



IN THE EVENT CONFLICTS ARE DISCOVERED  
BETWEEN THE ORIGINAL SIGNED AND SEALED  
DOCUMENTS PREPARED BY THE ARCHITECTS  
AND/OR THEIR CONSULTANTS, AND ANY COPY OF  
THE DOCUMENTS TRANSMITTED BY MAIL, FAX,  
ELECTRONICALLY OR OTHERWISE, THE ORIGINAL  
SIGNED AND SEALED DOCUMENTS SHALL GOVERN.

PROJECT # 2017-110

DATE: 06/16/2021  
PERMIT SET

REVISIONS

BURNSIDE  
MIXED USE  
2202 E BURNSIDE ST, PORTLAND, OR 97214

SHEET:

E1.12

**M** Consulting Engineers  
2007 S.E. Ash St.  
Portland, OR 97214  
PHN: (503) 234-0548  
FAX: (503) 234-0677  
**EA** INC. WWW.MFIA-ENG.COM  
CONTACT: DENISE TAYLOR

## MECHANICAL EQUIPMENT SCHEDULE

NO.	EQUIPMENT NAME	HP/KW	VOLTS	PH	AMPS	CONDUIT	WIRE	GND	CIRCUIT
EF-1	EXHAUST FAN NO.1	8.2HP	120	1		1/2"	#12	#12	SEE E3.00
EF-2	EXHAUST FAN NO.2	30W	120	1		1/2"	#12	#12	SEE E3.01
EF-3	EXHAUST FAN NO.3	83W	120	1		1/2"	#12	#12	2MN-2
EF-4	EXHAUST FAN NO. 4	218W	120	1		1/2"	#12	#12	2MS-20
EF-5	EXHAUST FAN NO.5	1/2HP	120	1		1/2"	#12	#12	2MS-14
EF-6	EXHAUST FAN NO.6	1/2HP	120	1		1/2"	#12	#12	2MS-16
EF-7	EXHAUST FAN NO.7	1/2HP	120	1		1/2"	#12	#12	2MN-9
EF-8	EXHAUST FAN NO.8	1/2HP	120	1		1/2"	#12	#12	2MN-11
EF-9	EXHAUST FAN NO.9	1/2HP	120	1		1/2"	#12	#12	2MN-13
EF-10	EXHAUST FAN NO.10	1/2HP	120	1		1/2"	#12	#12	2MN-15
EF-11	EXHAUST FAN NO.11	1/2HP	120	1		1/2"	#12	#12	2MN-17
EF-12	EXHAUST FAN NO.12	1/2HP	120	1		1/2"	#12	#12	2MN-19
EF-13	EXHAUST FAN NO.13	1/2HP	120	1		1/2"	#12	#12	2MN-21
EF-14	EXHAUST FAN NO.14	1/2HP	120	1		1/2"	#12	#12	2MN-23
EF-15	EXHAUST FAN NO.15	1/2HP	120	1		1/2"	#12	#12	2MN-25
EF-16	EXHAUST FAN NO.16	26W	120	1		1/2"	#12	#12	
TF-1	THRU-WALL FAN NO.1	25W	120	1		1/2"	#12	#12	SEE UNIT TYPE 'G'
GEF-1	GARAGE EXHAUST FAN NO.1	1.5HP	208	3		1/2"	#12	#12	2MS-28,30,32
EH-1	ELECTRIC WALL HEATER NO.1	1.5 KW	120	1		1/2"	#12	#12	SEE UNIT PLANS
EH-2	ELECTRIC WALL HEATER NO.2	1.0 KW	120	1		1/2"	#12	#12	SEE E3.00, E3.01
EH-3	ELECTRIC WALL HEATER NO.3	3.0 KW	208	1		1/2"	#12	#12	SEE E3.00, E3.01
EH-4	ELECTRIC WALL HEATER NO.4	500W	120	1		1/2"	#12	#12	SEE E3.01
EH-5	ELECTRIC WALL HEATER NO.5	7.5 KW	208	1		3/4"	#8	#10	2MS-10,12
FC-1	FAN COIL UNIT NO.1	15.0KW	208	1		1-1/4"	#3	#8	2MN-8,10
HP-1	HEAT PUMP NO.1		208	1	31.8MCA	3/4"	#8	#10	2MN-12,14
IAC-1	SPLIT SYST NO.1 (BOILER RM)								INTERCONNECT W/ OAC
OAC-1	SPLIT SYST NO.1 (ROOF)		208	1	12.0 MCA	1/2"	#12	#12	2MS-15,17
IAC-2	SPLIT SYST NO.2 (ELEV MACH RM)								INTERCONNECT W/ OAC
OAC-2	SPLIT SYST NO.2 (ROOF)		208	1	12.0 MCA	1/2'	#12	#12	2MN-4,6
IAC-3	SPLIT SYST NO.3 (MAINTENANCE)								INTERCONNECT W/ OAC
OAC-3	SPLIT SYST NO.3 (ROOF)		208	1	12.0 MCA	1/2'	#12	#12	2MS-24,26
IAC-4	MINI SPLIT SYST NO.4 (RM #292)								INTERCONNECT W/ OAC
OAC-4	SPLIT SYST NO.4 (ROOF)		208	1	12.0 MCA	1/2'	#12	#12	2MS-3,5
IHP-1	MINI SPLIT SYST NO.1 (A & B)								SEE UNIT PLANS
OHP-1	MINI SPLIT SYST NO.1 (ROOF)		208	1	22.1 MCA	3/4"	#10	#10	SEE E3.05 & E3.07
IHP-2	MINI SPLIT SYST NO.2 (A & B)								SEE UNIT PLANS
OHP-2	MINI SPLIT SYST NO.2 (OUTDOOR)		208	1	22.1 MCA	3/4"	#10	#10	SEE E3.05 & E3.07
IHP-3	MINI SPLIT SYST NO.3 (A & B)								SEE UNIT PLANS
OHP-3	MINI SPLIT SYST NO.3 (OUTDOOR)		208	1	22.1 MCA	3/4"	#10	#10	SEE E3.05 & E3.07
IHP-4	MINI SPLIT SYST NO.4 (INDOOR)								INTERCONNECT W/ OAC
OHP-4	MINI SPLIT SYST NO.4 (ROOF)		208	1	22.1 MCA	3/4"	#10	#10	2MS-3,5
IHP-5	MINI SPLIT SYST NO.5 (INDOOR)								INTERCONNECT W/ OAC
OHP-5	MINI SPLIT SYST NO.5 (ROOF)		208	1	22.1 MCA	3/4"	#10	#10	2MN-1,3
IHP-6	MINI SPLIT SYST NO.6 (INDOOR)								INTERCONNECT W/ OAC
OHP-6	MINI SPLIT SYST NO.6 (ROOF)		208	1	22.1 MCA	3/4"	#10	#10	2MN-16,18
RTU-1	AIR HANDLING UNIT NO.1		480	3	14.0 MCA	1/2'	#12	#12	4M1-8,10,12
RTU-2	AIR HANDLING UNIT NO.2		480	3	12.0 MCA	1/2'	#12	#12	4M1-14,16,18
RTU-3	AIR HANDLING UNIT NO.3		480	3	20.0 MCA	1/2'	#10	#10	4M1-9,11,13
RTU-4	AIR HANDLING UNIT NO.4		480	3	14.0 MCA	1/2'	#12	#12	4M1-15,17,19
RTU-5	AIR HANDLING UNIT NO.5		480	3	12.0 MCA	1/2'	#12	#12	4M1-21,23,25
PTHP-1	THRU-WALL HEAT/AC NO.1	3.5KW	208	1	10.6 MCA	1/2"	#12	#12	REFER TO UNIT PLANS
PTHP-2	THRU-WALL HEAT/AC NO.2	3.5KW	208	1	12.1 MCA	1/2"	#10	#10	REFER TO UNIT PLANS
SP-1	SUMP PUMP NO.1	1/2HP	120	1		1/2"	#12	#12	2EN-4
SP-2	SUMP PUMP NO.2	1/2HP	120	1		1/2"	#12	#12	2ES-4
RP-1	RECIRC PUMP NO.1	1/2HP	120	1		1/2"	#12	#12	2MS-23
RP-2	RECIRC PUMP NO.2	1/2HP	120	1		1/2"	#12	#12	2MS-25
BP-1	BOOSTER PUMP NO.1	(2) 5HP	208	3	28.8 EA.	1"	#4	#10	2MS-18,20,22
WH-1	WATER HEATER NO.1 (GAS)		120	1		1/2"	#12	#12	2MS-19 (PC)
WH-2	WATER HEATER NO.2 (GAS)		120	1		1/2"	#12	#12	2MS-19 (PC)
WH-3	WATER HEATER NO.3 (GAS)		120	1		1/2"	#12	#12	2MS-21 (PC)
WH-4	WATER HEATER NO.4 (GAS)		120	1		1/2"	#12	#12	2MS-21 (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.

MFIA PANEL SCHEDULE													
panel 4M1		mounting SURFACE			location GARAGE			connected load amps					
voltage 277/480V		phase 3			bus & main 200A SCCR: 42K MLO			calculated load amps					
C	service	va	a/p	no.	a	b	c	no.	a/p	va	service	C	
6	ELEVATOR #1	7479	100/3	1	*	*	*	2	100/3	7479	ELEVATOR #2	6	
6	*	7479	*	3	*	*	*	4	*	7479	*	6	
6	*	7479	*	5	*	*	*	6	*	7479	*	6	
5	TRANSFORMER ET1 (PNL 2ES)	6388	225/3	7	*	*	*	8	225/3	5576	TRANSFORMER ET2 (PNL 2EN)	5	
5	*	6388	*	9	*	*	*	10	*	5576	*	5	
5	*	6388	*	11	*	*	*	12	*	5576	*	5	
	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		
	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		26922 VA			NOTES:					line-line voltage			
Phase B		26922 VA								480			
Phase C		26922 VA								largest motor (va)			
Total Connected		80766 VA								0			
load code:		ph. A	ph. B		ph. C		total		factor		calculated load (va)		
1. LIGHTS=		0	0		0		0 VA		0		1.25		
2. RECEPT.=		0	0		0		0 VA		0		1 + 0.5		
3. HEATING=		0	0		0		0 VA		0		1.00		
4. KITCHEN=		0	0		0		0 VA		0		1.00		
5. EQUIP.=		11964	11964		11964		VA		35892		1.00		
6. MOTORS=		14958	14958		14958		VA		44874		*		
7. MISC=		0	0		0		0 VA		0		1.00		
(* 125% of the largest motor + 100% of the balance)										TOTAL =		80766	

MFIA PANEL SCHEDULE												
panel 4E1			mounting SURFACE			location Parking Garage			connected load amps			
voltage 277/480V			phase 3			bus & main 200A SCCR: 65K MLO			calculated load amps			
C	service	va	a/p	no.	a b c	no.	a/p	va	service	C		
6	ELEVATOR #1	7500	150/3	1	*	2	150/3	7500	ELEVATOR #2	6		
6	*	7500	*	3	*	4	*	7500	*	6		
6	*	7500	*	5	*	6	*	7500	*	6		
5	TRANSFORMER ET1 (PNL 2ES)	6150	60/3	7	*	8	60/3	4050	TRANSFORMER ET2 (PNL 2EN)	5		
5	*	6102	*	9	*	10	*	6102	*	5		
5	*	5750	*	11	*	12	*	5500	*	5		
	SPARE	0	20/1	13	*	14	20/1	0	SPARE			
	SPARE	0	20/1	15	*	16	20/1	0	SPARE			
	SPARE	0	20/1	17	*	18	20/1	0	SPARE			
	SPARE	0	20/1	19	*	20	20/1	0	SPARE			
	SPARE	0	20/1	21	*	22	20/1	0	SPARE			
	SPARE	0	20/1	23	*	24	20/1	0	SPARE			
	SPARE	0	20/1	25	*	26	20/1	0	SPARE			
	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		25200 VA		NOTES:				line-line voltage				
Phase B		27204 VA										
Phase C		26250 VA						largest motor (va)				
Total Connected		78654 VA						0				
load code		ph. A	ph. B	ph. C		total		factor		calculated load (va)		
1. LIGHTS=		0	0	0		VA		0.125		0		
2. RECEPT =		0	0	0		VA		0.1 + 0.5		0		
3. HEATING=		0	0	0		VA		0.100		0		
4. KITCHEN=		0	0	0		VA		0.100		0		
5. EQUIP. =		10200	12204	11250 VA		33654		1.00		33654		
6. MOTORS=		15000	15000	15000 VA		45000		*		45000		
7. MISC=		0	0	0		VA		0.100		0		
(* 125% of the largest motor + 100% of the balance)									TOTAL =		78654	