

REVISIONS	BY

'MDP' PANEL SCHEDULE

PANEL ID: MDP PANEL TYPE: SQ. D-1-LINE MOUNTING: SURFACE
ELECT. DATA: 200-TRIP, 3 PHASE, 4 WIRE, 800 AMPS, 32 CIRCUITS MAINS: BREAKER / V. SHUNT TRIP LOCATION: STOCK ROOM

CIR. NO.	POLE	AMP TRIP C.B.	WIRE (AWG)	COND. (IN)	LOAD			IDENTIFICATION	PHASES		
					'A' AMP	'B' AMP	'C' AMP		A	B	C
1	3	80	#1	1 1/2"	64			A/C - 1			
3		80	#1	1 1/2"	64			A/C - 1			
5		80	#1	1 1/2"	64			A/C - 1			
7	3	80	#1	1 1/2"	64			A/C - 3			
9		80	#1	1 1/2"	64			A/C - 3			
11		80	#1	1 1/2"	64			A/C - 3			
13											
15											
17											
19	3	200	3/0	2"	81			PANEL - A			
21		200	3/0	2"	69			PANEL - A			
23		200	3/0	2"	81			PANEL - A			
25	3	200	3/0	2"	69			PANEL - C			
27		200	3/0	2"	53			PANEL - C			
29		200	3/0	2"	42			PANEL - C			
31											
33											
35											
37	2	60	#1	1 1/2"	40			WATER HEATER - STORAGE			
39		60	#1	1 1/2"	40			WATER HEATER - STORAGE			
41											
					318	290	251	SUBTOTAL (AMPS)			

A	B	C	TOTAL AMPS
603	547	492	

'A' PANEL SCHEDULE

PANEL ID: 'A' LIGHTING PANEL TYPE: SQ. D-NGOOD MOUNTING: SURFACE
ELECT. DATA: 200-TRIP, 3 PHASE, 4 WIRE, 800 AMPS, 42 CIRCUITS MAINS: M.L.D. LOCATION: STOCK ROOM

CIR. NO.	POLE	AMP TRIP C.B.	WIRE (AWG)	COND. (IN)	LOAD			IDENTIFICATION	PHASES		
					'A' AMP	'B' AMP	'C' AMP		A	B	C
1	1	20	#12	1/2"	9			GENERAL LIGHTING (SALES)			
3	1	20	#12	1/2"	7			GENERAL LIGHTING (SALES)			
5	1	20	#12	1/2"	5			GENERAL LIGHTING (SALES)			
7	1	20	#12	1/2"	9			GENERAL LIGHTING (SALES)			
9	1	20	#12	1/2"	10			GENERAL LIGHTING (SALES)			
11	1	20	#12	1/2"	7			GENERAL LIGHTING (SALES)			
13	1	20	#12	1/2"	7			GENERAL LIGHTING (SALES)			
15	1	20	#12	1/2"	9			GENERAL LIGHTING (SALES)			
17	1	20	#12	1/2"	9			GENERAL LIGHTING (P.D.S.)			
19	1	20	#12	1/2"	10			GENERAL LIGHTING (P.D.S.)			
21	1	20	#12	1/2"	1			NIGHT LIGHTS / EMERGENCY			
23	1	20	#12	1/2"	2			LIGHTS (ELECT. ROOM)			
25	1	20	#12	1/2"	5			LIGHTS (STORAGE)			
27	1	20	#12	1/2"	5			LIGHTS (W.I.B.C.)			
29	1	20	#12	1/2"	13			LIGHTS (W.I.B.C. DOOR)			
31	1	20	#12	1/2"	10			LIGHTS (W.I.B.C. DOOR)			
33											
35											
37	3	30	#10	1/2"				SURGE PROTECTOR			
39		30	#10	1/2"				SURGE PROTECTOR			
41		30	#10	1/2"				SURGE PROTECTOR			
					50	32	36	SUBTOTAL (AMPS)			

A	B	C	TOTAL AMPS
65	55	65	

'B' PANEL SCHEDULE

PANEL ID: 'B' - POWER PANEL TYPE: SQ. D-NGOOD MOUNTING: SURFACE
ELECT. DATA: 200-TRIP, 3 PHASE, 4 WIRE, 800 AMPS, 32 CIRCUITS MAINS: M.L.D. LOCATION: STOCK ROOM

CIR. NO.	POLE	AMP TRIP C.B.	WIRE (AWG)	COND. (IN)	LOAD			IDENTIFICATION	PHASES		
					'A' AMP	'B' AMP	'C' AMP		A	B	C
1	1	20	#12	1/2"	8			P.D.S. REGISTER			
3	1	30	#10	1/2"	24			GEN. P.D.S. RECEPT.			
5	1	20	#12	1/2"	3			TIDEL SAFE			
7	1	20	#12	1/2"	12			ICE MERCH.			
9	1	20	#12	1/2"	9			REST ROOM RECEPT.			
11	1	20	#12	1/2"	5			FOUNTAIN GF1			
13	1	20	#12	1/2"	12			FRONT DOOR			
15	1	20	#12	1/2"	6			FRONT DOOR GF1			
17	1	20	#12	1/2"	6			HUMIDOR RECEPT.			
19	2	20	#12	1/2"	10			HUMIDIFIER			
21		20	#12	1/2"	10			HUMIDIFIER			
23	1	20	#12	1/2"	2			MAGNETIC STRIKE			
25	1	30	#10	1/2"	28			MEETING ROOM			
27	1	20	#12	1/2"	9			STORAGE RM. RECEPT.			
29	1	20	#12	1/2"	4			ELECT. RM. EXHAUST FAN			
31	1	20	#12	1/2"	3			SPRINKLER CONTROLLER			
33	1	30	#10	1/2"	20			ELECT. WATER HEATER LADIES RESTROOM			
35	1	30	#10	1/2"	20			ELECT. WATER HEATER MEN'S RESTROOM			
37	2	20	#12	1/2"	12			ICE CUBER			
39		20	#12	1/2"	12			ICE CUBER			
41	1	30	#10	1/2"	25			HAND DRYERS			
					85	90	65	SUBTOTAL (AMPS)			

A	B	C	TOTAL AMPS
151	141	119	

'C' PANEL SCHEDULE

PANEL ID: 'C' EQUIPMENT PANEL TYPE: SQ. D-NGOOD MOUNTING: SURFACE
ELECT. DATA: 200-TRIP, 3 PHASE, 4 WIRE, 800 AMPS, 30 CIRCUITS MAINS: M.L.D. LOCATION: STOCK ROOM

CIR. NO.	POLE	AMP TRIP C.B.	WIRE (AWG)	COND. (IN)	LOAD			IDENTIFICATION	PHASES		
					'A' AMP	'B' AMP	'C' AMP		A	B	C
1	1	15	#12	1/2"	8			EVAP. - 1			
3											
5											
7	3	30	#10	1/2"	18			COND. - 1			
9		30	#10	1/2"	18			COND. - 1			
11		30	#10	1/2"	18			COND. - 1			
13	2	20	#10	1/2"	11			COND. - 3			
15		20	#10	1/2"	11			COND. - 3			
17											
19											
21											
23											
25											
27											
29											
					37	29	18	SUBTOTAL (AMPS)			

A	B	C	TOTAL AMPS
69	53	42	

'D' PANEL SCHEDULE

PANEL ID: 'D' OUTSIDE LIGHTING PANEL TYPE: SQ. D-NGOOD MOUNTING: SURFACE
ELECT. DATA: 200-TRIP, 3 PHASE, 4 WIRE, 800 AMPS, 30 CIRCUITS MAINS: M.L.D. LOCATION: STOCK ROOM

CIR. NO.	POLE	AMP TRIP C.B.	WIRE (AWG)	COND. (IN)	LOAD			IDENTIFICATION	PHASES		
					'A' AMP	'B' AMP	'C' AMP		A	B	C
1	1	20	#10	1/2"	13			MONUMENT SIGN			
3	1	20	#10	1/2"	6			MONUMENT RECEPT.			
5											
7											
9											
11											
13											
15											
17	1	20	#10	1/2"	12			FRONT WALL SIGN			
19											
21											
23											
25	1	20	#10	1/2"	12			POLE LIGHT			
27	1	20	#10	1/2"	12			POLE LIGHT			
29	1	20	#10	1/2"	12			POLE LIGHT			
					25	18	24	SUBTOTAL (AMPS)			

A	B	C	TOTAL AMPS
56	41	46	

SHORT CIRCUIT CURRENT CALCULATIONS

THE SHORT CIRCUIT CURRENT CALCULATIONS ARE BASED FROM THE BOOK "ELECTRICAL WIRING COMMERCIAL" BY RAY C. MULLIN AND ROBERT L. SMITH FIFTH EDITION DATED 1984.

INFORMATION PROVIDED BY FIELD OR SYSTEM CONDITIONS:

- KVA = TRANSFORMER KVA RATING = 225
- E(L-L) = VOLTAGE LINE TO LINE = 208
- TRANS. % Z = TRANSFORMER IMPEDANCE IN % = 2
- L = LENGTH OF SECONDARY CONDUCTOR RUN IN FEET = 100
- C = CONSTANT DERIVED FROM TABLES FOR SPECIFIC TYPE OF CONDUCTOR AND CIRCUIT ARRANGEMENT. SEE ATTACHED TABLE FOR C VALUES.

CALCULATED INFORMATION:

I FLA = FULL LOAD RATING AMPS OF THE PAD-MOUNT TRANSFORMER

I SCT = PAD-MOUNT TRANSFORMER SHORT CIRCUIT CURRENT

I SCM = PANEL 'MDP' MINIMUM SHORT CIRCUIT CURRENT CALCULATIONS

SHORT CIRCUIT AVAILABLE AT PANEL 'MDP':

$$I_{FLA} = \frac{KVA \times 10000}{E(L-L) \times 1.73} = \frac{225 \times 10000}{208 \times 1.73} = 62528$$

$$MULTIPLIER M = \frac{100}{TRANS \% Z} = \frac{100}{2} = 50$$

$$I_{SCT} = I_{FLA} \times M = 62528 \times 50 = 3126400$$

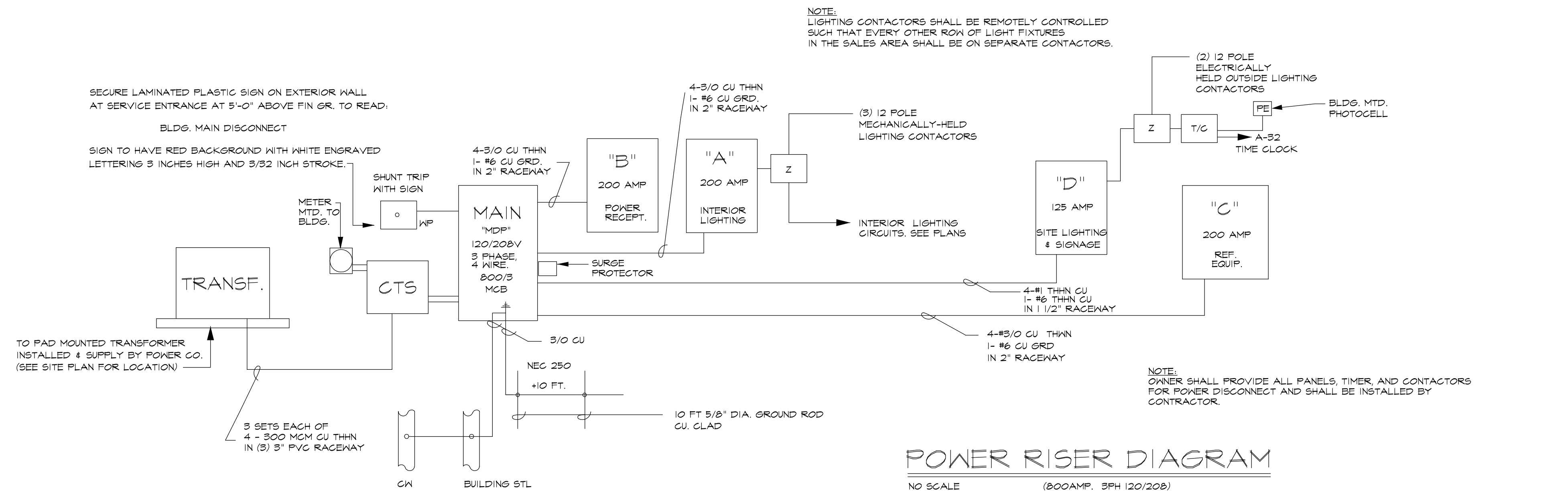
SHORT CIRCUIT AVAILABLE AT PANEL 'MDP':

$$f = \frac{1.73 \times L \times I}{3 \times C \times E(L-L)} = \frac{1.73 \times 100 \times 3126400}{3 \times 11300 \times 208} = 0.73$$

$$I_{SCM} = \frac{I_{SCT}}{1.73} = \frac{3126400}{1.73} = 1807167$$

POWER RISER DIAGRAM NOTE'S:

- OWNER TO SUPPLY AND CONTRACTOR TO INSTALL ALL ELECTRICAL EQUIP. ALL EQUIP. TO BE SQUARE D TYPE GEAR.
- CONTRACTOR SHALL OBTAIN POWER CO. C.T. AND SERVICE REQUIREMENTS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO RUN THE MAIN SERVICE FEEDER FROM THE BUILDING TO THE PAD MOUNTED TRANSFORMER. CONTRACTOR TO INSTALL AND WIRE C.T. CAN METER BASE, POWER CO. TO SUPPLY CURRENT TRANSFORMER.
- ALL CONDUCTORS SHALL BE COPPER W/ THIN INSULATION MIN. SIZE #12.
- CONTRACTOR SHALL SUPPLY TEMPORARY POWER TO JOB SITE FOR GENERAL AND ALL SUBCONTRACTORS.
- C.T. CABINET TO BE BONDED ACCORDING TO TABLE 250-95. BONDING CONDUCTOR SHALL BE CONT. NON SPLICED.
- PANEL 'MDP' MINIMUM A/C RATING SHALL BE 22000 A/C. SEE THIS SHEET FOR SHORT CIRCUIT CALCULATIONS.
- CONTRACTOR SHALL VERIFY A/C RATINGS OF ALL PANELS BASED ON METHOD LISTED ABOVE PRIOR TO BID.



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DRAWN: S.L.M.
CHECKED: S. RIVERA
DATE: 7-2-09
SCALE: AS NOTED
JOB No: 59 B
SHEET

PANEL SCHEDULE