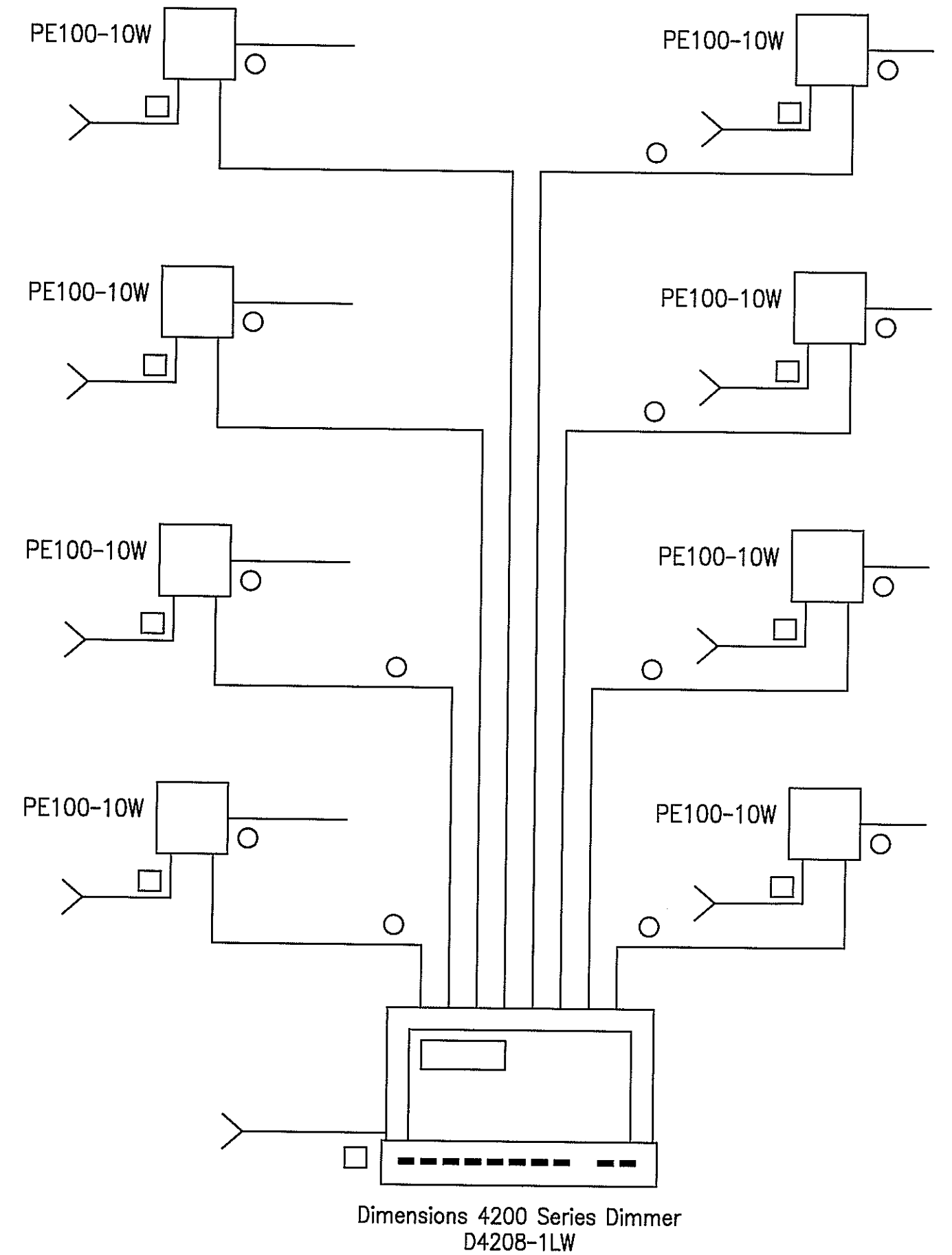




ISSUE
 09-10-10 ISSUED FOR PERMIT
 10-08-10 DBR REVIEW COMMENTS
 11-02-10 ISSUED FOR CONSTRUCTION



- SYMBOL KEY**
- △ TWO POWER CONDUCTORS AND DATA CABLE. SEE PRODUCT DATA SHEETS FOR TYPE AND SIZE.
 - CLASS 1 WIRING 2 CONDUCTORS.
 - CLASS 1 WIRING 3 CONDUCTORS.
 - CLASS 2 WIRING 4 CONDUCTORS.
 - #18 AWG MINIMUM CLASS 2 WIRING. SEE INPUT SCHEDULE FOR QTY OF CONDUCTORS.
 - ◆ #18 AWG MINIMUM CLASS 2 WIRING 3 CONDUCTORS PER DEVICE.
 - ▲ CAT 5 OR CAT 5E NETWORK CABLE.

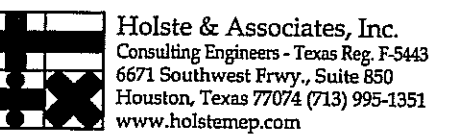
1 DIMMING SYSTEM DIAGRAM
 SCALE: NONE

- DIMMING SYSTEM NOTES:**
1. WHEREVER CONTROL WIRES SHOWN MUST BE RUN CLOSE TO CLASS 1 REMOTE CONTROL AND SIGNALING CIRCUITS AND/OR ELECTRICAL LIGHT AND POWER CIRCUITS, THESE CONTROL WIRES MUST BE RUN IN SEPARATE METAL CONDUIT.
 2. PROVIDE AN EQUIPMENT GROUND, AS REQUIRED BY THE NATIONAL ELECTRICAL CODE, BETWEEN BUILDING SERVICE ENTRANCE AND THE DIMMER/RELAY EQUIPMENT.
 3. REFER TO DEVICE INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.
 BACK BOXES ARE NOT SUPPLIED WITH DEVICES AND MUST BE PURCHASED SEPARATELY. BACK BOXES MUST BE GROUNDED.
 4. THE INTERFACE OF LEVITON EQUIPMENT WITH EQUIPMENT BY OTHERS IS THE SOLE RESPONSIBILITY OF THE ELECTRICAL/THEATRICAL CONTRACTOR. LEVITON ASSUMES NO RESPONSIBILITY FOR THE FUNCTIONALITY OF EQUIPMENT BY OTHERS AS IT RELATES TO THIS SYSTEM.
 5. CABLE RUNS ARE CONTINUOUS BETWEEN CONNECTED DEVICES. NO SPLICING ALLOWED.
 6. REFER TO BILL OF MATERIALS FOR INCLUDED ACCESSORIES AND EQUIPMENT NOT SHOWN ON THESE DRAWINGS.
 7. PULL SEPARATE NEUTRALS FOR ALL DIMMED CIRCUITS.
 8. BALLASTS NOT BY LEVITON. LEVITON WILL NEED TO KNOW BALLAST TYPE, MANUFACTURER, AND MODEL NUMBER IN ORDER TO INSURE COMPATIBILITY WITH THE DIMMING CONTROL SYSTEM. FLUORESCENT DIMMING RANGE IS FROM 100% TO THE LOWEST LEVEL ALLOWED BY THE BALLAST USED. FOR 0-10V CONTROL TYPE BALLASTS, 2 #18AWG MINIMUM WIRES PER ZONE ARE REQUIRED (VIOLET & GRAY) AND ADDITIONAL EQUIPMENT MAY BE REQUIRED.
 9. MAGNETIC STEP-DOWN TRANSFORMER PRIMARY MUST BE FUSED FOR LOW VOLTAGE LIGHTING CIRCUITS, MAGNETIC TRANSFORMERS ONLY.



9575 Katy Frwy., #200
 Houston, Texas 77024
 tel: 713.722.7071
 fax: 713.722.7072

CONSULTANTS
HOLSTE & ASSOCIATES
 MEP Engineers



PROJECT NAME
LUCA & LEONARDO RESTAURANT



PROJECT ADDRESS
 20 WATERWAY
 THE WOODLANDS, TEXAS

PROJECT NUMBER
 10018
 SHEET NAME
DIMMING SYSTEM SCHEMATIC
 SHEET NUMBER

E3.00



ISSUE
 09-10-10 ISSUED FOR PERMIT
 10-08-10 DBR REVIEW COMMENTS
 11-02-10 ISSUED FOR CONSTRUCTION

PANEL 'HA' 277/480V, 3 ϕ , 4W MOUNTING: SURFACE
 LOCATION: DRY STORAGE 120 200 AMP MLO NEMA-1 65K ISCA

CKT	LOAD	* KVA	WIRE	BKR	BKR	WIRE	KVA	* LOAD	CKT	
1	KITCHEN LIGHTING	1.1	#12	20/1	60/3	#6	36.3	1 AHU-1	2	
3	EMERGENCY/EXIT LTG.	2	0.1	#12	20/1	-	-	-	4	
5	ENTRY LIGHTING	3	0.9	#10	20/1	-	-	-	6	
7	BAR/DINING LIGHTING	3	1.7	#10	20/1	25/3	#10	13.4	1 AHU-2	8
9	OUTDOOR LIGHTING	3	1.5	#10	20/1	-	-	-	10	
11	DINING LIGHTING	3	0.5	#10	20/1	-	-	-	12	
13	EXTERIOR LIGHTING	4	0.7	#12	20/1	20/3	#12	1.2	KSE-1	14
15	SPACE	-	-	-	-	-	-	-	16	
17	SPACE	-	-	-	-	-	-	-	18	
19	SPACE	-	-	-	-	20/3	#12	2.3	K-EF-1	20
21	SPACE	-	-	-	-	-	-	-	22	
23	SPACE	-	-	-	-	-	-	-	24	
25	SPACE	-	-	-	-	20/3	#12	1.2	KSE-2	26
27	SPACE	-	-	-	-	-	-	-	28	
29	SPACE	-	-	-	-	-	-	-	30	
31	SPACE	-	-	-	-	20/3	#12	1.5	K-EF-2	32
33	SPACE	-	-	-	-	-	-	-	34	
35	SPACE	-	-	-	-	-	-	-	36	
37	SPACE	-	-	-	-	175/3	#2/0	97.6	XFMR ILA (112.5KVA)	38
39	---	-	-	-	-	-	-	-	40	
41	---	-	-	-	-	-	-	-	42	

CONTINUOUS (LTG.) LOAD 6.5 x 1.25 = 8.1
 MISC. LOAD x 1.0 = 153.5
 TOTAL KVA = 161.6

- * NOTES
1. PROVIDE H.A.C.R. CIRCUIT BREAKER AT THIS LOCATION.
 2. PROVIDE CIRCUIT BREAKER WITH LOCK-ON DEVICE.
 3. CONTROLLED BY "LEVITON" D4208 DIMMING SYSTEM (TIMECLOCK OFF).
 4. PROVIDE PHOTOCELL FOR ON/OFF CONTROL OF THIS CIRCUIT.

PANEL 'LK' 120/208V, 3 ϕ , 4W MOUNTING: RECESSED
 LOCATION: KITCHEN 200 AMP MCB W/ FEED THRU LUGS NEMA-1 (S.S) FRONT 10K ISCA

CKT	LOAD	* KVA	WIRE	BKR	BKR	WIRE	KVA	* LOAD	CKT	
1	UNDERCOUNTER REFRIG.	0.6	#12	20/1	20/1	#12	0.4	RECEPTACLES	2	
3	REFRIG. PREP TABLE	0.9	#12	20/1	20/1	#12	0.4	RECEPTACLES	4	
5	PIZZA OVEN	0.3	#12	20/1	20/1	#12	0.4	RECEPTACLES	6	
7	REFRIG. PREP TABLE	1.1	#12	20/1	20/1	#12	0.4	RECEPTACLES	8	
9	HORIZONTAL SLICER	0.8	#12	20/1	20/1	#12	0.4	RECEPTACLES	10	
11	U/C REFRIGERATOR	1.1	#12	20/1	20/1	#12	0.2	RECEPTACLE	12	
13	TEA BREWER	2.4	#10	20/1	20/1	-	-	SPARE	14	
15	BACK BAR COOLER	0.8	#12	20/1	20/3	#12	2.2	DISPOSER	16	
17	BACK BAR COOLER	0.8	#12	20/1	20/1	-	-	SPARE	18	
19	BACK BAR FREEZER	0.3	#10	30/1	-	-	-	SPARE	20	
21	BLENDER STATION	1.8	#12	20/1	100/3	#3	27.0	LOAD CENTER	22	
23	BLENDER STATION	1.8	#12	20/1	-	-	-	SPARE	24	
25	UNDERCOUNTER REFRIG.	0.6	#12	20/1	-	-	-	SPARE	26	
27	SPARE	-	-	-	-	20/2	#12	1.3	ICE MACHINE CONDENSER	28
29	SPARE	-	-	-	-	-	-	SPARE	30	
31	SPARE	-	-	-	-	20/2	#12	3.2	ICE MACHINE	32
33	SPARE	-	-	-	-	-	-	SPARE	34	
35	SPARE	-	-	-	-	40/2	#8	6.2	COFFEE BREWER	36
37	DISHMACHINE FAN	1	2.5	#12	20/3	-	-	SPARE	38	
39	---	-	-	-	-	20/2	#12	3.1	PANINI GRILL	40
41	---	-	-	-	-	-	-	SPARE	42	

KITCHEN x .65% = (SEE SECTION-2)
 MISC. LOAD x 1.0 = (SEE SECTION-2)
 TOTAL KVA = (SEE SECTION-2)

- * NOTES
1. VERIFY EXACT AMPERAGE AND LOAD WITH KITCHEN EQUIPMENT SUPPLIER.

PANEL 'LK' 120/208V, 3 ϕ , 4W MOUNTING: RECESSED
 LOCATION: KITCHEN 200 AMP MLO NEMA-1 (S.S) FRONT 10K ISCA

CKT	LOAD	* KVA	WIRE	BKR	BKR	WIRE	KVA	* LOAD	CKT		
43	CONVECTION OVEN	1	0.7	#12	20/1	20/3	#12	4.5	1.2	DISH MACHINE	44
45	SHUNT TRIP	-	-	-	-	-	-	-	-	-	46
47	CONVECTION OVEN	1	0.5	#12	20/1	-	-	-	-	-	48
49	SHUNT TRIP	-	-	-	-	-	-	-	-	-	50
51	REFRIG. EQUIP. STAND	1	0.6	#12	20/1	20/3	#12	3.6	1	MIXER	52
53	SHUNT TRIP	-	-	-	-	-	-	-	-	-	54
55	PASTA COOKER	1	0.6	#12	20/1	-	-	-	-	-	56
57	SHUNT TRIP	-	-	-	-	-	-	-	-	-	58
59	REFRIG. EQUIP. STAND	1	0.6	#12	20/1	20/1	-	-	-	SPARE	60
61	SHUNT TRIP	-	-	-	-	-	-	-	-	SPARE	62
63	ELECTRIC KETTLE	1	10.8	#8	40/3	20/1	-	-	-	SPARE	64
65	---	-	-	-	-	-	-	-	-	SPARE	66
67	---	-	-	-	-	-	-	-	-	SPARE	68
69	SHUNT TRIP	-	-	-	-	-	-	-	-	SPARE	70
71	FIRE SUPPRESSION	1	1.8	#12	20/1	20/1	-	-	-	SPARE	72
73	SHUNT TRIP	-	-	-	-	-	-	-	-	SPARE	74
75	FIRE SUPPRESSION	1.8	#12	20/1	20/1	-	-	-	-	SPARE	76
77	SHUNT TRIP	-	-	-	-	20/1	#12	0.9	WALK-IN CLR. HTR./LTS	78	
79	HOOD LIGHTS	1	0.7	#12	20/1	20/1	#12	0.8	WALK-IN CLR. COIL	80	
81	SHUNT TRIP	-	-	-	-	20/2	#12	0.5	2	REFRIG. CONDENSER	82
83	SHUNT TRIP	-	-	-	-	-	-	-	-	-	84

KITCHEN 26.4 x .65% = 17.2
 MISC. LOAD x 1.0 = 63.2
 TOTAL KVA = 80.4

- * NOTES
1. PROVIDE SHUNT TRIP CIRCUIT BREAKER FOR THIS CIRCUIT.
 2. VERIFY EXACT AMPERAGE AND LOAD WITH KITCHEN EQUIPMENT SUPPLIER.

ELECTRICAL LOAD ANALYSIS

PROJECT: LUCA & LEONARDO RESTAURANT
 LOCATION: 20 WATER WAY THE WOODLANDS, TX
 DESCRIPTION: NEW RESTAURANT BUILD-OUT
 VOLTAGE: 277/480V, 3 ϕ , 4W

LOAD DESCRIPTION	LOAD KVA
LIGHTING CONNECTED LOAD= 11.0 KVA AT 1.25% = <13.75>	-
LIGHTING 3W X 4,438 SQ. FT AT 1.25% =	16.6
RECEPTACLES =	5.0
H.V.A.C. AT 100% =	57.1
25% LARGEST MOTOR = 6.3 X .25 =	1.6
KITCHEN CONTINUOUS @ 100% =	12.4
KITCHEN NON-CONTINUOUS 75.0 @ 65% =	48.8
MISCELLANEOUS NON-CONTINUOUS AT 100% =	5.0
MISCELLANEOUS CONTINUOUS 6.9 KVA AT 1.25% =	8.6
TOTAL ESTIMATED CONNECTED LOAD =	155.1
155.1 KVA / 480 / $\sqrt{3}$ = AMPS	186.6 AMPS

NEW FACILITY SERVICE SIZE = 200 AMPS AT 480V, 3 ϕ , - 4W
 SPARE CAPACITY = 13.4 AMPS

PANEL 'LA' 120/208V, 3 ϕ , 4W MOUNTING: SURFACE
 LOCATION: MEZZANINE 200 AMP MCB NEMA-1 10K ISCA

CKT	LOAD	* KVA	WIRE	BKR	BKR	WIRE	KVA	* LOAD	CKT	
1	RR AREA LIGHTING	0.7	#12	20/1	20/1	#12	0.4	RECEPTACLES	2	
3	OUTDOOR FANS	0.5	#12	20/1	20/1	#12	0.8	RECEPTACLES	4	
5	BAR/DINING LIGHTING	1	0.2	#10	20/1	20/1	#12	0.6	RECEPTACLES	6
7	BAR/DINING LIGHTING	1	0.4	#10	20/1	20/1	#12	0.3	UNIT HEATER	8
9	LED LIGHTING	1	0.6	#10	20/1	20/1	#12	0.2	UNIT HEATER	10
11	BAR/DINING LIGHTING	1	0.7	#10	20/1	20/1	#12	0.6	ROOF RECEPTACLES	12
13	EXTERIOR LIGHTING	2	0.1	#12	20/1	20/1	#12	0.6	MISC. EQUIP.	14
15	TRACK LIGHTING	1.3	#12	20/1	20/2	#12	0.5	DISHWASHER HOOD FAN	16	
17	SPARE	-	-	-	-	20/1	#12	0.2	E-EF-1	18
19	SPARE	-	-	-	-	20/1	#12	0.3	E-EF-1	20
21	SPARE	-	-	-	-	20/1	#12	0.2	MOTORIZED DAMPERS	22
23	SPARE	-	-	-	-	20/1	#12	0.4	MEZZANINE RECEPTACLES	24
25	SPACE	-	-	-	-	-	-	-	SPARE	26
27	SPACE	-	-	-	-	-	-	-	SPACE	28
29	SPACE	-	-	-	-	-	-	-	SPACE	30
31	SPACE	-	-	-	-	-	-	-	SPACE	32
33	DUMB WATER	3	2.9	#12	20/3	-	-	-	SPACE	34
35	---	-	-	-	-	-	-	-	SPACE	36
37	---	-	-	-	-	100/3	#1	5.5	PANEL CA	38
39	SWH-1	0.2	#12	20/1	-	-	-	-	-	40
41	SWH-2	0.2	#12	20/1	-	-	-	-	-	42

CONTINUOUS (LTG.) LOAD 2.7 x 1.25 = 3.3
 MISC. LOAD x 1.0 = 13.9
 TOTAL KVA = 17.2

- * NOTES
1. CONTROLLED BY "LEVITON" D4208 DIMMING SYSTEM (TIMECLOCK OFF).
 2. PROVIDE PHOTOCELL FOR ON/OFF CONTROL OF THIS CIRCUIT.
 3. COORDINATE ELECTRICAL CHARACTERISTICS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
 4. PROVIDE TIMECLOCK FOR ON/OFF CONTROL OF THIS CIRCUIT.

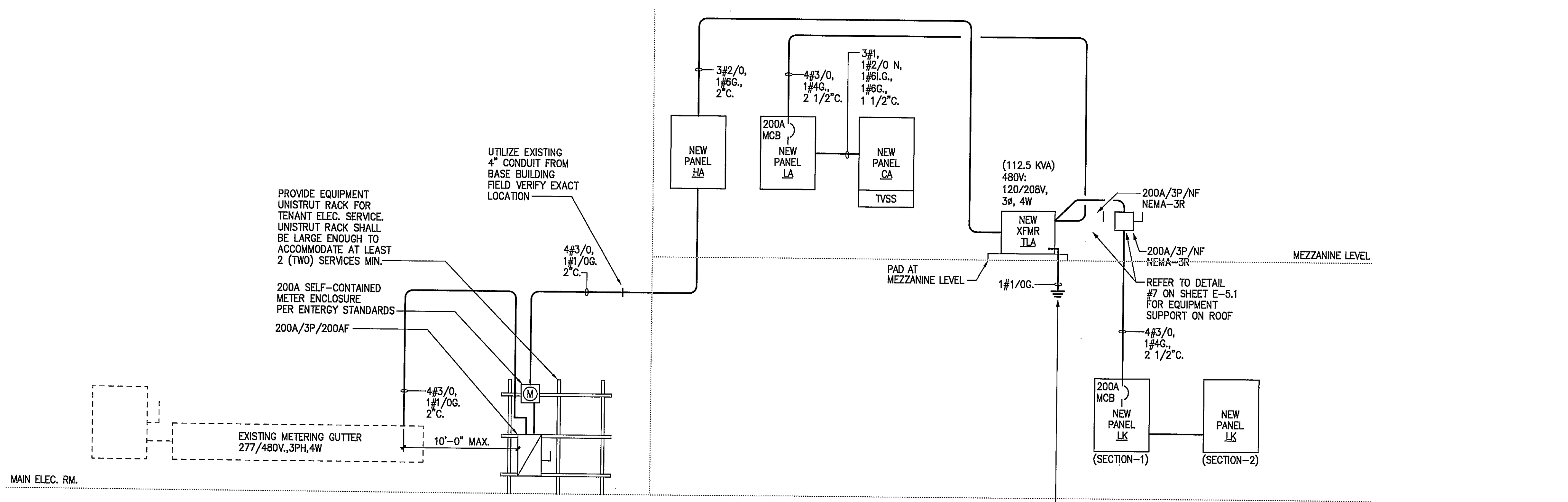
PANEL 'CA' 120/208V, 3 ϕ , 3W MOUNTING: RECESSED
 LOCATION: MEZZANINE 100 AMP MLO NEMA-1 (S.S.) FRONT 10K ISCA

CKT	LOAD	* KVA	WIRE	BKR	BKR	WIRE	KVA	* LOAD	CKT		
1	P.O.S.	1	1.0	#12	20/1	20/1	#12	0.5	1	SECURITY EQUIPMENT	2
3	P.O.S.	2	1.0	#12	20/1	20/1	#12	0.5	1	MUSIC SYSTEM	4
5	P.O.S.	2	0.5	#12	20/1	20/1	#12	0.5	1	ALARM EQUIPMENT	6
7	TELEPHONE BOARD	0.5	#12	20/1	20/1	#12	1.0	DATA EQUIPMENT	8		
9	SPARE	-	-	-	-	-	-	-	SPACE	10	
11	SPARE	-	-	-	-	-	-	-	SPACE	12	
13	SPARE	-	-	-	-	-	-	-	SPACE	14	
15	SPARE	-	-	-	-	-	-	-	SPACE	16	
17	SPARE	-	-	-	-	-	-	-	SPACE	18	
19	SPARE	-	-	-	-	-	-	-	SPACE	20	
21	SPARE	-	-	-	-	-	-	-	SPACE	22	
23	SPARE	-	-	-	-	-	-	-	SPACE	24	
25	SPACE	-	-	-	-	20/3	#8	-	TVSS	26	
27	SPACE	-	-	-	-	-	-	-	-	28	
29	SPACE	-	-	-	-	-	-	-	-	30	

MISC. LOAD x 1.0 = 5.5
 TOTAL KVA = 5.5

ISOLATED GROUND BUS
 200% NEUTRAL
 TVSS: EPOEBO
 "CURRENT TECHNOLOGY"

- * NOTES
1. PROVIDE LOCK-ON DEVICE WITH THIS CIRCUIT.
 2. THIS CIRCUIT NOT LOCATED ON PLANS. COORDINATE FINAL LOCATIONS WITH OWNER.



1 ELECTRICAL RISER DIAGRAM
 SCALE: NONE

HARRELL
 ARCHITECTS, LP

9575 Katy Fwy., #200
 Houston, Texas 77024
 tel: 713.722.7071
 fax: 713.722.7072

CONSULTANTS
HOLSTE & ASSOCIATES
 MEP Engineers

Holste & Associates, Inc.
 Consulting Engineers - Texas Reg. F-543
 6671 Southwest Fwy., Suite 800
 Houston, Texas 77074 (713) 995-1351
 www.holstemap.com

PROJECT NAME
LUCA & LEONARDO RESTAURANT

PROJECT ADDRESS
 20 WATERWAY
 THE WOODLANDS, TEXAS

PROJECT NUMBER
 10018

SHEET NAME
ELECTRICAL RISER DIAGRAM

SHEET NUMBER

E4.00