

PROVIDE AN ARC FLASH WARNING SIGN PER NEC 110.16.

PNL A				PANELBOARD				208Y/120V, 3PH, 4W 400A M.C.B. SERIES RATED 22/10K A.I.C. GROUND BUS ISOLATED GROUND				
MOUNTING: FLUSH LOCATION: ELEC. CABINET TYPE: BOLT ON W/GROUND BUS NEMA RATING: 1				INTERIOR PANELBOARDS SHALL BE RECESSED WITH FLANGED/REMOVABLE SCREW-ON COVER. SURFACE MOUNTED PANELBOARDS OR HINGED/FLUSH COVERS NOT ALLOWED								
DESCRIPTION		WIRE	BRKR	PL	KVA			PL	BRKR	WIRE	DESCRIPTION	
					A	B	C					
1	WIC DISPLAY LTS/MENUBRD/LED	12	20	1	0.61	1.00		1	20	12	FAX '87, MGR '84C', COMP '49A'	
3	HOOD CONTL PNL 'M4'	12	20	1		0.50	0.60	1	20	12	MUSIC, VCR, MONITOR	
5	SERVICE POS 94, PTR '86A'(2,6)	12	20	1			1.10	0.50	1	20	12	COMPUTER RECEP '83A' (2)
7	SPACE	—	—	—	—	—		—	—	—	SPACE	
9	95-4-S3,FLY LT,C02 (1)	12	20	1		0.91	1.41		2	20	12	CHF-25 AIR CURTAIN
11	RICE WARMER '54A' (1,4)	12	20	1			0.11	1.41				SPACE
13	REF. PREP TABLE '34A' (1)	12	20	1	1.44	0.36			1	20	12	REAR DOOR — FLY FAN 'M8A'
15	REF. PREP TABLE '34D' (1)	12	20	1		1.08	0.0		1	20	12	SPARE
17	UNDER CTR FRZR '33K' (1,4)	12	20	1			1.08					SPACE
19	BEV,4AB, ICE MAC. '10J' (1)	12	20	1	0.31	1.8			1	20	10	INDUCT WELL 3J, 3K-GFI (1,4,6)
21	SERVING COUNTER '20'	12	20	1		1.80	1.8		1	20	10	INDUCT WELL 3J, 3K-GFI (1,4,6)
23	ICE TEA BREWER '9D'	12	20	1			1.78	1.80	1	20	10	INDUCT WELL 3J, 3K-GFI (1,4,6)
25	FOOD PROCESSOR '53'	12	20	1	0.34	1.80			1	20	10	INDUCT WELL 3J, 3K-GFI (1,4,6)
27	SPACE	—	—	—		1.80			1	20	10	INDUCT WELL 3J, 3K-GFI (1,4,6)
29	WALK-IN COOLER COIL '31M'(1)	12	20	1			1.78	1.80	1	20	10	INDUCT WELL 3J, 3K-GFI (1,4,6)
31	RICE HOLD CABINET '24H' (1,4,6)	10	20	1	1.78	1.80			1	20	10	INDUCT WELL 3J, 3K-GFI (1,4,6)
33	FUTURE CONTROLS (1,6)	12	20	1		0.2	1.10		1	20	12	RAD TOP HEATER '1S2B2' (1)
35	COKE/COMP OUTLET	12	20	1			0.50	0.84	1	20	12	RAD TOP HEATER '1S2B1' (1)
37	4B' BOOSTER OUTLET (6)	12	20	1	0.86	1.10			1	20	12	RAD TOP HEATER '1S2B2' (1)
39	HEAT WRAP '32-S7' (4)	12	20	1		0.50	—		—	—	—	SPACE
41	FLY LIGHT	12	20	1			0.18	—	—	—	—	SPACE
43	DUCT DETECTORS	12	20	1	0.20	—			—	—	—	SPACE
45	LTG-FOOD PREP/EM., EF-3 (4)	10	20	1		0.8			—	—	—	SPACE
47	LTG DINING AREA	12	20	1			1.17	1.40	2	20	12	MICROWAVE — 55A (1)
49	SHOW WINDOW RECEPS	12	20	1	0.72	1.40			1	20	12	FUTURE EQUIPMENT
51	GENERAL RECEPS	12	20	1		0.54	0.18		—	—	—	SPACE
53	EXTERIOR RECEPS	12	20	1			0.36	—	—	—	—	SPACE
55	SPACE	—	—	—	0.0	1.23			2	20	12	ICE MACHINE COND. '10J-S1' (1)
57	SEC. MONITOR/HME — RECEPTS	12	20	1		0.50	1.23		2	20	12	WALK IN FRZR COND.'32-S1'(1,7)
59	GAS WATER HEATER — P.3, (6)	12	20	1			0.96	2.08	2	20	12	WALK IN COOL COND. '31-S' (1)
61	ICE TEA BREWER '9D' (1,4)	10	20	1	1.78	2.08			2	20	12	
63	LIGHTING-RRs & EF-3	12	20	1		0.70	1.56					
65	INDUC DR WELL 3J,3K-GFI(1,4,6)	10	20	1			1.30	1.56				
67	SPACE	—	—	—	—	—						SPACE
69	SPACE	—	—	—	—	—						SPACE
71	SPACE	—	—	—	—	—						SPACE
73	ELECTRIC GRILL "23E" (1,6)	6	50	2	3.6							SPACE
75	SPACE	—	—	—		3.6						SPACE
77	SPACE	—	—	—								SPACE
79	SPACE	—	—	—		13.79			3	200		SUB-PANEL B
81	SPACE	—	—	—			12.06					
83	SPACE	—	—	—				12.51				
TOTAL					38.34	32.67	33.72	KVA				
PER NEC ARTICLE 220					319.5	272.25	281.00	AMPS				
TOTAL LOAD					104.73	KVA	290.92	AMPS				
FEEDER LOAD					89.20	KVA	247.80	AMPS				

- WIRE SIZE SHALL BE MINIMUM #12 AWG, THWN SOLID COPPER UNLESS OTHERWISE NOTED. PROVIDE GROUND WIRE WHERE REQUIRED BY CODE. INCREASE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP WHERE TOTAL LENGTH OF ANY BRANCH EXCEEDS 100 FEET.

PANEL BOARD GENERAL NOTES		5
NOT TO SCALE		E-601

- UNLESS NOTED, ALL DEVICES AND TERMINATIONS 100 AMPS AND LESS TO BE RATED FOR 60°C WIRE, OVER 100 AMPS, 75°C WIRE.
- CONTRACTOR TO SUBMIT SERVICE ENTRANCE GEAR SHOP DRAWINGS TO SERVING UTILITY COMPANY FOR APPROVAL.
- ALL WIRE #8 AND SMALLER TO BE THWN/THHN CU.; #6 AND LARGER TO BE XHHW CU.
- THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED LOAD CALCULATIONS AND VERIFIES THAT ALL UPSTREAM PANELS AND EQUIPMENT ARE NOT OVERLOADED.

SINGLE LINE DIAGRAM GENERAL NOTES		3
NOT TO SCALE		E-601

- ENTIRE INSTALLATION TO COMPLY WITH N.E.C. 110.22 AND 240.86(B).
- NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT THE PRIOR APPROVAL OF THE DESIGN ELECTRICAL ENGINEER AND THE ELECTRICAL INSPECTOR.
- A TWO TIER 65000/10000 AIC SERIES RATING SYSTEM IS SPECIFIED BETWEEN THE SES MAINS FUSES AND THE PANEL BRANCH CIRCUIT BREAKERS, NO SUBSTITUTIONS - UNLESS A FULLY RATED SYSTEM IS PROVIDED.
- MOTOR CONTRIBUTION TO THE FAULT CURRENT IS LESS THAN 1% OF THE INTERRUPTING RATING OF THE DOWNSTREAM CIRCUIT BREAKER(S).
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE LABELS AT ALL COMPONENTS OF THE SERIES PROTECTED SYSTEM:
A. PANEL 'MDP' STATING "CAUTION - 65/10 SERIES COMBINATION SYSTEM RATED XXXX AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED"
B. PANEL 'A' STATING "CAUTION - 65/10 SERIES COMBINATION SYSTEM RATED XXXX AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED"
C. PANEL 'B' STATING "CAUTION - 22/10 SERIES COMBINATION SYSTEM RATED XXXX AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED"
- EQUIPMENT SUPPLIER TO PROVIDE CUT SHEETS OF ALL SERIES RATED COMPONENTS (I.E. FUSES, CIRCUIT BREAKERS) HI-LIGHTING EACH ITEM AND THE SPECIFIC LISTING/TESTING OF EACH ITEM'S SERIES RATING WITH THE OTHER.
- POST THIS INFORMATION ON THE JOB-SITE WITH PERMIT FOR CITY ELECTRICAL INSPECTOR'S REVIEW/APPROVAL.

SERIES RATING NOTES		4
NOT TO SCALE		E-601

PANELBOARD NOTES ()

- KITCHEN EQUIPMENT SHOWN AT 65% IN PANEL TOTALS PER NEC (KITCHEN EQUIPMENT).
- TERMINATE GROUND ON ISOLATED GROUND BUS.
- ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR, CONTROLLED BY TIMECLOCK. REFER TO DETAILS, SHEET 11/E-400.
- WIRE SIZE INCREASE DUE TO VOLTAGE DROP. SIZE EQUIPMENT GROUND CONDUCTOR PROPORTIONALLY PER NEC.
- REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.
- GFCI BREAKER
- INSTALL LOCKING DEVICE (LOCK-OFF FOR MAINTENANCE).

MDP

SWITCHBOARD

480/277V, 3PH, 4W
400A M.L.O.
65,000 AIC
GROUND BUS
ISOLATED GROUND

MOUNTING: SURFACE
LOCATION: INSIDE IN NEMA 1 ENCLOSURE

(NEW)

51.9251.9251.92

	DESCRIPTION	WIRE	BRKR	PL	KVA			PL	BRKR	WIRE	DESCRIPTION		
					A	B	C						
1	TRANSFORMER	200	3	37.5	7.21			3	30	8	RTU-1	2	
3					37.5	7.21						4	
5						37.5	7.21					6	
7	SPACE				7.21			3	30	8	RTU-2	8	
9						7.21						10	
11							7.21					12	
13	SPACE										SPACE	14	
15												16	
17												18	
TOTAL					51.92	51.92	51.92	KVA					
PER NEC ARTICLE 220					187.4	187.4	187.4	AMPS					
TOTAL LOAD					155.76	KVA	187.44	AMPS					
FEEDER LOAD					137.00	KVA	164.86	AMPS					

Total VA per system											
1) General Receptacles - 1st 10,000VA = 5,060 x 1.00 = 5,060											
2) General Receptacles - over 10,000VA = 37,473 x 0.65 = 24,358											
3) Kitchen Equipment = 9,030 x 1.25 = 11,288											
4) Lighting = 44,460 x 1.25 = 55,575											
5) HVAC = 34,413 x 0.65 = 22,369											
6) Refrigeration = 2,310 x 1.25 = 2,888											
7) Continuous = 8,943 x 1.00 = 8,943											
8) Non-Continuous = 8,943 x 1.00 = 8,943											
9) Spare = 155,760 x 1.00 = 155,760											
Total VA per system = 831											
Panelboard voltage = 831											
Total Connected Load (amperes) = 187.44											
Total Diversified Load (amperes) = 164.86											

PROVIDE AN ARC FLASH WARNING SIGN PER NEC 110.16.

PNL B

PANELBOARD

208Y/120V, 3PH, 4W
225A M.L.O.
SERIES RATED 22/10K A.I.C.
GROUND BUS

MOUNTING: FLUSH
LOCATION: ELEC. CABINET
TYPE: BOLT ON W/GROUND BUS
NEMA RATING: 1

INTERIOR PANELBOARDS SHALL BE RECESSED WITH FLANGED/REMOVABLE SCREW-ON COVER. SURFACE MOUNTED PANELBOARDS OR HINGED/FLUSH COVERS NOT ALLOWED

DESCRIPTION				WIRE	BRKR	PL	KVA			PL	BRKR	WIRE	DESCRIPTION		
							A	B	C						
1	LOGO 'S2'/I.D. SIGN 'S1' (3)			12	20	1	1.00	1.23		2	20	10	ICE MACHINE COND. '10J-S1' (4)	2	4
3	ROOF RECEPTACLES			12	20	1		0.54	1.23					4	6
5	SPACE			—	—	—			—	0.96	1	20	12	21G MJ345 FRYER (1,6)	4
7	TICKET PRINTER			12	20	1	0.22				—	—	—	SPACE	8
9	BEV. DISPENSER4AB (1,4)			12	20	1		1.12	0.05		1	20	12	TIME CLOCKS	10
11	SECURITY/POS MONITORS			12	20	1			0.36	0.00	1	20	12	SPACE	12
13	HYPERACTIVE TIMER SYS.			12	20	1	0.36							SPACE	14
15	—			12	20	1								SPACE	16
17	SPACE			—	—	—				—				SPACE	18
19	SPACE			—	—	—	—	2.57			3	30	10	CU-2	20
21	SPACE			—	—	—		—	2.57						22
23	BUILDING LTG/EM (3)			12	20	1			1.53	2.57					24
25	MENUBOARD (3,4)			12	20	1	1.50	0.94			3	30	12	EF-1	26
27	SPARE			12	20	1		0.00	0.94						28
29	RTU CONVENIENCE OUTLETS			12	20	1			0.54	0.94					30
31	EX. LIGHTING			12	20	1	0.36	0.94			3	20	12	EF-2	32
33	SPACE			12	20	1			0.94						34
35	SPACE			—	—	—			0.94						36
37	CU-1			10	30	3	2.57	2.10			3	30	10	MA-1	38
39								2.57	2.10						40
TOTAL							13.79	12.06	12.51	KVA					
							114.92	100.50	104.25	AMPS					
TOTAL LOAD							38.36	KVA	106.60	AMPS					
FEEDER LOAD							40.00	KVA	111.20	AMPS					

PER NEC ARTICLE 220