

PANEL: MDP									
MFG.	GE	VOLTAGE	277/480	PHASE	3	WIRE	4		
CAT.	SPECTRA	AMPS.	800	SYM.	A.I.C.	(I.E.R.)	42,000		
MOUNT	SSURFACE	MAIN	MLO	GRD.	BUS	X			
CT	DESCRIPTION	POLE	AMPS	WIRE	COND	ØA	ØB	ØC	
1	4DP1	3	500	2-250K	2&1/2"	308	308	308	
2	EXIST. PAN 4D1	3	225	#4/0	2&1/2"	60	60	60	
3	XFMR X-1	3	225	#4/0	2&1/2"	169	169	169	
4	DISH WASHER	3	90	#4	1&1/4"	60	60	60	

\* W/ 120V SHUNT TRIP COIL 597 597 597

PANEL: 4DP1									
MFG.	SQ D	VOLTAGE	277/480	PHASE	3	WIRE	4		
CAT.	X	AMPS.	500	SYM.	A.I.C.	(I.E.R.)	22,000		
MOUNT	SURFACE	MAIN	MLO	GRD.	BUS	X			
CT	DESCRIPTION	POLE	AMPS	WIRE	COND	ØA	ØB	ØC	
1	AHU-1	3	40	#8	3/4"	29	29	29	
2	AHU-2	3	60	#6	1"	46	46	46	
3	ELEVATOR	3	40	#8	3/4"	22	22	22	
4	PANEL 4DP2	3	150	#1/0	2"	109	109	109	
5	AHU-5	3	40	#8	3/4"	22	22	22	
6	CU-3	3	60	#6	1"	47	47	47	
7	CU-4	3	30	#10	3/4"	17	17	17	
8	EXIST. 30T RTU	3	90	#4	1&1/4"	56	56	56	
9	SPACE	3	-	-	-	-	-	-	
10	SPACE	3	-	-	-	-	-	-	
11,12,13	LIGHTS	1	20	#12	1/2"	12	12	12	
14,15,16	LIGHTS	1	20	#12	1/2"	12	12	12	

TOTAL CONNECTED 372 372 372  
 TOTAL LESS CU-3&4 (NON-CONCURRENT) 308 308 308  
 (NO REDUCTION TAKEN FOR KITCHEN EQPT. DIVERSITY)

PANEL: 4DP2									
MFG.	SQ D	VOLTAGE	277/480	PHASE	3	WIRE	4		
CAT.	NQOD	AMPS.	150	SYM.	A.I.C.	(I.E.R.)	22,000		
MOUNT	SURFACE	MAIN	MLO	GRD.	BUS	X			
CT	DESCRIPTION	POLE	AMPS	WIRE	COND	ØA	ØB	ØC	
1	AHU-3	3	70	#4	1"	56	56	56	
2	AHU-4	3	60	#6	1"	41	41	41	
3,4,5	LIGHTS	1	20	#12	1/2"	12	12	12	
6,7,8	SPARE	1	20	-	-	-	-	-	
9	SPARE	3	40	-	-	-	-	-	
10	SPACE	3	-	-	-	-	-	-	

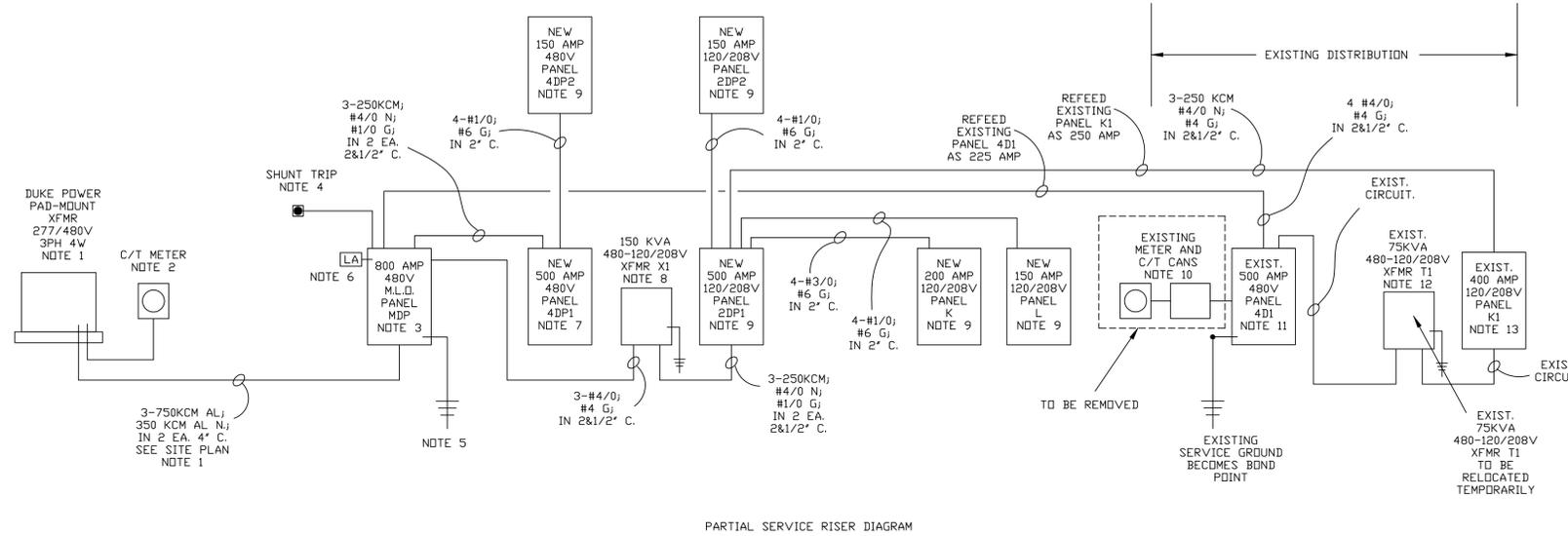
109 109 109

PANEL: 2DP1									
MFG.	SQ D	VOLTAGE	120/208	PHASE	3	WIRE	4		
CAT.	NQOD	AMPS.	500	SYM.	A.I.C.	(I.E.R.)	10,000		
MOUNT	SURFACE	MAIN	500/3 C/B	GRD.	BUS	X			
CT	DESCRIPTION	POLE	AMPS	WIRE	COND	ØA	ØB	ØC	
1,3,5	PANEL K (KIT)	3	200	#3/0	2"	91	92	83	
7,9,11	PANEL L (LOBBY)	3	150	#1/0	2"	88	67	72	
2,4,6	PANEL 2DP2	3	150	#1/0	2"	106	82	87	
8,10,12	EXIST KIT PAN K1	3	250	250KCM	2&1/2"	120	120	120	
13,15,17	OUTLETS	1	20	#12	1/2"	9	9	9	
14,16	OUTLETS	1	20	#12	1/2"	9	9	9	
18	SHUNT TRIP	1	20	#12	1/2"	6	6	6	
19,21	STRIP LIGHTS	1	20	#12	1/2"	6	6	6	
20,22,24	SITE PANEL	3	100	#3	2" PVC	20	20	20	

TOTAL AMPS 421 375 375

CALCULATION OF MINIMUM SERVICE REQUIRED FOR ENLARGED THEATER

	3PH AMPS @ 480 VOLTS
TOTAL CONNECTED LOAD ON PANEL 4DP1	372 AMPS
TRANSFORMER X-1 LOAD	182 AMPS
SUBTOTAL (NEW LOADS PLUS TRANSFERRED LOADS)	554 AMPS
LESS LOADS TRANSFERRED FROM EXISTING THEATER:	
30 T RTU	56 AMPS
KITCHEN PANEL K1 (43.2 KVA)	52 AMPS
TOTAL TRANSFERRED LOADS	108 AMPS
TOTAL CONNECTED NEW LOAD AT 480 VOLTS	446 AMPS
NON-CONCURRENT LOADS INCLUDED	64 AMPS
TOTAL NEW LOAD EXCL. CU-3&4 (NON-CONCURRENT)	382 AMPS
PEAK DEMAND OVER PAST 12 MONTHS FOR EXISTING THEATER PLUS 25% (1.25 X 102 KW/831)	153 AMPS
MINIMUM SERVICE REQUIRED:	535 AMPS



- SERVICE RISER NOTES
- 277/480V, 3-PH, 4W DUKE POWER TRANSFORMER TO BE CONVERTED TO C/T TRANSFORMER WITH PEDESTAL MOUNT METER SERVING ENTIRE THEATER COMPLEX.
  - PROVIDE DUKE POWER APPROVED PEDESTAL-MOUNTED METER CAN AT LOCATION SPECIFIED BY DUKE POWER AND PROVIDE 1&1/2" CONDUIT FROM METER CAN TO TRANSFORMER.
  - NEW PANEL MDP TO BE A 800 AMP, 277/480 VOLT, 3-PHASE, 4 WIRE MLD PANEL IN NEMA 1 ENCLOSURE. PROVIDE THREE BRANCH BREAKERS PER PANEL SCHEDULE, AND LABEL AS 'SERVICE MAIN DISCONNECT #1 OF 3 THRU #3 OF 3' EACH BREAKER TO HAVE 120 VOLT SHUNT TRIP COIL.
  - MOUNT SHUNT TRIP OPERATOR OUTSIDE ELECTRICAL ROOM, OR AS OTHERWISE DIRECTED BY A.H.J., AND WIRE TO TRIP ALL THREE BREAKERS OF PANEL MDP UPON ACTUATION.
  - SERVICE GROUND TO BE #3/0 COPPER, CONNECTED TO NEUTRAL AND GROUND BUSES OF PANEL MDP, TO THREE EACH 20-FOOT DRIVEN COPPER ELECTRODES, 20 FEET ON CENTERS, MINIMUM, TO BUILDING FOOTER REINFORCING STEEL, AND TO METAL WATER PIPE IF PRESENT (NOTE THAT GROUND AND NEUTRAL ARE TO BE ISOLATED AT EXISTING PANEL 4D1 ONCE IT BECOMES A BRANCH PANEL).
  - SURGE ARRESTOR TO BE SQUARE D MODEL SDSA3650, OR APPROVED EQUAL.
  - PANEL 4DP1 TO BE A 277/480 VOLT, 3-PH, 4W 500 AMP MLD PANEL IN NEMA 1 ENCLOSURE. SEE PANEL SCHEDULE FOR FURTHER SPECIFICATIONS, AND PROVIDE PANEL DIRECTORY UPON COMPLETION OF WORK.
  - TRANSFORMER X-1 TO BE A 150 KVA DRY-TYPE, 480-120/208 VOLT 3-PHASE, DELTA-WYE TRANSFORMER IN NEMA 1 ENCLOSURE.
  - PANELS 4DP2, 2DP1, 2DP2, K AND L1 TO BE 3-PH, 4W PANELS IN NEMA 1 ENCLOSURES. SEE RESPECTIVE PANEL SCHEDULES FOR VOLTAGE, AMPERAGE, MAINS DEVICE, AIC RATINGS, MOUNTING AND PROPOSED CIRCUITING. PROVIDE PANEL DIRECTORIES UPON COMPLETION OF WORK.
  - EXISTING C/T CAN AND METER SERVING EXISTING PORTION OF THEATER TO REMAIN IN SERVICE UNTIL TIME OF TRANSFER OF POWER SUPPLY FROM DUKE POWER TRANSFORMER TO NEW PANEL MDP. COORDINATE FINAL METER READING AND REMOVAL OF EQUIPMENT WITH DUKE POWER REPRESENTATIVE, AND WITH OWNER'S REP TO MINIMIZE IMPACT OF INTERRUPTION TO EXISTING SERVICE.
  - AT TIME OF TRANSFER TO NEW FEED FROM PANEL MDP, ISOLATE NEUTRAL AND GROUND AT EXISTING PANEL 4D1, AND REMOVE ANY SIGNAGE INDICATING 'SERVICE MAIN DISCONNECT'.
  - EXISTING 75 KVA TRANSFORMER T1 TO BE TEMPORARILY RELOCATED DURING CONSTRUCTION, AND ABANDONED AT TIME OF FINAL POWER TRANSFER TO NEW SERVICE LATERAL THROUGH PANEL MDP. SEE SHEET E-2 FOR EXISTING LOCATION.
  - NO CHANGE REQUIRED AT EXISTING PANEL K1.

ELECTRICAL RISER, SCHEDULES AND DETAILS

SCALE: N.T.S.

arter electric company, inc.  
 contractors-engineers  
 231 JEAN STREET  
 DAYTONA BEACH, FLORIDA 32114  
 PH (386)-255-1418  
 FX (386)-255-3429

PAUL M. ESTES, P.E.  
 ELECTRICAL CONSULTANT  
 615 NORTHERN PENINSULA DRIVE  
 DAYTONA BEACH, FL 32118  
 (386)-255-6948  
 FL REG. PE # 33651

REVISIONS	BY

HOLZMAN MOSS BOTTINO  
 ARCHITECTURE  
 214 W. 29TH STREET, TOWER, 17TH FLOOR  
 NEW YORK, NEW YORK 10001  
 HOLZMANMOSS.COM

ANTHONY L. LEPORE, ARCHITECT  
 1401 EDGEWATER DRIVE  
 ORLANDO, FLORIDA 32804  
 LICENSE NUMBER AP0004892  
 TELEPHONE (407) 895-4820

H.J. HIGH CONSTRUCTION CO.  
 1015 W. AMELIA STREET  
 ORLANDO, FLORIDA 32805  
 TELEPHONE (407) 422-8771  
 FAX (407) 844-4820

ADDITIONS + MODIFICATIONS  
 ENZIAN THEATER  
 MAITLAND, FLORIDA

DRAWN	
CHECKED	
DATE	2-14-14
SCALE	
JOB NO.	
SHEET	
E-6	
SHEETS	