

ELECTRIC LOAD SUMMARY				
DESCRIPTION	208Y/120V SERVICE		N.E.C. DEMAND FACTOR	N.E.C. DEMAND
	CONNECTED	NOTES		
15.152	(1)	1.25	18.440	
LIGHTING (CONTINUOUS)	-	(2)	-	28.375
TRACK LIGHT DEMAND ALLOWANCE	-	(3)	-	7.500
SHOW WINDOW DEMAND ALLOWANCE	2.000	(4)	1.00	2.000
KIT APPLIANCE	13.240	(5)	-	11.620
RECEPTACLES	0.000	(6)	-	0.000
MOTORS	0.000	(7)	-	0.000
FIXED ELECTRIC SPACE HEATING	0.000	(8)	-	0.000
AIR CONDITIONING SYSTEM	65.888	(9)	1.0	65.888
ELECTRIC WATER HEATER	1.500	-	1.0	1.500
MISCELLANEOUS	11.370	-	1.0	11.370
	107.250	-	-	146.639
N.E.C. DEM. KVA X 1000 = MINIMUM FEEDER AMPERAGE				
DIV. VOLTAGE X 1.732 = 407.0 AMPS				
146.639 X 1000 = 208 X 1.732				
LOAD SUMMARY NOTES:				
[1] POWER FACTOR IS ALREADY INCLUDED IN LIGHTING LOAD.				
[2] 150VA/FT OF LINE VOLTAGE TRACK + SUM LOW VOLTAGE XFMR'S - CONNECTED LOAD				
[3] 200VA/FT - ACTUAL CONNECTED LOAD				
[4] KIT APPLIANCE DEMAND FACTOR PER NEC 220.56				
[5] 0.0 < 10KW + 100% REMAINING - 50%				
[6] 125% OF THE LARGEST MOTOR OR COMPRESSOR IN SYSTEM APPLIED ON ONE UNIT.				
[7] USE GREATER VALUE OF THESE TWO CATEGORIES				

Panel Wiring Schedule (3-Phase)											
Panelboard		Voltage		Phase		Options/Notes:		REUSE EXISTING			
Panel Type	NEMA Type	EXISTING	OCPO Mounting	M.L.O. SURFACE	Wiring	Bus	Rating	Wiring	Bus	Rating	42,000
Ckt. No. Zone Load Description Brkr. Size Brkr. Opts. N.E.C. KVA Phase N.E.C. KVA Brkr. Opts. Brkr. Size Load Description Zone Ckt. No.											
1		SPARE			0.000	A	0.000			SPARE	2
3		SPARE			0.000	B	0.540			RTU REC	E 4
5		SPARE			0.000	C	0.160			RR GFI REC	E 6
7		SPARE			0.000	A	0.000			SPARE	8
9		SPARE			0.000	B	0.000			SPARE	10
11		SPARE			0.000	C	1.500			EVH-1	E 12
13		SPARE			0.000	A	0.000			SPARE	14
15		SPARE			0.000	B	0.000			SPARE	16
17		SPARE			0.000	C	0.000			SPARE	18
19		SPARE			7.668	A	0.000			SPARE	20
21	E	RTU-1	803	HACR	7.668	B	0.000			SPARE	22
23		SPARE			7.668	C	0.000			SPARE	24
25		SPARE			6.660	A	0.000			SPARE	26
27	E	RTU-2	703	HACR	6.660	B	0.000			SPARE	28
29		SPARE			6.660	C	0.000			SPARE	30
31		SPARE			7.668	A	4.420			SPARE	32
33	E	RTU-3	803	HACR	7.668	B	4.972	8F	1503	PANEL "A"	E 34
35		SPARE			7.668	C	4.840			SPARE	36
37		SPARE			0.000	A	8.760			SPARE	38
39		SPARE			0.000	B	8.000	8F	1503	PANEL "B"	E 40
41		SPARE			0.000	C	8.050			SPARE	42
Notes: * All circuit breakers to be 20-Amp, 1-Pole unless otherwise noted. ** All Phases to be balanced to within 10% using Actual Load Totals.											
Breaker Options: AS Powerlink AS Breaker LO Handle lock-on device ST Shunt Trip Type AUX Auxiliary Contacts PA Handle Padlock Attachment GFCI Ground Fault Circuit Interrupter HACR Heating, A/C & Refrigeration SF Subfeed AFCI Arc Fault Circuit Interrupter											
E Existing Circuit to remain IG Isolated Ground Circuit Connected Load: 297.7 amps NEC Demand Feeder Load: 407.0 amps											

Panel Wiring Schedule (3-Phase)											
Panelboard		Voltage		Phase		Options/Notes:		FURNISH/INSTALL NEW			
Panel Type	NEMA Type	EXISTING	OCPO Mounting	M.L.O. SURFACE	Wiring	Bus	Rating	Wiring	Bus	Rating	30,000
Ckt. No. Zone Load Description Brkr. Size Brkr. Opts. N.E.C. KVA Phase N.E.C. KVA Brkr. Opts. Brkr. Size Load Description Zone Ckt. No.											
1		SPARE			0.000	A	0.000			SPARE	2
3	A	STOREFRONT SIGN			1.200	B	1.268	LO		SALES AREA EXEM/NLN	4
5	A	SHOWWIN. TRK LGT			0.400	C	1.504	LO		NS LGT EXEM/NLN	6
7	A	SHOW WINDOW REC.			1.000	A	1.000			BACKWRAP SIGN	C 8
9		SPARE			0.000	B	1.152			FLUORESCENT LGT	C 10
11		SPARE			0.000	C	1.056			FLUORESCENT LGT	C 12
13	B	SALES TRACK LGT			0.720	A	0.960			FLUORESCENT LGT	C 14
15	B	SALES TRACK LGT			0.520	B	0.192			FLUORESCENT LGT	C 16
17	B	SALES TRACK LGT			0.920	C	0.000			SPARE	18
19	B	SALES TRACK LGT			0.660	A	0.000			SPARE	20
21	B	SALES TRACK LGT			0.640	B	0.000			SPARE	22
23	B	SALES TRACK LGT			0.960	C	0.000			SPARE	24
25		SPARE			0.000	A	0.000			SPARE	26
27		SPARE			0.000	B	0.000			SPARE	28
29		SPARE			0.000	C	0.000			SPARE	30
31		SPARE			0.000	A	0.000			SPARE	32
33		SPARE			0.000	B	0.000			SPARE	34
35		SPARE			0.000	C	0.000			SPARE	36
37		SPARE			0.000	A	0.000			SPARE	38
39		SPARE			0.000	B	0.000			SPARE	40
41		SPARE			0.000	C	0.000			SPARE	42
Notes: * All circuit breakers to be 20-Amp, 1-Pole unless otherwise noted. ** All Phases to be balanced to within 10% using Actual Load Totals.											
Breaker Options: AS Powerlink AS Breaker LO Handle lock-on device ST Shunt Trip Type AUX Auxiliary Contacts PA Handle Padlock Attachment GFCI Ground Fault Circuit Interrupter HACR Heating, A/C & Refrigeration SF Subfeed AFCI Arc Fault Circuit Interrupter											
E Existing Circuit to remain IG Isolated Ground Circuit Connected Load: 38.5 amps NEC Demand Feeder Load: 48.6 amps											

Panel Wiring Schedule (3-Phase)											
Panelboard		Voltage		Phase		Options/Notes:		FURNISH/INSTALL NEW			
Panel Type	NEMA Type	EXISTING	OCPO Mounting	M.L.O. SURFACE	Wiring	Bus	Rating	Wiring	Bus	Rating	30,000
Ckt. No. Zone Load Description Brkr. Size Brkr. Opts. N.E.C. KVA Phase N.E.C. KVA Brkr. Opts. Brkr. Size Load Description Zone Ckt. No.											
1		L.V. RACK (IFS)			0.360	A	0.720			WALKIE TALKIE REC.	2
3		TEMP/LTG CTRLS (IFS)			0.360	B	0.250			BUZZER SYSTEM	4
5		TELEPHONE BOARD			0.160	C	0.000	LO		SECURITY SYSTEM	6
7		SOUND SYSTEM			0.360	A	0.540			MANAGER REC.	8
9		SPARE			0.000	B	0.500			MANAGER COMPUTER	10
11		SPARE			0.000	C	0.540			NON-SALES REC.	12
13		SPARE			3.000	A	0.720			NON-SALES REC.	14
15		DREAMSTEAMER	303		3.000	B	0.500	LO		BURGULAR ALARM	16
17		SPARE			3.000	C	0.000			SPARE	18
19		SPARE			0.000	A	1.440			UTILITY REC.	20
21		TELEVISION			0.600	B	0.550			CASH REGISTERS	22
23		SPARE			0.000	C	0.550			CASH REGISTERS	24
25		SPARE			0.000	A	0.720			BACKWRAP REC.	26
27		REFRIGERATOR			0.800	B	0.720	LO		CHECKPOINT	28
29		MICROWAVE			1.200	C	1.080			SALES REC.	30
31		SPARE			0.000	A	0.900			SALES REC.	32
33		SPARE			0.000	B	0.720			SALES REC.	34
35		SPARE			0.000	C	0.900			SALES REC.	36
37		SPARE			0.000	A	0.000			SPARE	38
39		SPARE			0.000	B	0.000			SPARE	40
41		SPARE			0.000	C	0.000			SPARE	42
Notes: * All circuit breakers to be 20-Amp, 1-Pole unless otherwise noted. ** All Phases to be balanced to within 10% using Actual Load Totals.											
Breaker Options: AS Powerlink AS Breaker LO Handle lock-on device ST Shunt Trip Type AUX Auxiliary Contacts PA Handle Padlock Attachment GFCI Ground Fault Circuit Interrupter HACR Heating, A/C & Refrigeration SF Subfeed AFCI Arc Fault Circuit Interrupter											
E Existing Circuit to remain IG Isolated Ground Circuit Connected Load: 66.9 amps NEC Demand Feeder Load: 66.9 amps											

LIGHTING CONTROL LEGEND:

A - SHOW WINDOW LIGHTS, SHOW WINDOW RECEPTACLES, EXTERIOR SIGNAGE

B - STOCKING LEVEL SALES AREA LIGHTING GENERAL SALES FLOOR RECEPTACLES STOCKING FITTING ROOM LIGHTING

C - SALES LEVEL SALES AREA LIGHTING INTERIOR DISPLAY LIGHTING DISPLAY CABINET LIGHTING RECEPTACLES SALES LEVEL FITTING ROOM LIGHTING

ELECTRICAL EQUIPMENT DATA												
SYM	ITEM	VOLTAGE	HP	KW	M.C.A.	FEEDERS		TYPE OF CONN	BRANCH BREAKER	DISC SWITCH	BUSB/ FUSES	REMARKS
						WIRE	COND					
①	EXISTING WATER HEATER	120V, 1PH	---	1.50	---	EXISTING	EXISTING	EXISTING	EXIST 20A-1P	---	---	SEE NOTE NO.1 BELOW
②	DREAM STEAMER	208V, 3PH	---	9.0	---	3/10 THHN #10 G	3/4"	THRU RECEPTACLE	30A-3P	---	---	---
③	RTU-1	208V, 3PH	---	---	63.9	EXISTING	EXISTING	EXISTING	EXIST 80A-3P HACR	---	---	SEE NOTE NO.1 BELOW
④	RTU-2	208V, 3PH	---	---	55.5	EXISTING	EXISTING	EXISTING	EXIST 70A-3P HACR	---	---	SEE NOTE NO.1 BELOW
⑤	RTU-3	208V, 3PH	---	---	63.9	EXISTING	EXISTING	EXISTING	EXIST 80A-3P HACR	---	---	SEE NOTE NO.1 BELOW
NOTE: N. EXISTING TO REMAIN, REUSE EXISTING DISCONNECT, CIRCUIT BREAKER, WIRE, CONDUIT, ETC. AND LEAVE IN GOOD OPERATING CONDITION.												

ELECTRICAL POWER GENERAL NOTES:

- HVAC CIRCUIT BREAKERS SHALL BE "HACR" TYPE WHEN REQUIRED BY EQUIPMENT NAMEPLATE PER N.E.C.
- ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXACT K.A./C. RATING (BUILDING SERVICE AVAILABLE FAULT CURRENT) OF LANDLORD DISTRIBUTION EQUIPMENT PRIOR TO BID AND WORK COMMENCEMENT. IF FOUND TO BE HIGHER THAN PANEL RATING, NOTIFY YOUR ESDC PROJECT MANAGER IMMEDIATELY.
- ELECTRICAL CONTRACTOR SHALL BALANCE ALL PANELS AND ELECTRICAL EQUIPMENT TO 7% (+/-) BETWEEN PHASES: A/B, B/C, A/C, REGARDLESS OF CIRCUITING INDICATED.
- PROPER CLEARANCE MUST BE MAINTAINED ABOUT ELECTRICAL EQUIPMENT PER N.E.C. FIELD VERIFY EXACT MOUNTING SPACE AVAILABLE IN ELECTRICAL ROOM/AREA PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT.
- ALL PANEL BRANCH CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE.
- ALL PANEL BUS BARS SHALL BE COPPER.
- MOUNT A TYPEWRITTEN DIRECTORY BEHIND GLASS OR PLASTIC ON THE INSIDE OF EACH PANEL DOOR AND, ON THE DIRECTORY, SHOW THE CIRCUIT NUMBER AND COMPLETE DESCRIPTION OF ALL OUTLETS ON EACH CIRCUIT.
- ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS FOR A COMPLETE AND OPERABLE ELECTRICAL DISTRIBUTION SYSTEM.
- ALL PANELBOARDS, SWITCHBOARDS AND LINE VOLTAGE CONTROL EQUIPMENT SHALL BE FACTORY MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTING, SERVICING OR MAINTENANCE OF EQUIPMENT.
- ELECTRICAL CONTRACTOR SHALL MAKE SURE ENTIRE INSTALLATION CONFORMS TO N.E.C. 110.3 - EXAMINATION, IDENTIFICATION, INSTALLATION, AND USE OF EQUIPMENT.
- SWITCHBOARDS, PANELBOARDS, DISCONNECT SWITCHES, AND CONTACTORS ARE TO BE "LISTED" AND "IDENTIFIED" AS RATED FOR A MINIMUM OF 75°C CONDUCTOR TERMINATION.
- IFS ENCLOSURE LIGHTING CONTROLS: SOLENOID OPERATED BADR BREAKERS ARE PROVIDED WITH IFS PANELS FOR STORE LIGHTING CONTROLS AND STOREFRONT SIGNS. SEE PANEL SCHEDULES FOR LIGHTING ZONE DESIGNATIONS (ie: ZONE A, B, C).
- IFS ENCLOSURE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR IS HEREIN DESCRIBED:
 - UNIT WILL BE SHIPPED TO PROJECT IN MULTIPLE SECTIONS AND THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR OFF-LOADING OF EQUIPMENT, INSPECTION OF EQUIPMENT FOR DAMAGE, VERIFICATION OF EQUIPMENT RECEIVED FOR PROPER STORAGE, SETTING AND MOVING OF EQUIPMENT INTO SPACE AS WELL AS REASSEMBLING OF SECTIONS INTO ONE COMPLETE UNIT PER MANUFACTURER'S DOCUMENTATION.
 - INTERCONNECTING CABLES BETWEEN SECTIONS AND TORQUE CONNECTIONS PER MANUFACTURER'S REQUIREMENTS.
 - ALL CONNECTIONS WITHIN THE TELEPHONE/DATA SECTION AND HVAC CONTROL SECTION OF THE IFS ENCLOSURE WILL BE DONE BY OTHERS. ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLATION OF LOW VOLTAGE CONDUIT SYSTEM (IF REQUIRED BY CODE OR LANDLORD) INTO THESE SECTIONS ONLY.
 - SWITCHBOARD WILL BE SHIPPED ON AN ENCLOSED SEMI-TRAILER. ELECTRICAL CONTRACTOR MUST ARRANGE FOR A FORKLIFT TO OFF-LOAD AT JOB SITE. ELECTRICAL CONTRACTOR WILL RECEIVE 24 HOUR NOTICE PRIOR TO DELIVERY.
- ELECTRICAL CONTRACTOR SHALL INCLUDE ALL COSTS TO FURNISH AND INSTALL ALL LOW VOLTAGE WIRING IN CONDUIT, AS PART OF BASE BID.

DEMARC DEMOLITION NOTES:

- THE G.C. SHALL NOT CUT THE MAIN TELEPHONE WIRES LEADING TO THE TERMINATION STRIP (DEMARC BLOCK) OR PHONE SYSTEM.
- IF THE DEMARC IS TO BE RELOCATED, IT SHALL BE COORDINATED WITH EXPRESS TECHNICAL SERVICES (ETS). THE PRIMARY CONTACT IS BRENDEN SPIVEY AT 614-416-4077, AND THE SECONDARY CONTACT IS ZELDA WARD AT 614-416-2160.
- THE G.C. SHALL ALLOW ADEQUATE TIME FOR RELOCATION IN THE CONSTRUCTION SCHEDULE.
- IF THE WALL WITH THE TELEPHONE BLOCK IS SCHEDULED FOR DEMOLITION, THE ENTIRE BACKING PANEL SHALL BE REMOVED FROM THE WALL (WITHOUT DISCONNECTING THE WIRING) AND IT SHALL BE SAFELY SECURED IN THE CEILING UNTIL IT CAN BE RELOCATED TO THE NEW AREA OR REINSTALLED ON WALL.

SERIES-RATED NOTES:

- MAIN CIRCUIT BREAKER IN "PANEL IFS" SHALL BE FULLY RATED TO PROVIDE AN INTERRUPTING RATING OF 65,000 AMPS RMS.
- MAIN CIRCUIT BREAKER SHALL BE "SERIES" RATED WITH ALL OTHER FEEDER BREAKERS IN "PANEL IFS" TO PROVIDE AN INTERRUPTING RATING OF 65,000 AMPS RMS.
- PANELBOARDS OR OTHER EQUIPMENT THAT IS PROTECTED BY "SERIES" RATED OVERCURRENT-PROTECTED DEVICES UPSTREAM SHALL BE MARKED WITH A PERMANENT LABEL THAT INDICATES THE SHORT-CIRCUIT RATING OF THE SERIES COMBINATION AND CALLS OUT THE SPECIFIC REPLACEMENT OVERCURRENT DEVICE(S) THAT CAN BE UTILIZED.

E.C. IS TO REUSE EXISTING (2) PARALLEL SETS OF 4 #500 KCMIL AL AND 1 #1 GRD. IN EXISTING 4" PVC CONDUITS. E.C. IS TO VERIFY ROUTING IN FIELD.

E.C. IS TO REUSE EXISTING METER AND METERING C/T'S (FURNISHED AND INSTALLED BY LANDLORD). VERIFY ALL REQUIREMENTS IN FIELD.

E.C. IS TO REUSE EXISTING 600A-3P BREAKER IN