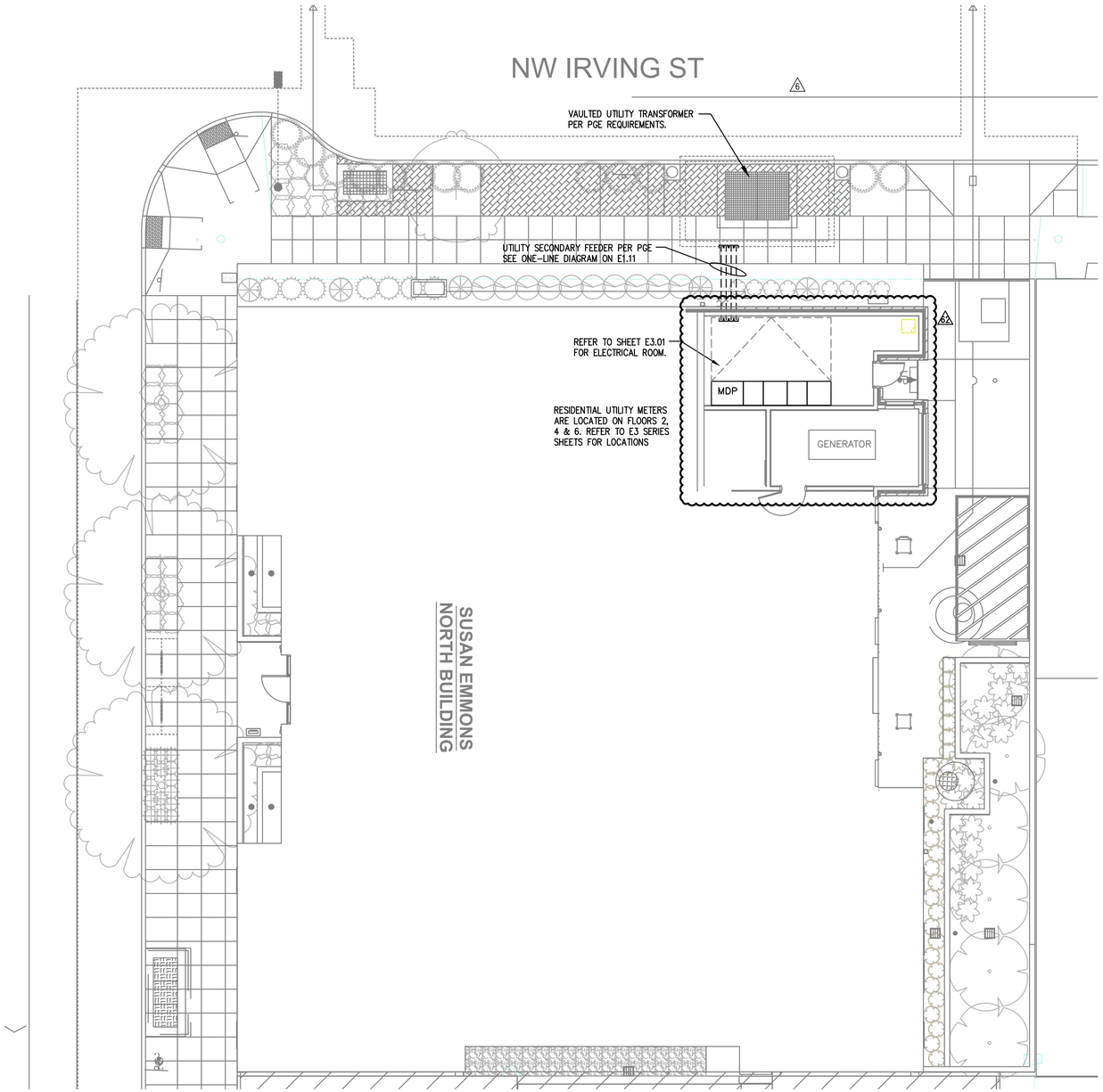

1 E1.01 SITE PLAN – NORTH BUILDING
SCALE: 1/8" = 1'-0"

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.

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.

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REGISTERED PROFESSIONAL ENGINEER
16,597
OREGON
JULY 20, 1993
ROBERT L. CONNELL
EXPIRES 12-31-2021

CARLETON HART ARCHITECTURE P.C.
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SUSAN EMMONS - NORTH BUILDING
680 NW 18TH AVENUE,
PORTLAND, OR

NORTHWEST HOUSING ALTERNATIVES

BID SET

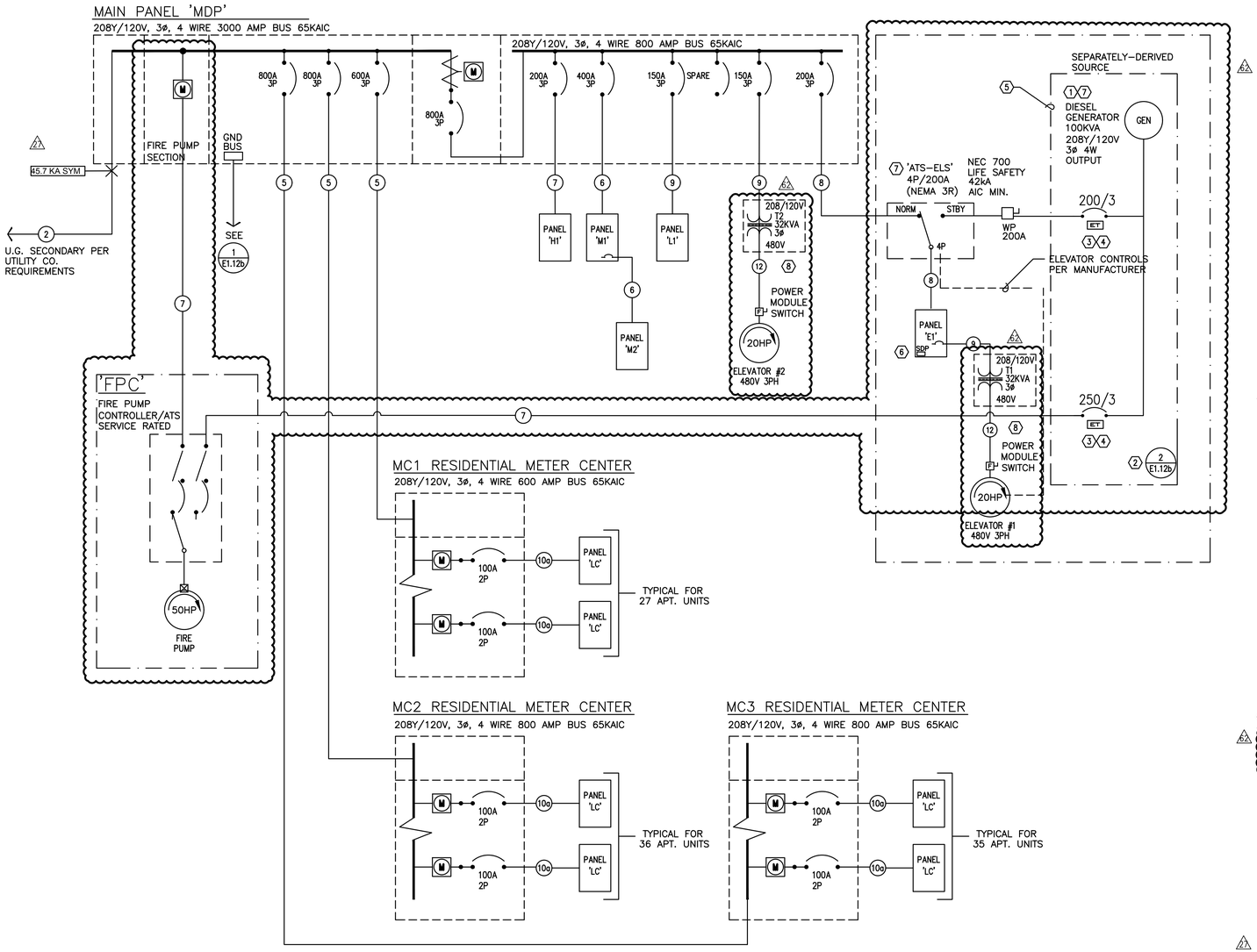
PROJECT NO.
17004

ELECTRICAL
SITE PLAN

REVISIONS: 8

1	ADDENDUM #1	04/30/2021
2	ADDENDUM #2	05/04/2021
5	PR #2	07/07/2021
6	PR #3	08/06/2021
8	PR #4	08/18/2021
12	PR #7	09/17/2021
16	PR #6	10/15/2021
14a	PR #10	10/06/2021
17	PR #11	10/21/2021
21	PR #12	01/21/2022
23	PR #17	02/25/2022
24	PR #19	03.23.2022

E1.01



1 E1.11 ELECTRICAL ONE-LINE DIAGRAM
208Y/120V, 3PH, 4W

FEEDER SCHEDULE (COPPER)

NO.	AMPS	CONDUIT	CONDUCTOR
1		*(5) 4"	BY UTILITY CO. & (1) GND
2		*(8) 6"	BY UTILITY CO. & (1) GND
3	1600A	*(4) 4"	ea w/ (4) #600Kcmil & (1) #4/0 GND
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	400A	3 1/2"	(4) #500Kcmil & (1) #3 GND
7	250A	2 1/2"	(4) #250Kcmil & (1) #4 GND
8	200A	2"	(4) #3/0 & (1) #6 GND
9	150A	2"	(4) #1/0 & (1) #6 GND
10	100A	1 1/2"	(4) #1 & (1) #8 GND
10o	100A	1 1/2"	(3) #1 & (1) #8 GND
11	125A	1 1/2"	(3) #1 & (1) #6 GND
12	60A	1 1/4"	(4) #4 & (1) #10 GND

* PARALLEL FEEDER

ONE-LINE GENERAL NOTES:

A. COORDINATE ALL WORK ASSOCIATED WITH ELECTRIC SERVICE WITH LOCAL UTILITY. PROVIDE ALL CONDUIT, GROUNDING, TRANSFORMER VAULT/PAD, ETC., IN ACCORDANCE WITH SERVING UTILITY REQUIREMENTS.

B. COORDINATE METERING REQUIREMENTS WITH UTILITY.

C. FOR LOAD CENTER FEEDER LENGTHS GREATER THAN 145'-0" FROM METER CENTER, INCREASE WIRE SIZE ONE SIZE UP FOR VOLTAGE DROP.

D. PER NEC 240.87, THE ELECTRICAL CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR ARC ENERGY REDUCTION DEVICE(S) FOR CIRCUIT BREAKERS 1200A OR GREATER. CONTRACTOR SHALL PROVIDE AN ENERGY-REDUCING ACTIVE FLASH MITIGATION SYSTEM OR OTHER METHOD APPROVED BY THE NEC.

E. ELEVATOR MANUFACTURER SHALL VERIFY THAT THE ELEVATOR WILL BE SUPPLIED WITH A KEY SWITCH TO OPERATE AND SELECT THE ELEVATOR CARS ON EMERGENCY POWER, AND THAT THE CARS WILL OPERATE IN SEQUENCE. THIS IS UNDERSTOOD TO MEAN THAT ONLY ONE CAR AT A TIME WILL OPERATE ON EMERGENCY POWER AND NOT SIMULTANEOUSLY, THUS PROVING THE 60KW GENERATOR TO BE ADEQUATE TO SUPPORT THE CODE REQUIREMENT FOR EMERGENCY POWER TO A MINIMUM OF ONE ELEVATOR FOR EGRESS IN THE EVENT OF A POWER OUTAGE.

F. PER THE UTILITY PROVIDER'S ELECTRICAL SERVICE REQUIREMENTS, METERING EQUIPMENT SHALL BE MANUFACTURED IN ACCORDANCE WITH EUSERC REQUIREMENTS.

⬡ ONE-LINE NOTES:

△5 1. DIESEL GENERATOR TO OPERATE ONLY ONE ELEVATOR IN THE EVENT OF A POWER OUTAGE. VERIFY ELEVATOR ELECTRICAL REQUIREMENTS AND CONSULT GENERATOR PROVIDER FOR PROPER SIZING BASED ON STANDBY POWER LOAD. REFER TO PANEL E1 FOR CIRCUITING INFORMATION. REFER TO SHEET M6.05 FOR INFORMATION REGARDING THE GENERATOR FUEL SYSTEM.

2. PROVIDE GROUND FOR SEPARATELY DERIVED SYSTEM PER NEC.

3. 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.

4. COORDINATE INSTALLATION OF OUTPUT BREAKER WITH GENERATOR MANUFACTURER TO SELECTIVELY COORDINATE WITH POWER STUDY RECOMMENDATIONS.

5. THE STANDBY POWER SYSTEM SHALL MEET ALL REQUIREMENTS OF NFPA 110 AND NEC 700. CONTRACTOR SHALL BE AWARE THAT MFIA 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.

△7 6. SURGE PROTECTION DEVICE (SDP) SIZED ACCORDINGLY SUPPLIED AND INSTALLED BY PANEL MANUFACTURER, AS REQUIRED BY CODE.

7. VENDOR TO PROVIDE GENERATOR SIZING BASED ON THE LOAD INFORMATION PROVIDED AND SUBMIT SIZING REPORT FOR APPROVAL.

△6 8. THE ELECTRICAL CONTRACTOR SHALL CONSULT WITH, AND COORDINATE WITH THE ELEVATOR INSTALLER, PRIOR TO AND THROUGHOUT CONSTRUCTION TO PROVIDE ALL REQUIRED COMPONENTS FOR A COMPLETE INSTALL OF THE ELEVATORS AND ASSOCIATED EQUIPMENT. REFER TO THE ELEVATOR MANUFACTURER'S SUBMITTAL DOCUMENTS AND INSTALLATION MANUALS FOR ADDITIONAL INFORMATION. MFIA HAS ATTEMPTED TO SHOW ALL SUCH ELEMENTS, HOWEVER THERE MAY BE ADDITIONAL ITEMS THAT WILL NEED TO BE ADDRESSED BY THE ELECTRICAL CONTRACTOR IN THE FIELD.

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BID SET

PROJECT NO.
17004

ELECTRICAL
~~ONE-LINE DIAGRAM~~

REVISIONS: △8

△1	ADDENDUM #1	04/30/2021
△2	ADDENDUM #2	05/04/2021
△5	PR #2	07/07/2021
△6	PR #3	08/06/2021
△8	PR #4	08/18/2021
△11	PR #7	09/17/2021
△10	PR #6	10/15/2021
△2a	PR #10	10/06/2021
△7	PR #11	10/21/2021
△9	PR #12	01/21/2022
△3	PR #17	02/25/2022
△4	PR #19	03.23.2022

E1.11

Susan Emmons - North Building
LOAD SUMMARY - MAIN PANEL 'MDP'
3/23/2022

LOAD:	LIGHTS	RECEPT	HEAT	KITCHEN	EQUIP	MOTORS	MISC	LARGEST MOTOR
Panel H1 (House Loads)	10,400	13,670	0	13,230	3,600	0		
Panel M1/M2 (Equip. Loads)	0	2,940	15,236	0	32,500	65,428		
Panel L1 (Laundry Equip)	0	23,300	0	0	3,500	1,226		
Panel E1 (Gen Set) (incl. Elev. #1)	625	500			3,000	32,000		
Elevator #2 T2 32kVA XFMR						32,000		
Water Heater/Heat Pump						32,160		
Fire Pump (50hp)						54,000		54,000
MC1 (Tenant Meters)							191,000	
MC2 (Tenant Meters)							232,000	
MC3 (Tenant Meters)							226,000	
SUBTOTAL	11,025	40,410	15,236	13,230	42,600	216,814	649,000	54,000
X-FACTOR	1.25	1 + .5	1	0.65	1	1	1	0.25
CODE LOAD:	13,781	25,205	15,236	8,600	42,600	216,814	649,000	13,500

CONN LOAD:	988	KVA

VOLTS:	208	3ph
TOTAL CALC:	985	KVA
CALC AMPS:	2733	AMPS

Susan Emmons - North Building
"HOUSE" LOAD SUMMARY - MAIN PANEL 'MDP'
2/10/2022

LOAD:	LIGHTS	RECEPT	HEAT	KITCHEN	EQUIP	MOTORS	MISC	LARGEST MOTOR
Panel H1 (House Loads)	10,400	13,670	0	13,230	3,600	0		
Panel M1 (Equip. Loads)	0	720	15,236	0	24,000	30,776		
Panel M2 (Equip. Loads)	0	2,220	0	0	8,500	34,652		
Panel L1 (Laundry Equip)	0	23,300	0	0	3,500	1,226		
Panel E1 (Gen Set) (incl. Elev. #1 32KVA XFMR)	625	500	0	0	3,000	32,000		
Elevator #2 (VIA 32KVA XFMR)	0	0	0	0	0	32,000		
Water Heater Heat Pumps	0	0	0	0	0	32,160		
SUBTOTAL	11,025	40,410	15,236	13,230	42,600	162,814	0	0
X-FACTOR	1.25	1 + .5	1	0.65	1	1	1	0.25
CODE LOAD:	13,781	25,205	15,236	8,600	42,600	162,814	0	0

CONN LOAD:	285	KVA
VOLTS:	208	3ph
TOTAL CALC:	268	KVA
CALC AMPS:	745	AMPS

Susan Emmons - North Building
LOAD SUMMARY - GENERATOR
2/10/2022

LOAD:	LIGHTS	RECEPT	HEAT	KITCHEN	EQUIP	MOTORS	MISC	LARGEST MOTOR
Panel E1 (Gen Set)	625	500	0	0	3,000	0		
T1 32KVA XFMR (Elev. #1)						32,000		32,000
Fire Pump (50hp)						54,000		
SUBTOTAL	625	500	0	0	3,000	86,000	0	32,000
X-FACTOR	1.25	1 + .5	1	0.65	1	1	1	0.25
CODE LOAD:	781	500	0	0	3,000	86,000	0	8,000

CONN LOAD:	90	KVA
VOLTS:	208	3ph
TOTAL CALC:	98	KVA
CALC AMPS:	273	AMPS

MFIA PANEL SCHEDULE

panel	mounting	location	connected load amps
H1 (House Loads)	SURFACE	ELECT RM	122
voltage	**phase**	**bus & main**	**calculated load amps**
120/208V (SCCR: 42KAIC)	3	200A MLO	114

C	service	va	a/p	no.	a b c	no.	a/p	va	service	C
1	LIGHTS - BLDG EXTERIOR	100	20/1	1	*	2	20/1	1260	RECEPTACLES - 1ST FLR	2
1	LIGHTS - STAIR 1	240	20/1	3	*	4	20/1	1260	RECEPTACLES - 1ST FLR	2
1	LIGHTS - STAIR 2	240	20/1	5	*	6	20/1	1080	RECEPTACLES - 2ND FLR	2
1	LTS - FLRS 1 CORRID (EGRESS)	435	20/1	7	*	8	20/1	1080	RECEPTACLES - 2ND FLR	2
1	LTS - FLRS 2 CORRID (EGRESS)	435	20/1	9	*	10	20/1	1080	RECEPTACLES - 2ND FLR	2
1	LTS - FLRS 1&2 CORRIDOR	870	20/1	11	*	12	20/1	1080	RECEPTACLES - 2ND FLR	2
1	LTS - FLRS 1&2	840	20/1	13	*	14	20/1	1080	RECEPTACLES - 3RD FLR	2
1	LTS - FLRS 3 CORRID (EGRESS)	435	20/1	15	*	16	20/1	1080	RECEPTACLES - 3RD FLR	2
1	LTS - FLRS 4 CORRID (EGRESS)	435	20/1	17	*	18	20/1	1080	RECEPTACLES - 4TH FLR	2
1	LTS - FLRS 3&4 CORRIDOR	870	20/1	19	*	20	20/1	1080	RECEPTACLES - 4TH FLR	2
1	LTS - FLRS 3,4,5,6	1680	20/1	21	*	22	20/1	1080	RECEPTACLES - 5TH FLR	2
1	LTS - FLRS 5 CORRID (EGRESS)	435	20/1	23	*	24	20/1	1080	RECEPTACLES - 5TH FLR	2
1	LTS - FLRS 6 CORRID (EGRESS)	435	20/1	25	*	26	20/1	900	RECEPTACLES - 6TH FLR	2
1	LTS - FLRS 5&6 CORRID	870	20/1	27	*	28	20/1	900	RECEPTACLES - 6TH FLR	2
5	INVERTER INV-1	600	20/1	29	*	30	20/1	500	ELEV MACH RM RECEPT	2
5	INVERTER INV-2	600	20/1	31	*	32	20/1	720	RECEPTACLES - MAIL ROOM	2
5	INVERTER INV-3	600	20/1	33	*	34	20/1	1500	HOOD/MICRO	4
5	INVERTER INV-4	600	20/1	35	*	36	50/2	6000	RANGE	4
5	INVERTER INV-5	600	20/1	37	*	38	*	6000	*	4
5	INVERTER INV-6	600	20/1	39	*	40	20/1	1200	FRIDGE	4
2	ELEV. PIT LTS & RECEPTS	500	20/1	41	*	42	20/1	500	RECEPT - AMENITY KITCHEN	2

Phase A	16000 VA	NOTES: PANEL IS AT FULL CAPACITY - NO AVAILABLE SPARES
Phase B	12960 VA	line-line voltage: 208
Phase C	15000 VA	largest motor (va): 0
Total Connected	43960 VA	

load code:	ph. A	ph. B	ph. C		total	factor	calculated load (va)
1. LIGHTS=	2680	3660	1980	VA	8320	1.25	10400
2. RECEPT.=	6120	5400	5820	VA	17340	1 + 0.5	13670
3. HEATING=	0	0	0	VA	0	1.00	0
4. KITCHEN=	6000	2700	6000	VA	14700	0.90	13230
5. EQUIP.=	1200	1200	1200	VA	3600	1.00	3600
6. MOTORS=	0	0	0	VA	0	*	0
7. MISC=	0	0	0	VA	0	1.00	0
(* 125% of the largest motor + 100% of the balance)						TOTAL =	40900

MFIA PANEL SCHEDULE

panel	mounting	location	connected load amps
M1 (Mechanical Loads)	SURFACE	ELECT RM	333
voltage	**phase**	**bus & main**	**calculated load amps**
120/208V (SCCR: 42KAIC)	3	400A MLO	333

C	service	va	a/p	no.	a b c	no.	a/p	va	service	C
5	PHONE BOARD	500	20/1	1	*	2	20/3	1800	TRASH COMPACTOR	6
5	COMMUNICATIONS BOARD	500	20/1	3	*	4	*	1800	*	6
5	SECURITY SYSTEM	1500	20/1	5	*	6	*	1800	*	6
5	AUTO DOORS	1500	20/1	7	*	8	20/1	1500	PALLET JACK CHARGER	5
5	ENTRY ACCESS SYSTEM	1500	20/1	9	*	10	20/1	1500	BIKE CHARGING	5
5	BUILDING SIGN	1500	20/1	11	*	12	20/1	1500	GENERATOR FUEL FILL SYSTEM	5
3	WH-1, WH-2, WH-3 (GAS)	1500	20/1	13	*	14	20/1	720	RECEPT - TRASH ROOM	2
6	BP-1/BP-2	1900	20/1	15	*	16	20/1	1500	EH-2	3
6	BP-1	6240	60/3	17	*	18	20/1	1176	SP-1 (ELEV PIT)	6
6	*	6240	*	19	*	20	20/1	1500	SMOKE DAMPERS	5
6	*	6240	*	21	*	22	20/1	1500	SMOKE DAMPERS	5
3	EH-3	500	20/1	23	*	24	20/1	1500	SMOKE DAMPERS	5
3	EH-4	1500	20/2	25	*	26	20/1	2000	SMOKE DAMPERS	5
3	*	1500	*	27	*	28	20/1	2000	SMOKE DAMPERS	5
5	IRRIGATION CONTROLS	1500	20/1	29	*	30	20/1	2000	SMOKE DAMPERS	5
3	IHP/OHP-4	4368	30/2	31	*	32	20/1	2000	SMOKE DAMPERS	5
3	*	4368	*	33	*	34	20/2	1040	IHP/OHP-3	6
	SPARE	0	20/1	35	*	36	*	1040	*	6
7	PANEL M2	14104	200/3	37	*	38	20/1	1500	WHEELCHAIR LIFT	6
7	*	16884	*	39	*	40	20/2	1040	IAC/OAC-1	6
7	*	14384	*	41	*	42	*	1040	*	6

Phase A	40732 VA	NOTES: PANEL IS AT FULL CAPACITY - NO AVAILABLE SPARES
Phase B	43272 VA	line-line voltage: 208
Phase C	35680 VA	largest motor (va): 0
Total Connected	119684 VA	

load code:	ph. A	ph. B	ph. C		total	factor	calculated load (va)
1. LIGHTS=	0	0	0	VA	0	1.25	0
2. RECEPT.=	720	0	0	VA	720	1 + 0.5	720
3. HEATING=	7368	7368	500	VA	15236	1.00	15236
4. KITCHEN=	0	0	0	VA	0	1.00	0
5. EQUIP.=	9000	7000	9500	VA	25500	1.00	25500
6. MOTORS=	9540	12020	11296	VA	32856	*	32856
7. MISC=	14104	16884	14384	VA	45372	1.00	45372
(* 125% of the largest motor + 100% of the balance)						TOTAL =	119684

MFIA PANEL SCHEDULE

panel	mounting	location	connected load amps
L1 (Laundry)	FLUSH	RM 222	115
voltage	**phase**	**bus & main**	**calculated load amps**
120/208V	3	150A MLO	78

C	service	va	a/p	no.	a b c	no.	a/p	va	service	C
2	WASHER	500	20/1	1	*	2	40/2	2800	DRYER	2
2	WASHER	500	20/1	3	*	4	*	2800	*	2
2	WASHER	500	20/1	5	*	6	40/2	2800	DRYER	2
2	WASHER	500	20/1	7	*	8	*	2800	*	2
2	WASHER	500	20/1	9	*	10	40/2	2800	DRYER	2
2	WASHER	500	20/1	11	*	12	*	2800	*	2
5	LAUNDRY CARD MACHINE	1500	20/1	13	*	14	40/2	2800	DRYER	2
6	EF-4 (FLRS 3,5)	50	20/1	15	*	16	*	2800	*	2
5	FACP	500	20/1	17	*	18	40/2	2800	DRYER	2
5	GENERATOR ANNUNCIATOR	500	20/1	19	*	20	*	2800	*	2
5	GEN BATTERY CHANGER	500	20/1	21	*	22	40/2	2800	DRYER	2
5	GEN BLOCK HEATER	500	20/1	23	*	24	*	2800	*	2
6	SP-1	1176	20/1	25	*	26			BLANK	
	BLANK			27	*	28			BLANK	
	BLANK			29	*	30			BLANK	
	BLANK			31	*	32			BLANK	
	BLANK			33	*	34			BLANK	
	BLANK			35	*	36			BLANK	
	BLANK			37	*	38			BLANK	
	BLANK			39	*	40			BLANK	
	BLANK			41	*	42			BLANK	

Phase A	15376 VA	NOTES:
Phase B	12750 VA	line-line voltage: 208
Phase C	13200 VA	largest motor (va): 0
Total Connected	41326 VA	

load code:	ph. A	ph. B	ph. C		total	factor	calculated load (va)
1. LIGHTS=	0	0	0	VA	0	1.25	0
2. RECEPT.=	12200	12200	12200	VA	36600	1 + 0.5	23300
3. HEATING=	0	0	0	VA	0	1.00	0
4. KITCHEN=	0	0	0	VA	0	1.00	0
5. EQUIP.=	2000	500	1000	VA	3500	1.00	3500
6. MOTORS=	1176	50	0	VA	1226	*	1226
7. MISC=	0	0	0	VA	0	1.00	0
(* 125% of the largest motor + 100% of the balance)						TOTAL =	28026

MFIA PANEL SCHEDULE

panel	mounting	location	connected load amps
M2 (Mechanical Loads)	SURFACE	RM 619	126
voltage	**phase**	**bus & main**	**calculated load amps**
120/208V (SCCR: 42KAIC)	3	200A MLO	126

C	service	va	a/p	no.	a b c	no.	a/p	va	service	C
6	RTU-1	5496	50/3	1	*	2	50/3	5388	RTU-2	6
6	*	5496	*	3	*	4	*	5388	*	6
6	*	5496	*	5	*	6	*	5388	*	6
6	EF-5,EF-6	500	20/1	7	*	8	20/1	720	RECEPT - ROOF GFCI	2
6	EF-3 (FLRS 2, 4, 6)	1500	20/1	9	*	10	20/1	1500	BIK CHARGING	2
5	RADON MITIGATION	1000	20/1	11	*	12	20/1	1000	RADON MITIGATION	5
5	RADON MITIGATION	1000	20/1	13	*	14	20/1	1000	RADON MITIGATION	5
5	COMMUNICATIONS BOARD	1500	20/1	15	*	16	20/1	1500	COMMUNICATIONS BOARD	5
5	COMMUNICATIONS BOARD	1500	20/1	17	*	18	20/1	0	SPARE	
	BLANK			19	*	20			BLANK	
	BLANK			21	*	22			BLANK	
	BLANK			23	*	24			BLANK	
	BLANK			25	*	26			BLANK	
	BLANK			27	*	28			BLANK	
	BLANK			29	*	30			BLANK	

Phase A	14104 VA	NOTES:
Phase B	16884 VA	line-line voltage: 208
Phase C	14384 VA	largest motor (va): 0
Total Connected	45372 VA	

load code:	ph. A	ph. B	ph. C		total	factor	calculated load (va)
1. LIGHTS=	0	0	0	VA	0	1.25	0
2. RECEPT.=	720	1500	0	VA	2220	1 + 0.5	2220
3. HEATING=	0	0	0	VA	0	1.00	0
4. KITCHEN=	0	0	0	VA	0	1.00	0
5. EQUIP.=	2000	3000	3500	VA	8500	1.00	8500
6. MOTORS=	11384	12384	10884	VA	34652	*	34652
7. MISC=	0	0	0	VA	0	1.00	0
(* 125% of the largest motor + 100% of the balance)						TOTAL =	45372

MFIA PANEL SCHEDULE

panel	mounting	location	connected load amps
E1 (Generator Loads)	SURFACE	ELECT RM	100
voltage	**phase**	**bus & main**	**calculated load amps**
120/208V (SCCR: 42KAIC)	3	200A MLO	101

C	service	va	a/p	no.	a b c	no.	a/p	va	service	C
1	ELEV. LTS & RECEPT	500	20/1	1	*	2	150/3	10700	T1 XFMR (ELEVATOR #1)	6
2	RECEPT - ELEV MACHINE RM	500	20/1	3	*	4	*	10700	*	6
5	ELEV CONTROL MODULE	1500	20/1	5	*	6	*	10700	*	6
5	ELEV CONTROL MODULE	1500	20/1	7	*	8	20/1	0	SPARE	
	SPARE	0	20/1	9	*	10	20/1	0	SPARE	
	SPARE	0	20/1	11	*	12	20/1	0	SPARE	
	BLANK			13	*	14			BLANK	
	BLANK			15	*	16			BLANK	
	BLANK			17	*	18			BLANK	
	BLANK			19	*	20			BLANK	
	BLANK			21	*	22			BLANK	
	BLANK			23	*	24			BLANK	
	BLANK			25	*	26			BLANK	
	BLANK			27	*	28			BLANK	
	BLANK			29	*	30			BLANK	

Phase A	12700 VA	NOTES:
Phase B	11200 VA	line-line voltage: 208
Phase C	12200 VA	largest motor (va): 0
Total Connected	36100 VA	

load code:	ph. A	ph. B	ph. C		total	factor	calculated load (va)
1. LIGHTS=	500	0	0	VA	500	1.25	625
2. RECEPT.=	0	500	0	VA	500	1 + 0.5	500
3. HEATING=	0	0	0	VA	0	1.00	0
4. KITCHEN=	0	0	0	VA	0	1.00	0
5. EQUIP.=	1500	0	1500	VA	3000	1.00	3000
6. MOTORS=	10700	10700	10700	VA	32100	*	32100
7. MISC=	0	0	0	VA	0	1.00	0
(* 125% of the largest motor + 100% of the balance)						TOTAL =	36225

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REGISTERED PROFESSIONAL ENGINEER 16,597 OREGON JULY 20, 1993 ROBERT L. CONNELL
EXPIRES 12-31-2021

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NORTHWEST HOUSING ALTERNATIVES

BID SET

PROJECT NO.
17004

ELECTRICAL PANEL SCHEDULES & LOAD SUMMARIES

REVISIONS: #

1	ADDENDUM #1	04/30/2021
2	ADDENDUM #2	05/04/2021
5	PR #2	07/07/2021
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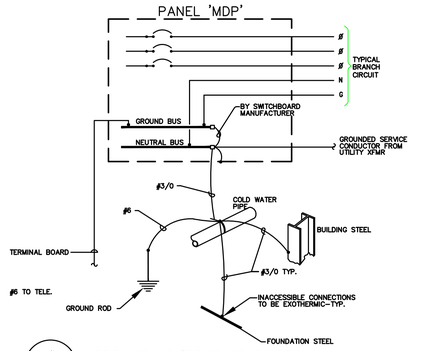
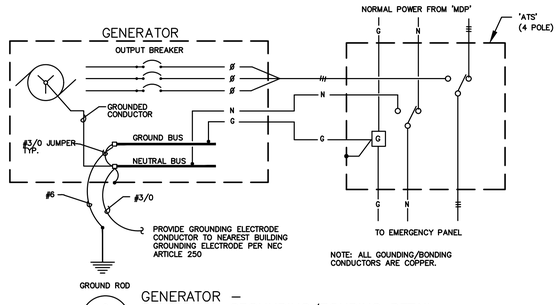
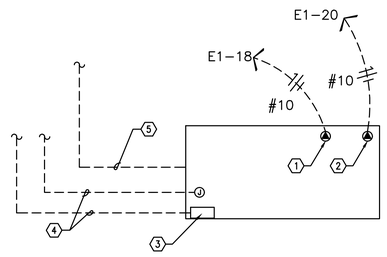
60	PR #17	02/25/2022
62	PR #19	03.23.2022



1 E1.12b GROUNDING/BONDING DIAGRAM
208Y/120V, 3Ø, 4 WIRE



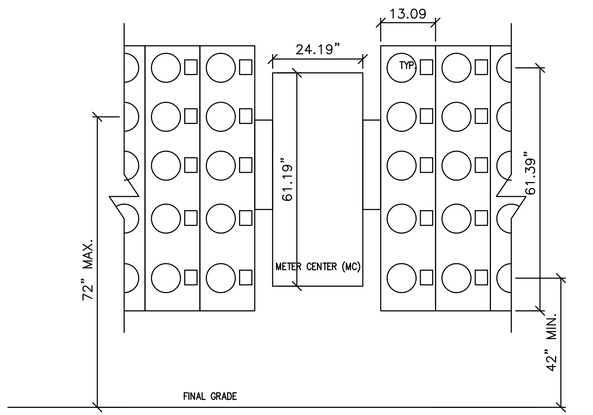
2 E1.12b GENERATOR – ELECTRICAL GROUNDING/BONDING DETAIL
NO SCALE



3 E1.12b GENERATOR CIRCUITING DETAIL
NO SCALE

NOTES:

1. 120V GENERATOR BLOCK HEATER. PANEL E1.
2. 120V GENERATOR BATTERY CHARGER. PANEL E1.
3. GENERATOR OUTPUT BREAKER AND CONTROL SECTION. PANEL E1.
4. POWER AND CONTROL TO TRANSFER SWITCH AND REMOTE ANNUNCIATOR. SEE ONE-LINE DIAGRAM ON SHEET E1.11.
5. TO AUTOMATIC TRANSFER SWITCH. SEE E1.11.
6. DIESEL GENERATOR TO BE PROVIDED WITH DOUBLE-WALL FUEL TANK AND SPILL CONTAINMENT PER CITY OF PORTLAND REQUIREMENTS.
7. 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 E1.12b TYPICAL METER ELEVATION
NOT TO SCALE

TYPICAL METER ARRANGEMENT PER PGE REQUIREMENTS. COMPONENTS SHOWN ARE APPROXIMATE BASED ON VENDOR INFORMATION. ACTUAL EQUIPMENT TO BE INSTALLED MAY VARY. ELECTRICAL CONTRACTOR TO PROVIDE CUTSHEETS OF THE PRODUCTS INSTALLED UPON SUBMITTAL REVIEW & APPROVAL.

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E1.12b

LIGHTING FIXTURE LIST

TYPE	LAMP	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	OPTIONS
A1 A1E	LED 3000K 2000LM/80CRI 25W	LITHONIA (OR APROVED OTHER)	ZL1N SERIES	TYPE :4' GEN. PURPOSE STRIP MOUNTING :SURFACE HOUSING :STEEL LENS/REFL :DIFFUSED ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	TYPE 'AE' SIMILAR TO TYPE 'A' EXCEPT WITH EMERGENCY BATTERY BACK-UP EQUIP. RMS, TRASH RM
A2	LED 3500K 3000LM/80CRI 23W	LITHONIA (OR APROVED OTHER)	FEML48 SERIES	TYPE :4' ENCLOSED INDUSTRIAL MOUNTING :SURFACE HOUSING :POLYCARBONATE LENS/REFL :CLEAR POLYCARBONATE VOLTAGE :MVOLT BALLAST :LED DRIVER	 ELEVATOR PIT & TOP OF SHAFT
B1 B1E	LED 3000K 3600LM/80CRI 34W	FAIL SAFE (OR APROVED OTHER)	HVSL8 SERIES	TYPE :4' WRAP AROUND MOUNTING :SURFACE HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	B1E TO BE PROVIDED WITH EMERGENCY BATTERY BALLAST. PROVIDE WITH INTEGRAL OCCUPANCY. SENSOR, DIM50 STANDBY MODE. STAIRWELLS ⚠1
B3 B3E	LED 3000K 575LM/FT 80CRI 20W	NEO RAY LIGHTING (OR APROVED OTHER)	S124DS-C SERIES	TYPE :4FT LINEAR FIXTURE MOUNTING :SURFACE HOUSING :STEEL LENS/REFL :STRAIGHT BLADE DIFFUSER VOLTAGE :MVOLT BALLAST :LED DRIVER (0-10 DIMMING)	B3E PROVIDED WITH EMERGENCY BATTERY BACKUP. MATTE WHITE FINISH VERIFY MOUNTING TYPE W/ ARCHITECT OFFICE, TRASH RMS LAUNDRY, BIKE RMS
C1 C1E	LED 1300LM/80CRI 3000K 16W	USAI LIGHTING (OR APPROVED OTHER)	B4RD 16G1 SERIES	TYPE :4.5" DIA. DOWNLIGHT MOUNTING :RECESSED HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER (0-10 DIMMING)	C1E PROVIDED WITH EMERGENCY BATTERY BACK UP. 90 DEGREE BEAM TRIMLESS/WHITE FINISH IC RATED ELEV. LOBBIES, MAIL ROOM ⚠1
C2 C2E	LED 3000K 975LM 14W	USAI LIGHTING (OR APROVED OTHER)	BEVELED 1020 SERIES	TYPE :4.5" DIA. DOWNLIGHT MOUNTING :RECESSED HOUSING :ALUMINUM LENS/REFL :SOLITE VOLTAGE :MVOLT BALLAST :LED DRIVER	C2E TO BE PROVIDED WITH EMERGENCY BATTERY BACK UP. ⚠1 FLANGE TRIM/WHITE FINISH UL LISTED WET LOCATION MAIN BUILDING ENTRANCES
C3 C3E	LED 3000K 2000LM 10W	LITHONIA LIGHTING (OR APROVED OTHER)	WDGE1 P2 SERIES	TYPE :EXTERIOR WALL PACK MOUNTING :SURFACE (+8'-0") HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :MVOLT BALLAST :LED DRIVER	C3E TO BE PROVIDED WITH EMERGENCY BATTERY BACK UP. ⚠1 WHITE FINISH TYPE VW DISTRIBUTION WET LOCATION LISTED BUILDING COURTYARD ⚠1
C4N	(2) LED A19 3000K 10W	SEA GULL LIGHTING (NO SUBSTITUTE)	8313802-12	TYPE :EXTERIOR WALL SCONCE MOUNTING :SURFACE (+8'-0") HOUSING :ALUMINUM LENS/REFL :NA VOLTAGE :120V BALLAST :INTEGRAL LED DRIVER	C4E TO BE PROVIDED WITH REMOTE EMERGENCY BATTERY BACK UP. WHITE FINISH WET LOCATION LISTED BUILDING SERVICE ENTRANCES
C5	LED 3000K 50W	WAC LIGHTING (NO SUBSTITUTE)	HR-D425LED	TYPE :4" DIA ADJ. SPOT MOUNTING :SURFACE HOUSING :ALUMINUM LENS/REFL :NA VOLTAGE :12V BALLAST :LED DRIVER	PROVIDE APPROPRIATE HOUSING AND LOW VOLTAGE TRANSFORMER ELEVATOR LOBBY
F1	(2) LED A19 3000K 1530LM 30W	JUSTICE DESIGN (NO SUBSTITUTE)	CLD-7564W	TYPE :EXTERIOR WALL SCONCE MOUNTING :SURFACE (+8'-0") HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :120V BALLAST :LED DRIVER	ADA COMPLIANT. VERIFY MOUNTING HEIGHT. WHITE FINISH ⚠1 WET LOCATION LISTED MAIN BUILDING ENTRANCE
D1	LED 1020LM/FT 3000K (6.7W/FT)	KELVIX LIGHTING (OR APPROVED EQUAL)	VT35K-WR-24V SERIES CH-011 CHANNEL	TYPE :LINEAR LED TAPE (18'-0") ⚠1 MOUNTING :SURFACE (IN CHANNEL) HOUSING :ALUMINUM ⚠1 LENS/REFL :ACRYLIC/FROSTED VOLTAGE :24 VOLT DC BALLAST :LED DRIVER	VERIFY EXACT LENGTHS W/ARCHITECT CHANNEL TYPE PER ARCHITECT PROVIDE APPROPRIATE TRANSFORMER(S) AND ACCESSORIES FOR EACH LOCATION. UL LISTED WET LOCATION
L1 ⟨1⟩	LED 3000K 1620LM 18W	LIGHTOLOGY (OR APROVED OTHER)	RLM801450	TYPE :18" DECORATIVE PENDANT MOUNTING :SUSPENDED HOUSING : LENS/REFL :GLASS GLOBE VOLTAGE :120V BALLAST :INTEGRAL LED DRIVER	MATTE BLACK FINISH PROVIDE WITH ADJUSTABLE SUSPENSION CORD. LOBBY ⚠1
L2	LED 3000K 3571OLM 42W	LIGHTOLOGY (OR APROVED OTHER)	HAMPTON SERIES	TYPE :20.9" DIA CEILING LIGHT MOUNTING :SURFACE HOUSING :METAL LENS/REFL :ACRYLIC VOLTAGE :120V BALLAST :INTEGRAL LED DRIVER	MATTE BLACK FINISH MAIL ROOM ⚠1
L3	LED 3000K 2000LM 22W	ALCON LIGHTING (OR APROVED OTHER)	11170-12 SERIES	TYPE :12" DIA CEILING LIGHT MOUNTING :SURFACE HOUSING :METAL LENS/REFL :ACRYLIC VOLTAGE :120V BALLAST :INTEGRAL LED DRIVER	WHITE FINISH CORRIDORS, AMENITY, RESTROOM ⚠1

LIGHTING FIXTURE LIST

TYPE	LAMP	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	OPTIONS
U1	LED 700LM/90CRI 3000K (10W)	LIGHTOLIER (OR APPROVED EQUAL)	SD5R SERIES	TYPE :5" DIA. DOWNLIGHT MOUNTING :SURFACE (J-BOX) HOUSING :ALUMINUM LENS/REFL :MOLDED POLYMER VOLTAGE :MVOLT BALLAST :LED DRIVER (0-10 DIMMING)	WHITE FINISH ⚠1 UNIT KITCHEN, HALL, BATHROOM
U3	LED 1300LM/90CRI 3000K 16W	DESIGN CLASSICS (OR APPROVED EQUAL)	PRODUCT #646438 MODEL 1330-30-90	TYPE :24" VANITY LIGHT MOUNTING :SURFACE (+6" ABOVE MIRROR) HOUSING :STEEL LENS/REFL :ACRYLIC VOLTAGE :120V BALLAST :INTEGRAL DRIVER	CHROME FINISH ⚠1 UNIT BATHROOM
U4	LED 2500lm 3000K (36W)	MAXIM LIGHTING (OR APPROVED EQUAL)	WAFER SERIES MODEL 57746WLT	TYPE :4FT FLAT PANEL MOUNTING :SURFACE HOUSING :ALUMINUM LENS/REFL :ACRYLIC VOLTAGE :120V BALLAST :LED DRIVER (0-10 DIMMING)	 UNIT KITCHEN
U5	LED 1200LM 3000K (17W)	PROGRESS LIGHTING (OR APPROVED EQUAL)	P3911 SERIES	TYPE :14" DIA. CEILING LIGHT MOUNTING :SURFACE HOUSING :STEEL LENS/REFL :WHITE ACRYLIC VOLTAGE :120V BALLAST :LED DRIVER (0-10 DIMMING)	WHITE FINISH ⚠1 UNIT BEDROOM, LIVING ROOM
X1 X2	LED (GREEN LETTERS) (1.5W)	LITHONIA DMF LIGHTING (OR APROVED OTHER)	LE EL N SERIES DLED500EM-G	TYPE :EXIT SIGN MOUNTING :UNIVERSAL HOUSING :DIE-CAST ALUMINUM LENS/REFL :SINGLE FACE/DUAL FACE VOLTAGE :MVOLT BALLAST :NICKLE CADMIUM BATTERY	X1=SINGLE SIDE X2=DOUBLE SIDE
X3	LED (GREEN LETTERS) (1.5W)	LITHONIA (OR APROVED OTHER)	WLTE SERIES	TYPE :EXIT SIGN MOUNTING :UNIVERSAL HOUSING :DIE-CAST ALUMINUM LENS/REFL :SINGLE FACE VOLTAGE :MVOLT BALLAST :NICKLE CADMIUM BATTERY	UL LISTED WET LOCATION

--- NOT USED ---

MECHANICAL EQUIPMENT SCHEDULE

NO.	EQUIPMENT NAME	HP/KW	VOLTS	PH	AMPS	CONDUIT	WIRE	GND	CIRCUIT
EF-1	EXHAUST FAN NO.1	8.2W	120	1		1/2"	#12	#12	SEE UNIT PLANS
EF-2	EXHAUST FAN NO.2	8.2W	120	1		1/2"	#12	#12	SEE E3.01
EF-3	EXHAUST FAN NO.3	8.2W	120	1		1/2"	#12	#12	SEE E3.02, E3.04, E3.06
EF-4	EXHAUST FAN NO.4	7.7W	120	1		1/2"	#12	#12	SEE E3.03, E3.05
EF-5	EXHAUST FAN NO.5	1/10 HP	120	1		1/2"	#12	#12	M2-7 (PC)
EF-6	EXHAUST FAN NO.6	7.7W	120	1		1/2"	#12	#12	M2-7 (PC)
EH-1	WALL HEATER NO.1	1.2KW	120V	1		1/2"	#12	#12	SEE UNIT PLANS
EH-2	WALL HEATER NO.2	1.5KW	120	1		1/2"	#12	#12	M1-16
EH-3	WALL HEATER NO.3	500W	120	1		1/2"	#12	#12	M1-23
EH-4	WALL HEATER NO.4	3.0KW	208V	1		1/2"	#12	#12	M1-25,27
IAC-1	MINI SPLIT SYST NO.1 (INDOOR)								
OAC-1	MINI SPLIT SYST NO.1 (OUTDOOR)		208	1	11.0 MCA	1/2"	#12	#12	M1-40,42
IHP-1	MINI SPLIT SYST NO.1 (INDOOR) (A & B)								
OHP-1	MINI SPLIT SYST NO.1 (OUTDOOR)		208	1	19.0 MCA	1/2"	#10	#10	SEE UNIT PLANS
IHP-2	MINI SPLIT SYST NO.2 (INDOOR) (A & B)								
OHP-2	MINI SPLIT SYST NO.2 (OUTDOOR)		208	1	10.0 MCA	1/2"	#12	#12	SEE UNIT PLANS
IHP-3	MINI SPLIT SYST NO.3 (INDOOR) (A & B)								
OHP-3	MINI SPLIT SYST NO.3 (OUTDOOR)		208	1	10.0 MCA	1/2"	#10	#10	M1-34,36
IHP-4	MINI SPLIT SYST NO.4 (INDOOR)								
OHP-4	MINI SPLIT SYST NO.4 (OUTDOOR)		208	1	42.0 MCA	3/4"	#10	#10	M1-31,33
RTU-1	AIR HANDLING UNIT NO.1		208	3	45.8 MCA	3/4"	#6	#10	M2-1,3,5
RTU-2	AIR HANDLING UNIT NO.2		208	3	44.9 MCA	3/4"	#6	#10	M2-2,4,6
SP-1	SUMP PUMP NO.1	1/2HP	120	1		1/2"	#12	#12	M1-18
RP-1	RECIRC PUMP NO.1	1/2HP	120	1		1/2"	#12	#12	M1-15 (PC)
RP-2	RECIRC PUMP NO.2	1/2HP	120	1		1/2"	#12	#12	M1-15 (PC)
BP-1	BOOSTER PUMP NO.1	(2) 5HP	208	3	37.0	1"	#4	#10	M1-17,19,21
WH-1	WATER HEATER NO.1 (GAS)		120	1		1/2"	#12	#12	M1-13 (PC)
WH-2	WATER HEATER NO.2 (GAS)		120	1		1/2"	#12	#12	M1-13 (PC)
WH-3	WATER HEATER NO.3 (GAS)		120	1		1/2"	#12	#12	M1-13 (PC)

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. EGRESS LIGHTING SHALL BE PROVIDED TO MEET MINIMUM LIGHT LEVELS AS DESCRIBED PER OREGON STRUCTURAL SPECIALTY CODE 1008 AND NFPA 110.
I. BUILDING MOUNTED LIGHT FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL AND SHALL ACT AS EGRESS LIGHTING IN THE EVENT OF POWER FAILURE.

⟨1⟩ KEYED LIGHTING NOTES:

1. PROVIDE REMOTE EMERGENCY BATTERY PACK FOR THE FIXTURES IN THE MAIN LOBBY.

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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ELECTRICAL DETAILS

REVISIONS: ⚠4

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⚠2	ADDENDUM #2	05/04/2021
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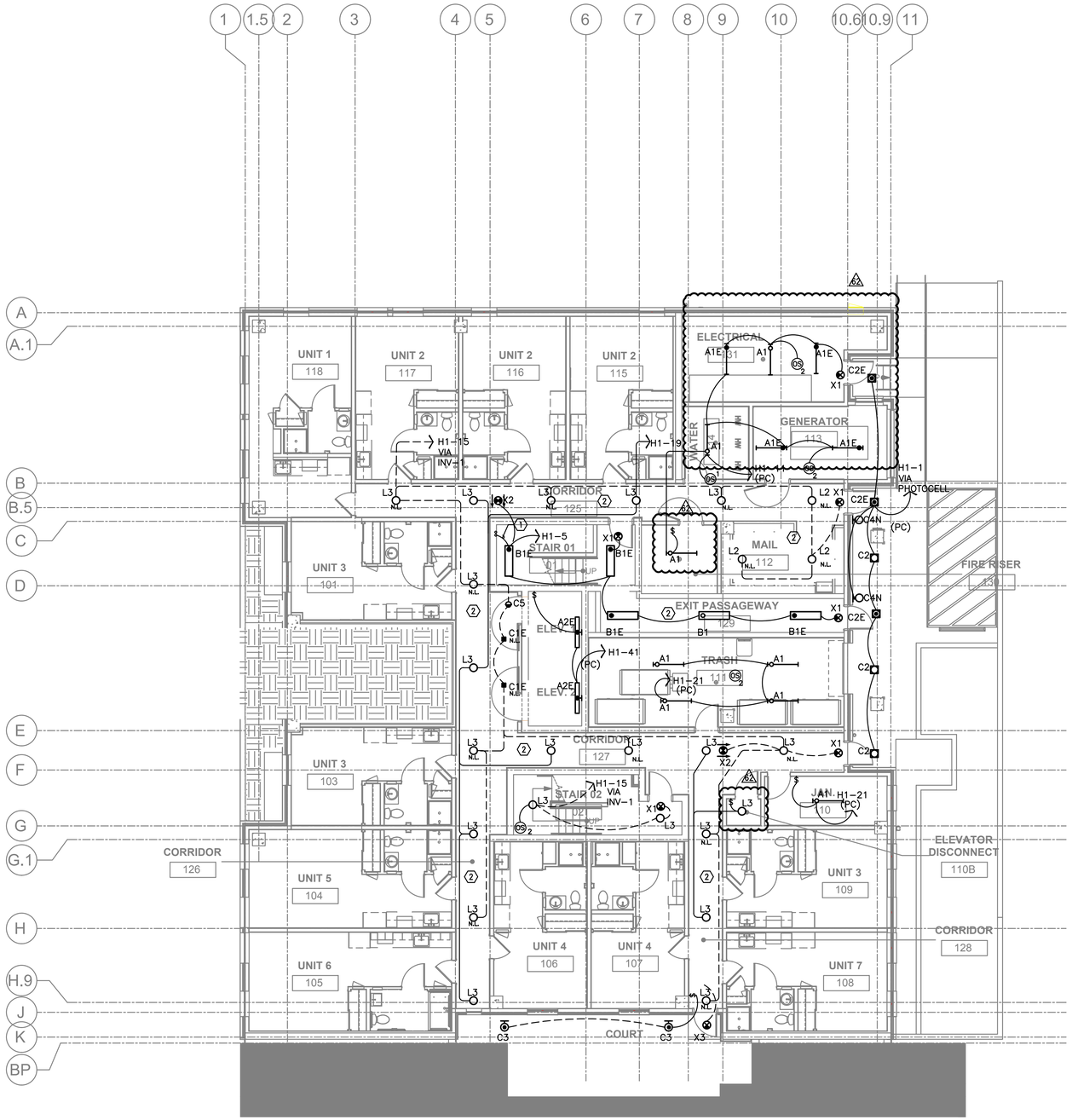
⚠8	PR #4	08/18/2021
⚠3	PR #7	09/17/2021
⚠9	PR #6	10/15/2021
⚠4	PR #10	10/06/2021
⚠7	PR #11	10/21/2021
⚠3	PR #12	01/21/2022
⚠10	PR #17	02/25/2022
⚠2	PR #19	03.23.2022

E1.14



1 E2.01 FIRST FLOOR LIGHTING PLAN

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

GENERAL LIGHTING 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 ENLARGED TYPICAL UNIT PLANS (E4 SERIES SHEETS) FOR TYPICAL POWER & LIGHTING LAYOUTS FOR THE RESIDENTIAL UNITS.

D. REFER TO SHEET E1.14 FOR LIGHT FIXTURE SCHEDULE.

E. THE CONTRACTOR SHALL CONSULT THE ARCHITECT AND/OR INTERIOR DESIGNER FOR THE EXACT LOCATION OF ALL LIGHT FIXTURES PRIOR TO THE START OF ANY ROUGH IN WORK

F. OCCUPANCY SENSORS SHALL BE FIELD ADJUSTED TO ENSURE COVERAGE AND PROPER CONTROL.

G. CORRIDOR LIGHTING TO BE CONSTANT "ON" AND PROVIDED WITH LOCAL MANUAL OVERRIDE SWITCHES FOR MAINTENANCE. ROUTE CORRIDOR LIGHTING VIA TIME CLOCK TO REDUCE LIGHT LEVELS BY 50% DURING PERIODS OF LOW ACTIVITY (EG. MIDNIGHT TO 4AM). REFER TO SHEET E1.15 FOR SWITCH WIRING DIAGRAMS.

H. ALL EGRESS FIXTURES SHALL BE WIRED SUCH THAT IN THE EVENT OF A POWER FAILURE, ALL LIGHTS WILL AUTOMATICALLY RETURN TO FULL POWER REGARDLESS OF SWITCH POSITION. REFER TO SWITCHING DETAILS ON SHEET E1.15.

KEYED NOTES:

1. CONTINUE CIRCUIT UP THROUGH THE STAIRWELL.
2. CORRIDOR LIGHTS NOTED AS NIGHT LIGHTS (N.L.) SHALL BE ON 24/7. ALL OTHER CORRIDOR FIXTURES TO BE CIRCUITED VIA MECHANICAL TIME CLOCK AND SET TO REDUCE THE LIGHT LEVELS DURING PERIODS OF LOW ACTIVITY (EG. 12AM TO 4AM). CONSULT OWNER FOR PREFERRED TIME CLOCK SETTINGS.

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BID SET

PROJECT NO.
17004

FIRST FLOOR
LIGHTING PLAN

REVISIONS:

1	ADDENDUM #1	04/30/2021
2	ADDENDUM #2	05/04/2021
5	PR #2	07/07/2021
6	PR #3	08/06/2021
8	PR #4	08/18/2021
13	PR #7	09/17/2021
16	PR #6	10/15/2021
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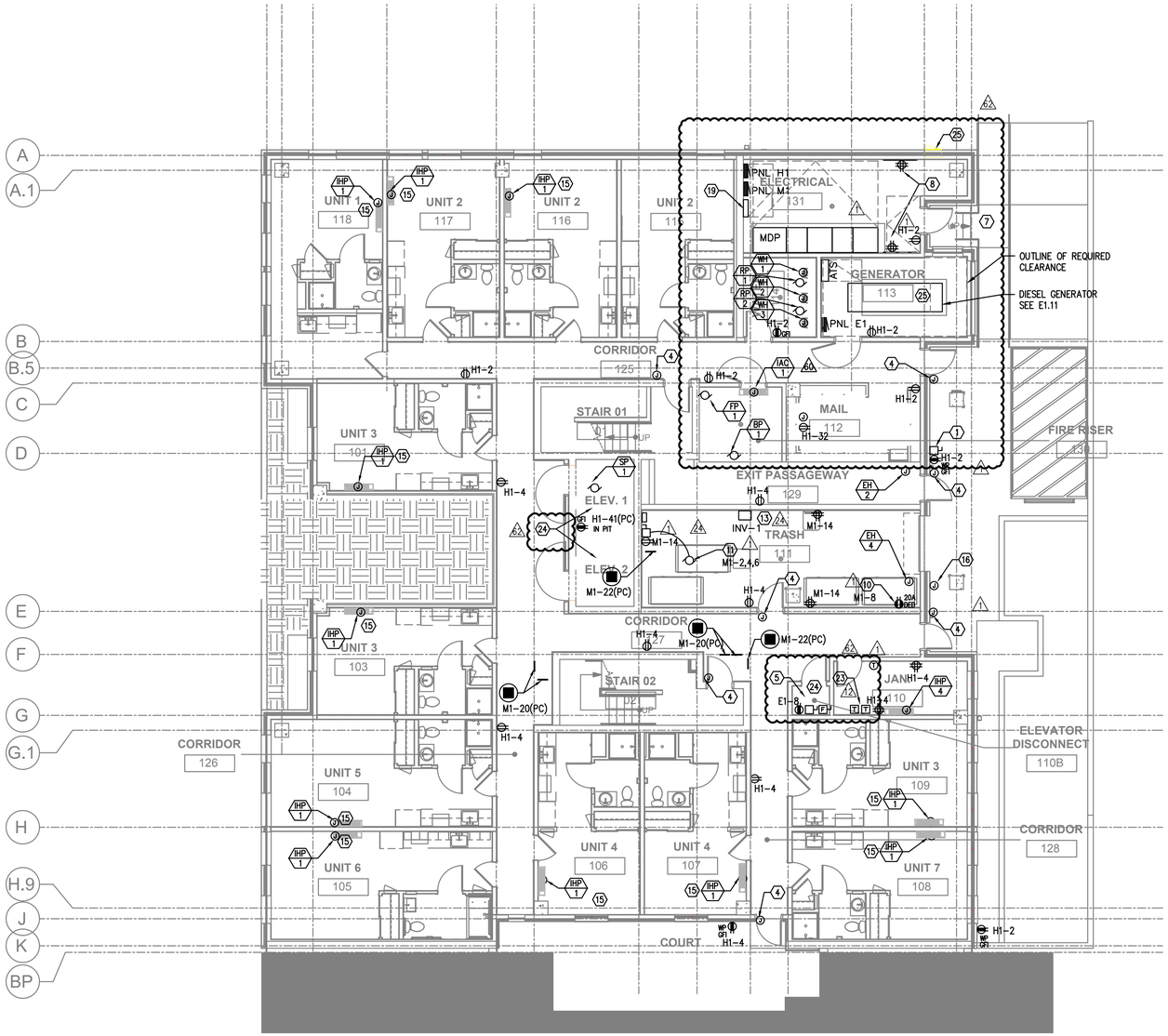
27	PR #11	10/21/2021
31	PR #12	01/21/2022
60	PR #17	02/25/2022
62	PR #19	03.23.2022

E2.01



1 E3.01 FIRST FLOOR POWER PLAN
SCALE: 1/8" = 1'-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 CONTRACTOR TO PROVIDE THERMOSTATS NOT SUPPLIED BY MECHANICAL CONTRACTOR. CONSULT MECHANICAL PLANS FOR ADDITIONAL INFORMATION.

C. ELECTRICAL CONTRACTOR SHALL PROVIDE INSTALLATION AND FINAL CONNECTION OF THERMOSTATS. CONSULT MECHANICAL CONTRACTOR FOR EXACT REQUIREMENTS PRIOR TO ROUGH IN.

D. REFER TO INTERIOR DECORATOR AND/OR ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATION(S) AND ELEVATIONS OF FIXTURES & DEVICES. OTHER DEVICES SHOWN ON THE ELECTRICAL PLANS AND NOT INDICATED ON THE DECORATOR'S OR ARCHITECT'S DRAWINGS, SHALL BE INSTALLED AT STANDARD MOUNTING HEIGHT AS INDICATED THE SYMBOL LIST.

E. REFER TO ENLARGED TYPICAL UNIT PLANS (E4 SERIES SHEETS) FOR TYPICAL POWER & LIGHTING LAYOUTS FOR THE APARTMENT UNITS.

F. ELECTRICAL EQUIPMENT SHOWN IN THE ELECTRICAL ROOMS IS APPROXIMATE, BASED ON TYPICAL PRODUCTS. CONTRACTOR SHALL VERIFY ANY SUBMITTED EQUIPMENT WILL FIT WITHIN THE SPACE PROVIDED, PRIOR TO PRODUCT SUBMITTAL REVIEW.

G. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE LOW VOLTAGE ('T' SERIES) PLANS, INCLUDING FIRE ALARM AND SYSTEMS INSTALLER, AND PROVIDE ROUGH IN AS NEEDED.

H. GENERAL PURPOSE CONVENIENCE RECEPTACLES LOCATED ON THE BUILDING EXTERIOR, OTHER THAN INTERIOR COURT YARD, SHALL BE EQUIPPED WITH A LOCKING, WEATHER PROOF COVER. (6)

I. TENANT ELECTRICAL METERS LOCATED ON FLOORS 2, 4, & 6.

KEYED NOTES:

1. GENERATOR DISCONNECT. SEE ONE-LINE DIAGRAM ON SHEET E1.11.
2. PROVIDE ONE 20A, 120V, 1P CIRCUIT FOR GENERATOR REMOTE ANNUNCIATOR. FED FROM PANEL E1.
3. PROVIDE ONE 20A,120V, 1P POWER CONNECTION FOR BUILDING SIGNS. CIRCUIT AS INDICATED VIA TIME CLOCK. MOUNT JUNCTION BOX TIGHT TO CEILING (AT BUILDING INTERIOR), COORDINATING EXACT LOCATION WITH SIGN INSTALLER'S SLEEVE AND PER ARCHITECT'S DIRECTION.
4. PROVIDE ONE 20A, 120V, 1P CIRCUIT FROM PANEL H1 FOR BUILDING ENTRY ACCESS CONTROL SYSTEM AND PROVIDE ROUGH IN AND WIRING TO ACCESS POINTS LOCATED ON PLANS. CONSULT WITH LOW VOLTAGE SYSTEMS INSTALLER AND THE 'T' SERIES SHEETS FOR ADDITIONAL INFORMATION.
5. VERIFY ELEVATOR EQUIPMENT LOCATION AND ELECTRICAL REQUIREMENTS WITH ARCHITECT AND/OR ELEVATOR PROVIDER.
6. PROVIDE ONE 20A, 120V, 1P CIRCUIT FROM PANEL H1 FOR AUTOMATIC DOOR OPENERS.
7. ELECTRICAL SERVICE & METER ROOMS SHALL HAVE OUTWARD SWING DOORS EQUIPPED WITH PANIC HARDWARE. PROVIDE A KEY BOX AT THE EXTERIOR FOR ELECTRICAL UTILITIES' 24/7 ACCESS.
8. (6) 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' & 'M2' SCHEDULES ON E1.12 FOR CIRCUITS.
9. DEDICATED POWER FOR WHEELCHAIR LIFT. VERIFY EXACT REQUIREMENTS WITH MANUFACTURER/INSTALLER PRIOR TO ROUGH IN.
10. DEDICATED 20A, 120V RECEPTACLE FOR PALLET JACK CHARGING.
11. (4) PROVIDE ONE 30A, 208V, 3PH ELECTRICAL CIRCUIT FOR TRASH COMPACTOR. FEED FROM PANEL M1.
12. DEDICATED 20A, 120V RECEPTACLE FOR ELECTRIC BIKE CHARGING.
13. EMERGENCY LIGHTING INVERTER. EVENLITE LM 535, 120V, 1P, OR APPROVED OTHER. REFER TO PANEL H1 FOR CIRCUITING.
14. CONTINUOUS OPERATION EXHAUST FAN TO BE TIED INTO THE LIGHTING CIRCUIT FOR THIS AREA, AHEAD OF THE LIGHTING CONTROLS. CONSULT MECHANICAL PLANS AND/OR EQUIPMENT INSTALLER FOR EXACT POWER REQUIREMENTS PRIOR TO ROUGH IN.
15. REFER TO TYPICAL UNIT PLANS ON THE E4 SERIES SHEETS FOR ADDITIONAL INFORMATION REGARDING THE HVAC EQUIPMENT LOCATIONS AND CIRCUITING. COORDINATE WITH MECHANICAL INSTALLER.
16. COORDINATE WITH LANDSCAPE DESIGNER/INSTALLER FOR EXACT LOCATION AND POWER REQUIREMENTS OF ANY IRRIGATION CONTROLLER. PROVIDE POWER CONNECTION FROM PANEL 'M1' AND SLEEVE TO GRADE.
17. PROVIDE ALL CIRCUITING FOR LAUNDRY MACHINES FROM PANEL 'L1'.
18. ROOF TOP GFCI RECEPTACLES TO BE PROVIDED WITHIN A 25FT RADIUS OF ALL MECHANICAL EQUIPMENT PER CODE. LOCATIONS SHOWN REPRESENT THIS. FINAL LOCATION(S) SHALL BE FIELD DETERMINED AND INSTALLED PER CODE.
19. REFER TO 'T' SERIES SHEETS AND COORDINATE POWER REQUIREMENTS FOR THE FACP PANEL AND DEMARCATION BOARDS.
20. ELECTRICAL CONTRACTOR TO CONSULT THE MECHANICAL PLANS AND COORDINATE WITH THE MECHANICAL INSTALLER FOR ANY POWER CONNECTIONS NEEDED FOR DAMPERS. PROVIDE ANY ROUGH IN AND/OR FINAL ELECTRICAL CONNECTIONS.
21. PROVIDE ONE 20A, 120V CIRCUIT DISCONNECT SWITCH FOR RADON MITIGATION SYSTEM. CONSULT INSTALLER FOR EXACT REQUIREMENTS PRIOR TO ROUGH IN. CIRCUIT AS INDICATED.
22. PROVIDE ONE 20A, 120V, 1P CIRCUIT FOR "WAVEPOINT" SYSTEM PER OWNER'S DIRECTION. CONSULT ARCHITECT FOR EXACT LOCATION.
23. (6) PROVIDE STEP-UP TRANSFORMERS PER THE ELEVATOR MANUFACTURER'S REQUIREMENTS. TRANSFORMERS TO BE MOUNTED ON UNI-STRUT (BY OTHERS), CLOSE TO THE CEILING.
24. THE ELECTRICAL CONTRACTOR SHALL CONSULT WITH, AND COORDINATE WITH THE ELEVATOR INSTALLER, PRIOR TO AND THROUGHOUT CONSTRUCTION TO PROVIDE ALL REQUIRED COMPONENTS FOR A COMPLETE INSTALL OF THE ELEVATORS AND ASSOCIATED EQUIPMENT. REFER TO THE ELEVATOR MANUFACTURER'S SUBMITTAL DOCUMENTS AND INSTALLATION MANUALS FOR ADDITIONAL INFORMATION. MFIA HAS ATTEMPTED TO SHOW ALL SUCH ELEMENTS, HOWEVER THERE MAY BE ADDITIONAL ITEMS THAT WILL NEED TO BE ADDRESSED BY THE ELECTRICAL CONTRACTOR IN THE FIELD.
25. REFER TO SHEET M6.05 FOR ADDITIONAL INFORMATION REGARDING THE GENERATOR FUELING SYSTEM. PROVIDE ONE 20A, 120V, 1P CIRCUIT FROM PANEL 'M1'.

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