

BRANCH CIRCUIT WIRING SCHEDULE					
BREAKER SIZE	PHASE CONDUCTOR	NEUTRAL CONDUCTOR	GROUND	CONDUIT	
15A	12	12	12	12	3/4"
20A	12	12	12	12	3/4"
30A	10	10	10	10	3/4"
35A	8	8	8	10	1"
40A	8	8	8	10	1"
45A	6	6	6	10	1"
50A	6	6	6	10	1"
60A	4	4	4	10	1-1/4"
70A	4	4	4	8	1-1/4"
80A	3	3	3	8	1-1/2"

NOTE:
1. PROVIDE A CONDUCTOR PER BREAKER POLE. THESE ARE THE MINIMUM SIZES REQUIRED FOR EACH CIRCUIT. CONTRACTOR TO MAKE ALL THE NECESSARY FIELD ADJUSTMENTS TO COMPENSATE FOR VOLTAGE DROP.
2. IN GENERAL, VOLTAGE DROP FOR ANY BRANCH CIRCUIT SHALL NOT EXCEED 3%. VOLTAGE DROP FOR ANY FEEDER SHALL NOT EXCEED 2% WHERE VOLTAGE DROP EXCEEDS THESE REQUIREMENTS, THE CONTRACTOR SHALL INCREASE THE SIZE OF THE CONDUCTORS AND RACEWAYS AS REQUIRED.

EXISTING PANEL ESP-3H					
RATINGS: 208/120V, 3PH, 4W BUS RATING: 225 A A.I.C. RATING: EXISTING					
MANS TYPE: MLO			LOCATION: FED FROM: MOUNTING: SURFACE		
CKT NO	CIRCUIT DESCRIPTION	BREAKER	LOAD (KVA)	BREAKER	CIRCUIT DESCRIPTION
1	EXISTING - LTG - PENTHOUSE	20 A	1.00	20 A	EXISTING - LTG - PENTHOUSE
3	EXISTING - LTG - PENTHOUSE	20 A	1.00	20 A	EXISTING - RECP - PENTHOUSE
5	EXISTING - LTG - PENTHOUSE	20 A	1.00	20 A	EXISTING - DIRECT DIGITAL CONTROL
7	EXISTING - 1-UH1 & 1-UH3	20 A	1.00	20 A	EXISTING - RECP - PENTHOUSE
9	EXISTING - 1-UH2 & 1-UH4	20 A	1.00	20 A	EXISTING - RECP - PENTHOUSE
11	EXISTING - 1-EF12	20 A	1.00	20 A	EXISTING - STEAM TRAP PANEL
13	EXISTING - 1-EF14	20 A	1.00	20 A	EXISTING - AIR DRYER
15	EXISTING - 1-EF15	20 A	1.00	20 A	SPARE
17	EXISTING - 1-EF21	20 A	1.00	20 A	SPARE
19	EXISTING - HUMIDIFIER SF2 & SF3	20 A	1.00	20 A	EXISTING - HUMIDIFIER SF4 & SF5
21	Space	20 A	1.00	20 A	Space
23	Space	20 A	1.00	20 A	Space
25	EXISTING - 1-EF10	20 A	1.00	20 A	EXISTING - EF-13
27	Space	20 A	1.00	20 A	Space
29	Space	20 A	1.00	20 A	Space
31	EXISTING - AIR COMPRESSOR	30 A	1.00	20 A	EXISTING - EF-11
33	Space	20 A	1.00	20 A	Space
35	Space	20 A	1.00	20 A	Space
37	SPARE	50 A	0.00	40 A	EXISTING - AIR COMPRESSOR
39	Space	20 A	1.00	20 A	Space
41	Space	20 A	1.00	20 A	Space
43	SPARE	100 A	0.00	60 A	AHU-3 (RF-3) (See Note 1)
45	Space	20 A	1.00	20 A	Space
47	Space	20 A	1.00	20 A	Space
49	AHU-3 (SP-3) (See Note 1)	3	125 A	11.04	0.00
51	Space	20 A	1.00	20 A	Space
53	Space	20 A	1.00	20 A	Space
		27.9	24.9	24.9	CONNECTED LOAD/PHASE (KVA)
		232.5	207.5	207.5	CONNECTED LOAD/PHASE (A)
		215.7	215.7	215.7	TOTAL CONNECTED LOAD (A)
		100.00%	100.00%	100.00%	TOTAL DEMAND FACTOR
		215.7	215.7	215.7	TOTAL DEMAND LOAD (KVA)
		215.7	215.7	215.7	TOTAL DEMAND LOAD (A)

NOTES:
1. PROVIDE NEW CIRCUIT BREAKERS.

EQUIPMENT CONNECTION SCHEDULE											
TAG	IDENTIFICATION	HP	FLA / MCA	VOLTAGE / PH / LOAD	CKT. BKR / MCP	PANEL	CKT. #	NEMA TYPE	DISC / POLES / FUSE	FEEDER SIZE	CONDUIT SIZE
AHU-1 (RF-1)	AHU-1 RETURN FAN	2	3.4 FLA	480 V/3-2823 VA	15A	ME-MCC1	2	1	VFD W/ 30A/3P	(3) #12, (1) #12 GND	3/4"
AHU-1 (SF-1)	AHU-1 SUPPLY FAN	15	21 FLA	480 V/3-17436 VA	50A	ME-MCC1	1	1	VFD W/ 60A/3P	(3) #6, (1) #10 GND	1"
AHU-3 (RF-3)	AHU-3 RETURN FAN	10	32.2 FLA	208 V/3-11587 VA	60A	ESP-3H	44,46,48	1	VFD W/ 60A/3P	(3) #4, (1) #10 GND	1-1/4"
AHU-3 (SF-3)	AHU-3 SUPPLY FAN	30	92 FLA	208 V/3-33105 VA	125A	ESP-3H	48,51,53	1	VFD W/ 200A/3P	(3) #1, (1) #6 GND	2"
AHU-5 (RF-5)	AHU-5 RETURN FAN	5	7.6 FLA	480 V/3-6311 VA	15A	ME-MCC2	9	1	VFD W/ 30A/3P	(3) #12, (1) #12 GND	3/4"
AHU-5 (SF-5)	AHU-5 SUPPLY FAN	10	14 FLA	480 V/3-11626 VA	25A	ME-MCC2	7	1	VFD W/ 30A/3P	(3) #10, (1) #10 GND	3/4"
AHU-6 (RF-6)	AHU-6 RETURN FAN	3	11 FLA	208 V/3-3958 VA	20A	PP-4	13,35	1	VFD W/ 30A/3P	(3) #12, (1) #12 GND	3/4"
AHU-6 (SF-6)	AHU-6 SUPPLY FAN	15	48.3 FLA	208 V/3-17280 VA	100A	PP-4	16,18,20	1	VFD W/ 100A/3P	(3) #1, (1) #6 GND	2"
RTU-L	ROOF TOP UNIT - LAUNDRY	-	51.9 MCA	208 V/3-17096 VA	60A	PPAC	13,15,17	3R	VFD W/ 60A/3P	(3) #4, (1) #10 GND	1-1/4"

EQUIPMENT SCHEDULE NOTES:
1. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF EQUIPMENT.
2. E.C. SHALL VERIFY AND COORDINATE EXACT OCPD AND OVERLOAD RATING WITH RESPECTIVE CONTRACTOR AND EQUIPMENT SUPPLIER. ADJUST CIRCUIT ACCORDINGLY.
3. PROVIDE CIRCUITING AND CONNECTIONS FROM ALL VFDs, FUSED AND NON-FUSED DISCONNECT SWITCHES, COMBINATION STARTERS, MANUAL MOTOR STARTERS, AND CONTROLLERS TO MECHANICAL EQUIPMENT SERVED. CONDUCTOR AND CONDUIT SIZES SHALL MATCH THOSE SERVING THE EQUIPMENT FROM THE PANELBOARD.

EXISTING PANEL PPAC					
RATINGS: 208/120V, 3PH, 4W BUS RATING: 400 A A.I.C. RATING: EXISTING					
MANS TYPE: MCB			LOCATION: FED FROM: MOUNTING: SURFACE		
CKT NO	CIRCUIT DESCRIPTION	BREAKER	LOAD (KVA)	BREAKER	CIRCUIT DESCRIPTION
1	EXISTING - HEAT PUMP	3	20 A	1.90	0.00
3	Space	20 A	1.90	0.00	Space
5	Space	20 A	1.90	0.00	Space
7	EXISTING - KITCHEN FAN	3	50 A	4.80	0.00
9	Space	20 A	1.90	0.00	Space
11	Space	20 A	1.90	0.00	Space
13	RTU-L (See Note 1)	3	60 A	5.69	2.90
15	Space	20 A	1.90	0.00	Space
17	Space	20 A	1.90	0.00	Space
19	Space	20 A	1.90	0.00	Space
21	Space	20 A	1.90	0.00	Space
23	Space	20 A	1.90	0.00	Space
25	EXISTING - HEAT PUMP	3	20 A	1.90	0.00
27	Space	20 A	1.90	0.00	Space
29	Space	20 A	1.90	0.00	Space
31	Space	20 A	1.90	0.00	Space
33	Space	20 A	1.90	0.00	Space
35	Space	20 A	1.90	0.00	Space
37	Space	20 A	1.90	0.00	Space
39	Space	20 A	1.90	0.00	Space
41	Space	20 A	1.90	0.00	Space
		19.1	19.1	19.1	CONNECTED LOAD/PHASE (KVA)
		159.0	159.0	159.0	CONNECTED LOAD/PHASE (A)
		158.9	158.9	158.9	TOTAL CONNECTED LOAD (A)
		100.00%	100.00%	100.00%	TOTAL DEMAND FACTOR
		158.9	158.9	158.9	TOTAL DEMAND LOAD (KVA)
		158.9	158.9	158.9	TOTAL DEMAND LOAD (A)

NOTES:
1. PROVIDE NEW CIRCUIT BREAKER.

EXISTING PANEL PP-4					
RATINGS: 208/120V, 3PH, 4W BUS RATING: 600 A A.I.C. RATING: EXISTING					
MANS TYPE: MCB			LOCATION: FED FROM: MOUNTING: SURFACE		
CKT NO	CIRCUIT DESCRIPTION	BREAKER	LOAD (KVA)	BREAKER	CIRCUIT DESCRIPTION
1	AHU-6 (RF-6) (See Note 1)	3	20 A	1.32	26.66
3	Space	20 A	1.32	26.66	Space
5	Space	20 A	1.32	26.66	Space
7	SPARE	3	50 A	0.00	0.00
9	Space	20 A	1.32	26.66	Space
11	Space	20 A	1.32	26.66	Space
13	SPARE	3	50 A	0.00	0.00
15	Space	20 A	1.32	26.66	Space
17	Space	20 A	1.32	26.66	Space
19	SPARE	3	225 A	0.00	5.79
21	Space	20 A	1.32	26.66	Space
23	Space	20 A	1.32	26.66	Space
25	EXISTING - PANEL K	3	200 A	15.00	0.00
27	Space	20 A	1.32	26.66	Space
29	Space	20 A	1.32	26.66	Space
31	EXISTING - COND. PUMP RM 11	3	30 A	2.10	0.00
33	Space	20 A	1.32	26.66	Space
35	Space	20 A	1.32	26.66	Space
37	Space	20 A	1.32	26.66	Space
39	Space	20 A	1.32	26.66	Space
41	Space	20 A	1.32	26.66	Space
		51.4	51.4	51.4	CONNECTED LOAD/PHASE (KVA)
		428.1	428.1	428.1	CONNECTED LOAD/PHASE (A)
		154.1	154.1	154.1	TOTAL CONNECTED LOAD (A)
		427.8	427.8	427.8	TOTAL DEMAND LOAD (A)
		100.00%	100.00%	100.00%	TOTAL DEMAND FACTOR
		154.1	154.1	154.1	TOTAL DEMAND LOAD (KVA)
		427.8	427.8	427.8	TOTAL DEMAND LOAD (A)

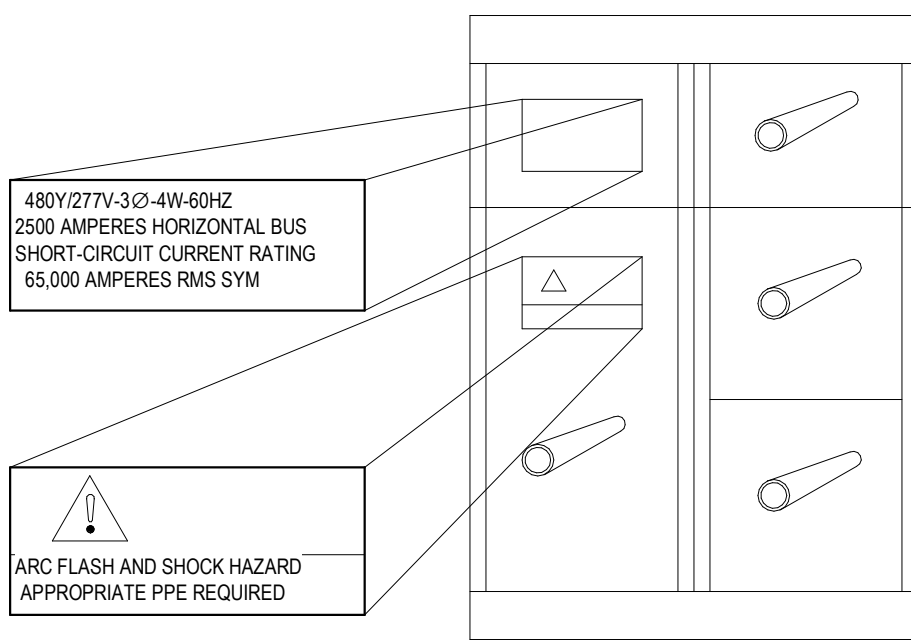
NOTES:
1. RE-USE EXISTING CIRCUIT BREAKER.

EXISTING SWITCHBOARD ME-MCC1					
RATINGS: 480/277V, 3PH, 4W BUS RATING: 600 A A.I.C. RATING: EXISTING					
MANS TYPE: MLO			LOCATION: FED FROM: MOUNTING: SURFACE		
CKT	CIRCUIT DESCRIPTION	POLES	TRIP	A	B
1	AHU-1 (SF-1)	3	50 A	5.8	5.8
2	AHU-1 (RF-1)	3	15 A	0.9	0.9
3	EXISTING - 1-EF5	3	3 A	0.4	0.4
4	EXISTING - 1-EF6	3	7 A	0.8	0.8
5	EXISTING - 1-EF7	3	3 A	0.3	0.3
6	EXISTING - 1-EF17	3	7 A	0.8	0.8
7	EXISTING - 1-SF7	3	3 A	0.3	0.3
8	SPARE	3	15 A	0.0	0.0
9	Space	--	--	0.0	--
10	Space	--	--	0.0	--
11	Space	--	--	0.0	--
12	Space	--	--	0.0	--
		9.5	9.5	9.5	CONNECTED LOAD/PHASE (KVA)
		34.1	34.1	34.1	CONNECTED LOAD/PHASE (A)
		28.4	28.4	28.4	TOTAL CONNECTED LOAD (A)
		100.00%	100.00%	100.00%	TOTAL DEMAND FACTOR
		28.4	28.4	28.4	TOTAL DEMAND LOAD (KVA)
		34.1	34.1	34.1	TOTAL DEMAND LOAD (A)

NOTES:
1. PROVIDE NEW OR MODIFY EXISTING BUCKET WITH NEW FUSE/BREAKER TRIP SIZE AS INDICATED AND RECOMMENDED BY EQPM. MANUFACTURER.

EXISTING SWITCHBOARD ME-MCC2					
RATINGS: 480/277V, 3PH, 4W BUS RATING: 600 A A.I.C. RATING: EXISTING					
MANS TYPE: MLO			LOCATION: FED FROM: MOUNTING: SURFACE		
CKT	CIRCUIT DESCRIPTION	POLES	TRIP	A	B
1	EXISTING - 1-EF1	3	30 A	5.8	5.8
2	EXISTING - 1-EF3	3	7 A	1.3	1.3
3	EXISTING - 1-EF9	3	3 A	0.3	0.3
4	EXISTING - 1-EF11	3	3 A	0.6	0.6
5	EXISTING - 1-SF2	3	100 A	14.4	14.4
6	EXISTING - 1-SF4	3	50 A	7.5	7.5
7	AHU-5 (SF-5)	3	25 A	3.9	3.9
8	AHU-5 (RF-5)	3	15 A	2.1	2.1
9	AHU-5 (SF-5)	3	15 A	2.1	2.1
10	EXISTING - 1-EF13	3	3 A	0.3	0.3
11	Space	--	--	0.0	--
12	EXISTING - 1-P5	3	15 A	3.1	3.1
13	EXISTING - 1-P6	3	15 A	2.1	2.1
14	SPARE	3	15 A	0.0	0.0
15	SPARE	3	15 A	0.0	0.0
16	Space	--	--	0.0	--
		43.5	43.5	43.5	CONNECTED LOAD/PHASE (KVA)
		157.0	157.0	157.0	CONNECTED LOAD/PHASE (A)
		130.4	130.4	130.4	TOTAL CONNECTED LOAD (A)
		156.9	156.9	156.9	TOTAL DEMAND LOAD (A)
		100.00%	100.00%	100.00%	TOTAL DEMAND FACTOR
		130.4	130.4	130.4	TOTAL DEMAND LOAD (KVA)
		156.9	156.9	156.9	TOTAL DEMAND LOAD (A)

NOTES:
1. PROVIDE NEW OR MODIFY EXISTING BUCKET WITH NEW FUSE/BREAKER TRIP SIZE AS INDICATED AND RECOMMENDED BY EQPM. MANUFACTURER.



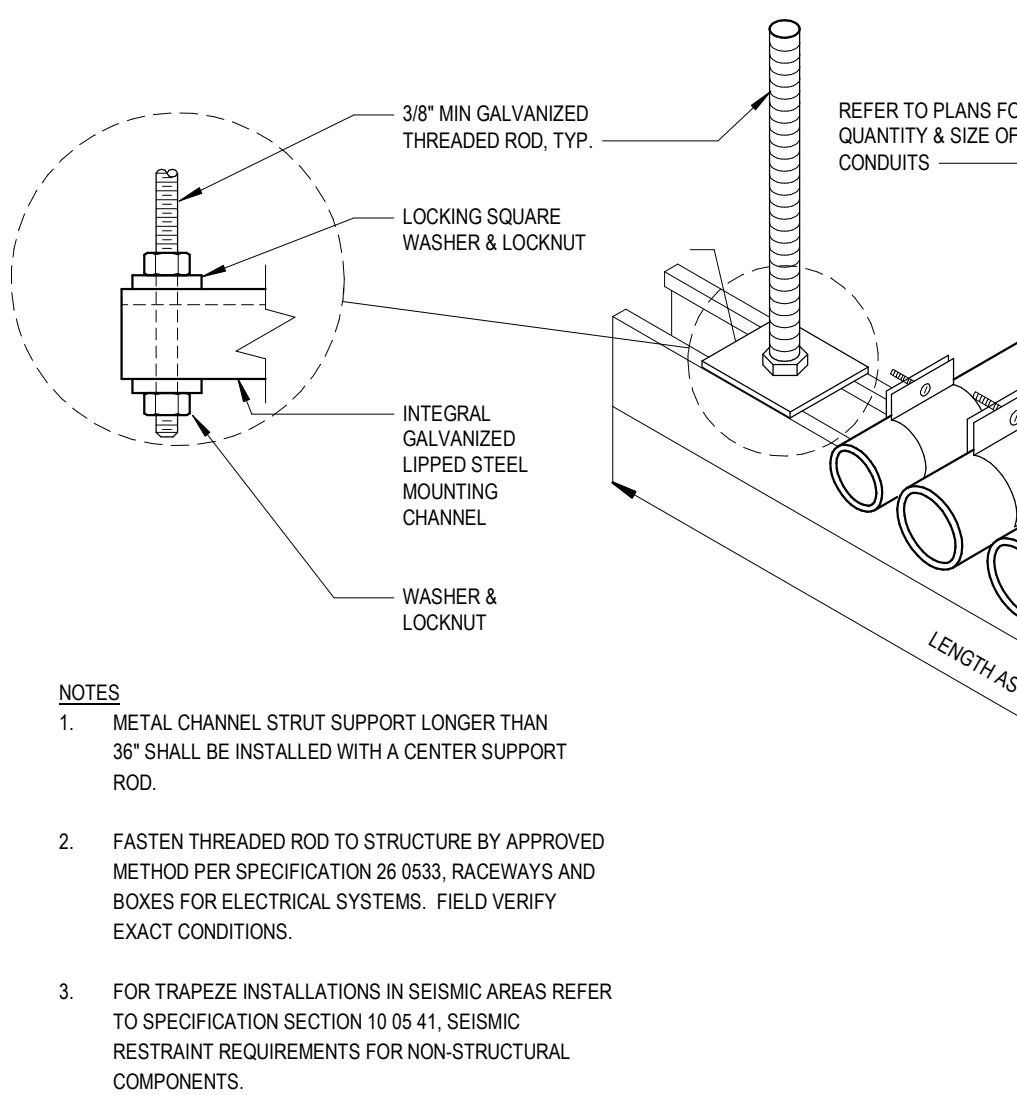
NOTES:
1. THE PROSPECTIVE SYMMETRICAL FAULT CURRENT AT A NOMINAL VOLTAGE TO WHICH AN APPROPRIATE, OR SYSTEM IS ABLE TO BE CONNECTED WITHOUT SUSTAINING DAMAGE EXCEEDING ACCEPTANCE CRITERIA, SHALL BE DISPLAYED ON THE EXTERIOR OF THE STRUCTURE, OR ON THE INSIDE COVER OF A PANELBOARD.

EQUIPMENT LABELING REQUIREMENTS

4" WIDE			
VOLTAGE 208Y/120V	VOLTAGE 480Y/277V	PHASE A BLACK	PHASE A BROWN
PHASE B RED	PHASE B ORANGE	PHASE C BLUE	PHASE C YELLOW
NEUTRAL WHITE	NEUTRAL GRAY		

NOTES:
1. LABEL SHALL BE DISPLAYED ON ALL SWITCHBOARDS, PANELBOARDS, TRANSFER SWITCHES AND FIDELITIES (MULTIPLE VOLTAGES).
2. NAMEPLATE SHALL BE WHITE LETTERING ON BLACK MORTAR.
3. IF ONLY ONE VOLTAGE IS PRESENT, LABEL SHALL INDICATE ONLY THAT RESPECTIVE VOLTAGE.

BRANCH WIRING IDENTIFICATION



CONDUIT TRAPEZE MOUNTING DETAIL

		<div>CONS</div>
Revision	Date	