

GENERAL ELECTRICAL NOTES

- THE ELECTRICAL WORK IS SUBJECT TO ALL OF THE PURCHASER'S TERMS, CONDITIONS AND SPECIFICATIONS, INCLUDING WORKMANSHIP.
- GENERAL WORK PRACTICES FOR ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NECA 1 "STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION" (ANSI).
- IT IS THE INTENT OF THESE ELECTRICAL DRAWING SHEETS TO CALL FOR FINISHED WORK; TESTED, AND READY FOR OPERATION. FOR THE ELECTRICAL WORK, "PROVIDE" IS AN ALL-INCLUSIVE TERM REQUIRING CONTRACTOR TO PROCURE, FABRICATE, FURNISH, INSTALL, MOUNT, WIRE, CONNECT AND SUPPLY ALL MATERIAL AND LABOR NECESSARY TO COMPLETE THE WORK TO THE ACCEPTANCE OF THE OWNER AND THE AUTHORITY HAVING JURISDICTION (AHJ).
- ALL MATERIAL PROVIDED BY THE CONTRACTOR SHALL BE NEW AND FREE OF DEFECTS, LISTED/LABELED FOR THE INTENDED PURPOSE BY UNDERWRITERS LABORATORY (UL) OR OTHER ORGANIZATION THAT IS ACCEPTABLE TO THE AHJ.
- ALL MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. UON.
- CONTRACTOR SHALL INSPECT SITE FOR FIELD VERIFICATION OF ALL ASPECTS OF THE WORK PRIOR TO BIDDING.
- ALL DISCREPANCIES ON DRAWING SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO SUBMISSION OF BIDS. CONTRACTOR'S SUBMISSION OF A BID CONSTITUTES ACCEPTANCE OF ALL CONDITIONS INCLUDING FIELD CONDITIONS.
- THE CONTRACTOR SHALL OBTAIN AND FURNISH ALL REQUIRED PERMITS AND ARRANGE FOR ALL REQUIRED INSPECTIONS. THE CONTRACTORS BID SHALL INCLUDE COST OF ALL REQUIRED PERMITS AND FEES, INCLUDING UTILITY FEES.
- THE ELECTRICAL SHEETS ARE DIAGRAMICAL IN NATURE AND INDICATE THE GENERAL LOCATION OF OUTLETS, EQUIPMENT, AND THE CIRCUIT ARRANGEMENT OF THE REQUIRED WIRING, ALTHOUGH THE DRAWINGS DO NOT NECESSARILY INDICATE THE ACTUAL ROUTES OF CONDUITS, WHERE INDICATED, THEY SHALL BE FOLLOWED AS CLOSELY AS PROPER COORDINATION WITH THE WORK OF OTHER TRADES AND SPACE WILL PERMIT. WHERE CONDUIT RUNS ARE NOT SHOWN ON THE DRAWINGS, COORDINATE CONDUIT RUNS WITH THE WORK OF OTHER TRADES AND STRUCTURE. SIMPLY INSTALLATION WHEREVER POSSIBLE, BUT SUBJECT TO APPROVAL BY THE ARCHITECT FOR VISUAL AND STRUCTURAL REASONS. IT IS NOT WITHIN THE SCOPE OF THE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, BENDS, PULL BOXES, AND OBSTRUCTIONS. THE DRAWINGS ARE NOT INTENDED TO BE SCALED, REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS. IN CASE OF DISCREPANCY BETWEEN ELECTRICAL AND ARCHITECT SHEET SET FOR MOUNTING ELEVATIONS OR REFLECTED CEILINGS, FOLLOW ARCHITECT SHEETS.
- MAINTAIN ON THE JOB SITE, IN GOOD CONDITION, ONE SET OF UP-TO-DATE ELECTRICAL DRAWINGS. PROGRESSIVELY, NEATLY, LEGIBLY, AND EXACTLY RECORD ON THESE DRAWINGS THE LOCATION OF ALL CONCEALED CONDUIT RUNS AND ALL WORK WHICH IS INSTALLED DIFFERENTLY THAN IN THE LOCATION AND MANNER INDICATED ON THE DRAWINGS. ON COMPLETION OF THE WORK, THE DRAWINGS SHALL BE TURNED OVER TO THE ARCHITECT FOR APPROVAL AND POSSESSION AS A PERMANENT AND COMPLETE RECORD DOCUMENT OF THE ELECTRICAL WORK.
- WHEN FOLLOWED BY THE PHRASE "OR EQUAL," SPECIFIC MANUFACTURERS PRODUCTS ARE USED AS A BASIS OF DESIGN. ALTERNATE PRODUCT MAY BE PROVIDED IF APPROVED "AS EQUAL" BY THE ENGINEER OF RECORD AND THE AHJ.
- FOR ALL ELECTRICAL & COMMUNICATIONS DEVICES AND CIRCUITS, CONTRACTOR SHALL FIELD VERIFY WITH OWNER AND COORDINATE WITH ALL OTHER TRADES FINAL LOCATION(S) PRIOR TO ROUGHT IN.
- PRIOR TO FINAL ACCEPTANCE, CLEAN ALL SWITCHES, CABINETS, DEVICE PLATES, FIXTURES, AND OTHER ITEMS FURNISHED UNDER THIS CONTRACT, AND ENSURE THAT ALL PANELBOARD DIRECTORIES ARE IN PLACE AND COMPLETED OR REVISED AS REQUIRED BY THE WORK, AND THAT ALL MARKING AND IDENTIFICATION OF ALL EQUIPMENT, JUNCTION BOXES, AND OTHER ITEMS IS COMPLETED. REPAIR OR REPLACE, AS DIRECTED BY THE OWNER, ANY ITEMS DAMAGED DUE TO INSTALLATION OR RELOCATION OF EQUIPMENT OR DEVICES AT NO ADDITIONAL COST TO THE OWNER.
- UPON THE COMPLETION OF THE WORK, THE ENTIRE ELECTRICAL SYSTEM SHALL BE TESTED AND SHALL BE SHOWN TO BE IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL SYSTEMS READY FOR OPERATION AND TO HAVE AN ELECTRICIAN AVAILABLE TO OPERATE SAME IN ACCORDANCE WITH OR UNDER THE SUPERVISION OF THE ARCHITECT/ENGINEER AND OR AHJ. THE CONTRACTOR SHALL BE AVAILABLE TO ASSIST IN REMOVAL OF PANEL FRONTS, ECT. TO PERMIT INSPECTION AS REQUIRED.
- ALL WORK SHALL MEET OR EXCEED THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, NATIONAL ELECTRIC CODE (NFPA 70), LOCAL ORDINANCES AND THE AUTHORITY HAVING JURISDICTION.
- FLEXIBLE CONDUIT INSTALLED OUT OF DOORS, IN ANY MECHANICAL EQUIPMENT ROOM, OR IN NORMALLY WET AREAS SHALL BE LIQUID TIGHT FLEX WITH SUITABLE FITTINGS.
- COORDINATE WITH ALL MECHANICAL TRADES FOR SPACE REQUIREMENTS IN MECHANICAL ROOMS, CORRIDORS, SHAFTS, ABOVE CEILING, ETC. THIS INCLUDES SPACE ABOVE PANELS WHERE DUCTS AND PIPING ARE PROHIBITED.
- FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT, SEE MECHANICAL PLANS.
- PROVIDE CONDUIT EXPANSION FITTINGS WITH BONDING JUMPERS FAR ALL CONDUITS PASSING THROUGH EXPANSION JOINTS.
- SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED EQUIPMENT.
- ALL RECEPTACLES BESIDE SINKS SHALL BE LOCATED AT LEAST 6" HORIZONTALLY FROM THE TOWEL DISPENSER. UNDER NO CONDITION SHALL A RECEPTACLE BE LOCATED UNDER A TOWEL DISPENSER.
- CONTRACTOR SHALL VERIFY AND COORDINATE ALL MOUNTING HEIGHTS OF ALL DEVICES MOUNTED IN CASEWORK OR IN OR ABOVE COUNTERS WITH EXISTING EQUIPMENT AND EQUIPMENT FURNISHED.

SUBMITTAL/ SHOP DRAWING DATA

PROVIDE 6-SETS (EACH) OF MANUFACTURER'S DATA, O&M MANUALS, ELECTRICAL DATA, DIMENSIONAL DATA AND CLEARANCES, CONNECTION DATA, COLOR SAMPLES (IF REQUIRED), AND TEST DATA FOR THE FOLLOWING:

LIGHTING FIXTURES, PANELS, SWITCHBOARDS, TRANSFORMERS, GENERATORS, UPS,

SHOP DRAWINGS MUST BE SUBMITTED AND APPROVED PRIOR TO ORDERING OF EQUIPMENT. ENGINEER WILL REQUIRE 7 WORKING DAYS TO REVIEW DRAWINGS. ANY ITEM FURNISHED AND/OR INSTALLED WITHOUT THE BENEFIT OF REVIEW AND ACCEPTANCE FOUND TO BE DEFICIENT SHALL BE SUBJECT TO REPLACEMENT AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S SOLE EXPENSE. ENGINEER WILL REQUIRE DETAILED, COMPLETED SUBMITTALS. IF ENGINEER IS REQUIRED TO REVIEW SUBMITTAL DATA MORE THAN TWICE, THAN THE CONTRACTOR WILL BE CHARGED \$125 PER HOUR FOR ADDITIONAL ENGINEERING TIME TO RELEASE SUBMITTALS.

ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME
AFC	AVAILABLE FAULT CURRENT
AFI	ARC FAULT CIRCUIT INTERRUPTER
AFG	ABOVE FINISHED FLOOR
AHU	AIR HANDLER UNIT (HVAC)
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
AT	AMPERE TRIP
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT OR CONDUCTOR
CB	CIRCUIT BREAKER
CLG	CEILING
CO	CONDUIT ONLY
CPT	CONTROL POWER TRANSFORMER
CJ	CONDENSING UNIT (HVAC), COPPER
DS	DISCONNECT (SAFETY) SWITCH
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EL	EMERGENCY LIGHT (UNSWITCHED)
ELE	ELECTRICAL, ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NONMETALLIC TUBING
EW	ELECTRIC WATER HEATER
EX	EXISTING
FBC	FLORIDA BUILDING CODE
FDS	FUSED DISCONNECT (SAFETY) SWITCH
FLO	FLOURESCENT
FMC	FLEXIBLE METAL CONDUIT
FMT	FLEXIBLE METAL TUBING
GND	GROUND (ELECTRICAL)
GEN	GENERATOR
GF	GROUND FAULT INTERRUPTER
GWH	GAS WATER HEATER
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE LIGHT
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM LIGHT
HZ	HERTZ (ELECTRICAL)
ICAN	ICANDESCENT LIGHT
ICCB	INSULATED CASE CIRCUIT BREAKER
IGND	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERE
KW	KILOWATT
KWH	KILOWATT-HOUR
LGT	LIGHT, LIGHTING
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MH	METAL HALIDE LIGHT, MAN HOLE
MLO	MAIN LUGS ONLY
N	NEUTRAL (ELECTRICAL)
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSN.
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NL	NIGHT LIGHT (UNSWITCHED)
PO	POLE
PB	PULL BOX
PCB	POWER CIRCUIT BREAKER
PH	PHASE (ELECTRICAL)
PNL	PANEL
PNLB	PANELBOARD
PVC	PLASTIC CONDUIT
PWR	POWER (ELECTRICAL)
RCPT	RECEPTACLE
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETALLIC CONDUIT
RTU	ROOM TOP UNIT (HVAC)
SD	SMOKE DETECTOR
SF	SUPPLY FAN
SH	SHIELDED
SW	SWITCH
SWBD	SWITCHBOARD
TEL	TELEPHONE
TTB	TELEPHONE TERMINAL BOARD
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
V, VAC	VOLT, VOLT AC
W	WATT
WP	WEATHERPROOF
XFMR	POWER TRANSFORMER

RENOVATION/DEMOLITION LEGEND

SYMBOL:	DESCRIPTION:
	EXISTING TO REMAIN.
	EXISTING TO REMOVED.
	EXISTING TO RELOCATE.
	NEW ADDED.

CONDUIT RACEWAY & WIRING LEGEND

SYMBOL:	DESCRIPTION:
	HOME RUN TO PANEL ALL HOMERUNS SHALL BE #10 AWG, 3/4" C. MINIMUM. WIRING HOME RUN: LETTER INDICATES PANEL; NUMBER IS BRANCH CIRCUIT(S)

LIGHTING PLAN LEGEND

SYMBOL:	DESCRIPTION:
	FLOURESCENT FIXTURE. UPPER CASE LETTER DENOTES FIXTURE TYPE. REFER TO "LIGHTING FIXTURE SCHEDULE" FOR FIXTURE SPECIFICATIONS AND MOUNTING. CIRCUIT CONDUIT OR SIDE NUMBERING DESIGNATES WHICH PANEL BOARD/CIRCUIT FIXTURES ARE CONNECTED TO. (TYPICAL FOR ALL LIGHTING FIXTURES)
	2X2 LED FIXTURE
	CEILING MOUNTED DOWNLIGHT FIXTURE (UON IN LIGHT FIXTURE SCHEDULE)
	EXIT LIGHT, UNIVERSAL MOUNT AS SPECIFIED IN THE FIXTURE SCHEDULE. ARROW(S) INDICATE DIRECTION OF TRAVEL. VERIFY WITH ARCHITECTURAL FOR OPTIMUM MOUNTING LOCATION AND SINGLE OR DUAL FACE. CONNECT FIXTURE TO SAME CIRCUIT AS NORMAL LIGHTING CIRCUIT IN THAT ROOM AHEAD OF ANY CONTROL DEVICE. DOUBLE ARROW INDICATES NON DIRECTIONAL SIGN TYPICALLY PLACED OVER DOORS.
	LINEAR PENDANT STRIP LIGHT (CHAIN HUNG)
	SUSPENDED PENDANT FIXTURE (UON IN LIGHT FIXTURE SCHEDULE)
	FIXED TRACK LIGHT
	EMERGENCY WALL PACK LIGHT
	ACCENT LINEAR LIGHTING WITH #GSFL LAMP
	STRING LIGHT MOUNTING ON POLE
	WALL SWITCH, SINGLE POLE, 120/277VAC, 20A, MOUNT 48" AFF UON.
	OCCUPANCY SENSOR DUAL TECHNOLOGY PIR/MICROPHONICS MANUFACTURER - SENSOR SWITCH, MODEL - WSD-PDT (800W)
	CEILING FAN WITH LIGHTING FIXTURE

ELECTRICAL SHEET INDEX

SR. NO.	DRAWING NO.	SHEET NAME	SCALE
1	E-001	GENERAL NOTES, ABBREVIATION & LEGEND	NO SCALE
2	E-002	SPECIFICATION-ELECTRICAL	NO SCALE
3	EP-100	PHOTOMETRIC CALCULATION - ELECTRICAL	1/8" = 1'-0"
4	EP-101	PHOTOMETRIC EMERGENCY CALCULATION - ELECTRICAL	1/8" = 1'-0"
4	E-101	LIGHTING FLOOR PLAN-ELECTRICAL	1/8" = 1'-0"
5	E-102	POWER FLOOR PLAN-ELECTRICAL	1/8" = 1'-0"
6	E-501	DETAILS-ELECTRICAL	NO SCALE
7	E-601	RISER DIAGRAM & PANEL SCHEDULE	NO SCALE

POWER PLAN LEGEND

SYMBOL:	DESCRIPTION:
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT 18" AFF UON.
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT 42" AFF OR ABOVE COUNTER.
	DUPLEX RECEPTACLE, NEMA 5-20R, SPLIT WIRE, MOUNT 42" AFF UON.
	DUPLEX RECEPTACLE, NEMA 5-20R, FLUSH CEILING MOUNT UON.
	QUAD RECEPTACLE, 2 OF NEMA 5-20R, MOUNT 18" AFF UON.
	QUAD RECEPTACLE, 2 OF NEMA 5-20R, MOUNT 42" AFF OR ABOVE COUNTER.
	SPECIAL PURPOSE OUTLET, NEMA CONFIGURATION AS SHOWN.
	INDICATED ISOLATED GROUND ON ANY RECEPTACLE
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT 18" AFF UON (GROUND FAULT CIRCUIT INTERRUPTED)
	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT 42" AFF OR ABOVE COUNTER (GROUND FAULT CIRCUIT INTERRUPTED)
	JUNCTION BOX WITH BLANK PLATE; BRACKET INDICATES WALL MOUNTED.
	PANELBOARD (RECESSED FLUSH-MOUNTED UON).
	COMMUNICATIONS OUTLET BOX FOR OWNER FURNISHED VOICE AND/OR DATA. STUB 1" C. TO CEILING CAVITY AND TERMINATE WITH PLASTIC BUSHINGS. C=MOUNTED 6" ABOVE COUNTER OR BACKSPASH, W=WALL MOUNTED AT +54" AFF.
	CABLE TV OUTLET BOX FOR OWNER FURNISHED CABLE TV SYSTEM. STUB 3/4" C. TO CEILING CAVITY AND TERMINATE WITH PLASTIC BUSHINGS.
	SPEAKER
	3/4" PLYWOOD TELEPHONE BACKBOARD.
	FLOORBOX-3 GANG/3 COMPARTMENT, 1 GANG FOR POWER AND 2 GANGS FOR COMMUNICATIONS. WALKER/WIREMOLD RFB4-4DB WITH RAKMII COVER PLATE (VERIFY FLOOR COVERING AND DESIRED COVER PLATE PRIOR TO ORDERING). COORDINATE REQUIRED COMMUNICATIONS BRACKETS WITH OWNER AND PROVIDE THOSE DESIRED BRACKETS. PROVIDE (1) 1" C. AS A MINIMUM TO NEAREST WALL AND ROUTE CONDUIT UP WALL TO ACCESSIBLE CEILING CAVITY FOR EVERY FLOORBOX SHOWING COMMUNICATION OUTLETS. ACCEPTABLE SUBSTITUTIONS BY HUBBELL.
	FLOORBOXES MAY BE STAMPED STEEL IF NOT IN DIRECT CONTACT WITH THE EARTH. PROVIDE LAYER OF CONCRETE IF REQUIRED. OTHERWISE, IF IN DIRECT CONTACT WITH EARTH, PROVIDE CAST IRON FLOORBOXES.
	ELECTRICAL FAN
	SMOKE DETECTOR (NOT PART OF FIRE ALARM SYSTEM)
	COMBINATION SMOKE & CARBON MONOXIDE DETECTOR (NOT PART OF FIRE ALARM SYSTEM)
	FUSED SAFETY (DISCONNECT) SWITCH TOP NUMBER = FUSE RATING, BOTTOM NUMBER = DISCONNECT RATING USE ALL RK-1 FUSES.
	SAFETY (DISCONNECT) SWITCH, NON-FUSED FRONT NUMBER = NUMBER OF POLE, TOP NUMBER = DISCONNECT RATING, BOTTOM NUMBER = BARKER RATING
	ENCLOSED CIRCUIT BREAKER IN NEMA 1 ENCLOSURE, U.N.O.
	METER SOCKET, PROVIDE PER UTILITY COMPANY REQUIREMENTS.
	TIME CLOCK
	TRANSFORMER (NON-UTILITY) NUMBER INDICATES KVA, EX: 45=45KVA
	TRANSFORMER (UTILITY)
	DOOR OR WINDOW STRIKE
	CARD READER
	SECURITY KEYPAD
	SECURITY CAMERA
	MOTION DETECTOR

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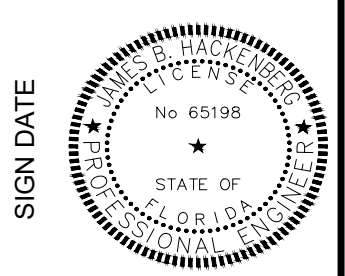
NOT ALL SYMBOLS ARE USED IN EVERY DESIGN

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GENERAL  
NOTES,  
ABBREVIATION  
&  
LEGENDS  
E-001  
ISSUE DATE 09-26-2023

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DIVISION 26 - ELECTRICAL SPECIFICATIONS

GENERAL ELECTRICAL REQUIREMENTS

- A. THE COMPLETE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE FOLLOWING CODES & STANDARDS:
  1. NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS.
  2. NFPA 20 STANDARD FOR THE INSTALLATION OF CENTRIFUGAL FIRE PUMPS.
  3. NFPA 70 NATIONAL ELECTRICAL CODE 2017 ED.
  4. NFPA 72 NATIONAL FIRE ALARM CODE.
  5. NFPA 780 LIGHTNING PROTECTION CODE.
  6. NFPA 90A STANDARD TO THE INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS.
  7. NFPA 96 STANDARD FOR VENTILATION CONTROL AND FIRE PREVENTION OF COMMERCIAL COOKING OPERATIONS.
  8. NFPA 101 LIFE SAFETY CODE.
  9. NFPA 110 STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS.
  10. ANSI A17.1 ELEVATOR CODE.
  11. ANSI A117.1 ACCESSIBILITY CODE.
  12. FLORIDA AMERICANS WITH DISABILITIES ACCESSIBILITY IMPLEMENTATION ACT AS DESCRIBED IN ACCESSIBILITY REQUIREMENTS MANUAL, DEPARTMENT OF COMMUNITY AFFAIRS.
  13. AMERICANS WITH DISABILITIES ACT.
  14. FLORIDA BUILDING CODE 2020 7<sup>TH</sup> EDITION.
  15. FLORIDA FIRE PREVENTION CODE 7<sup>TH</sup> EDITION WITH BROWARD COUNTY AMENDMENTS.
- B. 'FURNISH AND INSTALL' AND 'PROVIDE' ARE EQUIVALENT TERMS WHICH INDICATE MATERIAL AND/OR EQUIPMENT SUPPLIED AND INSTALLED BY THIS CONTRACTOR. 'FURNISHED' DENOTES MATERIAL OR EQUIPMENT SUPPLIED BUT NOT INSTALLED BY THIS CONTRACTOR. 'INSTALLED' DENOTES THE SETTING IN POSITION OR CONNECTION OF MATERIAL OR EQUIPMENT BY THIS CONTRACTOR BUT SUPPLIED BY OTHERS.
- C. IT IS THE REQUIREMENT OF THESE CONTRACT DOCUMENTS TO HAVE THE CONTRACTOR PROVIDE SYSTEMS AND COMPONENTS THAT ARE FULLY COMPLETE AND OPERATIONAL AND FULLY SUITABLE FOR THE INTENDED USE.
- D. DRAWINGS ARE DIAGRAMMATIC AND SHOULD NOT BE SCALED TO DETERMINE EXACT LOCATIONS. VERIFY ALL LOCATIONS A REQUIREMENTS OF EQUIPMENT FURNISHED AND/OR INSTALLED BY OTHERS BEFORE ROUGHING IN.
- E. ELECTRICAL SYSTEMS SHALL BE INSTALLED AS A COMPLETE INSTALLATION. INCIDENTAL DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER INSTALLATION AND OPERATION SHALL BE INCLUDED IN THE WORK OF THIS CONTRACTOR.
- F. PRE-BID SURVEY.
  1. THIS CONTRACTOR SHALL SURVEY THE JOBSITE PRIOR TO SUBMITTING THEIR BID TO DETERMINE THE FOLLOWING:
    - 1.1. AREAS REQUIRING DEMOLITION, TEMPORARY POWER, RELOCATING, ETC. WHICH ARE INADVERTENTLY NOT SHOWN ON THE DRAWINGS.
    - 1.2. PROBLEMS WITH WORK SEQUENCE.
  2. ANY UNUSUAL CONDITIONS NOT SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE ENGINEER PRIOR TO BIDDING.
- G. ACCEPTABLE MANUFACTURERS: THE LISTING OF A MANUFACTURER AS "ACCEPTABLE" UNDER ANY DIVISION 26 REQUIREMENTS DOES NOT IMPLY AUTOMATIC APPROVAL. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ANY SUBMITTALS MADE ARE FOR PRODUCTS THAT MEET OR EXCEED THE SPECIFICATIONS INCLUDED HERE.
- H. UPON COMPLETION OF THE WORK, BUT BEFORE FINAL ACCEPTANCE OF THE SYSTEM AND REQUEST FOR FINAL PAYMENT, FURNISH THE OWNER, FOR APPROVAL, OPERATION AND MAINTENANCE MANUALS IN LOOSE-LEAF BINDERS. PROVIDE A MINIMUM OF 6 SETS. MANUAL SHALL INCLUDE:
  1. SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
  2. OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
  3. NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY.
- I. PROVIDE OWNER WITH A RECORD SET OF AS-BUILT DRAWINGS WITHIN 30 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE FROM A DESIGNATED MARKED-UP SET OF BLUE LINES INCLUDING:
  1. A SINGLE-LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM AND
  2. FLOOR PLANS INDICATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION.
- J. PROVIDE TEMPORARY ELECTRICAL POWER TO JOBSITE FOR THE DURATION OF THE PROJECT.
- K. SUBMIT SHOP DRAWINGS TO ARCHITECT FOR ALL ELECTRICAL ITEMS. THE SHOP DRAWINGS SHALL BE SUBMITTED COMPLETE FOR ALL ELECTRICAL ITEMS. INCOMPLETE SUBMITTALS WILL BE RETURNED WITHOUT BEING REVIEWED OR THE CONTRACTOR SHALL AGREE TO PAY THE ELECTRICAL ENGINEER DIRECTLY AT AN HOURLY RATE OF \$125.00 TO REVIEW SUBSEQUENT SUBMITTALS. SHOP DRAWING RE-SUBMITTALS DUE TO REJECTIONS FOR NOT SUBMITTING THE SPECIFIED ITEMS ARE ALSO SUBJECT TO THE HOURLY REVIEW FEE.
- L. PROVIDE 4" HIGH CONCRETE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, ETC.).
- M. DIVISION 26 SUB-CONTRACTOR SHALL REVIEW DIVISION 15 SHOP DRAWINGS AND VERIFY EQUIPMENT VOLTAGE, PHASE-AND AMPS PRIOR TO BUILDING ROUGH-IN OF ALL EQUIPMENT.
- N. ALL EQUIPMENT, DEVICES, ETC. FURNISHED BY ELECTRICAL CONTRACTOR SHALL BE U.L. LISTED (OR EQUIVALENT NATIONAL TESTING AGENCY) FOR ITS INTENDED PURPOSE. INFORM OWNER THAT ALL OWNER FURNISHED EQUIPMENT, DEVICES, ETC. MUST ALSO HAVE A U.L. LISTING (OR EQUIVALENT LISTING).
- O. ALL ELECTRICAL COMPONENTS (CONDUIT, WIRE, FITTINGS, SUPPORTS, CIRCUIT BREAKERS, LAMPS, ETC.) PROVIDED AND INSTALLED IN THIS PROJECT SHALL BE BRAND NEW. RE-USE OF EXISTING COMPONENTS WILL NOT BE APPROVED.
- P. UTILITY COORDINATION: CONTRACTOR SHALL SUBMIT COMPLETE SET OF CONSTRUCTION DOCUMENTS TO UTILITY COMPANY IMMEDIATELY AFTER RECEIVING NOTICE TO PROCEED OR PRIOR TO ANY SITE OR BUILDING ROUGH-IN. COORDINATE EASEMENT LOCATIONS BETWEEN OWNER AND UTILITY COMPANY. VERIFY WITH UTILITY COMPANY: PROPOSED VOLTAGE, PHASE, POLE/ PAD-MOUNT TRANSFORMER LOCATIONS, METERING, UTILITY PRIMARY ROUTING AND CONDUIT REQUIREMENTS, ETC.

ELECTRICAL IDENTIFICATION

- A. PROVIDE CABLE/CONDUCTOR IDENTIFICATION BANDS. PROVIDE ENGRAVED PLASTIC LAMINATE SIGNS. WHITE LETTERING ON A BLACK BACKGROUND, FOR EACH UNIT OF THE FOLLOWING CATEGORIES OF ELECTRICAL WORK: SWITCHBOARDS, MOTOR STARTERS, TRANSFORMERS, PANELBOARDS, DISCONNECTS, AND JUNCTION BOXES. NAME PLATES SHALL IDENTIFY PANEL DESIGNATION (NAME), VOLTAGE, PHASE AND WIRE CONFIGURATION.
  - C. UNDERGROUND CABLE/CONDUIT IDENTIFICATION PLASTIC LINE MARKERS SHALL BE PROVIDED THE CONTINUOUS TRENCH LENGTH.
- ELECTRICAL DEMOLITION AND ALTERATIONS**
- A. ANY EXISTING CIRCUITS OR EQUIPMENT NOT SHOWN ON DRAWINGS AND WHICH ARE LOGICALLY EXPECTED TO BE CONTINUED IN SERVICE SHALL BE RECONNECTED IN AN APPROVED MANNER.
  - B. WIRING TO ELECTRICAL EQUIPMENT BEING DISCONNECTED SHALL BE REMOVED BACK TO THEIR OVER-CURRENT DEVICE OR BACK TO NEAREST ACTIVE JUNCTION BOX.
  - C. CONTRACTOR SHALL PROVIDE SUPPORT FOR EXISTING CONDUIT IN REMODELED AREA THAT IS TO REMAIN AND IS NOT PROPERLY SUPPORTED IN ACCORDANCE WITH N.E.C. REQUIREMENTS.
  - D. EXCEPT FOR CONDUIT, CONDUCTORS AND MISCELLANEOUS HARDWARE, ALL ELECTRICAL EQUIPMENT SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED OR DISPOSED OF AS DIRECTED BY OWNER.

CONDUIT & RACEWAYS

- A. MINIMUM SIZE CONDUIT SHALL BE 1/2". DOES NOT APPLY TO MC CABLE.
- B. CONDUIT SHALL BE MC CABLE, ELECTRICAL METALLIC TUBING, OR RIGID GALVANIZED STEEL CONDUIT. SCHEDULE 40 PVC CONDUIT IS ALLOWED FOR CONDUITS IN/UNDER THE SLAB AND UNDERGROUND. MC CABLE MAY NOT BE USED FOR ANY HOMERUN.
- C. ALL CONDUIT SHALL BE CONCEALED. CONDUIT SHALL BE EMT IN INTERIOR AREAS, AND RIGID GALVANIZED STEEL CONDUIT IN EXTERIOR AREAS.
- D. COORDINATE ROUTING (LOCATION) OF CONDUIT WITH HVAC DUCTWORK, PLUMBING PIPING AND SPRINKLER PIPING.
- E. SECURE CONDUIT IN PLACE WITH CORROSION-PROOF ALLOY STRAPS AT SPACING AS REQUIRED BY N.E.C.
- F. CONDUIT SHALL BE SECURED TO BUILDING STRUCTURE. INSTALL FLEXIBLE STEEL CONDUIT NOT OVER 3' LONG TO MOTORS, TRANSFORMERS AND EQUIPMENT SUBJECT TO VIBRATION.
- G. INSTALL LIQUID-TIGHT FLEXIBLE CONDUIT NOT OVER 3' LONG WHERE SUBJECT TO MOISTURE, DIRT OR FUMES.
- H. TYPE MC CABLE SHALL BE OF THE INTERLOCKING JACKET TYPE. CABLE SHALL BE SUPPORTED AT NOT MORE THAN SIX-FOOT INTERVALS, AND ALL FITTINGS SHALL BE IDENTIFIED FOR USE WITH SAID CABLE. MC CABLE SHALL NOT BE USED FOR SERVICE ENTRANCE OR IN EXPOSED AREAS. MC CABLE MAY BE USED ABOVE DROP CEILING AND IN INTERIOR PARTITIONS.
- I. CONTRACTOR SHALL MINIMIZE FLOOR SLAB PENETRATIONS.
- J. ALL CONDUIT RUNS SHALL BE DESIGNED TO PRESENT A NEAT AND ORDERLY APPEARANCE, RUNNING LINES PARALLEL WITH BUILDING STRUCTURE OR WALLS.
- K. ROOFTOP UNITS AND EXHAUST FANS ARE TO BE WIRED THROUGH THE ROOF CURBS OR UTILIZE FACTORY-FABRICATED ROOF PIPING CURBS. PITCH POCKETS ARE NOT ALLOWED.
- L. ROMEX CABLE IS NOT PERMITTED.
- M. CONDUIT SHALL BE ROUTED PERPENDICULAR THROUGH RATED WALLS. PROVIDE PROPER SLEEVES AND FIRE SAFING/SEALANTS.
- N. PROVIDE UL APPROVED FIRE SEALS FOR ALL FIRE RATED WALL AND FLOOR PENETRATIONS.

CONDUIT FITTINGS

- A. COMPRESSION TYPE STEEL OR STEEL SETSCREW TYPE SHALL BE UTILIZED.
- B. PROVIDE PROPER EXPANSION FITTINGS WHEN CROSSING BUILDING EXPANSION LINES.

WIRES, CABLES AND CONNECTORS

- A. ALL CONDUCTORS SHALL BE COPPER WITH 600V 75°C WITH THHN/THWN-2 INSULATION FOR USE WITHIN BUILDING CONFINES, WHERE INSTALLED BEYOND THE BUILDING CONFINES, SUCH AS IN UNDERGROUND FEEDER BANKS OR CIRCUITRY TO SITE LUMINAIES IT SHALL BE COPPER WITH 600V, 75°, THHN/THWN-2 INSULATION.
- B. USE SOLID CONDUCTOR, SINGLE CONDUCTOR, NO. 12 AWG MINIMUM FOR GENERAL USE WIRING.
- C. USE STRANDED CONDUCTOR, SINGLE CONDUCTOR NO. 12 AWG AND LARGER, FOR MOTORS AND OTHER INSTALLATIONS WHERE VIBRATION IS GENERATED.
- D. COLOR-CODING SHALL IDENTIFY THE SAME PHASE THROUGHOUT THE SYSTEM, FROM SERVICE SWITCH OR TRANSFORMER THROUGH ALL BRANCH CIRCUITRY. ALL WIRING SHALL BE COLOR-CODED AS FOLLOWS:
 

240/208/120 VOLT	480/277 VOLT
PHASE A-BLACK	PHASE A-BROWN
PHASE B-BLUE	PHASE B-PURPLE
PHASE C-RED	PHASE C-YELLOW
NEUTRAL-WHITE	NEUTRAL-WHITE
- E. A STANDARD 500V MEGGER INSULATION TEST SHALL BE MADE AND RECORDED FOR ALL FEEDER CIRCUITS. PROVIDE A COPY OF TEST RESULTS TO ENGINEER FOR REVIEW.
- F. PROVIDE LUGS FOR FEEDER SIZES INDICATED ON DRAWINGS OR AS REQUIRED.
- G. WIRE SIZE FOR 120V BRANCH CIRCUITS SHALL BE PER THE FOLLOWING LENGTH OF RUNS.
  1. 0 TO 50 FT: RUN FROM PANELBOARD TO FIRST OUTLET; NO.12 AWG MINIMUM.
  2. 51 TO 200 FT RUN: INCREASE ONE WIRE SIZE, I.E. NO.12 AWG BECOMES NO.10 AWG TO FIRST OUTLET.
  3. 201 TO 325 FT RUN: INCREASE TWO WIRE SIZES, I.E. NO.12 AWG BECOMES NO.8 AWG TO FIRST OUTLET.
  4. 326 AND ABOVE: WIRING SHALL BE SIZED FOR 3% MAXIMUM VOLTAGE DROP.

BOXES

- A. WALL OUTLET BOXES SHALL BE 4 INCH SQUARE WITH A TOTAL DEPTH OF LESS THAN 2-1/2" GALVANIZED PRESSED STEEL WITH PLASTER RINGS OR GANG COVER, OR SIZED AS REQUIRED.
- B. WHERE MORE THAN TWO SWITCHES OR DEVICES ARE LOCATED AT ONE POINT, USE GANGED BOXES AND COVERS.
- C. ALL BOXES FOR ELECTRICAL EQUIPMENT SHALL HAVE COVERS.
- D. DO NOT INSTALL BOXES BACK TO BACK OR THROUGH WALL. OFFSET OUTLET BOXES ON OPPOSITE SIDES OF WALL A MINIMUM OF 12" OR ON OPPOSITE SIDES OF STUD IN PARTITION WALLS. WHERE BACK TO BACK BOXES CANNOT BE AVOIDED, PROVIDE GYPSUM BOARD BETWEEN BOXES. PROVIDE PUTTY PADS ON ALL BOXES WHERE REQUIRED PER FBC 712.3.2.
- E. IF A K.O. IS AVAILABLE IN THE BASE JUNCTION BOX, THEN NO TERMINATIONS ARE ALLOWED IN THE EXTENSION RINGS.

WIRING DEVICES

- A. RECEPTACLES SHALL BE HEAVY DUTY DUPLEX, 2 POLE, 3W, GROUNDING, 20A, 125V, DESIGNED FOR SIDE AND BACK WIRING WITH NEMA CONFIGURATION 5-20R.
- B. RECEPTACLES NEXT TO DATA OUTLETS SHALL BE TVSS.
- C. GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLES SHALL BE NEMA 5-20R OR EQUAL.
- D. SWITCHES SHALL BE HEAVY DUTY SINGLE POLE AC QUIET SWITCHES, 20A.
- E. PROVIDE SMOOTH NYLON COVERS FOR ALL DEVICES.
- F. INCANDESCENT DIMMERS SHALL BE 2000WATTS, 120V. CONTRACTOR SHALL PROVIDE MAGNETIC LV DIMMERS FOR MAGNETIC TRANSFORMERS AND ELECTRONIC LV DIMMERS FOR ELECTRONIC TRANSFORMERS.

PANELBOARDS

- A. PROVIDE LIGHTING & APPLIANCE PANELBOARDS, & POWER DISTRIBUTION PANELBOARDS WITH DEAD FRONT COVERS, FULL SIZE NEUTRAL & BOLT-ON HEAVY DUTY, QUICK MAKE, QUICK BREAK CIRCUIT BREAKERS. INSTAL PANELBOARDS SHALL BE U.L. LISTED.
- B. INSTAL PANELBOARDS SO TOP BREAKER IS NOT HIGHER THAN 6'-0" ABOVE FLOOR.
- C. CONTRACTOR SHALL BALANCE PHASES IN PANELBOARD SO THAT LOAD IMBALANCE DOES NOT EXCEED 10%.
- D. PANELBOARD SHALL INCLUDE COMPLETE TYPEWRITTEN DIRECTORY.
- E. PROVIDE SPARE CONDUITS TO CEILING CAVITY FOR SPARES/SPACES IN RECESSED PANELBOARDS, PROVIDE (1) 3/4" FOR EVERY 3 SPACES.
- F. PROVIDE 120V POWER TO 480V CIRCUIT BREAKER SHUNT-TRIPS FROM NEAREST 120V PANELBOARD.
- G. LOAD CENTERS SHALL BE DEAD FRONT, FACTORY ASSEMBLED, FULL-SIZE NEUTRAL AND GROUND BAR. NOTE: IF LOAD CENTERS CANNOT BE FABRICATED TO MEET THE MINIMUM REQUIREMENTS SPECIFIED, PROVIDE LIGHTING & APPLIANCE PANELBOARDS WITH BOLT-ON BREAKERS.
- H. NON-LINEAR PANELBOARDS SHALL BE PROVIDED WHERE INDICATED ON PLANS. EQUIP WITH 200% RATED NEUTRAL.
- I. PROVIDE U.L. LISTED BREAKERS FOR EXISTING PANELBOARDS TO MATCH MANUFACTURER & AIC RATING.
- J. PROVIDE AFCI (ARC FAULT CIRCUIT INTERRUPTER) BREAKERS FOR ALL CIRCUITS SERVING BEDROOMS OF DWELLING UNITS PER N.E.C. 210.12.
- K. ALL BREAKERS SERVING MECHANICAL, REFRIGERATION, OR OTHER EQUIPMENT WHERE REQUIRED, SHALL BE HACR RATED.
- L. BREAKERS WITH HID LIGHTING LOADS SHALL BE HID RATED.
- M. BREAKERS SERVING ELEVATOR SHALL BE SHUNT-TRIP TYPE.
- N. BREAKERS SERVING CIRCUITS UNDER KITCHEN HOODS SHALL BE SHUNT-TRIP TYPE.

SWITCHBOARDS

- A. SWITCHBOARDS SHALL BE MULTI-SECTION I-LINE SWITCHBOARDS.
- B. SWITCHBOARDS SHALL BE DEAD-FRONT AND TOTALLY FRONT ACCESSIBLE.
- C. PROVIDE STAND ALONE, MICROPROCESSOR BASED, 3-PH POWER METERING DEVICE MOUNTED RECESSED IN FRONT OF SWITCHBOARD. PROVIDE CURRENT-TRANSFORMERS & RELAYING IN SIZES AS REQUIRED.
- D. MAIN BREAKER SHALL BE 100% CURRENT RATED & INCLUDE GROUND FAULT & SHUNT-TRIP.
- E. MEGGER CHECK PHASE-TO-PHASE & PHASE-TO-GROUND INSULATION LEVELS PRIOR TO ENERGIZATION.

MOTOR AND CIRCUIT DISCONNECTS

- A. DISCONNECT SWITCHES MAY BE GENERAL DUTY FOR 480V, & SHALL BE HEAVY DUTY FOR 600V.
- B. PROVIDE RAIN-TIGHT HUBS FOR EXTERIOR DISCONNECTS.
- C. PROVIDE CLASS R REJECTION FUSE CLIPS & CLASS R FUSES.
- D. SERVICE DISCONNECT SWITCH SHALL BE HEAVY DUTY TYPE.

SUPPORTING DEVICES

- A. LIGHTING FIXTURES SHALL BE SUPPORTED FROM BUILDING STRUCTURE & NOT FROM CEILING GRID. SECURE A MINIMUM OF TWO CORNERS (OPPOSITE) TO STRUCTURE ABOVE WITH CHAIN OR WIRE.
- B. FASTEN CONDUIT TO STRUCTURAL PARTS OF BUILDING.

LIGHTING

- A. U.L. LABELS MUST APPEAR ON ALL NEW LIGHTING FIXTURES. FLEXIBLE CONDUIT TAILS, UP TO 6' IN LENGTH, MAY BE USED BETWEEN JUNCTION BOXES & RECESSED LIGHTING FIXTURES. OUTLET BOXES MAY SERVE UP TO FOUR SEPARATELY RECESSED FIXTURES. BALLASTS SHALL BE ELECTRONIC HIGH-POWER FACTOR CBM LABELED.
- B. PROVIDE PROPER TRIM PER REFLECTED CEILING PLAN OR ACTUAL CEILING INSTALLED.
- C. PROVIDE NEW LAMPS IN ALL NEW FIXTURES.
- D. PROVIDE FOUNDATIONS FOR ALL SITE LIGHTING FIXTURES/POLES AS RECOMMENDED BY MANUFACTURER.
- E. SITE LIGHTING POLE FIXTURES SHALL BE RATED FOR 120 mph WINDS WITH 1.3 GUST FACTOR FOR 3SEC. PER FLORIDA BUILDING CODE "FIGURE 1606".
- F. SITE LIGHTING FIXTURES LOCATED BETWEEN PARKING SPACES OR SUBJECT TO BEING DAMAGED BY VEHICLES, SHALL BE PROVIDED WITH 2' HIGH X 2' DIAMETER CONCRETE BASES.
- G. LIGHTING FIXTURES IN MECHANICAL ROOMS, ETC., SHALL BE COORDINATED WITH EQUIPMENT.
- H. EMERGENCY BATTERY BALLASTS SHALL BE 1400 LUMENS MINIMUM.
- I. PROVIDE ADDITIONAL BALLAST IN ALL FIXTURES INDICATED ON DRAWINGS AS BEING CONTROLLED VIA 'DUAL LEVEL SWITCHING'.
- J. ALL INTERIOR LAMPS SHALL BE 3000°K, 3500°K, 4100°K KELVIN TEMPERATURE. COORDINATE WITH ARCHITECT FOR EXACT COLOR REQUIRED.
- K. EMERGENCY BATTERY BALLASTS AND BATTERY OPERATED EXIT SIGNS AND/OR EMERGENCY LIGHTS SHALL BE WIRED AHEAD OF LOCAL SWITCHING MEANS.

REVISIONS

D

C

B

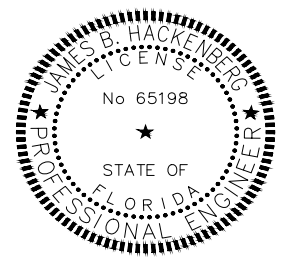
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SPECIFICATION  
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**E-002**  
 ISSUE DATE 09-26-2023

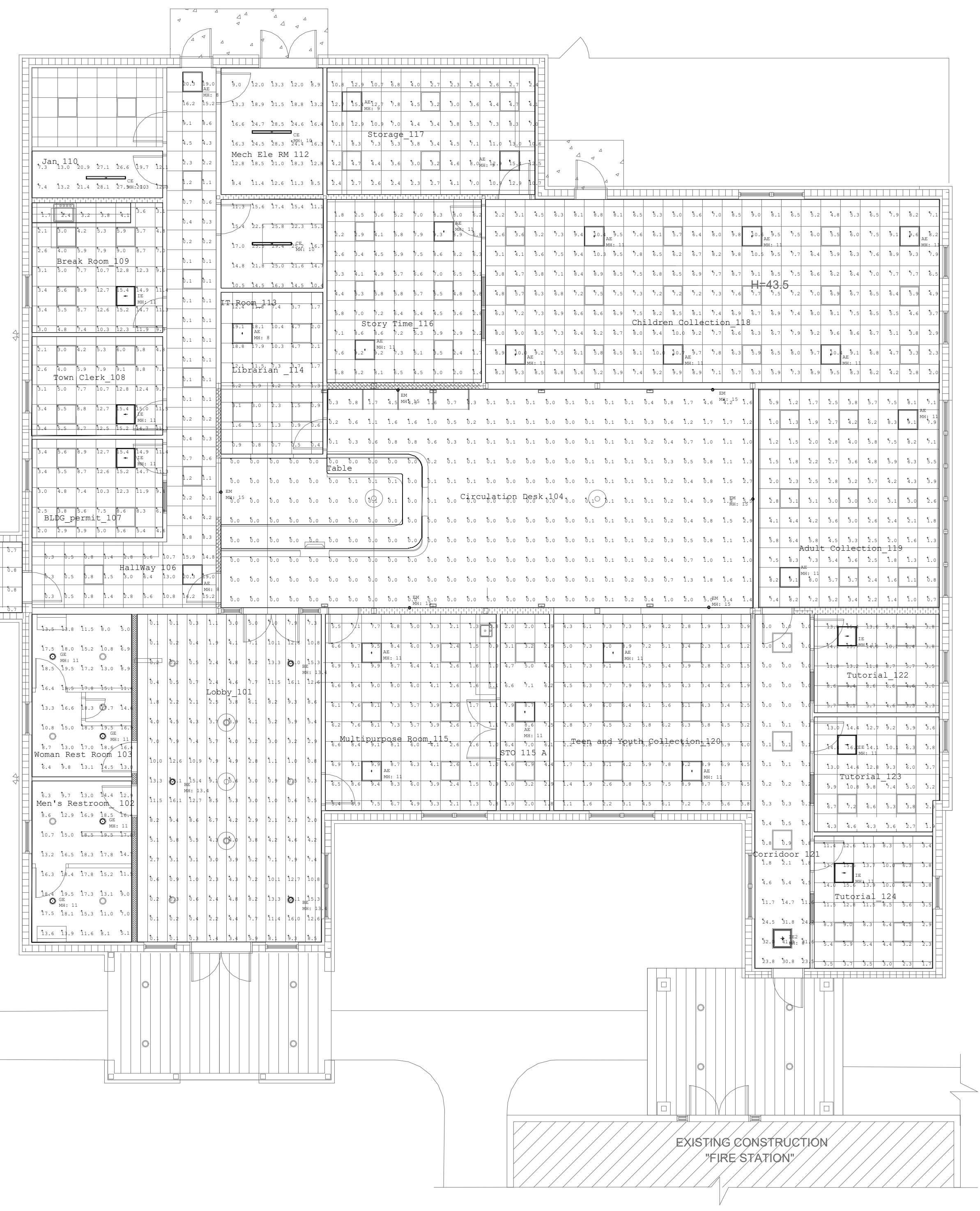
GC-22-010 JOB #:

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 Winter Park, FL 32790



Symbol	Qty	Arrangement	LLF	Description	Tag
□	21	SINGLE	0.800	2RTL2 20L LP830	AE
—	3	SINGLE	0.800	CLX L96 6000IM SEF FDL MVOLT 35K 80CRI	CE
□	6	SINGLE	0.800	2RTL2 33L LP830	IE
○	6	SINGLE	0.800	XR6C	EM
□	1	SINGLE	0.800	2TLX2 33L A12 MVOLT E21 LP830	IE2
○	4	SINGLE	0.800	HC610D010-HM612827-61RWWW	GE
○	3	SINGLE	0.800	8CR-TL-L20-835-xxx-DIM-UNV-OM-CS-xx	BE

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Adult Collection 119 Workplane	Illuminance	Fc	3.92	9.3	0.7	5.60	13.00
BLDG permit 107 Workplane	Illuminance	Fc	7.87	15.4	2.0	3.94	7.70
Break Room 109	Illuminance	Fc	7.88	15.4	2.1	3.75	7.33
Children Collection 118 Workplane	Illuminance	Fc	7.12	10.7	2.0	3.56	5.35
Circulation Desk 104 Workplane	Illuminance	Fc	0.38	5.5	0.0	N.A.	N.A.
Corridor 121 Workplane	Illuminance	Fc	6.07	41.3	0.0	N.A.	N.A.
Counter	Illuminance	Fc	3.04	4.1	1.7	1.79	2.41
Hallway 106 Workplane	Illuminance	Fc	4.15	20.3	0.1	41.90	203.00
IT Room 113 Workplane	Illuminance	Fc	17.99	29.4	10.4	1.73	2.83
Jan 110 Workplane	Illuminance	Fc	18.39	28.1	7.3	2.51	3.85
Librarian 114 Workplane	Illuminance	Fc	5.54	19.1	0.4	13.85	47.75
Lobby 101	Illuminance	Fc	5.51	18.1	0.1	55.10	181.00
Mech Ele RM 112 Workplane	Illuminance	Fc	16.57	28.5	8.4	1.97	3.39
Men's Restroom 102 Workplane	Illuminance	Fc	14.21	19.5	5.1	2.79	3.82
Multipurpose Room 115 Workplane	Illuminance	Fc	5.08	9.9	0.8	6.35	12.38
STO 115 A Workplane	Illuminance	Fc	4.84	8.7	1.8	2.69	4.83
Storage 117 Workplane	Illuminance	Fc	6.61	15.4	2.3	2.87	6.70
Story Time 116 Workplane	Illuminance	Fc	5.51	9.3	1.4	3.94	6.64
Teen and Youth Collection 120 Workplane	Illuminance	Fc	4.93	9.2	0.9	5.48	10.22
Town Clerk 108 Workplane	Illuminance	Fc	8.05	15.4	2.1	3.83	7.33
Town Hall Connection 105 Workplane	Illuminance	Fc	3.84	8.6	0.7	5.49	12.29
Tutorial 123 Workplane	Illuminance	Fc	8.33	15.7	2.3	3.62	6.83
Tutorial 124 Workplane	Illuminance	Fc	7.84	16.0	1.9	4.13	8.42
Tutorial 122 Workplane	Illuminance	Fc	7.54	15.6	1.7	4.44	9.18
Woman Rest Room 103 Workplane	Illuminance	Fc	14.21	19.5	5.0	2.84	3.90



1 PHOTOMETRIC EMERGENCY CALCULATION - ELECTRICAL

0 4' 8' 16' 24'

1/8" = 1'-0"

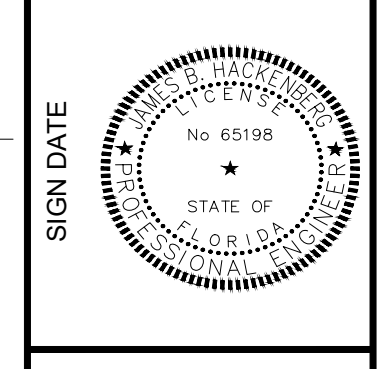
NORTH

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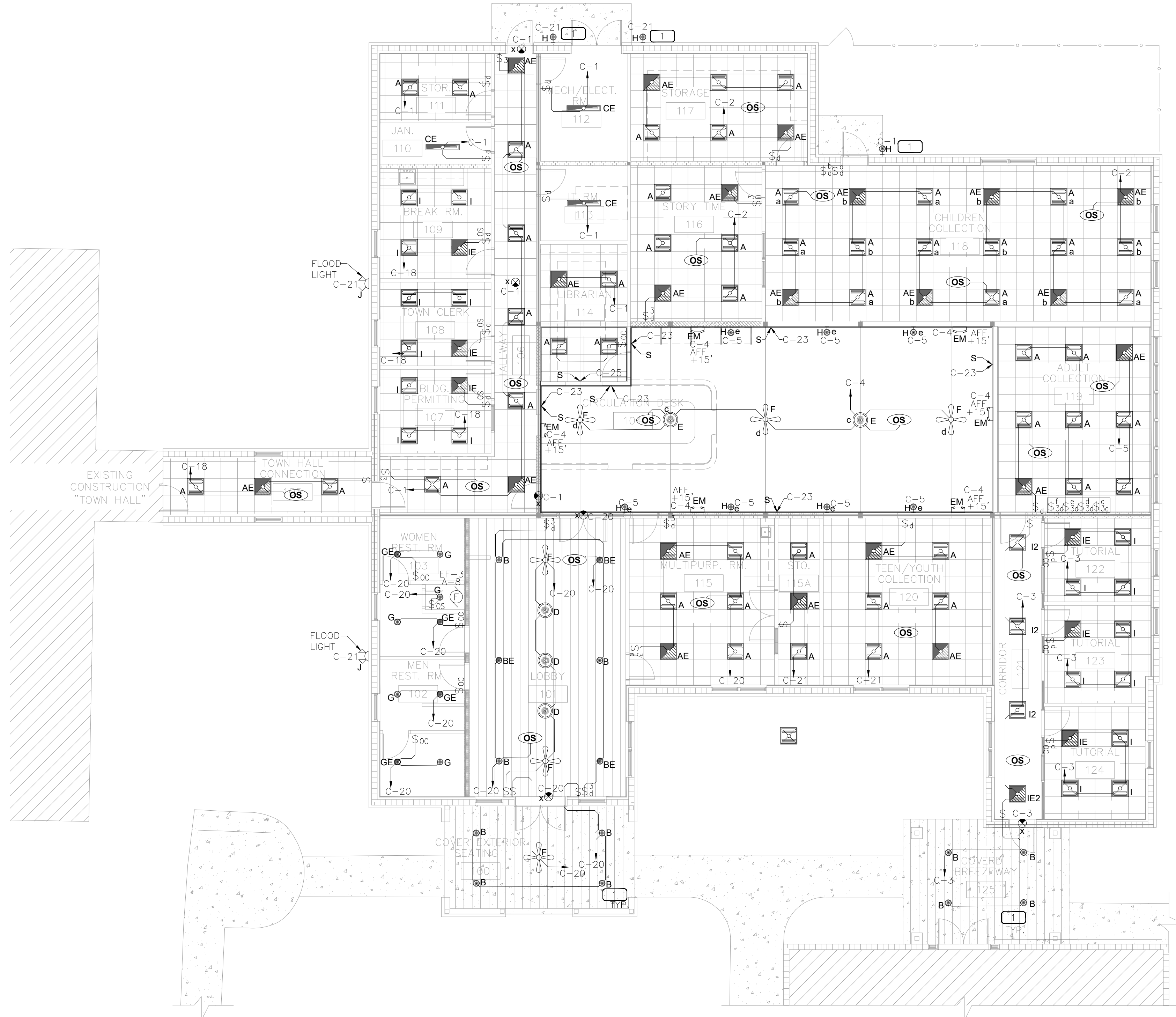
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**PHOTOMETRIC  
 EMERGENCY  
 CALCULATION -  
 ELECTRICAL**

**EP-101**

ISSUE DATE 09-26-2023

**HACKENBERG  
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 PO Box 1886  
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1 LIGHTING PLAN - ELECTRICAL NORTH

0 4' 8' 16' 24'

1/8" = 1'-0"

LIGHT FIXTURE SCHEDULE			
TYPE	MANUFACTURER & PART NUMBER	DESCRIPTION	LAMPS (W)
A	LITHONIA 2RTL2 20L LP830	2X2 RECESSED LIGHTING FIXTURE	20.1 W
AE	LITHONIA 2RTL2 20L LP830 E10WLCP	2X2 RECESSED LIGHTING FIXTURE	20.1 W
B	HE WILLIAMS 8CR-TL-L20/835-DIM-UNV	8" LED ROUND CEILING DOWNLIGHT SURFACE CEILING MOUNT	19.6 W
BE	HE WILLIAMS 8CR-TL-L20/835-EM/10W-DIM-UNV	8" LED ROUND CEILING DOWNLIGHT SURFACE CEILING MOUNT	19.6 W
CE	LITHONIA CLX L4B 5000LM HEF FDL MVOLT 30K 80CRI E10WLCP	EME 1x8 H LED STRIP LIGHT	31.6 W
D	LITHONIA MGLP 24IN 80CRI 35K 1500LM	2' PENDENT LIGHT	18 W
E	LITHONIA MGLP 36IN 80CRI 35K 6000LM	3' PENDENT LIGHT	133 W
G	HALO LIGHTING HC6 10D010	6" LED ROUND CEILING DOWNLIGHT SURFACE CEILING MOUNT	10.1W
GE	HALO LIGHTING HC6 10D010REM7	6" LED ROUND CEILING DOWNLIGHT SURFACE CEILING MOUNT	10.1W
I	LITHONIA 2RTL2 33L LP830	2X2 RECESSED LIGHTING FIXTURE	37 W
IE	LITHONIA 2RTL2 33L LP830 E10WLCP	2X2 RECESSED LIGHTING FIXTURE	37 W
I2	LITHONIA 2TLX2 33L LP830	2X2 SURFACE LIGHTING FIXTURE	37 W
IE2	LITHONIA 2TLX2 33L LP830 E10WLCP	2X2 SURFACE LIGHTING FIXTURE	37 W
X	LITHONIA EDGR	EXIT SIGN, EXTRUDED BRUSHED ALUMINUM FINISH WITH GREEN LED SELF-POWERED, INTEGRAL 90 MINUTE BATTERY, 120/277 V CEILING, WALL & END MOUNTING	3.8-4.5W
EM	COOPER SEL60R10SD	EMERGENCY WALL PACK LIGHT	3.5W
H	ACTUITY BRANDS WJGE2 LED P1 80CRI 27K T4M MOVLT SRM E10WH NLTAIR2 PIR FINISH TBD	WALL SCONCE	12W
S	PHILIPS B08CK9LMH9	LIGHT STRIP PLUS BASE V5 80 INCH HUE AND COLOR AMBIANCE	3.04W/FEET
F	HAVELLS FHCMOURARB52	CEILING FAN WITH LIGHT FIXTURE	70 W
J	LITHONIA HGX LED 3RH ALO SSW2 120 PE WH	LED FLOOD LIGHT	25W

- CONTRACTOR SHALL PROVIDE SUBMITTAL OF ALL FIXTURES TO OWNER AND ARCHITECT. SUBMITTAL SHALL BE APPROVED BY OWNER, ARCHITECT AND ENGINEER PRIOR TO ORDERING ANY FIXTURES. IT IS THE RESPONSIBILITY OF THE LIGHTING VENDOR TO ENSURE OWNER & ARCHITECT HAVE SIGNED OFF ON SUBMITTALS.
- ANY SUBSTITUTION OF FIXTURES WILL REQUIRE A FULL PHOTOMETRIC ANALYSIS TO BE PROVIDED FOR ALL SUBSTITUTED AREAS. LIGHTING VENDOR/DISTRIBUTOR WILL BE RESPONSIBLE FOR GATHERING AND EVALUATING DATA TO MATCH INTENDED FIXTURE PHOTOMETRIC RESULTS. SUBSTITUTED FIXTURES WILL NOT BE APPROVED WITHOUT PHOTOMETRIC PROVIDED WITH SUBMITTAL.
- SUBSTITUTION OF LIGHT FIXTURES SHALL BE PRESENTED FIFTEEN DAYS PRIOR TO BID. ANY ADDITIONAL ENGINEERING COST FOR RE-WORK OR EXTRA SUBMITTAL EVALUATION FOR SUBSTITUTIONS SHALL BE PAID FOR BY GENERAL CONTRACTOR.

KEY NOTES

- EXTERIOR LIGHTS SHALL BE CONTROLLED VIA PHOTOCELL/ASTRONOMICAL TIMECLOCK.

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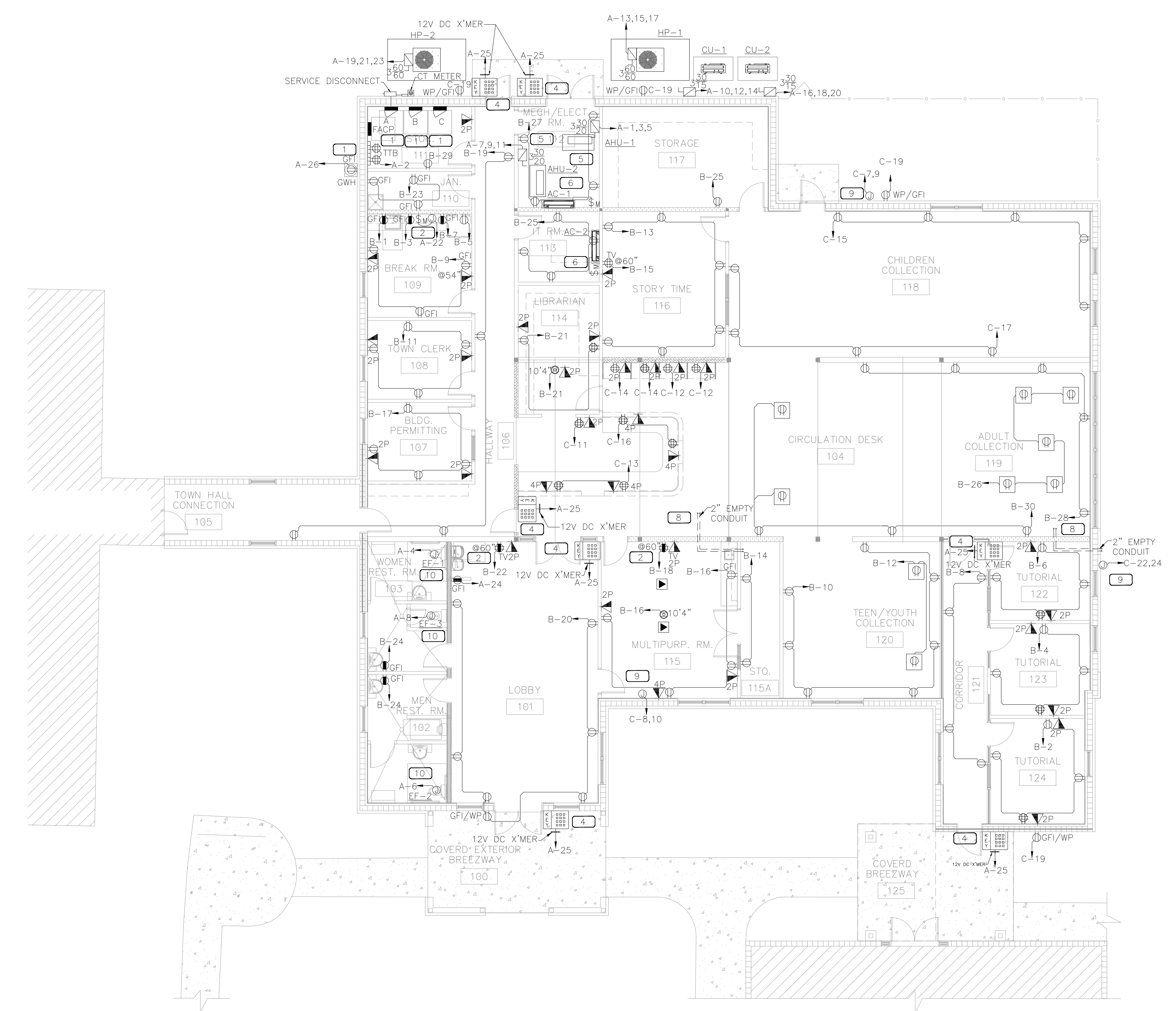
LIGHTING  
PLAN-  
ELECTRICAL  
**E-101**  
JOB # GC-22-010  
ISSUE DATE 09-26-2023

GENERAL NOTES

- 1. ALL EXTERIOR JUNCTION BOX SHALL BE GFI & WP PROTECTED.
- 2. LOCATION OF SPEAKERS & CAMERAS IN THESE SHEET IS FOR REPRESENTATION PURPOSE ONLY. REFER UPDATED ARCHITECTURE PLAN FOR COORDINATION.

KEY NOTES

- 1 CONTRACTOR SHALL COORDINATE EXACT ELECTRICAL AND COMMUNICATION REQUIREMENT WITH OWNER/VENDOR. CONTRACTOR SHALL INSTALL ALL NECESSARY CONDUIT, WIRE, BREAKERS, ETC.
- 2 NEED POWER & DATA FOR TV'S @5'. EC SHALL CO-ORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
- 3 PROVIDE 120V, 1PH DISCONNECT FOR RETICULATION PUMP. EC SHALL COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
- 4 PROVIDE 12V DC TRANSFORMER TO FEED KEY FOB FOR ELECTRONIC SECURITY KEYPAD HARDWARE. EC SHALL COORDINATE EXACT LOCATION & REQUIREMENT PRIOR TO ROUGH-IN ANYTHING.
- 5 PROVIDE 208V, 3PH DISCONNECT FOR AHU LOCAL OPERATION. EC SHALL COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN ANYTHING
- 6 PROVIDE POWER SWITCH FOR LOCAL OPERATION OF AC.
- 7 PROVIDE 120V 1PH ELECTRICAL POWER FOR RE-CIRCULATION PUMP. EC SHALL VERIFY EXACT LOCATION OF EQUIPMENT & PROVIDE POWER & CONTROLLING ACCORDINGLY PRIOR TO ROUGH-IN
- 8 2" EMPTY CONDUIT FROM ELECTRICAL ROOM UPTO JUNCTION BOX AT INDICATED LOCATION. EC SHALL COORDINATE EXACT LOCATION AT SITE FOR THE LOCATION.
- 9 PROVIDE JUNCTION BOX FOR THE FUTURE CONNECTION WITH 30AMP/2P BREAKER.
- 10 EC SHALL POWER IN BUILT DISCONNECT SWITCH. EC SHALL PROVIDE TIME DELAY SWITCH IN THE ROOM WITH A DELAY OF 1 TO 60 MINUETS AFTER THE LIGHT ON FAN HAS BEEN TURNED OFF.



1 POWER PLAN - ELECTRICAL

0 4' 8' 16' 24'

1/8" = 1'-0"

NORTH

REVISIONS

D

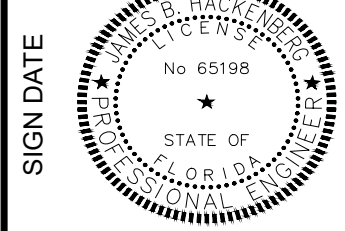
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B



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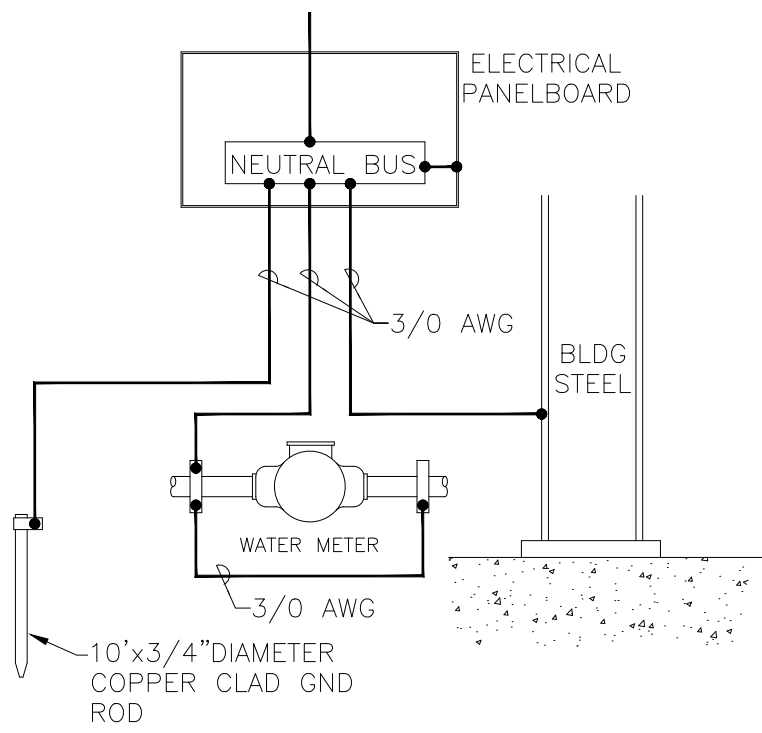
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A

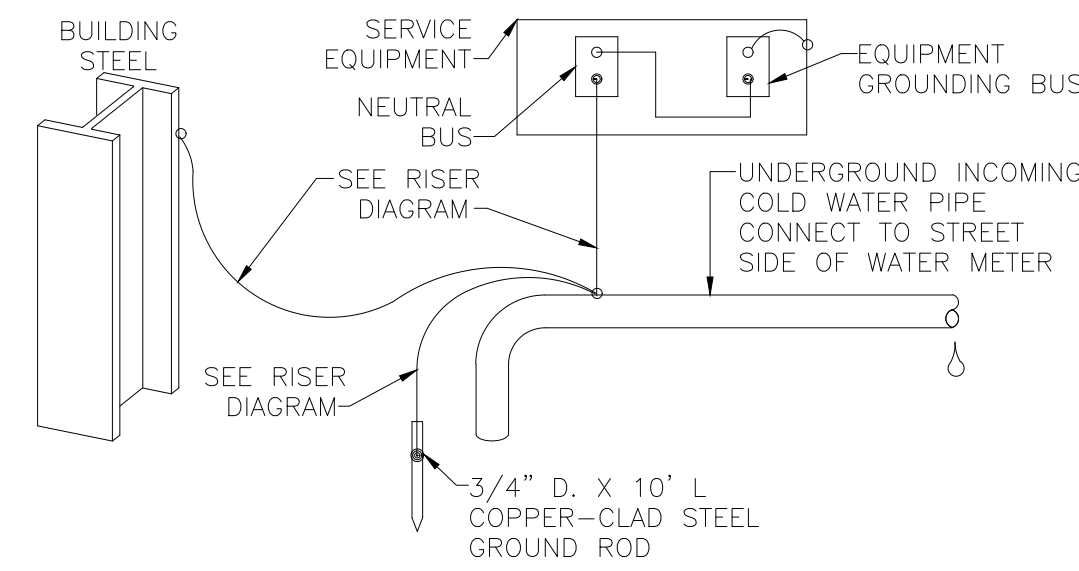
POWER  
PLAN-  
ELECTRICAL  
**E-102**  
JOB #

ISSUE  
DATE 09-26-2023

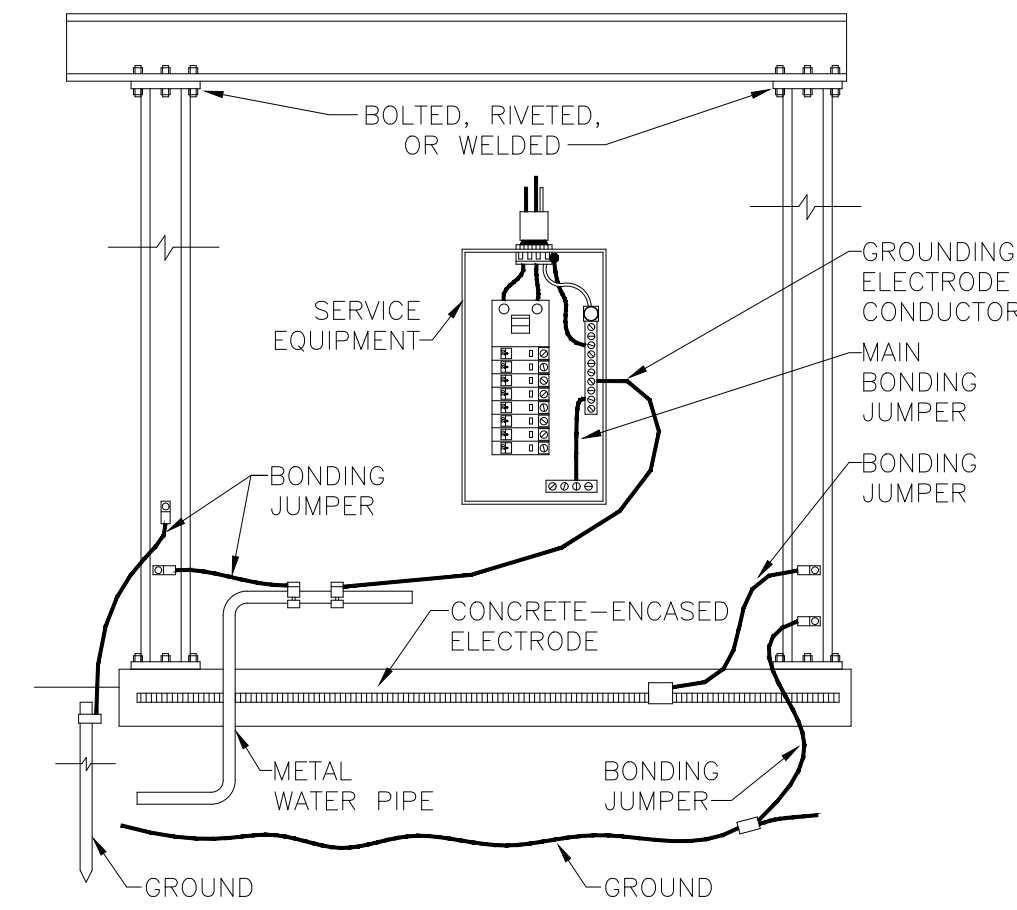
**HACKENBERG  
ENGINEERING**  
Hackenberg Engineering  
PO Box 1886  
Winter Park, FL 32790



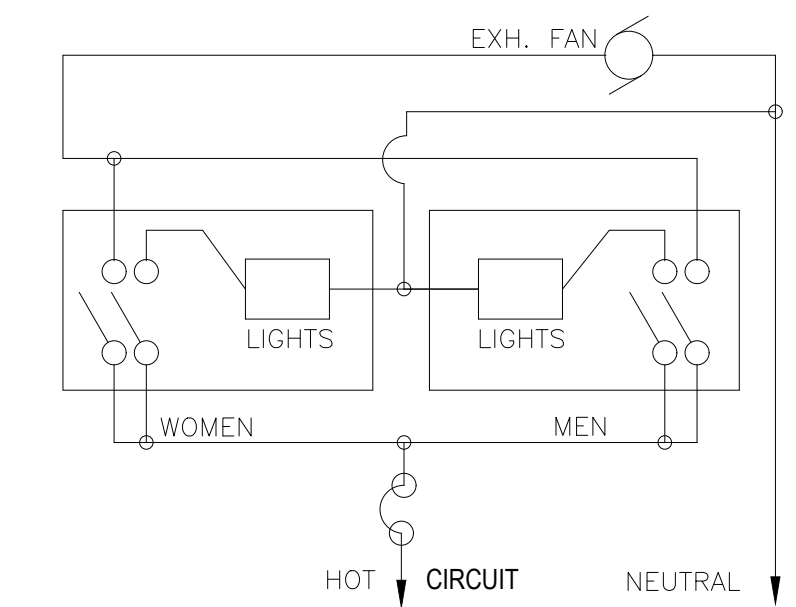
**7 GROUNDING & BONDING DETAIL**  
SCALE: NONE



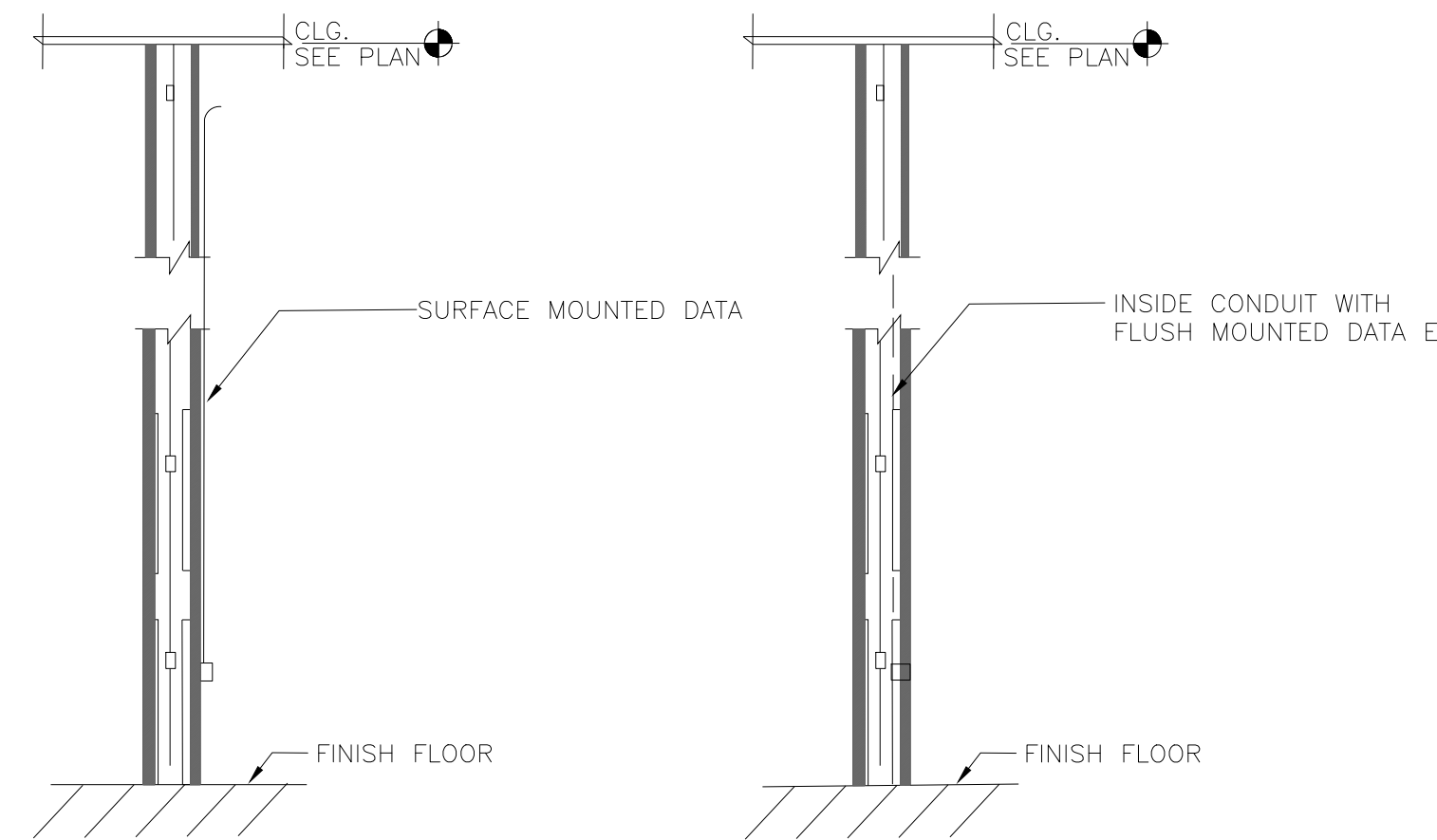
**6 GROUNDING SYSTEM DETAIL**  
SCALE: NONE



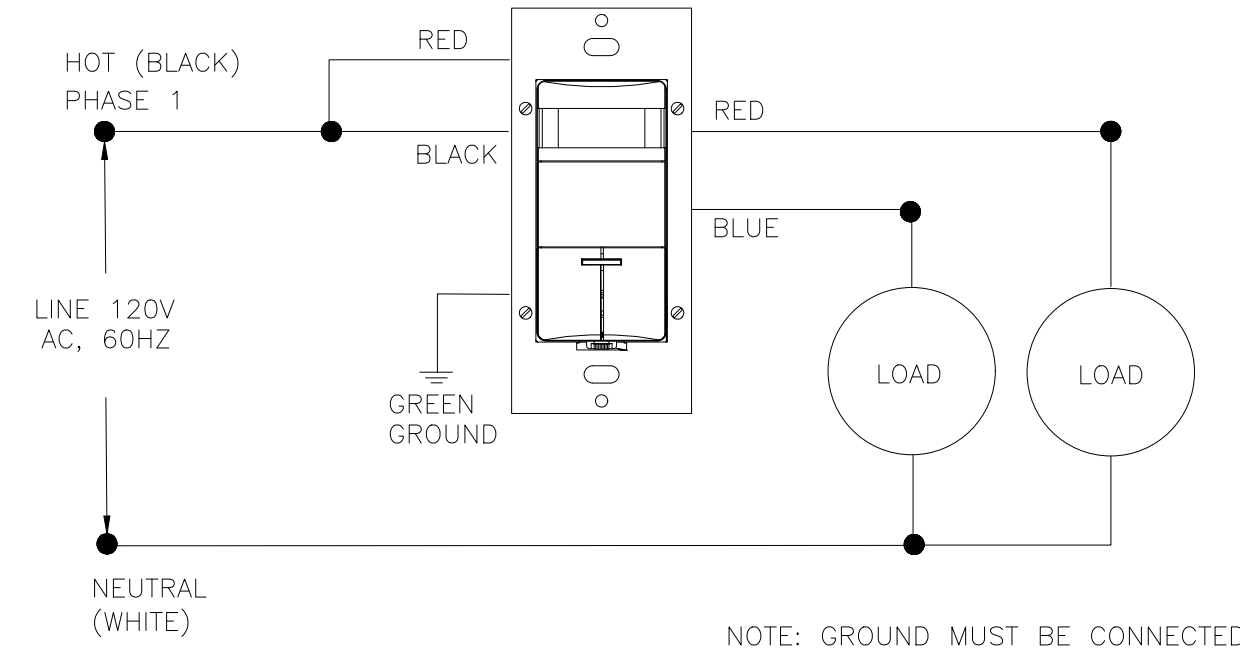
**5 GROUNDING ELECTRODE SYSTEM DETAIL**  
SCALE: NONE



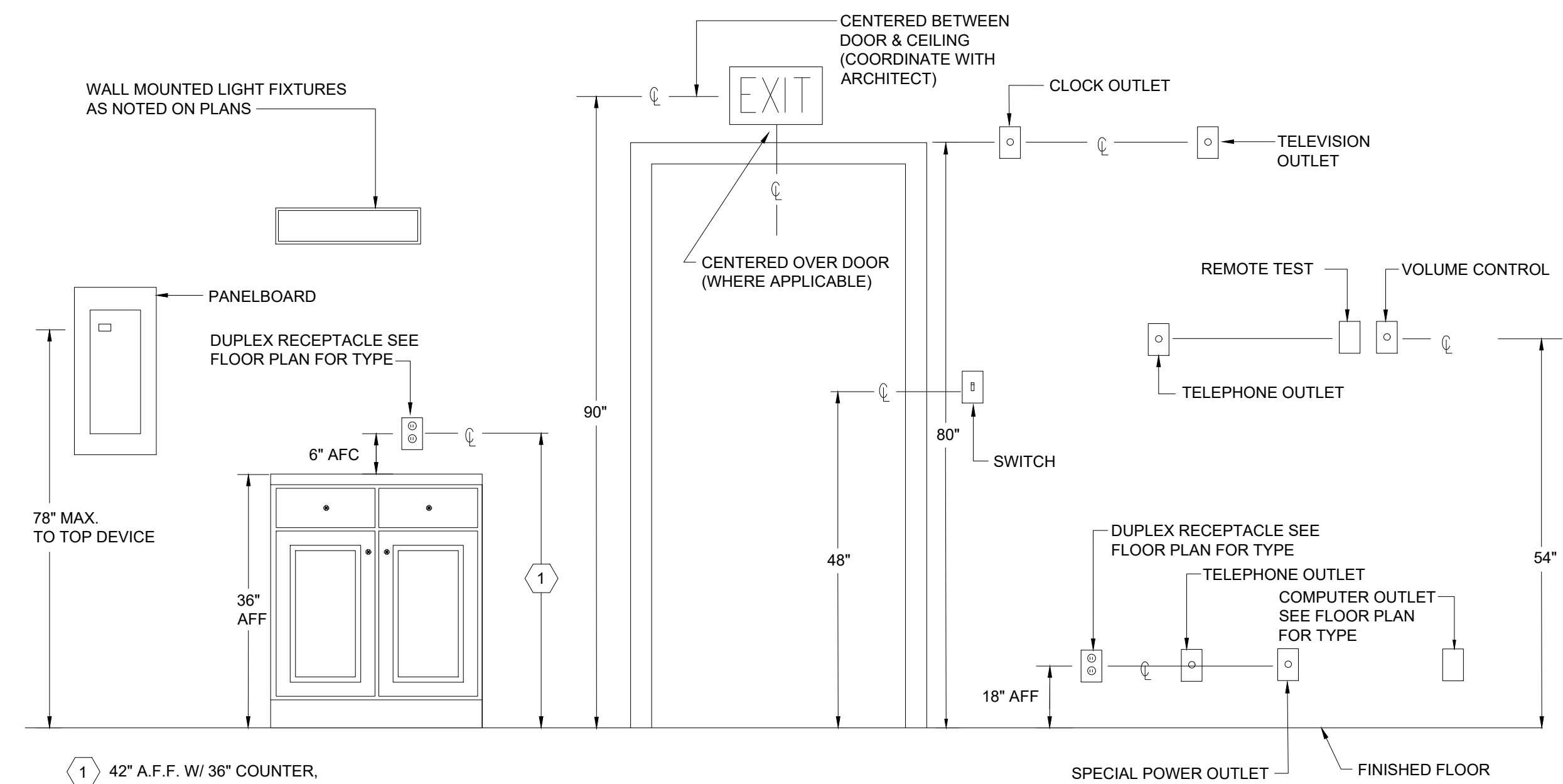
**4 EXHAUST FAN CONTROL DIAGRAM**  
SCALE: NONE



**3 RECEPTACLE / DATA MOUNTED DETAIL**  
SCALE: N.T.S



**2 WALL SWITCH OCCUPANCY SENSOR**  
SCALE: NONE



**1 MOUNTING HEIGHTS DETAILS**  
SCALE: NONE

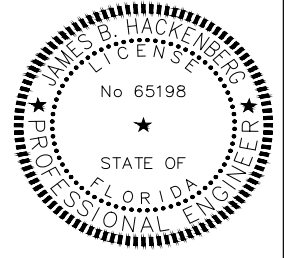
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DETAILS-ELECTRICAL

E-501

ISSUE DATE 09-26-2023

JOB # GC-22-010

**HACKENBERG  
ENGINEERING**

Hackenberg Engineering  
PO Box 1886  
Winter Park, FL 32790

UPDATED: 9/8/2023 12:23 pm  
ISSUED FOR: APPROVAL

**PANEL A**

LOCATION: WORK 124  
VOLTAGE: 120Y/208V  
TRIM: SURFACE

MAIN: 400A MCB  
SYSTEM: 3 $\phi$ , 4W  
BUS RATING: 400A

CONN. LOAD: 89.3 KVA  
FEED: TOP  
GROUND BUS: YES COPPER

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	AHU-1	3/4"	#10	-	#10	20/3	A	1859 720			R	20/1	3/4"	#10	#10	#10	TELEPHONE BOARD	2
3	"	"	#10	-	"	"	"	1859 80			R	20/1	3/4"	#10	#10	#10	EF-1	4
5	"	"	#10	-	"	"	"	1859 80			R	20/1	3/4"	#10	#10	#10	EF-2	6
7	AHU-2	3/4"	#10	-	#10	20/3	A	1859 80			R	20/1	3/4"	#10	#10	#10	EF-3	8
9	"	"	#10	-	"	"	"	1859 80			A	15/3	3/4"	#10	-	#10	AC-1/CU-1	10
11	"	"	#10	-	"	"	"	1859 80			R	20/1	3/4"	#10	#10	#10	"	12
13	HP-1	1"	#4	-	#10	60/3	A	5728 835			A	15/3	3/4"	#10	-	#10	"	14
15	"	"	#4	-	"	"	"	5728 835			A	15/3	3/4"	#10	-	#10	AC-2/CU-2	16
17	"	"	#4	-	"	"	"	5728 835			A	15/3	3/4"	#10	-	#10	"	18
19	HP-2	1"	#4	-	#10	60/3	A	5728 835			A	15/3	3/4"	#10	-	#10	"	20
21	"	"	#4	-	"	"	"	5728 835			M	20/1	3/4"	#10	#10	#10	RCP	22
23	"	"	#4	-	"	"	"	5728 835			R	20/1	3/4"	#10	#10	#10	DRINKING FOUNTAIN	24
25	SECURITY KEY PAD	3/4"	#10	#10	#10	20/1	R	450 120			R	20/1	3/4"	#10	#10	#10	GW	26
27	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	28
29	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	30
31	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	32
33	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	34
35	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	36
37	PANEL-C	-	-	-	-	100/3	SF	5209 9490			SF	200/3	-	-	-	-	PANEL-B	38
39	"	-	-	-	-	"	SF	4045 8160			SF	-	-	-	-	-	"	40
41	"	-	-	-	-	"	SF	3960 5760			SF	-	-	-	-	-	"	42

32903 29221 27144 FROM: METER

LOADS (IN VA )	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	REMAINING CONTINUOUS LOADS	0	1.25	0	
LIGHTING	5634	1.25	7043	NON-SEASONAL MOTORS	92	1.0	92	REMAINING NON-CONTINUOUS LOADS	0	1.0	0	
RECEPTS TO 10 KVA	10000	1.0	10000	LARGEST MOTOR	0	0.25	0	DEMAND LOADS	0	1.0	0	
RECEPTS REMAINING	17610	0.5	8805	WATER HEATING	0	1.0	0	TOTAL CONNECTED LOAD	89.3	KVA	248	AMPS
SPACE HEATING	0	0.0	0	KITCHEN EQUIP.	5400	1.0	5400	MIN. FEEDER/PANEL CAP.	81.9	KVA	227.4	AMPS
AIR CONDITIONING	50532	1.0	50532					OVERALL DEMAND FACTOR	0.92			

UPDATED: 9/8/2023 6:41 pm  
ISSUED FOR: APPROVAL

**PANEL B**

LOCATION: WORK 124  
VOLTAGE: 120Y/208V  
TRIM: SURFACE

MAIN: 200A MCB  
SYSTEM: 3 $\phi$ , 4W  
BUS RATING: 200A

CONN. LOAD: 23.6 KVA  
FEED: TOP  
GROUND BUS: YES COPPER

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	KITCHEN APPLIANCE CKT#1	3/4"	#10	#10	#10	20/1	K	1500 900			R	20/1	3/4"	#10	#10	#10	TUTORIAL ROOM REC.	2
3	KITCHEN APPLIANCE CKT#1	3/4"	#10	#10	#10	20/1	K	1500 900			R	20/1	3/4"	#10	#10	#10	TUTORIAL ROOM REC.	4
5	REFRIGERATOR	3/4"	#10	#10	#10	20/1	K	900 900			R	20/1	3/4"	#10	#10	#10	TUTORIAL ROOM REC.	6
7	DISHWASHER	3/4"	#10	#10	#10	20/1	K	1500 900			R	20/1	3/4"	#10	#10	#10	CORRIDOR REC.	8
9	BREAK RM. REC.	3/4"	#10	#10	#10	20/1	R	540 720			R	20/1	3/4"	#10	#10	#10	TEEN COLLECTION RM REC.	10
11	TOWN CLEAR. REC.	3/4"	#10	#10	#10	20/1	R	720 360			R	20/1	3/4"	#10	#10	#10	TEEN COLLECTION RM REC.	12
13	STORY RM. REC.	3/4"	#10	#10	#10	20/1	R	1080 360			R	20/1	3/4"	#10	#10	#10	STO RM. REC.	14
15	STORY RM. TV	3/4"	#10	#10	#10	20/1	R	360 900			R	20/1	3/4"	#10	#10	#10	MULTIPURPOSE RM. REC.	16
17	BLDG PERMITTING REC.	3/4"	#10	#10	#10	20/1	R	720 360			R	20/1	3/4"	#10	#10	#10	MULTIPURPOSE RM. TV	18
19	CORRIDOR REC.	3/4"	#10	#10	#10	20/1	R	360 1260			R	20/1	3/4"	#10	#10	#10	LOBBY REC.	20
21	LIBRARIAN RM. REC.	3/4"	#10	#10	#10	20/1	R	720 360			R	20/1	3/4"	#10	#10	#10	LOBBY TV	22
23	JAN RM. REC.	3/4"	#10	#10	#10	20/1	R	540 360			R	20/1	3/4"	#10	#10	#10	WASHROOM REC.	24
25	IT RM./STORAGE REC.	3/4"	#10	#10	#10	20/1	R	900 300			R	20/1	3/4"	#10	#10	#10	ADULT COLLECTION FB.	26
27	MECH RM. REC.	3/4"	#10	#10	#10	20/1	R	720 900			R	20/1	3/4"	#10	#10	#10	ADULT COLLECTION RM. REC.	28
29	STOR. RM RCPT	3/4"	#10	#10	#10	20/1	R	180 900			R	20/1	3/4"	#10	#10	#10	ADULT COLLECTION RM. REC.	30
31	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	32
33	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	34
35	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	36
37	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	38
39	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	40
41	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	42

9480 8160 5940 FROM: PANEL A

LOADS (IN VA )	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	REMAINING CONTINUOUS LOADS	0	1.25	0	
LIGHTING	0	1.25	0	NON-SEASONAL MOTORS	0	1.0	0	REMAINING NON-CONTINUOUS LOADS	0	1.0	0	
RECEPTS TO 10 KVA	10000	1.0	10000	LARGEST MOTOR	0	0.25	0	DEMAND LOADS	0	1.0	0	
RECEPTS REMAINING	8180	0.5	4090	WATER HEATING	0	1.0	0	TOTAL CONNECTED LOAD	23.6	KVA	65.5	AMPS
SPACE HEATING	0	0.0	0	KITCHEN EQUIP.	5400	0.8	4320	MIN. FEEDER/PANEL CAP.	18.4	KVA	51.1	AMPS
AIR CONDITIONING	0	1.0	0					OVERALL DEMAND FACTOR	0.78			

UPDATED: 9/22/2023 7:20 pm  
ISSUED FOR: APPROVAL

**PANEL C**

LOCATION: WORK 124  
VOLTAGE: 120Y/208V  
TRIM: SURFACE

MAIN: 100A MLO  
SYSTEM: 3 $\phi$ , 4W  
BUS RATING: 100A

CONN. LOAD: 14.2 KVA  
FEED: TOP  
GROUND BUS: YES COPPER

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	LIGHTING (CORRIDOR,STOR.,IT,LIBRARIAN)	3/4"	#10	#10	#10	20/1	L	711 608			L	20/1	3/4"	#10	#10	#10	LIGHTING CKT(STORAGE,CHILDREN,STORY)	2
3	LIGHTING CKT (TUTO., CORRIDOR 121)	3/4"	#10	#10	#10	20/1	L	875 455			L	20/1	3/4"	#10	#10	#10	LIGHTING CKT (CIRCULATION DESK)	4
5	LIGHTING CKT (CIRCULATION,ADULT)	3/4"	#10	#10	#10	20/1	L	204 888			L	20/1	3/4"	#10	#10	#10	LIGHTING CKT (CIRCULATION DESK)	6
7	FUTURE EXPANSION	3/4"	#10	#10	#10	30/2	R	500 500			R	30/2	3/4"	#10	#10	#10	FUTURE EXPANSION	8
9	"	"	#10	#10	#10	"	"	500 500			R	"	"	#10	#10	#10	"	10
11	PRINTER (CIRCULATION DESK)	3/4"	#10	#10	#10	20/1	R	360 720			R	20/1	3/4"	#10	#10	#10	DIGITAL RESOURCE REC.	12
13	CIRCULATION DESK REC.	3/4"	#10	#10	#10	20/1	R	720 720			R	20/1	3/4"	#10	#10	#10	DIGITAL RESOURCE REC.	14
15	CHILDREN COLL. RM. REC.	3/4"	#10	#10	#10	20/1	R	900 900			R	20/1	3/4"	#10	#10	#10	DIGITAL RESOURCE REC.	16
17	CHILDREN COLL. RM. REC.	3/4"	#10	#10	#10	20/1	R	720 720			L	20/1	3/4"	#10	#10	#10	LIGHTING CKT(BREAK,TOWN,BLDG)	18
19	EXTERIOR RCPT.	3/4"	#10	#10	#10	20/1	R	720 681			L	20/1	3/4"	#10	#10	#10	LIGHTING(LOBBY,REST,MULTIPURPOSE)	20
21	LIGHTING CKT(STO.,TEEN)	3/4"	#10	#10	#10	20/1	L	255 500			R	30/2	3/4"	#10	#10	#10	FUTURE EXPANSION	22
23	STRIP LIGHT AT CIRCULATION DESK 104	3/4"	#12	#12	#12	20/1	L	46 500			-	-	-	-	-	-	"	24
25	STRIP LIGHT AT LIBRARIAN 114	3/4"	#12	#12	#12	20/1	L	99 99			-	-	-	-	-	-	SPACE	26
27	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	28
29	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	30
31	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	32
33	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	34
35	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	36
37	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	38
39	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	40
41	SPACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SPACE	42

5259 4545 4357 FROM: PANEL-A

LOADS (IN VA )	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	REMAINING CONTINUOUS LOADS	0	1.25	0	
LIGHTING	5581	1.25	6976	NON-SEASONAL MOTORS	0	1.0	0	REMAINING NON-CONTINUOUS LOADS	0	1.0	0	
RECEPTS TO 10 KVA	8580	1.0	8580	LARGEST MOTOR	0	0.25	0	DEMAND LOADS	0	1.0	0	
RECEPTS REMAINING	0	0.5	0	WATER HEATING	0	1.0	0	TOTAL CONNECTED LOAD	14.2	KVA	39.3	AMPS
SPACE HEATING	0	0.0	0	KITCHEN EQUIP.	0	1.0	0	MIN. FEEDER/PANEL CAP.	15.6	KVA	43.2	AMPS
AIR CONDITIONING	0	1.0	0					OVERALL DEMAND FACTOR	1.10			

