ELECTRICAL ABBREVIATIONS

A	AMPERES OR AMP METER
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	ARCHITECTURAL
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAGE
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
C	CELSIUS; COIL
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION SYSTEM
CD/Cd	CANDELA
CLG	CEILING
COAX	COAXIAL CABLE
CONTR	CONTRACTOR
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
EGC	EQUIPMENT GROUNDING CONDUCTOR
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINATION CABINET
FFE	FINISHED FLOOR ELEVATION
FL	FLOOR
FLA	FULL LOAD AMPS
FLC	FLEXIBLE LIQUIDTIGHT CONDUIT
FLEX	FLEXIBLE
FMC	FLEXIBLE METAL CONDUIT
FT	FEET; FOOT
FU	FUSE
GA	GAUGE; GAGE
GB	GROUND BUS
GC	GENERAL CONTRACTOR
GEC	GROUNDING ELECTRODE CONDUCTOR
GFI, GFCI	GROUND FAULT (CIRCUIT) INTERRUPTER
GND	GROUND
HD	HEAVY DUTY
HOA	HANDS-OFF-AUTOMATIC
HP	HORSEPOWER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LED	LIGHT EMMITING DIODE
LRA	LOCKED ROTOR AMPS
LS	LIFE SAFETY
LTG	LIGHTING
M	MOTOR; METERING
MC	METAL CLAD
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CONTROL PROTECTOR
MCS	MOLDED CASE SWITCH
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUG ONLY
N, NEU	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON-FUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN; NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OL	OVERLOAD
P	POLE
PB	PULL BOX
PC	PHOTOCELL
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POINT; POTENTIAL TRANSFORMER
PUN	PER UNIT NAMEPLATE
PVC	POLYVINYL CHLORIDE (CONDUIT)
RD	ROUND

ELECTRICAL ABBREVIATIONS

REV	REVISION
RLA	RATED LOAD AMPS
RMC	RIDGID METAL CONDUIT
SN	SOLID NEUTRAL
SNAC	SIGNAL NOTIFICATION APPLIANCE CIRCUIT
SP	SURGE PROTECTED
SPD	SURGE PROTECTED DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE SINGLE THROW
SQ	SQUARE
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TBB	TELEPHONE BACK BOARD
TELEC OM	TELECOMMUNICATIONS
TEMP	TEMPERATURE
THD	TOTAL HARMONIC DISTORTION
TV	TELEVISION
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES INC.
UNO	UNLESS NOTED OTHERWISE
V	VOLTAGE; VOLT
VAC	VOLTS ALTERNATING CURRENT
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WIRE
W/	WITH
WG	WIREGUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
Z	IMPEDANCE
ø	ROUND; DIAMETER; PHASE

ELECTRICAL SYMBOLS

WALL MTD LIGHTING FIXTURE AND OUTLET

PENDANT LIGHTING FIXTURE AND OUTLET

DOWNLIGHT LIGHTING FIXTURE AND OUTLET

WALL MTD LIGHTING FIXTURE AND OUTLET

PENDENT MOUNTED STRIP FIXTURE

CEILING MTD LIGHTING FIXTURE AND OUTLET

WALL MTD EXIT SIGN AND OUTLET, SINGLE FACE. ARROW INDICATES DIRECTION.

CEILING MTD EXIT SIGN AND OUTLET, DUAL FACE. ARROWS INDICATE DIRECTION.

EMERGENCY LIGHT BATTERY PACK - TWO HEAD UNIT.

CEILING MOUNTED EMERGENCY BATTERY LIGHT

EMERGENCY LIGHT REMOTE HEAD

GROUND MOUNTED FLOODLIGHT AND OUTLET

AREA LUMINAIR AND STANDARD

FLUSH MTD TOGGLE SWITCH, SPST, 20A, 120/277V

FLUSH MTD TOGGLE SWITCH, DPST, 20A, 120/277V

FLUSH MTD 3-WAY TOGGLE SWITCH, 20A, 120/277V

FLUSH MTD 4-WAY TOGGLE SWITCH, 20A, 120/277V

FLUSH MTD DIMMER SWITCH, 20A, 120/277V

FLUSH MTD KEY SWITCH, 20A, 120/277V

FLUSH MOUNTED OCCUPANCY SENSOR SWITCH, 20A, 120/277V

FLUSH MTD LIGHTED HANDLE TOGGLE SWITCH, SPST, 20A, 120V. LIGHT ON WITH OPEN SWITCH

FLUSH MTD TOGGLE SWITCH WITH PILOT LIGHT. LIGHT ON WITH CLOSED SWITCH.

TIMED SWITCH

CEILING MTD INFRA-RED OCCUPANCY SENSOR SWITCH

CEILING MTD ULTRASONIC OCCUPANCY SENSOR SWITCH

CEILING MTD DUAL TECHNOLOGY (IR, U) OCCUPANCY SENSOR SWITCH

PHOTOCELL

FLUSH MTD DUPLEX RECEPTACLE, 20A, 125V, 3W

FLUSH MTD DUPLEX GFCI RECEPTACLE, 20A, 125V, 3W

FLUSH MTD DUPLEX RECEPTACLE WITH DUPLEX USB OUTLETS, 20A, 125V, 3W

FLUSH MTD SINGLE RECEPTACLE, 20A, 125V, 3W

FLUSH MTD QUADRUPLEX RECEPTACLE, 20A, 125V, 3W

FLUSH MTD DUPLEX RECEPTACLE, 20A, 125V, 3W, SPLIT WIRED WITH TOP OUTLET SWITCHED.

FLUSH MTD DUPLEX RECEPTACLE, 20A, 125V, 3W, INSTALLED VERTICALLY 4" ABOVE BACKSPLASH OR COUNTERTOP IF NO BACKSPLASH EXISTS.

FLUSH MTD QUADRUPLEX RECEPTACLE, 20A, 125V, 3W, INSTALLED VERTICALLY 4" ABOVE BACKSPLASH OR COUNTERTOP IF NO BACKSPLASH EXISTS.

WALL MOUNTED POWER DEVICE

FLOOR BOX WITH DEVICE(S). REFER TO SCHEDULES FOR MARK

WALL MTD TELECOM OUTLET, REFER TO SCHEDULES FOR MARK

CEILING MTD RECEPTACLE AND OUTLET, 20A, 125V

CEILING MTD TELECOM OUTLET, REFER TO SCHEDULES FOR MARK

CEILING MTD DUPLEX RECEPTACLE & TELECOM OUTLET, REFER TO SCHEDULES FOR MARK

CEILING MTD PUBLIC ADDRESS SPEAKER

FLUSH MTD VOLUME CONTROL FOR SPEAKER

WALL MTD TELEVISION ANTENNA/ELECTRICAL OUTLET, REFER TO SCHEDULES FOR MARK

(WIFI) WIRELESS ACCESS POINT.

PANELBOARD, 250V LEVEL

PANELBOARD, 600V LEVEL

HOMERUN; ARROW HEADS INDICATE NUMBER OF CIRCUITS, LETTERS AND NUMBERS DESIGNATE PANEL AND CIRCUITS. SHORT TICK MARKS INDICATE NUMBER OF CURRENT CARRYING PHASE CONDUCTORS. LONG TICK MARK(S) INDICATE NEUTRAL(S). GROUNDING CONDUCTORS REQUIRED BY SPECIFICATIONS ARE NOT SHOWN. CONDUCTOR SIZES SPECIFIED ON THE PANEL SCHEDULES ARE MANDATORY FOR THE ENTIRE CIRCUIT EXCEPT WHERE SPECIFICATIONS REQUIRE A SIZE INCREASE FOR VOLTAGE DROP.

SURFACE METAL RACEWAY WITH DEVICES, LETTER DESIGNATES TYPE

PENDANT MTD, PLUG-IN BUS DUCT WITH PLUG-IN CIRCUIT BREAKER OR FUSIBLE SWITCH AND TAP BOX. DUCT AND SWITCH RATING AS NOTED.

TOP # - DEVICE MAXIMUM RATING OR FRAME SIZE
BOTTOM # - FUSE SIZE OR DEVICE SETTING

DISCONNECT SWITCH.

COMBINATION DISCONNECT SWITCH AND MAGNETIC MOTOR STARTER. SEE SCHEDULE OR NOTE.

FLUSH MTD MANUAL MOTOR STARTER SWITCH WITHOUT OVERLOAD HEATERS

MAGNETIC MOTOR STARTER

3 POLE CIRCUIT BREAKER IN ENCLOSURE. # INDICATES CB RATING.

VARIABLE FREQUENCY DRIVE CONTROLLER, 40" AFF, PROVIDED BY HVAC OR PLUMBING CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR

MAGNETIC CONTACTOR, SIZE PER SCHEDULE

JUNCTION, PULL, TAP OR OUTLET BOX (CODE SIZE)

TIME CLOCK

MAGNETIC RELAY, SIZE PER SCHEDULE

ELECTRICAL SYMBOLS

FLUSH MOUNTED MUSHROOM HEAD PUSH BUTTON

FLUSH MOUNTED PUSH BUTTON

SUPPLEMENTAL GROUND BAR

GROUND PER NEC

ELECTRICAL DEMAND METER

SURGE PROTECTION DEVICE

WALL MTD FIRE ALARM PULL STATION

SMOKE DETECTOR, CEILING MTD

SMOKE DETECTOR FOR ELEVATOR RECALL, CEILING MTD

SMOKE DETECTOR WITH SOUNDER BASE, CEILING MTD

SMOKE DETECTOR, CEILING MTD, MULTI SENSOR

CEILING MTD REMOTE ALARM INDICATOR LAMP

CARBON MONOXIDE DETECTOR

SMOKE DETECTOR, DUCT MTD (WITH RAIL)

HEAT DETECTOR, CEILING MTD

SMOKE DETECTOR, WALL MTD

SMOKE DETECTOR WITH SOUNDER BASE, WALL MTD

WALL MTD HEAT DETECTOR

WALL MTD REMOTE ALARM INDICATOR LAMP (RAIL)

WALL MTD HORN TYPE AUDIO/VISUAL APPLIANCE

WALL MTD SPEAKER TYPE AUDIO/VISUAL APPLIANCE

WALL MTD CHIME TYPE AUDIO/VISUAL APPLIANCE

WALL MTD VISUAL ALARM APPLIANCE

CEILING MTD HORN TYPE AUDIO/VISUAL ALARM APPLIANCE

CEILING MTD SPEAKER TYPE AUDIO/VISUAL ALARM APPLIANCE

CEILING MTD CHIME TYPE AUDIO/VISUAL ALARM APPLIANCE

CEILING MTD FIRE ALARM VISUAL DEVICE

DOOR HOLDER

FIRE ALARM MONITOR MODULE

FLOW SWITCH FIRE ALARM CONNECTION, SWITCH PROVIDED BY OTHERS

TAMPER SWITCH FIRE ALARM CONNECTION, SWITCH PROVIDED BY OTHERS

POST INDICATOR VALVE FIRE ALARM CONNECTION, VALVE PROVIDED BY OTHERS

FIRE ALARM TEMPERATURE SENSOR

FIRE ALARM CONTROL MODULE OR RELAY

CEILING MTD FIRE ALARM SPEAKER

CLOCK

FIRE ALARM BELL; # INDICATED DIAMETER IN INCHES

LINEAR BEAM TRANSMITTER

LINEAR BEAM RECEIVER

FIRE ALARM WALL MTD SPEAKER

FIREMAN'S 2-WAY TELEPHONE

FIRE ALARM ISOLATION MODULE

FIRE ALARM ASPIRATION SMOKE DETECTOR

DIGITAL ALARM COMMUNICATIONS TRANSMITTER

FIRE ALARM ANNUNCIATOR PANEL

FIRE ALARM CONTROL PANEL

FIRE ALARM TERMINAL CABINET

SUPPLEMENTAL NOTIFICATION APPLIANCE CABINET

DOOR CONTROL ID TAG

SECURITY SYSTEM KEYPAD, 42" AFF

ACCESS CONTROL CARD READER

SECURITY PANIC BUTTON

CAMERA BY OWNER. PROVIDE 1" CONDUIT BACK TO IT ROOM ON SAME LEVEL

EMERGENCY TELEPHONE

MASTER RESCUE ASSISTANCE STATION

RESCUE ASSISTANCE STATION

RESCUE ASSISTANCE LIGHT

CORD REEL

NEW WORK

EXISTING TO REMAIN

EXISTING TO BE DEMOLISHED

ELECTRICAL GENERAL NOTES

1 ALL SYMBOLS AND ABBREVIATIONS MAY NOT BE UTILIZED FOR THIS PROJECT.

2 SYMBOLS NOT SHOWN ON THIS ELECTRICAL SYMBOL LEGEND ARE IDENTIFIED ON THE DRAWINGS WHERE THEY OCCUR.

3 UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS OR ON THE DRAWINGS, MOUNTING HEIGHT OF DEVICES IS TO BE THE CENTERLINE OF THE DEVICE.

4 UNLESS OTHERWISE INDICATED, SWITCHES AND SIMILAR DEVICES ARE TO BE LOCATED 42" AFF; RECEPTACLES ARE TO BE VERTICALLY MOUNTED AT 18" AFF WITH THE GROUNDING TERMINAL ON THE BOTTOM.

5 TELEPHONE & DATA OUTLETS ARE TO BE MOUNTED AT 18" AFF UNLESS OTHERWISEINDICATED. "W" INDICATES MOUNTING AT 42" AFF. "C" INDICATES MOUNTING ABOVECOUNTERTOP WITH ALIGNMENT AND HEIGHT AS INDICATED FOR RECEPTACLES SIMILARLY MOUNTED.

6 FIRE ALARM PULL STATIONS ARE TO BE VERTICALLY MOUNTED AT 42" AFF.

7 FIRE ALARM INDICATING APPLIANCES SHALL BE 15 Cd RATING, UNLESS NOTED OTHERWISE ON THE PLANS.

8 FIRE ALARM INDICATING APPLIANCES ARE TO BE MOUNTED WITH THE LOWER EDGE OF THE VISUAL ELEMENT AT 6'-8" AFF OR 6" BFC, WHICHEVER IS LOWER. WHERE DUCTWORK, CONDUIT, OR OTHER OBSTRUCTIONS BLOCK DIRECT VIEW OF APPLIANCE, MOUNT 6" BELOW SUCH OBSTRUCTIONS.

9 CEILING MOUNTED SMOKE DETECTORS ARE SHOWN IN APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH CEILING FEATURES. WALL MOUNTED SMOKE DETECTECTORS ARE TO BE MOUNTED 10" BELOW FINISHED CEILING TO THE CENTER OF DEVICE AND A MINIMUM OF 12" FROM ADJACENT WALLS OR OTHER OBSTRUCTIONS.

10 COORDINATE SMOKE DETECTOR AND HEAT DETECTOR LOCATIONS WITH HVAC SUPPLY AND RETURN GRILLES. MAINTAIN 3'-0" CLEARANCE BETWEEN EDGE OF SUPPLY GRILL AND EDGE OF SMOKE DETECTOR.

11 UPPER CASE LETTER (OR LETTER/NUMBER COMBINATION) ADJACENT TO FIXTURE OR SWITCH DESIGNATES TYPE. SEE FIXTURE SCHEDULE FOR DETAILS.

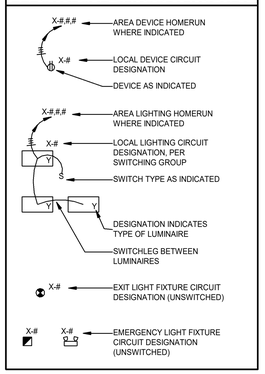
12 LOWER CASE LETTER ADJACENT TO FIXTURE OR SWITCH DESIGNATES CONTROL RELATIONSHIP.

13 NUMBER ADJACENT TO FIXTURE, SWITCH, OR RECEPTACLE DESIGNATES CIRCUIT CONNECTION.

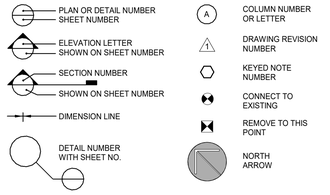
14 SINGLE DIAGONAL LINE ACROSS A FIXTURE INDICATES FIXTURE IS UNSWITCHED FOR 24 HOUR OPERATION.

15 REFERENCE SPECIFICATION 260800 FOR THIRD PARTY COMMISSIONING REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL ENGAGE AN INDEPENDANT, THIRD PARTY COMMISSIONING AGENT IN ACCORDANCE WITH ANISNETA ECS-2015.

ELECTRICAL CIRCUITING KEY



GENERAL SYMBOLS



ELECTRICAL DRAWING LIST

⚠ ELECTRICAL THIRD PARTY COMMISSIONING AGENT

THIS PROJECT REQUIRES THE ENGAGEMENT OF AN INDEPENDANT, THIRD PARTY COMMISSIONING AGENT. REFERNERECE SPECIFICATION 260800. ALSO REFERENCE THE 2020 STATE CONSTRUCTION OFFICE ELECTRICAL GUIDELINES AND POLICIES.

⚠ MULTIPLE ELECTRICAL SERVICE WARNING

THIS BUILDING HAS MULTIPLE ELECTRICAL SERVICES. VERIFY THAT ALL ELECTRICAL EQUIPMENT IS TOTALLY DE-ENERGIZED PRIOR TO PERFORMANCE OF WORK INVOLVING CONTACT OR POSSIBLE CONTACT WITH ELECTRICALLY ENERGIZED COMPONENTS. ALWAYS USE PROPER LOCKOUT/TAGOUT PROCEDURES.

SO DETAIL: IN0013

⚠ EXISTING UNDERGROUND UTILITIES WARNING

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR LOCATING, PROTECTING, AND COORDINATING WITH OR ROUTING AROUND ALL EXISTING UTILITIES. LOCATIONS SHOWN ON THE EXISTING SITE PLAN ARE APPROXIMATE, BASED ON INFORMATION FROM PREVIOUS PROJECT DOCUMENTATION, AND SHOULD NOT BE CONSIDERED COMPLETE OR ACCURATE. THE CONTRACTOR MUST PROVIDE ALL NECESSARY LOCATING SERVICES PRIOR TO EXCAVATION. THE USE OF CURRENT TECHNOLOGY, EXPLORATORY EXCAVATION, AND SIGNIFICANT HAND EXCAVATION IS EXPECTED AND REQUIRED. ANY UNDERGROUND ITEMS DAMAGED BY THE CONTRACTOR MUST BE IMMEDIATELY REPAIRED AT THE CONTRACTOR'S EXPENSE.

SO DETAIL: IN0014

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SCO PROJECT NO. 22-25408-02A

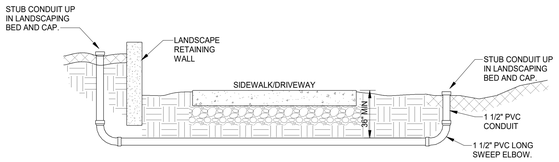
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS CONSTRUCTION

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **STANDARDS, SYMBOLS & ABBREVIATIONS**

E001



2 E002 **LOW-VOLTAGE LIGHTING CONDUIT RACEWAY**
SCALE: NOT TO SCALE

GENERAL NOTES TO E002

1 ALL EXTERIOR UNDERGROUND RACEWAYS OUTSIDE OF UTILITY YARD SHALL BE 36" DEEP.

KEY NOTES TO E002

1 PROVIDE NEW 200 KW, 480Y/277V, DIESEL GENERATOR.

2 PROPOSED LOCATION OF NEW 480Y/277V UTILITY TRANSFORMER BY UTILITY COMPANY. CONTRACTOR TO PROVIDE CONCRETE PAD AND COORDINATE EXACT LOCATION WITH DUKE ENERGY.

3 PROVIDE CONCRETE ENCASED DUCTBANK. SEE DETAILS ON SHEET E601.

4 PROVIDE (3) 3" CONDUITS ENCASED IN CONCRETE FOR TELECOMMUNICATIONS SERVICE ENTRANCE. COORDINATE EXACT ROUTE AND TERMINATIONS WITH UTILITY. SEE DETAIL ON SHEET E521.

5 PROVIDE 24" X 24" X 12" TRAFFIC RATED HANDHOLE OUTSIDE EQUIPMENT YARD. MARK COVER WITH "COMMUNICATIONS". OWNER TO BRING FIBER AND COPPER TO BUILDING VIA HAND HOLE AND RACEWAY.

6 ROUTE A 4" EMPTY PVC CONDUIT WITH PULL STRING 3' BELOW GRADE WITH 12" X 12" X 12" HANDHOLE AT EACH END. MARK COVER WITH "POWER".

7 PROVIDE FIRE ALARM CONNECTIONS TO FIRE LINE BACKFLOW PREVENTER TAMPER SWITCHES AND PIV. ROUTE IN 1" CONDUIT. FIRE ALARM MONITOR MODULE SHALL BE LOCATED INSIDE BUILDING (FIRE PUMP RM 127) . PROVIDE SURGE PROTECTORS FOR ALL CABLES ENTERING BUILDING. COORDINATE EXACT LOCATION WITH OTHER TRADES.

8 PROVIDE CIRCUITS TO TEMPORARY GENERATOR DOCKING STATION FOR JACKET HEATER AND BATTERY CHARGER. SEE DETAIL ON E602.

9 MOUNT PANEL TO RACK. REFER TO DETAIL ON SHEET E302.

KEY NOTES TO E002

10 NEW CAMPUS PRIMARY DUCTBANK ROUTE BY OWNER, SHOWN FOR REFERENCE.

11 PROVIDE CIRCUITS FOR GENERATOR JACKET HEATER, BATTERY CHARGER, AND LIGHTS/RECEPTACLES.

12 PROVIDE CIRCUITS FOR BACKFLOW PREVENTOR HOTBOXES. COORDINATE CONNECTIONS WITH OTHER TRADES.

13 PROPOSED PATHWAY FOR DUKE ENERGY PRIMARY ROUTING. COORDINATE EXACT ROUTING WITH DUKE ENERGY.

14 PROVIDE EMPTY 1" CONDUIT WITH PULL STRING TO FUTURE TRASH COMPACTOR MOTOR LOCATION.

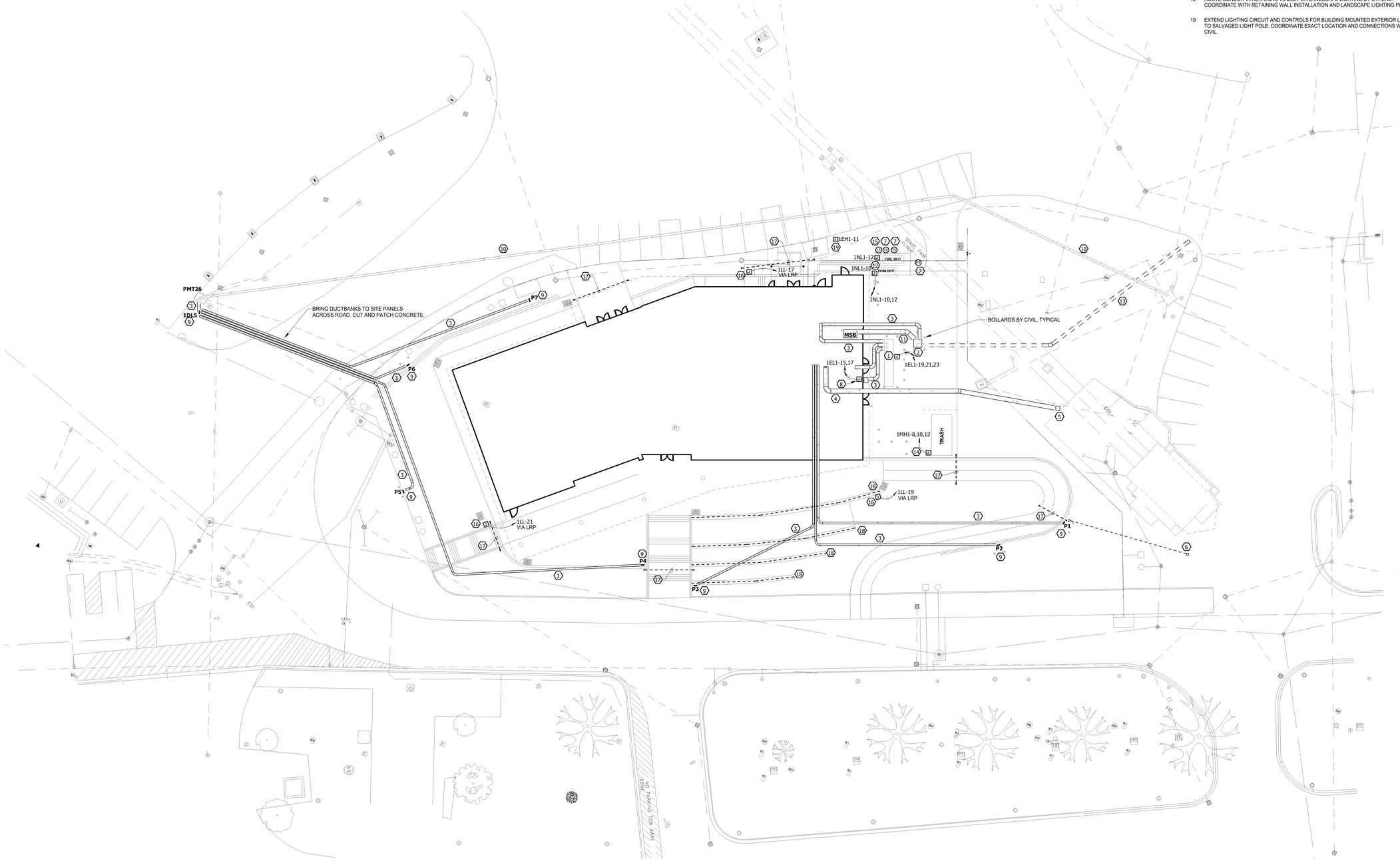
15 PROVIDE LOW TEMPERATURE SENSOR WITH FIRE ALARM CONNECTIONS IN FIRE LINE HOT BOX. FIRE ALARM MONITOR MODULE SHALL BE LOCATED INSIDE BUILDING (FIRE PUMP RM 127) .

16 PROVIDE POWER CONNECTION TO LOW-VOLTAGE SITE LANDSCAPE LIGHTING TRANSFORMERS. COORDINATE EXACT LOCATION OF TRANSFORMERS WITH SITE CONTRACTOR.

17 1 1/2" PVC CONDUIT SLEEVE ROUTED BELOW GRADE AND UP INTO LANDSCAPING BEDS FOR LOW VOLTAGE LANDSCAPE LIGHTING CONDUCTOR ROUTING. LANDSCAPE LIGHTING BY OTHERS. SEE DETAIL 2/E002.

18 ROUTE CONDUIT IN RETAINING WALLS FOR LANDSCAPE LIGHTING BY OTHERS. COORDINATE WITH RETAINING WALL INSTALLATION AND LANDSCAPE LIGHTING PLANS.

19 EXTEND LIGHTING CIRCUIT AND CONTROLS FOR BUILDING MOUNTED EXTERIOR LIGHTS TO SALVAGED LIGHT POLE. COORDINATE EXACT LOCATION AND CONNECTIONS WITH CIVIL.



1 E002 **ELECTRICAL SITE PLAN**
SCALE: 1" = 20'-0"

Plot Time:6/10/2025 5:22:54 PM

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SCO PROJECT NO. 22-25408-02A

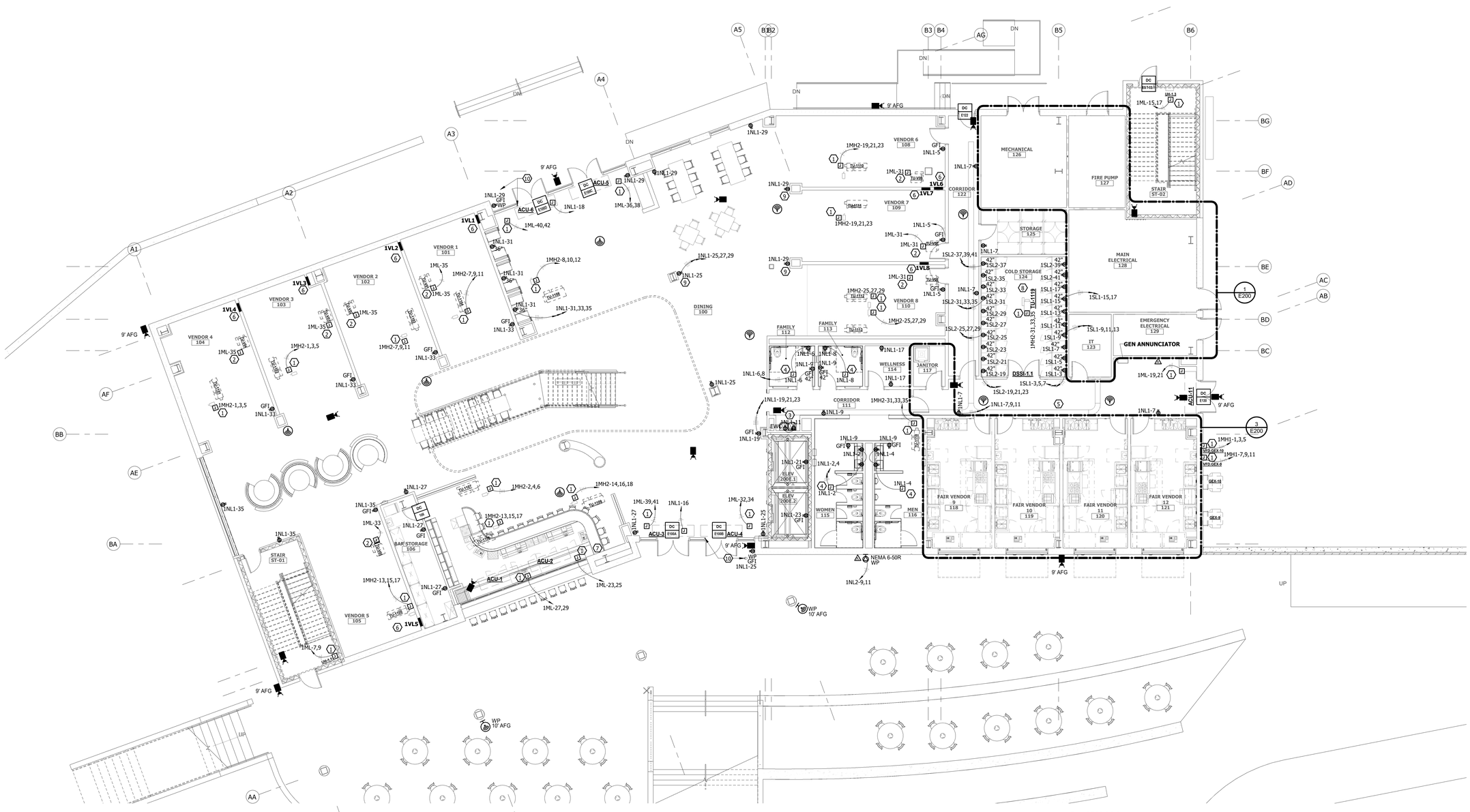
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS CIVIL CONSULTING

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **SITE PLAN**

E002



1 E111 **1st FLOOR PLAN - POWER**
SCALE: 1/8" = 1'-0"

4' 0 4' 8' 12' 16' 20'

KEY NOTES TO E111

1 CONNECT CIRCUIT TO LINE SIDE OF DISCONNECT PROVIDED BY OTHER TRADES.

2 PROVIDE POWER CONNECTION TO TERMINAL UNIT LOW-VOLTAGE CONTROLS.

3 PROVIDE RECEPTACLES FOR ELECTRIC WATER COOLER. SEE DETAIL ON SHEET E301.

4 PROVIDE CIRCUIT TO JUNCTION BOX WITH MOTOR RATED SWITCH ABOVE CEILING FOR PLUMBING FLUSH VALVES. COORDINATE EXACT LOCATION AND CONNECTIONS WITH PLUMBING CONTRACTOR. WIRE RECEPTACLES BELOW SINK FOR FAUCET SENSORS THROUGH SWITCH.

5 PROVIDE CABLE TRAY FOR DATA CABLES. REFER TO DETAILS ON SHEET E521.

6 PANEL SHALL BE RECESSED IN WALL. PROVIDE WIREWAY ABOVE CEILING WITH SIX SPARE 1" AND TEN SPARE 3/4" CONDUITS FOR FUTURE CIRCUIT CONNECTIONS.

7 PROVIDE FOUR SPARE EMPTY 3/4" CONDUITS WITH PULL STRING ROUTED BACK TO PANEL 1NL2. PROVIDE ONE 1" CONDUIT WITH PULL STRING FOR DATA BACK TO NEAREST CABLE TRAY. STUB CONDUITS OUT THROUGH WALL AT 24" AFF AND CAP.

8 ALL RACEWAYS ENTERING AND LEAVING COLD STORAGE ROOM 124 SHALL BE SEALED.

9 MOUNT RECEPTACLE TO COLUMN WRAP. COORDINATE WITH ARCHITECTURAL DETAILS.

10 PROVIDE ADA ACTUATOR LCN8310-818 OR APPROVED EQUAL.

PARTITION SCHEDULE

	1 HOUR RATED BARRIER
	2 HOUR RATED BARRIER

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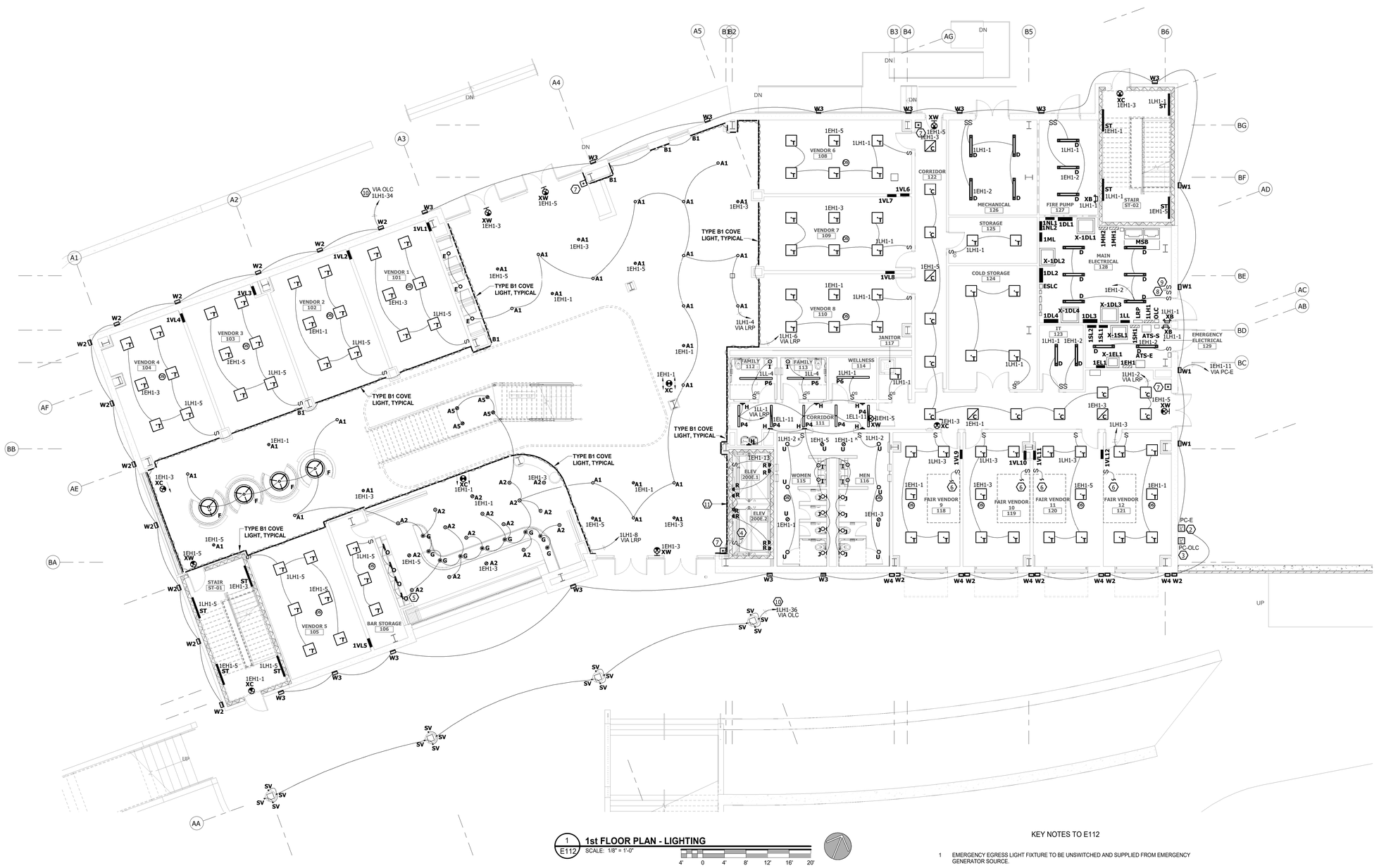
CLANCY & THEYS CONSTRUCTION

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **1st FLOOR PLAN - POWER**

E111



1 E112 **1st FLOOR PLAN - LIGHTING**

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

4' 0 4' 8' 12' 16' 20'

KEY NOTES TO E112

1 EMERGENCY EGRESS LIGHT FIXTURE TO BE UNSWITCHED AND SUPPLIED FROM EMERGENCY GENERATOR SOURCE.

2 PROVIDE 2000VA PHOTOCELL PC-E. PHOTOCELL SHALL CONTROL EXTERIOR EMERGENCY EGRESS LIGHTING. MOUNT 10' AFG AWAY FROM ARTIFICIAL LIGHT SOURCES. SEE DETAILS ON SHEET E502.

3 PROVIDE 600VA CONTROL PHOTOCELL PC-OLC. PHOTOCELL SHALL CONTROL OUTDOOR LIGHTING CONTACTOR. MOUNT 10' AFG AWAY FROM ARTIFICIAL LIGHT SOURCES. SEE DETAILS ON SHEET E502.

4 CONTROL LIGHTS IN SHAFT WITH THREE WAY SWITCHES ON FIRST AND SECOND FLOOR AND THROUGH ELEVATOR LIGHTING CONTACTOR IN THE MAIN ELECTRICAL ROOM. SEE ELEVATOR LIGHTING CONTROL DETAILS.

5 DRIVER FOR 4 ROWS OF TYPE O LED TAPE LIGHT MOUNTED WITHIN CASEWORK. TYPICAL FOR ALL. FIXTURE SHALL BE CONTINUOUS ACROSS EACH OPENING OF BACK BAR AS SHOWN ON SHEET A650.

6 PROVIDE SWITCH AND CONDUIT FOR HOOD LIGHTING CONTROL. COORDINATE EXACT LOCATION WITH HOOD PROVIDER.

7 PROVIDE CORRIDOR LIGHTING OVERRIDE SWITCH. LABEL FOR "2 HOUR LIGHTING ON TIME".

8 PROVIDE (2) DIMMER SWITCHES FOR EXTERIOR LIGHTING CONTROL.

9 PROVIDE RGBW CONTROL SWITCH FOR EXTERIOR LIGHTING.

10 CONTROL LIGHTING FIXTURES FROM DIMMER SWITCH IN ELECTRICAL ROOM 128.

11 SEE ARCHITECTURAL DRAWINGS FOR ELEVATOR CALL LIGHT AND BUTTON LOCATIONS.

PARTITION SCHEDULE

1 HOUR RATED BARRIER

2 HOUR RATED BARRIER

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NC STATE FAIRGROUNDS - MIDWAY CENTER

NC DEPT. OF AGRICULTURE & CONSUMER SERVICES
4285 TRINITY RD, RALEIGH, NC 27607

SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

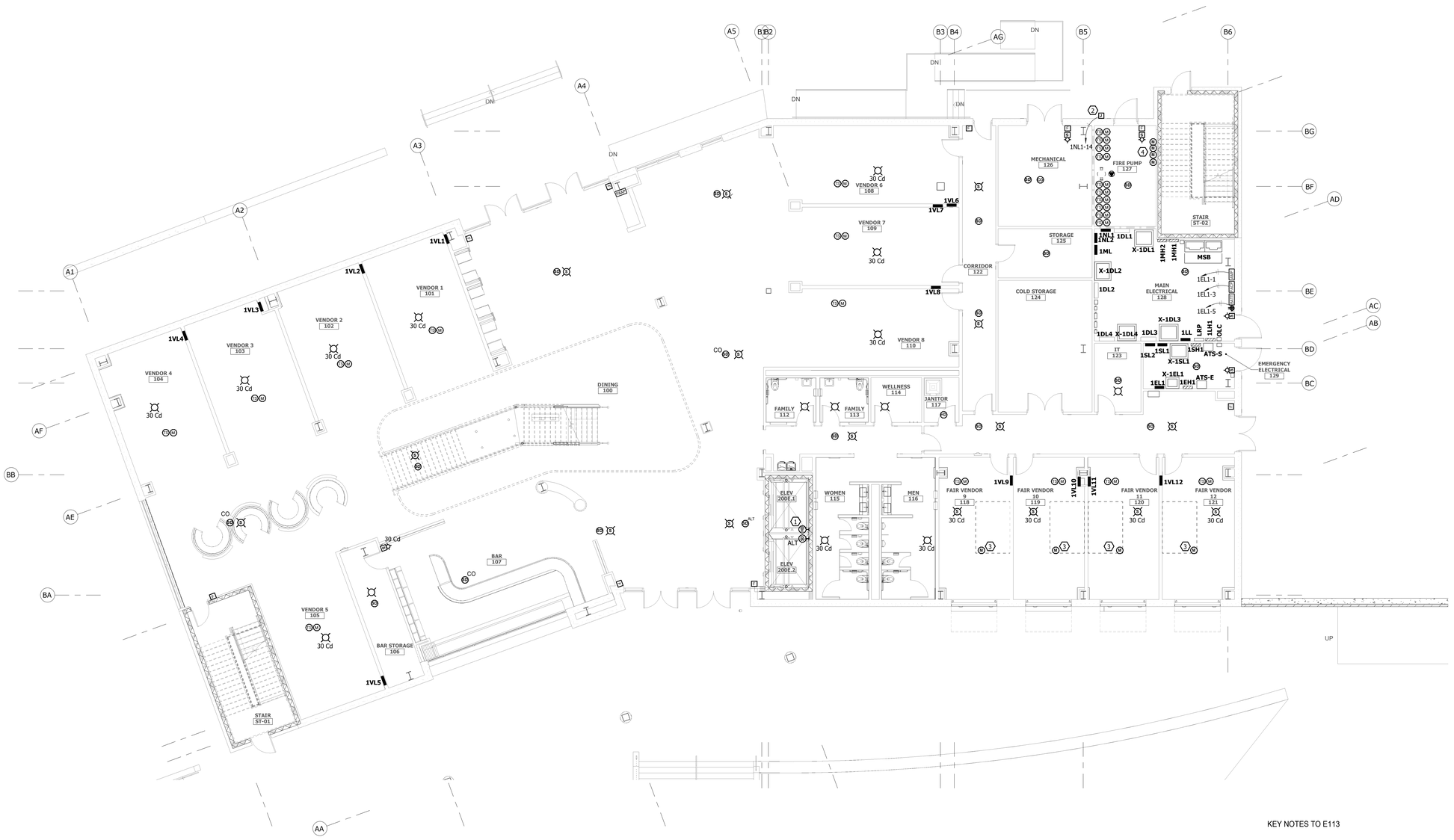
JOB NUMBER **23-013**

DATE ISSUED **06/12/2025**

PROJECT STATUS **BID SET**

SHEET **1st FLOOR PLAN - LIGHTING**

E112



1 E113 **1st FLOOR PLAN - FIRE ALARM**
SCALE: 1/8" = 1'-0"

4' 0 4' 8' 12' 16' 20'

KEY NOTES TO E113

1 LOCATE HEAT DETECTOR ADJACENT TO FIRE PROTECTION SPRINKLER HEAD COVERING ELEVATOR SHAFT.

2 PROVIDE 24V SUPPLY FOR FIRE SPRINKLER ALARM BELL PROVIDED UNDER DIV 21. FACP SHALL INITIATE 24V TO BELL IN RESPONSE TO ACTIVATION OF MAIN FLOW SWITCH IN ROOM 127. COORDINATE WITH FIRE PROTECTION CONTRACTOR.

3 PROVIDE FIRE ALARM MONITOR MODULE FOR KITCHEN HOOD ANSUL SYSTEM.

4 MONITOR MODULES FOR FIRE PROTECTION HOT BOX AND PIV.

PARTITION SCHEDULE

1 HOUR RATED BARRIER

2 HOUR RATED BARRIER

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06/11/2025

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PROJECT STATUS **BID SET**
SHEET **1st FLOOR PLAN - FIRE ALARM**

E113

1 E121 **2nd FLOOR PLAN - POWER**
SCALE: 1/8" = 1'-0"
4' 0 4' 8' 12' 16' 20'

KEY NOTES TO E121

1 CONNECT CIRCUIT TO LINE SIDE OF DISCONNECT PROVIDED BY OTHER TRADES.

2 PROVIDE CIRCUIT FOR CONNECTION TO PROJECTOR SCREENS.

3 PROVIDE RECEPTACLES FOR ELECTRIC WATER COOLER. SEE DETAIL ON SHEET E301.

4 PROVIDE JUNCTION BOX WITH RACEWAY BACK TO ELEVATOR DISCONNECT IN MAIN ELECTRICAL ROOM.

5 PROVIDE JUNCTION BOX WITH 1" RACEWAY TO ABOVE CEILING AND A 120V POWER CONNECTION FOR ELEVATOR VISUAL COMMUNICATION EQUIPMENT (FCVAP/ECVAB), PROVIDED BY ELEVATOR VENDOR. COORDINATE LOCATION AND EXACT REQUIREMENTS WITH ELEVATOR PROVIDER.

6 PROVIDE CIRCUIT TO JUNCTION BOX WITH MOTOR RATED SWITCH ABOVE CEILING FOR PLUMBING FLUSH VALVES. COORDINATE EXACT LOCATION AND CONNECTIONS WITH PLUMBING CONTRACTOR. WIRE RECEPTACLES BELOW SINK FOR FAUCET SENSORS THROUGH SWITCH.

7 PROVIDE CABLE TRAY FOR DATA CABLES. REFER TO DETAILS ON SHEET E521.

8 PROVIDE FOUR SPARE EMPTY 3/4" CONDUITS WITH PULL STRING ROUTED BACK TO PANEL 2NL2. PROVIDE ONE 1" CONDUIT WITH PULL STRING FOR DATA BACK TO NEAREST CABLE TRAY. STUB CONDUITS OUT THROUGH WALL AT 24" AFF AND CAP.

9 MOUNT RECEPTACLE RECESSED INTO BRICK WALL. COORDINATE WITH ARCHITECT.

10 MOUNT RECEPTACLE TO COLUMN WRAP. COORDINATE WITH ARCHITECTURAL DETAILS.

PARTITION SCHEDULE

1 HOUR RATED BARRIER

2 HOUR RATED BARRIER

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06/11/2025

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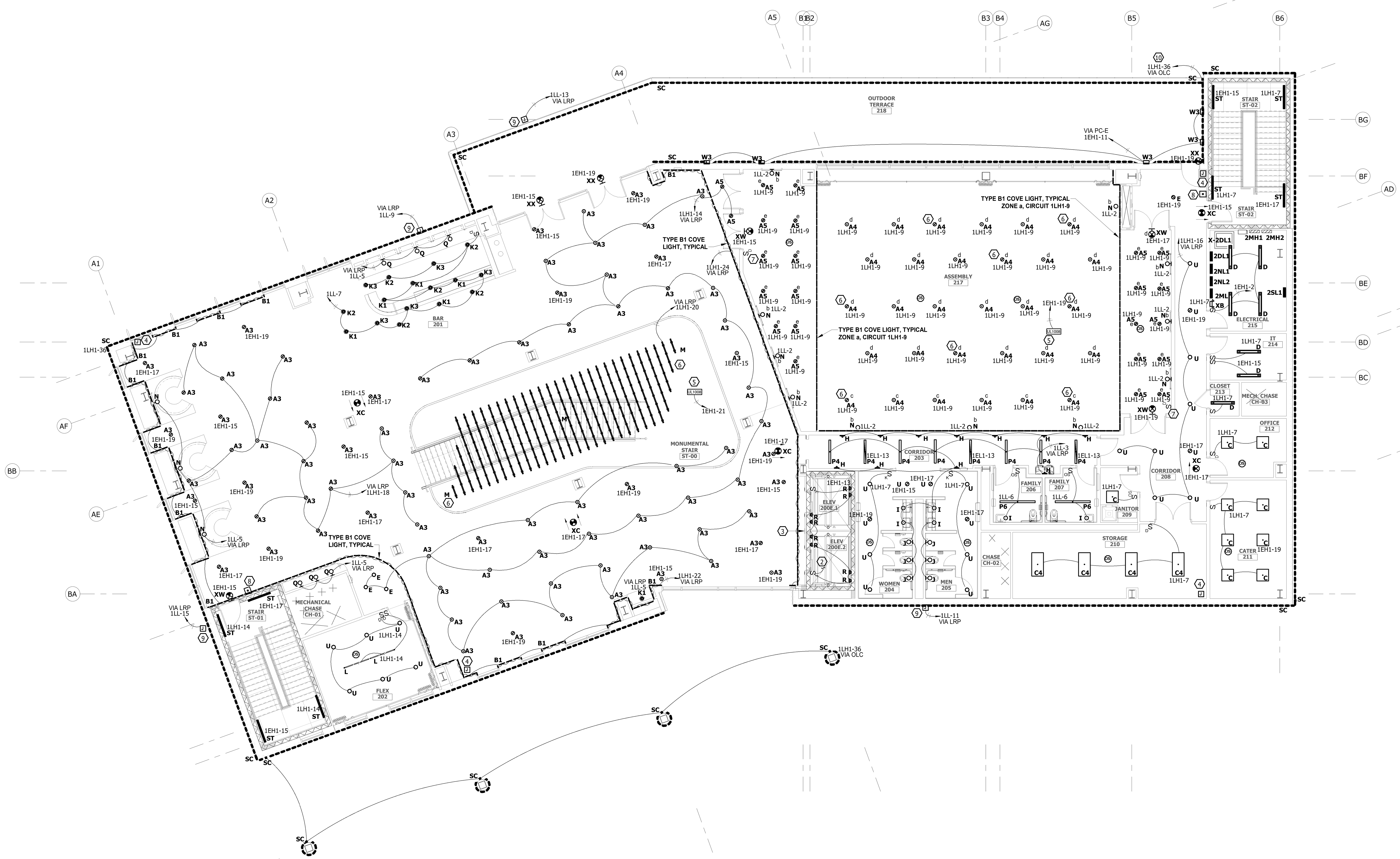
CLANCY & THEYS

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **2nd FLOOR PLAN - POWER**

E121



1 E122 2nd FLOOR PLAN - LIGHTING

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

4' 0 4' 8' 12' 16' 20'

KEY NOTES TO E122

1 EMERGENCY EGRESS LIGHT FIXTURE TO BE UNSWITCHED AND SUPPLIED FROM EMERGENCY GENERATOR SOURCE.

2 CONTROL LIGHTS IN SHAFT WITH THREE WAY SWITCHES ON FIRST AND SECOND FLOOR AND THROUGH ELEVATOR LIGHTING CONTACTOR IN THE MAIN ELECTRICAL ROOM. SEE ELEVATOR LIGHTING CONTROL DETAILS.

3 SEE ARCHITECTURAL DRAWINGS FOR ELEVATOR CALL LIGHT AND BUTTON LOCATIONS.

4 PROVIDE JUNCTION BOX AND 3/4" CONDUIT WITH PULL STRING TO 2ND FLOOR LIGHTING PANEL FOR FUTURE LIGHTING CIRCUIT CONNECTIONS.

5 PROVIDE UL1008 DEVICE, REFER TO DETAIL ON SHEET E502. WIRE NORMAL AND EMERGENCY CIRCUIT THROUGH TRANSFER DEVICE. DEFAULT OUTPUT SHALL BE NORMAL POWER CIRCUIT SHOWN, DEVICE SHALL SWITCH POWER TO EMERGENCY CIRCUIT AND ILLUMINATE TO FULL BRIGHTNESS UNDER EMERGENCY CONDITION.

6 EMERGENCY LIGHT FIXTURE WIRED THROUGH UL1008 DEVICE.

7 PROVIDE FIVE DIMMER SWITCHES FOR ZONES a, b, c, d, AND e, NOTED NEXT TO FIXTURES.

8 PROVIDE CORRIDOR LIGHTING OVERRIDE SWITCH. LABEL FOR "2 HOUR LIGHTING ON TIME".

9 APPROXIMATE LOCATION OF ILLUMINATED SIGN. PROVIDE CIRCUIT AND COORDINATE CONNECTIONS WITH VENDOR.

10 CONTROL RGBW COVE LIGHT TYPE SE FIXTURES FROM SWITCH IN ELECTRICAL ROOM 128.

PARTITION SCHEDULE

(line type)	1 HOUR RATED BARRIER
(line type)	2 HOUR RATED BARRIER

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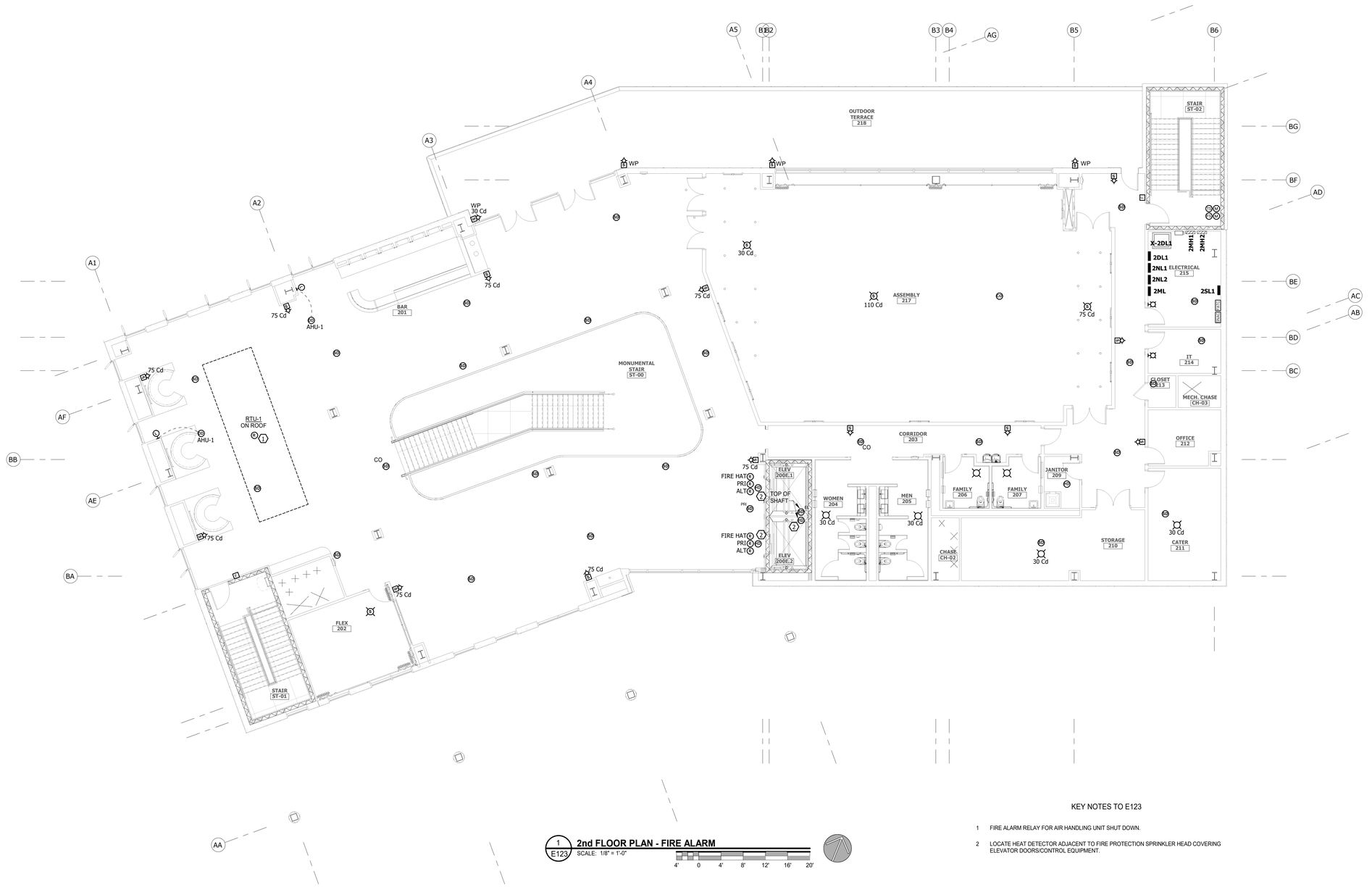
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS 06/13/2025

JOB NUMBER
23-013
DATE ISSUED
06/12/2025
PROJECT STATUS
BID SET
SHEET
2nd FLOOR PLAN - LIGHTING

E122



1 E123 **2nd FLOOR PLAN - FIRE ALARM**
SCALE: 1/8" = 1'-0"
4" 0 4" 8" 12" 16" 20'

KEY NOTES TO E123

1 FIRE ALARM RELAY FOR AIR HANDLING UNIT SHUT DOWN.

2 LOCATE HEAT DETECTOR ADJACENT TO FIRE PROTECTION SPRINKLER HEAD COVERING ELEVATOR DOORS/CONTROL EQUIPMENT.

PARTITION SCHEDULE

1 HOUR RATED BARRIER

2 HOUR RATED BARRIER

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06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS CIVIL CONSULTING

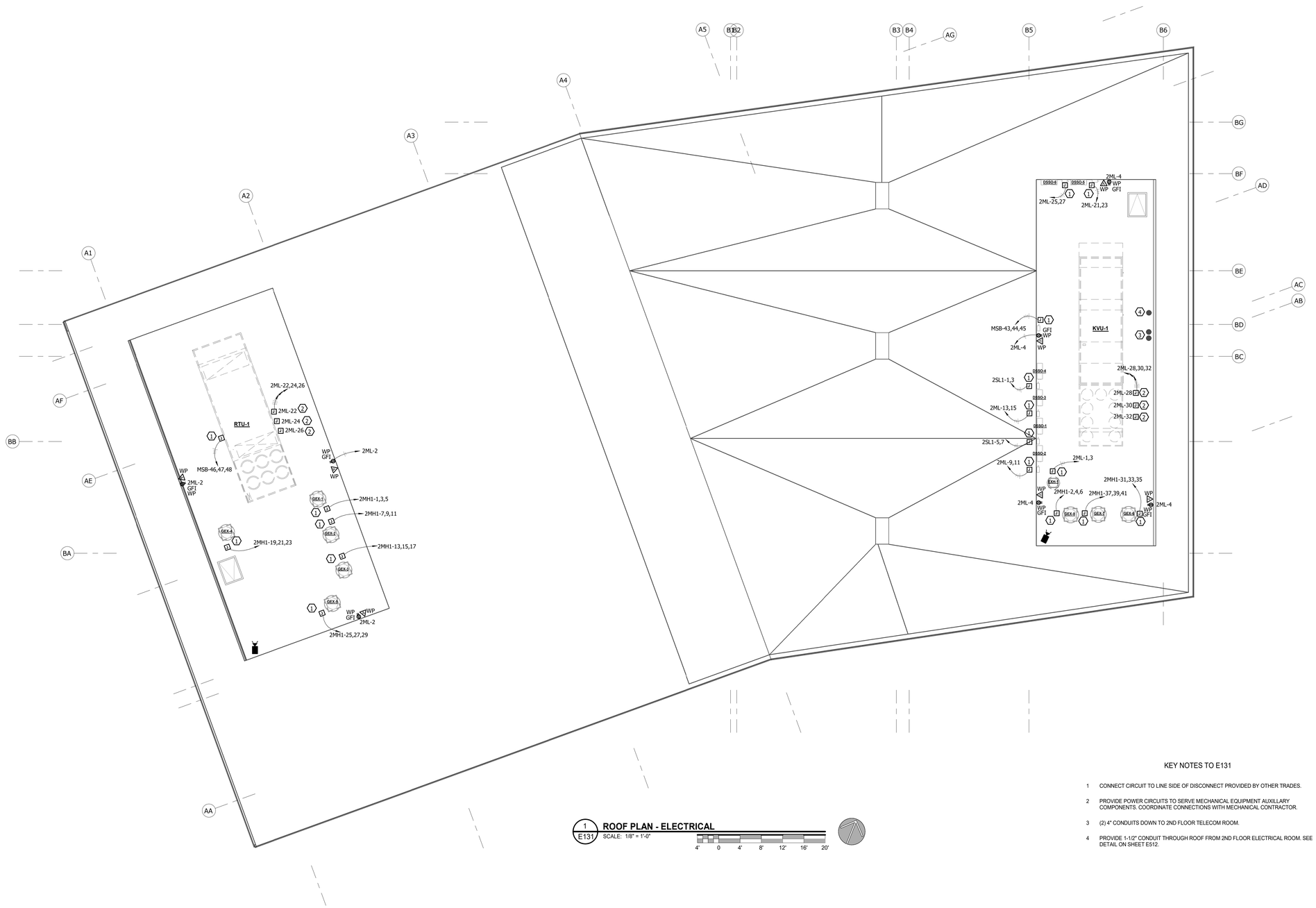
JOB NUMBER **23-013**

DATE ISSUED **06/12/2025**

PROJECT STATUS **BID SET**

SHEET **2nd FLOOR PLAN - FIRE ALARM**

E123



1 E131 **ROOF PLAN - ELECTRICAL**
SCALE: 1/8" = 1'-0"
4' 0 4' 8' 12' 16' 20'

KEY NOTES TO E131

1 CONNECT CIRCUIT TO LINE SIDE OF DISCONNECT PROVIDED BY OTHER TRADES.

2 PROVIDE POWER CIRCUITS TO SERVE MECHANICAL EQUIPMENT AUXILLARY COMPONENTS. COORDINATE CONNECTIONS WITH MECHANICAL CONTRACTOR.

3 (2) 4" CONDUITS DOWN TO 2ND FLOOR TELECOM ROOM.

4 PROVIDE 1-1/2" CONDUIT THROUGH ROOF FROM 2ND FLOOR ELECTRICAL ROOM. SEE DETAIL ON SHEET E512.

PARTITION SCHEDULE

1 HOUR RATED BARRIER

2 HOUR RATED BARRIER

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06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **ROOF PLAN**

E131

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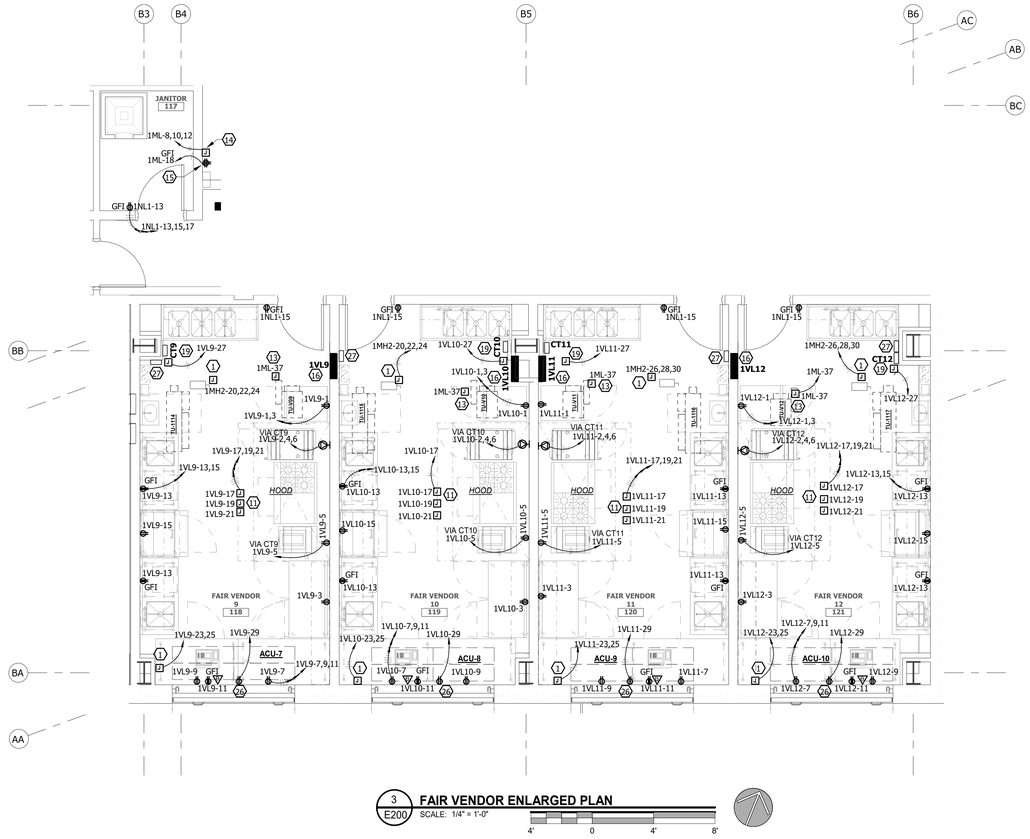
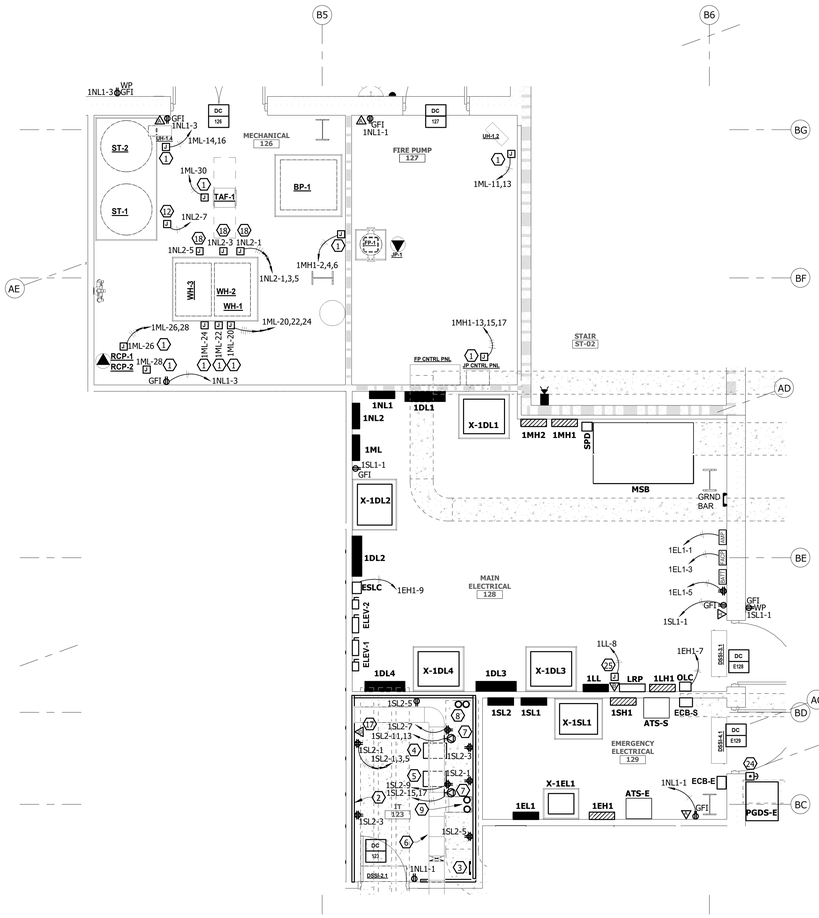
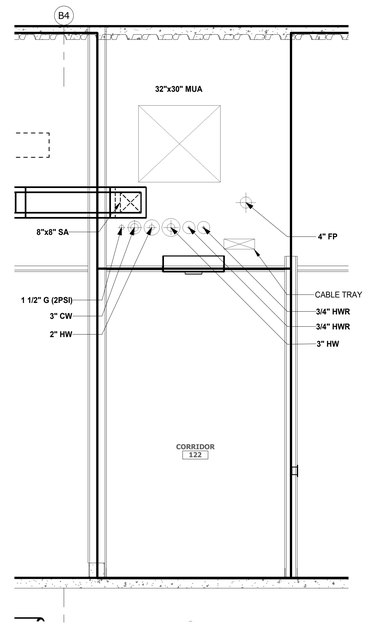
Plot Time: 6/10/2025 5:24:38 PM



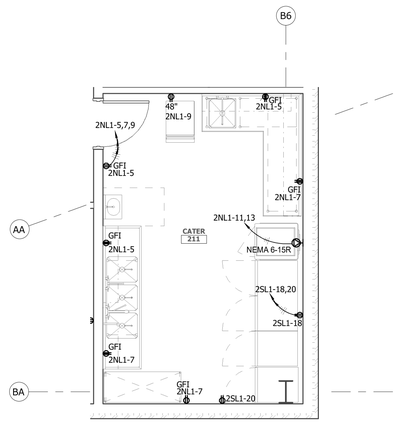
3 E200 **FAIR VENDOR ENLARGED PLAN**
SCALE: 1/4" = 1'-0"



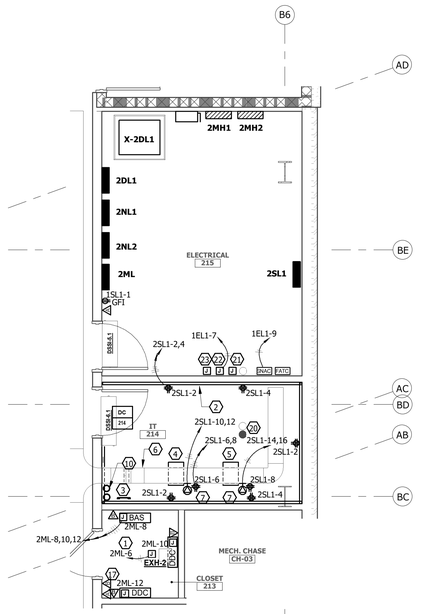
1 E200 **MAIN ELECTRICAL ROOM 128 ENLARGED PLAN**
SCALE: 1/4" = 1'-0"



4 E200 **CORRIDOR 122 - CEILING COORDINATION ELEC**
SCALE: 1/2" = 1'-0"



5 E200 **CATER 211**
SCALE: 1/4" = 1'-0"



2 E200 **ELECTRICAL ROOM 215 ENLARGED PLAN**
SCALE: 1/4" = 1'-0"

KEY NOTES TO E200

1 CONNECT CIRCUIT TO LINE SIDE OF DISCONNECT PROVIDED BY OTHER TRADES.

2 MOUNT 3/4" THICK FIRE RATED PLYWOOD TO 8' AFF ON ALL FOUR WALLS OF TELECOM ROOM. PAINT FLAT WHITE LEAVING FIRE RATING LABELS VISIBLE.

3 PROVIDE GROUNDING BAR. SEE DETAIL ON SHEET E603.

4 TELECOM EQUIPMENT RACK

5 TELECOM DISTRIBUTION RACK

6 LADDER TYPE CABLE TRAY MOUNTED AT 7'-6" AFF. SUPPORT FROM STRUCTURE ABOVE AND CONNECT TO EQUIPMENT RACKS FOR ADDITIONAL SUPPORT.

7 RECEPTACLES FOR EQUIPMENT RACKS. MOUNT ON CABLE TRAY ADJACENT TO EQUIPMENT RACK.

8 PROVIDE (2) 4" CONDUITS STUBBED UP 12" AFF FOR TELECOMMUNICATIONS SERVICE ENTRANCE.

9 3- 4" CONDUITS UP TO TELECOM ROOM ON SECOND FLOOR.

10 3- 4" CONDUITS DOWN TO IT ROOM ON FIRST FLOOR.

11 PROVIDE POWER CONNECTIONS TO KITCHEN EXHAUST HOOD FOR CONTROLS, FIRE SUPPRESSION, AND LIGHTS. COORDINATE REQUIREMENTS WITH FOODSERVICE EQUIPMENT PROVIDER.

12 PROVIDE POWER CONNECTION TO UTILITY CONTROLLER FOR NATURAL GAS EMERGENCY SHUTOFF SUPPLYING WATER HEATERS IN ROOM 126. COORDINATE CONNECTIONS AND EXACT LOCATION WITH PLUMBING CONTRACTOR.

13 PROVIDE POWER CONNECTION TO TERMINAL UNIT LOW-VOLTAGE CONTROLS.

14 PROVIDE POWER CONNECTION TO SUMP PUMP VIA CONTROL PANEL. COORDINATE REQUIREMENTS WITH PLUMBING CONTRACTOR.

15 PROVIDE DOUBLE DUPLEX RECEPTACLE FOR SUMP PUMP REMOTE ALARMS. COORDINATE INSTALLATION WITH PLUMBING CONTRACTOR.

16 PANEL SHALL BE RECESSED IN WALL. PROVIDE WIREWAY ABOVE WITH SPARE CONDUITS FOR FUTURE CIRCUIT CONNECTIONS.

17 PROVIDE CONNECTIONS FOR OWNER PROVIDED ACCESS CONTROL HEAD END EQUIPMENT.

18 PROVIDE POWER CONNECTION FOR WATER HEATER PUMPS. COORDINATE CONNECTIONS WITH PLUMBING CONTRACTOR.

19 PROVIDE CONTACTOR FOR EQUIPMENT LOCATED UNDER KITCHEN HOOD. CONTACTOR CIRCUIT CONTROLLED BY HOOD ANSUL SYSTEM. SEE DETAILS ON SHEET E302.

20 (2) 4" CONDUITS UP TO ROOF AND CAPPED.

21 PROVIDE RACEWAYS FOR ERRC/DAS SYSTEM AS DEFINED ON E512. LOCATE JUNCTION BOXES AT 48" AFF.

22 PROVIDE WALL JUNCTION BOX AT 48" AFF WITH CIRCUIT FOR ERRC/DAS SYSTEM.

23 PROVIDE WALL JUNCTION BOX AT 48" AFF WITH 3/4" CONDUIT TO FIRE ALARM TERMINATION CABINET FOR ERRC/DAS SYSTEM.

24 REMOTE EMERGENCY SHUTDOWN PUSHBUTTON FOR GENERATOR, PER NEC ART 445.18(C).

25 PROVIDE CIRCUIT AND DATA FOR CONNECTION TO LIGHTING RELAY PANEL.

26 PROVIDE RECEPTACLE FOR MOTORIZED WINDOW OPERATOR. COORDINATE EXACT LOCATION AND CONNECTIONS WITH MANUFACTURER.

27 PROVIDE 208V, 3 PHASE, 50A REMOTE GFI TEST SWITCH FOR OVEN CIRCUIT. PROVIDE NSS LINE GARD PGFS-85108 OR APPROVED EQUAL.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON 06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS 06/12/2025

JOB NUMBER **23-013**
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PROJECT STATUS **BID SET**
SHEET **ENLARGED PLANS**

E200

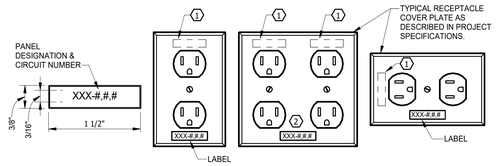


FIG. 1 - LABEL DIMENSIONS

FIG. 2 - LABEL LOCATION ON DEVICE PLATE

GENERAL NOTES :

1. LABELS ARE TO BE MACHINE PRODUCED USING A THERMAL TRANSFER PROCESS WITH DIMENSIONS AS SHOWN ABOVE. LABELS ARE TO BE SUITABLE FOR EITHER INDOOR OR OUTDOOR USE.
2. LABEL COLOR TO BE CLEAR WITH BLACK LETTERING.
3. LABELS ARE TO BE ATTACHED AS INDICATED ABOVE TO ALL PROJECT RECEPTACLE COVER PLATES.

KEYED NOTES :

1. WRITE PANEL DESIGNATION NUMBER ON DEVICE YOKE WITH A FINE TIP, PERMANENT MARKER AS AN AID TO PROPER FACEPLATE LOCATION. ALL MARKING ON DEVICES MUST BE COVERED BY FACEPLATE.
2. FOR DUPLEX RECEPTACLES CENTER LABEL IF BOTH DEVICES ARE SUPPLIED BY THE SAME CIRCUIT. IF DEVICES ARE SUPPLIED BY DIFFERENT CIRCUITS PROVIDE A LABEL BELOW EACH RECEPTACLE.

SW DETAIL: LA0002

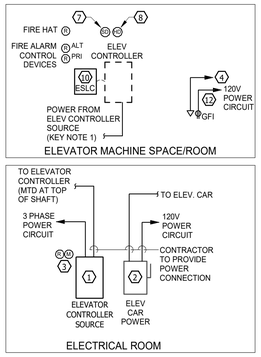
8 E301 **DEVICE LABELS**
SCALE: NTS

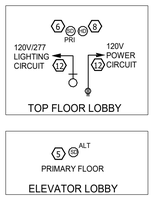
GENERAL NOTES :

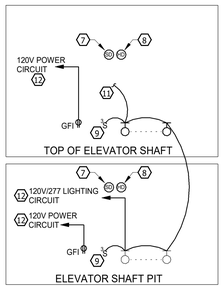
1. INSTALL NEW LABELS ON ALL PROJECT EQUIPMENT (PANELBOARDS, ENCLOSED BREAKERS, DISCONNECTS, TRANSFORMERS).
2. CONSTRUCT LABELS FROM 2 COLOR PLASTIC LAMINATE. DIMENSIONS ARE 5" WIDE X 1 1/2" HIGH. TEXT HEIGHT IS 3/16", EXCEPT AS NOTED OTHERWISE.
3. LABEL COLORS ARE TO BE SELECTED FROM THE FOLLOWING CHOICES:

480/277 VOLT SYSTEM:	BLACK BACKGROUND/WHITE LETTERS
120/208 VOLT SYSTEM:	BLUE BACKGROUND/WHITE LETTERS
EMERGENCY:	GREEN BACKGROUND/WHITE LETTERS

4. SECURE TO TOP CENTER OF EQUIPMENT COVER WITH #4-40 STAINLESS STEEL SCREWS WITH MATCHING NUTS AND LOCKWASHERS. USE OF ADHESIVES TO SECURE LABEL TO EQUIPMENT IS NOT ACCEPTABLE.







KEYED NOTES:

1. PROVIDE 3-PHASE, FUSED SHUNT TRIP DISCONNECT SWITCH WITH INTEGRAL CPT, KEYED TEST SWITCH, PILOT LIGHT, FIRE SAFETY INTERFACE, INTERLOCKING CONTACTS, AND FIRE ALARM MONITORING RELAY. SIZE DISCONNECT SWITCH PER UNIT NAMEPLATE. A PRODUCT MEETING THIS SPECIFICATION IS THE COOPER BUSSMAN POWER MODULE SWITCH.
2. PROVIDE 120V, 30A FUSED DISCONNECT SWITCH WITH 20A FUSES FOR CAR POWER AND LIGHTING. FINAL CONNECTIONS TO ELEVATOR CAR ARE PROVIDED BY ELEVATOR INSTALLER.
3. PROVIDE FIRE ALARM CONTROL RELAY TO INITATE ELEVATOR POWER SHUNT AND MODULE TO MONITOR SHUNT TRIP CONTROL POWER FOR LOSS OF VOLTAGE.
4. PROVIDE DEDICATED TELEPHONE LINE TO SERVE ELEVATOR. FINAL CONNECTIONS TO ELEVATOR ARE PROVIDED BY ELEVATOR INSTALLER.
5. SMOKE DETECTOR AT PRIMARY FLOOR. UPON ACTIVATION OF THIS DEVICE TYPE, THE ELEVATOR IS RECALLED TO ALTERNATE FLOOR.
6. SMOKE DETECTOR AT EACH FLOOR OTHER THAN PRIMARY FLOOR. UPON ACTIVATION OF THIS DEVICE TYPE, THE ELEVATOR IS RECALLED TO PRIMARY FLOOR.
7. SMOKE DETECTOR TO INITATE ELEVATOR RECALL FUNCTION. LOCATE ADJACENT TO FIRE PROTECTION SPRINKLER HEAD. SEE FLOOR PLANS FOR RECALL DESTINATION ASSIGNMENT FOR THIS DEVICE.
8. HEAT DETECTOR ADJACENT TO FIRE PROTECTION SPRINKLER HEAD.
9. ELEVATOR PIT AND SHAFT LIGHTING. PROVIDE INDICATED NUMBER OF FIXTURES (MINIMUM DESIGNED LIGHT LEVEL IS 20 FOOTCANDLE).
10. ELEVATOR SHAFT LIGHTING CONTACTOR (ESLC) TO INTERFACE WITH ELEVATOR CONTROLLER. MOUNT ESLC ADJACENT TO ELEVATOR CONTROLLER OR ABOVE CEILING WHERE CONTROLLER IS MOUNTED IN ELEVATOR FRAME. SEE ELEVATOR SHAFT LIGHTING CONTROL DIAGRAM.
11. EXTEND SWITCHLEG TO ELEVATOR SHAFT LIGHTING CONTACTORS (ESLC) TO INTERFACE WITH ELEVATOR CONTROLLER FOR SHAFT LIGHTING CONTROL FROM ELEVATOR EQUIPMENT.
12. PROVIDE DEDICATED CIRCUITS TO SUPPLY LIGHTS AND RECEPTACLE LOADS AS INDICATED ON FLOOR PLANS PER NEC ARTICLE 620.23. THESE LOADS SHALL NOT BE FED FROM A SHARED CIRCUIT.

GENERAL NOTES:

1. COORDINATE ALL DEVICE QUANTITIES AND LOCATIONS WITH REQUIREMENTS ON FLOOR PLANS.
2. LOCATIONS FOR PRIMARY AND ALTERNATE FLOOR ASSIGNMENTS ARE DEFINED ON FLOOR PLANS.
3. PROVIDE HEAT DETECTORS ADJACENT TO FIRE PROTECTION SPRINKLER HEADS THAT ARE LOCATED IN ALL PIT, SHAFT, AND ELEVATOR WORKSPACE AREAS. UPON ACTIVATION OF THESE DEVICES, THE FIRE ALARM SYSTEM SHALL INITIATE ELEVATOR POWER SHUTDOWN PRIOR TO SPRINKLER WATER DISCHARGE.
4. FOR ELEVATORS WITH CONCEALED CONTROL PANEL WITHIN SHAFT WALL, PROVIDE A HEAT DETECTOR WITHIN 24" OF ALL SPRINKLER HEADS LOCATED 15'-0" OR LESS FROM ELEVATOR EQUIPMENT. COORDINATE EXACT REQUIREMENTS WITH GC AND SELECTED ELEVATOR MANUFACTURER.

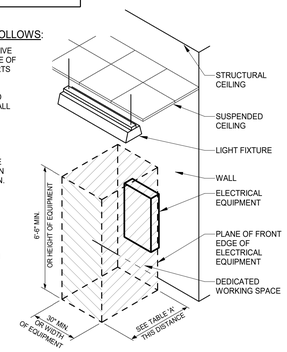
SO DETAIL: GE0041

11 E301 **ELEVATOR WIRING DETAIL**
SCALE: NOT TO SCALE

TABLE A - WORKING CLEARANCES			
NOMINAL VOLTAGE TO GROUND	MINIMUM CLEAR DISTANCE (FEET)		
	CONDITION 1	CONDITION 2	CONDITION 3
0-150	3	3	3
151-600	3	3 1/2	4

WHERE THE CONDITIONS ARE AS FOLLOWS:

1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR UNGROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300V SHALL NOT BE CONSIDERED LIVE PARTS.
2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.

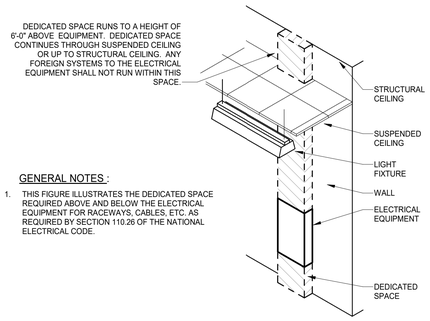


GENERAL NOTES :

1. THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF ELECTRICAL EQUIPMENT AS REQUIRED BY SECTION 110.26 OF THE NATIONAL ELECTRICAL CODE.

SW DETAIL: GE0029

5 E301 **WORKING CLEARANCES FOR ELECTRICAL EQUIPMENT**
SCALE: NTS

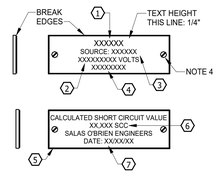


GENERAL NOTES :

1. THIS FIGURE ILLUSTRATES THE DEDICATED SPACE REQUIRED ABOVE AND BELOW THE ELECTRICAL EQUIPMENT FOR RACEWAYS, CABLES, ETC. AS REQUIRED BY SECTION 110.26 OF THE NATIONAL ELECTRICAL CODE.

SW DETAIL: GE0030

6 E301 **DEDICATED SPACE FOR ELECTRICAL EQUIPMENT**
SCALE: NTS

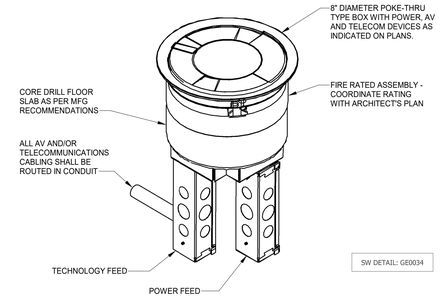


KEYED NOTES :

1. INSERT EQUIPMENT DESIGNATION WHERE X'S ARE INDICATED.
2. INSERT VOLTAGE WHERE X'S ARE INDICATED. POSSIBLE VOLTAGES ARE:
   "480Y/277"
   "208Y/120"
   "480: 208Y/120"
3. INSERT SUPPLY SOURCE DESIGNATION HERE.
4. INSERT SUPPLY SYSTEM WHERE X'S ARE INDICATED POSSIBLE CHOICES ARE:
   "NORMAL POWER"
   "EMERGENCY"
   "OPTIONAL STANDBY"
5. ADD THIS LABEL AT SERVICE EQUIPMENT, PANELBOARDS, MECHANICAL SYSTEM MOTOR CONTROLLERS (VARIABLE DRIVE UNITS).
6. INSERT VALUE INDICATED ON PROJECT ELECTRICAL DRAWINGS.
7. INSERT DATE OF PROJECT DRAWING BID SET.

9 E301 **EQUIPMENT LABEL**
SCALE: NTS

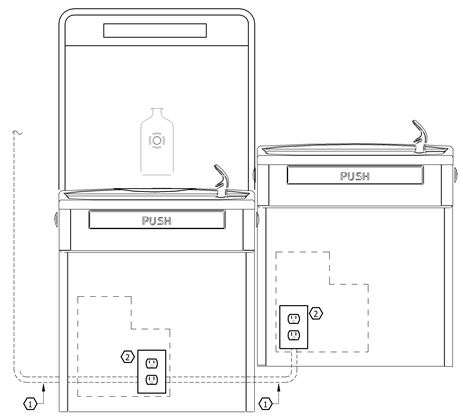
SO DETAIL: LA0003 R2



SW DETAIL: GE0034

ELECTRICAL POKE THROUGH SCHEDULE						
Box Type	DUPLEX QTY	DATA TYPE/QTY	DATA CONDUIT SIZE	A/V SPACE	A/V CONDUIT SIZE	Comments
A	1	-	-	-	-	
B	1	2	1"	-	-	
C	1	2	1"	1 GANG	1-1/4"	

10 E301 **POKE-THRU FLOOR OUTLET DETAIL**
SCALE: NTS

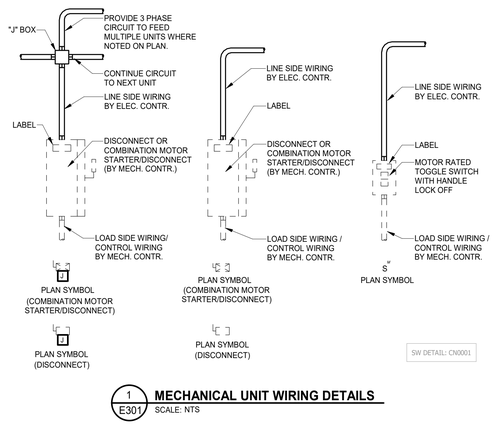


KEYED NOTES :

1. GFI BREAKER PROTECTED CONDUCTORS WITHIN CONDUIT CONCEALED WITHIN WALL.
2. DUPLEX RECEPTACLE(S) WITH LABEL IDENTIFYING OUTLET AS GFI PROTECTED. LOCATE RECEPTACLE WITHIN EACH COOLER HOUSING. COORDINATE EXACT MOUNTING LOCATION OF EACH RECEPTACLE WITH EWC MANUFACTURER AND PLUMBING CONTRACTOR.

SW DETAIL: GE0038

7 E301 **ELECTRIC WATER COOLER GFCI DETAIL**
SCALE: NTS

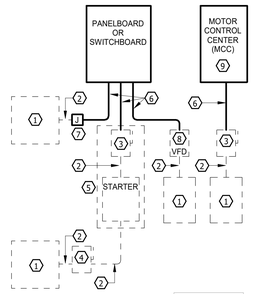


SW DETAIL: CN0001

1 E301 **MECHANICAL UNIT WIRING DETAILS**
SCALE: NTS

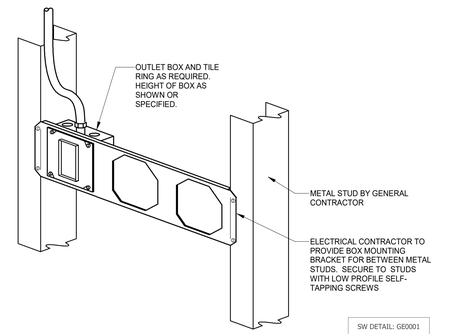
KEYED NOTES :

1. EQUIPMENT PROVIDED AND INSTALLED BY OTHER CONTRACTOR. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS, START UP AND TEST EQUIPMENT.
2. CONDUIT & WIRING BY OTHER CONTRACTOR PROVIDING EQUIPMENT.
3. DISCONNECT PROVIDED AND INSTALLED BY CONTRACTOR PROVIDING EQUIPMENT.
4. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC, IT SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR PROVIDING EQUIPMENT.
5. A COMBINATION STARTER MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. A COMBINATION STARTER SHALL BE PROVIDED AND INSTALLED BY THE OTHER CONTRACTOR PROVIDING THE EQUIPMENT.
6. FEEDER AND CONDUIT BY ELECTRICAL CONTRACTOR. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER SIZES TO OTHER EQUIPMENT. TERMINATE FEEDER AT LINE SIDE OF DISCONNECTING MEANS.
7. JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT IF NO STARTER IS REQUIRED. INSTALL JUNCTION BOX ADJACENT TO THE EQUIPMENT AND PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. MOTOR RATED DISCONNECT SHALL BE PROVIDED BY CONTRACTOR PROVIDING EQUIPMENT WHERE REQUIRED BY CODE.
8. VARIABLE FREQUENCY DRIVE (VFD) PROVIDED AND INSTALLED BY OTHER CONTRACTOR PROVIDING EQUIPMENT. VFD IS SUPPLIED WITH INTEGRAL DISCONNECTING MEANS.
9. FOR PROJECTS UTILIZING A MOTOR CONTROL CENTER (MCC), THE STARTER, CIRCUIT BREAKER OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.



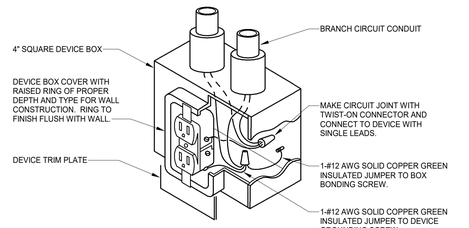
SW DETAIL: CN0002

2 E301 **MECHANICAL UNIT WIRING DETAILS**
SCALE: NTS



SW DETAIL: GE0001

3 E301 **OUTLET BOX SUPPORT**
SCALE: NTS



SW DETAIL: GE0033

4 E301 **RECEPTACLE GROUNDING DETAIL**
SCALE: NTS

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NC STATE FAIRGROUNDS - MIDWAY CENTER
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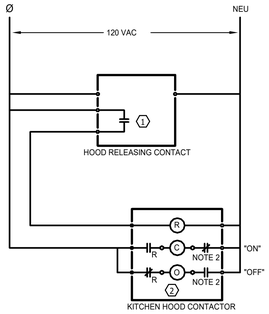
4285 TRINITY RD, RALEIGH, NC 27607
SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **ELECTRICAL DETAILS**

E301



GENERAL NOTES :

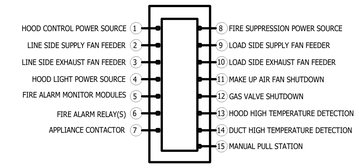
1. MAIN CONTACTS NOT SHOWN AT CONTACTOR.
2. COIL CLEARING CONTACTS INTERLOCKED WITH MAIN CONTACTS.
3. ALL CONTROL CONDUCTORS ARE TO BE AWG #12.

KEYED NOTES :

1. KITCHEN HOOD FIRE SUPPRESSION CONTROL RELAY. CONTACTS AND RELAY COIL RATING IS TO MATCH KITCHEN HOOD REQUIREMENTS.
2. KITCHEN HOOD CONTACTOR. RATED FOR USE AT 250 VOLT, 60 AMP, 6-POLE. PROVIDE MECHANICALLY HELD TYPE CONFIGURED FOR 2-WIRE 120 VAC CONTROL MOUNTED IN NEMA 1 ENCLOSURE.

SO DETAIL: CN0023

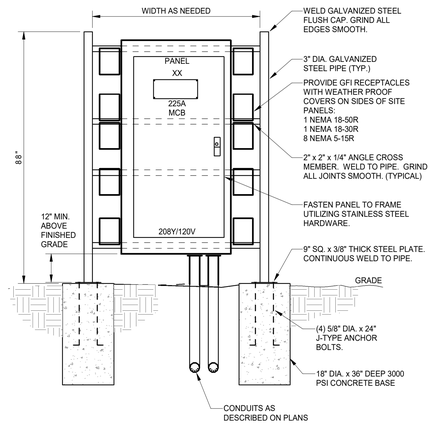
4 / E302 **KITCHEN HOOD CONTACTOR (CTXX) DIAGRAM**
SCALE: NTS



FOOD SERVICE HOOD CONNECTION SCHEDULE

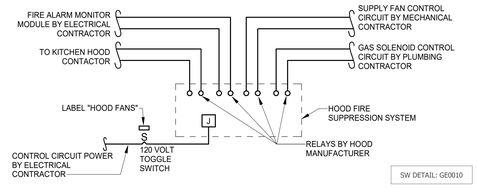
MARK	DESCRIPTION	RESPONSIBILITY	REMARKS
1	HOOD CONTROL POWER SOURCE	ELECTRICAL DIVISION	ELECTRICAL DIVISION TO PROVIDE SOURCE AND TERMINATE IN HOOD CONTROL PANEL.
2	LINE SIDE SUPPLY FAN FEEDER	ELECTRICAL DIVISION	ELECTRICAL DIVISION TO PROVIDE SOURCE AND TERMINATE IN HOOD CONTROL PANEL.
3	LINE SIDE EXHAUST FAN FEEDER	ELECTRICAL DIVISION	ELECTRICAL DIVISION TO PROVIDE SOURCE AND TERMINATE IN HOOD CONTROL PANEL.
4	HOOD LIGHT POWER SOURCE	ELECTRICAL DIVISION	ELECTRICAL DIVISION TO PROVIDE SOURCE AND TERMINATE IN HOOD CONTROL PANEL.
5	FIRE ALARM MONITOR MODULES	ELECTRICAL DIVISION	ELECTRICAL DIVISION TO PROVIDE FIRE ALARM MODULES TO SUPERVISE 120 VAC FOR APPLIANCE SHUNT TRIP, TROUBLE AT HOOD CONTROL PANEL AND ACTIVATION OF HOOD SUPPRESSION SYSTEM. REFER TO FIRE ALARM MATRIX.
6	FIRE ALARM RELAY(S)	ELECTRICAL DIVISION	ELECTRICAL DIVISION TO PROVIDE FIRE ALARM RELAY FOR EACH MAKE UP AIR UNIT TO INITIATE FAN SHUTDOWN. REFER TO FIRE ALARM MATRIX.
7	APPLIANCE CONTACTOR	ELECTRICAL DIVISION	ELECTRICAL DIVISION TO PROVIDE POWER CIRCUIT AND CONNECT HOOD OUTPUT SIGNAL TO APPLIANCE CONTACTOR. ALL APPLIANCES UNDER HOOD SHALL POWER DOWN FROM ACTIVATION OF HOOD SYSTEM.
8	FIRE SUPPRESSION POWER SOURCE	ELECTRICAL DIVISION	ELECTRICAL DIVISION TO PROVIDE POWER SOURCE AND TERMINATE IN HOOD CONTROL PANEL.
9	LOAD SIDE SUPPLY FAN(S) FEEDER(S)	MECHANICAL DIVISION	MECHANICAL DIVISION PROVIDES LOAD SIDE FEEDER FROM HOOD CONTROL PANEL TO FAN AND PROVIDES UNIT DISCONNECT
10	LOAD SIDE EXHAUST FAN FEEDER	MECHANICAL DIVISION	MECHANICAL DIVISION PROVIDES LOAD SIDE FEEDER FROM HOOD CONTROL PANEL TO FAN AND PROVIDES UNIT DISCONNECT
11	MAKE UP AIR FAN SHUTDOWN	MECHANICAL DIVISION	MECHANICAL DIVISION TO PROVIDE CONTROL WIRING TO ENABLE MAKE UP AIR SHUTDOWN
12	GAS VALVE SHUTDOWN	PLUMBING DIVISION	MECHANICAL DIVISION PROVIDES VALVE FROM HOOD PACKAGE. PLUMBING DIVISION INSTALLS VALVE IN GAS PIPING. MECHANICAL DIVISION CONNECTS FOR SHUT DOWN (CABLE STYLE OPERATOR)
13	HOOD HIGH TEMPERATURE DETECTION	MECHANICAL DIVISION	FUSIBLE LINK STYLE
14	DUCT HIGH TEMPERATURE DETECTION	MECHANICAL DIVISION	MECHANICAL DIVISION TO PROVIDE SENSOR AND CONTROL WIRING
15	MANUAL PULL STATION CABLE	ELECTRICAL DIVISION	ELECTRICAL DIVISION TO PROVIDE WALL MOUNTED BOX AND CONDUIT SLEEVE TO ABOVE CEILING. HOOD INSTALLER TO PROVIDE PULL STATION AND OPERATING CABLE.

1 / E302 **KITCHEN HOOD CONNECTIONS**
SCALE: NTS



SW DETAIL: OC0023

5 / E302 **PANEL RACK DETAIL**
SCALE: NTS

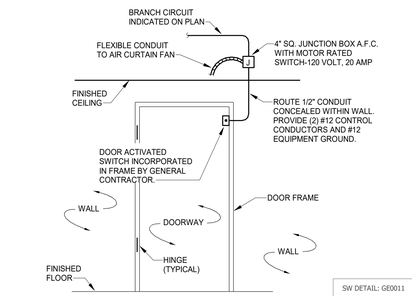


SW DETAIL: GE0010

GENERAL NOTES :

1. ALL ELECTRICAL DEVICES UNDER HOOD AND HOOD SUPPLY FAN TO POWER DOWN THROUGH HOOD CONTROL RELAYS UPON ACTIVATION OF HOOD FIRE SUPPRESSION SYSTEM.

2 / E302 **KITCHEN HOOD WIRING SCHEMATIC**
SCALE: NTS



SW DETAIL: GE0011

3 / E302 **AIR CURTAIN WIRING DETAIL**
SCALE: NTS

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NC STATE FAIRGROUNDS - MIDWAY CENTER
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SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS CONSTRUCTION CO.

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **ELECTRICAL DETAILS**

E302

PANEL ID: 2MH1

VOLTAGE: 480Y/277 **SERVICE EQUIP:** No **MOUNTING:** SURFACE
SOURCE: MSB **AMPS:** 200 **PANEL AIC:** 35,000 **TYPE:** BOLT ON
LOCATION: ELEC. 215 **MAIN:** MLO **CALC SCC:** 22,658 **APPROX. DIM:** 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	942	942		2						
GEX-1	1	3/4		3	20	3		942	942	4	20	3		3/4	1	GEX-8
						5			942	942	6					
						7	942	6000		8						
GEX-2	1	3/4		3	20	9		942	6000	10	35	1	1-#8, 1-#8, 1-#10	3/4		RH-2 TERRACE 140
						11			942	6000	12	35	1	1-#8, 1-#8, 1-#10	3/4		RH-3 TERRACE 140
						13	942	6000		14	35	1	1-#8, 1-#8, 1-#10	3/4		RH-4 TERRACE 140
GEX-3	1	3/4		3	20	15		942	6000	16	35	1	1-#8, 1-#8, 1-#10	3/4		RH-5 TERRACE 140
						17			942	--	18	--	1	--	--	SPACE
						19	942	--		20	--	1	--	--		SPACE
GEX-4	1	3/4		3	20	21		942	--	22	--	1	--	--		SPACE
						23			942	--	24	--	1	--	--	SPACE
						25	942	--		26	--	1	--	--		SPACE
GEX-5	1	3/4		3	20	27		942	--	28	--	1	--	--		SPACE
						29			942	--	30	--	1	--	--	SPACE
						31	942	--		32	--	1	--	--		SPACE
GEX-6	1	3/4		3	20	33		942	--	34	--	1	--	--		SPACE
						35			942	--	36	--	1	--	--	SPACE
						37	942	--		38	--	1	--	--		SPACE
GEX-7	1	3/4		3	20	39		942	--	40	--	1	--	--		SPACE
						41			942	--	42	--	1	--	--	SPACE
							19534 VA	19534 VA	13534 VA							
							74 A	74 A	49 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	22603 VA	100.00%	22603 VA		
Mechanical	30000 VA	100.00%	30000 VA	CONNECTED LOAD	52603 VA
				DEMAND LOAD	52603 VA
				AVG. CONNECTED CURRENT	63 A
				AVG. DEMAND CURRENT	63 A

NOTES:
1. PROVIDE EMPTY CONDUIT WITH PULL STRING AND CIRCUIT BREAKER ONLY FOR FUTURE GREASE EXHAUST FANS ON ROOF.

PANEL ID: 1MH1

VOLTAGE: 480Y/277 **SERVICE EQUIP:** No **MOUNTING:** SURFACE
SOURCE: MSB **AMPS:** 200 **PANEL AIC:** 35,000 **TYPE:** BOLT ON
LOCATION: MAIN ELECTRICAL 128 **MAIN:** MLO **CALC SCC:** 25,683 **APPROX. DIM:** 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	720	5817		2						
KITCHEN EXHAUST FAN GEX-10		3/4	3-#12, 1-#12, 1-#12	3	15	3		720	5817	4	45	3	3-#6, 1-#6, 1-#10	1		BOOSTER PUMP WBP-1 MECH. 277 (15 HP)
						5			720	5817	6					
						7	720	5817		8						
KITCHEN EXHAUST FAN GEX-9		3/4	3-#12, 1-#12, 1-#12	3	15	9		720	5817	10	45	3			1	FUTURE TRASH COMPACTOR (15HP)
						11			720	5817	12					
						13	582	--		14	--	1	--	--		SPACE
JOCKEY PUMP JP-1 RM 163		3/4	3-#12, 1-#12, 1-#12	3	20	15		582	--	16	--	1	--	--		SPACE
						17			582	--	18	--	1	--	--	SPACE
SPACE		--	--	1	--	19	--	--		20	--	1	--	--		SPACE
SPACE		--	--	1	--	21		--	--	22	--	1	--	--		SPACE
SPACE		--	--	1	--	23			--	24	--	1	--	--		SPACE
SPACE		--	--	1	--	25	--	--		26	--	1	--	--		SPACE
SPACE		--	--	1	--	27		--	--	28	--	1	--	--		SPACE
SPACE		--	--	1	--	29			--	30	--	1	--	--		SPACE
SPACE		--	--	1	--	31	--	--		32	--	1	--	--		SPACE
SPACE		--	--	1	--	33		--	--	34	--	1	--	--		SPACE
SPACE		--	--	1	--	35			--	36	--	1	--	--		SPACE
SPACE		--	--	1	--	37	--	--		38	--	1	--	--		SPACE
SPACE		--	--	1	--	39		--	--	40	--	1	--	--		SPACE
SPACE		--	--	1	--	41			--	42	--	1	--	--		SPACE
							13656 VA	13656 VA	13656 VA							
							49 A	49 A	49 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	17451 VA	100.00%	17451 VA		
Mechanical	23516 VA	100.00%	23516 VA	CONNECTED LOAD	40967 VA
				DEMAND LOAD	40967 VA
				AVG. CONNECTED CURRENT	49 A
				AVG. DEMAND CURRENT	49 A

NOTES:
1. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEUTRAL IF UNNEEDED FOR SUPPLY OF 277V LOAD.

PANEL ID: 2MH2

VOLTAGE: 480Y/277 **SERVICE EQUIP:** No **MOUNTING:** SURFACE
SOURCE: MSB **AMPS:** 200 **PANEL AIC:** 35,000 **TYPE:** BOLT ON
LOCATION: ELEC. 215 **MAIN:** MLO **CALC SCC:** 22,658 **APPROX. DIM:** 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	2667	2667		2						
TU-1201 & TU-1211 201, 202		3/4	3-#12, 1-#12, 1-#12	3	20	3		2667	2667	4	25	3	3-#10, 1-#10, 1-#10	3/4		TU-1206 203
						5			2667	2667	6					
						7	2667	2667		8						
TU-1202 200		3/4	3-#12, 1-#12, 1-#12	3	20	9		2667	2667	10	20	3	3-#12, 1-#12, 1-#12	3/4		TU-1207 203
						11			2667	2667	12					
						13	2667	4000		14						
TU-1203 200		3/4	3-#12, 1-#12, 1-#12	3	20	15		2667	4000	16	20	3	3-#12, 1-#12, 1-#12	3/4		TU-1208, 1209, 1210 205, 208
						17			2667	4000	18					
						19	2667	--		20	--	1	--	--		SPACE
TU-1204 200		3/4	3-#12, 1-#12, 1-#12	3	20	21		2667	--	22	--	1	--	--		SPACE
						23			2667	--	24	--	1	--	--	SPACE
						25	2667	--		26	--	1	--	--		SPACE
TU-1205 200		3/4	3-#12, 1-#12, 1-#12	3	20	27		2667	--	28	--	1	--	--		SPACE
						29			2667	--	30	--	1	--	--	SPACE
SPACE		--	--	1	--	31	--	--		32	--	1	--	--		SPACE
SPACE		--	--	1	--	33		--	--	34	--	1	--	--		SPACE
SPACE		--	--	1	--	35			--	36	--	1	--	--		SPACE
SPACE		--	--	1	--	37	--	--		38	--	1	--	--		SPACE
SPACE		--	--	1	--	39		--	--	40	--	1	--	--		SPACE
SPACE		--	--	1	--	41			--	42	--	1	--	--		SPACE
							22667 VA	22667 VA	22667 VA							
							82 A	82 A	82 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Mechanical	68000 VA	100.00%	68000 VA		
				CONNECTED LOAD	68000 VA
				DEMAND LOAD	68000 VA
				AVG. CONNECTED CURRENT	82 A
				AVG. DEMAND CURRENT	82 A

NOTES:

PANEL ID: 1MH2

VOLTAGE: 480Y/277 **SERVICE EQUIP:** No **MOUNTING:** SURFACE
SOURCE: MSB **AMPS:** 200 **PANEL AIC:** 35,000 **TYPE:** BOLT ON
LOCATION: MAIN ELECTRICAL 128 **MAIN:** MLO **CALC SCC:** 25,683 **APPROX. DIM:** 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	2667	3667		2						
TU-1101 & TU-1102 VENDOR 3 & 4 103, 104		3/4	3-#12, 1-#12, 1-#12	3	20	3		2667	3667	4	20	3	3-#12, 1-#12, 1-#12	3/4		TU-1107 BAR 322
						5			2667	3667	6					
						7	2667	3667		8						
TU-1103 & TU-1104 VENDOR 1 & 2 101, 102		3/4	3-#12, 1-#12, 1-#12	3	20	9		2667	3667	10	20	3	3-#12, 1-#12, 1-#12	3/4		TU-1108 DINING & CIRCULATION 298
						11			2667	3667	12					
						13	2667	3667		14						
TU-1105 & TU-1106 VENDOR 5 & BAR 103, 104		3/4	3-#12, 1-#12, 1-#12	3	20	15		2667	3667	16	20	3	3-#12, 1-#12, 1-#12	3/4		TU-1109 BAR 322
						17			2667	3667	18					
						19	2667	2667		20						
TU-1110 & TU-1111 VENDOR 6 & 7 108, 109		3/4	3-#12, 1-#12, 1-#12	3	20	21		2667	2667	22	20	3	3-#12, 1-#12, 1-#12	3/4		TU-1114 & TU-1115 VENDOR 9 & 10 118, 119
						23			2667	2667	24					
						25	2667	2667		26						
TU-1112 & TU-1113 VENDOR 8 110		3/4	3-#12, 1-#12, 1-#12	3	20	27		2667	2667	28	20	3	3-#12, 1-#12, 1-#12	3/4		TU-1116 & TU-1117 VENDOR 11 & 12 120, 121
						29			2667	2667	30					
						31	2667	--		32	--	1	--	--		SPACE
TU-1118 & TU-1119 MEN 116 & COLD STOR 124		3/4	3-#12, 1-#12, 1-#12	3	20	33		2667	--	34	--	1	--	--		SPACE
						35			2667	--	36	--	1	--	--	SPACE
SPACE		--	--	1	--	37	--	--		38	--	1	--	--		SPACE
SPACE		--	--	1	--	39		--	--	40	--	1	--	--		SPACE
SPACE		--	--	1	--	41			--	42	--	1	--	--		SPACE
							32333 VA	32333 VA	32333 VA							
							117 A	117 A	117 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Mechanical	97000 VA	100.00%	97000 VA		
				CONNECTED LOAD	97000 VA
				DEMAND LOAD	97000 VA
				AVG. CONNECTED CURRENT	117 A
				AVG. DEMAND CURRENT	117 A

NOTES:

PANEL ID: 1LH1

VOLTAGE: 480Y/277 **SERVICE EQUIP:** No **MOUNTING:** SURFACE
SOURCE: MSB **AMPS:** 100 **PANEL AIC:** 22,000 **TYPE:** BOLT ON
LOCATION: MAIN ELECTRICAL 128 **MAIN:** MLO **CALC SCC:** 17,285 **APPROX. DIM:** 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
LIGHTING ELECTRICAL 128		3/4	1-#12, 1-#12, 1-#12	1	20	1	927	384		2	20	1	1-#12, 1-#12, 1-#12	3/4	2	LIGHTING CORRIDOR-1 122-1
LIGHTING FAIR VENDOR 12...		3/4	1-#12, 1-#12, 1-#12	1	20	3			480	1308	4	20	1	1-#12, 1-#12, 1-#12	3/4	2	LIGHTING DINING 100
LIGHTING VENDOR 1 101		3/4	1-#12, 1-#12, 1-#12	1	20	5				916	480	6	20	1	1-#12, 1-#12, 1-#12	3/4	2	COVE LIGHTING DINING 100
LIGHTING ELEC. 215		3/4	1-#12, 1-#12, 1-#12	1	20	7	617	845				8	20	1	1-#12, 1-#12, 1-#12	3/4	2	COVE LIGHTING DINING 100
LIGHTING ASSEMBLY 217		3/4	1-#12, 1-#12, 1-#12	1	20	9			2168	0		10	20	1	--	--		SPARE
SPARE		--	--	1	20	11				0	0	12	20	1	--	--		SPARE
SPARE		--	--	1	20	13	0	1746				14	20	1	1-#12, 1-#12, 1-#12	3/4	2	LIGHTING DINING 200
SPARE		--	--	1	20	15			0	126		16	20	1	1-#12, 1-#12, 1-#12	3/4	2	LIGHTING CORRIDOR 208
SPARE		--	--	1	20	17				0	594	18	20	1	1-#12, 1-#12, 1-#12	3/4	2	LIGHTING DINING 200
SPARE		--	--	1	20	19	0	578				20	20	1	1-#12, 1-#12, 1-#12	3/4	2	LIGHTING STAIR-1 ST-00-1
SPARE		--	--	1	20	21			0	570		22	20	1	1-#12, 1-#12, 1-#12	3/4	2	LIGHTING COVE 200
SPARE		--	--	1	20	23					0	24	20	1	1-#12, 1-#12, 1-#12	3/4	2	LIGHTING COVE 200
SPACE		--	--	1	--	25	--	0				26	20	1	--	--		SPARE
SPACE		--	--	1	--	27			--	0		28	20	1	--	--		SPARE
SPACE		--	--	1	--	29					--	30	20	1	--	--		SPARE
SPACE		--	--	1	--	31	--	0				32	20	1	--	--		SPARE
SPACE		--	--	1	--	33			--	276		34	20	1	1-#12, 1-#12, 1-#12	3/4	1	EXTERIOR LIGHTING
SPACE		--	--	1	--	35					--	2591	36	20	1	1-#12, 1-#12, 1-#12	1	1	EXTERIOR LIGHTING
SPACE		--	--	1	--	37	--	0				38							
SPACE		--	--	1	--	39			--	0		40	30	3	1-#10, 1-#10, 1-#10	3/4		SPD
SPACE		--	--	1	--	41					--	0	42						
							5067 VA	4903 VA	4915 VA							
							18 A	18 A	18 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	12025 VA	100.00%	12025 VA		
EXTERIOR LIGHTING	2867 VA	125.00%	3584 VA	CONNECTED LOAD	14884 VA
				DEMAND LOAD	15599 VA
				AVG. CONNECTED CURRENT	18 A
				AVG. DEMAND CURRENT	19 A

NOTES:
1. ROUTE EXTERIOR LIGHTING THROUGH OUTDOOR LIGHTING CONTACTOR/CONTROLS.
2. ROUTE INTERIOR COMMON SPACE LIGHTING THROUGH INTERIOR LIGHTING CONTROL PANEL (LRP)

SWITCHBOARD: MSB

Location: MAIN ELECTRICAL 128 **Volts:** 480Y/277 **A.I.C. Rating:** 42,000
Supply From: UTILITY **Phases:** 3 **Mains Type:** MCB (NOTE 1)
Mounting: Floor **Wires:** 4 **Mains Rating:** 2000 A
Enclosure: NEMA 1 **SCC:** 33,034

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	WIRE SIZE	COND SIZE	NOTES	A	B	C
1							5067 VA		
2	1LH1	100 A	3	3-#1, 1-#1, 1-#8	1-1/2			4903 VA	
3									4915 VA
4							11080 VA		
5	ELEV-1	100 A	3	3-#1, 1-#1, 1-#8	1-1/2	4		11080 VA	
6									11080 VA
7							11080 VA		
8	ELEV-2	100 A	3	3-#1, 1-#1, 1-#8	1-1/2	4		11080 VA	
9									11080 VA
10							16320 VA		
11	ATS-E	200 A	3	3-#3/0, 1-#3/0, 1-#6	1-1/2	2		12404 VA	
12									15296 VA
13							4050 VA		
14	ATS-S	100 A	3	3-#1, 1-#1, 1-#8	1-1/2			3460 VA	
15									2440 VA
16							21668 VA		
17	X-1DL1	175 A	3			3		24748 VA	
18									23644 VA
19							0 VA		
20	X-1DL2	175 A	3			3		0 VA	
21									0 VA
22							29399 VA		
23	X-1DL3	175 A	3			3		28267 VA	
24									25479 VA
25							16020 VA		
26	X-1DL4	175 A	3			3		16020 VA	
27									15020 VA
28							13656 VA		
29	1MH1	200 A	3	3-#3/0, 1-#3/0, 1-#6	2			13656 VA	
30									13656 VA
31							32333 VA		
32	1MH2	200 A	3	3-#3/0, 1-#3/0, 1-#6	2			32333 VA	
33									32333 VA
34							19534 VA		
35	2MH1	200 A	3	3-#3/0, 1-#3/0, 1-#6	(2) 2			19534 VA	
36									13534 VA
37							22667 VA		
38	2MH2	200 A	3	3-#3/0, 1-#3/0, 1-#6	2			22667 VA	
39									22667 VA
40							14932 VA		
41	X-2DL1 (VIA DISC-X-2DL1)	175 A	3			3		17591 VA	
42									11393 VA
43							33794 VA		
44	KVU-1	150 A	3	3-#1/0, 1-#1/0, 1-#6	2	4		33794 VA	
45									33794 VA
46							56508 VA		
47	RTU-1	225 A	3	3-#4/0, 1-#4/0, 1-#4	3	4		56508 VA	
48									56508 VA
49							0 VA		
50	SPD	60 A	3	3-#6, 1-#6, 1-#10	1			0 VA	
51									0 VA
52							0 VA		
53	SPARE	400 A	3	--	--	2		0 VA	
54									0 VA
55							0 VA		
56	SPARE	200 A	3	--	--			0 VA	
57									0 VA
58							0 VA		
59	SPARE	175 A	3	--	--			0 VA	
60									0 VA
61							--		
62	SPACE	--	3	--	--			--	
63									--
64							--		
65	SPACE	--	3	--	--			--	
66									--
67							--		
68	SPACE	--	3	--	--			--	
69									--
70							--		
71	SPACE	--	3	--	--			--	
72									--
	Total Load:						308091 VA	308034 VA	292831 VA
	Total Amps:						1121 A	1120 A	1057 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Power	464515 VA	100.00%	464515 VA	**Total Conn. Load:**	908956 VA
Spare	47060 VA	100.00%	47060 VA	**Total Est. Demand:**	847562 VA
REC	136400 VA	53.67%	73200 VA	**Total Conn. Current:**	1093 A
Lighting	18734 VA	100.00%	18734 VA	**Total Est. Demand Current:**	1019 A
Mechanical	235073 VA	100.00%	235073 VA		
Lighting - Exterior	3600 VA	125.00%	4500 VA		
EXTERIOR LIGHTING	3626 VA	125.00%	4532 VA		

Notes:
1. PROVIDE DRAWOUT TYPE, ELECTRONIC MAIN CIRCUIT BREAKER WITH LSIG TRIP FUNCTIONS.
2. PROVIDE ELECTRONIC BREAKER WITH LSI TRIP FUNCTIONS.
3. REFERENCE TRANSFORMER SCHEDULE FOR FEEDER CONFIGURATION.
4. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEUTRAL IF UNNEEDED FOR SUPPLY OF 277V LOAD.

PANEL KEY		
2MH1	1MH1	--
2MH2	1MH2	MSB
--	1LH1	--

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NC STATE FAIRGROUNDS - MIDWAY CENTER
NC DEPT. OF AGRICULTURE & CONSUMER SERVICES
4285 TRINITY RD, RALEIGH, NC 27607
SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL SEAL 039503 ENGINEER MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS CIVIL CONSULTING

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **PANEL SCHEDULES - 480V**

E401

PANEL ID: 2SL1

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: Surface
SOURCE: 1SL1 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: ELEC. 215 | MAIN: MLO | CALC SCC: 5,063 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
DSSO-4	2	3/4	2-#10, 1-#10, 1-#10	2	30	1	1664 540			2	20	1	1-#12, 1-#12, 1-#12	3/4		REC IT 214
						3		1664 360		4	20	1	1-#12, 1-#12, 1-#12	--		REC IT 214
DSSO-1	2	1-1/4	2-#4, 1-#4, 1-#10	2	60	5			3536 180	6	20	1	1-#12, 1-#12, 1-#12	3/4		REC IT 214
						7	3536 180			8	20	1	1-#12, 1-#12, 1-#12	--		REC IT 214
ELEVATOR COMM 200	2	3/4	1-#12, 1-#12, 1-#12	1	20	9		200 500		10						
ELEVATOR COMM 200	2	--	1-#12, 1-#12, 1-#12	1	20	11			200 500	12	20	2	2-#12, 1-#12, 1-#12	3/4		REC IT 214
SPARE		--	--	1	20	13	0 500			14	20	2	2-#12, 1-#12, 1-#12	3/4		REC IT 214
SPARE		--	--	1	20	15		0 500		16						
SPARE		--	--	1	20	17			0 1140	18	20	1	1-#12, 1-#12, 1-#12	3/4	1	REF CATER 211
SPARE		--	--	1	20	19	0 1000			20	20	1	1-#12, 1-#12, 1-#12	--	1	REF CATER 211
SPARE		--	--	1	20	21		0 --		22	--	1	--	--	--	SPACE
SPARE		--	--	1	20	23			0 --	24	--	1	--	--	--	SPACE
SPARE		--	--	1	20	25	0 --			26	--	1	--	--	--	SPACE
SPARE		--	--	1	20	27		0 --		28	--	1	--	--	--	SPACE
SPARE		--	--	1	20	29			0 --	30	--	1	--	--	--	SPACE
SPARE		--	--	1	20	31	0 --			32	--	1	--	--	--	SPACE
SPARE		--	--	1	20	33		0 --		34	--	1	--	--	--	SPACE
SPARE		--	--	1	20	35			0 --	36	--	1	--	--	--	SPACE
SPARE		--	--	1	20	37	0 --			38	--	1	--	--	--	SPACE
SPARE		--	--	1	20	39		0 --		40	--	1	--	--	--	SPACE
SPARE		--	--	1	20	41			0 --	42	--	1	--	--	--	SPACE
							7420 VA	3224 VA	5556 VA							
							65 A	27 A	49 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	10800 VA	100.00%	10800 VA		
REC	5400 VA	100.00%	5400 VA	CONNECTED LOAD	16200 VA
				DEMAND LOAD	16200 VA
				AVG. CONNECTED CURRENT	53 A
				AVG. DEMAND CURRENT	45 A

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER.
2. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEUTRAL IF UNNEEDED FOR SUPPLY OF 120V LOAD.

PANEL ID: 1SH1

VOLTAGE: 480Y/277 | SERVICE EQUIP: No | MOUNTING: SURFACE
SOURCE: ATS-S | AMPS: 100 | PANEL AIC: 35,000 | TYPE: BOLT ON
LOCATION: EMERGENCY... | MAIN: MCB | CALC SCC: 18,252 | APPROX. DIM: 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	16320 --			2	--	1	--	--		
X-1SL1	1				3	110	3		12404 --	4	--	1	--	--		
SPACE		--	--	1	--	7	-- --			8	--	1	--	--		SPACE
SPACE		--	--	1	--	9		-- --		10	--	1	--	--		SPACE
SPACE		--	--	1	--	11			-- --	12	--	1	--	--		SPACE
SPACE		--	--	1	--	13	-- --			14	--	1	--	--		SPACE
SPACE		--	--	1	--	15		-- --		16	--	1	--	--		SPACE
SPACE		--	--	1	--	17			-- --	18	--	1	--	--		SPACE
SPACE		--	--	1	--	19	-- --			20	--	1	--	--		SPACE
SPACE		--	--	1	--	21		-- --		22	--	1	--	--		SPACE
SPACE		--	--	1	--	23			-- --	24	--	1	--	--		SPACE
SPACE		--	--	1	--	25	-- --			26	--	1	--	--		SPACE
SPACE		--	--	1	--	27		-- --		28	--	1	--	--		SPACE
SPACE		--	--	1	--	29			-- --	30	--	1	--	--		SPACE
SPACE		--	--	1	--	31	-- --			32	--	1	--	--		SPACE
SPACE		--	--	1	--	33		-- --		34	--	1	--	--		SPACE
SPACE		--	--	1	--	35			-- --	36	--	1	--	--		SPACE
SPACE		--	--	1	--	37	-- --			38	--	1	--	--		SPACE
SPACE		--	--	1	--	39		-- --		40	--	1	--	--		SPACE
SPACE		--	--	1	--	41			-- --	42	--	1	--	--		SPACE
							16320 VA	12404 VA	15296 VA							
							61 A	45 A	57 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	10800 VA	100.00%	10800 VA		
REC	33220 VA	65.05%	21610 VA	CONNECTED LOAD	44020 VA
				DEMAND LOAD	32410 VA
				AVG. CONNECTED CURRENT	122 A
				AVG. DEMAND CURRENT	90 A

NOTES:
1. REFERENCE TRANSFORMER SCHEDULE FOR FEEDER CONFIGURATION.

PANEL ID: 1SL1

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: Surface
SOURCE: X-1SL1 | AMPS: 225 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: EMERGENCY... | MAIN: MCB | CALC SCC: 7,888 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
REC MAIN. ELEC. 160		3/4	1-#12, 1-#12, 1-#12	1	20	1	720 --			2	--	1	--	--		SPACE
REC COLD STORAGE 124		3/4	1-#12, 1-#12, 1-#12	1	20	3		1000 --		4	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	5			1000 --	6	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	7	1000 --			8	--	1	--	--		SPACE
REC COLD STORAGE 124		3/4	1-#12, 1-#12, 1-#12	1	20	9		1000 --		10	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	11			1000 --	12	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	13	1000 --			14	--	1	--	--		SPACE
REC COLD STORAGE 124		3/4	1-#12, 1-#12, 1-#12	1	20	15		1000 --		16	--	1	--	--		SPACE
			1-#12, 1-#12, 1-#12	1	20	17			1000 --	18	--	1	--	--		SPACE
						19	6180 --			20	--	1	--	--		SPACE
1SL2		1-1/2	3-#1, 1-#1, 1-#8	3	100	21		6180 --		22	--	1	--	--		SPACE
						23			6740 --	24	--	1	--	--		SPACE
						25	7420 --			26	--	1	--	--		SPACE
2SL1		1-1/2	3-#1, 1-#1, 1-#8	3	100	27		3224 --		28	--	1	--	--		SPACE
						29			5556 --	30	--	1	--	--		SPACE
SPACE		--	--	1	--	31	-- --			32	--	1	--	--		SPACE
SPACE		--	--	1	--	33		-- --		34	--	1	--	--		SPACE
SPACE		--	--	1	--	35			-- --	36	--	1	--	--		SPACE
						37	0 --			38	--	1	--	--		SPACE
SPD		3/4	1-#10, 1-#10, 1-#10	3	30	39		0 --		40	--	1	--	--		SPACE
						41			0 --	42	--	1	--	--		SPACE
							16320 VA	12404 VA	15296 VA							
							140 A	103 A	131 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	10800 VA	100.00%	10800 VA		
REC	33220 VA	65.05%	21610 VA	CONNECTED LOAD	44020 VA
				DEMAND LOAD	32410 VA
				AVG. CONNECTED CURRENT	122 A
				AVG. DEMAND CURRENT	90 A

NOTES:

PANEL ID: 1SL2

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: Surface
SOURCE: 1SL1 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: EMERGENCY... | MAIN: MLO | CALC SCC: 7,096 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
REC IT 123		3/4	1-#12, 1-#12, 1-#12	1	20	1	720 --			2	--	1	--	--		SPACE
REC IT 123		--	1-#12, 1-#12, 1-#12	1	20	3		720 --		4	--	1	--	--		SPACE
REC IT 123		--	1-#12, 1-#12, 1-#12	1	20	5			540 --	6	--	1	--	--		SPACE
REC IT 123		3/4	1-#12, 1-#12, 1-#12	1	20	7	360 --			8	--	1	--	--		SPACE
REC IT 123		3/4	1-#12, 1-#12, 1-#12	1	20	9		360 --		10	--	1	--	--		SPACE
REC IT 123		3/4	2-#12, 1-#12, 1-#12	2	20	11			1100 --	12	--	1	--	--		SPACE
						13	1100 --			14	--	1	--	--		SPACE
REC IT 123		3/4	2-#12, 1-#12, 1-#12	2	20	15		1100 --		16	--	1	--	--		SPACE
						17			1100 --	18	--	1	--	--		SPACE
REC COLD STORAGE 124		3/4	1-#12, 1-#12, 1-#12	1	20	19	1000 --			20	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	21		1000 --		22	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	23			1000 --	24	--	1	--	--		SPACE
REC COLD STORAGE 124		3/4	1-#12, 1-#12, 1-#12	1	20	25	1000 --			26	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	27		1000 --		28	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	29			1000 --	30	--	1	--	--		SPACE
REC COLD STORAGE 124		3/4	1-#12, 1-#12, 1-#12	1	20	31	1000 --			32	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	33		1000 --		34	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	35			1000 --	36	--	1	--	--		SPACE
REC COLD STORAGE 124		3/4	1-#12, 1-#12, 1-#12	1	20	37	1000 --			38	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	39		1000 --		40	--	1	--	--		SPACE
REC COLD STORAGE 124		--	1-#12, 1-#12, 1-#12	1	20	41			1000 --	42	--	1	--	--		SPACE
							6180 VA	6180 VA	6740 VA							
							52 A	52 A	56 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
REC	19100 VA	76.18%	14550 VA		
				CONNECTED LOAD	19100 VA
				DEMAND LOAD	14550 VA
				AVG. CONNECTED CURRENT	53 A
				AVG. DEMAND CURRENT	40 A

NOTES:

PANEL ID: 1EH1

VOLTAGE: 480Y/277 | SERVICE EQUIP: No | MOUNTING: SURFACE
SOURCE: ATS-E | AMPS: 200 | PANEL AIC: 22,000 | TYPE: BOLT ON
LOCATION: EMERGENCY... | MAIN: MLO | CALC SCC: 17,165 | APPROX. DIM: 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
EGRESS LTG 1ST FLR		3/4	1-#12, 1-#12, 1-#12	1	20	1	358 420			2	20	1	1-#12, 1-#12, 1-#12	3/4		LIGHTING ELEC. 215
EGRESS LTG 1ST FLR		3/4	1-#12, 1-#12, 1-#12	1	20	3		410 0		4	20	1	--	--		SPARE
EGRESS LTG 1ST FLR		3/4	1-#12, 1-#12, 1-#12	1	20	5			389 0	6	20	1	--	--		SPARE
OLC ELECTRICAL 128		3/4	1-#12, 1-#12, 1-#12	1	20	7	200 0			8	20	1	--	--		SPARE
ESLC ELECTRICAL 128		3/4	1-#12, 1-#12, 1-#12	1	20	9		200 0		10	20	1	--	--		SPARE
EXTERIOR LTG		3/4	1-#12, 1-#12, 1-#12	1	20	11			859 0	12	20	1	--	--		SPARE
ELEVATOR SHAFT LIGHTING		3/4	1-#12, 1-#12, 1-#12	1	20	13	396 0			14	20	1	--	--		SPARE
EGRESS LTG 2ND FLR		3/4	1-#12, 1-#12, 1-#12	1	20	15		382 0		16	20	1	--	--		SPARE
EGRESS LTG 2ND FLR		3/4	1-#12, 1-#12, 1-#12	1	20	17			413 0	18	20	1	--	--		SPARE
EGRESS LTG 2ND FLR		3/4	1-#12, 1-#12, 1-#12	1	20	19	646 0			20	20	1	--	--		SPARE
EGRESS LTG STAIR		3/4	1-#12, 1-#12, 1-#12	1	20	21		578 0		22	20	1	--	--		SPARE
SPARE		--	--	1	20	23			0 0	24	20	1	--	--		SPARE
SPARE		--	--	1	20	25	0 0			26	20	1	--	--		SPARE
SPARE		--	--	1	20	27		0 0		28	20	1	--	--		SPARE
SPARE		--	--	1	20	29			0 0	30	20	1	--	--		SPARE
SPARE		--	--	1	20	31	0 0			32	20	1	--	--		SPARE
SPARE		--	--	1	20	33		0 0		34	20	1	--	--		SPARE
SPARE		--	--	1	20	35			0 0	36	20	1	--	--		SPARE
SPARE		--	--	1	20	37	0 0			38						
SPARE		--	--	1	20	39		0 0		40	30	3	1-#10, 1-#10, 1-#10	3/4		SPD
SPARE		--	--	1	20	41			0 0	42						
							2040 VA	1900 VA	787 VA							
							18 A	17 A	7 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	4300 VA	100.00%	4300 VA		
REC	360 VA	100.00%	360 VA	CONNECTED LOAD	4727 VA
Lighting	70 VA	100.00%	70 VA	DEMAND LOAD	4727 VA
				AVG. CONNECTED CURRENT	13 A
				AVG. DEMAND CURRENT	13 A

NOTES:
1. PROVIDE LOCK ON CLIP.

PANEL ID: 1EL1

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: Surface
SOURCE: X-1EL1 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: EMERGENCY... | MAIN: MCB | CALC SCC: 2,916 | APPROX. DIM: 20" W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
FIRE ALARM AMP 128	1	3/4	1-#12, 1-#12, 1-#12	1	20	1	400 0			2	20	1	--	--		SPACE
FIRE ALARM CNTRL PNL 128	1	3/4	1-#12, 1-#12, 1-#12	1	20	3		200 0		4	20	1	--	--		SPACE
PRINTER REC. ELEC. 128	1	3/4	1-#12, 1-#12, 1-#12	1	20	5			360 0	6	20	1	--	--		SPARE
ERRC ELEC. 215		3/4	1-#12, 1-#12, 1-#12	1	20	7	100 0			8	20	1	--	--		SPARE
FIRE ALARM SNAC 215	1	3/4	1-#12, 1-#12, 1-#12	1	20	9		0 0		10	20	1	--	--		SPARE
LIGHTING		3/4	1-#12, 1-#12, 1-#12	1	20	11			28 0	12	20	1	--	--		SPARE
LIGHTING CORRIDOR 203		3/4	1-#12, 1-#12, 1-#12	1	20	13	42 0			14	20	1	--	--		SPARE
TEMP GEN JACKET HEATER		1	1-#12, 1-#12, 1-#12	1	20	15		1500 0		16	20	1	--	--		SPARE
TEMP GEN BATT CHARGER		--	1-#12, 1-#12, 1-#12	1	20	17			200 0	18	20	1	--	--		SPARE
GENERATOR JACKET HEATER		1	1-#12, 1-#12, 1-#12	1	20	19	1500 0			20	20	1	--	--		SPARE
GEN LTS/REC		--	1-#12, 1-#12, 1-#12	1	20	21		200 0		22	20	1	--	--		SPARE
GEN BATTERY CHARGER		--	1-#12, 1-#12, 1-#12	1	20	23			200 0	24	20	1	--	--		SPARE
SPARE		--	--	1	20	25	0 0			26	20	1	--	--		SPARE
SPARE		--	--	1	20	27		0 0		28	20	1	--	--		SPARE
SPARE		--	--	1	20	29			0 0	30	20	1	--	--		SPARE
SPARE		--	--	1	20	31	0 0			32	20	1	--	--		SPARE
SPARE		--	--	1	20	33		0 0		34	20	1	--	--		SPARE
SPARE		--	--	1	20	35			0 0	36	20	1	--	--		SPARE
SPARE		--	--	1	20	37	0 0			38						
SPARE		--	--	1	20	39		0 0		40	30	3	1-#10, 1-#10, 1-#10	3/4		SPD
SPARE		--	--	1	20	41			0 0	42						
							2040 VA	1900 VA	787 VA							
							18 A	17 A	7 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	4300 VA	100.00%	4300 VA		
REC	360 VA	100.00%	360 VA	CONNECTED LOAD	4727 VA
Lighting	70 VA	100.00%	70 VA	DEMAND LOAD	4727 VA
				AVG. CONNECTED CURRENT	13 A
				AVG. DEMAND CURRENT	13 A

NOTES:
1. REFERENCE TRANSFORMER SCHEDULE FOR FEEDER CONFIGURATION.

PANEL KEY		
2SL1	1SH1	1EH1
--	1SL1	1EL1
--	1SL2	--

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NC STATE FAIRGROUNDS - MIDWAY CENTER
NC DEPT. OF AGRICULTURE & CONSUMER SERVICES
4285 TRINITY RD, RALEIGH, NC 27607
SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS 06/3/2001

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **PANEL SCHEDULES - GENERATOR**

E402

PANEL ID: 2NL1

SOURCE:	2DL1	VOLTAGE: 208Y/120	SERVICE EQUIP: No	MOUNTING:	Surface
SOURCE:	2DL1	AMPS: 100	PANEL AIC: 22,000	TYPE:	BOLT-ON
LOCATION:	ELEC. 215	MAIN: MLO	CALC SCC: 9,643	APPROX. DIM:	20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A		B		C		CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
REC 208		3/4	1-#12, 1-#12, 1-#12	1	20	1	540	900					2	20	1	1-#12, 1-#12, 1-#12	3/4		REC ASSEMBLY 217
REC 212		--	1-#12, 1-#12, 1-#12	1	20	3			540	900			4	20	1	1-#12, 1-#12, 1-#12	--		REC ASSEMBLY 217
REC 211		3/4	1-#12, 1-#12, 1-#12	1	20	5					540	1080	6	20	1	1-#12, 1-#12, 1-#12	--		REC ASSEMBLY 217
REC CATER 211		--	1-#12, 1-#12, 1-#12	1	20	7	540	720					8	20	1	1-#12, 1-#12, 1-#12	3/4		FLOOR BOX ASSEMBLY 217
ICE MAKER CATER 211	1	--	1-#12, 1-#12, 1-#12	1	20	9			1080	360			10	20	1	1-#12, 1-#12, 1-#12	--		FLOOR BOX ASSEMBLY 217
WARMER CATER 211	1	3/4	2-#12, 1-#12, 1-#12	2	20	11					250	360	12	20	1	1-#12, 1-#12, 1-#12	--		FLOOR BOX ASSEMBLY 217
						13	250	360					14	20	1	1-#12, 1-#12, 1-#12	3/4		REC OUTDOOR TERRACE 140
REC 203		3/4	1-#12, 1-#12, 1-#12	1	20	15			360	360			16	20	1	1-#12, 1-#12, 1-#12	--		REC OUTDOOR TERRACE 140
EWC 203	1	--	1-#12, 1-#12, 1-#12	1	20	17					1000	180	18	20	1	1-#12, 1-#12, 1-#12	3/4		REC ELEVATOR 200
REC 204,205,206,207		--	1-#12, 1-#12, 1-#12	1	20	19	720	180					20	20	1	1-#12, 1-#12, 1-#12	--		REC ELEVATOR 200
REC STORAGE 210		3/4	1-#12, 1-#12, 1-#12	1	20	21			540	180			22	20	1	1-#12, 1-#12, 1-#12	3/4		PROJECTOR ASSEMBLY 217
REC STORAGE 210		--	1-#12, 1-#12, 1-#12	1	20	23					540	180	24	20	1	1-#12, 1-#12, 1-#12	--		PROJECTOR ASSEMBLY 217
SPARE		--	--	1	20	25	0	200					26	20	1	1-#12, 1-#12, 1-#12	3/4		PROJECTOR SCREEN 217
SPARE		--	--	1	20	27			0	200			28	20	1	1-#12, 1-#12, 1-#12	--		PROJECTOR SCREEN 217
SPARE		--	--	1	20	29					0	0	30	20	1	--	--		SPARE
SPARE		--	--	1	20	31	0	0					32	20	1	--	--		SPARE
SPARE		--	--	1	20	33			0	0			34	20	1	--	--		SPARE
SPARE		--	--	1	20	35					0	0	36	20	1	--	--		SPARE
SPARE		--	--	1	20	37	0	0					38	20	1	--	--		SPARE
SPARE		--	--	1	20	39			0	0			40	20	1	--	--		SPARE
SPARE		--	--	1	20	41					0	0	42	20	1	--	--		SPARE
							4410 VA 37 A		4520 VA 38 A		4130 VA 34 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	400 VA	100.00%	400 VA		
REC	12660 VA	89.49%	11330 VA	CONNECTED LOAD	13060 VA
				DEMAND LOAD	11730 VA
				AVG. CONNECTED CURRENT	36 A
				AVG. DEMAND CURRENT	33 A

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER.
2. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEUTRAL IF UNNEEDED FOR SUPPLY OF 120V LOAD.

PANEL ID: 1ML

		VOLTAGE: 208Y/120	SERVICE EQUIP: No	MOUNTING:	RECESSED
SOURCE:	1DL1	AMPS: 200	PANEL AIC: 22,000	TYPE:	BOLT-ON
LOCATION:	MAIN ELECTRICAL 128	MAIN: MLO	CALC SCC: 8,005	APPROX. DIM:	20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A		B		C		CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPARE		--	--	1	20	1	0	0					2	20	1	--	--		SPARE
SPARE		--	--	1	20	3			0	0			4	20	1	--	--		SPARE
SPARE		--	--	1	20	5					0	0	6	20	1	--	--		SPARE
UH-1.1 STAIR ST-01	1	3/4	2-#10, 1-#10, 1-#10	2	25	7	1500	480					8	20	3	3-#12, 1-#12	3/4	1	SUMP PUMP SP-1 JAN. 174
						9			1500	480			10						
UH-1.2 FIRE PUMP 163	1	3/4	2-#10, 1-#10, 1-#10	2	25	11					1500	480	12						
						13	1500	1500					14	25	2	2-#10, 1-#10, 1-#10	3/4	1	UH-1.4 MECHANICAL 126
UH-1.3 STAIR 165	1	3/4	2-#10, 1-#10, 1-#10	2	25	15			1500	1500			16						
						17					1500	400	18	20	1	1-#12, 1-#12, 1-#12	3/4		SUMP PUMP ALARM JAN. 174
ACU-11 CORRIDOR 122	1	3/4	2-#12, 1-#12, 1-#12	2	20	19	1123	200					20	30	1	1-#10, 1-#10, 1-#10	3/4		WH-1 MECH. 277
						21			1123	200			22	30	1	1-#10, 1-#10, 1-#10	--		WH-2 MECH. 277
ACU-2 BAR 322	1	3/4	2-#12, 1-#12, 1-#12	2	20	23					1123	200	24	30	1	1-#10, 1-#10, 1-#10	--		WH-3 MECH. 277
						25	1123	1176					26	20	1	1-#12, 1-#12, 1-#12	3/4		RCP-1 MECH. 277
ACU-1 BAR 322	1	3/4	2-#12, 1-#12, 1-#12	2	20	27			1123	1176			28	20	1	1-#12, 1-#12, 1-#12	--		RCP-2 MECH. 277
						29					1123	200	30	20	1	1-#12, 1-#12, 1-#12	3/4		TAF-1 MECHANICAL 126
TU-V6, 7, 8		3/4	1-#12, 1-#12, 1-#12	1	20	31	600	1123					32	20	2	2-#12, 1-#12, 1-#12	3/4	1	ACU-4 DINING 100
TU-V5		3/4	1-#12, 1-#12, 1-#12	1	20	33			200	1123			34						
TU-V1, 2, 3, 4		3/4	1-#10, 1-#10, 1-#10	1	20	35					800	1123	36	20	2	2-#12, 1-#12, 1-#12	3/4	1	ACU-5 DINING 100
TU-V9, 10, 11, 12		3/4	1-#12, 1-#12, 1-#12	1	20	37	800	1123					38						
ACU-3 DINING 100	1	3/4	2-#12, 1-#12, 1-#12	2	20	39			1123	1830			40	20	2	2-#10, 1-#10, 1-#10	3/4	1	ACU-6 DINING 100
						41					1123	1830	42						
							12249 VA 103 A		12879 VA 108 A		11403 VA 95 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	26139 VA	100.00%	26139 VA		
REC	400 VA	100.00%	400 VA	CONNECTED LOAD	36531 VA
Mechanical	9992 VA	100.00%	9992 VA	DEMAND LOAD	36531 VA
				AVG. CONNECTED CURRENT	101 A
				AVG. DEMAND CURRENT	101 A

NOTES:
1. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEUTRAL IF UNNEEDED FOR SUPPLY OF 120V LOAD.

PANEL ID: 1DL1

		VOLTAGE: 208Y/120	SERVICE EQUIP: No	MOUNTING:	Surface
SOURCE:	X-1DL1	AMPS: 400	PANEL AIC: 22,000	TYPE:	DISTRIBUTION
LOCATION:	MAIN ELECTRICAL 128	MAIN: MCB	CALC SCC: 11,166	APPROX. DIM:	32" W x 8.25" D x 73" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A		B		C		CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
1NL1		1 1/2	3-#1, 1-#1, 1-#8	3	100	1	4300	0					2	20	1	--	--		SPARE
						3			5240	0			4	20	1	--	--		SPARE
						5					6726	0	6	20	1	--	--		SPARE
1NL2		1 1/2	3-#1, 1-#1, 1-#8	3	100	7	1064	0					8	20	1	--	--		SPARE
						9			2864	0			10	20	1	--	--		SPARE
						11					2864	0	12	20	1	--	--		SPARE
1ML		2	3-#3/0, 1-#3/0, 1-#6	3	200	13	12249	0					14	20	1	--	--		SPARE
						15			12879	0			16	20	1	--	--		SPARE
						17					11403	0	18	20	1	--	--		SPARE
1LL		1 1/2	3-#1, 1-#1, 1-#8	3	100	19	4056	0					20	20	1	--	--		SPARE
						21			3765	0			22	20	1	--	--		SPARE
						23					2650	0	24	20	1	--	--		SPARE
SPACE		--	--	1	--	25	--	0					26	30	3	3-#10, 1-#10, 1-#10	3/4		SPD
SPACE		--	--	1	--	27			--	0			28						
SPACE		--	--	1	--	29					--	0	30						
							21668 VA 181 A		24748 VA 209 A		23644 VA 200 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	34986 VA	100.00%	34986 VA		
REC	16020 VA	81.21%	13010 VA	CONNECTED LOAD	70060 VA
Lighting	2673 VA	100.00%	2673 VA	DEMAND LOAD	67950 VA
Mechanical	12784 VA	100.00%	12784 VA	AVG. CONNECTED CURRENT	194 A
Lighting - Exterior	3600 VA	125.00%	4500 VA	AVG. DEMAND CURRENT	189 A

NOTES:

PANEL ID: 2NL2

		VOLTAGE: 208Y/120	SERVICE EQUIP: No	MOUNTING:	Surface
SOURCE:	2DL1	AMPS: 100	PANEL AIC: 22,000	TYPE:	BOLT-ON
LOCATION:	ELEC. 215	MAIN: MLO	CALC SCC: 9,027	APPROX. DIM:	20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A		B		C		CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
REC DINING 200		3/4	1-#12, 1-#12, 1-#12	1	20	1	540	660					2	20	1	1-#12, 1-#12, 1-#12	3/4	1	REC WOMEN 204
REC DINING 200		--	1-#12, 1-#12, 1-#12	1	20	3			360	660			4	20	1	1-#12, 1-#12, 1-#12	--	1	REC MEN 205
REC DINING 200		--	1-#12, 1-#12, 1-#12	1	20	5					360	280	6	20	1	1-#12, 1-#12, 1-#12	3/4	1	REC FAMILY 206
REC DINING 200		3/4	1-#12, 1-#12, 1-#12	1	20	7	540	280					8	20	1	1-#12, 1-#12, 1-#12	--	1	REC FAMILY 207
REC DINING 200		--	1-#12, 1-#12, 1-#12	1	20	9			360	0			10	20	1	--	--		SPARE
REC DINING 200		--	1-#12, 1-#12, 1-#12	1	20	11					360	0	12	20	1	--	--		SPARE
REC FLEX 202		3/4	1-#12, 1-#12, 1-#12	1	20	13	540	0					14	20	1	--	--		SPARE
REC FLEX 202		--	1-#10, 1-#10, 1-#10	1	20	15			720	0			16	20	1	--	--		SPARE
REC FLEX 202		--	1-#10, 1-#10, 1-#10	1	20	17					660	0	18	20	1	--	--		SPARE
SPACE		--	--	1	--	19	--	0					20	20	1	--	--		SPARE
SPACE		--	--	1	--	21			--	0			22	20	1	--	--		SPARE
SPACE		--	--	1	--	23					--	0	24	20	1	--	--		SPARE
SPACE		--	--	1	--	25	--	0					26	20	1	--	--		SPARE
SPACE		--	--	1	--	27			--	0			28	20	1	--	--		SPARE
SPACE		--	--	1	--	29					--	0	30	20	1	--	--		SPARE
SPACE		--	--	1	--	31	--	0					32	20	1	--	--		SPARE
SPACE		--	--	1	--	33			--	0			34	20	1	--	--		SPARE
SPACE		--	--	1	--	35					--	0	36	20	1	--	--		SPARE
SPACE		--	--	1	--	37	--	0					38	20	1	--	--		SPARE
SPACE		--	--	1	--	39			--	0			40	20	1	--	--		SPARE
SPACE		--	--	1	--	41					--	0	42	20	1	--	--		SPARE
							2560 VA 22 A		2100 VA 18 A		1660 VA 14 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	800 VA	100.00%	800 VA		
REC	5520 VA	100.00%	5520 VA	CONNECTED LOAD	6320 VA
				DEMAND LOAD	6320 VA
				AVG. CONNECTED CURRENT	18 A
				AVG. DEMAND CURRENT	18 A

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER.

PANEL ID: 1LL

		VOLTAGE: 208Y/120	SERVICE EQUIP: No	MOUNTING:	RECESSED
SOURCE:	1DL1	AMPS: 100	PANEL AIC: 10,000	TYPE:	BOLT-ON
LOCATION:	MAIN ELECTRICAL 128	MAIN: MLO	CALC SCC: 6,527	APPROX. DIM:	20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A		B		C		CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
LIGHTING	1	3/4	1-#12, 1-#12, 1-#12	1	20	1	476	220					2	20	1	1-#12, 1-#12, 1-#12	3/4		LIGHTING
LIGHTING CORRIDOR 203	1	3/4	1-#12, 1-#12, 1-#12	1	20	3			475	95			4	20	1	1-#12, 1-#12, 1-#12	3/4		LIGHTING - RESTRMS 112, 113
LTG DINING 200	1	3/4	1-#12, 1-#12, 1-#12	1	20	5					360	95	6	20	1	1-#12, 1-#12, 1-#12	3/4		LIGHTING - RESTRMS 206, 207
LIGHTING BAR 201		3/4	1-#10, 1-#10, 1-#10	1	20	7	960	200					8	20	1	1-#12, 1-#12, 1-#12	3/4		LRP ELEC 128
EXT ILLUMINATED SIGN	1	3/4	1-#10, 1-#10, 1-#10	1	20	9			1000	0			10	20	1	--	--		SPARE
EXT ILLUMINATED SIGN	1	3/4	1-#12, 1-#12, 1-#12	1	20	11					1000	0	12	20	1	--	--		SPARE
EXT ILLUMINATED SIGN	1	3/4	1-#10, 1-#10, 1-#10	1	20	13	1000	0					14	20	1	--	--		SPARE
EXT ILLUMINATED SIGN	1	3/4	1-#8, 1-#8, 1-#8	1	20	15			1000	0			16	20	1	--	--		SPARE
LANDSCAPE LIGHTING	1	3/4	1-#12, 1-#12, 1-#12	1	20	17					1200	0	18	20	1	--	--		SPARE
LANDSCAPE LIGHTING	1	3/4	1-#12, 1-#12, 1-#12	1	20	19	1200	0					20	20	1	--	--		SPARE
LANDSCAPE LIGHTING	1	1	1-#8, 1-#8, 1-#8	1	20	21			1200	0			22	20	1	--	--		SPARE
SPARE		--	--	1	20	23					0	0	24	20	1	--	--		SPARE
SPARE		--	--	1	20	25	0	0					26	20	1	--	--		SPARE
SPARE		--	--	1	20	27			0	0			28	20	1	--	--		SPARE
SPARE		--	--	1	20	29					0	0	30	20	1	--	--		SPARE
SPARE		--	--	1	20	31	0	0					32	20	1	--	--		SPARE
SPARE		--	--	1	20	33			0	0			34	20	1	--	--		SPARE
SPARE		--	--	1	20	35					0	0	36	20	1	--	--		SPARE
SPARE		--	--	1	20	37	0	0					38	20	1	--	--		SPARE
SPARE		--	--	1	20	39			0	0			40	20	1	--	--		SPARE
SPARE		--	--	1	20	41					0	0	42	20	1	--	--		SPARE
							4056 VA 35 A		3765 VA 33 A		2650 VA 22 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	4200 VA	100.00%	4200 VA		
Lighting	2673 VA	100.00%	2673 VA	CONNECTED LOAD	10471 VA
Lighting - Exterior	3600 VA	125.00%	4500 VA	DEMAND LOAD	11371 VA
				AVG. CONNECTED CURRENT	29 A
				AVG. DEMAND CURRENT	32 A

NOTES:
1. ROUTE LIGHTING CIRCUIT THROUGH INTERIOR LIGHTING CONTROL PANEL (LRP)

PANEL ID: 1NL1

		VOLTAGE: 208Y/120	SERVICE EQUIP: No	MOUNTING:	RECESSED
SOURCE:	1DL1	AMPS: 100	PANEL AIC: 22,000	TYPE:	BOLT-ON
LOCATION:	MAIN ELECTRICAL 128	MAIN: MLO	CALC SCC: 8,486	APPROX. DIM:	20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A		B		C		CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
REC EMERG. ELEC. 279		3/4	1-#12, 1-#12, 1-#12	1	20	1	540	760					2	20	1	1-#12, 1-#12, 1-#12	3/4	1	REC WOMEN 115
REC MECH. 277		3/4	1-#12, 1-#12, 1-#12	1	20	3			540	760			4	20	1	1-#12, 1-#12, 1-#12	--	1	REC MEN 116
REC VENDOR 6 157			1-#12, 1-#12, 1-#12	1	20	5					540	280	6	20	1	1-#12, 1-#12, 1-#12	3/4	1	REC FAMILY 112
REC CORRIDOR 317		3/4	1-#12, 1-#12, 1-#12	1	20	7	900	280					8	20	1	1-#12, 1-#12, 1-#12	--	1	REC FAMILY 113
REC 317		--	1-#12, 1-#12, 1-#12	1	20	9			900	500			10	20	1	1-#12, 1-#12, 1-#12	3/4		DOM BFP HOTBOX
EWC CORR 111	1	--	1-#12, 1-#12, 1-#12	1	20	11					1000	500	12	20	1	1-#12, 1-#12, 1-#12	--		FIRE BFP HOTBOX
REC JAN. 174		3/4	1-#12, 1-#12, 1-#12	1	20	13	180	200					14	20	1	1-#12, 1-#12, 1-#12	3/4		FIRE SPRINKLER ALARM BELL
REC FAIR VENDOR 9 171		--	1-#12, 1-#12, 1-#12	1	20	15			720	200			16	20	1	1-#12, 1-#12, 1-#12	3/4		DOOR OPERATOR E100A
REC RR 107		--	1-#12, 1-#12, 1-#12	1	20	17					360	2246	18	20	1	1-#8, 1-#8, 1-#8	3/4		DOOR OPERATOR E100B
REC 298		3/4	1-#12, 1-#12, 1-#12	1	20	19	180	0					20	20	1	--	--		SPARE
REC ELEV 113		--	1-#12, 1-#12, 1-#12	1	20	21			180	0			22	20	1	--	--		SPARE
REC ELEV 114		--	1-#12, 1-#12, 1-#12	1	20	23					180	0	24	20	1	--	--		SPARE
REC 100		3/4	1-#12, 1-#12, 1-#12	1	20	25	720	0					26	20	1	--	--		SPARE
REC 100		--	1-#10, 1-#10, 1-#10	1	20	27			720	0			28	20	1	--	--		SPARE
REC 100		--	1-#12, 1-#12, 1-#12	1	20	29					1080	0	30	20	1	--	--		SPARE
REC 100		3/4	1-#12, 1-#12, 1-#12	1	20	31	540	0					32	20	1	--	--		SPARE
REC 101,102,103,104		--	1-#10, 1-#10, 1-#10	1	20	33			720	0			34	20	1	--	--		SPARE
REC 100, 105		--	1-#12, 1-#12, 1-#12	1	20	35					540	0	36	20	1	--	--		SPARE
SPACE		--	--	1	--	37	--	0					38	20	1	--	--		SPARE
SPACE		--	--	1	--	39			--	0			40	20	1	--	--		SPARE
SPACE		--	--	1	--	41					--	0	42	20	1	--	--		SPARE
							4300 VA 36 A		5240 VA 45 A		6726 VA 57 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	4646 VA	100.00%	4646 VA		
REC	11620 VA	93.03%	10810 VA	CONNECTED LOAD	16266 VA
				DEMAND LOAD	15456 VA
				AVG. CONNECTED CURRENT	45 A
				AVG. DEMAND CURRENT	43 A

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER.

PANEL ID: 2ML

		VOLTAGE: 208Y/120	SERVICE EQUIP: No	MOUNTING:	Surface
SOURCE:	2DL1	AMPS: 200	PANEL AIC: 22,000	TYPE:	BOLT-ON
LOCATION:	ELEC. 215	MAIN: MLO	CALC SCC: 9,847	APPROX. DIM:	20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A		B		C		CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
EXH-1	1	3/4	2-#10, 1-#10, 1-#10	2	25	1	1144	540					2	20	1	1-#12, 1-#12, 1-#12	3/4		ROOFTOP RECEPT.
						3			1144	720			4	20	1	1-#12, 1-#12, 1-#12	3/4		ROOFTOP RECEPT.
SPARE		--	--	1	20	5					0	1176	6	20	1	1-#12, 1-#12, 1-#12	3/4		EXH-2 CLOSET 213
SPARE		--	--	1	20	7	0	200					8	20	1	1-#12, 1-#12, 1-#12	3/4		BAS 213
DSSO-2	1	3/4	2-#10, 1-#10, 1-#10	2	30	9			1664	200			10	20	1	1-#12, 1-#12, 1-#12	--		DDC 213
						11					1664	200	12	20	1	1-#12, 1-#12, 1-#12	--		DDC 213
DSSO-3	1	1	2-#6, 1-#6, 1-#10	2	50	13	3016	499					14	15	2	2-#12, 1-#12, 1-#12	3/4	1	ACU-12 FLEX 202
						15			3016	499			16						
SPARE		--	--	1	20	17					0	499	18	15	2	2-#12, 1-#12, 1-#12	3/4	1	ACU-13 FLEX 202
SPARE		--	--	1	20	19	0	499					20						
DSSO-5	1	3/4	2-#10, 1-#10, 1-#10	2	30	21			1664	200			22	20	1	1-#12, 1-#12, 1-#12	3/4		RTU-1 AUX POWER
						23					1664	200	24	20	1	1-#12, 1-#12, 1-#12	--		RTU-1 AUX POWER
DSSO-6	1	3/4	2-#10, 1-#10, 1-#10	2	30	25	1664	200					26	20	1	1-#12, 1-#12, 1-#12	--		RTU-1 AUX POWER
						27			1664	200			28	20	1	1-#12, 1-#12, 1-#12	3/4		KVU-1 AUX POWER
SPARE		--	--	1	20	29					0	200	30	20	1	1-#12, 1-#12, 1-#12	--		KVU-1 AUX POWER
SPARE		--	--	1	20	31	0	200					32	20	1	1-#12, 1-#12, 1-#12	--		KVU-1 AUX POWER
SPARE		--	--	1	20	33			0	--			34	--	1	--	--		SPACE
SPARE		--	--	1	20	35					0	--	36	--	1	--	--		SPACE
SPARE		--	--	1	20	37	0	--					38	--	1	--	--		SPACE
SPARE		--	--	1	20	39			0	--			40	--	1	--	--		SPACE
SPARE		--	--	1	20	41					0	--	42	--	1	--	--		SPACE
							7962 VA 69 A		10971 VA 94 A		5603 VA 47 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	19504 VA	100.00%	19504 VA		
REC	1260 VA	100.00%	1260 VA	CONNECTED LOAD	24537 VA
Mechanical	3773 VA	100.00%	3773 VA	DEMAND LOAD	24537 VA
				AVG. CONNECTED CURRENT	68 A
				AVG. DEMAND CURRENT	68 A

NOTES:
1. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEURAL IF UNNEEDED FOR SUPPLY OF 120V LOAD.

PANEL ID: 2DL1

		VOLTAGE: 208Y/120	SERVICE EQUIP: No	MOUNTING:	Surface
SOURCE:	X-2DL1	AMPS: 400	PANEL AIC: 22,000	TYPE:	BOLT-ON
LOCATION:	ELEC. 215	MAIN: MCB	CALC SCC: 11,166	APPROX. DIM:	20" W x 5.75" D x 65" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A		B		C		CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPACE		--	--	1	--	1	--	--					2	--	1	--	--		SPACE
SPACE		--	--	1	--	3			--	--			4	--	1	--	--		SPACE
SPACE		--	--	1	--	5					--	--	6	--	1	--	--		SPACE
SPACE		--	--	1	--	7	--	--					8	--	1	--	--		SPACE
SPACE		--	--	1	--	9			--	--			10	--	1	--	--		SPACE
SPACE		--	--	1	--	11					--	--	12	--	1	--	--		SPACE
2NL1		1 1/2	3-#1, 1-#1, 1-#8	3	100	13	7962	--					14	--	1	--	--		SPACE
						15			10971	--			16	--	1	--	--		SPACE
						17					5603	--	18	--	1	--	--		SPACE
2NL2		1 1/2	3-#1, 1-#1, 1-#8	3	100	19	2560	--					20	--	1	--	--		SPACE
						21			2100	--			22	--	1	--	--		SPACE
						23					1660	--	24	--	1	--	--		SPACE
2ML		2	3-#3/0, 1-#3/0, 1-#6	3	200	25	4410	0					26	30	3	3-#10, 1-#10, 1-#10	3/4		SPD
						27			4520	0			28						
						29					4130	0	30						
							14932 VA 129 A		17591 VA 151 A		11393 VA 95 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	20704 VA	100.00%	20704 VA		
REC	19440 VA	75.72%	14720 VA	CONNECTED LOAD	43917 VA
Mechanical	3773 VA	100.00%	3773 VA	DEMAND LOAD	39197 VA
				AVG. CONNECTED CURRENT	122 A
				AVG. DEMAND CURRENT	109 A

NOTES:

PANEL ID: 1NL2

		VOLTAGE: 208Y/120	SERVICE EQUIP: No	MOUNTING:	RECESSED
SOURCE:	1DL1	AMPS: 100	PANEL AIC: 22,000	TYPE:	BOLT-ON
LOCATION:	MAIN ELECTRICAL 128	MAIN: MLO	CALC SCC: 8,005	APPROX. DIM:	20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A		B		C		CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
WH-1 PUMP 126 (1/3 HP)		3/4	1-#12, 1-#12, 1-#12	1	20	1	864	0					2	20	1	--	--		SPARE
WH-2 PUMP 126 (1/3 HP)		--	1-#12, 1-#12, 1-#12	1	20	3			864	0			4	20	1	--	--		SPARE
WH-3 PUMP 126 (1/3 HP)		--	1-#12, 1-#12, 1-#12	1	20	5					864	0	6	20	1	--	--		SPARE
GAS SHUTOFF - WHs 126		3/4	1-#12, 1-#12, 1-#12	1	20	7	200	0					8	20	1	--	--		SPARE
OUTDOOR REC	1	1	2-#6, 1-#6, 1-#10	2	50	9			2000	0			10	20	1	--	--		SPARE
						11					2000	0	12	20	1	--	--		SPARE
SPARE		--	--	1	20	13	0	0					14	20	1	--	--		SPARE
SPARE		--	--	1	20	15			0	0			16	20	1	--	--		SPARE
SPARE		--	--	1	20	17					0	0	18	20	1	--	--		SPARE
SPARE		--	--	1	20	19	0	0					20	20	1	--	--		SPARE
SPARE		--	--	1	20	21			0	0			22	20	1	--	--		SPARE
SPARE		--	--	1	20	23					0	0	24	20	1	--	--		SPARE
SPARE		--	--	1	20	25	0	0					26	20	1	--	--		SPARE
SPARE		--	--	1	20	27			0	0			28	20	1	--	--		SPARE
SPARE		--	--	1	20	29					0	0	30	20	1	--	--		SPARE
SPARE		--	--	1	20	31	0	0					32	20	1	--	--		SPARE
SPARE		--	--	1	20	33			0	0			34	20	1	--	--		SPARE
SPARE		--	--	1	20	35					0	0	36	20	1	--	--		SPARE
SPARE		--	--	1	20	37	0	0					38	20	1	--	--		SPARE
SPARE		--	--	1	20	39			0	0			40	20	1	--	--		SPARE
SPARE		--	--	1	20	41					0	0	42	20	1	--	--		SPARE
							1064 VA 9 A		2864 VA 26 A		2864 VA 26 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
REC	4000 VA	100.00%	4000 VA		
Mechanical	2792 VA	100.00%	2792 VA	CONNECTED LOAD	6792 VA
				DEMAND LOAD	6792 VA
				AVG. CONNECTED CURRENT	19 A
				AVG. DEMAND CURRENT	19 A

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER.

PANEL KEY

2NL1	1ML	1DL1
2NL2	1LL	1NL1
2ML	2DL1	1NL2

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NC STATE FAIRGROUNDS - MIDWAY CENTER
NC DEPT. OF AGRICULTURE & CONSUMER SERVICES
4285 TRINITY RD, RALEIGH, NC 27607
SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS 06/13/2025

JOB NUMBER
23-013
DATE ISSUED
06/12/2025
PROJECT STATUS
BID SET
SHEET
PANEL SCHEDULES - GENERAL POWER

E403

PANEL ID: 1VL6

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL2 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: VENDOR 7 109 | MAIN: MCB | CALC SCC: 5,111 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPARE		--	--	1	20	1	0	0		2						
SPARE		--	--	1	20	3		0	0	4	50	3	--	--		SPARE
SPARE		--	--	1	20	5			0	6						
SPARE		--	--	1	20	7	0	--		8	--	1	--	--		SPACE
SPARE		--	--	1	20	9		0	--	10	--	1	--	--		SPACE
SPARE		--	--	1	20	11			0	12	--	1	--	--		SPACE
SPARE		--	--	1	20	13	0	--		14	--	1	--	--		SPACE
SPARE		--	--	1	20	15		0	--	16	--	1	--	--		SPACE
SPARE		--	--	1	20	17			0	18	--	1	--	--		SPACE
SPARE		--	--	1	20	19	0	--		20	--	1	--	--		SPACE
SPARE		--	--	1	20	21		0	--	22	--	1	--	--		SPACE
SPARE		--	--	1	20	23			0	24	--	1	--	--		SPACE
SPARE		--	--	1	20	25	0	--		26	--	1	--	--		SPACE
SPARE		--	--	1	20	27		0	--	28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0	30	--	1	--	--		SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--		SPACE
SPARE		--	--	1	20	33		0	--	34	--	1	--	--		SPACE
SPARE		--	--	1	20	35			0	36	--	1	--	--		SPACE
SPARE		--	--	1	20	37	0	--		38	--	1	--	--		SPACE
SPARE		--	--	1	20	39		0	--	40	--	1	--	--		SPACE
SPARE		--	--	1	20	41			0	42	--	1	--	--		SPACE
							0 VA	0 VA	0 VA							
							0 A	0 A	0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
				CONNECTED LOAD	0 VA
				DEMAND LOAD	0 VA
				AVG. CONNECTED CURRENT	0 A
				AVG. DEMAND CURRENT	0 A

NOTES:

PANEL ID: 1VL3

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL2 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: | MAIN: MCB | CALC SCC: 2,847 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPARE		--	--	1	20	1	0	0		2						
SPARE		--	--	1	20	3		0	0	4	50	3	--	--		SPARE
SPARE		--	--	1	20	5			0	6						
SPARE		--	--	1	20	7	0	--		8	--	1	--	--		SPACE
SPARE		--	--	1	20	9		0	--	10	--	1	--	--		SPACE
SPARE		--	--	1	20	11			0	12	--	1	--	--		SPACE
SPARE		--	--	1	20	13	0	--		14	--	1	--	--		SPACE
SPARE		--	--	1	20	15		0	--	16	--	1	--	--		SPACE
SPARE		--	--	1	20	17			0	18	--	1	--	--		SPACE
SPARE		--	--	1	20	19	0	--		20	--	1	--	--		SPACE
SPARE		--	--	1	20	21		0	--	22	--	1	--	--		SPACE
SPARE		--	--	1	20	23			0	24	--	1	--	--		SPACE
SPARE		--	--	1	20	25	0	--		26	--	1	--	--		SPACE
SPARE		--	--	1	20	27		0	--	28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0	30	--	1	--	--		SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--		SPACE
SPARE		--	--	1	20	33		0	--	34	--	1	--	--		SPACE
SPARE		--	--	1	20	35			0	36	--	1	--	--		SPACE
SPARE		--	--	1	20	37	0	--		38	--	1	--	--		SPACE
SPARE		--	--	1	20	39		0	--	40	--	1	--	--		SPACE
SPARE		--	--	1	20	41			0	42	--	1	--	--		SPACE
							0 VA	0 VA	0 VA							
							0 A	0 A	0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
				CONNECTED LOAD	0 VA
				DEMAND LOAD	0 VA
				AVG. CONNECTED CURRENT	0 A
				AVG. DEMAND CURRENT	0 A

NOTES:

PANEL ID: 1DL2

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: Surface
SOURCE: X-2DL1 | AMPS: 400 | PANEL AIC: 22,000 | TYPE: DISTRIBUTION
LOCATION: MAIN ELECTRICAL 128 | MAIN: MCB | CALC SCC: 11,166 | APPROX. DIM: 32" W x 8.25" D x 73" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	0	0		2						
1VL1		2	3-#1, 1-#1, 1-#8	3	100	3		0	0	4	100	3	3-#1, 1-#1, 1-#8	2		1VL4
						5			0	6						
1VL2		2	3-#1, 1-#1, 1-#8	3	100	7	0	0		8						
						9		0	0	10	100	3	3-#1, 1-#1, 1-#8	2		1VL5
						11			0	12						
1VL3		2	3-#1, 1-#1, 1-#8	3	100	13	0	0		14						
						15		0	0	16	100	3	3-#1, 1-#1, 1-#8	2		1VL6
						17			0	18						
SPACE		--	--	1	--	19	--	--		20	--	1	--	--		SPACE
SPACE		--	--	1	--	21		--	--	22	--	1	--	--		SPACE
SPACE		--	--	1	--	23			--	24	--	1	--	--		SPACE
SPACE		--	--	1	--	25	--	0		26						
SPACE		--	--	1	--	27			--	28	30	3	3-#10, 1-#10, 1-#10	3/4		SPD
SPACE		--	--	1	--	29			--	30						
							0 VA	0 VA	0 VA							
							0 A	0 A	0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	0 VA	0.00%	0 VA		
				CONNECTED LOAD	0 VA
				DEMAND LOAD	0 VA
				AVG. CONNECTED CURRENT	0 A
				AVG. DEMAND CURRENT	0 A

NOTES:

PANEL ID: 1VL4

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL2 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: VENDOR 3 103 | MAIN: MCB | CALC SCC: 2,635 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPARE		--	--	1	20	1	0	0		2						
SPARE		--	--	1	20	3		0	0	4	50	3	--	--		SPARE
SPARE		--	--	1	20	5			0	6						
SPARE		--	--	1	20	7	0	--		8	--	1	--	--		SPACE
SPARE		--	--	1	20	9		0	--	10	--	1	--	--		SPACE
SPARE		--	--	1	20	11			0	12	--	1	--	--		SPACE
SPARE		--	--	1	20	13	0	--		14	--	1	--	--		SPACE
SPARE		--	--	1	20	15		0	--	16	--	1	--	--		SPACE
SPARE		--	--	1	20	17			0	18	--	1	--	--		SPACE
SPARE		--	--	1	20	19	0	--		20	--	1	--	--		SPACE
SPARE		--	--	1	20	21		0	--	22	--	1	--	--		SPACE
SPARE		--	--	1	20	23			0	24	--	1	--	--		SPACE
SPARE		--	--	1	20	25	0	--		26	--	1	--	--		SPACE
SPARE		--	--	1	20	27		0	--	28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0	30	--	1	--	--		SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--		SPACE
SPARE		--	--	1	20	33		0	--	34	--	1	--	--		SPACE
SPARE		--	--	1	20	35			0	36	--	1	--	--		SPACE
SPARE		--	--	1	20	37	0	--		38	--	1	--	--		SPACE
SPARE		--	--	1	20	39		0	--	40	--	1	--	--		SPACE
SPARE		--	--	1	20	41			0	42	--	1	--	--		SPACE
							0 VA	0 VA	0 VA							
							0 A	0 A	0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
				CONNECTED LOAD	0 VA
				DEMAND LOAD	0 VA
				AVG. CONNECTED CURRENT	0 A
				AVG. DEMAND CURRENT	0 A

NOTES:

PANEL ID: 1VL1

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL2 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: DINING 100 | MAIN: MCB | CALC SCC: 3,394 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPARE		--	--	1	20	1	0	0		2						
SPARE		--	--	1	20	3		0	0	4	50	3	--	--		SPARE
SPARE		--	--	1	20	5			0	6						
SPARE		--	--	1	20	7	0	--		8	--	1	--	--		SPACE
SPARE		--	--	1	20	9		0	--	10	--	1	--	--		SPACE
SPARE		--	--	1	20	11			0	12	--	1	--	--		SPACE
SPARE		--	--	1	20	13	0	--		14	--	1	--	--		SPACE
SPARE		--	--	1	20	15		0	--	16	--	1	--	--		SPACE
SPARE		--	--	1	20	17			0	18	--	1	--	--		SPACE
SPARE		--	--	1	20	19	0	--		20	--	1	--	--		SPACE
SPARE		--	--	1	20	21		0	--	22	--	1	--	--		SPACE
SPARE		--	--	1	20	23			0	24	--	1	--	--		SPACE
SPARE		--	--	1	20	25	0	--		26	--	1	--	--		SPACE
SPARE		--	--	1	20	27		0	--	28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0	30	--	1	--	--		SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--		SPACE
SPARE		--	--	1	20	33		0	--	34	--	1	--	--		SPACE
SPARE		--	--	1	20	35			0	36	--	1	--	--		SPACE
SPARE		--	--	1	20	37	0	--		38	--	1	--	--		SPACE
SPARE		--	--	1	20	39		0	--	40	--	1	--	--		SPACE
SPARE		--	--	1	20	41			0	42	--	1	--	--		SPACE
							0 VA	0 VA	0 VA							
							0 A	0 A	0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
				CONNECTED LOAD	0 VA
				DEMAND LOAD	0 VA
				AVG. CONNECTED CURRENT	0 A
				AVG. DEMAND CURRENT	0 A

NOTES:

PANEL ID: 1VL5

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL2 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: BAR STORAGE 106 | MAIN: MCB | CALC SCC: 2,410 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPARE		--	--	1	20	1	0	0		2						
SPARE		--	--	1	20	3		0	0	4	50	3	--	--		SPARE
SPARE		--	--	1	20	5			0	6						
SPARE		--	--	1	20	7	0	--		8	--	1	--	--		SPACE
SPARE		--	--	1	20	9		0	--	10	--	1	--	--		SPACE
SPARE		--	--	1	20	11			0	12	--	1	--	--		SPACE
SPARE		--	--	1	20	13	0	--		14	--	1	--	--		SPACE
SPARE		--	--	1	20	15		0	--	16	--	1	--	--		SPACE
SPARE		--	--	1	20	17			0	18	--	1	--	--		SPACE
SPARE		--	--	1	20	19	0	--		20	--	1	--	--		SPACE
SPARE		--	--	1	20	21		0	--	22	--	1	--	--		SPACE
SPARE		--	--	1	20	23			0	24	--	1	--	--		SPACE
SPARE		--	--	1	20	25	0	--		26	--	1	--	--		SPACE
SPARE		--	--	1	20	27		0	--	28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0	30	--	1	--	--		SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--		SPACE
SPARE		--	--	1	20	33		0	--	34	--	1	--	--		SPACE
SPARE		--	--	1	20	35			0	36	--	1	--	--		SPACE
SPARE		--	--	1	20	37	0	--		38	--	1	--	--		SPACE
SPARE		--	--	1	20	39		0	--	40	--	1	--	--		SPACE
SPARE		--	--	1	20	41			0	42	--	1	--	--		SPACE
							0 VA	0 VA	0 VA							
							0 A	0 A	0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
				CONNECTED LOAD	0 VA
				DEMAND LOAD	0 VA
				AVG. CONNECTED CURRENT	0 A
				AVG. DEMAND CURRENT	0 A

NOTES:

PANEL ID: 1VL2

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL2 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: VENDOR 1 101 | MAIN: MCB | CALC SCC: 3,096 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPARE		--	--	1	20	1	0	0		2						
SPARE		--	--	1	20	3		0	0	4	50	3	--	--		SPARE
SPARE		--	--	1	20	5			0	6						
SPARE		--	--	1	20	7	0	--		8	--	1	--	--		SPACE
SPARE		--	--	1	20	9		0	--	10	--	1	--	--		SPACE
SPARE		--	--	1	20	11			0	12	--	1	--	--		SPACE
SPARE		--	--	1	20	13	0	--		14	--	1	--	--		SPACE
SPARE		--	--	1	20	15		0	--	16	--	1	--	--		SPACE
SPARE		--	--	1	20	17			0	18	--	1	--	--		SPACE
SPARE		--	--	1	20	19	0	--		20	--	1	--	--		SPACE
SPARE		--	--	1	20	21		0	--	22	--	1	--	--		SPACE
SPARE		--	--	1	20	23			0	24	--	1	--	--		SPACE
SPARE		--	--	1	20	25	0	--		26	--	1	--	--		SPACE
SPARE		--	--	1	20	27		0	--	28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0	30	--	1	--	--		SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--		SPACE
SPARE		--	--	1	20	33		0	--	34	--	1	--	--		SPACE
SPARE		--	--	1	20	35			0	36	--	1	--	--		SPACE
SPARE		--	--	1	20	37	0	--		38	--	1	--	--		SPACE
SPARE		--	--	1	20	39		0	--	40	--	1	--	--		SPACE
SPARE		--	--	1	20	41			0	42	--	1	--	--		SPACE
							0 VA	0 VA	0 VA							
							0 A	0 A	0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
				CONNECTED LOAD	0 VA
				DEMAND LOAD	0 VA
				AVG. CONNECTED CURRENT	0 A
				AVG. DEMAND CURRENT	0 A

NOTES:

PANEL KEY		
1VL6	1VL3	1DL2
--	1VL4	1VL1
--	1VL5	1VL2

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NC STATE FAIRGROUNDS - MIDWAY CENTER
NC DEPT. OF AGRICULTURE & CONSUMER SERVICES
4285 TRINITY RD, RALEIGH, NC 27607
SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. MCGINNIS
06/11/2025

NO.	REVISION	DATE

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **PANEL SCHEDULES - VENDOR**

E404

PANEL ID: 1VL12

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL3 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: FAIR VENDOR 11 120 | MAIN: MCB | CALC SCC: 6,527 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
REF FAIR VENDOR 12 121	1	3/4	1-#12, 1-#12, 1-#12	1	20	1	1000	3367		2						
REF FAIR VENDOR 12 121	1	--	1-#12, 1-#12, 1-#12	1	20	3		1000	3367	4	50	3	3-#6, 1-#6, 1-#10	1	1	OVEN FAIR VENDOR 12 121
FRYER FAIR VENDOR 12 121	1	3/4	1-#12, 1-#12, 1-#12	1	20	5			1000	3367	6					
REF FAIR VENDOR 12 121	1	3/4	1-#12, 1-#12, 1-#12	1	20	7	1000	--		8	--	1	--	--	--	SPACE
REF FAIR VENDOR 12 121	1	--	1-#12, 1-#12, 1-#12	1	20	9		1000	--	10	--	1	--	--	--	SPACE
PT OF SALE FAIR VENDOR 121		--	1-#12, 1-#12, 1-#12	1	20	11			180	--	12	--	1	--	--	SPACE
REC FAIR VENDOR 12 121		3/4	1-#12, 1-#12, 1-#12	1	20	13	360	--		14	--	1	--	--	--	SPACE
REC FAIR VENDOR 12 121	1	--	1-#12, 1-#12, 1-#12	1	20	15		1000	--	16	--	1	--	--	--	SPACE
HOOD FAIR VENDOR 12 121		3/4	1-#12, 1-#12, 1-#12	1	20	17			500	--	18	--	1	--	--	SPACE
HOOD FAIR VENDOR 12 121		--	1-#12, 1-#12, 1-#12	1	20	19	500	--		20	--	1	--	--	--	SPACE
HOOD FAIR VENDOR 12 121		--	1-#12, 1-#12, 1-#12	1	20	21		500	--	22	--	1	--	--	--	SPACE
ACU-10 121	2	3/4	2-#12, 1-#12, 1-#12	2	20	23			1123	--	24	--	1	--	--	SPACE
						25	1123	--			26	--	1	--	--	SPACE
HOOD CONTACTOR CT12		3/4	1-#12, 1-#12, 1-#12	1	20	27		200	--		28	--	1	--	--	SPACE
WINDOW OPERATOR 121		3/4	1-#12, 1-#12, 1-#12	1	20	29			200	--	30	--	1	--	--	SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--	--	SPACE
SPARE		--	--	1	20	33			0	--	34	--	1	--	--	SPACE
SPARE		--	--	1	20	35				0	--	36	--	1	--	--	SPACE
SPARE		--	--	1	20	37	0	--				38	--	1	--	--	SPACE
SPARE		--	--	1	20	39			0	--		40	--	1	--	--	SPACE
SPARE		--	--	1	20	41					0	--	42	--	1	--	--	SPACE
							7350 VA	7067 VA	6370 VA							
							62 A	60 A	53 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Power	3946 VA	100.00%	3946 VA	
REC	16840 VA	79.69%	13420 VA	CONNECTED LOAD 20786 VA
				DEMAND LOAD 17366 VA
				AVG. CONNECTED CURRENT 58 A
				AVG. DEMAND CURRENT 48 A

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER.
2. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEUTRAL IF UNNEEDED FOR SUPPLY OF 120V LOAD.

PANEL ID: 1VL9

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL3 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: FAIR VENDOR 10 119 | MAIN: MCB | CALC SCC: 5,510 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
REF FAIR VENDOR 9 118	1	3/4	1-#12, 1-#12, 1-#12	1	20	1	1000	3367		2						
REF FAIR VENDOR 9 118	1	--	1-#12, 1-#12, 1-#12	1	20	3		1000	3367	4	50	3	3-#6, 1-#6, 1-#10	1	1	OVEN FAIR VENDOR 9 118
FRYER FAIR VENDOR 9 118	1	3/4	1-#12, 1-#12, 1-#12	1	20	5			1000	3367	6					
REF FAIR VENDOR 9 118	1	3/4	1-#12, 1-#12, 1-#12	1	20	7	1000	--		8	--	1	--	--	--	SPACE
REF FAIR VENDOR 9 118	1	--	1-#12, 1-#12, 1-#12	1	20	9		1000	--	10	--	1	--	--	--	SPACE
PT OF SALE FAIR VENDOR 118		--	1-#12, 1-#12, 1-#12	1	20	11			180	--	12	--	1	--	--	SPACE
REC FAIR VENDOR 9 118		3/4	1-#12, 1-#12, 1-#12	1	20	13	360	--		14	--	1	--	--	--	SPACE
REF FAIR VENDOR 9 118	1	--	1-#12, 1-#12, 1-#12	1	20	15		1000	--	16	--	1	--	--	--	SPACE
HOOD FAIR VENDOR 9 118		3/4	1-#12, 1-#12, 1-#12	1	20	17			500	--	18	--	1	--	--	SPACE
HOOD FAIR VENDOR 9 118		--	1-#12, 1-#12, 1-#12	1	20	19	500	--		20	--	1	--	--	--	SPACE
HOOD FAIR VENDOR 9 118		--	1-#12, 1-#12, 1-#12	1	20	21		500	--	22	--	1	--	--	--	SPACE
ACU-7 118	2	3/4	2-#12, 1-#12, 1-#12	2	20	23			1123	--	24	--	1	--	--	SPACE
						25	1123	--			26	--	1	--	--	SPACE
HOOD CONTACTOR CT9		3/4	1-#12, 1-#12, 1-#12	1	20	27		200	--		28	--	1	--	--	SPACE
WINDOW OPERATOR 118		3/4	1-#12, 1-#12, 1-#12	1	20	29			200	--	30	--	1	--	--	SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--	--	SPACE
SPARE		--	--	1	20	33			0	--	34	--	1	--	--	SPACE
SPARE		--	--	1	20	35				0	--	36	--	1	--	--	SPACE
SPARE		--	--	1	20	37	0	--				38	--	1	--	--	SPACE
SPARE		--	--	1	20	39			0	--		40	--	1	--	--	SPACE
SPARE		--	--	1	20	41					0	--	42	--	1	--	--	SPACE
							7350 VA	7067 VA	6370 VA							
							62 A	60 A	53 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Power	3946 VA	100.00%	3946 VA	
REC	16840 VA	79.69%	13420 VA	CONNECTED LOAD 20786 VA
				DEMAND LOAD 17366 VA
				AVG. CONNECTED CURRENT 58 A
				AVG. DEMAND CURRENT 48 A

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER.
2. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEUTRAL IF UNNEEDED FOR SUPPLY OF 120V LOAD.

PANEL ID: 1DL3

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: Surface
SOURCE: X-1DL3 | AMPS: 400 | PANEL AIC: 22,000 | TYPE: DISTRIBUTION
LOCATION: MAIN ELECTRICAL 128 | MAIN: MCB | CALC SCC: 11,166 | APPROX. DIM: 32" W x 8.25" D x 73" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	0	7350		2						
1VL7		2	3-#1, 1-#1, 1-#8	3	100	3			0	7067		4	100	3	3-#1, 1-#1, 1-#8	2		1VL10
						5					0	6370	6			
1VL8		2	3-#1, 1-#1, 1-#8	3	100	7	0	7350		8						
						9			0	7067		10	100	3	3-#1, 1-#1, 1-#8	2		1VL11
						11					0	6370	12			
1VL9		2	3-#1, 1-#1, 1-#8	3	100	13	7350	7350		14						
						15			7067	7067		16	100	3	3-#1, 1-#1, 1-#8	2		1VL12
						17					6370	6370	18			
SPACE		--	--	1	--	19	--	--				20	--	1	--	--	--	SPACE
SPACE		--	--	1	--	21			--	--		22	--	1	--	--	--	SPACE
SPACE		--	--	1	--	23					--	24	--	1	--	--	--	SPACE
SPACE		--	--	1	--	25	--	0				26						
SPACE		--	--	1	--	27			--	0		28	30	3	3-#10, 1-#10, 1-#10	3/4		SPD
SPACE		--	--	1	--	29					--	30						
							29399 VA		28267 VA		25479 VA					
							249 A		239 A		212 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Power	15786 VA	100.00%	15786 VA	
REC	67360 VA	57.42%	38680 VA	CONNECTED LOAD 83146 VA
				DEMAND LOAD 54466 VA
				AVG. CONNECTED CURRENT 231 A
				AVG. DEMAND CURRENT 151 A

NOTES:

PANEL ID: 1VL10

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL3 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: | MAIN: MCB | CALC SCC: 5,510 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
REF FAIR VENDOR 10 119	1	3/4	1-#12, 1-#12, 1-#12	1	20	1	1000	3367		2						
REF FAIR VENDOR 10 119	1	--	1-#12, 1-#12, 1-#12	1	20	3		1000	3367	4	50	3	3-#6, 1-#6, 1-#10	1	1	OVEN FAIR VENDOR 10 119
FRYER FAIR VENDOR 10 119	1	3/4	1-#12, 1-#12, 1-#12	1	20	5			1000	3367	6					
REF FAIR VENDOR 10 119	1	3/4	1-#12, 1-#12, 1-#12	1	20	7	1000	--		8	--	1	--	--	--	SPACE
REF FAIR VENDOR 10 119	1	--	1-#12, 1-#12, 1-#12	1	20	9		1000	--	10	--	1	--	--	--	SPACE
PT OF SALE FAIR VENDOR 119		--	1-#12, 1-#12, 1-#12	1	20	11			180	--	12	--	1	--	--	SPACE
REC FAIR VENDOR 10 119		3/4	1-#12, 1-#12, 1-#12	1	20	13	360	--		14	--	1	--	--	--	SPACE
REF FAIR VENDOR 10 119	1	--	1-#12, 1-#12, 1-#12	1	20	15		1000	--	16	--	1	--	--	--	SPACE
HOOD FAIR VENDOR 10 119		3/4	1-#12, 1-#12, 1-#12	1	20	17			500	--	18	--	1	--	--	SPACE
HOOD FAIR VENDOR 10 119		--	1-#12, 1-#12, 1-#12	1	20	19	500	--		20	--	1	--	--	--	SPACE
HOOD FAIR VENDOR 10 119		--	1-#12, 1-#12, 1-#12	1	20	21		500	--	22	--	1	--	--	--	SPACE
ACU-8 119	2	3/4	2-#12, 1-#12, 1-#12	2	20	23			1123	--	24	--	1	--	--	SPACE
						25	1123	--			26	--	1	--	--	SPACE
HOOD CONTACTOR CT10		3/4	1-#12, 1-#12, 1-#12	1	20	27		200	--		28	--	1	--	--	SPACE
WINDOW OPERATOR 119		3/4	1-#12, 1-#12, 1-#12	1	20	29			200	--	30	--	1	--	--	SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--	--	SPACE
SPARE		--	--	1	20	33			0	--	34	--	1	--	--	SPACE
SPARE		--	--	1	20	35				0	--	36	--	1	--	--	SPACE
SPARE		--	--	1	20	37	0	--				38	--	1	--	--	SPACE
SPARE		--	--	1	20	39			0	--		40	--	1	--	--	SPACE
SPARE		--	--	1	20	41					0	--	42	--	1	--	--	SPACE
							7350 VA	7067 VA	6370 VA							
							62 A	60 A	53 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Power	3946 VA	100.00%	3946 VA	
REC	16840 VA	79.69%	13420 VA	CONNECTED LOAD 20786 VA
				DEMAND LOAD 17366 VA
				AVG. CONNECTED CURRENT 58 A
				AVG. DEMAND CURRENT 48 A

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER.
2. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEUTRAL IF UNNEEDED FOR SUPPLY OF 120V LOAD.

PANEL ID: 1VL7

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL3 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: VENDOR 6 108 | MAIN: MCB | CALC SCC: 5,510 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPARE		--	--	1	20	1	0	0		2						
SPARE		--	--	1	20	3			0	0		4	50	3	--	--	SPARE
SPARE		--	--	1	20	5					0	6				
SPARE		--	--	1	20	7	0	--				8	--	1	--	--	SPACE
SPARE		--	--	1	20	9			0	--		10	--	1	--	--	SPACE
SPARE		--	--	1	20	11					0	12	--	1	--	--	SPACE
SPARE		--	--	1	20	13	0	--				14	--	1	--	--	SPACE
SPARE		--	--	1	20	15			0	--		16	--	1	--	--	SPACE
SPARE		--	--	1	20	17					0	18	--	1	--	--	SPACE
SPARE		--	--	1	20	19	0	--				20	--	1	--	--	SPACE
SPARE		--	--	1	20	21			0	--		22	--	1	--	--	SPACE
SPARE		--	--	1	20	23					0	24	--	1	--	--	SPACE
SPARE		--	--	1	20	25	0	--				26	--	1	--	--	SPACE
SPARE		--	--	1	20	27			0	--		28	--	1	--	--	SPACE
SPARE		--	--	1	20	29					0	30	--	1	--	--	SPACE
SPARE		--	--	1	20	31	0	--				32	--	1	--	--	SPACE
SPARE		--	--	1	20	33			0	--		34	--	1	--	--	SPACE
SPARE		--	--	1	20	35					0	36	--	1	--	--	SPACE
SPARE		--	--	1	20	37	0	--				38	--	1	--	--	SPACE
SPARE		--	--	1	20	39			0	--		40	--	1	--	--	SPACE
SPARE		--	--	1	20	41					0	42	--	1	--	--	SPACE
							0 VA		0 VA		0 VA					
							0 A		0 A		0 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
				CONNECTED LOAD 0 VA
				DEMAND LOAD 0 VA
				AVG. CONNECTED CURRENT 0 A
				AVG. DEMAND CURRENT 0 A

NOTES:

PANEL ID: 1VL11

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL3 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: FAIR VENDOR 11 120 | MAIN: MCB | CALC SCC: 6,843 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
REF FAIR VENDOR 11 120	1	3/4	1-#12, 1-#12, 1-#12	1	20	1	1000	3367		2						
REF FAIR VENDOR 11 120	1	--	1-#12, 1-#12, 1-#12	1	20	3		1000	3367	4	50	3	3-#6, 1-#6, 1-#10	1	1	OVEN FAIR VENDOR 11 120
FRYER FAIR VENDOR 11 120	1	--	1-#12, 1-#12, 1-#12	1	20	5			1000	3367	6					
REF FAIR VENDOR 11 120	1	3/4	1-#12, 1-#12, 1-#12	1	20	7	1000	--		8	--	1	--	--	--	SPACE
REF FAIR VENDOR 11 120	1	--	1-#12, 1-#12, 1-#12	1	20	9		1000	--	10	--	1	--	--	--	SPACE
PT OF SALE FAIR VENDOR 120		--	1-#12, 1-#12, 1-#12	1	20	11			180	--	12	--	1	--	--	SPACE
REC FAIR VENDOR 11 120		3/4	1-#12, 1-#12, 1-#12	1	20	13	360	--		14	--	1	--	--	--	SPACE
REF FAIR VENDOR 11 120	1	--	1-#12, 1-#12, 1-#12	1	20	15		1000	--	16	--	1	--	--	--	SPACE
HOOD FAIR VENDOR 11 120		3/4	1-#12, 1-#12, 1-#12	1	20	17			500	--	18	--	1	--	--	SPACE
HOOD FAIR VENDOR 11 120		-	1-#12, 1-#12, 1-#12	1	20	19	500	--		20	--	1	--	--	--	SPACE
HOOD FAIR VENDOR 11 120		--	1-#12, 1-#12, 1-#12	1	20	21		500	--	22	--	1	--	--	--	SPACE
ACU-9 120	2	3/4	2-#12, 1-#12, 1-#12	2	20	23			1123	--	24	--	1	--	--	SPACE
						25	1123	--			26	--	1	--	--	SPACE
HOOD CONTACTOR CT11		3/4	1-#12, 1-#12, 1-#12	1	20	27		200	--		28	--	1	--	--	SPACE
WINDOW OPERATOR 120		3/4	1-#12, 1-#12, 1-#12	1	20	29			200	--	30	--	1	--	--	SPACE
SPARE		--	--	1	20	31	0	--		32	--	1	--	--	--	SPACE
SPARE		--	--	1	20	33			0	--	34	--	1	--	--	SPACE
SPARE		--	--	1	20	35				0	--	36	--	1	--	--	SPACE
SPARE		--	--	1	20	37	0	--				38	--	1	--	--	SPACE
SPARE		--	--	1	20	39			0	--		40	--	1	--	--	SPACE
SPARE		--	--	1	20	41					0	42	--	1	--	--	SPACE
							7350 VA	7067 VA	6370 VA							
							62 A	60 A	53 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Power	3946 VA	100.00%	3946 VA	
REC	16840 VA	79.69%	13420 VA	CONNECTED LOAD 20786 VA
				DEMAND LOAD 17366 VA
				AVG. CONNECTED CURRENT 58 A
				AVG. DEMAND CURRENT 48 A

NOTES:
1. PROVIDE GFI CIRCUIT BREAKER.
2. CONFIRM NEUTRAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. OMIT NEUTRAL IF UNNEEDED FOR SUPPLY OF 120V LOAD.

PANEL ID: 1VL8

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RECESSED
SOURCE: 1DL3 | AMPS: 100 | PANEL AIC: 10,000 | TYPE: BOLT-ON
LOCATION: VENDOR 7 109 | MAIN: MCB | CALC SCC: 5,733 | APPROX. DIM: 20" W x 5.75" D x 35" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
SPARE		--	--	1	20	1	0	0		2						
SPARE		--	--	1	20	3			0	0		4	50	3	--	--	SPARE
SPARE		--	--	1	20	5					0	6				
SPARE		--	--	1	20	7	0	--				8	--	1	--	--	SPACE
SPARE		--	--	1	20	9			0	--		10	--	1	--	--	SPACE
SPARE		--	--	1	20	11					0	12	--	1	--	--	SPACE
SPARE		--	--	1	20	13	0	--				14	--	1	--	--	SPACE
SPARE		--	--	1	20	15			0	--		16	--	1	--	--	SPACE
SPARE		--	--	1	20	17					0	18	--	1	--	--	SPACE
SPARE		--	--	1	20	19	0	--				20	--	1	--	--	SPACE
SPARE		--	--	1	20	21			0	--		22	--	1	--	--	SPACE
SPARE		--	--	1	20	23					0	24	--	1	--	--	SPACE
SPARE		--	--	1	20	25	0	--				26	--	1	--	--	SPACE
SPARE		--	--	1	20	27			0	--		28	--	1	--	--	SPACE
SPARE		--	--	1	20	29					0	30	--	1	--	--	SPACE
SPARE		--	--	1	20	31	0	--				32	--	1	--	--	SPACE
SPARE		--	--	1	20	33			0	--		34	--	1	--	--	SPACE
SPARE		--	--	1	20	35					0	36	--	1	--	--	SPACE
SPARE		--	--	1	20	37	0	--				38	--	1	--	--	SPACE
SPARE		--	--	1	20	39			0	--		40	--	1	--	--	SPACE
SPARE		--	--	1	20	41					0	42	--	1	--	--	SPACE
							0 VA		0 VA		0 VA					
							0 A		0 A		0 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
				CONNECTED LOAD 0 VA
				DEMAND LOAD 0 VA
				AVG. CONNECTED CURRENT 0 A
				AVG. DEMAND CURRENT 0 A

NOTES:

PANEL KEY		
1VL12	1VL9	1DL3
--	1VL10	1VL7
--	1VL11	1VL8

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NC STATE FAIRGROUNDS - MIDWAY CENTER
NC DEPT. OF AGRICULTURE & CONSUMER SERVICES
4285 TRINITY RD, RALEIGH, NC 27607
SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS 06/11/2025

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **PANEL SCHEDULES - VENDOR**

E405

PANEL ID: P6

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RACK
SOURCE: 1DL5 | AMPS: 225 | PANEL AIC: 10,000 | TYPE: BOLT ON - NEMA 3R
LOCATION: SITE | MAIN: MCB | CALC SCC: 7,866 | APPROX. DIM: 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	2400 --			2	--	1	--	--		SPACE
REC		1	1-#8, 1-#8, 1-#10	3	50	3		2400 --		4	--	1	--	--		SPACE
						5			2400 --	6	--	1	--	--		SPACE
						7	1440 --			8	--	1	--	--		SPACE
REC		3/4	1-#10, 1-#10, 1-#10	3	30	9		1440 --		10	--	1	--	--		SPACE
						11			1440 --	12	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	13	500 --			14	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	15		500 --		16	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	17			500 --	18	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	19	500 --			20	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	21		500 --		22	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	23			500 --	24	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	25	500 --			26	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	27		500 --		28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0 --	30	--	1	--	--		SPACE
							5340 VA	5340 VA	4840 VA							
							45 A	45 A	40 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	15520 VA	100.00%	15520 VA	
				CONNECTED LOAD 15520 VA
				DEMAND LOAD 15520 VA
				AVG. CONNECTED CURRENT 43 A
				AVG. DEMAND CURRENT 43 A

NOTES:
1. SEE PANEL RACK MOUNTING DETAIL FOR RECEPTACLE CONFIGURATION ON SHEET E302.

PANEL ID: P3

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RACK
SOURCE: 1DL4 | AMPS: 225 | PANEL AIC: 10,000 | TYPE: BOLT ON - NEMA 3R
LOCATION: SITE | MAIN: MCB | CALC SCC: 4,140 | APPROX. DIM: 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	2400 --			2	--	1	--	--		SPACE
REC		1	1-#8, 1-#8, 1-#10	3	50	3		2400 --		4	--	1	--	--		SPACE
						5			2400 --	6	--	1	--	--		SPACE
						7	1440 --			8	--	1	--	--		SPACE
REC		3/4	1-#10, 1-#10, 1-#10	3	30	9		1440 --		10	--	1	--	--		SPACE
						11			1440 --	12	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	13	500 --			14	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	15		500 --		16	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	17			500 --	18	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	19	500 --			20	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	21		500 --		22	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	23			500 --	24	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	25	500 --			26	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	27		500 --		28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0 --	30	--	1	--	--		SPACE
							5340 VA	5340 VA	4840 VA							
							45 A	45 A	40 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	15520 VA	100.00%	15520 VA	
				CONNECTED LOAD 15520 VA
				DEMAND LOAD 15520 VA
				AVG. CONNECTED CURRENT 43 A
				AVG. DEMAND CURRENT 43 A

NOTES:
1. SEE PANEL RACK MOUNTING DETAIL FOR RECEPTACLE CONFIGURATION ON SHEET E302.

PANEL ID: P1

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RACK
SOURCE: 1DL4 | AMPS: 225 | PANEL AIC: 10,000 | TYPE: BOLT ON - NEMA 3R
LOCATION: SITE | MAIN: MCB | CALC SCC: 4,423 | APPROX. DIM: 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	2400 --			2	--	1	--	--		SPACE
REC		1	1-#8, 1-#8, 1-#10	3	50	3		2400 --		4	--	1	--	--		SPACE
						5			2400 --	6	--	1	--	--		SPACE
						7	1440 --			8	--	1	--	--		SPACE
REC		3/4	1-#10, 1-#10, 1-#10	3	30	9		1440 --		10	--	1	--	--		SPACE
						11			1440 --	12	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	13	500 --			14	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	15		500 --		16	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	17			500 --	18	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	19	500 --			20	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	21		500 --		22	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	23			500 --	24	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	25	500 --			26	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	27		500 --		28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0 --	30	--	1	--	--		SPACE
							5340 VA	5340 VA	5340 VA							
							45 A	45 A	45 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	16020 VA	100.00%	16020 VA	
				CONNECTED LOAD 16020 VA
				DEMAND LOAD 16020 VA
				AVG. CONNECTED CURRENT 44 A
				AVG. DEMAND CURRENT 44 A

NOTES:
1. SEE PANEL RACK MOUNTING DETAIL FOR RECEPTACLE CONFIGURATION ON SHEET E302.

PANEL ID: P7

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RACK
SOURCE: 1DL5 | AMPS: 225 | PANEL AIC: 10,000 | TYPE: BOLT ON - NEMA 3R
LOCATION: SITE | MAIN: MCB | CALC SCC: 5,373 | APPROX. DIM: 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	2400 --			2	--	1	--	--		SPACE
REC		1	1-#8, 1-#8, 1-#10	3	50	3		2400 --		4	--	1	--	--		SPACE
						5			2400 --	6	--	1	--	--		SPACE
						7	1440 --			8	--	1	--	--		SPACE
REC		3/4	1-#10, 1-#10, 1-#10	3	30	9		1440 --		10	--	1	--	--		SPACE
						11			1440 --	12	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	13	500 --			14	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	15		500 --		16	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	17			500 --	18	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	19	500 --			20	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	21		500 --		22	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	23			500 --	24	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	25	500 --			26	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	27		500 --		28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0 --	30	--	1	--	--		SPACE
							5340 VA	5340 VA	4840 VA							
							45 A	45 A	40 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	15520 VA	100.00%	15520 VA	
				CONNECTED LOAD 15520 VA
				DEMAND LOAD 15520 VA
				AVG. CONNECTED CURRENT 43 A
				AVG. DEMAND CURRENT 43 A

NOTES:
1. SEE PANEL RACK MOUNTING DETAIL FOR RECEPTACLE CONFIGURATION ON SHEET E302.

PANEL ID: P4

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RACK
SOURCE: 1DL5 | AMPS: 225 | PANEL AIC: 10,000 | TYPE: BOLT ON - NEMA 3R
LOCATION: SITE | MAIN: MCB | CALC SCC: 4,605 | APPROX. DIM: 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	2400 --			2	--	1	--	--		SPACE
REC		1	1-#8, 1-#8, 1-#10	3	50	3		2400 --		4	--	1	--	--		SPACE
						5			2400 --	6	--	1	--	--		SPACE
						7	1440 --			8	--	1	--	--		SPACE
REC		3/4	1-#10, 1-#10, 1-#10	3	30	9		1440 --		10	--	1	--	--		SPACE
						11			1440 --	12	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	13	500 --			14	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	15		500 --		16	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	17			500 --	18	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	19	500 --			20	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	21		500 --		22	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	23			500 --	24	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	25	500 --			26	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	27		500 --		28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0 --	30	--	1	--	--		SPACE
							5340 VA	5340 VA	4840 VA							
							45 A	45 A	40 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	15520 VA	100.00%	15520 VA	
				CONNECTED LOAD 15520 VA
				DEMAND LOAD 15520 VA
				AVG. CONNECTED CURRENT 43 A
				AVG. DEMAND CURRENT 43 A

NOTES:
1. SEE PANEL RACK MOUNTING DETAIL FOR RECEPTACLE CONFIGURATION ON SHEET E302.

PANEL ID: P2

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RACK
SOURCE: 1DL4 | AMPS: 225 | PANEL AIC: 10,000 | TYPE: BOLT ON - NEMA 3R
LOCATION: SITE | MAIN: MCB | CALC SCC: 2,374 | APPROX. DIM: 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	2400 --			2	--	1	--	--		SPACE
REC		1	1-#8, 1-#8, 1-#10	3	50	3		2400 --		4	--	1	--	--		SPACE
						5			2400 --	6	--	1	--	--		SPACE
						7	1440 --			8	--	1	--	--		SPACE
REC		3/4	1-#10, 1-#10, 1-#10	3	30	9		1440 --		10	--	1	--	--		SPACE
						11			1440 --	12	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	13	500 --			14	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	15		500 --		16	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	17			500 --	18	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	19	500 --			20	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	21		500 --		22	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	23			500 --	24	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	25	500 --			26	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	27		500 --		28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0 --	30	--	1	--	--		SPACE
							5340 VA	5340 VA	4840 VA							
							45 A	45 A	40 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	15520 VA	100.00%	15520 VA	
				CONNECTED LOAD 15520 VA
				DEMAND LOAD 15520 VA
				AVG. CONNECTED CURRENT 43 A
				AVG. DEMAND CURRENT 43 A

NOTES:
1. SEE PANEL RACK MOUNTING DETAIL FOR RECEPTACLE CONFIGURATION ON SHEET E302.

PANEL ID: 1DL4

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: Surface
SOURCE: X-1DL4 | AMPS: 400 | PANEL AIC: 22,000 | TYPE: DISTRIBUTION
LOCATION: MAIN ELECTRICAL 128 | MAIN: MCB | CALC SCC: 11,166 | APPROX. DIM: 32" W x 8.25" D x 73" H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	5340 --			2	--	1	--	--		SPACE
P1		2-1/2	3-#4/0, 1-#4/0, 1-#4	3	225	3		5340 --		4	--	1	--	--		SPACE
						5			5340 --	6	--	1	--	--		SPACE
						7	5340 --			8	--	1	--	--		SPACE
P2		2-1/2	3-#4/0, 1-#4/0, 1-#4	3	225	9		5340 --		10	--	1	--	--		SPACE
						11			4840 --	12	--	1	--	--		SPACE
						13	5340 --			14	--	1	--	--		SPACE
P3		2-1/2	3-#4/0, 1-#4/0, 1-#4	3	225	15		5340 --		16	--	1	--	--		SPACE
						17			4840 --	18	--	1	--	--		SPACE
SPACE		--	--	1	--	19	-- --			20	--	1	--	--		SPACE
SPACE		--	--	1	--	21		-- --		22	--	1	--	--		SPACE
SPACE		--	--	1	--	23			-- --	24	--	1	--	--		SPACE
SPACE		--	--	1	--	25	-- 0			26						
SPACE		--	--	1	--	27		-- 0		28	30	3	1-#10, 1-#10, 1-#10	3/4		SPD
SPACE		--	--	1	--	29			-- 0	30						
							16020 VA	16020 VA	15520 VA							
							135 A	135 A	125 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	47060 VA	100.00%	47060 VA	
				CONNECTED LOAD 47060 VA
				DEMAND LOAD 47060 VA
				AVG. CONNECTED CURRENT 131 A
				AVG. DEMAND CURRENT 131 A

NOTES:

PANEL ID: P5

VOLTAGE: 208Y/120 | SERVICE EQUIP: No | MOUNTING: RACK
SOURCE: 1DL5 | AMPS: 225 | PANEL AIC: 10,000 | TYPE: BOLT ON - NEMA 3R
LOCATION: SITE | MAIN: MCB | CALC SCC: 6,449 | APPROX. DIM: 20"W X 5.75"D X 50"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	2400 --			2	--	1	--	--		SPACE
REC		1	1-#8, 1-#8, 1-#10	3	50	3		2400 --		4	--	1	--	--		SPACE
						5			2400 --	6	--	1	--	--		SPACE
						7	1440 --			8	--	1	--	--		SPACE
REC		3/4	1-#10, 1-#10, 1-#10	3	30	9		1440 --		10	--	1	--	--		SPACE
						11			1440 --	12	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	13	500 --			14	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	15		500 --		16	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	17			500 --	18	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	19	500 --			20	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	21		500 --		22	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	23			500 --	24	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	25	500 --			26	--	1	--	--		SPACE
REC		3/4	1-#12, 1-#12, 1-#12	1	20	27		500 --		28	--	1	--	--		SPACE
SPARE		--	--	1	20	29			0 --	30	--	1	--	--		SPACE
							5340 VA	5340 VA	4840 VA							
							45 A	45 A	40 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	15520 VA	100.00%	15520 VA	
				CONNECTED LOAD 15520 VA
				DEMAND LOAD 15520 VA
				AVG. CONNECTED CURRENT 43 A
				AVG. DEMAND CURRENT 43 A

NOTES:
1. SEE PANEL RACK MOUNTING DETAIL FOR RECEPTACLE CONFIGURATION ON SHEET E302.

PANEL ID: 1DL5

VOLTAGE: 208Y/120 | SERVICE EQUIP: Yes | MOUNTING: RACK
SOURCE: UTILITY | AMPS: 600 | PANEL AIC: 42,000 | TYPE: DISTRIBUTION - NEMA 3R
LOCATION: SITE | MAIN: MCB | CALC SCC: 21,530 | APPROX. DIM: 32"W X 8.25"D X 73"H

LOAD	NOTE	COND	Phase, Neu, Grd Size	POLE	BKR	CKT	A	B	C	CKT	BKR	POLE	Phase, Neu, Grd Size	COND	NOTE	LOAD
						1	5340 --			2	--	1	--	--		SPACE
P4		2-1/2	3-#4/0, 1-#4/0, 1-#4	3	225	3		5340 --		4	--	1	--	--		SPACE
						5			4840 --	6	--	1	--	--		SPACE
						7	5340 --			8	--	1	--	--		SPACE
P5		2-1/2	3-#4/0, 1-#4/0, 1-#4	3	225	9		5340 --		10	--	1	--	--		SPACE
						11			4840 --	12	--	1	--	--		SPACE
						13	5340 --			14	--	1	--	--		SPACE
P6		2-1/2	3-#4/0, 1-#4/0, 1-#4	3	225	15		5340 --		16	--	1	--	--		SPACE
						17			4840 --	18	--	1	--	--		SPACE
						19	5340 --			20	--	1	--	--		SPACE
P7		2-1/2	3-#4/0, 1-#4/0, 1-#4	3	225	21		5340 --		22	--	1	--	--		SPACE
						23			4840 --	24	--	1	--	--		SPACE
						25	0 --			26	--	1	--	--		SPACE
SPARE		--	--	3	225	27		0 --		28	--	1	--	--		SPACE
						29			0 --	30	--	1	--	--		SPACE
						31	0 --			32	--	1	--	--		SPACE
SPARE		--	--	3	225	33		0 --		34	--	1	--	--		SPACE
						35			0 --	36	--	1	--	--		SPACE
SPACE		--	--	1	--	37	-- 0			38						
SPACE		--	--	1	--	39		-- 0		40	30	3	1-#10, 1-#10, 1-#10	3/4		SPD
SPACE		--	--	1	--	41			-- 0	42						
							21360 VA	21360 VA	19360 VA							
							181 A	181 A	161 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	62080 VA	100.00%	62080 VA	
				CONNECTED LOAD 62080 VA
				DEMAND LOAD 62080 VA
				AVG. CONNECTED CURRENT 172 A
				AVG. DEMAND CURRENT 172 A

NOTES:

PANEL KEY		
P7	P4	P1
P8	P5	P2
1DL4	P6	1DL5

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NC DEPT. OF AGRICULTURE & CONSUMER SERVICES
4285 TRINITY RD, RALEIGH, NC 27607
SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **PANEL SCHEDULES - SITE PANELS**

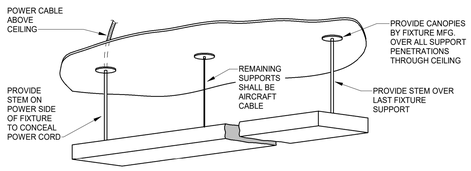
E406

LIGHTING FIXTURE SCHEDULE

TYPE MARK	DESCRIPTION	MOUNTING	COLOR	LUMENS	VOLTAGE	WATTAGE	CONTROL	FINISH	DIMENSIONS	FIXTURE MEETING SPECIFICATION	SHIELDING TYPE	COMMENTS	IMAGE
A1	SURFACE MOUNT LED CYLINDER WITH CONDUIT FEED CANOPY	SURFACE	3000	2500	120/277	23 VA	0-10V	CUSTOM FINISH AS SELECTED BY ARCHITECT	4.5" DIA x 7" H	3G LIGHTING: 3G-SD245R-7H-25-S80-30K-40D-UNV-DIM-(CUSTOM)-WLV INTENSE LIGHTING: GC4DR-S DMF-DC4 INTEGER PRIME RPA4	40-DEGREE		
A2	4.5" APERTURE LED CYLINDER PENDANT	PENDANT	3000	2500	120/277	23 VA	0-10V	BLACK	4.5" DIA x 7" H	3G LIGHTING: 3G-PDZ45R-7H-25-S80-30K-40D-UNV-DIM-(CUSTOM)-BLV INTENSE LIGHTING: GC4DR DMF-DC4 INTEGER PRIME RPA4	40-DEGREE		
A3	4.5" APERTURE LED CYLINDER PENDANT	PENDANT	3000	3000	120/277	29 VA	0-10V	CUSTOM FINISH AS SELECTED BY ARCHITECT	4.5" DIA x 7" H	3G LIGHTING: 3G-PDZ45R-11H-30-S80-30K-40D-UNV-DIM-(CUSTOM)-BLV INTENSE LIGHTING: GC4DR DMF-DC4 INTEGER PRIME RPA4	40-DEGREE		
A4	4.5" APERTURE LED CYLINDER PENDANT	PENDANT	3000	2500	120/277	23 VA	0-10V	WHITE	4.5" DIA x 7" H	3G LIGHTING: 3G-PDZ45R-7H-25-S80-30K-40D-UNV-DIM-(CUSTOM)-BLV INTENSE LIGHTING: GC4DR DMF-DC4 INTEGER PRIME RPA4	40-DEGREE		
A5	SURFACE MOUNT LED CYLINDER WITH CONDUIT FEED CANOPY	SURFACE	3000	2500	120/277	23 VA	0-10V	WHITE	4.5" DIA x 7" H	3G LIGHTING: 3G-SD245R-7H-25-S80-30K-40D-UNV-DIM-WHITE-WLV GOTHAM LIGHTING USAI LIGHTING	40-DEGREE		
B1	LED COVE LIGHTING	SURFACE IN COVE	3000	564	120/277	5 VA	0-10V	WHITE	1 1/4" W x .86" H	SOLID STATE LUMINAIRES: MC 1 3K CRI80 120 KELVIX: 006-I-X-DX-30K-UNV ARCHLIT: LCOV-301X-A TRAXON CLP COVE PLUS	120-DEGREE		
C	2X2 LAY-IN LED TROFFER WITH ACRYLIC CENTER LENS WITH INTEGRAL LINEAR PRISMS	RECESSED, GRID LAY-IN	3000	3800	277	28 VA	0-10V	WHITE	24" x 24" x 3" D	DAY-BRITE: 2DSRT3050LCS-2-UNV-DIM LEDALUX: CB22 TGS: WT22 JADEMAR JPTR	CURVED SHIELDING		
C4	2X4 LAY-IN LED TROFFER WITH ACRYLIC CENTER LENS WITH INTEGRAL LINEAR PRISMS	RECESSED, GRID LAY-IN	3000	5150	277	39 VA	0-10V	WHITE	24" W x 48" L x 3" D	DAY-BRITE: 2DSRT4060LCS-4-UNV-DIM LEDALUX: CB24 TGS: WT24 JADEMAR JPTR	CURVED SHIELDING		
D	LED LINEAR STRIP	PENDANT	3000	4000	277	28 VA	0-10V	WHITE	3 3/4" W x 48" L x 3 3/4" D	ALPHALITE: ILL-4L ELITE: 4-OC4 HE WILLIAMS: 75S COLUMBIA: MPS LEDALUX: SL DAY-BRITE: SDS JADEMAR: JSTRE	ROUND DIFFUSED LENS		
E	DECORATIVE PENDANT LIGHT	PENDANT	3000	2000	120/277	26 VA	0-10V	FINISH AS SELECTED BY ARCHITECT	16" DIA WITH 36" STEM	BOCK LIGHTING: PIANETA-P-WH-16-GXX/LED/ST8F-360GXX/640-10MM-GXX/G UMBALLX24-GXX BETTER DESIGNED LIGHTING: CUSTOM PENDANT SAZERAC LIGHTING-GUMBALL PENDANT		CONFIRM STEM LENGTH WITH ARCHITECT	
F	ACOUSTIC SHADE LIGHT	PENDANT	3000	2500	120/277	40 VA	0-10V	FINISH AS SELECTED BY ARCHITECT	47.2" DIA x 47.2" H	BYIBA LIGHT: LL0112S-40W-AC 30K DIM RAL XL LIGHTART: ACC7-SHPE-CYLN-42D LOFFKO: CIRCUS CISESP120O07			
G	DECORATIVE PENDANT LIGHT	PENDANT	3000	1200	120/277	10 VA	0-10V	FINISH AS SELECTED BY ARCHITECT	12.25" H x 7.5" DIA	BYIBA: BY-255-CL-ML-K30-DIM MULLAN: CAIRO PENDANT LOLA LIGHTING: CLEISSIDRA PENDANT			
H	DECORATIVE WALL SCONCE	SURFACE, WALL	3000	900	120	13 VA	0-10V	CUSTOM FINISH AS SELECTED BY ARCHITECT	10" DIA x 4" D	BETTER DESIGNED LIGHTING: 1153327 BOCK LIGHTING:WALTER SLIM WALLSCONCE MULLAN: JUPITER COLORFUL DISK WALLSCONCE	FROSTED WHITE GLASS GLOBE		
I	DECORATIVE PENDANT	CEILING, PENDANT	3000	900	120	6.5 VA	0-10V	FINISH AS SELECTED BY ARCHITECT	8.25" DIA x 2.75" H	MULLAN: MLCMP056SATBRSOP BOCK LIGHTING: ORBIS FIXTURE BETTER DESIGNED LIGHTING: CUSTOM PENDANT			
J	DECORATIVE WALL SCONCE - FIXED UPLIGHT POSITION	SURFACE, WALL	3000	300	120	40 VA	0-10V	FINISH AS SELECTED BY ARCHITECT	12" L x 9.25" H	MULLAN: MLWL237SATBRS BETTER DESIGNED LIGHTING: 1153086 SAL-SR-WB101	SATIN BRASS REFLECTOR, FIXED		
K1	DECORATIVE JUG PENDANT	PENDANT	3000	2500	120	23 VA	0-10V	WHITE	6" DIA x 12.3" H x 33.6" L	BOCK LIGHTING: JUG0812S-CL		PROVIDE WHITE CORD CWH COLOR OPTION	
K2	DECORATIVE JUG PENDANT	PENDANT	3000	2500	120	23 VA	0-10V	WHITE	6" DIA x 12.3" H x 33.6" L	BOCK LIGHTING: JUG0812S-CL		PROVIDE BLACK/WHITE 1 CORD CCBW1 COLOR OPTION	
K3	DECORATIVE JUG PENDANT	PENDANT	3000	2500	120	23 VA	0-10V	WHITE	6" DIA x 12.3" H x 33.6" L	BOCK LIGHTING: JUG0812S-CL		PROVIDE BLACK/WHITE CROSS CCBW CORD COLOR OPTION	
L	DECORATIVE LINEAR PENDANT LIGHT	PENDANT	3000	6400	120/277	80 VA	0-10V	FINISH AS SELECTED BY ARCHITECT	59" L x 11.8" H	CERCHIO LIGHTING: MS-003-03-101 TRULY GREEN SOLUTIONS: LS25-06-WP KELVIX: VINE SERIES			

LIGHTING FIXTURE SCHEDULE

TYPE MARK	DESCRIPTION	MOUNTING	COLOR	LUMENS	VOLTAGE	WATTAGE	CONTROL	FINISH	DIMENSIONS	FIXTURE MEETING SPECIFICATION	SHIELDING TYPE	COMMENTS	IMAGE
M	CUSTOM DECORATIVE PENDANT	PENDANT	3000	2700	120/277	578 VA	0-10V	CUSTOM FINISH AS SELECTED BY ARCHITECT	44" x 16' x 9'-8" H	YELLOW GOAT DESIGN: QUOTE #16482 CERCHIO LIGHTING: GLACE CUSTOM CANOPY OCL: GLOWBALL CUSTOM CANOPY		PROVIDE RGBW FIXTURE AS ALTERNATE BID	
N	DECORATIVE WALL SCONCE	SURFACE, WALL	3000	2700	120	8 VA	0-10V	CUSTOM FINISH AS SELECTED BY ARCHITECT	40" W x 23" H x 4" D	BETTER DESIGNED LIGHTING: 1153118 BOCK LIGHTING:NOVANTA CUSTOM LOLA LIGHTING: ARCH WALL LAMP	FROSTED WHITE GLASS GLOBE	PROVIDE 3" BULBS TO MAINTAIN 4" DEPTH OF FIXTURE	
O	LED TAPE LIGHT	SURFACE IN COVE	3000	631 LM/FT	120/277	4.8 VA/FT	0-10V		0.6" W x 0.6"H	PURE EDGE LIGHTING: ST5A-PIN-24V-(LENGTH AS REQUIRED)-30D KELVIX: DV SERIES CONTECH: SPECFLEX OPTIC ARTS LL42		PROVIDE REMOTE 0-10V UNIVERSAL DIMMING POWER SUPPLIES AND NECESSARY PARTS FOR INSTALLATION	
P4	RECESSED NARROW APERTURE LINEAR LED	RECESSED	3000	1600	120	3.4 VA/FT	0-10V	WHITE FRAME	2" W x 3 3/4" H x 48" L	HE WILLIAMS: MX2R-X-X-LX/830-F FOCAL POINT SEEM 2 FINELITE: HP-2-R-D-X-X-830 LEDALITE 230/L930 MERCURY MLS2			
P6	RECESSED NARROW APERTURE LINEAR LED	RECESSED	3000	4800	277	6.7 VA/FT	0-10V	WHITE FRAME	2" W x 3 3/4" H x 72" L	HE WILLIAMS: MX2RG-6'00-L8/830-F FOCAL POINT SEEM 2 FINELITE: HP-2-R-D-X-X-830 LEDALITE 230/L930 MERCURY MLS2			
Q	ARCHITECTURAL WALL SCONCE -ADJUSTABLE DOWN LIGHT POSITION	SURFACE, WALL	3000	300	120	40 VA	0-10V	CUSTOM FINISH AS SELECTED BY ARCHITECT	12" L x 9.25" H	MULLAN: MLWL237SATBRS BETTER DESIGNED LIGHTING: 1180009 SAL-SR-WB101	SATIN BRASS REFLECTOR		
R	ROUGH SERVICE VAPOR PROOF LED	SURFACE/SUSPENDED	4000	4000	277	33W	0-10V		24" W x 48" L x 3" D	HE WILLIAMS: 96 MOBERN: VW LED ELITE: 4-OW1IP ILP: VVT SIGNIFY: DW BEGHELLI: BS100LED JADEMAR: JVTHB-SL	FROSTED POLYCARBONATE LENS		
SC	LED COVE LIGHTING	SURFACE IN COVE	4000	200LM/FT	120/277	1.7 VA/FT	0-10V		1 1/2" W x 1 1/2" H	KELVIX LIGHTING DIODE LED CONTECH: SPECFLEX OPTIC ARTS KLC			
ST	WALL BRACKET, SURFACE MOUNT LED	SURFACE	4000	4000	MVOLT	40W	0-10V	WHITE POLYESTER POWDER COAT	51" L x 4 3/4" W x 4" D	DAY-BRITE: FSS440L830-UNV-SDIM-SWZCS FINELITE: HPX-SM-D-4'-V-830-F-UNV-SC-OBO HE WILLIAMS: 75R-4-L50-830-OCCWS-FSP-311-LX-120/277-SD50 JADEMAR JSW	LINEAR FACETED REFRACTOR	FIXTURE DIMS TO APPROXIMATELY 50% LIGHT OUTPUT WHEN UNOCCUPIED	
SV	IN-GRADE UPLIGHT	RECESSED	3000	220	120/277	3 VA	0-10V	CUSTOM FINISH AS SELECTED BY ARCHITECT	2-1/4" DIA	ERCO: 39970.023 BINA: GOPHER BK LIGHTING: MINI MICRO RECESSED HK LIGHTING: ZXL08 ARCLUCE INGROUND55	SEALED GLASS	PROVIDE WITH REMOTE DRIVERS AS NECESSARY	
T	2X2 LAY-IN LED FLAT PANEL	RECESSED, GRID LAY-IN	3000	3317	120/277	30 VA	0-10V	WHITE FRAME	24" x 24" x 2" D	HE WILLIAMS: BP DAY-BRITE: SBP TGS: 882ZW5 ERALUX ALPS EVOLVE	FLAT WHITE ACRYLIC LENS		
U	6" RECESSED DOWNLIGHT	RECESSED	3000	2200	120/277	18 VA	0-10V	WHITE	4.5" DIA x 5.75" H	3G LIGHTING: 3G-DZ45R 22-S80-30K-40D-UNV-DIM-WT-WLV-NC INTENSE LIGHTING: GD4DR METEOR: REV FLEX 4 INTEGER PRIME RPA6	40-DEGREE		
W1	ARCHITECTURAL WALL SCONCE	SURFACE	4000	1319	277	15 VA	PHOTOCELL	FINISH AS SELECTED BY ARCHITECT	8" W x 8" H x 2 9/16" D	PERFORMANCE IN LIGHTING: MIMIK 20M #071582 FLOS: CLIMBER DOWN 175 BROWNLEEE: BRICK OD			
W2	ARCHITECTURAL STEP LIGHT	SURFACE	4000	372	120/277	8 VA	PHOTOCELL	FINISH AS SELECTED BY ARCHITECT	5 1/8" W x 4 7/8" H x 4" D	B-K LIGHTING: MINI YUKON - #MYK-I-LED-e191-1-SD-010-MT BETA CALCO: SCALA 8208712 COLE LIGHTING: 157 SERIES		PROVIDE SATIN BRONZE FINISH	
W3	ARCHITECTURAL WALL SCONCE DIRECT/INDIRECT	SURFACE	4000	653	277	10 VA	PHOTOCELL	FINISH AS SELECTED BY ARCHITECT	5" W x 5" H x 2 9/16" D	PERFORMANCE IN LIGHTING: MIMIK M10-B-10W-C/\-__-3K-UNV-0-10V-L33 FLOS: CLIMBER UP & DOWN 175 INTER-LUX: SKI-__-DFR			
W4	ARCHITECTURAL WALL SCONCE DIRECT	SURFACE	4000	645	277	10 VA	PHOTOCELL	FINISH AS SELECTED BY ARCHITECT	3 5/16" L x 2 1/2" W x 6 1/2" H	MIMIK 10 C/I		PROVIDE DOWNLIGHT ONLY	
XB	WALL MOUNT EMERGENCY LIGHTING UNIT	WALL	N/A	1100	120/277	5 VA	N/A	WHITE	13 1/2" L x 3 3/4" W x 6" H	LITHONIA: ELM6L CHLORIDE: CLU MULE: SQ-80 COMPASS: CU2 CARPENTER: MU			
XC	EDGE LIT EXIT SIGN	CEILING	N/A	N/A	277	5 VA	N/A	BRUSHED ALUMINUM	12 3/4" W x 12" H	CHLORIDE: 44R SERIES BEGHELLI: CRV ISOLITE: UEL BARRON: EXITRONIX CH900X CARPENTER: FX	RED LETTERS WITH MIRROR BACKING	PROVIDE SINGLE OR DOUBLE FACE AS INDICATED ON DRAWINGS. PROVIDE STEM KIT AS REQUIRED.	
XW	EDGE LIT EXIT SIGN	WALL	N/A	N/A	277	5 VA	N/A	BRUSHED ALUMINUM	12 3/4" W x 12" H	CHLORIDE: 44R SERIES BEGHELLI: CRV ISOLITE: UEL BARRON: EXITRONIX CH900X CARPENTER: FX	RED LETTERS WITH MIRROR BACKING		
XX	EXTERIOR RATED EXIT SIGN	WALL	N/A	N/A	277	5 VA	N/A	WHITE	14 3/4" W x 10" H x 3" D	CHLORIDE: C4XE-R-W-1/2 BEGHELLI: PXA SERIES LITHONIA: LV CARPENTER T SERIES NEMA 4X	RED LETTERS		
XXW	EXTERIOR RATED EXIT SIGN	WALL	N/A	N/A	277	5 VA	N/A	WHITE	14 3/4" W x 10" H x 3" D	CHLORIDE: C4XE-R-W-1/2 BEGHELLI: PXA SERIES LITHONIA: LV CARPENTER T SERIES NEMA 4X	RED LETTERS	PROVIDE SINGLE FACE OR DOUBLE FACE AS INDICATED ON DRAWINGS.	

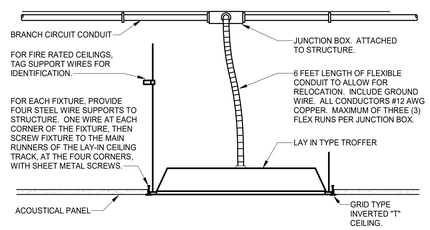


GENERAL NOTES :

1. FIXTURE STYLE AND NUMBER OF REQUIRED SUPPORTS WILL VARY BY FIXTURE TYPE.
2. REFER TO MANUFACTURER'S SUPPLIED MOUNTING INSTRUCTIONS FOR EXACT REQUIRMENTS.

SO DETAIL: GE0022

2 E501 **TYPICAL LINEAR FIXTURE INSTALLATION**
SCALE: NTS



SW DETAIL: GE0013

1 E501 **LIGHTING FIXTURE MOUNTING DETAIL**
SCALE: NTS

FIXTURE SCHEDULE NOTES:

1. THIS FIXTURE SCHEDULE IDENTIFIES A FIXTURE THAT MEETS THE SPECIFIED PERFORMANCE REQUIREMENTS AND A LEVEL OF QUALITY REQUIRED FOR THE PROJECT. **MANUFACTURER'S NAMES AND FIXTURE SERIES/MODELS IN SCHEDULE ARE NOT A BRAND NAME SPECIFICATION.** EQUIVALENT FIXTURES BY MANUFACTURERS OTHER THAN THOSE LISTED MAY BE SUBMITTED FOR THIS PROJECT AND MUST BE REVIEWED BY ARCHITECT.
2. PROVIDE LED DRIVERS SUITABLE FOR FULL RANGE DIMMING, INTEGRAL SURGE PROTECTION, CURRENT TOTAL HARMONIC DISTORTION (THD) OF <20% AND A POWER FACTOR >0.90. IN ADDITION, DRIVERS MUST BE RF SUPPRESSED FOR MINIMUM INJECTION OF FEEDBACK INTO SUPPLY LINES. MAXIMUM CURRENT THD AND MINIMUM POWER FACTOR MUST BE SUBMITTED AS A PART OF THE FIXTURE SUBMITTAL DATA.
3. UNLESS OTHERWISE INDICATED, PROVIDE SINGLE DRIVER PER FIXTURE.
4. PROVIDE MOUNTING FRAME AND RELATED ACCESSORIES FOR ALL FIXTURES AS REQUIRED TO MATCH CEILING CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT CEILING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MODIFICATION OF FIXTURE SCHEDULE MANUFACTURER'S PART NUMBERS FOR PURPOSES OF MATCHING CEILING CONSTRUCTION.
5. PROVIDE DIMMING DRIVERS WHERE DIMMING CONTROLS ARE INDICATED ON THE PLANS.
6. ALL FIXTURES TO HAVE A COLOR TEMPERATURE OF 3000K UNLESS NOTED OTHERWISE.
7. UNLESS NOTED OTHERWISE, ALL FIXTURES SHALL INCLUDE INTEGRAL DRIVER.
8. ALL FIXTURES SHALL BE UL OR THIRD PARTY LISTED AS COMPLETE ASSEMBLY.
9. FOR LIGHT FIXTURES HAVING LINEAR VISUAL FEATURES (IE: CENTER BASKET, LOUVERS, ETC), COORDINATE AND ALIGN COMPONENTS IN A SIMILAR DIRECTION CONSISTENTLY ACROSS THE BUILDING SPACES.

SW DETAIL: IN0011 LED

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SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS CONSTRUCTION

JOB NUMBER
23-013

DATE ISSUED
06/12/2025

PROJECT STATUS
BID SET

SHEET
LIGHTING FIXTURE SCHEDULE

E501

LIGHTING CONTROL SYSTEMS OPERATION NARRATIVE

OPERATIONS BY SPACE TYPE

- **CORRIDORS & COMMON SPACE**
- **CENTRALIZED AUTOMATIC CONTROL OF INTERIOR SPACES**

OVERVIEW:

DURING NORMAL HOURS OF OPERATION GENERAL CORRIDOR, COMMON SPACE AND OPEN OFFICE SPACES LIGHTING SHALL BE ENERGIZED. NORMAL HOURS OF OPERATION SHALL BE DETERMINED BY THE OWNER AND ARE DESIGNATED AT THE BAS. AFTER NORMAL HOURS OF OPERATION, GENERAL LIGHTING WILL BE DEACTIVATED. TIMED OVERRIDE SWITCHES EACH FLOOR, AS SHOWN ON THE FLOOR PLANS, SHALL PROVIDE A 'TIMED-ON' CONDITION FOR THE ASSOCIATED LIGHTING CONTROL GROUP ON THE FLOOR. FLOOR OVERRIDE SHALL ALLOW NORMAL OPERATION OF LIGHTING ON THAT FLOOR FOR THE TIME SPECIFIED BY THE OVERRIDE SWITCH. THE LENGTH OF TIME IS SET FOR 2 HOURS.

COMPONENTS:

LIGHTING RELAY PANEL IS PROVIDED TO AUTOMATICALLY CONTROL COMMON SPACE LIGHTING. PANEL SHALL BE 120/277V RATED FOR LED LIGHTING. ONE 20A CONTROL RELAY WILL BE PROVIDED FOR EACH LIGHTING CIRCUIT SPECIFIED ON FLOORPLANS. RELAY PANEL SHALL RECIEVE INPUT FROM BAS FOR LIGHTING CONTROL SCHEDULE.

OVERRIDE SWITCHES ARE PROVIDED TO OVERRIDE SPECIFIC INTERIOR LIGHTING ZONES DURING UNOCCUPIED HOURS. SWITCHES AND WIRING ARE PROVIDED BY THE MECHANICAL CONTRACTOR TO OPERATE THROUGHT THE BUILDING BAS. RACEWAYS AND BOXES SERVING OVERRIDES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. LIGHTS SHALL BE ENERGIZED IN RESPONSE TO OVERRIDE SWITCHES FOR 2 HOURS.

- **LOCAL AUTOMATIC CONTROL OF INTERIOR SPACES**

OVERVIEW:

LOCAL OCCUPANCY SENSORS SHOWN ON THE FLOOR PLANS PROVIDE AUTOMATIC CONTROL DURING NORMAL HOURS OF OPERATION.

MANUAL SWITCHING AND DIMMING CONFIGURATIONS ARE SHOWN ON FLOOR PLANS (ON/OFF SWITCH, DIMMING SWITCH, OR NO LOCAL SWITCHING) TO CONTROL THE LIGHTING.

COMPONENTS:

OCCUPANCY SENSORS ARE DUAL TECHNOLOGY TYPE SET UP FOR OCCUPANCY SENSING, WITH AUTOMATIC RESPONSE TO DETECTION OF ULTRASONIC AND PASSIVE INFRARED SIGNALS. ACTIVATION IS MAINTAINED WHILE EITHER OF THESE SIGNALS IS PRESENT AND FOR 15 MINUTES BEYOND ABSENCE OF BOTH SIGNALS.

- **CENTRALIZED AUTOMATIC CONTROL OF EXTERIOR SPACES**

OVERVIEW:

LIGHTING IS CONTROLLED BY PHOTOCONTROL SENSOR TO ENERGIZE LIGHTING AT DUSK OR CLOUDY CONDITIONS DURING DAYLIGHT HOURS. LIGHTING IS DE-ENERGIZED AT DAWN BY THE PHOTOCONTROL SENSOR. WHERE INDICATED, LIGHTING WILL BE DEACTIVATED BY A 'TIMED-OFF' CONDITION FROM CONTACTOR.

OVERRIDE SHALL ALLOW NORMAL OPERATION OF EXTERIOR LIGHTING FOR THE TIME SPECIFIED BY THE OVERRIDE SWITCH. THE LENGTH OF TIME IS SET FOR 2 HOURS.

COMPONENTS:

CONTACTORS ARE FULL VOLTAGE LIGHTING CONTACTORS WITH MECHANICALLY HELD CONTACTS. CONTACTORS FOR EXTERIOR LIGHTING ARE SET UP WITH CONTROL CIRCUIT DRIVEN BY A SINGLE PHOTOCONTROL SENSOR AND BAS INPUT.

PHOTOCONTROL SWITCH IS LOCATED TO PROVIDE AUTOMATIC CONTROL OF EXTERIOR LIGHTING FOR DUSK TO DAWN OPERATION. SWITCH ALSO RESPOND TO LOW LIGHT CONDITIONS DURING DAYLIGHT HOURS.

- **EMERGENCY & EGRESS LIGHTING**

OVERVIEW:

LIGHTING IS UNSWITCHED, SUPPLIED FROM SOURCES INDICATED ON PLANS. WHERE FIXTURES ARE SERVED BY TWO INDEPENDENT SOURCES, A LISTED EMERGENCY LIGHTING TRANSFER SWITCH SHALL BE PROVIDED AND WILL TRANSFER POWER SOURCE IN THE EVENT OF FAILURE FROM THE NORMAL BRANCH CIRCUIT. ALTERNATE SOURCE FOR THE TRANSFER SWITCH IS SERVED FROM GENERATOR. UNDER LOSS OF NORMAL POWER, EMERGENCY AND EGRESS LIGHTING CIRCUITS SHALL BE RESTORED WITHIN 10 SECONDS.

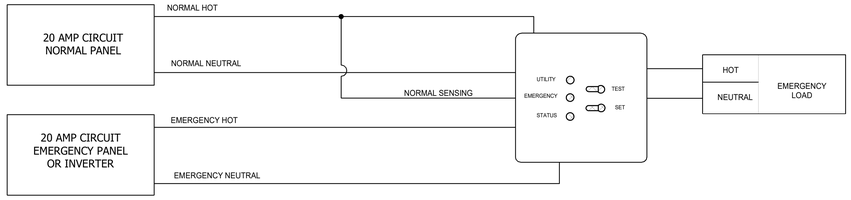
EXTERIOR EXIT DISCHARGE LIGHTING SHALL BE CONTROLLED BY PHOTOCONTROL SENSOR TO ENERGIZE LIGHTING AT DUSK OR CLOUDY CONDITIONS DURING DAYLIGHT HOURS. LIGHTING IS DE-ENERGIZED AT DAWN BY THE PHOTOCONTROL SENSOR.

COMPONENTS FOR EXIT DISCHARGE LIGHTING:

PHOTOCONTROL SWITCH IS LOCATED TO PROVIDE AUTOMATIC CONTROL OF EXTERIOR LIGHTING FOR DUSK TO DAWN OPERATION. SWITCH ALSO RESPOND TO LOW LIGHT CONDITIONS DURING DAYLIGHT HOURS.

- **SPACES AND OR LIGHTING GROUPS NOT CONTROLLED BY BUILDING AUTOMATIC LIGHTING SYSTEM**

STAIRS
BUILDING EGRESS LIGHTING
ELECTRICAL ROOMS
MECHANICAL ROOMS
ELEVATOR PIT

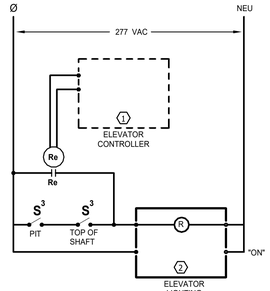


GENERAL NOTES:

1. WHEN NORMAL POWER IS AVAILABLE YHE NNORMAL AND EMERGENCY LOADS WILL BEHAVE IDENTICALLY AND WILL BE CONTROLLED BY THE LOCAL LIGHTING CONTROLS.
2. WHEN NORMAL POWER IS LOST THE NROMAL LIGHTING LOAD WILL TURN OFF.
   A. THE EMERGENCY LIGHTING LOAD WILL TURN ON.
   B. THE EMERGENCY LOAD WILL GO TO FULL BRIGHTNESS.
3. WHEN NORMAL POWER IS RE-ESTABLISHED THE LIGHTING LOAD BEHAVIOR WILL RETURN BASED ON LOCAL LIGHTING CONTROLS.

SO DETAIL: CN0048

1 / E502 CN0048-UL1008 BRANCH CIRCUIT EMERGENCY LIGHTING TRANSFER SWITCH
SCALE: NTS



GENERAL NOTES:

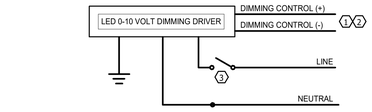
1. MAIN CONTACTS NOT SHOWN AT CONTACTOR.
2. ALL LIGHTING CONTROL CONDUCTORS ARE TO BE AWG #12.

KEYED NOTES:

1. ELEVATOR CONTROLLER BY ELEVATOR EQUIPMENT PROVIDER. SHAFT LIGHTING SHALL BE ACTIVATED UPON RECEIVING SIGNAL FROM ELEVATOR CONTROLLER. PROVIDE RELAY/DEVICE/EQUIPMENT AS REQUIRED TO RECEIVE SIGNAL AND ENGAGE CONTACTOR. COORDINATE EXACT REQUIREMENTS WITH ELEVATOR EQUIPMENT PROVIDER.
2. LIGHTING CONTACTOR. RATED FOR USE AT 120 VOLT, 20 AMP, 1-POLE. PROVIDE ELECTRICALLY HELD TYPE CONFIGURED FOR 2-WIRE, 120 VAC CONTROL MOUNTED IN NEMA-1 ENCLOSURE.
3. 3-WAY LIGHTING SWITCHES AT TOP AND BOTTOM OF ELEVATOR SHAFT.

SO DETAIL: CN0050

4 / E502 ELEVATOR SHAFT LIGHTING CONTROL DIAGRAM
SCALE: NTS



KEYED NOTES:

1. CAP DIMMING CONTROL LEADS WHERE FIXTURES ARE NOT REQUIRED TO BE DIMMED, AND ROVIDE LINE SIDE SWITCHLEG (NOT SHOWN).
2. PROVIDE 0-10 VOLT STANDARD CURRENT SINK 0-10 VOLT CONTROL DIMMER (IEC 60929) WHERE INDICATED (COMPATIBLE WITH LIGHT FIXTURES). PROVIDE 600 VOLT RATED CONTROL CONDUCTORS ROUTED WITH POWER CIRCUIT TO EACH FIXTURE DRIVER.
3. INTEGRAL DRIVER DISCONNECT.

SW DETAIL: CN0046

2 / E502 0-10 VOLT DIMMING WIRING DETAIL
SCALE: NTS

OCCUPANCY SENSOR NOTES:

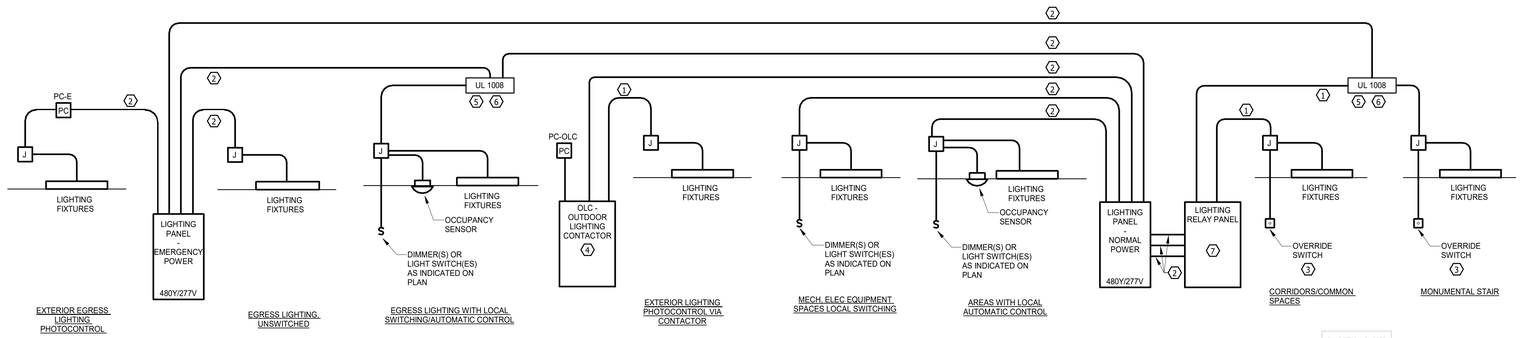
1. OCCUPANCY SENSORS ARE DIAGRAMATICALLY INDICATED ON THE LIGHTING FLOOR PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND QUANTITIES OF SENSORS INSTALLED TO PROPERLY COVER EACH SPACE BASED ON THE APPROVED PRODUCT COVERAGE PATTERNS AND IN COORDINATION WITH THE MANUFACTURER'S INSTRUCTIONS.
2. ALL SENSORS SHALL UTILIZE DUAL TECHNOLOGIES FOR DETECTION AS SPECIFIED.
3. COORDINATE CLEARANCES FROM AIR DISTRIBUTION SYSTEMS TO AVOID NUISANCE TRIPPING AS RECOMMENDED BY THE MANUFACTURER OF SENSORS.
4. OCCUPANCY SENSORS SHALL WORK IN COORDINATION WITH 0-10 VOLT DIMMING CONTROLS.

GENERAL NOTES:

1. RISER TYPICAL PER FLOOR.
2. REFER TO FLOOR PLANS FOR EXACT DEVICE QUANTITIES AND LOCATIONS.
3. PROVIDE ALL CLASS 2 WIRING BETWEEN FIXTURES AND CONTROL DEVICES IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.
4. THE EXTERIOR LIGHTING CONTACTORS ARE TO ACTIVATE/DEACTIVATE LIGHTING BASED ON A USER DETERMINED OCCUPANCY SCHEDULE. SCHEDULE TO INCLUDE HOURS OF OPERATION AND HOLIDAY SCHEDULE BASED ON INPUT FROM THE MECHANICAL SYSTEM BAS.
5. THE INTERIOR LIGHTING RELAYS ARE TO ACTIVATE/DEACTIVATE LIGHTING BASED ON A USER DETERMINED OCCUPANCY SCHEDULE. SCHEDULE TO INCLUDE HOURS OF OPERATION AND HOLIDAY SCHEDULE BASED ON INPUT FROM THE LIGHTING RELAY PANEL INTEGRAL TIME CLOCK.
6. OVERRIDE SWITCHES LOCATED IN EACH ZONE SHALL ACTIVATE LIGHTS DURING PERIODS WHEN LIGHTING HAS BEEN DEACTIVATED FOR A USER DEFINED PERIOD INITIALLY SET FOR 2 HOURS.

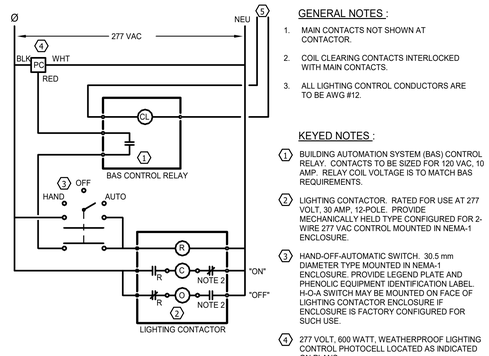
KEYED NOTES:

1. PROVIDE CIRCUITS AS DESIGNATED ON PLANS, ROUTED VIA CONTACTOR OR RELAY PANEL FOR TIME OF DAY CONTROL.
2. CIRCUITS AS DESIGNATED BY FLOOR PLANS. PROVIDE BRANCH CIRCUITS AND RACEWAYS AS REQUIRED BY PANEL SCHEDULE(S).
3. FLOOR LIGHTING OVERRIDE SWITCHES TO BE PROVIDED BY MECHANICAL CONTRACTOR. PROVIDE PUSH BUTTON WITH PHENOLIC LABEL ON SWITCH PLATE THAT READS "PRESS TO TURN ON LIGHTS AFTER NORMAL BUSINESS HOURS". OVERRIDE RACEWAYS AND BACKBOXES TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR. SEE ELECTRICAL LIGHTING PLANS FOR LOCATIONS AND QUANTITY OF OVERRIDES FOR FLOORS.
4. MECHANICALLY HELD CONTACTORS AS SPECIFIED WITH CONNECTIONS AS DETAILED ON THE PLANS. CONTACTOR IS ENERGIZED/DEENERIZED BY INPUTS FROM A CONTROL PHOTOCELL AND BAS CONTROL RELAY.
5. EMERGENCY LIGHTING TRANSFER SWITCH.
6. PROVIDE TWO SEPARATE BRANCH CIRCUITS FROM SEPARATE SOURCES, ONE NORMAL CIRCUIT AND ONE EMERGENCY CIRCUIT. REFER TO PLANS. UL 1008 TRANSFER SWITCH WILL SHUNT FROM CONTROL DEVICE AND BECOME ILLUMINATED TO 100%.
7. LIGHTING RELAY PANEL LOCATED IN ELECTRICAL ROOM. RELAY PANEL SHALL RECIEVE INPUT FROM BAS FOR LIGHTING CONTROL SCHEDULE.



SW DETAIL: CN0022

5 / E502 LIGHTING CONTROL RISER DIAGRAM
SCALE: NTS



GENERAL NOTES:

1. MAIN CONTACTS NOT SHOWN AT CONTACTOR.
2. COIL CLEARING CONTACTS INTERLOCKED WITH MAIN CONTACTS.
3. ALL LIGHTING CONTROL CONDUCTORS ARE TO BE AWG #12.

KEYED NOTES:

1. BUILDING AUTOMATION SYSTEM (BAS) CONTROL RELAY. CONTACTS TO BE SIZED FOR 120 VAC, 10 AMP. RELAY COIL VOLTAGE IS TO MATCH BAS REQUIREMENTS.
2. LIGHTING CONTACTOR. RATED FOR USE AT 277 VOLT, 30 AMP, 12-POLE. PROVIDE MECHANICALLY HELD TYPE CONFIGURED FOR 2-WIRE 277 VAC CONTROL MOUNTED IN NEMA-1 ENCLOSURE.
3. HAND-OFF-AUTOMATIC SWITCH. 30.5 mm DIAMETER TYPE MOUNTED IN NEMA-1 ENCLOSURE. PROVIDE LEGEND PLATE AND PHENOLIC EQUIPMENT IDENTIFICATION LABEL. H-O-A SWITCH MAY BE MOUNTED ON FACE OF LIGHTING CONTACTOR ENCLOSURE IF ENCLOSURE IS FACTORY CONFIGURED FOR SUCH USE.
4. 277 VOLT, 600 WATT, WEATHERPROOF LIGHTING CONTROL PHOTOCELL LOCATED AS INDICATED ON PLANS.
5. TO BUILDING AUTOMATION SYSTEM (BAS) CONTROL POINT FOR EXTERIOR LIGHTING.

SO DETAIL: CN0028

3 / E502 EXTERIOR LIGHT CONTROL DIAGRAM
SCALE: NTS

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NORTH CAROLINA PROFESSIONAL SEAL 039503 ENGINEER MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS BUILDERS

JOB NUMBER
23-013
DATE ISSUED
06/12/2025
PROJECT STATUS
BID SET
SHEET
LIGHTING ELEVATION & DETAILS

E502

SYSTEM OUTPUTS

Output columns:
- CONTROL UNIT ANNUNCIATION: A – ACTUATE COMMON ALARM SIGNAL INDICATOR; B – ACTUATE AUDIBLE ALARM SIGNAL; C – ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR; D – ACTUATE AUDIBLE SUPERVISORY SIGNAL; E – ACTUATE COMMON TROUBLE SIGNAL INDICATOR; F – ACTUATE AUDIBLE COMMON TROUBLE SIGNAL; G – ACTUATE ZONE ALARM INDICATOR; H – ACTUATE CARBON MONOXIDE ALARM INDICATOR; I; J; K; L
- NOTIFICATION: M – ACTUATE EVACUATION SIGNAL; N – DISPLAY/PRINT CHANGE OF STATUS; O – TRANSMIT FIRE ALARM SIGNAL TO SUPERVISING STATION; P – TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION; Q – TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION; R – ACTUATE CARBON MONOXIDE SIGNAL; S – TRANSMIT CARBON MONOXIDE SIGNAL TO SUPERVISING STATION; T
- REQUIRED FIRE SAFETY CONTROL: U – RELEASE MAGNETICALLY HELD SMOKE DOORS; V – RELEASE SMOKE DAMPERS; W – RECALL ELEVATORS TO PRIMARY RECALL FLOOR; X – RECALL ELEVATORS TO ALTERNATE RECALL FLOOR; Y – ACTUATE ELEVATOR "FIRE HAT" LIGHT; Z – UNLOCK ACCESS CONTROLLED DOORS; AA – OPEN KITCHEN CONTACTOR CIRCUITS
- SUPPLEMENARY: BB – ACTUATE LOCAL/REMOTE LED INDICATORS; CC – ACTUATE GRAPHICS SYSTEM - DISPLAY LED INDICATORS; DD – SHUTDOWN AHU'S, EXHAUST FANS, FAN POWERED TU'S ETC.; EE – ACTUATE EXTERIOR STROBE; FF – SHUTDOWN RTU-1 AND KVU-1 SUPPLY FANS; GG; HH; II – SHUNT TRIP ELEVATOR POWER; JJ

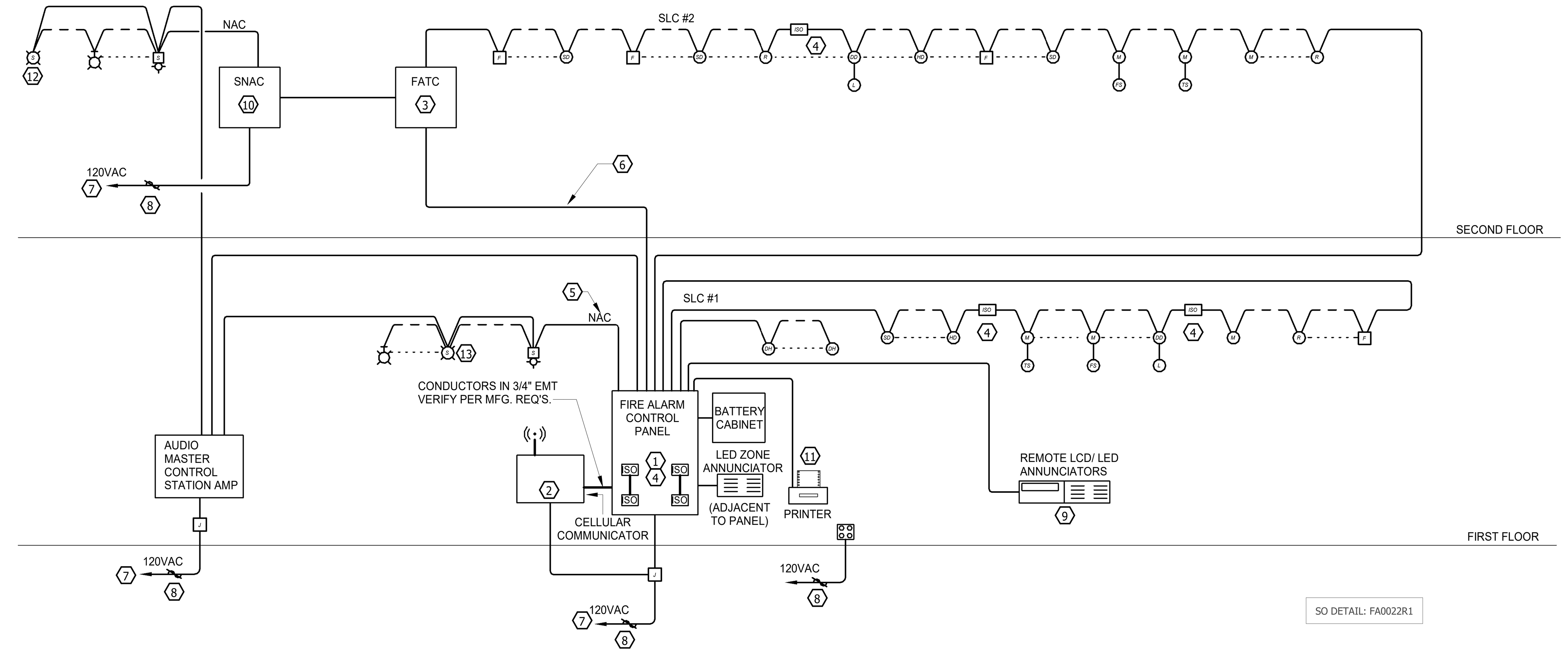
#	SYSTEM INPUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	#
1	SMOKE DETECTORS	●	●					●						●	●	●						●	●				●		●	●	●	●						1
2	IN-DUCT SMOKE DETECTORS			●	●										●		●					●	●				●		●	●	●							2
3	CARBON MONOXIDE DETECTORS								●										●	●									●	●								3
4	ELEVATOR (PRI) SMOKE DETECTORS	●	●					●						●	●	●						●	●	●			●		●	●	●	●						4
5	ELEVATOR (ALT) SMOKE DETECTORS	●	●					●						●	●	●						●	●		●		●		●	●	●	●						5
6	ELEVATOR SHAFT/MECH. RM. SMOKE DETECTORS	●	●					●						●	●	●						●	●	●		●	●		●	●	●	●						6
7	THERMAL DETECTORS	●	●					●						●	●	●						●	●				●		●	●	●	●						7
8	THERMAL DETECTOR SHAFT/MECH. RM.	●	●					●						●	●	●						●	●				●		●	●	●	●				●		8
9	PULL STATIONS	●	●					●						●	●	●						●	●				●		●	●	●	●						9
10																																						10
11	LOOP OPEN/SHORT CIRCUIT					●	●								●			●											●	●								11
12	LOOP GROUND FAULT					●	●								●			●											●	●								12
13	LOOP FAILURE					●	●								●			●											●	●								13
14																																						14
15	NAC OPEN/SHORT CIRCUIT					●	●								●			●											●	●								15
16	NAC GROUND FAULT					●	●								●			●											●	●								16
17	NAC FAILURE					●	●								●			●											●	●								17
18	LOSS OF AC POWER					●	●								●												●		●	●								18
19	LOSS OF AC POWER (>3 HR)					●	●								●			●									●		●	●								19
20	BATTERY/CHARGER FAILURE					●	●								●			●									●		●	●								20
21	LOW BATTERY					●	●								●			●									●		●	●								21
22																																						22
23	OVERRIDE (AHU, DOORHOLDERS, ETC.)					●	●								●			●											●	●								23
24																																						24
25	LOSS OF AC POWER FOR ELEV. SHUNT TRIP					●	●								●			●											●	●								25
26																																						26
27	SPRINKLER WATER FLOW	●	●					●						●	●	●						●	●				●		●	●	●	●						27
28	SPRINKLER TAMPER SWITCHES			●	●										●		●												●	●								28
29																																						29
30	FIRE PUMP RUNNING	●	●					●						●	●	●						●	●				●		●	●	●	●						30
31	FIRE PUMP LOSS OF AC/PHASE REVERSAL			●	●										●		●												●	●								31
32	FIRE PUMP LOW PRESSURE			●	●										●		●												●	●								32
33	FIRE PUMP TROUBLE			●	●										●			●											●	●								33
34	FIRE CONNECTED TO ALTERNATE SOURCE			●	●										●		●												●	●								34
35																																						35
36	KITCHEN HOOD ANSUL SYSTEM	●	●					●						●	●	●						●	●				●	●	●	●	●	●						36
37																																						37
38	LOW TEMPERATURE SENSOR			●	●										●		●												●	●								38
39																																						39
40	ERRCS - LOSS OF NORMAL POWER SUPPLY			●	●										●		●												●	●								40
41	ERRCS - SYSTEM BATTERY CHARGER(S) FAILURE			●	●										●		●												●	●								41
42	ERRCS - MALFUNCTION OF DONOR ANTENNA(S)			●	●										●		●												●	●								42
43	ERRCS - FAILURE OF ACTIVE RF-EMITTING DEVICES			●	●										●		●												●	●								43
44	ERRCS - LOW BATTERY CAPACITY AT 70% REDUCTION			●	●										●		●												●	●								44
45	ERRCS - FAILURE OF CRITICAL SYSTEM COMPONENTS			●	●										●		●												●	●								45
46	ERRCS - COMMUNICATIONS LINK TO FACP			●	●										●		●												●	●								46
47	ERRCS - OSCILLATION OF ACTIVE RF EMITTING DEVICES			●	●										●		●												●	●								47
48																																						48
49																																						49
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	

GENERAL NOTES :

1. THE TENTATIVE FIRE ALARM CONTROL MATRIX SHOW HOW SYSTEM INPUTS ARE MAPPED TO SYSTEM OUTPUTS. THE MATRIX IS PROVIDED FOR GUIDANCE. THE CONTRACTOR SHALL SUBMIT AN ACTUAL CONTROL MATRIX THAT INDICATES ALL INITIATING DEVICES BY SOFTWARE ZONE AND ALL OUTPUT ACTIONS BY ANNUNCIATION ZONE. MULTIPLE INPUTS AND/OR OUTPUTS FROM SIMILAR BUT INDEPENDENT SOURCES, FOR EXAMPLE MULTIPLE ELEVATORS OR AIR HANDLING UNITS, SHALL BE SHOWN AS SEPARATE LINE ITEMS.
2. ● INDICATES THAT THE NAMED INPUT CAUSES THE NAMED OUTPUT TO OCCUR.
3. PROVIDE OVERRIDE FUNCTIONS FOR AHU BY-PASS, FIRE ALARM STROBES, DOOR-HOLDS, DAMPERS.
4. KITCHEN HOOD ANSUL SYSTEM SHALL ONLY SHUT DOWN BUILDING EXHAUST FANS. KITCHEN HOOD EXHAUST FANS TO REMAIN POWERED.
5. FIRE ALARM INPUTS ASSOCIATED WITH THE EMERGENCY RESPONDER COMMUNICATION SYSTEM (ERRCS) SHALL BE PROGRAMMED ONLY IF SYSTEM IS REQUIRED.

SW DETAIL: FA0020

7 / E511 **FIRE ALARM CONTROL MATRIX**
SCALE: NTS



GENERAL NOTES :

1. RISER DIAGRAM SHOWS FUNCTIONAL CONNECTIONS. EXACT WIRING AND CONNECTIONS ARE DEPENDENT ON EQUIPMENT MANUFACTURER AND ARE TO BE PROVIDED AS A PART OF THE FIRE ALARM SHOP DRAWING SUBMITTAL PACKAGE SUPPLIED BY THE CONTRACTOR.
2. PROVIDE SEPARATE CONDUITS FOR OPPOSITE END OF LOOPED CIRCUIT RUNS. DO NOT COMBINE OUTGOING AND INCOMING LOOP CONDUCTORS IN THE SAME RACEWAY EXCEPT AS PERMITTED BY THE NFPA 72.
3. ALL ALARM APPLIANCE CIRCUITS ARE TO BE SUPERVISED. PROVIDE END-OF-LINE RESISTOR OR OTHER TERMINATION DEVICE AS REQUIRED TO MATCH FIRE ALARM CONTROL PANEL.
4. SMOKE DETECTORS ARE TO BE PHOTOELECTRIC TYPE WITH MATCHING (LOCKING TYPE) BASE UNLESS OTHERWISE INDICATED ON DRAWINGS. POWER CONSUMPTION OF DETECTORS IS TO BE COMPATIBLE WITH FIRE ALARM CONTROL PANEL CAPABILITIES. PROVIDE ADDITIONAL DRIVER MODULES AS REQUIRED.
5. SPEAKER/STROBE, AND STROBE ONLY POWER CONSUMPTION IS TO BE COMPATIBLE WITH FIRE ALARM CONTROL PANEL CAPABILITIES. PROVIDE ADDITIONAL POWER SUPPLIES AS REQUIRED.
6. THE FIRE ALARM SYSTEM SHALL INITIATE SHUTDOWN OF ALL BUILDING AIR HANDLING UNITS IN RESPONSE TO AN ALARM CONDITION.
7. HEAT DETECTORS ARE TO BE 135°F RATE OF RISE TYPE UNLESS OTHERWISE INDICATED.
8. PROVIDE CONTROL MODULES AS REQUIRED TO CONTROL DOOR HOLD-OPEN MAGNET CIRCUITS.
9. SELECTED CONTROL MODULES ARE TO BE CONNECTED TO ACTIVATE ELEVATOR RECALL. THESE MODULES ARE INDICATED ON THE FLOOR PLANS. FINAL CONNECTIONS TO ELEVATOR CONTROLLER SHALL BE PROVIDED BY ELEVATOR INSTALLER OR SERVICE VENDOR.
10. THE FIRE ALARM SYSTEM SHALL COMPLY WITH THE STATE OF NORTH CAROLINA DEPARTMENT OF ADMINISTRATION PUBLICATION "FIRE ALARM GUILDLINES AND POLICIES." 2020. SEE SPECIFICATIONS.
11. ALL JUNCTION BOXES AND COVER SHALL BE PAINTED RED, COVERS SHALL BE LABELED WITH LOOPS NUMBERS CONTAINED IN THE BOX.
12. SUPPORT ALL CEILING MOUNTED DEVICES FROM STRUCTURE WITH MANUFACTURERED SUPPORTING DEVICES. DO NOT SUPPORT FROM CEILING.
13. FACP, SNAC's AND DIALER CABINETS DOORS SHALL BE GROUNDED. DO NOT USE THE CIRCUITBOARD CHASSIS TO PROVIDE GROUND. ALL GROUNDING POINTS SHALL BE CLEARED OF ANY PAINT, BOND DIRECTLY TO METAL.
14. ALL CABINETS SHALL BE FACTORY COLORED THE SAME.
15. ALL CABINETS (FACP, SNAC, BATTERY, DIALER) AND PULL STATIONS SHALL BE KEYED ALIKE.
16. PROVIDE TYPED DIRECTORY SCHEDULE AND LABEL EACH WIRE CONSISTENTLY TO MATCH SCHEDULE IN EACH TERMINAL CABINET.
17. DO NOT INSTALL ANY SMOKE OR HEAT DETECTOR WITHIN 3 FEET OF ANY SUPPLY OR RETURN AIR REGISTER.
18. PROVIDE PLASTIC ENGRAVED IDENTIFICATION LABELS ON THE EXTERIOR DOORS OF ALL SNAC'S, FACP, AND DIALER.
19. PROVIDE PLASTIC ENGRAVED IDENTIFICATION LABEL ON THE INTERIOR DOORS OF ALL SNAC'S, FACP, AND DIALER, STATING POWER PANEL ID SOURCE AND CIRCUIT NUMBERS.
20. ALL SURFACE MOUNTED BOXES SHALL BE BY FIRE ALARM DEVICE MANUFACTURER. NO STAMPED STEEL KNOCK-OUT BOXES.
21. INITIATION DEVICE DESCRIPTIONS AT FACP SHALL INCLUDE DEVICE TYPE, LOCATION AND UNIQUE ADDRESS. INFORMATION SHALL BE EXACTLY CONSISTENT AT FACP, DEVICE LABEL AND RECORD DRAWINGS. DESCRIPTION FOR ALL DEVICES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO PROGRAMMING.
22. PROVIDE INTEGRATED CONTROL BUTTONS AT FACP FOR THE FOLLOWING ITEMS: COORDINATE EXACT REQUIREMENTS PRIOR TO TESTING WITH AHJ. ALL BYPASS FUNCTIONS SHALL GENERATE A TROUBLE CONDITION AT THE FACP.
    A. HVAC BYPASS
    B. SMOKE DAMPER BYPASS
    C. DOOR HOLD BYPASS
    D. FIRE ALARM VISUAL BYPASS
    E. AUDIO BYPASS
23. TESTING SYSTEM:

    PROVIDE ENGINEER A COMPLETED NFPA 72, AND VENDOR'S COMPLETED AS-BUILT DRAWINGS PRIOR TO TEST.

    PROVIDE 100% DEVICE TEST (WITH ADDRESSES), PRIOR TO ENGINEER'S TEST. THIS TEST SHALL BE A TRUE TEST, NOT IN WALK MODE.

    PROVIDE SENSITIVITY TEST DOCUMENTATION FOR EACH SMOKE DETECTOR.

    WITH AC POWER OFF, PROVIDE BATTERY VOLTAGE DOCUMENTATION AT EACH CARD AND AT THE APPROPRIATE END OF LINE RESISTOR, FOR EVERY NAC CIRCUIT. VOLTAGE SHALL BE DOCUMENTED INITIALLY, AFTER 30 MINUTES AND AFTER 45 MINUTES OF ALARM TESTING.

    PROVIDE 72 HOURS NOTICE PRIOR TO 100% ACCEPTANCE TEST. THIS TEST SHALL INCLUDE ENGINEER & REPRESENTATIVES OF OWNER.

1 / E511 **FIRE ALARM RISER DIAGRAM**
SCALE: NTS

KEYED NOTES :

1. FIRE ALARM CONTROL PANEL TO BE ADDRESSABLE TYPE BY ONE OF THE FOLLOWING:
   EDWARDS EST III
   NOTIFIER NFS2-3030
   SIMPLEX 4100ES
2. PROVIDE CELLULAR, IP COMMUNICATOR LISTED FOR USE WITH INSTALLED FIRE ALARM SYSTEM. COMMUNICATOR SHALL BE INTERNALLY SUPERVISED AND HAVE BATTERY BACKUP RATED FOR STANDBY TIME INTERVAL AS SPECIFIED FOR FACP.OWNER SHALL PROVIDE WIRELESS CONNECTION WITH LOCAL CELLULAR SERVICE PROVIDER. CELLULAR COMMUNICATION MUST BE COMPATIBLE WITH STATE CAPITAL POLICE. ADOPT PREVIOUSLY PROVEN COMMUNICATION METHODOLOGY ENABLING MONITORIGN BY STATE CAPITAL POLICE.
3. REFER TO FIRE ALARM TERMINATION CABINET (FATC) DETAIL.
4. ISOLATION MODULES SHALL BE INSTALLED AT THE FACP ON BOTH THE OUTGOING AND RETURN CONDUCTORS OF EACH LOOP. ADDITIONALLY, ISOLATION MODULES SHALL BE INSTALLED AFTER EACH 20 DEVICES OR MODULES ON THE ADDRESSABLE LOOPS. ISOLATION MODULES SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE NEAREST LOOP DEVICE AND SHALL BE IDENTIFIED BY A MACHINED LABEL AT THAT DEVICE.
5. PROVIDE NOTIFICATION APPLIANCE CIRCUITS AS REQUIRED TO PROVIDE DEVICES AS INDICATED ON THE PLANS.
6. PROVIDE CONDUITS TO RISER AS REQUIRED. CONDUIT FILL SHALL NOT EXCEED 40% AT ANY PORTION OF RACEWAY SYSTEM.
7. PROVIDE CIRCUIT BREAKER "LOCK-ON" CLIPS FOR CIRCUIT(S). PROVIDE RED PAINT ON BREAKER TO INDICATE FUNCTION.
8. SURGE ARRESTOR(S) FOR INDICATED CIRCUIT(S).
9. LOCATE AT FIREMAN'S ENTRY. SEE FLOOR PLANS.
10. PROVIDE SUPPLEMENTAL NOTIFICATION APPLIANCE CABINET FOR UP TO FOUR FIRE ALARM STROBE CIRCUITS.
11. PROVIDE PRINTER WITH METAL STAND TO ACCOMMODATE PRINTER AND PAPER ON SEPARATE SHELVES.
12. EMERGENCY VOICE SYSTEM IS REQUIRED FOR THIS BUILDING. PROVIDE SPEAKER BACKBOXES, ALL LOCATIONS.

SW DETAIL: FA0025 R1

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

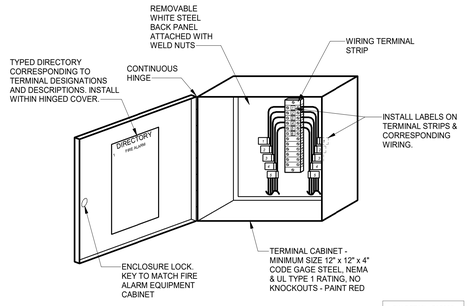
NO.	REVISION	DATE

CLANCY & THEYS 06/13/2025

JOB NUMBER
23-013
DATE ISSUED
06/12/2025
PROJECT STATUS
BID SET

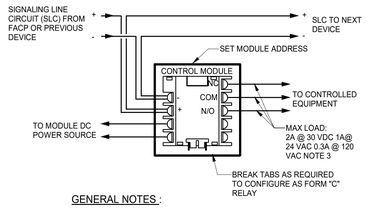
SHEET
FIRE ALARM SYSTEM RISER AND MATRIX

Plot Time:6/10/2025 5:25:32 PM



SW DETAIL: FA0008

4 E512 **FIRE ALARM TERMINATION CABINET (FATC)**
SCALE: NTS

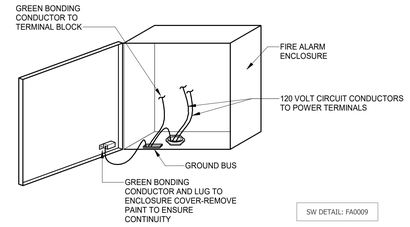


GENERAL NOTES :

1. LOCATE CONTROL MODULE ADJACENT TO EQUIPMENT.
2. EXACT CONTROL MODULE CONFIGURATION VARIES WITH EQUIPMENT MANUFACTURER. COORDINATE CONNECTIONS AND WIRING WITH EXACT DEVICES INSTALLED.
3. CONTACTS SHALL BE RATED FOR INDUCTIVE LOADS. PROVIDE ADDITIONAL CONTROL RELAY WHERE CONTROL CIRCUIT LOAD EXCEEDS CONTACT RATINGS. ARRANGE WITH CONTROL CIRCUIT ACROSS N.O. (FAIL-SAFE) CONTACTS.

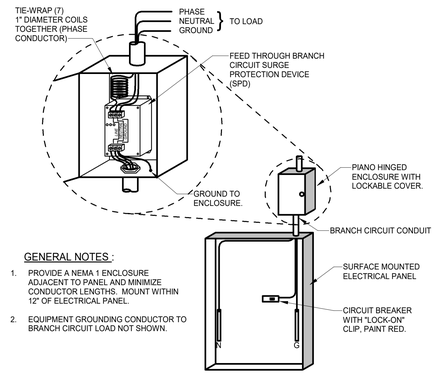
SW DETAIL: FA0004

1 E512 **AHU SHUTDOWN MODULE**
SCALE: NTS



SW DETAIL: FA0009

5 E512 **FIRE ALARM ENCLOSURE BONDING DETAIL**
SCALE: NTS



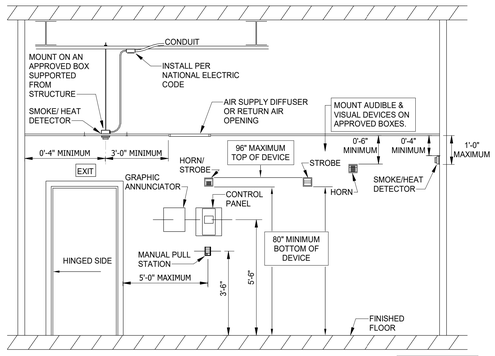
GENERAL NOTES :

1. PROVIDE A NEMA 1 ENCLOSURE ADJACENT TO PANEL AND MINIMIZE CONDUCTOR LENGTHS. MOUNT WITHIN 12" OF ELECTRICAL PANEL.
2. EQUIPMENT GROUNDING CONDUCTOR TO BRANCH CIRCUIT LOAD NOT SHOWN.

SW DETAIL: FA0006

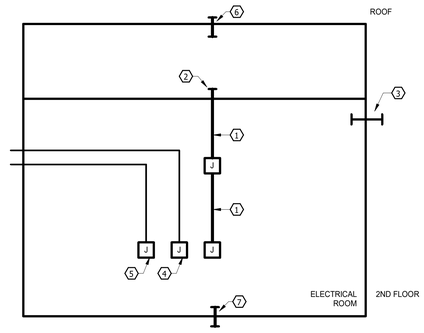
2 E512 **SURGE PROTECTION DEVICE WIRING DETAIL**
SCALE: NTS

NFPA 72 AND ADA DEVICE INSTALLATION REQUIREMENTS



SW DETAIL: FA0011

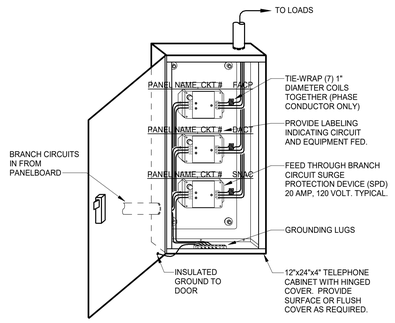
6 E512 **FIRE ALARM DEVICE MOUNTING DETAIL**
SCALE: NTS



KEY NOTES:

1. 2" CONDUIT FOR FUTURE USE.
2. EXTEND CONDUIT TO 12" ABOVE CEILING AND CAP.
3. 1 1/2" CONDUIT SLEEVE TO ACCESSIBLE CORRIDOR CEILING.
4. 120 VOLT, 20 AMP, DEDICATED CIRCUIT TERMINATED IN J-BOX LABELED "ERRC". PROVIDE IN-LINE SURGE PROTECTOR AT ELECTRICAL PANEL SIMILAR TO DETAIL 2/E512.
5. PROVIDE 3/4" CONDUIT WITH PULL STRING TO FACP.
6. PROVIDE 1 1/2" CONDUIT SLEEVE THROUGH ROOF AND CAPPED. COORDINATE WITH ROOFING CONTRACTOR.
7. PROVIDE 2" CONDUIT SLEEVE THROUGH FLOOR TO FIRST FLOOR TELECOM ROOM.

7 E512 **RACEWAY ROUGH IN FOR FUTURE OWNER USE**
SCALE: NTS



GENERAL NOTES :

1. PROVIDE A NEMA 1 ENCLOSURE ADJACENT TO PANEL AND MINIMIZE CONDUCTOR LENGTHS. MOUNT WITHIN 12" OF ELECTRICAL PANEL.
2. EQUIPMENT GROUNDING CONDUCTOR TO BRANCH CIRCUIT LOAD NOT SHOWN.
3. REFER TO EQUIPMENT SURGE PROTECTION DEVICE WIRING DETAIL FOR ADDITIONAL INFORMATION.
4. EACH CIRCUIT SHALL BE DEDICATED, WITH SEPARATE PHASE, NEUTRAL, AND GROUND FROM THE LOAD SIDE OF EACH SPD.

SW DETAIL: FA0007

3 E512 **SURGE PROTECTION DEVICE CABINET DETAIL**
SCALE: NTS

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SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

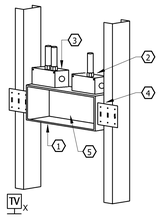
NO.	REVISION	DATE

CLANCY & THEYS

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**

SHEET
FIRE ALARM SYSTEM DETAILS

E512



GENERAL NOTES :

1. PROVIDE RECESSED, STEEL BOX ASSEMBLY WITH LOW VOLTAGE AND LINE VOLTAGE OUTLET BOXES ARRANGED TO ISOLATE POWER CONDUCTORS.

KEYED NOTES :

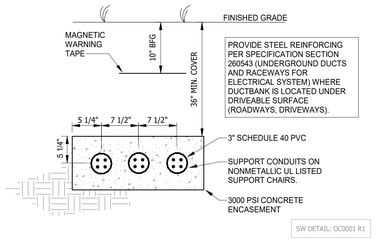
1. AV WALL BOX APPROX. 11"W x 5 1/2"H x 3 1/2" D. MOUNT SECURELY ACROSS WALL FRAMING.
2. AC POWER BOX COMPONENT. PROVIDE DEVICES NOTED IN SCHEDULE.
3. LOW VOLTAGE BOX COMPONENT. PROVIDE DEVICES AND CONDUITS NOTED IN SCHEDULE.
4. COORDINATE BOX POSTION WITH WALL BLOCKING INDICATED IN ARCHITECTURAL PLANS SO THAT ALL POWER AND AV CORDS WILL BE FULLY CONCEALED BEHIND THE FLAT SCREEN DISPLAY.
5. PROVIDE COVER PLATE WITH SLOTTED OPENING FOR CORD ENTRIES (NOT SHOWN IN THIS VIEW).

FLAT SCREEN WALL OUTLET SCHEDULE

Type Mark	DUPLEX QTY (COMM)	DATA TYPE/QTY (COMM)	DATA CONDUIT SIZE (COMM)	A/V SPACE (COMM)	A/V CONDUIT SIZE (COMM)	MOUNTING HEIGHT	Comments
A	1	1	1"	1 GANG	1-1/4"	66"	

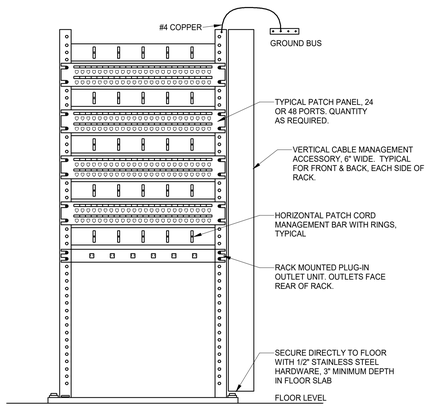
SW DETAIL: GE0039

9 E521 AV WALL BOX DETAIL
SCALE: NTS



SW DETAIL: OC0001 R1

10 E521 TELECOM SERVICE DUCT BANK SECTION
SCALE: NTS

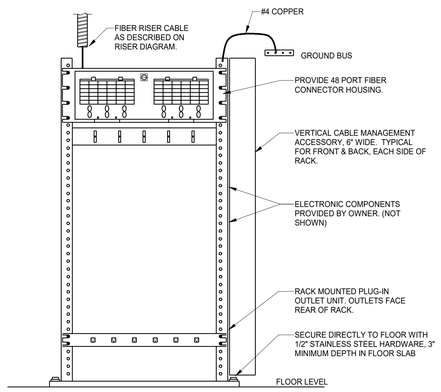


GENERAL NOTES :

1. INDICATED ARRANGEMENT IS TYPICAL FOR NEW HORIZONTAL DISTRIBUTION RACKS IN TELECOM ROOMS.
2. A SINGLE VERTICAL CABLE MANAGEMENT ACCESSORY CAN BE SHARED BETWEEN ADJACENT RACKS.
3. ALL CONNECTIONS BY CONTRACTOR TO 110 BLOCKS AT BACK OF PATCH PANELS. PATCH CORDS AND ACTIVE COMPONENTS PROVIDED AND INSTALLED BY THE OWNER.

SW DETAIL: TD0001 R2

7 E521 TELECOM DISTRIBUTION RACK ELEVATION
SCALE: NTS



GENERAL NOTES :

1. INDICATED ARRANGEMENT IS TYPICAL FOR NEW ELECTRONICS RACKS IN TELECOM ROOMS.
2. A SINGLE VERTICAL CABLE MANAGEMENT ACCESSORY CAN BE SHARED BETWEEN ADJACENT RACKS.
3. FIBER PATCH CORDS AND ACTIVE ELECTRONIC COMPONENTS ARE PROVIDED AND INSTALLED BY THE OWNER.

SW DETAIL: TD0002 R2

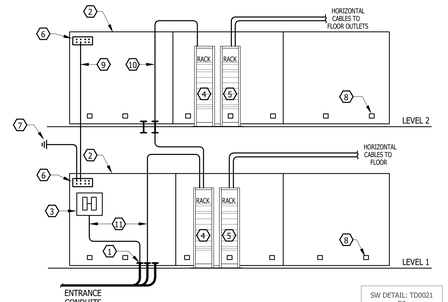
8 E521 TELECOM ELECTRONICS RACK ELEVATION
SCALE: NTS

GENERAL NOTES :

1. CROSS CONNECTS FROM TELEPHONE DEMARC TO CONTRACTOR M66 BLOCKS ARE PROVIDED BY OWNER.
2. ACTIVE ELECTRONICS AND PATCH CORDS ARE PROVIDED AND INSTALLED BY OWNER.
3. M66 BLOCKS ON BACKBOARD SHALL BE USED FOR THE FOLLOWING DEDICATED PHONE LINES:
   a. ELEVATOR CAR PHONES
   b. FIRE ALARM PHONE LINES
   c. INTERIOR EMERGENCY TELEPHONES
4. FIRE SEAL ALL FLOOR PENETRATIONS.

KEYED NOTES :

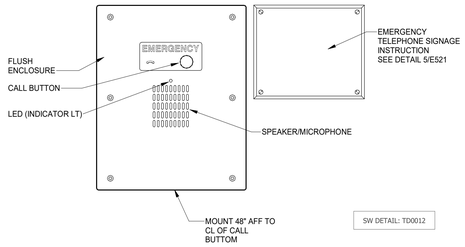
1. TELECOM SERVICE ENTRANCE CONDUITS, STUB CONDUITS UP 4" AFF AND BUSH. PROVIDE CAP DURING CONSTRUCTION. SEAL ENDS OF ALL CONDUITS AFTER INSTALLATION OF CABLES.
2. PROVIDE CONTINUOUS 4'x8'x3/4" THICK FIRE RETARDANT PLYWOOD BACKBOARD FROM FLOOR TO 8'-0" AFF ON WALLS. PAINT PLYWOOD WHITE, LEAVING RATING LABELS VISIBLE FOR INSPECTIONS.
3. TELEPHONE DEMARC BY LOCAL PHONE COMPANY. TELEPHONE COMPANY SHALL PROVIDE ENTRANCE CABLE, PROTECTORS, DEMARCATION BLOCKS. EXTEND MINIMUM CATEGORY 3 CABLE TO EACH DEDICATED PHONE LINE SPECIFIED IN GENERAL NOTES.
4. TELECOMMUNICATIONS ELECTRONICS RACK. FIBER HOUSING AND CABLE MANAGEMENT BY ELECTRICAL CONTRACTOR, ELECTRONIC COMPONENTS BY OWNER.
5. TELECOMMUNICATIONS DISTRIBUTION RACK. PATCH PANELS AND CABLE MANAGEMENT BY ELECTRICAL CONTRACTOR, ELECTRONIC COMPONENTS BY OWNER.
6. WALL MOUNTED GROUND BUS PER PROJECT DETAIL.
7. PROVIDE GROUNDING CONDUCTOR AS INDICATED IN EMT TO GROUNDING BUS IN ELECTRICAL ROOM.
8. PROVIDE QUADRUPLEX RECEPTACLES AT 24" AFF. REFER TO FLOOR PLANS FOR CIRCUITRY.
9. PROVIDE GROUNDING CONDUCTOR AS INDICATED IN EMT TO NEXT COMMUNICTIONS EQUIPMENT ROOM.
10. PROVIDE 24 STRAND SINGLE MODE FIBER RISER CABLE IN 4" CONDUIT.
11. OWNER TO BRING FIBER AND COPPER INTO BUILDING AND TERMINATE. CONTRACTOR TO PROVIDE RACEWAYS.



SW DETAIL: TD0020 R2

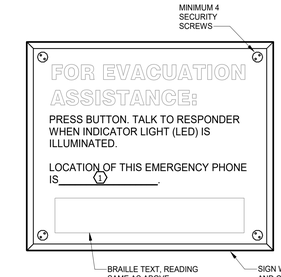
SW DETAIL: TD0021 R2

1 E521 TELECOMMUNICATIONS RISER
SCALE: NTS



SW DETAIL: TD0012

4 E521 EMERGENCY TELEPHONE DETAIL
SCALE: NTS



GENERAL NOTES :

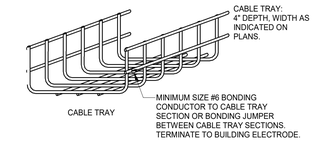
1. SIGN MUST BE SUBMITTED FOR APPROVAL BY PROJECT ENGINEER.

KEYED NOTES :

1. LOCATION SHALL INDICATE SPECIFIC FLOOR AND AREA OF BUILDING. (EXAMPLE: ELEVATOR LOBBY AND STAIRWELL).

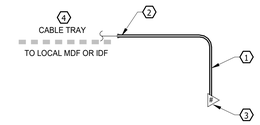
SW DETAIL: LA0004 R1

5 E521 EMERGENCY TELEPHONE SIGN DETAIL
SCALE: NTS



SW DETAIL: TD0010

6 E521 BASKET STYLE CABLE TRAY
SCALE: NTS

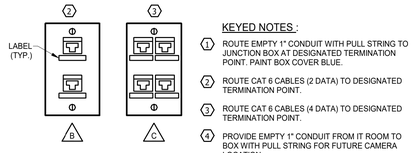


KEYED NOTES :

1. 1" CONDUIT TO 90° ELBOW ABOVE ACCESSIBLE CEILING. TERMINATE IMMEDIATELY ABOVE CABLE TRAY. BUSH ENDS OF PIPE.
2. ROUTE TELECOMMUNICATIONS CABLE EXPOSED ABOVE CEILING ALONG CABLE TRAY.
3. REFER TO TELECOMMUNICATIONS OUTLET SCHEDULE.
4. DATA CABLES TO EAST END OF BULDING ACROSS OPEN CEILING AREAS OF DINING 100 AND DINING 200 SHALL BE ROUTED IN CONDUIT BACK TO NEAREST CABLE TRAY LOCATION. ONLY PROVIDE CABLE TRAY ABOVE ACCESSIBLE CEILINGS.

SW DETAIL: TD0003 R1

2 E521 TYPICAL TELECOM OUTLET
SCALE: NTS



KEYED NOTES :

1. ROUTE EMPTY 1" CONDUIT WITH PULL STRING TO JUNCTION BOX AT DESIGNATED TERMINATION POINT. PAINT BOX COVER BLUE.
2. ROUTE CAT 6 CABLES (2 DATA) TO DESIGNATED TERMINATION POINT.
3. ROUTE CAT 6 CABLES (4 DATA) TO DESIGNATED TERMINATION POINT.
4. PROVIDE EMPTY 1" CONDUIT FROM IT ROOM TO BOX WITH PULL STRING FOR FUTURE CAMERA LOCATION.

TELECOMMUNICATIONS OUTLET SCHEDULE

SYMBOL	PORTS	FUNCTION	CABLE
A	1	FUTURE	N/A (1)
B	2	DATA/DATA	(2) CAT. 6
C	4	DATA/DATA/DATA/DATA	(4) CAT. 6
	2	CAMERA	N/A (4)
	2	WIFI ACCESS POINT	(2) CAT. 6

SW DETAIL: TD0006

3 E521 TYPICAL TELECOM OUTLETS SCHEDULE
SCALE: NTS

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CLANCY & THEYS 06/12/2025

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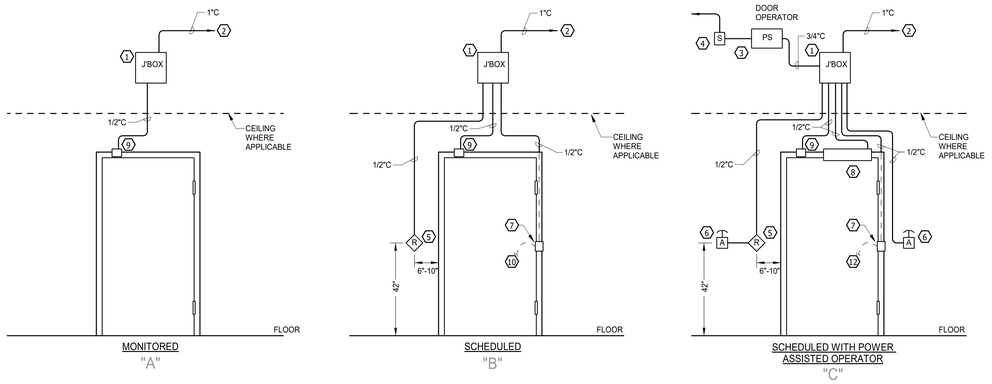
PROJECT STATUS **BID SET**
SHEET **TELECOMMUNICATIONS SYSTEMS**

E521



KEYED NOTES :

1. J'BOX FOR ALL LOW VOLTAGE WIRING.
2. RACEWAY WITH PULL STRING TO ELECTRONIC ACCESS DOOR CONTROL UNIT IN IT 123.
3. POWER SUPPLY FOR DOOR OPERATOR. MAY ALSO BE LOCATED IN DOOR OPERATOR
4. PROVIDE SINGLE POLE DISCONNECT SWITCH FOR 120 VAC SUPPLY. SEE FLOOR PLAN FOR INDICATED CIRCUIT.
5. CARD READER.
6. DOOR ACTUATOR.
7. ELECTRIC TRANSFER HINGE.
8. ELECTRIC DOOR OPERATOR.
9. DOOR POSITION SWITCH FLUSH IN DOOR FRAME.
10. TO HARDWARE SET ON DOOR, PUSH BAR OR MORTICE/LEVER. SET INCLUDES REQUEST FOR EXIT AT EGRESS DOORS.

GENERAL NOTES :

1. ALL RACEWAYS AND BOXES PROVIDED BY ELECTRICAL CONTRACTOR. VERIFY REQUIREMENTS WITH HARDWARE AND ACCESS CONTROL EQUIPMENT.
2. ALL RACEWAYS SHALL BE CONCEALED ABOVE CEILINGS OR WITHIN WALLS. EXPOSED RACEWAYS SHALL BE PERMITTED IN AREAS WITH EXPOSED OVERHEAD CONSTRUCTION.

SO DETAIL: GE0012 R2

1 / E531 **DOOR CONTROL DETAIL**
SCALE: NTS

DOOR CONTROL EQUIPMENT MATRIX

Door ID	Door Number	Detail Elevation	Door Contacts	Card Reader	Door Operator	Actuator	Comments
106	106	B	Yes	Yes	No	No	
123	123	B	Yes	Yes	No	No	
126	126	A	Yes	No	No	No	
127	127	A	Yes	No	No	No	
214	214	B	Yes	Yes	No	No	
E100A	E100A	C	Yes	Yes	Yes	Yes	
E100B	E100B	B	Yes	Yes	No	No	
E100C	E100C	B	Yes	Yes	No	No	
E100D	E100D	C	Yes	Yes	Yes	Yes	
E122	E122	A	Yes	No	No	No	
E128	E128	A	Yes	No	No	No	
E129	E129	A	Yes	No	No	No	
E130	E130	B	Yes	Yes	No	No	
EST-01.3	EST-01.3	B	Yes	Yes	No	No	
EST-02.1	EST-02.1	A	Yes	No	No	No	
EST-02.2	EST-02.2	B	Yes	Yes	No	No	

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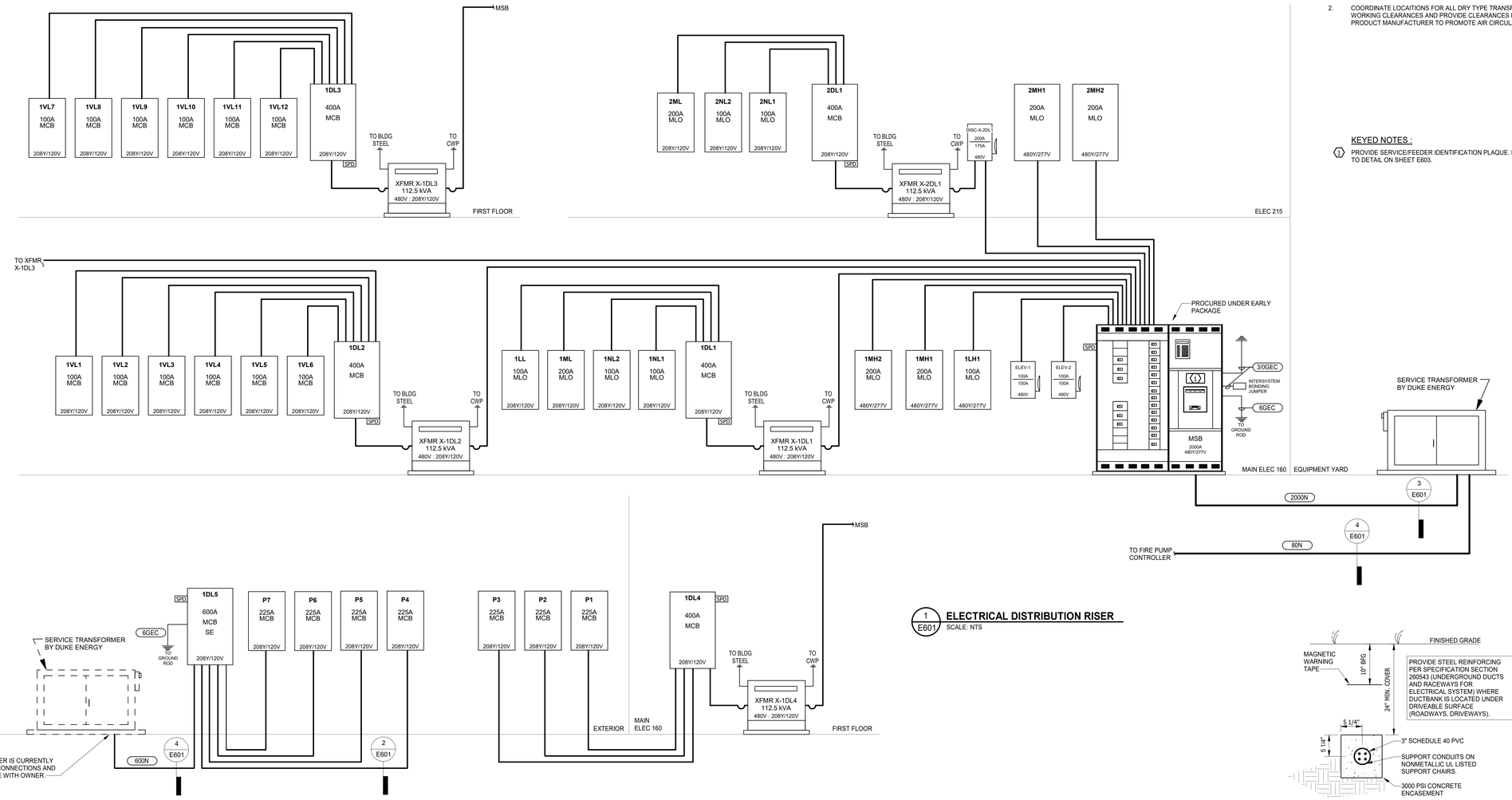
PROJECT STATUS **BID SET**
SHEET **SECURITY SYSTEM**

E531



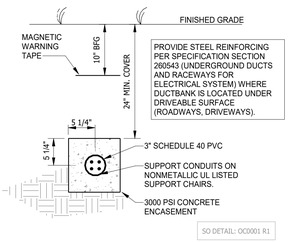
GENERAL NOTES TO POWER RISERS:

1. PROVIDE 4" (NOMINAL) THICK, 3000 PSI CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED GEAR AND TRANSFORMERS. FNIISH SMOOTH AND CHAMFER EDGES.
2. COORDINATE LOCAITIONS FOR ALL DRY TYPE TRANSFORMERS TO PROVIDE NEC MANDATED WORKING CLEARANCES AND PROVIDE CLEARANCES FROM WALLS AS RECOMMENDED BY PRODUCT MANUFACTURER TO PROMOTE AIR CIRCULATION (6" MIN.)

KEYED NOTES :

(1) PROVIDE SERVICE/FEEDER IDENTIFICATION PLAQUE. REFER TO DETAIL ON SHEET E603.

1 E601 **ELECTRICAL DISTRIBUTION RISER**
SCALE: NTS



2 E601 **FEEDER DUCT BANK SECTION - PANELS P1-P7**
SCALE: NTS

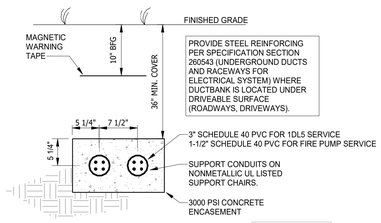
ELECTRICAL LOAD SUMMARY		
LOAD	kVA	AMP/PHASE
LIGHTING	20.2	24.3
RECEPTACLE	136.0	163.6
POWER	472.9	568.8
MECHANICAL	239.8	288.4
-		
TOTAL	868.9	1045.1

LOAD SUMMARY NOTES:

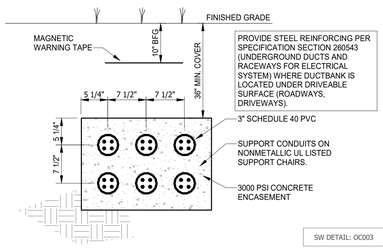
1. LOAD KVA VALUES ARE TOTAL OVER ALL THREE PHASES.
2. LOAD CURRENTS ARE EQUALLY DISTRIBUTED EQUALLY OVER ALL THREE PHASES AT THE THE SUPPLY VOLTAGE.

SO DETAIL: SC0001

5 E601 **ELECTRICAL LOAD SUMMARY**
SCALE: NTS



4 E601 **SERVICE CONDUCTOR DUCT BANK SECTION**
SCALE: NTS



3 E601 **SERVICE CONDUCTOR DUCT BANK SECTION**
SCALE: NTS

ELECTRICAL FEEDER SCHEDULE		
Mark	Ampacity	Description
80N	85A	3-#3 PHASE & 1-#3 NEU IN 1 1/4" C.
80G	85A	3-#3 PHASE & 1-#8 GND IN 1 1/4" C.
100NG	100A	3-#1 PHASE, 1-#1 NEU, & 1-#8 GND IN 1 1/4" C.
200NG	200A	3-#3/0 PHASE, 1-#3/0 NEU, & 1-#6 GND IN 2" C.
600N	620A	2 PARALLEL RUNS, EACH OF 3-350 kcmil PHASE & 1-350 kcmil NEU IN 3"C.
2000N	2010A	6 PARALLEL RUNS, EACH OF 3-400 kcmil PHASE & 1-400 kcmil NEU IN 3" C.
6GEC	N/A	GROUNDING ELECTRODE CONDUCTOR. 1-#6 IN 1/2" RMC. SEE NOTE 3.
3/0GEC	N/A	GROUNDING ELECTRODE CONDUCTOR. 1-#3/0 IN 3/4" RMC. SEE NOTE 3.

NOTES TO FEEDER SCHEDULE:

1. ALL AMPACITIES ARE BASED ON 75° C. RATING. CONTRACTOR IS RESPONSIBLE FOR THE MODIFICATION OF CONDUCTOR SIZES AS NECESSARY TO MEET THE REQUIREMENTS OF NEC 110-14(C) WHERE TERMINATIONS ARE NOT LISTED AND LABELED FOR USE AT 75° C. THIS REQUIREMENT APPLIES TO TERMINATIONS IN BOTH NEW EQUIPMENT AND IN EXISTING EQUIPMENT TO WHICH TERMINATIONS ARE MADE AS A PART OF THIS PROJECT.
2. DESIGNATION "C" IN THE ABOVE TABLE REFERS TO "CONDUIT". SEE SPECIFICATIONS FOR EXACT TYPE OF RACEWAY REQUIRED. TYPE OF RACEWAY, UNLESS INDICATED IN TABLE OR ELSEWHERE IN THE DRAWINGS, IS TO BE DETERMINED BY USE CONDITIONS.
3. PROVIDE A BONDING BUSHING AT THE EQUIPMENT END OF THIS CONDUIT RUN AND A BONDING HUB AT THE CONNECTION TO THE GROUNDING ELECTRODE.

ELECTRICAL TRANSFORMER SCHEDULE

NAME	SIZE	SUPPLY FROM	VOLTAGE	Primary Feeder Size	SECONDARY FEEDER	Grounding Electrode	IMPEDANCE	ROOM NAME	ROOM NUMBER
X-1DL1	112.5 KVA	MSB	480:208Y/120	3-#2/0 PHASE & 1-#6 GND IN 2" C.	2 PARALLEL RUNS, EACH OF 3-#3/0 PHASE, 1-#3/0 NEU & 1-#2 BONDING JUMPER IN 2' C.	1-#1/0 IN 3/4" RMC	3.5%-5.8%	MAIN ELECTRICAL	128
X-1DL2	112.5 KVA	MSB	480:208Y/120	3-#2/0 PHASE & 1-#6 GND IN 2" C.	2 PARALLEL RUNS, EACH OF 3-#3/0 PHASE, 1-#3/0 NEU & 1-#2 BONDING JUMPER IN 2' C.	1-#1/0 IN 3/4" RMC	3.5%-5.8%	MAIN ELECTRICAL	128
X-1DL3	112.5 KVA	MSB	480:208Y/120	3-#2/0 PHASE & 1-#6 GND IN 2" C.	2 PARALLEL RUNS, EACH OF 3-#3/0 PHASE, 1-#3/0 NEU & 1-#2 BONDING JUMPER IN 2' C.	1-#1/0 IN 3/4" RMC	3.5%-5.8%	MAIN ELECTRICAL	128
X-1DL4	112.5 KVA	MSB	480:208Y/120	3-#2/0 PHASE & 1-#6 GND IN 2" C.	2 PARALLEL RUNS, EACH OF 3-#3/0 PHASE, 1-#3/0 NEU & 1-#2 BONDING JUMPER IN 2' C.	1-#1/0 IN 3/4" RMC	3.5%-5.8%	MAIN ELECTRICAL	128
X-1EL1	30 KVA	1EH1	480:208Y/120	3-#6 PHASE & 1-#10 GND IN 1" C.	3-#3 PHASE, 1-#3 NEU, & 1-#8 BONDING JUMPER IN 1 1/4" C.	1-#6 IN 1/2" RMC	3.5%-5.8%	EMERGENCY ELECTRICAL	129
X-1SL1	75 KVA	1SH1	480:208Y/120	3-#1 PHASE & 1-#8 GND IN 1 1/2" C.	3-#4/0 PHASE, 1-#4/0 NEU, 1-#2 BONDING JUMPER IN 2-1/2" C.	1-#2 IN 1/2" RMC	3.5%-5.8%	EMERGENCY ELECTRICAL	129
X-2DL1	112.5 KVA	MSB	480:208Y/120	3-#2/0 PHASE & 1-#6 GND IN 2" C.	2 PARALLEL RUNS, EACH OF 3-#3/0 PHASE, 1-#3/0 NEU & 1-#2 BONDING JUMPER IN 2' C.	1-#1/0 IN 3/4" RMC	3.5%-5.8%	ELEC.	215

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06/11/2025

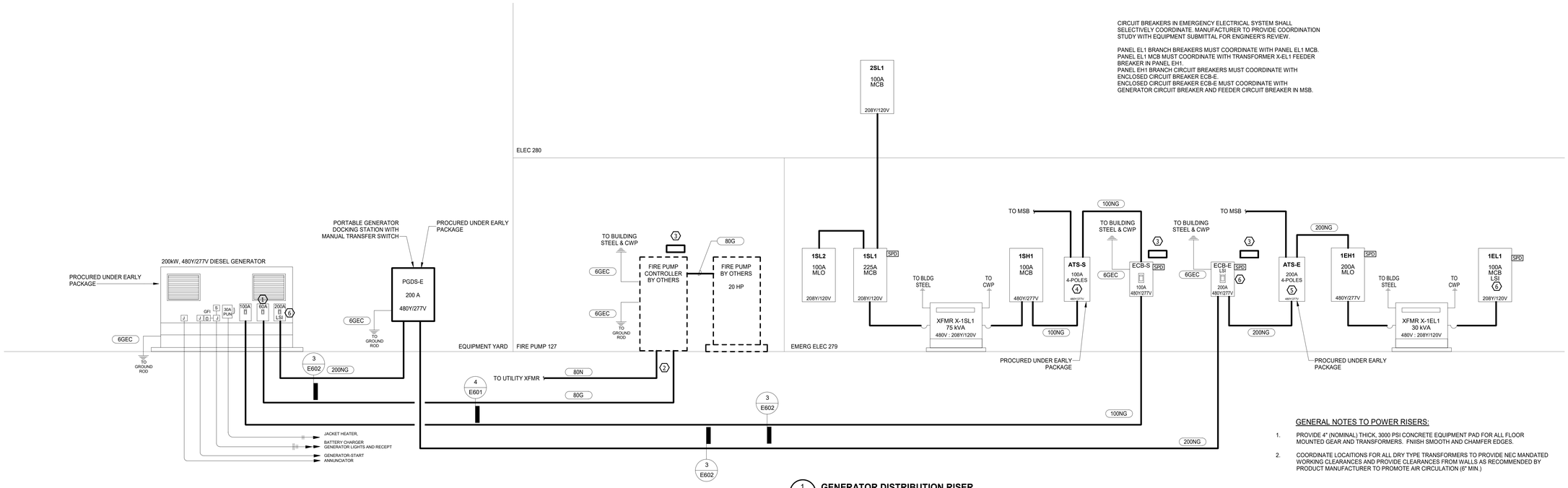
NO.	REVISION	DATE

CLANCY & THEYS CIVIL CONSULTING

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **ELECTRICAL DISTRIBUTION SYSTEM**

E601

Plot Time:6/10/2025 5:25:42 PM



GENERATOR DISTRIBUTION RISER

1 / E602 — SCALE: NTS

GENERAL NOTES TO POWER RISERS:

1. PROVIDE 4" (NOMINAL) THICK, 3000 PSI CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED GEAR AND TRANSFORMERS. FNIISH SMOOTH AND CHAMFER EDGES.
2. COORDINATE LOCAITIONS FOR ALL DRY TYPE TRANSFORMERS TO PROVIDE NEC MANDATED WORKING CLEARANCES AND PROVIDE CLEARANCES FROM WALLS AS RECOMMENDED BY PRODUCT MANUFACTURER TO PROMOTE AIR CIRCULATION (6" MIN.)

ELECTRICAL GENERATOR LOAD SUMMARY		
LOAD	kVA	AMP/PHASE
LIGHTING	4.6	5.5
RECEPTACLE	33.6	40.4
POWER	5.1	6.1
FIRE PUMP	22.4	27
.		
TOTAL	43.3	52.0

LOAD SUMMARY NOTES:

1. LOAD KVA VALUES ARE TOTAL OVER ALL THREE PHASES.
2. LOAD CURRENTS ARE EQUALLY DISTRIBUTED EQUALLY OVER ALL THREE PHASES AT THE THE SUPPLY VOLTAGE.

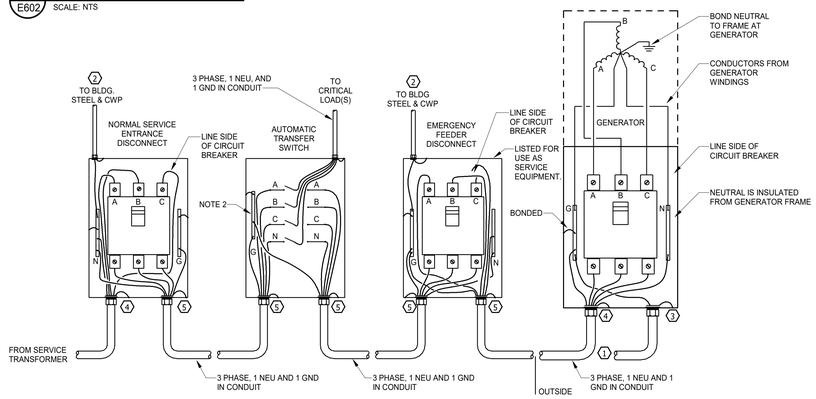
SO DETAIL: SC0001

ELECTRICAL LOAD SUMMARY

7 / E602 — SCALE: NTS

KEY NOTES TO E602

1. 60A MOTOR CIRCUIT PROTECTION CIRCUIT BREAKER FOR FIRE PUMP. THE INSTANTANEOUS TRIP SETTING FOR THE BREAKER SHALL NOT EXCEED THE CALCULATED SHORT CIRCUIT FAULT AVAILABLE FROM THE GENERATOR. THE BREAKER SHALL HAVE PROVISIONS TO LOCK IN THE CLOSED POSITION AND MEET ALL REQUIREMENTS OF NEC 695.4 (B)(3). PROVIDE SIGNAGE TO INDICATE "FIRE PUMP DISCONNECTING MEANS" WITH 1" HIGH LETTERS.
2. PROVIDE POWER CONNECTIONS FROM GENERATOR AND 480V SERVICE TRANSFORMER TO THE FIRE PUMP CONTROL PANEL/TRANSFER EQUIPMENT. COORDINATE EXACT REQUIREMENTS WITH FIRE PROTECTION CONTRACTOR AND EQUIPMENT MANUFACTURER.
3. PROVIDE SERVICE/FEEDER IDENTIFICATION PLAQUE. REFER TO DETAIL ON SHEET E603.
4. ATS-S IS THE TRANSFER SWITCH SERVING THE NEC ARTICLE 702 OPTIONAL STANDBY SYSTEM.
5. ATS-E IS THE TRANSFER SWITCH SERVING THE NEC ARTICLE 700 EMERGENCY SYSTEM.
6. CIRCUIT BREAKER SHALL SELECTIVELY COORDINATE WITH UPSTREAM BREAKERS. PROVIDE LSI FUNCTIONS IN TRIP UNIT AS REQUIRED.



GENERAL NOTES :

1. GROUNDING BUS IS GENERALLY ATTACHED DIRECTLY TO THE EQUIPMENT ENCLOSURE. IN THE ABSENCE OF SUCH A LISTED ATTACHMENT, SIZE BONDING JUMPER AS DESCRIBED IN KEYED NOTES.
2. USE BONDING BUSHINGS FOR ALL CONDUIT TERMINATIONS AT EQUIPMENT ENCLOSURES SHOWN.
3. ALL CONNECTIONS TO SWITCH OR CIRCUIT BREAKER ENCLOSURES SHALL BE MADE WITH LISTED TERMINALS. ALL TERMINALS SHALL BE BOLTED TO THE ENCLOSURE WITH SCREWS, LOCKWASHERS AND NUTS. REMOVE ALL PAINT FROM ENCLOSURE SURFACES PRIOR TO MAKING TERMINATIONS. MANUFACTURER FURNISHED TERMINALS MAY BE USED IN LIEU OF CONTRACTOR INSTALLED LUGS.
4. ONLY SINGLE PHASE/NEUTRAL CONDUCTOR SETS ARE SHOWN. ACTUAL INSTALLATION MAY REQUIRE PARALLEL CONDUCTORS. SEE POWER RISER AND ELECTRICAL PLANS FOR ADDITIONAL DETAILS AND CONDUIT SIZES.

KEYED NOTES :

1. GROUNDING ELECTRODE CONDUCTOR AND CONDUIT TO THE GENERATOR SYSTEM COUNTERPOISE. USE BONDING HUB AT ELECTRODE END AND BONDING BUSHING AT C/B END. SIZE CONDUCTOR AS DESCRIBED ON RISER DIAGRAMS.
2. GROUNDING ELECTRODE CONDUCTOR AND CONDUIT TO BUILDING STEEL AND COLD WATER PIPE. USE BONDING HUB AT ELECTRODE END AND BONDING BUSHING AT C/B END. SIZE CONDUCTOR AS DESCRIBED ON RISER DIAGRAMS.
3. DETERMINE THE SIZE OF THIS BONDING JUMPER FROM NEC TABLE 250.66 WITH TABLE ENTRY BASED ON THE SIZE OF THE CONDUCTORS CONTAINED IN THE CONDUIT. THIS CONNECTION MAY BE MADE TO THE EQUIPMENT GROUNDING BUS IN LIEU OF CONNECTION METHOD DESCRIBED BY NOTE 5.
4. DETERMINE THE SIZE OF THIS BONDING JUMPER FROM NEC TABLE 250.102(C)1 WITH TABLE ENTRY BASED ON THE SIZE OF THE CONDUCTORS CONTAINED IN THE CONDUIT. THIS CONNECTION MAY BE MADE TO THE EQUIPMENT GROUNDING BUS IN LIEU OF CONNECTION METHOD DESCRIBED IN NOTE 5.
5. DETERMINE THE SIZE OF THIS BONDING JUMPER FROM NEC TABLE 250.122 WITH TABLE ENTRY BASED ON CIRCUIT BREAKER SIZE.

SW DETAIL: GN0008

GENERATOR SYSTEM GROUNDING DETAIL

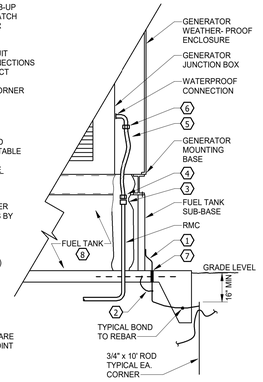
6 / E602 — SCALE: NTS

GENERAL NOTES :

1. STUB UP CONDUIT THROUGH ELECTRICAL STUB-UP OPENING IN FUEL TANK BASE. USE CARE TO MATCH EXACT CONDUIT LOCATIONS WITH GENERATOR CONNECTION POINTS.
2. DRAWING INDICATES A TYPICAL SINGLE CONDUIT CONNECTION TO GENERATOR. MULTIPLE CONNECTIONS ARE REQUIRED. SEE RISER DIAGRAM FOR EXACT CONDUIT SIZE AND QUANTITY. BONDING AND GROUNDING INDICATED IS TYPICAL AT EACH CORNER OF GENERATOR.

KEYED NOTES :

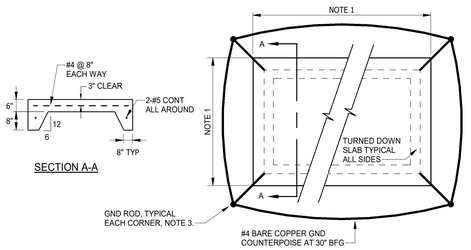
1. BOND GENERATOR TANK BASE TO GROUND ROD USING #4 STRANDED COPPER JUMPER AND SUITABLE BONDING LUGS. MAKE CONNECTION AT STRUCTURAL SUPPORT MEMBER. DO NOT MAKE CONNECTION TO SIDE OF CONTAINMENT TANK.
2. BOND ROD TO REINFORCING STEEL AND/OR REINFORCING WIRE USING #4 STRANDED COPPER JUMPER. MAKE ALL GROUNDING CONNECTIONS BY MEANS OF EXOTHERMIC WELDING.
3. RIGID METAL CONDUIT COUPLER.
4. STRAIGHT FLEXIBLE LIQUIDTIGHT CONDUIT (FLC) CONNECTOR.
5. METALLIC FLEXIBLE LIQUIDTIGHT CONDUIT.
6. RIGHT ANGLE FLEXIBLE LIQUIDTIGHT CONDUIT CONNECTOR.
7. PVC SLEEVE THROUGH CONCRETE PAD. USE CARE TO LOCATE SLEEVE TO MATCH CONNECTION POINT AT GENERATOR FRAME.
8. SIZE VARIES WITH TANK CAPACITY.



GENERATOR RACEWAY CONNECTIONS

4 / E602 — SCALE: NTS

SO DETAIL: OC0008



GENERAL NOTES :

1. DIMENSIONS ARE BASED ON MANUFACTURER'S EQUIPMENT. GENERATOR PAD SHALL EXTEND 6" BEYOND EQUIPMENT FOOTPRINT IN ALL DIRECTIONS.
2. ENSURE PAD IS LEVEL BEFORE EQUIPMENT IS SET.
3. BOND EACH GROUND ROD TO REBAR AND GENERATOR ENCLOSURE. TOP OF ROD IS TO BE A MINIMUM OF 24" BELOW FINISHED GRADE.

SW DETAIL: GN0007 R1

GENERATOR CONCRETE PAD

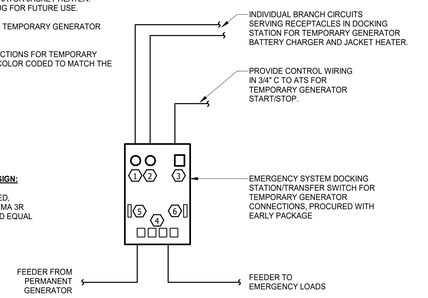
5 / E602 — SCALE: NTS

KEYED NOTES :

1. SECONDARY 120V, 20 AMP, GFCI RECEPTACLE FOR TEMPORARY GENERATOR BATTERY CHARGER.
2. SECONDARY 208V, 30 AMP, TWIST LOCK RECEPTACLE FOR TEMPORARY GENERATOR JACKET HEATER. PROVIDE MATCHING PLUG FOR FUTURE USE.
3. CONNECTION PORT FOR TEMPORARY GENERATOR START/STOP.
4. CAMLOK WIRING CONNECTIONS FOR TEMPORARY POWER CONNECTION. COLOR CODED TO MATCH THE PROJECT VOLTAGE.
5. NEUTRAL BUS.
6. GROUND BUS.

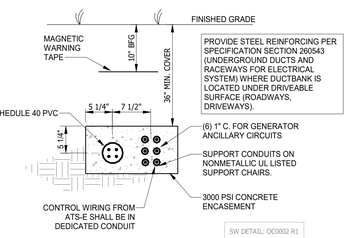
BASIS OF DESIGN:

200 AMP RATED,
480Y/277V, NEMA 3R
OR APPROVED EQUAL



GENERATOR DOCKING STATION

2 / E602 — SCALE: NTS



SW DETAIL: OC0002 R1

FEEDER DUCT BANK SECTION

3 / E602 — SCALE: NTS

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NORTH CAROLINA PROFESSIONAL SEAL 039503 ENGINEER MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS CONSTRUCTION

JOB NUMBER **23-013**
DATE ISSUED **06/12/2025**
PROJECT STATUS **BID SET**
SHEET **GENERATOR DISTRIBUTION SYSTEM**

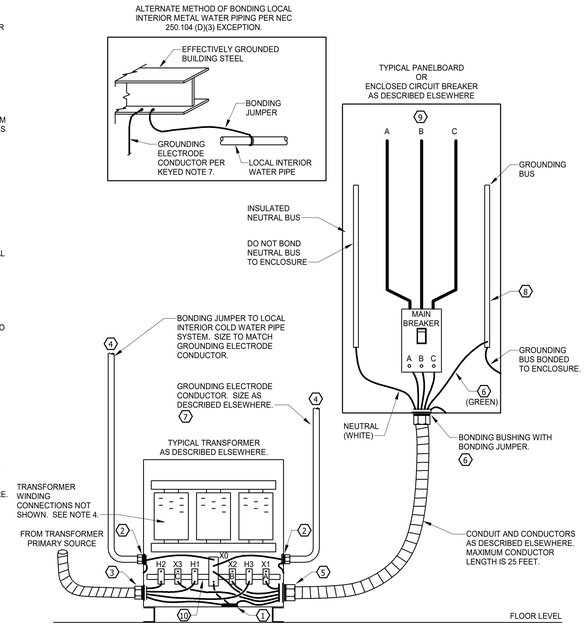
E602

GENERAL NOTES :

1. ADJUST TRANSFORMER TAPS TO PROVIDE NOMINAL SECONDARY VOLTAGE UNDER NORMAL TRANSFORMER LOAD CONDITIONS.
2. CONNECT TRANSFORMER SECONDARY TERMINALS TO OBTAIN A-B-C CLOCKWISE ROTATION AT THE PANELBOARD BUS. TRANSFORMER TERMINAL CONNECTIONS ARE TYPICAL; EXACT TERMINAL LOCATION MAY VARY WITH TRANSFORMER STYLE OR MANUFACTURER.
3. ALL CONNECTIONS TO TRANSFORMER OR PANELBOARD ENCLOSURES SHALL BE MADE WITH LISTED 75° C. TERMINALS. ALL TERMINALS SHALL BE BOLTED TO THE ENCLOSURE WITH SCREWS, LOCK WASHERS, AND NUTS. REMOVE ALL PAINT FROM ENCLOSURE SURFACES PRIOR TO MAKING TERMINATIONS. FURNISHED TERMINALS MAY BE USED IN LIEU OF CONTRACTOR INSTALLED LUGS.
4. THREE PHASE TRANSFORMER IS SHOWN. GROUNDING FOR SINGLE PHASE TRANSFORMERS IS IDENTICAL.
5. HOUSEKEEPING PAD BELOW TRANSFORMER NOT SHOWN.

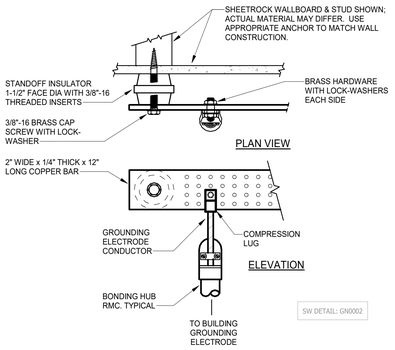
KEYED NOTES :

1. PROVIDE BONDING JUMPER TO PANELBOARD BY PASSING JUMPER THROUGH GROUND BAR SECURED TO TRANSFORMER ENCLOSURE. BAR SHALL NOT CONCEAL VENTILATION PROVISIONS IN ENCLOSURE.
2. USE A BONDING BUSHING AND JUMPER AT THIS CONDUIT TERMINATION. JUMPER SHOULD BE THE SAME SIZE AS THE GROUNDING CONDUCTOR CONTAINED IN THE CONDUIT.
3. CONDUCTORS TO TRANSFORMER PRIMARY ARE PHASE CONDUCTORS AND A GROUNDING CONDUCTOR. THESE CONDUCTORS ARE DESCRIBED ELSEWHERE. NO BONDING BUSHING IS REQUIRED AT THIS CONDUIT TERMINATION.
4. USE A BONDING HUB AT THE TERMINATION OF THIS GROUNDING CONDUCTOR CONDUIT RUN TO PHYSICALLY AND ELECTRICALLY CONNECT THE RACEWAY AND GROUND TO THE ELECTRODE. ELECTRICAL CONNECTION ALONE IS NOT ACCEPTABLE.
5. NO BONDING BUSHING IS REQUIRED AT THIS END OF PANELBOARD FEEDER.
6. DETERMINE THE SIZE OF THIS BONDING JUMPER FROM NEC TABLE 250.66 WITH TABLE ENTRY BASED ON THE SIZE OF THE CONDUCTORS SUPPLYING THE PANELBOARD.
7. EXTEND GROUNDING ELECTRODE CONDUCTOR TO EFFECTIVELY GROUNDED BUILDING STEEL OR METAL WATER PIPE WITHIN 5 FEET FROM POINT OF ENTRANCE INTO BUILDING.
8. GROUNDING BUS IS GENERALLY ATTACHED DIRECTLY TO PANELBOARD ENCLOSURE. IN THE ABSENCE OF SUCH A LISTED ATTACHMENT SIZE BONDING JUMPER AS DESCRIBED IN KEYED NOTE 6 ABOVE.
9. PANELBOARD OR ENCLOSED CIRCUIT BREAKER.
10. PROVIDE OVERSIZED NEUTRAL TERMINAL AS REQUIRED TO ACCOMMODATE BONDING CONNECTIONS.



8 E603 **TYPICAL TRANSFORMER BONDING**
SCALE: NTS

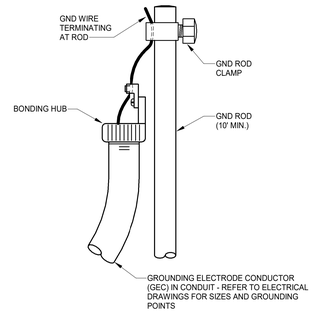
SW DETAIL: GN0005 R1



SW DETAIL: GN0002

4 E603 **GROUNDING BUS DETAIL**
SCALE: NTS

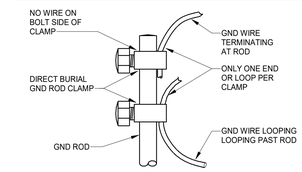
WARNING
1. FIELD VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE DRIVING GROUND RODS.
2. DO NOT USE POWER ASSISTED TOOLS TO DRIVE GROUND RODS.



SW DETAIL: GN0004-R1

5 E603 **GROUND ROD CONNECTIONS**
SCALE: NTS

WARNING
1. FIELD VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE DRIVING GROUND RODS.
2. DO NOT USE POWER ASSISTED TOOLS TO DRIVE GROUND RODS.

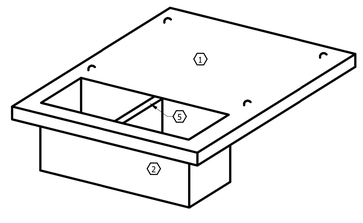


GENERAL NOTES :

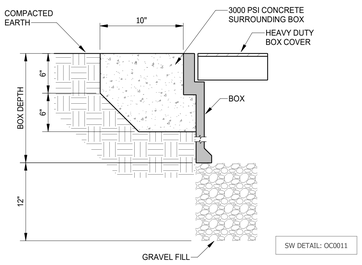
1. USE ADDITIONAL CLAMP(S) AS REQUIRED TO MATCH NUMBER OF GROUNDING ELECTRODE CONDUCTORS TO BE ATTACHED.
2. TOP OF ROD IS TO BE A MINIMUM OF 16" BFG.

SW DETAIL: GN0001

1 E603 **EQUIPMENT PAD GROUND ROD CONNECTIONS**
SCALE: NTS



TRANSFORMER PIT PAD ISOMETRIC VIEW



SW DETAIL: OC0011

9 E603 **UNDERGROUND ENCLOSURE INSTALLATION**
SCALE: NTS

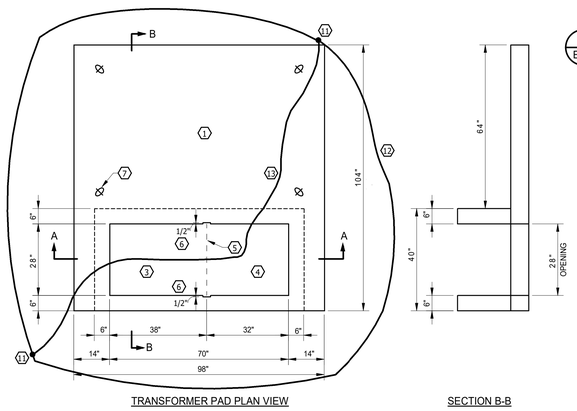
GENERAL NOTES :

1. PROVIDE A PRECAST TRANSFORMER PIT PAD BY ONE OF THE LISTED VENDORS APPROVED BY DUKE ENERGY.
2. PAD DIMENSIONS INDICATED ARE BASED ON DUKE ENERGY LARGE PIT PAD DETAIL. CONFIRM SIZE WITH PROPOSED TRANSFORMER INSTALLATION.

KEY NOTES :

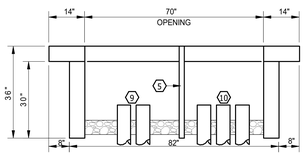
1. PRECAST CONCRETE PAD.
2. PRIMARY AND SECONDARY PIT.
3. PRIMARY CONDUIT COMPARTMENT.
4. SECONDARY CONDUIT COMPARTMENT.
5. DIVIDER.
6. 1/2" DEEP DADO ON EACH SIDE FOR DIVIDER.
7. LIFTING LOOP.
8. TRANSFORMER ANCHORS.
9. PROVIDE (2) 4" CONDUIT RISERS EXTENDED TO BEYOND PAD IN DIRECTION OF PRIMARY ROUTING AND CAP. CUT OFF ALL ELBOWS 6" ABOVE GRAVEL.
10. PROVIDE SECONDARY CONDUIT RISERS WITH BONDING BUSHINGS. QUANTITY AND SIZES ARE INDICATED IN THE PROJECT FEEDER SCHEDULE. CUT OFF ALL ELBOWS 6" ABOVE GRAVEL.
11. GROUND ROD AND CLAMP. CLAMP SHALL BE LISTED FOR DIRECT BURIAL. TOP OF ROD SHALL BE MINIMUM OF 24" BELOW FINISHED GRADE.
12. #4 SOLID BARE COPPER CONTINUOUS GROUND LOOP. BURIED WITH MINIMUM 30" COVER.
13. #3/0 BARE COPPER EXTENDED INTO PIT. CONDUCTOR SHALL BE ACCESSIBLE IN BOTH PRIMARY AND SECONDARY FOR EQUIPMENT CONNECTIONS. TERMINATE AT EACH END AT OPPOSING GROUND RODS AS SHOWN.

PRE-CAST PIT PAD VENDOR SCHEDULE				
PAD TYPE	ENCORE PRECAST	PBC PRECAST	TRENWA	UTILITY PRECAST
LARGE PIT	TRPIT098104	PIT824030	PIT-82x40	FTP8131

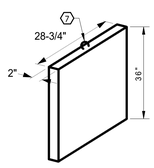


TRANSFORMER PAD PLAN VIEW

SECTION B-B



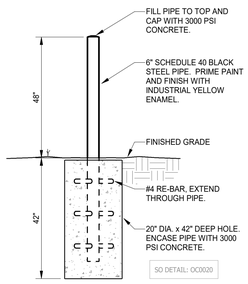
SECTION A-A



DIVIDER 5

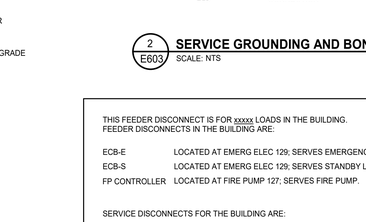
SO DETAIL: GN0015

10 E603 **TRANSFORMER PAD AND GROUNDING SYSTEM**
SCALE: NTS



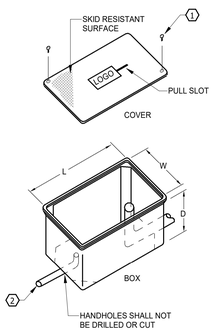
SO DETAIL: OC0020

11 E603 **PIPE BOLLARD DETAIL**
SCALE: NTS



SW DETAIL: GN0006

6 E603 **GROUND ROD ENCLOSURE**
SCALE: NTS



GENERAL NOTES :

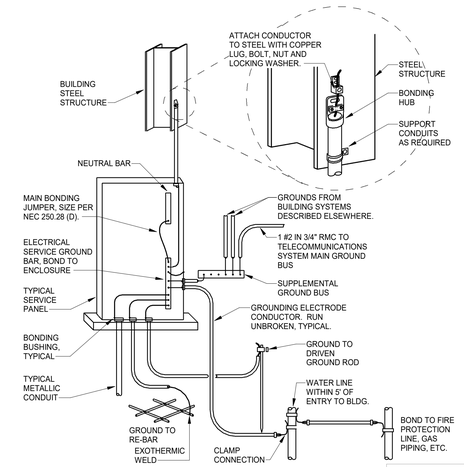
1. HEAVY WEAVE FIBERGLASS; BOX HAS OPEN BASE. PROVIDE GRAVEL FILL 12" DEEP BELOW BOX.
2. BOX DIMENSIONS VARY, SEE NOTES ON SHEET E002.
3. PROVIDE BOX COVER LOGO, AS APPLICABLE.
4. BOX COVERS SHALL BE A HEAVY DUTY DESIGN, CAPABLE OF WITHSTANDING A LOAD OF 15,000 LBS. OVER A 10" SQUARE AREA.
5. SEE UNDERGROUND ENCLOSURE INSTALLATION DETAIL.

KEYED NOTES :

1. PROVIDE TAMPER RESISTANT STAINLESS STEEL COVER HOLD-DOWN BOLTS.
2. TYPICAL CONDUIT ENTRY. CONDUIT SHALL ENTER BOX FROM THE BOTTOM AND EXTEND UP 6" INTO BOX.

SO DETAIL: OC0012

7 E603 **TYPICAL UNDERGROUND ENCLOSURE**
SCALE: NTS



SW DETAIL: GN0010-R1

2 E603 **SERVICE GROUNDING AND BONDING**
SCALE: NTS

THIS FEEDER DISCONNECT IS FOR xxxxx LOADS IN THE BUILDING. FEEDER DISCONNECTS IN THE BUILDING ARE:		
ECB-E	LOCATED AT EMERG ELEC 129; SERVES EMERGENCY LOADS	USE FOR GENERATOR FEEDER DISCONNECTS
ECB-S	LOCATED AT EMERG ELEC 129; SERVES STANDBY LOADS	
FP CONTROLLER	LOCATED AT FIRE PUMP 127; SERVES FIRE PUMP.	
SERVICE DISCONNECTS FOR THE BUILDING ARE:		
SERVICE 1 - MSB	LOCATED AT MAIN ELEC 160; SERVES NORMAL POWER.	
SERVICE 2 - FP CTRL	LOCATED AT FIRE PUMP 127; SERVES FIRE PUMP.	

THIS SERVICE DISCONNECT IS FOR SERVICE xxxx OF 2. SERVICE DISCONNECTS ARE:		
SERVICE 1 - MSB	LOCATED AT MAIN ELEC 160; SERVES NORMAL POWER.	USE FOR SERVICE DISCONNECTS
SERVICE 2 - FP CTRL	LOCATED AT FIRE PUMP 127; SERVES FIRE PUMP.	
IN ADDITION, THREE GENERATOR FEEDER DISCONNECTS FOR THE BUILDING ARE:		
ECB-E	LOCATED AT EMERG ELEC 129; SERVES EMERGENCY LOADS	
ECB-S	LOCATED AT EMERG ELEC 129; SERVES STANDBY LOADS	
FP CONTROLLER	LOCATED AT FIRE PUMP 127; SERVES FIRE PUMP.	

GENERAL NOTES :

1. PROVIDE DIRECTORY AT EACH SERVICE/FEEDER DISCONNECT FOR BUILDING. FILL IN BLANK DESIGNATING EACH SERVICE/FEEDER RESPECTIVELY.
2. ENGRAVED PLASTIC LAMINATE SIGN WITH FIELD COLORS AS SPECIFIED IN SECTION 260533. LETTERING SHALL BE 3/8" HIGH.

SW DETAIL: LA0006

3 E603 **SERVICE/FEEDER IDENTIFICATION PLAQUES**
SCALE: NTS

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SCO PROJECT NO. 22-25408-02A

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039503 MATTHEW J. JOHNSON
06/11/2025

NO.	REVISION	DATE

CLANCY & THEYS BUILT-RITE

JOB NUMBER **23-013**
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PROJECT STATUS **BID SET**
SHEET **ELECTRICAL DISTRIBUTION SYSTEM DETAILS**

E603