

TRANSFORMER LOAD SUMMARY						
DESCRIPTION	ACTUAL CONNECTED (KW/KVA)	POWER FACTOR	ACTUAL DEMAND (KVA)	NEC CONNECTED (KW/KVA)	NEC DEMAND FACTOR	NEC DEMAND (KVA)
LIGHTING	10.706	1.0	10.706	10.706	1.25	13.383
RECEPTACLES	9.780	1.0	9.780	9.780	1.0	9.780
MOTORS	1.420	1.0	1.420	1.420	1.25	1.775
AIR CONDITIONING	0.000	1.0	0.000	0.000	1.0	0.000
WATER HEATER	7.200	1.0	7.200	7.200	1.0	7.200
MISCELLANEOUS	4.160	1.0	4.160	4.160	1.0	4.160
TOTAL	33.266		33.266	33.266		36.298
USE	45		KVA 480-120/208V, 3 PHASE TRANSFORMER			

ELECTRICAL LOAD SUMMARY						
DESCRIPTION	ACTUAL CONNECTED (KW/KVA)	POWER FACTOR	ACTUAL DEMAND (KVA)	NEC CONNECTED (KW/KVA)	NEC DEMAND FACTOR	NEC DEMAND (KVA)
LIGHTING	5.696	1.0	5.696	5.696	1.25	7.120
TRACK LIGHTING	5.010	1.0	5.010	5.010	299 FT 150VA/2FT ***	22.425
SHOW WINDOW	0.000	1.0	0.000	0.000	0 FT 200VA/FT **	0.000
RECEPTACLES	9.780	1.0	9.780	9.780	100-100W 0.5 REMAINING	9.780
MOTORS	7.736	1.0	7.736	7.736	1.25	9.670
AIR CONDITIONING *	30.373	1.0	30.373	30.373	1.0 ****	30.373
ELECTRIC HEATING *	6.997	1.0	0.000	6.997	1.0	0.000
WATER HEATER	7.200	1.0	7.200	7.200	1.0	7.200
MISCELLANEOUS	4.160	1.0	4.160	4.160	1.0	4.160
TOTAL	76.952		69.955	76.952		90.728
NOTES:						
* USE GREATER LOAD OF THE TWO CATEGORIES						
** NEC ARTICLE 220-43 REQUIREMENT (200VA PER FOOT OR ACTUAL CONNECTED)						
*** NEC ARTICLE 220-43 REQUIREMENT (150VA/2FT OR ACTUAL CONNECTED)						
**** 125% OF THE LARGEST MOTOR OR COMPRESSOR IN SYSTEM						
NEC DEMAND KW *1000 = MINIMUM FEEDER AMPERAGE						
SYSTEM VOLTAGE * 1.732						
90.728 *1000 = 109 A						
480 *1.732 NEW 200A SERVICE						

CURRENT LIMITING BREAKERS		
CIRCUIT NUMBER	BREAKER SIZE	
A-10	1	10A
A-12	2	10A
NOTE: PROVIDE EATON PRC LIMITER PANEL WITH BREAKERS SHOWN. ROUTE CIRCUITS THROUGH CURRENT LIMITING BREAKER PRIOR TO LANDING ON BRANCH CIRCUIT BREAKER.		

## PANELBOARD B

LOCATION: WR ENCLOSURE (IFS)

VOLTAGE 120/208V, 3PH, 4W MOUNTING SURFACE BUS RATING 100A														
LCL	LTG ZONE	CCCT NO	LOAD DESCRIPTION	CB AMP	POLE	LOAD A	B	C	CB AMP	POLE	LOAD DESCRIPTION	CCCT NO	LTG ZONE	LCL
		1	SPARE	20	1	0	2,100		20	2	DEMO WATER HEATER	2		
		3	MANAGER'S RCPT	20	1		540	2,100				4		
		5	MANAGER'S IG RCPT	20	1			180	20	1	SALES AREA RCPT.	6		
		7	BACKWRAP RCPT	20	1	1,080	540		20	1	SALES AREA RCPT.	8		
		9	WALKIE TALKIE	20	1		360	0	20	1	SPARE	10		
		11	MUSIC/SOUND SYSTEM	20	1			500	20	1	IP CAMERA POWER	12		
		13	(WR) TEMP. CONTROLS	20	1	900	500		20	1	SECURITY PNL/MONITOR	14		
		15	CASHWRAP IG	20	1		900	500	20	1	BURGLAR ALARM	16		
		17	CASHWRAP RCPT	20	1			720	20	2	WATER HEATER	18		
		19	NON SALES RCPT	20	1	540	1,500					20		
		21	SPARE	20	1		0	600	20	1	DRINKING FOUNTAIN	22		
		23	SPARE	20	1			0	20	1	SPARE	24		
		25	SPARE	20	1	0	180	0	20	1	RTU RCPT.	26		
		27	(WR) TELEPHONE BRD.	20	1		360	200	20	1	FACP	28		
		29	A.L.L. SYSTEM	20	1			180	20	2	SPARE	30		
		31	SPARE	20	1	0	0	0	20	1	SPARE	32		
		33	SPARE	20	1		0	1,600	20	1	ROLLING GRILLE	34		
		35	SPARE	20	1			0	20	1	SPARE	36		
		37	SPARE	20	1	0	0	0	20	1	SPARE	38		
		39	SPARE	20	1		0	660	20	1	FPVAV-1	40		
		41	SPARE	20	1			0	20	1	FPVAV-2	42		
LOAD/PH: (NEC CONNECTED)						7,340	7,820	4,780	TOTAL VA: 19,940 VA					
LCL @ 25% PER PHASE						0	0	0	TOTAL AMPS: 55 A					
TOTAL LOAD/PH: (NEC DEMAND)						7,340	7,820	4,780						
NOTES: ALL CIRCUITS BREAKERS TO BE 20 AMP, 1-POLE UNLESS OTHERWISE NOTED.														
BREAKER OPTIONS:														
ACTUAL LOAD						A 7,340 kW	NEC CONNECTED TOTALS			A 7,340 kW	BABR - SOLENOID OPERATED BABR			
						B 7,820 kW				B 7,820 kW	LO - HANDLE LOCK-OFF DEVICE			
						C 4,780 kW				C 4,780 kW	ST - SHUNT TRIP			
TOTAL 19,940 kW									TOTAL 19,940 kW	AUX - AUXILIARY CONTACTS				
						PA - HANDLE PADLOCK ATTACHMENT								
						GFCI - GROUND FAULT INTERRUPT								
						HACR - HEATING, A/C & REFRIGERATION								
						LCL - CONTINUOUS LOAD								
(ALL PHASES SHALL BE BALANCED WITH 7% USING ACTUAL LOAD TOTALS)														

## PANELBOARD A

LOCATION: WR ENCLOSURE (IFS)

VOLTAGE 120/208V, 3PH, 4W MOUNTING SURFACE BUS RATING 225A															
LCL	LTG ZONE	CCCT NO	LOAD DESCRIPTION	CB			LOAD A			CB			CCCT NO	LTG ZONE	LCL
				AMP	POLE		A	B	C	AMP	POLE				
X		1	STORE N/EM LTS/FAN	20	1	1,304	416			20	1	STOCKROOM LTS	2	B	X
X	A	3	SHOW WINDOW LTS	20	1		140	500		20	1	PORTAL LTS	4	A	X
X	A1	5	STORE SIGN	20	1			1,200	969	20	1	SALES AREA TK LTS	6	D	X
X	C	7	TRANSITION LTS	20	1	476	816			20	1	SALES AREA TK LTS	8	D	X
X	C	9	CABINET LTS	20	1		120	774		20	1	SALES AREA TK LTS	10	C	X
X	C	11	CABINET LTS	20	1			120	774	20	1	SALES AREA TK LTS	12	C	X
X	C	13	CABINET LTS	20	1	120	0			20	1	SPARE	14		
X	C	15	CABINET LTS	20	1		160	954		20	1	SALES AREA TK LTS	16	D	X
X	C	17	CABINET LTS	20	1			120	723	20	1	SALES AREA TK LTS	18	D	X
D	19	FLOORBOX	20	1	540	0				20	1	SPARE	20		
D	21	FLOORBOX	20	1		180	1,000			20	1	GINGHAM TRANSOM	22	A1	X
D	23	FLOORBOX	20	1			180	0				SPARE	24		
D	25	FLOORBOX	20	1	180	0				20	1	SPARE	26		
X	C	27	CABINET LTS	20	1		120	0				SPACE ONLY	28		
	29	SPARE	20	1			0	0				SPACE ONLY	30		
	31	VIDEO WALL	20	1	720	0						SPACE ONLY	32		
	33	VIDEO WALL	20	1		720	0					SPACE ONLY	34		
	35	SPARE	20	1			0	0				SPACE ONLY	36		
	37	SPARE	20	1	0	0		0				SPACE ONLY	38		
	39	SPACE ONLY				0	0					SPACE ONLY	40		
	41	SPACE ONLY					0	0				SPACE ONLY	42		
LOAD/PH: (NEC CONNECTED)				4,572	4,668	4,088	TOTAL VA: 16,028 VA								
LCL @ 25% PER PHASE				783	942	977	TOTAL AMPS: 45 A								
TOTAL LOAD/PH: (NEC DEMAND)				5,355	5,610	5,063									
NOTES:															
ALL CIRCUITS BREAKERS TO BE 20 AMP, 1-POLE UNLESS OTHERWISE NOTED.															
BREAKER OPTIONS:															
ACTUAL LOAD				A 4,572 kW	NEC CONNECTED TOTALS				A 5,355 kW	BABR - SOLENOID OPERATED BABR					
				B 4,668 kW					B 5,610 kW	LO - HANDLE LOCK-OFF DEVICE					
				C 4,088 kW					C 5,063 kW	ST - SHUNT TRIP					
TOTAL 13,326 kW								TOTAL 16,028 kW	AUX - AUXILIARY CONTACTS						
(ALL PHASES SHALL BE BALANCED WITH 7% USING ACTUAL LOAD TOTALS)															
PA - HANDLE PADLOCK ATTACHMENT															
GFCI - GROUND FAULT INTERRUPT															
HACR - HEATING, A/C & REFRIGERATION															
LCL - CONTINUOUS LOAD															

### LIGHTING TIME CONTROL LEGEND:

A1 - EXTERIOR SIGNAGE BLADE SIGN INTERNALLY ILLUMINATED TRANSOMS STOREFRONT DOWNLIGHTING

A - MARKETING LEVEL LIGHTING SHOW WINDOW LIGHTS SHOW WINDOW RECEPTACLES

B - STOCKING STOCKROOM (NON-SALES) LIGHTING

C - TASK LEVEL 1/2 SALES FLOOR LIGHTING EVENLY DISTRIBUTED (BBW, PINK & BEN) - INCLUDING CABINET LIGHTING GENERAL SALES FLOOR RECEPTACLES DISPLAY CABINET LIGHTING RECEPTACLES

D - SALES LEVEL LIGHTING BALANCE OF SALES FLOOR LIGHTING INTERIOR DISPLAY LIGHTING (CHANDLERS, NEON, ETC)

NOTE: ALL LIGHTING CIRCUITS CONNECTED TO LIGHTING ZONES ARE CONNECTED AND CONTROLLED AUTOMATICALLY THROUGH THE H.V.A.C BUILDING CONTROL TIME CLOCK. REFER TO ELECTRICAL POWER GENERAL NOTE #13 ON THIS SHEET.

ELECTRICAL EQUIPMENT DATA												
SYM.	ITEM	VOLTAGE	HP.	KW.	F.L.A.	FEEDERS		TYPE OF CONN.	BRANCH BREAKER	DISC. SW.	BUS/ FUSES	REMARKS
						WIRE	COND.					
①	WATER HEATER	208V, 1ø	--	4.16	--	2ø12 THHN 1ø12 G	1/2"	"AC" TOGGLE SWITCH	20A-2P	---	---	SEE NOTE NO. 1 BELOW
②	WATER HEATER	208V, 1ø	--	3.0	--	2ø12 THHN 1ø12 G	1/2"	"AC" TOGGLE SWITCH	20A-2P	---	---	SEE NOTE NO. 1 BELOW
③	FPVAV-1	120V, 3ø	--	--	5.5	2ø12 THHN 1ø12 G	1/2"	THRU UNIT DISC. SW.	20A-1P	---	---	SEE NOTE NO. 2 BELOW
④	FPVAV-2 (ELECTRIC HEAT)	480V, 3ø	--	7.00 ELEC. HEAT	--	3ø10 THHN 1ø10 G	3/4"	THRU UNIT DISC. SW.	25A-3P	---	---	SEE NOTE NO. 2 BELOW
⑤	FPVAV-2 (MOTOR)	120V, 1ø	--	--	5.5	2ø12 THHN 1ø12 G	1/2"	THRU UNIT DISC. SW.	20A-1P	---	---	SEE NOTE NO. 2 BELOW
⑥	RTU-1	480V, 3ø	--	--	46.6	3ø4 THHN 1ø8 G	1-1/4"	THRU UNIT DISC. SW.	70A-3P	---	---	SEE NOTE NO. 2 BELOW
NOTE:												
1. "AC" TOGGLE SWITCH TO BE FURNISHED BY LSD&C AND INSTALLED BY ELECTRICAL CONTRACTOR.												
2. DISCONNECT SWITCH TO BE FURNISHED AND INSTALLED BY MECHANICAL SUPPLIER.												