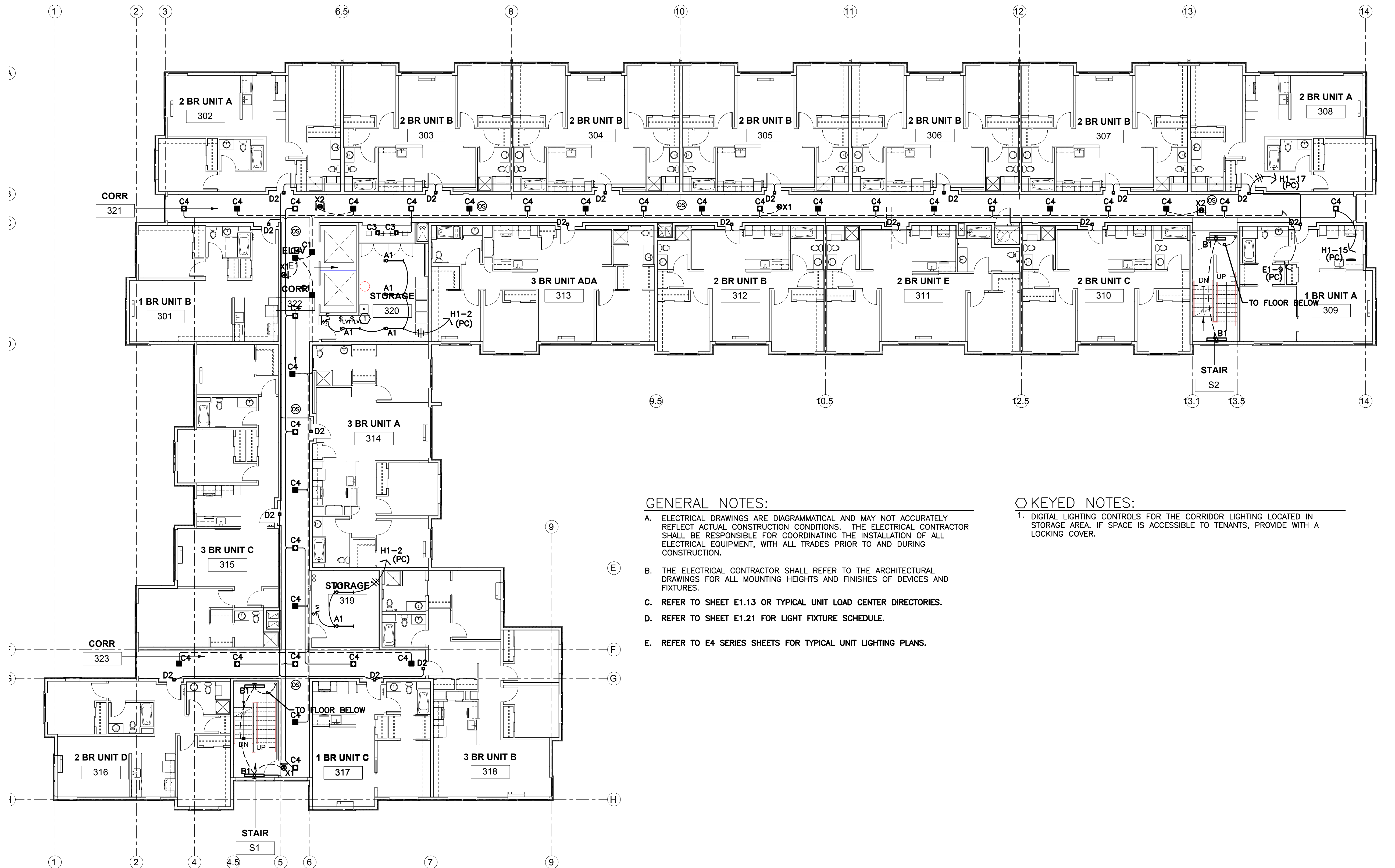
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THIRD FLOOR
LIGHTING PLAN

E2.03



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- D. REFER TO SHEET E1.21 FOR LIGHT FIXTURE SCHEDULE.
- E. REFER TO E4 SERIES SHEETS FOR TYPICAL UNIT LIGHTING PLANS.

KEYED NOTES:

- 1. DIGITAL LIGHTING CONTROLS FOR THE CORRIDOR LIGHTING LOCATED IN STORAGE AREA. IF SPACE IS ACCESSIBLE TO TENANTS, PROVIDE WITH A LOCKING COVER.

1 THIRD FLOOR LIGHTING PLAN
E2.03 SCALE: 3/32" = 1'-0"



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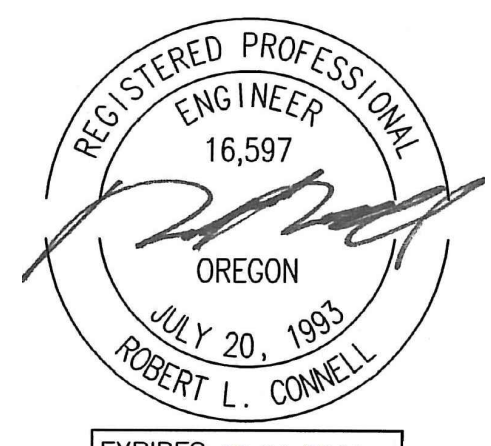
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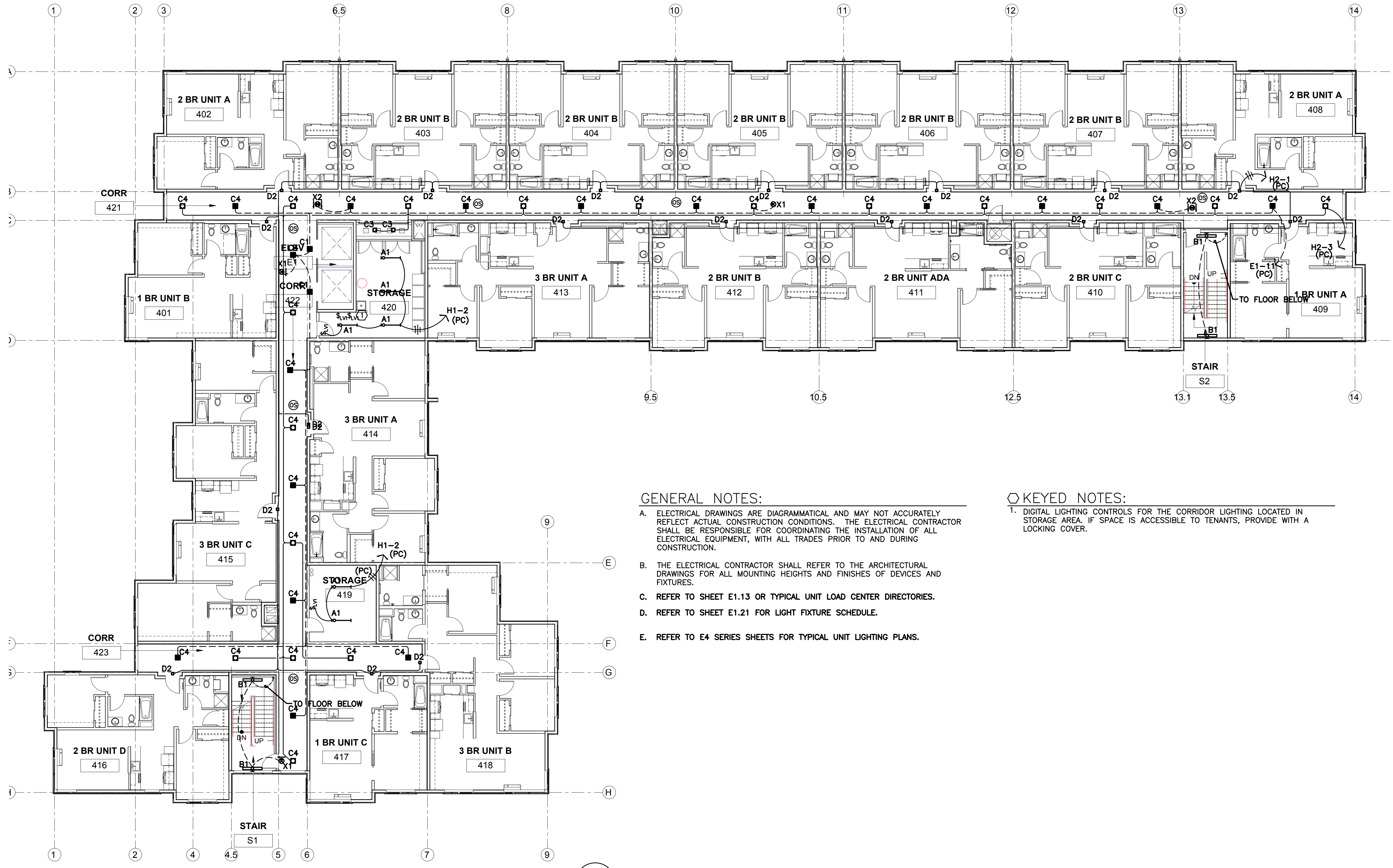
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FOURTH FLOOR LIGHTING PLAN

E2.04



GENERAL NOTES:

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- D. REFER TO SHEET E1.21 FOR LIGHT FIXTURE SCHEDULE.
- E. REFER TO E4 SERIES SHEETS FOR TYPICAL UNIT LIGHTING PLANS.

KEYED NOTES:

- 1. DIGITAL LIGHTING CONTROLS FOR THE CORRIDOR LIGHTING LOCATED IN STORAGE AREA. IF SPACE IS ACCESSIBLE TO TENANTS, PROVIDE WITH A LOCKING COVER.

1 FOURTH FLOOR LIGHTING PLAN
E2.04 SCALE: 3/32" = 1'-0"



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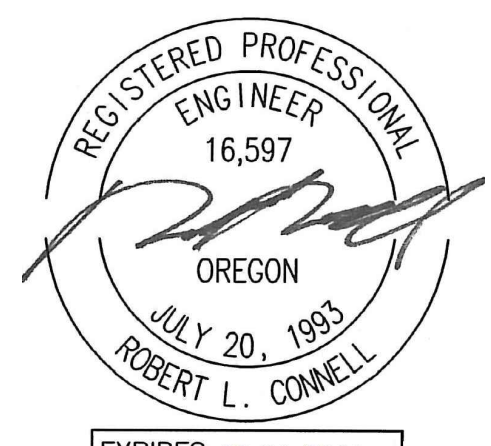
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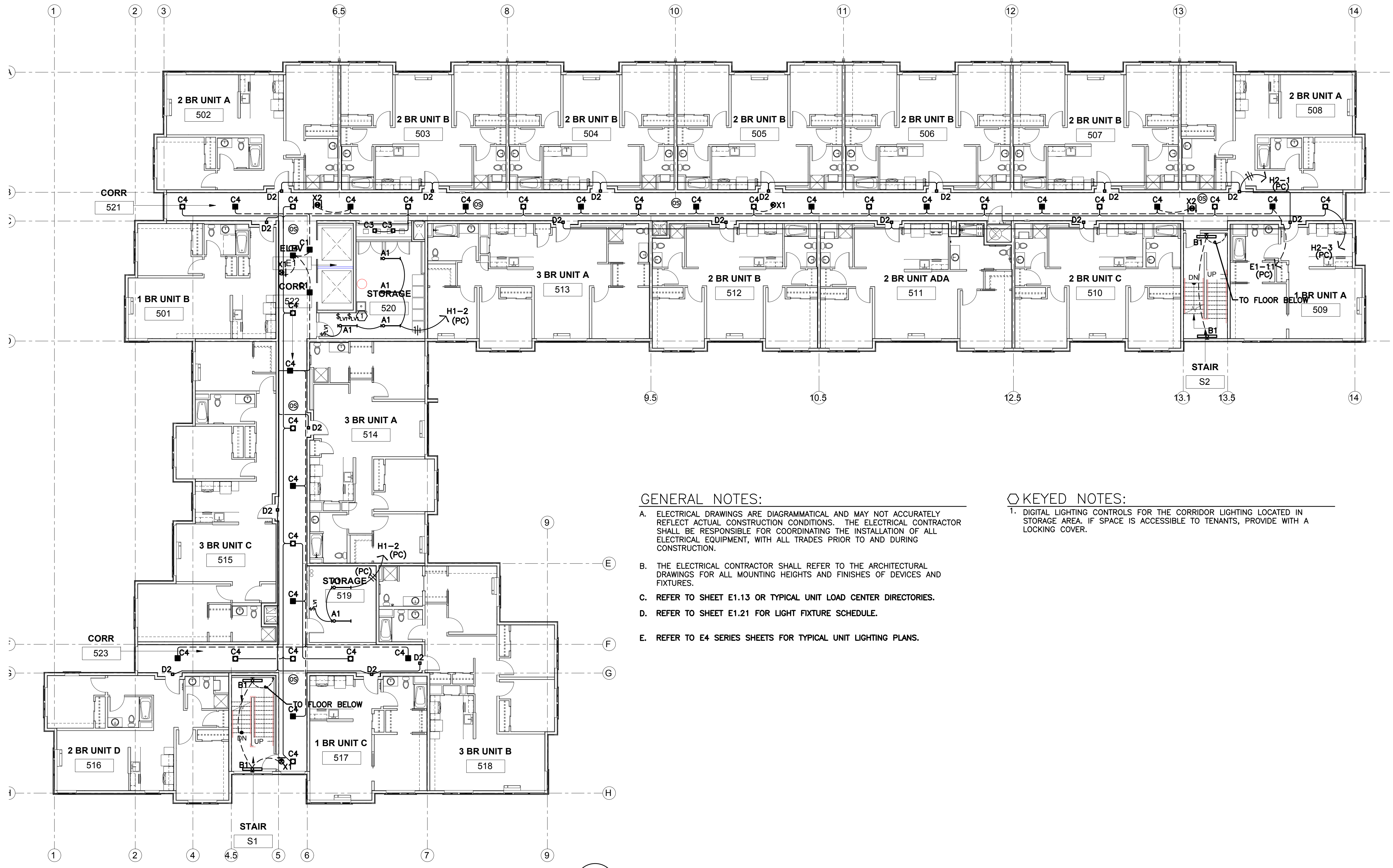
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FIFTH FLOOR
LIGHTING PLAN

E2.05



GENERAL NOTES:

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- D. REFER TO SHEET E1.21 FOR LIGHT FIXTURE SCHEDULE.
- E. REFER TO E4 SERIES SHEETS FOR TYPICAL UNIT LIGHTING PLANS.

KEYED NOTES:

- 1. DIGITAL LIGHTING CONTROLS FOR THE CORRIDOR LIGHTING LOCATED IN STORAGE AREA. IF SPACE IS ACCESSIBLE TO TENANTS, PROVIDE WITH A LOCKING COVER.

1 FIFTH FLOOR LIGHTING PLAN
E2.05 SCALE: 3/32" = 1'-0"



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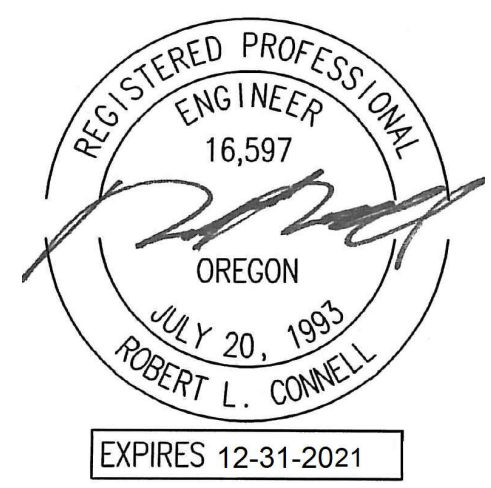
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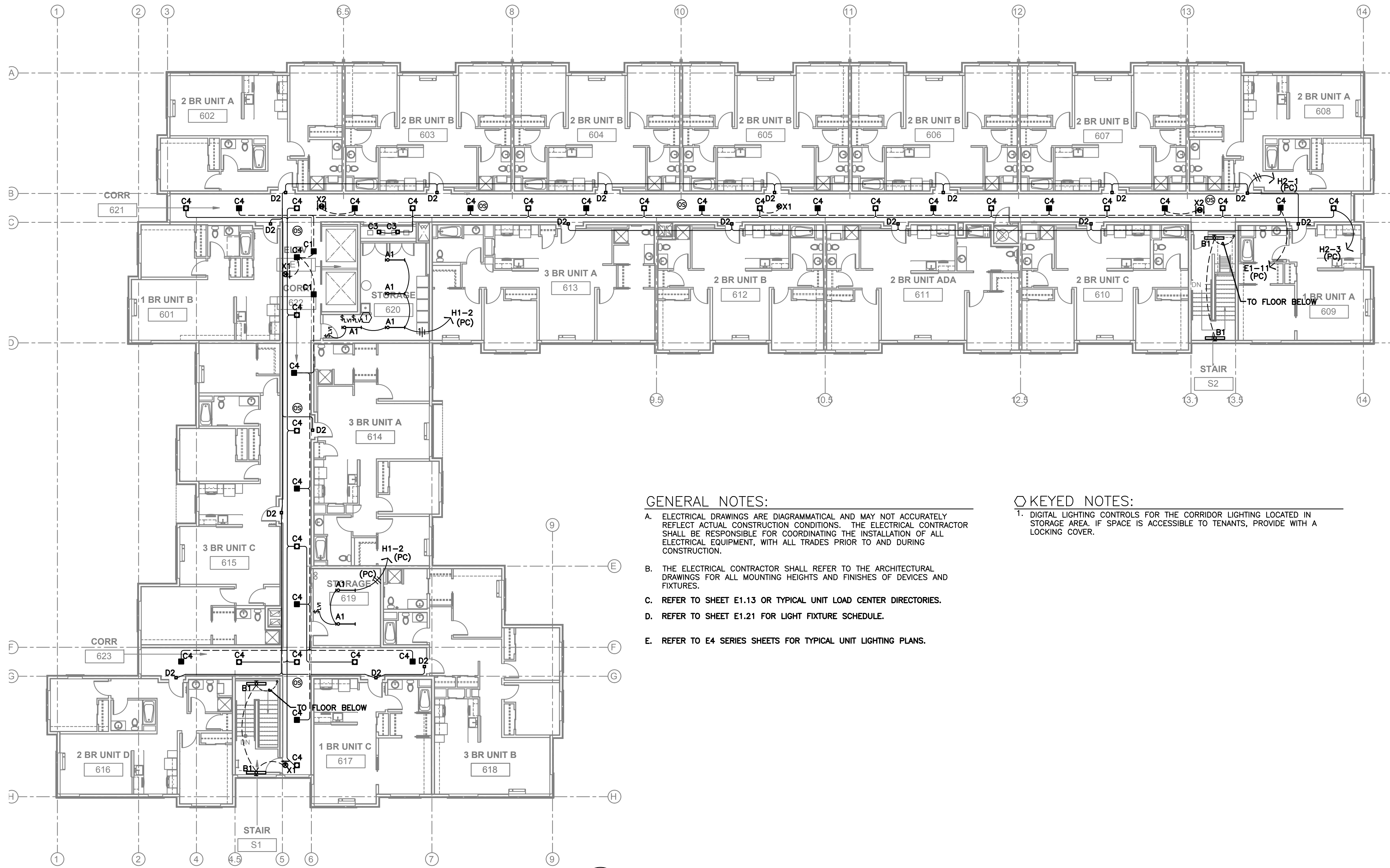


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- E. REFER TO E4 SERIES SHEETS FOR TYPICAL UNIT LIGHTING PLANS.

KEYED NOTES:

- 1. DIGITAL LIGHTING CONTROLS FOR THE CORRIDOR LIGHTING LOCATED IN STORAGE AREA. IF SPACE IS ACCESSIBLE TO TENANTS, PROVIDE WITH A LOCKING COVER.

1 SIXTH FLOOR LIGHTING PLAN
E2.06 SCALE: 3/32" = 1'-0"

SIXTH FLOOR LIGHTING PLAN

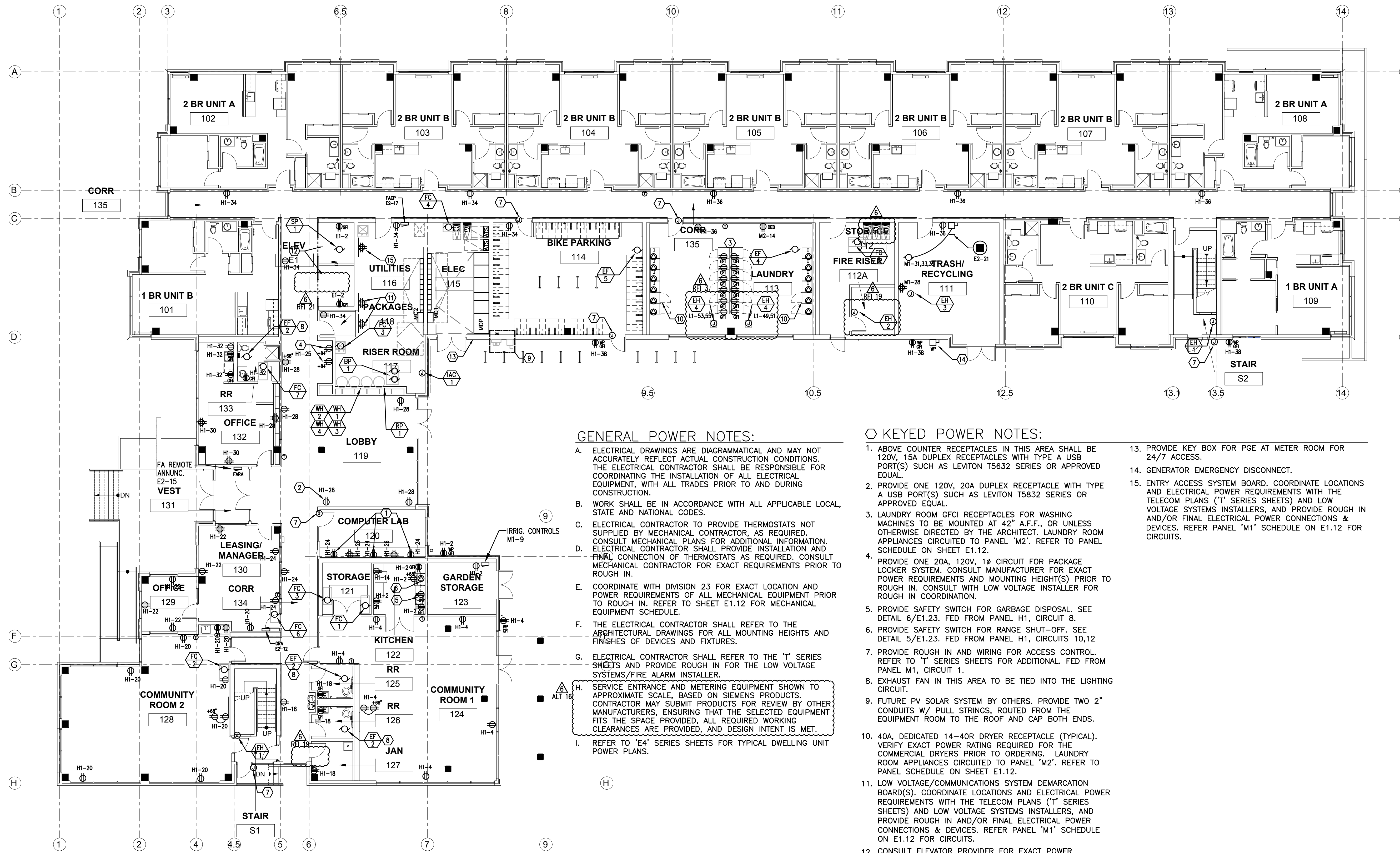
E2.06



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1 FIRST FLOOR POWER PLAN
E3.01
SCALE: 3/32" = 1'-0"

GENERAL POWER NOTES:

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- B. WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES.
- C. ELECTRICAL CONTRACTOR TO PROVIDE THERMOSTATS NOT SUPPLIED BY MECHANICAL CONTRACTOR, AS REQUIRED. CONSULT MECHANICAL PLANS FOR ADDITIONAL INFORMATION. ELECTRICAL CONTRACTOR SHALL PROVIDE INSTALLATION AND FINAL CONNECTION OF THERMOSTATS AS REQUIRED. CONSULT MECHANICAL CONTRACTOR FOR EXACT REQUIREMENTS PRIOR TO ROUGH IN.
- E. COORDINATE WITH DIVISION 23 FOR EXACT LOCATION AND POWER REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH IN. REFER TO SHEET E1.12 FOR MECHANICAL EQUIPMENT SCHEDULE.
- F. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL MOUNTING HEIGHTS AND FINISHES OF DEVICES AND FIXTURES.
- G. ELECTRICAL CONTRACTOR SHALL REFER TO THE 'T' SERIES SHEETS AND PROVIDE ROUGH IN FOR THE LOW VOLTAGE SYSTEMS/FIRE ALARM INSTALLER.
- H. SERVICE ENTRANCE AND METERING EQUIPMENT SHOWN TO APPROXIMATE SCALE, BASED ON SIEMENS PRODUCTS. CONTRACTOR MAY SUBMIT PRODUCTS FOR REVIEW BY OTHER MANUFACTURERS, ENSURING THAT THE SELECTED EQUIPMENT FITS THE SPACE PROVIDED, ALL REQUIRED WORKING CLEARANCES ARE PROVIDED, AND DESIGN INTENT IS MET.
- I. REFER TO 'E4' SERIES SHEETS FOR TYPICAL DWELLING UNIT POWER PLANS.

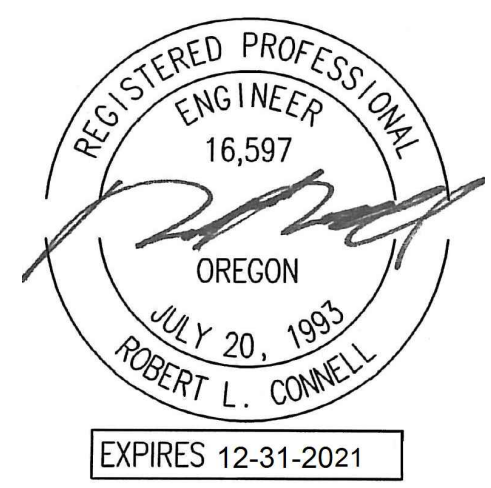
KEYED POWER NOTES:

- 1. ABOVE COUNTER RECEPTACLES IN THIS AREA SHALL BE 120V, 15A DUPLEX RECEPTACLES WITH TYPE A USB PORT(S) SUCH AS LEVITON T5632 SERIES OR APPROVED EQUAL.
- 2. PROVIDE ONE 120V, 20A DUPLEX RECEPTACLE WITH TYPE A USB PORT(S) SUCH AS LEVITON T5832 SERIES OR APPROVED EQUAL.
- 3. LAUNDRY ROOM GFCI RECEPTACLES FOR WASHING MACHINES TO BE MOUNTED AT 42" A.F.F., OR UNLESS OTHERWISE DIRECTED BY THE ARCHITECT. LAUNDRY ROOM APPLIANCES CIRCUITED TO PANEL 'M2'. REFER TO PANEL SCHEDULE ON SHEET E1.12.
- 4. PROVIDE ONE 20A, 120V, 1Ø CIRCUIT FOR PACKAGE LOCKER SYSTEM. CONSULT MANUFACTURER FOR EXACT POWER REQUIREMENTS AND MOUNTING HEIGHT(S) PRIOR TO ROUGH IN. CONSULT WITH LOW VOLTAGE INSTALLER FOR ROUGH IN COORDINATION.
- 5. PROVIDE SAFETY SWITCH FOR GARBAGE DISPOSAL. SEE DETAIL 6/E1.23. FED FROM PANEL H1, CIRCUIT 8.
- 6. PROVIDE SAFETY SWITCH FOR RANGE SHUT-OFF. SEE DETAIL 5/E1.23. FED FROM PANEL H1, CIRCUITS 10,12
- 7. PROVIDE ROUGH IN AND WIRING FOR ACCESS CONTROL. REFER TO 'T' SERIES SHEETS FOR ADDITIONAL. FED FROM PANEL M1, CIRCUIT 1.
- 8. EXHAUST FAN IN THIS AREA TO BE TIED INTO THE LIGHTING CIRCUIT.
- 9. FUTURE PV SOLAR SYSTEM BY OTHERS. PROVIDE TWO 2" CONDUITS W/ PULL STRINGS, ROUTED FROM THE EQUIPMENT ROOM TO THE ROOF AND CAP BOTH ENDS.
- 10. 40A, DEDICATED 14-40R DRYER RECEPTACLE (TYPICAL). VERIFY EXACT POWER RATING REQUIRED FOR THE COMMERCIAL DRYERS PRIOR TO ORDERING. LAUNDRY ROOM APPLIANCES CIRCUITED TO PANEL 'M2'. REFER TO PANEL SCHEDULE ON SHEET E1.12.
- 11. LOW VOLTAGE/COMMUNICATIONS SYSTEM DEMARCATION BOARD(S). COORDINATE LOCATIONS AND ELECTRICAL POWER REQUIREMENTS WITH THE TELECOM PLANS ('T' SERIES SHEETS) AND LOW VOLTAGE SYSTEMS INSTALLERS, AND PROVIDE ROUGH IN AND/OR FINAL ELECTRICAL POWER CONNECTIONS & DEVICES. REFER PANEL 'M1' SCHEDULE ON E1.12 FOR CIRCUITS.
- 12. CONSULT ELEVATOR PROVIDER FOR EXACT POWER REQUIREMENTS AND PROVIDE ALL ELECTRICAL WORK AS DIRECTED. VERIFY EXACT LOCATION FOR ELEVATOR EQUIPMENT WITH ARCHITECT AND COORDINATE WITH ELEVATOR INSTALLER.
- 13. PROVIDE KEY BOX FOR PGE AT METER ROOM FOR 24/7 ACCESS.
- 14. GENERATOR EMERGENCY DISCONNECT.
- 15. ENTRY ACCESS SYSTEM BOARD. COORDINATE LOCATIONS AND ELECTRICAL POWER REQUIREMENTS WITH THE TELECOM PLANS ('T' SERIES SHEETS) AND LOW VOLTAGE SYSTEMS INSTALLERS, AND PROVIDE ROUGH IN AND/OR FINAL ELECTRICAL POWER CONNECTIONS & DEVICES. REFER PANEL 'M1' SCHEDULE ON E1.12 FOR CIRCUITS.

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FIRST FLOOR POWER PLAN

E3.01



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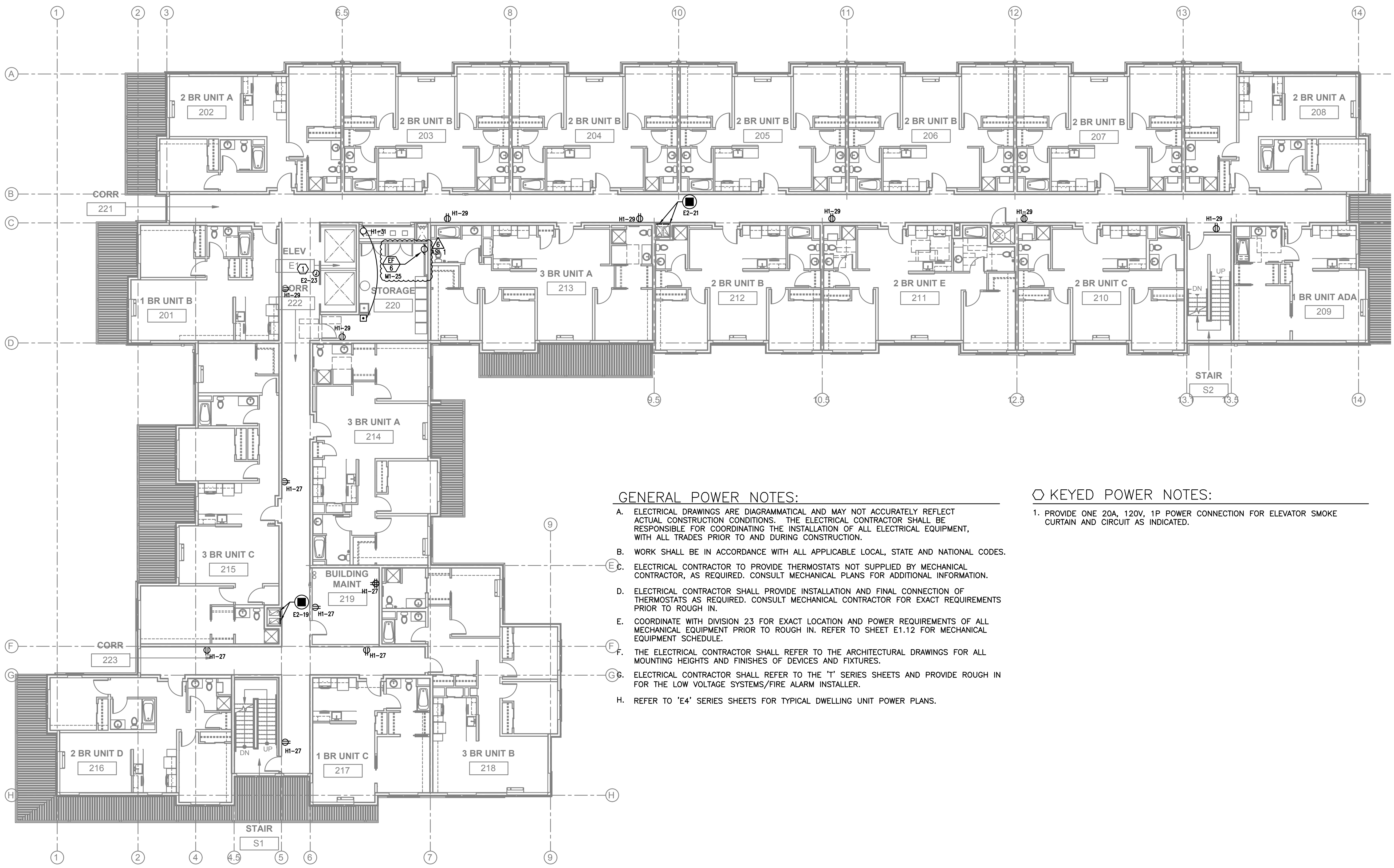
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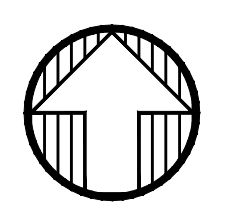


GENERAL POWER NOTES:

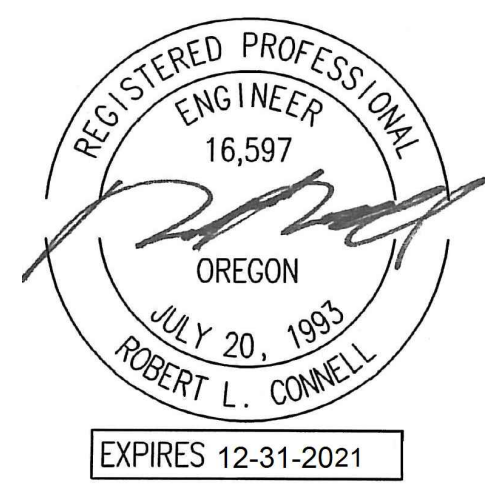
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- H. REFER TO 'E4' SERIES SHEETS FOR TYPICAL DWELLING UNIT POWER PLANS.

KEYED POWER NOTES:

- 1. PROVIDE ONE 20A, 120V, 1P POWER CONNECTION FOR ELEVATOR SMOKE CURTAIN AND CIRCUIT AS INDICATED.



1 SECOND FLOOR POWER PLAN
E3.02 SCALE: 3/32" = 1'-0"



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SECOND FLOOR POWER PLAN

E3.02



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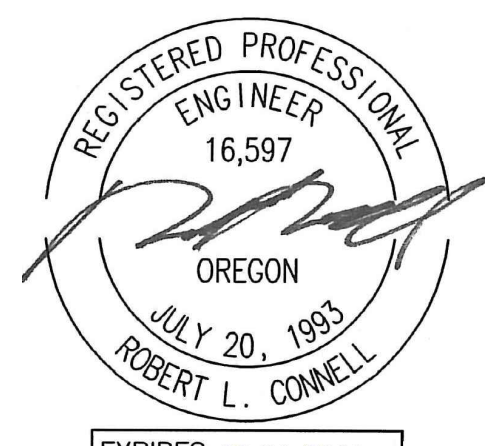
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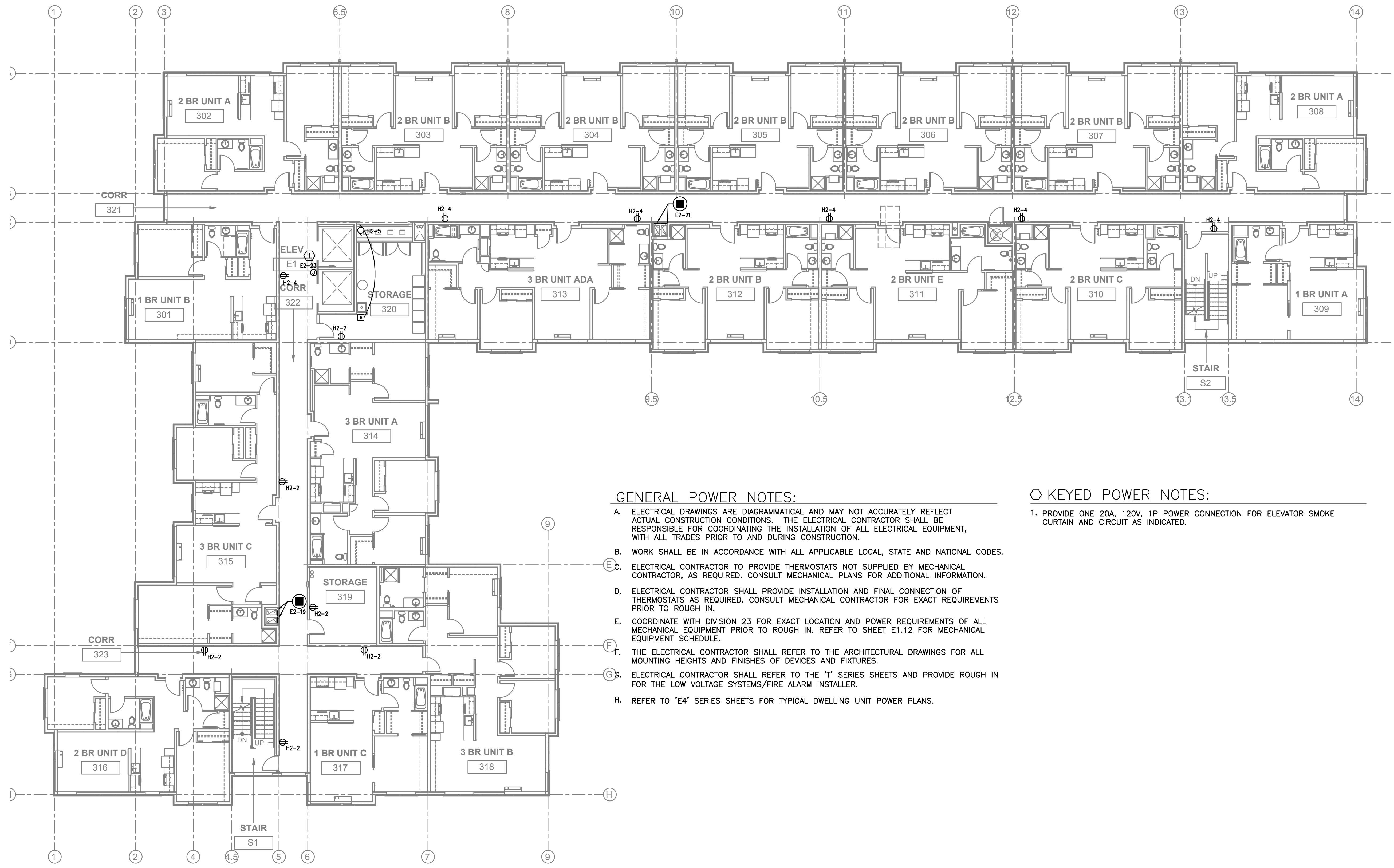
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THIRD FLOOR POWER PLAN

E3.03

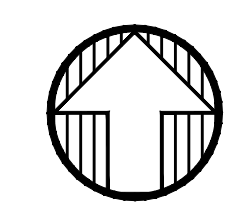


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- D. ELECTRICAL CONTRACTOR SHALL PROVIDE INSTALLATION AND FINAL CONNECTION OF THERMOSTATS AS REQUIRED. CONSULT MECHANICAL CONTRACTOR FOR EXACT REQUIREMENTS PRIOR TO ROUGH IN.
- E. COORDINATE WITH DIVISION 23 FOR EXACT LOCATION AND POWER REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH IN. REFER TO SHEET E1.12 FOR MECHANICAL EQUIPMENT SCHEDULE.
- F. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL MOUNTING HEIGHTS AND FINISHES OF DEVICES AND FIXTURES.
- G. ELECTRICAL CONTRACTOR SHALL REFER TO THE 'T' SERIES SHEETS AND PROVIDE ROUGH IN FOR THE LOW VOLTAGE SYSTEMS/FIRE ALARM INSTALLER.
- H. REFER TO 'E4' SERIES SHEETS FOR TYPICAL DWELLING UNIT POWER PLANS.

KEYED POWER NOTES:

- 1. PROVIDE ONE 20A, 120V, 1P POWER CONNECTION FOR ELEVATOR SMOKE CURTAIN AND CIRCUIT AS INDICATED.



1 THIRD FLOOR POWER PLAN
E3.03 SCALE: 3/32" = 1'-0"



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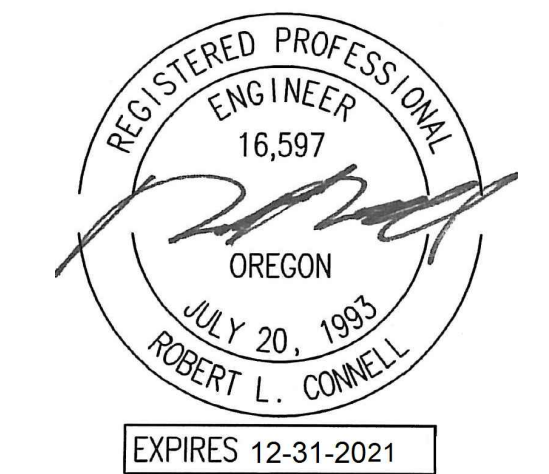
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PH: 503.278.7571
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2007 SE Ash St
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FAX: (503) 234-0677
WWW.MFA-ENG.COM
CONTACT: DENISE TAYLOR

FULLER STATION HOUSING

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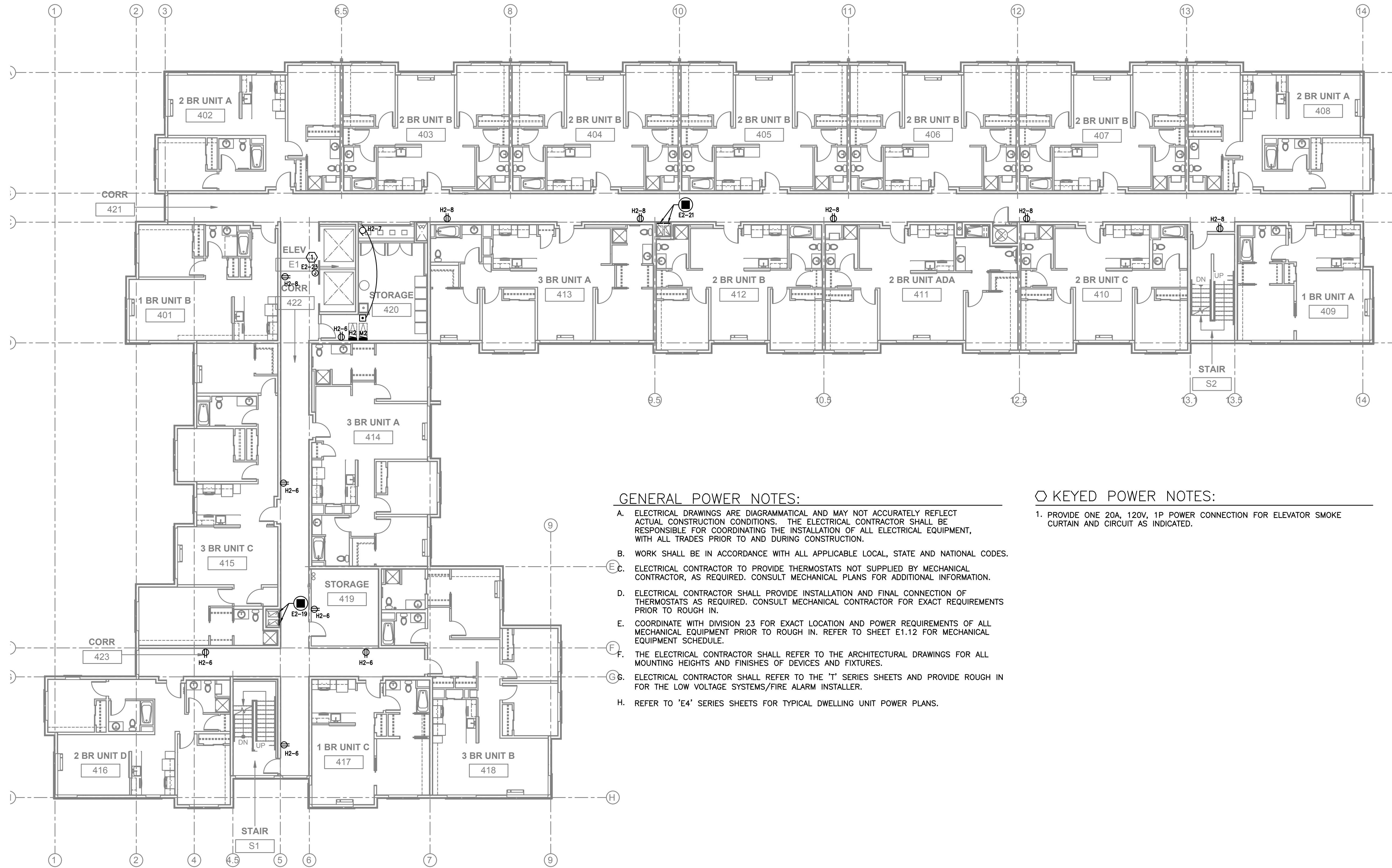
PERMIT SET DOCUMENTS

PROJECT #: 1617.00
 SHEET ISSUE DATE: 01/31/2020
 REVISIONS:

#	DESCRIPTION	DATE
1	COUNTY REVIEW RESPONSES	10.09.2020
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3	RFI 03	11.19.2020
6	ASI #01	03.05.2021

FOURTH FLOOR POWER PLAN

E3.04

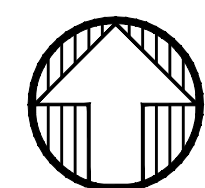


GENERAL POWER NOTES:

- A. ELECTRICAL DRAWINGS ARE DIAGRAMMATICAL AND MAY NOT ACCURATELY REFLECT ACTUAL CONSTRUCTION CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT, WITH ALL TRADES PRIOR TO AND DURING CONSTRUCTION.
- B. WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES.
- C. ELECTRICAL CONTRACTOR TO PROVIDE THERMOSTATS NOT SUPPLIED BY MECHANICAL CONTRACTOR, AS REQUIRED. CONSULT MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
- D. ELECTRICAL CONTRACTOR SHALL PROVIDE INSTALLATION AND FINAL CONNECTION OF THERMOSTATS AS REQUIRED. CONSULT MECHANICAL CONTRACTOR FOR EXACT REQUIREMENTS PRIOR TO ROUGH IN.
- E. COORDINATE WITH DIVISION 23 FOR EXACT LOCATION AND POWER REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH IN. REFER TO SHEET E1.12 FOR MECHANICAL EQUIPMENT SCHEDULE.
- F. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL MOUNTING HEIGHTS AND FINISHES OF DEVICES AND FIXTURES.
- G. ELECTRICAL CONTRACTOR SHALL REFER TO THE 'T' SERIES SHEETS AND PROVIDE ROUGH IN FOR THE LOW VOLTAGE SYSTEMS/FIRE ALARM INSTALLER.
- H. REFER TO 'E4' SERIES SHEETS FOR TYPICAL DWELLING UNIT POWER PLANS.

KEYED POWER NOTES:

- 1. PROVIDE ONE 20A, 120V, 1P POWER CONNECTION FOR ELEVATOR SMOKE CURTAIN AND CIRCUIT AS INDICATED.



1 FOURTH FLOOR POWER PLAN
E3.04 SCALE: 3/32" = 1'-0"



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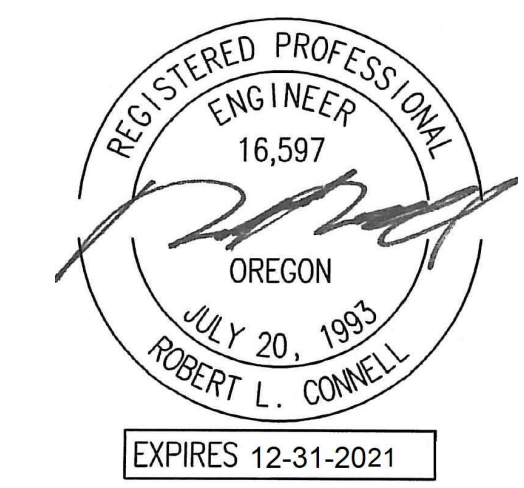
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FX: 503.273.8891

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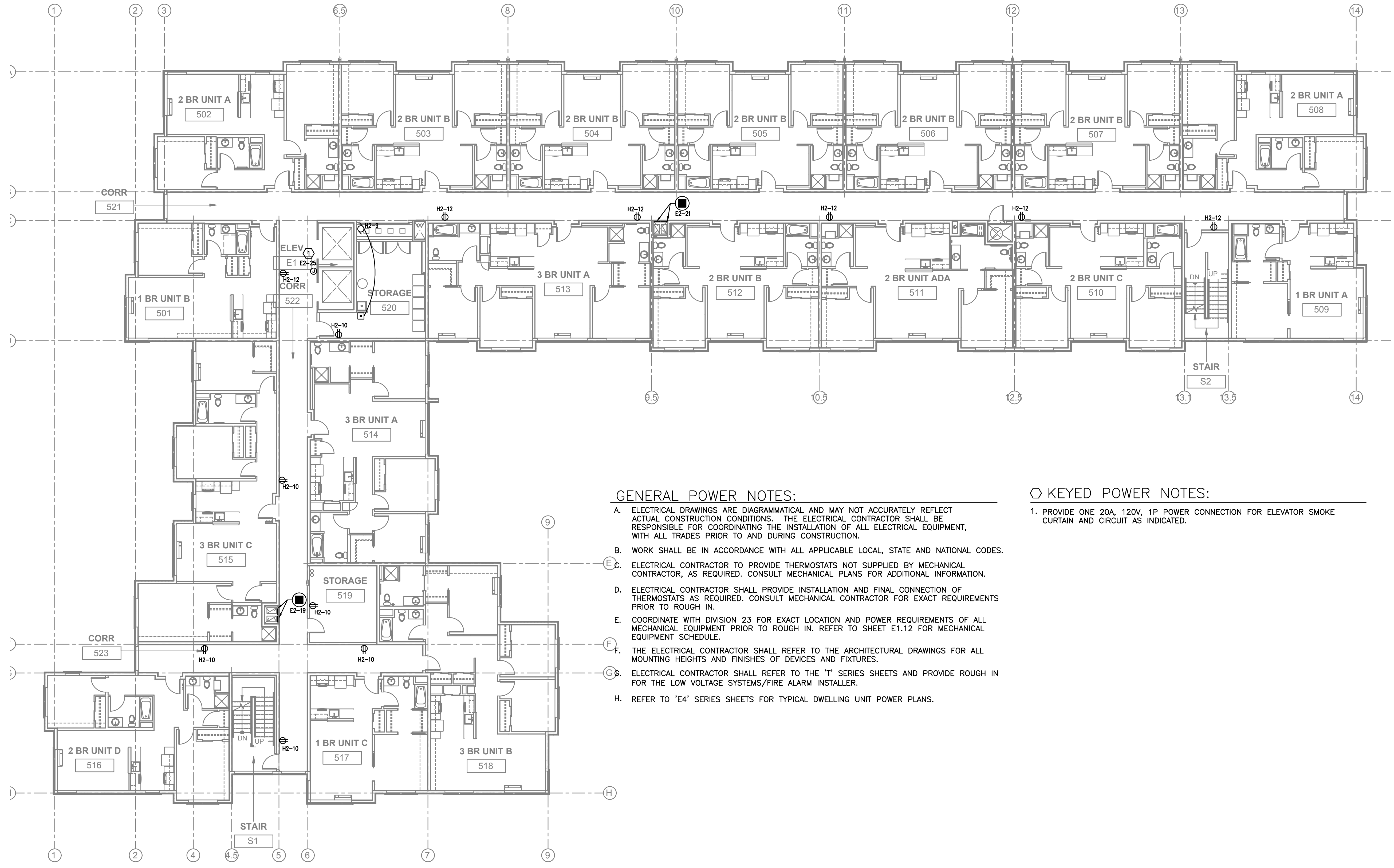
PERMIT SET DOCUMENTS

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FIFTH FLOOR POWER PLAN

E3.05

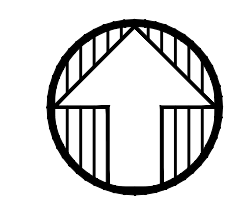


GENERAL POWER NOTES:

- A. ELECTRICAL DRAWINGS ARE DIAGRAMMATICAL AND MAY NOT ACCURATELY REFLECT ACTUAL CONSTRUCTION CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT, WITH ALL TRADES PRIOR TO AND DURING CONSTRUCTION.
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- C. ELECTRICAL CONTRACTOR TO PROVIDE THERMOSTATS NOT SUPPLIED BY MECHANICAL CONTRACTOR, AS REQUIRED. CONSULT MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
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- H. REFER TO 'E4' SERIES SHEETS FOR TYPICAL DWELLING UNIT POWER PLANS.

KEYED POWER NOTES:

- 1. PROVIDE ONE 20A, 120V, 1P POWER CONNECTION FOR ELEVATOR SMOKE CURTAIN AND CIRCUIT AS INDICATED.



1 FIFTH FLOOR POWER PLAN
E3.05 SCALE: 3/32" = 1'-0"



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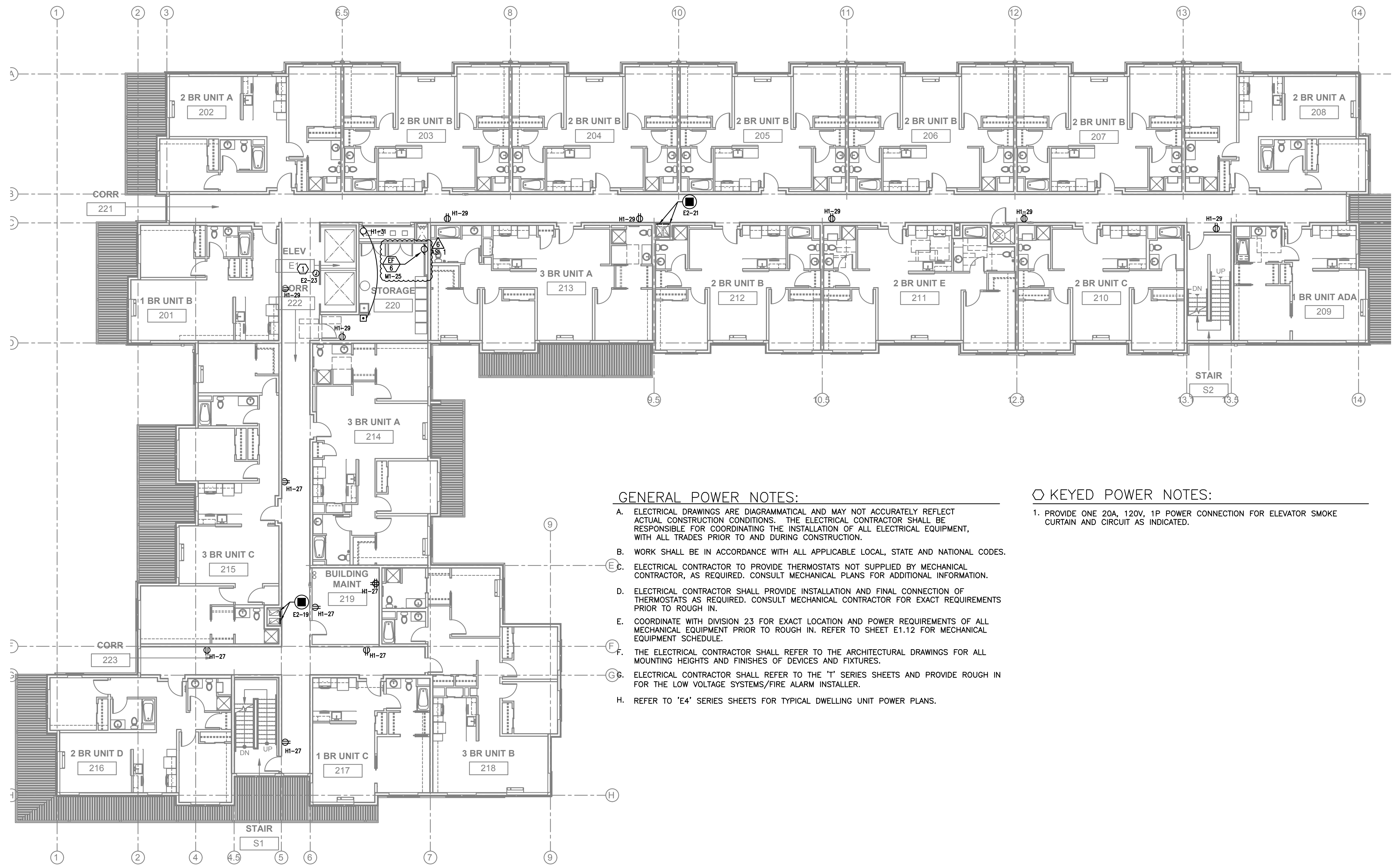
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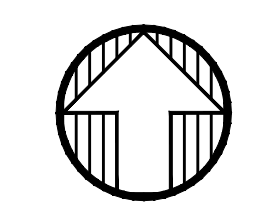


GENERAL POWER NOTES:

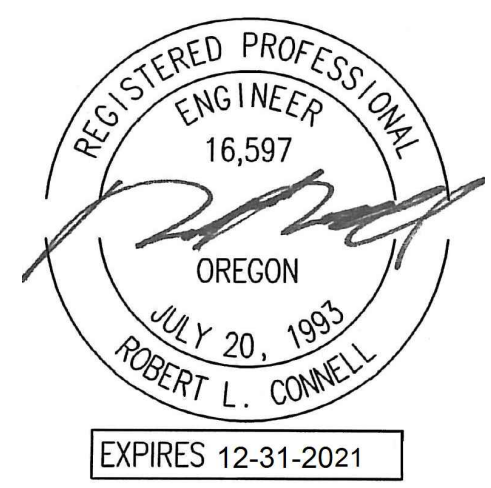
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- G. ELECTRICAL CONTRACTOR SHALL REFER TO THE 'T' SERIES SHEETS AND PROVIDE ROUGH IN FOR THE LOW VOLTAGE SYSTEMS/FIRE ALARM INSTALLER.
- H. REFER TO 'E4' SERIES SHEETS FOR TYPICAL DWELLING UNIT POWER PLANS.

KEYED POWER NOTES:

- 1. PROVIDE ONE 20A, 120V, 1P POWER CONNECTION FOR ELEVATOR SMOKE CURTAIN AND CIRCUIT AS INDICATED.



1 SECOND FLOOR POWER PLAN
E3.02 SCALE: 3/32" = 1'-0"



PERMIT SET DOCUMENTS

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SIXTH FLOOR POWER PLAN

E3.06



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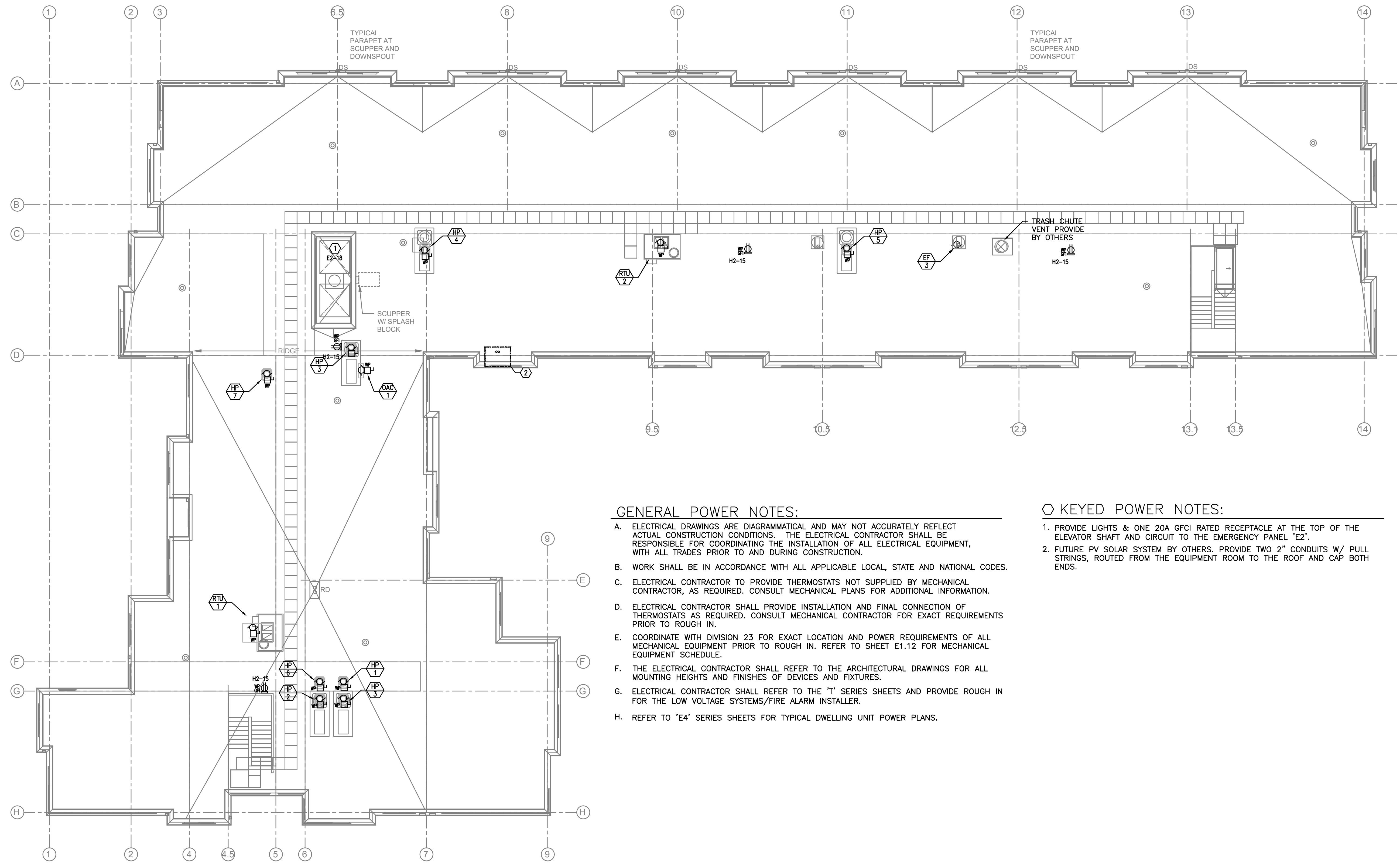
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CONTACT: DENISE TAYLOR



FULLER STATION HOUSING

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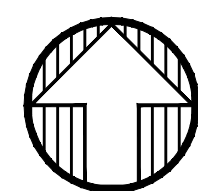


GENERAL POWER NOTES:

- A. ELECTRICAL DRAWINGS ARE DIAGRAMMATICAL AND MAY NOT ACCURATELY REFLECT ACTUAL CONSTRUCTION CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT, WITH ALL TRADES PRIOR TO AND DURING CONSTRUCTION.
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- F. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL MOUNTING HEIGHTS AND FINISHES OF DEVICES AND FIXTURES.
- G. ELECTRICAL CONTRACTOR SHALL REFER TO THE 'T' SERIES SHEETS AND PROVIDE ROUGH IN FOR THE LOW VOLTAGE SYSTEMS/FIRE ALARM INSTALLER.
- H. REFER TO 'E4' SERIES SHEETS FOR TYPICAL DWELLING UNIT POWER PLANS.

KEYED POWER NOTES:

- 1. PROVIDE LIGHTS & ONE 20A GFCI RATED RECEPTACLE AT THE TOP OF THE ELEVATOR SHAFT AND CIRCUIT TO THE EMERGENCY PANEL 'E2'.
- 2. FUTURE PV SOLAR SYSTEM BY OTHERS. PROVIDE TWO 2" CONDUITS W/ PULL STRINGS, ROUTED FROM THE EQUIPMENT ROOM TO THE ROOF AND CAP BOTH ENDS.



1 ROOF LEVEL POWER PLAN
E3.07 SCALE: 3/32" = 1'-0"



EXPIRES 12-31-2021

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ROOF LEVEL
POWER PLAN

E3.07



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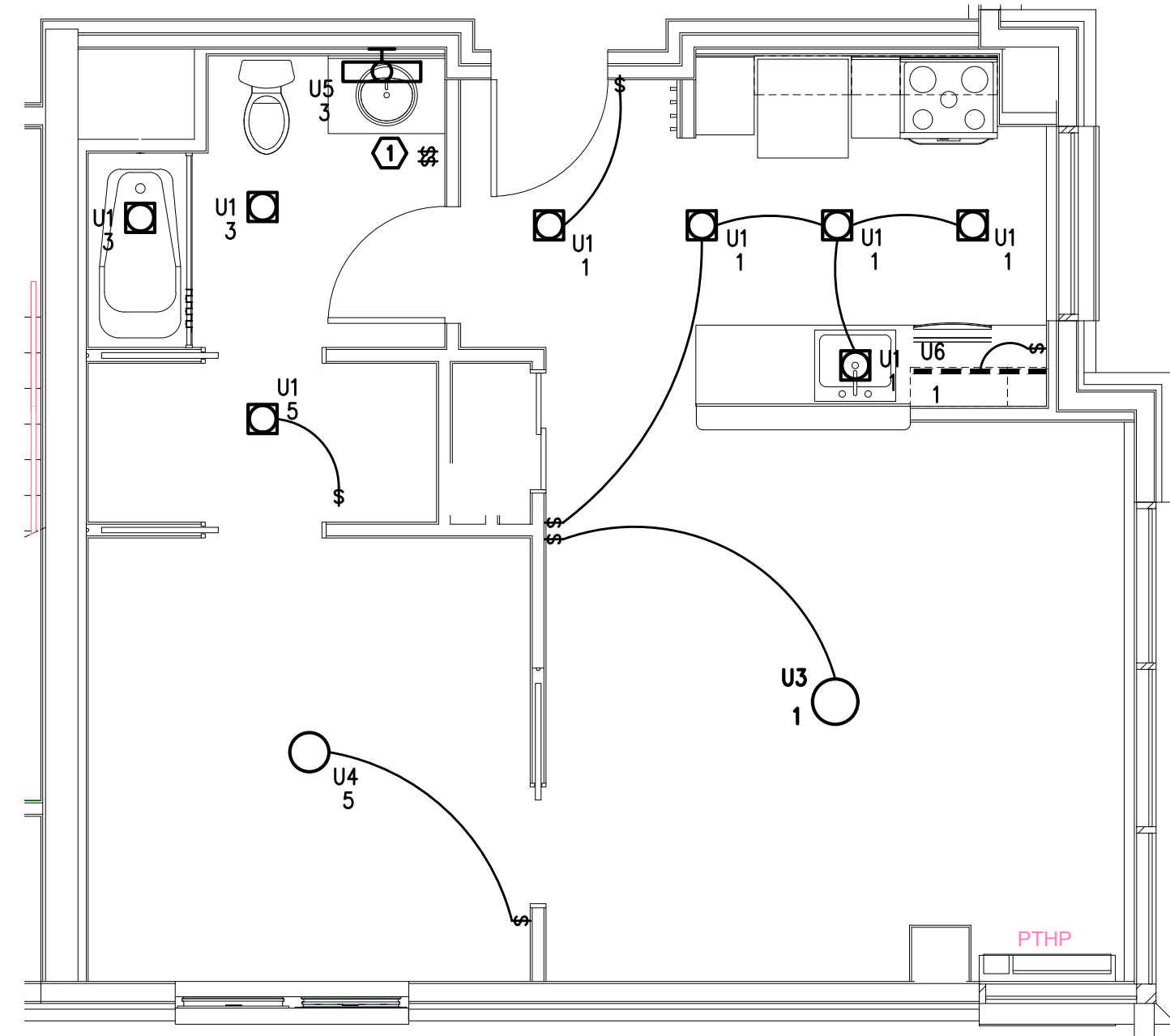
9608 SE Fuller Road
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GENERAL NOTES:

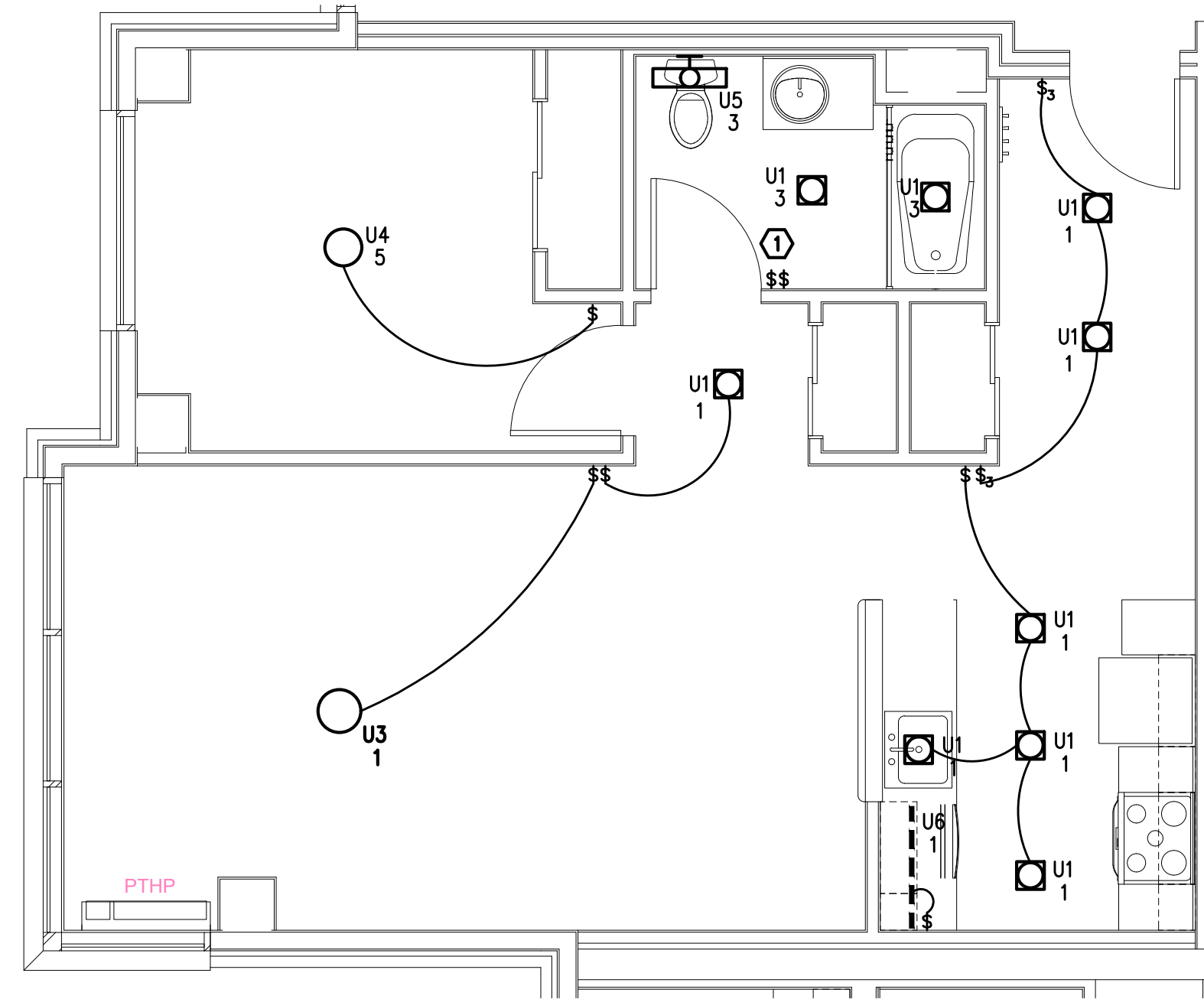
- A. ALL PLANS ARE DIAGRAMMATICAL. CONSULT ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL DEVICES AND FIXTURES.
- B. REFER TO SHEET E1.14 FOR TYPICAL UNIT LOAD CENTER DIRECTORIES.
- C. ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, SUCH AS LEVITON DECORA, OR APPROVED EQUAL.
- D. REFER TO SHEETS E4.11 - E4.14 FOR TYPICAL UNIT POWER PLANS.

KEYED NOTES:

- 1. REFER TO E1.22 FOR TYPICAL BATHROOM SWITCHING DIAGRAM.



1 TYPICAL UNIT TYPE 1A - LIGHTING PLAN
E4.01 SCALE: 1/4" = 1'-0"



2 TYPICAL UNIT TYPE 1B - LIGHTING PLAN
E4.01 SCALE: 1/4" = 1'-0"



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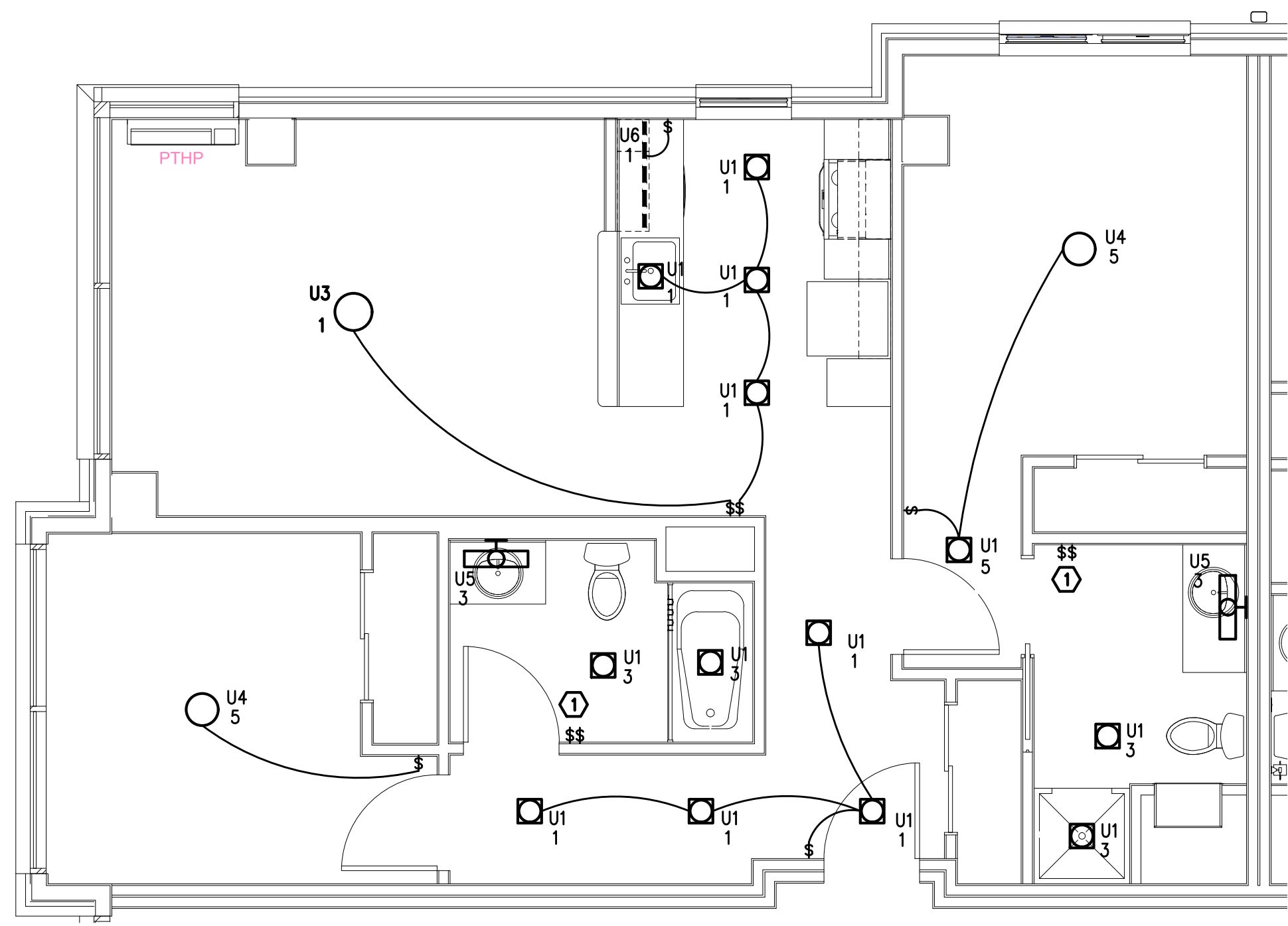
ENLARGE UNIT
LIGHTING PLANS

E4.01

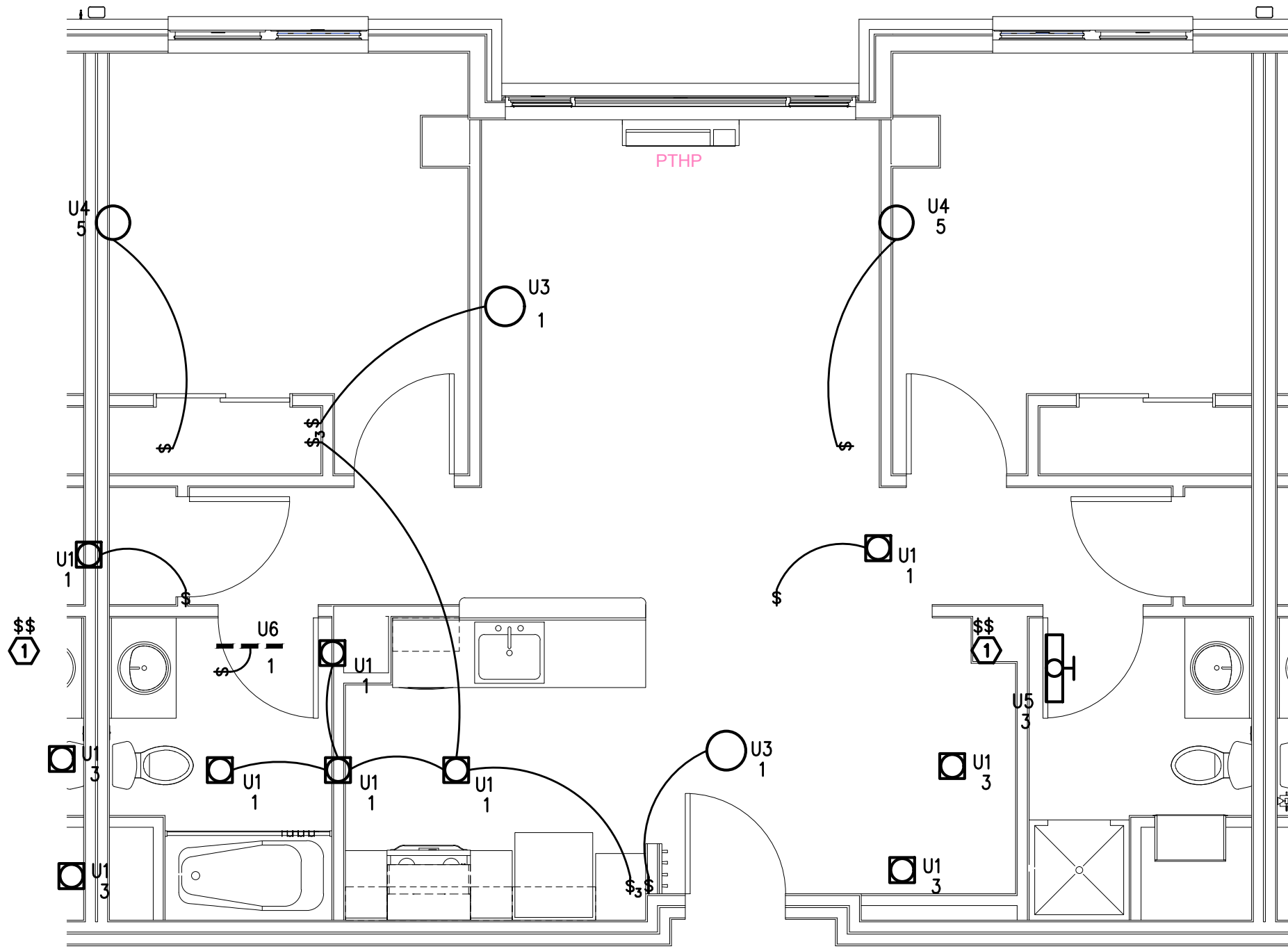


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 CONTACT: DENISE TAYLOR



1 TYPICAL UNIT TYPE 2A - LIGHTING PLAN
 E4.02 SCALE: 1/4" = 1'-0"



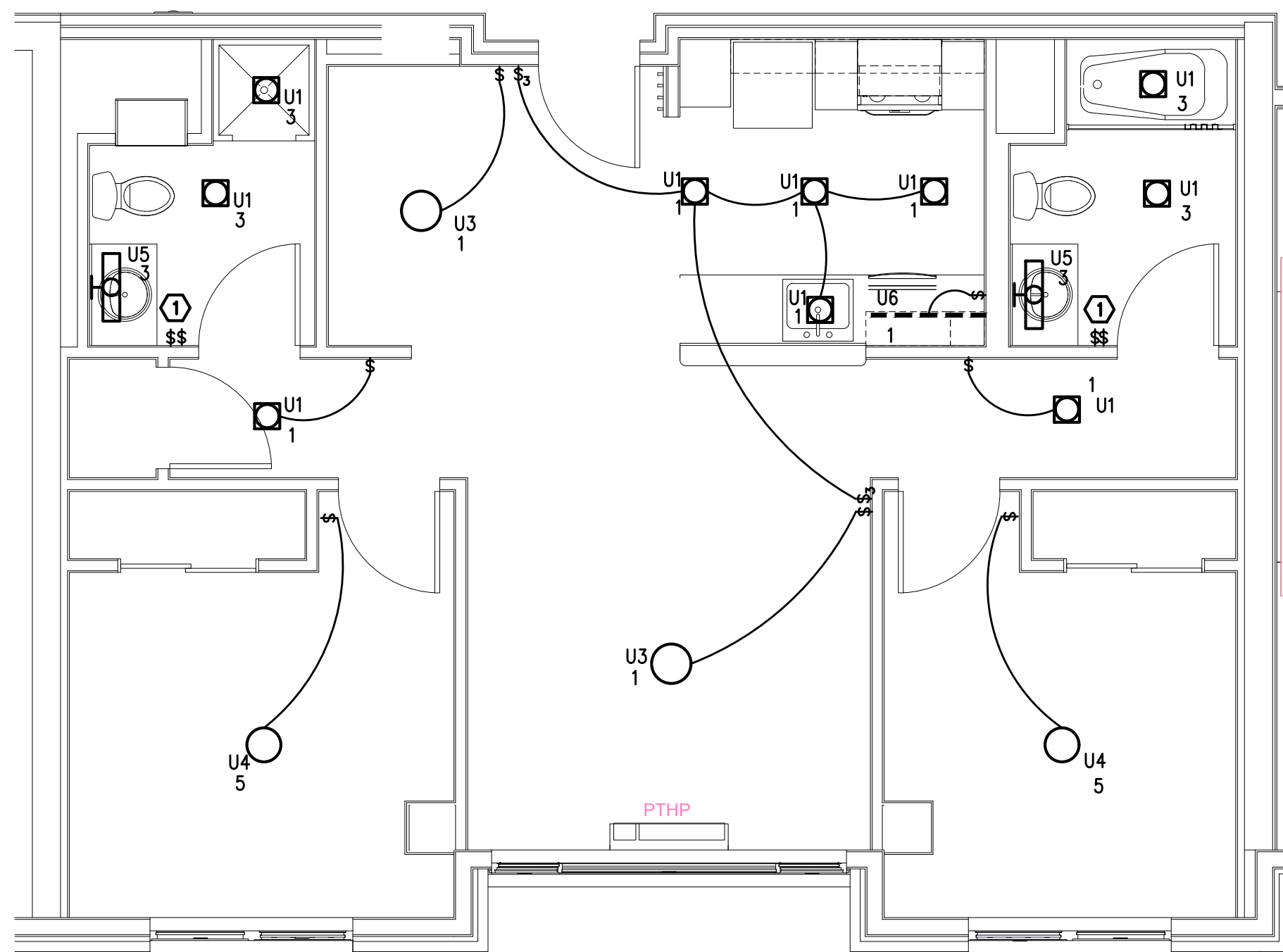
2 TYPICAL UNIT TYPE 2B - LIGHTING PLAN
 E4.02 SCALE: 1/4" = 1'-0"

GENERAL NOTES:

- A. ALL PLANS ARE DIAGRAMMATICAL. CONSULT ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL DEVICES AND FIXTURES.
- B. REFER TO SHEET E1.14 FOR TYPICAL UNIT LOAD CENTER DIRECTORIES.
- C. ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, SUCH AS LEVITON DECORA, OR APPROVED EQUAL.
- D. REFER TO SHEETS E4.11 - E4.14 FOR TYPICAL UNIT POWER PLANS.

KEYED NOTES:

- 1. REFER TO E1.22 FOR TYPICAL BATHROOM SWITCHING DIAGRAM.



3 TYPICAL UNIT TYPE 2C - LIGHTING PLAN
 E4.02 SCALE: 1/4" = 1'-0"

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EXPIRES 12-31-2021

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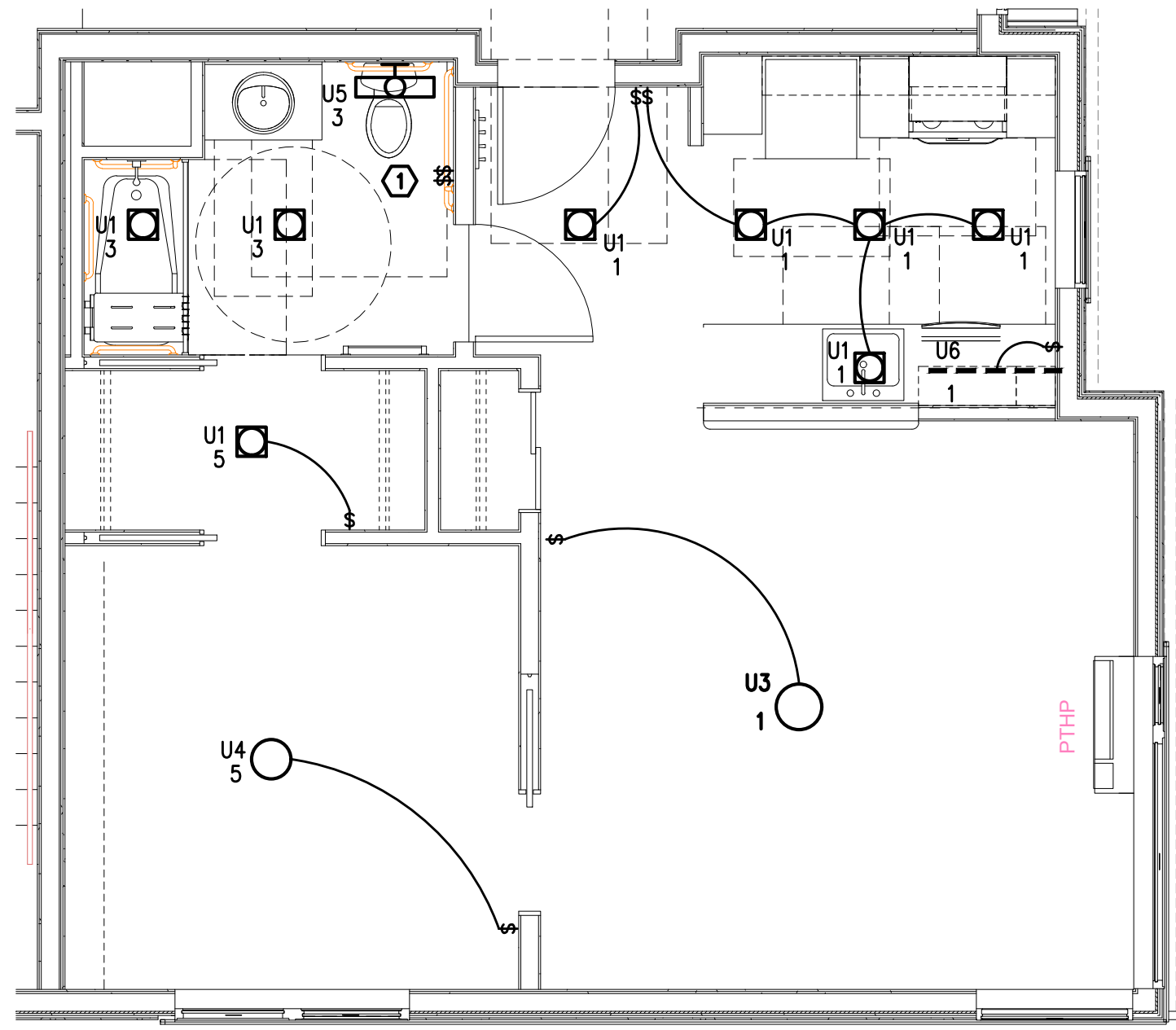
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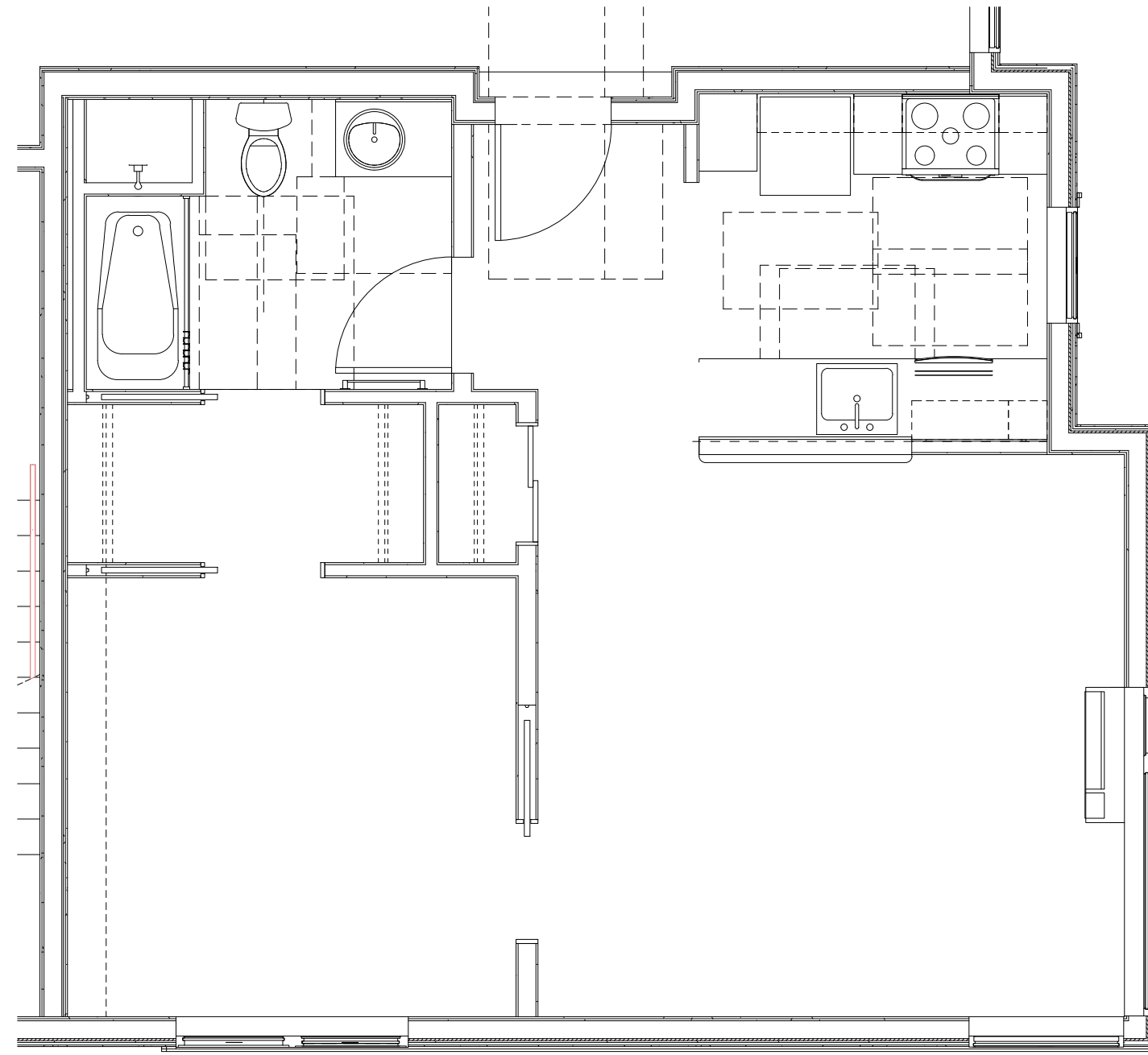
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ENLARGE UNIT
 LIGHTING PLANS

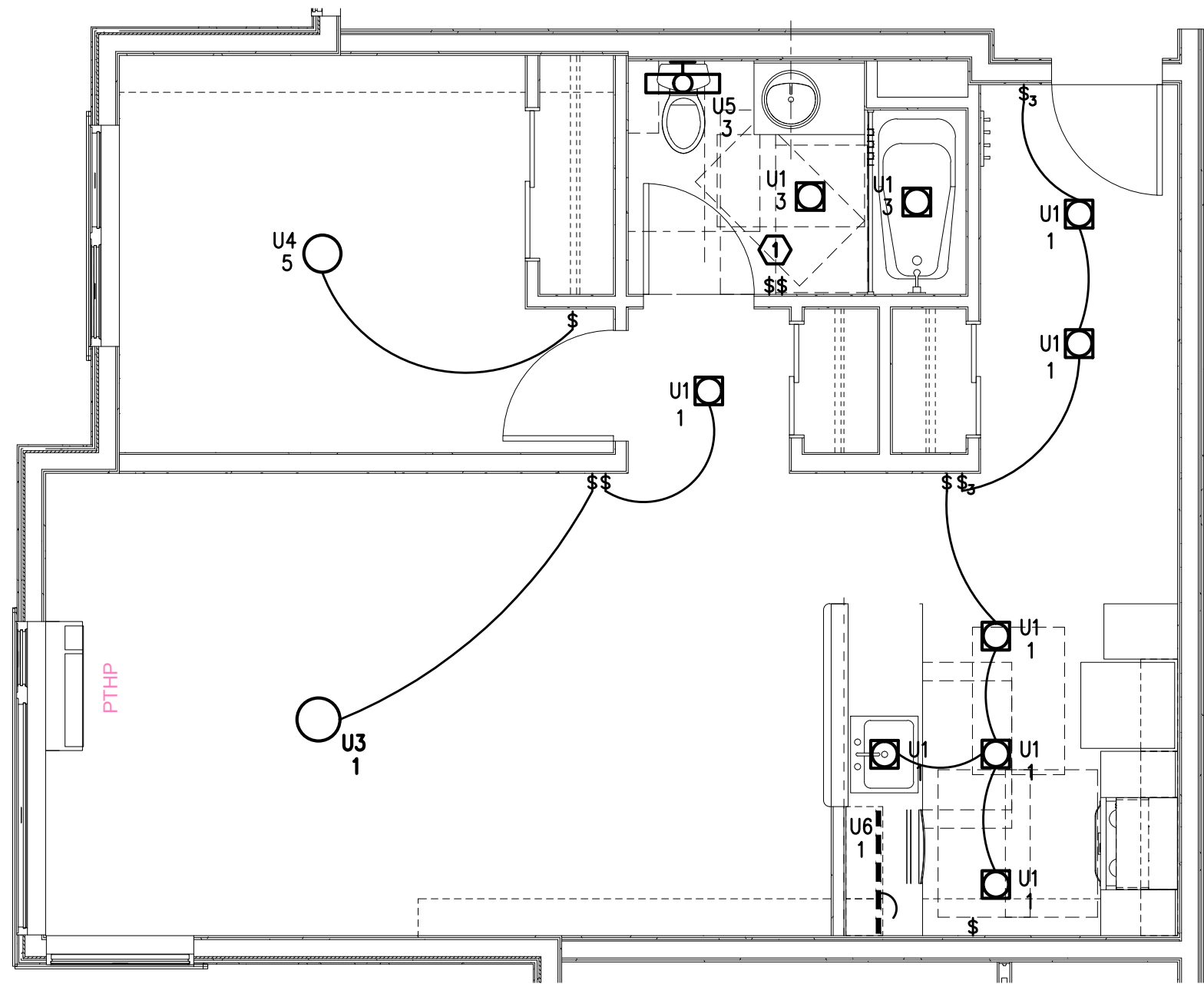
E4.02



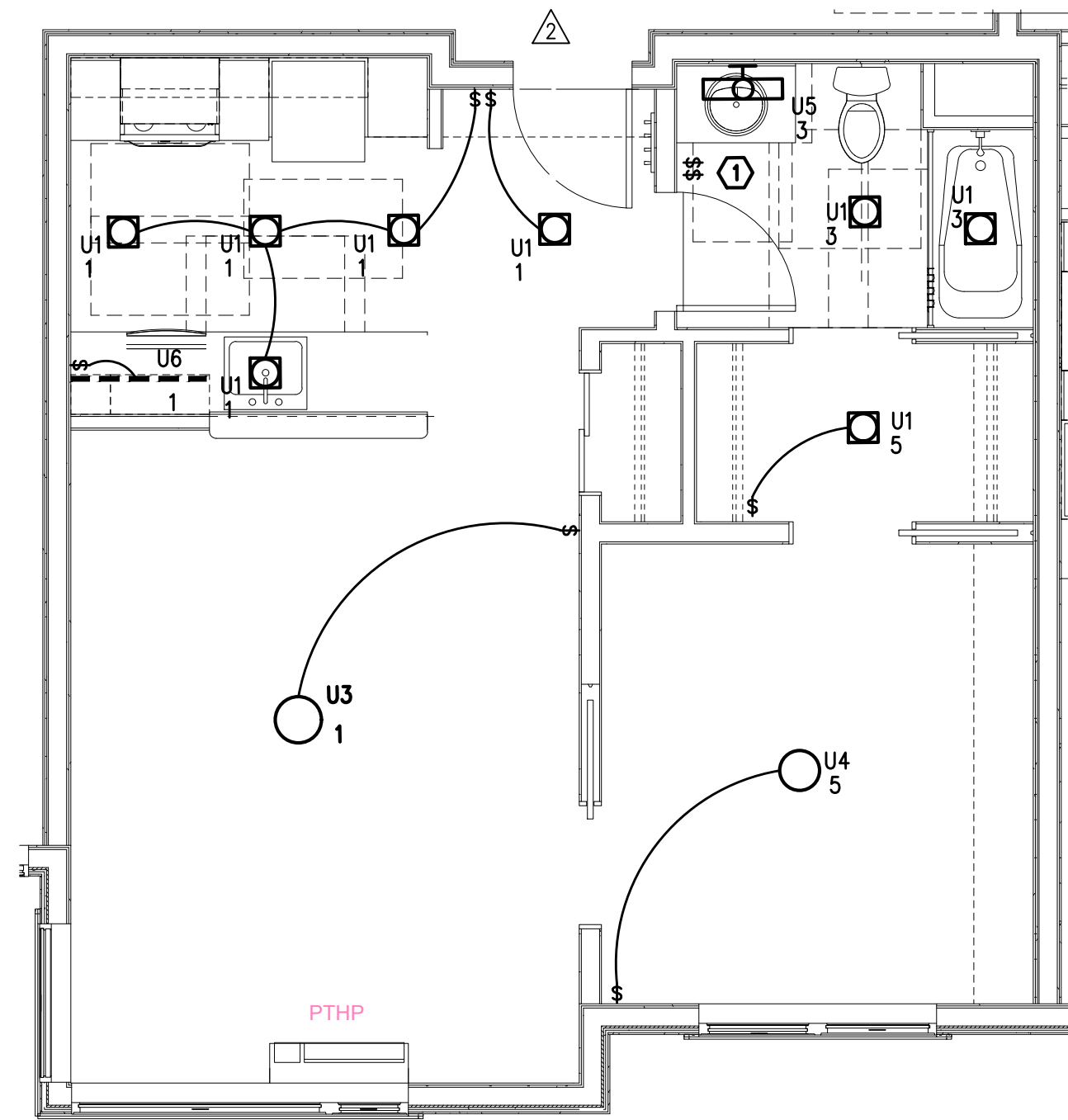
1 TYPICAL UNIT TYPE 1A - LIGHTING PLAN
 E4.03 SCALE: 1/4" = 1'-0"
 (FLOORS 2-6)



2 TYPICAL UNIT TYPE 1A - POWER PLAN
 E4.13 SCALE: 1/4" = 1'-0"
 (FLOORS 3-6)



3 TYPICAL UNIT TYPE 1B ADA - LIGHTING PLAN
 E4.03 SCALE: 1/4" = 1'-0"
 (FLOORS 2-6)



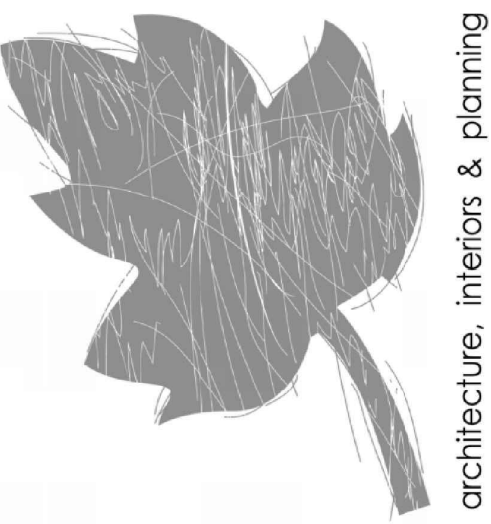
4 TYPICAL UNIT TYPE 1C - LIGHTING PLAN
 E4.03 SCALE: 1/4" = 1'-0"

GENERAL NOTES:

- A. ALL PLANS ARE DIAGRAMMATICAL. CONSULT ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL DEVICES AND FIXTURES.
- B. REFER TO SHEET E1.14 FOR TYPICAL UNIT LOAD CENTER DIRECTORIES.
- C. ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, SUCH AS LEVITON DECORA, OR APPROVED EQUAL.
- D. REFER TO SHEETS E4.11 - E4.14 FOR TYPICAL UNIT POWER PLANS.

KEYED NOTES:

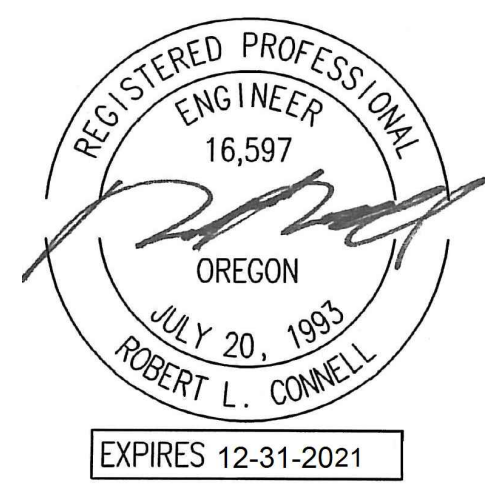
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ENLARGE UNIT
 LIGHTING PLANS

E4.03



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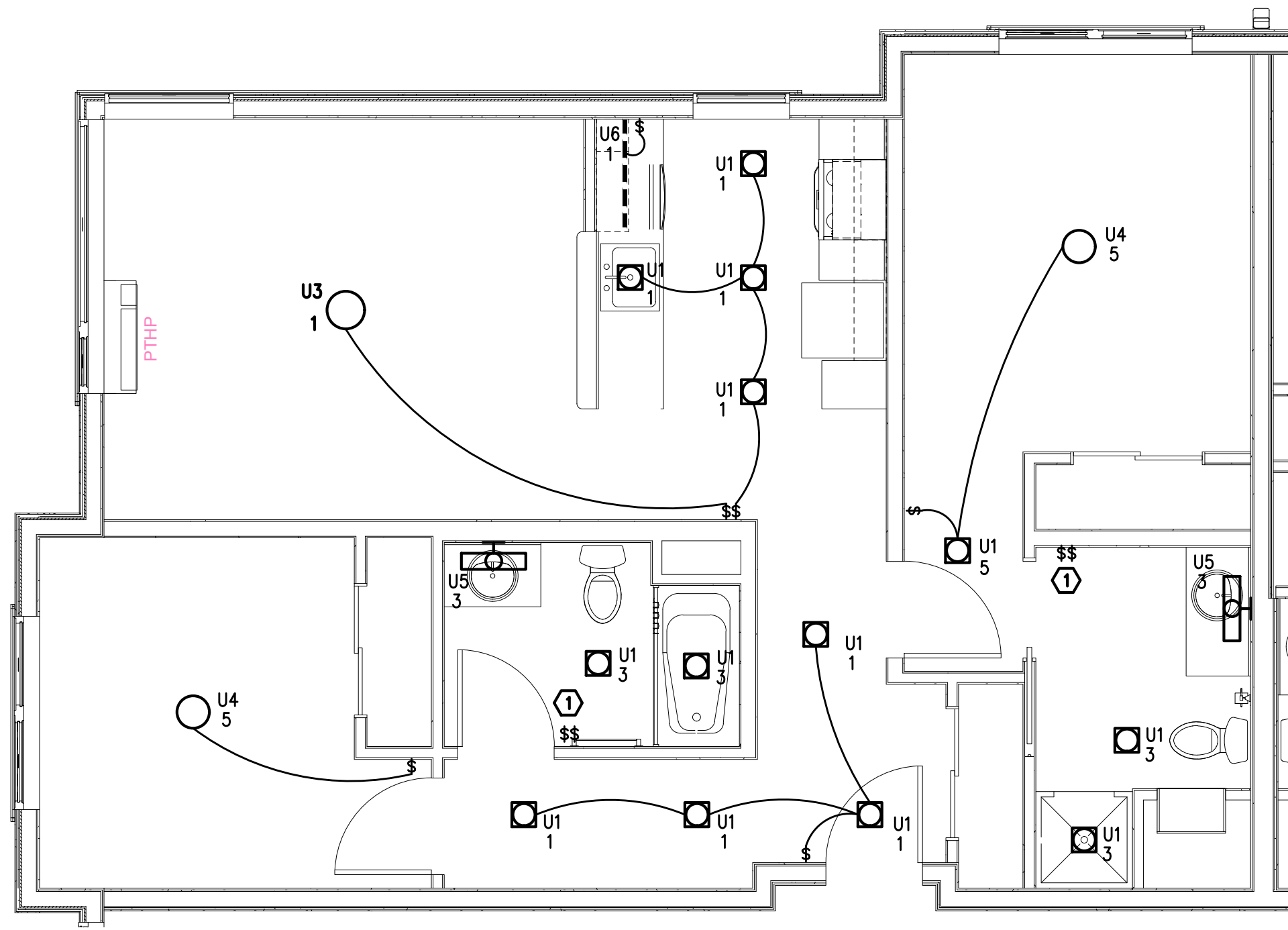
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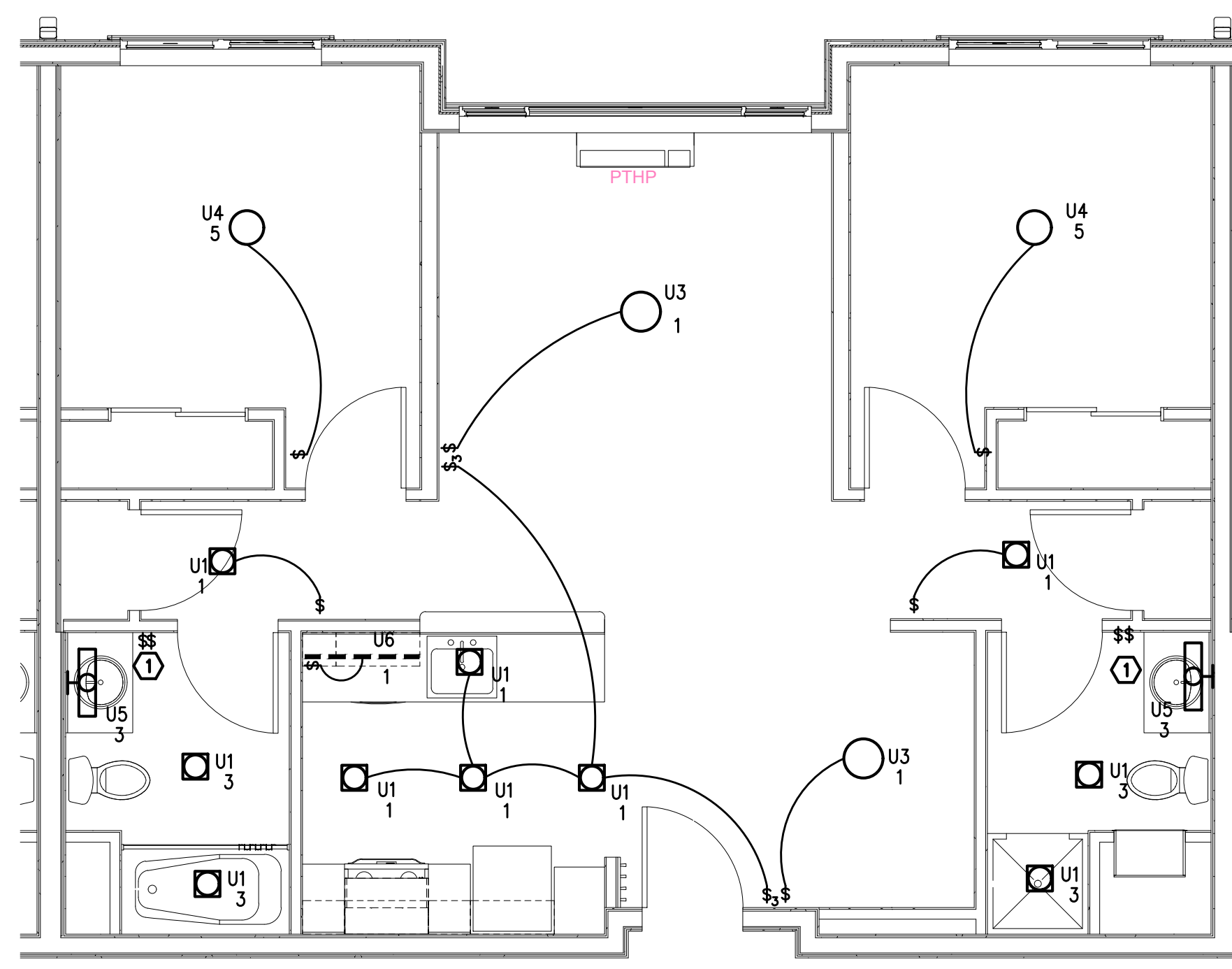
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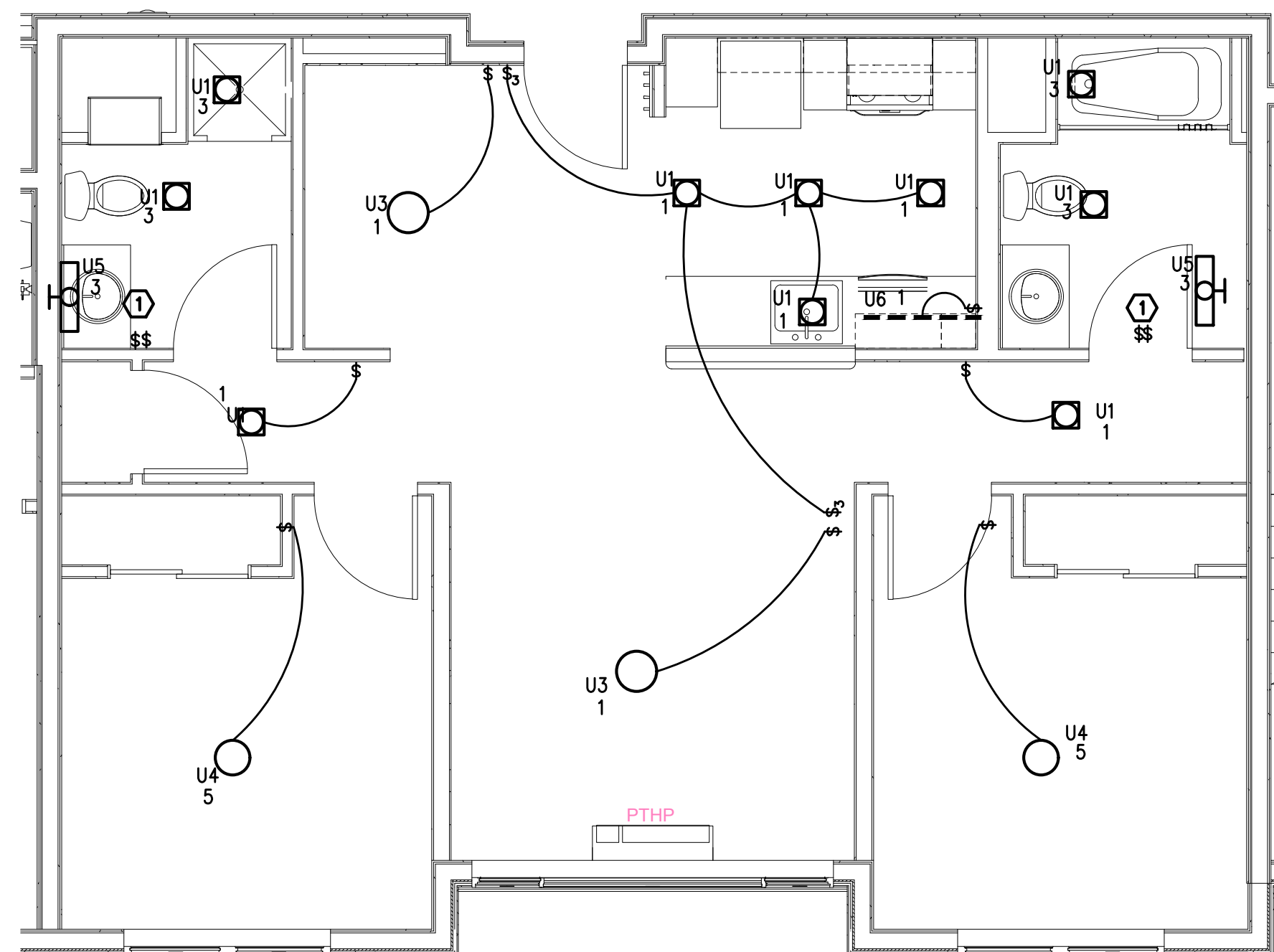
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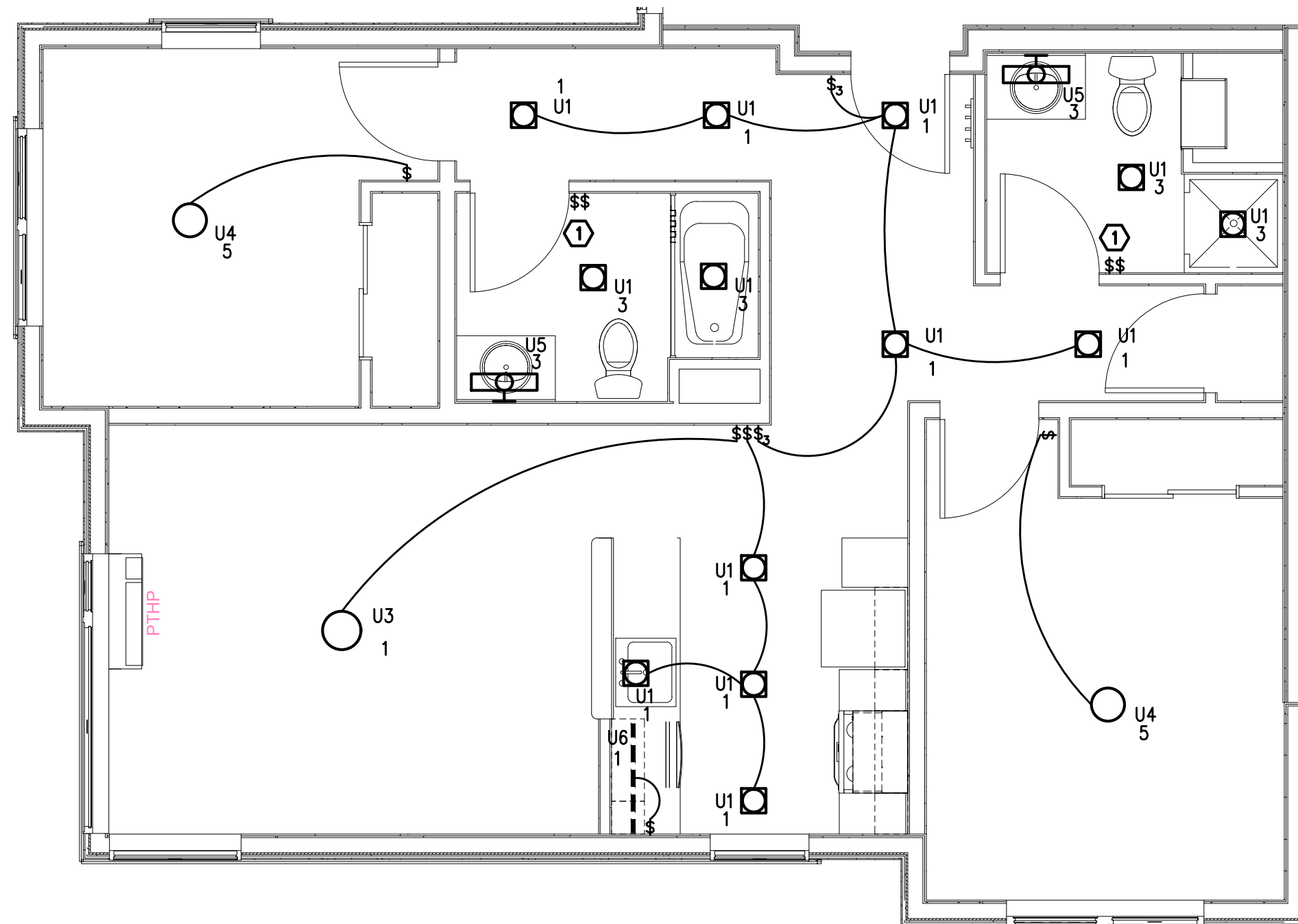
1 TYPICAL UNIT TYPE 2A - LIGHTING PLAN
E4.04 SCALE: 1/4" = 1'-0"
(FLOORS 2-6)



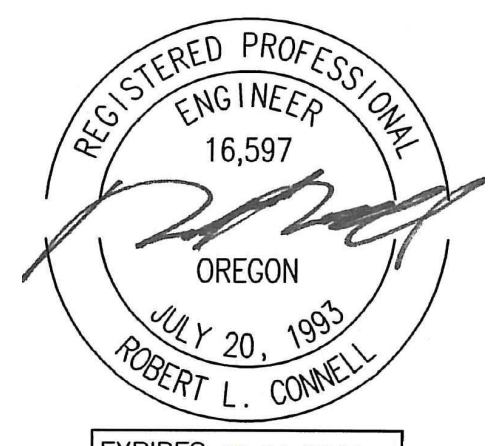
2 TYPICAL UNIT TYPE 2B - LIGHTING PLAN
E4.04 SCALE: 1/4" = 1'-0"
(FLOORS 2-6)



3 TYPICAL UNIT TYPE 2C - LIGHTING PLAN
E4.14 SCALE: 1/4" = 1'-0"
(FLOORS 2-6)



4 TYPICAL UNIT TYPE 2D - LIGHTING PLAN
E4.04 SCALE: 1/4" = 1'-0"
(FLOORS 2-6)



EXPIRES 12-31-2021

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ENLARGE UNIT
LIGHTING PLANS

E4.04

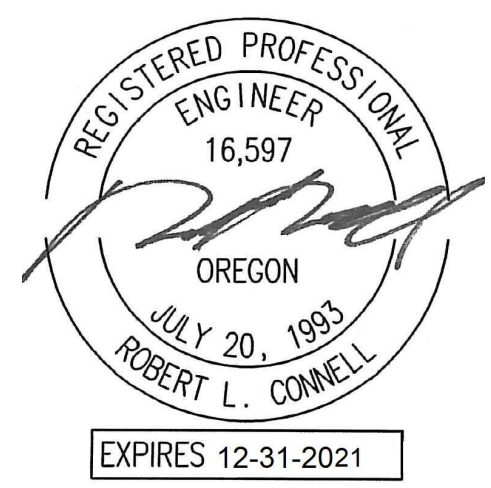


architecture, interiors & planning

FULLER STATION HOUSING

PERMIT SET DOCUMENTS

9608 SE Fuller Road
Clackamas County, Oregon, 97086



PERMIT SET DOCUMENTS

PROJECT #: 1617.00
SHEET ISSUE DATE: 01/31/2020

REVISIONS:

#	DESCRIPTION	DATE
1	COUNTY REVIEW RESPONSES	10.09.2020
2	ADDENDUM #1	10.09.2020
3	RFI 03	11.19.2020
6	ASI #01	03.05.2021

ENLARGE UNIT LIGHTING PLANS

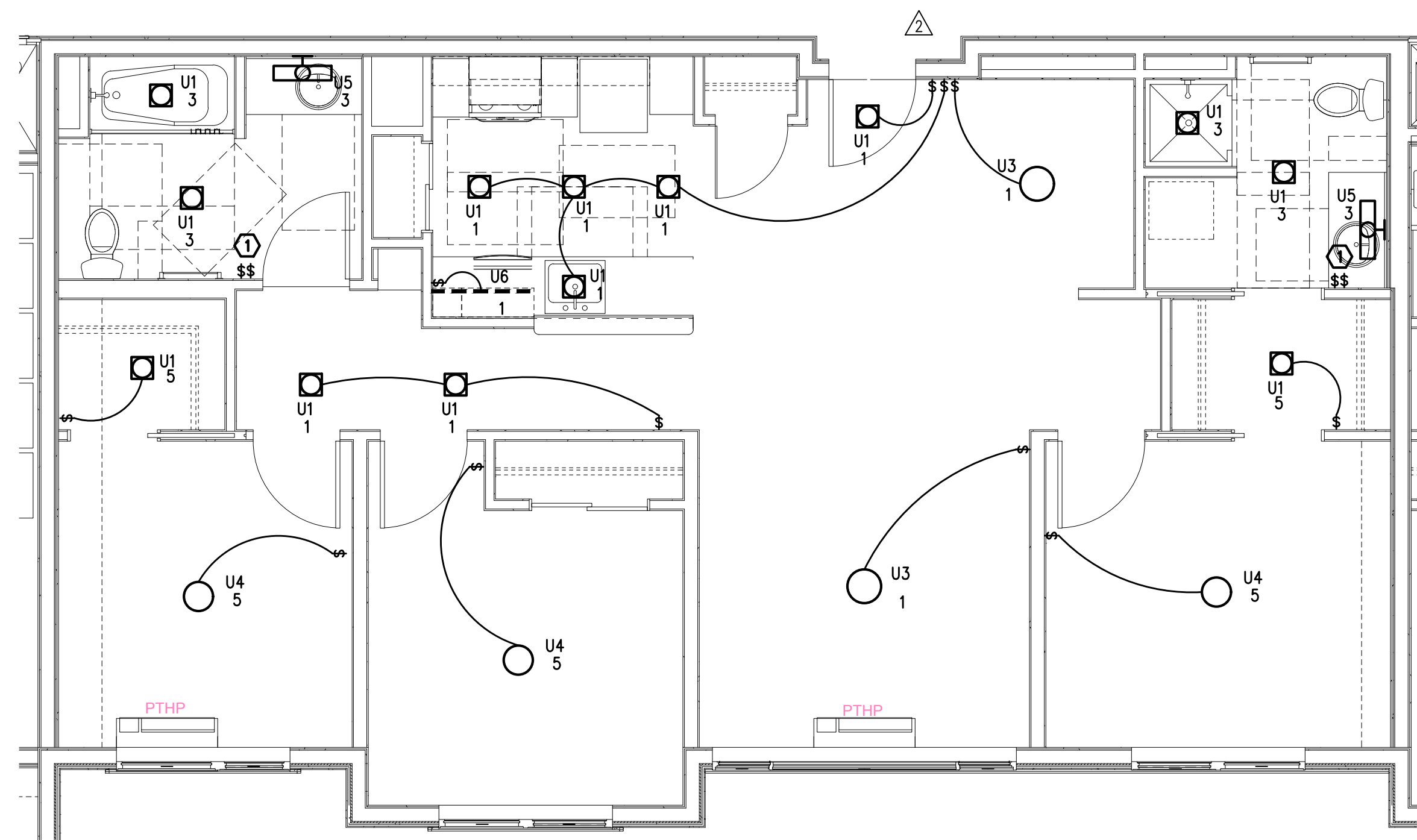
E4.05

GENERAL NOTES:

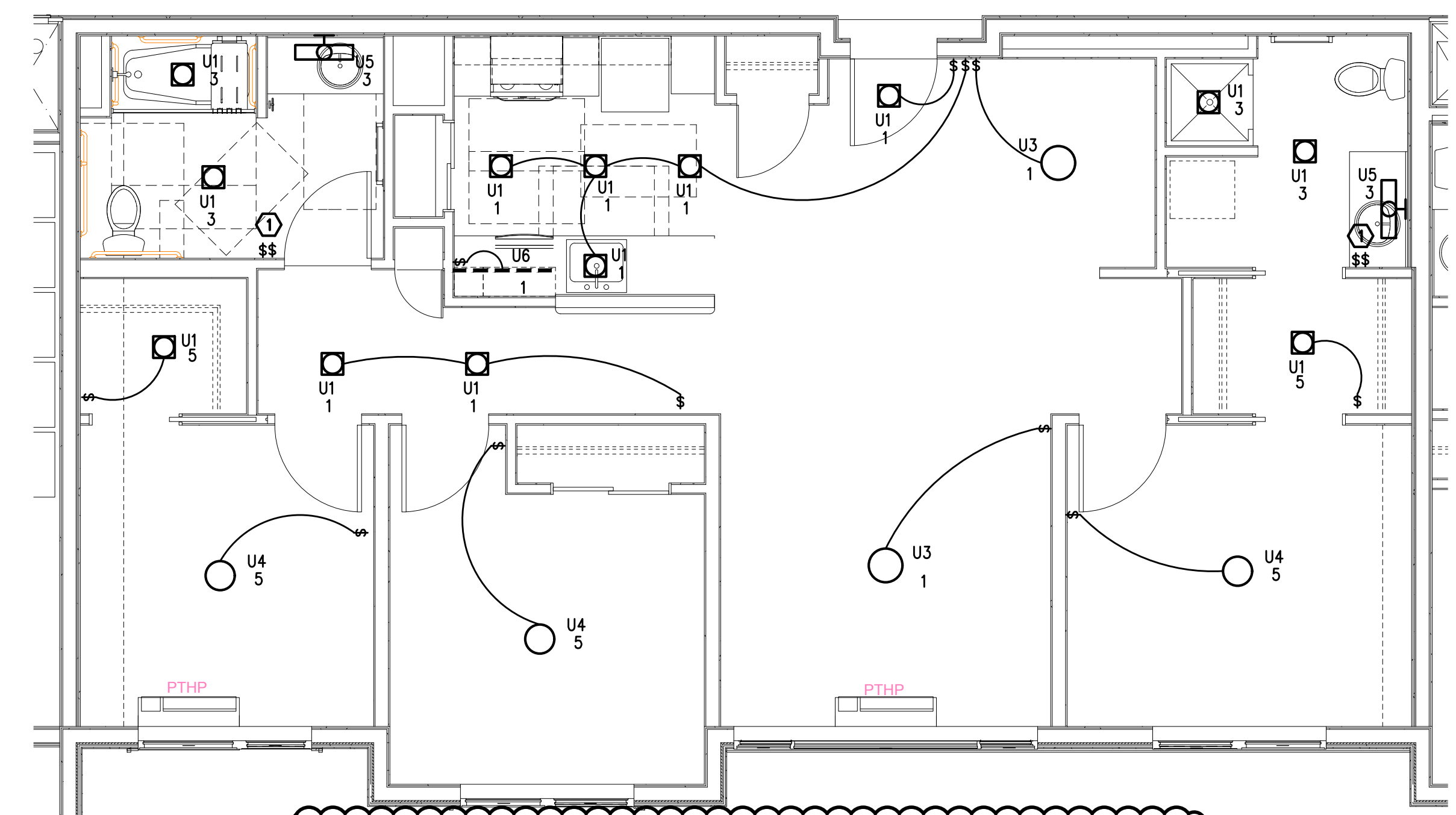
- A. ALL PLANS ARE DIAGRAMMATICAL. CONSULT ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL DEVICES AND FIXTURES.
- B. REFER TO SHEET E1.14 FOR TYPICAL UNIT LOAD CENTER DIRECTORIES.
- C. ALL LIGHT SWITCHES SHALL BE ROCKER STYLE, SUCH AS LEVITON DECORA, OR APPROVED EQUAL.
- D. REFER TO SHEETS E4.11 - E4.14 FOR TYPICAL UNIT POWER PLANS.

KEYED NOTES:

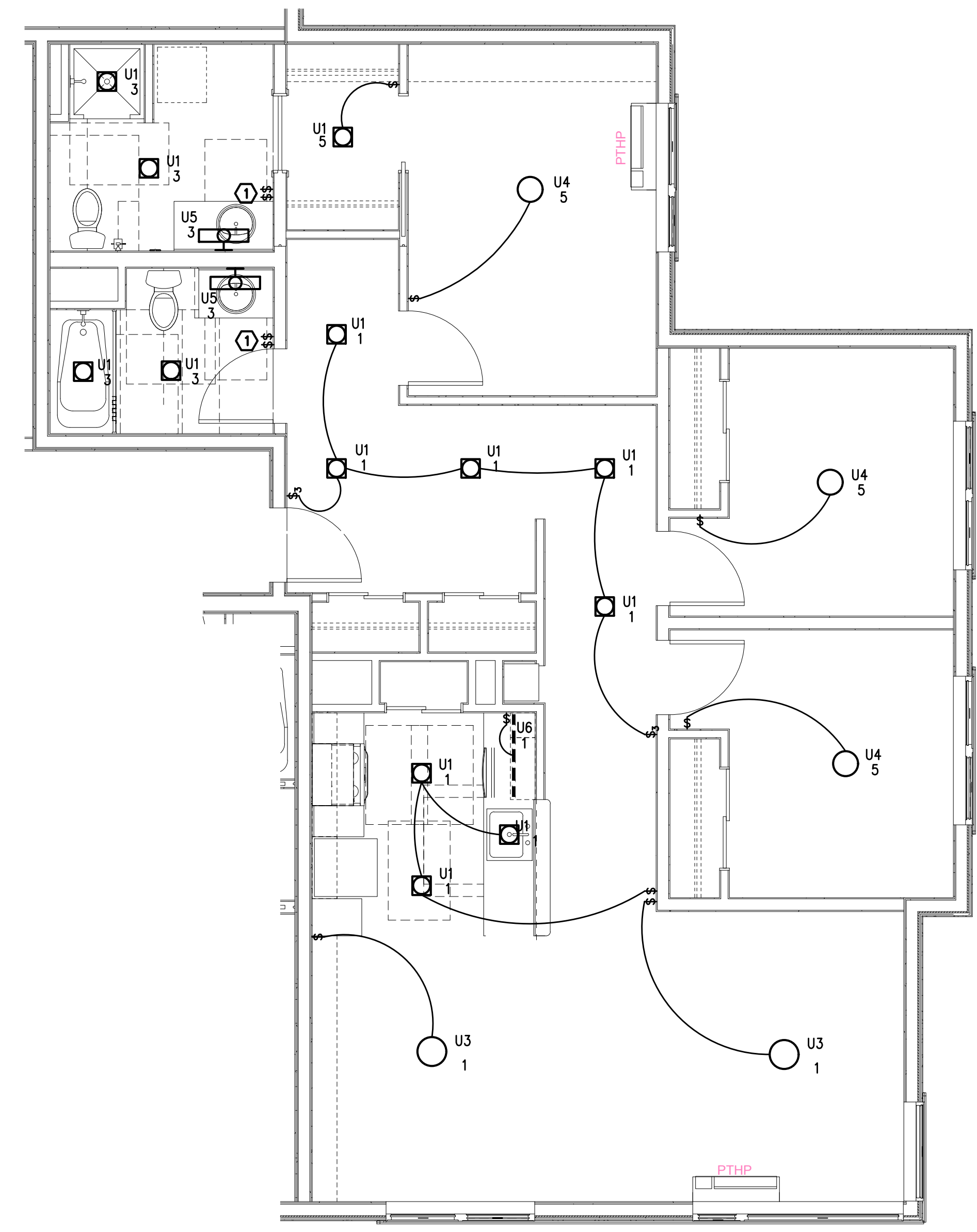
- 1. REFER TO E1.22 FOR TYPICAL BATHROOM SWITCHING DIAGRAM.



1 TYPICAL UNIT TYPE 3A - LIGHTING PLAN
E4.05 SCALE: 1/4" = 1'-0"
(FLOORS 2-6)



3 TYPICAL UNIT TYPE 3A - LIGHTING PLAN
E4.05 SCALE: 1/4" = 1'-0"
(UNIT 313)



2 TYPICAL UNIT TYPE 3B - LIGHTING PLAN
E4.05 SCALE: 1/4" = 1'-0"
(FLOORS 2-6)



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FULLER STATION HOUSING

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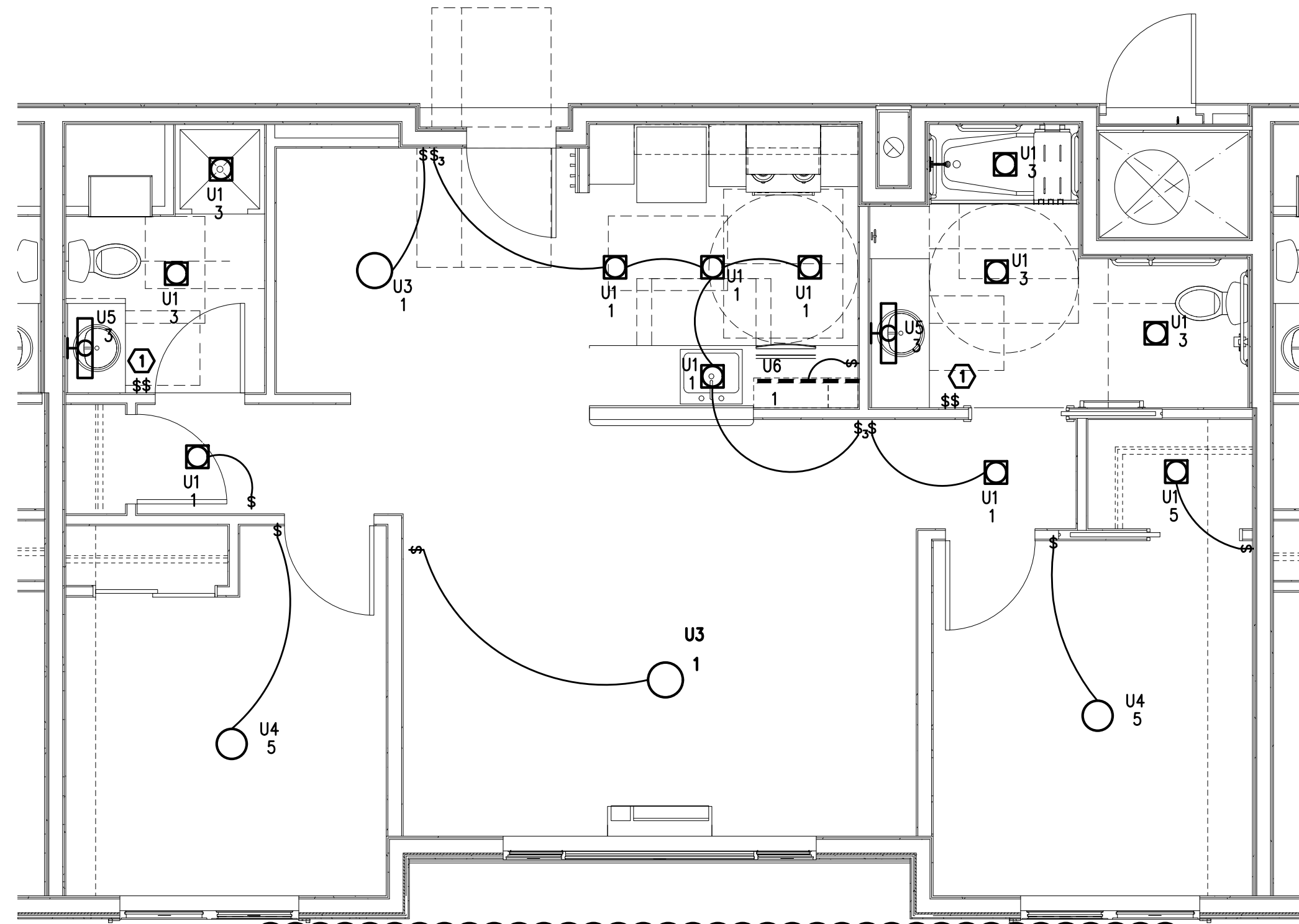
9608 SE Fuller Road
Clackamas County, Oregon, 97086

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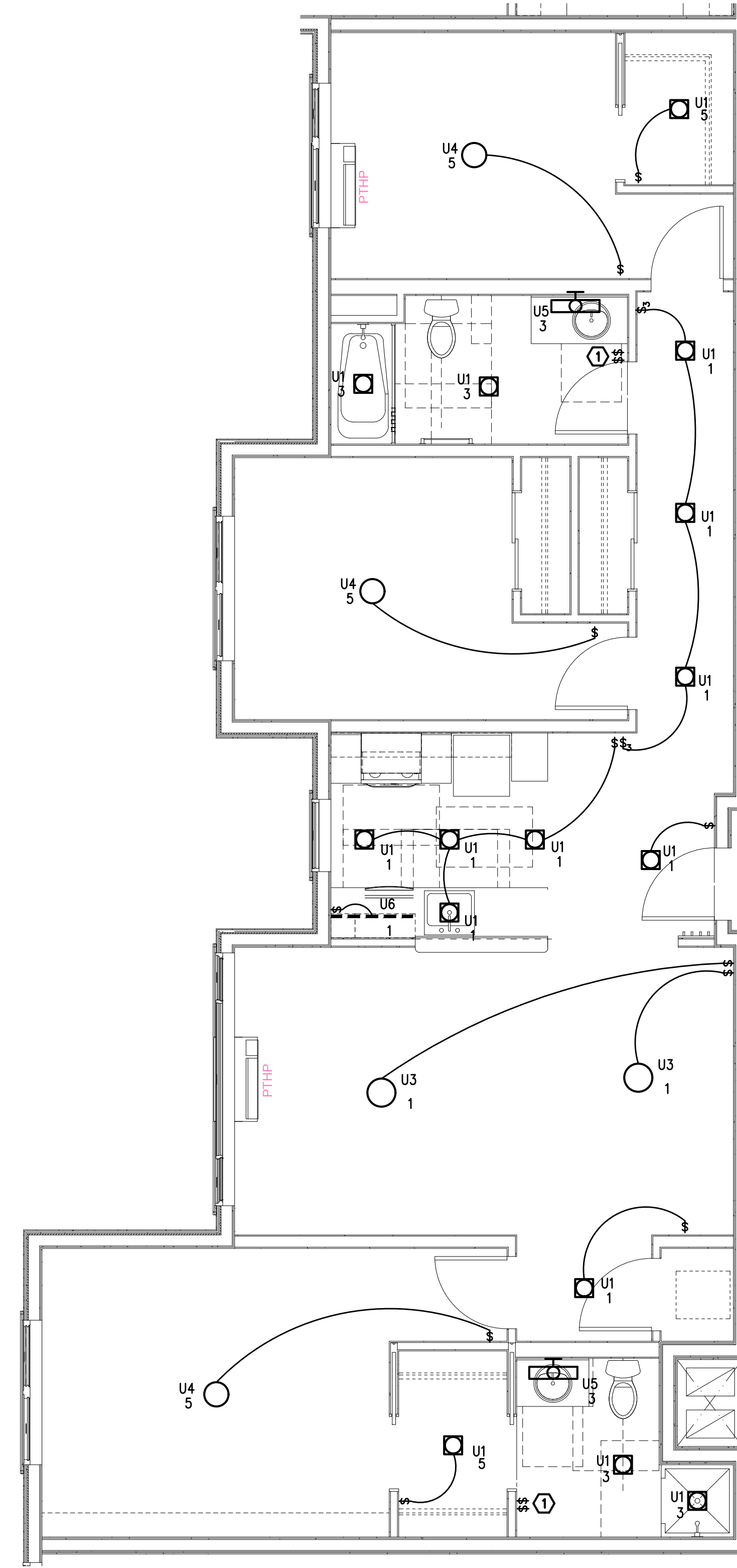
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KEYED NOTES:

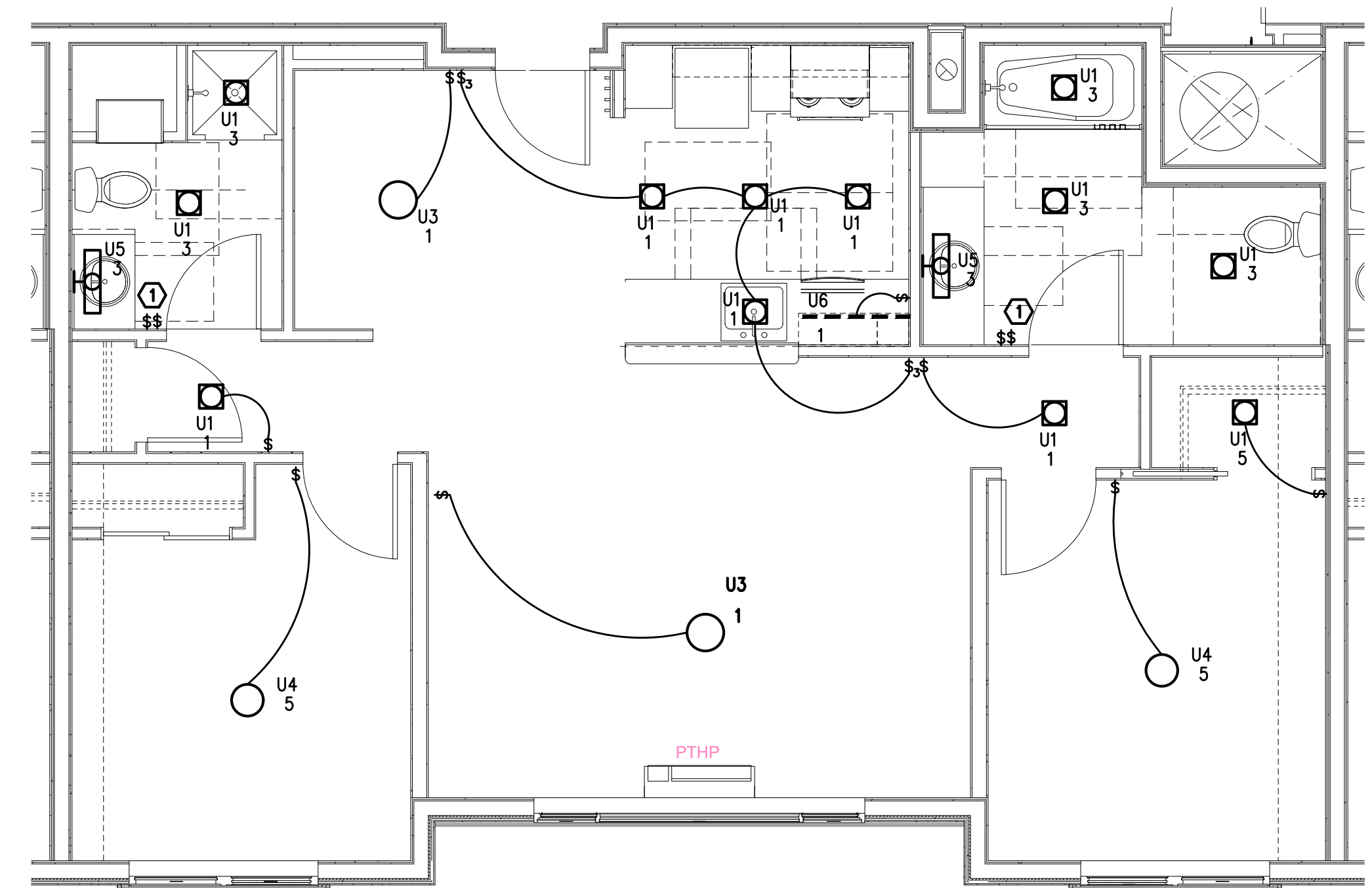
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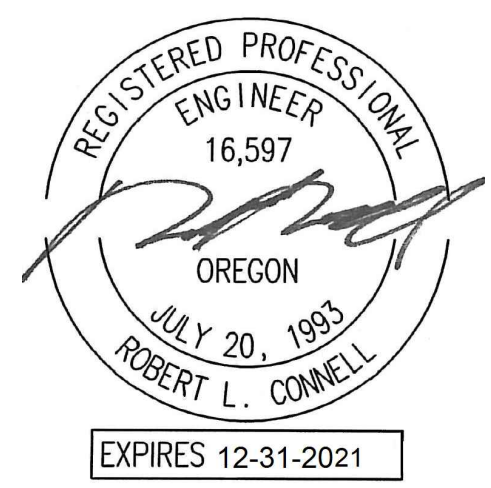
2 TYPICAL UNIT TYPE 2A - LIGHTING PLAN
E4.06 SCALE: 1/4" = 1'-0"
(UNITS 411,511,611)



1 TYPICAL UNIT TYPE 3C - LIGHTING PLAN
E4.06 SCALE: 1/4" = 1'-0"
(FLOORS 2-6)



3 TYPICAL UNIT TYPE 2A/ADA - LIGHTING PLAN
E4.06 SCALE: 1/4" = 1'-0"
(UNITS 211,311)



PERMIT SET DOCUMENTS

PROJECT #: 1617.00
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ENLARGE UNIT LIGHTING PLANS

E4.06



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FULLER STATION HOUSING
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ENLARGE UNIT
 POWER PLANS

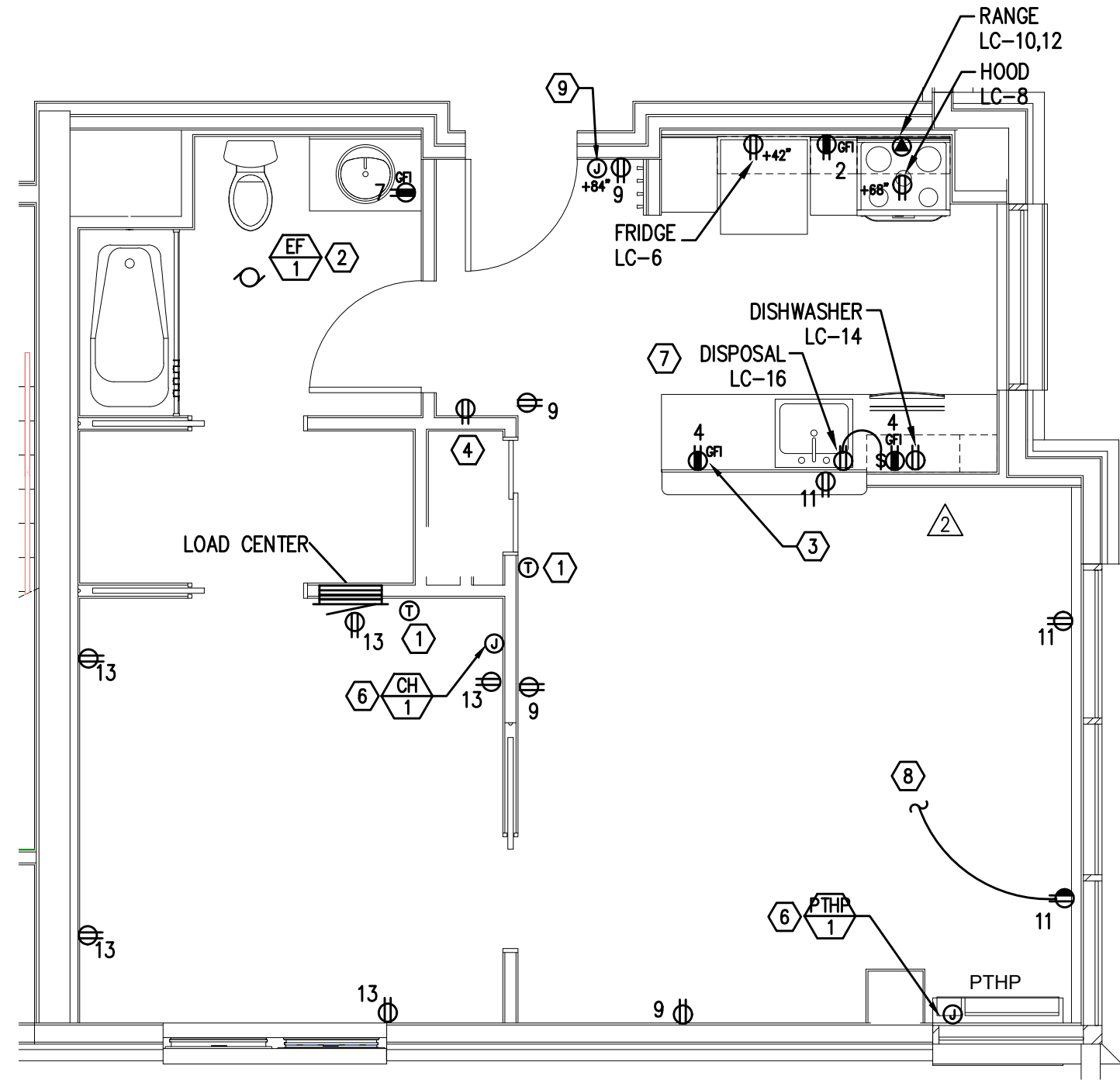
E4.11

GENERAL NOTES:

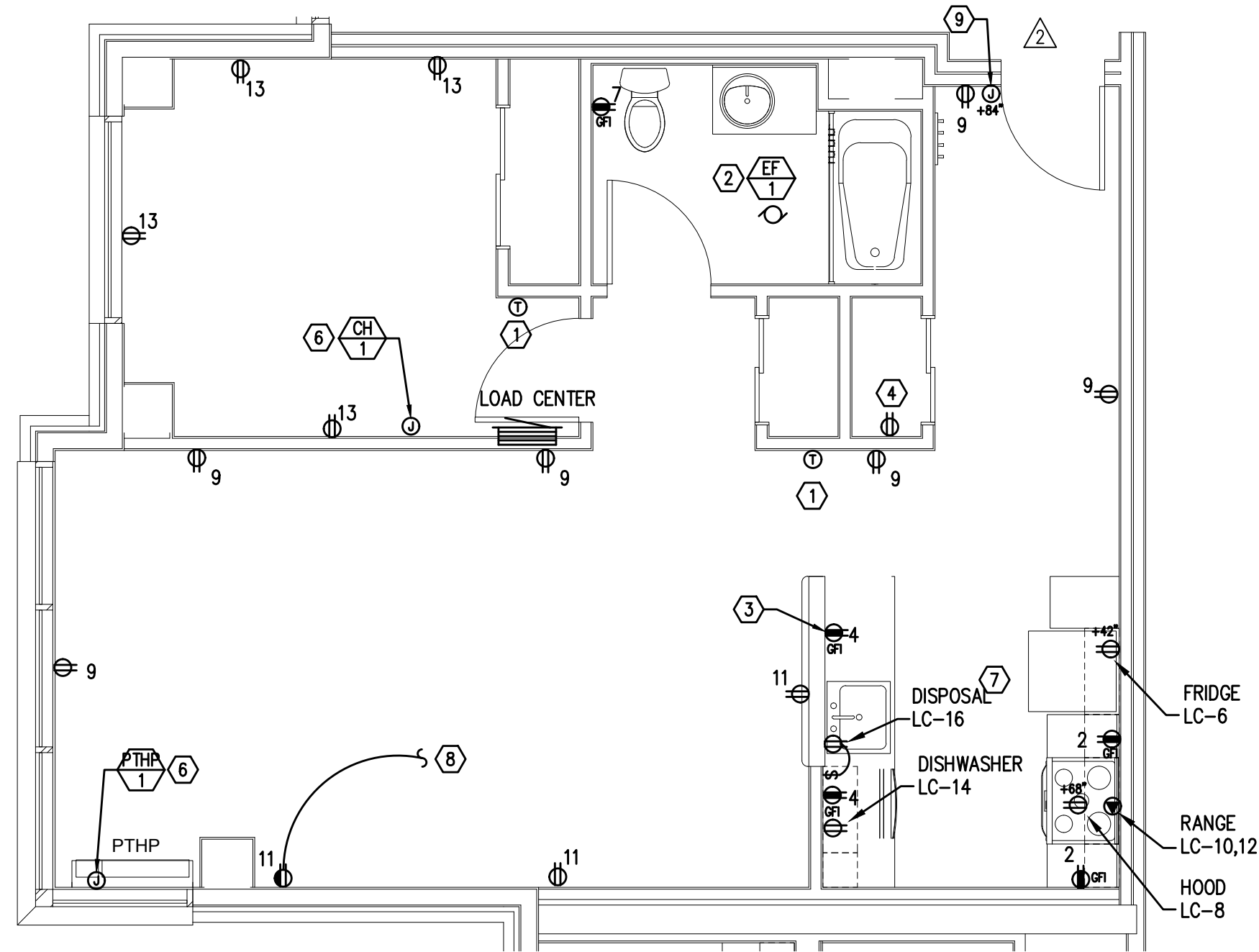
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- STANDARD RECEPTACLE MOUNTING HEIGHT IS 18" A.F.F. UNLESS OTHERWISE SPECIFIED. RECEPTACLES LOCATED BELOW WINDOW SILLS SHALL NOT BE LESS THE 15" A.F.F. AS REQUIRED BY CODE. DEVICES LOCATED BELOW WINDOW SILLS MAY BE ROTATED 90° IF NECESSARY. CONTRACTOR TO ADVISE ARCHITECT IMMEDIATELY IF CONFLICT BETWEEN DEVICES AND WINDOW SILLS IS APPARENT.
- REFER TO SHEET E1.13 FOR TYPICAL UNIT LOAD CENTER DIRECTORIES.
- PROVIDE ELECTRICAL ROUGH IN FOR LOW VOLTAGE DEVICES. REFER TO 'T' SERIES SHEETS FOR ADDITIONAL INFORMATION. COORDINATE INSTALLATION WITH LOW VOLTAGE CONTRACTOR/INSTALLER.
- KITCHEN COUNTER TOP RECEPTACLES LOCATED AT HALF-WALLS SHALL BE MOUNTED HORIZONTAL TO THE COUNTER.

KEYED NOTES:

- PROVIDE WIRE CONNECTION FOR THERMOSTAT(S). COORDINATE WITH MECHANICAL INSTALLER FOR EXACT LOCATION AND POWER REQUIREMENTS PRIOR TO ROUGH IN.
- BATHROOM EXHAUST FAN TO BE TIED INTO THE LIGHTING CIRCUIT FOR THE SPACE AND SWITCHED SEPARATELY FROM LIGHTS. REFER TO BATHROOM SWITCHING DETAIL ON SHEET E1.6. CONSULT MECHANICAL PLANS FOR FAN LOCATIONS.
- DUPLEX RECEPTACLE LOCATED AT KITCHEN HALF WALL TO BE ROTATED 90°.
- PROVIDE ONE 20A, 120V, 1P DUPLEX RECEPTACLE ON A DEDICATED CIRCUIT FED FROM THE TENANT LOAD CENTER FOR SMART PANEL. COORDINATE EXACT LOCATION WITH LOW VOLTAGE INSTALLER PRIOR TO ROUGH IN (REFER TO 'T' SERIES SHEETS).
- NOT USED.
- COORDINATE EXACT POWER CONNECTION LOCATION WITH MECHANICAL INSTALLER PRIOR TO ROUGH IN.
- PROVIDE ONE 20A, 120V, 1P GFCI DUPLEX RECEPTACLE UNDER KITCHEN SINK FOR DISPOSAL POWER CONNECTION.
- HALF-SWITCHED DUPLEX RECEPTACLE. REFER TO TYPICAL UNIT LIGHTING PLANS FOR SWITCH LOCATION.
- PROVIDE CONNECTION AND FINAL INSTALLATION OF DOOR BELL AND BUTTON. AND TIE INTO NEAREST RECEPTACLE CIRCUIT. DOOR BELL BUTTON TO BE BALDWIN HARDWARE MODEL 14851.150 IN SATIN FINISH. HARDWIRED DOOR BELL TO BE NUTONE LA11W OR APPROVED EQUAL. PROVIDE INSTALLATION PER MANUFACTURER'S DIRECTION.
- PROVIDE BID ALTERNATE FOR LAUNDRY ELECTRICAL CONNECTIONS IN 3-BEDROOM APARTMENT UNITS.



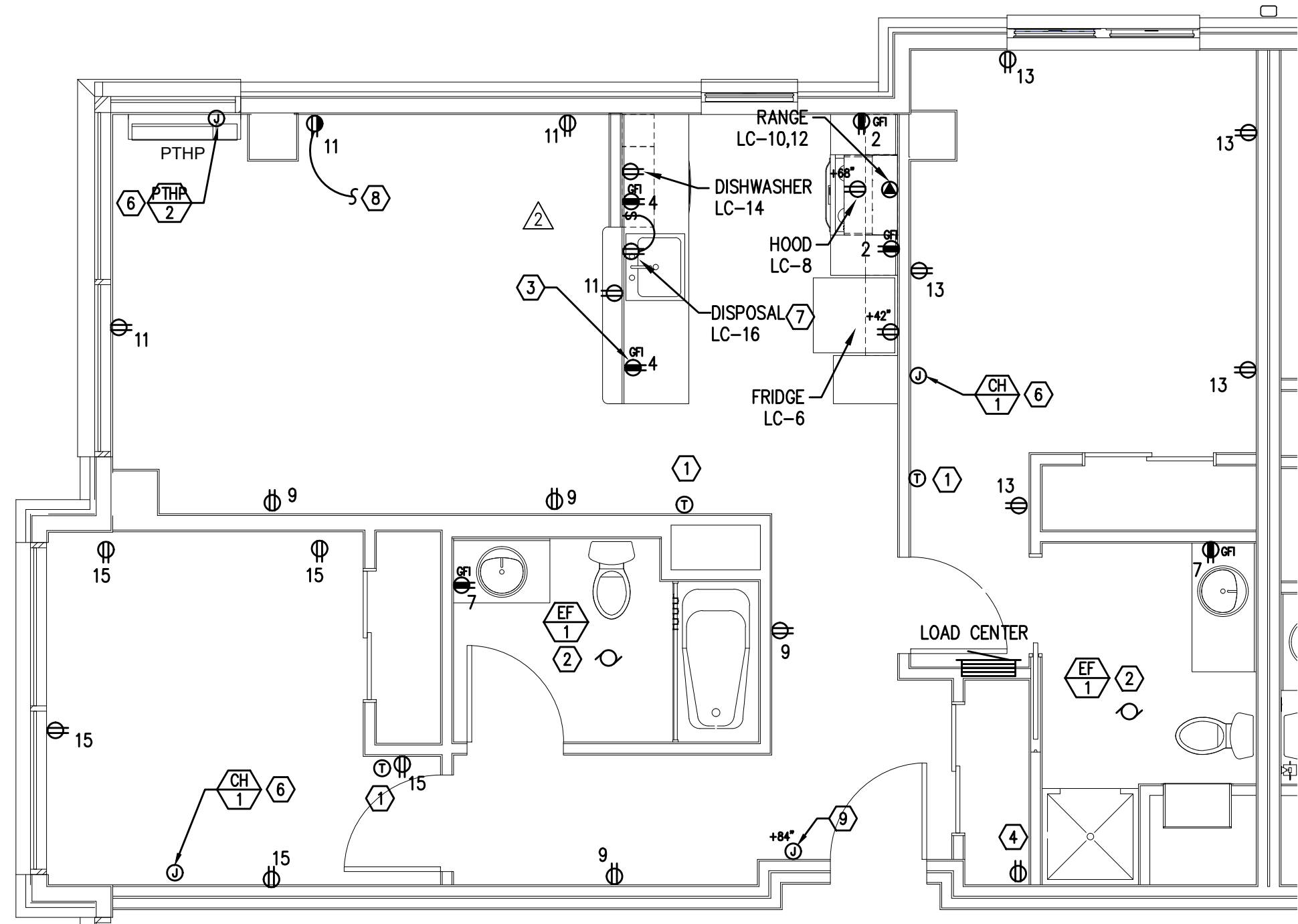
1 TYPICAL UNIT TYPE 1A - POWER PLAN
 E4.11 SCALE: 1/4" = 1'-0"



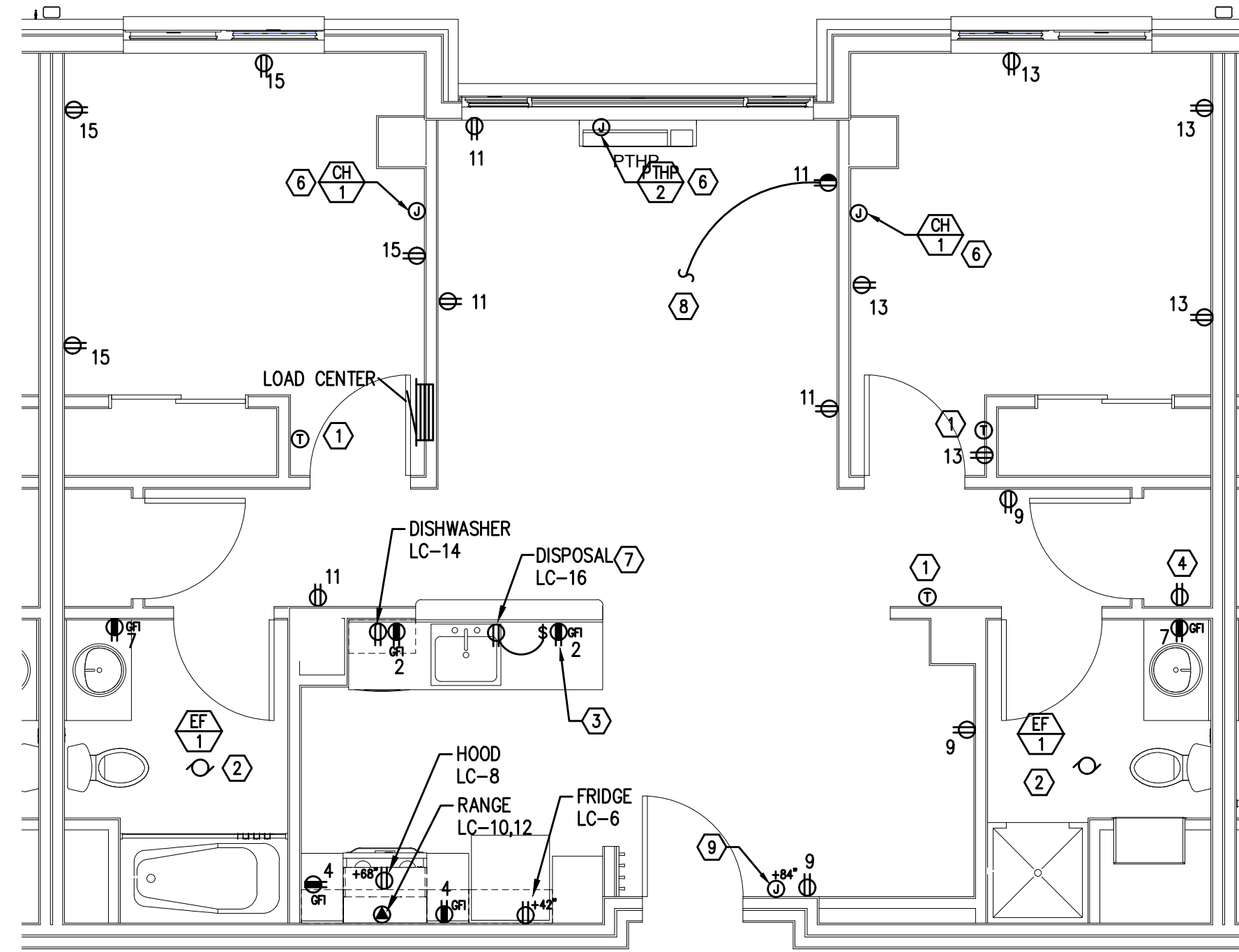
2 TYPICAL UNIT TYPE 1B - POWER PLAN
 E4.11 SCALE: 1/4" = 1'-0"



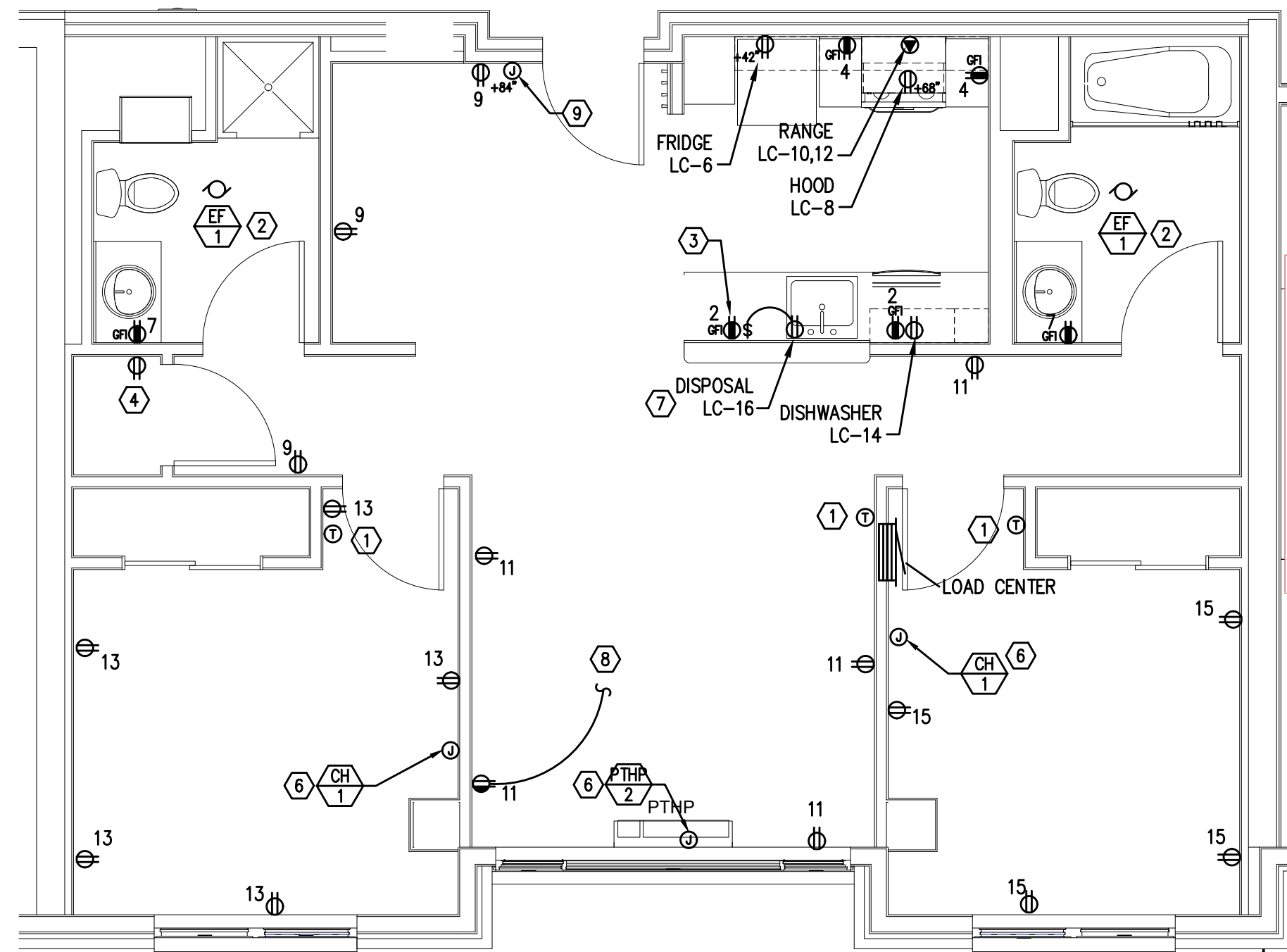
architecture, interiors & planning



1 TYPICAL UNIT TYPE 2A - POWER PLAN
E4.12 SCALE: 1/4" = 1'-0"



2 TYPICAL UNIT TYPE 2B - POWER PLAN
E4.12 SCALE: 1/4" = 1'-0"



3 TYPICAL UNIT TYPE 2C - POWER PLAN
E4.12 SCALE: 1/4" = 1'-0"

GENERAL NOTES:

- A. ALL PLANS ARE DIAGRAMMATICAL. CONSULT ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL DEVICES AND FIXTURES.
- B. REFER TO DETAILS ON SHEET E1.23 FOR ADDITIONAL INFORMATION REGARDING ADA REACH REQUIREMENTS FOR RECEPTACLE AND SWITCH MOUNTING HEIGHT.
- C. STANDARD RECEPTACLE MOUNTING HEIGHT IS 18" A.F.F. UNLESS OTHERWISE SPECIFIED. RECEPTACLES LOCATED BELOW WINDOW SILLS SHALL NOT BE LESS THE 15" A.F.F. AS REQUIRED BY CODE. DEVICES LOCATED BELOW WINDOW SILLS MAY BE ROTATED 90° IF NECESSARY. CONTRACTOR TO ADVISE ARCHITECT IMMEDIATELY IF CONFLICT BETWEEN DEVICES AND WINDOW SILLS IS APPARENT.
- D. REFER TO SHEET E1.13 FOR TYPICAL UNIT LOAD CENTER DIRECTORIES.
- E. PROVIDE ELECTRICAL ROUGH IN FOR LOW VOLTAGE DEVICES. REFER TO 'T' SERIES SHEETS FOR ADDITIONAL INFORMATION. COORDINATE INSTALLATION WITH LOW VOLTAGE CONTRACTOR/INSTALLER.
- F. KITCHEN COUNTER TOP RECEPTACLES LOCATED AT HALF-WALLS SHALL BE MOUNTED HORIZONTAL TO THE COUNTER.

KEYED NOTES:

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10. PROVIDE BID ALTERNATE FOR LAUNDRY ELECTRICAL CONNECTIONS IN 3-BEDROOM APARTMENT UNITS.

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FULLER STATION HOUSING

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CONTACT: DENISE TAYLOR



EXPIRES 12-31-2021

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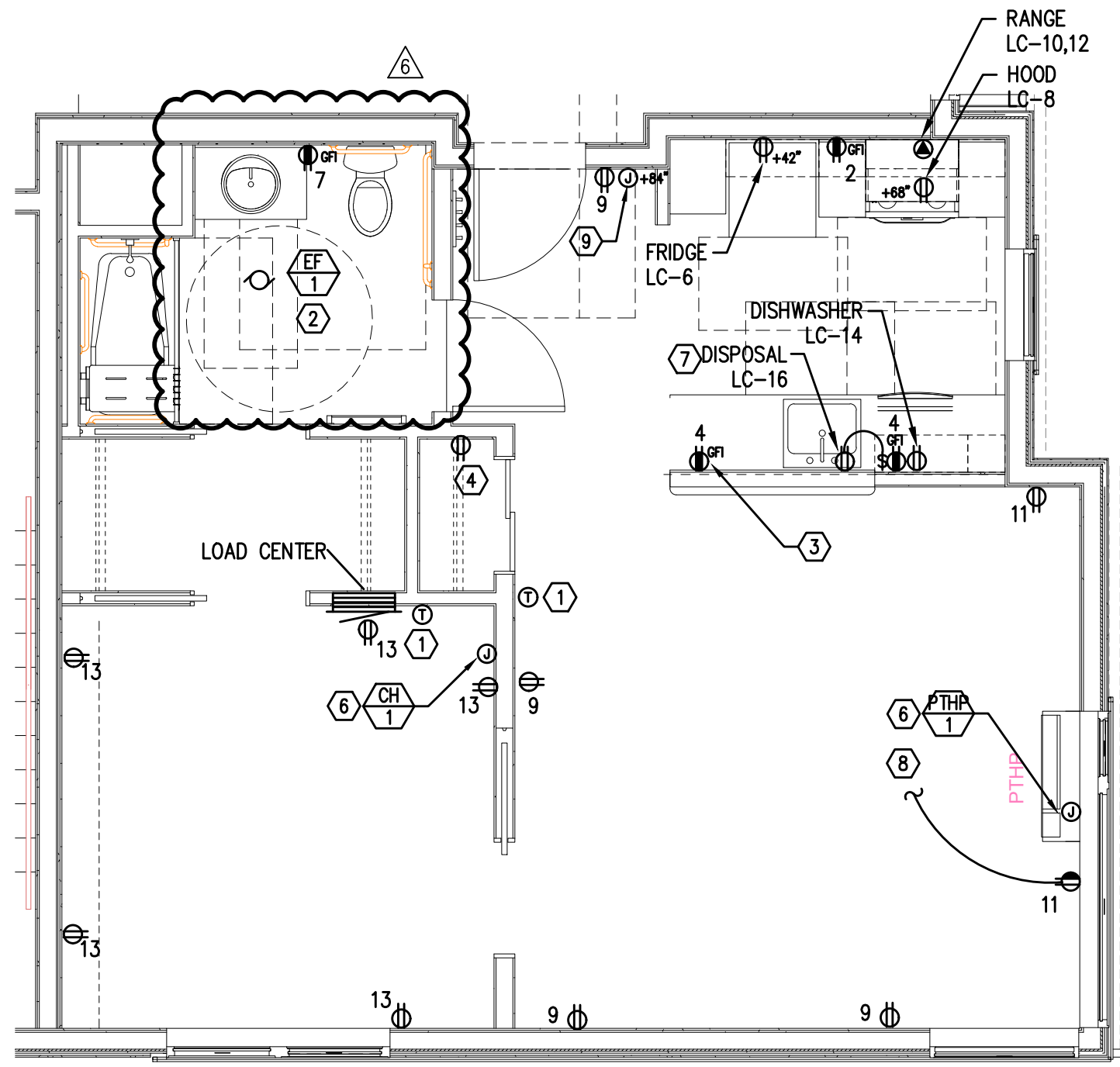
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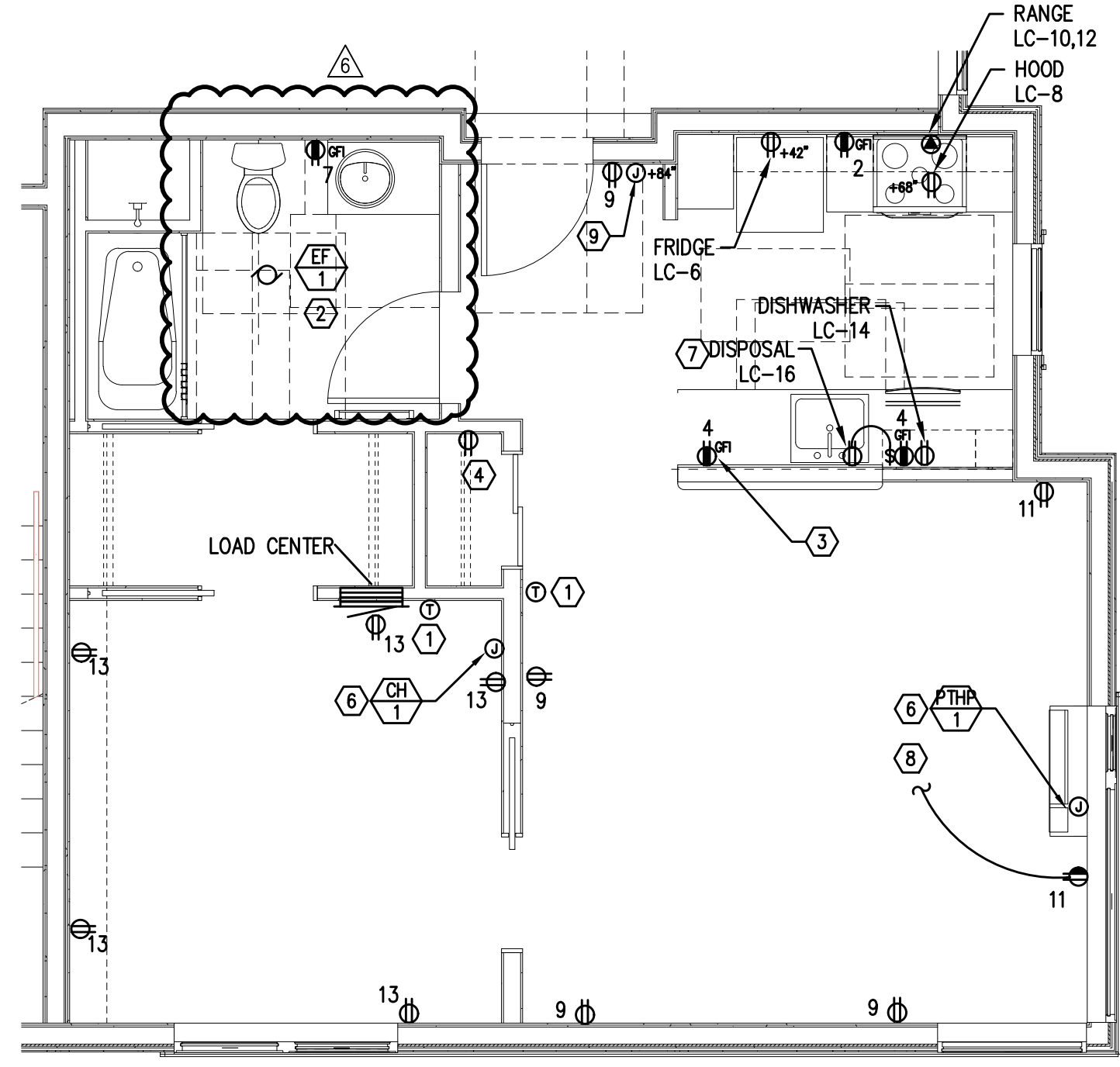
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ENLARGE UNIT POWER PLANS

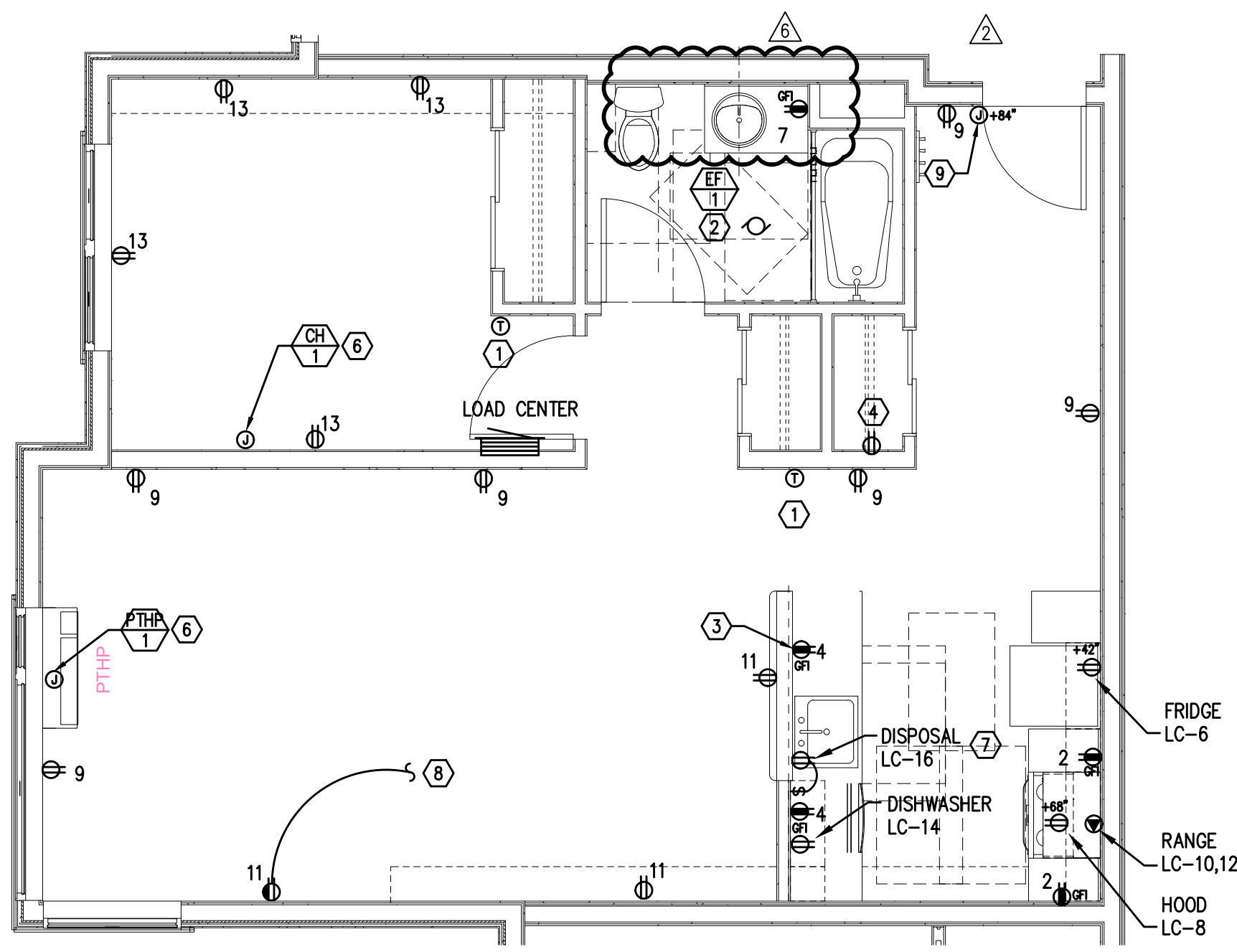
E4.12



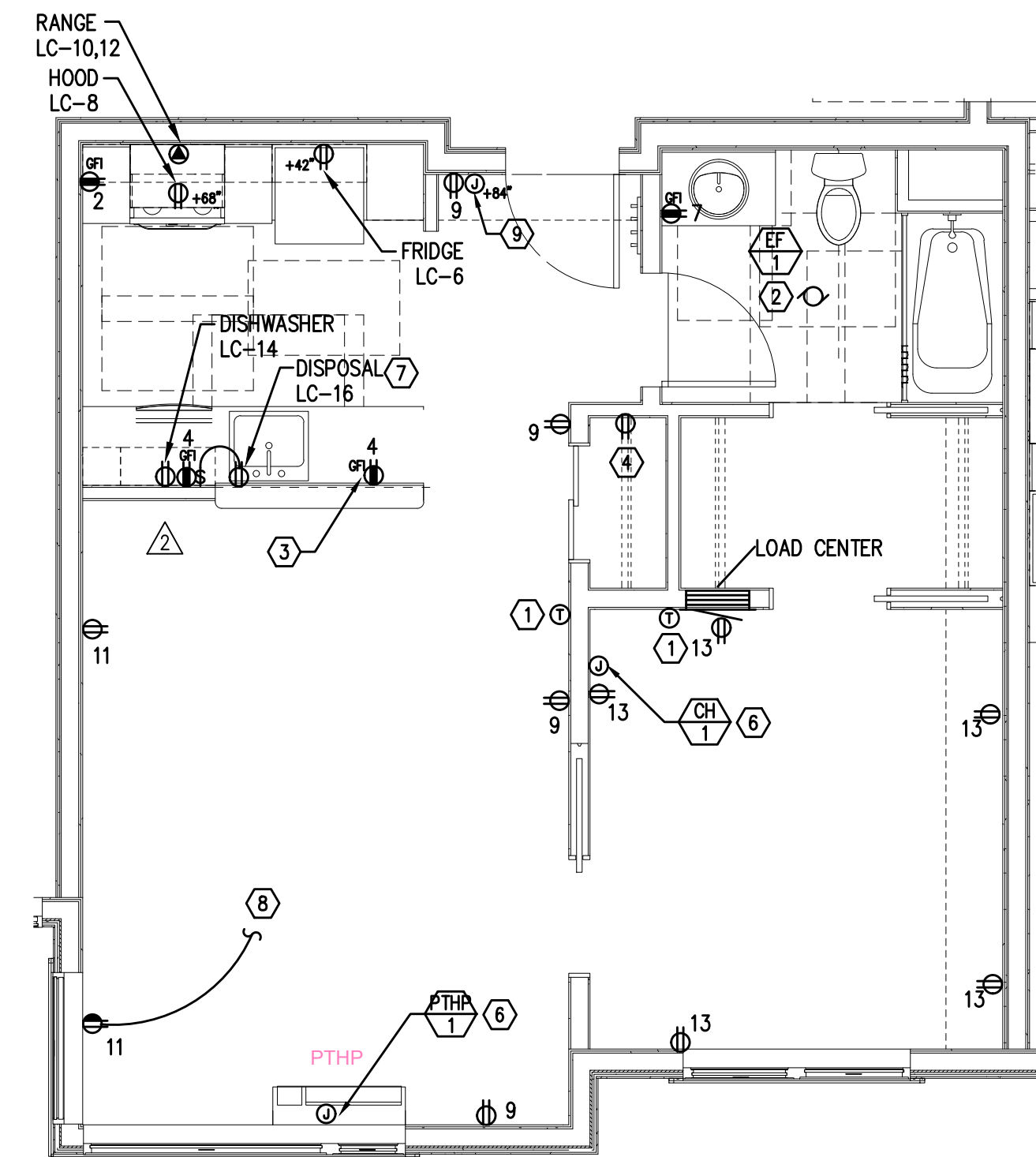
1 TYPICAL UNIT TYPE 1A ADA – POWER PLAN
 E4.13 SCALE: 1/4" = 1'-0"
 (UNIT 209)



2 TYPICAL UNIT TYPE 1A – POWER PLAN
 E4.13 SCALE: 1/4" = 1'-0"
 (FLOORS 3-6)



3 TYPICAL UNIT TYPE 1B ADA – POWER PLAN
 E4.13 SCALE: 1/4" = 1'-0"
 (FLOORS 2-6)



4 TYPICAL UNIT TYPE 1C – POWER PLAN
 E4.13 SCALE: 1/4" = 1'-0"
 (FLOORS 2-6)

GENERAL NOTES:

- A. ALL PLANS ARE DIAGRAMMATICAL. CONSULT ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL DEVICES AND FIXTURES.
- B. REFER TO DETAILS ON SHEET E1.23 FOR ADDITIONAL INFORMATION REGARDING ADA REACH REQUIREMENTS FOR RECEPTACLE AND SWITCH MOUNTING HEIGHT.
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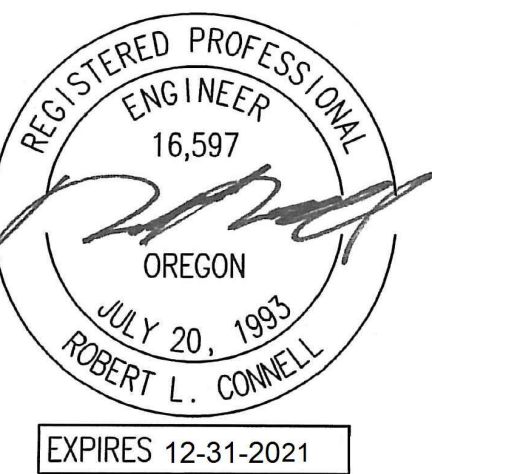
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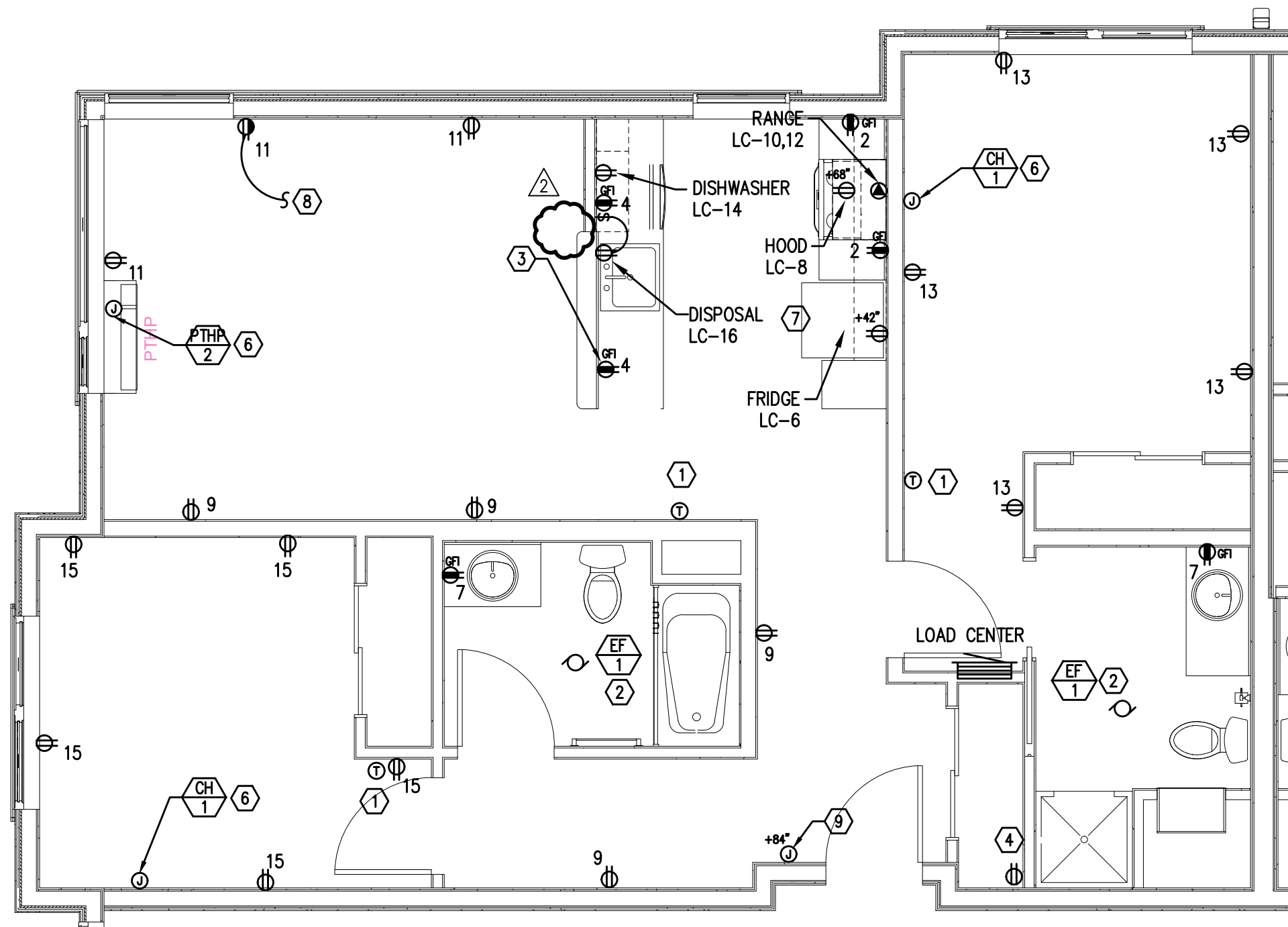
ENLARGE UNIT
 POWER PLANS

E4.13

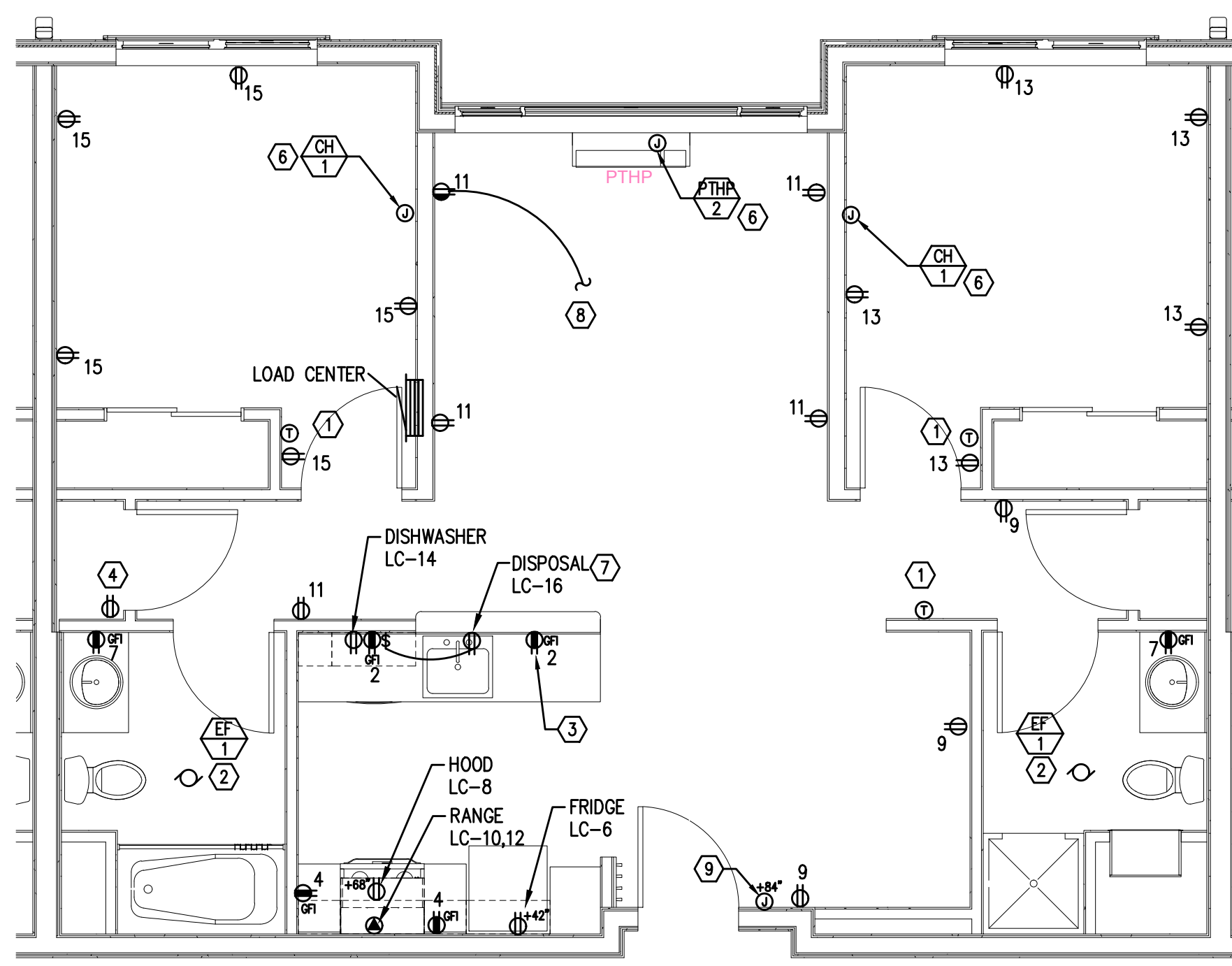


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1 TYPICAL UNIT TYPE 2A - POWER PLAN
 E4.14 SCALE: 1/4" = 1'-0"
 (FLOORS 2-6)



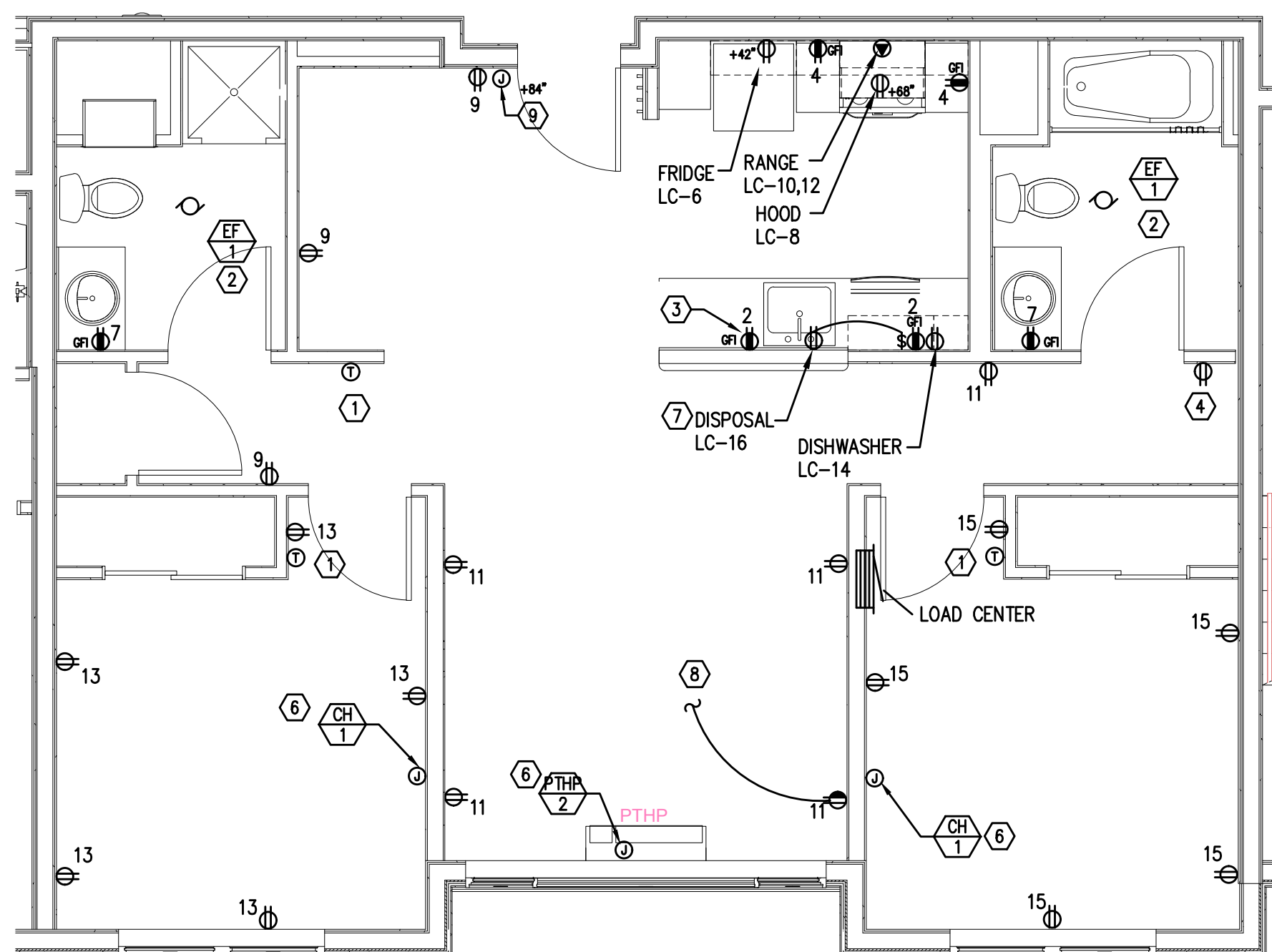
2 TYPICAL UNIT TYPE 2B - POWER PLAN
 E4.14 SCALE: 1/4" = 1'-0"
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GENERAL NOTES:

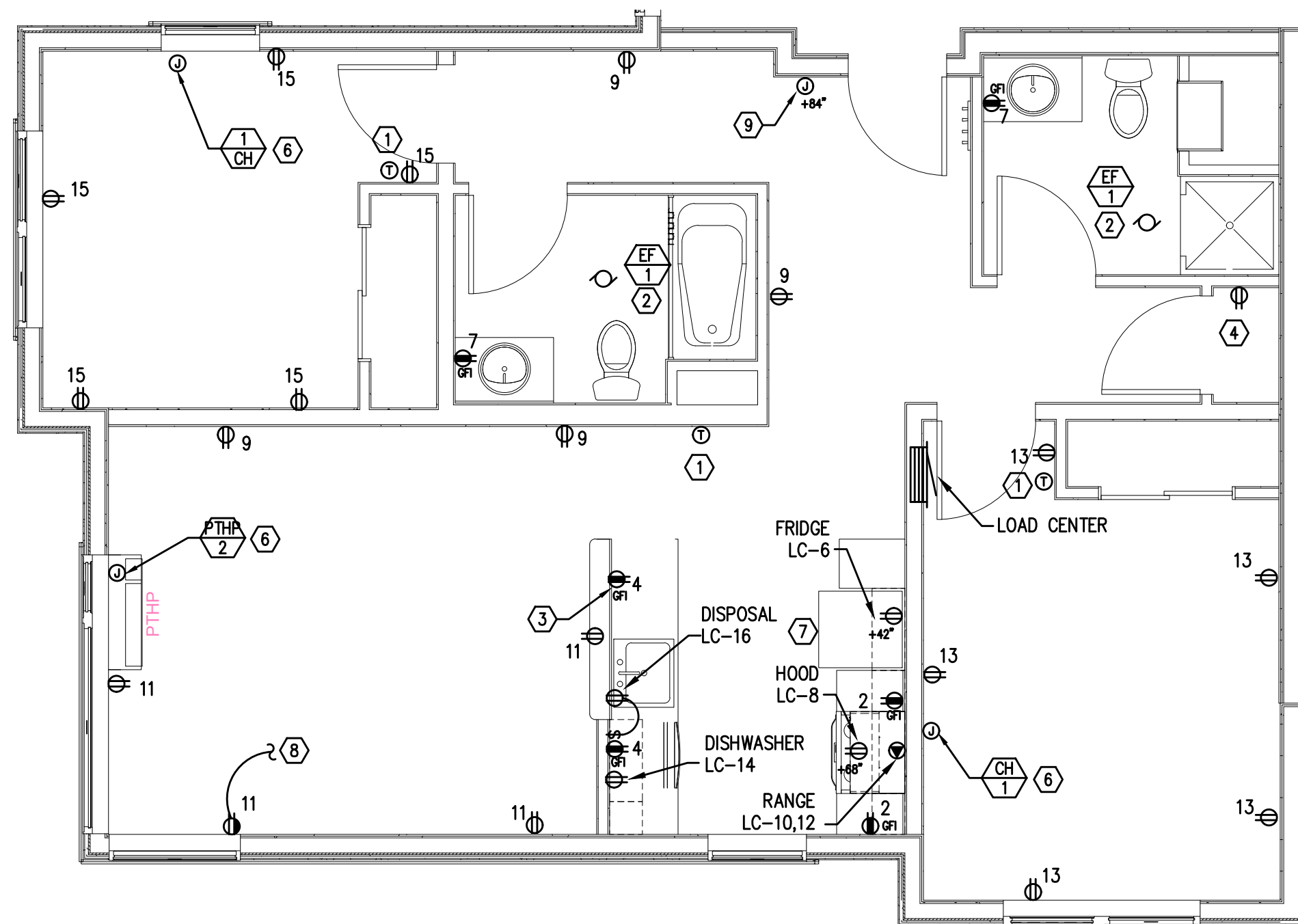
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KEYED NOTES:

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3 TYPICAL UNIT TYPE 2B - POWER PLAN
 E4.14 SCALE: 1/4" = 1'-0"
 (FLOORS 2-6)



4 TYPICAL UNIT TYPE 2D - POWER PLAN
 E4.14 SCALE: 1/4" = 1'-0"
 (FLOORS 2-6)

FULLER STATION HOUSING

PERMIT SET DOCUMENTS

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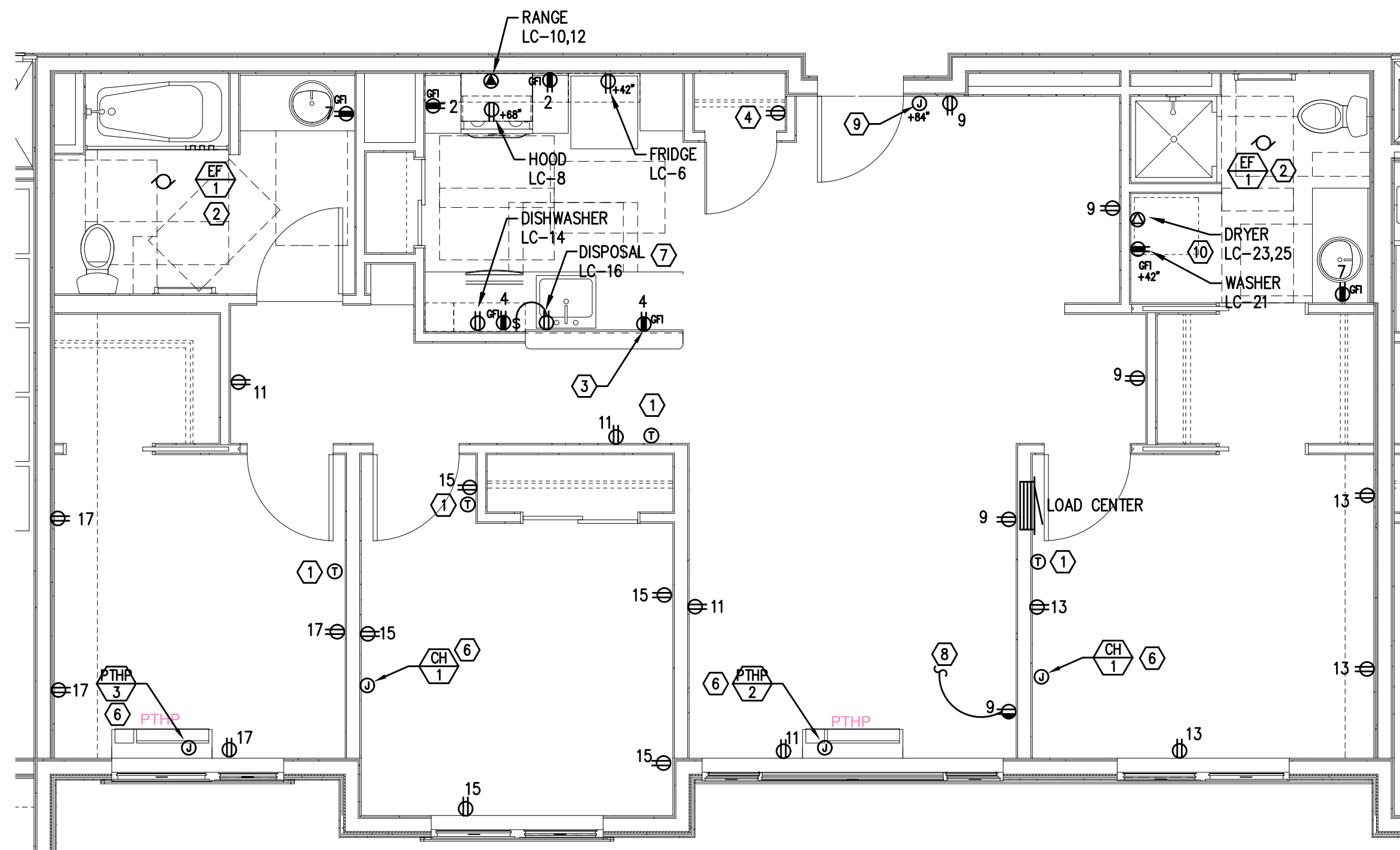
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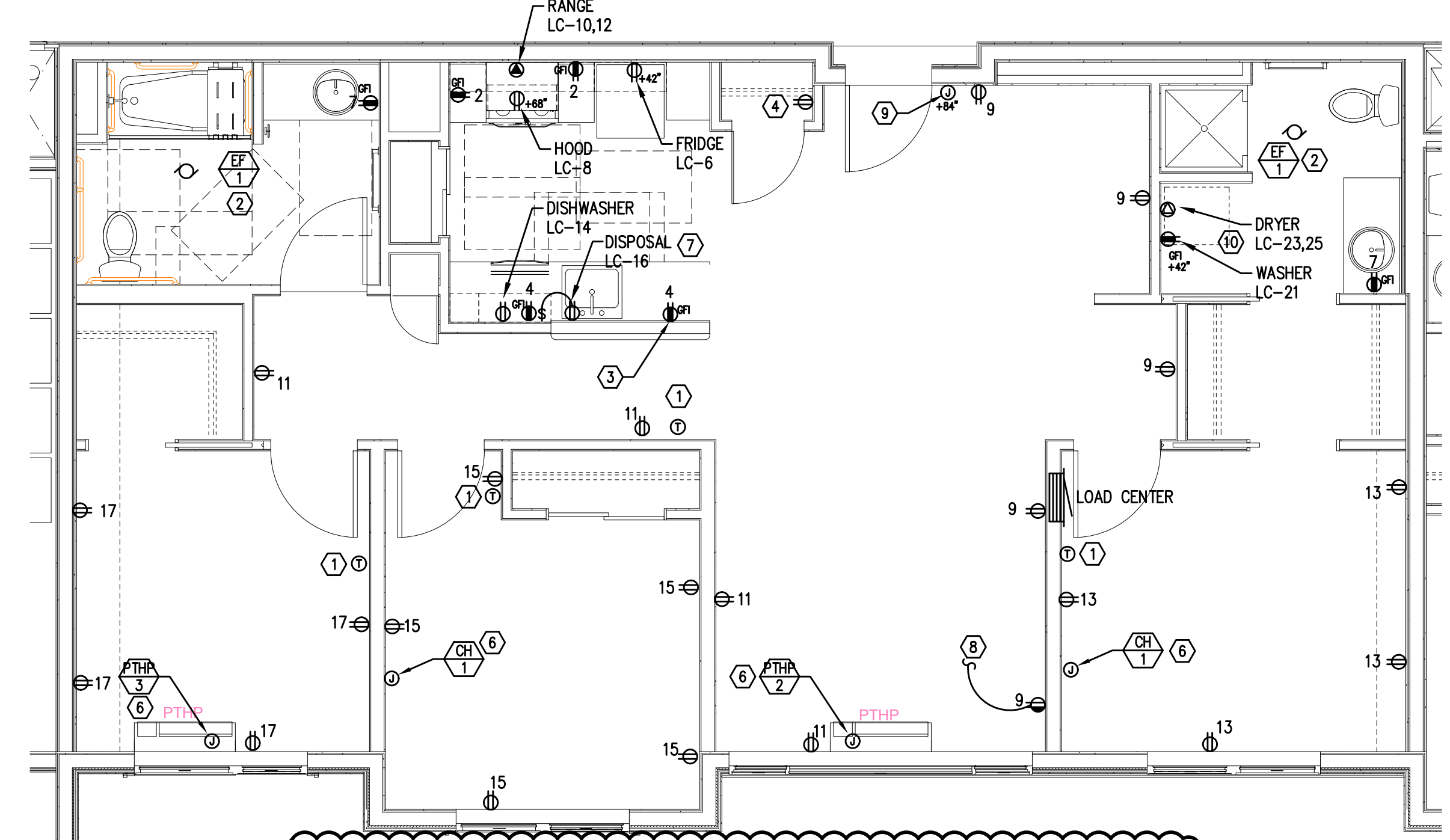
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6	ASI #01	03.05.2021

ENLARGE UNIT POWER PLANS

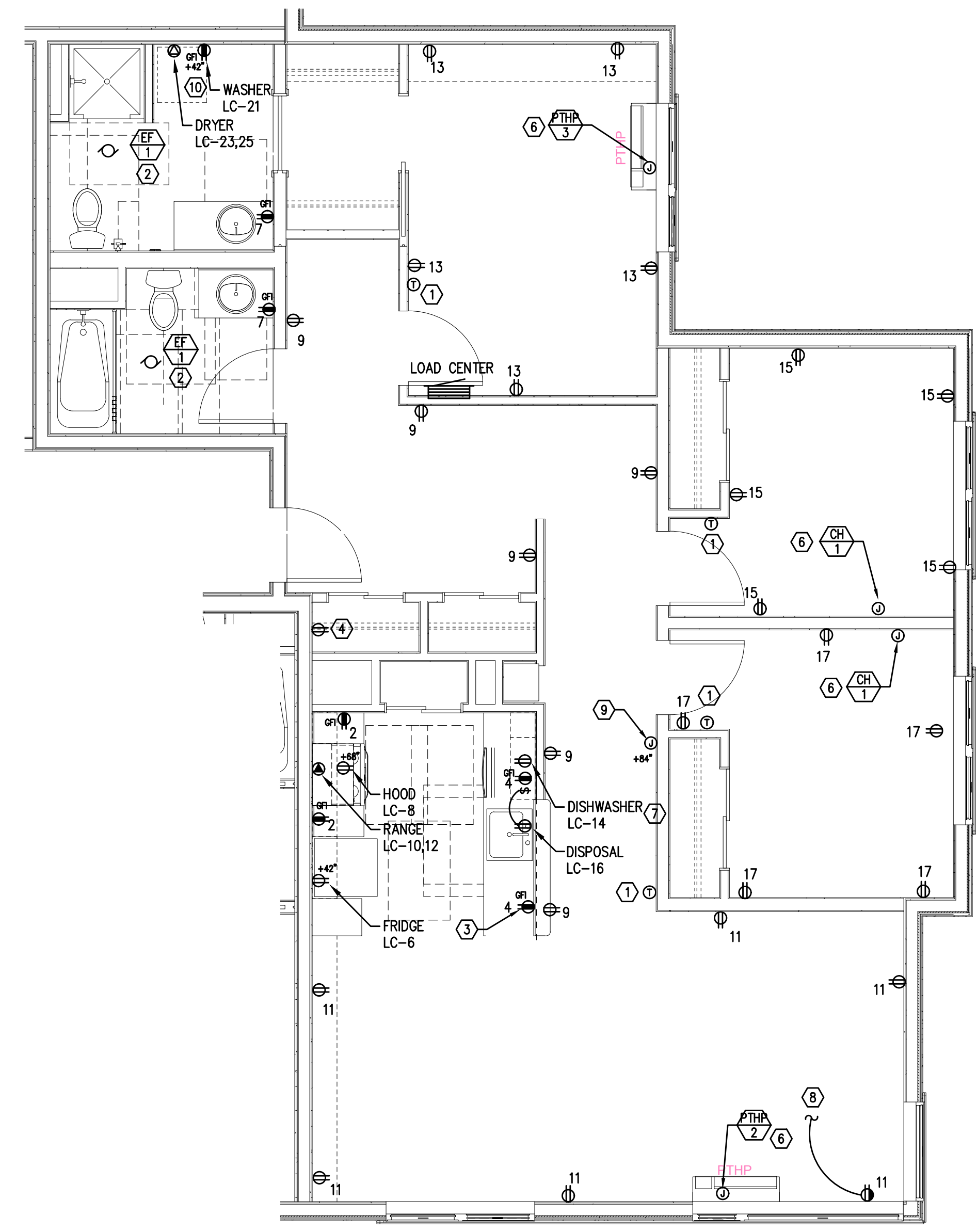
E4.14



1 TYPICAL UNIT TYPE 3A – POWER PLAN
 E4.14 SCALE: 1/4" = 1'-0"
 (FLOORS 2-6)



3 TYPICAL UNIT TYPE 3A – POWER PLAN
 E4.15 SCALE: 1/4" = 1'-0"
 (UNIT 313)



2 TYPICAL UNIT TYPE 3B – POWER PLAN
 E4.14 SCALE: 1/4" = 1'-0"
 (FLOORS 2-6)

GENERAL NOTES:

- A. ALL PLANS ARE DIAGRAMMATICAL. CONSULT ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL DEVICES AND FIXTURES.
- B. REFER TO DETAILS ON SHEET E1.23 FOR ADDITIONAL INFORMATION REGARDING ADA REACH REQUIREMENTS FOR RECEPTACLE AND SWITCH MOUNTING HEIGHT.
- C. STANDARD RECEPTACLE MOUNTING HEIGHT IS 18" A.F.F. UNLESS OTHERWISE SPECIFIED. RECEPTACLES LOCATED BELOW WINDOW SILLS SHALL NOT BE LESS THE 15" A.F.F. AS REQUIRED BY CODE. DEVICES LOCATED BELOW WINDOW SILLS MAY BE ROTATED 90° IF NECESSARY. CONTRACTOR TO ADVISE ARCHITECT IMMEDIATELY IF CONFLICT BETWEEN DEVICES AND WINDOW SILLS IS APPARENT.
- D. REFER TO SHEET E1.13 FOR TYPICAL UNIT LOAD CENTER DIRECTORIES.
- E. PROVIDE ELECTRICAL ROUGH IN FOR LOW VOLTAGE DEVICES. REFER TO 'T' SERIES SHEETS FOR ADDITIONAL INFORMATION. COORDINATE INSTALLATION WITH LOW VOLTAGE CONTRACTOR/INSTALLER.
- F. KITCHEN COUNTER TOP RECEPTACLES LOCATED AT HALF-WALLS SHALL BE MOUNTED HORIZONTAL TO THE COUNTER.

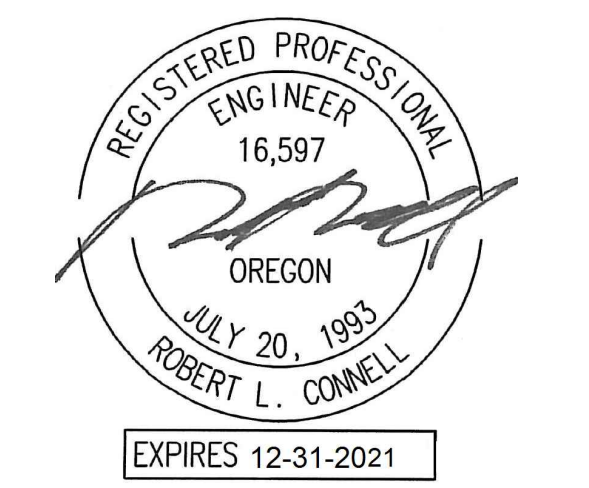
KEYED NOTES:

- 1. PROVIDE WIRE CONNECTION FOR THERMOSTAT(S). COORDINATE WITH MECHANICAL INSTALLER FOR EXACT LOCATION AND POWER REQUIREMENTS PRIOR TO ROUGH IN.
- 2. BATHROOM EXHAUST FAN TO BE TIED INTO THE LIGHTING CIRCUIT FOR THE SPACE AND SWITCHED SEPARATELY FROM LIGHTS. REFER TO BATHROOM SWITCHING DETAIL ON SHEET E1.6. CONSULT MECHANICAL PLANS FOR FAN LOCATIONS.
- 3. DUPLEX RECEPTACLE LOCATED AT KITCHEN HALF WALL TO BE ROTATED 90°.
- 4. PROVIDE ONE 20A, 120V, 1P DUPLEX RECEPTACLE ON A DEDICATED CIRCUIT FED FROM THE TENANT LOAD CENTER FOR SMART PANEL. COORDINATE EXACT LOCATION WITH LOW VOLTAGE INSTALLER PRIOR TO ROUGH IN (REFER TO 'T' SERIES SHEETS).
- 5. NOT USED.
- 6. COORDINATE EXACT POWER CONNECTION LOCATION WITH MECHANICAL INSTALLER PRIOR TO ROUGH IN.
- 7. PROVIDE ONE 20A, 120V, 1P GFCI DUPLEX RECEPTACLE UNDER KITCHEN SINK FOR DISPOSAL POWER CONNECTION.
- 8. HALF-SWITCHED DUPLEX RECEPTACLE. REFER TO TYPICAL UNIT LIGHTING PLANS FOR SWITCH LOCATION.
- 9. PROVIDE CONNECTION AND FINAL INSTALLATION OF DOOR BELL AND BUTTON. AND TIE INTO NEAREST RECEPTACLE CIRCUIT. DOOR BELL BUTTON TO BE BALDWIN HARDWARE MODEL 14851.150 IN SATIN FINISH. HARDWIRED DOOR BELL TO BE NUTONE LA11W OR APPROVED EQUAL. PROVIDE INSTALLATION PER MANUFACTURER'S DIRECTION.
- 10. PROVIDE BID ALTERNATE FOR LAUNDRY ELECTRICAL CONNECTIONS IN 3-BEDROOM APARTMENT UNITS.



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FULLER STATION HOUSING
 PERMIT SET
 DOCUMENTS
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 Clackamas County, Oregon, 97086



PERMIT SET DOCUMENTS

PROJECT #: 1617.00
 SHEET ISSUE DATE: 01/31/2020

#	DESCRIPTION	DATE
1	COUNTY REVIEW RESPONSES	10.09.2020
2	ADDENDUM #1	10.09.2020
3	RFI 03	11.19.2020
6	ASI #01	03.05.2021

ENLARGE UNIT POWER PLANS
E4.15



architecture, interiors & planning

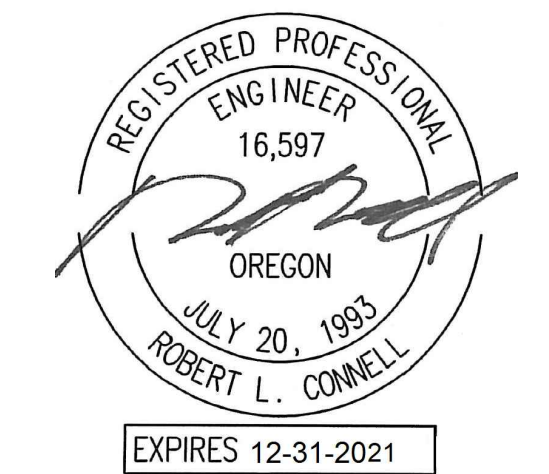
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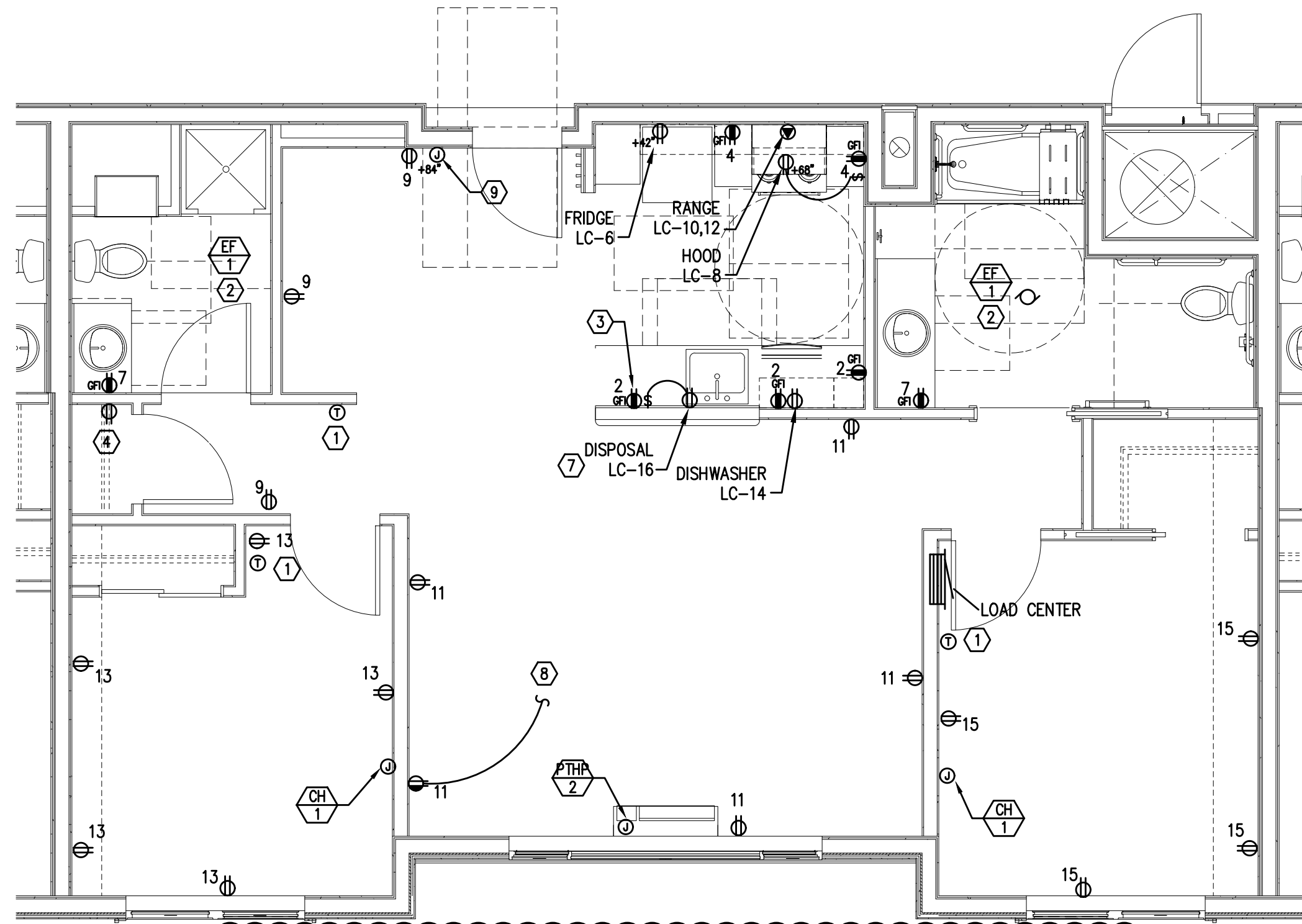
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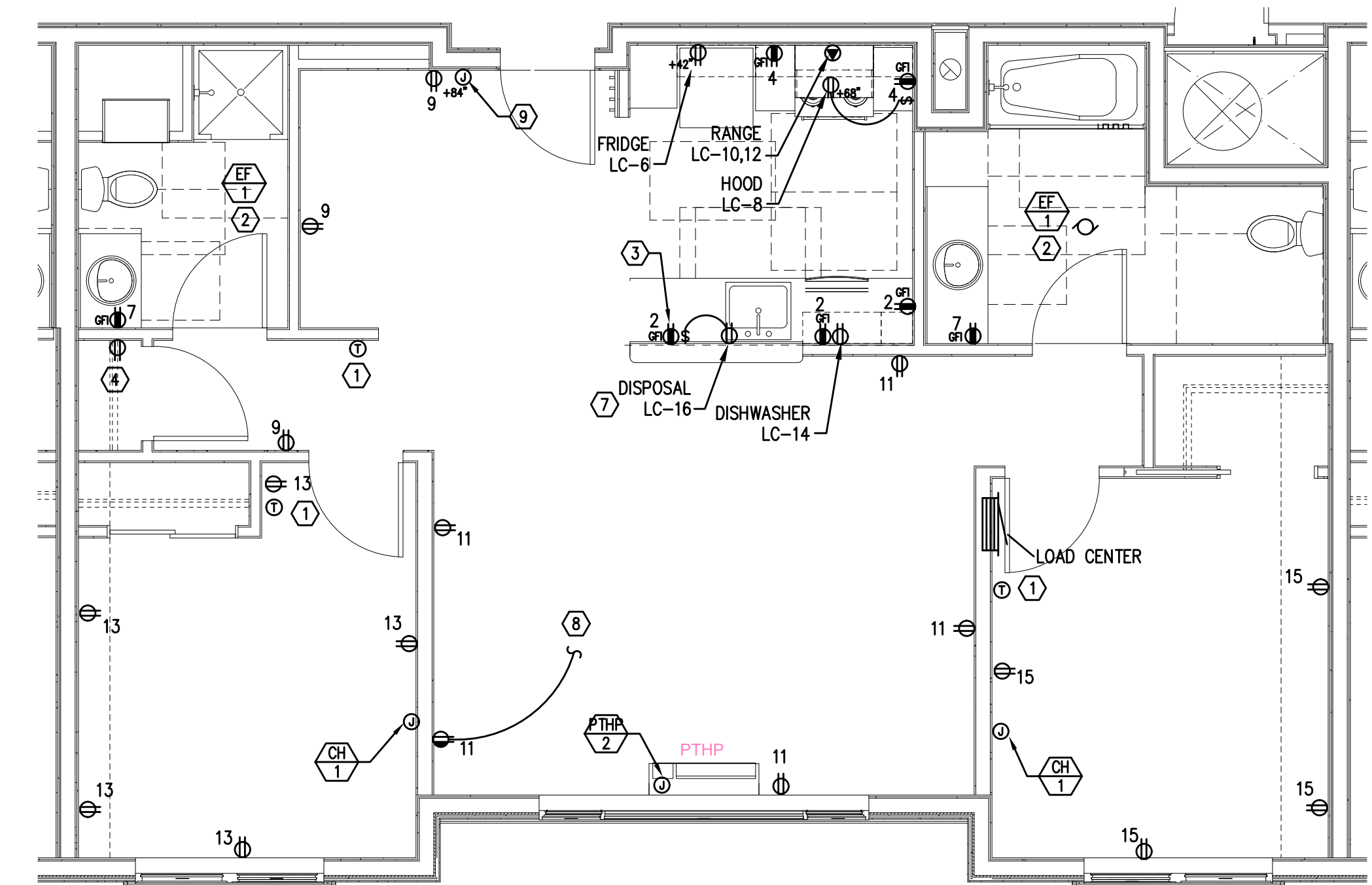
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ENLARGE UNIT POWER PLANS

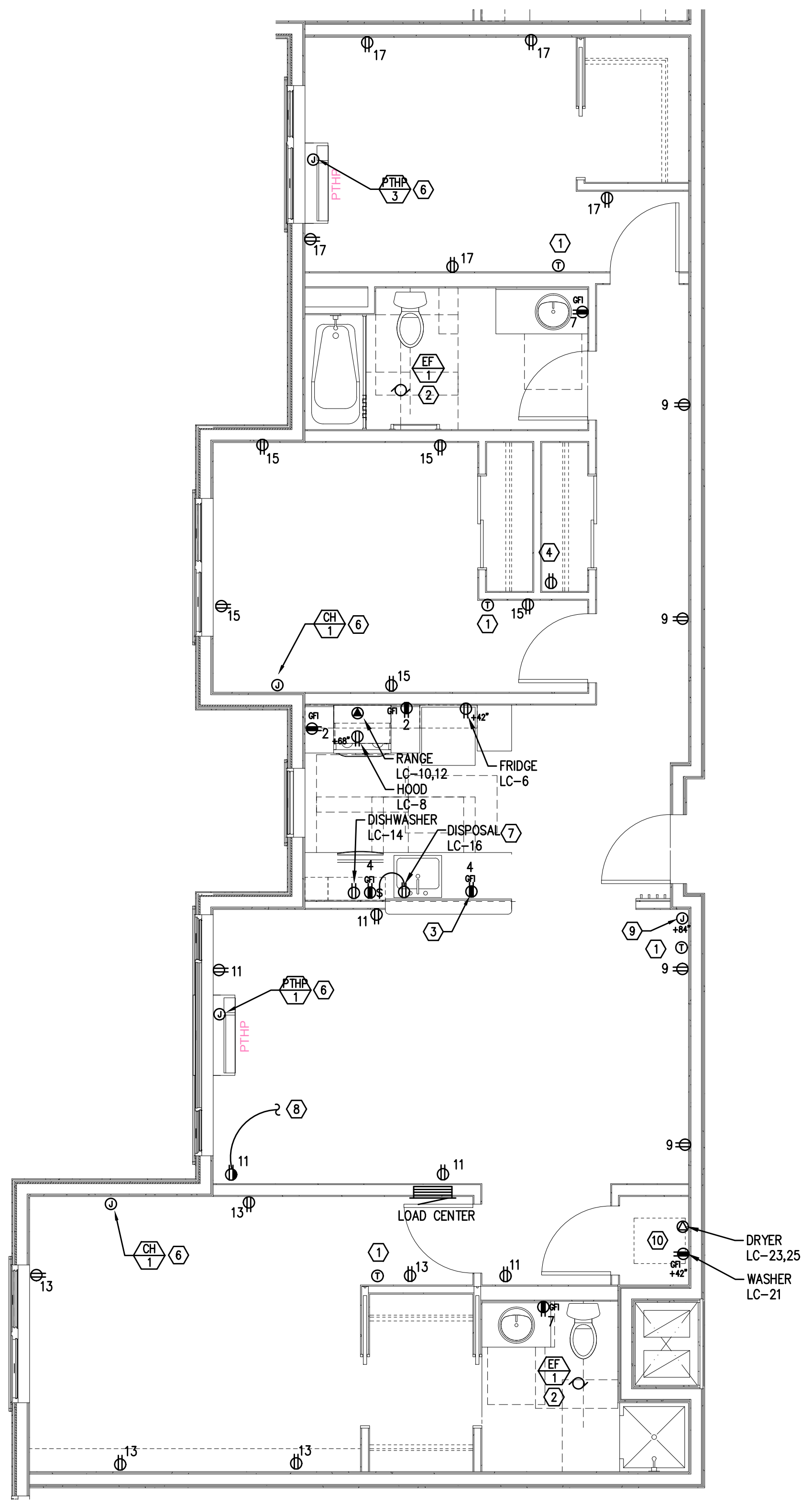
E4.16



2 TYPICAL UNIT TYPE 2A - POWER PLAN
E4.16 SCALE: 1/4" = 1'-0"
(UNITS 411,511,611)



3 TYPICAL UNIT TYPE 2A/ADA - POWER PLAN
E4.16 SCALE: 1/4" = 1'-0"
(UNITS 211,311)



1 TYPICAL UNIT TYPE 3C - POWER PLAN
E4.16 SCALE: 1/4" = 1'-0"
(FLOORS 2-6)

GENERAL NOTES:

- ALL PLANS ARE DIAGRAMMATICAL. CONSULT ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL DEVICES AND FIXTURES.
- REFER TO DETAILS ON SHEET E1.23 FOR ADDITIONAL INFORMATION REGARDING ADA REACH REQUIREMENTS FOR RECEPTACLE AND SWITCH MOUNTING HEIGHT.
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- REFER TO SHEET E1.13 FOR TYPICAL UNIT LOAD CENTER DIRECTORIES.
- PROVIDE ELECTRICAL ROUGH IN FOR LOW VOLTAGE DEVICES. REFER TO 'T' SERIES SHEETS FOR ADDITIONAL INFORMATION. COORDINATE INSTALLATION WITH LOW VOLTAGE CONTRACTOR/INSTALLER.
- KITCHEN COUNTER TOP RECEPTACLES LOCATED AT HALF-WALLS SHALL BE MOUNTED HORIZONTAL TO THE COUNTER.

KEYED NOTES:

- PROVIDE WIRE CONNECTION FOR THERMOSTAT(S). COORDINATE WITH MECHANICAL INSTALLER FOR EXACT LOCATION AND POWER REQUIREMENTS PRIOR TO ROUGH IN.
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- NOT USED.
- COORDINATE EXACT POWER CONNECTION LOCATION WITH MECHANICAL INSTALLER PRIOR TO ROUGH IN.
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