

ABBREVIATIONS

A	AMPERES OR AMPS
AC	ALTERNATING CURRENT
AFF	ABOVE FINISH FLOOR
C	CONDUIT
CB	CIRCUIT BREAKER
DS	DISCONNECT SWITCH
E	ELECTRICAL
EC	ELECTRICAL CONTRACTOR
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
FA	FIRE ALARM
FMC	FLEXIBLE METALLIC CONDUIT
G	GROUNDING (BONDING) CONDUCTOR
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GPFE	GROUND FAULT PROTECTION FOR EQUIPMENT
GRC	GALVANIZED RIGID STEEL CONDUIT
HP	HORSEPOWER
LTG	LIGHTING
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCM	KCMIL (THOUSAND CIRCULAR MILLS)
MH	MANHOLE
MLO	MAIN LUG ONLY
N	NEUTRAL (GROUNDED) CONDUCTOR
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON FUSED
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NORMALLY OPEN
NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY
PB	PULL BOX
PH or Ø	PHASE
PVC	POLYVINYL CHLORIDE CONDUIT
RCPT	RECEPTACLE
RA	RETURN AIR
SA	SUPPLY AIR
SPD	SURGE PROTECTION DEVICE
TYP	TYPICAL
UG	UNDERGROUND
U.L.	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
VA	VOLT-AMPS
W	WATT(S)

CIRCUIT AND RACEWAY SYMBOLS

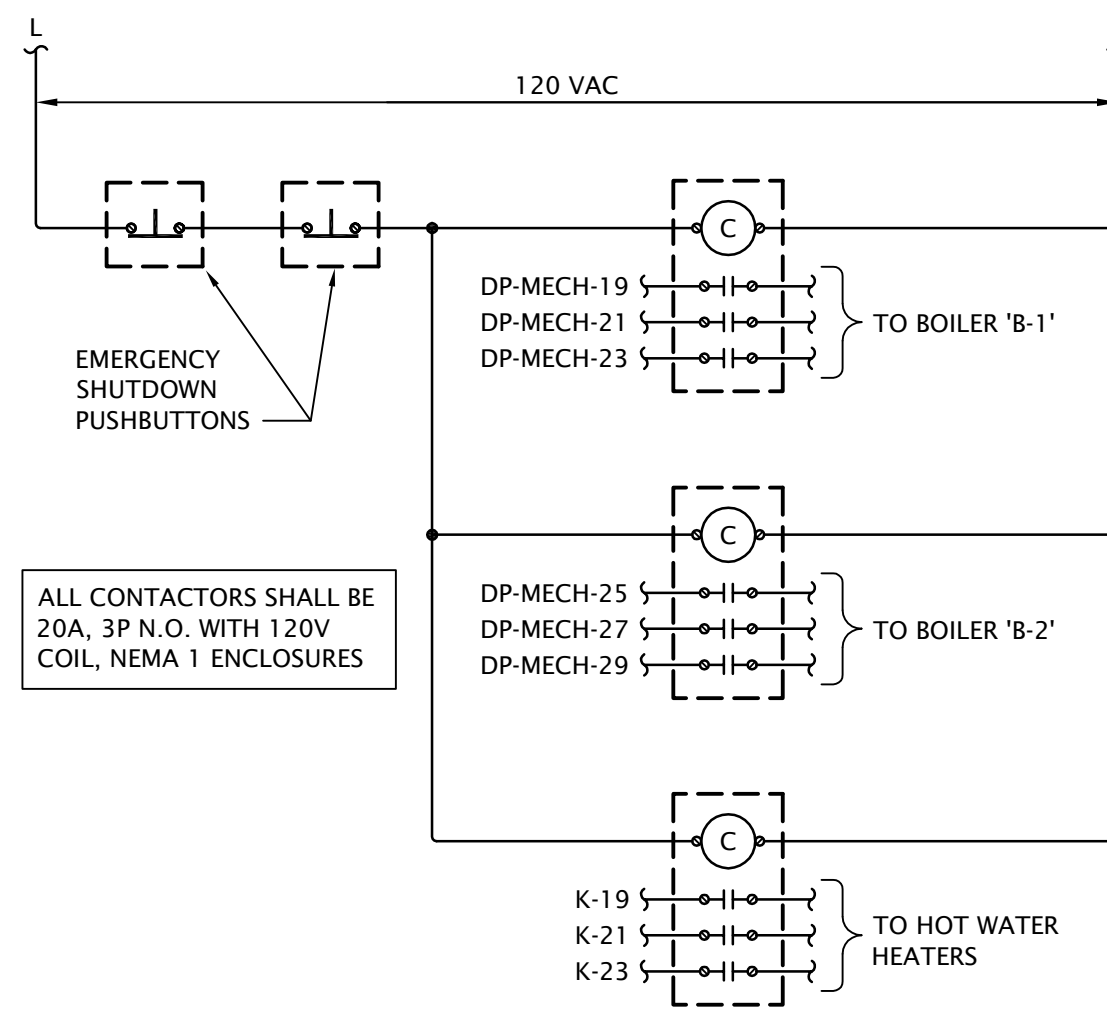
	CIRCUIT DESIGNATION: TOP INDICATES PANEL OF CIRCUIT ORIGIN BOTTOM INDICATES CIRCUIT NUMBER
	HOMERUN - WIRING TO PANEL OF CIRCUIT ORIGIN
	PARTIAL HOMERUN - WIRING TO PANEL OF CIRCUIT ORIGIN
	CONDUIT CONCEALED IN WALL OR ABOVE CEILING
	CONDUIT BELOW GRADE OR EMBEDDED IN CONCRETE
	LINE VOLTAGE CIRCUIT CONDUCTORS SHORT = HOT/TRACER/SWITCH LEG CONDUCTOR LONG = NEUTRAL (GROUNDED) CONDUCTOR CURVED = GROUNDING (BONDING) CONDUCTOR
	CONDUIT STUB OUT WITH NYLON END BUSHING
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	GROUNDING CONNECTION

POWER SYMBOLS

	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE
	SINGLE POLE SNAP SWITCH
	TWO POLE SNAP SWITCH
	MOTOR HP RATED SWITCH WITHOUT OVERLOAD PROTECTION
	CONTRACTOR
	POWER RELAY
	PUSH BUTTON OPERATOR
	JUNCTION BOX
	MOTOR
	MOTORIZED DAMPER
	DISCONNECT SWITCH
	VARIABLE SPEED DRIVE UNIT
	EXISTING BRANCH CIRCUIT PANELBOARD, SURFACE MOUNTED
	EXISTING BRANCH CIRCUIT PANELBOARD, FLUSH MOUNTED
	EXISTING DISTRIBUTION PANEL OR SWITCHBOARD

SYMBOL MODIFYING DESIGNATORS

CLG	CEILING MOUNTED • FLUSH MOUNTED IN SUSPENDED CEILING • SURFACE MOUNTED TO STRUCTURE ABOVE IN OPEN CEILING
e	DEVICE IS EXISTING TO REMAIN
GFI	GROUND FAULT CIRCUIT INTERRUPTING DEVICE
WP	PROVIDE WEATHERPROOF ENCLOSURE FOR DEVICE
XX"	MOUNTING HEIGHT OF DEVICE ABOVE FINISHED FLOOR



BOILER & WATER HEATER SHUTDOWN

No Scale

Panel Designation: MSB				Mounting: Floor			
Location: F147				Bus Amps: 1600			
Voltage: 480Y/277V-3Ph-4W				MCB Amps: 1600/3			
Enclosure: NEMA 1				Other: 65 KAIC			
Existing Square D Switchboard to Remain							
Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	SPACE ONLY	---	---	---	---	SPACE ONLY	2
6	PANEL 'DP-2'	(ETR)	600 / 3	---	---	SPACE ONLY	4
5	SURGE PROTECTION	(ETR)	60 / 3	90 / 3	3#3, #8G, 1-1/4" C.	'AHU-6'	8
				60 / 3	3#6, #10C, 1" C.	'AHU-5'	10
7	SPACE ONLY	---	---	150 / 3	(ETR)	SPACE BREAKER	12
11	PANEL 'MCCA'	(ETR)	400 / 3	150 / 3	(ETR)	SPACE BREAKER	14
				125 / 3	(ETR)	PANEL 'P2'	16
13	PANEL 'PFT3P'	(ETR)	400 / 3	100 / 1	(ETR)	PANEL 'HC'	18
15	PANEL 'X'	(ETR)	400 / 3	---	---	SPACE ONLY	20
				---	---	SPACE ONLY	22
16	SPACE ONLY	---	---	---	---	SPACE ONLY	24
				---	---	SPACE ONLY	26
16	SPACE ONLY	---	---	---	---	SPACE ONLY	28
				---	---	SPACE ONLY	30

Panel Designation: DP-MECH				Mounting: Flush				
Location: F142B				Bus Amps: 400				
Voltage: 480Y/277V-3PH-4W				MCB Amps: 200/3				
Enclosure: NEMA 1				Other: 35 KAIC				
Existing Square D "NP" Panelboard to Remain								
Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #	
1	COOLING TOWER PUMP #1 (VFD-3)	(E-1R)	50 / 3	50 / 3	(E-1R)	COOLING TOWER PUMP #2 (VFD-4)	2	
3							4	
5							6	
7							8	
9	HOT WATER CIRC PUMP "P-1"	3#8, #10G, 3/4"	40 / 3	40 / 3	3#8, #10G, 3/4"	HOT WATER CIRC PUMP "P-2"	10	
11	DX HTFAN PHYS THER COIL	(E-TR)	15 / 3	50 / 3	(E-TR)	COOLING TOWER	12	
13							14	
15							16	
17							18	
19	BOILER #1 & PUMP "BP-1"	3#12, #12G, 1/2"	15 / 3	25 / 1	(E-TR)	LOCKER ROOM HEATER	20	
21				---	---	SPACE ONLY	22	
23				---	---	SPACE ONLY	24	
25				---	---	SPACE ONLY	26	
27	ROB FR #2 & PUMP "BP-2"	3#12, #12G, 1/2"	15 / 3	---	---	SPACE ONLY	28	
29	SPACE ONLY	---	---			---	SPACE ONLY	30
31							SPACE ONLY	32
33							SPACE ONLY	34
35				SPACE ONLY	36			
37	SPACE ONLY	---	---	---	---	SPACE ONLY	38	
39	SPACE ONLY	---	---	---	---	SPACE ONLY	40	
41	SPACE ONLY	---	---	---	---	SPACE ONLY	42	

Panel Designation: K				Mounting: Surface			
Location: F142B				Bus Amps: 100			
Voltage: 208Y/120V-3PH-4W				MCB Amps: 100/3			
Enclosure: NEMA 1				Other: 10 KAIC			
Existing Square D 'NQOD' Panelboard to Remain							
Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	LTS FRIG RM	(ETR)	20 / 1	20 / 1	(ETR)	CAT WALKS	2
3	LTS EX FAN BOILER RM	(ETR)	20 / 1	20 / 1	(ETR)	HOT WATER CIRC PUMPS	4
5	LTS GENERATOR RM	(ETR)	20 / 1	20 / 1	(ETR)	PHOTOCALL & TIMECLOCK	6
7	HW CIRC SYSTEM PUMP #1	2#12, #12G, 1/2" C	20 / 1	20 / 1	(ETR)	CT BOOSTER	8
9	REFCT OVER RMCH	(ETR)	20 / 1	20 / 1	(ETR)	FRIG FRIER BOILER RM	10
11	HW CIRC SYSTEM PUMP #2	2#12, #12G, 1/2" C	20 / 1	20 / 1	(ETR)	SPARE	12
13	CENT. CONT.	(ETR)	20 / 1	20 / 1	(ETR)	MECH AREA	14
15	CEN. CONT.	(ETR)	20 / 1	20 / 1	(ETR)	PAIH INC	16
17	#2 COMPRESSOR CTRL	(ETR)	20 / 1	20 / 1	(ETR)	PAIH INC	18
19	DOMESTIC WATER HEATER	2#12, #12G, 1/2" C	15 / 1	20 / 1	(ETR)	SPARE	20
21	DOMESTIC WATER HEATER	2#12, #12G, 1/2" C	15 / 1	50 / 3	(ETR)	X-HRM 18 001 FOR PNL 8 001 BOILERS	22
23	DOMESTIC WATER HEATER	2#12, #12G, 1/2" C	15 / 1				24
25	POL LIGHT TIMER	(ETR)	20 / 1				26
27	BOILER SHUTDOWN	2#12, #12G, 1/2" C	20 / 1	30 / 2	(ETR)	PARKING LOT LTS	28
29	CANDOPY LTS OFF D100	(ETR)	20 / 2				30
31	SIGN VISIT & FMRC WFST			20 / 1	(ETR)	OUTSIDE LTS	32
33	FLOOD LTS ON WGN WFST	(ETR)	20 / 1	20 / 1	(ETR)	SPARE	34
35	DENTAL VAC CONTROLLER	2#12, #12G, 1/2" C	15 / 1	20 / 1	(ETR)	CANOPY LTS AREA 8	36
37	PARKING LOT LIGHTS	(ETR)	30 / 2	20 / 1	(ETR)	EXIT LTS	38
39				20 / 1	(ETR)	NEEDLE CRUSHER	40
41	SPARE	(ETR)	20 / 1	20 / 1	(ETR)	EXISTING LOAD	42

Panel Designation: LP Location: F237 Voltage: 208Y/120V-3PH-4W Enclosure: NEMA 1				Mounting: Flush Bus Amps: 225 MCB Amps: MLO Other: 10 KAIC			
Existing Square D "NQOD" Panelboard to Remain							
Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	REC RMS F239, 240	(ETR)	20 / 1	20 / 1	(ETR)	REC RM F242	2
3	REC RM F-235	(ETR)	20 / 1	20 / 1	(ETR)	REC RM F237	4
5	REC RM F-239	(ETR)	20 / 1	20 / 1	(ETR)	REC RM F237	6
7	REC RM F231	(ETR)	20 / 1	20 / 1	(ETR)	LTS RMS F232, 233, 234, 236, 240, 241, 242	8
9	REC RMS F 239, F241	(ETR)	20 / 1	20 / 1	(ETR)	RFC RM F247	10
11	LTS RM F231, 235, 237, 239	(ETR)	20 / 1	20 / 1	(ETR)	LTS OUTSIDE CANOPY COUITYARD AREA	12
13	LTS CONP - RM F141	(ETR)	20 / 1	20 / 1	(ETR)	REC RM F231	14
15	SUMP PUMP SP-1 RM F232	(ETR)	20 / 1	20 / 1	(ETR)	REC RM F247	16
17	REC RM F241	(ETR)	20 / 1	20 / 1	(ETR)	RFC RM F237	18
19	SPACE BREAKER	(ETR)	20 / 1	20 / 1	(ETR)	REC RM F235	20
21	REC RM F236	(ETR)	20 / 1	20 / 1	(ETR)	REC RM F234	22
23	REC RMS F234, 235, 238	(ETR)	20 / 1	20 / 1	(ETR)	REC RM F232	24
25	REC RM F232	(ETR)	20 / 1	20 / 2	(ETR)	PANEL 'AH2'	26
27	LTS CONP - RM F141	(ETR)	20 / 1				28
29	REC SERVER RM F232	(ETR)	20 / 2	20 / 1	(ETR)	REC RM F231	30
31				20 / 2	(ETR)	208V SERVER RM F237	32
33	REC RMS F239, 240	(ETR)	20 / 1				34
35	REC RM F236	(ETR)	20 / 1	20 / 2	(ETR)	208V SERVER RM F232	36
37	EXISTING LOAD	(ETR)	20 / 1				38
39	REC RM F235	(ETR)	20 / 1	20 / 1	2#10, #10G, 1/2"C	'FPAV-12'	40
41	SPACE ONLY	(ETR)	—	20 / 1	2#10, #10G, 1/2"C	'FPAV-13'	42

Panel Designation: D				Mounting: Flush			
Location: D136				Bus Amps: 225			
Voltage: 208Y/120V-3PH-4W				MCB Amps: MLO			
Enclosure: NEMA 1				Other: 10 KAIC			
Existing Eaton C-H 'PRL1a' Panelboard to remain							
Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	FRONT DOOR CT	(ETR)	20 / 1	20 / 1	(ETR)	REC RMS D128,129 TOILET	2
3	REC TOILETS RM F105,106	(ETR)	20 / 1	20 / 1	(ETR)	WATER COOLER WAITING	4
5	'HVAW-1'	2#12, #12G, 1/2" C	20 / 1	20 / 1	(ETR)	LTS RMS D128,129 TOILET	6
7	REC RMD102 MOD. FURN	(ETR)	20 / 1	20 / 1	(ETR)	LTS RMS D126	8
9	'FPAW-2'	2#12, #12G, 1/2" C	20 / 1	20 / 1	(ETR)	LTS RMS D170,171,172	10
11	REC RMD102 MOD. FURN	(ETR)	20 / 1	20 / 1	(ETR)	LTS RMD130,131	12
13	LTS LOBBY RMS F105,106	(ETR)	20 / 1	20 / 1	(ETR)	LIGHTS LOBBY D101	14
15	'FPAW-3' & 'FPAW-5'	2#12, #12G, 1/2" C	20 / 1	20 / 1	(ETR)	LTS ENTRY D100 LOBBY D101	16
17	'FPAW-4'	2#12, #12G, 1/2" C	20 / 1	20 / 1	(ETR)	EXIT & NI LOBBY D101	18
19	COILING WINDOWS RMD102	(ETR)	20 / 1	20 / 1	(ETR)	REC CORR. D	20
21	COILING WINDOWS RMD102	(ETR)	20 / 1	20 / 1	(ETR)	DOOR OPERATOR INSIDE SI DOR	22
23	REC RM D130	(ETR)	20 / 1	20 / 1	(ETR)	DOOR OPERATOR FRONT DOOR	24
25	REC LOBBY RM D100,101 N WALL	(ETR)	20 / 1	20 / 1	(ETR)	SPARE BREAKER	26
27	REC LOBBY RM D101 WEST WALL	(ETR)	20 / 1	20 / 1	(ETR)	SPARE BREAKER	28
29	REC LOBBY RM D101 & CORR. F248	(ETR)	20 / 1	20 / 1	(ETR)	LTS RMS D118,124,CORR. SI DOR	30
31	REC RM D107	(ETR)	20 / 1	20 / 1	(ETR)	LTS RMS D130,131,132	32
33	REC RM D102	(ETR)	20 / 1	20 / 1	(ETR)	LTS RMS D133,136,CORR. & OUTSIDE LTS # DOCK	34
35	REC RM D102	(ETR)	20 / 1	20 / 1	(ETR)	ACCESS CONTROL EQUIP. UPS RM D111	36
37	REC RMS D123,131,132, 124, CORR.	(ETR)	20 / 1	20 / 1	(ETR)	LTS RMD125, D116	38
39	REC RMD125, 126	(ETR)	20 / 1	20 / 2	(ETR)	SURGE SUPPRESSOR	40
41	REC RMD123, 130	(ETR)	20 / 1	20 / 1	(ETR)	SPARE CIR ABOVE CLG D119	42

Panel Designation: DP-1				Mounting: Floor			
Location: F147				Bus Amps: 1600			
Voltage: 208Y/120V-3PH-4W				MCB Amps: 1600/3			
Enclosure: NEMA 1				Other: 65 KAIC			
Existing Square D Switchboard to Remain							
Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	AUX CHILLER CONTROLS	(ETR)	20 / 1	---	---	SPACE ONLY	2
3	SPACE ONLY	---	---	---	---	SPACE ONLY	4
5	PANEL 'SB'	(ETR)	100 / 3	40 / 3	3#8, #10G, 3/4" C	DENTAL DRY VAC PUMP #1	6
7	PANEL 'SB'	(ETR)	100 / 3	40 / 3	3#8, #10G, 3/4" C	DENTAL DRY VAC PUMP #2	8
9	PANEL 'DP-3'	(ETR)	400 / 3	100 / 3	(ETR)	PANEL 'L'	10
11	SPACE ONLY	---	---	100 / 3	(ETR)	PANEL 'LY'	12
13	SPACE ONLY	---	---	100 / 3	(ETR)	PANEL 'PD'	16
15	PANEL 'DP-4'	(ETR)	400 / 3	100 / 3	(ETR)	PANEL 'FSF-3'	18
17	PANEL 'LY'	(ETR)	100 / 3	---	---	SPACE ONLY	22
19	PANEL 'LT'	(ETR)	100 / 3	---	---	SPACE ONLY	24
21	SPACE ONLY	---	---	---	---	SPACE ONLY	26
23	SPACE ONLY	---	---	---	---	SPACE ONLY	28