

- NOTES:**
- ALL FUTURE EV CHARGERS SHALL BE DESIGNED BY OTHERS UNDER SEPARATE PERMIT(S).
 - DESIGN ASSUMES NO ADDITIONAL LOADS WILL BE ADDED
 - ALL OCPD TO HAVE A MINIMUM 75 DEGREE TERMINATION LUG RATING

- GENERAL NOTES:**
- LOCKABLE BREAKERS FOR ALL EV DISTRIBUTION BREAKERS.
 - "EMERGENCY SHUTDOWN - ELECTRIC VEHICLE CHARGING STATION" SIGN MUST BE INSTALLED ON "EV-L1".
 - EVSE L2 EV CHARGERS ARE 16.6 KW, 80A, AT 208V. EVSE INFORMATION ON DETAIL 1 PAGE E-4
 - WIRING AT THE CONDUIT AND CONDUCTOR SCHEDULE TO BE COPPER (CU).
 - BREAKERS OF 1200A OR GREATER TO BE COMPLIANT WITH NEC 213.10 (GFI).
 - "SWBD MSB" AND "EV-L1" SHALL HAVE PLACARD TO SHOW LOCATION OF SWITCH BOARD AND SERVICE DISCONNECT.
 - EXPOSED CONDUITS SHALL BE RMC BELOW 10' AND CAN BE EMT ABOVE 10'. THREADED COUPLINGS ON RGS AND STEEL, COMPRESSION ON EMT.
 - SURFACE MOUNTED BOXES ARE FD OR FS ONLY. SHEET METAL CANNOT BE EXPOSED.
 - JUNCTION BOXES: RATED FOR APPLICATION, GALVANIZED STEEL WITH CONDUIT KNOCKOUTS AND THREADED HOLES FOR MOUNTING WIRING DEVICES. CONFORM TO NEMA 250.
 - ARC FLASH LABELS TO BE PROVIDED ON "EV-L1" & "MSWB"
 - ALL BRANCH CIRCUITS SUPPORTING AN EV CHARGER MUST HAVE OCPD CAPABLE OF LOCK OUT TAG OUT REQUIREMENTS. ALL OCPDS TO BE BOLT ON MOLDED CASE CIRCUIT BREAKERS.
 - SIGNAGE REQUIRED ON EVSE DISTRIBUTION PANELS: "EV SERVICE LOADS ONLY"
 - THREE PHASE CONDUCTOR IDENTIFICATION:
 - NUMBER 8 AWG AND SMALLER: UNIFORM COLORED JACKET. JACKET COLOR AS INDICATED ON 15.3.
 - NUMBER 6 AWG AND LARGER: TAPE APPLIED TO JACKET WITHIN 6 INCHES OF THE END OF EACH CONDUCTOR. TAPE COLOR AS INDICATED 15.3.
 - JACKET AND TAPE COLOR (CONDUCTORS OF 120/208 VOLT CIRCUITS):
 - PHASE A: BLACK.
 - PHASE B: RED.
 - PHASE C: BLUE.
 - NEUTRAL: WHITE.
 - GROUND: GREEN.
 - CHARGING NUMBER AND PARKING NUMBER ON SHEET E-1.1
 - EXPANSION COUPLINGS REQUIRED ON ALL CONDUIT RUNS OVER THAN 150FT.

(E) MSWB 1600A 208/120V

MOUNTING NEMA RATING	FLOOR	# OF PARALLEL FEEDERS	VOLTS	120 / 208	MAIN BUS	1600A
FEED THRU	1	NEUTRAL (%)	PHASE WIRE	3	A.I.C.	1600A
	NO	100		4		100K

LOCATION	A	B	C	LOCATION
EXISTING LOAD	29338	29338	29338	
EV-L1 SUB PANEL	58240	58240	49920	
TOTAL VA=				254414
HIGH PHASE VA=				87578

(N) EV SUB PANEL "EV L1" 100% RATED

MOUNTING NEMA RATING	WALL	# OF PARALLEL FEEDERS	VOLTS	120 208	MAIN BUS	600A 100% RATED
FEED THRU	NO	NEUTRAL (%)	PHASE WIRE	3	A.I.C.	600A
		100		4		100K

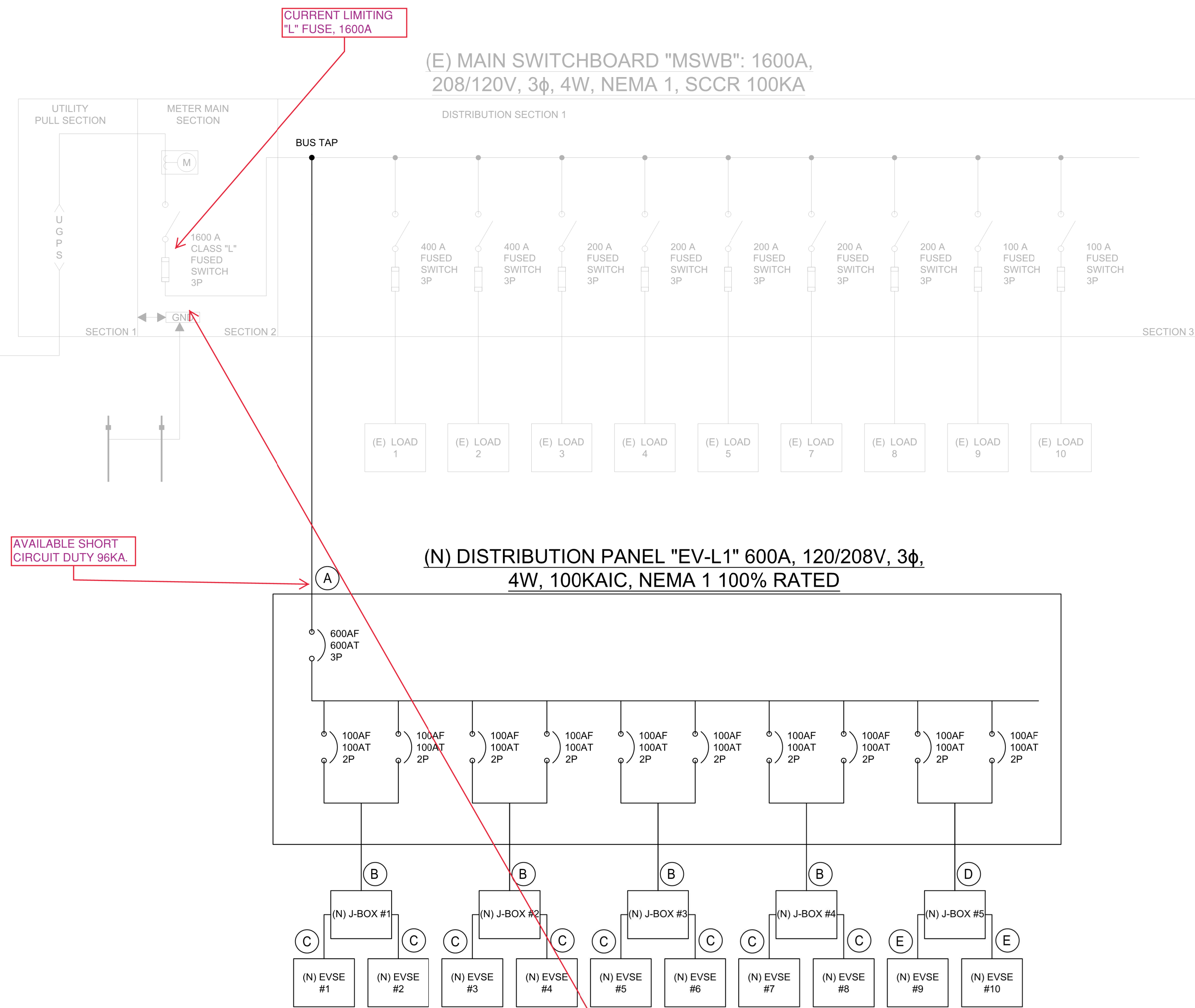
LOCATION	A	B	C	LOCATION
EVSE #1	8320			EVSE #7
EVSE #2	8320	8320		EVSE #8
EVSE #3	8320	8320	8320	EVSE #9
EVSE #4	8320	8320		EVSE #10
EVSE #5	8320	8320		
EVSE #6	8320	8320		
TOTAL VA=				166400
HIGH PHASE VA=				58240

2 PANEL SCHEDULE

CONDUIT & WIRE SCHEDULE

IDENTIFIER	FROM	TO	VOLTAGE (VAC - PHASE)	NET CURRENT (AMPS)	UPSTREAM OCPD (AMPS)	PARALLEL RUNS	CONDUIT SIZE/TYPE	WIRE CONTENTS	ONE WAY DISTANCE (MAX)	%VDROP	REMARKS
A	(E) 208/120V MAIN SWITCHGEAR	(N) SUB PANEL "EV-L1" (120/208V SECTION)	208V-3φ	485	1600 (BUS TAP AFTER MAIN)	2	3" SCH 40 RMC	(4) #400 MCM CU THWN-2 (1) #1 AWG CU EGC	25	.21	PARALLEL RUNS (4 X #400 AND 1 X #1 AWG CU PER RUN)
B	(N) SUB PANEL "EV-L1" (120/208V SECTION)	(N) J-BOX #1 - #4	208V-1φ	80	100	-	1-1/4" C SCH 40 RMC	(4) #2 AWG CU THWN-2 (1) #8 AWG CU EGC	190	2.48	-
C	(N) J-BOX #1 - #4	(N) EVSE #1 - #8					1" C SCH 40 RMC	(2) #2 AWG CU THWN-2 (1) #8 AWG CU EGC			
D	(N) SUB PANEL "EV-L1" (120/208V SECTION)	(N) J-BOX #5					1-1/2" C SCH 40 RMC	(4) #1 AWG CU THWN-2 (1) #6 AWG CU EGC	204	2.42	-
E	(N) J-BOX #5	(N) EVSE #9 - #10					1-1/4" C SCH 40 RMC	(2) #1 AWG CU THWN-2 (1) #6 AWG CU EGC			

3 CONDUIT AND WIRE SCHEDULE



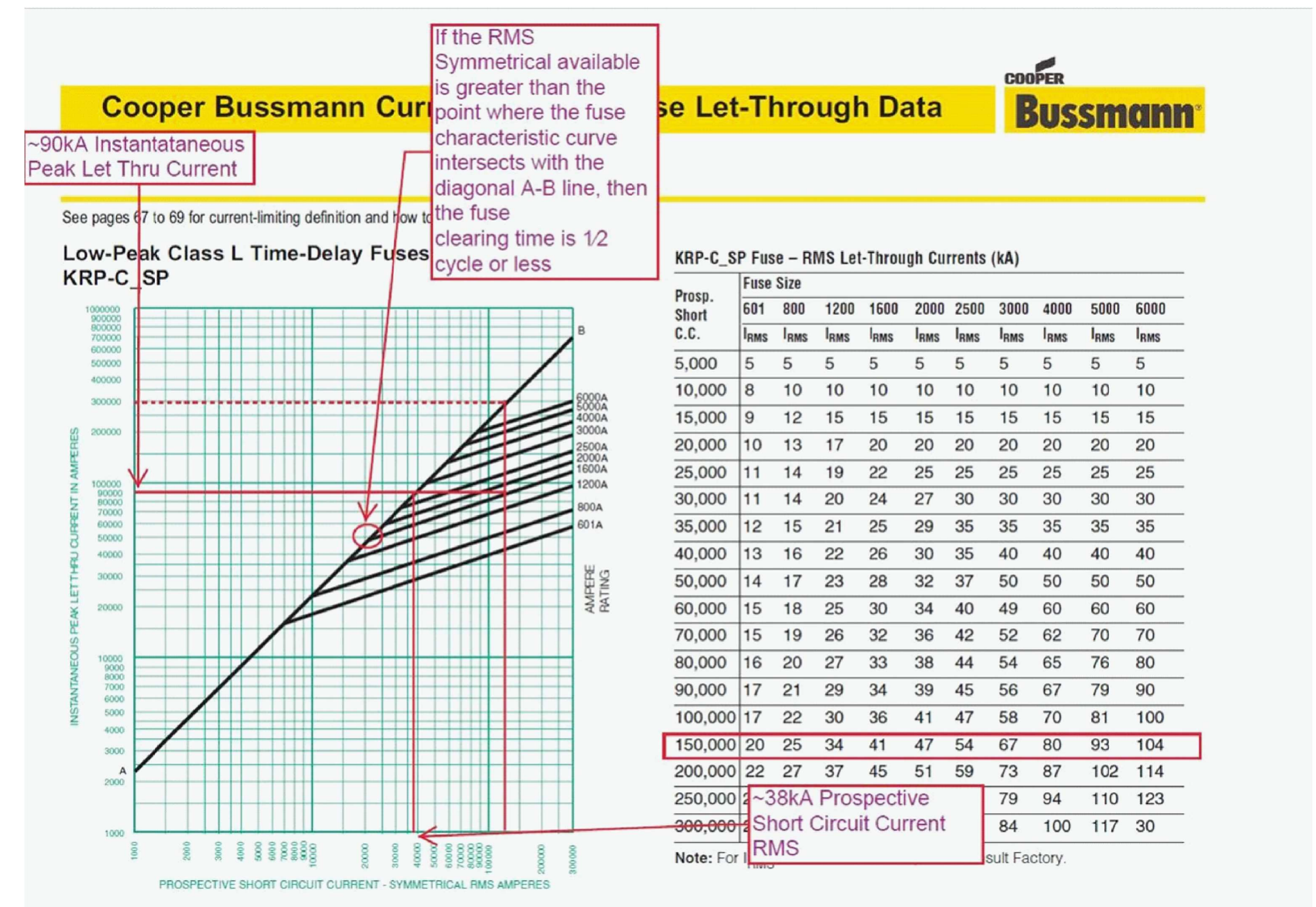
1 SINGLE LINE DIAGRAM

PER THE NATIONAL ELECTRICAL CODE (NEC), ARTICLE 220.87, THE MAXIMUM DEMAND AT 125 PERCENT PLUS THE NEW LOAD CAN BE ADDED TO DETERMINE THE ADEQUACY OF THE EXISTING ELECTRICAL DISTRIBUTION SYSTEM TO SUPPORT THE SHORT-TERM PROGRAM LOADS.

LOAD SUMMARY OF SERVICE PANEL "MSWB"

MAXIMUM DEMAND	88	KW
MAXIMUM DEMAND @ 125%:	110	KW
NEW LOAD @ 125%:	209	KW
NEW AND MAX DEMAND TOTAL KW =		319
EXISTING SERVICE VOLTAGE	208	V
NEW 3-PHASE CURRENT DEMAND =		885.48
		AMPS

THE EXISTING [1600] AMP, 120/208VOLT, 3-PHASE, 4-WIRE ELECTRICAL DISTRIBUTION SYSTEM HAS ADEQUATE LOAD CAPACITY TO SUPPORT THE PROPOSED NEW EVSE LOADS.



KRP-C_SP Fuse - RMS Let-Through Currents (kA)

Prospect. Short C.C.	5000A	6000A	800A	1000A	1200A	1600A	2000A	2500A	3000A	4000A	5000A	6000A
5,000	5	5	5	5	5	5	5	5	5	5	5	5
10,000	8	10	10	10	10	10	10	10	10	10	10	10
15,000	9	12	15	15	15	15	15	15	15	15	15	15
20,000	10	13	17	20	20	20	20	20	20	20	20	20
25,000	11	14	19	22	25	25	25	25	25	25	25	25
30,000	11	14	20	24	27	30	30	30	30	30	30	30
35,000	12	15	21	25	29	35	35	35	35	35	35	35
40,000	13	16	22	26	30	35	40	40	40	40	40	40
50,000	14	17	23	28	32	37	50	50	50	50	50	50
60,000	15	18	25	30	34	40	49	60	60	60	60	60
70,000	15	19	26	32	36	42	52	62	70	70	70	70
80,000	16	20	27	33	38	44	54	65	76	80	80	80
90,000	17	21	29	34	39	45	56	67	79	90	90	90
100,000	17	22	30	36	41	47	58	70	81	100	100	100
150,000	20	25	34	41	47	54	67	80	93	104	104	104
200,000	22	27	37	45	51	59	73	87	102	114	114	114
250,000	24	29	39	47	53	61	75	90	104	118	118	118
300,000	25	30	40	48	54	62	76	91	105	120	120	120