


1 PARTIAL SINGLE LINE DIAGRAM
SCALE: NOT TO SCALE

GROUP 6 KITCHEN RENOV.						PANEL SCHEDULE										EX.PANEL: 9E										250065	
Location		Feed Through				Source: P900																					
Cat	Load Description	Phase	Amps	Poles	Notes	Rec	Ltg	Klt	Mtr	Htg	Clg	Cont	Non	Total	Specifications												
1	EX. HOT FOOD MERCH	A	30	3	1									2.50	2.50												
3	-	B	-	-	-									2.50	2.50 Rating (Amps)		150										
5	-	C	-	-	-									2.50	2.50 Voltage (L-L)		208										
7	EX. HOT FOOD MERCH	A	30	3	1									2.50	2.50 Phase		4										
9	-	B	-	-	-									2.50	2.50 Wire		4										
11	EV1	C	20	1	2.4									2.50	2.50 Bus Material		Cu										
13	EX. COLD FOOD STATION	A	20	1	1					1.20	1.20 Int. Rating			1.20	1.20		1000A										
15	EX. COLD FOOD STATION	B	20	1	1									1.20	1.20												
17	EX. AIR CURTAIN	C	20	2	1									0.96	0.96	Main Lugs Only											
19	-	A	-	-	-									0.96	0.96 Main Ckt Brkr		150 A										
21	EX. AIR CURTAIN	B	20	1	1									0.96	0.96												
23	EX. AIR CURTAIN	C	20	1	1									0.96	0.96 Surface Mtd		X										
25	EV2	A	20	1	3									1.12	1.12 Flush Mtd		X										
27	-	B	-	-	-									1.12	1.12												
29	FREEZER AUXILIARY LOADS	C	20	1	2									0.50	0.50 Bonded Gnd												
31	COOLER AUXILIARY LOADS	A	20	1	2									0.50	0.50 Isolated Gnd												
33	EX. KITCHEN LIGHT	B	20	1	1					1.44				1.44	200% Neutral												
35	SPARE C.B.	C	20	1	1									0.00	Feed Thru		0.00										
37	SPARE C.B.	A	20	1	1									0.00	Double Lug		0.00										
39	SPARE C.B.	B	20	1	1									0.00	Top Feed		0.00										
41	FREEZER/COOLER/VESTIBULE LTG	C	20	1	2.4					0.50				0.50	0.50 Bottom Feed												
2	EX. WARMER	A	20	1	1									1.80	1.80												
4	SPARE C.B.	B	20	1	1									0.00													
6	EX. POINT OF SALE	C	20	1	1									1.00	1.00												
8	EX. COLD FOOD STATION	A	20	1	1									0.96	0.96 Feed Thru Load:		NONE										
10	EX. COLD FOOD STATION	B	20	1	1									0.96	0.96 Phase A		0.00										
12	EX. MENU DISPLAY	C	20	1	1									1.20	1.20 Phase B		0.00										
14	EX. REACH-IN	A	20	1	1									1.50	1.50 Phase C		0.00										
16	SPARE C.B.	B	20	1	1									0.00	Total Conn.		0.00										
18	SPARE C.B.	C	20	1	1									0.00	Load From This Panel:		0.00										
20	SPARE C.B.	A	20	1	1									0.00	Phase A		15.53										
22	EX. SIGN	B	20	1	1					0.10				0.10	Phase B		12.77										
24	SPARE C.B.	C	20	1	1									0.00	Phase C		12.41										
26	SPARE C.B.	A	20	1	1									0.00	Total Conn.		40.72										
28	SPARE C.B.	B	20	1	1									0.00	Total Connected Load:												
30	SPARE C.B.	C	20	1	1									0.00	Phase A		15.53										
32	EX. MAU-1	A	30	3	1									1.50	1.50 Phase B		12.77										
34	-	B	-	-	-									1.50	1.50 Phase C		12.41										
36	-	C	-	-	-									1.50	1.50 Total Conn.		40.72										
38	EX. MECHANICAL CONTROLS	A	20	1	1									1.00	1.00 Total Feeder Demand Load:												
40	EX. CIRCULATION PUMP	B	20	1	1									0.50	0.50 Total												
42	EX. OUTLETS MECHANICAL	C	20	1	1									0.80	0.80 Avg. Amps/Phase		41.2 KVA										
CATEGORY		TOTAL CONN. LOAD (KVA)		DEMAND FACTOR		DEMAND LOAD (KVA)		DEMAND LOAD (KVA)		TOTAL		TOTAL		TOTAL		TOTAL											
Receptacles		0.80		50%*10KVA		0.80		0.80		0.80		0.80		0.80		0.80											
Lighting		2.04		125%		2.55		2.55		2.55		2.55		2.55		2.55											
Kitchen Equipment		0.00		NEC 220.56		0.00		0.00		0.00		0.00		0.00		0.00											
Motors (Largest)		0.00		125%		0.00		0.00		0.00		0.00		0.00		0.00											
Motors		0.00		100%		0.00		0.00		0.00		0.00		0.00		0.00											
Heating		0.00		NEC 220.60		0.00		0.00		0.00		0.00		0.00		0.00											
Cooling		0.00		125%		0.00		0.00		0.00		0.00		0.00		0.00											
Continuous Load		0.00		100%		0.00		0.00		0.00		0.00		0.00		0.00											
Non-Continuous Load		37.88		100%		37.88		37.88		37.88		37.88		37.88		37.88											
TOTAL		40.72		100%		41.23		41.23		41.23		41.23		41.23		41.23											
NOTES:																											
1. EXISTING CIRCUIT BREAKER AND LOAD TO REMAIN.																											
2. UPDATED LOAD. EXISTING CIRCUIT BREAKER.																											
3. NEW LOAD. PROVIDE NEW CIRCUIT BREAKER WITH AIC RATING TO MATCH EXISTING.																											
4. CIRCUIT BREAKER MADE SPARE AS PART OF THIS PROJECT.																											
GENERAL NOTES																											
A. CONTRACTOR TO VERIFY SPARE BREAKERS.																											
																											

VOLTAGE DROP CALCULATION																			V1.02	
PROJECT: Group 6 Walk in Freezer															SYSTEM VOLTAGE: 208					
NUMBER: 250065															SYSTEM PHASE: 3					
VOLT DROP CALCULATION BASED ON CHAPTER 9 OF THE NATIONAL ELECTRICAL CODE; LENGTHS SHOWN ARE FOR CALCULATION PURPOSES ONLY, NOT FOR BIDDING.																				
PREPARED BY: Coffman, San Diego, CA															METERING (VARS): N					
															Date: 3/14/2025					
LOAD DESCRIPTION	NOMINAL VOLTAGE	SYSTEM PHASE	STARTING VOLTAGE	POWER FACTOR	LENGTH OF CIRCUIT IN FEET	CURRENT IN AMPS	FINAL WIRE SIZE IN INCHES	INITIAL WIRE SIZE IN INCHES	REOD. WIRE SIZE IN INCHES	FEDDER BRANCH CONDUIT	MAGNETIC CONDUIT	WIRE TYPE	COPPER	VOLTS PERCENT	SINGLE RUN TO OTHER LOAD	ADD %	ADD TO WHAT LOAD	ENDING VOLTAGE	PERCENT	TOTAL
P900	208	3	208.0	85%	10.0	1,000.0	500	3	30	30	1"	N	C	0.3	0.12%	N	P900	207.7	0.12%	
PANEL SF	208	3	207.7	85%	185.0	200.0	40	1	4	4	1"	N	C	4.8	2.25%	Y	P900	203.0	2.41%	
CU1	208	3	203.0	85%	25.0	13.0	10	1	10	10	1"	B	N	C	1.3	0.63%	Y	PANEL SF	201.7	3.03%
CU-2	208	3	203.0	85%	50.0	22.0	8	1	10	10	1"	B	N	C	1.3	0.63%	Y	PANEL SF	201.7	3.04%

SHORT CIRCUIT CALCULATION															V3.07			
Project -															Engineer: 14-Mar-25			
SHORT CIRCUIT CALCULATION PERFORMED PER BLISSMANN "ELECTRICAL PROTECTION HANDBOOK" 2008. LENGTHS SHOWN ARE FOR CALCULATION PURPOSES ONLY, NOT FOR BIDDING.															19/04/25 SYSTEM VOLTAGE: 208 PHASE: 3			
WIRE MATERIALS															MOTOR		MIN. IBI	
PANEL OR FAULT LOCATION	CONTINUED	CAL	LYMR	ISC AT	TRANSFORMER PROPERTIES				WIRE MATERIALS				LENGTH	FLUOA	RATING			
LYR	LYR	LYR	LYR	START	KVA	PR VOL	SEC VOL	IMPF %	SIZE	CTYPR	WIR	CONDUCT	CABLE	VOLTS	PHASE	LENGTH	FLUOA	RATING
PANEL 1	Y	LL	N	22.000A					500	3	W	N	200	3			0.000	1.000A
PANEL 2	Y	WIRB		25.500A					1	1	N	N	200	3		185.00	200A	1.000A
PANEL 3	Y	LL	N	8.350A					8	1	N	N	200	3		55.00	185	0.750A
PANEL 4	Y	LL	N	8.350A					1	1	N	N	200	3		55.00	225	2.000A
PANEL 5	Y	LL	N	8.350A					8	1	N	N	200	3		55.00	225	2.000A