GENERAL LIGHTING NOTES:

1. MANUFACTURERS & NUMBERS ARE LISTED TO ESTABLISH QUALITY ONLY AND NOT TO LIMIT COMPETITION. TEN DAYS PRIOR TO BIDDING, SUBSTITUTIONS ARE ALLOWED SUBJECT TO SUBMITTAL DATA, PHOTOMETRICS & ENGINEERS APPROVAL AS REQUIRED BY SPECIFICATIONS.

2. ALL FLUORESCENT FIXTURES SHALL HAVE PREMIUM ELECTRONIC BALLASTS WITH 90% MIN. BALLAST FACTOR AND MAX.THD OF 20%. BALLAST SHALL BE MANUFACTURED BY A MAJOR US BALLAST MANUFACTURER.

3. ALL FIXTURES TO BE U.L. LISTED. ALL EXTERIOR FIXTURES SHALL HAVE U.L. WET LABEL OR DAMP LABEL AS REQUIRED BY LOCATION. CONTRACTOR SHALL VERIFY BEFORE INSTALLING FIXTURE.

4. CONTRACTOR SHALL PROVIDE ALL MOUNTING ACCESSORIES, BAR HANGARS & HARDWARE REQUIRED FOR A COMPLETE SYSTEM.

5. CONTRACTOR TO COORDINATE AND DETERMINE EXACT MOUNTING HEIGHTS OF ALL INTERIOR AND EXTERIOR WALL MOUNTED LIGHT FIXTURES IN FIELD PRIOR TO ROUGH-IN. FIXTURES TO BE UNIFORM AND CONSISTANT IN ALL APPLICATIONS.

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	FIXTURE DESCRIPTION	ACCEPTABLE MANUFACTURERS	LAMPS	FIXTURE WATTAGE	VOLTAGE
EL	EXTERIOR WEATHERPROOF EMERGENCY LIGHT, (2) 12 WATT HALOGEN LAMPS, DARK BRONZE FINISH.	MCPHILBEN #PDLBZ LIGHTALARMS #CAM/LX6-DB	BY MANUFACTURER	12	6
EXC	COMBINATION EMERGENY LIGHT/EXIT SIGN WITH RED LED ON ON WHITE HOUSING, BATTERY BACKUP, DIFFUSER LENS, AND HIGH OUTPUT BATTERY BALLAST. SPEC. GRADE.	CHLORIDE #ERC2-XBAT DUALLITE #LT-U-R-W-3	BY MANUFACTURER	10	120
EM	WALL MOUNTED SPECIFICATION GRADE TWIN-HEAD EMERGENCY LIGHT WITH BATTERY BACKUP, WHITE HOUSING.	CHLORIDE #GM2 DUALLITE #EZ-2-D	BY MANUFACTURER	11	120
TA	RECESSED 2X4, SPEC GRADE STATIC TROFFER, 4 LAMP, FLAT WHITE STEEL DOOR, 22 GA. STEEL, PAF, .125 MIN LENS, (1) ELECTRONIC BALLAST.	WILLIAMS #LPT-24-432-SA12125-EB2-UNV-PAF COLUMBIA #ST824-432G-FSA12.125M-2U-PAF	4-F032T8/35K	114	120
TC	RECESSED 2X4, SPEC GRADE STATIC TROFFER, 2 LAMP, FLAT WHITE STEEL DOOR, 22 GA. STEEL, PAF, .125 MIN LENS, (1) ELECTRONIC BALLAST.	WILLIAMS #LPT-24-232-SA12125-EB2-UNV-PAF COLUMBIA #ST824-232G-FSA12.125M-2U-PAF	2-F032T8/35K	56	120
TD	RECESSED 2X2, SPEC GRADE STATIC TROFFER, 4 LAMP, FLAT WHITE STEEL DOOR, 22 GA. STEEL, PAF, .125 MIN LENS, (1) ELECTRONIC BALLAST.	WILLIAMS #LPT-22-417-SA12125-EB4-UNV-PAF COLUMBIA #ST822-417G-FSA12.125M-4EU-PAF	4-F017T8/35K	56	120

PANELBOARD: LA (EXISTING) — VOLTAGE: 208/120V, 3Ø, 4W
MOUNTING: SURFACE — MAINS: MLO — MIN. AIC RATING: 35,000A
TRIP: N/A — FRAME: 200A

	LOAD	DESCRIPTION	CKT.	TRIP	TRIP	CKT.	DESCRIPTION	LOAD	L1	L2	L3	
○	4000	EXISTING HVAC UNIT	1	60	50	2	EXISTING HVAC UNIT	4000	8000			○
	4000	↓	3	↓	↓	4	↓	4000		8000		
	4000	↓	5	↓	↓	6	↓	4000			8000	
○	4000	EXISTING HVAC UNIT	7	60	100	8	PANEL 'LAS'	2500	6500			○
	4000	↓	9	↓	↓	10	↓	2500		6500		
	4000	↓	11	↓	↓	12	↓	2500			6500	
●		SPARE	13	20	20	14	L.-RESTROOM,BACK	650	650			●
●		SPARE	15	20	20	16	L.-EXISTING	750		750		○
●		SPARE	17	20	20	18	L.-EXISTING	750			750	○
■	2250	WH-1	19	30	20	20	L.-EXISTING	750	3000			○
	2250	↓	21	↓	20	22	L.-EXISTING	750		3000		○
○	2000	EXISTING LOAD	23	30	20	24	L.-EXISTING	750			2750	○
○	2250	EXISTING LOAD	25	35	20	26	R.-POWER POLE	750	3000			●
	2250	↓	27	↓	20	28	R.-POWER POLE	750		3000		●
	2250	↓	29	↓	20	30	R.-FRONT MERCANTILE	500			2750	●
●	500	R.-BACK MERCANTILE	31	20	20	32	R.-FRONT MERCANTILE	500	1000			●
●	360	R.-RESTROOMS	33	20	20	34	R.-FRONT MERCANTILE	500		860		●
●	750	R.-PLUGMOLD	35	20	20	36	R.-POWER POLE	750			1500	■
■	750	R.-PLUGMOLD	37	20	20	38	R.-FRONT SIGNAGE	1500	2250			■
■	750	R.-PLUGMOLD	39	20	20	40	R.-FRONT MERCANTILE	500		1250		■
■	750	R.-PLUGMOLD	41	20	20	42	R.-EWC'S	1200			1950	■*

PHASE LOAD VA: L1, L2, L3

○ EXISTING BREAKER, EXISTING LOAD
● EXISTING BREAKER, NEW LOAD
■ NEW BREAKER, NEW LOAD
* GFCI BREAKER

TOTAL L1	24400
TOTAL L2	23360
TOTAL L3	24200
TOTAL VA	71960

200 AMPS CONNECTED
@ 208V, 3PH

SCOPE OF WORK

INTERIOR RENOVATION

ADDITIONAL LOAD INFORMATION

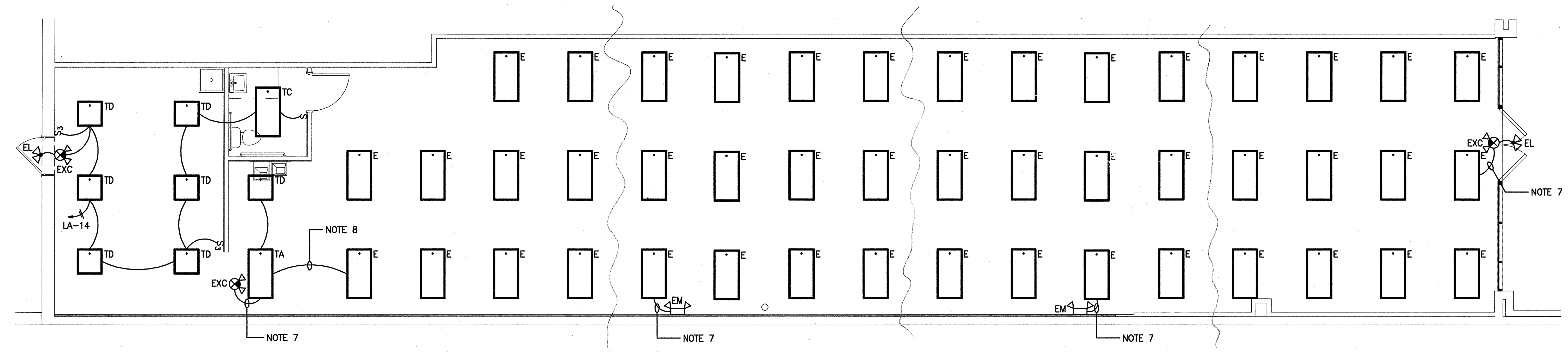
PERMIT DATA	PERMIT DATA
NEW SERVICE	N/A
SERVICE CHANGE OR UPGRADE	NO
# OF AMPS	45 (ADDED)
# OF BRANCH CIRCUITS	17 (NEW)
HOUSE METER	N/A
# OF AMPS	N/A
# OF BRANCH CIRCUITS	N/A

ELECTRICAL SPECIFICATIONS

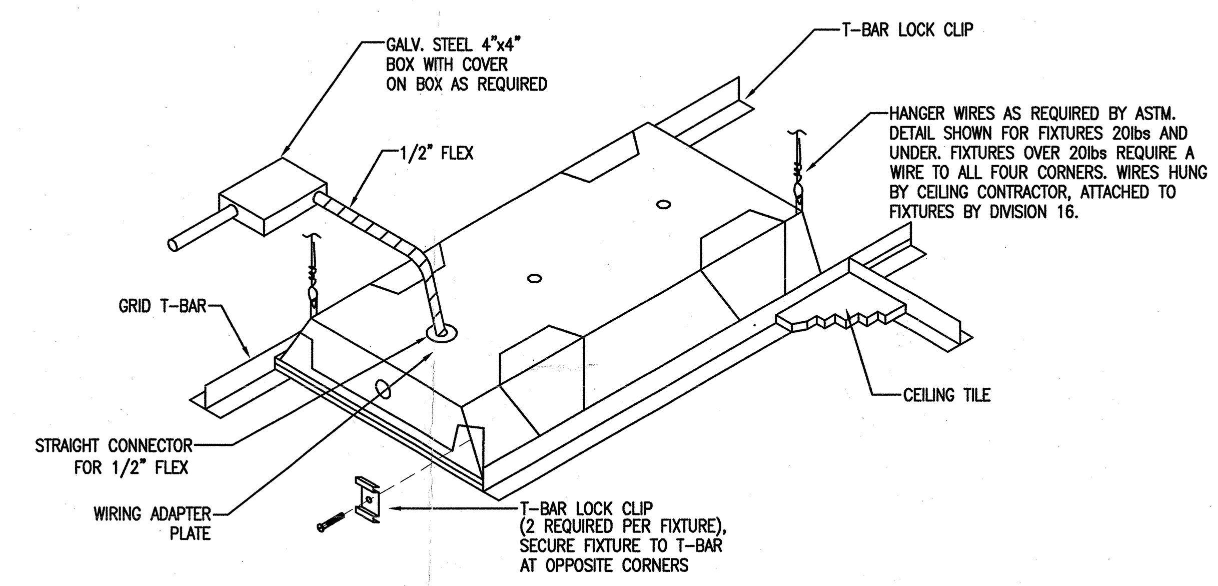
1. DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW APPROXIMATE LOCATIONS. ELECTRICAL WORK SHALL NOT INTERFERE WITH CLEARANCES REQUIRED FOR GENERAL AND MECHANICAL CONSTRUCTION. ANY CORRECTIONS WILL BE MADE BY THE ELECTRICAL CONTRACTOR AT NO COST TO THE OWNER.
2. ALL WORK SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE IBC AND THE NATIONAL ELECTRICAL CODE, LATEST EDITIONS, AND ALL APPLICABLE STATE AND LOCAL CODES. ALL WORK SHALL BE ACCOMPLISHED IN A NEAT AND PROFESSIONAL MANNER.
3. ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE U/L LABEL.
4. CONTRACTOR SHALL CONFIRM BRANCH CIRCUIT SIZING, LOCATIONS AND CONNECTION REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT PRIOR TO INSTALLATION. ANY ADJUSTMENTS REQUIRED SHALL BE MADE BY THE ELECTRICAL CONTRACTOR. SUBSTANTIAL CHANGES TO THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
5. ALL TERMINALS SHALL BE RATED FOR 75 DEGREES CELSIUS COPPER WIRE.
6. RECEPTACLES SHALL BE OF THE GROUNDING TYPE WITH GROUND CONNECTION MADE THROUGH AN EXTRA POLE WHICH SHALL BE PERMANENTLY CONNECTED TO THE RACEWAY AND GROUNDING SYSTEMS. COVERPLATES AND COLOR FOR ALL WIRING DEVICES TO BE COORDINATE W/ARCHITECT.
7. LIGHTING FIXTURES SHALL BE FURNISHED COMPLETE IN ALL RESPECTS PER FIXTURE SCHEDULE. VERIFY CEILING FINISHES AND SUSPENSION SYSTEMS FOR SELECTION OF PROPER TRIM AND SUPPORT ARRANGEMENTS. INSTALL ALL LIGHT FIXTURES WITH LAMPS AS REQUIRED.
8. RECESSED FIXTURES MOUNTED IN GRID CEILING SHALL BE SECURELY FASTENED TO THE GRID BY A MECHANICAL MEANS THAT COMPLIES WITH REQUIREMENTS FOR SEISMIC EVENTS PER ASCE 7.5. THE GRID SHALL BE ABLE TO SUPPORT THE WEIGHT OF THE FIXTURE, AND SHALL BE SECURED TO TRUE STRUCTURE AS REQUIRED. ALL SURFACE MOUNTED, EMERGENCY, AND EXIT FIXTURES SHALL BE SECURELY FASTENED TO THE BUILDING STRUCTURE BY A MECHANICAL MEANS THAT COMPLIES WITH THE SAME STIPULATIONS AS ABOVE.
9. ALL WIRING SHALL BE CONCEALED WHERE POSSIBLE AND INSTALLED IN SUITABLE RACEWAYS. EMT SHALL BE USED (1/2" MIN) FOR LIGHTING AND POWER BRANCH CIRCUITRY. EMT SHALL BE USED FOR EQUIPMENT FEEDERS. SCHEDULE 40 PVC SHALL BE USED UNDERGROUND.
10. OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE SEALED USING APPROVED MATERIALS AND METHODS TO MAINTAIN THE ORIGINAL FIRE-RESISTANCE RATING.
11. RECEPTACLES INSTALLED BACK TO BACK IN FIRE RATED WALLS SHALL BE A MINIMUM OF 24" APART AND SHALL NOT OCCUPY THE SAME STUD CAVITY.
12. DISCONNECT SWITCHES SHALL BE FURNISHED AS SHOWN ON THE DRAWINGS WITH VOLTAGE RATING, AMPERAGE RATING AND NUMBER OF POLES AS INDICATED. PROVIDE NEMA 3R TYPE WHERE EXPOSED TO WEATHER. PROVIDE HEAVY DUTY TYPE SWITCHES.
13. FUSES FOR FUSIBLE SWITCHES SHALL BE OF THE DUAL ELEMENT, REJECTION TYPE.
14. DISCONNECT SWITCHES SHALL HAVE EXTERNAL SWITCH HANDLE, SWITCH AND DOOR SHALL BE INTERLOCKED SUCH THAT THE DOOR CAN NOT BE OPENED UNLESS THE SWITCH IS IN THE OPENED POSITION.
15. ALL WIRE SHALL BE SINGLE CONDUCTOR STRANDED, COPPER SIZED AS INDICATED ON THE DRAWINGS. MINIMUM SIZE SHALL BE #12 AWG.
16. SOLID WIRE MAY BE USED FOR #12 AND #10 AWG WIRE USED ON LIGHTING FIXTURES, RECEPTACLES AND SWITCHES ONLY.
17. INSULATION OF WIRE SHALL BE 75 DEGREES CELSIUS (THHN, THWN), 600 VOLT.
18. UNLESS INDICATED ON THE DRAWINGS, ALL WIRING SHALL BE #12 AWG. CONTRACTOR SHALL CONFIRM AND ROUTE THE PROPER QUANTITY OF WIRES AND SIZE OF CONDUIT TO FIT THE APPLICATION AND THE CIRCUITRY INDICATED.
19. CONTRACTOR SHALL PROVIDE A PROPERLY SIZED, GREEN COLORED INSULATED GROUNDING CONDUCTOR IN ALL CONDUITS. THIS CONDUCTOR IS NOT INDICATED IN THE HASH MARKS ON THE CONDUIT RUNS ON THE PLANS.
20. INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH NEC ARTICLE 250 AND THESE SPECIFICATIONS. GROUNDING SYSTEM SHALL BE ELECTRICALLY CONTINUOUS THOUGHOUT.
21. PROVIDE AN UPDATED TYPEWRITTEN CIRCUIT DIRECTORY FOR EXISTING PANEL.
22. THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING ALL EXISTING ELECTRICAL EQUIPMENT, DEVICES, CONDUIT, WIRE, AND FIXTURES NOT RE-USED IN THE RENOVATION OR INTERFERING WITH NEW CONSTRUCTION. PRIOR TO BIDDING, THE CONTRACTOR SHALL VISIT THE SITE TO EXAM THE EXISTING FACILITY TO BETTER UNDERSTAND THE EXTENT OF THE DEMOLITION AND EXISTING CONDITIONS.

ELECTRICAL SYMBOLS

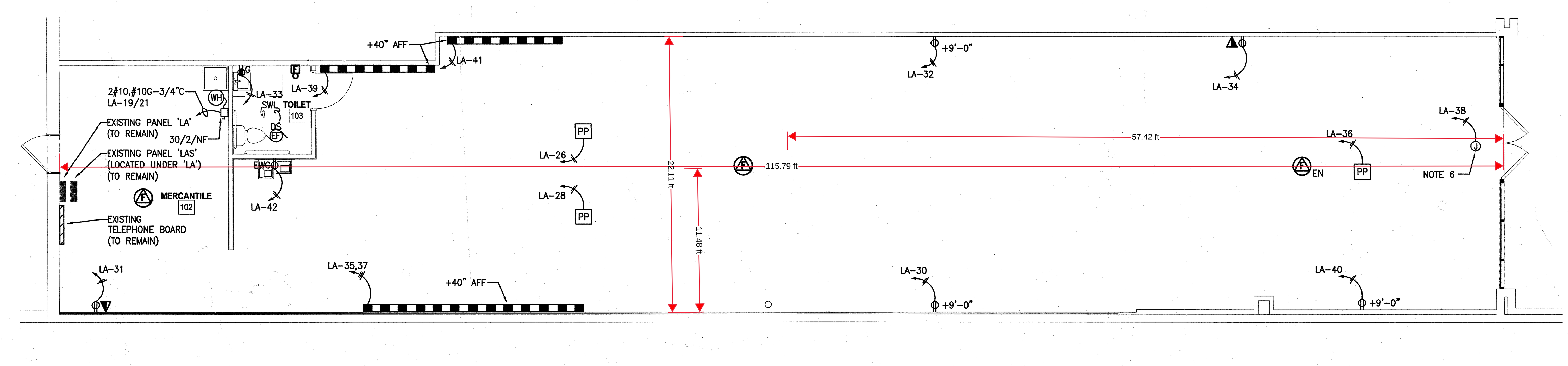
- 20A, 125V, 2P, 3W, NEMA 5-20R, DUPLEX RECEPTACLE MTD. 18" ABOVE FLOOR UNLESS NOTED OTHERWISE. SEE ABBREVIATIONS BELOW FOR DESIGNATIONS:
  G – GROUND FAULT INTERRUPTER
  +12" – MOUNTED AT 12" AFF
  EWC – RECEPTACLE SERVING ELECTRIC WATER COOLER
- SAME AS φ ABOVE EXCEPT QUADRUPLEX TYPE.
- SAME AS φ ABOVE EXCEPT BOTTOM OF OUTLET MOUNTED 4" ABOVE COUNTER HEIGHT, COORDINATE WITH CABINETRY DETAILS.
- SURFACE MOUNTED PLUGMOLD. OUTLETS SHALL BE PROVIDED EVERY 12" ON CENTER. PROVIDE LENGTH AS SHOWN ON PLANS.
- PP — DUAL COMPARTMENT POWER POLE FOR DATA AND POWER WIRING. PROVIDE WITH TWO (2) RECEPTACLES AND 120V CONNECTIONS AS REQUIRED ABOVE CEILING. VERIFY EXACT LOCATIONS, DEVICE CONFIGURATION, AND CONNECTION REQUIREMENTS WITH THE OWNER PRIOR TO ROUGH-IN.
- TELE/DATA OUTLET 18" AFF. DUAL GANG JUNCTION BOX WITH SINGLE GANG PLASTER RING AND WITH 3/4" CONDUIT TO ABOVE CEILING WITH END BUSHING. JACKS, CABLE AND BOX COVER BY SYSTEM INSTALLER. 'W' = 60" AFF. "ACH" INDICATES ABOVE COUNTER HEIGHT.
- J — JUNCTION BOX. SIZE AS REQUIRED TO FIT APPLICATION.
- EF — EXHAUST FAN. SEE MECHANICAL DRAWINGS. "SWL" INDICATES 'SWITCHED WITH ROOM LIGHTS'.
- WH — WATER HEATER. SEE PLUMBING DRAWINGS.
- WALL MTD EXTERIOR EGRESS EMERGENCY LIGHT.
- A — CEILING MOUNTED FLUORESCENT LIGHT FIXTURE PER FIXTURE SCHEDULE. 'E' INDICATES EXISTING TO REMAIN.
- WALL MOUNTED TWIN HEAD EMERGENCY FIXTURE. PROVIDE CONTINUOUS HOT LEAD TO FIXTURE FOR BATTERY.
- COMBINATION EXIT/EMERGENCY FIXTURE. PROVIDE CONTINUOUS HOT LEAD TO FIXTURE FOR BATTERY.
- S — SINGLE POLE LIGHTING SWITCH, 48" AFF, 120/277 VOLT, 20 AMP, SPEC GRADE, "T" RATED.
- S3 — SAME AS "S" ABOVE EXCEPT "3" IN SUBSCRIPT DENOTES 3-WAY SWITCH.
- A-7 — HOMERUN TO ELECTRICAL PANEL. HOMERUN NOTE (A-7) INDICATES PANEL DESIGNATION AND RELATIVE CIRCUIT NUMBER. UNLESS NOTED OTHERWISE, CONDUCTORS SHALL BE #12 AWG IN 1/2" CONDUIT. HATCH MARKS INDICATE THE QUANTITY OF CONDUCTORS REQUIRED. SHORT HATCH MARKS REPRESENT HOT CONDUCTORS OR SWITCHED LEGS. LONG HATCH MARKS REPRESENT THE NEUTRAL CONDUCTOR. ALL BRANCH CIRCUITS SHALL CONTAIN A #12 INSULATED GREEN GROUND CONDUCTOR. PROVIDE ALL WIRING REQUIRED TO ACCOMPLISH CIRCUITRY AS INDICATED. NO HATCH MARKS INDICATE 2#12,#12G-1/2".
- BRANCH CIRCUIT WIRING CONCEALED IN WALL OR CEILING SPACE.
- ● CONDUIT RUN TURNED DOWN OR AWAY FROM OBSERVER.
- ○ CONDUIT RUN TURNED UP OR TOWARDS OBSERVER.
- CAPPED CONDUIT.
- FLEXIBLE CONNECTION TO EQUIPMENT.
- ELECTRICAL PANEL, 208/120V, MOUNTING AS INDICATED. COORDINATE EXACT LOCATION IN FIELD.
- 30/2/F — SAFETY DISCONNECT SWITCH. "30" INDICATES AMP RATING, 2 INDICATES NUMBER OF POLES, "F" INDICATES FUSED, "NF" INDICATES NON-FUSED. ENCLOSURE TO BE NEMA 1 UNLESS NOTED OTHERWISE (3R, 4X, ETC.) FUSE PER MANUFACTURERS RECOMMENDATIONS.
- DS — LOCAL 120V TOGGLE TYPE EQUIPMENT DISCONNECT. RATED 20A, UNLESS NOTED OTHERWISE.
- F — FIRE ALARM HORN/STROBE UNIT, CEILING MOUNTED, TO MATCH EXISTING. TIE INTO EXISTING FIRE ALARM SYSTEM. 'EN' INDICATES EXISTING DEVICE RELOCATED TO LOCATION SHOWN. TAP AND EXTEND EXISTING WIRING AND CONDUIT.
- F — FIRE ALARM STROBE ONLY UNIT MOUNTED AT 84" AFF TO MATCH EXISTING. TIE INTO EXISTING FIRE ALARM SYSTEM.



B1 / E1.11 **LIGHTING PLAN**
SCALE: 3/16" =1'-0"



B5 / E1.11 **TYPICAL GRID MOUNTED FIXTURE DETAIL**
SCALE: NOT TO SCALE



A1 / E1.11 **POWER PLAN**
SCALE: 3/16" =1'-0"

PLAN NOTES:

1. FOR DRAWING CLARITY, INDIVIDUAL BRANCH CIRCUIT HOMERUNS ARE INDICATED. ELECTRICAL CONTRACTOR MAY RUN UP TO (4) 20A BRANCH CIRCUITS IN A SINGLE HOMERUN TO A COMMON PANEL.
2. PULL AN UNSWITCHED LEG OF THE LOCAL LIGHTING CIRCUIT TO ALL EXIT, EMERGENCY AND NIGHT LIGHTING FIXTURES SHOWN UNLESS INDICATED OTHERWISE ON PLANS.
3. DETERMINE EXACT LOCATION FOR ALL LIGHT FIXTURES IN FIELD. COORDINATE W/CEILING GRID LAYOUT WHERE APPLICABLE AND WITH OTHER TRADES.
4. VERIFY ALL LOCATIONS, ELECTRICAL CIRCUIT AND CONNECTION REQUIREMENTS FOR ALL HVAC AND PLUMBING EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
5. VERIFY EXACT LOCATIONS OF ALL TELE/DATA OUTLETS W/ OWNER PRIOR TO ROUGH-IN.
6. PROVIDE CIRCUIT FOR CONNECTION TO STORE FRONT SIGNAGE. COORDINATE WITH OWNER FOR ON/OFF OPERATION.
7. TIE INTO EXISTING UNSWITCHED AREA LIGHTING CIRCUIT.
8. TIE INTO EXISTING SWITCHED AREA LIGHTING CIRCUIT.

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SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER — NO. 21651 — JAMES D. JOYE — 7/19/16

MAULDIN AT BUTLER, LLC

VIKING SEW 'N QUILT

113 W. BUTLER ROAD - MAULDIN, SC

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
A	2016.07.20	FOR PERMITS	JDJ

PRINCIPAL IN CHARGE: JDJ
PROJECT ARCHITECT: JDJ
DRAWN BY: JDJ

SHEET TITLE:
ELECTRICAL PLAN

SHEET NO.
E1.11

PROJ. NO.
016262.00

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