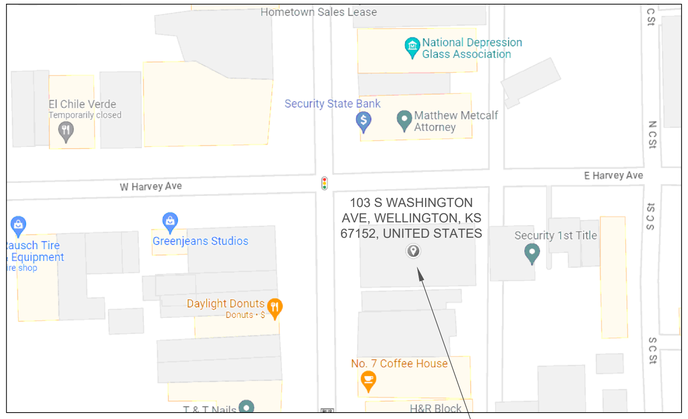
STOMATA DEVELOPMENT LLC W/R/T "COMMUNITY 101"



N

SITE LOCATION PLAN

NOT TO SCALE

SHEET NO.	DESCRIPTION
E1	- COVER SHEET
E2	- FIRST FLOOR - LIGHTING PLAN
E3	- FIRST FLOOR - POWER PLAN
E4	- SECOND FLOOR - LIGHTING PLAN
E5	- SECOND FLOOR - POWER PLAN
E6	- PANEL SCHEDULES
E7	- ELECTRICAL LINE DIAGRAM
E8	- LIGHTING CONTROLS RISER

APPLICABLE BUILDING CODES:

BUILDING:	INTERNATIONAL BUILDING CODE - IBC 2015, INTERNATIONAL EXISTING BUILDING CODE - IBEC 2015
LIFE SAFETY:	2015 NFPA 101 FIRE CODE (NATIONAL FIRE PROTECTION ASSOCIATION)
ELECTRICAL:	NEC NATIONAL ELECTRICAL CODE 2014
MECHANICAL:	INTERNATIONAL MECHANICAL CODE - IMC 2015
PLUMBING:	INTERNATIONAL PLUMBING CODE - IPC 2015
ACCESSIBILTY:	ADA 2015
ENERGY:	INTERNATIONAL ENERGY CONSERVATION CODE 2015, ASHRAE 2015
FIRE CODE:	BUILDING, FIRE, AND RELATED CODES OF WELLINGTON, KANSAS 2015 EDITION

SCOPE OF WORK:

RENOVATION:

- INTERIOR RENOVATION OF EXISTING FIRST FLOOR AND SECOND FLOOR.
- FIRST FLOOR HAS TWO UTILITY SPACE AND ONE ASSEMBLY SPACE.
- SECOND FLOOR HAS ONE ASSEMBLY SPACES AND ONE FUTURE REST ROOM.
- ALL WORK SHALL BE IN ACCORDANCE WITH WELLINGTON, KANSAS BUILDING CODES AND ELECTRICAL CODES.

GENERAL NOTES

- INSTALLATION OF ALL WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING REGULATIONS, CODES, ETC.
  A. LOCAL CODES AND ORDINANCES
  B. THE EDITION OF THE NATIONAL ELECTRICAL CODE NFPA 70 (NEC) IN EFFECT.
- ELECTRICAL SYSTEMS SHALL BE GROUNDED PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- CONTRACTOR SHALL INFORM THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO COMPLETION OF CONSTRUCTION TO ALLOW SUFFICIENT TIME FOR COORDINATION OF EXISTING BUILDING ACTIVITIES WITH THE CONSTRUCTION WORK.
- IF MATERIAL OR EQUIPMENT IS INSTALLED BEFORE IT IS APPROVED, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO ADDITIONAL CHARGE.
- IF IN THE OPINION OF THE ARCHITECT OR ENGINEER THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE DRAWINGS AND/OR SPECIFICATIONS THE CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS IN ADDITION TO CONTRACT DOCUMENTS.
- IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, INDICATED AND/OR SPECIFIED. ALL MATERIALS AND WORK SHALL BE ACCORDING TO PROJECT SPECIFICATIONS.
- NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS, ONLY THOSE WHERE CLARIFICATION IS NECESSARY.
- PROVIDE THE NUMBER AND SIZE AS NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER SPECIFICALLY INDICATED ON PLAN OR NOT.
- PROVIDE ACCESS PANELS FOR ALL INACCESSIBLE JUNCTION BOXES AS REQUIRED BY THE N.E.C.
- CONTRACTOR TO COORDINATE ELECTRICAL WORK TO AVOID INTERFERENCE BETWEEN ALL TRADES.

  A. DETERMINE INTERFERENCE BEFORE WORK IS FABRICATED OR INSTALLED. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH ALL DETAILS OF WORK AND WORKING CONDITIONS AND COORDINATE WORK DURING PRELIMINARY STAGES TO ENSURE ACTUAL ERECTION WILL PROCEED WITHOUT INTERFERENCE. COORDINATION IS OF PARAMOUNT IMPORTANCE AND REQUESTS FOR ADDITIONAL PAYMENT WILL BE CONSIDERED WHERE REQUEST IS BASED ON INTERFERENCE.

(B). WHERE JOB CONDITIONS REQUIRE REASONABLE DEVIATIONS FROM CONTRACT DOCUMENTS MAKE DEVIATIONS WITHOUT ADDITIONAL COST TO OWNER, AFTER OBTAINING APPROVAL OF ARCHITECT.

C. PROVIDE MAXIMUM PRACTICAL SPACE FOR OPERATION, REPAIR, REMOVAL, AND TESTING OF OPERATION, REPAIR, REMOVAL, AND TESTING OF ELECTRICAL EQUIPMENT. DEVIATIONS MAY BE MADE TO PROVIDE REQUIRED ACCESSIBILITY PROVIDED THEY ARE APPROVED BY THE OWNERS OR THE ARCHITECTS.

D. KEEP CONDUITS, WIRE WAYS AND SIMILAR ITEMS AS CLOSE AS POSSIBLE TO CEILING, WALLS AND COLUMNS IN ORDER TO TAKE UP MINIMUM AMOUNT OF SPACE. ALL WORK TO BE IN STALLED IN A NEAT AND WORK MAN LIKE MANNER.

E. THE CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST, ANY LABOR, MATERIALS, SERVICES, APPARATUS, AND DRAWINGS IN ADDITION TO CONTRACT DOCUMENTS, IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, INDICATED AND/OR SPECIFIED. PROVIDE ALL ELECTRICAL EQUIPMENT WITH ALL NECESSARY ASSOCIATED ACCESSORIES AND CONDUIT INFRASTRUCTURE AS REQUIRED TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM AT NO ADDITIONAL COST TO OWNER.

F. PROVIDE ACCESS TO AND CLEARANCES AROUND ELECTRICAL EQUIPMENT AS REQUIRED BY THE N.E.C. BEFORE SUBMITTING BIDS, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE ALL ADJOINING EXISTING BUILDINGS, EQUIPMENT, AND SPACE CONDITIONS ON WHICH HIS WORK IS ANY WAY DEPENDANT FOR THE BEST WORKMANSHIP AND OPERATION ACCORDING TO THE INTENT OF THE SPECIFICATIONS AND DRAWINGS.

- CONTRACTOR SHALL REPORT TO THE ARCHITECT/ ENGINEER ANY CONDITION WHICH MIGHT PREVENT HIM FROM INSTALLING HIS EQUIPMENT IN THE MANNER SPECIFIED OR AS SHOWN IN CONTRACT DOCUMENTS TEN BUSINESS DAYS PRIOR TO SUBMISSION OF BIDS.
- NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT THE SITE, NOR FOR ANY ALLEGED MISUNDERSTANDING OF MATERIALS TO BE FURNISHED OR WORK TO BE PERFORMED.
- THE CONTRACTOR SHALL INCLUDE IN HIS BID PRICE ALL LABOR AND MATERIAL THAT MAY EFFECT HIS WORK.
- REFER TO ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION, ELEVATION, MOUNTING HEIGHTS AND DETAILS OF ALL LIGHT FIXTURES AND DEVICES. REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.
- ALL NEW SLAB PENETRATIONS MUST BE X-RAYED OR RADAR PRIOR TO CORE DRILLING. OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE PRIOR TO ANY CORE DRILLING.
- ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL, PLUMBING AND OTHER TRADES TO PROVIDE ALL EQUIPMENT ASSOCIATED WITH THEIR RESPECTIVE TRADES WITH NECESSARY WIRING AND CONDUIT INFRASTRUCTURE FOR ALL SENSORS, AND CONTROL SYSTEMS AS REQUIRED.
- PROVIDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL BRANCH CIRCUITS AND FEEDERS INSTALLED IN RACEWAYS.
- THE DEDICATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED PER NEC SECTION 250.122.

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT APPEAR ON THE DRAWING

4PLEX-R	- QUADRUPLEX RECEPTACLE
CWR	- CO-WORKING RECEPTACLE
EWC	- ELECTRIC WATER COOLER
RTU	- ROOF TOP UNIT
WH	- WATER HEATER
ERU	- ENERGY RECOVERY UNIT
EF	- EXHAUST FAN

- WIRING SHALL BE IN ACCORDANCE WITH 2014 EDITION OF NEC AND/OR APPLICABLE LOCAL STATE AND UTILITY COMPANY RULES, LAWS AND ORDINANCES.
- SECURE ALL PERMISSIONS AND INSPECTIONS REQUIRED FOR INSTALLATION OF ELECTRICAL WORKS. VERIFY ALL OUTLET LOCATIONS WITH MASONRY , IF ANY , TO MINIMIZE CUTTING AND PATCHING OF BOTH BRICK OR BLOCK.
- THE ELECTRICAL CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS, INSTALL EQUIPMENTS IN PROPER SEQUENCE AS NOT TO INTERFERE WITH THE PROGRESS OF OTHER CONTRACTORS, AND GIVE GENERAL CONTRACTOR ALL NECESSARY INFORMATION FOR MAKING PROPER PROVISION FOR INSTALLATION OF HIS EQUIPMENTS.
- ALL MATERIALS SHALL BE NEW, CARRY UNDER WRITER'S LABEL OR BE LISTED BY THAT GROUP AND BE FULLY EQUAL TO MAKES SPECIFIED.
- THERE SHALL BE NO BACK-TO-BACK INSTALLATION OF ELECTRICAL DEVICES IN COMMON WALLS ETC MAY VARY LOCATION SHOWN BY PLUS OR MINUS THREE INCHES IN ORDER TO MEET THIS REQUIREMENT.
- ON FIRE WALLS AND SEPERATION WALLS, ALL ELECTRICAL OUTLETS AND SWITCH BOXES ARE REQUIRED TO MEET IBC SEC. 709.7.
- INDIVIDUAL HOME RUNS ARE SHOWN FOR ALL PENETRATIONS IN THE RATED WALLS, FLOOR/ CEILING ASSEMBLY AND IN THE ROOF ASSEMBLY SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES. THE SEALER SHALL HAVE A T- RATING AND F- RATING OF ONE HOUR. THE ABOVE REQUIREMENTS SHALL MEET IBC SEC. 709.6 A MAXIMUM OF TWO OUTLET BOXES PER STUD SPACE IN THE RATED WALL.
- A MAXIMIM OF TWO OUTLET BOXES PER JOIST SPACE IN THE FLOOR/ CEILING ASSEMBLY AND ROOF/ CEILING ASSEMBLY, THE ABOVE REQUIREMENTS TO MEET IBC SEC. 709.7 AND 710.2.

Electrical Consulting by:

José J. Rivera, PE, LEED AP
Senior EE

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Decent ENERGY

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PROJECT NAME & ADDRESS

STOMATA DEVELOPMENT LLC W/R/T "COMMUNITY 101"

101-103 S WASHINGTON AVE WELLINGTON, KS 67152

SIGNATURE WITH SEAL

09/12/2023

JOSE J. RIVERA LICENSED 20266 Jose J Rivera KANSAS PROFESSIONAL ENGINEER

Digitally signed by Jose J Rivera Date: 2023.09.12 08:58:58 -05'00'

REVISIONS	DATE	DESCRIPTION	REV

SHEET TITLE

COVER SHEET

DRAWN DATE	09-09-2023
DRAWN BY	EB
REVIEWED BY	JR

SHEET NUMBER

E-1

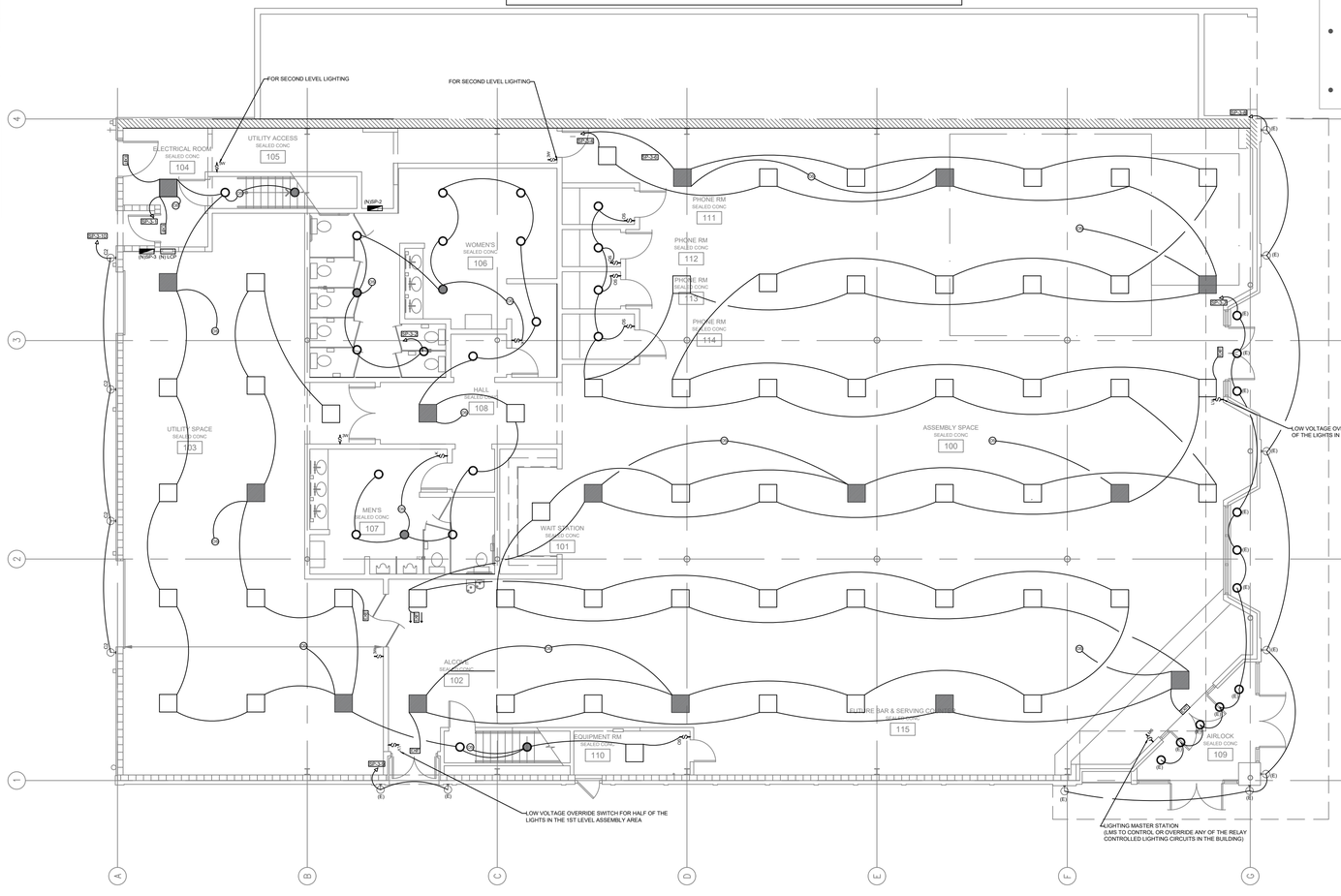
ELECTRICAL SYMBOLS

TYPE	DESCRIPTION
	ELECTRICAL WIRING
	2' X 2' LED LIGHTING PANEL
	LED RECESS DOWNLIGHT
	EMERGENCY LIGHT 2' X 2' LED PANEL WITH 90 MINUTES BATTERY BACK UP
	EMERGENCY LIGHT RECESS DOWNLIGHT WITH 90 MINUTES BATTERY BACK UP
S	20A COMMERCIAL GRADE LIGHT SWITCH
S OS	COMMERCIAL GRADE WALL LIGHT SWITCH WITH BUILT-IN PIR OCCUPANCY SENSOR
S 3W	20A COMMERCIAL GRADE LIGHT 3WAY SWITCH
S K	20A COMMERCIAL GRADE LIGHT KEYED SWITCH
S LV	LOW VOLTAGE SWITCH FROM THE LCP
S MS	LIGHTING MASTER STATION
S T	TIMER SWITCH
	WALL MOUNTED LIGHTING FIXTURE
	ELECTRICAL PANEL
EXIT	EXIT SIGN WITH 90 MINUTES BATTERY BACK UP
EXIT	EXIT SIGN AND EMERGENCY LIGHT WIT 90 MINUTES BATTERY BACK UP
ACD	AC DISCONNECT - SPECS PER ONE LINE
C	CIRCUIT NUMBERS
OS	DUAL TECHNOLOGY CEILING OCCUPANCY SENSOR
(E)	EXISTING

LIGHTING FIXTURE SCHEDULE
(FOR DESIGN PURPOSE ONLY, THE FINAL LIGHTING MODELS SHALL BE SELECTED BY THE OWNER)

TYPE	ACTUAL IMAGE	SYMBOL	DESCRIPTION	MODEL	LUMEN	COLOR TEMP	VOLT	WATTS
A			LED PANEL LIGHTING FIXTURE	LITHONIA SPX 2X2 6000LM 40K BFR MPL MW	6000 LM	4000K	120 V	44 W
AE			LED PANEL LIGHTING FIXTURE WITH BATTERY BACK PACK, 10W CONSTANT POWER	LITHONIA SPX 2X2 6000LM 40K BFR MPL E10WLCP MW	6000 LM	4000K	120 V	44 W
B			LED 6" WALLWASH LED DOWNLIGHT	LITHONIA LDN6 40/15 L06AR LSS TRW 120	1500 LM	4000K	120 V	20.5 W
BE			LED 6" DOWNLIGHT WITH BATTERY BACK PACK, 10W CONSTANT POWER	LITHONIA LDN6 40/15 L06AR LSS TRW 120 E10WCP	1500 LM	4000K	120 V	20.5 W
C1		C1	LED WALL MOUNTED	LITHONIA TWP ALO 40K T3M 120 DDBXD	3410 LM	4000K	120 V	34 W
C2		C2	LED WALL MOUNTED	LITHONIA ARC1 LED P3 40K MVOLT PE DDBXD	3000 LM	4000K	120 V	25 W
D		EXIT	LED EXIT AND EMERGENCY LIGHT COMBO	LITHONIA TCC 750L HO HSG	750 LM		120 V	6.6 W
E		EXIT	LED EXIT WITH DIRECTIONAL SIGN	LITHONIA LQM S W 3 R 120/277 M6			120 V	0.62 W

CONFIRM THE FIXTURES MOUNTING TYPES WITH THE ACTUAL JOB SITE CONDITIONS.



1 FIRST FLOOR PLAN - ELECTRICAL LIGHTING
SCALE: 1/16"=1'-0"

GENERAL NOTES

- REFER TO DRAWING E-1 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
- REFER TO DRAWING E-7 FOR POWER RISER DIAGRAM,
- REFER TO DRAWING E-6 FOR PANEL SCHEDULES.
- REFER TO ARCHITECTURAL DRAWINGS, ELEVATION & DETAILS FOR EXACT LOCATION OF ELECTRICAL DEVICES.
- REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT MECHANICAL AND PLUMBING EQUIPMENT LOCATIONS.
- ALL NEW RECEPTACLES, TELECOMMUNICATION OUTLETS WITH ASSOCIATED WIRING SHALL BE FLUSH MOUNTED. SURFACE MOUNTED OUTLETS, CONDUIT, RACEWAYS, ETC TO BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION, MOUNTING HEIGHTS AND ADDITIONAL INFORMATION FOR POWER/DATA OUTLETS PRIOR TO ROUGH-IN WORK.
- ALL THE EXTERIOR LIGHTING FIXTURES ARE EXISTING TO REMAIN. THEY SHALL BE SERVED FROM NEW 120V CIRCUITS AND CONTROLLED BY TIMER AND/OR PHOTOCELL PER LIGHTING PLAN. FOR THE EXTERIOR LIGHTING CONTROLS REFER TO THE LIGHTING CONTROL RISER.
- ALL THE EXISTING INTERIOR WIRING SERVING 120V RECEPTACLES SHALL BE REMOVED. CONDUITS IN GOOD WORKING CONDITION CAN BE REUSED AS POSSIBLE.
- ALL THE EXISTING ELECTRICAL PANELBOARDS SHALL BE REMOVED.

1ST FLOOR PLAN LIGHTING NOTES

NOTES ABOUT THE EXISTING FIRST FLOOR INTERIOR LIGHTING FIXTURES:

1. THE EXISTING HID LIGHTING FIXTURES, LOCATED MAINLY IN THE ASSEMBLY AND UTILITY AREAS, SHALL REMAIN. THE GENERAL LIGHTS SHOWN IN THOSE AREAS ARE FOR ILLUSTRATION PURPOSES ONLY. THEY SHOW AN ALTERNATIVE LED BASED LAYOUT.
2. JUST ADD NEW NIGHT/EMERGENCY LED LIGHTING TO THOSE AREAS FOR LIFE SAFETY COMPLIANCE AS CLOSE TO THIS LAYOUT AS POSSIBLE.
3. INSTALL LIGHTING CONTROL STATIONS AND SWITCHES PER THIS LAYOUT AS CLOSE AS POSSIBLE.
4. RE-WIRE THE EXISTING CIRCUITS PER THE LIGHTING CONTROL RISER IN SHEET E-7.
5. THE EXISTING HID LIGHTING LAYOUTS, AND CIRCUITING, CAN BE RE-ARRANGED AS PRACTICALLY AS POSSIBLE TO MIMICK THE PATTERN OF THIS LAYOUT. BUT THERE IS NO NEED TO PROVIDE DUAL UNIFORM LIGHTING LEVELS IF THAT IS NOT PRACTICAL.

NOTES ABOUT THE EXISTING OUTDOOR LIGHTING FIXTURES:

1. ALL THE EXISTING OUTDOOR LIGHTING FIXTURES SHALL REMAIN. REPLACE THE LAMPS WITH LED RETROFIT TECHNOLOGY AS POSSIBLE AND KEEPING THE UL LAMPS AND FIXTURES LISTINGS. THIS IN COORDINATION WITH THE OWNER'S REPRESENTATIVE. THE OWNER SHALL APPROVE THE FINAL LAMP TYPES AND COLORS.
2. RE-WIRE THE EXISTING CIRCUITS PER THE LIGHTING CONTROL RISER IN SHEET E-7.

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PROJECT NAME & ADDRESS
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101-103 S WASHINGTON AVE
WELLINGTON, KS 67152

SIGNATURE WITH SEAL
09/12/2023
JOSE J. RIVERA LICENSED 20266 KANSAS PROFESSIONAL ENGINEER

REVISIONS	DESCRIPTION	DATE
REV		

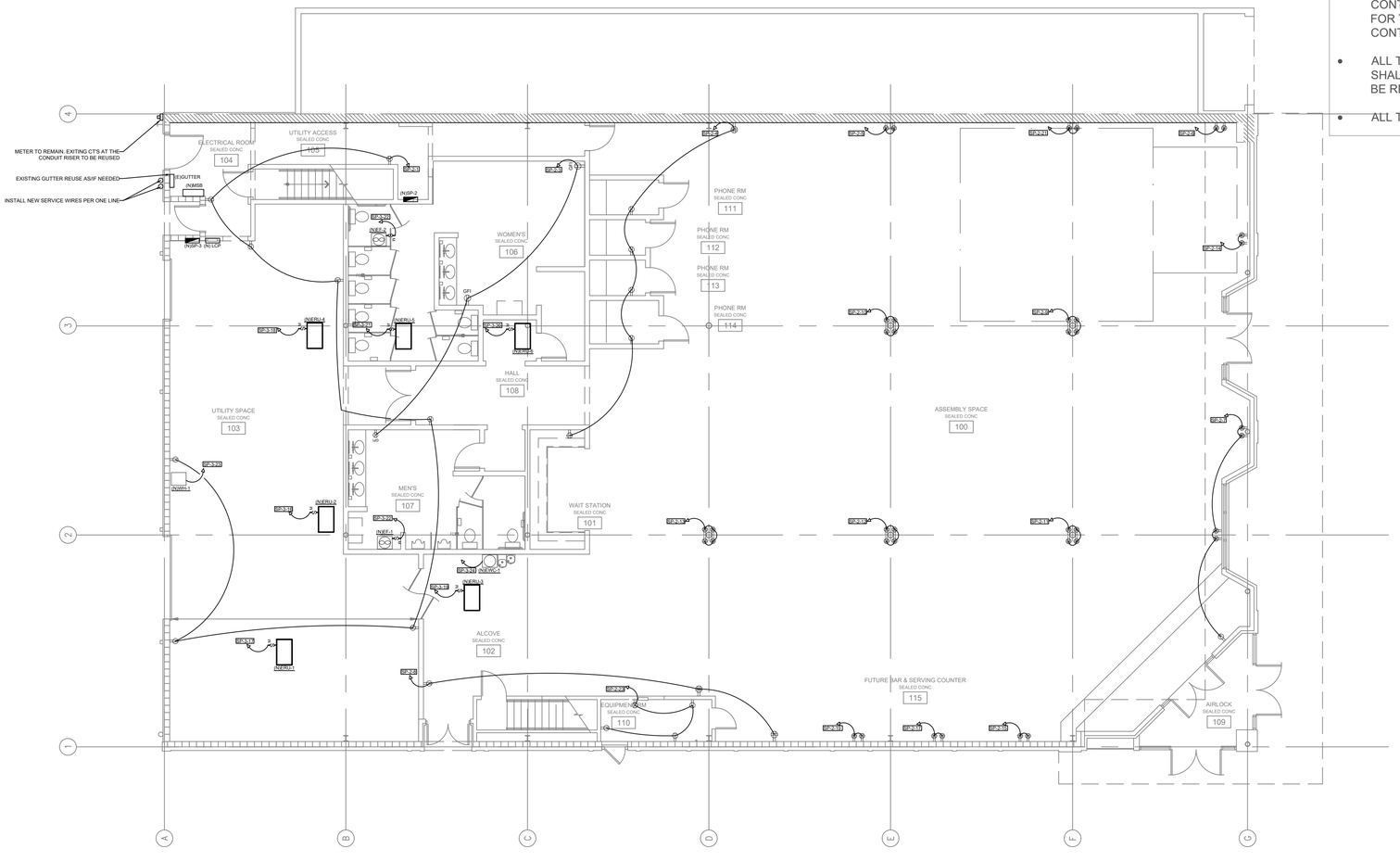
SHEET TITLE
FIRST FLOOR LIGHTING PLAN

DRAWN DATE	09-09-2023
DRAWN BY	EB
REVIEWED BY	JR

SHEET NUMBER
E-2

ELECTRICAL SYMBOLS

TYPE	DESCRIPTION
	20A, 120V DUPLEX COMMERCIAL GRADE RECEPTACLE
	20A, 120V 4-PLEX COMMERCIAL GRADE RECEPTACLE
	20A, 120V 8-PLEX COMMERCIAL GRADE RCEPTACLE
C-X	CIRCUIT NUMBERS-(X INDICATES THE CIRCUIT NUMBER)
GFI	20A, 120V COMMERICAL GRADE GROUND FAULT INTERRUPT RECEPTACLE
GFI_WP	20A,120V COMMERCIAL GRADE WEATHER PROOF GFI RECEPTACLE
AC-DISCONNECT	NEW AC-DISCONNECT
	ELECTRICAL PANEL
M	20A MANUAL MOTOR RATED SWITCH
J	JUNCTION BOX



1 FIRST FLOOR PLAN - ELECTRICAL POWER
SCALE: 1/16"=1'-0"

1ST FLOOR PLAN

GENERAL NOTES

- REFER TO DRAWING E-1 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
- REFER TO DRAWING E-7 FOR POWER RISER DIAGRAM,
- REFER TO DRAWING E-6 FOR PANEL SCHEDULES.
- REFER TO ARCHITECTURAL DRAWINGS, ELEVATION & DETAILS FOR EXACT LOCATION OF ELECTRICAL DEVICES.
- REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT MECHANICAL AND PLUMBING EQUIPMENT LOCATIONS.
- ALL NEW RECEPTACLES, TELECOMMUNICATION OUTLETS WITH ASSOCIATED WIRING SHALL BE FLUSH MOUNTED. SURFACE MOUNTED OUTLETS, CONDUIT, RACEWAYS, ETC TO BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION, MOUNTING HEIGHTS AND ADDITIONAL INFORMATION FOR POWER/DATA OUTLETS PRIOR TO ROUGH-IN WORK.
- ALL THE EXTERIOR LIGHTING FIXTURES ARE EXISTING TO REMAIN. THEY SHALL BE SERVED FROM NEW 120V CIRCUITS AND CONTROLLED BY TIMER AND/OR PHOTOCELL PER LIGHTING PLAN. FOR THE EXTERIOR LIGHTING CONTROLS REFER TO THE LIGHTING CONTROL RISER.
- ALL THE EXISTING INTERIOR WIRING SERVING 120V RECEPTACLES SHALL BE REMOVED. CONDUITS IN GOOD WORKING CONDITION CAN BE REUSED AS POSSIBLE.
- ALL THE EXISTING ELECTRICAL PANELBOARDS SHALL BE REMOVED.

Decent ENERGY
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SIGNATURE WITH SEAL
09/12/2023
JOSÉ J. RIVERA LICENSED 20266 KANSAS PROFESSIONAL ENGINEER

REVISIONS					
REV	DESCRIPTION				DATE

SHEET TITLE
FIRST FLOOR POWER PLAN

DRAWN DATE	09-09-2023
DRAWN BY	EB
REVIEWED BY	JR

SHEET NUMBER
E-3

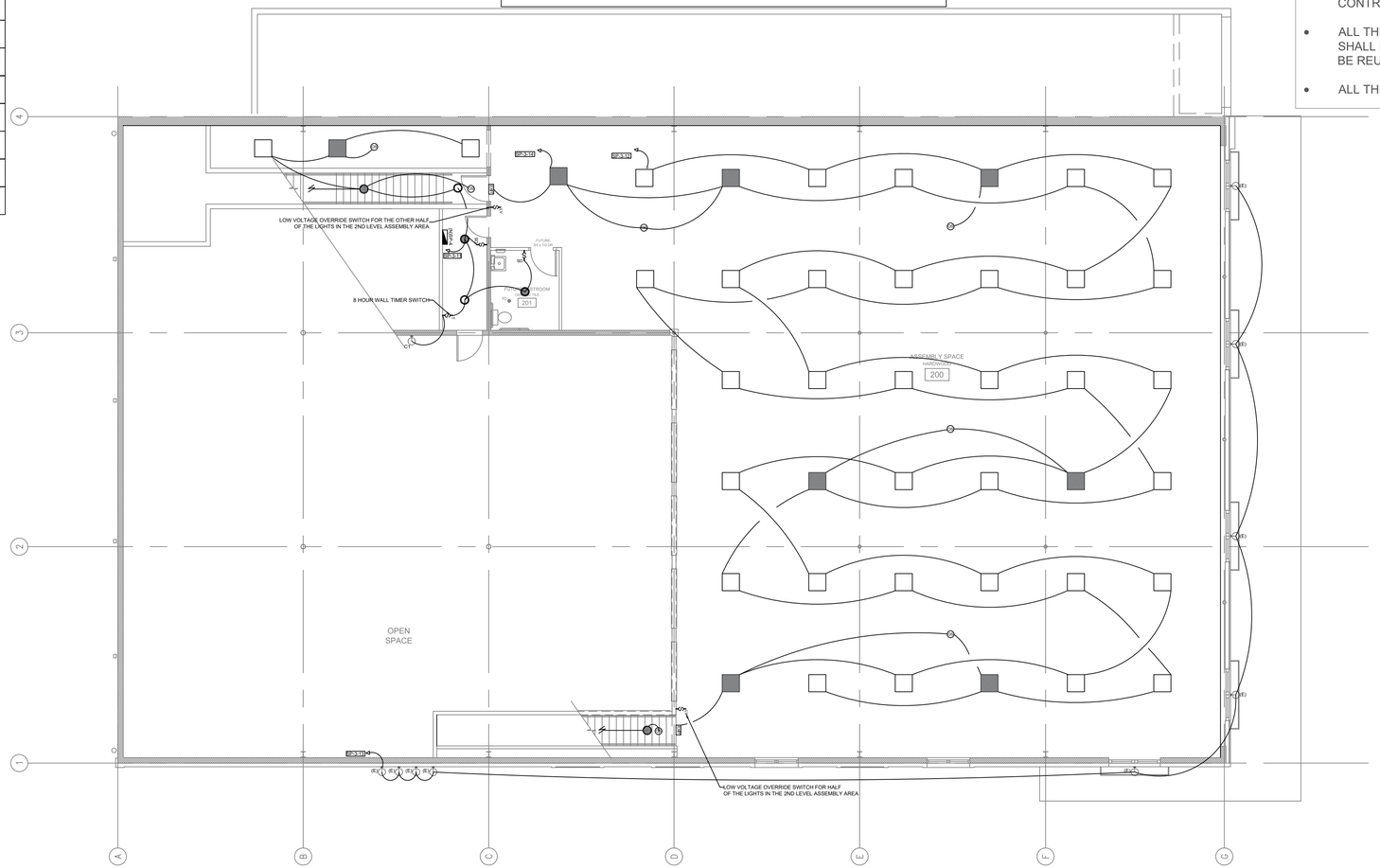
ELECTRICAL SYMBOLS

TYPE	DESCRIPTION
	ELECTRICAL WIRING
	2' X 2' LED LIGHTING PANEL
	LED RECESS DOWNLIGHT
	EMERGENCY LIGHT 2' X 2' LED PANEL WITH 90 MINUTES BATTERY BACK UP
	EMERGENCY LIGHT RECESS DOWNLIGHT WITH 90 MINUTES BATTERY BACK UP
S	20A COMMERCIAL GRADE LIGHT SWITCH
S OS	COMMERCIAL GRADE WALL LIGHT SWITCH WITH BUILT-IN PIR OCCUPANCY SENSOR
S 3W	20A COMMERCIAL GRADE LIGHT 3WAY SWITCH
S K	20A COMMERCIAL GRADE LIGHT KEYED SWITCH
S LV	LOW VOLTAGE SWITCH FROM THE LCP
S MS	LIGHTING MASTER STATION
S T	TIMER SWITCH
	WALL MOUNTED LIGHTING FIXTURE
	ELECTRICAL PANEL
EXIT	EXIT SIGN WITH 90 MINUTES BATTERY BACK UP
EXIT	EXIT SIGN AND EMERGENCY LIGHT WIT 90 MINUTES BATTERY BACK UP
ACD	AC DISCONNECT - SPECS PER ONE LINE
C	CIRCUIT NUMBERS
OS	DUAL TECHNOLOGY CEILING OCCUPANCY SENSOR
(E)	EXISTING

LIGHTING FIXTURE SCHEDULE
(FOR DESIGN PURPOSE ONLY, THE FINAL LIGHTING MODELS SHALL BE SELECTED BY THE OWNER)

TYPE	ACTUAL IMAGE	SYMBOL	DESCRIPTION	MODEL	LUMEN	COLOR TEMP	VOLT	WATTS
A			LED PANEL LIGHTING FIXTURE	LITHONIA SPX 2X2 6000LM 40K BFR MPL MW	6000 LM	4000K	120 V	44 W
AE			LED PANEL LIGHTING FIXTURE WITH BATTERY BACK PACK, 10W CONSTANT POWER	LITHONIA SPX 2X2 6000LM 40K BFR MPL E10WLCP MW	6000 LM	4000K	120 V	44 W
B			LED 6" WALLWASH LED DOWNLIGHT	LITHONIA LDN6 40/15 L06AR LSS TRW 120	1500 LM	4000K	120 V	20.5 W
BE			LED 6" DOWNLIGHT WITH BATTERY BACK PACK, 10W CONSTANT POWER	LITHONIA LDN6 40/15 L06AR LSS TRW 120 E10WCP	1500 LM	4000K	120 V	20.5 W
C1		C1	LED WALL MOUNTED	LITHONIA TWP ALO 40K T3M 120 DDBXD	3410 LM	4000K	120 V	34 W
C2		C2	LED WALL MOUNTED	LITHONIA ARC1 LED P3 40K MVOLT PE DDBXD	3000 LM	4000K	120 V	25 W
D		EXIT	LED EXIT AND EMERGENCY LIGHT COMBO	LITHONIA TCC 750L HO HSG	750 LM		120 V	6.6 W
E		EXIT	LED EXIT WITH DIRECTIONAL SIGN	LITHONIA LQM S W 3 R 120/277 M6			120 V	0.62 W

CONFIRM THE FIXTURES MOUNTING TYPES WITH THE ACTUAL JOB SITE CONDITIONS.



2ND FLOOR PLAN

1 SECOND FLOOR PLAN - ELECTRICAL LIGHTING
SCALE: 1/16"=1'-0"

GENERAL NOTES

- REFER TO DRAWING E-1 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
- REFER TO DRAWING E-7 FOR POWER RISER DIAGRAM,
- REFER TO DRAWING E-6 FOR PANEL SCHEDULES.
- REFER TO ARCHITECTURAL DRAWINGS, ELEVATION & DETAILS FOR EXACT LOCATION OF ELECTRICAL DEVICES.
- REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT MECHANICAL AND PLUMBING EQUIPMENT LOCATIONS.
- ALL NEW RECEPTACLES, TELECOMMUNICATION OUTLETS WITH ASSOCIATED WIRING SHALL BE FLUSH MOUNTED. SURFACE MOUNTED OUTLETS, CONDUIT, RACEWAYS, ETC TO BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION, MOUNTING HEIGHTS AND ADDITIONAL INFORMATION FOR POWER/DATA OUTLETS PRIOR TO ROUGH-IN WORK.
- ALL THE EXTERIOR LIGHTING FIXTURES ARE EXISTING TO REMAIN. THEY SHALL BE SERVED FROM NEW 120V CIRCUITS AND CONTROLLED BY TIMER AND/OR PHOTOCELL PER LIGHTING PLAN. FOR THE EXTERIOR LIGHTING CONTROLS REFER TO THE LIGHTING CONTROL RISER.
- ALL THE EXISTING INTERIOR WIRING SERVING 120V RECEPTACLES SHALL BE REMOVED. CONDUITS IN GOOD WORKING CONDITION CAN BE REUSED AS POSSIBLE.
- ALL THE EXISTING ELECTRICAL PANELBOARDS SHALL BE REMOVED.

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SIGNATURE WITH SEAL
09/12/2023
JOSE J. RIVERA LICENSED 20266 KANSAS PROFESSIONAL ENGINEER

REVISIONS			
REV	DESCRIPTION	DATE	

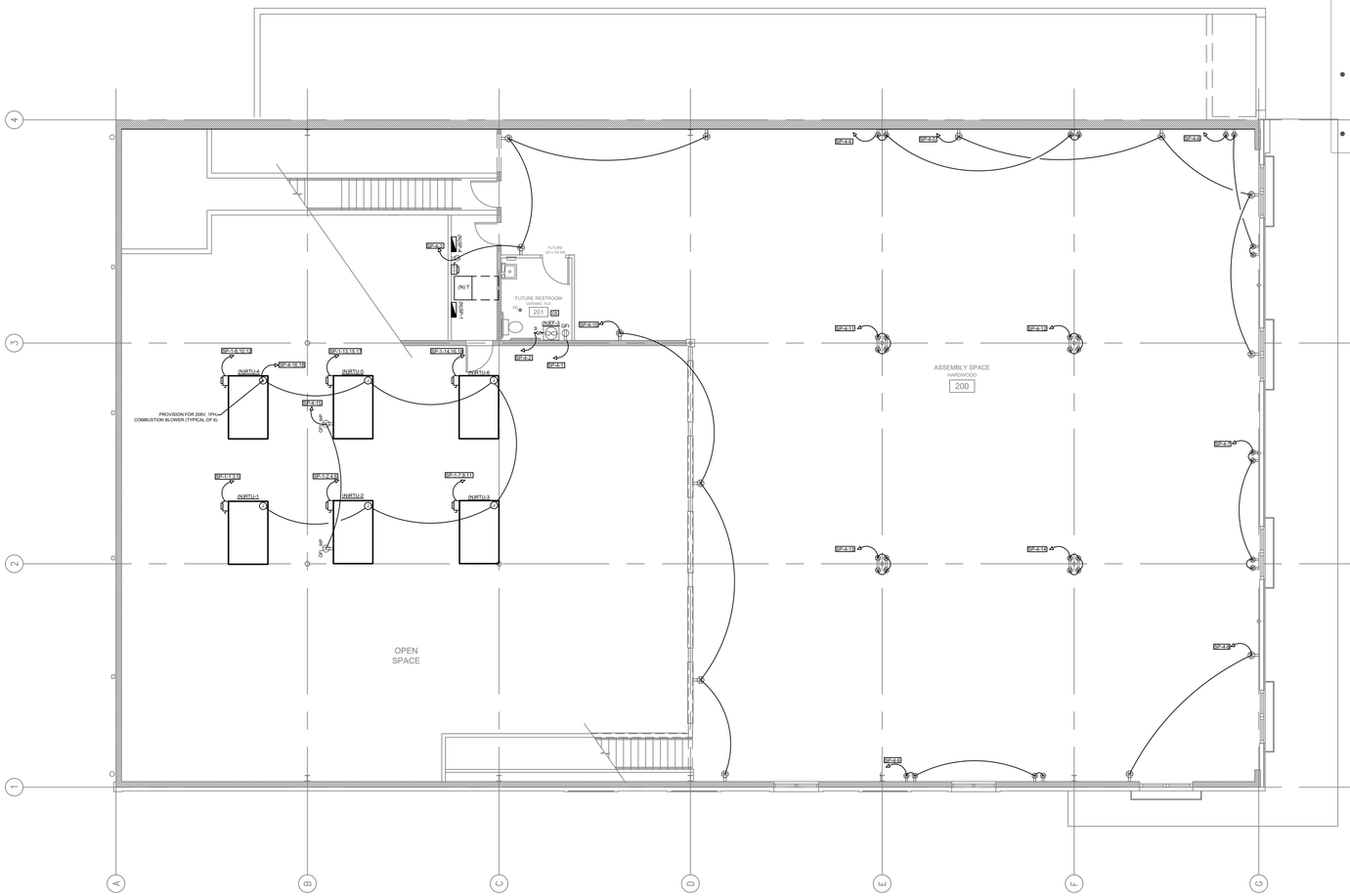
SHEET TITLE
SECOND FLOOR LIGHTING PLAN

DRAWN DATE	09-09-2023
DRAWN BY	EB
REVIEWED BY	JR

SHEET NUMBER
E-4

ELECTRICAL SYMBOLS

TYPE	DESCRIPTION
	20A, 120V DUPLEX COMMERCIAL GRADE RECEPTACLE
	20A, 120V 4-PLEX COMMERCIAL GRADE RECEPTACLE
	20A, 120V 8-PLEX COMMERCIAL GRADE RCEPTACLE
C-X	CIRCUIT NUMBERS-(X INDICATES THE CIRCUIT NUMBER)
GFI	20A, 120V COMMERICAL GRADE GROUND FAULT INTERRUPT RECEPTACLE
GFI_WP	20A,120V COMMERCIAL GRADE WEATHER PROOF GFI RECEPTACLE
AC/D	NEW AC-DISCONNECT
	ELECTRICAL PANEL
M	20A MANUAL MOTOR RATED SWITCH
J	JUNCTION BOX



1 SECOND FLOOR PLAN - ELECTRICAL POWER
SCALE: 1/16"=1'-0"

GENERAL NOTES

- REFER TO DRAWING E-1 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
- REFER TO DRAWING E-7 FOR POWER RISER DIAGRAM,
- REFER TO DRAWING E-6 FOR PANEL SCHEDULES.
- REFER TO ARCHITECTURAL DRAWINGS, ELEVATION & DETAILS FOR EXACT LOCATION OF ELECTRICAL DEVICES.
- REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT MECHANICAL AND PLUMBING EQUIPMENT LOCATIONS.
- ALL NEW RECEPTACLES, TELECOMMUNICATION OUTLETS WITH ASSOCIATED WIRING SHALL BE FLUSH MOUNTED. SURFACE MOUNTED OUTLETS, CONDUIT, RACEWAYS, ETC TO BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION, MOUNTING HEIGHTS AND ADDITIONAL INFORMATION FOR POWER/DATA OUTLETS PRIOR TO ROUGH-IN WORK.
- ALL THE EXTERIOR LIGHTING FIXTURES ARE EXISTING TO REMAIN. THEY SHALL BE SERVED FROM NEW 120V CIRCUITS AND CONTROLLED BY TIMER AND/OR PHOTOCELL PER LIGHTING PLAN. FOR THE EXTERIOR LIGHTING CONTROLS REFER TO THE LIGHTING CONTROL RISER.
- ALL THE EXISTING INTERIOR WIRING SERVING 120V RECEPTACLES SHALL BE REMOVED. CONDUITS IN GOOD WORKING CONDITION CAN BE REUSED AS POSSIBLE.
- ALL THE EXISTING ELECTRICAL PANELBOARDS SHALL BE REMOVED.

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101-103 S WASHINGTON AVE
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SIGNATURE WITH SEAL
09/12/2023
JOSE J. RIVERA
LICENSED
20266
KANSAS
PROFESSIONAL ENGINEER

REVISIONS					
REV	DESCRIPTION	DATE			

SHEET TITLE
SECOND FLOOR POWER PLAN

DRAWN DATE	09-09-2023
DRAWN BY	EB
REVIEWED BY	JR

SHEET NUMBER
E-5

PANELBOARD NO: NEW 'SP-1'

SECTION: 1 OF 1
MOUNTING: SURFACE
POLES: 30
LOCATION: 2ND FLR UTILITY SPACE
ENCLOSURE: NEMA 1

VOLTAGE: 480
PHASE: 3
WIRE: 3
GROUND BUS: YES

BUS: 200A
MAIN: 200A MCB
MIN. AIC: 10,000

CKT NO.	DESCRIPTION	LOAD (VA) LTS	REC	MECH	MISC	CIRCUIT BREAKER AMPS	POLES		CIRCUIT BREAKER AMPS	POLES	LOAD (VA) LTS	REC	MECH	MISC	DESCRIPTION	CKT NO
1	RTU-1			5433		30	3	A	30	3			5433		RTU-2	2
3				5433				B					5433			4
5				5433				C					5433			6
7	RTU-3			5433		30	3	A	30	3			5433		RTU-4	8
9				5433				B					5433			10
11				5433				C					5433			12
13	RTU-5			5433		30	3	A	30	3			5433		RTU-6	14
15				5433				B					5433			16
17				5433				C					5433			18
19	Space							A							Space	20
21	Space							B							Space	22
23	Space							C							Space	24
25	Space							A							Space	26
27	Space							B							Space	28
29	Space							C							Space	30

PANELBOARD NO: NEW 'SP-1'

	LTS	REC	MECH	MISC							
SUBTOTAL CONNECTED KVA	0.0	0.0	48.9	0.0				0.0	0.0	48.9	0.0 SUBTOTAL CONNECTED KVA
								0.0	0.0	97.8	0.0 TOTAL CONNECTED KVA

PHASE BALANCE

	LTS	REC	MECH	MISC	TOTAL	% DIF
PHASE A CONNECTED KVA	0.0	0.0	32.6	0.0	32.6	0.0
PHASE B CONNECTED KVA	0.0	0.0	32.6	0.0	32.6	0.0
PHASE C CONNECTED KVA	0.0	0.0	32.6	0.0	32.6	0.0
AVERAGE PHASE CONNECTED KVA					32.6	

NEC LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MECH	MISC	SUBTOT	SPARE	TOTAL	
0.0	0.0	97.8	0.0	97.8	0		CONNECTED KVA
1.0	#1	1.0	1.00		%		DEMAND FACTOR
0.0	0.0	97.8	0.0	97.8	0.0	97.8	DEMAND KVA
						117.6	DEMAND AMPS
1.25	1.0	1.0	1.25		1.0		CONTINUOUS / NON-CONTINUOUS FACTOR
						118	MIN. BREAKER AMPS

PANELBOARD NO: NEW 'SP-2'

SECTION: 1 OF 1
MOUNTING: SURFACE
POLES: 30
LOCATION: 1ST FLR UTILITY SPACE
ENCLOSURE: NEMA 1

VOLTAGE: 120/208V
PHASE: 3
WIRE: 4
GROUND BUS: YES

BUS: 200A
MAIN: MLO
MIN. AIC: 42,000

CKT NO.	DESCRIPTION	LOAD (VA) LTS	REC	MECH	MISC	CIRCUIT BREAKER AMPS	POLES		CIRCUIT BREAKER AMPS	POLES	LOAD (VA) LTS	REC	MECH	MISC	DESCRIPTION	CKT NO
1	UTILITY REC.		1440			20	1	A								
3	BATH REC. GFI		540			20	1		B		20	1		1260	ASSEMBLY SPACE REC.	4
5	ASSEMBLY SPACE REC.		720			20	1			C	20	1		720	ASSEMBLY SPACE REC.	6
7	ASSEMBLY SPACE REC.		1440			20	1	A			20	1		900	ASSEMBLY SPACE REC.	8
9	ASSEMBLY SPACE REC.		1440			20	1		B		20	1		1440	ASSEMBLY SPACE REC.	10
11	ASSEMBLY SPACE REC.		1440			20	1			C	20	1		1440	ASSEMBLY SPACE REC.	12
13	ASSEMBLY SPACE REC.		1440			20	1	A			20	1		720	ASSEMBLY SPACE REC.	14
15	SERVING AND BAR REC.		720			20	1		B		100	2			8320 FUTURE EV CHARGER	16
17	SERVING AND BAR REC.		720			20	1			C					8320	18
19	SERVING AND BAR REC.		720			20	1	A			100	2			8320 FUTURE EV CHARGER	20
21	ASSEMBLY SPACE REC.		720			20	1		B						8320	22
23	EQUIPMENT ROOM 110		540			20	1			C	20	1			Spare	24
25	Spare					20	1	A			20	1			Spare	26
27	Spare					20	1		B		20	1			Space	28
29	Spare					20	1			C					Space	30
31	Space							A							Space	32
33	Space								B						Space	34
35	Space									C					Space	36
37	Space							A							Space	38
39	Space								B						Space	40
41	Space									C					Space	42

PANELBOARD NO: NEW 'SP-2'

	LTS	REC	MECH	MISC							
SUBTOTAL CONNECTED KVA	0.0	11.9	0.0	0.0				0.0	6.5	0.0	33.3 SUBTOTAL CONNECTED KVA
								0.0	18.4	0.0	33.3 TOTAL CONNECTED KVA

PHASE BALANCE

	LTS	REC	MECH	MISC	TOTAL	% DIF
PHASE A CONNECTED KVA	0.0	6.7	0.0	8.3	15.0	-13.0
PHASE B CONNECTED KVA	0.0	6.1	0.0	16.6	22.8	32.2
PHASE C CONNECTED KVA	0.0	5.6	0.0	8.3	13.9	-19.2
AVERAGE PHASE CONNECTED KVA					17.2	

NEC LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MECH	MISC	SUBTOT	SPARE	TOTAL	
0.0	18.4	0.0	33.3	51.6	0		CONNECTED KVA
1.0	#1	1.0	1.00		%		DEMAND FACTOR
0.0	14.2	0.0	33.3	47.5	0.0	47.5	DEMAND KVA
						131.7	DEMAND AMPS
1.25	1.0	1.0	1.25		1.0		CONTINUOUS / NON-CONTINUOUS FACTOR
						155	MIN. BREAKER AMPS

PANELBOARD NO: NEW 'SP-3'

SECTION: 1 OF 1
MOUNTING: SURFACE
POLES: 42
LOCATION: 1ST FLR UTILITY SPACE
ENCLOSURE: NEMA 1

VOLTAGE: 120/208V
PHASE: 3
WIRE: 4
GROUND BUS: YES

BUS: 100A
MAIN: MLO
MIN. AIC: 42,000

CKT NO.	DESCRIPTION	LOAD (VA) LTS	REC	MECH	MISC	CIRCUIT BREAKER AMPS	POLES		CIRCUIT BREAKER AMPS	POLES	LOAD (VA) LTS	REC	MECH	MISC	DESCRIPTION	CKT NO
1	1ST UTILITY SPACE LIGHTING	1040				20	1	A	20	1	416				1ST FLOOR RESTROOMS LIGHTING	2
3	Spare					20	1	B	20	1	1226				1ST ASSEMBLY SPACE LIGHTING	4
5	Spare					20	1	C	20	1	1056				1ST ASSEMBLY SPACE LIGHTING	6
7	1ST EXISTING EXTERIOR LIGHTING	250				20	1	A	20	1	250				1ST EXISTING EXTERIOR LIGHTING	8
9	1ST EXISTING EXTERIOR LIGHTING	250				20	1	B	20	1	100				1ST NEW EXTERIOR LIGHTING	10
11	Spare					20	1	C	20	1	880				2ND ASSEMBLY SPACE LIGHTING	12
13	2ND EXISTING EXTERIOR LIGHTING	250				20	1	A	20	1	836				2ND ASSEMBLY SPACE LIGHTING	14
15	Spare					20	1	B	20	1				670	ERU-2	16
17	ERU-1			670		20	1	C	20	1				670	ERU-4	18
19	ERU-3			670		20	1	A	20	1				670	ERU-6	20
21	ERU-5			670		20	1	B	15	1				500	EF 1 AND EF 2	22
23	WH				670	15 *	1	C	15	1				370	EWC	24
25	Spare					20	1	A	20	1					Spare	26
27	Spare					20	1	B	20	1					Spare	28
29	Spare					20	1	C	20	1					Spare	30
31	Space							A							Space	32
33	Space							B							Space	34
35	Space							C							Space	36
37	Space							A							Space	38
39	Space							B							Space	40
41	Space							C							Space	42

PANELBOARD NO: NEW 'SP-3'

	LTS	REC	MECH	MISC							
SUBTOTAL CONNECTED KVA	1.8	0.0	2.0	0.7				4.8	0.0	2.5	0.4 SUBTOTAL CONNECTED KVA
								6.6	0.0	4.5	1.0 TOTAL CONNECTED KVA

PHASE BALANCE

	LTS	REC	MECH	MISC	TOTAL	% DIF
PHASE A CONNECTED KVA	3.0	0.0	1.3	0.0	4.4	8.5
PHASE B CONNECTED KVA	1.6	0.0	1.8	0.0	3.4	-15.4
PHASE C CONNECTED KVA	1.9	0.0	1.3	1.0	4.3	6.9
AVERAGE PHASE CONNECTED KVA					4.0	

NEC LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MECH	MISC	SUBTOT	SPARE	TOTAL	
6.6	0.0	4.5	1.0	12.1	0		CONNECTED KVA
1.0	#1	1.0	1.00		%		DEMAND FACTOR
6.6	0.0	4.5	1.0	12.1	0.0	12.1	DEMAND KVA
						33.6	DEMAND AMPS
1.25	1.0	1.0	1.25		1.0		CONTINUOUS / NON-CONTINUOUS FACTOR
						39	MIN. BREAKER AMPS

NOTE:
1. * - GFI BREAKER

PANELBOARD NO: NEW 'SP-4'

SECTION: 1 OF 1
MOUNTING: SURFACE
POLES: 42
LOCATION: 2ND FLR UTILITY SPACE
ENCLOSURE: NEMA 1

VOLTAGE: 120/208V
PHASE: 3
WIRE: 4
GROUND BUS: YES

BUS: 100A
MAIN: MLO
MIN. AIC: 22,000

CKT NO.	DESCRIPTION	LOAD (VA) LTS	REC	MECH	MISC	CIRCUIT BREAKER AMPS	POLES		CIRCUIT BREAKER AMPS	POLES	LOAD (VA) LTS	REC	MECH	MISC	DESCRIPTION	CKT NO
1	BATH GFI REC.		180			20	1		15	1				38	EF-3	2
3	ASSEMBLY SPACE REC.		1260			20	1		20	1		1440			ASSEMBLY SPACE REC.	4
5	ASSEMBLY SPACE REC.		1440			20	1	C	20	1		1440			ASSEMBLY SPACE REC.	6
7	ASSEMBLY SPACE REC.		1440			20	1	A	20	1		1440			ASSEMBLY SPACE REC.	8
9	ASSEMBLY SPACE REC.		1440			20	1	B	20	1		1440			ASSEMBLY SPACE REC.	10
11	ASSEMBLY SPACE REC.		1440			20	1	C	20	1		1440			ASSEMBLY SPACE REC.	12
13	ASSEMBLY SPACE REC.		1440			20	1	A	20	1		1440			ASSEMBLY SPACE REC.	14
15	OUTDOOR REC. GFI		360			20	1	B	15	2				650	COMBUSTION BLOWERS	16
17	Spare					20	1	C								18
19	Spare					20	1	A	20	1					Spare	20
21	Spare					20	1	B	20	1					Spare	22
23	Space							C	20	1					Spare	24
25	Space							A							Space	26
27	Space							B							Space	28
29	Space							C							Space	30
31	Space							A							Space	32
33	Space							B							Space	34
35	Space							C							Space	36
37	Space							A							Space	38
39	Space							B							Space	40
41	Space							C							Space	42

PANELBOARD NO: NEW 'SP-4'

	LTS	REC	MECH	MISC							
SUBTOTAL CONNECTED KVA	0.0	9.0	0.0	0.0				0.0	7.9	0.7	0.0 SUBTOTAL CONNECTED KVA
								0.0	16.9	0.7	0.0 TOTAL CONNECTED KVA

PHASE BALANCE

	LTS	REC	MECH	MISC	TOTAL	% DIF
PHASE A CONNECTED KVA	0.0	5.2	0.0	5.3	-10.4	
PHASE B CONNECTED KVA	0.0	5.9	0.7	0.0	6.6	12.3
PHASE C CONNECTED KVA	0.0	5.8	0.0	0.0	5.8	-1.9
AVERAGE PHASE CONNECTED KVA					5.8	

NEC LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MECH	MISC	SUBTOT	SPARE	TOTAL	
0.0	16.9	0.7	0.0	17.6	0		CONNECTED KVA
1.0	#1	1.0	1.00		%		DEMAND FACTOR
0.0	13.5	0.7	0.0	14.1	0.0	14.1	DEMAND KVA
						39.3	DEMAND AMPS
1.25	1.0	1.0	1.25		1.0		CONTINUOUS / NON-CONTINUOUS FACTOR
						39	MIN. BREAKER AMPS

PANELBOARD NO: MSB

SECTION: 1 OF 1
MOUNTING: SURFACE
POLES: 18
LOCATION: ELECTRICAL ROOM
ENCLOSURE: NEMA 1

VOLTAGE: 120/208V
PHASE: 3
WIRE: 4
GROUND BUS: YES

BUS: 600A
MAIN: MLO
MIN. AIC: 42,000

SERVICE ENTRANCE PANEL WITH 6 BREAKERS MAXIMUM

CKT NO.	DESCRIPTION	LOAD (VA) LTS	REC	MECH	MISC	CIRCUIT BREAKER AMPS	POLES		CIRCUIT BREAKER AMPS	POLES	LOAD (VA) LTS	REC	MECH	MISC	DESCRIPTION	CKT NO
1	PANEL SP-1	0	0	32598	0	400	3	A	100	3	3042	0	1340	0	PANEL SP-3	2
3		0	0	32598	0			B			1576	0	1840	0		4
5		0	0	32598	0			C			1936	0	1340	1040		6
7	PANEL SP-2	0	6660	0	8320	100	3	A	100	3	0	5220	38	0	PANEL SP-4	8
9		0	6120	0	16640			B			0	5940	650	0		10
11		0	5580	0	8320			C			0	5760	0	0		12
13	Space					100	3	A	100	3					Space	14
15								B								16
17								C								18

PANELBOARD NO: MSB

	LTS	REC	MECH	MISC							
SUBTOTAL CONNECTED KVA	0.0	18.4	97.8	33.3				6.6	16.9	5.2	1.0 SUBTOTAL CONNECTED KVA
								6.6	35.3	103.0	34.3 TOTAL CONNECTED KVA

PHASE BALANCE

	LTS	REC	MECH	MISC	TOTAL	% DIF
PHASE A CONNECTED KVA	3.0	11.9	34.0	8.3	57.2	-4.2
PHASE B CONNECTED KVA	1.6	12.1	35.1	16.6	65.4	9.5
PHASE C CONNECTED KVA	1.9	11.3	33.9	9.4	56.6	-5.3
AVERAGE PHASE CONNECTED KVA					59.7	

NEC LOAD SUMMARY & FEEDER CALCULATION

LTS	REC	MECH	MISC	SUBTOT	SPARE	TOTAL	
6.6	35.3	103.0	34.3	179.2	20		CONNECTED KVA
1.0	#1	1.0	1.00		%		DEMAND FACTOR
6.6	22.6	103.0	34.3	166.5	33.3	199.8	DEMAND KVA
						554.6	DEMAND AMPS
1.25	1.0	1.0	1.25		1.0		CONTINUOUS / NON-CONTINUOUS FACTOR
						583	MIN. BREAKER AMPS
							Therefore the 600A service is Ok.

SHORT CIRCUIT CURRENT (Isc) CALCULATIONS

STOMATA DEVELOPMENT LLC

Formulas & Parameters	L-L-L		
		Iscx= (KVA/V)*(100/Z%*0.9), f=(1.732*L*Isca)/(C*V)	
		Iscb=Isca*1/(1+f), V=208	
Z% of Transformer		1.11	% **
Transformer Size		300	KVA **
		Without Current Limiting Fuses	
		Line to Line to Line (Prospective)	
Iscx=Isca (Isc at Existing Transformer Secondary - F1)		**83357**	**A**
L (Feeder Length) **		80	ft
C (Conductivity Factor)		18594	table
Parallel Sets #		2	ea
V (Voltage)		208	V
f (Fault factor)		1.4932	
Iscb (Isc at Existing CT Units - F2)		**33434**	**A**
L (Feeder Length) **		5	ft
C (Conductivity Factor)		22737	table
Parallel Sets #		2	ea
V (Voltage)		208	V
f (Fault factor)		0.0306	
Iscb (Isc at Existing Gutter - F3)		**32441**	**A**
L (Feeder Length) **		5	ft
C (Conductivity Factor)		22737	table
Parallel Sets #		2	ea
V (Voltage)		208	V
f (Fault factor)		0.0297	
Iscb (Isc at Main Switchboard - F4)		**31505**	**A**
L (Feeder Length) **		50	ft
C (Conductivity Factor)		22185	table
Parallel Sets #		1	ea
V (Voltage)		208	V
f (Fault factor)		0.5913	
Iscb (Isc at AC Disconnect - 1 - F5)		**19799**	**A**
L (Feeder Length) **		2	ft
C (Conductivity Factor)		22185	table
Parallel Sets #		1	ea
V (Voltage)		208	V
f (Fault factor)		0.0149	
Iscb (Isc at Transformer Primary - F6)		**19509**	**A**
Formulas & Parameters	**L-L-L**	f' = 1.732*Iscb*Vprimary*Z%/(100000*KVA)	
		M = 1/(1+f), V=480	
		Issc = Vpri/Vsec*M*Iscb	
Z% of Transformer		1.11	% **
Transformer Size		112.5	KVA **
V (Voltage)		480	V
f' (Fault factor)		0.6935	
M (Multiplier)		0.59051	
Iscc (Isc at Transformer Secondary - F7)		**4992**	**A**
L (Feeder Length) **		3	ft
C (Conductivity Factor)		7293	table
Parallel Sets #		1	ea
V (Voltage)		480	V
f (Fault factor)		0.0074	
Iscb (Isc at SP-1 - F8)		**4955**	**A**
Remarks: All Subsequent calculations from SP-1 to RTU'S are below 10KA.			

L (Feeder Length) **	21	ft
C (Conductivity Factor)	12844	table
Parallel Sets #	1	ea
V (Voltage)	208	V
f (Fault factor)	0.4289	
Iscb (Isc at SP-2 - F9)	**22048**	**A**
L (Feeder Length) **	8	ft
C (Conductivity Factor)	7293	table
Parallel Sets #	1	ea
V (Voltage)	208	V
f (Fault factor)	0.2878	
Iscb (Isc at SP-3 - F10)	**24465**	**A**
L (Feeder Length) **	50	ft
C (Conductivity Factor)	7293	table
Parallel Sets #	1	ea
V (Voltage)	208	V
f (Fault factor)	1.7986	
Iscb (Isc at SP-4 - F11)	**11258**	**A**

** These are design calculations. The Electrical Contractor shall advise the Electrical Engineer if the actual Transformer size is larger or the Z% is lower. Or the actual feeder lengths are significantly shorter.

PANELBOARD NOTES

1. PANELS' MOUNTING SHALL BE SURFACE OR RECESSED DEPENDING ON SITE CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL MAKE THE FINAL DETERMINATION IN COORDINATION WITH THE OWNER'S REPRESENTATIVE.

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SIGNATURE WITH SEAL
09/12/2023
JOSE J. RIVERA
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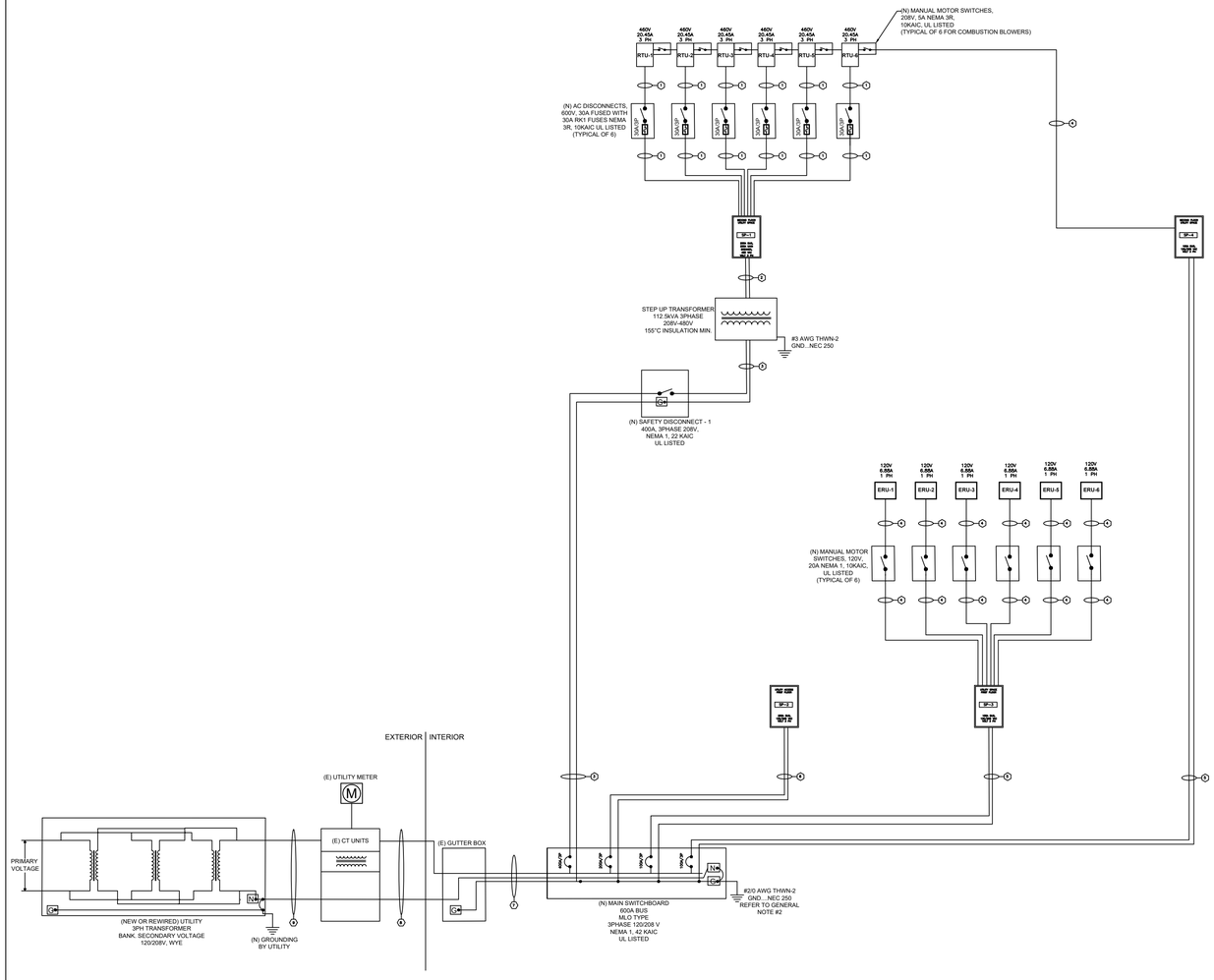
KANSAS
PROFESSIONAL ENGINEER

REVISIONS	DESCRIPTION	DATE

SHEET TITLE
PANEL SCHEDULE

DRAWN DATE	09-09-2023
DRAWN BY	EB
REVIEWED BY	JR

SHEET NUMBER
E-6



SINGLE LINE DIAGRAM

GENERAL NOTES

1. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE SERVICE WORKS WITH THE UTILITY COMPANY PRIOR TO ANY RELATED PROCUREMENT OR INSTALLATION.

2.THE ELECTRICAL CONTRACTOR SHALL VERIFY THE CONDITION OF THE EXISTING BUILDING GROUNDING SYSTEM. AND WILL REPAIR IT IF/AS NEEDED PER NEC 250.52. BOND THE NEW GROUNDING ELECTRODE CONDUCTORS TO THE BUILDING GROUNDING SYSTEM.

ELECTRICAL EQUIPMENT LIST

Sl. No.	Equipment	Mfg	Model	Voltage	Phase	Power	MCA	MOCP	Notes
1	RTU-1	DAIKIN	DBG 1204DM00001SAA	460	3	16.29kW	20.45A	30A	
2	RTU-2	DAIKIN	DBG 1204DM00001SAA	460	3	16.29kW	20.45A	30A	
3	RTU-3	DAIKIN	DBG 1204DM00001SAA	460	3	16.29kW	20.45A	30A	100% POWER
4	RTU-4	DAIKIN	DBG 1204DM00001SAA	460	3	16.29kW	20.45A	30A	
5	RTU-5	DAIKIN	DBG 1204DM00001SAA	460	3	16.29kW	20.45A	30A	
6	RTU-6	DAIKIN	DBG 1204DM00001SAA	460	3	16.29kW	20.45A	30A	
7	ERU-1	FANTECH	SER 700	120	1	670W	6.88A	20A	
8	ERU-2	FANTECH	SER 700	120	1	670W	6.88A	20A	
9	ERU-3	FANTECH	SER 700	120	1	670W	6.88A	20A	
10	ERU-4	FANTECH	SER 700	120	1	670W	6.88A	20A	
11	ERU-5	FANTECH	SER 700	120	1	670W	6.88A	20A	
12	ERU-6	FANTECH	SER 700	120	1	670W	6.88A	20A	
13	EF-1	COOK	ACE (DNBLAST)	120	1	1/3HP (248.56W)	2.07A	15A	
14	EF-2	COOK	ACE (DNBLAST)	120	1	1/3HP (248.56W)	2.07A	15A	
15	EF-3	PANASONIC	FV05-11 (INLINE)	120	1	1/20HP (37.28W)	0.27A	15A	
16	EWC	HALSEY TAYLOR	HAC8BLSS-WF	115	1	370W	4.5A	15A	
17	WH	BOSCH	C1050ES	120	1	300W	2.5A	15A	
18	4 PLEX RC	WIRING DEVICE KELLEMS	HBL415HW	125	1				

CONDUCTOR AND CONDUIT SCHEDULE

SR. NO.	DESCRIPTION	CONDUIT SIZE
1	(3) #10 AWG THWN-2 (L1,L2,L3,N) , (1) # 10 AWG THWN-2 (G)	IN 3/4" CONDUIT RUN
2	(3) #1 AWG THWN-2 (L1,L2,L3,N) , (1) # 8 AWG THWN-2 (G)	IN 1-1/2" CONDUIT RUN
3	(3) #500 AWG THWN-2 (L1,L2,L3) , (1) # 3 AWG THWN-2 (G)	IN 3" CONDUIT RUN
4	(2) # 12 AWG THWN-2 (L1,N) , (1) # 12 AWG THWN-2 (G)	IN 1/2" CONDUIT RUN
5	(4) # 1 AWG THWN-2 (L1,L2,L3,N) , (1) # 8 AWG THWN-2 (G)	IN 1- 1/2" CONDUIT RUN
6	(4) # 3/0 AWG THWN-2 (L1,L2,L3,N) , (1) # 6 AWG THWN-2 (G)	IN 2" CONDUIT RUN
7	(4) 2 SETS OF # 350 AWG THWN-2 (L1,L2,L3,N) , (1) # 2/0 AWG THWN-2 (G)	IN EXISTING CONDUIT
8	(4) 2 SETS OF # 350 AWG THWN-2 (L1,L2,L3,N)	IN EXISTING CONDUIT
9	(4) 2 SETS OF # 250 AWG THWN-2 (L1,L2,L3,N)	FREE AIR BY UTILITY CO.

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PROJECT NAME & ADDRESS

STOMATA DEVELOPMENT LLC W/R/T "COMMUNITY 101"

101-103 S WASHINGTON AVE
WELLINGTON, KS 67152

SIGNATURE WITH SEAL

09/12/2023

JOSE J. RIVERA LICENSED 20266 KANSAS PROFESSIONAL ENGINEER

REVISIONS	DATE	DESCRIPTION	REV

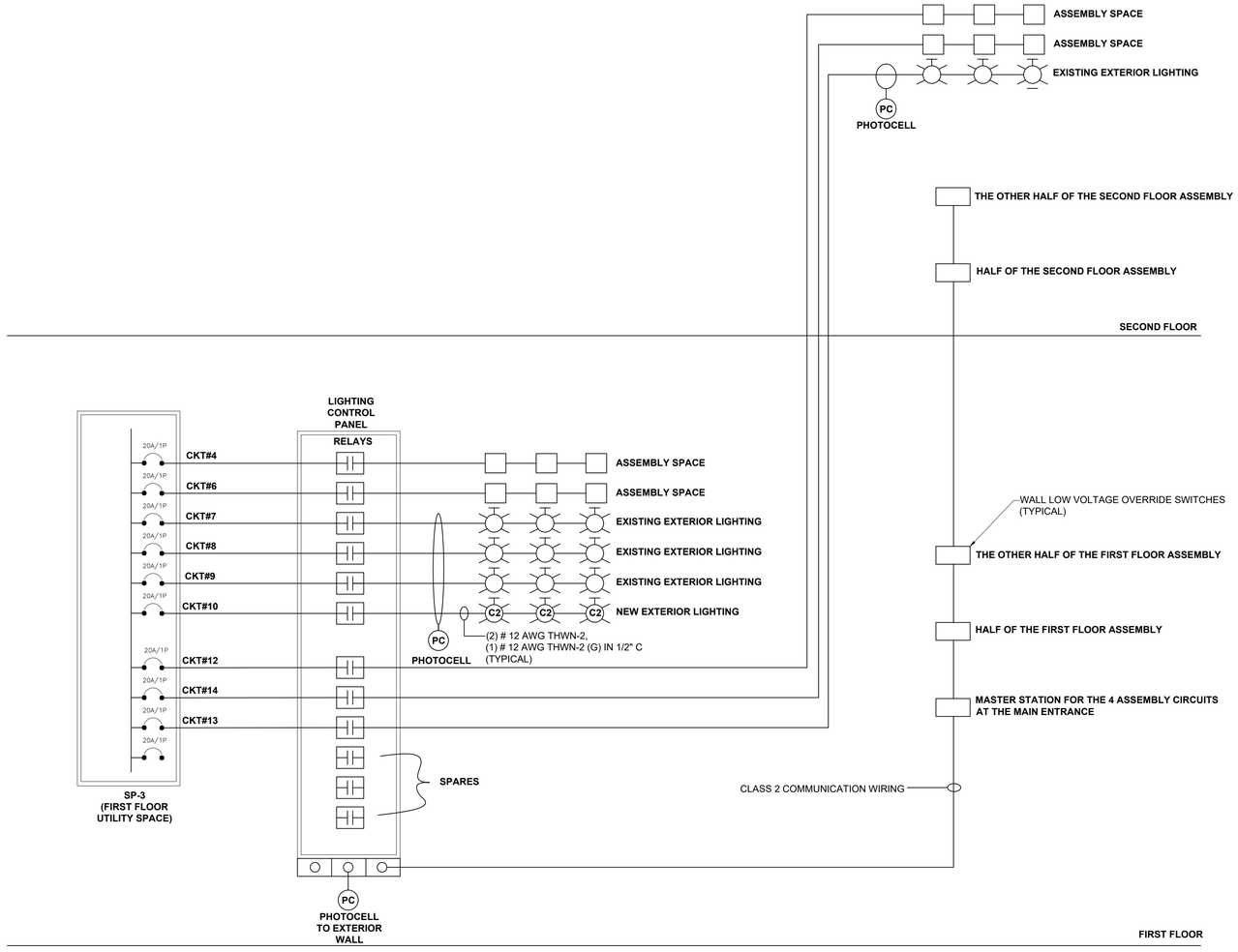
SHEET TITLE

ELECTRICAL LINE DIAGRAM

DRAWN DATE	09-09-2023
DRAWN BY	EB
REVIEWED BY	JR

SHEET NUMBER

E-7



LIGHTING CONTROL RISER

NOTES:

1. REFER TO THE FLOOR PLANS FOR EXACT QUANTITY OF ALL DEVICES INDICATED IN THE WIRING DIAGRAM.
2. ALL WIRING SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS.
3. THE LIGHTING CONTROL PANEL SHALL BE GREENGATE LITEKEEPER LK-16 WITH GDS SERIES WALLSTATIONS, OR EQUAL. ENGRAVE WALLSTATIONS PER OWNER'S DIRECTION.
4. INSTALL HOT (UNSWITCHED) WIRES FOR THE NIGHT/EMERGENCY LIGHTING FIXTURES IN THE ASSEMBLY AREAS, FROM THE SAME BREAKERS SERVING THE RELAYS.

LIGHTING CONTROL OPERATIONS

A. ASSEMBLY SPACES

1. GENERAL LIGHTING: TIME PROGRAMMED ON/OFF (365 DAYS W/ HOLIDAYS) THROUGH RELAYS IN THE LIGHTING CONTROL PANEL (LCP). OR, MANUAL ON IN THE MORNING AND AFTER HOURS OFF AUTOMATIC SWEEP. CONSULT THE USER FOR THE DESIRED LIGHTING TIME PROGRAM. ANY PROGRAM CAN BE OVERRIDDEN THROUGH THE LIGHTING MASTER STATION (LMS) AND LOW VOLTAGE SWITCHES IN THE AREA.
2. NIGHT/EMERGENCY LIGHTING: THROUGH SELECTED FIXTURES IN THE AREA TO PROVIDE LIFE SAFETY CODE REQUIRED EGRESS LIGHTING. THE REGULAR LED DRIVERS SHALL BE CONTROLLED THROUGH CEILING OCCUPANCY SENSORS ONLY FOR NIGHT LIGHTING. THE BATTERY BACKUP LED DRIVER SHALL BE SERVED UNSWITCHED TO PROVIDE EMERGENCY LIGHTING UPON LOSS OF UTILITY POWER.

B. RESTROOMS

1. GENERAL LIGHTING: CONTROLLED THROUGH KEYED SWITCH IN THE WALL IN SERIES WITH CEILING OCCUPANCY SENSOR(S).
2. NIGHT/EMERGENCY LIGHTING: THROUGH SELECTED FIXTURES TO PROVIDE LIFE SAFETY CODE REQUIRED EGRESS LIGHTING. THE REGULAR LED DRIVERS SHALL BE CONTROLLED THROUGH CEILING OCCUPANCY SENSORS ONLY FOR NIGHT LIGHTING. THE BATTERY BACKUP LED DRIVER SHALL BE SERVED UNSWITCHED TO PROVIDE EMERGENCY LIGHTING UPON LOSS OF UTILITY POWER.

C. UTILITY SPACE / UTILITY ACCESS

1. GENERAL LIGHTING: CONTROLLED THROUGH STANDARD 3-WAY WALL SWITCHES IN THE WALL IN SERIES WITH CEILING OCCUPANCY SENSORS.
2. NIGHT/EMERGENCY LIGHTING: THROUGH SELECTED FIXTURES TO PROVIDE LIFE SAFETY CODE REQUIRED EGRESS LIGHTING. THE REGULAR LED DRIVERS SHALL BE CONTROLLED THROUGH CEILING OCCUPANCY SENSORS ONLY FOR NIGHT LIGHTING. THE BATTERY BACKUP LED DRIVER SHALL BE SERVED UNSWITCHED TO PROVIDE EMERGENCY LIGHTING UPON LOSS OF UTILITY POWER.

D. ELECTRICAL ROOM 1ST LEVEL

1. GENERAL/EMERGENCY LIGHTING: SINGLE FIXTURE. THE REGULAR LED DRIVER SHALL BE CONTROLLED THROUGH CEILING OCCUPANCY SENSOR ONLY FOR NIGHT LIGHTING. THE BATTERY BACKUP LED DRIVER SHALL BE SERVED UNSWITCHED TO PROVIDE EMERGENCY LIGHTING UPON LOSS OF UTILITY POWER.

E. STAIRS

1. GENERAL LIGHTING: CONTROLLED THROUGH CEILING OCCUPANCY SENSORS ONLY, ONE SENSOR IN EACH LANDING. WIRE THE TWO SENSORS SO THAT ANY SINGLE ONE, WHEN TRIGGERED, CAN TURN ON ALL THE LIGHTS IN THE STAIR.
2. EMERGENCY LIGHTING: ONE FIXTURE IN OR CLOSE TO THE MIDDLE. THE REGULAR LED DRIVER SHALL BE CONTROLLED THROUGH CEILING OCCUPANCY SENSORS ONLY. THE BATTERY BACKUP LED DRIVER SHALL BE SERVED UNSWITCHED TO PROVIDE EMERGENCY LIGHTING UPON LOSS OF UTILITY POWER.

F. FUTURE RESTROOM 2ND LEVEL

1. GENERAL/EMERGENCY LIGHTING: SINGLE FIXTURE. THE REGULAR LED DRIVER SHALL BE CONTROLLED THROUGH WALL MANUAL SW./OCCUPANCY SENSOR UNIT. THE BATTERY BACKUP LED DRIVER SHALL BE SERVED UNSWITCHED TO PROVIDE EMERGENCY LIGHTING UPON LOSS OF UTILITY POWER.

G. ELECTRICAL ROOM 2ND LEVEL

1. GENERAL LIGHTING: THE LED DRIVERS SHALL BE CONTROLLED THROUGH WALL MANUAL SW./OCCUPANCY SENSOR UNIT.
2. EMERGENCY LIGHTING: THE REGULAR LED DRIVER SHALL BE CONTROLLED THROUGH WALL MANUAL SW./ OCCUPANCY SENSOR UNIT. THE BATTERY BACKUP LED DRIVER SHALL BE SERVED UNSWITCHED TO PROVIDE EMERGENCY LIGHTING UPON LOSS OF UTILITY POWER.

H. 2ND LEVEL ROOF RTU AREA

1. GENERAL LIGHTING: THE LED DRIVERS SHALL BE CONTROLLED THROUGH AN 8-HOUR ROTARY TIMER WALL UNIT LOCATED INDOORS. THIS LIGHT SHALL BE USED FOR MAINTENANCE ONLY.

I. OUTDOOR (FAÇADE) LIGHTING FIXTURES

1. CONTROLLED THROUGH TIMED RELAY AND PHOTOCELL IN SERIES. EACH LIGHTING CIRCUIT CAN TURN ON AT DUSK BY PHOTOCELL AND TURN OFF AT A SPECIFIC TIME IN THE NIGHT (FOR ENERGY SAVING) OR AT DAWN (FOR SECURITY) PER USER PROGRAMMING.

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LIGHTING CONTROLS RISER

DRAWN DATE	09-09-2023
DRAWN BY	EB
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SHEET NUMBER
E-8