ELECTRICAL LEGEND

- 'B' — A–1 ADJACENT TO ARROW INDICATES HOMERUN OF CIRCUIT NO. 1 TO PANEL A; "B" INDICATES FIXTURE TYPE; MARKS ACROSS RACEWAY RUN INDICATES THE NUMBER OF NO. 12 CONDUCTORS; UNLESS NOTED OTHERWISE NO MARKS INDICATES TWO NO. 12 CONDUCTORS AND ONE NO. 12 GREEN GROUND CONDUCTOR IN 1/2" CONDUIT (2#12 & 1#12 GND–1/2"C)
- CEILING FIXTURE
- WALL BRACKET FIXTURE
- POLE MOUNTED FIXTURE
- 2' X 4' FIXTURE; CEILING MOUNTED
- TWIN HEAD EMERGENCY BATTERY UNIT
- TWIN HEAD EMERGENCY BATTERY UNIT; CEILING MOUNTED
- EXIT SIGN; CEILING MOUNTED; ARROWS AS NOTED; SHADED SECTION INDICATES LIGHTED FACE OF EXIT SIGN
- EXIT SIGN; BACK MOUNTED; ARROWS AS NOTED; SHADED SECTION INDICATES LIGHTED FACE OF EXIT SIGN
- JUNCTION BOX; MOUNTED ABOVE CEILING
- JUNCTION BOX; MOUNTED FLUSH IN WALL WITH BLANK COVER
- DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBBELL SERIES HBL5352
- CEILING MOUNTED DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT FLUSH IN CEILING UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES HBL5352
- QUAD RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES HBL5352
- QUAD RECEPTACLE; 125V; 20A; 3 POLE GND; GFI; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA GF–5–20R; HUBBELL SERIES GF5362
- DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; GFI; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA GF–5–20R; HUBBELL SERIES GF5362
- WP — LETTERS "WP" ADJACENT TO SYMBOL INDICATES GFI WEATHER RESISTANT RECEPTACLE; HUBBELL HBLGFBFHP20 SERIES WITH WEATHERPROOF COVER; PASS AND SEYMOUR WIUFC10S COVER/BOX.
- DUPLEX RECEPTACLE FOR TELEVISION WITH TVSS PROTECTION, LED AND ALARM; 125V; 20A; 2 POLE; 3 WIRE; GND; SEE TELECOM PLANS FOR MOUNTING DETAILS. NEMA 5–20R; HUBBELL SERIES HBL5362SA
- LETTERS +XX" ADJACENT TO SYMBOL INDICATES RECEPTACLE MOUNTING HEIGHT.
  - +AC" = ABOVE COUNTER.
  - +DF" = VERIFY HEIGHT FOR DRINKING FOUNTAIN WITH MECHANICAL CONTRACTOR
  - +SB" = SMARTBOARD/INTERACTIVE FLAT PANEL TV RECEPTACLE, VERIFY MOUNTING REQUIREMENTS WITH TELECOM PLANS.
  - +TS" = TEACHER STATION RECEPTACLE, VERIFY MOUNTING REQUIREMENTS WITH TELECOM PLANS.
- X — SPECIAL TYPE RECEPTACLE 'X' DENOTES NEMA TYPE; VERIFY MOUNTING REQUIREMENTS WITH EQUIPMENT CONTRACTOR.
  - A = 120V, 30A, 2P, 3W, NEMA L5–30R; HUBBELL SERIES HBL2610.
  - B = 250V, 30A, 3P, 4W, NEMA 14–30R; HUBBELL SERIES HBL9430.
  - C = 250V, 50A, 3P, 4W, NEMA 14–50R; HUBBELL SERIES HBL9450.
  - D = 250V, 30A, 2P, 3W, NEMA 6–30R; HUBBELL SERIES HBL9330
- SPECIAL TYPE RECEPTACLE 'X' DENOTES NEMA TYPE; CEILING MOUNTED; VERIFY EXACT LOCATION & REQUIREMENTS WITH EQUIPMENT CONTRACTOR.
  - A = 120V, 30A, 2P, 3W, NEMA L5–30R; HUBBELL SERIES HBL2610.
  - B = 250V, 30A, 3P, 4W, NEMA 14–30R; HUBBELL SERIES HBL9430.
  - C = 250V, 50A, 3P, 4W, NEMA 14–50R; HUBBELL SERIES HBL9450.
- S — WALL SWITCH; 120/277V; 20A; 1 POLE; A.C. ONLY; MT 48" AFF TO C/L; HUBBELL SERIES HBL1221
- S3 — WALL SWITCH; 120/277V; 20A; 3 WAY; A.C. ONLY; MT 48" AFF TO C/L; HUBBELL SERIES HBL1223
- S4 — WALL SWITCH; 120/277V; 20A; 4 WAY; A.C. ONLY; MT 48" AFF TO C/L; HUBBELL SERIES HBL1224
- S — WALL SWITCH; 120/277V; 20A; VACANCY SENSOR DUAL TECHNOLOGY MULTI–WAY TYPE; MT 48" AFF TO C/L; REFER TO SPECS; WATTSTOPPER #DW–100–W.
- SWP — WALL SWITCH; 120/277V; 20A; 1 POLE; A.C. ONLY; MT 48" AFF TO C/L; HUBBELL SERIES HBL1221; IN WEATHER PROOF ENCLOSURE
- S,#,# — LOW VOLTAGE WALL SWITCH; CONNECT TO NETWORKED ROOM CONTROLLER OR LIGHTING CONTROL PANEL; MT 48" AFF TO C/L; REFER TO SPECS; SEE LIGHTING CONTROL DETAILS. NUMBER "#" INDICATES BUTTON COUNT; REFER TO LOW VOLTAGE SWITCH MATRIX FOR SPECIFIC INFORMATION.
- MOTOR CONTROL SWITCH; 600V; 30A; 2 POLE; A.C. ONLY; NEAR OR ON EQUIPMENT BEING SERVED; HUBBELL SERIES 30102D.
- WP — NEMA 3R MOTOR CONTROL SWITCH; 600V; 30A; 2 POLE; A.C. ONLY; NEAR OR ON EQUIPMENT BEING SERVED; HUBBELL SERIES 30322D.
- RACEWAY 'EYS' TYPE SEAL FITTING
- RED MUSHROOM PUSH–BUTTON WITH KEY RELEASE; MT. 60" AFF TO C/L. LABEL 'EMERGENCY STOP', EQUAL TO SQUARE D MODEL XB6AS9345B
- LIGHTING CONTROLS SYSTEM NETWORK BRIDGE; INSTALL CONCEALED ABOVE CEILING; REFER TO LIGHTING CONTROLS DETAILS
- ROOM CONTROLLER; INSTALL CONCEALED ABOVE CEILING SPACE; REFER TO LIGHTING CONTROLS DETAILS
- PARTITION SENSOR POWER PACK; MOUNT ABOVE CEILING; REFER TO LIGHTING CONTROLS DETAILS
- PARTITION SENSOR; MOUNT TO FLANGES ON EACH SIDE OF PARTITION; REFER TO LIGHTING CONTROLS DETAILS
- LOW VOLTAGE OCCUPANCY SENSOR; 360' DUAL–TECHNOLOGY TYPE; CEILING MOUNTED; UNLESS OTHERWISE NOTED; REFER TO LIGHTING CONTROLS DETAILS
- LOW VOLTAGE VACANCY SENSOR; 360' DUAL–TECHNOLOGY TYPE; CEILING MOUNTED; UNLESS OTHERWISE NOTED; REFER TO LIGHTING CONTROLS DETAILS
- LNC — LIGHTING NETWORK CONTROL PANEL; REFER TO LIGHTING CONTROLS DETAILS FOR MORE INFORMATION.
- NRP — LIGHTING CONTROL NETWORK ROUTER ENCLOSURE; REFER TO LIGHTING CONTROLS DETAILS FOR MORE INFORMATION.
- PANEL; 120/208V; MT 72" AFF TO TOP
- DRY TYPE TRANSFORMER; SIZE AND RATING AS NOTED
- MOTOR; FURNISHED BY OTHERS
- EXHAUST FAN; FURNISHED BY OTHERS
- MAGNETIC STARTER; FURNISHED BY OTHERS
- NON–FUSED DISCONNECT SWITCH; AMP SIZE AS NOTED
- FUSED DISCONNECT SWITCH; AMP SIZE AS NOTED; FUSE SIZE PER EQUIPMENT NAMEPLATE DATA
- RACEWAY INSTALLED CONCEALED IN WALLS AND/OR ABOVE CEILING
- RACEWAY INSTALLED CONCEALED IN FLOOR SLAB AND/OR BELOW GRADE
- RACEWAY INSTALLED EXPOSED
- FLEXIBLE CONDUIT CONNECTION
- CONDUIT STUB UP WITH FLEXIBLE CONDUIT CONNECTION TO EQUIPMENT
- FIRE ALARM SYSTEM MANUAL PULL STATION; MT 48" AFF TO C/L
- 110 — FIRE ALARM SYSTEM STROBE; MT 80" AFF TO BOTTOM, '110' INDICATES CANDELA RATING, NO NUMBER INDICATES 75 CANDELA MINIMUM
- FIRE ALARM SYSTEM AUTOMATIC HEAT DETECTOR; 135 DEGREE/RATE OF RISE TYPE; CEILING MOUNTED
- FIRE ALARM SYSTEM CARBON MONOXIDE DETECTOR; CEILING MOUNTED
- FIRE ALARM SYSTEM AUTOMATIC SMOKE DETECTOR; CEILING MOUNTED
- FIRE ALARM SYSTEM AUTOMATIC AIR DUCT SMOKE DETECTOR
- NORMALLY CLOSED RELAY IN H.V.A.C CONTROL CIRCUIT TO OPEN UPON ACTUATION OF BUILDING FIRE ALARM SYSTEM TO SHUT DOWN A/C UNIT. CONTACTS RATED 5 AMPS, 120 VOLTS.
- 110 — FIRE ALARM SYSTEM SIGNAL SPEAKER/STROBE; MT 80" AFF TO BOTTOM, '110' INDICATES CANDELA RATING, NO NUMBER INDICATES 75 CANDELA MINIMUM
- WP — FIRE ALARM SYSTEM EXTERIOR WEATHERPROOF SIGNAL SPEAKER/STROBE; MT 80" AFF TO BOTTOM, 75 CANDELA RATING UNLESS NOTED OTHERWISE
- WP — FIRE ALARM SYSTEM EXTERIOR, WEATHERPROOF SIGNAL SPEAKER; MT 90" AFF TO BOTTOM
- FIRE SPRINKLER SYSTEM FLOW/TAMPER SWITCH
- FIRE SPRINKLER SYSTEM FLOW SWITCH
- A/V SYSTEM SPEAKER/AMPLIFIER. REFER TO TELECOM PLANS FOR CONNECTION AND LOCATION REQUIREMENTS. 120V.
- PHOTOCELL; REFER TO LIGHTING CONTROL DIAGRAM

SPECIAL DEMOLITION NOTE

THE LOCATIONS OF ALL ELECTRICAL EQUIPMENT INDICATED (FIXTURES & DEVICES) MAY VARY FROM DRAWING. EXISTING CONDITIONS AND DEMOLITION WORK WAS DETERMINED BY SITE OBSERVATION AND REVIEW OF EXISTING DOCUMENTS WITHOUT THE BENEFIT OF DESTRUCTIVE INVESTIGATION. VERIFY ACTUAL LOCATIONS, TYPES, AND QUANTITIES OF EQUIPMENT AND APPLY DEMOLITION NOTES AS APPROPRIATE FOR THE EQUIPMENT AND ROOM OR AREA.

TOXIC MATERIAL DEMOLITION NOTE

IF THE CONTRACTOR SUSPECTS TOXIC MATERIALS SUCH AS ASBESTOS AND/OR LEAD–BASED PAINT WILL BE AFFECTED AS PART OF THIS PROJECT THESE SHALL BE IDENTIFIED BEFORE CONSTRUCTION START. IF FEASIBLE, OTHERS WILL TEST FOR AND REMOVE THESE MATERIALS PRIOR TO CONSTRUCTION START. IF THESE MATERIALS MUST REMAIN IN PLACE THE CONTRACTOR WILL MINIMIZE THE DISTURBANCE OF SUCH MATERIALS LEAVING THEM ENCAPSULATED. WHERE SUCH MATERIALS CANNOT BE LEFT ENCAPSULATED THE CONTRACTOR SHALL INCLUDE TESTING OF THESE SPECIFIED AREAS AS PART OF THE PROJECT SCOPE. REMOVAL OF THESE MATERIALS IS NOT TO BE INCLUDED IN THE PROJECT SCOPE.

ELECTRICAL DEMOLITION NOTES

1. PLANNED INTERRUPTIONS OF UTILITY SERVICE TO ANY FACILITY OR AREAS WITHIN ANY FACILITY AFFECTED BY THIS CONTRACT, SHALL BE CAREFULLY PLANNED AND COORDINATED WITH THE FACILITY PERSONNEL IN ADVANCE OF THE REQUESTED INTERRUPTION. THE CONTRACTOR SHALL NOT INTERRUPT SERVICES UNTIL SPECIFIED APPROVAL HAS BEEN GRANTED. THE REQUEST SHALL INDICATE SERVICES AND AREAS TO BE AFFECTED, DATE AND TIME OF INTERRUPTION AND DURATION OF OUTAGE. REQUEST FOR INTERRUPTION OF SERVICE WILL NOT BE APPROVED UNTIL ALL EQUIPMENT AND MATERIAL REQUIRED FOR THE COMPLETION OF THAT PARTICULAR PHASE OF WORK ARE ON THE JOB SITE.
2. ALL DEMOLITION WORK REQUIRED SHALL BE PERFORMED WITH CARE SO AS NOT TO INTERRUPT OTHER EXISTING SERVICES (WATER, GAS, ELECTRICAL, SEWER, SPRINKLERS, ETC.). IF ACCIDENTAL UTILITY INTERRUPTION, DAMAGE, ETC., RESULTS FROM WORK PERFORMED BY THE CONTRACTOR, THE AFFECTED UTILITY OR SERVICE SHALL BE RETURNED TO ITS ORIGINAL CONDITION WITHOUT DELAY, BY AND AT THE EXPENSE OF THE CONTRACTOR, USING SKILLED WORKMEN OF THE TRADE INVOLVED.
3. REMOVE ALL OUTLETS, PULL BOXES, JUNCTION BOXES, ETC., AS REQUIRED TO COMPLETELY REMOVE THE ELECTRICAL ITEMS SHOWN FOR DEMOLITION UNLESS NOTED TO REMAIN. DISCONNECT AND REMOVE ALL ELECTRICAL PROVISIONS TO EQUIPMENT BEING REMOVED.
4. REMOVE ALL WIRING, CONDUIT, RACEWAYS, OUTLET BOXES, SUPPORTING APPARATUS ETC., AS REQUIRED.
5. SYMBOLS SHOWN ARE TYPICAL AND LOCATIONS ARE APPROXIMATE AND ARE NOT INTENDED TO LIMIT THE AMOUNT OF DEMOLITION. COORDINATE WITH EXISTING CONDITIONS AND THESE NOTES AND REMOVE ALL APPLICABLE SYSTEMS AND COMPONENTS CONFLICTING WITH FINISHED DESIGN INTENT.
6. EXISTING BRANCH WIRING SHOWN IS DIAGRAMMATICAL ONLY AND IS BASED UPON EXISTING AS–BUILT DRAWINGS AND SURVEYS. COORDINATE WITH ACTUAL EXISTING CONDITIONS FOR NUMBER OF CONDUCTORS PER CONDUIT AND EXACT LOCATIONS OF CONDUIT RUNS AND EQUIPMENT.
7. ALL FEEDERS, SYSTEMS, CONTROL WIRING, MISCELLANEOUS AUXILIARY SYSTEMS, ETC., PASSING THROUGH THE AREA OF WORK SHALL BE MAINTAINED AT ALL TIMES, REMAIN IN SERVICE, CONTINUOUS AND UNINTERRUPTED. ANY DAMAGE, DISRUPTION OR DISCONNECTION SHALL BE IMMEDIATELY REPAIRED, REPLACED AND/OR REROUTED AS REQUIRED TO MAINTAIN CONTINUITY OF SYSTEMS. ANY EXISTING SERVICE OR OPERATING SYSTEM WHICH MUST BE INTERRUPTED SHALL BE SUPPLIED WITH A TEMPORARY SERVICE FOR CONTINUATION OF THE NORMAL OPERATIONS OF THE FACILITY.
8. ANY EQUIPMENT THAT REQUIRES REMOVAL FROM EXISTING LOCATION FOR RE–USE OR TO BE RETURNED TO OWNER SHALL BE INSPECTED AND TESTED TO CONFIRM EQUIPMENT OPERATES AS INTENDED. OWNER SHALL BE NOTIFIED OF ANY EQUIPMENT THAT DOES NOT OPERATE AS INTENDED BEFORE REMOVAL.
9. CONCEALED CONDUIT THAT CANNOT BE REMOVED DUE TO INACCESSIBILITY MAY BE ABANDONED. CONDUCTORS SHALL BE REMOVED AND CONDUIT CUT FLUSH WITH SURFACE.
10. OUTLET BOXES THAT CANNOT BE REMOVED DUE TO FLUSH MOUNTING IN PARTITIONS SHALL BE FILLED WITH GROUT, PATCHED AND FINISHED FLUSH TO MATCH EXISTING WALL CONDITIONS.
11. IN GENERAL, THE WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
    - a. PROVIDE ALL DEMOLITION AS REQUIRED OF EXISTING SYSTEMS REMOVING ALL ITEMS THAT CONFLICT WITH FINISHED DESIGN INTENT AS INDICATED ABOVE.
    - b. MODIFY, REPLACE, REPAIR, REVISE ETC., EXISTING SYSTEMS AND/OR EQUIPMENT.
    - c. EXTEND EXISTING SYSTEMS AS REQUIRED TO FUNCTION AS SPECIFIED AND IN ACCORDANCE WITH SYSTEM REQUIREMENTS.
    - d. NEW SYSTEM COMPONENTS SHALL MATCH EXISTING SYSTEMS PROVISIONS AND BE COMPLETELY COMPATIBLE AND IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. WHEN REQUIRED, APPROVAL FROM A SYSTEM MANUFACTURER SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO INSTALLING ANY NEW EQUIPMENT OR DEVICES TO AN EXISTING SYSTEM.
    - e. ALL EQUIPMENT, DEVICES, OUTLETS, COMPONENTS, ETC., TO BE REUSED SHALL BE CLEANED, REPAIRED AND PLACED IN OPERATING CONDITION. LUMINARIES NOTED TO BE REUSED SHALL BE CLEANED, REPAIRED, PROVIDED WITH NEW LAMPS AND PLACED IN OPERATING CONDITION.
    - f. EXISTING OUTLET BOXES MAY BE USED AS NOTED IF OF THE PROPER CONFIGURATION AND SIZE REQUIRED. MODIFICATIONS SHALL BE MADE WHEN REQUIRED SUCH AS PROVIDING EXTENSION RINGS, LOCKNUTS, BUSHINGS, ETC.
    - g. EXISTING PANELBOARDS SHALL BE UTILIZED TO THE EXTENT SHOWN ON THE DRAWINGS AND MODIFIED AS REQUIRED TO FACILITATE THE NEW REQUIREMENTS AS INDICATED HEREIN OR SHOWN ON THE DRAWINGS. NEW CIRCUIT BREAKERS SHALL BE OF THE SAME MANUFACTURER, FRAME SIZE, SHORT CIRCUIT RATING AND TYPE AS EXISTING. WHERE APPLICABLE, THE CONTRACTOR SHALL BE REQUIRED TO FURNISH AND INSTALL ADDITIONAL MOUNTING HARDWARE AS REQUIRED BY THE MANUFACTURER.
    - h. WHEN EXISTING DEVICES, SWITCHES, EQUIPMENT ETC., ARE NOTED TO BE REMOVED AND THE CIRCUIT(S) SERVING SUCH ITEMS SERVES OTHER ITEMS OR DEVICES WHICH ARE TO BE MAINTAINED, THE CONTRACTOR SHALL REROUTE, EXTEND, MODIFY, ETC., EXISTING CIRCUITS AS REQUIRED TO MAINTAIN COMPLETE AND OPERATING SYSTEMS.

ELECTRICAL GENERAL NOTES

A. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT SIZE AND LOCATION OF EQUIPMENT WHICH IS FURNISHED BY OTHERS AND CONNECTED BY ELECTRICAL.

B. RECEPTACLES, SWITCHES AND COVERPLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS.

C. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGHING–IN WALL FOR SWITCHES.

D. LOCATION OF LIGHTING FIXTURES, DISCONNECT SWITCHES, ETC. FOR MECHANICAL EQUIPMENT/ROOM SHALL BE COORDINATED WITH FINAL MECHANICAL EQUIPMENT LOCATION TO PROVIDE NATIONAL ELECTRIC CODE REQUIRED ACCESS SPACE.

E. FINAL CONNECTION TO ALL MOTORS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION.

F. ALL EXIT AND EMERGENCY FIXTURES SHALL BE CONNECTED TO LIGHT CIRCUIT AHEAD OF LOCAL SWITCH.

G. ALL PANELBOARDS, BACKBOARDS, TERMINAL CABINETS, ETC SHALL HAVE CUSTOM ENGRAVED MICARTA NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM.

H. PROVIDE GREEN GROUND CONDUCTOR IN ALL CIRCUITS – SIZE PER N.E.C.

I. ALL EXPOSED CONDUITS, BOXES, STRAPS AND HANGERS IN THE CONTRACT AREA WHETHER NEW OR EXISTING THAT ARE PART OF THE ELECTRICAL SYSTEM SHALL BE PAINTED TO MATCH ADJACENT FINISH.

J. PROVIDE CONCRETE MARKER AT END OF ALL CONDUITS STUBBED OUT OF BUILDING FOR FUTURE USE. MARKER SHALL BE 6" DIA X 18" HIGH WITH 2" ABOVE FINISHED GRADE. INSCRIBE IN TOP OF MARKER "E" FOR ELECTRICAL,"T" FOR TELEPHONE,"V" FOR TV CABLE,"F" FOR FIRE ALARM, AND "IC" FOR INTERCOM.

K. GENERAL CONTRACTOR SHALL FIELD–VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. FAILURE TO DO SO INDICATES THAT THE CONTRACTOR ACCEPTS THE CONDITIONS AS THEY EXIST, AND SHALL PERFORM THE WORK REQUIRED AS SHOWN AND SPECIFIED.

L. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND REVIEW THE MECHANICAL AND SPECIAL EQUIPMENT SUBMITTALS PRIOR TO SUBMITTING THE ELECTRICAL SUBMITTALS. ANY ELECTRICAL EQUIPMENT, CONDUIT, AND WIRE SIZE CHANGES RESULTING FROM THIS REVIEW SHALL ALSO BE SUBMITTED FOR APPROVAL.

M. FIRE ALARM LOW VOLTAGE SOURCE AND BATTERY STANDBY SHALL ENERGIZE ALL ITEMS IN FIRE ALARM SYSTEM THAT REQUIRE POWER.

N. VERIFY EXACT LOCATION OF ALL FLOOR OUTLETS WITH THE ARCHITECT PRIOR TO ROUGHING–IN.

O. FINAL CONNECTION TO ALL DRY TYPE TRANSFORMERS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION

P. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FAULT CURRENT CALCULATIONS FOR THE SERVICE EQUIPMENT AND SHALL MARK THE EQUIPMENT WITH THE AVAILABLE FAULT CURRENT AND DATE OF THE CALCULATION PER NEC 110.24. REFER TO TYPICAL SERVICE EQUIPMENT FAULT CURRENT LABEL DETAIL.

Q. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ARC FAULT LABELS PER NFPA 70E ARTICLE 110.16 FOR NEW EQUIPMENT. THE OWNER SHALL PROVIDE AVAILABLE CALCULATION DATA FOR THE EXISTING EQUIPMENT IN THE ELECTRICAL SYSTEM. REFER TO TYPICAL ARC FLASH HAZARD LABEL DETAIL.

R. PROVIDE NEUTRAL AT ALL LINE VOLTAGE SWITCH LOCATIONS PER N.E.C. 404.2(C).

S. PROVIDE 'LSI' TRIP UNITS FOR ALL BREAKERS GREATER THAN OR EQUAL TO 200A.

T. PROVIDE BUSHINGS ON ALL CONDUIT.

ABBREVIATIONS

AFF – ABOVE FINISHED FLOOR
C. – CONDUIT
C/L – CENTERLINE
EC – ELECTRICAL CONTRACTOR
EF – EXHAUST FAN
GND – GROUND CONDUCTOR
GFI – GROUND FAULT PROTECTION
LTG – LIGHTING
LTS – LIGHTS
REC – RECEPTACLE
UNO – UNLESS NOTED OTHERWISE
WH – WATER HEATER
WP – WEATHERPROOF
A/C – AIR CONDITIONER
COND – CONDENSING UNIT
IHP – INDOOR HEAT PUMP
OHP – OUTDOOR HEAT PUMP
NL – NIGHT LIGHT

SHEET INDEX

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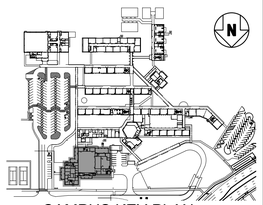
E3.4	BUILDING 4 - HVAC POWER
E4.4	BUILDING 4 - FIRE ALARM
E5.4	BUILDING 4 - LIGHTING
E5.5	KITCHEN EQUIPMENT
E6.1	ELECTRICAL DETAILS
E6.2	ELECTRICAL DETAILS
E6.3	GROUNDING DETAILS
E6.4	LIGHTING CONTROLS DETAILS AND FIXTURE SCHEDULE
E6.5	LIGHTING CONTROLS DETAILS
E6.6	LIGHTING CONTROLS DETAILS
E6.7	LIGHTING CONTROLS DETAILS
E6.8	LIGHTING CONTROLS DETAILS
E7.4	BUILDING 4 - SINGLE LINE POWER RISER
E7.5	FIRE ALARM RISER
E8.4	PANEL SCHEDULES
E8.5	MECHANICAL COORDINATION SCHEDULES



CAMPUS KEY PLAN

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
Commission Number. 21802

SEAL

HG Engineers
142 Eglin Parkway SE
Fort Walton Beach, Florida, 32548

FL Authorization No.00006680
Christopher A. Garick; FL. PE No.53924
Thomas A. Alexander; FL. PE No.73172
Daniel J. White; FL. PE No.73790
Caleb W. Leonard; FL. PE No.91782

www.hgengineers.com
E-mail: office@hgengineers.com
Ph:850.243.6723

CONSULTANTS #2146

REVISIONS

NO.	DATE	DESCRIPTION

DATE 01/06/2025

SUBMITTAL
GMP DOCUMENTS

PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
LEGEND AND NOTES

SHEET NO.:
E0.1

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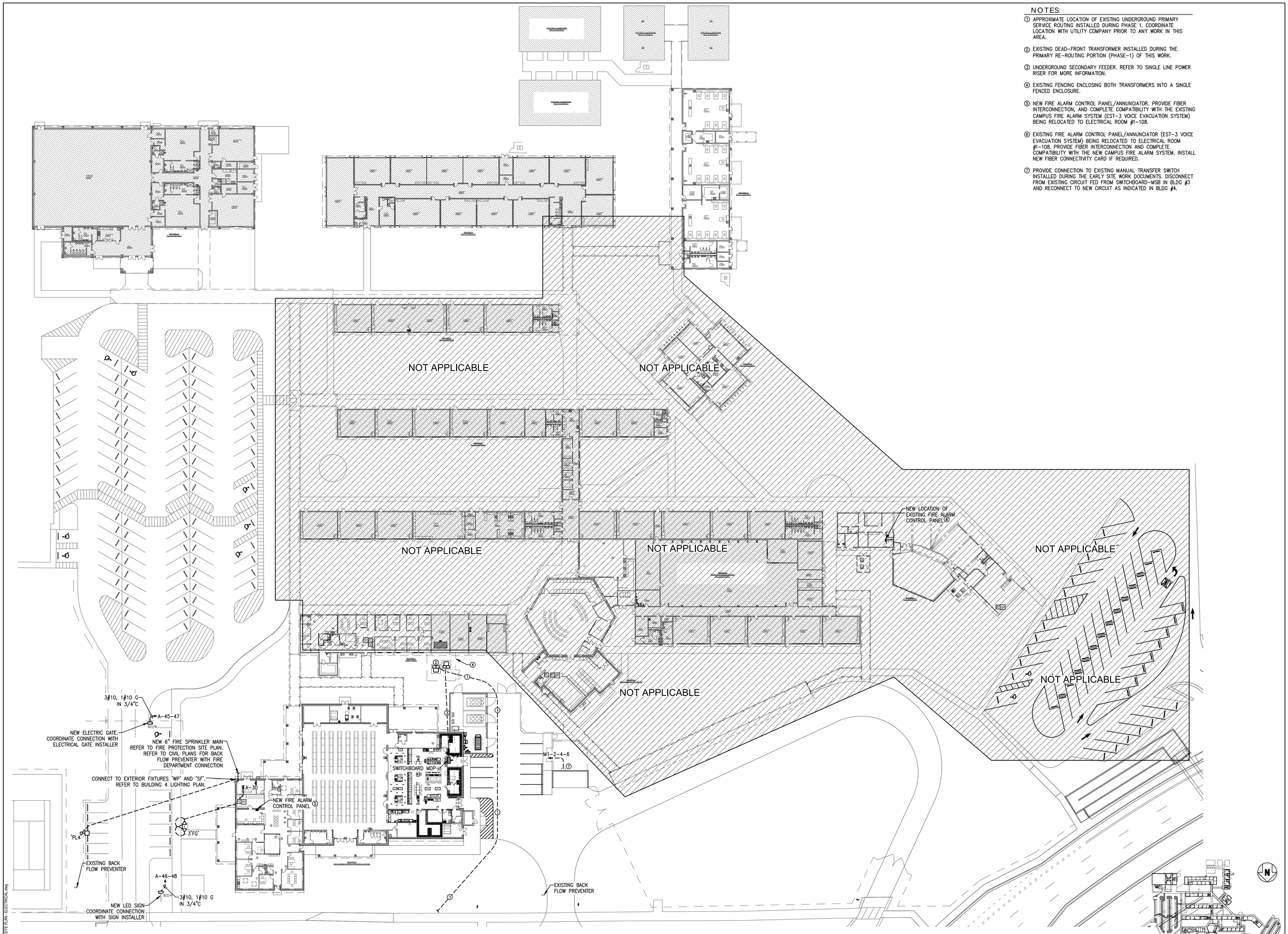

SITE PLAN - ELECTRICAL

1" = 30'-0"

0 15' 30' 60'

CAMPUS KEY PLAN

NOTES:

1. APPROXIMATE LOCATION OF EXISTING UNDERGROUND PRIMARY SERVICE ROUTING INSTALLED DURING PHASE 1. COORDINATE LOCATION WITH UTILITY COMPANY PRIOR TO ANY WORK IN THIS AREA.
2. EXISTING DEAD-FRONT TRANSFORMER INSTALLED DURING THE PRIMARY RE-ROUTING PORTION (PHASE-1) OF THIS WORK.
3. UNDERGROUND SECONDARY FEEDER. REFER TO SINGLE LINE POWER RISER FOR MORE INFORMATION.
4. EXISTING FENCING ENCLOSING BOTH TRANSFORMERS INTO A SINGLE FENCED ENCLOSURE.
5. NEW FIRE ALARM CONTROL PANEL/ANNUNCIATOR. PROVIDE FIBER INTERCONNECTION, AND COMPLETE COMPATIBILITY WITH THE EXISTING CAMPUS FIRE ALARM SYSTEM (EST-3 VOICE EVACUATION SYSTEM) BEING RELOCATED TO ELECTRICAL ROOM #1-108.
6. EXISTING FIRE ALARM CONTROL PANEL/ANNUNCIATOR (EST-3 VOICE EVACUATION SYSTEM) BEING RELOCATED TO ELECTRICAL ROOM #1-108. PROVIDE FIBER INTERCONNECTION AND COMPLETE COMPATIBILITY WITH THE NEW CAMPUS FIRE ALARM SYSTEM. INSTALL NEW FIBER CONNECTIVITY CARD IF REQUIRED.
7. PROVIDE CONNECTION TO EXISTING MANUAL TRANSFER SWITCH INSTALLED DURING THE EARLY SITE WORK DOCUMENTS. DISCONNECT FROM EXISTING CIRCUIT FED FROM SWITCHBOARD-MSB IN BLDG #3 AND RECONNECT TO NEW CIRCUIT AS INDICATED IN BLDG #4.

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
Commission Number. 21802

SEAL

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www.hgengineers.com
E-mail: office@hgengineers.com
Ph:850.243.6723

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PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
SITE PLAN - ELECTRICAL

SHEET NO.:
E1.1

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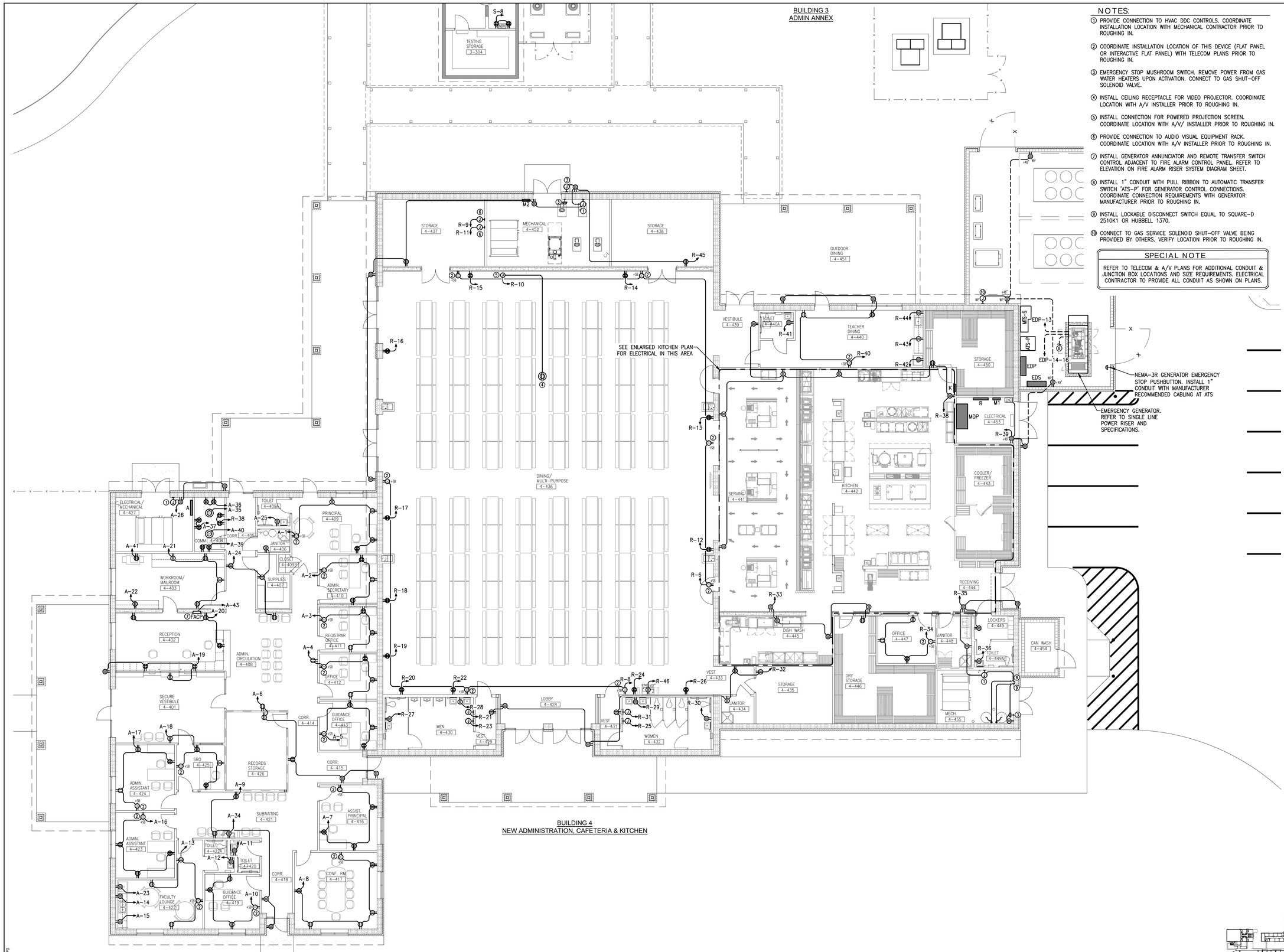


NOTES:

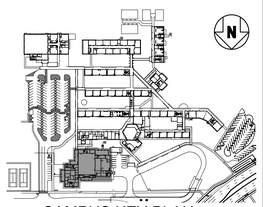
1. PROVIDE CONNECTION TO HVAC DDC CONTROLS. COORDINATE INSTALLATION LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING IN.
2. COORDINATE INSTALLATION LOCATION OF THIS DEVICE (FLAT PANEL OR INTERACTIVE FLAT PANEL) WITH TELECOM PLANS PRIOR TO ROUGHING IN.
3. EMERGENCY STOP MUSHROOM SWITCH. REMOVE POWER FROM GAS WATER HEATERS UPON ACTIVATION. CONNECT TO GAS SHUT-OFF SOLENOID VALVE.
4. INSTALL CEILING RECEPTACLE FOR VIDEO PROJECTOR. COORDINATE LOCATION WITH A/V INSTALLER PRIOR TO ROUGHING IN.
5. INSTALL CONNECTION FOR POWERED PROJECTION SCREEN. COORDINATE LOCATION WITH A/V/ INSTALLER PRIOR TO ROUGHING IN.
6. PROVIDE CONNECTION TO AUDIO VISUAL EQUIPMENT RACK. COORDINATE LOCATION WITH A/V INSTALLER PRIOR TO ROUGHING IN.
7. INSTALL GENERATOR ANNUNCIATOR AND REMOTE TRANSFER SWITCH CONTROL ADJACENT TO FIRE ALARM CONTROL PANEL. REFER TO ELEVATION ON FIRE ALARM RISER SYSTEM DIAGRAM SHEET.
8. INSTALL 1" CONDUIT WITH PULL RIBBON TO AUTOMATIC TRANSFER SWITCH 'ATS-P' FOR GENERATOR CONTROL CONNECTIONS. COORDINATE CONNECTION REQUIREMENTS WITH GENERATOR MANUFACTURER PRIOR TO ROUGHING IN.
9. INSTALL LOCKABLE DISCONNECT SWITCH EQUAL TO SQUARE-D 2510K1 OR HUBBELL 1370.
10. CONNECT TO GAS SERVICE SOLENOID SHUT-OFF VALVE BEING PROVIDED BY OTHERS. VERIFY LOCATION PRIOR TO ROUGHING IN.

SPECIAL NOTE

REFER TO TELECOM & A/V PLANS FOR ADDITIONAL CONDUIT & JUNCTION BOX LOCATIONS AND SIZE REQUIREMENTS. ELECTRICAL CONTRACTOR TO PROVIDE ALL CONDUIT AS SHOWN ON PLANS.

BUILDING 4 - POWER

1/8" = 1'-0"



CAMPUS KEY PLAN

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
Commission Number. 21802

SEAL

HG Engineers
142 Eglin Parkway SE
Fort Walton Beach, Florida, 32548

Fl. Authorization No.00006680
Christopher A. Garick; FL. PE No.53924
Thomas A. Alexander; FL. PE No.73172
Daniel J. White; FL. PE No.73790
Caleb W. Leonard; FL. PE No.91782

www.hgengineers.com
E-mail: office@hgengineers.com
Ph:850.243.6723

CONSULTANTS #2146

REVISIONS		
NO.	DATE	DESCRIPTION

SUBMITTAL	DATE
GMP DOCUMENTS	01/06/2025

PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
BUILDING 4 - POWER

SHEET NO.:
E2.4

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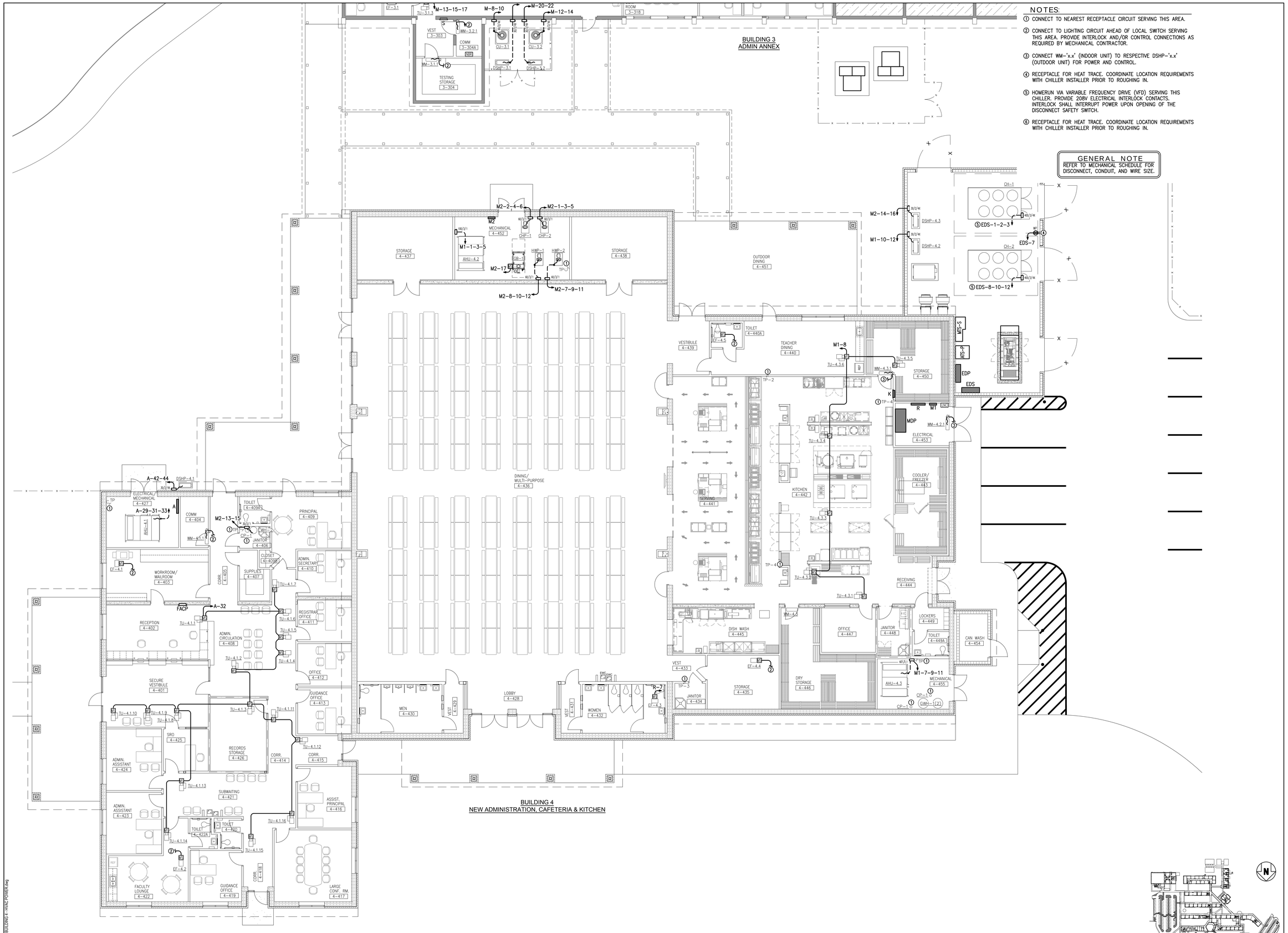

NOTES:

1. CONNECT TO NEAREST RECEPTACLE CIRCUIT SERVING THIS AREA.
2. CONNECT TO LIGHTING CIRCUIT AHEAD OF LOCAL SWITCH SERVING THIS AREA. PROVIDE INTERLOCK AND/OR CONTROL CONNECTIONS AS REQUIRED BY MECHANICAL CONTRACTOR.
3. CONNECT WM-'x.x' (INDOOR UNIT) TO RESPECTIVE DSHP-'x.x' (OUTDOOR UNIT) FOR POWER AND CONTROL.
4. RECEPTACLE FOR HEAT TRACE. COORDINATE LOCATION REQUIREMENTS WITH CHILLER INSTALLER PRIOR TO ROUGHING IN.
5. HOMERUN VIA VARIABLE FREQUENCY DRIVE (VFD) SERVING THIS CHILLER. PROVIDE 208V ELECTRICAL INTERLOCK CONTACTS. INTERLOCK SHALL INTERRUPT POWER UPON OPENING OF THE DISCONNECT SAFETY SWITCH.
6. RECEPTACLE FOR HEAT TRACE. COORDINATE LOCATION REQUIREMENTS WITH CHILLER INSTALLER PRIOR TO ROUGHING IN.

GENERAL NOTE
REFER TO MECHANICAL SCHEDULE FOR DISCONNECT, CONDUIT, AND WIRE SIZE.

BUILDING 4 - HVAC POWER

1/8" = 1'-0"

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2551 BLAIRSTONE PINES DR.
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PANAMA CITY, FLORIDA

SHEET TITLE:
BUILDING 4 - HVAC POWER

SHEET NO.:
E3.4

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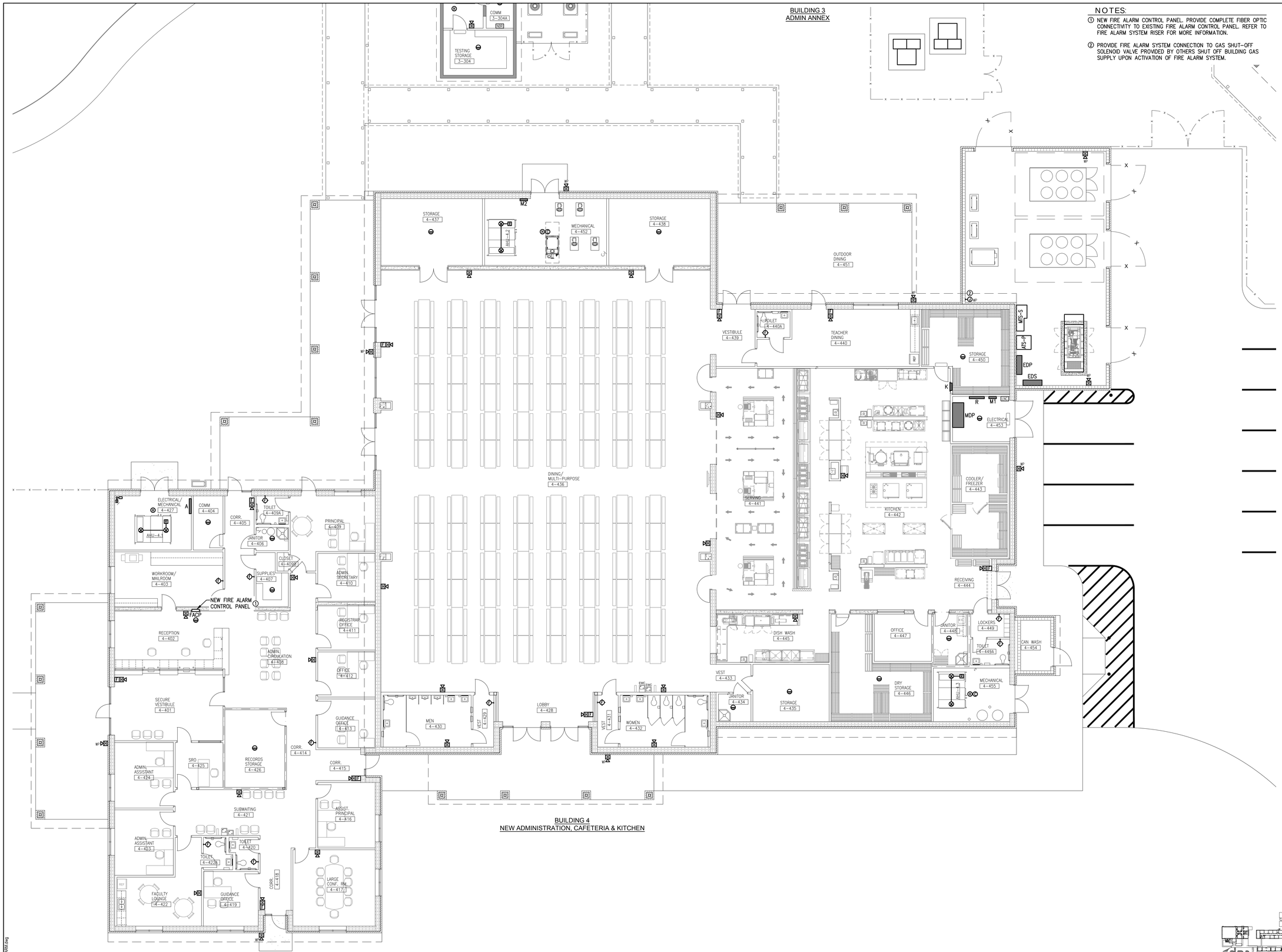
BUILDING 3
ADMIN ANNEX

NOTES:

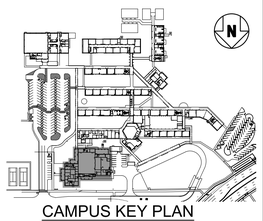
1. NEW FIRE ALARM CONTROL PANEL. PROVIDE COMPLETE FIBER OPTIC CONNECTIVITY TO EXISTING FIRE ALARM CONTROL PANEL. REFER TO FIRE ALARM SYSTEM RISER FOR MORE INFORMATION.
2. PROVIDE FIRE ALARM SYSTEM CONNECTION TO GAS SHUT-OFF SOLENOID VALVE PROVIDED BY OTHERS SHUT OFF BUILDING GAS SUPPLY UPON ACTIVATION OF FIRE ALARM SYSTEM.



BUILDING 4
NEW ADMINISTRATION, CAFETERIA & KITCHEN

BUILDING 4 - FIRE ALARM

1/8" = 1'-0"



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JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
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Fort Walton Beach, Florida, 32548

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PANAMA CITY, FLORIDA

SHEET TITLE:
BUILDING 4 - FIRE ALARM

SHEET NO.:
E4.4

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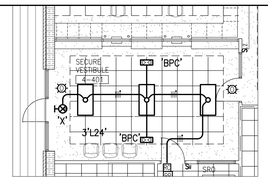


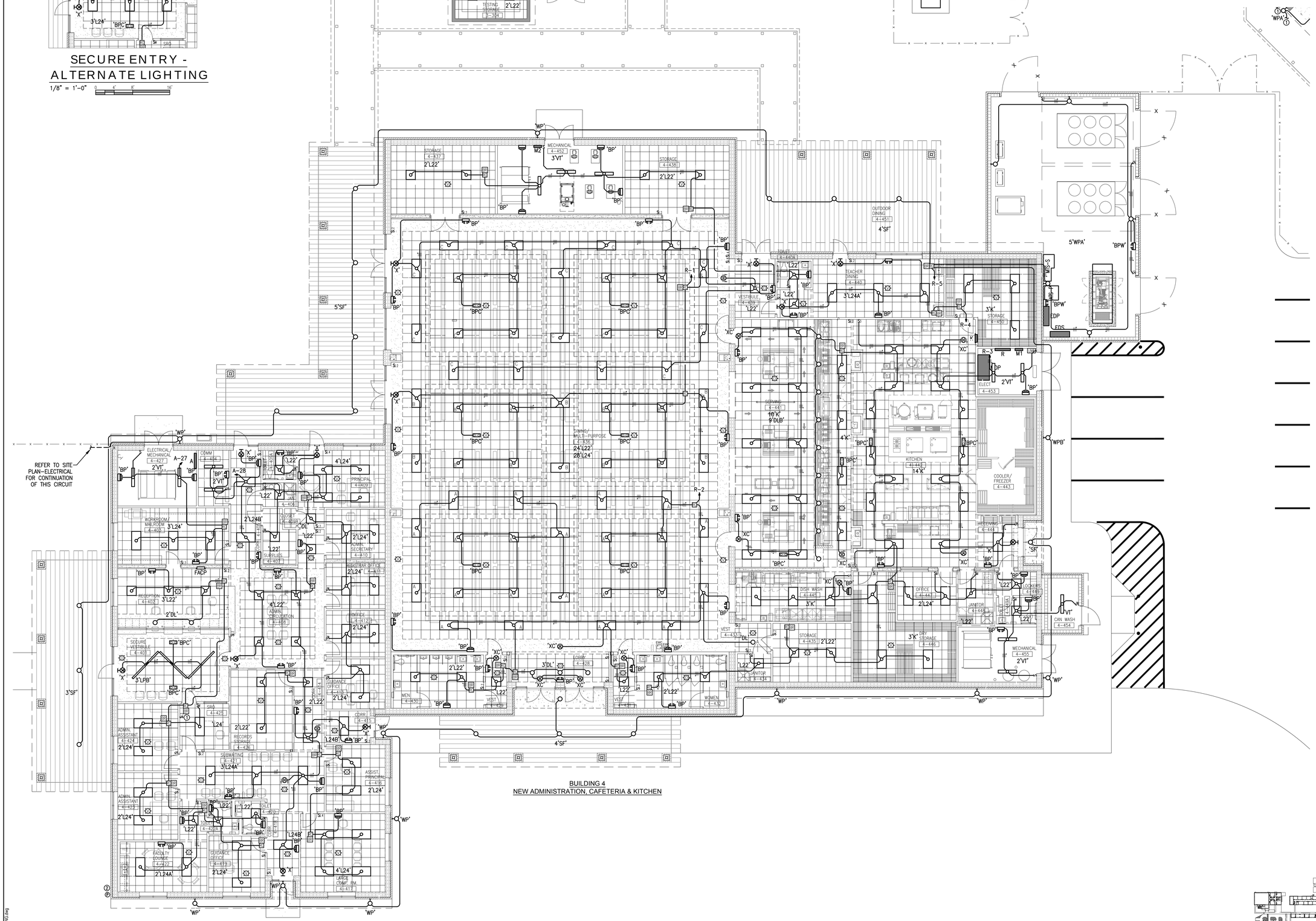
SECURE ENTRY - ALTERNATE LIGHTING

1/8" = 1'-0"

BUILDING 3
ADMIN ANNEX

NOTES:

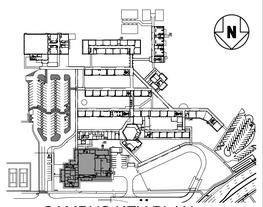
1. SWITCH FOR SECURE ENTRY LOBBY.
2. INSTALL PHOTOCELL AS HIGH AS POSSIBLE FACING NORTH. REFER TO LIGHTING CONTROL DETAILS.



BUILDING 4
NEW ADMINISTRATION, CAFETERIA & KITCHEN

BUILDING 4 - LIGHTING

1/8" = 1'-0"



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DATE 01/06/2025

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MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION

PANAMA CITY, FLORIDA

SHEET TITLE:

BUILDING 4 - LIGHTING

SHEET NO.:

E5.4

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KITCHEN EQUIPMENT COORDINATION SCHEDULE

(VERIFY ALL EQUIPMENT CIRCUIT REQUIREMENTS WITH MANUFACTURERS SHOP DRAWINGS PRIOR TO ROUGH-IN)

EQUIPMENT DESIGNATION	DESCRIPTION	VOLT	Φ	TOTAL CONNECTED VA	PROTECTION		SPECIFIED		CONDUCTOR / CONDUIT SIZE		CONDUCTORS			MEANS OF DISCONNECT	MOUNTING HEIGHT	REMARKS
					MCA	MOCP	TRIP	POLE	SETS	QTY.	SIZE	GND	CONDUIT			
101	CAN WASH															
102	AIR CURTAIN UNHEATED	120	1	1224	10.2	20	20	1	1	2	#12	#12	3/4"	MOTOR SWITCH	108" AFF	
103	UTILITY TRUCK															NO ELECTRICAL REQUIRED
104	OPEN ITEM															
105	WALK IN COOLER	208	3	3816	10.6	20	20	3	1	3	#12	#12	3/4"			INTER-CONNECT THRU W.I. CEILING TO INTERIOR LIGHTS
105.1	WALK IN FREEZER	208	3	7740	21.6	30	30	3	1	3	#10	#10	3/4"			INTER-CONNECT THRU W.I. CEILING TO INTERIOR LIGHTS
105.2	COOLER/FREEZER ALARM															
106	EVAPORATOR COIL COOLER	120	1	216	1.8		20	1	1	2	#12	#12	3/4"			
106.1	EVAPORATOR COIL FREEZER	208	1	2850	13.7	20	20	2	1	2	#12	#12	3/4"			CONNECT THRU FREEZER DEFROST TIMER TO REMOTE CONDENSER
106.2	REMOTE CONDENSER RACK AIR COOLED	208	3	11556	37.5	50	50	3	1	3	#8	#10	3/4"	60/30/3R		CONNECT THRU DEFROST TIMER TO FREEZER EVAPORATOR COIL
107	RACK DUNNAGE															NO ELECTRICAL REQUIRED
108	COOLER/FREEZER SHELVING 4 TIER															NO ELECTRICAL REQUIRED
109	DRY STORAGE SHELVING 5 TIER															NO ELECTRICAL REQUIRED
110	RACK DUNNAGE															NO ELECTRICAL REQUIRED
111	CAN OPENER	120	1	180	1.5	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P	50" AFF	
112	S/S WORKTABLE W/DRAWER															
112.1	S/S SHELF WALL MOUNT															NO ELECTRICAL REQUIRED
113	OPEN ITEM															
114.0	DISPENSER HOT WATER	208	1	4992	24	30	30	2	1	2	#10	#10	3/4"	NEMA 6-30P HUBBELL HBL9331	50" AFF	RECEPTACLE HUBBELL HBL9330
115	REFRIGERATOR 2 DOOR	120	1	888	9.3	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P	90" AFF	
116	SLICER TABLE MOBILE															NO ELECTRICAL REQUIRED
117	SLICER	120	1	672	5.6	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P	50" AFF	
118	MIXER 20 QT. COUNTER TYPE	120	1	960	8	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P	50" AFF	
119	MIXER TABLE MOBILE															NO ELECTRICAL REQUIRED
120	S/S SHELF WALL MOUNT															NO ELECTRICAL REQUIRED
121	OPEN ITEM															NO ELECTRICAL REQUIRED
122	S/S KNEE WALL SHELF 64" AFF															NO ELECTRICAL REQUIRED
123	VEG. PREP. TABLE WITH SINKS															NO ELECTRICAL REQUIRED
123.1	PRE RINSE W/16" NOZZLE SPLASH MOUNT															NO ELECTRICAL REQUIRED
124	2 HP DISPOSER WTH CONTROL	208	3	2376	6.6	20	20	3	1	3	#12	#12	3/4"	CONTROL PANEL	30" AFF	
125	32 GAL. TRASH CONTAINER MOBILE															NO ELECTRICAL REQUIRED
126	FOOD PROCESSOR	120	1	1440	12	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P	50" AFF	
127	TRASH CONTAINER SLIM JIM															NO ELECTRICAL REQUIRED
128	HAND SINK WALL MOUNT															NO ELECTRICAL REQUIRED
129	S/S WALL ANGLE GUARDS															NO ELECTRICAL REQUIRED
130	MEAT PREP TABLE WITH SINK															NO ELECTRICAL REQUIRED
130.1	FAUCET 16" NOZZLE SPLASH MOUNT															NO ELECTRICAL REQUIRED
131	CONVECTION STEAMER (FUTURE ITEM)	120	1	1800	18.8	20	20	1	1	2	#12	#12	3/4"		46" AFF	DIRECT DISCONNECT
132	TILT SKILLET 40 GAL GAS	120	1	600	6.3	20	20	1	1	2	#12	#12	3/4"	DR20 RECEPTACLE		POWER THROUGH UDS - GFI BREAKER
133	S/S FLOOR TROUGH WITH FIBERGLASS GRATE															NO ELECTRICAL REQUIRED
134	TILT KETTLE 40 GAL GAS	120	1	600	5	20	20	1	1	2	#12	#12	3/4"	DR20 RECEPTACLE		POWER THROUGH UDS - GFI BREAKER
135	ISLAND EXHAUST HOOD	120	1													
135.1	FIRE PROTECTION SYSTEM	120	1	756	6.3	20	20	1	1	2	#12	#12	3/4"			
135.2	UTILITY DISTRIBUTION SYSTEM	208	3	77724	215.9	300	300	3	2	3	#1/0	#4	1-1/2"			
136	EXHAUST HOOD FAN (KEF-1)	208	3	2052	17.1	20	20	3	1	3	#12	#12	3/4"	30/3/3R		
	EXHAUST HOOD FAN (KEF-2)	208	3	2052	17.1	20	20	3	1	3	#12	#12	3/4"	30/3/3R		
137	RETURN AIR FAN SYSTEM (KSF-1)	208	3	2988	10.4	15	20	3	1	3	#12	#12	3/4"	30/3/1		
138	2 BURNER RANGE GAS															NO ELECTRICAL REQUIRED; Battery-spark ignition
139	OPEN ITEM															
140	COMBI OVEN ELECTRIC 10 PAN	208	3	37400	103.8	125	125	3	1	3	#1	#6	1-1/4"	150/3/1		POWER THROUGH UDS
141	S/S FLOOR TROUGH WITH FIBERGLASS GRATE															NO ELECTRICAL REQUIRED
142	WORKTABLE WITH DRAWER MOBILE															NO ELECTRICAL REQUIRED
143	WARMING/PROOFING CABINET MOBILE	120	1	2000	16.7	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-20P	60" AFF	
144	INGEDIENT BIN MOBILE															NO ELECTRICAL REQUIRED
145	BAKERS TABLE WITH DRAWERS															NO ELECTRICAL REQUIRED
146	S/S KNEE WALL SHELF 64" AFF															NO ELECTRICAL REQUIRED
147	WORKTABLE WITH DRAWER															NO ELECTRICAL REQUIRED
148	STORAGE SHELF 4 TIER															NO ELECTRICAL REQUIRED
149	ICE MAKER CUBE	120	1	1440	12	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-20P	78" AFF	
149.1	WATER FILTER															NO ELECTRICAL REQUIRED
149.2	ICE BIN															NO ELECTRICAL REQUIRED
150	FLOOR TROUGH WITH FIBERGLASS GRATE															NO ELECTRICAL REQUIRED
151	OPEN ITEM															
152	OPEN ITEM															
153	EMPLOYEE LOCKERS															NO ELECTRICAL REQUIRED
154	WASHER DOMESTIC	120	1	1200	20	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-20P		
155	DRYER DOMESTIC	208	1	5000	30	30	30	2	1	3	#10	#10	3/4"			
156	MOP SINK WITH FAUCET															NO ELECTRICAL REQUIRED
157	MOP/ BROOM RACK															NO ELECTRICAL REQUIRED
158	STORAGE CART															NO ELECTRICAL REQUIRED
159	KITCHEN MANAGER OFFICE FURNISHINGS															NO ELECTRICAL REQUIRED
160	OPEN ITEM															NO ELECTRICAL REQUIRED
161	RACK DUNNAGE															NO ELECTRICAL REQUIRED
162	DRY STORAGE SHELF 5 TIER															NO ELECTRICAL REQUIRED
163	POT & PAN STORAGE SHELF 4 TIER															NO ELECTRICAL REQUIRED
164	18X26 TRAY STORAGE SHELF 4 TIER															NO ELECTRICAL REQUIRED
165	WARMING CABINET PASS THRU	208	1	3000	20	20	20	2	1	3	#12	#12	3/4"	30/2/1	92" AFF	HARD WIRE
166	REFRIGERATOR PASS THRU	120	1	888	7.4	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15 P	92" AFF	
167	SPRAY SYSTEM WALL MOUNT	120	1	1800	15	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-20 P	82" AFF	
168	PAN RACK															NO ELECTRICAL REQUIRED
169	S/S CHANNEL GUARD															NO ELECTRICAL REQUIRED
170	MILK COOLERS	120	1	264	2.2	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P	+48" AFF	
171	SERVING COUNTER	208	1	20800	100	125	125	2	1	3	#1	#6	1-1/4"			PRE WIRED CONTROL PANEL BY FABRICATOR LOCATED IN THIS COUNTER FOR #172, #173, #175, #176
172	HEATED SHELF, DROP IN	208	1	2816	13.5	20	20	2	1	3	#12	#12	3/4"			INTERCONNECTS TO #171 CONTROL PANEL BY FABRICATOR
173	HEAT LAMP	120	1	1100	9.2	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P		INTERCONNECTS TO #171 CONTROL PANEL BY FABRICATOR
174	PROTECTOR CASE															NO ELECTRICAL REQUIRED
175	HOT FOOD PAN 4 PAN	120	1	760	7.9	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P		INTERCONNECTS TO #171 CONTROL PANEL BY FABRICATOR
176	COLD PAN 4 WELL	120	1	769	6.41	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P		INTERCONNECTS TO #171 CONTROL PANEL BY FABRICATOR
177	PROTECTOR CASE															NO ELECTRICAL REQUIRED
178	ICE CREAM MERCHANDISER	120	1	168	1.4	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P		
179	DISPENSER PLASTIC SILVERWARE															NO ELECTRICAL REQUIRED
180	POS COUNTER															
181	POS	120	1	100	20	20	20	1	1	2	#12	#12	3/4"			
182	CASHIER STOOL															NO ELECTRICAL REQUIRED
183	DIGITAL MENU BOARD	120	1	400	20	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P	84"	VERIFY MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN
184	SNACK RACK															NO ELECTRICAL REQUIRED
185	UTILITY RISER, ST. STEEL															
186	SECURITY DOOR PULL DOWN															NO ELECTRICAL REQUIRED
187	SOILED DISHTABLE															NO ELECTRICAL REQUIRED
188	DISPOSER	208	3	4572	12.7	20	20	3	1	3	#12	#12	3/4"	30/3/1		
189	HOSE REEL															NO ELECTRICAL REQUIRED
190	CONDENSATE VENT RISER															NO ELECTRICAL REQUIRED
190.1	CONDENSATE FAN (DEF-1)	120	1	756	6.3	15	20	1	1	2	#12	#12	3/4"	MOTORSWITCH		INTERCONNECT WITH DISHWASHER EQUIPMENT.
191	DISHWASHER L R W/BUILT IN BOOSTER	208	3	52020	144.5	175	175	3	1	3	#2/0	#6	1-1/2"	200/3/1	66" AFF	MUST BE 208/ 3PHASE; LOAD MAY CHANGE DEPENDING ON OPTIONS
192	WARE WASHER BLOWER/DRYER	120	1	520	4.33	20	20	1	1	2	#12	#12	3/4"	NEMA GFS-15P	78" AFF	
193	CLEAN DISHTABLE															NO ELECTRICAL REQUIRED
194	TURBOWASH POTSINK W/ELECT. TANK HEAT	208	3	6120	17	20	20	3	1	3	#12	#12	3/4"	30/3/1	16" AFF	MUST BE 208/ 3PHASE; LOAD MAY CHANGE DEPENDING ON OPTIONS
195	POT RACK WALL MOUNT															NO ELECTRICAL REQUIRED
196	POT & PAN STORAGE SHELF 4 TIER															NO ELECTRICAL REQUIRED
197	HAND RAIL S/S															
198	OPEN ITEM															

KITCHEN SCHEDULE NOTES

Ⓐ CONNECT FREEZER EVAPORATOR AND COOLER EVAPORATOR COIL TO REFRIGERATION SYSTEM CONTROL PANEL. USE SEAL LOCK ON ALL CONDUITS.

Ⓑ EXHAUST HOOD/UDS SYSTEM – INSTALL 2#12 CU & 1#12 CU GND IN 3/4" CONDUIT FOR FAN CONTROL. INSTALL TWO 3 WIRE CIRCUITS FROM HOOD FIRE SUPPRESSION SYSTEM MICROSWITCH TO HOOD TERMINALS FOR SHUNT TRIP. INSTALL TWO 3 PHASE CIRCUITS TO HOOD TERMINALS FOR HOOD FANS SHUNT TRIP. INSTALL THREE 3 PHASE CIRCUITS FROM HOOD TERMINALS TO HOOD FANS FOR SHUNT TRIP. COORDINATE ALL 'UDS' CONNECTIONS TO EQUIPMENT WITH 'UDS' SYSTEM SUPPLIER PRIOR TO ROUGHING IN. CONNECT TO FIRE ALARM SYSTEM TO SOUND ALARM UPON ACTIVATION OF HOOD ANSUL SYSTEM.

Ⓒ CONNECT TO WALK–IN COOLER AND FREEZER DOOR HEATER, CONDENSATE DRAIN (IF REQUIRED) AND LIGHTS. USE SEAL LOCKS ON ALL CONDUITS. PROVIDE COMMUNICATION THRU LINES (BY ELECTRICIAN) TO THE BUILDING ALARM SYSTEM AND/OR KITCHEN MANAGERS OFFICE. NOTIFIES BUILD SYSTEM OF POWER OUTAGE, REFRIGERATION ISSUES. ALSO HAS BUILT IN USB PORT FOR KITCHEN MANAGER TO OBTAIN HACCP READINGS. UNIT IS CAPABLE OF SENDING REFRIGERATION INFORMATION TO AUTHORIZED PERSON OFF–SITE WHEN KITCHEN IS CLOSED.

Ⓓ CONNECT DISPOSER VIA CONTROL PANEL AND SOLENOID VALVE. TWO CONNECTIONS REQUIRED.

Ⓔ ALL ITEMS UNDER EXHAUST HOOD SHALL SHUT–DOWN UPON ACTUATION OF HOOD FIRE SUPPRESSION (ANSUL) SYSTEM.

Ⓕ INSTALL 3/4" CONDUIT WITH PULLCORD TO HOOD FIRE SUPPRESSION SYSTEM FOR REMOTE PULL STATION.

GENERAL NOTES:

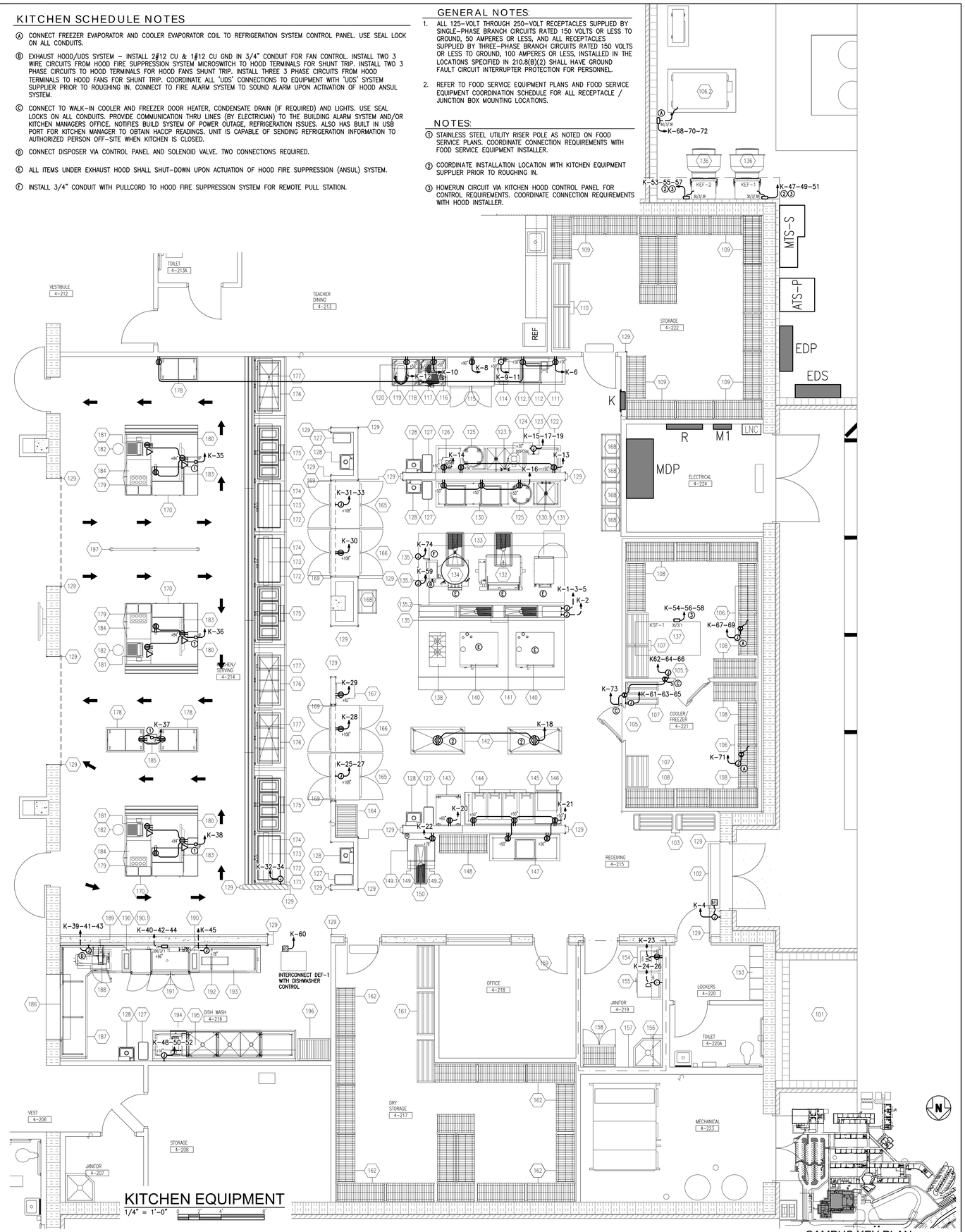
1. ALL 125–VOLT THROUGH 250–VOLT RECEPTACLES SUPPLIED BY SINGLE–PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY THREE–PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS, INSTALLED IN THE LOCATIONS SPECIFIED IN 210.8(B)(2) SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL.
2. REFER TO FOOD SERVICE EQUIPMENT PLANS AND FOOD SERVICE EQUIPMENT COORDINATION SCHEDULE FOR ALL RECEPTACLE / JUNCTION BOX MOUNTING LOCATIONS.

NOTES:

① STAINLESS STEEL UTILITY RISER POLE AS NOTED ON FOOD SERVICE PLANS. COORDINATE CONNECTION REQUIREMENTS WITH FOOD SERVICE EQUIPMENT INSTALLER.

② COORDINATE INSTALLATION LOCATION WITH KITCHEN EQUIPMENT SUPPLIER PRIOR TO ROUGHING IN.

③ HOMERUN CIRCUIT VIA KITCHEN HOOD CONTROL PANEL FOR CONTROL REQUIREMENTS. COORDINATE CONNECTION REQUIREMENTS WITH HOOD INSTALLER.



KITCHEN EQUIPMENT
1/4" = 1'–0"

CAMPUS KEY PLAN

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
Commission Number. 21802

SEAL

HG Engineers
142 Eglin Parkway SE
Fort Walton Beach, Florida, 32548
FL Authorization No.00006680
Christopher A. Garick, FL. PE No.53924
Thomas A. Alexander, FL. PE No.73172
Daniel J. White, FL. PE No.73790
Caleb W. Leonard, FL. PE No.91782
www.hgengineers.com
E-mail: office@hgengineers.com
Ph:850.243.6723
CONSULTANTS #2146

REVISIONS

NO.	DATE	DESCRIPTION

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	DATE
GMP DOCUMENTS	01/06/2025

PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
KITCHEN EQUIPMENT

SHEET NO.:
E5.5

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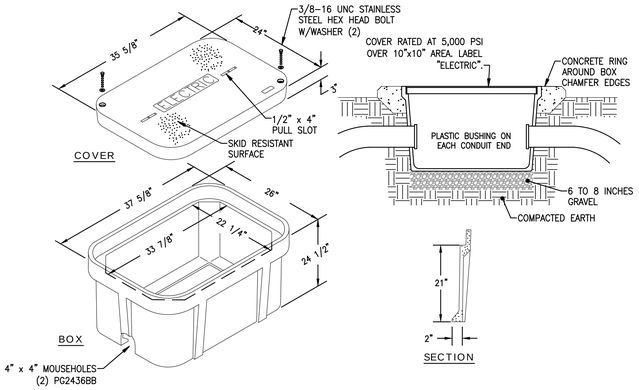
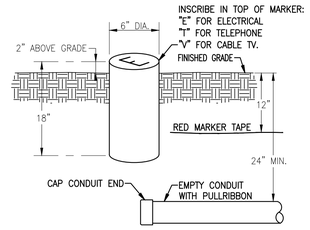


ELECTRICAL PULLBOX DETAIL
NOT TO SCALE



CONDUIT MARKER DETAIL
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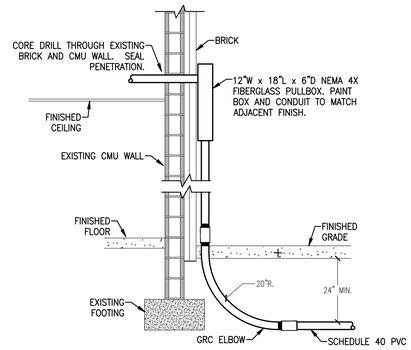

EXISTING BUILDING CONDUIT ENTRY DETAIL
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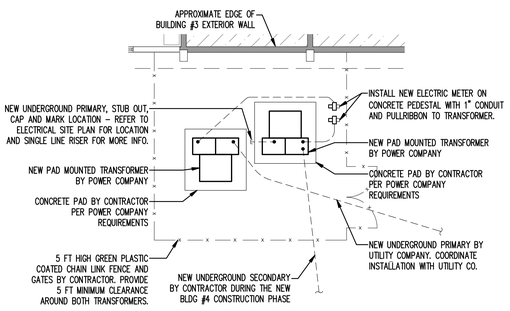

PAD MOUNTED TRANSFORMER FENCE DETAIL
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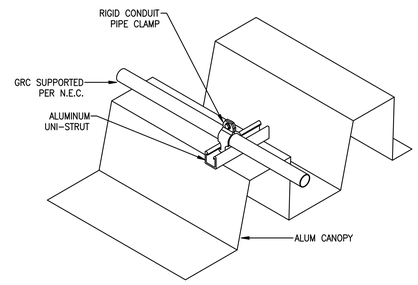

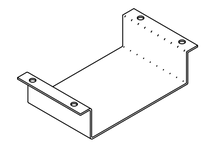

3 SIDED ALUM PAN DETAIL
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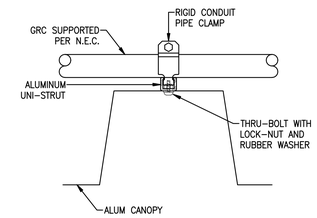

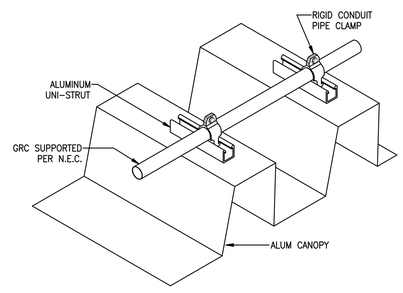

CONDUIT MOUNTING DETAIL
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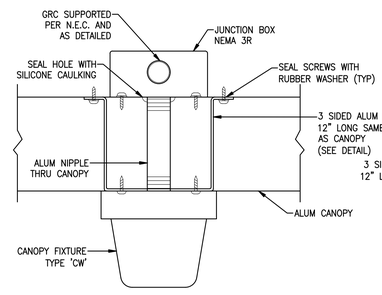
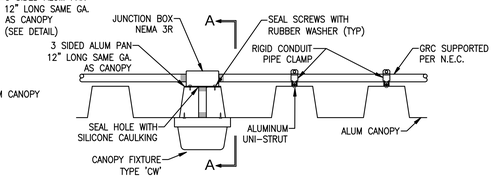


SECTION "A-A"
NOT TO SCALE



CANOPY FIXTURE MTG. DETAIL
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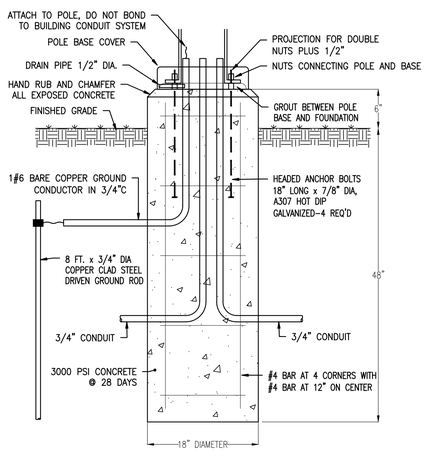
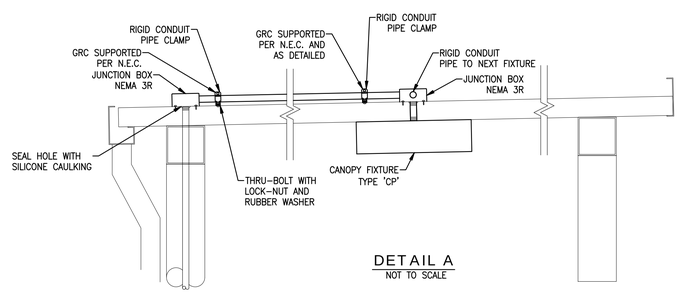
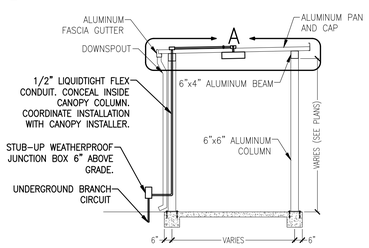


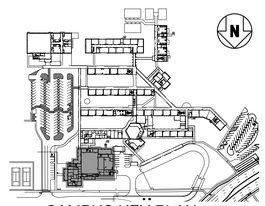
CONCRETE POLE BASE FOR FIXTURE 'PL' & 'PLA'
NOT TO SCALE



DETAIL A
NOT TO SCALE



TYPICAL CANOPY FIXTURE 'CP' MTG. DETAIL
NOT TO SCALE



CAMPUS KEY PLAN

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2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
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SEAL

HG Engineers
142 Eglin Parkway SE
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CONSULTANTS #2146

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CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
ELECTRICAL DETAILS

SHEET NO.:
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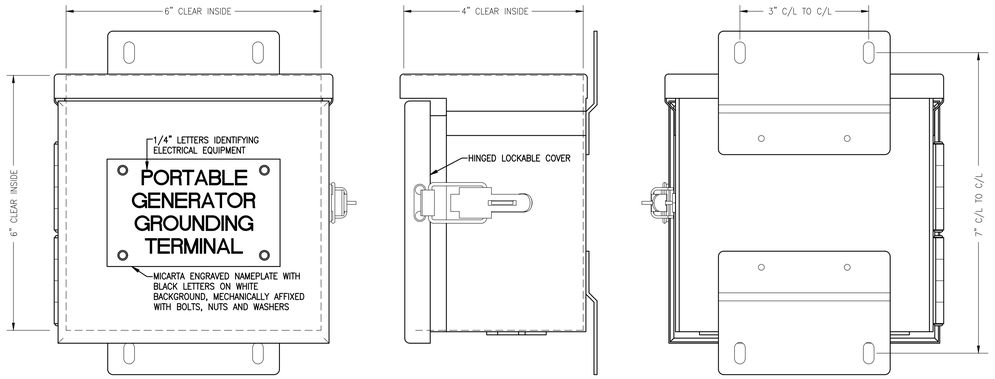
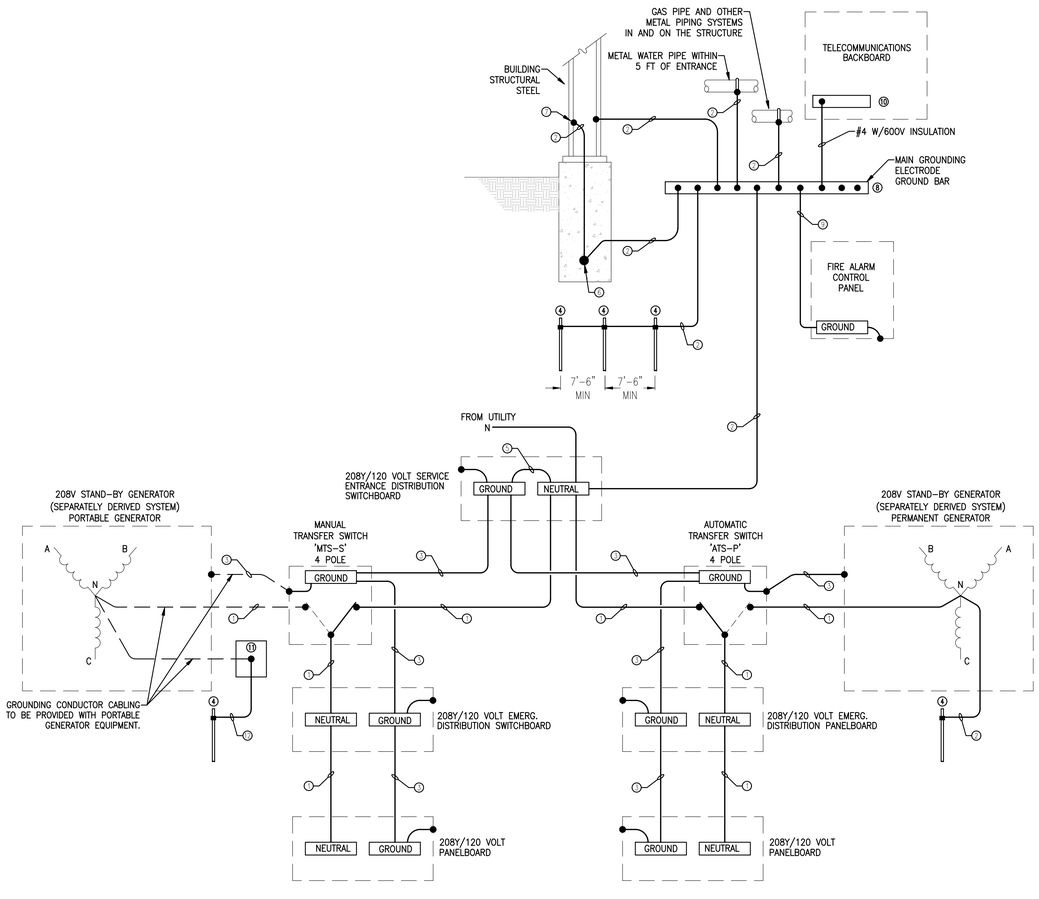


FRONT VIEW SIDE VIEW BACK VIEW

PORTABLE GENERATOR GROUNDING ENCLOSURE DETAIL

NOT TO SCALE



208Y/120V GROUNDING SYSTEM DIAGRAM

NOT TO SCALE

GENERAL NOTES

1. BOND HOT AND COLD WATER PIPING SYSTEMS.
2. CONDUCTOR SIZES SHOWN ARE MINIMUM AND MAY BE LARGER THAN THE MINIMUM SIZES REQUIRED BY NEC.
3. INSTALL GROUNDING CONNECTIONS TO BUILDING STRUCTURE AND WATER PIPES AT LOCATIONS THAT ARE VISIBLE AND ACCESSIBLE FOR INSPECTION, MAINTENANCE, AND TESTING.
4. INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC SERVICE ENTRANCE CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-66 USING THE SERVICE PHASE CONDUCTOR SIZE.
5. INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC FEEDER CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-122 USING THE FEEDER CIRCUIT OVERCURRENT DEVICE SIZE OR THE SEPARATELY DERIVED SYSTEM OVERCURRENT DEVICE SIZE.

KEYNOTES

① INSTALL GROUNDED (NEUTRAL) CONDUCTOR SAME SIZE AS THE LARGEST PHASE CONDUCTOR IF THE LINE-TO-NEUTRAL LOAD EXCEEDS 5% OF THE CONNECTED LOAD. IF NEUTRAL LOAD IS SMALLER, INSTALL THE NEC MINIMUM GROUNDED CONDUCTOR.

② INSTALL GROUNDING ELECTRODE CONDUCTOR, SIZED BASED ON NEC TABLE 250.66 USING THE SERVICE PHASE CONDUCTOR SIZE, BUT NOT SMALLER THAN NO 4.

③ INSTALL EQUIPMENT GROUNDING CONDUCTOR SIZED BASED ON NEC TABLE 250.122 USING THE FEEDER OVERCURRENT DEVICE SIZE.

④ 10 FOOT MINIMUM X 3/4" DIAMETER COPPER CLAD STEEL SECTIONAL DRIVEN GROUND ROD.

⑤ NSTALL BONDING JUMPER WIRE THAT IS SIZED BASED ON NEC TABLE 250-66 OR 250.28(D)(1) USING THE SERVICE OR SEPARATELY-DERIVED SYSTEM PHASE PHASE CONDUCTOR SIZE.

⑥ NSTALL A CONCRETE-ENCASED MAIN GROUNDING ELECTRODE IN THE BUILDING FOUNDATION PER NEC ARTICLE 250.52 (A) (3).

⑦ BOND EACH PERIMETER STRUCTURAL STEEL COLUMN TO THE CONCRETE-ENCASED MAIN GROUNDING ELECTRODE. USE COMPRESSION CONNECTORS THAT MEET IEEE 837 REQUIREMENTS OR USE EXOTHERMIC WELDS.

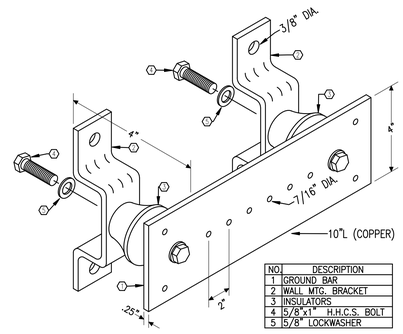
⑧ INSTALL A "MAIN GROUND ELECTRODE GROUND BAR" FOR SINGLE POINT GROUNDING. LOCATE AT AN ACCESSIBLE POINT NEAR THE SERVICE ENTRANCE EQUIPMENT. MAKE CONNECTIONS TO THE GROUND ELECTRODE CONDUCTOR USING IRREVERSIBLE CONNECTORS OR EXOTHERMIC WELDS. MAKE OTHER CONNECTIONS TO THE GROUND BAR USING TWO-HOLE COMPRESSION SPADE LUGS THAT MEET IEEE 837 REQUIREMENTS. LABEL EACH CONNECTION TO THE GROUND BAR.

⑨ FIRE ALARM CONTROL PANEL GROUND – #6 COPPER CONDUCTOR.

⑩ INSTALL A COPPER GROUNDING BAR IN EACH TELECOMMUNICATIONS ROOM. CONNECT TO THE "MAIN GROUNDING ELECTRODE GROUND BAR" USING 600V INSULATED #4 COPPER CABLE AND COMPRESSION SPADE LUGS.

⑪ GROUNDING TERMINAL LUG ENCLOSURE FOR PORTABLE EMERGENCY GENERATOR GROUNDING CONNECTION. INSTALL DIN RAIL MOUNTED COPPER MECHANICAL LUG CONNECTOR, EQUAL TO ERICO POWER BLOCK #SB80AL, CAPABLE OF ACCEPTING #4 THRU #14 GA. CONDUCTOR. INSTALL 48"AFF IN NEMA-3R ENCLOSURE ADJACENT TO MANUAL TRANSFER SWITCH. PROVIDE NAMEPLATE AS INDICATED IN "PORTABLE GENERATOR GROUNDING ENCLOSURE" DETAIL.

⑫ INSTALL NO.4 GROUNDING ELECTRODE CONDUCTOR BETWEEN PORTABLE GENERATOR GROUNDING CONNECTION TERMINAL BOX AND GROUND ROD.



NO.	DESCRIPTION
1	GROUND BAR
2	WALL MTG. BRACKET
3	INSULATORS
4	5/8"x1" H.H.C.S. BOLT
5	5/8" LOCKWASHER

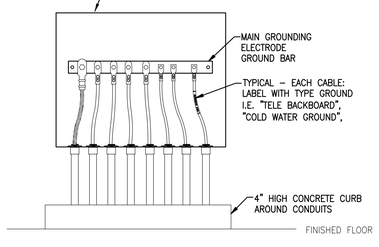
GROUND BAR NOTES:

1. INSTALL ONE BAR AT EACH COMMUNICATIONS ROOM.
2. ROUTE 1#4 BARE CU IN 1"CONDUIT FROM GROUND BAR TO BUILDING ELECTRICAL SERVICE ENTRANCE GROUND.
3. CONNECT BARS WITH 1#6 BARE CU IN 1" CONDUIT.

INSULATED GROUNDING BAR DETAIL

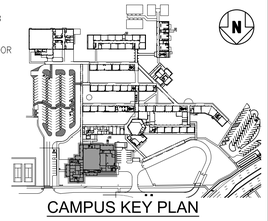
NOT TO SCALE

TYPICAL ENCLOSURE: EQUAL TO CARLON 'CIRCUIT-SAFE' JIC ENCLOSURE: NON-METALLIC; SIDE OPENING, HINGED DOOR WITH LOCK OR CATCH; POLYCARBONATE CONSTRUCTION. PROVIDE A MICARTA PLATE, MECHANICALLY ATTACHED TO OUTSIDE OF DOOR, ENGRAVED IN LETTERS 1" HIGH TO READ "MAIN GROUND BUS BAR". SIZE ENCLOSURE TO ENSURE A MINIMUM OF 2" CLEARANCE AT EACH END OF THE GROUND BAR.



GROUNDING SYSTEM TYPICAL ENCLOSURE

NOT TO SCALE



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PANAMA CITY, FLORIDA

SHEET TITLE:
GROUNDING DETAILS

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LIGHTING FIXTURE SCHEDULE

Project: 2146 - Mowat Middle School Additions and Renovations

Note: Per electrical specifications, alternate fixtures shall be submitted to the engineer for prior approval a minimum of (10) ten business days prior to bid date. Any alternate fixtures not submitted for prior approval will not be reviewed.

Luminaire Designation	Manufacturer	Catalog Number	Connected Voltage	Luminaire Load (va)	Lamping Source	Color Rendering Index (CRI)	Kelvin Temperature	Mounting	Comments
BP	CHLORIDE	CLUR2-N-W	120 V	0.036 VA	LED	N/A	N/A	WALL 7'-6" AFF	
BPC	CHLORIDE	CLUR3-N-W	120 V	0.053 VA	LED	N/A	N/A	LAY-IN GRID	
BPW	BEGHELLI	BOL-WP-12V27W-2-MR16LED-AT-BPG9	120V	.068 VA	LED	N/A	N/A	WALL 7'-6" AFG	
CP	TOPAZ	F-CPS/40W/50K/BZ-80	120 V	40 VA	LED	>70	5000K	CANOPY	OWNER SPECIFIED FIXTURE - NO SUBSTITUTIONS
CPA	TOPAZ	F-CPS/40W/50K/BZ-80	120 V	40 VA	LED	>70	5000K	CANOPY	OWNER SPECIFIED FIXTURE - NO SUBSTITUTIONS
DL	HE WILLIAMS	2DR-L15-840-DIM-UNV-O-W-OF-CS-R-CA 1	120 V	18 VA	LED	>80	4000K	RECESSED CEILING	
DLA	HE WILLIAMS	2DR-L7-840-DIM-UNV-O-W-OF-CS-R-CA 1	120 V	9 VA	LED	>80	4000K	RECESSED CEILING	
DLB	HE WILLIAMS	4DR-TL-L10-840-DIM-UNVL-W-OF-CS-F 1	120 V	9 VA	LED	>80	4000K	RECESSED CEILING	
FG	WE-FE	ETC130-GB LED ASC	120 V	18 VA	LED	>70	4000K	IN-GRADE	
K	HE WILLIAMS	50-G-S-24-L59-840-F-AF12125-DG-DIM-UNV	120 V	48 VA	LED	>80	4000K	LAY-IN GRID	
L22	LAUREN	LGM2240W-QC LD60 DRIVER	120 V	35 VA	LED	>80	4000K	LAY-IN GRID	
L24	LAUREN	LGM2440W-QC LD60 DRIVER	120 V	55 VA	LED	>80	4000K	LAY-IN GRID	
L24A	LAUREN	LGM2440W-QC LD60 DRIVER; DC02	120 V	55 VA	LED	>80	4000K	LAY-IN GRID	DIM CHIP 75%
L24B	LAUREN	LGM2440W-QC LD60 DRIVER; DC02	120 V	55 VA	LED	>80	4000K	LAY-IN GRID	DIM CHIP 50%
LPB	FINELITE	HP4-P RO-ID-F/S-V340-WSO-RGD-96LG-120-SC-FC-10x(MOUNTING)-(CEILING)-FE-(FINISH)	120 V	57 VA	LED	>80	4000K	PENDANT 10'-0" AFF	SECURE LOBBY
PL3	GARDCO	ECF-S/S-3ZL-1A-WW-G2-AR-3-BZ	120V	106 VA	LED	>70	3000K	POLE MOUNT 20'-0" AFG	
PL4	GARDCO	ECF-S/S-3ZL-1A-WW-G2-AR-4-BZ	120V	106 VA	LED	>70	3000K	POLE MOUNT 20'-0" AFG	
PL5	GARDCO	ECF-S/S-3ZL-1A-WW-G2-AR-5W-BZ	120V	106 VA	LED	>70	3000K	POLE MOUNT 20'-0" AFG	
POLE FOR PL3, PL4, PL5	VALMONT	2000454584-D1-DDB	N/A	N/A	N/A	N/A	N/A	CONCRETE BASE	MUST MEET EPA 140MPH WITH FIXTURE
SF	GARDCO	SVPG-140L-800-SM-5-UNV-BZ	120 V	37 VA	LED	>80	3000K	SURFACE	
V	HE WILLIAMS	7SL-2-L32-840-AF12125-DRV-UNV	120 V	26 VA	LED	>80	4000K	WALL ABOVE DOOR 7'-6" AFF	
VT	BEGHELLI	BS100LED--4-HT-VLO-WT 40-120-277-SM-SS	120 V	30 VA	LED	>80	4000K	SURFACE	
WP	HE WILLIAMS	VWM-H-L20-730-T 3-DBZ-CLG-DIM-UNV	120 V	25 VA	LED	>70	3000K	WALL 8'-0" AFG	
WPA	STONCO	WP-60-SCT-G2-10-BZ	120 V	60 VA	LED	>70	4000K	WALL 7'-6" AFG	
WPB	STONCO	LPW32-90-4-UNV-BZ	120 V	90 VA	LED	>70	3000K	WALL 12'-0" AFG	
X	BREZZA	BRZ-LR-U-W-AT	120 V	4.5 VA	LED	N/A	N/A	WALL 7'-6" AFF	
XC	BREZZA	BRZ-LR-U-W-AT	120 V	4.5 VA	LED	N/A	N/A	LAY-IN GRID	

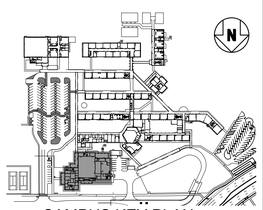
DETAIL NOTES

1. SWITCH BUTTON LABELING INDICATES A DEFAULT SCHEME. OWNER TO PROVIDE ACTUAL LABELING DURING THE CONSTRUCTION PHASE OF THIS PROJECT. IF THE OWNER DOES NOT MAKE ANY DECISION, THEN THE DEFAULT LABELING MAY BE UTILIZED. VERIFY WITH OWNER PRIOR TO PROCEEDING WITH ORDERING OF ANY AND ALL BUTTON ENGRAVING.

Lighting Space and Zones				Sequence of Opperations												Low Voltage Switch Matrix (Button Labels to be designated by owner during installation)									
		ZONE OF CONTROL		CONTROL SCENARIOS												CONNECT TO NETWORKED ROOM CONTROLLER OR LIGHTING CONTROL PANEL					CONNECT TO NON-NETWORKED LOCAL ROOM CONTROL				
Space Type	Room Number	Description	Designator	Manual On	Manual Off	Dimming	Multi-Level Control	Timeclock On	Timeclock Off	Occupancy Sensor On	Vacancy Sensor Off	Partition Sensor	Daylight Harvesting	Photo Sensor On	Fire Alarm System Shutdown / Security System Override to 'On'	SL1 (1-Button)	SL2 (2-Button)	SL3 (3-Button)	SL4 (4-Button)	SL5 (5-Button)	SL6 (8-Button)	SM (Wall sensor)	SLb (4-Button)	SLc (6-Button)	Remarks
CORRIDOR	TYPICAL			X	X		X	X	X	X				X	X		X								SEE LIGHTING CONTROL DETAIL 'A' SWITCH DISABLED DURING REGULAR WORKING HOURS
LOBBY	3-306 4-428			X	X		X	X	X	X				X	X		X								SEE LIGHTING CONTROL DETAIL 'A' SWITCH DISABLED DURING REGULAR WORKING HOURS
ADMIN CIRCULTAON/SUBWAITING	408, 421			X	X		X	X	X	X				X	X		X								SEE LIGHTING CONTROL DETAIL 'A' SWITCH DISABLED DURING REGULAR WORKING HOURS
RECEPTION	4-402			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'J'
HEALTH OFFICE	3-324			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'J'
STORAGE	2-233			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'J'
STORAGE	2-231, 232, 3-304, 4-426, 435, 437, 438, 446, 450			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'L'
STORAGE	2-241, 243			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'B'
TEACHERS DINING	4-440			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'B'
FACULTY LOUNGE	4-422			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'B'
STORAGE	1-101A, 104A, 105A, 106, 3-326, 328, 4-407			X	X					X												X			
CAN WASH	4-454			X	X					X				X	X							X			
LOCKERS	4-449			X	X					X				X	X							X			
LOCKERS	2-236			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'J'
MUSIC LIBRARY	2-238			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'J'
JANITOR	TYPICAL			X	X					X												X			
WORKROOM	3-311			X	X					X												X			
WORKROOM	4-403			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'J'
SINGLE GANG TOILET	TYPICAL			X	X				X	X												X			
SERVING	4-441			X	X		X	X	X	X				X	X		X								SEE LIGHTING CONTROL DETAIL 'A' SWITCH DISABLED DURING REGULAR WORKING HOURS
MULTI-GANG TOILET	1-101, 103, 4-430, 432			X	X		X	X	X	X				X	X		X								SEE LIGHTING CONTROL DETAIL 'K' SWITCH DISABLED DURING REGULAR WORKING HOURS
SECURE LOBBY	4-401			X	X				X	X				X	X		X								SEE LIGHTING CONTROL DETAIL 'A'
ENCLOSED OFFICE	3-307,311-317,327,328, 4-410-413, 425			X	X					X												X			
ENCLOSED OFFICE	2-237, 4-416, 419, 423, 424			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'L'
ENCLOSED OFFICE	4-409			X	X	X				X				X	X				X						SEE LIGHTING CONTROL DETAIL 'C'
CONFERENCE ROOM	3-308, 318, 4-417			X	X	X				X				X	X				X						SEE LIGHTING CONTROL DETAIL 'C'
CAFETERIA	4-436	NORTH CAFETERIA	A	X	X	X				X				X	X		X				X				SEE LIGHTING CONTROL DETAIL 'E'
		MIDDLE CAFETERIA	B																						
		SOUTH CAFETERIA	C																X						
CLASSROOM	2-230	AV	A	X	X	X				X				X	X		X			X					SEE LIGHTING CONTROL DETAIL 'D'
		GENERAL LIGHTING	B																						
CLASSROOM	1-101, 105	AV	A	X	X	X				X				X	X		X			X					SEE LIGHTING CONTROL DETAIL 'F'
		GENERAL LIGHTING	B																						
		AV DAYLIGHT	C									X													
		DAYLIGHT	D																						
CLASSROOM	1-104	AV	A	X	X	X				X	X	X		X	X		X		X		X				SEE LIGHTING CONTROL DETAIL 'G' DISABLE 4-BUTTON SWITCH WHEN PARTITION IS CLOSED.
		GENERAL LIGHTING	B																						
		AV DAYLIGHT	C																						
		DAYLIGHT	D																						
		GENERAL LIGHTING	E														X		X						SEE LIGHTING CONTROL DETAIL 'G' DISABLE 4-BUTTON SWITCH WHEN PARTITION IS OPEN.
		DAYLIGHT	F									X													
BAND ROOM	2-235			X	X					X				X	X		X								SEE LIGHTING CONTROL DETAIL 'H'
Parking Area Lighting	n/a						X	X					X												SEE LIGHTING CONTROL OVERALL RISER
Building Exterior Security Lighting	n/a						X	X					X												SEE LIGHTING CONTROL OVERALL RISER

SWITCH FUNCTION / CONTROL MATRIX

Room #	Low Voltage Switch Button Qty. (Switch Model #)	Zone of Control	Switch Button Number and Correlated Function (Button labels are recommendations and shall be designated by owner during installation)																Additional Notes
			Button #1		Button #2		Button #3		Button #4		Button #5		Button #6		Button #7		Button #8		
			Function	Label	Function	Label	Function	Label	Function	Label	Function	Label	Function	Label	Function	Label	Function	Label	
TYPICAL	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'A' SWITCH DISABLED DURING REGULAR WORKING HOURS
3-306, 4-428	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'A' SWITCH DISABLED DURING REGULAR WORKING HOURS
408, 421	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'A' SWITCH DISABLED DURING REGULAR WORKING HOURS
4-402	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'J'
3-324	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'J'
2-233	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'J'
2-231, 232, 3-304, 4-426, 435, 437, 438, 446, 450	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'L'
2-241, 243	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'B'
4-440	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'B'
4-422	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'B'
2-236	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'J'
2-238	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'J'
4-403	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'J'
4-441	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'A' SWITCH DISABLED DURING REGULAR WORKING HOURS
1-101, 103, 4-430, 432	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'K' SWITCH DISABLED DURING REGULAR WORKING HOURS
4-401	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'A'
2-237, 4-416, 419, 423, 424	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'L'
4-409	4 (LMSW-104-W)		ON	ALL ON	OFF	ALL OFF	DIM UP	RAISE	DIM DOWN	LOWER									SEE LIGHTING CONTROL DETAIL 'C'
3-308, 318, 4-417	4 (LMSW-104-W)																		SEE LIGHTING CONTROL DETAIL 'C'
4-436	2 (LMSW-102-W)	A	ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'E'
		B																	
		C																	
	4 (LMSW-104-W)	A																	
		B																	
		C	ZONE-C ON	C-ON	ZONE-C OFF	C-OFF	ZONE-C DIM UP	RAISE	ZONE-C DIM DOWN	LOWER									
	8 (LMSW-108-W)	A	ZONE-A ON	A-ON	ZONE-A DIM UP	A-RAISE	ZONE-B ON	B-ON	ZONE-B DIM UP	B-RAISE									
		B									ZONE-A OFF	A-OFF	ZONE-A DIM DOWN	A-LOWER	ZONE-B OFF	B-OFF	ZONE-B DIM DOWN	B-LOWER	
		C																	
2-230	2 (LMSW-102-W)	A	ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'D'
		B																	
	5 (LMSW-105-W)	A	RAISE AND LOWER	RAISE - LOWER	ZONE-A ON	A-ON	ZONE-A OFF	A-OFF											
		B							ZONE-B ON	B-ON	ZONE-B OFF	B-OFF							
1-101, 105	2 (LMSW-102-W)	A	ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'F'
		B																	
		C																	
		D																	
	5 (LMSW-105-W)	A	RAISE AND LOWER	RAISE - LOWER	ZONE-A/C ON	A/C-ON	ZONE-A/C OFF	A/C-OFF											SEE LIGHTING CONTROL DETAIL 'F'
		B							ZONE-B/D ON	B/D-ON	ZONE-B.D OFF	B/D-OFF							
		C			ZONE-A/C ON	A/C-ON	ZONE-A/C OFF	A/C-OFF											
		D							ZONE-B/D ON	B/D-ON	ZONE-B/D OFF	B/D-OFF							
1-104	2 (LMSW-102-W)		OPEN PARTITION	OPEN	CLOSE PARTITION	CLOSE													SEE LIGHTING CONTROL DETAIL 'G'
	4 (LMSW-104-W)	A	ZONE-E/F ON	E/F-ON	ZONE-E/F OFF	E/F-OFF	ZONE E/F DIM UP	RAISE	ZONE E/F DIM DOWN	LOWER									SEE LIGHTING CONTROL DETAIL 'G' ENABLE 4-BUTTON SWITCH WHEN PARTITION IS CLOSED.
		B																	
		C																	
		D																	
		E																	
		F																	
	4 (LMSW-104-W)	A	ZONE-E/F ON	E/F-ON	ZONE-E/F OFF	E/F-OFF	ZONE E/F DIM UP	RAISE	ZONE E/F DIM DOWN	LOWER									SEE LIGHTING CONTROL DETAIL 'G' DISABLE 4-BUTTON SWITCH WHEN PARTITION IS OPEN.
		B																	
		C																	
		D																	
		E																	
		F																	
	8 (LMSW-108-W)	A	ZONE-A/C ON	A/C-ON	ZONE-A/C DIM UP	A/C-RAISE	ZONE-B/D ON	B/D-ON	ZONE-B/D DIM UP	B/D-RAISE									SEE LIGHTING CONTROL DETAIL 'G'
		B									ZONE-A/C OFF	A/C-OFF	ZONE-A/C DIM DOWN	A/C-LOWER	ZONE-B/D OFF	B/D-OFF	ZONE-B/D DIM DOWN	B/D-LOWER	
		C																	
		D																	
		E																	
		F																	
2-235	2 (LMSW-102-W)		ON	ALL ON	OFF	ALL OFF													SEE LIGHTING CONTROL DETAIL 'H'



CAMPUS KEY PLAN

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
Commission Number. 21802

SEAL

HG Engineers
142 Eglin Parkway SE
Fort Walton Beach, Florida, 32548

Fl. Authorization No.00006680
Christopher A. Garick; FL. PE No.53924
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www.hgengineers.com
E-mail: office@hgengineers.com
Ph:850.243.6723

CONSULTANTS #2146

REVISIONS

NO.	DATE	DESCRIPTION

DATE 01/06/2025

SUBMITTAL
GMP DOCUMENTS

SCHEDULE

PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
LIGHTING CONTROLS DETAILS AND FIXTURE

SHEET NO.:
E6.4

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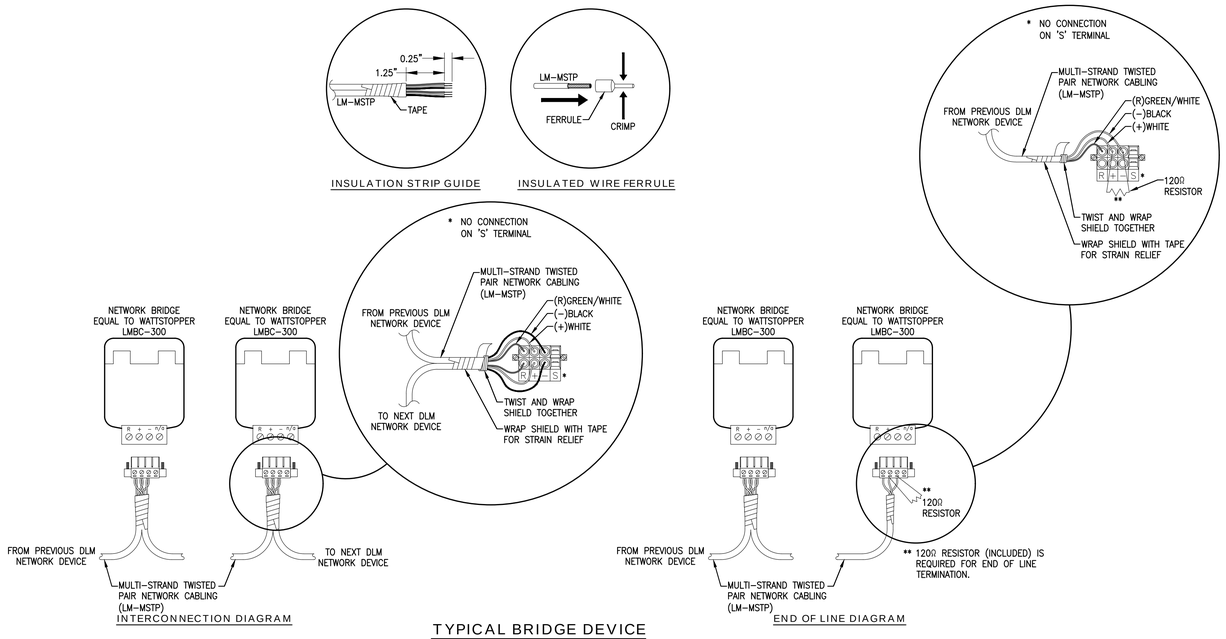
INSULATION STRIP GUIDE

INSULATED WIRE FERRULE



INTERCONNECTION DIAGRAM

END OF LINE DIAGRAM

TYPICAL BRIDGE DEVICE CONNECTION DETAILS

NOT TO SCALE

LIGHTING CONTROL GENERAL NOTES

A. THE DIAGRAMS ARE NOT INTENDED TO SHOW EXACT QUANTITIES OF DEVICES. REFER TO PLAN FOR ESTIMATED DEVICE QUANTITIES AND LOCATIONS.

B. THE LIGHTING CONTROL SYSTEM BASIS OF DESIGN IS WATTSTOPPER DLM PRODUCTS.
OPTIONAL: THE LIGHTING CONTROL SYSTEM WILL INTERFACE WITH THE BMS/BAC SYSTEM USING A COMMONLY ACCEPTED PROTOCOL.

C. THE LOCAL DEVICE INTERCONNECTIONS FOR ALL LIGHTING CONTROL DEVICES SHALL BE OF THE TOPOLOGY FREE TYPE.

D. COLORS FOR ALL DEVICES AND DEVICE COVERS SHALL BE SELECTED BY THE ARCHITECT.

E. ALL DATA LINE SWITCHES SHALL INCLUDE CUSTOM ENGRAVED LABEL INDICATING FUNCTION OF SWITCH. COORDINATE EXACT LABEL DESCRIPTIONS WITH OWNER PRIOR TO INSTALLATION.

F. PROVIDE ADDITIONAL POWER AND CONTROL MODULES AS RECOMMENDED BY THE SYSTEM SUPPLIER.

G. THE DIAGRAMS REPRESENT A TYPICAL SYSTEM AND ARE NOT INTENDED FOR INSTALLATION, SYSTEM SUPPLIER SHALL PROVIDE INSTALLATION DRAWINGS AND WIRING DIAGRAMS.

H. E.C. SHALL COORDINATE FIELD PROGRAMMING OF LIGHTING CONTROL SYSTEM WITH SYSTEM PROGRAMMER, SPECIFYING ENGINEER, AND OWNER TO ENSURE PROPER OPERATION AND TIME SCHEDULES.

I. ALL EMERGENCY AND EXIT LIGHTING CIRCUITS SHALL BE CONNECTED TO CONTINUOUS POWER SOURCE AHEAD OF RELAY PANEL OR INDIVIDUAL RELAY COMPONENTS.

J. INSTALL ALL CEILING SENSORS MINIMUM OF 6FT CLEAR OF DUCT REGISTERS.

K. THE LIGHTING CONTROL AND EMERGENCY LIGHTING SYSTEMS SHALL BE CAPABLE OF BEING ACCESSED VIA THE LOCAL AREA NETWORK AND REMOTELY VIA AUTHORIZED PERSONNEL ONLY.

L. PROGRAMMER / COMMISSIONING AGENT SHALL BE CERTIFIED BY THE EQUIPMENT MANUFACTURER ON THE SYSTEM INSTALLED.

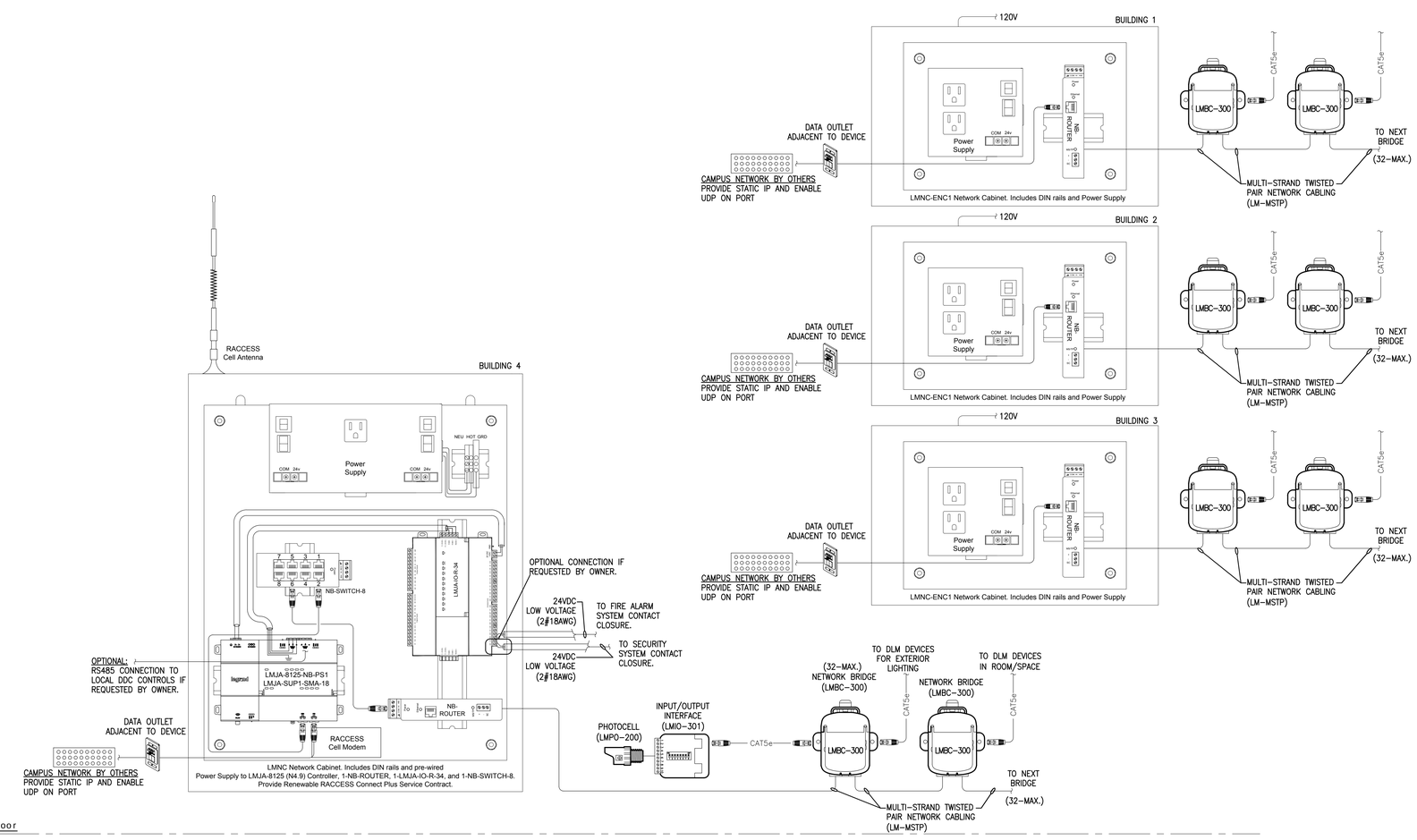
M. THE MANUFACTURER CERTIFIED TECHNICIAN WILL MEET ONSITE WITH THE ELECTRICAL CONTRACTORS TO COORDINATE INSTALLATION DETAILS, REVIEW BEST PRACTICES, AND DISCUSS PROJECT SPECIFIC CHALLENGES; PRIOR TO THE INSTALLATION BEING STARTED, ENABLING THE CONTRACTORS TO WORK WITH THE TECHNICIAN TO PREPARE AND MAKE CHANGES UP FRONT.

N. THE MANUFACTURER'S LIGHTING SYSTEMS TEAM SHALL WORK ONSITE AFTER FIXTURE AND CONTROLS INSTALLATION IS COMPLETED. THE MANUFACTURER'S AGENT IS TO VERIFY THE PROJECT IS REVIEWED AND CHECKED FOR PROPER WIRING, INSTALLATION AND FUNCTIONALITY OF THE SYSTEM AS A WHOLE. ANY PROBLEMS SHALL BE ADDRESSED AND RESOLVED WITH THE ONSITE CONTRACTORS.

O. MANUFACTURER'S TECHNICIANS SHALL MAP OUT THE FIXTURE LOCATIONS AND ADDRESSES WITHIN THE LIGHTING CONTROL SOFTWARE. ASTRONOMIC TIMECLOCK EVENTS, SCENES, AND SCHEDULES ARE PROGRAMMED ACCORDING TO A PRE-DEFINED SCRIPT. THESE EVENTS, SCENES, AND SCHEDULES ARE TESTED AND FINALIZED FOR FINAL APPROVAL BY THE PROJECT'S OWNERSHIP.

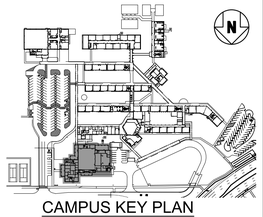
P. MANUFACTURER'S TECHNICIANS SHALL PROVIDE TRAINING FOR SYSTEM USERS AND THE SYSTEM MAINTENANCE TEAM. THE DETAILS OF THE TECHNOLOGY SHALL BE COVERED FROM A MAINTENANCE AND TROUBLESHOOTING POINT OF VIEW. THIS COVERS THE LIGHTING CONTROL SYSTEM AND ITS CORE FUNCTIONALITY, WITH A FOCUS ON HOW TO EDIT EXISTING SCENES AND ASTRONOMIC LIGHTING EVENTS.

Q. THE MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE IN-DEPTH TRAINING TO THE END USER ON MANAGING THE SPECIFIC CONTROL SYSTEM, GIVING THEM THE TOOLS AND KNOWLEDGE TO OPERATE THEIR SYSTEM.



OVERALL LIGHTING CONTROL RISER

NOT TO SCALE



CAMPUS KEY PLAN

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
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E-mail: office@hgengineers.com
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PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
LIGHTING CONTROLS DETAILS

SHEET NO.:
E6.5

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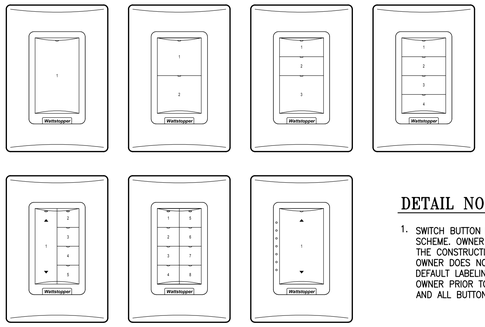
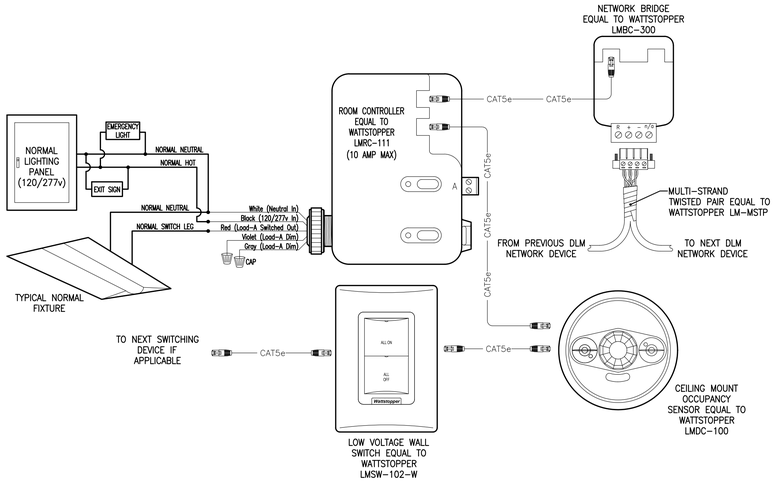


TYPICAL SWITCH BUTTON ARRANGEMENTS

NOT TO SCALE

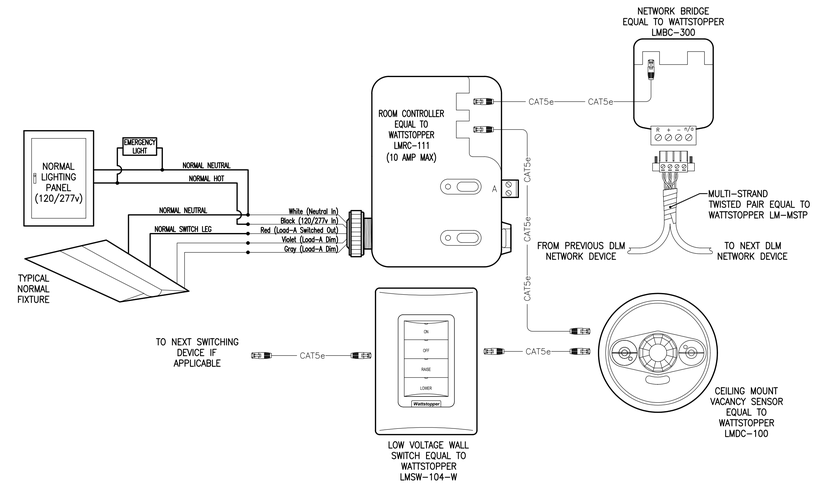
DETAIL NOTES

1. SWITCH BUTTON LABELING INDICATES A DEFAULT SCHEME. OWNER TO PROVIDE ACTUAL LABELING DURING THE CONSTRUCTION PHASE OF THIS PROJECT. IF THE OWNER DOES NOT MAKE ANY DECISION, THEN THE DEFAULT LABELING MAY BE UTILIZED. VERIFY WITH OWNER PRIOR TO PROCEEDING WITH ORDERING OF ANY AND ALL BUTTON ENGRAVING.



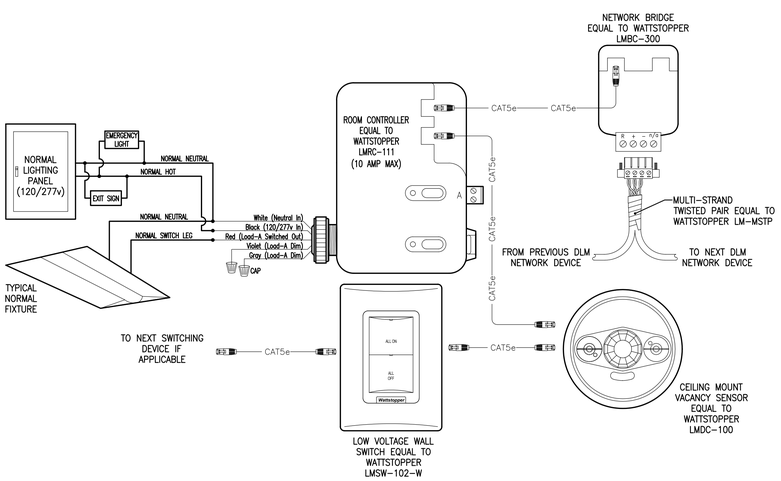
DETAIL 'A'
WITH OCCUPANCY DETECTION

NOT TO SCALE



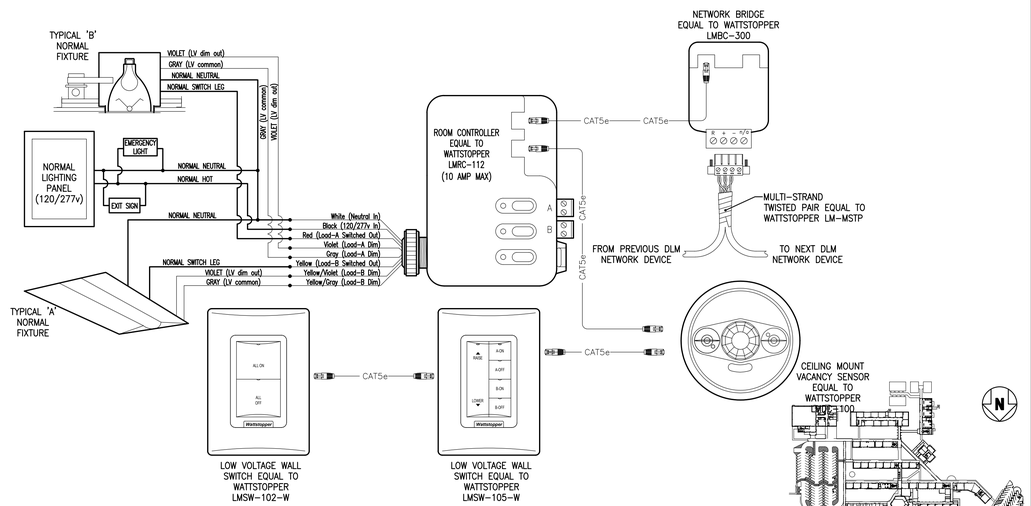
DETAIL 'C'
WITH VACANCY DETECTION AND DIMMING

NOT TO SCALE



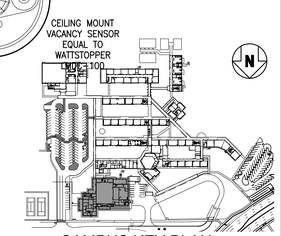
DETAIL 'B'
WITH VACANCY DETECTION

NOT TO SCALE



DETAIL 'D'
WITH VACANCY DETECTION AND DIMMING

NOT TO SCALE



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JRA ARCHITECTS
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TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
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CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
LIGHTING CONTROLS DETAILS

SHEET NO.:
E6.6

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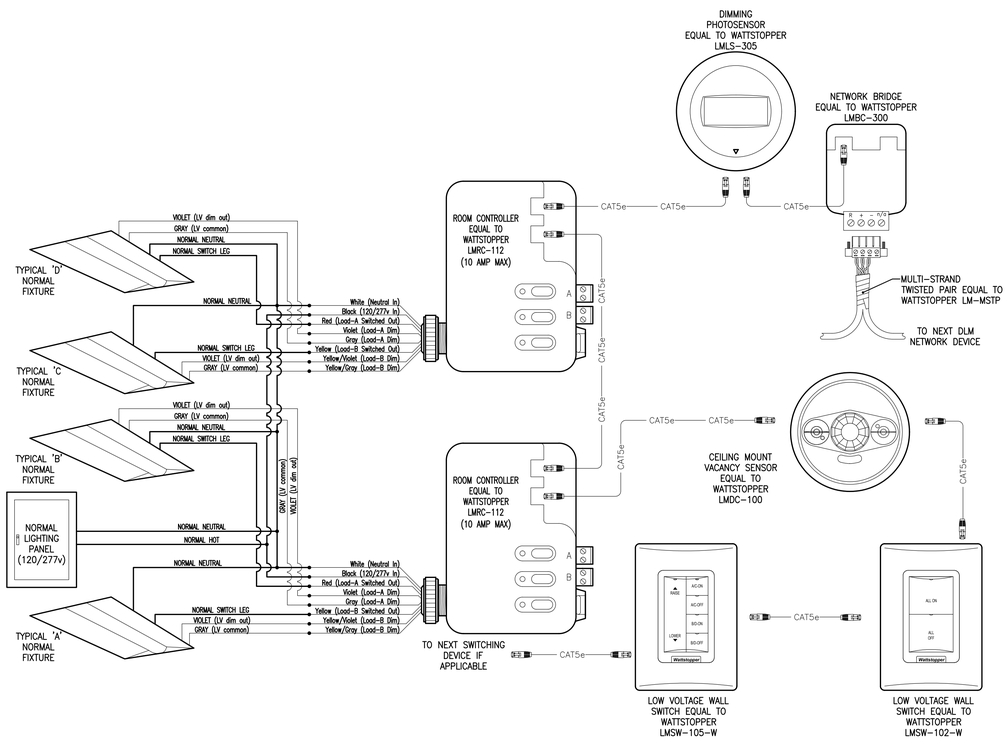
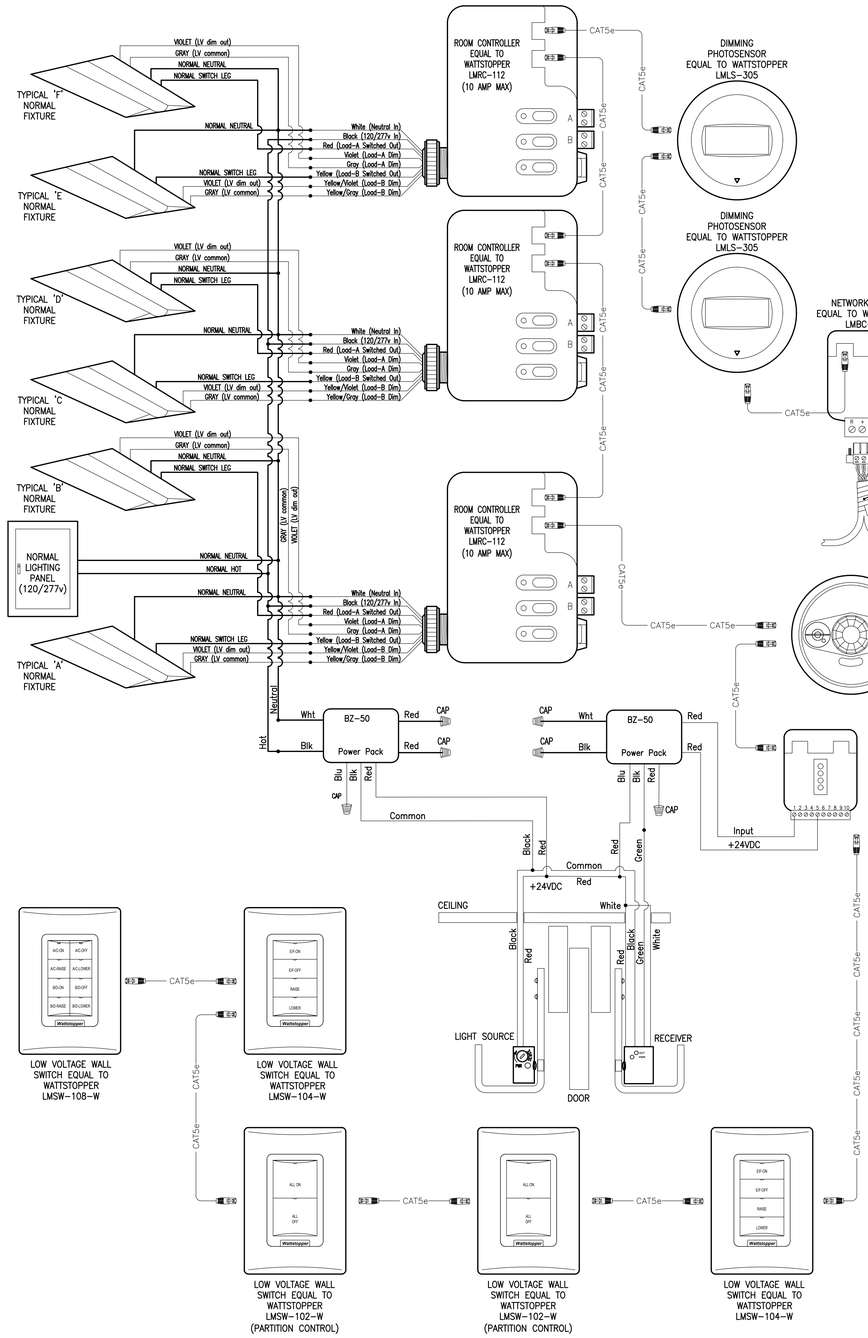


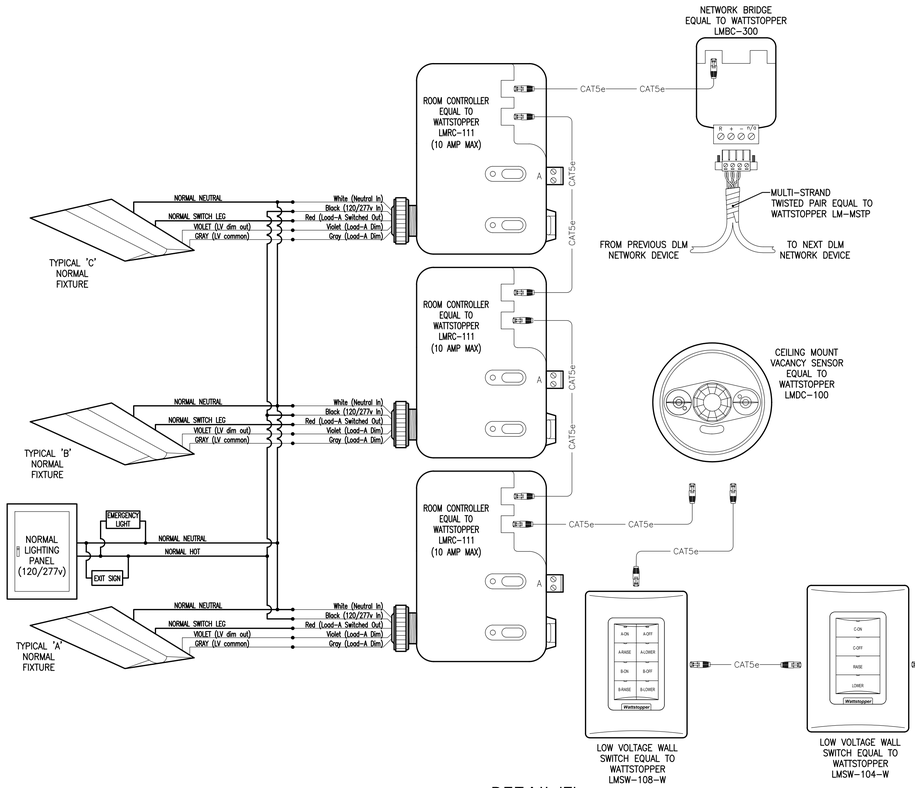
DETAIL 'F'
WITH VACANCY DETECTION, DAYLIGHT HARVESTING AND DIMMING

NOT TO SCALE



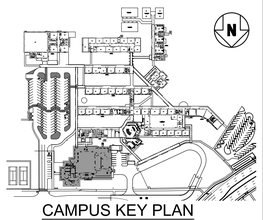
DETAIL 'G'
WITH VACANCY DETECTION, DAYLIGHT HARVESTING, PARTITION DETECTION AND DIMMING

NOT TO SCALE



DETAIL 'E'
WITH VACANCY DETECTION

NOT TO SCALE



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Daniel J. White; FL. PE No.73790
Caleb W. Leonard; FL. PE No.91782

www.hgengineers.com
E-mail: office@hgengineers.com
Ph:850.243.6723

CONSULTANTS #2146

REVISIONS		
NO.	DATE	DESCRIPTION

DATE	
01/06/2025	

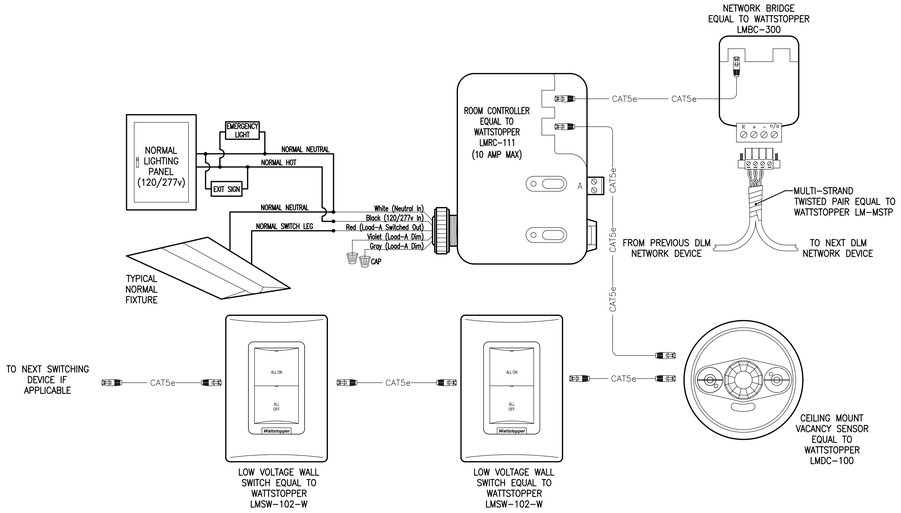
SUBMITTAL
GMP DOCUMENTS

PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
LIGHTING CONTROLS DETAILS

SHEET NO.:
E6.7

R:\DRAWSBY-1131-MM - E6.7 LIGHTING CONTROLS DETAILS.dwg



DETAIL 'H'
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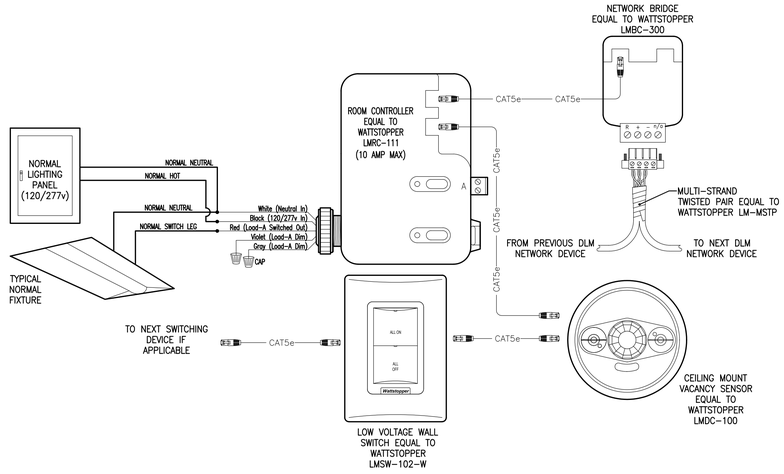

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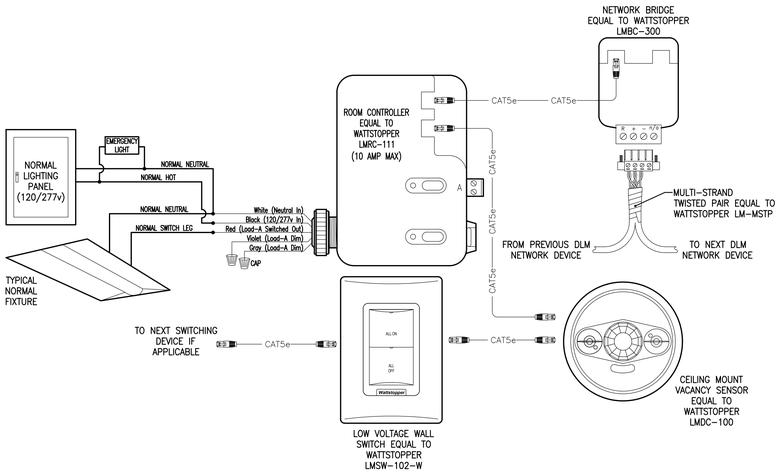

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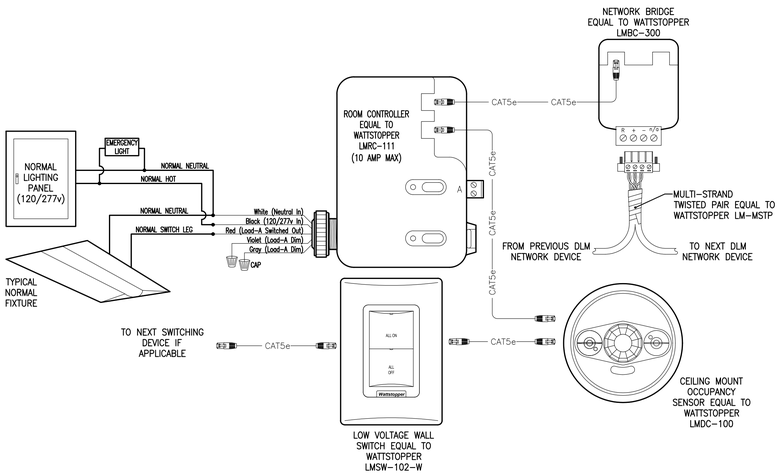

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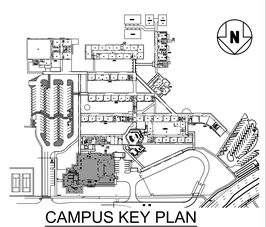

CAMPUS KEY PLAN

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
Commission Number. 21802

SEAL

CONSULTANTS
HG Engineers
142 Eglin Parkway SE
Fort Walton Beach, Florida, 32548

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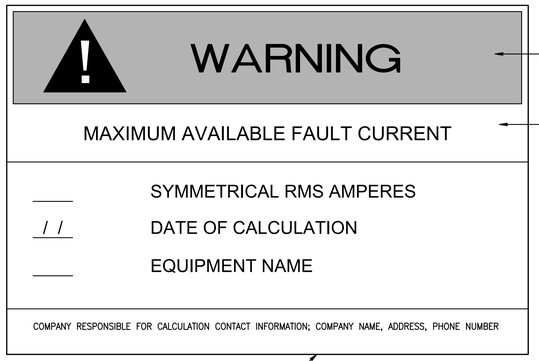
R:\DRAWSBY - 11:32 AM - E6.8 LIGHTING CONTROLS DETAILS.dwg



TYPICAL SERVICE EQUIPMENT FAULT CURRENT LABEL DETAIL

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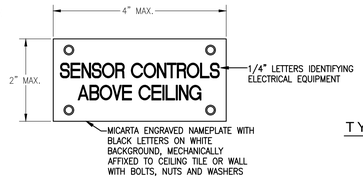

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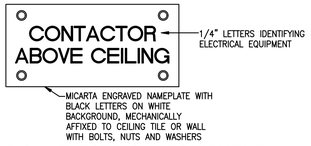

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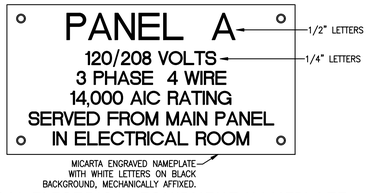

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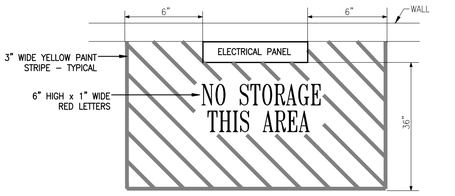
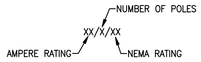


TYPICAL FLOOR MARKING AT ELECTRICAL PANELS

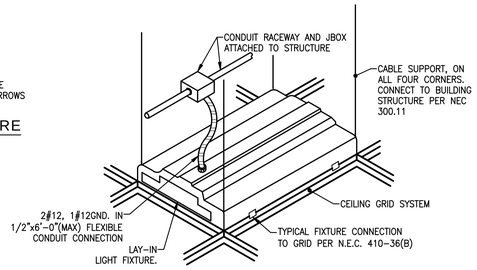
NOT TO SCALE



DISCONNECT SWITCH DESCRIPTION NOMENCLATURE

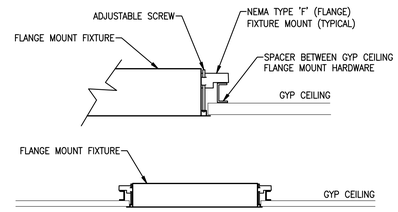
EXIT SIGN NOMENCLATURE

NOT TO SCALE



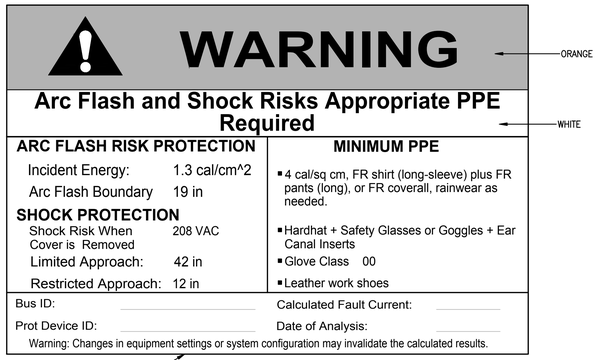
LAY-IN FIXTURE CABLE SUPPORT DETAIL

NOT TO SCALE



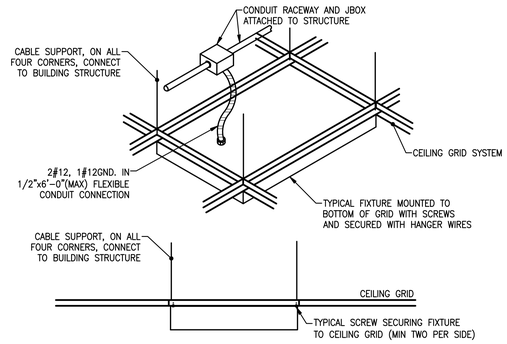
FLANGE MOUNT FIXTURE IN GYP BOARD CEILING

NOT TO SCALE



TYPICAL ARC FLASH HAZARD LABEL DETAIL

NOT TO SCALE



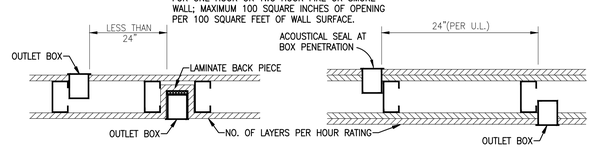
LAY-IN FIXTURE CABLE SUPPORT DETAIL

FIXTURE MOUNTED TO BOTTOM OF CEILING GRID

NOT TO SCALE

note:

FOR ONE HOUR OR TWO HOUR FIRE OR SMOKE WALL; MAXIMUM 100 SQUARE INCHES OF OPENING PER 100 SQUARE FEET OF WALL SURFACE.

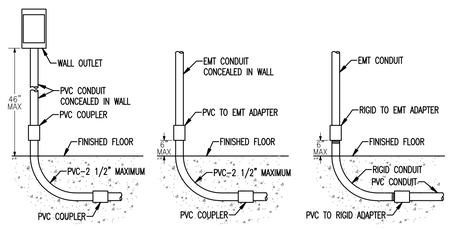


FIVE SIDED ELECTRICAL BOX

ADJACENT ELECTRICAL BOXES

WALL DETAILS - ELECTRICAL BOX INSTALLATION

NOT TO SCALE



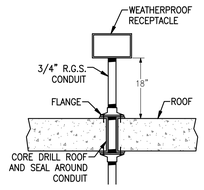
WITH OUTLET BOX

WITHOUT OUTLET BOX

EXPOSED OR FEEDER CONDUIT

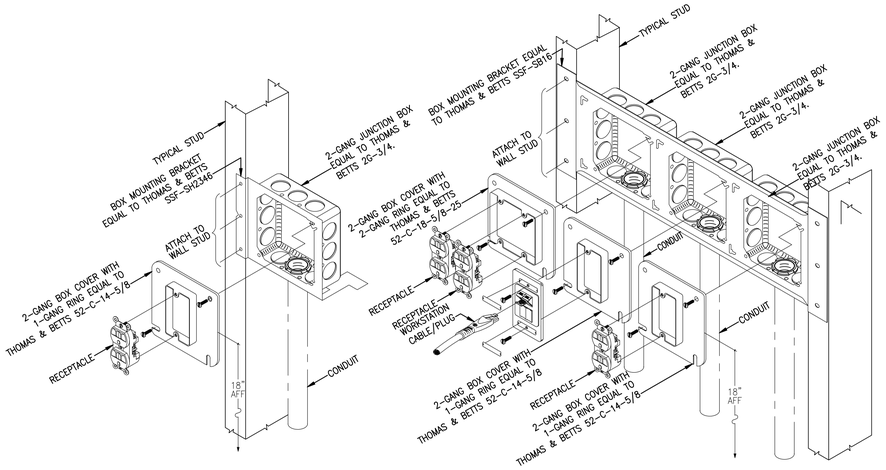
PVC STUB-UP DETAILS

NOT TO SCALE



ROOF MOUNTED WEATHERPROOF RECEPTACLE DETAIL

NOT TO SCALE

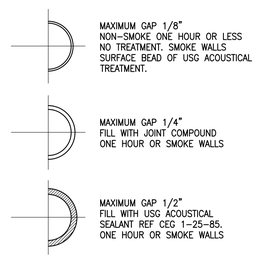


TYPICAL POWER OUTLET INSTALLATION DETAIL

NOT TO SCALE

TYPICAL POWER/COMMUNICATIONS OUTLET INSTALLATION DETAIL

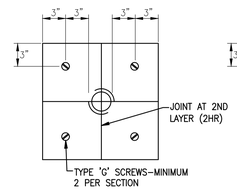
NOT TO SCALE



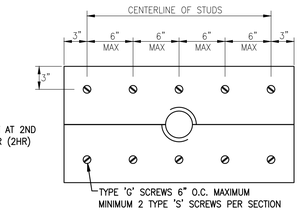
SMALL DIAMETER GAPS IN ONE HOUR WALLS

NOTE:

BUTTER BACK SIDE OF PATCH WITH JOINT COMPOUND-DO NOT STRIKE OFF EXCESS. LEAVE SCREWS EXPOSED



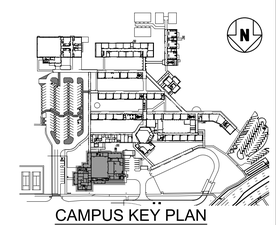
OPENINGS UP TO 3' DIA.



OPENINGS OVER 3' DIA.

WALL PENETRATIONS –APPLIES TO ALL CORRIDOR, SMOKE AND FIRE RATED WALLS

NOT TO SCALE



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CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
ELECTRICAL DETAILS

SHEET NO.:
E6.1

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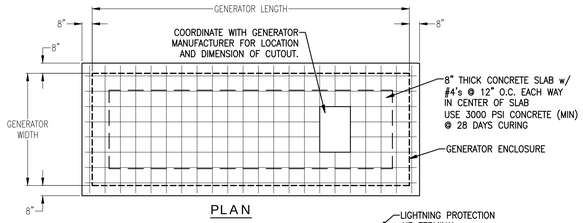
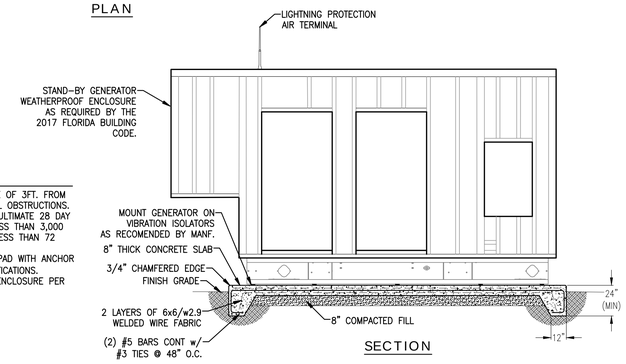


PLAN



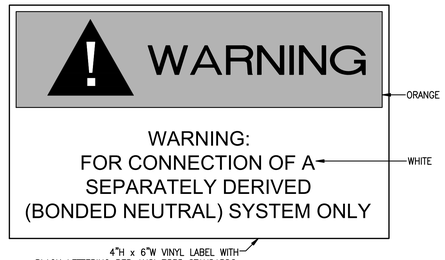
SECTION

NOTES:

1. INSTALL WITH A MINIMUM CLEARANCE OF 3FT. FROM ALL BUILDINGS AND 4 FT. FROM ALL OBSTRUCTIONS.
2. CONCRETE SHALL HAVE A MINIMUM ULTIMATE 28 DAY COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 LBS. PAD SHALL NOT BE CURED LESS THAN 72 HOURS.
3. SECURE GENERATOR TO CONCRETE PAD WITH ANCHOR BOLTS PER MANUFACTURER'S SPECIFICATIONS.
4. PROVIDE LIGHTING PROTECTION ON ENCLOSURE PER NFPA 780.

GENERATOR PAD MOUNTING DETAIL

NOT TO SCALE

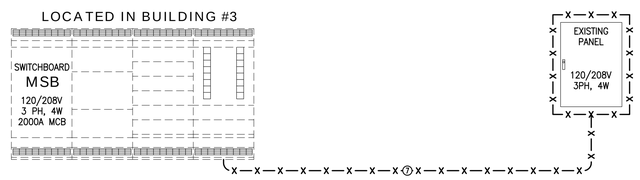


MANUAL TRANSFER SWITCH SYSTEM LABEL DETAIL

NOT TO SCALE

NOTES:

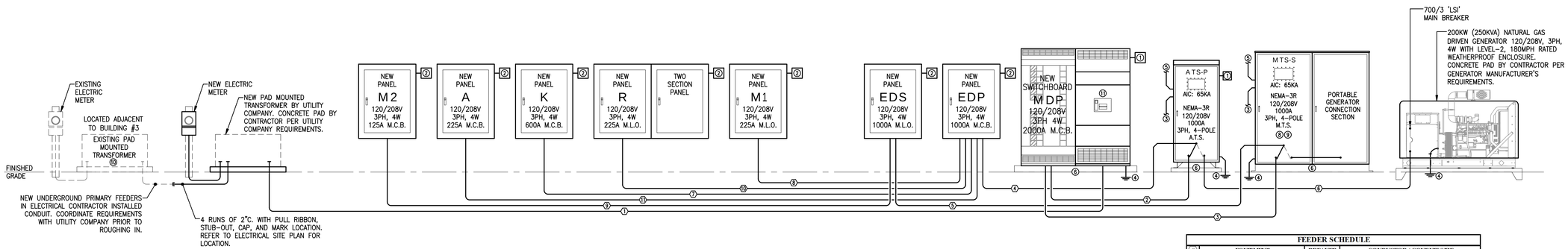
1. INSTALL SURGE PROTECTIVE DEVICE IN BREAKER POSITION NEAREST TO NEUTRAL BAR WITH 3#6, 1#10 GND IN 3/4"C; LEAD LENGTH CANNOT EXCEED UL 1449 4TH EDITION TEST OF 14" – REFER TO SPECS. PROVIDE INTERNAL 60A. FUSING.
2. INSTALL SURGE PROTECTIVE DEVICE IN BREAKER POSITION NEAREST TO NEUTRAL BAR WITH 3#10, 1#10 GND IN 3/4"C; LEAD LENGTH CANNOT EXCEED UL 1449 4TH EDITION TEST OF 14" – REFER TO SPECS. PROVIDE INTERNAL 30A. FUSING.
3. 1" CONDUIT FOR GENERATOR CONTROLS WIRING PER MANUFACTURER'S REQUIREMENTS.
4. REFER TO GROUNDING DETAILS FOR COMPLETE GROUNDING REQUIREMENTS.
5. 1" CONDUIT WITH MANUFACTURER RECOMMENDED CONTROL CABLES TO DDC PANEL. REFER TO MECHANICAL EQUIPMENT SCHEDULE.
6. PROVIDE 4" CONCRETE HOUSKEEPING PAD.
7. EXISTING PANEL FEEDER PREVIOUSLY REMOVED IN PHASE I PORTRION OF THIS PROJECT.
8. INSTALL NEMA 3R; 4-POLE, OPEN TRANSITION MANUAL TRANSFER SWITCH WITH SURGE PROTECTION, PHASE MONITORING, INTEGRAL 2000AMP 'LSIG' BREAKERS ON HOUSE POWER AND GENERATOR SIDES, INTEGRAL PORTABLE GENERATOR CONNECTION CAPABILITY VIA 'CAM STYLE' TYPE CONNECTORS. MANUAL TRANSFER SWITCH EQUAL TO ESL POWER STORM SWITCH SERIES MODEL #SSDX.
9. INSTALL LABEL INDICATING SEPARATELY DERIVED SYSTEM REQUIREMENT. REFER TO "MANUAL TRANSFER SWITCH SYSTEM LABEL DETAIL".
10. EXISTING LIVE FRONT TRANSFORMER TO BE REPLACED (AT UTILITY COMPANY EXPENSE) WITH A NEW DEAD-FRONT TRANSFORMER DURING THE PRIMARY RE-ROUTING PORTION OF THIS WORK. COORDINATE TIMING FOR THIS OCCURRENCE WITH LOCAL UTILITY COMPANY. REFER TO NEW WORK SITE PLAN FOR MORE INFORMATION.
11. PROVIDE SIGNAGE ON PANEL INDICATING THE TYPE AND LOCATION OF THE ON-SITE EMERGENCY GENERATOR PER NEC 701.7(A).



EXISTING SINGLE LINE POWER RISER - BUILDING 4

NOT TO SCALE

Generator Load Calculation Summary		
Load Description	**KVA**	**Amps**
Lighting - Hardened Area Only	**5.15**	14.31
Lighting - Admin Area Only	**2.68**	7.44
Receptacles - Hardened Area Only	**55.20**	153.33
Receptacles - Admin Area Only	**27.94**	77.61
Kitchen Equipment - diversified (65% per NEC 220.56)	**152.58**	423.82
Lift Station	**9.50**	26.40
AHU-4.1 - Non-Hardened Area	**5.66**	15.71
AHU-4.2 - Hardened Area	**15.64**	43.43
AHU-4.3 - Hardened Area	**8.07**	22.42
Shunt Trip Dishwasher in Kitchen	**-52.02**	-144.50
Whole Bldg Total Load (diversified) Permanent Genset Load	**230.39**	639.98
Genset 200KW (200KW(250kva) - 695 amps)	250.00	695.00
Entire Building 4 (all lights and receptacles) No cool air (air circulation only)		



NEW WORK SINGLE LINE POWER RISER - BUILDING 4

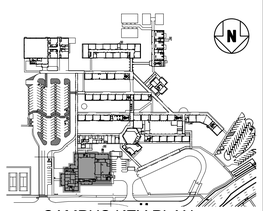
NOT TO SCALE

FEEDER SCHEDULE											
DESIGNATION	EQUIPMENT		BREAKER		CONDUCTOR / CONDUIT SIZE						
							CONDUCTORS				
	SOURCE	TERMINATION	TRIP	POLE	RUNS	CONDUIT	QTY.	SIZE	GND	MATERIAL
1	UTILITY XFMR	MDP	2000	3	6	3"	4	#400kcmil	-	CU
2	MDP	ATS-P	1000	3	4	3"	4	#250kcmil	#2/0	CU
3	MDP	MTS-S	1000	3	4	3"	4	#250kcmil	#2/0	CU
4	ATS-P	EDP	1000	3	4	3"	4	#250kcmil	#2/0	CU
5	MTS-S	EDS	1000	3	4	3"	4	#250kcmil	#2/0	CU
6	GENSET	ATS-P	700	3	3	2-1/2"	4	#250kcmil	#1/0	CU
7	EDP	K	600	3	2	3"	4	#350kcmil	#1	CU
8	EDP	M1	225	3	1	2-1/2"	4	#4/0	#4	CU
9	EDS	M2	125	3	1	1-1/2"	4	#1	#6	CU
10	EDP	R	225	3	1	2-1/2"	4	#4/0	#4	CU
11	EDP	A	225	3	1	2-1/2"	4	#4/0	#4	CU

*** SPECIAL NOTE ***
PROVIDE 'LSI' TRIP UNITS FOR BREAKERS GREATER THAN OR EQUAL TO 200A.

LINETYPE LEGEND

- NEW EQUIPMENT
- EXISTING TO REMAIN
- —x—x—x— EXISTING TO BE REMOVED



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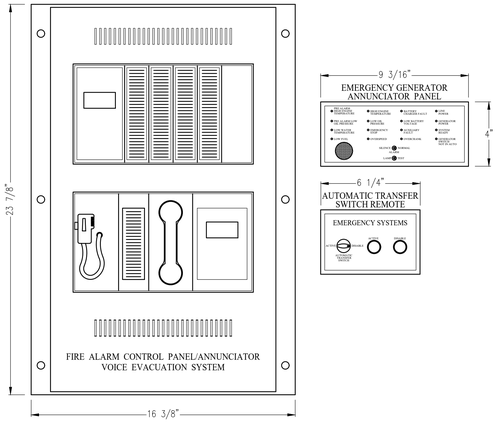
PANAMA CITY, FLORIDA

SHEET TITLE:
BUILDING 4 - SINGLE LINE POWER RISER

SHEET NO.:
E7.4

P:\PROJ\397 - 11:32 AM - E7.4 BUILDING 4 - SINGLE LINE POWER RISER.dwg



NEW FIRE ALARM CONTROL PANEL ELEVATION
BUILDING #4 - RECEPTION RM. #4-402

NOT TO SCALE

FIRE ALARM RISER GENERAL NOTES

A. THIS DIAGRAM IS NOT INTENDED TO SHOW EXACT QUANTITIES OF DEVICES. REFER TO PLAN FOR DEVICE QUANTITIES AND LOCATIONS.

B. THE RISER REPRESENTS A TYPICAL SYSTEM AND IS NOT INTENDED FOR INSTALLATION, SYSTEM SUPPLIER SHALL PROVIDE INSTALLATION DRAWINGS AND WIRING DIAGRAMS.

C. PROVIDE ADDITIONAL MONITOR AND CONTROL MODULES AS RECOMMENDED BY THE SYSTEM SUPPLIER.

D. FIRE ALARM SYSTEM SHALL HAVE U.L. APPROVED DIGITAL ALARM DIALER/COMMUNICATOR TO SEND ALARM SIGNAL TO MONITORING SERVICE.

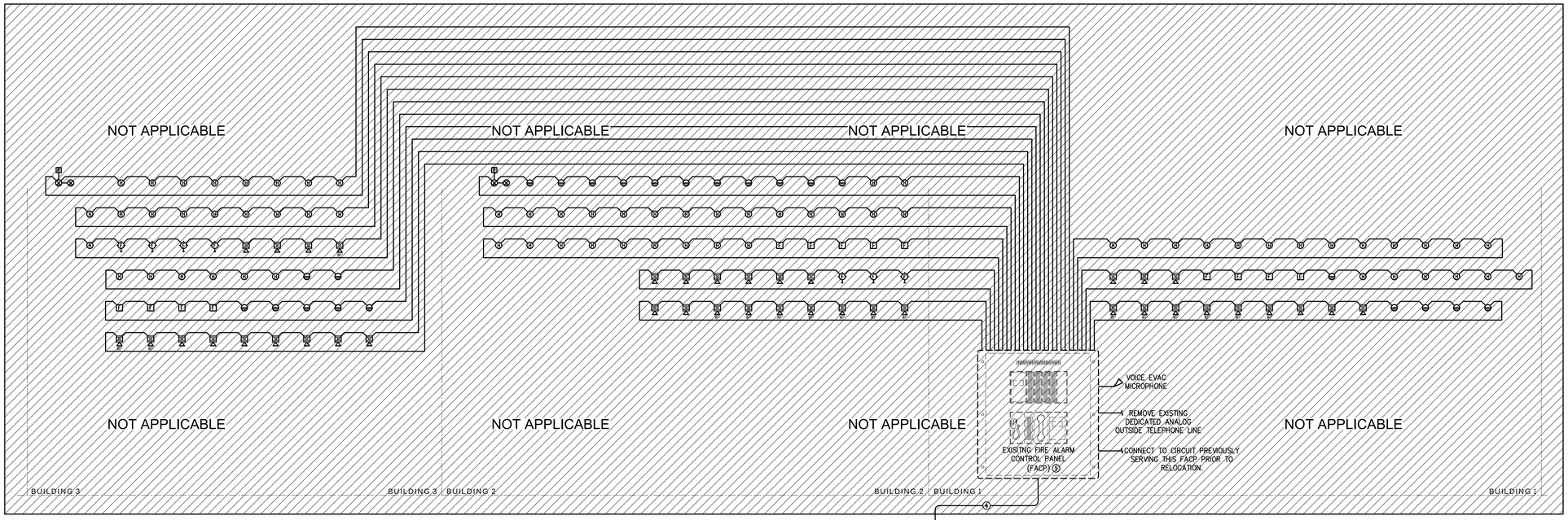
E. FIRE ALARM SYSTEM LOW VOLTAGE SOURCE AND BATTERY STAND-BY SHALL ENERGIZE ALL ITEMS IN FIRE ALARM SYSTEM THAT REQUIRE POWER.

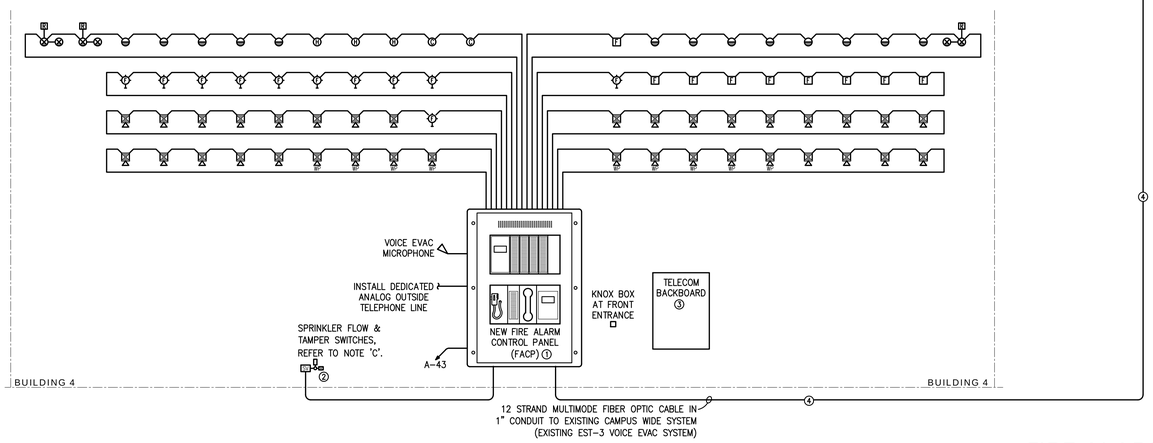
F. REFER TO MECHANICAL DRAWINGS FOR SMOKE AND/OR SMOKE/FIRE DAMPER LOCATIONS. CONNECT TO FIRE ALARM SYSTEM AND TO 120V POWER.

G. VERIFY LOCATION AND QUANTITIES OF FLOW AND TAMPER SWITCHES WITH SPRINKLER CONTRACTOR.

NOTES:

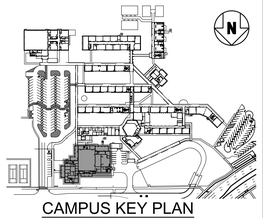
1. NEW FIRE ALARM CONTROL PANEL/ANNUNCIATOR. PROVIDE FIBER INTERCONNECTION, AND COMPLETE COMPATIBILITY WITH THE EXISTING CAMPUS FIRE ALARM SYSTEM (EST-3 VOICE EVACUATION SYSTEM) BEING RELOCATED TO ELECTRICAL ROOM #1-108.
2. BUILDING SPRINKLER FLOW AND TAMPER SWITCH. VERIFY EXACT LOCATION WITH SPRINKLER CONTRACTOR.
3. TELECOMMUNICATIONS BACKBOARD. CONNECT FIRE ALARM CONTROL PANEL FOR OUTSIDE COMMUNICATIONS LINE CAPABILITY.
4. INSTALL 1" CONDUIT UNDERGROUND TO CAMPUS WIDE FIRE ALARM SYSTEM. INSTALL FIBER CONNECTION AND ALL NECESSARY ACCESSORIES TO PROVIDE A FULLY FUNCTIONAL INTEGRATED SYSTEM. COORDINATE EXISTING SYSTEM COMPATIBILITY REQUIREMENTS PRIOR TO PURCHASING EQUIPMENT. REFER TO SITE PLAN FOR LOCATION INFORMATION. APPROPRIATE FIBER OPTIC CABLE ROUTING TO BE DETERMINED IN THE FIELD BY THE FIRE ALARM SYSTEM INSTALLER.
5. EXISTING FIRE ALARM CONTROL PANEL/ANNUNCIATOR (EST-3 VOICE EVACUATION SYSTEM) BEING RELOCATED TO ELECTRICAL ROOM #1-108. PROVIDE FIBER INTERCONNECTION AND COMPLETE COMPATIBILITY WITH THE NEW CAMPUS FIRE ALARM SYSTEM. INSTALL NEW FIBER CONNECTIVITY CARD IF REQUIRED. IN ACCORDANCE WITH NFPA 101 (LIFE SAFETY CODE), THE CONTRACTOR SHALL PROVIDE FIRE WATCH DURING THE TIME THE CAMPUS WIDE FIRE ALARM CONTROL PANEL IS REMOVED UNTIL THE TIME IT IS RELOCATED AND APPROVED AS AN OPERABLE SYSTEM. THE FIRE WATCH SHALL BE ON-SITE DURING THIS TIME.





FIRE ALARM SYSTEM RISER

NOT TO SCALE



CAMPUS KEY PLAN

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
Commission Number. 21802

SEAL

HG Engineers
142 Eglin Parkway SE
Fort Walton Beach, Florida, 32548

FL Authorization No.00006680
Christopher A. Garick; FL. PE No.53924
Thomas A. Alexander; FL. PE No.73172
Daniel J. White; FL. PE No.73790
Caleb W. Leonard; FL. PE No.91782

www.hgengineers.com
E-mail: office@hgengineers.com
Ph:850.243.6723

CONSULTANTS #2146

REVISIONS

NO.	DATE	DESCRIPTION

SUBMITTAL

	DATE
GMP DOCUMENTS	01/06/2025

PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
FIRE ALARM RISER

SHEET NO.:
E7.5

P:\ORKNSBY - 11:33 AM - E7.5 FIRE ALARM RISER.dwg

BDLG #4 - MAIN DISTRIBUTION SWITCHBOARD

PANEL-MDP

SYSTEM 208/120V 3Φ 4W
RATING 2000A M.C.B. 65,000 AIC MINIMUM
ENCLOSURE NEMA 1 SURFACE MOUNT
OPTIONS BOLT ON BREAKERS; SERVICE ENTRANCE RATED

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	ATS-P (PANEL-EDP)	1000	3**	303079	247966	**3	1000	MTS-S (PANEL EDS)	2
3	----	---	-	-	-	-	---	----	4
5	----	---	-	-	-	-	---	----	6
7	SPACE ONLY (225A FRAME)	---	3	-	0	3	60	SPACE ONLY (60A FRAME)	8
9	----	---	-	-	-	-	---	----	10
11	----	---	-	-	-	-	---	----	12
13	SPACE ONLY (125A FRAME)	---	3	-	0	3	60	SURGE PROTECTIVE DEVICE	14
15	----	---	-	-	-	-	-	----	16
17	----	---	-	-	-	-	-	----	18

TOTAL CONNECTED LOAD = 551045 VA / 360 = 1530.7 A

NOTES:
* PROVIDE 'LSIG' MAIN CIRCUIT BREAKER
** PROVIDE 'LSI' CIRCUIT BREAKER

BLDG #4 - EMERG. DISTRIBUTION PANEL - PRIMARY

PANEL-EDP

SYSTEM 208/120V 3Φ 4W
RATING 1000A M.C.B. 42,000 AIC MINIMUM
ENCLOSURE NEMA 3R SURFACE MOUNT
OPTIONS BOLT ON BREAKERS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	PANEL-M1	225	**3	38086	55286	3**	225	PANEL-R	2
3	----	---	-	-	-	-	---	----	4
5	----	---	-	-	-	-	---	----	6
7	PANEL-K	600	**3	152576	54531	3**	225	PANEL-A	8
9	----	---	-	-	-	-	---	----	10
11	----	---	-	-	-	-	---	----	12
13	GENERATOR BATTERY CHARGER	20	1	200	2400	2	20	GENERATOR BLOCK HEATER	14
15	SPARE	20	1	-	-	-	---	----	16
17	SPACE ONLY	---	1	-	-	-	-	SPACE ONLY	18
19	SPACE ONLY	---	1	-	0	3	30	SURGE PROTECTIVE DEVICE	20
21	SPACE ONLY	---	1	-	-	-	-	----	22
23	SPACE ONLY	---	1	-	-	-	-	----	24

TOTAL CONNECTED LOAD = 303079 VA / 360 = 841.9 A

NOTES:
* PROVIDE 'LSI' MAIN CIRCUIT BREAKER
** PROVIDE 'LSI' CIRCUIT BREAKER

BLDG #4 - EMERG. DISTRIBUTION SWITCHBOARD - SECONDARY

PANEL-EDS

SYSTEM 208/120V 3Φ 4W
RATING 1000A M.C.B. 42,000 AIC MINIMUM
ENCLOSURE NEMA 3R SURFACE MOUNT
OPTIONS BOLT ON BREAKERS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	CH-1 CHILLER	350	**3	111880	23186	3**	125	PANEL-M2	2
3	----	---	-	-	-	-	---	----	4
5	----	---	-	-	-	-	---	----	6
7	HEAT TRACE FOR CHILLER PIPING	1200	1	20	110880	3	350	CH-2 CHILLER	8
9	SPARE	20	1	-	-	-	-	----	10
11	SPACE ONLY	---	1	-	-	-	-	----	12
13	SPACE ONLY	---	1	-	2000	2	30	ROADSIDE SIGN	14
15	SPACE ONLY	---	1	-	-	-	-	----	16
17	SPACE ONLY	---	1	-	-	1	-	SPACE ONLY	18
19	SPACE ONLY	---	1	-	-	3	30	SURGE PROTECTIVE DEVICE	20
21	SPACE ONLY	---	1	-	-	-	---	----	22
23	SPACE ONLY	---	1	-	-	-	---	----	24

TOTAL CONNECTED LOAD = 247966 VA / 360 = 688.8 A

NOTES:
* PROVIDE 'LSI' MAIN CIRCUIT BREAKER
** PROVIDE 'LSI' CIRCUIT BREAKER

BLDG #4 - KITCHEN EQUIPMENT PANEL

PANEL-K

SYSTEM 208/120V 3Φ 4W
RATING 600A M.C.B.* 42,000 AIC MINIMUM
ENCLOSURE NEMA 4X RECESSED MOUNT
OPTIONS BOLT ON BREAKERS; STAINLESS STEEL ENCLOSURE

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	ITEM 135.2 - UDS	**300	3	77724	500	1	20	ITEM 135.2 - UDS CONTROLS	2
3	----	--	-	-	1224	1	20	ITEM 102 - AIR CURTAIN	4
5	----	--	-	-	348	1	20	ITEM 111, 112, & 178 - CONV. REC	6
7	ITEM 135.2 - UDS SHUNT TRIP	20	1	-	888	1	20	ITEM 115 - REFRIGERATOR	8
9	ITEM 114 - DISPENSER HOT WATER	30	2	4992	672	1	20	ITEM 117 - SLICER	10
11	----	--	-	-	960	1	20	ITEM 118 - MIXER	12
13	ITEM 123 - CONV. REC	20	1	360	1440	1	20	ITEM 126 - FOOD PROCESSOR	14
15	ITEM 124 - DISPOSER	20	3	2376	540	1	20	ITEM 130 - CONV. REC	16
17	----	--	-	-	360	1	20	ITEM 140 - REC - CEILING	18
19	----	--	-	-	2000	1	20	ITEM 143 - WARMING/PROOFING CABINET	20
21	ITEM 145 - CONV. REC	20	1	900	1440	1	20	ITEM 149 - ICE MAKER	22
23	ITEM 154 - WASHER	20	1	1200	5000	2	20	ITEM 155 - DRYER	24
25	ITEM 165 - WARMING CABINET PASS THRU	20	2	3000	-	-	--	----	26
27	----	--	-	-	888	1	20	ITEM 166 - REFRIGERATOR PASS THRU	28
29	ITEM 167 - SPRAY SYSTEM WALL MOUNT	20	1	1800	888	1	20	ITEM 166 - REFRIGERATOR PASS THRU	30
31	ITEM 165 - WARMING CABINET PASS THRU	20	2	3000	20800	2	100	ITEM 171 - SERVING COUNTER	32
33	----	--	-	-	-	-	--	----	34
35	ITEM 170, 181, &183	20	1	764	764	1	20	ITEM 170, 181, &183	36
37	ITEM 178 - ICE CREAM	20	1	336	764	1	20	ITEM 170, 181, &183	38
39	ITEM 188 - DISPOSER	20	3	4572	52020	3	**175	ITEM 191 - DISHWASHER	40
41	----	--	-	-	-	-	--	----	42
43	----	--	-	-	-	-	--	----	44
45	ITEM 192 - WARE WASHER BLOWER/DRYER	20	1	520	-	1	20	ITEM 191 - DISHWASHER SHUNT TRIP	46
47	ITEM 136 - KEF-1	20	3	2052	6120	3	20	ITEM 192 - TURBOWASH WITH ELEC HEAT	48
49	----	--	-	-	-	-	--	----	50
51	----	--	-	-	-	-	--	----	52
53	ITEM 136 - KEF-2	20	3	2052	2988	1	20	ITEM 137 - KSF-1	54
55	----	--	-	-	-	-	--	----	56
57	----	--	-	-	-	-	--	----	58
59	ITEM 135.1 - FIRE PROTECTION SYSTEM	20	1	756	756	1	20	ITEM 190.1 - DEF-1	60
61	ITEM 105 - WALK-IN COOLER	20	3	3816	7740	3	30	ITEM 105.1 - WALK-IN FREEZER	62
63	----	--	-	-	-	-	--	----	64
65	----	--	-	-	-	-	--	----	66
67	ITEM 106.1 - EVAPORATOR COIL FREEZER	20	2	2850	11556	3	50	ITEM 106.2 - REMOTE CONDENSER RACK	68
69	----	--	-	-	-	-	--	----	70
71	ITEM 106 - EVAPORATOR COIL COOLER	20	1	206	-	-	-	----	72
73	ITEM 105 - WALK-IN COOLER/FREEZER CONTROLS	20	1	300	500	1	20	ITEM 135 - ISLAND EXHAUST HOOD CONTROLS	74
75	SPARE	20	1	-	-	1	20	SPARE	76
77	SPARE	20	1	-	-	1	20	SPARE	78
79	SPARE	20	1	-	-	3	30	SURGE PROTECTIVE DEVICE	80
81	SPARE	20	1	-	-	-	-	----	82
83	SPARE	20	1	-	-	-	-	----	84

TOTAL CONNECTED LOAD = 234732 VA / 360 = 652.0 A

TOTAL DIVERSIFIED LOAD (N.E.C. 220.56) = 152576 VA / 360 = 423.8 A

NOTES:
* PROVIDE 'LSI' MAIN CIRCUIT BREAKER
** PROVIDE SHUNT TRIP BREAKER

BLDG #4 - LTS/REC PANEL

PANEL-A

SYSTEM 208/120V 3Φ 4W
RATING 225A M.C.B. 22,000 AIC MINIMUM
ENCLOSURE NEMA 1 SURFACE MOUNT
OPTIONS BOLT ON BREAKERS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	REC - PRINCIPAL OFFICE	20	1	1300	1120	1	20	REC - ADMIN SECRETARY OFFICE	2
3	REC - REGISTRAR OFFICE	20	1	1300	1300	1	20	REC - OFFICE	4
5	REC - GUIDANCE OFFICE	20	1	1120	900	1	20	REC - CORR, RECORDS STORAGE	6
7	REC - ASSIST PRINCIPAL OFFICE	20	1	1120	1620	1	20	REC - CONF RM	8
9	REC - CORR. SUBWAITING	20	1	720	1120	1	20	REC - GUIDANCE OFFICE	10
11	REC - TOILET	20	1	1500	1500	1	20	REC - TOILET	12
13	REC - FACULTY LOUNGE	20	1	900	1200	1	20	REC - FACULTY LOUNGE COUNTERTOP	14
15	REC - FACULTY LOUNGE COUNTERTOP	20	1	1200	1120	1	20	REC - ADMIN ASSISTANT OFFICE	16
17	REC - ADMIN ASSISTANT OFFICE	20	1	1120	1300	1	20	REC - SRO OFFICE	18
19	REC - RECEPTION	20	1	1520	940	1	20	REC - RECEPTION	20
21	REC - WORKROOM/MAILROOM	20	1	900	180	1	20	REC - WORKROOM/MAILROOM	22
23	REC - FRIDGE FACULTY LOUNGE	20	1	1800	720	1	20	REC - CIRCULATION, SUPPLIES, JANITOR	24
25	REC - PRINCIPAL BATHROOM	20	1	1500	360	1	20	REC - CORR, MECHANICAL	26
27	LTS - RM 401-403, 419, 420, 422-425, 427	20	1	1247	1492	1	20	LTS - RM 405-418, 421, 426	28
29	AHU-4.1	35	3	5656	60	1	20	LTS - FLAG POLE	30
31	----	-	-	-	800	1	20	ITU-4.1.1-4.1.16	32
33	----	-	-	-	600	1	20	DRINKING FOUNTAIN (EWC)	34
35	REC - TELECOM	20	1	720	720	1	20	REC - TELECOM	36
37	REC - TELECOM	20	1	720	720	1	20	REC - TELECOM	38
39	REC - TELECOM	20	1	720	720	1	20	REC - TELECOM	40
41	REC-COPIER-WORKROOM 403	20	1	1200	4576	2	30	DSHP-4.1 / WM-4.1.1	42
43	FACP - RECEPTION	20	1	1200	-	-	--	----	44
45	ELECTRIC GATE	20	2	2000	2000	2	30	ROADSIDE SIGN	46
47	----	-	-	-	-	-	-	----	48
49	SPARE	20	1	-	-	1	20	SPARE	50
51	SPARE	20	1	-	-	1	21	SPARE	52
53	SPARE	20	1	-	-	1	22	SPARE	54
55	SPARE	20	1	-	-	1	23	SPARE	56
57	SPARE	20	1	-	-	1	24	SPARE	58
59	SPARE	20	1	-	-	1	25	SPARE	60
61	SPARE	20	1	-	-	1	26	SPARE	62
63	SPARE	20	1	-	-	1	27	SPARE	64
65	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	66
67	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	68
69	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	70
71	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	72
73	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	74
75	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	76
77	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	78
79	SPACE ONLY	-	1	-	-	3	30	SURGE PROTECTIVE DEVICE	80
81	SPACE ONLY	-	1	-	-	-	-	----	82
83	SPACE ONLY	-	1	-	-	-	-	----	84

TOTAL CONNECTED LOAD = 54531 VA / 360 = 151.5 A

NOTES:
* PROVIDE 'LSI' MAIN CIRCUIT BREAKER

BLDG #4 - LTS/REC PANEL

PANEL-R

SYSTEM 208/120V 3Φ 4W
RATING 225A M.L.O. 42,000 AIC MINIMUM
ENCLOSURE NEMA 1 SURFACE MOUNT
OPTIONS BOLT ON BREAKERS; TWO EQUAL SECTIONS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	LTS - DINING/ MULITPURPOSE	20	1	1660	1357	1	20	LTS - RM 4-404, 436, 428-431	2
3	LTS - RM 4-432-435,441, 442, 444-449, 453	20	1	1573	644	1	20	LTS - RM 4-437-440A, 450, 454	4
5	LTS - EXTERIOR	20	1	1192	800	1	20	REC-DINING-FLAT PANELS	6
7	EF-4.3 - WOMEN 4-432	20	1	492	600	1	20	REC-DINING-FLAT PANELS	8
9	AUDIT VISUAL EQUIPMENT RACK	20	1	500	1000	1	20	PROJECTION SCREEN - PROJECTOR	10
11	AUDIT VISUAL EQUIPMENT RACK	20	1	500	1584	1	20	REC-DINING	12
13	REC-DINING	20	1	1584	1584	1	20	REC-DINING	14
15	REC-DINING	20	1	1584	1584	1	20	REC-DINING	16
17	REC-DINING	20	1	1584	1584	1	20	REC-DINING	18
19	REC-DINING	20	1	1584	1584	1	20	REC-DINING	20
21	HAND DRYER-MEN	20	1	1500	1584	1	20	REC-DINING	22
23	HAND DRYER-MEN	20	1	1500	1584	1	20	REC-DINING	24
25	HAND DRYER-WOMEN	20	1	1500	1584	1	20	REC-DINING	26
27	REC - MENS BATHROOM	20	1	1200	1200	1	20	REC - MENS BATHROOM	28
29	REC - WOMANS BATHROOM	20	1	1200	1200	1	20	REC - WOMANS BATHROOM	30
31	HAND DRYER-WOMEN	20	1	1500	1260	1	20	REC - STORAGE, JANITOR, VEST, LOBBY	32
33	REC - KITCHEN	20	1	900	940	1	20	REC - KITCHEN OFFICE	34
35	REC - LOCKERS, JANITOR, MECHANICAL	20	1	900	1500	1	20	REC - KITCHEN BATHROOM	36
37	SPARE	20	1	-	1260	1	20	REC - KITCHEN, SERVING, STORAGE	38
39	REC - ELECTRICAL ROOM/EQUIPT. YARD	20	1	720	900	1	20	REC - TEACHER DINING, OUTDOOR DINING	40
41	REC - BATHROOM	20	1	1500	1200	1	20	REC - TEACHER DINING REF	42
43	REC -TEACHER DINING COUNTERTOP	20	1	1200	1200	1	20	REC - TEACHER DINING COUNTERTOP	44
45	REC - STORAGE, MECHANICAL	20	1	1080	600	1	20	DRINKING FOUNTAIN (EWC)	46
47	SPARE	20	1	-	-	1	20	SPARE	48
49	SPARE	20	1	-	-	1	20	SPARE	50
51	SPARE	20	1	-	-	1	20	SPARE	52
53	SPARE	20	1	-	-	1	20	SPARE	54
55	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	56
57	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	58
59	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	60
61	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	62
63	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	64
65	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	66
67	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	68
69	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	70
71	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	72
73	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	74
75	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	76
77	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	78
79	SPACE ONLY	-	-	-	-	3	30	SURGE PROTECTIVE DEVICE	80
81	SPACE ONLY	-	-	-	-	-	-	----	82
83	SPACE ONLY	-	-	-	-	-	-	----	84

TOTAL CONNECTED LOAD = 55286 VA / 360 = 153.6 A

NOTES:
*

BLDG #4 - MECHANICAL EQUIPMENT PANEL

PANEL-M1

SYSTEM 208/120V 3Φ 4W
RATING 225A M.L.O. 42,000 AIC MINIMUM
ENCLOSURE NEMA 3R SURFACE MOUNT
OPTIONS BOLT ON BREAKERS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	AHU-4.2	90	3	15636	9504	3	60	LIFT STATION (2x3 HP)	2
3	----	-	-	-	-	-	-	----	4
5	----	-	-	-	-	-	-	----	6
7	AHU-4.3	50	3	8070	300	1	20	ITU-4.3.1-4.3.6	8
9	----	-	-	-	4576	2	30	DSHP-4.2 / WM-4.2.1	10
11	----	-	-	-	-	-	--	----	12
13	SPARE	20	1	-	-	20	-	SPARE	14
15	SPARE	20	1	-	-	20	-	SPARE	16
17	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	18
19	SPACE ONLY	-	-	-	-	3	30	SURGE PROTECTIVE DEVICE	20
21	SPACE ONLY	-	-	-	-	-	-	----	22
23	SPACE ONLY	-	-	-	-	-	-	----	24

TOTAL CONNECTED LOAD = 38086 VA / 360 = 105.8 A

NOTES:
*

BLDG #4 - MECHANICAL EQUIPMENT PANEL

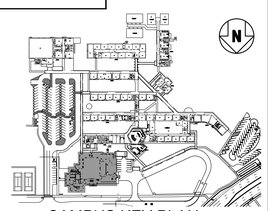
PANEL-M2

SYSTEM 208/120V 3Φ 4W
RATING 125A M.C.B. 22,000 AIC MINIMUM
ENCLOSURE NEMA 1 SURFACE MOUNT
OPTIONS BOLT ON BREAKERS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	CHP-2 (NON SYNCHRONOUS OPERATION)	35	3		6305	3	35	CHP-1 (NON SYNCHRONOUS OPERATION)	2
3	----	-	-	-	-	-	-	----	4
5	----	-	-	-	-	-	-	----	6
7	HWP-2 (NON SYNCHRONOUS OPERATION)	35	3		6305	3	35	HWP-1 (NON SYNCHRONOUS OPERATION)	8
9	----	-	-	-	-	-	-	----	10
11	----	-	-	-	-	-	-	----	12
13	EWH-2	25	2	4500	4576	2	30	DSHP-4.3 / WM-4.3.1	14
15	----	-	-	-	-	-	-	----	16
17	GB-1 (GAS BOILER)	20	1	1500	-	1	20	SPARE	18
19	SPARE	20	1	-	-	1	20	SPARE	20
21	SPARE	20	1	-	-	1	20	SPARE	22
23	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	24
25	SPACE ONLY	-	1	-	-	3	30	SURGE PROTECTIVE DEVICE	26
27	SPACE ONLY	-	1	-	-	-	-	----	28
29	SPACE ONLY	-	1	-	-	-	-	----	30

TOTAL CONNECTED LOAD = 23186 VA / 360 = 64.4 A

NOTES:
*



CAMPUS KEY PLAN

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
Commission Number. 21802

SEAL

HG Engineers
142 Eglin Parkway SE
Fort Walton Beach, Florida, 32548

FL Authorization No.00006680
Christopher A. Garick; FL PE No.53924
Thomas A. Alexander; FL PE No.73172
Daniel J. White; FL PE No.73790
Caleb W. Leonard; FL PE No.91782

www.hgengineers.com
E-mail: office@hgengineers.com
Ph:850.243.6723

CONSULTANTS #2146

REVISIONS

NO.	DATE	DESCRIPTION

SUBMITTAL

	DATE
GMP DOCUMENTS	01/06/2025

PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
PANEL SCHEDULES

SHEET NO.:
E8.4

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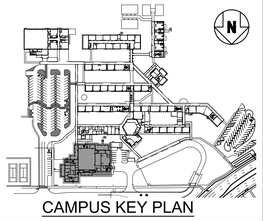
MECHANICAL EQUIPMENT SCHEDULE

(VERIFY ALL EQUIPMENT CIRCUIT REQUIREMENTS WITH MANUFACTURERS SHOP DRAWINGS PRIOR TO ROUGH-IN)

					ELECTRICAL LOAD							PROTECTION				CONDUCTOR / CONDUIT SIZE						
					MOTOR(S) FLA									SPECIFIED			CONDUCTORS					
EQUIPMENT DESIGNAITON	DESCRIPTION	CFM	VOLT	Φ	QTY	LARGEST	SUM OF REMAINING	ELECTRIC HEATER KW	OTHER VA	TOTAL CONNECTED VA	MCA	MOCP	TRIP	POLE	SETS	QTY.	SIZE	GND	CONDUIT	DISC.	REMARKS
AHU-1.1	AIR HANDLING UNIT	825	208	1	1	2.8		2.88		3462	21	25	25	2	1	2	#10	#10	3/4"	30/2/1	Single point connection
AHU-1.2	AIR HANDLING UNIT	1085	208	1	1	4.3		2.88		3774	23	25	25	2	1	2	#10	#10	3/4"	30/2/1	Single point connection
AHU-1.3	AIR HANDLING UNIT	1085	208	1	1	4.3		2.88		3774	23	25	25	2	1	2	#10	#10	3/4"	30/2/1	Single point connection
AHU-2.1	AIR HANDLING UNIT	6090	208	3	1	22.4				8070	28	50	50	3	1	3	#8	#10	3/4"	60/3/1	Field Provided VFD interface option; Install duct detectors for unit shutdown
AHU-2.2	AIR HANDLING UNIT	1065	208	3	1	9.7				3495	12.13	20	20	3	1	3	#12	#12	3/4"	30/3/1	
AHU-2.3	AIR HANDLING UNIT	1065	208	3	1	2.4				865	3	15	15	3	1	3	#12	#12	3/4"	30/3/1	
AHU-3.1	AIR HANDLING UNIT	3170	208	3	1	8.8				3170	11	15	15	3	1	3	#12	#12	3/4"	30/3/1	Install duct detectors for unit shutdown
	UV LIGHTS		120	1					184.8	185	1.93	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
AHU-4.1	AIR HANDLING UNIT	4100	208	3	1	15.7				5656	19.63	35	35	3	1	3	#8	#10	3/4"	60/3/1	Field Provided VFD interface option; Install duct detectors for unit shutdown
AHU-4.2	AIR HANDLING UNIT	10700	208	3	1	43.4				15636	54.25	90	90	3	1	3	#3	#8	1-1/4"	100/3/1	Field Provided VFD interface option; Install duct detectors for unit shutdown
AHU-4.3	AIR HANDLING UNIT	5900	208	3	1	22.4				8070	28	50	50	3	1	3	#8	#10	3/4"		Field Provided VFD interface option; Install duct detectors for unit shutdown
FCU-2.1	FAN COIL UNIT	410	208	1	1	2.25				468	2.25	15	15	2	1	2	#12	#12	3/4"	30/2/1	
HP-1.1	HEAT PUMP (OUTDOOR UNIT)		208	1	1	10.9	0.74			2421	15	25	25	2	1	2	#10	#10	3/4"	30/2/4X	
HP-1.2	HEAT PUMP (OUTDOOR UNIT)		208	1	1	14.1	0.74			3087	19	30	30	2	1	2	#10	#10	3/4"	30/2/4X	
HP-1.3	HEAT PUMP (OUTDOOR UNIT)		208	1	1	14.1	0.74			3087	19	30	30	2	1	2	#10	#10	3/4"	30/2/4X	
OAU-1.1	OUTSIDE AIR UNIT	1555	208	3	1	17.5		22		28305	89	90	90	3	1	3	#3	#8	1-1/4"	100/3/1	
OACU-1.1	OUTSIDE AIR UNIT (CONDESNING UNIT)		208	3	1	17.5				6305	7.4	15	15	3	1	3	#12	#12	3/4"	30/3/4X	
CH-1	CHILLER		208	3	1	73.9	212.3			110880	308	350	350	3	2	3	#2/0	#3	1-1/2"	400/3/3R	Single Point connection
CH-2	CHILLER		208	3	1	73.9	212.3			110880	308	350	350	3	2	3	#2/0	#3	1-1/2"	400/3/3R	Single Point connection
CHP-1	COLD WATER PUMP		208	3	1	17.5				6305	21.9	35	35	3	1	3	#8	#10	3/4"	60/3/1	
CHP-2	COLD WATER PUMP		208	3	1	17.5				6305	21.9	35	35	3	1	3	#8	#10	3/4"	60/3/1	
HWP-1	HOT WATER PUMP		208	3	1	17.5				6305	21.9	35	35	3	1	3	#8	#10	3/4"	60/3/1	
HWP-2	HOT WATER PUMP		208	3	1	17.5				6305	21.9	35	35	3	1	3	#8	#10	3/4"	60/3/1	
DSHP-1.1	MINI-SPLIT HEAT PUMP		208	1	1	22				4576	28	30	30	2	1	2	#10	#10	3/4"	30/2/4X	Indoor Unit powered from outdoor unit.
DSHP-1.2	MINI-SPLIT HEAT PUMP		208	1	1	22				4576	28	30	30	2	1	2	#10	#10	3/4"	30/2/4X	Indoor Unit powered from outdoor unit.
DSHP-2.1	MINI-SPLIT HEAT PUMP		208	1	1	22				4576	28	30	30	2	1	2	#10	#10	3/4"	30/2/4X	Indoor Unit powered from outdoor unit.
DSHP-3.1	MINI-SPLIT HEAT PUMP		208	1	1	22				4576	28	30	30	2	1	2	#10	#10	3/4"	30/2/4X	Indoor Unit powered from outdoor unit.
DSHP-3.2	MINI-SPLIT HEAT PUMP		208	1	1	22				4576	28	30	30	2	1	2	#10	#10	3/4"	30/2/4X	Indoor Unit powered from outdoor unit.
DSHP-4.1	MINI-SPLIT HEAT PUMP		208	1	1	22				4576	28	30	30	2	1	2	#10	#10	3/4"	30/2/4X	Indoor Unit powered from outdoor unit.
DSHP-4.2	MINI-SPLIT HEAT PUMP		208	1	1	22				4576	28	30	30	2	1	2	#10	#10	3/4"	30/2/4X	Indoor Unit powered from outdoor unit.
DSHP-4.2	MINI-SPLIT HEAT PUMP		208	1	1	22				4576	28	30	30	2	1	2	#10	#10	3/4"	30/2/4X	Indoor Unit powered from outdoor unit.
WM-1.1.1	MINI-SPLIT AIR HANDLER	455																		MOTORSWITCH	Unit powered from outdoor unit.
WM-1.2.1	MINI-SPLIT AIR HANDLER	455																		MOTORSWITCH	Unit powered from outdoor unit.
WM-2.1.1	MINI-SPLIT AIR HANDLER	455																		MOTORSWITCH	Unit powered from outdoor unit.
WM-3.1.1	MINI-SPLIT AIR HANDLER	455																		MOTORSWITCH	Unit powered from outdoor unit.
WM-3.2.1	MINI-SPLIT AIR HANDLER	455																		MOTORSWITCH	Unit powered from outdoor unit.
WM-4.1.1	MINI-SPLIT AIR HANDLER	455																		MOTORSWITCH	Unit powered from outdoor unit.
WM-4.2.1	MINI-SPLIT AIR HANDLER	455																		MOTORSWITCH	Unit powered from outdoor unit.
WM-4.3.1	MINI-SPLIT AIR HANDLER	455																		MOTORSWITCH	Unit powered from outdoor unit.
EF-1.1	EXHAUST FAN	300	120	1	1	4.1				492	5.1	20	20	1	1	2	#12	#12	3/4"		
EF-2.1	EXHAUST FAN	910	120	1	1	4.75				570	5.9	20	20	1	1	2	#12	#12	3/4"		
EF-2.2	EXHAUST FAN	50	120	1	1	0.29				35	0.4	20	20	1	1	2	#12	#12	3/4"		
EF-3.1	EXHAUST FAN	760	120	1	1	4.75				570	5.9	20	20	1	1	2	#12	#12	3/4"		
EF-4.1	EXHAUST FAN	220	120	1	1	1.5				180	1.9	20	20	1	1	2	#12	#12	3/4"		
EF-4.2	EXHAUST FAN	240	120	1	1	1.5				180	1.9	20	20	1	1	2	#12	#12	3/4"		
EF-4.3	EXHAUST FAN	445	120	1	1	4.1				492	5.1	20	20	1	1	2	#12	#12	3/4"		
EF-4.4	EXHAUST FAN	190	120	1	1	1.5				180	1.9	20	20	1	1	2	#12	#12	3/4"		
EF-4.5	EXHAUST FAN	50	120	1	1	0.29				35	0.4	20	20	1	1	2	#12	#12	3/4"		
TU-2.1.1	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-2.1.2	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-3.1.1	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-3.1.2	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-3.1.3	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-3.1.4	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-3.1.5	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-3.1.6	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-3.1.7	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-3.1.8	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.1	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.2	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.3	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.4	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.5	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.6	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.7	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.8	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.9	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.10	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.11	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.12	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.13	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.14	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.15	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.1.16	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.3.1	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.3.2	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.3.3	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.3.4	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.3.5	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
TU-4.3.6	TERMINAL UNIT		120	1	1	0.42				50	0.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	
CP-1	CIRCULATION PUMP		120	1						44	0.37	20	20	1	1	2	#12	#12	3/4"		
EWH-1	ELECTRIC WATER HEATER		208	3					6000	6000	16.7	25	25	3	1	3	#10	#10	3/4"	30/3/1	
EWH-2	ELECTRIC WATER HEATER		208	1					4500	4500	21.6	25	25	2	1	2	#10	#10	3/4"	30/2/1	
GWH-1	GAS WATER HEATER		120	1	1	10				1200	12.5	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	Provide connection to automatic solenoid shut-off vavle
EWC	ELECTRIC WATER COOLER		120	1					600	600	5	20	20	1	1	2	#12	#12	3/4"	RECEPTACLE	Install G.F.C.I. receptacle.
TP	TRAP PRIMER		120	1					6.3	6	0.1	20	20	1	1	2	#12	#12	3/4"	RECEPTACLE	
GB-1	GAS BOILER		120	1					1500	1500	20	20	20	1	1	2	#12	#12	3/4"	MOTORSWITCH	Provide connection to automatic solenoid shut-off vavle



CAMPUS KEY PLAN

JRA ARCHITECTS
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
PHONE: (850) 878-7891
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SEAL

HG Engineers
142 Eglin Parkway SE
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www.hgengineers.com
E-mail: office@hgengineers.com
Ph:850.243.6723

CONSULTANTS #2146

REVISIONS

NO.	DATE	DESCRIPTION

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SUBMITTAL
GMP DOCUMENTS

PROJECT NAME / LOCATION:
MOWAT MIDDLE SCHOOL
CAFETERIA AND ADMINISTRATION ADDITION
PANAMA CITY, FLORIDA

SHEET TITLE:
MECHANICAL COORDINATION SCHEDULES

SHEET NO.:
E8.5

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