

### LED LUMINAIRE SCHEDULE

<b>(DESC) DOOR:</b> FA - FLAT ALUMINUM FS - FLAT STEEL RA - REGRESSED ALUMINUM RS - REGRESSED STEEL <b>FINISH:</b> PAF - PAINT AFTER FABRICATION CFSA - COLOR-FINISH SELECTION BY ARCHITECT	<b>DISTRIBUTION:</b> II - ANSIES TYPE 2 DISTRIBUTION III - ANSIES TYPE 3 DISTRIBUTION IV - ANSIES TYPE 4 DISTRIBUTION V - ANSIES TYPE 5 DISTRIBUTION	<b>BEAMWIDTH:</b> NSP - VERY NARROW SPOT SP - SPOT MD - MEDIUM WD - WIDE VWD - VERY WIDE WW - WALL WASH	<b>(L/L) LENS/LOUVER:</b> A - .125" ACRYLIC B - BAFFLE/LOUVER C - CLEAR ALZAK F - FROSTED ACRYLIC G - TEMPERED GLASS K - KSH12 .125" ACRYLIC	K19 - KSH19 .156" ACRYLIC M - MATTE DIFFUSE CLEAR N - NONE P - POLYCARBONATE R - HIGH IMPACT DR ACRYLIC SS - SEMI-SPECULAR CLEAR O - OTHER (SEE DESCRIPTION) [DESIGN SPECIFIC BLANKS]
<b>(MTG) MOUNTING:</b> CL - CEILING SURFACE CV - COVE FR - FLANGED RECESSED P - PERIMETER PL - POLE	RE - RECESSED SP - SUSPENDED SU - SURFACE UC - UNDER CABINET WL - WALL O - OTHER (SEE DESCRIPTION)	<b>(WATT) PER:</b> FIX - FIXTURE, FT - FOOT, LAMP	<b>(TYPE) LED</b> LED - LIGHT EMITTING DIODE TLED - TUBULAR LED LAMP OLED - ORGANIC LED DLED - DYNAMIC TUNABLE LED	RGB - COLOR CHANGING LED RGBW - COLOR CHANGING + WHITE RGBA - COLOR CHANGING + AMBER RLED - RETROFIT LED WLED - WARM DIM LED

<b>(TYPE) DRIVER:</b> 0-10V - 0-10V DIMMING DALI - DIGITAL ADDRESSABLE DMX - DIGITAL MULTIPLEX	EB - ELECTRONIC ELV - ELECTRONIC LOW VOLTAGE EM - EMERGENCY BATTERY	HL - HIGH/LOW (100%/50%) STEP DIM LINE - LINE VOLTAGE DIMMING ML - MULTI-LEVEL SWITCHING	MV - MULTI-VOLTAGE ELECTRONIC REM - REMOTE O - OTHER (SEE DESCRIPTION)
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CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURER LISTED IS THE BASIS OF DESIGN.

VERIFY AND COORDINATE ALL CEILING TYPES WITH LUMINAIRE MOUNTING AND TRIM REQUIREMENTS PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER. CONFIRM ALL COLORS AND FINISHES OF ALL LUMINAIRE COMPONENTS WITH ARCHITECT AND INTERIOR DESIGNER PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER. UNLESS INDICATED ON LIGHTING PLANS OR BELOW, REFER TO ARCHITECTURAL AND INTERIOR DESIGN ELEVATIONS, SECTIONS AND DETAILS FOR ALL SUSPENDED AND WALL MOUNTED LUMINAIRE MOUNTING HEIGHTS.

ITEM	DESCRIPTION	L/L	MTG	DIMENSIONS				WATT		LED		DRIVER		MANUFACTURER AND MODEL	
				L	W	H	DIA.	ANSI WATTS	PER	TYPE	QTY	DELIVERED LUMENS (MIN)	VOLTS		TYPE
E2	WALL PACK WITH EMERGENCY BATTERY BACKUP. BLACK FINISH. BLACK CORD. FURNISH WITH INTEGRAL PHOTOCCELL.	O	WL	1'-0 7/16"	6 13/16"	8 205/256"		16 W	FIX	LED	1	3500K CCT, 1500 NOMINAL LUMENS, 80 CRI	120 V	120V	GARDCO WALL MOUNT GEO FORM GBM LED WALL SCONCE OR APPROVED EQUAL
EM1	EMERGENCY UNIT, TWO ADJUSTABLE HEADS, HOUSING COLOR PER ARCHITECT. PROVIDE WITH BATTERY BACKUP AND SELF-DIAGNOSTIC TEST.	O	WL	1'-0 1/4"	3 3/4"	4"		2 W	FIX	LED	1	LED	120 V	EM	EMERGI-LITE EL-2SOL LED OR APPROVED EQUAL
EX1	EXIT SIGN RED LETTER, BLACK HOUSING. PROVIDE WITH BATTERY BACKUP AND SELF-DIAGNOSTICS TEST.	O	WL/CL	1'-0 3/4"	4 5/16"	7 1/2"		3.8 W	FIX	LED	1	LED	120 V	EM	LSL LSX OR APPROVED EQUAL
S4	SQUARE LENSED FIXTURE. SUSPEND AT 8'-0" AFF OR MOUNT TO CEILING, WHICHEVER IS LOWER	A	CL/SP/WL	4'-0"	2 3/4"	3 5/8"		7.5 W	FT	LED	1	3500K CCT, 3681 NOMINAL LUMENS, 80 CRI	120 V		UTOPIA LIGHTING SS OR APPROVED EQUAL
S8	SQUARE LENSED FIXTURE. SUSPEND AT 8'-0" AFF OR MOUNT TO CEILING, WHICHEVER IS LOWER. FURNISH WITH BATTERY PACK WHERE NOTED.	A	CL/SP/WL	8'-0"	3 5/8"	3 5/8"		7.5 W	FT	LED	1	3500K CCT, 3681 NOMINAL LUMENS, 80 CRI	120 V		UTOPIA LIGHTING SS OR APPROVED EQUAL

NOTES:

- LIGHT FIXTURES ON PLANS SHOWN AS HALF-SHADED OR INDICATED WITH 'EM' SHALL HAVE AN INTEGRAL EMERGENCY BATTERY PACK. PROVIDE A BATTERY INVERTER AS NEEDED.

### LIGHTING SEQUENCE OF OPERATION

NOTES:  
1. {L#} DENOTES THE LIGHTING SEQUENCE OF OPERATIONS FOR THIS SPACE.  
2. {#B} PUSH BUTTON REFERS TO SCENE QUANTITY. CONTROL STATION SHALL BE CAPABLE OF [RAISE/LOWER AND] SWITCHING ON/OFF FOR MULTIPLE SCENES AS INDICATED ON SHEETS AND THE LIGHTING SEQUENCE OF OPERATIONS {L#}. COORDINATE QUANTITIES OF BUTTONS FOR CONTROL STATIONS WITH LIGHTING CONTROL MANUFACTURER.  
3. {Z#} DENOTES LIGHTING CONTROL ZONE. PROVIDE SEPARATE CONTROL OF EACH CONTROLLED ZONE. LUMINAIRES ASSOCIATED WITH THE SAME ZONE SHALL OPERATE TOGETHER WITHIN THE SAME PROGRAMMED SCENE.  
4. S = SWITCH DESIGNATION FOR LIGHTING CONTROL  
5. VERIFY AND COORDINATE ALL TIME CLOCK SETTINGS WITH OWNER PRIOR TO FINAL PROGRAMMING.  
6. VERIFY AND COORDINATE ALL PUSH BUTTON WALL DEVICES AND QUANTITIES OF INDIVIDUAL BUTTONS WITH SCENES AND ZONES PER LOCATION.  
7. VERIFY AND COORDINATE ALL PUSH BUTTON QUANTITIES AND SCENE NAMES WITH OWNER PRIOR TO SUBMITTING ENGRAVING TEMPLATE TO MANUFACTURER.

PLAN ID	LIGHTING SWITCHED
{LS1}	Sequence: Switched lights are controlled in this space. ON: The lights turn on manually via lighting switch. OFF: The lights turn off manually via lighting switch.
{LS2}	Sequence: Switched lights are vacancy controlled in this space. ON: The lights shall turn on manually via lighting switch. OFF: After the space has been vacant for 20 minutes, the lights will automatically turn off via occupancy sensor or manually via lighting switch.
{PC1}	Sequence: Switched lights are controlled in this space. ON: The lights turn on using integral photocell. OFF: The lights turn off using integral photocell.

### SWITCHBOARD SB-LM

ENCLOSURE: NEMA 1  
FED FROM: 20 A/3P @ UTILITY TRANSFORMER  
LOCATION: MECHANICAL 106

SOLID NEUTRAL  
GROUND BUS

MAIN: 1,000 A MCCB  
VOLTS: 120/208 Wye  
PHASE: 3  
WIRE: 4  
SCCR: 22 kA  
ISC: 16.40 kA

NOTES: 1. ALL CIRCUIT BREAKERS SHALL HAVE LSI ADJUSTMENT. 2. SELECTIVE COORDINATION IS REQUIRED FOR ALL CIRCUIT BREAKERS. 3. PROVIDE WITH METERING FOR ALL CIRCUIT BREAKERS. 4. MAIN CIRCUIT BREAKER FOR SB-LM SHALL BE FURNISHED WITH LSI ADJUSTMENT.

CKT	LOAD DESCRIPTION	LOAD	POLES	FRAME	TRIP	TYPE	ACC.	WIRE AND RACEWAY	CIRCUIT KEY
1	DP-L	174.36 kVA	3	1,200 A	800 A			(2) SETS OF 4#500 & 1#10 EGC IN 3-1/2" C.	
2	L1	4.16 kVA	3	250 A	200 A			4#3/0 & 1#6 EGC IN 2-1/2" C.	
3	L2	3.27 kVA	3	250 A	200 A			4#3/0 & 1#6 EGC IN 2-1/2" C.	
4	SPARE	0 kVA	3	250 A	200 A	--	--		--
5	SPARE	0 kVA	3	150 A	100 A	--	--		--
6	SPACE	--	3	--	--	--	--		--
7	SPACE	--	3	--	--	--	--		--

LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*
Lighting	2.894 kVA	100.00%	2.894 kVA	
Power	174.764 kVA	100.00%	174.764 kVA	TOTAL CONNECTED LOAD: 181.80 kVA
Receptacles	4.14 kVA	100.00%	4.14 kVA	TOTAL ESTIMATED DEMAND LOAD: 181.798 kVA
				TOTAL CONNECTED AMPS: 504.62 A
				TOTAL ESTIMATED DEMAND AMPS: 504.6 A

\*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

### DISTRIBUTION PANEL DP-L

ENCLOSURE: NEMA 1  
FED FROM: 800 A/3P @ SB-LM  
LOCATION: MECHANICAL 106

SOLID NEUTRAL  
GROUND BUS

MAIN: 800 A MCCB  
VOLTS: 120/208 Wye  
PHASE: 3  
WIRE: 4  
SCCR: 22 kA  
ISC: 15.65 kA

NOTES: PROVIDE METERING FOR ALL CIRCUIT BREAKERS.

CKT	LOAD DESCRIPTION	LOAD	POLES	FRAME	TRIP	TYPE	ACC.	WIRE AND RACEWAY	CIRCUIT KEY
1	AHU-1L: MECHANICAL 107	36.39 kVA	3	150 A	125 A			3#1 & 1#6 EGC IN 1-1/2" C.	
2	AHU-2L: MECHANICAL 114	50.8 kVA	3	200 A	175 A			3#2/0 & 1#6 EGC IN 2" C.	
3	ACCU-1: OUTSIDE	36.39 kVA	3	150 A	125 A			3#1 & 1#6 EGC IN 1-1/2" C.	
4	ACCU-2: OUTSIDE	50.8 kVA	3	200 A	175 A			3#2/0 & 1#6 EGC IN 2" C.	
5	SPARE	0 kVA	3	250 A	200 A	--	--		--
6	SPARE	0 kVA	3	150 A	100 A	--	--		--
7	SPACE	--	3	--	--	--	--		--
8	SPACE	--	3	--	--	--	--		--

LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*
Power	174.364 kVA	100.00%	174.364 kVA	
				TOTAL CONNECTED LOAD: 174.36 kVA
				TOTAL ESTIMATED DEMAND LOAD: 174.364 kVA
				TOTAL CONNECTED AMPS: 483.99 A
				TOTAL ESTIMATED DEMAND AMPS: 484 A

\*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:



10.27.2023

A/E FIRMS ARCH: QUINN EVANS 219 1/2 N. MAIN STREET ANN ARBOR, MI T: 734.663.5888 MEP/ENG: IMEG CORP. 1400 BALTIMORE STREET, SUITE 300 KANSAS CITY, MO T: 816.842.8437	DESIGNED: ZMB CADD: WMM TECH. REVIEW: PIP DATE: 10.27.2023	SUB SHEET NO.  <b>02</b> <b>EP6.1</b>	TITLE OF SHEET LIBBEY BATHHOUSE <b>ELECTRICAL SCHEDULES</b>  REHABILITATE BATHHOUSES HOT SPRINGS NATIONAL PARK	DRAWING NO. <b>128</b> <b>182951</b> PMIS/PKG NO. 318915 SHEET 191 OF 286
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