

NOTE: ELECTRICAL SERVICE AND SYSTEM DETAILED IS DESIGNED BASED ON 120 / 208 VOLT THREE PHASE SERVICE. ELECTRICAL CONTRACTOR TO VERIFY AVAILABLE SERVICE. MAKE NECESSARY MODIFICATIONS AS REQUIRED.

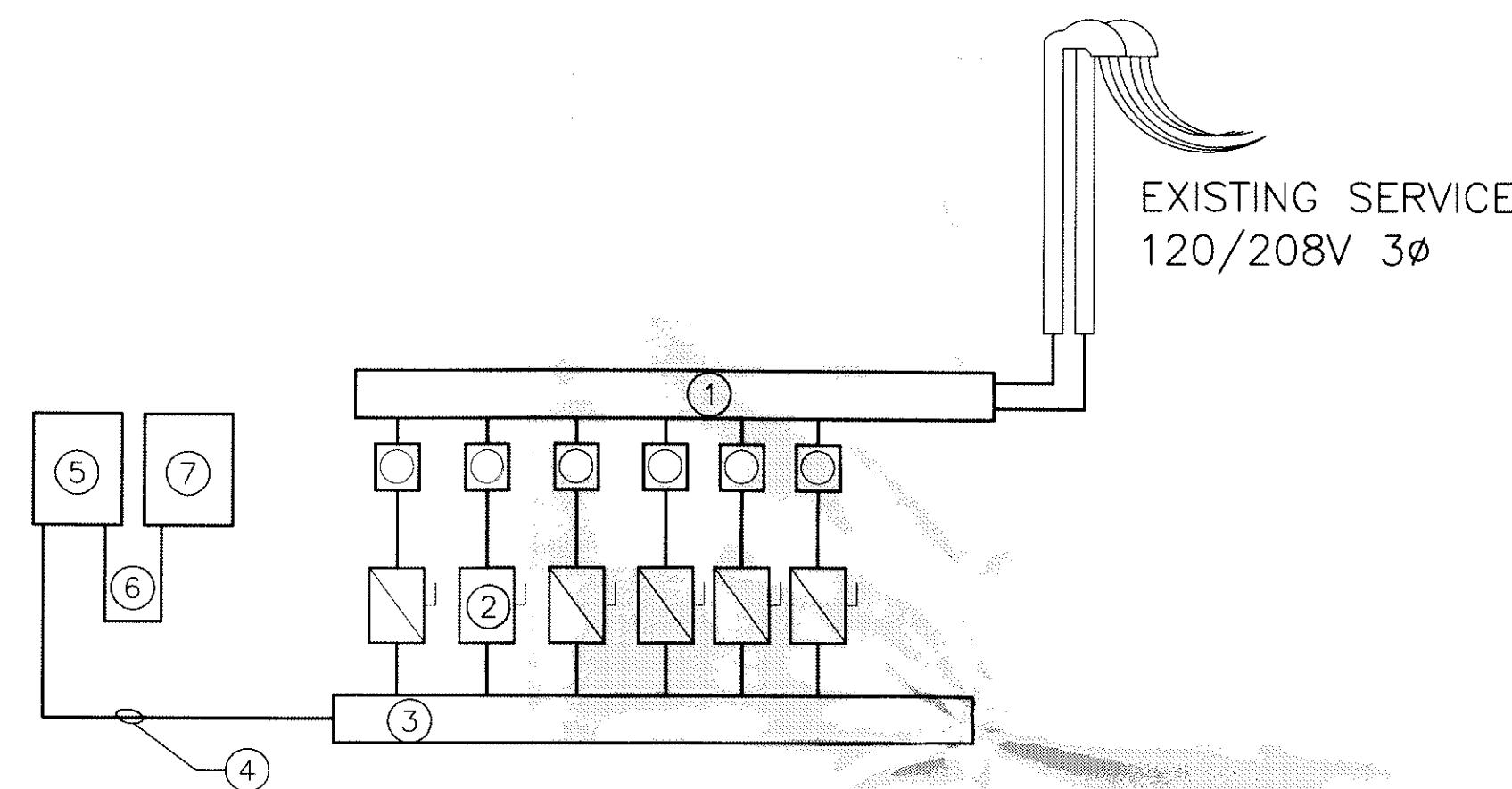
ELECTRICAL DESIGN BASED UPON 2008 NATIONAL ELECTRICAL CODE

ELECTRICAL LOAD SUMMARY - 200A SERVICE		
LOAD SOURCE	1Ø-kVA	3Ø-kVA
BUILDING LIGHTING	9.9k	
ELECTRIC WATER HEATING	9.0k	
AIR CONDITIONING		42.3k
ELECTRIC HEATING		
KITCHEN EQUIPMENT	15.6k	3.0k
REFRIGERATION	6.0k	
RECEPTACLES (STANDARD)	1.4k	
RECEPTACLES (COMPUTER)	5.7k	
OTHER (SPECIFY)		
TOTAL	47.6k	45.3k

LIGHT FIXTURE SCHEDULE				
MARK	DESCRIPTION	LAMP	MODEL NO.	MANUF.
A	2X4 LAY-IN FLUORESCENT EXISTING/RELOCATED	(3) F32-T8 3500K	2SP-G-3-32-FW-A12125-120-GEB	LITHONIA
B	2X2 RECESSED FLUORESCENT WITH ELECTRONIC BALLAST	(2) F17-T8 3000K	2ESBPF217-BLIP-L830HT8	LITHONIA
C	CEILING RECESSED COMPACT FLUORESCENT DOWNLIGHT	(1) F42TRT 4100K 82CRI	LP6F-1/42TRT 6L4	LITHONIA
D	CEILING RECESSED COMPACT FLUORESCENT WALL WASHER	(1) CF40 BX 4100K 82CRI	WWG/CF40-120 1RLD_GEB	LITHONIA
E	EMERGENCY DUAL LAMP W/BATTERY BACK-UP, INSTALL 84" A.F.F.	HIT 5.4W	ELM2	LITHONIA
F	EMERGENCY DUAL LAMP EXIT LIGHT W/BATTERY BACK-UP	2 - 5.4W AC, 6V DC	HQMSWR120/277	LITHONIA
G	L18-DBL -- SURFACE TRACK LIGHT 8" BLACK FINISH, ELECTRONIC BALLAST	(4) 35W METAL HALIDE	LTD-LPHR-35M-20-HEB-DBL-LPFL	LITHONIA

GENERAL NOTES:

- GENERAL REQUIREMENTS**
- ELECTRICAL CONTRACTOR SHALL COORDINATE FULLY WITH OTHER CONTRACTORS ASSOCIATED WITH THIS PROJECT TO VERIFY ALL EQUIPMENT LOCATIONS, CONNECTION REQUIREMENTS, ELEVATIONS AND LOCATIONS OF PIPES, CONDUITS AND DUCTS TO PREVENT CONFLICTS DURING CONSTRUCTION. ANY RELOCATION OR REROUTING OF EQUIPMENT, PIPES, CONDUITS, DUCTS OR MATERIALS RESULTING FROM A LACK OF COORDINATION BETWEEN CONTRACTORS WILL BE AT THE CONTRACTORS EXPENSE.
  - EQUIPMENT ROUGH-INS SHOWN ARE ACCURATE TO THE BEST OF DESIGNER'S KNOWLEDGE. HOWEVER, IN SOME INSTANCES, THE OWNER OR SUPPLIER MAY SUBSTITUTE, OR THE EQUIPMENT ITEM MAY VARY FROM WHAT IS SHOWN. THEREFORE, THE CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS WITH THE OWNER PRIOR TO CONSTRUCTION. FAILURE OF THE ELECTRICAL CONTRACTOR TO VERIFY THESE DIMENSIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION DIRECTLY UPON THE CONTRACTOR.
  - ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED DISCONNECT SWITCHES AND MOTOR STARTERS TO ALL EQUIPMENT.
  - ELECTRICAL CONTRACTOR SHALL REVIEW WITH OWNER AND SIGNAGE MANUFACTURER, REQUIREMENTS AND LOCATION OF BUILDING SIGNAGE PRIOR TO CONSTRUCTION AND PROVIDE 120VAC CONNECTION AS REQUIRED.
  - ELECTRICAL CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS AT JOB COMPLETION TO ARCHITECT.
  - ALL WORK SHALL BE INSTALLED PER ALL GOVERNING CODES.
  - ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL OVEN PLUGS, HUBBELL PLUGS (TWIST LOCKS)/ RECEPTACLES COMPLETE. REFER TO INSTRUCTION MANUAL FOR DETAILS.
  - ALL LIGHTING AND SIGN CIRCUIT BREAKERS TO BE "SWITCH GRADE".
  - ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL STARTERS FOR ROOF MOUNTED SUPPLY AND EXHAUST FANS (SF-1 AND EF-2) AND START-STOP SWITCH. BOTH SF-1 AND EF-2 SHALL RUN AND STOP TOGETHER AND ARE TO BE CONTROLLED FROM THE SAME SWITCH.
  - ALL JUNCTION BOXES INSTALLED ABOVE OR DIRECTLY BELOW THE SUSPENDED CEILING SHALL BE SUPPORTED IN ACCORDANCE WITH ARTICLE 314-23 OF THE 2002 NEC.
  - COMPUTER AND PHONE WIRING SHALL BE ROUTED IN 3/4" CONDUIT TO PHONE BOARD FROM DEVICE LOCATION.
  - ALL ISOLATED GROUND RECEPTACLE CIRCUITS SHALL BE EQUIPPED WITH INSULATED GROUND CONDUCTOR AND SEPARATE NEUTRAL WIRE.
  - NEUTRAL WIRES FOR ISOLATED GROUND CIRCUITS SHALL NOT BE SHARED WITH OTHER BRANCH CIRCUITS. PROVIDE SEPARATE NEUTRAL WIRE FOR EACH ISOLATED GROUND CIRCUIT.
  - ISOLATED GROUND CIRCUITS SHALL NOT BE ROUTED WITHIN SAME CONDUIT AS GENERAL BRANCH CIRCUIT WIRING. PROVIDE SEPARATE CONDUIT FOR SERVICE TO ISOLATED GROUND CIRCUITS.
  - ISOLATED GROUND RECEPTACLES SHALL UNDER NO CIRCUMSTANCE BE INSTALLED IN COMMON JUNCTION BOX WITH NON-ISOLATED GROUND TYPE RECEPTACLE.
  - ELECTRICAL CONTRACTOR SHALL USE THE PORCELAIN WIRE NUTS PROVIDED WITH THE HEAT STRIP UNITS. THE USE OF PLASTIC WIRE NUTS WILL VOID THE MANUFACTURERS WARRANTY. ELECTRICAL CONTRACTOR SHALL USE 90°C WIRE FOR CONNECTION TO HEAT STRIP UNITS PER MANUFACTURER'S RECOMMENDATION.
  - USE CIRCUIT BREAKERS U.L. LISTED AS HACR TYPE FOR USE WITH HVAC AND REFRIGERATING EQUIPMENT HAVING MOTOR GROUP COMBINATIONS AND MARKED FOR USE WITH HACR TYPE CIRCUIT BREAKERS.
  - ELECTRICAL CONTRACTOR SHALL MAKE ALL REQUIRED ELECTRICAL CONNECTIONS FOR WALK-IN COOLER LIGHTING, WALK-IN COOLER REFRIGERATION UNIT AND CUT TABLE HEAT STRIP UNITS.
  - FLUORESCENT LAMPS IN FOOD PREP, COOK AND FOOD STORAGE AREAS SHALL BE PROVIDED WITH SHATTER PROTECTIVE COVERS. GENERAL ELECTRIC "COVERGUARD" LAMPS OR APPROVED EQUAL.
  - ALL EXIT SIGNS, EMERGENCY EGRESS LIGHTS AND NIGHT LIGHT FIXTURES SHALL BE CONNECTED TO THE BRANCH CIRCUITS INDICATED AHEAD OF RESPECTIVE CONTROL SWITCH, IN ORDER TO PROVIDE UNSWITCHED SOURCE TO FIXTURES.
  - ALL 125 VOLT, SINGLE PHASE, 15 OR 20 AMP RECEPTACLES LOCATED IN THE KITCHEN AREA SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION AS REQUIRED BY SECTION 210.8.B.3 OF THE 2002 NEC.



SERVICE RISER DIAGRAM

NO SCALE

ELECTRICAL SERVICE RISER NOTES:

- EXISTING 120/208V 3Ø OVERHEAD SERVICE FROM SERVICE PROVIDER.
- REPLACE EXISTING METER PAN AND FUSED DISCONNECT WITH 120/208V 3Ø 4W 320A METER PAN AND 250A FUSED DISCONNECT.
- EXISTING WIRE WAY.
- NEW (3-250 MCM THHN; 1-4/0 THHN NEUTRAL; 1-#4 GND; 2½" CONDUIT)
- NEW (1- 120/208V 400 AMP 18 POLE PANEL, 22,000 AIC)
- NEW (3-1/0 THHN; 1-2/0 THHN NEUTRAL; 1-#4 GND; 2" CONDUIT)
- NEW (1- 120/208V 150 AMP 42 POLE PANEL, 22,000 AIC)

NEW PANEL: MDP  
LOCATION: BACK ROOM MAIN PANEL

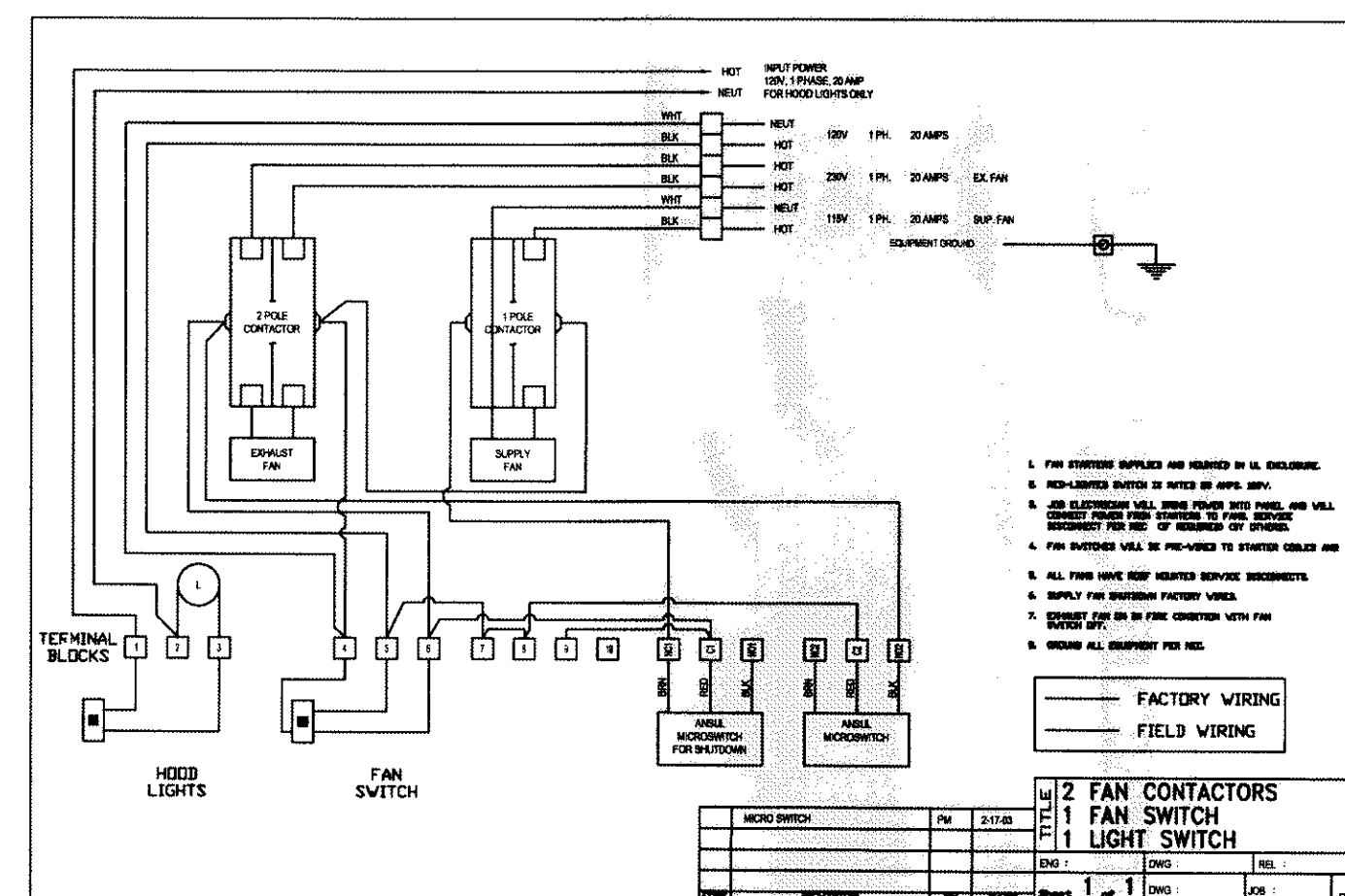
VOLTAGE: 120/208V, 250A 3Ø, 4W  
ENCLOSURE SURFACE MOUNTED W/EQUIPMENT GRND BAR  
400A, MLO, 22,000 AIC

CIR. NO.	THHN WIRE SIZE	LOAD DESCRIPTION	BREAKER	LOAD	AS BLD	CP	LOAD	BREAKER	LOAD DESCRIPTION	THHN WIRE SIZE	CIR. NO.	
1	SPARE						17.1				2	
3	SPARE						18.0	3	180	SUB PANEL A	12	
5	SPARE						15.5				4	
7				7.3			3.4				6	
9	12	EXISTING RTU #1 - 7 TON	70 3	7.3			3.4	40	RTU #3 - 5 TON	8	10	
11				7.3			3.4				12	
13				3.4			1.0				14	
15	8	RTU #2 - 5 TON	40 3	3.4			1.0	3	15	#18 - MIXER	12	
17				3.4			1.0				16	
					TOTAL CONNECTED LOAD (kVA)							
					AP 32.2(KVA) BP 30.1(KVA) CP 30.8(KVA)				GROUND BUS			
									GROUND WIRE (G)			

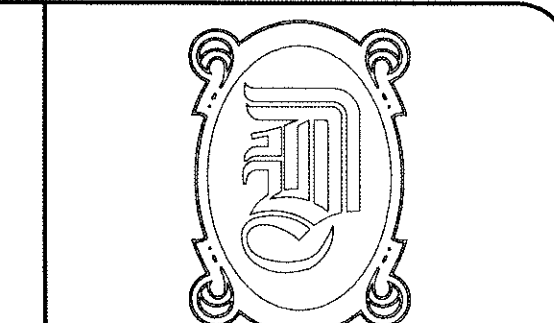
NEW PANEL: A  
LOCATION: BACK ROOM SUB PANEL

VOLTAGE: 120/208V, 150A 3Ø, 4W  
ENCLOSURE SURFACE MOUNTED W/EQUIPMENT GRND BAR  
225A, MLO, 22,000 AIC

CIR. NO.	THHN WIRE SIZE	LOAD DESCRIPTION	BREAKER	LOAD	AS BLD	CP	LOAD	BREAKER	LOAD DESCRIPTION	THHN WIRE SIZE	CIR. NO.	
1	12	#4 - DOUGH RE-PROFFER	20 1	1.1			1.2	1	20	#30 - POS #1	12	
3	12	#4 - DOUGH ROLLER	20 1	1.4			1.2	1	20	#11A - POS #2	12	
5	12	#10 - POS MONITOR #1	20 1	1.8			1.2	1	20	#11B - POS #3	12	
7	12	#5 - POS PRINTER	20 1	1.8			1.2	1	20	#11A - POS #3	12	
9	12	#7 - CONVEYOR OVEN #1 & #2 SHUNT TRIP BRKR	30 2	2.4			1.0	1	20	#1A - PIZZA PREP REFRIG.	12	
11	12	OUTLETS	20 1	.9			1.2	1	20	#2B - MERCHANDISER	12	
13	12	DOUGH MAKE TABLE	20 1	.6			1.7	1	20	#4S & 45B - POS DRIVER POS	12	
15	12	#28 - MERCHANDISER	20 1	.9			0.7	1	20	#2D - FREEZER & COOLER LGHT	12	
17	12	#18 - COOLER COMPRESSOR	20 2	1.2			4.5	2	50	HOT WATER HEATER	8	
19	12	FRONT COUNTER LIGHTS	20 1	0.7			1.5	1	20	WINDOW SIGNS	12	
21	12	OUTLETS	20 1	.5			1.0	1	20	LIGHTS & OUTLETS	12	
23	12	OUTLETS	20 1	.5			1.0	1	20	LIGHTS & OUTLETS	12	
25	12	#8A SUPPLY FAN	20 1	1.2			-	1	20	SPARE	26	
27	12	CARBON MONOXIDE DETECTOR	20 1	.6			1.5	1	20	FRONT SIGN	12	
29	12	OFFICE OUTLETS	20 1	.9			1.5	1	20	WINDOW SIGNS	12	
31	12	SHUNT TRIP CONTROL	20 1	-			1.8	1	20	OFFICE AND RESTROOM LITS	12	
33	12	#34 - BAG WARMER	20 1	1.6			0.8	1	20	DINING 2x4 LIGHTS	12	
35	12	SPARE	20 1	-			-	1	20	SPARE	36	
37	12	SPARE	20 1	-			0.8	1	20	KITCHEN 2x4 LIGHTS	12	
39	12	SPARE	20 1	-			0.8	2	20	#8B EXHAUST FAN	12	
41	12	SPARE	20 1	-			0.8	2	20		40	
					TOTAL CONNECTED LOAD (kVA)							
					AP 17.1(KVA) BP 15.0(KVA) CP 15.5(KVA)				GROUND BUS			
									GROUND WIRE (G)			



- RACEWAY SYSTEMS**
- ALL BRANCH CIRCUIT WIRING SHALL BE ROUTED IN EMT, ELECTRICAL METALLIC TUBING. USE STEEL SET SCREW TYPE FITTINGS ON ALL EMT.
  - CONDUIT SHALL BE SUPPORTED AT INTERVALS PER NEC REQUIREMENTS AND SHALL BE SECURELY FASTENED TO BUILDING WITH AN APPROVED FASTENING SYSTEM.
- WIRING DEVICES, PLATES AND GROUNDING**
- ALL WIRING SHALL CONSIST OF COPPER CONDUCTORS WITH THERMOPLASTIC INSULATION RATED FOR SIX HUNDRED (600) VOLTS. ALL WIRING INSULATION SHALL BE HEAT AND MOISTURE RESISTANT TYPES THW, THWN, OR THHN FOR INTERNAL AND DRIVE LOCATIONS.
  - MINIMUM CONDUCTOR SIZE SHALL BE NO. 12 AWG FOR ALL POWER CIRCUITS (I.E. RECEPTACLES, LIGHTING, EQUIPMENT POWER, ETC.). NUMBER 14 AWG SHALL BE MINIMUM SIZE PERMITTED FOR EQUIPMENT CONTROL CIRCUIT WIRING.
  - ALL SPLICES AND CONNECTIONS SHALL BE MADE IN OUTLET BOXES, JUNCTION BOXES OR EQUIPMENT WHERE ACCESSIBLE.
  - CONDUCTORS SHALL BE PULLED WITHOUT THE USE OF OIL OR GREASE. WIRE PULLING LUBRICANTS WHICH ARE APPROVED FOR USE WITH CONDUCTOR INSULATION MAY BE USED. CARE SHALL BE TAKEN IN PULLING WIRE TO ASSURE THAT MAXIMUM ALLOWABLE PULLING TENSION OF WIRE IS NOT EXCEEDED. WIRING WITH DAMAGED CONDUCTORS OR INSULATION WILL NOT BE ACCEPTED.
  - ALL PLUG-IN DEVICES SHALL BE GROUNDED TYPE. A GROUNDING JUMPER FROM RECEPTACLE TO OUTLET BOX SHALL BE INSTALLED WHERE CONDUIT SYSTEM IS USED FOR GROUNDING.
  - INSTALL INSULATED GREEN GROUNDING CONDUCTOR (NO. 12 AWG MINIMUM) IN RACEWAYS AS INDICATED ON DRAWINGS AND IN ALL NON-METALLIC RACEWAYS PER NEC.
  - SWITCHES FOR LIGHTING CONTROL SHALL BE INDUSTRIAL GRADE, IVORY COLOR, SIDE WIRED ONLY, TWENTY (20) AMP, ONE HUNDRED TWENTY-TWO HUNDRED SEVENTY-SEVEN (120/277) VOLT.
  - DUPLEX RECEPTACLES SHALL BE INDUSTRIAL GRADE, THREE (3) WIRE GROUNDING, IVORY COLOR, FINDER GROOVE, TWENTY (20) AMP, NEMA 5-20R 125 VAC.
  - PLATES FOR FLUSH MOUNTED DEVICES SHALL BE STAINLESS STEEL. PLATES FOR SURFACE MOUNTED BOXES SHALL BE GALVANIZED STEEL.
- LIGHTING FIXTURES**
- PROVIDE LIGHTING FIXTURES, OF SIZES, TYPES AND RATINGS INDICATED; COMPLETE WITH, BUT NOT LIMITED TO, HOUSINGS, ENERGY-EFFICIENT LAMPS, LAMP HOLDERS, REFLECTORS, ENERGY EFFICIENT BALLASTS, STARTERS AND WIRING. SHIP FIXTURES FACTORY-ASSEMBLED, WITH THOSE COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. DESIGN FIXTURES WITH CONCEALED HANGES AND CATCHES, WITH METAL PARTS GROUNDED AS COMMON UNIT, AND SO CONSTRUCTED AS TO DAMPEN BALLAST GENERATED NOISE.
  - FLUORESCENT BALLASTS PROVIDED FOR FOUR (4) FOOT T-8 FLUORESCENT LAMPS SHALL BE TWO-LAMP ENERGY SAVING, ELECTRONIC TYPE.
  - INSTALL INTERIOR LIGHTING FIXTURES AT LOCATIONS AS INDICATED, IN ACCORDANCE WITH FIXTURE MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC, NECA'S "STANDARD OF INSTALLATION", NEMA STANDARDS, AND WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT LIGHTING FIXTURES FULLFILL REQUIREMENTS.
  - PROVIDE AND INSTALL ALL LIGHT FIXTURES INDICATED COMPLETE WITH SPECIFIED LAMPS. FLUORESCENT LAMPS SHALL BE 48" 32W T-8, RAPID START WITH NOMINAL OPERATING TEMPERATURES OF 3,500 K. MINIMUM INITIAL LIGHT OUTPUT OF 2850 LUMENS. COMPACT FLUORESCENT LAMPS SHALL BE 29 WATT COMPACT FLUORESCENT LAMPS SHALL BE HIGH COLOR RENDERING, HIGH EFFICIENCY LAMPS WITH NOMINAL OPERATING TEMPERATURE OF 3,500 K.
  - FASTEN LIGHTING FIXTURES SECURELY TO STRUCTURAL SUPPORTS; AND ENSURE THAT FIXTURES ARE PLUMB AND LEVEL.
  - FLUORESCENT FIXTURES INSTALLED IN LAY-IN CEILINGS SHALL BE SUPPORTED BY ADDITIONAL WIRE SUPPORT AT TWO CORNERS, ATTACHED TO CEILING GRID, AND ANCHORED TO STRUCTURAL MEMBER. THIS ADDITIONAL WIRE SUPPORT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND IS NOT CONSIDERED PART OF GENERAL GRID LAYOUT.
  - PROVIDE EQUIPMENT GROUNDING CONNECTIONS FOR INTERIOR LIGHTING FIXTURES AS INDICATED. TIGHTEN CONNECTION TO COMPLY WITH TIGHTENING TORQUES SPECIFIED IN UL STD 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDS.
  - ALL LIGHT FIXTURES SHALL BE U.L. LISTED.
- FIRE RATED WALL PENETRATIONS**
- PROVIDE U.L. LISTED FIRESTOP SYSTEM SEALANTS AROUND ALL CONDUITS PASSING THROUGH ALL RATED WALLS OR FLOORS IN ACCORDANCE WITH THE U.L. FIRE RESISTANCE DIRECTORY.
  - THE SELECTED SYSTEM MUST BEAR AN APPROVED U.L. PENETRATION SYSTEM NUMBER AND BE INSTALLED IN ACCORDANCE WITH THE SELECTED SYSTEM TAKING INTO ACCOUNT THE CONSTRUCTION AND THE RATING OF THE RATED ASSEMBLY BEING PENETRATED AND THE TYPE OF PENETRATION BEING MADE.
  - THE ELECTRICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS TO CONFIRM NUMBER AND EXTENT OF ALL FIRE RATED PARTITIONS IN THE FACILITY.
- APPROVED PRODUCTS:**
- HILTI CS240
  - TERMO PYRESHIELD
  - 3M CP-25



DAMMON ENGINEERING, INC.

EMMETT DAMMON

ARCHITECT ROBERT WILTSE

1095 FLORIDA AVENUE SLIDELL, LA. 70458 985-649-5832

WEBSITE: WWW.DAMMONENGINEERING.COM

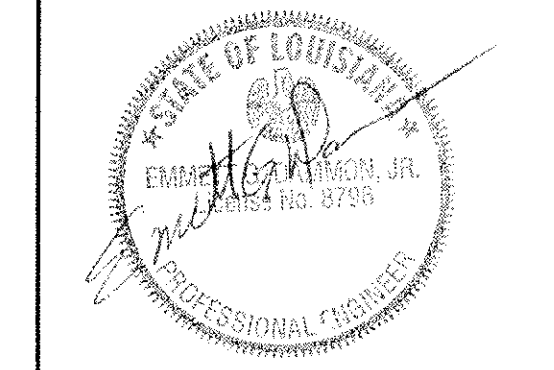
EMAIL: DAMMONENG@BELLSOUTH.NET

ARCHITECTURE  
ENGINEERING  
STUDIES  
PLANNING  
INVESTIGATION  
EXPERT WITNESS

MARCO'S PIZZA TENANT BUILDOUT

532 GAUSE BLVD SLIDELL, LA 70458

ELECTRICAL PANELS



SCALE: AS NOTED

JOB#: 2083

DATE: 11-10-10

SHEET 9

E-2

OF 11

REVIEWED FOR  
STATE FIRE MARSHAL  
AS PER DENNY LETTER  
8/7 JULY 11/11 SUBJECT  
G. Hassan Haddad