CODE SUMMARY

GOVERNING CODES:

BUILDING	2015 INTERNATIONAL BUILDING CODE (IBC)
ELECTRICAL	2020 NATIONAL ELECTRICAL CODE (NEC)
FIRE	2015 INTERNATIONAL FIRE CODE (IFC)
LIFE SAFETY	2015 NFPA 101
ENERGY	2006 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

PLUS LOCAL AMENDMENTS BY THE AUTHORITY HAVING JURISDICTION (AHJ).

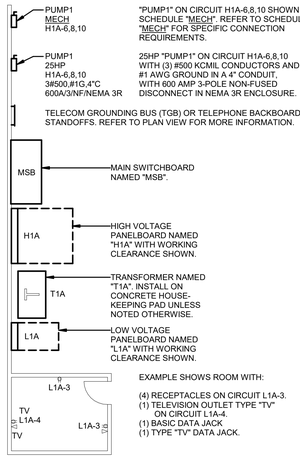
COMMON ABBREVIATIONS

ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS.

A	AMPS
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPS INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AVL	AUDIO VISUAL LIGHTING
BKR	CIRCUIT BREAKER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CKT	CIRCUIT
DEG, °	DEGREES
DEMO	DEMOLITION
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
EA	EACH
EPO	EMERGENCY POWER OFF
EXST	EXISTING
FLA	FULL LOAD AMPS
FT	FEET
FVL	FIELD VERIFY LENGTH
G,GND	GROUND
GA	GAUGE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
HP	HORSEPOWER
HZ	HERTZ
IER	INTEGRATED EQUIPMENT RATING
IG	ISOLATED GROUND
IN	INCHES
IT	INFORMATION TECHNOLOGY, DATA
KCMIL	1000 CIRCULAR MILLS
KV	KILOVOLTS
KVA	KILOVOLT-AMPS
KVAR	KILOVOLT-AMPS REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
L	LENGTH
LBS	POUNDS
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MSB	MAIN SWITCH BOARD
MTS	MANUAL TRANSFER SWITCH
N/A	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NO.	NUMBER
N/O	NORMALLY OPEN
N/C	NORMALLY CLOSED
O/C	ON CENTER
OCPD	OVERCURRENT PROTECTIVE DEVICE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PF	POWER FACTOR
PH, Φ	PHASE
RCPT	RECEPTACLE
RE:	REFERENCE, REFER
RLA	RUNNING LOAD AMPS
SE	SERVICE ENTRANCE
T	TAMPER RESISTANT
TGB	TELECOM GROUNDING BUS
TYP	TYPICAL
U/F	UNDER FLOOR
U/G	UNDER GROUND
U/S	UNDER SLAB
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS, VOLTAGE
VA	VOLT-AMPS
W	WATTS, WATTAGE
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF, WALL PACK
XFMR	TRANSFORMER

PLAN VIEW EXAMPLES

ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS. REFER TO DEVICE SYMBOL LEGENDS FOR ADDITIONAL POWER, DATA AND LIGHTING SYMBOLS.



PANEL NOMENCLATURE

"H1A"

H	480V/277Y
L	208V/120Y
1	1ST FLOOR
2	2ND FLOOR
3	3RD FLOOR
x	TYPICAL FLOOR
A,B,C...	LETTERS IN SEQUENCE FOR NORMAL PANELS
E	EMERGENCY BRANCH
S	STANDBY BRANCH
K	KITCHEN/ FOOD SERVICE

ELECTRICAL GENERAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR THE EXACT LOCATION OF ALL CEILING MOUNTED DEVICES.
2. REFER TO ARCHITECTURAL INTERIOR ELEVATION DRAWINGS, WHERE THE ARCHITECT HAS DRAWN SUCH ELEVATIONS, FOR THE LOCATIONS OF ALL WALL MOUNTED DEVICES.
3. COORDINATE THE EXACT LOCATION OF ALL THERMOSTATS, STARTERS, DISCONNECTS, ETC. AND COORDINATE ALL REQUIREMENTS FOR CONTROL AND POWER WIRING WITH THE MECHANICAL CONTRACTOR OR THE TRADE PROVIDING THE EQUIPMENT.
4. ALL RECEPTACLE OUTLETS LOCATED WITHIN 6'-0" OF A WET BAR OR SINK SHALL BE GFI TYPE. ALL RECEPTACLE OUTLETS LOCATED OUTDOORS SHALL BE WP/GFI. ALL RECEPTACLES SERVING VENDING MACHINES AND ELECTRIC WATER COOLERS SHALL BE GFI TYPE.
5. ALL CONDUIT PENETRATIONS THROUGH THE ROOF TO SERVE MECHANICAL EQUIPMENT SHALL BE WITHIN THE ASSOCIATED EQUIPMENT ROOF CURB. COORDINATE LOCATIONS OF PENETRATIONS WITH THE MECHANICAL CONTRACTOR.
6. PROVIDE ACCESS DOORS IN WALLS AND CEILINGS WHERE ACCESS TO CONCEALED ELECTRICAL BOXES AND DEVICES IS REQUIRED. ALL ACCESS LOCATIONS ARE TO BE APPROVED BY ARCHITECT PRIOR TO INSTALL.
7. EACH BRANCH AND FEEDER CIRCUIT SHALL BE PROVIDED WITH A GROUND CONDUCTOR SIZED PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE (NFPA 70). WHERE A CONDUIT CONTAINS MULTIPLE BRANCH CIRCUITS, PROVIDE A SINGLE GROUND CONDUCTOR UNLESS OTHERWISE NOTED.
8. INTEGRATED EQUIPMENT RATINGS (AIC) SHOWN ARE MINIMUMS. CONTRACTOR SHALL PROVIDE MANUFACTURER'S EQUAL OR NEXT HIGHER STANDARD RATINGS.
9. ALL PULL CORD/WIRE PROVIDED FOR EMPTY RACEWAY/CONDUIT SYSTEMS SHALL HAVE A MINIMUM STRENGTH OF 200 LBS TENSILE STRENGTH. ALL EMPTY CONDUITS SHALL HAVE A PULL CORD.
10. PROVIDE LUGS AS REQUIRED FOR ALL ELECTRICAL EQUIPMENT TO ACCEPT THE SIZE AND NUMBER OF CONDUCTORS SHOWN IN THESE DOCUMENTS.
11. ALL CONDUCTORS SHALL BE THWN/THHN UNLESS OTHERWISE INDICATED. CONDUCTORS SHALL BE RATED FOR 75 DEGREES C. TERMINATIONS SHALL BE RATED FOR 75 DEGREES C. DEVIATIONS SHALL COMPLY WITH NEC ARTICLE 110 FOR EXACT EQUIPMENT BEING PROVIDED.
12. OUTLET BOXES SHALL NOT BE INSTALLED BACK TO BACK IN WALLS. A MINIMUM OF 6" SEPARATION BETWEEN BOXES SHALL BE MAINTAINED TO REDUCE SOUND TRANSMISSION..
13. THERE SHALL BE NO SPLICES OF WIRING INSIDE PANELBOARDS OR DISCONNECT SWITCHES. ONLY ONE WIRE SHALL BE TERMINATED TO ANY SINGLE LUG ON A CIRCUIT BREAKER.
14. UNLESS OTHERWISE NOTED, FOR HOMERUNS HAVING A TOTAL LENGTH OF 100' TO 200', USE #10 CONDUCTORS; FOR HOMERUNS HAVING A TOTAL LENGTH OF 200' OR GREATER, USE #8 CONDUCTORS.
15. COORDINATE THE REQUIREMENTS FOR OVERCURRENT PROTECTIVE DEVICE SIZE, DISCONNECT SWITCH SIZE, AND CONDUCTOR AND CONDUIT SIZES WITH THE REQUIREMENTS OF THE MECHANICAL EQUIPMENT THAT IS ACTUALLY TO BE INSTALLED, AND PROVIDE AND INSTALL ALL ELECTRICAL COMPONENTS AS REQUIRED. THE ELECTRICAL COMPONENT SIZING SHOWN ON THESE DRAWINGS IS BASED UPON THE REQUIREMENTS FOR THE SPECIFIED MECHANICAL EQUIPMENT AVAILABLE AT THE TIME OF DESIGN. VARIATIONS IN REQUIREMENTS MAY OCCUR AS A RESULT OF THE PROVISION OF OTHER MANUFACTURER'S EQUIPMENT OR IN CHANGES TO THE SPECIFIED EQUIPMENT. SUCH REVISED REQUIREMENTS ARE A PART OF THIS CONTRACT AND SHALL BE ACCOMMODATED WITHOUT ADDITIONAL CHARGE.
16. FOR COORDINATION PURPOSES, DEVICES MAY BE MOVED A MAXIMUM DISTANCE OF FIVE FEET, PRIOR TO INSTALLATION, AT NO COST TO THE OWNER, UPON INSTRUCTION BY THE ARCHITECT OR ENGINEER
17. REFER TO SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR FIRE CAULKING REQUIREMENTS. ALL PENETRATIONS THROUGH FIRE WALLS AND SMOKE BARRIERS SHALL BE SEALED IN ACCORDANCE WITH CODE REQUIREMENTS.
18. ALL DEVICE PLATE COLORS TO BE AS SPECIFIED BY ARCHITECT.

FIRE ALARM DESIGN GENERAL NOTES

1. DRAWINGS DO NOT SHOW EXACT PLACEMENT OF DEVICES. THIS IS A DELEGATED DESIGN PERFORMANCE SPECIFICATION FOR THE FIRE ALARM SYSTEM.
2. THE CONTRACTOR SHALL EMPLOY A FIRE ALARM PLANNING SUPERINTENDENT, CERTIFIED OR LICENSED BY THE STATE FIRE MARSHAL'S OFFICE, TO DESIGN AND INSTALL A COMPLETE FIRE ALARM SYSTEM:
   - FURNISH AND INSTALL NEW FIRE ALARM SYSTEM PER MSU FIRE ALARM STANDARDS
3. THE FIRE ALARM PLANNING SUPERINTENDENT SHALL PREPARE PERMIT DOCUMENTS, USING EXACT DEVICES TO BE PROVIDED BY THE MANUFACTURER.
4. THE LICENSED FIRE ALARM DESIGNER SHALL ENSURE THAT HIS DESIGN MEETS ALL OF THE REQUIREMENTS OF NFPA, ADA, NEC, TAS AND ALL LOCAL CODES AND AMENDMENTS, AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
5. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS TO DETERMINE OCCUPANCY CLASSIFICATION AND OCCUPANT LOAD OF THE BUILDING.
6. PROVIDE SMOKE DUCT DETECTORS FOR EACH AIR HANDLING UNIT EXCEEDING 2000 CFM. DETECTORS SHALL BE MONITORED BY MAIN FIRE ALARM PANEL PER LOCAL FIRE MARSHALL REQUIREMENTS.
7. VERIFY FINAL LOCATION OF FIRE ALARM CONTROL PANEL WITH FIRE MARSHALL PRIOR TO INSTALLATION. VERIFY FINAL LOCATION OF FIRE ALARM ANNUNCIATOR AND/OR VOICE EVAC PANEL WITH OWNER AND FIRE MARSHALL PRIOR TO INSTALLATION.

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REV	DATE	DESCRIPTION
		APPR

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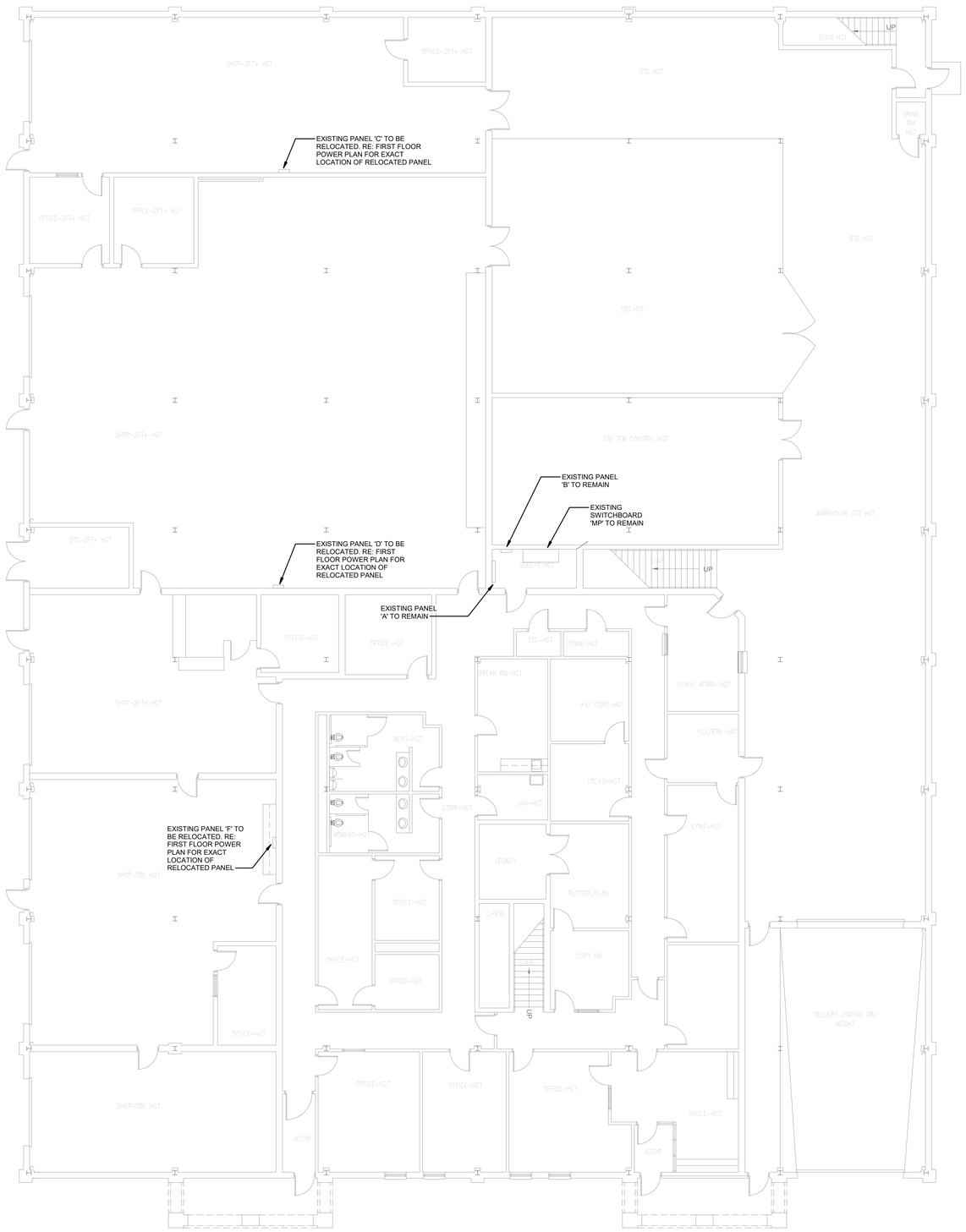
DRAWN BY	BKH
CHECKED BY	JSR
DATE	08/24/2020
PROJECT NO.	18071

ELECTRICAL ABBREVIATIONS AND SYMBOLS

E001

GENERAL DEMOLITION NOTES:

1. COORDINATE WITH ARCHITECT FOR COMPLETE SCOPE AND PHASE SCHEDULE OF DEMOLITION.
2. ON FIRST FLOOR, UNLESS NOTED OTHERWISE, ALL ELECTRICAL AND LIGHTING FIXTURES SHALL BE REMOVED. CONDUIT AND WIRING SHALL BE DEMOLISHED BACK TO SOURCE PANEL.
3. ON SECOND FLOOR, COORDINATE WITH ARCHITECT FOR AREAS BEING DEMOLISHED, AND ELECTRICAL AND LIGHTING FIXTURES BEING REMOVED. FOR ELECTRICAL AND LIGHTING FIXTURES BEING REMOVED, CONDUIT AND WIRING SHALL BE DEMOLISHED BACK TO SOURCE PANEL.
4. REMOVE ALL ABANDONED SURFACE RACEWAYS AND JUNCTION BOXES. EXISTING ABANDONED RECESSED JUNCTION BOXES SHALL BE REMOVED AND THE WALL PATCHED, OR A NEW BLANK COVERPLATE SHALL BE INSTALLED.
5. EXISTING LIGHTING SHALL BE REMOVED IN THE AREAS WHERE NEW LIGHTING IS TO BE INSTALLED. ANY LIGHTING NOT REMOVED SHALL BE RE-CONNECTED TO A LIGHTING CIRCUIT DURING CONSTRUCTION. REFER TO LIGHTING SHEETS FOR AREA OF WORK.
6. CONTRACTOR SHALL PAINT, PATCH, TEXTURE AND REPAIR WALLS, CEILINGS, FLOORS AND OTHER SURFACES TO MATCH EXISTING WHERE SURFACE RACEWAY, RECEPTACLES, LIGHTING, FIRE ALARM DEVICES, PA SYSTEM DEVICES, JUNCTION BOXES AND OTHER ELECTRICAL COMPONENTS ARE REMOVED.



1 FIRST FLOOR ELECTRICAL DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

8 0 8 16

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STATE OF TEXAS
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APPR	DESCRIPTION	DATE	REV

DRAWN BY: BKH
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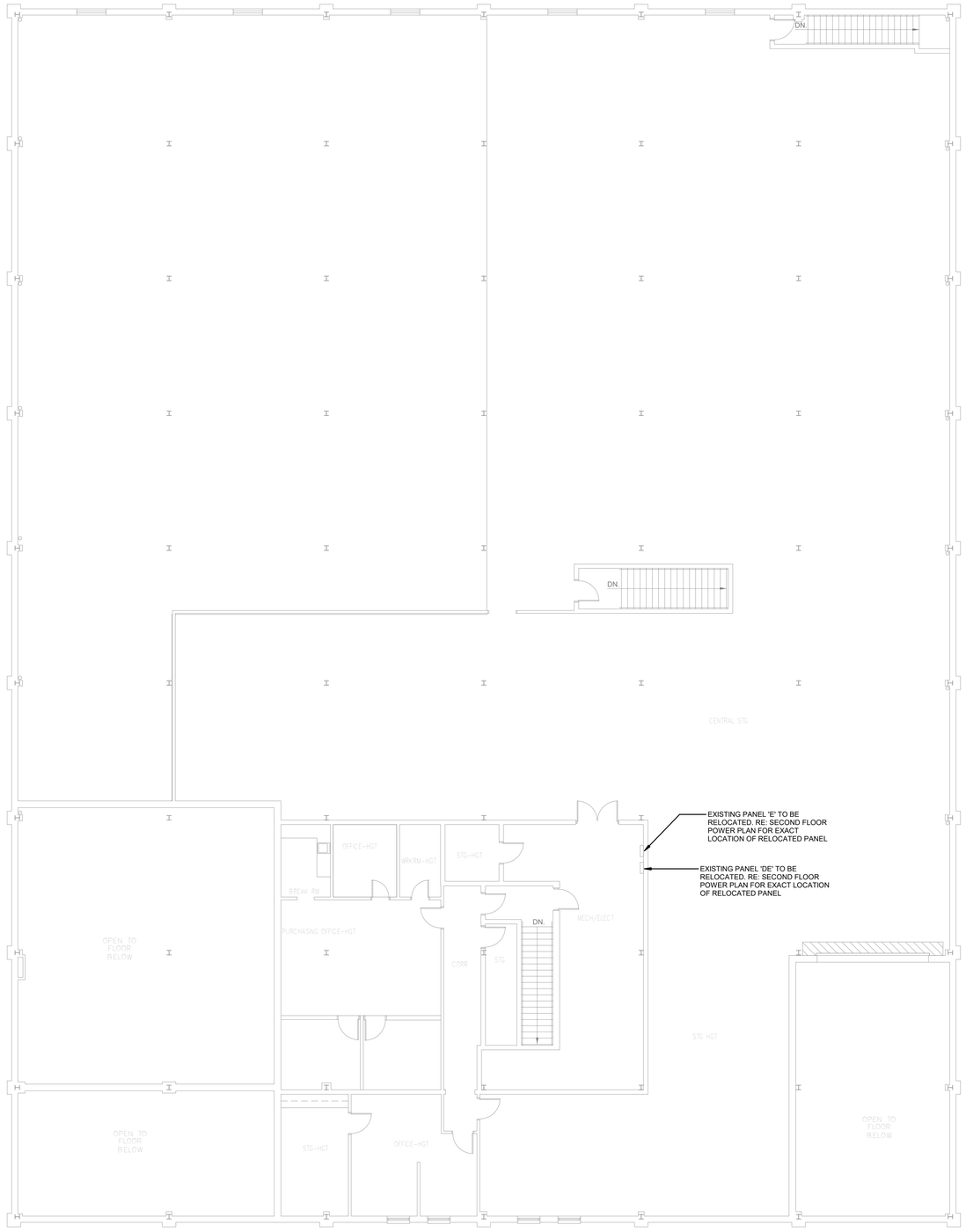
DATE: 08/24/2020
PROJECT NO.: 18071

FIRST FLOOR ELECTRICAL DEMOLITION PLAN

E101

GENERAL DEMOLITION NOTES:

1. COORDINATE WITH ARCHITECT FOR COMPLETE SCOPE AND PHASE SCHEDULE OF DEMOLITION.
2. ON FIRST FLOOR, UNLESS NOTED OTHERWISE, ALL ELECTRICAL AND LIGHTING FIXTURES SHALL BE REMOVED. CONDUIT AND WIRING SHALL BE DEMOLISHED BACK TO SOURCE PANEL.
3. ON SECOND FLOOR, COORDINATE WITH ARCHITECT FOR AREAS BEING DEMOLISHED, AND ELECTRICAL AND LIGHTING FIXTURES BEING REMOVED. FOR ELECTRICAL AND LIGHTING FIXTURES BEING REMOVED, CONDUIT AND WIRING SHALL BE DEMOLISHED BACK TO SOURCE PANEL.
4. REMOVE ALL ABANDONED SURFACE RACEWAYS AND JUNCTION BOXES. EXISTING ABANDONED RECESSED JUNCTION BOXES SHALL BE REMOVED AND THE WALL PATCHED, OR A NEW BLANK COVERPLATE SHALL BE INSTALLED.
5. EXISTING LIGHTING SHALL BE REMOVED IN THE AREAS WHERE NEW LIGHTING IS TO BE INSTALLED. ANY LIGHTING NOT REMOVED SHALL BE RE-CONNECTED TO A LIGHTING CIRCUIT DURING CONSTRUCTION. REFER TO LIGHTING SHEETS FOR AREA OF WORK.
6. CONTRACTOR SHALL PAINT, PATCH, TEXTURE AND REPAIR WALLS, CEILINGS, FLOORS AND OTHER SURFACES TO MATCH EXISTING WHERE SURFACE RACEWAY, RECEPTACLES, LIGHTING, FIRE ALARM DEVICES, PA SYSTEM DEVICES, JUNCTION BOXES AND OTHER ELECTRICAL COMPONENTS ARE REMOVED.



1 SECOND FLOOR ELECTRICAL DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

8 0 8 16

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SECOND FLOOR ELECTRICAL DEMOLITION PLAN

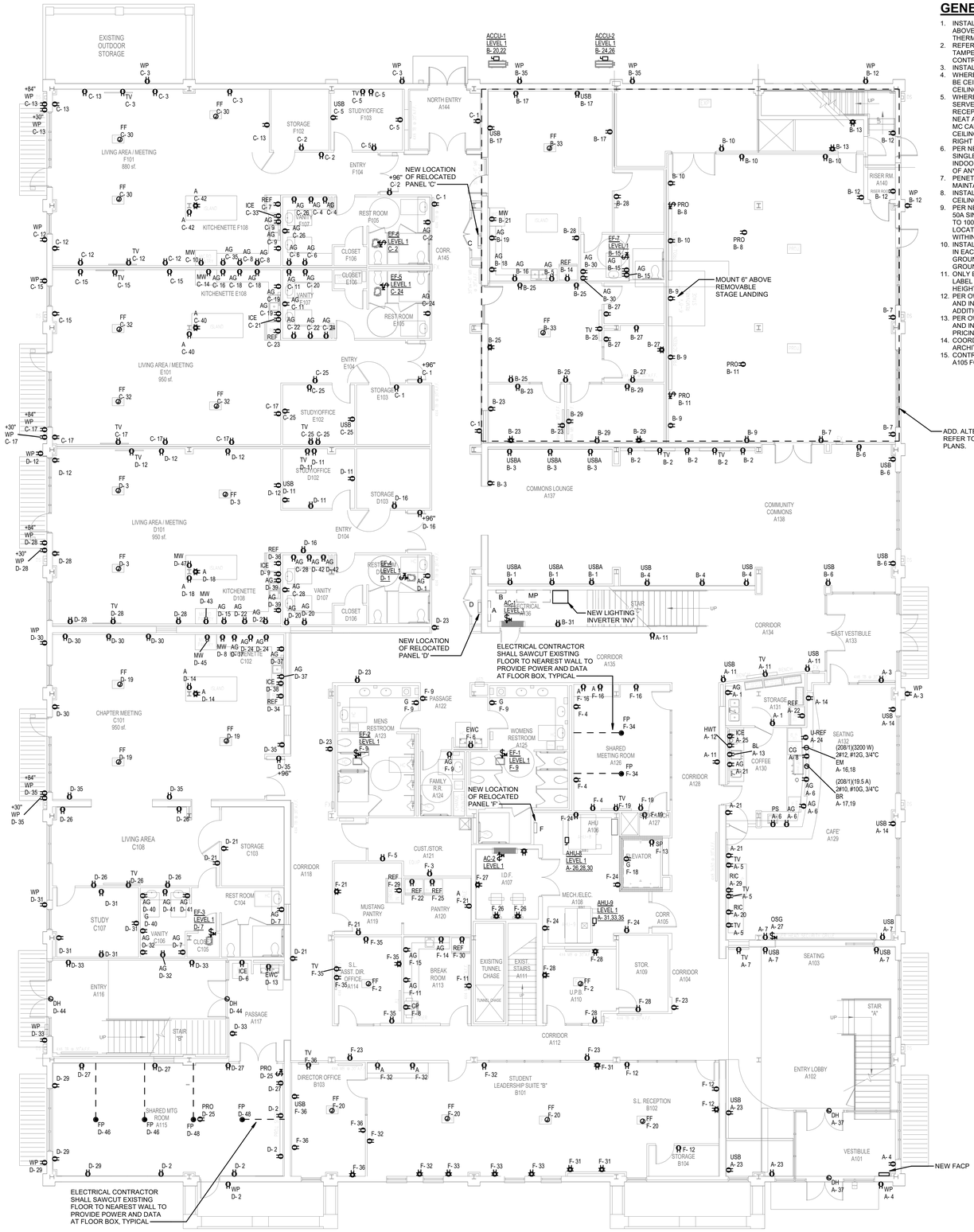
E102

POWER SYMBOL LEGEND

SYMBOL/TYPE		SYMBOL DESCRIPTION
⇔	A	ABOVE COUNTER DUPLEX RECEPTACLE, REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT PLACEMENT
⇔	A	ABOVE COUNTER QUADPLEX RECEPTACLE, REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT PLACEMENT
⇔	AG	ABOVE COUNTER GFI DUPLEX RECEPTACLE, REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT PLACEMENT
⇔	BL	STANDARD GFI DUPLEX RECEPTACLE FOR BLENDER, MOUNT AT 18" A.F.F. UNLESS NOTED OTHERWISE, COORDINATE WITH ARCHITECT FOR EXACT LOCATION
Ⓒ	BR	ELECTRICAL CONNECTION WITH GFCI BREAKER FOR COFFEE BREWER, COORDINATE WITH ARCHITECT FOR EXACT LOCATION. COORDINATE WITH EQUIPMENT MANUFACTURER FOR EXACT REQUIREMENTS
⇔	CG	ABOVE COUNTER GFCI DUPLEX RECEPTACLE FOR COFFEE GRINDER. COORDINATE WITH ARCHITECT FOR EXACT LOCATION. COORDINATE WITH EQUIPMENT MANUFACTURER FOR EXACT REQUIREMENTS
⇔	CP	STANDARD DUPLEX RECEPTACLE FOR COPIER, MOUNT AT 18" A.F.F. UNLESS NOTED OTHERWISE. COORDINATE WITH ARCHITECT FOR EXACT LOCATION
Ⓓ	DH	ELECTRICAL CONNECTION FOR DOOR HARDWARE. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT INSTALLER
⇔	EM	ABOVE COUNTER GFCI RECEPTACLE FOR ESPRESSO MACHINE. COORDINATE WITH ARCHITECT FOR EXACT LOCATION. COORDINATE WITH EQUIPMENT MANUFACTURER FOR EXACT REQUIREMENTS
⇔	EWC	GFI DUPLEX RECEPTACLE FOR ELECTRIC WATER COOLER, COORDINATE EXACT ELEVATION WITH INSTALLER OF EWC
Ⓕ	FF	PROVIDE J-BOX FOR POWER IN CEILING, WITH SWITCH ON WALL FOR FUTURE TENANT FAN OR FIXTURE.
◉	FP	FLOOR BOX WITH TWO DUPLEX POWER RECEPTACLES AND SEPARATE DATA COMPARTMENTS. FINISH TO BE SELECTED BY ARCHITECT. PROVIDE WIREMOLD 4RFBAE-OG FOR SLAB ON-GRADE LOCATIONS AND #6ATC FOR ABOVE-GRADE POKE-THROUGH LOCATIONS. POKE THROUGH SHALL MATCH FLOOR FIRE RATINGS. PROVIDE 1-1/4"C FOR COMMUNICATIONS TO ACCESSIBLE AREA ABOVE CEILING.
⇔	G	GFI DUPLEX RECEPTACLE, MOUNT AT 18" A.F.F. UNLESS NOTED OTHERWISE
⇔	HWT	STANDARD GFI DUPLEX RECEPTACLE FOR HOT WATER TOWER, MOUNT AT 18" A.F.F. UNLESS NOTED OTHERWISE, COORDINATE WITH ARCHITECT FOR EXACT LOCATION
⇔	ICE	STANDARD GFI DUPLEX RECEPTACLE FOR ICE MACHINE, MOUNT AT 18" A.F.F. UNLESS NOTED OTHERWISE, COORDINATE WITH ARCHITECT FOR EXACT LOCATION
⇔	MW	ABOVE COUNTER GFI DUPLEX RECEPTACLE FOR MICROWAVE, REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT PLACEMENT
$_{OS}$	OSG	ELECTRICAL CONNECTION AND SWITCH FOR OVERHEAD SECURITY GRILLE. COORDINATE WITH INSTALLER FOR EXACT REQUIREMENTS
$_{S}$	PRO	SWITCH FOR PROJECTOR SCREEN. COORDINATE WITH INSTALLER FOR EXACT REQUIREMENTS
⇔	PRO	CEILING MOUNTED RECEPTACLE FOR PROJECTOR. PROVIDE 3/4" CONDUIT FOR COMMUNICATIONS. INSTALL RECEPTACLE FLUSH WITH CEILING. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT
⇔	PS	ABOVE COUNTER DUPLEX RECEPTACLE FOR POINT-OF-SALE SYSTEM, REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT PLACEMENT
⇔	REF	STANDARD GFI DUPLEX RECEPTACLE FOR REFRIGERATOR, MOUNT AT 30" A.F.F. UNLESS NOTED OTHERWISE, COORDINATE WITH ARCHITECT FOR EXACT LOCATION
⇔	RIC	STANDARD GFI DUPLEX RECEPTACLE FOR REACH-IN CASE, MOUNT AT 18" A.F.F. UNLESS NOTED OTHERWISE, COORDINATE WITH ARCHITECT FOR EXACT LOCATION
⇔	SP	STANDARD DUPLEX RECEPTACLE FOR SUMP PUMP, COORDINATE WITH ELEVATOR INSTALLER FOR EXACT LOCATION
⇔	TV	RECESSED DUPLEX RECEPTACLE FOR TELEVISION. INSTALL COMMUNICATIONS BOX NEXT TO RECEPTACLE, MOUNT AT SAME HEIGHT. INSTALL 5" 6" AFF
⇔	U-REF	STANDARD GFI DUPLEX RECEPTACLE FOR UNDER COUNTER REFRIGERATOR. COORDINATE WITH ARCHITECT FOR EXACT LOCATION AND MOUNTING HEIGHT
⇔	USB	STANDARD DUPLEX RECEPTACLE WITH (2) 3.1A USB RECEPTACLES, MOUNT AT 18" A.F.F. UNLESS NOTED OTHERWISE
⇔	USBA	STANDARD ABOVE COUNTER DUPLEX RECEPTACLE WITH (2) 3.1A USB RECEPTACLES. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT PLACEMENT
⇔	WP	WEATHER RESISTANT GFI DUPLEX RECEPTACLE IN NEMA 3R WHILE IN USE COVER
⇔		STANDARD DUPLEX RECEPTACLE AT 18"ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE
⇔		STANDARD QUADPLEX RECEPTACLE AT 18"ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE
$_{S}$		MOTOR RATED SWITCH

MEP EQUIPMENT SCHEDULE

EQ NAME	EQUIPMENT DESCRIPTION	FEEDER	LOAD VA	VOLTAGE	PANEL	CIRCUIT NUMBER
AC-1	AIR HANDLING UNIT (POWERED THRU ACCU)	2#12, #12G, 3/4"C	0 VA	120 V		
AC-2	AIR HANDLING UNIT (POWERED THRU ACCU)	2#12, #12G, 3/4"C	0 VA	120 V		
ACCU-1	AIR COOLED CONDENSING UNIT (208/1)(19 MCA, 30 MOCP)	2#12, #12G, 3/4"C	3162 VA	208 V	B	20,22
ACCU-2	AIR COOLED CONDENSING UNIT (208/1)(19 MCA, 30 MOCP)	2#12, #12G, 3/4"C	3162 VA	208 V	B	24,26
AHU-1	HYDRONIC AIR HANDLING UNIT (208/3)(26.4 MCA, 45 MOCP, 7.5 HP)	3#10, #10G, 3/4"C	7609 VA	208 V	DE	25,27,29
AHU-2	HYDRONIC AIR HANDLING UNIT (208/3)(17.5 MCA, 30 MOCP, 10 HP)	3#12, #12G, 3/4"C	5044 VA	208 V	DE	22,24,26
AHU-3	HYDRONIC AIR HANDLING UNIT (208/3)(8.3 MCA, 15 MOCP, 2 HP)	3#12, #12G, 3/4"C	2393 VA	208 V	DE	7,9,11
AHU-4	HYDRONIC AIR HANDLING UNIT (208/3)(8.3 MCA, 15 MOCP, 2 HP)	3#12, #12G, 3/4"C	2393 VA	208 V	DE	10,12,14
AHU-5	HYDRONIC AIR HANDLING UNIT (208/3)(8.3 MCA, 15 MOCP, 2 HP)	3#12, #12G, 3/4"C	2393 VA	208 V	DE	13,15,17
AHU-6	HYDRONIC AIR HANDLING UNIT (208/3)(8.3 MCA, 15 MOCP, 2 HP)	3#12, #12G, 3/4"C	2393 VA	208 V	DE	16,18,20
AHU-7	HYDRONIC AIR HANDLING UNIT (120/1)(6.1 MCA, 15 MOCP, 1/4 HP)	2#12, #12G, 3/4"C	732 VA	120 V	DE	1
AHU-8	HYDRONIC AIR HANDLING UNIT (208/3)(8.3 MCA, 15 MOCP, 2 HP)	3#12, #12G, 3/4"C	2393 VA	208 V	A	26,28,30
AHU-9	HYDRONIC AIR HANDLING UNIT (208/3)(8.3 MCA, 15 MOCP, 2 HP)	3#12, #12G, 3/4"C	2393 VA	208 V	A	31,33,35
AHU-10	HYDRONIC AIR HANDLING UNIT (120/1)(6.1 MCA, 15 MOCP, 1/4 HP)	2#12, #12G, 3/4"C	732 VA	120 V	DE	2
CP1	CIRCULATION PUMP (120/1)(1/25 HP)	2#12, #12G, 3/4"C	30 VA	120 V		
EF-1	EXHAUST FAN (120/1)(249 W)	2#12, #12G, 3/4"C	249 VA	120 V	F	9
EF-2	EXHAUST FAN (120/1)(249 W)	2#12, #12G, 3/4"C	249 VA	120 V	F	9
EF-3	EXHAUST FAN (120/1)(71 W)	2#12, #12G, 3/4"C	71 VA	120 V	D	7
EF-4	EXHAUST FAN (120/1)(71 W)	2#12, #12G, 3/4"C	71 VA	120 V	D	1
EF-5	EXHAUST FAN (120/1)(71 W)	2#12, #12G, 3/4"C	71 VA	120 V	C	24
EF-6	EXHAUST FAN (120/1)(71 W)	2#12, #12G, 3/4"C	71 VA	120 V	C	2
EF-7	EXHAUST FAN (120/1)(36 W)	2#12, #12G, 3/4"C	36 VA	120 V	B	15
HWP-1	HOT WATER CONVERTER PUMP (208/3)(3 HP)	3#12, #12G, 3/4"C	3819 VA	208 V	DE	19,21,23
WH1	DOMESTIC ELECTRIC WATER HEATER (208/1)(4.5 KW)	2#10, #10G, 3/4"C	4500 VA	208 V	DE	3,5



GENERAL POWER NOTES:

1. INSTALL 3/4" CONDUIT FROM ALL THERMOSTATS TO ACCESSIBLE AREA ABOVE CEILING. REFER TO MECHANICAL SHEETS FOR LOCATIONS OF THERMOSTATS.
2. REFER TO FIRE PROTECTION SHEETS FOR LOCATIONS OF FIRE SPRINKLER TAMPER AND FLOW SWITCHES TO BE INSTALLED BY FIRE ALARM CONTRACTOR (TYPICAL, ALL FLOORS).
3. INSTALL BLANK COVERPLATES ON ALL EMPTY JUNCTION BOXES.
4. WHERE ALLOWED BY CODE, ALL FIRE ALARM NOTIFICATIONS DEVICES SHALL BE CEILING MOUNTED, NOT WALL MOUNTED EXCEPT FOR THE LOBBY CEILING. ALL DEVICES SHALL BE WHITE WITH RED LETTERING.
5. WHERE ALLOWED BY CODE, MC CABLE SHALL BE USED FOR CIRCUITS SERVED BY BREAKERS 20A AND BELOW. THIS INCLUDES LIGHTING AND RECEPTACLE CIRCUITS, 120V AND 277V. MC CABLE SHALL BE INSTALLED IN A NEAT AND ORDERLY MANNER, PROPERLY SUPPORTED FROM STRUCTURE. MC CABLE SHALL NOT BE INSTALLED ON TOP OF OR SUPPORTED BY CEILINGS, DUCTWORK, PIPING, ETC. MC CABLE SHALL BE INSTALLED AT RIGHT ANGLES TO BUILDING STRUCTURE.
6. PER NEC, GFCI PROTECTION SHALL BE PROVIDED FOR ALL 20A TO 50A SINGLE PHASE RECEPTACLES RATED UP TO 150V TO GROUND LOCATED IN INDOOR WET LOCATIONS, BATHROOMS, KITCHENS, AND WHERE WITHIN 6 FT OF ANY SINK, OR LOCATED OUTDOORS, OR ON ROOFTOPS.
7. PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE CAULKED TO MAINTAIN THE FIRE RATING OF THE WALL.
8. INSTALL 3/4" CONDUIT TO ALL EXTERIOR DOOR FRAMES TO ACCESSIBLE CEILING SPACE FOR DOOR CONTROLS.
9. PER NEC 210.8(B), GFCI PROTECTION SHALL BE PROVIDED FOR ALL 20A TO 50A SINGLE PHASE RECEPTACLES RATED UP TO 150V TO GROUND AND 20A TO 100A THREE PHASE RECEPTACLES RATED UP TO 150V TO GROUND LOCATED IN INDOOR WET LOCATIONS, BATHROOMS, KITCHENS, AND WHERE WITHIN 6 FT OF ANY SINK, OR LOCATED OUTDOORS, OR ON ROOFTOPS.
10. INSTALL WALL-MOUNTED GROUND BAR ON INSULATED STANDOFFS LOCATED IN EACH IT ROOM. VERIFY EXACT LOCATION WITH IT PERSONNEL. GROUNDING CONDUCTOR SHALL BE CONTINUOUS AND UN-CUT ACROSS GROUND BAR. OR CONNECTIONS SHALL BE MADE BY EXOTHERMIC WELD.
11. ONLY ELECTRICAL PANELS AND BOXES SHALL BE MARKED WITH PRINTED LABEL PER MSU REQUIREMENTS. LETTERING SHALL BE AT LEAST 1.5" IN HEIGHT.
12. PER OWNER REQUIREMENTS, SECURITY CAMERA SYSTEM SHALL PROVIDED AND INSTALLED BY DAC, INC. CONTACT 817-617-7162 FOR PRICING AND ADDITIONAL REQUIREMENTS.
13. PER OWNER REQUIREMENTS, AUDIO/VISUAL SYSTEM SHALL BE PROVIDED AND INSTALLED BY ONEVISION SOLUTIONS. CONTACT 972-714-0540 FOR PRICING AND ADDITIONAL REQUIREMENTS.
14. COORDINATE RECEPTACLE FACEPLATE AND SWITCH COVER COLOR WITH ARCHITECT.
15. CONTRACTORS TO USE ROOM IDENTIFICATION PER ARCHITECTURAL SHEET A105 FOR ALL REQUIRED LABELING.

1 FIRST FLOOR POWER PLAN

SCALE: 1/8" = 1'-0"

8 0 8 16

APPR | DESCRIPTION | DATE | REV

DANIEL BUILDING RENOVATION
J.S. BRIDWELL ACTIVITIES CENTER &
CANNEDY GREEK COMMONS

MSU TEXAS
MIDWESTERN STATE UNIVERSITY

BYSParchitects
1005 Ninth Street - Suite 200 Wichita Falls, Texas 76301 (940) 761-2404
Member American Institute of Architects

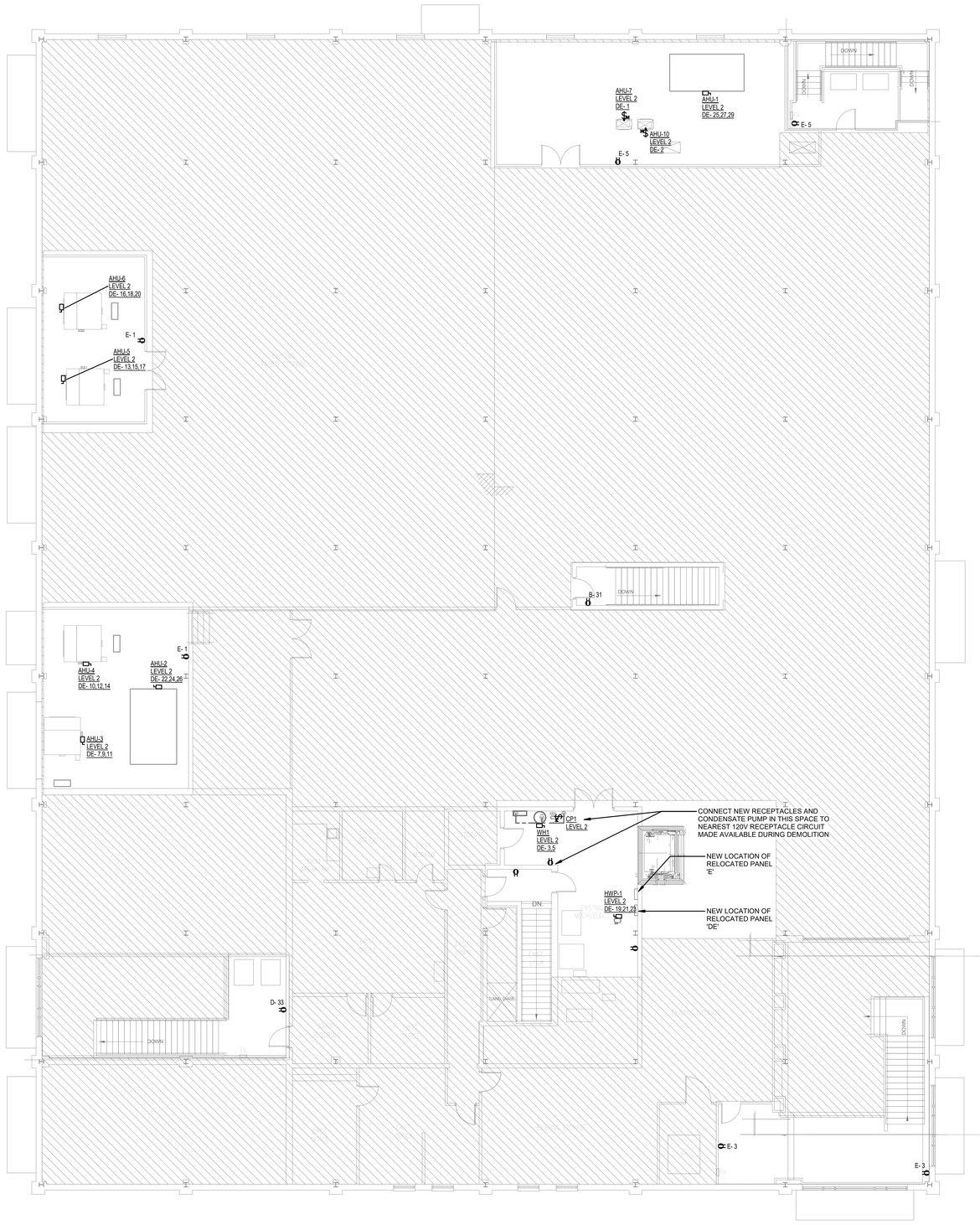
STATE OF TEXAS
JAMES S. RUSE
102703
LICENSED PROFESSIONAL ENGINEER
08/24/2020

DRAWN BY: BKH
CHECKED BY: JSR
DATE: 08/24/2020
PROJECT NO.: 18071

FIRST FLOOR POWER PLAN

E201

Summit CONSULTANTS, INC.
Texas BPE Registration # F-207
1300 Summit Avenue Suite 500 Fort Worth, Texas 76102 Office 817.878.4242
4144 N. Central Expwy Suite 635 Dallas, Texas 75204 Office 214.420.9111
www.summitmep.com



1 SECOND FLOOR POWER PLAN

SCALE: 1/8" = 1'-0"

8 0 8 16

GENERAL POWER NOTES:

1. INSTALL 3/4" CONDUIT FROM ALL THERMOSTATS TO ACCESSIBLE AREA ABOVE CEILING. REFER TO MECHANICAL SHEETS FOR LOCATIONS OF THERMOSTATS.
2. REFER TO FIRE PROTECTION SHEETS FOR LOCATIONS OF FIRE SPRINKLER TAMPER AND FLOW SWITCHES TO BE INSTALLED BY FIRE ALARM CONTRACTOR (TYPICAL, ALL FLOORS).
3. INSTALL BLANK COVERPLATES ON ALL EMPTY JUNCTION BOXES.
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6. PER NEC, GFCI PROTECTION SHALL BE PROVIDED FOR ALL 20A TO 50A SINGLE PHASE RECEPTACLES RATED UP TO 150V TO GROUND LOCATED IN INDOOR WET LOCATIONS, BATHROOMS, KITCHENS, AND WHERE WITHIN 6 FT OF ANY SINK, OR LOCATED OUTDOORS, OR ON ROOFTOPS.
7. PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE CAULKED TO MAINTAIN THE FIRE RATING OF THE WALL.
8. INSTALL 3/4" CONDUIT TO ALL EXTERIOR DOOR FRAMES TO ACCESSIBLE CEILING SPACE FOR DOOR CONTROLS.
9. PER NEC 210.8(B), GFCI PROTECTION SHALL BE PROVIDED FOR ALL 20A TO 50A SINGLE PHASE RECEPTACLES RATED UP TO 150V TO GROUND AND 20A TO 100A THREE PHASE RECEPTACLES RATED UP TO 150V TO GROUND LOCATED IN INDOOR WET LOCATIONS, BATHROOMS, KITCHENS, AND WHERE WITHIN 6 FT OF ANY SINK, OR LOCATED OUTDOORS, OR ON ROOFTOPS.
10. INSTALL WALL-MOUNTED GROUND BAR ON INSULATED STANDOFFS LOCATED IN EACH IT ROOM. VERIFY EXACT LOCATION WITH IT PERSONNEL. GROUNDING CONDUCTOR SHALL BE CONTINUOUS AND UN-CUT ACROSS GROUND BAR, OR CONNECTIONS SHALL BE MADE BY EXOTHERMIC WELD.
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15. CONTRACTORS TO USE ROOM IDENTIFICATION PER ARCHITECTURAL SHEET A105 FOR ALL REQUIRED LABELING.

NO.	DESCRIPTION	DATE	APPR

DANIEL BUILDING RENOVATION

J.S. BRIDWELL ACTIVITIES CENTER & CANNEDY GREEK COMMONS

MSU TEXAS
MIDWESTERN STATE UNIVERSITY

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STATE OF TEXAS
08/24/2020
JAMES S. RUSE
102703
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY	BKH
CHECKED BY	JSR
DATE	08/24/2020
PROJECT NO.	18071

SECOND FLOOR POWER PLAN

E202

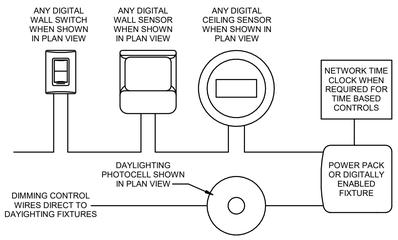
Summit
CONSULTANTS, INC.
Texas BPE Registration # F-207
1300 Summit Avenue Suite 500 Fort Worth, Texas 76102 Office 817.878.4242
4144 N. Central Expwy Suite 635 Dallas, Texas 75204 Office 214.420.9111
www.summitmep.com

DIGITAL LIGHTING CONTROLS NOTES AND DETAIL

DIGITAL LIGHTING CONTROLS GENERAL NOTES:

1. ALL POWER PACKS TO BE MOUNTED ABOVE CEILING NEAREST THE FIRST WALL SWITCH SERVING THE ASSOCIATED ROOM. PLAN VIEW SHOWS QUANTITY OF ZONES REQUIRED MANUFACTURER MAY COMBINE POWER PACKS WHERE POSSIBLE INTO MULTI ZONE POWER PACKS.
2. ALL EMERGENCY BATTERY PACK DECORATIVE FIXTURES ARE TO TURN ON/OFF WITH ASSOCIATED ROOM, BUT OVERRIDE TO ON IF POWER IS LOST. REFER TO EMERGENCY LIGHTING CONTROL DETAIL WHERE PROVIDED.
3. ALL EXIT LIGHTING AND BATTERY PACK ONLY FIXTURES ARE TO BE WIRED TO UN-SWITCHED LEG OF CIRCUITS SHOWN FOR CONSTANT POWER.
4. DETAIL IS GENERIC IN NATURE. PLAN VIEWS WILL INDICATE NUMBER OF ZONES, PROVIDE POWER PACK OR EQUIVALENT FOR EACH ZONE. PLAN VIEW WILL INDICATE LOCATION OF DIGITAL WALL SWITCHES WITH NUMBER OF BUTTONS REQUIRED. ACCEPTABLE MANUFACTURERS ARE WATT STOPPER, LUTRON AND ACUITY CONTROLS. OTHERS WILL BE CONSIDERED WITH PRE-APPROVAL PRIOR TO BIDDING.
5. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A FULLY FUNCTIONAL SYSTEM.
6. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. ALL LIGHTS WILL FUNCTION WITH ENLIGHTED LIGHTING SYSTEM PER OWNER REQUIREMENTS.

DIGITAL LIGHTING CONTROLS DETAIL:



EXTERIOR LIGHTING CONTROL NOTES AND DETAIL

EXTERIOR LIGHTING CONTROL GENERAL NOTES:

1. FOR GENERAL EXTERIOR SITE AND BUILDING LIGHTING, PROVIDE 365/7 DAY ASTRONOMIC TIME CONTROL WITH OVERRIDE ON/OFF AND MINIMUM 2 DAY PERMANENT SCHEDULE RETENTION. PROVIDE ONE RELAY OR CONTACT PER ZONE REQUIRED.
2. FOR AREA SECURITY SITE LIGHTING, PROVIDE TIME SCHEDULE TO BE ONE ZONE ON AT NIGHT AND ONE ZONE OFF AFTER MIDNIGHT (TWO ZONES, STEP DIMMED).
3. FOR FIXTURES LIGHTING FACADE AND LANDSCAPE, PROVIDE TIME SCHEDULE TO BE ON DUSK TO DAWN, STEP DIMMING NOT REQUIRED.
4. CIRCUIT AS SHOWN IN PLAN VIEW.

EXTERIOR LIGHTING CONTROL DETAIL:

EXTERIOR LIGHTING ENERGY CODE REQUIREMENTS :

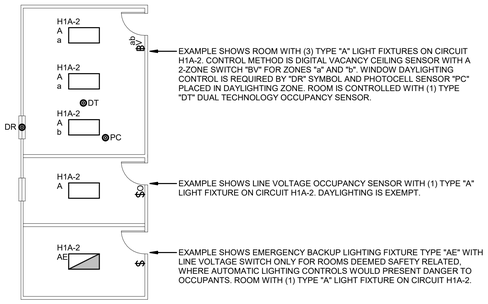
1. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED AS A FUNCTION OF AVAILABLE LIGHT USING AN ASTRONOMIC TIMECLOCK, PHOTOCELL OR SIMILAR MEANS, UNLESS NOTED OTHERWISE.
2. EXTERIOR LIGHTING SHALL BE REDUCED BY MINIMUM OF 30% AFTER MIDNIGHT AT THE LATEST TO 6AM, OR 1-HOUR AFTER CLOSING AND 1 HOUR BEFORE BUSINESS OPENING, OR ANYTIME OF INACTIVITY OF MORE THAN 15 MINUTES.
3. EXEMPTIONS TO EXTERIOR LIGHTING:
   A. EMERGENCY EGRESS LIGHTING
   B. COVERED VEHICLE ENTRANCES TO PARKING STRUCTURES
   C. BUILDING FACADE AND LANDSCAPE LIGHTING MAY BE PHOTOCELL ONLY; 30% DIMMING IS NOT REQUIRED.

GENERAL LIGHTING CONTROLS NOTES AND EXAMPLES

LIGHTING CONTROL GENERAL NOTES:

1. SENSOR LOCATIONS ARE MINIMUMS. CONTRACTOR SHALL PROVIDE FOR A MINIMUM OF 10% ADDITIONAL DEVICES TO COVER DARK SPOTS DISCOVERED DURING CONSTRUCTION FROM FIELD INSTALLED OBSTRUCTIONS. CONTRACTOR SHALL ALSO ALLOW FOR A MOVE OF UP TO 5'-0" IN ANY DIRECTION FOR ALL SENSORS, AT NO ADDITIONAL COST TO THE OWNER, TO ALLOW FOR FIELD ADJUSTMENT OF SENSOR PLACEMENTS TO ACHIEVE OPTIMUM PERFORMANCE.
2. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
3. CONTRACTOR SHALL PROVIDE A MINIMUM OF (2) SITE VISITS BY FACTORY TRAINED PERSONNEL TO ADJUST SENSORS AND TRAIN THE OWNER ON USE AND MAINTENANCE OF LIGHTING CONTROL COMPONENTS.
4. AFTER COMMISSIONING LIGHTING CONTROLS, CONTRACTOR SHALL PROVIDE A WRITTEN TEST REPORT INDICATING THAT ALL LIGHTING CONTROL SYSTEMS HAVE BEEN COMMISSIONED, TESTED AND FOUND TO BE FUNCTIONING IN ACCORDANCE WITH CONTRACT DOCUMENT AND CODE REQUIREMENTS. CONTRACTOR SHALL ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, MANUFACTURER'S INSTRUCTIONS AND CODE REQUIREMENTS. FUNCTIONAL TESTING SHALL BE IN ACCORDANCE WITH IECC SECTIONS C408.3.1.1/2 FOR THE APPLICABLE CONTROL TYPES.

GENERAL LIGHTING EXAMPLES:



GENERAL ENERGY CODE REQUIREMENTS :

1. ALL AREAS LISTED BELOW SHALL HAVE OCCUPANCY SENSOR CONTROL:
   - ENCLOSED SPACES 300 SQ.FT. OR LESS
   - PRIVATE OFFICES
   - RESTROOMS
   - STORAGE ROOMS
   - JANITORIAL CLOSETS
   - CONFERENCE, MEETING OR MULTIPURPOSE ROOMS
   - CLASSROOMS, LECTURE OR TRAINING ROOMS.
   - COPY OR PRINT ROOMS
   - LOUNGES
   - EMPLOYEE LUNCH AND BREAK ROOMS
   - LOCKER ROOMS
2. FOR OCCUPANCY SENSORS, AUTOMATIC ON TO 100% OUTPUT IS ALLOWED FOR PUBLIC CORRIDORS, LOBBIES AND SIMILAR PUBLIC USE ONLY AREAS. AUTOMATIC SENSORS ON SHALL BE PROGRAMMED TO AUTOMATICALLY TURN ON LIGHTING TO NO MORE THAN 50% IN OTHER SPACES IN ACCORDANCE WITH IECC REQUIREMENTS.
3. AREAS NOT PROVIDED WITH OCCUPANCY SENSORS AS LISTED ABOVE SHALL BE ON A TIME BASED SCHEDULE. TIME SWITCH CONTROLS SHALL PROVIDE MAXIMUM 2-HOUR OVERRIDE (MAXIMUM 5,000 SQ.FT. EACH OVERRIDE) WITHIN SPACE CONTROLLED OR HAVE A PILOT LIGHT AND MAP OF LIGHTING CONTROLLED.
4. AREAS NOT EXEMPTED FROM TIME BASE CONTROLS SHALL HAVE LIGHT REDUCTION CONTROLS (DIMMER) LOCATED IN SPACE FOR A MINIMUM 50% REDUCTION BY OCCUPANT.
5. LIGHTING REDUCTION IS NOT REQUIRED FOR ROOMS WITH ONLY ONE LIGHT FIXTURE, ROOMS USING LESS THAN 0.6 W/SQ.FT., CORRIDORS, EQUIPMENT ROOMS, AND PUBLIC LOBBIES.
6. TIME CONTROLS SHALL HAVE A 7-DAY CLOCK WITH DIFFERENT SCHEDULE EACH DAY, HAVE HOLIDAY SCHEDULING CAPABILITY AND 10 HOUR BACKUP FOR PROGRAMMING.
7. AREAS THAT HAVE SPECIAL EXEMPTIONS MUST BE EVALUATED ON A CASE BY CASE BASIS. THESE AREAS INCLUDE SLEEPING AREAS, PATIENT CARE AREAS, AREAS WHERE AUTOMATIC LIGHTING SHUTOFF WOULD ENDANGER LIFE SAFETY, DWELLING UNITS WITHIN COMMERCIAL BUILDINGS, AND WALK-IN COOLER AND FREEZERS.
8. SINGLE POLE LINE VOLTAGE TOGGLE SWITCHES MAY BE USED WHERE AUTOMATIC LIGHTING CONTROLS WOULD ENDANGER LIFE SAFETY OR ARE EXEMPT FOR EGRESS RELATED LIFE SAFETY REASONS.

LIGHTING FIXTURE SCHEDULE

SCHEDULE NOTES:

1. PROVIDE ALL REQUIRED MOUNTING HARDWARE AND ACCESSORIES REQUIRED FOR MOUNTING NECESSARY

TYPE	DESCRIPTION	MANUFACTURER	MODEL#	VOLT	COLOR	LUMENS	VA	COMMENTS
B	LED 2'X2' TROFFER	LITHONIA	2BLT2 48LHE ADP 120 EZ1 LP835	120 V	3500	4800	38 VA	
B3	LED 2'X2' TROFFER	LITHONIA	2BLT2 33LHE ADP 120 EZ1 LP835	120 V	3500	3300	25 VA	
B3E	LED 2'X2' TROFFER	LITHONIA	SAME AS TYPE 'B3' BUT ON EMERGENCY CIRCUIT	120 V	3500	3300	25 VA	
BE	LED 2'X2' TROFFER	LITHONIA	SAME AS TYPE 'B' BUT ON EMERGENCY CIRCUIT	120 V	3500	4800	38 VA	
C1	LED 6" RECESSED DOWNLIGHT	LITHONIA	LDN6 35/10 LO6 AR LSS 120 GZ1	120 V	3500	1000	11 VA	
C2	LED 6" RECESSED DOWNLIGHT	LITHONIA	LDN6 35/20 LO6 AR LSS 120 GZ1	120 V	3500	2000	23 VA	
C2E	LED 6" RECESSED DOWNLIGHT	LITHONIA	SAME AS TYPE 'C2' BUT ON EMERGENCY CIRCUIT	120 V	3500	2000	23 VA	
CS2	LED 6" SQAURE RECESSED DOWNLIGHT	LITHONIA	LDN6SQ 35/20 LS6 AR LSS 120 GZ1	120 V	3500	2000	23 VA	
CS2E	LED 6" SQAURE RECESSED DOWNLIGHT	LITHONIA	SAME AS TYPE 'CS2' BUT ON EMERGENCY CIRCUIT	120 V	3500	2000	23 VA	
F	LED 2'X2' EDGE LIT TROFFER W/ 2" DROP LENS	AXIS	SKPLED 22 3200 80 35K 2 W 120 DP 1 MOUNTING	120 V	3500	3200	35 VA	
FE	LED 2'X2' EDGE LIT TROFFER	AXIS	SAME AS TYPE 'F' BUT ON EMERGENCY CIRCUIT	120 V	3500	3200	35 VA	
G	LED PENDANT SOCKET	SEAGULL LIGHTING / LIGHTOLOGY	6114501-782 (GLASS SHADE) / SQCG3W2200KE26T120V (LED BULB)	120 V	2200	240	5 VA	VERIFY PENDANT LENGTH WITH ARCHITECT
H2	LED SQUARE PENDANT	MARK	S1LDP 2X2P 80CRI 35K 200LMF MIN1 DRP1 120 FINISH ZT F272A RDCY *CANOPY COLOR* WCRD	120 V	3500	1920	17 VA	
H3	LED SQUARE LINEAR PENDANT FIXTURE	MARK	S1LDP *PLAN 80CRI 35K 200LMF MIN1 DRP1 120 FINISH ZT F272A RDCY *CANOPY COLOR* WCRD	120 V	3500	3840	33 VA	VERIFY PATTERN LENGTH ON PLAN
H3E	LED SQUARE LINEAR PENDANT FIXTURE	MARK	SAME AS TYPE 'H3' BUT ON EMERGENCY CIRCUIT	120 V	3500	3840	33 VA	VERIFY PATTERN LENGTH ON PLAN
H4	LED SQUARE LINEAR PENDANT FIXTURE	MARK	S1LDP *PLAN 80CRI 35K 200LMF MIN1 DRP1 120 FINISH ZT F272A RDCY *CANOPY COLOR* WCRD	120 V	3500	4080	35 VA	VERIFY PATTERN LENGTH ON PLAN
H5	LED SQUARE LINEAR PENDANT FIXTURE	MARK	S1LDP *PLAN 80CRI 35K 200LMF MIN1 DRP1 120 FINISH ZT F272A RDCY *CANOPY COLOR* WCRD	120 V	3500	5520	48 VA	VERIFY PATTERN LENGTH ON PLAN
HCW	LED RECESSED LINEAR WALL-TO-CEILING FIXTURE	MARK	SL1L LOP X FL 90CRI 35K 200LMF MIN1 120 ZT	120 V	3500	240/FT	60 VA	VERIFY LENGTH ON PLAN AND WITH ARCHITECT
HH3E	LED SQUARE LINEAR PENDANT FIXTURE ON EMERGENCY CIRCUIT	MARK	S1LDP *PLAN 80CRI 35K 400LMF MIN1 DRP1 120 FINISH ZT F272A RDCY *CANOPY COLOR* WCRD	120 V	3500	5920	53 VA	VERIFY PATTERN LENGTH ON PLAN
HH4	LED SQUARE LINEAR PENDANT FIXTURE	MARK	S1LDP *PLAN 80CRI 35K 400LMF MIN1 DRP1 120 FINISH ZT F272A RDCY *CANOPY COLOR* WCRD	120 V	3500	6290	56 VA	VERIFY PATTERN LENGTH ON PLAN
HH5	LED SQUARE LINEAR PENDANT FIXTURE	MARK	S1LDP *PLAN 80CRI 35K 400LMF MIN1 DRP1 120 FINISH ZT F272A RDCY *CANOPY COLOR* WCRD	120 V	3500	8510	76 VA	VERIFY PATTERN LENGTH ON PLAN
HP	LED LINEAR PENDANT FIXTURE	MARK	S1LD LCP X X 90CRI 35K 800LMF MIN1 120 X ZT F1/36A RDCY X X	120 V	3500	750/FT	7 VA	VERIFY LENGTH ON PLAN AND WITH ARCHITECT
HPE	LED LINEAR PENDANT FIXTURE	MARK	SAME AS TYPE 'HP' BUT ON EMERGENCY CIRCUIT	120 V	3500	750/FT	7 VA	VERIFY LENGTH ON PLAN AND WITH ARCHITECT
HR	LED RECESSED LINEAR FIXTURE	MARK	SL1L LOP X FL 90CRI 35K 1000LMF MIN1 120 ZT	120 V	3500	935/FT	9 VA	VERIFY LENGTH ON PLAN AND WITH ARCHITECT
J	LED VANITY SCONCE	WAC LIGHTING	WS 85618	120 V	3500	865	16 VA	
L	LED 2" WIDE LINEAR WALL-MOUNT DIRECT/INDIRECT	MARK	S1LWID LCP X X 90CRI 35K 200LMF I90CRI I5K 200LMF MIN1 SCT 120 FINISH ZT	120 V	3500	400/FT	5 VA	VERIFY LENGTH ON PLAN
M	COPPERED INDOOR LED WALL SCONCE	POSSINI EURO DESIGN	U4434	120 V	3200	200	10 VA	
P	LED SURFACE MOUNT LINEAR FIXTURE	VODE	707-Z2 SL X X C 0 RP25 AE 1 0 Z LO 35 D3 0 FINISH 0	120 V	3500	506/FT	4 VA	VERIFY LENGTH ON PLAN
PW	LED SURFACE MOUNT LINEAR FIXTURE	VODE	707-Z3 SL X X S1 0 RP25 AE 1 0 Z L0 35 A1 0 FINISH 0	120 V	3500	337/FT	4 VA	VERIFY LENGTH ON PLAN
PWE	LED SURFACE MOUNT LINEAR FIXTURE	VODE	SAME AS TYPE 'PW' BUT ON EMERGENCY CIRCUIT	120 V	3500	337/FT	4 VA	VERIFY LENGTH ON PLAN
Q	LED PENDANT SOCKET	KICHLER / LIGHTOLOGY	43853OZ (GLASS SHADE) / SQCG3W2200KE26T120V (LED BULB)	120 V	2200	240	5 VA	VERIFY PENDANT LENGTH WITH ARCHITECT
S	LED STRIP LIGHT	LITHONIA	ZL1N L48 5000LM FST 120 35K 80CRI WH + HC36	120 V	3500	5000	34 VA	
SWE	WALL MOUNTED LED STRIP LIGHT ON EMERGENCY CIRCUIT FOR ELEVATOR SHAFT LIGHTING	LITHONIA	ZL1N L48 5000LM FST 120 35K 80CRI WH + ZLANGBKT	120 V	3500	5000	34 VA	COORDINATE EXACT MOUNTING HEIGHT OF ELEVATOR EMERGENCY LIGHTING WITH INSTALLER
WB	LED SECURITY WALL SCONCE	LITHONIA	TWR2 P1 40K MVOLT DDBTXD	120 V	4000	8150	64 VA	
WD	LED DECORATIVE WALL SCONCE	STERNBERG LIGHTING	X MS605BLED 8L 40 T3 MDLO14 CSA X 80 DBT	120 V	4000	2265	31 VA	
WDE	LED DECORATIVE WALL SCONCE	STERNBERG LIGHTING	SAME AS TYPE 'WD' BUT ON EMERGENCY CIRCUIT	120 V	4000	2265	31 VA	
WP	LED DIRECT/INDIRECT WALL PACK	BETACALCO	830 8132 40 FINISH DB	120 V	4000	900	26 VA	
WPE	LED DIRECT/INDIRECT WALL PACK	BETACALCO	SAME AS TYPE 'WP' BUT ON EMERGENCY CIRCUIT	120 V	4000	900	26 VA	
WSE	LED DECORATIVE WALL PACK ON EMERGENCY CIRCUIT	SCOTT ARCH LIGHTING	S9205-L16 40K BA L25	120 V	4000	1525	25 VA	
XC	CEILING MOUNT LED EXIT SIGN	LITHONIA	EXR LED M6	120 V	NA	NA	3 VA	SEE FLOORPLAN FOR NUMBER OF FACES AND DIRECTIONAL ARROWS
XDC	EDGE LIT CEILING MOUNT LED EXIT SIGN	LITHONIA	EDG X RMR	120 V	NA	NA	3 VA	SEE FLOORPLAN FOR NUMBER OF FACES AND DIRECTIONAL ARROWS
XDW	EDGE LIGHT WALL MOUNT LED EXIT SIGN	LITHONIA	EDG X RMR	120 V	NA	NA	3 VA	SEE FLOORPLAN FOR NUMBER OF FACES AND DIRECTIONAL ARROWS
XW	WALL MOUNT LED EXIT SIGN	LITHONIA	EXR LED M6	120 V	NA	NA	3 VA	SEE FLOORPLAN FOR NUMBER OF FACES AND DIRECTIONAL ARROWS

SWITCH SYMBOL LEGEND

SYMBOL/ TYPE	SYMBOL DESCRIPTION
⊖ DT	DUAL TECH OCCUPANCY SENSOR
⊖ PC	PHOTO CELL
⊖ DT	DUAL TECH OCCUPANCY SENSOR WALL MOUNTED
BF	DIGITAL 3-BUTTON PER ZONE (ON/OFF, RAISE, LOWER). PROGRAM TO AUTOMATIC 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY OCCUPANCY SENSORS AS SHOWN IN PLAN VIEW. LOWER CASE LETTERS ADJACENT TO SWITCH INDICATES ZONES.
BO	DIGITAL BUTTON 3-BUTTON PER ZONE (ON/OFF,RAISE,LOWER). PROGRAM TO AUTOMATIC 50% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY OCCUPANCY SENSORS AS SHOWN IN PLAN VIEW. LOWER CASE LETTERS ADJACENT TO SWITCH INDICATES ZONES.
$	LINE VOLTAGE TOGGLE SWITCH
$O	WALL MOUNTED LINE VOLTAGE OCCUPANCY SENSOR, 3-BUTTON (ON/OFF RAISE,LOWER) DIMMING SENSOR. PROGRAM TO AUTOMATIC 50% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED.

LIGHTING INVERTER SCHEDULE

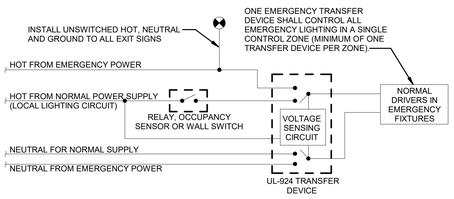
INVERTER NAME	SERVING AREA	VOLTAGE			RUNTIME (MINUTES)	OUTPUT BREAKERS	
		INPUT	OUTPUT	KVA		QUANTITY	AMPS
INV	INT / EXT	120	120	3.75	90	10	20

NOTES:

1. MYERS POWER PRODUCTS "IE" SERIES IS BASIS OF DESIGN. CONTRACTOR SHALL PROVIDE MYERS "IE" INVERTER OR APPROVED EQUAL UNLESS NOTED OTHERWISE.
2. OUTPUT BREAKERS SHALL BE 20A UNLESS NOTED OTHERWISE.

EMERGENCY LIGHTING CONTROL NOTES:

1. FOR CIRCUITS WITH DIMMED FIXTURES, TRANSFER DEVICE SHALL HAVE ADDITIONAL INTERNAL RELAY TO BREAK 0-10V DIMMING SIGNAL TO ENSURE DIMMED FIXTURES TURN ON WHEN NORMAL POWER FAILS. "LVS LIGHTING CONTROLS" MODEL "EPC-1-D" IS BASIS OF DESIGN FOR CIRCUITS WITH 0-10V DIMMING. SEE http://www.lvscontrols.com/
2. BODINE 'BLCD-20B' IS THE BASIS OF DESIGN FOR CIRCUITS WITHOUT 0-10V DIMMING.



1 LIGHTING CONTROLS DETAIL

SCALE: NTS

2 EMERGENCY LIGHTING CONTROL DETAIL

SCALE: N.T.S.

DANIEL BUILDING RENOVATION
J.S. BRIDWELL ACTIVITIES CENTER &
CANNEDY GREEK COMMONS

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REV	DATE	DESCRIPTION	APPR

STATE OF TEXAS
08/24/2020
JAMES S. RUSE
102703
LICENSED
PROFESSIONAL ENGINEER

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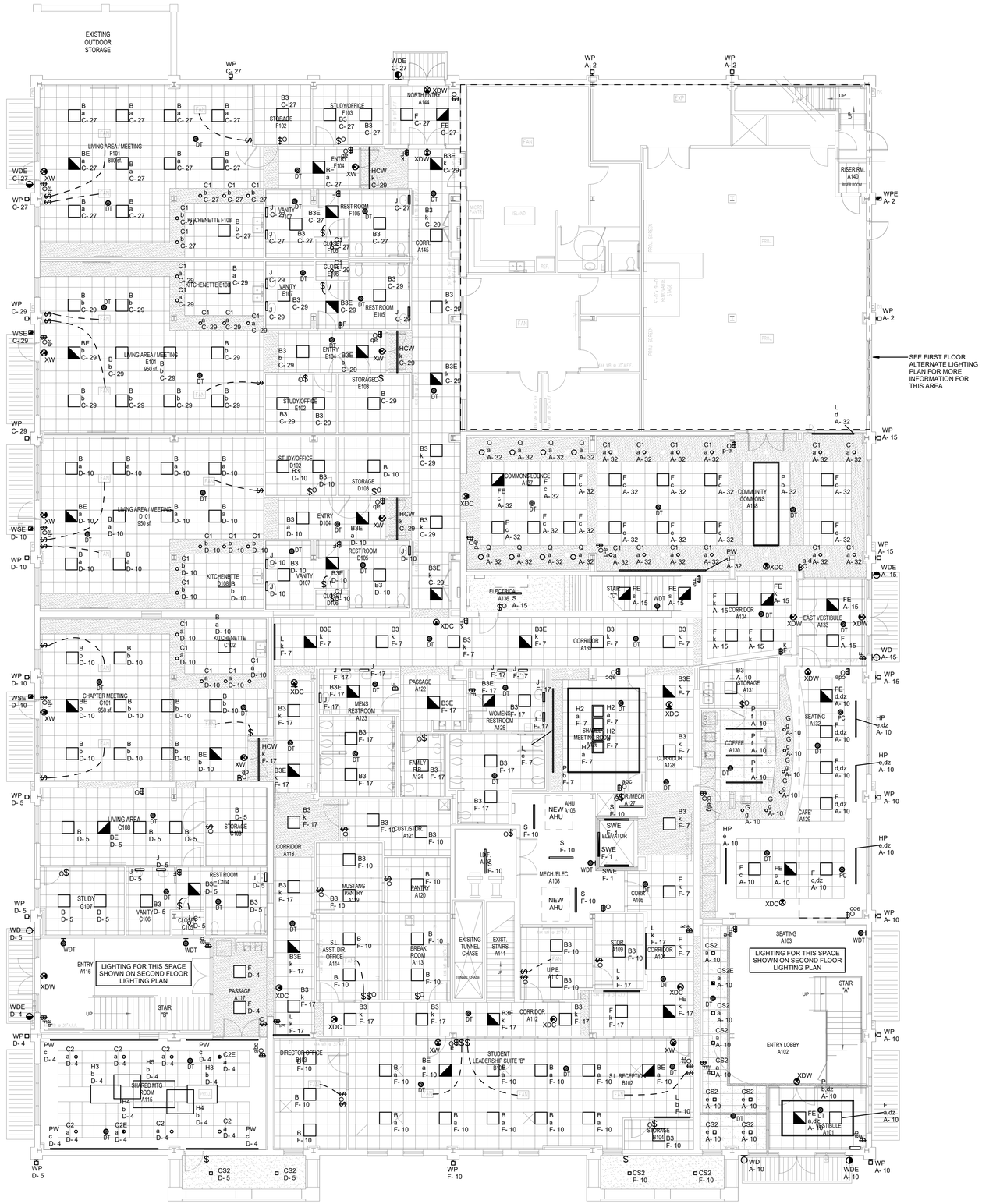
DRAWN BY	BKH
CHECKED BY	JSR
DATE	08/24/2020
PROJECT NO.	18071

LIGHTING DETAILS AND SCHEDULES

E300

GENERAL LIGHTING NOTES:

1. ALL EXIT SIGNS SHALL BE CONNECTED TO AN UNSWITCHED LEG OF THE LOCAL EMERGENCY LIGHTING CIRCUIT.
2. ELECTRICAL CONTRACTOR SHALL SET ALL OCCUPANCY AND VACANCY SENSORS THROUGHOUT BUILDING IN ACCORDANCE WITH OCCUPANCY SENSOR SETTINGS SCHEDULE ON PLANS.
3. UNLESS NOTED OTHERWISE, EMERGENCY LIGHTING ON INVERTER SHALL BE SWITCHED WITH LOCAL LIGHTING VIA BODINE BLCD-20B TRANSFER DEVICE OR EQUIVALENT. REFER TO EMERGENCY LIGHTING DETAIL FOR ADDITIONAL INFORMATION.
4. ALL EXTERIOR FIXTURES AT EGRESS DOORS SHALL BE CONNECTED TO THE EMERGENCY EGRESS LIGHTING CIRCUIT FOR THAT BUILDING. ALL EXTERIOR FIXTURES SHALL BE RELAY CONTROLLED AS INDICATED IN RELAY SCHEDULES.
5. IN MECHANICAL ROOMS AND I.T. CLOSETS, ADJUST LIGHT FIXTURE LOCATIONS AS NECESSARY FOR DUCTWORK, EQUIPMENT, RACKS, ETC.
6. EXTERIOR LIGHTING SHALL BE CONTROLLED BY PHOTOCELL UNLESS NOTED OTHERWISE.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND DETAILS FOR EXACT LIGHT FIXTURE PLACEMENT AND MOUNTING HEIGHTS.
8. LIGHT FIXTURES WITH THE ZONE DESIGNATION 'DZ' INDICATES FIXTURES IN A DAYLIGHTING ZONE.



1 FIRST FLOOR LIGHTING PLAN

SCALE: 1/8" = 1'-0"

8 0 8 16

REV	DATE	DESCRIPTION	APPR

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PROFESSIONAL ENGINEER
08/24/2020

DRAWN BY:	BKH
CHECKED BY:	JSR
DATE:	08/24/2020
PROJECT NO.:	18071

FIRST FLOOR LIGHTING PLAN

E301

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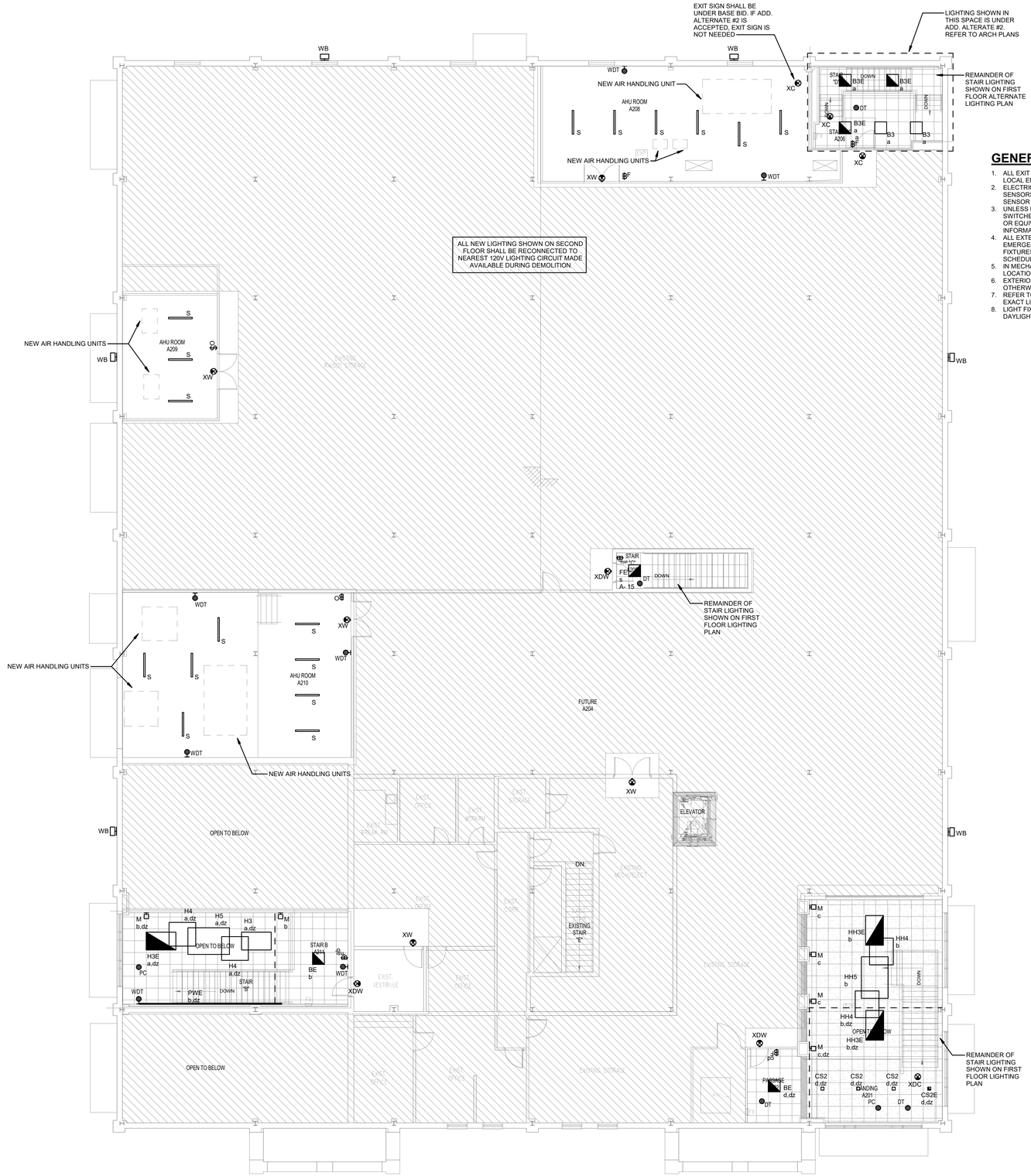

1 SECOND FLOOR LIGHTING PLAN

SCALE: 1/8" = 1'-0"

8 0 8 16

GENERAL LIGHTING NOTES:

1. ALL EXIT SIGNS SHALL BE CONNECTED TO AN UNSWITCHED LEG OF THE LOCAL EMERGENCY LIGHTING CIRCUIT.
2. ELECTRICAL CONTRACTOR SHALL SET ALL OCCUPANCY AND VACANCY SENSORS THROUGHOUT BUILDING IN ACCORDANCE WITH OCCUPANCY SENSOR SETTINGS SCHEDULE ON PLANS.
3. UNLESS NOTED OTHERWISE, EMERGENCY LIGHTING ON INVERTER SHALL BE SWITCHED WITH LOCAL LIGHTING VIA BODINE BLCD-20B TRANSFER DEVICE OR EQUIVALENT. REFER TO EMERGENCY LIGHTING DETAIL FOR ADDITIONAL INFORMATION.
4. ALL EXTERIOR FIXTURES AT EGRESS DOORS SHALL BE CONNECTED TO THE EMERGENCY EGRESS LIGHTING CIRCUIT FOR THAT BUILDING. ALL EXTERIOR FIXTURES SHALL BE RELAY CONTROLLED AS INDICATED IN RELAY SCHEDULES.
5. IN MECHANICAL ROOMS AND I.T. CLOSETS, ADJUST LIGHT FIXTURE LOCATIONS AS NECESSARY FOR DUCTWORK, EQUIPMENT, RACKS, ETC.
6. EXTERIOR LIGHTING SHALL BE CONTROLLED BY PHOTOCELL UNLESS NOTED OTHERWISE.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND DETAILS FOR EXACT LIGHT FIXTURE PLACEMENT AND MOUNTING HEIGHTS.
8. LIGHT FIXTURES WITH THE ZONE DESIGNATION 'DZ' INDICATES FIXTURES IN A DAYLIGHTING ZONE.

REV	DATE	DESCRIPTION	APPR

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SECOND FLOOR LIGHTING PLAN

E302

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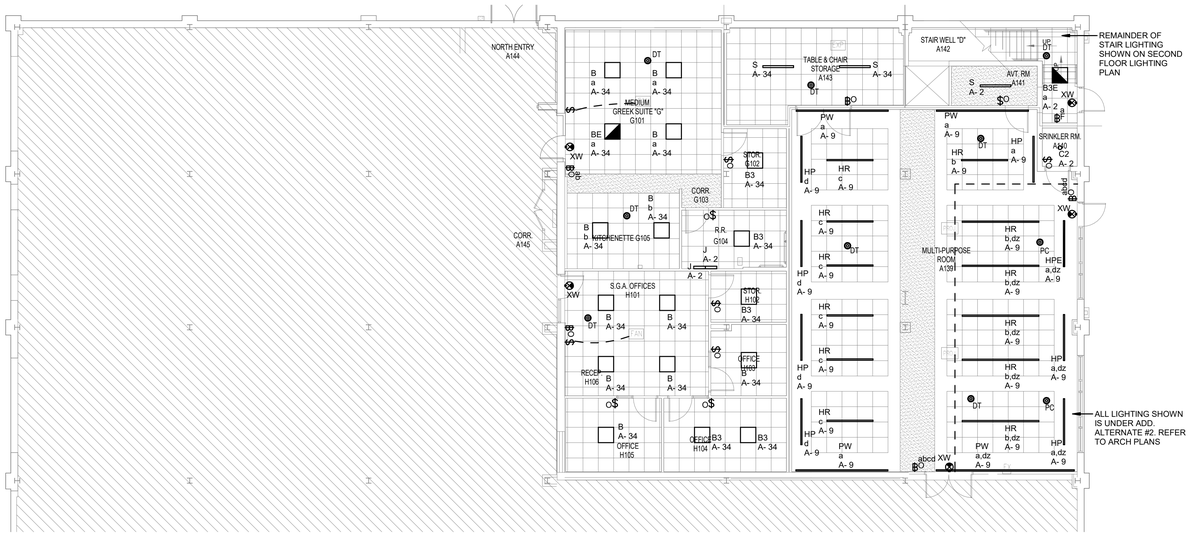
GENERAL LIGHTING NOTES:

1. ALL EXIT SIGNS SHALL BE CONNECTED TO AN UNSWITCHED LEG OF THE LOCAL EMERGENCY LIGHTING CIRCUIT.
2. ELECTRICAL CONTRACTOR SHALL SET ALL OCCUPANCY AND VACANCY SENSORS THROUGHOUT BUILDING IN ACCORDANCE WITH OCCUPANCY SENSOR SETTINGS SCHEDULE ON PLANS.
3. UNLESS NOTED OTHERWISE, EMERGENCY LIGHTING ON INVERTER SHALL BE SWITCHED WITH LOCAL LIGHTING VIA BODINE BLCD-20B TRANSFER DEVICE OR EQUIVALENT. REFER TO EMERGENCY LIGHTING DETAIL FOR ADDITIONAL INFORMATION.
4. ALL EXTERIOR FIXTURES AT EGRESS DOORS SHALL BE CONNECTED TO THE EMERGENCY EGRESS LIGHTING CIRCUIT FOR THAT BUILDING. ALL EXTERIOR FIXTURES SHALL BE RELAY CONTROLLED AS INDICATED IN RELAY SCHEDULES.
5. IN MECHANICAL ROOMS AND I.T. CLOSETS, ADJUST LIGHT FIXTURE LOCATIONS AS NECESSARY FOR DUCTWORK, EQUIPMENT, RACKS, ETC.
6. EXTERIOR LIGHTING SHALL BE CONTROLLED BY PHOTOCELL UNLESS NOTED OTHERWISE.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND DETAILS FOR EXACT LIGHT FIXTURE PLACEMENT AND MOUNTING HEIGHTS.
8. LIGHT FIXTURES WITH THE ZONE DESIGNATION 'DZ' INDICATES FIXTURES IN A DAYLIGHTING ZONE.



1 FIRST FLOOR ALTERNATE LIGHTING PLAN

SCALE: 1/8" = 1'-0"

8 0 8 16

STATE OF TEXAS
08/24/2020
JAMES S. RUSE
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DRAWN BY: BKH
CHECKED BY: JSR
DATE: 08/24/2020
PROJECT NO. 18071

FIRST FLOOR ALTERNATE LIGHTING PLAN

E303

Switchboard: MP

Mounting: SURFACE **Volts:** 120/208 Wye **A.I.C. Rating:** 65,000 AIC
Supply From: **Phases:** 3 **Mains Type:** MCB
Enclosure: NEMA 1 **Wires:** 4 **Mains Rating:** 1200 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1					0	0									2
3	EXISTING SPARE	125	3	--			0	0			--	3	250	EXISTING SPACE	4
5									0	0					6
7					9702	9235									8
9	EXISTING PANEL 'B'	200	3	77			9297	9770			78	3	200	EXISTING PANEL 'F'	10
11									8801	8980					12
13					9371	10505									14
15	EXISTING PANEL 'C'	225	3	80			10284	11291			92	3	225	EXISTING PANEL 'DE'	16
17									9288	11291					18
19					0	0									20
21	EXISTING SPACE	250	3	--			0	0			--	3	250	EXISTING SPACE	22
23									0	0					24
25					13402	12289									26
27	EXISTING PANEL 'D'	300	3	114			13763	10140			104	3	300	EXISTING PANEL 'A'	28
29									13835	15195					30

Total Load: 65 kVA 65 kVA 67 kVA
Total Amps: 538 A 538 A 562 A

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Cooling	6324 VA	100.00%	6324 VA		
Heating	4500 VA	100.00%	4500 VA	**Total Conn. Load:**	196 kVA
Lighting	15963 VA	125.00%	19954 VA	**Total Connt. Amps**	545 A
Motor	38912 VA	100.00%	38912 VA	**Total Demand Load:**	140 kVA
Receptacle	130740 VA	53.82%	70370 VA	**Total Demand Amps:**	389 A

Schedule Notes:

Branch Panel: A

Mounting: SURFACE **Volts:** 120/208 Wye **A.I.C. Rating:** 42,000 AIC
Supply From: MP **Phases:** 3 **Mains Type:** MLO
Enclosure: NEMA 1 **Wires:** 4 **Mains Rating:** 300 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1	Receptacle	20	1	3	360	218					2	1	20	Lighting	2
3	Receptacle	20	1	3			360	360			3	1	20	Receptacle	4
5	Receptacle	20	1	5					540	720	6	1	20	Receptacle	6
7	Receptacle	20	1	8	900	1440					12	1	20	Coffee Grinder	8
9	Lighting	20	1	12			1424	1123			9	1	20	Lighting	10
11	Receptacle	20	1	8					900	1400	12	1	20	Hot Water Tower	12
13	Blender	20	1	15	1800	540					5	1	20	Receptacle	14
15	Lighting	20	1	4			489	1600			15	2	20	Espresso Machine	16
17	Coffee Brewer	30	2	21					2150	1600					18
19					2150	1000					8	1	20	Reach-In Case	20
21	Receptacle	20	1	5			540	1000			8	1	20	Refrigerator	22
23	Receptacle	20	1	5					540	1000	8	1	20	Refrigerator	24
25	Ice Machine	20	1	8	1000	798									26
27	Overhead Security Grille	20	1	8			1000	798			7	3	15	AHU-8	28
29	Reach-In Case	20	1	8					1000	798					30
31					798	886					7	1	20	Lighting	32
33	AHU-9	15	3	7			798	649			5	1	20	Lighting	34
35									798	3750	31	1	40	Lighting Inverter 'INV'	36
37	Door Hardware	20	1	3	400	0					--	1	20	SPARE	38
39	SPARE	20	1	--			0	0			--	1	20	SPARE	40
41	SPARE	20	1	--					0	0	--	1	20	SPARE	42
43	SPARE	20	1	--	0	0					--	1	20	SPARE	44
45	SPARE	20	1	--			0	0			--	1	20	SPARE	46
47	SPARE	20	1	--					0	0	--	1	20	SPARE	48
49	SPARE	20	1	--	0	0					--	1	20	SPARE	50
51	SPARE	20	1	--			0	0			--	1	20	SPARE	52
53	SPARE	20	1	--					0	0	--	1	20	SPARE	54
55	SPARE	20	1	--	0	0					--	1	20	SPARE	56
57	SPARE	20	1	--			0	0			--	1	20	SPARE	58
59	SPARE	20	1	--					0	0	--	1	20	SPARE	60
61	SPARE	20	1	--	0	0					--	1	20	SPARE	62
63	SPARE	20	1	--			0	0			--	1	20	SPARE	64
65	SPARE	20	1	--					0	0	--	1	20	SPARE	66
67	SPARE	20	1	--	0	0					--	1	20	SPARE	68
69	SPARE	20	1	--			0	0			--	1	20	SPARE	70
71	SPARE	20	1	--					0	0	--	1	20	SPARE	72
73	SPARE	20	1	--	0	0					--	1	20	SPARE	74
75	SPARE	20	1	--			0	0			--	1	20	SPARE	76
77	SPARE	20	1	--					0	0	--	1	20	SPARE	78
79	SPARE	20	1	--	0	0					--	1	20	SPARE	80
81	SPARE	20	1	--			0	0			--	1	20	SPARE	82
83	SPARE	20	1	--					0	0	--	1	20	SPARE	84

Total Load: 12 kVA 10 kVA 15 kVA
Total Amps: 105 A 84 A 129 A

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Lighting	8538 VA	125.00%	10673 VA		
Motor	5786 VA	100.00%	5786 VA	**Total Conn. Load:**	38 kVA
Receptacle	23300 VA	71.46%	16650 VA	**Total Connt. Amps**	104 A
				Total Demand Load:	33 kVA
				Total Demand Amps:	92 A

Schedule Notes:

Branch Panel: B

Mounting: SURFACE **Volts:** 120/208 Wye **A.I.C. Rating:** 42,000 AIC
Supply From: MP **Phases:** 3 **Mains Type:** MLO
Enclosure: NEMA 1 **Wires:** 4 **Mains Rating:** 200 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1	Receptacle	20	1	5	540	900					8	1	20	Receptacle	2
3	Receptacle	20	1	6			720	540			5	1	20	Receptacle	4
5	Receptacle	20	1	4					500	720	6	1	20	Receptacle	6
7	Receptacle	20	1	5	540	720					6	1	20	Projector Screen / Switch	8
9	Receptacle	20	1	6			720	900			8	1	20	Receptacle	10
11	Projector Screen / Switch	20	1	6					720	900	8	1	20	Receptacle	12
13	Receptacle	20	1	6	720	1000					8	1	20	Refrigerator	14
15	Receptacle, EF-7	20	1	9			1036	500			4	1	20	Receptacle	16
17	Receptacle	20	1	6					720	500	4	1	20	Receptacle	18
19	Receptacle	20	1	4	500	1581					15	2	30	ACCU-1	20
21	Microwave	20	1	13			1500	1581							22
23	Receptacle	20	1	8					900	1581	15	2	30	ACCU-2	24
25	Receptacle	20	1	11	1260	1581									26
27	Receptacle	20	1	9			1080	360			3	1	20	Receptacle	28
29	Receptacle	20	1	8					900	1000	8	1	20	Receptacle	30
31	Receptacle	20	1	3	360	0					--	1	20	SPARE	32
33	Future Ceiling Fans	20	1	3			360	0			--	1	20	SPARE	34
35	Receptacle	20	1	3					360	0	--	1	20	SPARE	36
37	SPARE	20	1	--	0	0					--	1	20	SPARE	38
39	SPARE	20	1	--			0	0			--	1	20	SPARE	40
41	SPARE	20	1	--					0	0	--	1	20	SPARE	42

Total Load: 10 kVA 9 kVA 9 kVA
Total Amps: 81 A 78 A 73 A

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Cooling	6324 VA	100.00%	6324 VA		
Motor	396 VA	100.00%	396 VA	**Total Conn. Load:**	28 kVA
Receptacle	21080 VA	73.72%	15540 VA	**Total Connt. Amps**	77 A
				Total Demand Load:	22 kVA
				Total Demand Amps:	62 A

Schedule Notes:

Branch Panel: C

Mounting: SURFACE **Volts:** 120/208 Wye **A.I.C. Rating:** 22,000 AIC
Supply From: MP **Phases:** 3 **Mains Type:** MCB
Enclosure: NEMA 1 **Wires:** 4 **Mains Rating:** 225 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1	Receptacle	20	1	8	900	791					7	1	20	Receptacle, EF-6	2
3	Receptacle	20	1	8			900	1000			8	1	20	Receptacle	4
5	Receptacle	20	1	8					900	680	6	1	20	Receptacle	6
7	Refrigerator	20	1	8	1000	1000					8	1	20	Receptacle	8
9	Receptacle	20	1	8			1000	1500			13	1	20	Microwave	10
11	Receptacle	20	1	6					680	900	8	1	20	Receptacle	12
13	Receptacle	20	1	8	900	1500					13	1	20	Microwave	14
15	Receptacle	20	1	8			900	500			4	1	20	Receptacle	16
17	Receptacle	20	1	11					1260	680	6	1	20	Receptacle	18
19	Receptacle	20	1	6	680	500					4	1	20	Receptacle	20
21	Ice Machine	20	1	8			1000	680			6	1	20	Receptacle	22
23	Refrigerator	20	1	8					1000	751	6	1	20	Receptacle, EF-5	24
25	Receptacle	20	1	10	1200	360					3	1	20	Receptacle	26
27	Lighting	20	1	8			904	360			3	1	20	Receptacle	28
29	Lighting	20	1	10					1177	540	5	1	20	Future Ceiling Fans	30
31	SPARE	20	1	--	0	540					5	1	20	Future Ceiling Fans	32
33	Ice Machine	20	1	8			1000	0			--	1	20	SPARE	34
35	Receptacle	20	1	2					180	0	--	1	20	SPARE	36
37	SPARE	20	1	--	0	0					--	1	20	SPARE	38
39	SPARE	20	1	--			0	540			5	1	20	Receptacle	40
41	SPARE	20	1	--					0	540	5	1	20	Receptacle	42

Total Load: 9 kVA 10 kVA 9 kVA
Total Amps: 78 A 86 A 77 A

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Lighting	2081 VA	125.00%	2601 VA		
Motor	1222 VA	100.00%	1222 VA	**Total Conn. Load:**	29 kVA
Receptacle	25640 VA	69.50%	17820 VA	**Total Connt. Amps**	80 A
				Total Demand Load:	22 kVA
				Total Demand Amps:	60 A

Schedule Notes:

Branch Panel: D

Mounting: SURFACE **Volts:** 120/208 Wye **A.I.C. Rating:** 22,000 AIC
Supply From: MP **Phases:** 3 **Mains Type:** MCB
Enclosure: NEMA 1 **Wires:** 4 **Mains Rating:** 300 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1	Receptacle, EF-4	20	1	2	251	900					8	1	20	Receptacle	2
3	Future Ceiling Fans	20	1	5			540	723			6	1	20	Lighting	4
5	Lighting	20	1	5					555	1000	8	1	20	Ice Machine	6
7	Receptacle, EF-3	20	1	9	1071	1500					13	1	20	Microwave	8
9	Ice Machine	20	1	8			1000	1320			11	1	20	Lighting	10
11	Receptacle	20	1	9					1020	1080	9	1	20	Receptacle	12
13	EWC	20	1	4	500	540					5	1	20	Receptacle	14
15	Receptacle	20	1	4			500	540			5	1	20	Receptacle	16
17	Receptacle	20	1	4					500	540	5	1	20	Receptacle	18
19	Future Ceiling Fans	20	1	5	540	680					6	1	20	Receptacle	20
21	Receptacle	20	1	5			540	680			6	1	20	Receptacle	22
23	Receptacle	20	1	5					540	680	6	1	20	Receptacle	24
25	Projector Screen / Switch	20	1	6	720	900					8	1	20	Receptacle	26
27	Receptacle	20	1	6			720	1080			9	1	20	Receptacle	28
29	Receptacle	20	1	6					720	900	8	1	20	Receptacle	30
31	Receptacle	20	1	8	900	1000					8	1	20	Receptacle	32
33	Receptacle	20	1	8			900	1000			8	1	20	Refrigerator	34
35	Receptacle	20	1	9					1080	1000	8	1	20	Refrigerator	36
37	Receptacle	20	1	8	1000	1000					8	1	20	Ice Machine	38
39	Receptacle	20	1	8			1000	1000			8	1	20	Receptacle	40
41	Receptacle	20	1	8					1000	1000	8	1	20	Receptacle	42
43	Microwave	20	1	13	1500	400					3	1	20	Door Hardware	44
45	Microwave	20	1	13			1500	720			6	1	20	Receptacle	46
47	Microwave	20	1	13					1500	720	6	1	20	Receptacle	48
49	SPARE	20	1	--	0	0					--	1	20	SPARE	50
51	SPARE	20	1	--			0	0			--	1	20	SPARE	52
53	SPARE	20	1	--					0	0	--	1	20	SPARE	54
55	SPARE	20	1	--	0	0					--	1	20	SPARE	56
57	SPARE	20	1	--			0	0			--	1	20	SPARE	58
59	SPARE	20	1	--					0	0	--	1	20	SPARE	60
61	SPARE	20	1	--	0	0					--	1	20	SPARE	62
63	SPARE	20	1	--			0	0			--	1	20	SPARE	64
65	SPARE	20	1	--					0	0	--	1	20	SPARE	66
67	SPARE	20	1	--	0	0					--	1	20	SPARE	68
69	SPARE	20	1	--			0	0			--	1	20	SPARE	70
71	SPARE	20	1	--					0	0	--	1	20	SPARE	72
73	SPARE	20	1	--	0	0					--	1	20	SPARE	74
75	SPARE	20	1	--			0	0			--	1	20	SPARE	76
77	SPARE	20	1	--					0	0	--	1	20	SPARE	78
79	SPARE	20	1	--	0	0					--	1	20	SPARE	80
81	SPARE	20	1	--			0	0			--	1	20	SPARE	82
83	SPARE	20	1	--					0	0	--	1	20	SPARE	84

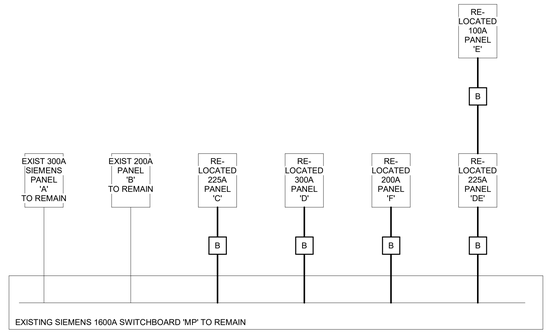
Total Load: 13 kVA 14 kVA 14 kVA
Total Amps: 112 A 115 A 116 A

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Lighting	2598 VA	125.00%	3248 VA		
Motor	1222 VA	100.00%	1222 VA	**Total Conn. Load:**	41 kVA
Receptacle	37180 VA	63.45%	23590 VA	**Total Connt. Amps**	114 A
				Total Demand Load:	28 kVA
				Total Demand Amps:	78 A

Schedule Notes:

SINGLE LINE DIAGRAM NOTES

1. PER NEC 210.8(B), GFCI PROTECTION SHALL BE PROVIDED FOR ALL 20A TO 50A SINGLE PHASE RECEPTACLES RATED UP TO 150V TO GROUND AND 20A TO 100A THREE PHASE RECEPTACLES RATED UP TO 150V TO GROUND LOCATED IN INDOOR WET LOCATIONS, BATHROOMS, KITCHENS, AND WHERE WITHIN 6 FT OF ANY SINK, OR LOCATED OUTDOORS, ON ROOFTOPS, OR IN VEHICLE GARAGES AND SERVICE BAYS.
2. INSTALL WALL-MOUNTED GROUND BAR ON INSULATED STANDOFFS LOCATED IN EACH IT ROOM. VERIFY EXACT LOCATION WITH IT PERSONNEL. GROUNDING CONDUCTOR SHALL BE CONTINUOUS AND UN-CUT ACROSS GROUND BAR, OR CONNECTIONS SHALL BE MADE BY EXOTHERMIC WELD.



1 SINGLE LINE DIAGRAM

SCALE: N.T.S.

FEEDER & BREAKER SCHEDULE

3-PHASE 4-WIRE COPPER

CIRCUIT AMPACITY	CIRCUIT BREAKER	CONDUCTOR SETS, QTY & SIZE		EQUIP. GROUND	CONDUIT
NEC TABLE 310.15(B)(16)	NEC 240.4(B)	NEC TABLE 310.15(B)(16)		NEC TABLE 250.122	
20 A	20 A, 3P	1 SET OF 4	#12	#12 G	3/4"
30 A	25 A, 3P	1 SET OF 4	#10	#10 G	3/4"
30 A	30 A, 3P	1 SET OF 4	#10	#10 G	3/4"
40 A	35 A or 40 A, 3P	1 SET OF 4	#8	#10 G	1"
55 A	45 A or 50 A, 3P	1 SET OF 4	#6	#10 G	1"
70 A	60 A, 3P	1 SET OF 4	#4	#10 G	1-1/4"
70 A	70 A, 3P	1 SET OF 4	#4	#8 G	1-1/4"
85 A	80 A or 90 A, 3P	1 SET OF 4	#3	#8 G	1-1/4"
95 A	100 A, 3P	1 SET OF 4	#2	#8 G	1-1/2"
110 A	110 A, 3P	1 SET OF 4	#1	#6 G	2"
130 A	125 A, 3P	1 SET OF 4	#1	#6 G	2"
150 A	150 A, 3P	1 SET OF 4	#1/0	#6 G	2"
175 A	175 A, 3P	1 SET OF 4	#2/0	#6 G	2"
200 A	200 A, 3P	1 SET OF 4	#3/0	#6 G	2"
230 A	225 A, 3P	1 SET OF 4	#4/0	#4 G	2-1/2"
255 A	250 A, 3P	1 SET OF 4	#250	#4 G	3"
310 A	300 A, 3P	1 SET OF 4	#350	#4 G	3"
380 A	350 A, 3P	1 SET OF 4	#500	#3 G	4"
400 A	400 A, 3P	2 SETS OF 4	#3/0	#3 G	2"
460 A	450 A, 3P	2 SETS OF 4	#4/0	#2 G	2-1/2"
510 A	500 A, 3P	2 SETS OF 4	#250	#2 G	2-1/2"
670 A	600 A, 3P	2 SETS OF 4	#400	#1 G	3"
760 A	700 A, 3P	2 SETS OF 4	#500	#1/0 G	3"
855 A	800 A, 3P	3 SETS OF 4	#300	#1/0 G	2-1/2"
1,005 A	1,000 A, 3P	2 SETS OF 4	#400	#2/0 G	3"
1,240 A	1,200 A, 3P	4 SETS OF 4	#350	#3/0 G	3"
1,675 A	1,600 A, 3P	5 SETS OF 4	#400	#4/0 G	3"
2,010 A	2,000 A, 3P	6 SETS OF 4	#400	#250 G	3"
2,660 A	2,500 A, 3P	7 SETS OF 4	#500	#350 G	3"
3,040 A	3,000 A, 3P	8 SETS OF 4	#500	#400 G	3"
4,180 A	4,000 A, 3P	11 SETS OF 4	#500	#500 G	3"

NEC 250.66 GROUNDING ELECTRODE CONDUCTOR

GEC FOR SERVICES, BUILDING FEEDERS AND SEPARATELY DERIVED SYSTEMS & SERVICES

LARGEST CONDUCTOR OR EQUIVALENT AREA OF PARALLEL CONDUCTORS (COPPER)	GEC (CU)
14 - 2	#8 G
1 - 1/0	#6 G
2/0 - 3/0	#4 G
300+ - 350	#2 G
351 - 600	#1/0 G
601 - 1100	#2/0 G
1100+	#3/0 G

FEEDER & BREAKER SCHEDULE NOTES:

1. WHERE [B] SYMBOL IS SHOWN, PROVIDE FEEDER ACCORDING TO THE "CIRCUIT BREAKER" COLUMN SHOWN ABOVE. FEEDER TO BE 4-WIRE PLUS GROUND UNLESS NOTED OTHERWISE.
2. USE **TABLE 250.122** TO DETERMINE SIZE OF EQUIPMENT GROUNDING CONDUCTOR (EGC) FOR BRANCH CIRCUITS, RACEWAY, CONDUIT, MOTOR CIRCUITS, AND WHERE PARALLEL FEEDERS ARE RUN. USE TOTAL EQUIVALENT AREA OF PARALLELED CONDUCTORS FOR SIZING PARALLEL GECs.
3. USE COMPRESSION LUGS FOR FEEDERS OVER 100A.
4. USE **TABLE 250.66** TO DETERMINE THE GROUNDING ELECTRODE CONDUCTOR (GEC) SIZE AT THE SERVICE ENTRANCE, AT EACH BUILDING OR STRUCTURE WHERE SUPPLIED BY A FEEDER(S), AT TRANSFORMERS, OR AT ANY OTHER SEPARATELY DERIVED SYSTEM.
5. WHERE [S] SYMBOL IS SHOWN, PROVIDE SERVICE FEEDER WITH AMPACITY EQUAL TO OR GREATER THAN THAT OF THE SERVICE DISCONNECT, WITH NO EQUIPMENT GROUND CONDUCTOR.
6. WHERE [2HR] SYMBOL IS SHOWN, NORMAL AND EMERGENCY FEEDERS SERVING FIRE PUMP AND FIRE SERVICE ELEVATOR SHALL BE ENCASED IN CONCRETE PROVIDING 2-HOUR FIRE RATING. A 2- HOUR RATING SHALL BE MAINTAINED FROM THE ROOM CONTAINING THE FEEDER'S SOURCE BREAKER OR DISCONNECT TO THE ROOM CONTAINING THE ATS. THE ELEVATOR FEEDER IS NOT REQUIRED TO BE ENCASED IN CONCRETE INSIDE THE ELEVATOR HOISTWAY OR PENTHOUSE.

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APPR | DESCRIPTION | DATE | REV

DANIEL BUILDING RENOVATION
J.S. BRIDWELL ACTIVITIES CENTER &
CANNEDY GREEK COMMONS

MSU TEXAS
MIDWESTERN STATE UNIVERSITY

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Member American Institute of Architects

DRAWN BY: BKH
CHECKED BY: JSR
DATE: 09/24/2020
PROJECT NO.: 18071

ELECTRICAL SINGLE LINE DIAGRAM AND PANELBOARD SCHEDULES

E401

Branch Panel: DE

Mounting: SURFACE
Supply From: MP
Enclosure: NEMA 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 22,000 AIC
Mains Type: MLO
Mains Rating: 225 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1	AHU-7	15	1	6	732	732					6	1	15	AHU-10	2
3	WH1	30	2	22			2250	360							4
5									2250	360	3	3	100	EXISTING PANEL 'E'	6
7					798	360									8
9	AHU-3	15	3	7			798	798							10
11									798	798	7	3	15	AHU-4	12
13					798	798									14
15	AHU-5	15	3	7			798	798							16
17									798	798	7	3	15	AHU-6	18
19					1273	798									20
21	HWP-1	25	3	11			1273	1681							22
23									1273	1681	14	3	30	AHU-2	24
25					2536	1681									26
27	AHU-1	45	3	21			2536	0			--	1	20	SPARE	28
29									2536	0	--	1	20	SPARE	30
31	SPARE	20	1	--	0	0					--	1	20	SPARE	32
33	SPARE	20	1	--			0	0			--	1	20	SPARE	34
35	SPARE	20	1	--					0	0	--	1	20	SPARE	36
37	SPARE	20	1	--	0	0					--	1	20	SPARE	38
39	SPARE	20	1	--			0	0			--	1	20	SPARE	40
41	SPARE	20	1	--					0	0	--	1	20	SPARE	42
43	SPARE	20	1	--	0	0					--	1	20	SPARE	44
45	SPARE	20	1	--			0	0			--	1	20	SPARE	46
47	SPARE	20	1	--					0	0	--	1	20	SPARE	48
49	SPARE	20	1	--	0	0					--	1	20	SPARE	50
51	SPARE	20	1	--			0	0			--	1	20	SPARE	52
53	SPARE	20	1	--					0	0	--	1	20	SPARE	54
	Total Load:				11 kVA		11 kVA		11 kVA						
	Total Amps:				88 A		95 A		95 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Heating	4500 VA	100.00%	4500 VA		
Motor	27508 VA	100.00%	27508 VA	**Total Conn. Load:**	33 kVA
Receptacle	1080 VA	100.00%	1080 VA	**Total Connt. Amps**	92 A
				Total Demand Load:	33 kVA
				Total Demand Amps:	92 A

Schedule Notes:

Branch Panel: E

Mounting: SURFACE
Supply From: DE
Enclosure: NEMA 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 22,000 AIC
Mains Type: MLO
Mains Rating: 100 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1	Receptacle	20	1	3	360	0					--	1	20	SPARE	2
3	Receptacle	20	1	3			360	0			--	1	20	SPARE	4
5	Receptacle	20	1	3					360	0	--	1	20	SPARE	6
7	SPARE	20	1	--	0	0					--	1	20	SPARE	8
9	SPARE	20	1	--			0	0			--	1	20	SPARE	10
11	SPARE	20	1	--					0	0	--	1	20	SPARE	12
13	SPARE	20	1	--	0	0					--	1	20	SPARE	14
15	SPARE	20	1	--			0	0			--	1	20	SPARE	16
17	SPARE	20	1	--					0	0	--	1	20	SPARE	18
19	SPARE	20	1	--	0	0					--	1	20	SPARE	20
21	SPARE	20	1	--			0	0			--	1	20	SPARE	22
23	SPARE	20	1	--					0	0	--	1	20	SPARE	24
25	SPARE	20	1	--	0	0					--	1	20	SPARE	26
27	SPARE	20	1	--			0	0			--	1	20	SPARE	28
29	SPARE	20	1	--					0	0	--	1	20	SPARE	30
	Total Load:				0 kVA		0 kVA		0 kVA						
	Total Amps:				3 A		3 A		3 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Receptacle	1080 VA	100.00%	1080 VA		
				Total Conn. Load:	1 kVA
				Total Connt. Amps	3 A
				Total Demand Load:	1 kVA
				Total Demand Amps:	3 A

Schedule Notes:
1. CONFIRM KAIC RATING WITH EXISTING PANELBOARD.

Branch Panel: F

Mounting: SURFACE
Supply From: MP
Enclosure: NEMA 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 22,000 AIC
Mains Type: MLO
Mains Rating: 200 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1	Elevator Lighting	20	1	1	102	360					3	1	20	Future Ceiling Fans	2
3	Receptacle	20	1	2			180	540			5	1	20	Receptacle	4
5	Receptacle	20	1	2					180	500	4	1	20	EWC	6
7	Lighting	20	1	5	653	1000					8	1	20	Copier	8
9	Receptacle, EF-1, EF-2	20	1	10			1218	1192			10	1	20	Lighting	10
11	Receptacle	20	1	6					680	900	8	1	20	Receptacle	12
13	Sump Pump	20	1	10	1200	500					4	1	20	Receptacle	14
15	Receptacle	20	1	4			500	540			5	1	20	Receptacle	16
17	Lighting	20	1	7					800	500	4	1	20	Receptacle	18
19	Receptacle	20	1	5	540	720					6	1	20	Future Ceiling Fans	20
21	Receptacle	20	1	6			720	1000			8	1	20	Refrigerator	22
23	Receptacle	20	1	5					540	720	6	1	20	Receptacle	24
25	Refrigerator	20	1	8	1000	1000					8	1	20	Receptacle	26
27	Receptacle	20	1	8			1000	1080			9	1	20	Receptacle	28
29	Refrigerator	20	1	8					1000	1000	8	1	20	Refrigerator	30
31	Receptacle	20	1	9	1080	1080					9	1	20	Receptacle	32
33	Receptacle	20	1	9			1080	720			6	1	20	Receptacle	34
35	Receptacle	20	1	9					1080	1080	9	1	20	Receptacle	36
37	SPARE	20	1	--	0	0					--	1	20	SPARE	38
39	SPARE	20	1	--			0	0			--	1	20	SPARE	40
41	SPARE	20	1	--					0	0	--	1	20	SPARE	42
	Total Load:				9 kVA		10 kVA		9 kVA						
	Total Amps:				77 A		82 A		75 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Lighting	2746 VA	125.00%	3433 VA		
Motor	2778 VA	100.00%	2778 VA	**Total Conn. Load:**	28 kVA
Receptacle	22460 VA	72.26%	16230 VA	**Total Connt. Amps**	78 A
				Total Demand Load:	22 kVA
				Total Demand Amps:	62 A

Schedule Notes:
1. CONFIRM KAIC RATING WITH EXISTING PANELBOARD.

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ELECTRICAL PANELBOARD SCHEDULES

E402

STATE OF TEXAS
08/24/2020
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