

PROVIDE AN ARC FLASH WARNING SIGN PER NEC 110.16.

PNL A				PANELBOARD				208Y/120V, 3PH, 4W				
MOUNTING: FLUSH				(NEW)				400A M.L.O.				
LOCATION: ELEC. CABINET				INTERIOR PANELBOARDS SHALL BE RECESSED WITH FLANGED/REMOVABLE SCREW-ON COVER. SURFACE MOUNTED PANELBOARDS OR HINGED/FLUSH COVERS NOT ALLOWED				SERIES RATED 22/10K A.I.C.				
TYPE: BOLT ON W/GROUND BUS								GROUND BUS				
NEMA RATING: 1								ISOLATED GROUND				
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			20	12	FAX 'B7', MGR 'B4C', COMP '49A'	
3	HOOD CONTL PNL 'M4'	12	20	1		0.50	0.60		1	20	MUSIC, VCR, MONITOR	
5	SERVICE POS 94, PTR 'B6A' (2)	12	20	1			1.10	0.50	1	20	COMPUTER RECEP 'B3A' (2)	
7	D. THRU POS '94'/PTRS 'B6A' (2)	12	20	1	1.10	0.13			1	20	10J ICE MACHINE (6)	
9	CARB. '4B', 95-4-53' (1)	12	20	1		0.91	1.41		2	20	CHF-25 AIR CURTAIN	
11	RICE WARMER '5A' (1)	12	20	1				0.11	1.41		10	
13	REF. PREP TABLE '34A' (1)	12	20	1	1.44	0.36					12	
15	REF. PREP TABLE '34D' (1)	12	20	1		1.08	0.0		1	20	REAR DOOR - FLY FAN 'M8A'	
17	UNDER CTR FRZR '30K' (4)	12	20	1			1.08				SPARE	
19	BEV. '4AB', ICE MAC. '10J' (1)	12	20	1	0.31	1.8			1	20	SPACE	
21	SERVING COUNTER '20'	12	20	1		1.80	1.8		1	20	INDUCT WELL 3J, 3K-GFI (1, 2)	
23	ICE TEA BREWER '9D'	12	20	1			1.78	1.80	1	20	INDUCT WELL 3J, 3K-GFI (1, 2)	
25	FOOD PROCESSOR '53'	12	20	1	0.34	1.80			1	20	INDUCT WELL 3J, 3K-GFI (1, 2)	
27	SPACE	12	20	1		1.80			1	20	INDUCT WELL 3J, 3K-GFI (1, 2)	
29	WALK-IN COOLER COIL '31M' (1)	12	20	1			0.24	1.80	1	20	INDUCT WELL 3J, 3K-GFI (1, 2)	
31	RICE HOLD CABINET '24H' (1)	10	20	1	1.78	1.80			1	20	INDUCT WELL 3J, 3K-GFI (1, 2)	
33	SPACE	12	20	1			0.84			12	RAD TOP HEATER '1S2B1' (1)	
35	COKE/COMP OUTLET	12	20	1				0.84	1	20	RAD TOP HEATER '1S2B1' (1)	
37	4B' BOOSTER OUTLET (6)	12	20	1	0.86	1.10			12	12	RAD TOP HEATER '1S2B2' (1)	
39	HEAT WRAP '32-5'	12	20	1		0.50	0.84		12	12	RAD TOP HEATER '1S2B1' (1)	
41	FLY LIGHT (6)	12	20	1				0.18	0.84	1	12	RAD TOP HEATER '1S2B1' (1)
43	DUCT DETECTORS	12	20	1	0.20	0.96			1	20	GAS WATER HEATER 'P2'	
45	LTG-FOOD PREP/EM., EF-3 (4)	10	20	1		1.03	0.90		2	20	MICROWAVE - 55A (1)	
47	LTG DINING AREA	12	20	1			1.17	0.90		--	--	--
49	SHOW WINDOW RECEPS	12	20	1	0.54	0.18			1	20	FUTURE EQUIPMENT (SHUNT)	
51	GENERAL RECEPS	12	20	1		0.54					52	DINING SYS
53	EXTERIOR RECEPS	12	20	1				0.36	0.72	1	12	ICE MACHINE COND. '10J-S1' (1)
55	SPACE	20	1		0.0	1.23			2	20		
57	SEC. MONITOR/HME - RECEPS	12	20	1		0.50	1.23				58	
59	GAS WATER HEATER - P3 (6)	12	20	1			1.80	2.08	2	20	12	WALK IN FRZR COND. '32-S1' (1)
61	ICE TEA BREWER '9D' (1)	10	20	1	1.78	2.08					60	
63	LIGHTING-RRS & EF-3'	12	20	1		0.07	1.56		2	20	12	WALK IN COOL COND. '31-S1' (1)
65	INDUC DR WELL 3J, 3K-GFI (1)	10	20	1			1.30	1.56			66	
67	DT WINDOW 'M9A'/SENSOR BAR	12	20	1	0.50						68	SPACE
69	INDUC DR WELL 3J, 3K-GFI (1)	10	20	1		1.80					70	SPACE
71	INDUC DR WELL 3J, 3K-GFI (1)	10	20	1			1.80				72	SPACE
73	ELECTRIC GRILL - '23E' (1)	6	50	2	3.60						74	SPACE
75	SPACE	-	-	-		3.60					76	SPACE
77	SPACE	-	-	-							78	SPACE
79	SPACE	-	-	-							80	SPACE
81	INDUC DRY WELL 3J, 3K-GFI (1)	10	20	1		1.30					82	SPACE
83	INDUC DRY WELL 3J, 3K-GFI (1)	10	20	1			1.30				84	SPACE
TOTAL					25.50	24.60	24.70	KVA				
PER NEC ARTICLE 220					213.0	205.0	206.0	AMPS				
TOTAL LOAD					74.8	KVA	207.9	AMPS				
FEEDER LOAD					62.8	KVA	174.4	AMPS				

1. WIRE SIZE SHALL BE MINIMUM #12 AWG, THWN SOLID COPPER UNLESS OTHERWISE NOTED. PROVIDE GROUND WIRE. 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

1. UNLESS NOTED, ALL DEVICES AND TERMINATIONS 100 AMPS AND LESS TO BE RATED FOR 60°C WIRE, OVER 100 AMPS, 75°C WIRE.
2. CONTRACTOR TO SUBMIT SERVICE ENTRANCE GEAR SHOP DRAWINGS TO SERVING UTILITY COMPANY FOR APPROVAL.
3. ALL WIRE #8 AND SMALLER TO BE THWN/THHN CU.; #6 AND LARGER TO BE XHHW CU.
4. 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

1. ENTIRE INSTALLATION TO COMPLY WITH N.E.C. 110.22 AND 240.86(B).
2. NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT THE PRIOR APPROVAL OF THE DESIGN ELECTRICAL ENGINEER AND THE ELECTRICAL INSPECTOR.
3. 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.
4. MOTOR CONTRIBUTION TO THE FAULT CURRENT IS LESS THAN 1% OF THE INTERRUPTING RATING OF THE DOWNSTREAM CIRCUIT BREAKER(S).
5. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LABELS AT ALL COMPONENTS OF THE SERIES PROTECTED SYSTEM:
- A. PANEL 'SES' STATING "CAUTION - 65/10 SERIES COMBINATION SYSTEM RATED 11,750 AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED"
- B. PANEL 'A' STATING "CAUTION - 22/10 SERIES COMBINATION SYSTEM RATED 11,034 AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED"
- C. PANEL 'B' STATING "CAUTION - 22/10 SERIES COMBINATION SYSTEM RATED 10,545 AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED"
6. 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.
7. 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 ( )

- (1) KITCHEN EQUIPMENT SHOWN AT 65% IN PANEL TOTALS PER NEC (KITCHEN EQUIPMENT).
- (2) TERMINATE GROUND ON ISOLATED GROUND BUS.
- (3) ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR, CONTROLLED BY TIMECLOCK. REFER TO DETAILS, SHEET 5/E-101.
- (4) WIRE SIZE INCREASE DUE TO VOLTAGE DROP. SIZE EQUIPMENT GROUND CONDUCTOR PROPORTIONALLY PER NEC.
- (5) REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.
- (6) GFCI BREAKER.
- (7) INSTALL LOCKING DEVICE (LOCK-OFF FOR MAINTENANCE).

SES				SWITCHBOARD				208Y/120V, 3PH, 4W						
MOUNTING: SURFACE				(NEW)				600A M.L.O.						
LOCATION: OUTSIDE IN NEMA 3R ENCLOSURE								65,000 AIC						
				25.7			25.9			24.5				
										ISOLATED GROUND				
DESCRIPTION				WIRE	BRKR	PL	KVA			PL	BRKR	WIRE	DESCRIPTION	
1	PANELBOARD "A" (5)			400	3		A B C			3	40	8	RTU-1	
3							25.5 3.5 24.6 3.5 24.7 3.5							
5							13.1 6.24 13.1 6.24 13.1 6.24							
7	PANELBOARD "B" (5)			200	3					3	60	6	RTU-2	
9							6.24 6.24							
11							6.24 6.24							
13	SPACE									3	60	6	RTU-3	
15							6.24 6.24							
17							6.24 6.24							
TOTAL							54.6 53.7 54.0			KVA				
PER NEC ARTICLE 220							455.0 447.5 450.0			AMPS				
TOTAL LOAD							162.4 KVA 451.1			AMPS				
FEEDER LOAD							159.9 KVA 444.2			AMPS				
Total VA per system														
1) General Receptacles - 1st 10,000VA = 7,080 x 1.00 = 7,080														
2) General Receptacles - over 10,000VA = 56,680 x 0.50 = 28,340														
3) Kitchen Equipment = 8,743 x 0.65 = 5,683														
4) Lighting = 41,720 x 1.25 = 52,150														
5) HVAC = 11,520 x 0.65 = 7,488														
6) Refrigeration = 6,000 x 1.25 = 7,500														
7) Continuous = 30,510 x 1.00 = 30,510														
8) Non-Continuous = 30,510 x 1.00 = 30,510														
9) Spare = 30,510 x 1.00 = 30,510														
Total VA per system = 162,400														
Panelboard voltage = 360														
Total Connected Load (amperes) = 451.1														
Total Diversified Load (amperes) = 444.2														

PROVIDE AN ARC FLASH WARNING SIGN PER NEC 110.16.

PNL B				PANELBOARD				208Y/120V, 3PH, 4W								
MOUNTING: FLUSH				(NEW)				225A M.L.O.								
LOCATION: ELEC. CABINET				INTERIOR PANELBOARDS SHALL BE RECESSED WITH FLANGED/REMOVABLE SCREW-ON COVER. SURFACE MOUNTED PANELBOARDS OR HINGED/FLUSH COVERS NOT ALLOWED				SERIES RATED 22/10K A.I.C.								
TYPE: BOLT ON W/GROUND BUS				GROUND BUS												
NEMA RATING: 1																
DESCRIPTION				WIRE	BRKR	PL	KVA			PL	BRKR	WIRE	DESCRIPTION			
							A	B		C						
1	LOGO "S2"/A.D. SIGN "S1" (3)			12	20	1	1.00	1.23				2	20	12	ICE MACHINE COND. "10J-S1" (A)	2
3	EX. POLE MOUNTED LTG (3,4)			6	20	1		0.45	1.23							4
5	EX. POLE MOUNTED LTG (3,4)			6	20	1				0.45	0.90				21B MJ345 EXTER (16)	6
7	FUTURE SITE IRRIGATION			-	20	1	0.18					-			SPACE	8
9	4AB			12	20	1		1.12	0.05			1	20	12	LIGHTING CONTROL CABINET	10
11	SECURITY/POS MONITORS			12	20	1				0.36	0.00	1	20		SPARE	12
13	HYPERACTIVE TIMER SYS.			12	20	1	0.36	0.22				1	20	12	TICKET PRINTER	14
15	DINING TV'S			12	20	1		0.26							SPACE	16
17	EXTERIOR POLE MOUNTED LTG (3)			6	20	1				0.74					SPACE	18
19	FIN LIGHTING (2)			-	20	1	0.30	2.57				3	30	10	CU-2	20
21	MONUMENT SIGN (3,4)			10	20	1		0.50	2.57							22
23	BUILDING LTG/EM (3)			12	20	1				1.53	2.57					24
25	MENUBOARD (3)			12	20	1	1.50	0.94				3	30	10	EF-1	26
27	DR THRU ORDER SCREEN			12	20	1		1.00	0.94							28
29	RTU CONVENIENCE OUTLETS			12	20	1				0.54	0.94					30
31	EXT. SCENCE AND CONOPY LTS.			12	20	1	0.36	0.94				3	20	12	EF-2	32
33	EXT. SCENCE AND CONOPY LTS.			12	20	1		0.36	0.94							34
35	SPACE										0.94					36
37	CU-1			10	30	3	2.57	1.32				3	20	12	MA-1	38
39								2.57	1.32							40
41										2.57	1.32					42
TOTAL							13.5	13.3		13.6		KVA				
							112.42	110.9		113.7		AMPS				
TOTAL LOAD							40.4	KVA		112.3		AMPS				
FEEDER LOAD							32.3	KVA		89.8		AMPS				
PER NEC ARTICLE 220																