

PANEL SCHEDULE											
PANEL NUMBER	LP	DIRECTORY									
LOCATION	STOCKROOM	CIRCUIT NO.	AMP/SP. OLB.	KVA	A	B	C	KVA	AMP/SP. OLB.	CIRCUIT NO.	DIRECTORY
		1	20A	0.20	-	-	-	0.20	20A	2	EXIT SIGNS / NITE LIGHTS / F.E.M.G. LIGHTS*
		3	20A	1.60	-	-	-	1.75	20A	4	L.T.G. SALES AREA (LVL 2)
		5	20A	0.67	-	-	-	0.00	20A	6	SPARE
		7	20A	0.25	-	-	-	0.00	20A	8	SPARE
		9	20A	0.00	-	-	-	0.00	20A	10	SPARE
		11	20A	0.00	-	-	-	0.10	12	ENERGY MANAGEMENT SYSTEM (E.M.S.)	
		13	20A	0.00	-	-	-	0.10	20A	13	SPARE
		15	20A	0.00	-	-	-	0.10	16	SPARE	
		17	20A	0.00	-	-	-	0.00	20A	18	SPARE
		19	10A	0.10	-	-	-	0.00	20A	20	SPARE
		21	10A	0.10	-	-	-	0.00	20A	21	SPARE
		23	10A	0.10	-	-	-	0.00	20A	24	SPARE
		25	10A	0.10	-	-	-	0.00	20A	25	SPARE
		27	10A	0.10	-	-	-	1.50	20A	28	HEATER H-1 (HACR)
		29	10A	0.10	-	-	-	1.50	30	SPARE	
		31	10A	0.10	-	-	-	0.10	32	PANEL 'CF'	
		33	10A	0.10	-	-	-	6.13	100A	34	SPARE
		35	10A	0.10	-	-	-	6.59	36	SPARE	
		37	80A	6.94	-	-	-	6.94	38	PANEL 'RP'	
		39	80A	6.94	-	-	-	7.22	100A	40	SPARE
		41	80A	6.94	-	-	-	9.98	42	SPARE	

LOAD SUMMARY			
Connected kW	Demand Factor	Demand kW	
13.40	1.25	16.75	
115.53	1.00	115.53	
15.28	1.00	15.28	
2.00	1.00	2.00	
20.82	1.00	20.82	
168.03		171.38	

PANEL SCHEDULE											
PANEL NUMBER	CT	DIRECTORY									
LOCATION	STOCKROOM	CIRCUIT NO.	AMP/SP. OLB.	KVA	A	B	C	KVA	AMP/SP. OLB.	CIRCUIT NO.	DIRECTORY
		1	15A	0.30	-	-	-	0.00	20A	2	SPARE
		3	15A	0.30	-	-	-	0.00	20A	4	SPARE
		5	20A	1.36	-	-	-	0.00	20A	6	SPARE
		7	40A	3.75	-	-	-	0.00	20A	8	SPARE
		9	40A	3.75	-	-	-	0.00	20A	10	SPARE
		11	40A	3.75	-	-	-	0.00	20A	12	SPARE
		13	40A	3.75	-	-	-	0.00	20A	14	SPARE
		15	20A	1.80	-	-	-	0.00	20A	16	SPARE
		17	1.80	-	-	-	-	0.00	20A	18	SPARE
		19	15A	0.50	-	-	-	0.00	20A	20	SPARE
		21	20A	0.00	-	-	-	0.00	20A	22	SPARE
		23	20A	0.00	-	-	-	0.00	20A	24	SPARE
		25	20A	0.00	-	-	-	0.00	20A	26	SPARE
		27	20A	0.00	-	-	-	0.00	20A	28	SPARE
		29	20A	0.00	-	-	-	0.00	20A	30	SPARE
		31	20A	0.00	-	-	-	0.00	20A	32	SPARE
		33	20A	0.00	-	-	-	0.00	20A	34	SPARE
		35	20A	0.00	-	-	-	0.00	20A	36	SPARE
		37	20A	0.00	-	-	-	0.00	20A	38	SPARE
		39	20A	0.00	-	-	-	0.00	20A	40	SPARE
		41	20A	0.00	-	-	-	0.00	20A	42	SPARE

LOAD SUMMARY			
Connected kW	Demand Factor	Demand kW	
0.00	1.25	0.00	
0.00	1.00	0.00	
0.00	1.00	0.00	
0.00	1.00	0.00	
20.82	1.00	20.82	
20.82		20.82	

PANEL SCHEDULE											
PANEL NUMBER	RP	DIRECTORY									
LOCATION	STOCKROOM	CIRCUIT NO.	AMP/SP. OLB.	KVA	A	B	C	KVA	AMP/SP. OLB.	CIRCUIT NO.	DIRECTORY
		1	20A	0.36	-	-	-	0.90	20A	2	R - SALES AREA
		3	20A	0.36	-	-	-	0.72	20A	4	R - SALES AREA
		5	20A	0.36	-	-	-	0.72	20A	6	R - SALES AREA / HALLWAY
		7	20A	0.36	-	-	-	0.90	20A	8	R - STOCKROOM
		9	20A	0.36	-	-	-	0.36	20A	10	QUAD @ TELEPHONE BACKBOARD*
		11	20A	0.36	-	-	-	0.18	20A	12	R - OFFICE (ISOLATED)
		13	20A	0.36	-	-	-	1.26	20A	14	R - STORE/REIN
		15	20A	0.36	-	-	-	0.72	20A	16	HVAC SERVICE RECEPTACLES
		17	20A	0.54	-	-	-	1.20	20A	18	HAND DRYER - MEN'S TOILET
		19	20A	0.54	-	-	-	1.20	20A	20	HAND DRYER - WOMEN'S TOILET
		21	20A	0.18	-	-	-	0.40	20A	22	CHIME TRANSFORMER
		23	20A	0.18	-	-	-	0.18	20A	24	R - OFFICE CCTV (ISOLATED)*
		25	20A	0.90	-	-	-	0.36	20A	26	R - OFFICE (ISOLATED)*
		27	20A	0.20	-	-	-	0.36	20A	28	R - SECURITY SYSTEM*
		29	20A	0.20	-	-	-	2.00	30A	30	WATER HEATER*
		31	20A	0.20	-	-	-	0.00	20A	32	SPARE
		33	20A	1.00	-	-	-	0.00	20A	34	SPARE
		35	20A	1.00	-	-	-	1.20	20A	36	SHWAGE (LVL 2)
		37	20A	1.00	-	-	-	1.20	20A	38	SHWAGE (LVL 3)
		39	20A	1.20	-	-	-	1.20	20A	40	SHWAGE (LVL 3)
		41	20A	0.56	-	-	-	1.20	20A	42	FUTURE SIGNAGE (LVL 3)

LOAD SUMMARY			
Connected kW	Demand Factor	Demand kW	
8.56	1.25	10.70	
0.00	1.00	0.00	
16.00	1.00	16.00	
2.00	1.00	2.00	
0.00	1.00	0.00	
26.54		28.70	

ON EACH ELECTRICAL PANEL, CIRCUITS DENOTED WITH "E.M.S." ARE CONTROLLED VIA LIGHTING CONTROL PANEL LCP WHICH IS PART OF THE E.M.S. (ENERGY MANAGEMENT SYSTEM). PER THE FOLLOWING, THE "LVL#" INDICATES THE CONTACTOR(S) THAT WILL SWITCH THE ASSOCIATED CIRCUITS.

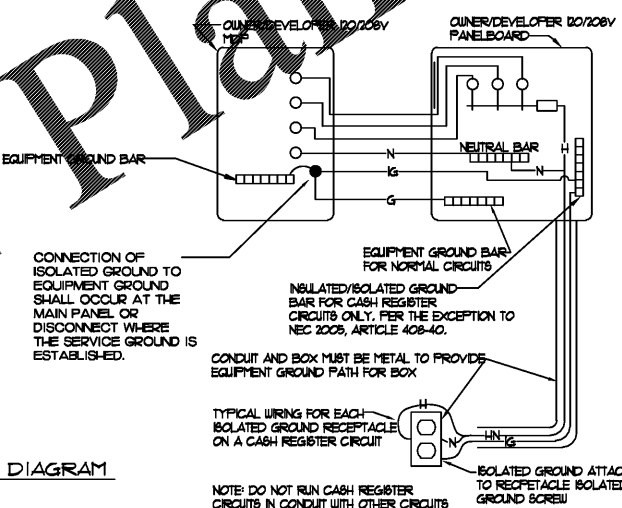
LVL 1 - EMPLOYEE LIGHTS (1 CONTACTOR REQUIRED)  
 LVL 2 - CUSTOMER LIGHTS (1 CONTACTOR REQUIRED)  
 LVL 3 - SIGNS / EXTERIOR LIGHTS (2 CONTACTORS REQUIRED)  
 LVL 4 - DAYLIGHTING (1 CONTACTOR REQUIRED)  
 LVL 5 - STOCKROOM (1 CONTACTOR REQUIRED)

**GENERAL NOTES:**

- ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70, NATIONAL ELECTRICAL CODE. ALL ITEMS ARE ON AN OR EQUAL BASIS.
- ALL SINGLE PHASE BRANCH CIRCUITS (RECEPTACLES, LIGHTING, ETC.) ARE 1/2" CONDUIT OR EMT WITH (3/4" OR 1/2" CABLE TO THE EXTENT ALLOWED BY NEC AND THE LOCAL AUTHORITIES. ALL CONDUCTORS TO BE THIN WALL 90°C WIRING. ALL OTHER CONDUIT AND WIRING SHALL BE AS INDICATED ON THE PLANS. ACTUAL ROUTING AND HOFERIN GROUPINGS ARE TO BE DETERMINED IN THE FIELD.
- ELECTRICAL DRAWINGS ARE DIAGRAMMATIC EXCEPT FOR DETAILS AND ELEVATIONS. DO NOT SCALE FROM DIAGRAMMATIC DRAWINGS. EXACT LOCATIONS OF DEVICES AND PANELS ARE TO BE DETERMINED AND ROUGHED-IN DURING CONSTRUCTION TO AVOID INTERFERENCE, TO MEET USER REQUIREMENTS, TO PROVIDE ADEQUATE MOUNTING, AND TO MEET NEC CLEARANCE REQUIREMENTS.
- CIRCUIT BREAKER FOR WATER HEATERS TO BE PROVIDED WITH THE MEANS TO BE LOCKED IN THE OPEN POSITION.
- VERIFY EXACT LOCATION OF ALL MOTORS AND EQUIPMENT BEFORE ROUGHING IN.
- FINAL CONNECTIONS TO ALL AIR-HANDLERS, CONDENSING UNITS, EXHAUST FANS, AND OTHER EQUIPMENT DEVICES WHICH VIBRATE, SHALL BE MADE WITH FLEXIBLE SEALING AND APPROPRIATE WIRING.
- THE GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE SIGN VENDOR FOR ANY ADDITIONAL EXTERIOR SIGNAGE AND THE ASSOCIATED ELECTRICAL REQUIREMENTS. AFTER THE ELECTRICAL DESIGN IS COMPLETE, IT MUST BE DETERMINED THAT CERTAIN SITES REQUIRE SIGN OR REAR SIGNAGE.
- BACK TO BACK MOUNTING OF RECEPTACLES IS NOT PERMITTED.
- IN ADDITION TO THE NEC REQUIREMENTS FOR GFCI RATED RECEPTACLES, THE FOLLOWING RECEPTACLES SHALL ALSO BE GFCI RATED: (1)-ALL RECEPTACLES LOCATED WITHIN 6 FEET OF A SINK, (2)-ALL RECEPTACLES WHICH ARE PROVIDED FOR CONVENIENCE IN OPERATING HVAC EQUIPMENT REGARDLESS OF LOCATION WHETHER INDIVIDUAL GFCI DEVICES OR GFCI CIRCUIT BREAKERS ARE ACCEPTABLE BUT RECEPTACLES PROVIDED BY CIRCUIT BREAKERS OR OTHER GFCI DEVICES SHALL BE CLEARLY MARKED AS GFCI AND THE SOURCE OF PROTECTION SHOWN.
- PROVIDE LAMINATED NAMEPLATE (WHITE LETTERS ON BLACK BACKGROUND) ON EACH PANELBOARD, MOTOR STARTER, TRANSFORMER, DISCONNECT SWITCH, ETC. LETTERS SHALL BE 0.15 INCH MINIMUM.
- CIRCUIT BREAKERS FOR HVAC EQUIPMENT SHALL BE HACR RATED.
- MINIMUM HORIZONTAL SEPARATION BETWEEN BOXES ON OPPOSITE WALLS OF FIRE RATED WALL SHALL BE 6 INCHES.
- VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL BEFORE ROUGHING IN LIGHT SWITCHES.
- TRADE NAMES ARE GIVEN TO CLARIFY TYPE OF PRODUCT AND QUALITY DESIRED.
- CONTRACTOR SHALL CUT AS REQUIRED TO INSTALL ELECTRICAL EQUIPMENT. REPAIR OF FLOOR OR WALLS SHALL BE COORDINATED WITH GENERAL CONTRACTOR. CONTRACTOR SHALL ALSO REPAIR ALL OPENINGS LEFT DUE TO EQUIPMENT REMOVAL.
- CONDUCTORS ARE AWG#2 COPPER UNLESS OTHERWISE SHOWN. ALL CONDUCTORS LARGER THAN #10 SHALL BE STRANDED. RUNS IN EXCESS OF 90'-0" (ONE WAY) SHALL BE SIZED PER THE NATIONAL ELECTRICAL CODE MAXIMUM 3% VOLTAGE DROP.
- PANELBOARDS SHALL CONTAIN A TYPEWRITTEN DIRECTORY WITH A PLASTIC COVER AFFIXED TO THE INSIDE DOOR.
- ALL FIXTURES, DEVICES, CONDUIT, AND EQUIPMENT SHALL BE SECURED WITH APPROVED HANGERS AND ANCHORS AND IN ACCORDANCE WITH APPROVED STANDARDS OF INSTALLATION.
- ALL BREAKERS SHOWN IN THE PANELBOARD SCHEDULE SHALL BE RATED AS SHOWN FOR BOTH CIRCUIT CAPACITY AND FAULT CURRENT INTERRUPTING CAPACITY.
- CONDUIT FOR TELEPHONE OUTLETS TO BE 3/4" EMT. PROVIDE FULL STRING TO TELEPHONE BACKBOARD VIA CONDUITS AND CABLE TRAY WHERE FEASIBLE.
- ALL PANELBOARDS, DISCONNECT SWITCHES, MOTOR STARTERS, AND CONTACTORS SHALL BE NEMA 1, UNLESS OTHERWISE NOTED.
- IN ACCORDANCE WITH ARTICLE 250-81 NEC, BOND GROUNDING ELECTRODE SYSTEM TO ALL OF THE FOLLOWING IF AVAILABLE:
  - BUILDING STEEL
  - FOUNDATION REBAR
  - BUILDING COUNTERPOISE
  - UNDERGROUND METAL COLD WATER PIPE

**CASH REGISTER GROUNDING DIAGRAM NOTES**

- CASH REGISTER AND COMPUTER WIRING  
 FURNISH AND INSTALL AN INSULATED, ISOLATED GROUND BAR IN PANEL. INSTALL AN INSULATED ISOLATED GROUND WIRE IN EACH BRANCH CIRCUIT HOMERUN TO PANELBOARD. CONNECT GROUND WIRE FROM CASH REGISTER AND COMPUTER CIRCUITS TO ISOLATED GROUND BAR IN PANELBOARD AND DIRECTLY TO ISOLATED GROUND RECEPTACLES IN ISOLATED GROUND RECEPTACLES.  
 DO NOT CONNECT ISOLATED GROUND WIRE TO RACEWAY OR BOX. CONDUIT AND BOX SHALL BE METAL. METAL CONNECTORS SHALL BE USED TO FILE AND WELD TO ESTABLISH GROUND PATH FOR BOX AND RACEWAY. DO NOT JOIN ANY DEVICES WITH CASH REGISTER OR COMPUTER CIRCUITS.  
 CASH REGISTER AND SYSTEM SHALL BE FURNISHED AND INSTALLED BY OTHERS. FURNISH AND INSTALL CONNECTION BOX IN OFFICE AND 7' CONDUIT WITH PLUG IN SALES AREA CEILING CAVITY.



**RISER LEGEND**

---	DASH DOT LINE TYPE INDICATES EXISTING EQUIPMENT TO REMAIN
---	HIDDEN LINE TYPE INDICATES EQUIPMENT FURNISHED AND INSTALLED BY OWNER/DEVELOPER
---	CONTINUOUS LINE TYPE INDICATES NEW EQUIPMENT TO BE INSTALLED
---	PHANTOM LINE TYPE INDICATES EXISTING EQUIPMENT TO BE RELOCATED

