

**SCOPE OF WORK**

USE THE NEW 600 AMP - 120/208 V - 3Ø ELECTRICAL SERVICE. USE THE NEW PANELS AND PROVIDE ALL NECESSARY EQUIPMENT AND ALL WIRING, LIGHTING AND LIGHTING CONTROLS FOR NEW MAACO SHOP BUILDOUT.

**GENERAL LIGHTING NOTES**

- A. WHERE LIGHT FIXTURE IS FOLLOWED BY "NL", THIS FIXTURE IS DESIGNATED AS A NIGHT LIGHT AND SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.
- B. UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE AND LOWER CASE LETTER DENOTES SWITCHING SCHEME.
- C. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.

**ELECTRICAL LEGEND**

SYMBOL	DESCRIPTION
	EXHAUST FAN
	COMBINATION EXHAUST FAN/LIGHT (REFER TO MECHANICAL PLANS)
	SMOKE DETECTOR
	JUNCTION BOX
	CAMERA LOCATION
	WALL MOUNTED PHOTO CELL
	BATTERY BACK UP EXIT LIGHT
	BATTERY BACK UP EMERGENCY LIGHT
	WALL SWITCH (SINGLE, DOUBLE, )
	WALL SWITCH (TIMER)
	DIMMER WALL SWITCH
	OCCUPANCY SENSOR WALL SWITCH
	VARIABLE SPEED SWITCH
	SIMPLEX RECEPTACLE, +1Ø AFF OR AS NOTED. SUFFIX DENOTES FOLLOWING: A - NEMA 5-15R B - NEMA 6-15R C - NEMA 14-30R D - NEMA 14-50R E - NEMA L6-30R
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, 4Ø TO AFF AT KITCHEN, BATHS AND TOPS
	HALF SWITCHED DUPLEX RECEPTACLE
	230 VOLT RECEPTACLE
	QUADRUPLEX RECEPTACLE
	FLOOR MOUNTED FLUSH DUPLEX RECEPTACLE
	FLOOR MOUNTED FLUSH QUAD RECEPTACLE
	FLOOR MOUNTED FLUSH 230 VOLT RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	ELECTRICAL PANEL
	DISCONNECT SWITCH
	USB CHARGER RECEPTACLE
	TELEVISION OUTLET
	TELEPHONE OUTLET
	TELEPHONE/DATA OUTLET
	DATA OUTLET
	FLOOR MTD. FLUSH TELEPHONE/DATA OUTLET
	QUAD. DATA OUTLET RJ45
	THERMOSTAT DEVICE
	AC OUTDOOR UNIT MOTOR AS NOTED WITH WEATHERPROOF CONTROLLER AND DISCONNECT SWITCH WITH
	NON FUSED DISCONNECT SWITCH AMPERAGE AND NUMBER OF POLES AS NOTED
	30A/240V NON FUSED DISCONNECT SWITCH
	60A/240V NON FUSED DISCONNECT SWITCH
	100A/240V NON FUSED DISCONNECT SWITCH
	200A/240V NON FUSED DISCONNECT SWITCH
<b>ABBREVIATIONS:</b>	
ABOVE FINISH FLOOR= A.F.F.	BELOW COUNTER= BC
COUNTER TOP LEVEL= C	PUSH BUTTON= PB
GROUND FAULT INTERRUPTER= GFI	UNDER CABINET= UC
VERIFY PRIOR TO INSTALL= VH	VAPOR PROOF= VP
WEATHER PROOF= WP	SALVAGED= S

**LIGHTING FIXTURE SCHEDULE**

MARK	MANUFACTURER	CATALOG NUMBER	LIGHTING FIXTURE DATA		VOLTS	BALLAST DATA			MOUNTING	DESCRIPTION
			NUMBER	TYPE		NUMBER	TYPE	INPUT WATTS		
A	ELITE LIGHTING	24FPL1-LED-400L-DM10-MVOLT-3Ø-85-EMG-LED-10W	1	LED	120	1	ELECTRONIC DRIVER	41	RECESSED	RECESSED 2x4 LED TROFFER WITH ACRYLIC LEIS
AE	ELITE LIGHTING	24FPL1-LED-400L-DM10-MVOLT-3Ø-85-EMG-LED-10W	2	LED	120	1	ELECTRONIC DRIVER	41	RECESSED	SAME AS FIXTURE TYPE 'A' EXCEPT PROVIDED WITH 90 MINUTE BATTERY BACK UP BALLAST. NOTE 3
BE	ELITE LIGHTING	40WLED-3400L-DM10-MVOLT-3Ø-85-EMG-LED	2	LED	120	1	ELECTRONIC DRIVER	26	SURFACE	SURFACE MOUNTED 1x4 WRAPAROUND WITH 90 MINUTE BATTERY BACK UP BALLAST. NOTE 3
C	ELITE LIGHTING	CB4LED-1000L-DM10-MVOLT-WD-3Ø-85-VHCH	46	LED	120	1	ELECTRONIC DRIVER	68	PENDANT	8' LED LOW BAY CHAIN HUNG 14' AFF
CE	ELITE LIGHTING	CB4LED-1000L-DM10-MVOLT-WD-3Ø-85-0EMG-LED-20W-VHCH	6	LED	120	1	ELECTRONIC DRIVER	68	PENDANT	SAME AS FIXTURE TYPE 'C' EXCEPT PROVIDED WITH 90 MINUTE BATTERY BACK UP BALLAST. NOTE 3
D	ELITE LIGHTING	8-AS18-LED-8-ØEM10-MVOLT-3Ø-90-ØØUØØ-SUM-Ø-ØØØØS	2	LED	120	1	ELECTRONIC DRIVER	74	PENDANT	8' LED LOW BAY PENDANT HUNG 12' AFF. WHITE FINISH
E	LITHONIA LIGHTING	W8TLED-P3-ØK-WW-WVOLT	10	LED	120	1	ELECTRONIC DRIVER	52	WALL	EXTERIOR LED WALL LIGHT. SEE ARCH ELEVATIONS FOR EXACT MOUNTING HEIGHTS
EE	LITHONIA LIGHTING	W8TLED-P3-ØK-WW-WVOLT	6	LED	120	1	ELECTRONIC DRIVER	52	WALL	SAME AS FIXTURE TYPE 'E' EXCEPT PROVIDED WITH 90 MINUTE BATTERY BACK UP BALLAST. NOTE 3
F	LEDALUX	HRM-1-T4-32L-Ø3-40K-UNV-WM-BLK	1	LED	120	1	ELECTRONIC DRIVER	57	SURFACE	CEILING MOUNTED EXPLOSION PROOF LED LIGHT FIXTURE, CLASS 1 DIV 2, MOUNT EVEN WITH BOTTOM OF BAR JOISTS
FE	LEDALUX	HRM-1-T4-32L-Ø3-40K-UNV-WM-BLK-CWB	1	LED	120	1	ELECTRONIC DRIVER	57	SURFACE	SAME AS FIXTURE TYPE 'F' EXCEPT PROVIDED WITH 90 MINUTE BATTERY BACK UP BALLAST. NOTE 3
Øx	MULE LIGHTING	MX-B-R-U-SD-PKMX2	-	LED	120	1	LED DRIVER	<1	UNIVERSAL	LED EXIT SIGN WITH RED LETTERS AND WHITE HOUSING. PROVIDE 90 MINUTE BATTERY BACKUP.
<p>NOTES:</p> <ol style="list-style-type: none"> <li>CATALOG NUMBERS AND MANUFACTURERS ARE TO INDICATE TYPE AND QUALITY OF FIXTURE DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MANUFACTURERS FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE OF ANY FIXTURES. INFORMATION ON ALTERNATE FIXTURES PROCESSED BY THE CONTRACTOR SHALL INCLUDE THE ADDITIONAL ASSOCIATED WITH ACCEPTANCE OF THAT FIXTURE (OR THE ALTERNATE PACKAGE AS A WHOLE)</li> <li>EXIT AND EMERGENCY LIGHTING FIXTURES SHALL BE CIRCUITED TO AN UNSWITCHED LEG OF THE LOCAL LIGHTING CIRCUIT UNLESS NOTED OTHERWISE.</li> <li>PROVIDE CONSTANT UNSWITCHED HOT WIRE FOR BATTERY. COORDINATE EXACT WIRING REQUIREMENTS WITH MANUFACTURER.</li> <li>ALL LIGHTING FIXTURES SHALL BE RATED FOR BUILDING SYSTEM VOLTAGE. CONTRACTOR MUST VERIFY ALL LOCATIONS. CONTRACTOR SHALL FURNISH AND INSTALL EACH LIGHTING FIXTURE COMPLETE WITH PLASTER FRAMES AND ALL OTHER INSTALLATION AND HANGING REQUIREMENTS AS REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION AT EACH FIXTURE LOCATION.</li> <li>UNLESS INDICATED OTHERWISE, ALL LED LIGHT FIXTURES TO HAVE ELECTRONIC DRIVERS.</li> <li>CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND COORDINATING ALL LIGHTING FIXTURE CATALOG NUMBERS AND LOCATIONS WITH THE INTENT OF FIXTURE DESCRIPTIONS LISTED AND VERIFY FIXTURE QUANTITIES. FIXTURE QUANTITIES SHOWN ARE FOR INFORMATION ONLY. ANY DISCREPANCY SHALL BE REPORTED IN WRITING TO THE ARCHITECT PRIOR TO INSTALLATION.</li> <li>ALL FIXTURES SHALL BE UL LISTED AND LISTED FOR INTENDED USE AND APPLICATION. ALL LIGHTING FIXTURES EXPOSED TO WEATHER OR MOISTURE SHALL BEAR UL "WET LOCATION" LABEL AND LIGHTING FIXTURES EXPOSED TO DAMPNESS SHALL BEAR UL "DAMP LOCATION" LABEL. ALL FIXTURES IN HAZARDOUS ENVIRONMENTS SHALL BE LISTED AND LABELED FOR THAT SPECIFIC PURPOSE, INCLUDING INSTALLATION MATERIALS AND METHODS.</li> <li>ALL EXIT SIGNS SHALL BE INSTALLED COMPLETE WITH ALL INSTALLATION AND HANGING ACCESSORIES TO PROVIDE AN UNOBSTRUCTED VIEW OF EACH SIGN FACE AS REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND LOCATION OF ALL EXITS WITH LOCAL AUTHORITIES. EXIT SIGNS WILL BE ADJUSTED AS NECESSARY WITHOUT ADDITIONAL COST.</li> <li>REFER TO APPLICABLE SECTIONS OF THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR LIGHTING FIXTURES.</li> <li>ALL EXIT SIGNS AND BATTERY EMERGENCY UNITS MUST BE APPROVED BY LOCAL CODE AND MAINTAIN MINIMUM OF 90 MINUTES OF CONTINUOUS ILLUMINATION AND SHALL PROVIDE A MINIMUM OF 1 FOOT-CANDLE AT THE WALKING SURFACE LEVEL, IN SPACES THAT REQUIRE TWO OR MORE MEANS OF EGRESS. THE CONTRACTOR WILL FURNISH AND INSTALL ALL ADDITIONAL EMERGENCY UNITS AS REQUESTED BY THE LOCAL AUTHORITY HAVING JURISDICTION AT THE FINAL INSPECTION. AN ADDITIONAL COST TO BE APPROVED BY THE OWNER.</li> <li>ALL ELECTRONIC DRIVERS SHALL BE EQUIPPED WITH DISCONNECT PER NEC 410.130(D).</li> <li>ALL CIRCUIT BREAKERS CONTROLLING EMERGENCY LIGHTS SHALL BE LOCKED IN THE "ON" POSITION.</li> </ol>										

**ELECTRICAL PLAN NOTES**

- ELECTRICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET.
- CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT, NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.
- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE OWNER OR HIS REPRESENTATIVE AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL OWNER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.
- ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRIC CODE AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION.
- DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION FOR ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
- ALL ELECTRICAL NOT BEING REUSED MUST BE REMOVED IN ITS ENTIRETY.
- ALL CONDUIT IN OR UNDERGROUND OR IN CONCRETE MUST BE RIGID GALVANIZED STEEL.
- CIRCUIT BREAKERS AND PANELS TO BE BOLT ON TYPE.
- ALL EQUIPMENT SHALL BE APPROVED BY UL OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY.
- ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY NEC 250.146
- SUBMIT SERVICE ENTRANCE EQUIPMENT FOR SEPARATE APPROVAL.
- ALL LOW VOLTAGE MUST BE IN CONDUIT TO ABOVE THE DROP CEILING. BRIDAL RINGS OR "J" HOOKS REQUIRED.
- SEPARATE PERMITS ARE REQUIRED FOR ALL LOW VOLTAGE SUCH AS TELEPHONE, DATA, THERMOSTAT, MUSIC, ALARMS, ETC.
- SEPARATE PERMIT REQUIRED FOR SIGNAGE.
- PRIOR TO ANY CONSTRUCTION WORK BEGINNING AN ON-SITE MEETING WITH GENERAL CONTRACTORS IS REQUIRED.
- ELECTRICIAN MUST BE ON SITE FOR ALL INSPECTIONS.
- MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING. ALL CONDUCTORS SHALL BE COPPER UNLESS OTHERWISE NOTED THIN INSULATION.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, PLASTIC AND CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS, AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE N.E.C. OR LOCAL CODES.
- ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE THAT CERTIFICATE OF OCCUPANCY IS ISSUED. WARRANTY SHALL BE PROVIDED IN WRITING. PROVIDE COPY TO LL.
- CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PARTS OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
- THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES.
- CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
- ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE CIRCUIT BREAKERS.
- PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WRES, BOXES, COVER PLATES, DEVICES, ETC. FOR ALL OUTLETS AS INDICATED.
- MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF N.E.C., NEMA, AND IECE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRED CAULKING REQUIRED OF HIS WORK.
- ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/TYPE WRITTEN DIRECTORIES.
- ALL ELECTRICAL AND COMMUNICATIONS OUTLETS TO BE AT 42" A.F.F. UNLESS NOTED OTHERWISE, AND VERTICALLY MOUNTED.
- ALL LIGHT SWITCHES TO BE AT 42" A.F.F.
- ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL ELECTRICAL WIRING FOR HVAC SYSTEM INCLUDING CONTROLS, THERMOSTATS, POWER, ETC. SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- BREAKER AND PANELS - ALL CURRENT CARRYING BUSSES SHALL BE COPPER. ALL GROUND BUS BARS SHALL BE COPPER. PANEL BOARD ENCLOSURES SHALL BE FURNISHED WITHOUT PRE-PUNCHED CONCENTRIC HOLES. ALL C. RATINGS SHALL BE AS INDICATED ON PANEL BOARD SCHEDULES.
- DISCONNECT SWITCHES SHALL BE W.P. RATED. GENERAL DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
- MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, WITH OVERLOAD RELAYS IN EACH HOT LEG.
- THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS INDICATES THE CONTRACT SHALL FURNISH AND INSTALL.
- CONTRACTOR SHALL CONFIRM WITH ANY AND ALL REQUIREMENTS SUCH AS LUG SIZE RESTRICTIONS, CONDUIT ENTRY, TRANSFORMER SIZE, SCHEDULED DOWN TIME FOR OWNERS CONFIRMATION, ETC. ANY CONFLICTS SHALL BE BROUGHT TO ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.
- VOLTAGE DROP FOR ALL BRANCH CONDUCTORS SHALL NOT EXCEED 3% WHERE VOLTAGE DROP EXCEEDS 3%, CONTRACTOR SHALL INCREASE SIZE OF CONDUCTORS.
- CONTRACTOR SHALL PROVIDE GFI TYPE BREAKER FOR ALL EXTERIOR 120V CIRCUITS OR GFI PROTECTION - FOR THE WHOLE CIRCUIT.
- GAS PIPING SHALL BE BONDED.
- ELECTRICAL CONTRACTOR SHALL COORDINATE SERVICE ENTRY WITH SERVICE PROVIDER PRIOR TO DETERMINING EXACT LOCATION OF THE METER BOX IN ORDER TO AVOID DISCREPANCIES BETWEEN DRAWINGS AND JOB CONDITIONS.
- ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.
- CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
- OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.
- ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY. (Ø" OR LESS).
- EXPOSED CONDUIT SHALL BE INSTALLED IN STRAIGHT LINES, PARALLEL OR IN RIGHT ANGLES TO THE BUILDING STRUCTURE. DO NOT LOOP EXCESS FLEXIBLE CONDUIT IN CEILING SPACE OR WALL CAVITY. NO CONDUIT TO BE SUPPORTED FROM THE ROOF DECK.
- CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE PERMITTED.
- ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.
- ALL PANELS TO BE UL LABELED WITH BOLT-ON TYPE CIRCUIT BREAKERS.
- 7-DAY 24-HOUR TIME CLOCK IS REQUIRED TO CONTROL STOREFRONT ENTRY LIGHTS. SHOW WINDOW LIGHTS, SHOW WINDOW RECEPTACLES AND STOREFRONT SIGNAGE. ILLUMINATED STOREFRONT SIGNS MUST REMAIN LIT DURING ALL WALL BUSINESS HOURS.
- TENANT IS REQUIRED TO MAKE A FIELD SURVEY OF THE EXISTING ELECTRICAL SERVICE TO ENSURE THAT THE TOTAL CONNECTED LOAD DOES NOT EXCEED THE ELECTRIC SERVICE. ANY ALL MODIFICATIONS OR UPGRADES NEEDED ARE SUBJECT TO LANDLORD'S PRIOR APPROVAL AND WILL BE COMPLETED BY TENANT/TENANTS GC AT TENANT'S SOLE EXPENSE.
- ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.
- PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.
- ELECTRICAL PANELS MAY NOT BE RECESSED IN DEMISING PARTITIONS. SURFACE MOUNT OR FULL FUR OUT WALL TO ACHIEVE FLUSH FINAL APPEARANCE.
- COORDINATE ALL CONCRETE TRENCHING/CORING TO ENSURE THAT ANY UNDER SLAB UTILITIES, ETC. ARE NOT DAMAGED DURING FLOOR CUT. ANY DAMAGE TO BE REPAIRED AT TENANT'S EXPENSE. PRIOR APPROVAL AND COORDINATION WITH PROPERTY MANAGEMENT IS REQUIRED FOR ALL CONCRETE CUTTING.
- CONFIRM ELECTRICAL METER REQUIREMENTS WITH MALL OPERATIONS.



**ELECTRICAL LIGHTING PLAN GENERAL NOTES:**

A. DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH NFPA 72 AND 'ADA'.

B. ALL LIGHT SWITCHES IN SERVICE AREA TO BE 46" MIN. AFF, UNLESS OTHERWISE NOTED.

C. ALL WIRING SHALL BE IN CONDUIT OR AS ALLOWED BY NEC OR LOCAL AHJ.

D. DEVICE QUANTITIES SHALL BE AS INDICATED ON THE PLANS. VERIFY QUANTITY AND EXACT LOCATION WITH AUTHORITY HAVING JURISDICTION TO ENSURE BID INCLUDES ALL REQUIRED WORK.

E. ALL EXTERNAL LIGHTS TO BE CONTROLLED VIA PHOTOCELL.

**ELECTRICAL LIGHTING PLAN KEYED WORK NOTES:**

1 LIGHTING CONTROLS: PROVIDE TIME CLOCK "TC", SEE "CONTACTOR WIRING DIAGRAM AND NOTES", ON SHEET "E-4" FOR ADDITIONAL INFORMATION.

2 PHOTOCELL: PROVIDE PHOTOCELL AT ROOF LINE FACING NORTH. VERIFY LOCATION AND REQUIREMENTS IN FIELD, SEE "CONTACTOR WIRING DIAGRAM" AND "CONTACTOR NOTES", ON SHEET "E-4" FOR ADDITIONAL INFORMATION.

3 TIMECLOCK: ROUTE DESIGNATED CIRCUITS VIA TIME CLOCK "TC" AND CONTACTORS AND RELAYS, AS NOTED IN THE "CONTACTOR AND RELAY WIRING DIAGRAM" AND "CONTACTOR AND RELAY NOTES" ON SHEET "E-4". FOR ANY ADDITIONAL INFORMATION ON CIRCUITING AND CONTROL SEE SHEET "E-4".

4 EXTERIOR WALL SIGNS: PROVIDE JUNCTION BOX WITH TOGGLE SWITCH FOR DISCONNECTING MEANS AND WIREWAY FOR EXTERIOR WALL SIGN, LENGTH OF WIREWAY SHALL BE FOR THE ENTIRE LENGTH OF THE SIGN. MOUNT THIS ASSEMBLY CENTERED ON THE LOWER CASE LETTERING OF THE SIGN. ROUTE CIRCUITS FROM JUNCTION BOX THRU CONTACTORS AND TIME CLOCK, AS SHOWN ON SHEET "E-4" AND ON TO CIRCUITS IN PANEL AS NOTED. VERIFY AND COORDINATE LOCATION WITH ARCHITECTURAL ELEVATIONS, AND SIGN COMPANY.

5 LIGHT FIXTURES ABOVE DOORS: MOUNT THESE LIGHTS IN-BETWEEN JOIST WITH BOTTOM OF LIGHT LEVEL WITH BOTTOM OF JOIST.

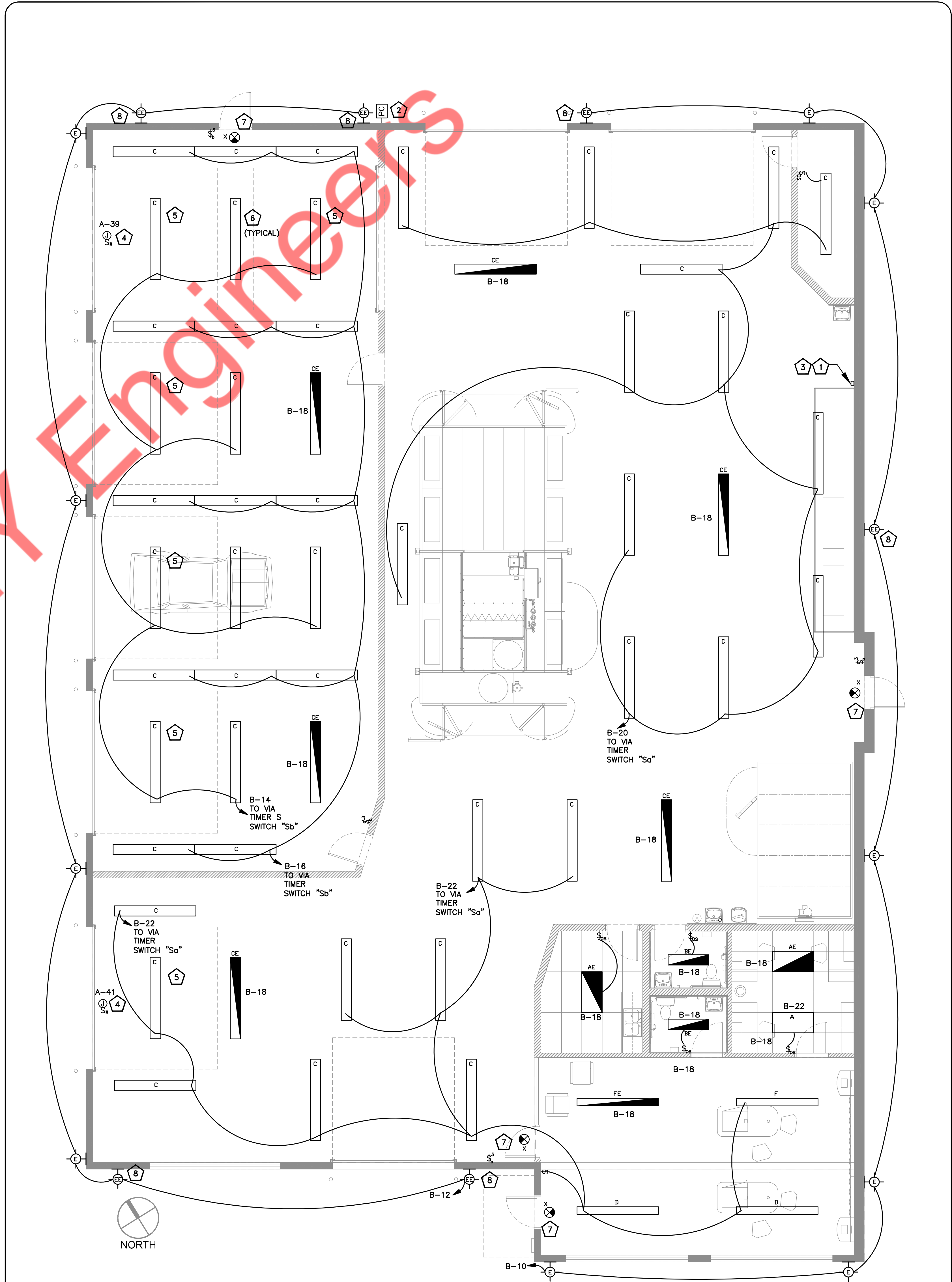
6 SHOP LIGHTS TYPE "C" AND "CE": THESE LIGHT FIXTURES TO BE CHAIN HANG AT 14' AFF.

7 CONNECT ALL EMERGENCY EGRESS AND NIGHT LIGHTING FIXTURES TO THE NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS PER STATE AND LOCAL CODES.

8 EXTERIOR EMERGENCY LIGHT: PROVIDE SWITCHED HOT FOR LIGHT AND UN-SWITCHED HOT FOR BATTERY BACK-UP DRIVER.

**ELECTRICAL SITE LIGHTING CRITERIA:**

1. THE SITE PARKING AND PEDESTRIAN AREAS SHALL BE ILLUMINATE TO 0.5 FC MINIMUM USING FIXTURES THAT COMPLY WITH "NIGHT SKY" CUT OFF.
2. PROVIDE POLE MOUNTED SITE LIGHTING TO SUPPLEMENT THE BUILDING MOUNTED EXTERIOR LIGHTS.
3. FIXTURE SELECTION, POLE HEIGHTS, FINISH, ETC SHALL BE COORDINATED AS REQUIRED FOR EACH SITE. CONTACT LOCAL AUTHORITY REGARDING SITE LIGHTING REQUIREMENTS, FIXTURE STYLE, COLOR, LAMP TYPE ETC REQUIRED FOR COMPLIANCE.
4. PROVIDE SITE PHOTOMETRIC CALCULATIONS TO INDICATE EXPECTED PERFORMANCE.









PANEL:		A										MOUNTING:		SURFACE		
208Y/120		VOLTS,			3			PHASE,			4			WIRE		
MAIN CB		600A			BUS			600A			MIN,					
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.		
						A	B	C								
1	20	EF-1-C4	M	1.14	2#12, #12G, 3/4" C	6.04			3#6, #10G, 3/4" C	4.90	E	TRUCK BOOTH	30-60	2		
3	20	EF-2-C4	M	1.14	2#12, #12G, 3/4" C	6.04			4.90	E	4					
5	20	EF-3-C4	M	0.42	2#12, #12G, 3/4" C	3.32		5.32	4.90	E	6					
7	20	EF-4-C4	M	0.56	2#12, #12G, 3/4" C	3.32	3.46		2.90	E	8					
9	20	EF-3-C4	M	0.56	2#12, #12G, 3/4" C	3.32	3.46		2.90	E	CURE OVEN	30-30	10			
11	20	EF-3-C4	M	0.56	2#12, #12G, 3/4" C	3.32	3.46		2.90	E		12				
13	20	EF-4-C4	M	0.33	2#12, #12G, 3/4" C	1.33			1.00	L	CURE OVEN LIGHTS	20	14			
15	20	EF-4-C4	M	0.33	2#12, #12G, 3/4" C	1.33	0.33		1.00	L	SPARE	20	16			
17	20	EF-5	M	0.50	2#12, #12G, 3/4" C	2.00		3.38	2.88	H	PAINT MIX ROOM	20	18			
19	40	SPRAY BOOTH LIGHTS	L	2.00	2#8, #10G, 3/4" C	2.00						20	20			
21	20	WH-1	H	4.00	2#8, #10G, 3/4" C	9.50			5.50	M	G11-FF AIR COMPRESSOR	30-80	22			
23	20	WH-1	H	4.00	2#8, #10G, 3/4" C	9.50		9.50	5.50	M		24				
25	20	CP-1	M	0.10	2#12, #12G, 3/4" C	5.60			5.50	M		26				
27	20	SPARE				5.50			5.50	M		28				
29	20	AH-1	M	1.47	2#12, #12G, 3/4" C	5.50		6.97	5.50	M	G11-FF AIR COMPRESSOR	30-80	30			
31	20	AH-1	M	1.47	2#12, #12G, 3/4" C	5.50		6.97	5.50	M		32				
33	20	CU-1	M	3.71	2#8, #10G, 3/4" C	9.21			5.50	M	SPARE	20	34			
35	20	RAD-1,4	H	0.60	2#12, #12G, 3/4" C	12.35		1.10	0.50	L	PYLON SIGN-C1	20	36			
37	20	RAD-2,3	H	0.60	2#12, #12G, 3/4" C	12.35			11.75	E	TO PANEL B	30-125	38			
39	20	EXTERIOR SIGN-C3	L	1.00	2#12, #12G, 3/4" C	12.75			11.75	E		40				
41	20	EXTERIOR SIGN-C3	L	1.00	2#12, #12G, 3/4" C	12.75			11.75	E	SPARE	20	42			
43	20	CEILING RECEPTACLE-C3	R	0.40	2#12, #12G, 3/4" C	0.80			0.40	R	CEILING RECEPTACLE-C3	20	44			
45	20	SPARE				0.00					SPARE	20	46			
47	20	SPARE				0.00					SPARE	20	48			
49	20	SPARE				0.00					SPARE	20	50			
51	20	WH-2	H	1.75	2#10, #10G, 3/4" C	1.75					SPARE	20	52			
53	20	SPARE				0.00					SPARE	20	54			
TOTAL LOAD (KVA)						42.40	43.05	42.48								

PANEL:		B										MOUNTING:		SURFACE		
208Y/120		VOLTS,			3			PHASE,			4			WIRE		
MAIN CB		125A			MLO			BUS			125A			MIN,		
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.		
						A	B	C								
1	20	OFFICE RECEPTACLES	R	0.90	2#12, #12G, 3/4" C	1.26			2#12, #12G, 3/4" C	0.36	R	RESTROOM RECEPTACLES-GFI	20	2		
3	20	POWERPOLE RECEPTACLE -IG	R	0.40	2#12, #12G, 3/4" C	0.94			2#12, #12G, 3/4" C	0.54	R	BREAKROOM RECEPTACLES-GFI	20	4		
5	20	POWERPOLE RECEPTACLE -IG	R	0.40	2#12, #12G, 3/4" C	1.40			2#12, #12G, 3/4" C	1.00	R	BREAKROOM MICROWAVE-GFI	20	6		
7	20	SALES RECEPTACLES	R	0.54	2#12, #12G, 3/4" C	1.04			2#12, #12G, 3/4" C	0.50	R	DRINKING FOUNTAIN-GFI	20	8		
9	20	SALES RECEPTACLES	R	0.72	2#12, #12G, 3/4" C	1.14			2#12, #12G, 3/4" C	0.42	L	EXTERIOR LIGHTS-C3	20	10		
11	20	SMCP-L	E	0.10	2#12, #12G, 3/4" C	0.52			2#12, #12G, 3/4" C	0.42	L	EXTERIOR LIGHTS-C3	20	12		
13	20	SPARE				0.68			2#12, #12G, 3/4" C	0.68	L	SERVICE BAY LIGHTING-C2	20	14		
15	20	SPARE				0.95			2#12, #12G, 3/4" C	0.95	L	SERVICE BAY LIGHTING-C2	20	16		
17	20	HAND DRYER	H	1.00	2#12, #12G, 3/4" C	1.62			2#12, #12G, 3/4" C	0.62	L	EMERGENCY LIGHTING-C2	20	18		
19	20	LOUVER - 1,2,3,4	M	0.50	2#12, #12G, 3/4" C	1.45			2#12, #12G, 3/4" C	0.95	L	MASKING BAY LIGHTING-C2	20	20		
21	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	2.04			2#12, #12G, 3/4" C	0.84	L	DELIVERYBAY, OFFICEL LIGHTING-C2	20	22		
23	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	2.20			2#12, #12G, 3/4" C	1.00	H	HAND DRYER	20	24		
25	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	2.40			2#12, #12G, 3/4" C	1.20	R	DELIVERY BAY RECEPTACLES-GFI	20	26		
27	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	2.40			2#12, #12G, 3/4" C	1.20	R	DELIVERY BAY RECEPTACLES-GFI	20	28		
29	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	2.40			2#12, #12G, 3/4" C	1.20	R	DELIVERY BAY RECEPTACLES-GFI	20	30		
31	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	2.40			2#12, #12G, 3/4" C	1.20	R	DELIVERY BAY RECEPTACLES-GFI	20	32		
33	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	1.92			2#12, #12G, 3/4" C	0.72	R	DRY STORAGE RECEPTACLES - GFI	20	34		
35	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	2.40			2#12, #12G, 3/4" C	1.20	R	MASKING BAY RECEPTACLES-GFI	20	36		
37	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	2.40			2#12, #12G, 3/4" C	1.20	R	MASKING BAY RECEPTACLES-GFI	20	38		
39	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	2.40			2#12, #12G, 3/4" C	1.20	R	MASKING BAY RECEPTACLES-GFI	20	40		
41	20	SERVICE BAY RECEPTACLES-GFI	R	1.20	2#12, #12G, 3/4" C	1.30			2#12, #12G, 3/4" C	0.10	L	LRP	20	42		
TOTAL LOAD (KVA)						11.63	11.79	11.84								

**PANEL SCHEDULE GENERAL NOTES:**

1. PROVIDE HACR BREAKERS FOR HVAC EQUIPMENT.
2. C - CIRCUIT VIA DESIGNATED LIGHTING CONTACTOR.
3. GFI - PROVIDE GFCI BREAKER FOR CIRCUIT.
4. L - PROVIDE LOCK-ON ATTACHMENT FOR BREAKER.
5. IG - ISOLATED GROUND.
6. PROVIDE SWD/HID RATED BREAKERS FOR LIGHTING CIRCUITS.

