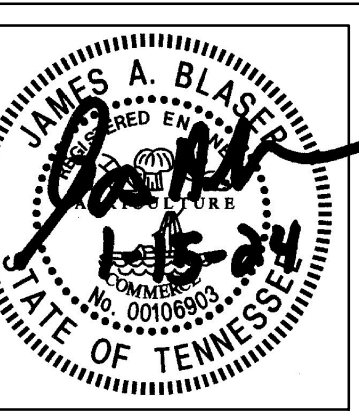


plotfile: 1/18/2024 11:19:16 AM file: 22120 ELECTRICAL.DWG



- CODED NOTES
1. PROVIDE POWER CONNECTION TO HOT BOX HEATER (2 KW, 208V, 1Ø). PROVIDE SUPPLEMENTAL GROUND ROD AT EQUIPMENT.
 2. PROVIDE TAMPER SWITCH AT POST INDICATING VALVE (PIV). PROVIDE 1" UNDERGROUND CONDUIT AND WIRING TO TIE INTO THE FIRE ALARM SYSTEM.
 3. EXTEND THREE EXISTING HELIPORT BRANCH CIRCUITS TO PANEL P12 (20A, 120V, 1Ø). EACH CIRCUIT IS CURRENTLY FED FROM THE EXISTING PANEL NEAR PANEL P12.

No.	Date	Description



Renovations for First Floor
Greene County Government
 Greenville, Tennessee

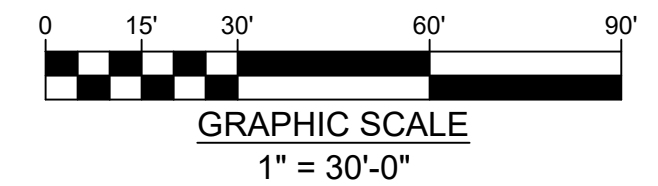
a. dave wright
 architect

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Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	23-116
Scale:	as noted
Date:	01-15-24
File Name:	22120 electrical
Drawing Title:	Electrical Site Plan
Sheet No.	E0.1

1 Electrical Site Plan
 Scale: 1"=30'-0"



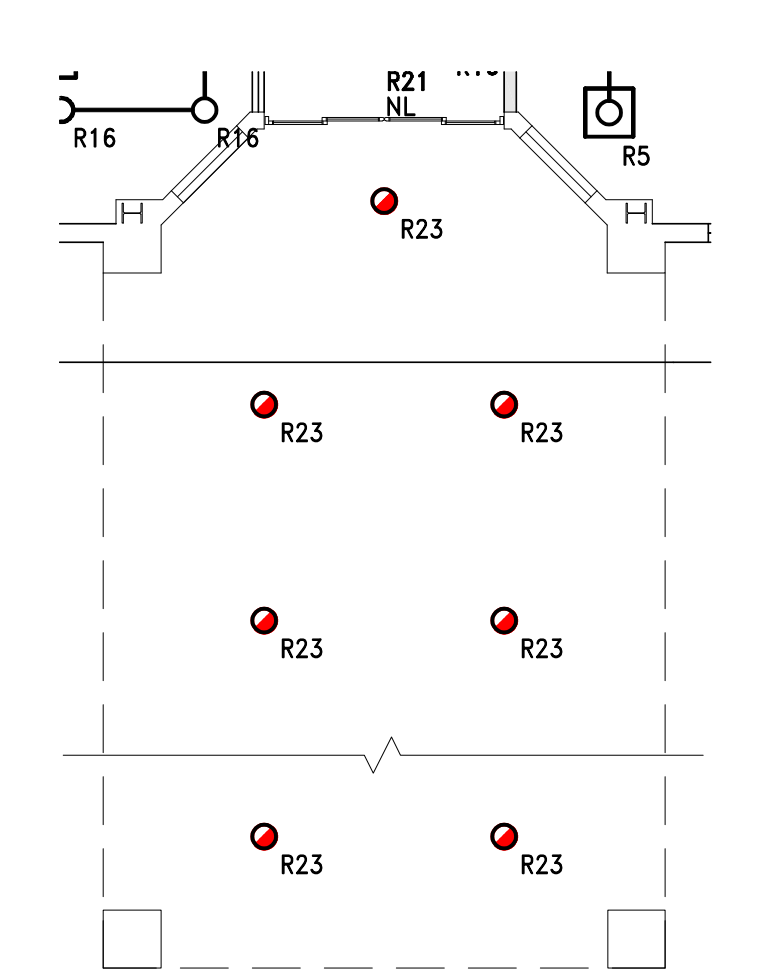
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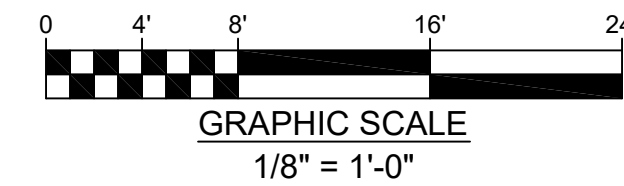
BLASER ENG JOB# 22-120



1 Lighting Plan - First Floor Area "A"
 Scale: 1/8"=1'-0"



2 Canopy Plan
 Scale: 1/8"=1'-0"

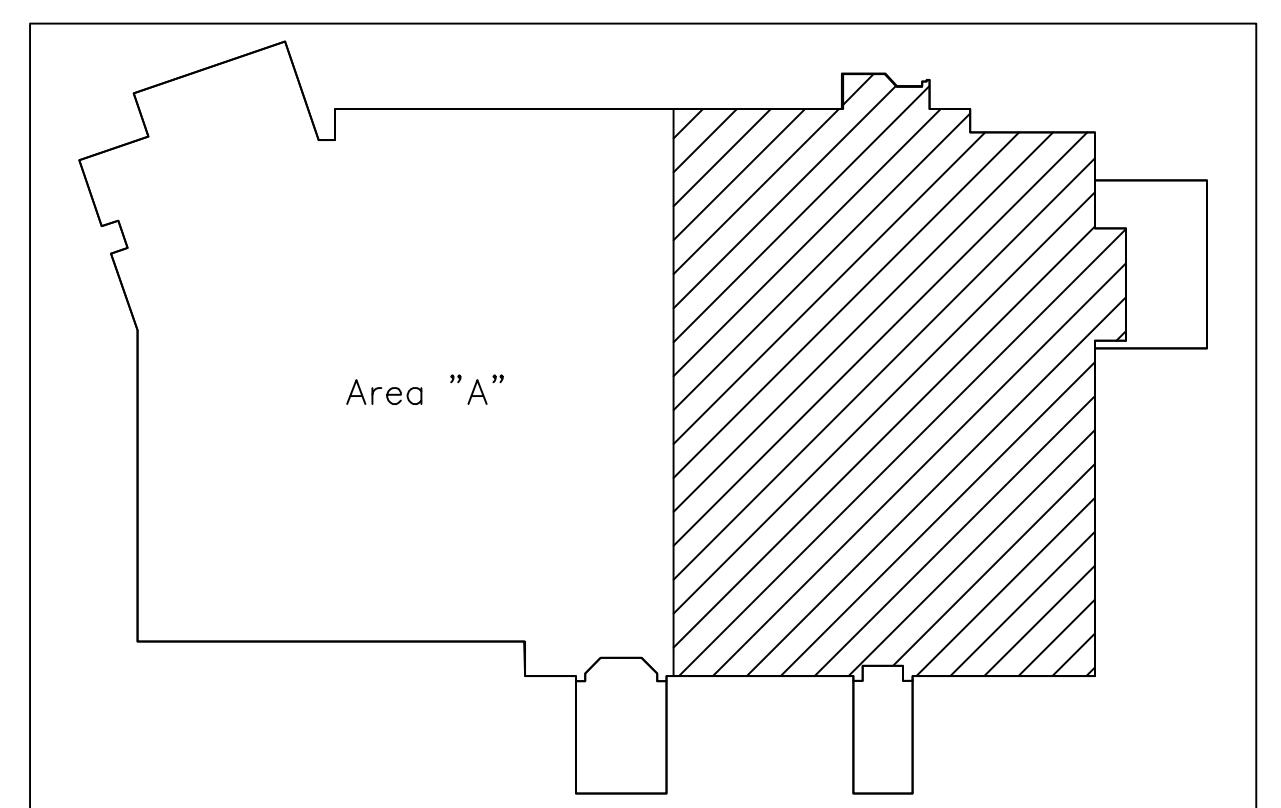


GENERAL NOTES

- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES.
- PROVIDE DIMMING STATIONS AND ENTRY STATIONS WHERE SHOWN TO CONTROL THE LIGHTING CONTROL SYSTEM IN EACH AREA/ROOM.
- THE LIGHTING CONTROL SYSTEM SHALL HAVE ALL COMPONENTS NECESSARY TO MAKE THE SYSTEM OPERATIONAL. THIS INCLUDES THE OCCUPANCY SENSORS, POWER SUPPLIES, SWITCH AND DIMMING PACKS, ALL CATS CONTROL WIRING, ETC.
- ALL EMERGENCY LIGHTING FIXTURES SHALL AUTOMATICALLY COME ON AT FULL BRIGHTNESS IN THE EVENT OF THE LOSS OF NORMAL POWER. PROVIDE UL924 LISTED DEVICES AS NECESSARY TO OVERRIDE ROOM LIGHTING CONTROLS AND TRANSFER TO EMERGENCY POWER.
- INTERIOR LIGHTING DENSITY CALCULATED AT 0.429 W/SQ.FT. ON THE FIRST FLOOR.
- PROVIDE LOW VOLTAGE WIRING BETWEEN OCCUPANCY SENSORS. CIRCUITRY FOR THE SENSORS SHALL FOLLOW THE SAME SWITCHING ZONES AS THE LIGHTING CIRCUITRY.
- LOCATION OF LIGHTING FIXTURES IN MECHANICAL ROOMS SHALL BE COORDINATED IN FIELD WITH MECHANICAL DUCTWORK, PIPING, ETC.
- ALL EXTERIOR BUILDING MOUNTED LIGHTING FIXTURES TYPES R23, W24, AND W25 SHALL BE CIRCUITED TO EEH11-11. #10 AWG CONDUCTORS SHALL BE PULLED THROUGHOUT ENTIRE CIRCUIT. CIRCUIT SHALL BE CONTROLLED BY A PHOTOCCELL. SEE DETAIL.
- CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
- CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFEED ANY DOWN STREAM DEVICES TO REMAIN (E), OR RELOCATED (R).
- ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
- EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.

CODED NOTES

- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-9. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WATSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- QUEUE LINE AND CORRIDOR AREAS TO BE CONTROLLED BY A DIGITAL TIME CLOCK DURING NORMAL OPERATING HOURS AND BY OCCUPANCY SENSOR(S) AFTER HOURS. DIGITAL TIME CLOCK TO BE LOCATED IN THE ELECTRICAL ROOM.
- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-2. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WATSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- STAIR/EGRESS LIGHTING TO DIM TO 50% WHEN UNOCCUPIED.
- PROVIDE CONDUIT FOR FUTURE CONNECTION TO UPPER FLOOR(S) STAIRWELL LIGHTING.
- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-10. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WATSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-12. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WATSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- PROVIDE TOUCHSCREEN WALL STATION TO ADJUST THE LIGHTING IN THE COMMISSION ROOM.
- SEE PLAN ON THIS SHEET FOR ADDITIONAL CANOPY LIGHTING.
- EXHAUST FAN TO BE CONTROLLED BY ROOM OCCUPANCY SENSOR(S) VIA ADDITIONAL SWITCHPACK, OR BY DUAL POLE WALL MOUNTED OCCUPANCY SENSOR SHARED WITH LIGHTING CONTROLS. DEVICE SHALL BE UL LISTED FOR 277 VOLT LIGHTING AND 120 VOLT FAN CONNECTIONS.

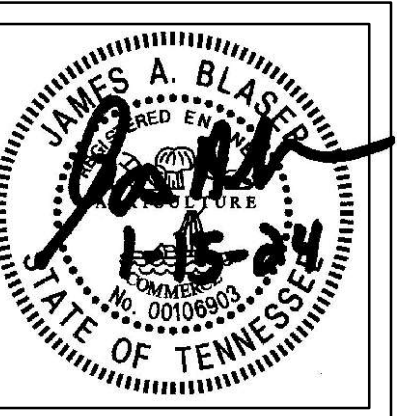


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BLASER ENG JOB# 22-120

Revisions	Description	Date	No.



Renovations for First Floor
Greene County Government
 Greeneville, Tennessee

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Drawn: J. Blaser
 Checked: J. Blaser
 Job No: 23-116
 Scale: as noted
 Date: 01-15-24
 File Name: 22120 electrical
 Drawing Title:
 Lighting Plan
 First Floor Area "A"
 Sheet No.
E1.1

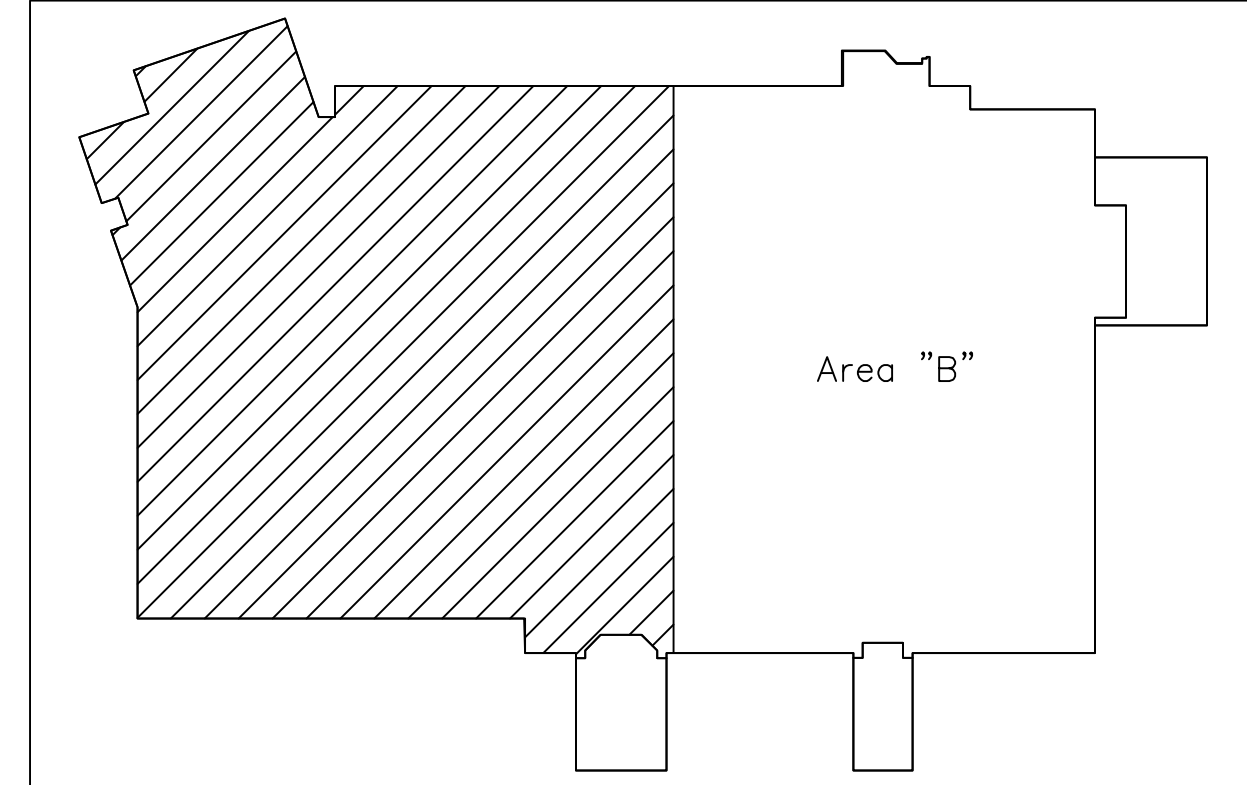
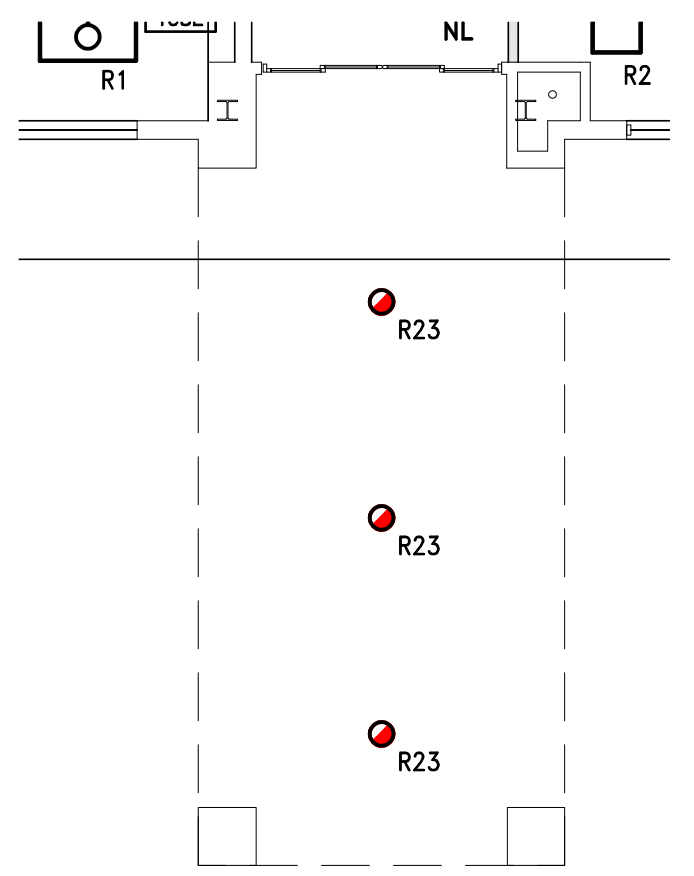


GENERAL NOTES

- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES.
- PROVIDE DIMMING STATIONS AND ENTRY STATIONS WHERE SHOWN TO CONTROL THE LIGHTING CONTROL SYSTEM IN EACH AREA/ROOM.
- THE LIGHTING CONTROL SYSTEM SHALL HAVE ALL COMPONENTS NECESSARY TO MAKE THE SYSTEM OPERATIONAL. THIS INCLUDES THE OCCUPANCY SENSORS, POWER SUPPLIES, SWITCH AND DIMMING PACKS, ALL CATS CONTROL WIRING, ETC.
- ALL EMERGENCY LIGHTING FIXTURES SHALL AUTOMATICALLY COME ON AT FULL BRIGHTNESS IN THE EVENT OF THE LOSS OF NORMAL POWER. PROVIDE UL924 LISTED DEVICES AS NECESSARY TO OVERRIDE ROOM LIGHTING CONTROLS AND TRANSFER TO EMERGENCY POWER.
- INTERIOR LIGHTING DENSITY CALCULATED AT 0.429 W/SQ.FT. ON THE FIRST FLOOR.
- PROVIDE LOW VOLTAGE WIRING BETWEEN OCCUPANCY SENSORS. CIRCUITRY FOR THE SENSORS SHALL FOLLOW THE SAME SWITCHING ZONES AS THE LIGHTING CIRCUITRY.
- LOCATION OF LIGHTING FIXTURES IN MECHANICAL ROOMS SHALL BE COORDINATED IN FIELD WITH MECHANICAL DUCTWORK, PIPING, ETC.
- ALL EXTERIOR BUILDING MOUNTED LIGHTING FIXTURES TYPES R23, W24, AND W25 SHALL BE CIRCUITED TO EEH11-11. #10 AWG CONDUCTORS SHALL BE PULLED THROUGHOUT ENTIRE CIRCUIT. CIRCUIT SHALL BE CONTROLLED BY A PHOTOCELL. SEE DETAIL.
- CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
- CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFEED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.
- ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION; OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
- EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.

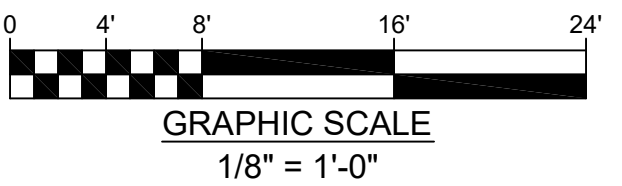
CODED NOTES

- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-5. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WAITSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- QUEUE LINE AND CORRIDOR AREAS TO BE CONTROLLED BY A DIGITAL TIME CLOCK DURING NORMAL OPERATING HOURS AND BY OCCUPANCY SENSOR(S) AFTER HOURS. DIGITAL TIME CLOCK TO BE LOCATED IN THE ELECTRICAL ROOM.
- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-5. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WAITSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-5. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WAITSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-7. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WAITSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-10. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WAITSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- STAIR/EGRESS LIGHTING TO DIM TO 50% WHEN UNOCCUPIED.
- PROVIDE CONDUIT FOR FUTURE CONNECTION TO UPPER FLOOR(S) STAIRWELL LIGHTING.
- PROVIDE POWER FOR EMERGENCY LIGHTS AND EXIT SIGNAGE FROM EMERGENCY LIGHTING CIRCUIT EEH11-10. FIXTURE TO BE CONTROLLED BY ROOM/AREA OCCUPANCY SENSOR THROUGH A UL924 LISTED SWITCHPACK. FIXTURE TO OVERRIDE ROOM CONTROLS UPON LOSS OF NORMAL POWER. DEVICE EQUAL TO WAITSTOPPER ELCU-200. MULTIPLE EMERGENCY FIXTURES IN THE SAME ROOM CAN BE ON ONE UL924 DEVICE.
- SEE PLAN ON THIS SHEET FOR ADDITIONAL CANOPY LIGHTING.
- EXHAUST FAN TO BE CONTROLLED BY ROOM OCCUPANCY SENSOR(S) VIA ADDITIONAL SWITCHPACK, OR BY DUAL POLE WALL MOUNTED OCCUPANCY SENSOR SHARED WITH LIGHTING CONTROLS. DEVICE SHALL BE UL LISTED FOR 277 VOLT LIGHTING AND 120 VOLT FAN CONNECTIONS.



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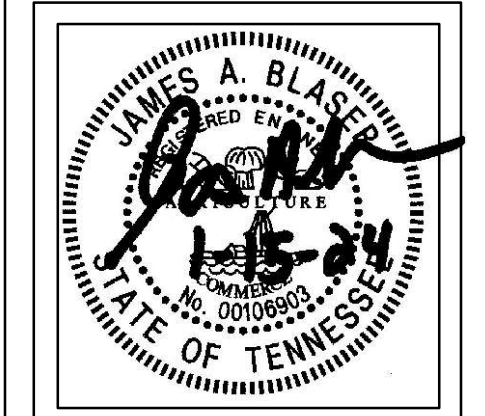


BLASER ENG JOB# 22-120

1 Lighting Plan - First Floor Area "B"
 Scale: 1/8"=1'-0"

2 Canopy Plan
 Scale: 1/8"=1'-0"

Revisions	Description	Date
No.		



Renovations for First Floor
Greene County Government
 Greeneville, Tennessee

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 Greeneville, TN 37743
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Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	23-116
Scale:	as noted
Date:	01-15-24
File Name:	22120 electrical
Drawing Title:	Lighting Plan First Floor Area "B"
Sheet No.	E1.2



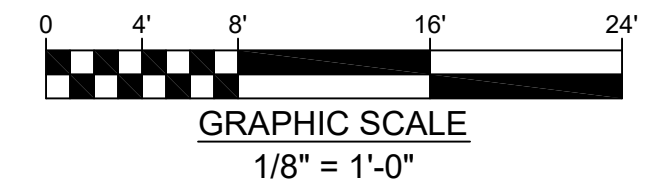
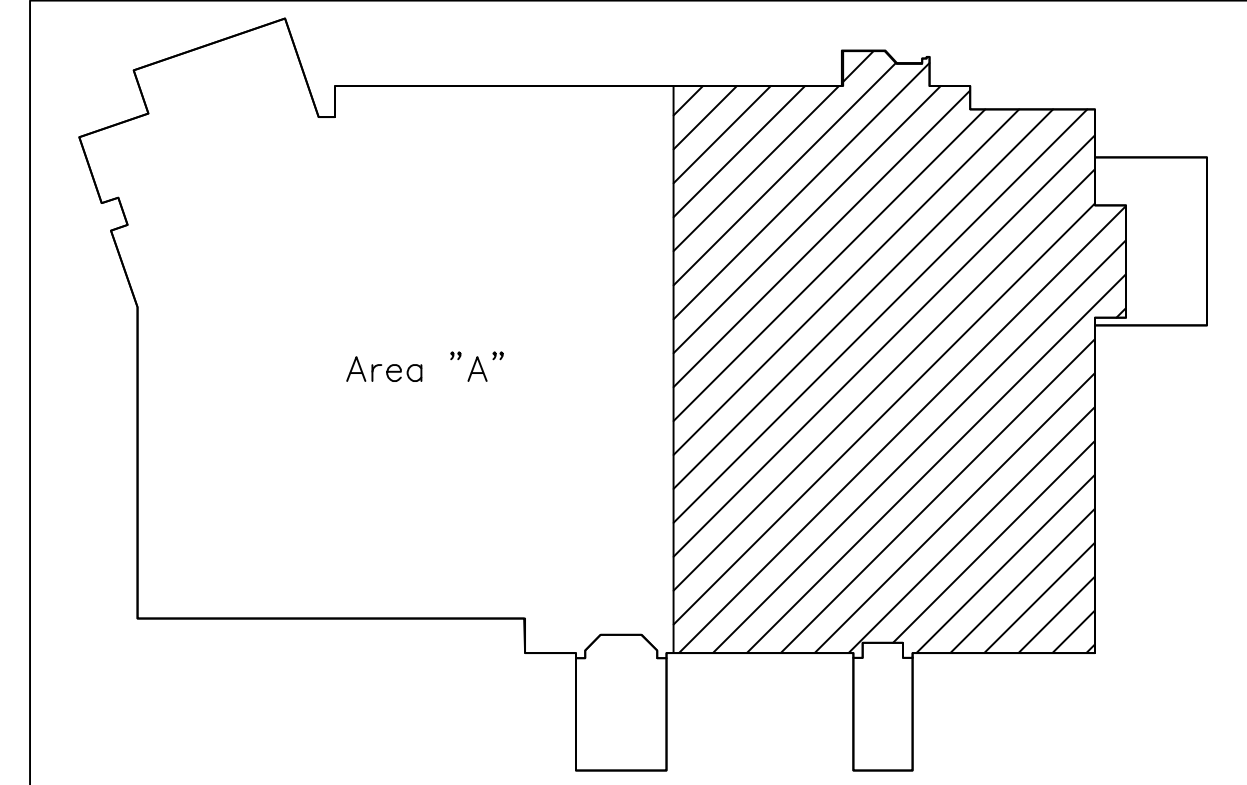
1 Power Plan - First Floor Area "A"
 E1.3 Scale: 1/8"=1'-0"

GENERAL NOTES

- EMERGENCY RESPONDER RADIO COVERAGE: INCLUDE FEE FOR TESTING THE BUILDING AS PART OF THE ELECTRICAL BID AND WORST CASE SCENARIO (FULL COVERAGE) PRICING AS A SEPARATE LINE ITEM. THE PRICING WILL BE ADJUSTED AFTER THE TEST RESULTS DETERMINE THE REQUIRED EQUIPMENT.
- COORDINATE CEILING MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- ALL DEVICES SHALL BE TAMPER RESISTANT PER NEC 406.12.
- ALL FIRE ALARM SYSTEM DEVICES SHALL BE FULLY COMPATIBLE WITH THE EXISTING EDWARDS EST3 FIRE ALARM SYSTEM.
- ALL WIRING SHALL BE PLENUM RATED, OR INSTALLED IN CONDUIT.
- PROVIDE #2 AWG GROUND WIRE FROM THE MAIN SERVICE GROUNDING BUS TO THE TELEPHONE TERMINAL BOARD. PROVIDE 0.25" X 2" X 12" COPPER GROUNDING BUS BAR MOUNTED ON INSULATED STANDOFFS ANCHORED WITH STAINLESS STEEL BRACKETS EQUAL TO ERICO T68-A12L06PT.
- PROVIDE 2 - 1" CONDUIT SLEEVES ABOVE ALL DOORS TO ROOMS SHOWN WITH PHONE, DATA, TELEVISION, OR OTHER LOW VOLTAGE COMMUNICATIONS SYSTEMS. PROVIDE 2 - 3" CONDUIT SLEEVES INTO ROOM WITH THE TELEPHONE TERMINAL BOARD (TTB).
- ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL STRING.
- CONTRACTOR SHALL COORDINATE ALL ADDITIONAL REQUIREMENTS WITH EACH UTILITY COMPANY AND TO INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH CONNECTION TO THE UTILITY SERVICES.
- PER NEC 210.8, ALL GROUND FAULT RECEPTACLES ARE TO BE IN A READILY ACCESSIBLE LOCATION. IF NOT, PROVIDE A GROUND FAULT CIRCUIT BREAKER IN THE PANEL, OR A DEAD FRONT GROUND FAULT DEVICE IN AN ACCESSIBLE LOCATION SERVING THE INACCESSIBLE DEVICE.
- COORDINATE ACTUAL MOUNTING LOCATIONS OF ALL EQUIPMENT WITH CONTRACTOR PROVIDING THE EQUIPMENT.
- PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SUPPLIED BY OTHERS.
- PROVIDE NEMA 3R RATED SAFETY SWITCHES WHERE LOCATED OUTDOORS.
- PROVIDE MATCHING PLUG, PIGTAIL, AND CONNECTIONS TO EQUIPMENT FOR ALL SPECIAL PURPOSE RECEPTACLES.
- COORDINATE RECEPTACLE PLACEMENT WITH ARCHITECTURAL SECTIONS AND ELEVATIONS.
- CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
- CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFEED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.
- ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
- EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.
- EXISTING RECEPTACLES AND OTHER ELECTRICAL BOXES MAY BE REUSED FOR NEW WORK IF LOCATED IN THE LOCATION SHOWN ON THE PLANS. ADJUST MOUNTING HEIGHTS TO MATCH HEIGHTS NOTED IN THESE PLANS. OTHER ELECTRICAL BOXES IN LOCATIONS NOT REUSED SHALL BE REMOVED AND THE WALL PATCHED TO MATCH EXISTING FINISHES.
- ANY REMOVED EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE OFFERED TO THE OWNER AS SALVAGE. IF THE OWNER DOES NOT WANT EQUIPMENT, THE CONTRACTOR SHALL RECYCLE OR DISPOSE OF IT PROPERLY.

CODED NOTES

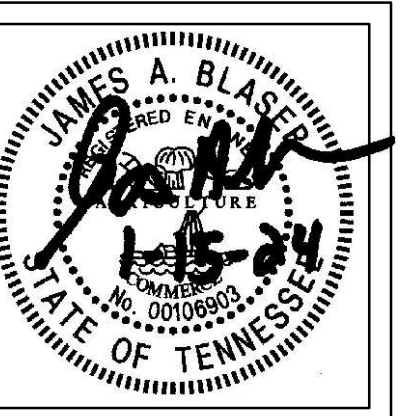
- PROVIDE WALL BOX AT 72" FOR A DUPLEX RECEPTACLE, CABLE TV, AND DATA JACKS MOUNTED BEHIND THE WALL MOUNTED TELEVISION. COORDINATE EXACT MOUNTING LOCATION AND HEIGHT WITH OWNER PRIOR TO ROUGH-IN. PROVIDE 2 - 1" CONDUITS TO ABOVE CEILING FOR LOW VOLTAGE WIRING. LEGRAND EVOLUTION SERIES 4 GANG WALL BOX #EFSB4 OR EQUAL.
- CONTRACTOR SHALL INSTALL GROUND FAULT RECEPTACLE IN AN ACCESSIBLE LOCATION. PROVIDE ADDITIONAL RECEPTACLES CONNECTED TO THE LOAD TERMINALS OF THE GROUND FAULT RECEPTACLE. LOCATE THESE RECEPTACLES BEHIND THE WATER COOLER COVER AS DIRECTED BY THE EQUIPMENT MANUFACTURER.
- PROVIDE CEILING MOUNTED RECEPTACLE AND DATA JACK FOR FUTURE CEILING MOUNTED PROJECTOR. COORDINATE EXACT MOUNTING LOCATION IN THE FIELD WITH THE OWNERS REPRESENTATIVE.
- PROVIDE UNDERSLAB CONDUITS TO FLOOR RECEPTACLE AND DATA JACK. PROVIDE A MINIMUM OF 1" CONDUIT FOR BOTH THE POWER AND LOW VOLTAGE WIRING. SAW CUT FLOOR AS REQUIRED AND PATCH TO MATCH EXISTING.
- EXISTING PANELS IN THIS AREA ARE TO BE USED FOR TEMPORARY CONSTRUCTION POWER AND REMOVED ONCE PERMANENT POWER IS AVAILABLE. PANELS AND FEEDERS SHALL BE REMOVED BACK TO THE SOURCE.



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BLASER ENG JOB# 22-120

Revisions	Description	Date	No.

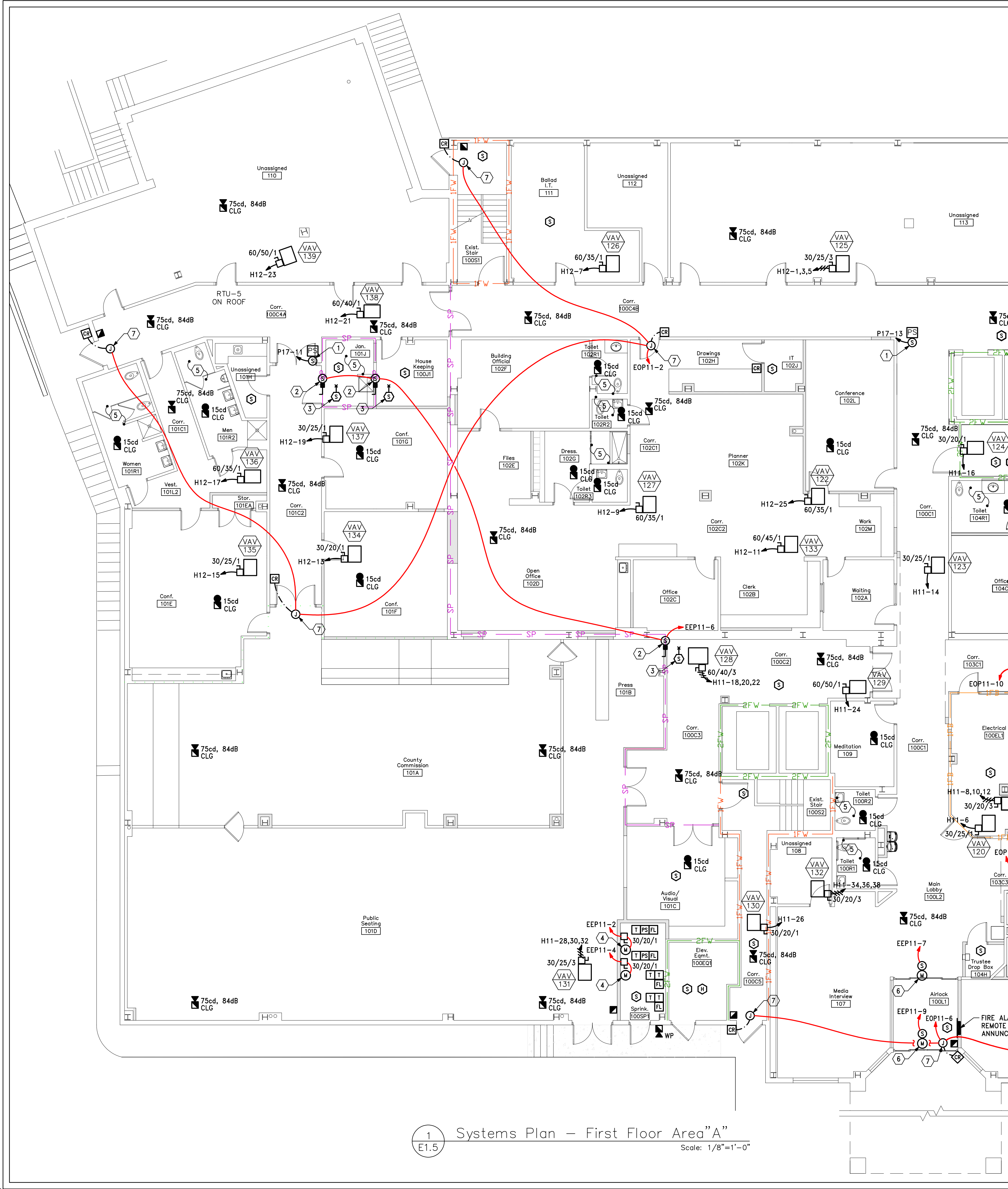


Renovations for First Floor
Greene County Government
 Greeneville, Tennessee

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Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	23-116
Scale:	as noted
Date:	01-15-24
File Name:	22120 electrical
Drawing Title:	Power Plan First Floor Area "A"
Sheet No.	E1.3

plotdate: 1/15/2024 4:23:58 PM file: 22120 ELECTRICAL.DWG



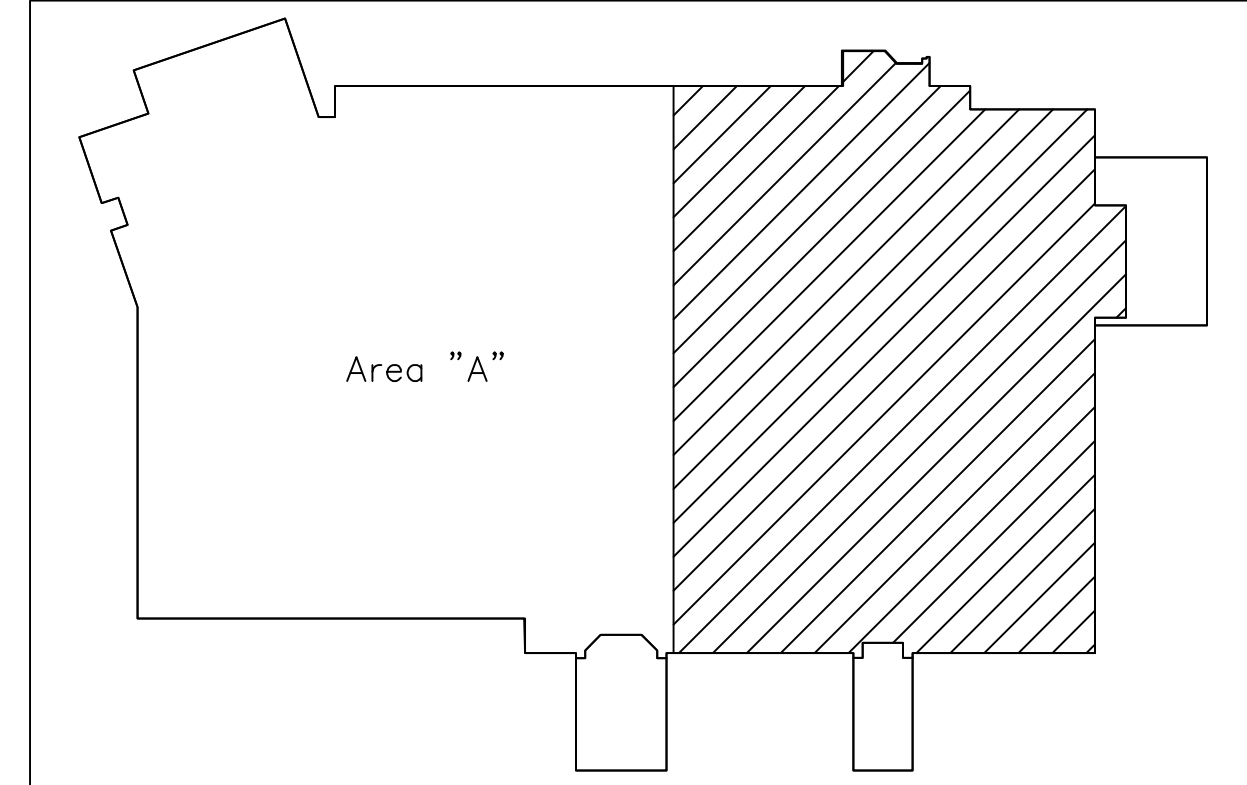
1 Systems Plan – First Floor Area "A"
 E1.5 Scale: 1/8"=1'-0"

GENERAL NOTES

- EMERGENCY RESPONDER RADIO COVERAGE: INCLUDE FEE FOR TESTING THE BUILDING AS PART OF THE ELECTRICAL BID AND WORST CASE SCENARIO (FULL COVERAGE) PRICING AS A SEPARATE LINE ITEM. THE PRICING WILL BE ADJUSTED AFTER THE TEST RESULTS DETERMINE THE REQUIRED EQUIPMENT.
- COORDINATE CEILING MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- ALL DEVICES SHALL BE TAMPER RESISTANT PER NEC 406.12.
- ALL FIRE ALARM SYSTEM DEVICES SHALL BE FULLY COMPATIBLE WITH THE EXISTING EDWARDS EST3 FIRE ALARM SYSTEM.
- ALL WIRING SHALL BE PLENUM RATED, OR INSTALLED IN CONDUIT.
- PROVIDE #2 AWG GROUND WIRE FROM THE MAIN SERVICE GROUNDING BUS TO THE TELEPHONE TERMINAL BOARD. PROVIDE 0.25" X 2" X 12" COPPER GROUNDING BUS BAR MOUNTED ON INSULATED STANDOFFS ANCHORED WITH STAINLESS STEEL BRACKETS EQUAL TO ERICO T68-A12L06PT.
- PROVIDE 2 - 1" CONDUIT SLEEVES ABOVE ALL DOORS TO ROOMS SHOWN WITH PHONE, DATA, TELEVISION, OR OTHER LOW VOLTAGE COMMUNICATIONS SYSTEMS. PROVIDE 2 - 3" CONDUIT SLEEVES INTO ROOM WITH THE TELEPHONE TERMINAL BOARD (TTB).
- ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL STRING.
- CONTRACTOR SHALL COORDINATE ALL ADDITIONAL REQUIREMENTS WITH EACH UTILITY COMPANY AND TO INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH CONNECTION TO THE UTILITY SERVICES.
- PER NEC 210.8, ALL GROUND FAULT RECEPTACLES ARE TO BE IN A READILY ACCESSIBLE LOCATION. IF NOT, PROVIDE A GROUND FAULT CIRCUIT BREAKER IN THE PANEL, OR A DEAD FRONT GROUND FAULT DEVICE IN AN ACCESSIBLE LOCATION SERVING THE INACCESSIBLE DEVICE.
- COORDINATE ACTUAL MOUNTING LOCATIONS OF ALL EQUIPMENT WITH CONTRACTOR PROVIDING THE EQUIPMENT.
- PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SUPPLIED BY OTHERS.
- PROVIDE NEMA 3R RATED SAFETY SWITCHES WHERE LOCATED OUTDOORS.
- PROVIDE MATCHING PLUG, PIGTAIL, AND CONNECTIONS TO EQUIPMENT FOR ALL SPECIAL PURPOSE RECEPTACLES.
- COORDINATE RECEPTACLE PLACEMENT WITH ARCHITECTURAL SECTIONS AND ELEVATIONS.
- CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
- CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFEED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.
- ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
- EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.
- EXISTING RECEPTACLES AND OTHER ELECTRICAL BOXES MAY BE REUSED FOR NEW WORK IF LOCATED IN THE LOCATION SHOWN ON THE PLANS. ADJUST MOUNTING HEIGHTS TO MATCH HEIGHTS NOTED IN THESE PLANS. OTHER ELECTRICAL BOXES IN LOCATIONS NOT REUSED SHALL BE REMOVED AND THE WALL PATCHED TO MATCH EXISTING FINISHES.
- ANY REMOVED EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE OFFERED TO THE OWNER AS SALVAGE. IF THE OWNER DOES NOT WANT EQUIPMENT, THE CONTRACTOR SHALL RECYCLE OR DISPOSE OF IT PROPERLY.

CODED NOTES

- PROVIDE POWER CONNECTION TO HVAC SYSTEM PRESSURE SENSOR, 120V, 1Ø.
- PROVIDE POWER CONNECTION TO SMOKE DAMPER, 120V, 1Ø.
- PROVIDE DUCT SMOKE DETECTOR TO CLOSE THE ASSOCIATED SMOKE DAMPER UPON DETECTION OF SMOKE.
- PROVIDE POWER CONNECTION TO DRY PIPE SPRINKLER SYSTEM AIR COMPRESSOR (1/2 HP, 120V, 1Ø).
- EXHAUST FAN IN THIS ROOM TO BE CONTROLLED BY ROOM OCCUPANCY SENSOR(S) VIA ADDITIONAL SWITCHPACK, OR BY DUAL POLE WALL MOUNTED OCCUPANCY SENSOR SHARED WITH LIGHTING CONTROLS. DEVICE SHALL BE UL LISTED FOR 277 VOLT LIGHTING AND 120 VOLT FAN CONNECTIONS. EXHAUST FAN LOCATIONS SHOWN ON THE ROOF PLAN.
- PROVIDE POWER CONNECTION TO MOTORIZED DOOR OPENER. (FRACT. HP, 120V, 1Ø). PROVIDE INTERCONNECTION WIRING FOR ALL CONTROLS AND SAFETY FEATURES. INTERLOCK DOOR OPERATION WITH DOOR SECURITY IF THE DOOR HAS A CARD READER.
- PROVIDE POWER CONNECTION TO DOOR SECURITY POWER SUPPLY. POWER SUPPLY SHALL INTERFACE WITH THE FIRE ALARM SYSTEM TO RELEASE THE DOOR UPON A FIRE ALARM. PROVIDE 3/4" CONDUIT AND WIRING FROM POWER SUPPLY THE CARD READER AND DOOR STRIKE.

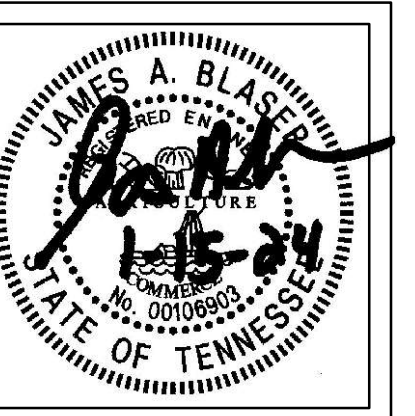


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BLASER ENG JOB# 22-120

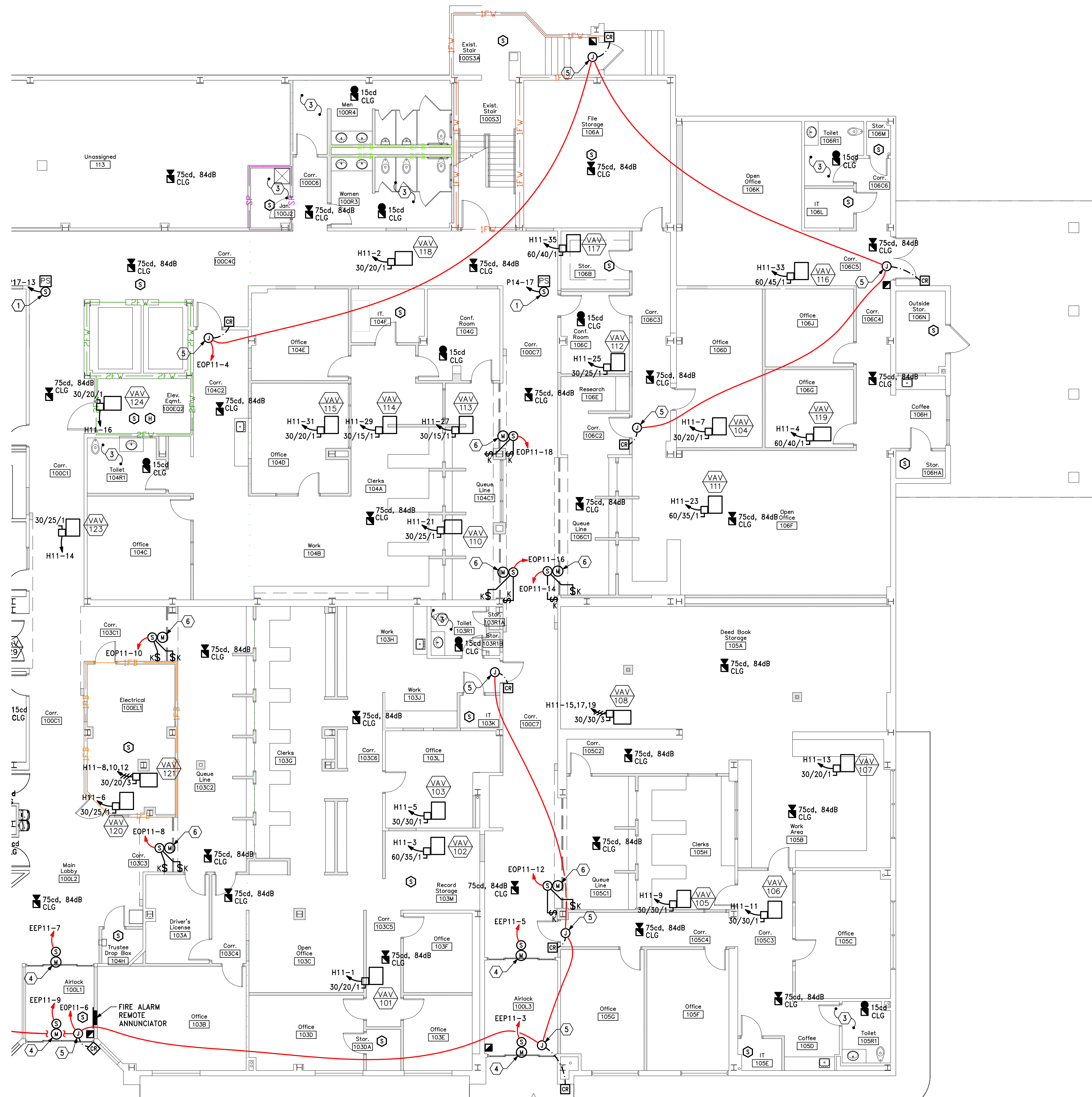
Revisions	Description	Date	No.



Renovations for First Floor
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Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	23-116
Scale:	as noted
Date:	01-15-24
File Name:	22120 electrical
Drawing Title:	Systems Plan First Floor Area "A"
Sheet No.	E1.5

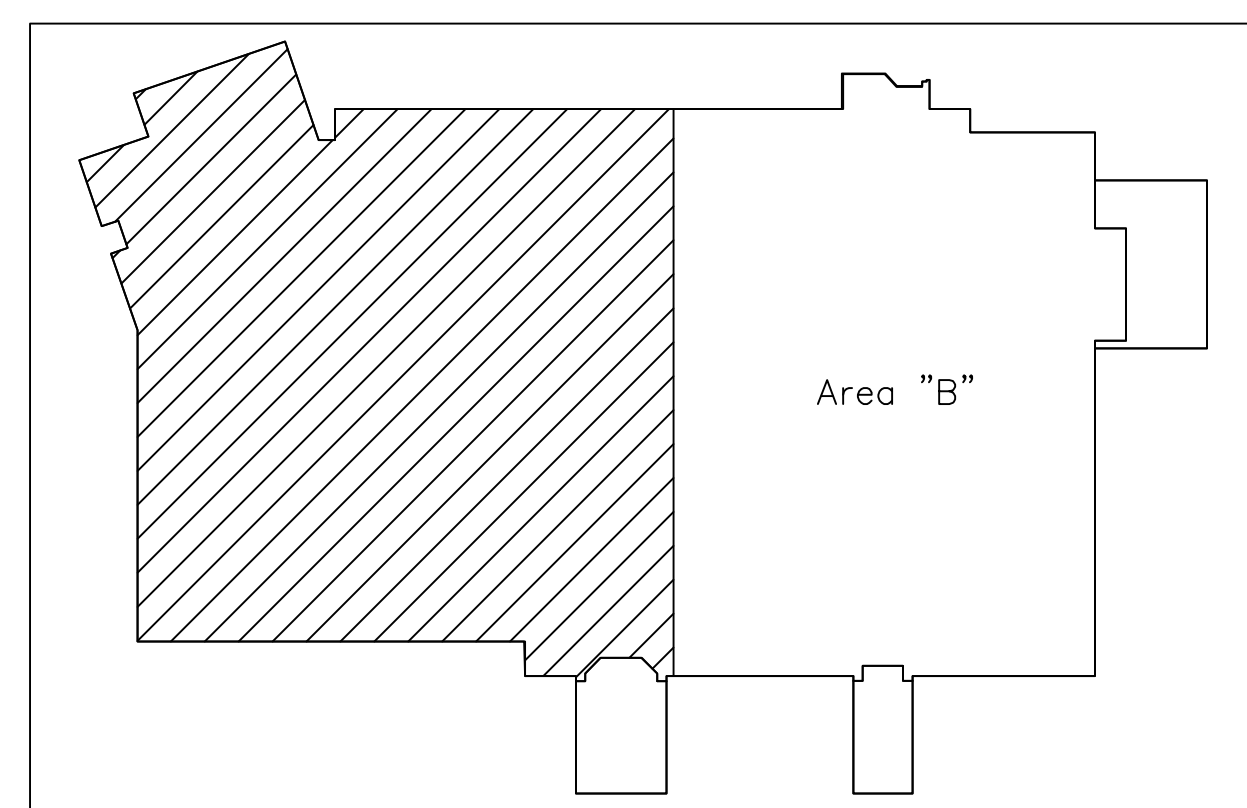


GENERAL NOTES

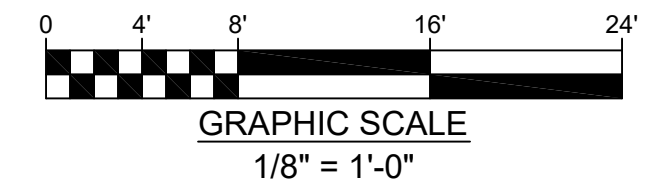
- EMERGENCY RESPONDER RADIO COVERAGE: INCLUDE FEE FOR TESTING THE BUILDING AS PART OF THE ELECTRICAL BID AND WORST CASE SCENARIO (FULL COVERAGE) PRICING AS A SEPARATE LINE ITEM. THE PRICING WILL BE ADJUSTED AFTER THE TEST RESULTS DETERMINE THE REQUIRED EQUIPMENT.
- COORDINATE CEILING MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- ALL DEVICES SHALL BE TAMPER RESISTANT PER NEC 406.12.
- ALL FIRE ALARM SYSTEM DEVICES SHALL BE FULLY COMPATIBLE WITH THE EXISTING EDWARDS EST3 FIRE ALARM SYSTEM.
- ALL WIRING SHALL BE PLENUM RATED, OR INSTALLED IN CONDUIT.
- PROVIDE #2 AWG GROUND WIRE FROM THE MAIN SERVICE GROUNDING BUS TO THE TELEPHONE TERMINAL BOARD. PROVIDE 0.25" X 2" X 12" COPPER GROUNDING BUS BAR MOUNTED ON INSULATED STANDOFFS ANCHORED WITH STAINLESS STEEL BRACKETS EQUAL TO ERICO T68-A12L06FT.
- PROVIDE 2 - 1" CONDUIT SLEEVES ABOVE ALL DOORS TO ROOMS SHOWN WITH PHONE, DATA, TELEVISION, OR OTHER LOW VOLTAGE COMMUNICATIONS SYSTEMS. PROVIDE 2 - 3" CONDUIT SLEEVES INTO ROOM WITH THE TELEPHONE TERMINAL BOARD (TTB).
- ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL STRING.
- CONTRACTOR SHALL COORDINATE ALL ADDITIONAL REQUIREMENTS WITH EACH UTILITY COMPANY AND TO INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH CONNECTION TO THE UTILITY SERVICES.
- PER NEC 210.8, ALL GROUND FAULT RECEPTACLES ARE TO BE IN A READILY ACCESSIBLE LOCATION. IF NOT, PROVIDE A GROUND FAULT DEVICE IN AN ACCESSIBLE LOCATION SERVING THE INACCESSIBLE DEVICE.
- COORDINATE ACTUAL MOUNTING LOCATIONS OF ALL EQUIPMENT WITH CONTRACTOR PROVIDING THE EQUIPMENT.
- PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SUPPLIED BY OTHERS.
- PROVIDE NEMA 3R RATED SAFETY SWITCHES WHERE LOCATED OUTDOORS.
- PROVIDE MATCHING PLUG, PIGTAIL, AND CONNECTIONS TO EQUIPMENT FOR ALL SPECIAL PURPOSE RECEPTACLES.
- COORDINATE RECEPTACLE PLACEMENT WITH ARCHITECTURAL SECTIONS AND ELEVATIONS.
- CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
- CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFEED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.
- ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
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- EXISTING RECEPTACLES AND OTHER ELECTRICAL BOXES MAY BE REUSED FOR NEW WORK IF LOCATED IN THE LOCATION SHOWN ON THE PLANS. ADJUST MOUNTING HEIGHTS TO MATCH HEIGHTS NOTED IN THESE PLANS. OTHER ELECTRICAL BOXES IN LOCATIONS NOT REUSED SHALL BE REMOVED AND THE WALL PATCHED TO MATCH EXISTING FINISHES.
- ANY REMOVED EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE OFFERED TO THE OWNER AS SALVAGE. IF THE OWNER DOES NOT WANT EQUIPMENT, THE CONTRACTOR SHALL RECYCLE OR DISPOSE OF IT PROPERLY.

CODED NOTES

- PROVIDE POWER CONNECTION TO HVAC SYSTEM PRESSURE SENSOR.
- PROVIDE POWER CONNECTION TO ELECTRIC HAND DRYER. COORDINATE EXACT MOUNTING HEIGHT PRIOR TO ROUGH-IN (100W, 120V, 1Ø).
- EXHAUST FAN IN THIS ROOM TO BE CONTROLLED BY ROOM OCCUPANCY SENSOR(S) VIA ADDITIONAL SWITCHPACK, OR BY DUAL POLE WALL MOUNTED OCCUPANCY SENSOR SHARED WITH LIGHTING CONTROLS. DEVICE SHALL BE UL LISTED FOR 277 VOLT LIGHTING AND 120 VOLT FAN CONNECTIONS. EXHAUST FAN LOCATIONS SHOWN ON THE ROOF PLAN.
- PROVIDE POWER CONNECTION TO MOTORIZED DOOR OPENER. (FRACT. HP, 120V, 1Ø). PROVIDE INTERCONNECTION WIRING FOR ALL CONTROLS AND SAFETY FEATURES. INTERLOCK DOOR OPERATION WITH DOOR SECURITY IF THE DOOR HAS A CARD READER.
- PROVIDE POWER CONNECTION TO DOOR SECURITY POWER SUPPLY. POWER SUPPLY SHALL INTERFACE WITH THE FIRE ALARM SYSTEM TO RELEASE THE DOOR UPON A FIRE ALARM. PROVIDE 3/4" CONDUIT AND WIRING FROM POWER SUPPLY THE CARD READER AND DOOR STRIKE.
- PROVIDE POWER CONNECTION TO MOTORIZED GATE OPENER. (FRACT. HP, 120V, 1Ø). PROVIDE KEY SWITCH OPERATION AND INTERCONNECTING WIRING FOR ALL CONTROLS AND SAFETY FEATURES.



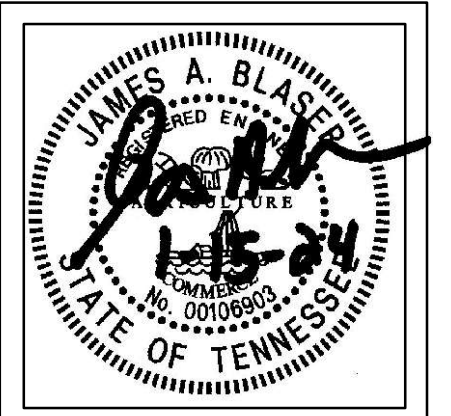
1 Systems Plan - First Floor Area "B"
E1.6 Scale: 1/8" = 1'-0"



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Revisions	Description	Date	No.

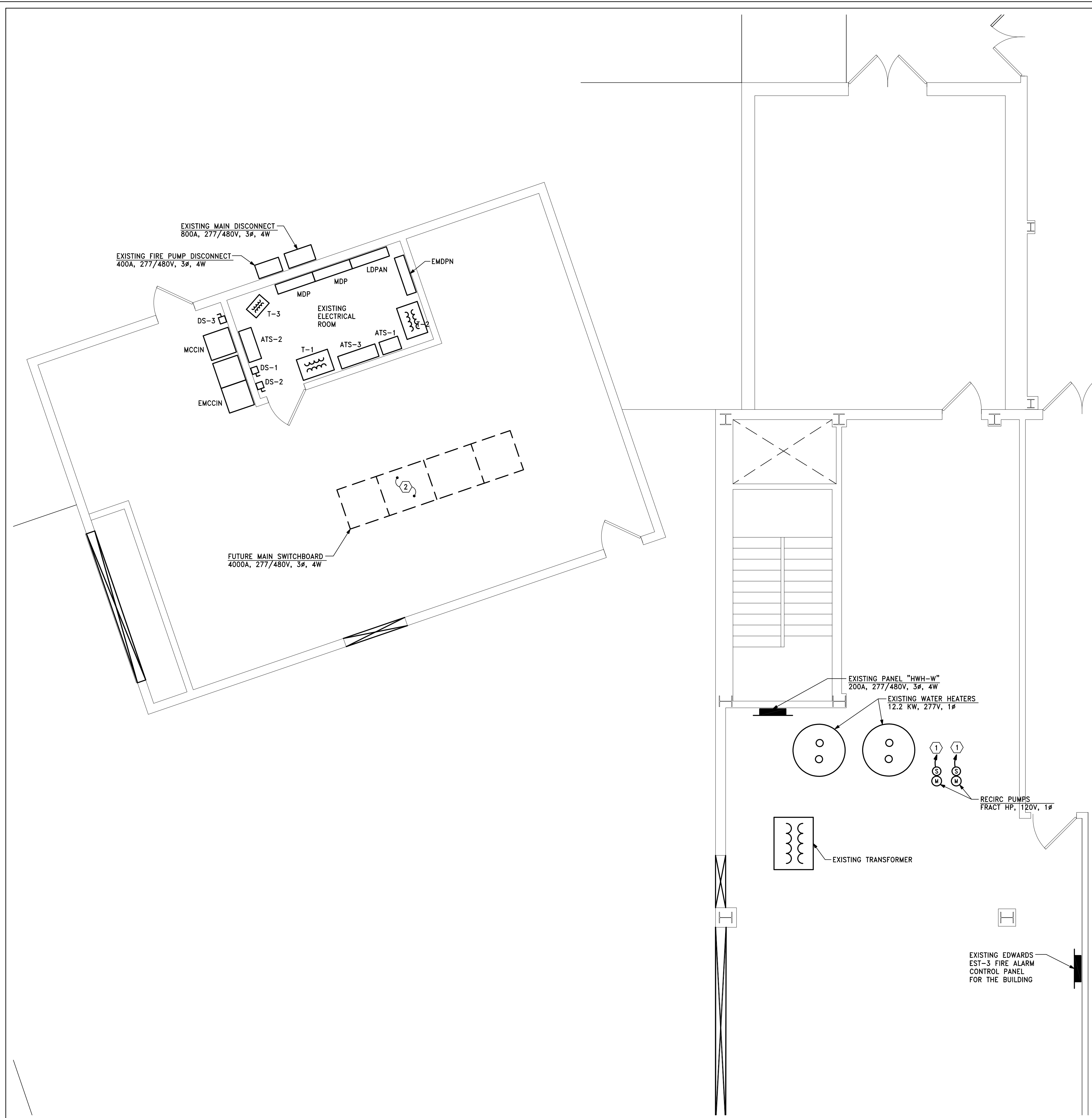


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Drawn: J. Blaser
Checked: J. Blaser
Job No: 23-116
Scale: as noted
Date: 01-15-24
File Name: 22120 electrical
Drawing Title:
Systems Plan
First Floor Area "B"
Sheet No.
E1.6

plotdate: 1/15/2024 4:24:03 PM file: 22120 ELECTRICAL.DWG

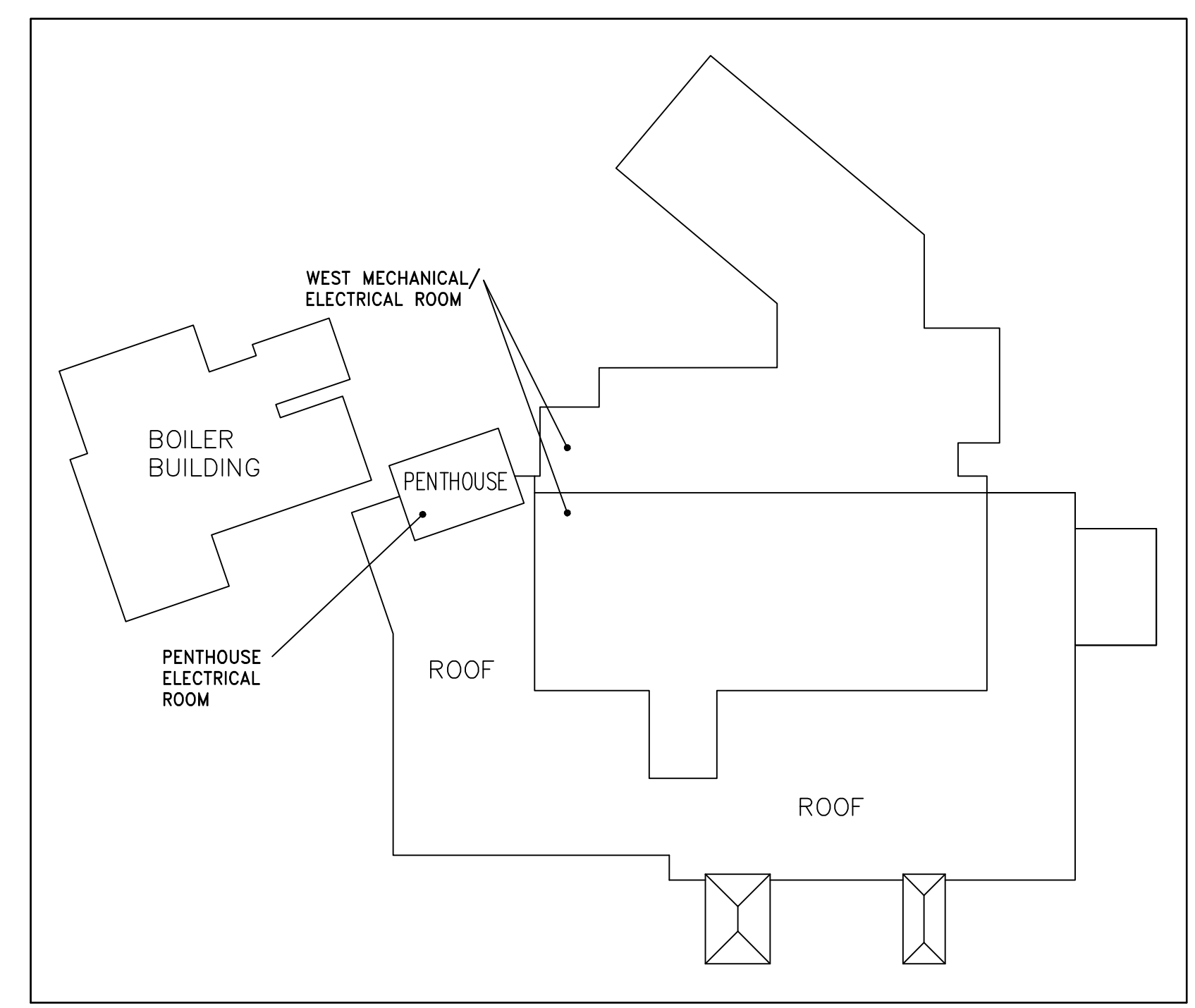


GENERAL NOTES

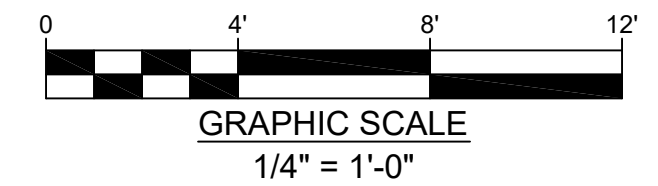
1. ALL DEVICES SHALL BE TAMPER RESISTANT PER NEC 406.12.
2. ALL FIRE ALARM SYSTEM DEVICES SHALL BE FULLY COMPATIBLE WITH THE EXISTING EDWARDS EST3 FIRE ALARM SYSTEM.
3. ALL WIRING SHALL BE PLENUM RATED, OR INSTALLED IN CONDUIT.
4. PER NEC 210.8, ALL GROUND FAULT RECEPTACLES ARE TO BE IN A READILY ACCESSIBLE LOCATION. IF NOT, PROVIDE A GROUND FAULT CIRCUIT BREAKER IN THE PANEL, OR A DEAD FRONT GROUND FAULT DEVICE IN AN ACCESSIBLE LOCATION SERVING THE INACCESSIBLE DEVICE.
5. COORDINATE ACTUAL MOUNTING LOCATIONS OF ALL EQUIPMENT WITH CONTRACTOR PROVIDING THE EQUIPMENT.
6. PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SUPPLIED BY OTHERS.
7. PROVIDE NEMA 3R RATED SAFETY SWITCHES WHERE LOCATED OUTDOORS.
8. ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
9. EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.

CODED NOTES

1. PROVIDE POWER FROM NEAREST 120V 1Ø ELECTRICAL PANEL WITH AVAILABLE SPACE. PROVIDE 15/1 CIRCUIT BREAKER AND BRANCH CIRCUIT CONSISTING OF 2 - #12 WITH #12 GROUND IN 3/4" CONDUIT.
2. FUTURE ELECTRICAL SERVICE AND SWITCHBOARD ARE NOT IN THE SCOPE OF THESE DOCUMENTS.



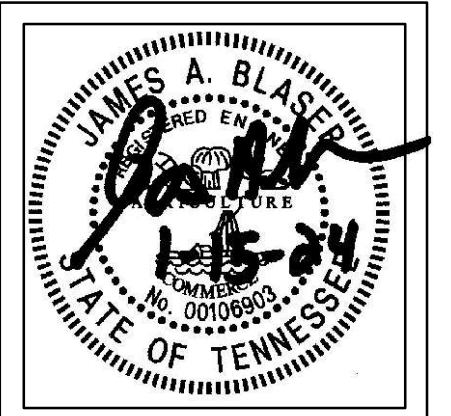
1 Enlarged Second Floor Penthouse Plan
E2.1 Scale: 1/4"=1'-0"



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Revisions	Description	Date	No.



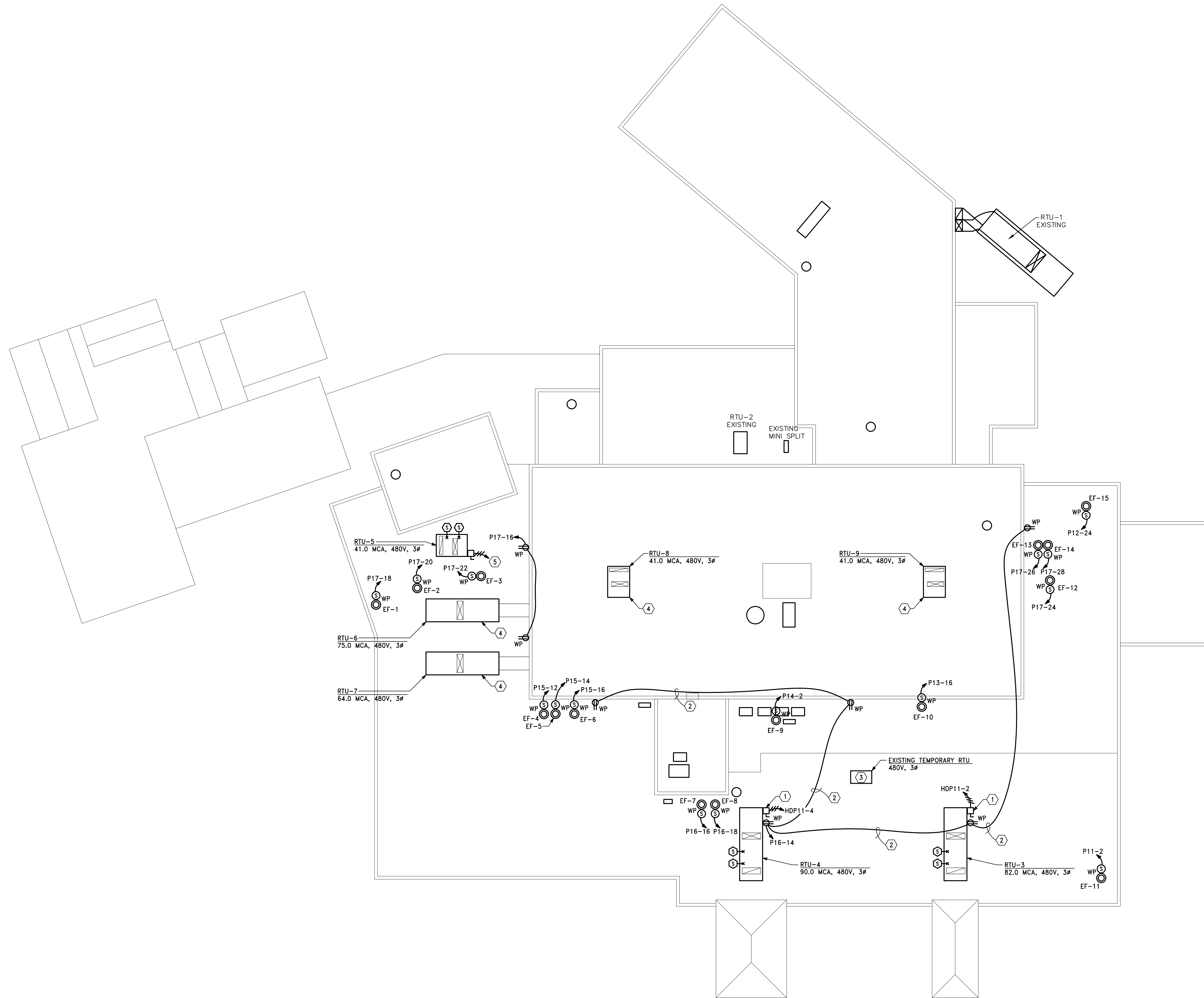
Renovations for First Floor
Greene County Government
Greenville, Tennessee



Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	23-116
Scale:	as noted
Date:	01-15-24
File Name:	22120 electrical
Drawing Title:	Enlarged Second Floor Penthouse Plan
Sheet No.	E2.1

BLASER ENG JOB# 22-120

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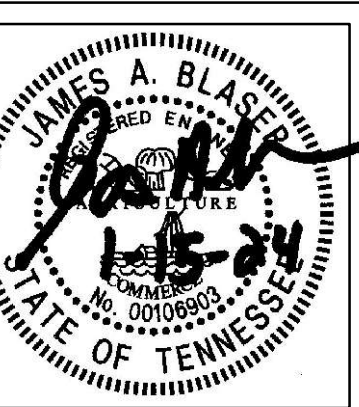
GENERAL NOTES

- ALL DEVICES SHALL BE TAMPER RESISTANT PER NEC 406.12.
- ALL FIRE ALARM SYSTEM DEVICES SHALL BE FULLY COMPATIBLE WITH THE EXISTING EDWARDS EST3 FIRE ALARM SYSTEM.
- ALL WIRING SHALL BE PLENUM RATED, OR INSTALLED IN CONDUIT.
- PER NEC 210.8, ALL GROUND FAULT RECEPTACLES ARE TO BE IN A READILY ACCESSIBLE LOCATION. IF NOT, PROVIDE A GROUND FAULT CIRCUIT BREAKER IN THE PANEL, OR A DEAD FRONT GROUND FAULT DEVICE IN AN ACCESSIBLE LOCATION SERVING THE INACCESSIBLE DEVICE.
- COORDINATE ACTUAL MOUNTING LOCATIONS OF ALL EQUIPMENT WITH CONTRACTOR PROVIDING THE EQUIPMENT.
- PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SUPPLIED BY OTHERS.
- PROVIDE NEMA 3R RATED SAFETY SWITCHES WHERE LOCATED OUTDOORS.
- ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
- EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.

CODED NOTES

- DISCONNECT SWITCH PROVIDED WITH MECHANICAL EQUIPMENT.
- RUN CONDUIT ON THE INTERIOR OF THE BUILDING.
- COORDINATE REMOVAL OF TEMPORARY HVAC UNIT WITH THE MECHANICAL CONTRACTOR. UNIT SHALL REMAIN IN OPERATION UNTIL RTU-3 AND RTU-4 ARE IN USE.
- ROOFTOP UNIT TO BE SET IN PLACE UNDER THIS CONTRACT WITH FUTURE WIRING AND DUCTWORK CONNECTIONS.
- PROVIDE POWER CONNECTION FROM EMCC1N. SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION. POWER CONNECTION WILL BE REROUTED ONCE FUTURE SWITCHBOARD IS INSTALLED.

No.	Date	Description

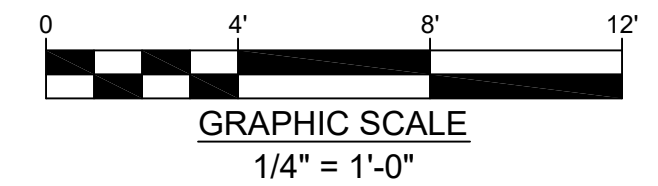


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Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	23-116
Scale:	as noted
Date:	01-15-24
File Name:	22120 electrical
Drawing Title:	Roof Electrical Plan
Sheet No.	E5.1

1 Roof Electrical Plan
 Scale: 1/16"=1'-0"



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 BLASER ENG JOB# 22-120

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LIGHTING FIXTURE SCHEDULE

NOTES: FIXTURE NUMBER, LETTER PREFIX INDICATES TYPE OF MOUNTING AS FOLLOWS: C-CEILING MOUNTED; S-SUSPENDED; W-WALL MOUNTED; R-CEILING RECESSED; WR-WALL RECESSED; CV-COVE MOUNTED; U-UNDERCABINET; P-POST; G-GROUND MOUNTED; X-UNIVERSAL MOUNTED; T-TRACK.				
ALL FIXTURES SHALL BE 80 CRI MINIMUM, UNLESS NOTED OTHERWISE PARTIAL MODEL NUMBERS MAY BE SHOWN AND ARE INTENDED TO INDICATE ACCEPTABLE MANUFACTURER'S PRODUCT LINE. EXACT MODEL NUMBERS MEETING THE FIXTURE DESCRIPTION SHALL BE OBTAINED FROM MANUFACTURER'S AGENT. ALL FIXTURES MAY NOT BE USED. REFER TO PLANS FOR FIXTURE QUANTITIES. FIXTURE DIMENSIONS MAY VARY BETWEEN MANUFACTURERS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.				
BE-JOB # 22-120				
FIXTURE NUMBER	FIXTURE DESCRIPTION	FIXTURE VOLTAGE	LAMP TYPE	APPROVED MANUFACTURERS
W13	33" LONG x 3" HIGH x 12" EXTENSION, LED WALL SCONCE PICTURE LIGHT, ALUMINUM HARDWARE, ACRYLIC DIFFUSER, BLACK FINISH, TRIMLESS J-BOX COVER, DRIVER CONCEALED IN CANOPY, 3000K COLOR TEMP, 90 CRI 0-10V DIMMING, DAMP LOCATION LISTED. FIELD VERIFY EXACT MOUNTING LOCATION WITH THE INTERIOR DESIGNER PRIOR TO ROUGH-IN. FIXTURE: 28 WATTS, 747 DELIVERED LUMENS	MVOLT	LED W/FIXTURE	WAC LIGHTING PL-11033-3000K-BK SERIES NOTED AS "WS2" ON INTERIOR DESIGNER PLANS
C14	49" DIAM x 7" HIGH, SURFACE MOUNTED TRI-PANEL ACOUSTIC FIXTURE, LOW PROFILE WHITE ACRYLIC DRUM WITH THREE BLACK ACOUSTIC PANELS ATTACHED TO THE OUTER WALL, MATTE WHITE ACRYLIC BOTTOM DIFFUSER, WHITE STEEL HOUSING, 4000K COLOR TEMP, 82 CRI, L70/100,000 LUMEN MAINTENANCE FACTOR, 0-10V DIMMABLE, 5 YEAR LIMITED WARRANTY. FIXTURE: 110 WATTS, 9,463 LUMENS	MVOLT	LED W/FIXTURE	BROWNLEE 2420-49-H110-BLK-40K SERIES NOTED AS "AL1" ON INTERIOR DESIGNER PLANS
S15	49" DIAM x 7" HIGH, PENDANT HUNG TRI-PANEL ACOUSTIC FIXTURE, LOW PROFILE WHITE ACRYLIC DRUM WITH THREE BLACK ACOUSTIC PANELS ATTACHED TO THE OUTER WALL, MATTE WHITE ACRYLIC BOTTOM DIFFUSER, WHITE STEEL HOUSING, 4000K COLOR TEMP, 82 CRI, L70/100,000 LUMEN MAINTENANCE FACTOR, 0-10V DIMMABLE, NICKEL TONE STEM & CABLE MOUNT, VERIFY REQUIRED SUSPENSION LENGTH. FIXTURE: 110 WATTS, 9,463 LUMENS	MVOLT	LED W/FIXTURE	BROWNLEE 2620-49-NT-H110-BLK-SCM-40K SERIES NOTED AS "AL2" ON INTERIOR DESIGNER PLANS
R16	6" X 1.1" LED MODULE WAFER LIGHT, DIE CAST ALUMINUM OUTER FRAME, WHITE POWDER COAT FINISH, REMOTE DRIVER BOX, POLYCARBONATE LENS, 1190 LUMENS, 90 CRI, 4000K LED LIGHT SOURCE, 10% DIMMING, 5 YEAR LIMITED WARRANTY. FIXTURE: 14 WATTS, 1190 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA WF6-LED-30K40K50K-90CRI-MW SERIES OR EQUAL NOTED AS "WAF1" ON INTERIOR DESIGNER PLANS
R17	4" X 1.1" LED MODULE WAFER LIGHT, DIE CAST ALUMINUM OUTER FRAME, WHITE POWDER COAT FINISH, REMOTE DRIVER BOX, POLYCARBONATE LENS, 810 LUMENS, 90 CRI, 4000K LED LIGHT SOURCE, 10% DIMMING, 5 YEAR LIMITED WARRANTY. FIXTURE: 11 WATTS, 810 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA WF4-LED-30K40K50K-90CRI-MW SERIES OR EQUAL
R18	2" DIA, 7" DEEP, LED, CEILING RECESSED DOWNLIGHT, SELF-FLANGED SEMI-SPECULAR REFLECTOR, NARROW DISTRIBUTION, 4000K COLOR TEMP, 869 LUMENS, 85CRI, DIMMABLE LED DRIVER, BAR HANGERS, PREWIRED HOUSING, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 10 WATTS, 869 LUMENS	MVOLT	LED W/FIXTURE	GOTHAM EV02-40/07-4AR-LSS-ND SERIES OR EQUAL NOTED AS "DL1" ON INTERIOR DESIGNER PLANS
C19	4" DIA, 10" HIGH, LED SURFACE MOUNTED CYLINDER, HEAVY GAUGE ALUMINUM CONSTRUCTION, BLACK FINISH, SEMI-SPECULAR FLANGELESS REFLECTOR, MEDIUM DISTRIBUTION, 4000K COLOR TEMP, 1472 LUMENS, 85CRI, L70/60,000 HR LUMEN MAINT. FACTOR, DIMMABLE LED DRIVER, BAR HANGERS, PREWIRED HOUSING, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 14 WATTS, 1472 LUMENS	MVOLT	LED W/FIXTURE	GOTHAM EV04SH-40/15-AR-LSS-MD SERIES OR EQUAL NOTED AS "CL1" ON INTERIOR DESIGNER PLANS
R20	4.5" WIDE x 3.6" HIGH x 4" LONG, CEILING RECESSED LED LIGHT, EXTRUDED ALUMINUM HOUSING, FLUSH SATIN LENS, 1000 LUMENS/FT, 4000K COLOR TEMP, 80 CRI, COORDINATE CEILING GRID TYPE WITH ARCHITECT FOR PROPER MOUNT OF FIXTURE, 5 YEAR LIMITED WARRANTY. FIXTURE: 38 WATTS, 4000 LUMENS	MVOLT	LED W/FIXTURE	FOCAL POINT F5M4LP-FL-1000LF-40K SERIES NOTED AS "LF1" ON INTERIOR DESIGNER PLANS
R21	2X2 LOW PROFILE LED FLAT PANEL, ALUMINUM FRAME, SATIN WHITE LENS, GRID CLIPS, SWITCHABLE LUMEN OUTPUT SET AT 2500 LUMENS(LOW), 4000K, 80 CRI LED SOURCE, L70/60,000 HOUR LUMEN MAINTENANCE FACTOR, 10% DIMMING WITH 0-10V CONTROLS, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 20 WATTS, 2563 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA CPX-2X2-AL07-SWW7-SWL SERIES COLUMBIA CBT22 SERIES OR EQUAL
X22	12" x 8" x 2", UNIVERSAL CANOPY MOUNT, SINGLE OR DOUBLE FACE LED EXIT SIGN, WHITE THERMOPLASTIC HOUSING, STENCIL FACE, RED LETTERS, DIRECTIONAL ARROWS AS SHOWN ON PLANS, AC ONLY, EMERGENCY POWER SUPPLIED BY GENERATOR. 5 YEAR LIMITED WARRANTY, UL LISTING. FIXTURE: 0.62 WATT	MVOLT	W/FIXTURE	LITHONIA LQM-SW3R-120/277 SERIES OR EQUAL
R23	6" DIA, 4" DEEP, LED, CEILING RECESSED DOWNLIGHT, SELF-FLANGED CLEAR SEMI-SPECULAR REFLECTOR, MEDIUM DISTRIBUTION, 4000K COLOR TEMP, 1516 LUMENS, 85CRI, 10% DIMMING WITH 0-10V CONTROL, BAR HANGERS, PREWIRED HOUSING, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 18 WATTS, 1516 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA LDN6-40/15-LO6AR-LSS SERIES OR EQUAL
W24	5.5" x 8" x 9", LED OUTDOOR WALL SCONCE, FORWARD THROW OPTICS, CAST ALUMINUM HOUSING, DARK BRONZE FINISH, OR AS SELECTED BY THE ARCHITECT, 4000K, 80CRI, L95/50,000 LUMEN MAINTENANCE FACTOR, 5 YEAR LIMITED WARRANTY, WET LOCATION UL LISTING. MOUNT AT LOCATION OF EXISTING FIXTURE FIXTURE: 15 WATTS, 1,978 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA WDG1-LED-P2-40K-80CRI-VF SERIES OR EQUAL
W25	7" x 11.5" x 9", LED OUTDOOR WALL SCONCE, TYPE 3 MEDIUM OPTICS, CAST ALUMINUM HOUSING, DARK BRONZE FINISH, OR AS SELECTED BY THE ARCHITECT, 4000K, 80CRI, L93/50,000 LUMEN MAINTENANCE FACTOR, 5 YEAR LIMITED WARRANTY, WET LOCATION UL LISTING. MOUNT AT LOCATION OF EXISTING FIXTURE FIXTURE: 32 WATTS, 3,216 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA WDG2-LED-P3-40K-80CRI-T3M SERIES OR EQUAL

LIGHTING FIXTURE SCHEDULE

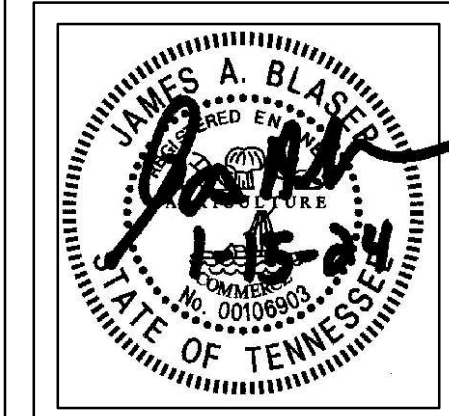
NOTES: FIXTURE NUMBER, LETTER PREFIX INDICATES TYPE OF MOUNTING AS FOLLOWS: C-CEILING MOUNTED; S-SUSPENDED; W-WALL MOUNTED; R-CEILING RECESSED; WR-WALL RECESSED; CV-COVE MOUNTED; U-UNDERCABINET; P-POST; G-GROUND MOUNTED; X-UNIVERSAL MOUNTED; T-TRACK.				
ALL FIXTURES SHALL BE 80 CRI MINIMUM, UNLESS NOTED OTHERWISE PARTIAL MODEL NUMBERS MAY BE SHOWN AND ARE INTENDED TO INDICATE ACCEPTABLE MANUFACTURER'S PRODUCT LINE. EXACT MODEL NUMBERS MEETING THE FIXTURE DESCRIPTION SHALL BE OBTAINED FROM MANUFACTURER'S AGENT. ALL FIXTURES MAY NOT BE USED. REFER TO PLANS FOR FIXTURE QUANTITIES. FIXTURE DIMENSIONS MAY VARY BETWEEN MANUFACTURERS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.				
BE-JOB # 22-120				
FIXTURE NUMBER	FIXTURE DESCRIPTION	FIXTURE VOLTAGE	LAMP TYPE	APPROVED MANUFACTURERS
R1	2X4 LOW PROFILE LED FLAT PANEL, ALUMINUM FRAME, SATIN WHITE LENS, GRID CLIPS, SWITCHABLE LUMEN OUTPUT SET AT 8000 LUMENS(HIGH), 4000K, 80 CRI LED SOURCE, L70/60,000 HOUR LUMEN MAINTENANCE FACTOR, 10% DIMMING WITH 0-10V CONTROLS, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 46 WATTS, 6383 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA CPX-2X4-AL08-SWW7-SWL SERIES COLUMBIA CBT24 SERIES OR EQUAL
R2	2X4 LOW PROFILE LED FLAT PANEL, ALUMINUM FRAME, SATIN WHITE LENS, GRID CLIPS, SWITCHABLE LUMEN OUTPUT SET AT 5000 LUMENS(MEDIUM), 4000K, 80 CRI LED SOURCE, L70/60,000 HOUR LUMEN MAINTENANCE FACTOR, 10% DIMMING WITH 0-10V CONTROLS, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 35 WATTS, 4982 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA CPX-2X4-AL08-SWW7-SWL SERIES COLUMBIA CBT24 SERIES OR EQUAL
R3	2X4 LOW PROFILE LED FLAT PANEL, ALUMINUM FRAME, SATIN WHITE LENS, GRID CLIPS, SWITCHABLE LUMEN OUTPUT SET AT 4000 LUMENS(LOW), 4000K, 80 CRI LED SOURCE, L70/60,000 HOUR LUMEN MAINTENANCE FACTOR, 10% DIMMING WITH 0-10V CONTROLS, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 25 WATTS, 3672 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA CPX-2X4-AL08-SWW7-SWL SERIES COLUMBIA CBT24 SERIES OR EQUAL
R4	2X2 LOW PROFILE LED FLAT PANEL, ALUMINUM FRAME, SATIN WHITE LENS, GRID CLIPS, 5000 LUMEN, 4000K, 80 CRI LED SOURCE, L70/60,000 HOUR LUMEN MAINTENANCE FACTOR, 10% DIMMING WITH 0-10V CONTROL, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 42 WATTS, 5468 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA CPX-2X2-5000LM-80CRI-40K-SWL SERIES OR EQUAL
R5	2X2 LOW PROFILE LED FLAT PANEL, ALUMINUM FRAME, SATIN WHITE LENS, GRID CLIPS, SWITCHABLE LUMEN OUTPUT SET AT 4000 LUMENS(HIGH), 4000K, 80 CRI LED SOURCE, L70/60,000 HOUR LUMEN MAINTENANCE FACTOR, 10% DIMMING WITH 0-10V CONTROLS, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 33 WATTS, 4557 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA CPX-2X2-AL07-SWW7-SWL SERIES COLUMBIA CBT22 SERIES OR EQUAL
R6	2X2 LOW PROFILE LED FLAT PANEL, ALUMINUM FRAME, SATIN WHITE LENS, GRID CLIPS, SWITCHABLE LUMEN OUTPUT SET AT 3000 LUMENS(MEDIUM), 4000K, 80 CRI LED SOURCE, L70/60,000 HOUR LUMEN MAINTENANCE FACTOR, 10% DIMMING WITH 0-10V CONTROLS, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 26 WATTS, 3587 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA CPX-2X2-AL07-SWW7-SWL SERIES COLUMBIA CBT22 SERIES OR EQUAL
W7	50" x 5" x 4", LED WALL BRACKET, WHITE POWDER COAT STEEL HOUSING, IMPACT RESISTANT CRESCENT SHAPED LENS, COLOR TEMPERATURE 4000K, 4000 LUMENS, 82 CRI, L90/60,000 LUMEN MAINTENANCE FACTOR, LED DRIVER, INTEGRAL OCCUPANCY SENSOR, DIM TO 50% WHEN UNOCCUPIED, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 40 WATTS 4325 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA WL4-40L-LP840-DIM50 SERIES OR EQUAL
S8	2.22" x 2.62" x 48", CHAIN HUNG LED STRIP LIGHT, STEEL HOUSING, DIFFUSE ACRYLIC LENS, WHITE FINISH SWITCHABLE LUMEN OUTPUT SET AT 5,000 LUMENS, 80 CRI, 4000K COLOR TEMP, 5 YEAR WARRANTY, UL LISTING. MOUNT AT 9' A.F.F. OR AS DIRECTED BY THE ARCHITECT. FIXTURE: 42 WATTS, 5884 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA CSS-148-AL03-MVOLT-40K SERIES COLUMBIA CSL4 SERIES OR EQUAL
S9	2.22" x 2.62" x 48", CHAIN HUNG LED STRIP LIGHT, STEEL HOUSING, DIFFUSE ACRYLIC LENS, WHITE FINISH SWITCHABLE LUMEN OUTPUT SET AT 4,000 LUMENS, 80 CRI, 4000K COLOR TEMP, 5 YEAR WARRANTY, UL LISTING. MOUNT AT 9' A.F.F. OR AS DIRECTED BY THE ARCHITECT. FIXTURE: 35 WATTS, 5076 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA CSS-148-AL03-MVOLT-40K SERIES COLUMBIA CSL4 SERIES OR EQUAL
R10	4" DIA, 7" DEEP, LED, CEILING RECESSED SHOWER DOWNLIGHT, FLUSH SMOOTH CLEAR LENS WITH PAINTED WHITE TRIM, 4000K COLOR TEMP, 856 LUMENS, 85CRI, IP66 RATED ON ROOM SIDE, BAR HANGERS, PREWIRED HOUSING, WET LOCATION LISTED, 5 YEAR WARRANTY. FIXTURE: 9 WATTS, 856 LUMENS	MVOLT	LED W/FIXTURE	GOTHAM EV04SH-35/10-DFF-SMO SERIES OR EQUAL
R11	6" DIA, 4" DEEP, LED, CEILING RECESSED DOWNLIGHT, SELF-FLANGED CLEAR SEMI-SPECULAR REFLECTOR, MEDIUM DISTRIBUTION, 4000K COLOR TEMP, 2000 LUMENS, 85CRI, 10% DIMMING WITH 0-10V CONTROL, BAR HANGERS, PREWIRED HOUSING, 5 YEAR WARRANTY, UL LISTING. FIXTURE: 23 WATTS, 2009 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA LDN6-40/20-LO6AR-LSS SERIES OR EQUAL
W12	28.5" LONG x 2.75" WIDE x 1.75" DEEP, LED WALL SCONCE, COLD ROLLED FORMED STEEL HOUSING, HALF ROUND FROSTED ACRYLIC DIFFUSER, 4000K, 82 CRI, L80/60,000 LUMEN MAINTENANCE FACTOR, 1948 LUMENS, 0-10V DIMMABLE, BLACK FINISH, 5 YEAR LIMITED WARRANTY. FIELD VERIFY EXACT MOUNTING LOCATION AND ORIENTATION WITH THE INTERIOR DESIGNER PRIOR TO ROUGH-IN. FIXTURE: 16 WATTS, 1948 LUMENS	MVOLT	LED W/FIXTURE	BROWNLEE 1125-BL-H16-40K SERIES NOTED AS "WS1" ON INTERIOR DESIGNER PLANS

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BLASER ENG JOB# 22-120

Revisions	Description	Date	No.



Renovations for First Floor
Greene County Government
 Greeneville, Tennessee



Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	23-116
Scale:	as noted
Date:	01-15-24
File Name:	22120 electrical
Drawing Title:	Light Fixture Schedule
Sheet No.	E6.1

PANEL ID:	H12	VOLTAGE:	277/480
LOCATION:	CORRIDOR 100C4A	PHASE:	3
MOUNTING:	FLUSH	WIRE:	4
MAIN TYPE:	LUGS	MAIN SIZE:	200 AMPS
		MINIMUM AIC RATING:	22,000

LEGEND: LO: LOCK ON DEVICE
PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)

BE-JOB# 22-120										
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE
10	10	-	-	4.50	1 # 2	1.61	20/1	LIGHTING	12	12
-	10	YAV-125	25/3	4.50	3 # 4	0.81	20/1	LIGHTING	12	12
-	10	-	-	4.50	5 # 6	1.33	20/1	LIGHTING	12	12
10	8	YAV-126	35/1	7.00	7 # 8	1.65	20/1	LIGHTING	12	12
10	8	YAV-127	35/1	7.00	9 # 10		20/1	SPARE		
10	6	YAV-133	45/1	9.50	11 # 12		20/1	SPARE		
12	12	YAV-134	20/1	4.00	13 # 14		20/1	SPARE		
10	10	YAV-135	25/1	5.50	15 # 16		20/1	SPARE		
10	8	YAV-136	35/1	7.00	17 # 18		20/1	SPARE		
10	10	YAV-137	25/1	5.00	19 # 20		20/1	SPARE		
10	8	YAV-138	40/1	8.00	21 # 22		20/1	SPARE		
10	6	YAV-139	50/1	10.00	23 # 24			SPARE		
10	8	YAV-122	35/1	7.00	25 # 26			SPARE		
		SPARE	25/1	27 # 28				SPARE		
		SPARE	30/1	29 # 30				SPARE		
		SPARE	31 # 32					SPARE		
		SPARE	33 # 34					SPARE		
		SPARE	35 # 36					SPARE		
		SPARE	37 # 38					SPARE		
		SPARE	39 # 40					SPARE		
		SPARE	41 # 42					SPARE		

PANEL LOAD SUMMARY:	LIGHTING:	5.40	KVA
	RECEPT & MISC:	0.00	KVA
	MOTORS:	0.00	KVA
	HEATING:	83.50	KVA
	TOTAL:	88.90	KVA

PANEL ID:	EOP11	VOLTAGE:	120/208	EMG-OPTIONAL
LOCATION:	ELECTRICAL 100E1	PHASE:	3	
MOUNTING:	SURFACE	WIRE:	4	
MAIN TYPE:	BREAKER	MAIN SIZE:	150 AMPS	MINIMUM AIC RATING: 10,000

LEGEND: LO: LOCK ON DEVICE
PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)

BE-JOB# 22-120										
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE
8	8	IT RECEPTACLES	30/1	2.50	1 # 2	0.75	20/1	DOOR SECURITY	10	10
10	10	IT RECEPTACLES	20/1	1.50	3 # 4	0.75	20/1	DOOR SECURITY	10	10
10	10	IT RECEPTACLES	30/1	2.50	5 # 6	0.75	20/1	DOOR SECURITY	10	10
12	12	IT RECEPTACLES	20/1	1.50	7 # 8	1.00	20/1	SECURITY GATE	12	12
8	8	IT RECEPTACLES	30/1	2.50	9 # 10	1.00	20/1	SECURITY GATE	12	12
10	10	IT RECEPTACLES	20/1	1.50	11 # 12	1.00	20/1	SECURITY GATE	12	12
12	12	IT RECEPTACLES	20/1	1.50	13 # 14	1.00	20/1	SECURITY GATE	10	10
10	10	IT RECEPTACLES	30/1	2.50	15 # 16	1.00	20/1	SECURITY GATE	10	10
12	12	IT RECEPTACLES	20/1	0.18	17 # 18	1.00	20/1	SECURITY GATE	10	10
12	12	IT RECEPTACLES	20/1	0.72	19 # 20		20/1	SPARE		
10	10	IT RECEPTACLES	30/1	2.50	21 # 22		20/1	SPARE		
10	10	IT RECEPTACLES	20/1	1.50	23 # 24		20/1	SPARE		
12	12	IT RECEPTACLES	20/1	1.50	25 # 26		20/1	SPARE		
		SPARE	20/1	27 # 28			20/1	SPARE		
		SPARE	20/1	29 # 30				SPARE		
		SPARE	20/1	31 # 32				SPARE		
		SPARE	20/1	33 # 34				SPARE		
		SPARE	20/1	35 # 36				SPARE		
		SPARE	20/1	37 # 38				SPARE		
		SPARE	20/1	39 # 40				SPARE		
		SPARE	41 # 42					SPARE		

PANEL LOAD SUMMARY:	LIGHTING:	0.00	KVA
	RECEPT & MISC:	23.15	KVA
	MOTORS:	6.00	KVA
	HEATING:	0.00	KVA
	TOTAL:	29.15	KVA

PANEL ID:	EEH11	VOLTAGE:	277/480	EMG-ESSENTIAL
LOCATION:	ELECTRICAL 100E1	PHASE:	3	
MOUNTING:	SURFACE	WIRE:	4	
MAIN TYPE:	LUGS	MAIN SIZE:	100 AMPS	MINIMUM AIC RATING: 22,000

LEGEND: LO: LOCK ON DEVICE
PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)
** SEE ONE LINE DIAGRAM

BE-JOB# 22-120										
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE
12	12	EMG LIGHTING	20/1	0.35	1 # 2	1.26	20/1	EMG LIGHTING	12	12
12	12	EMG LIGHTING	20/1	0.46	3 # 4	0.16	20/1	STAIR LIGHTING	12	12
12	12	EMG LIGHTING	20/1	0.37	5 # 6	0.08	20/1	STAIR LIGHTING	12	12
12	12	EMG LIGHTING	20/1	0.29	7 # 8	0.10	20/1	STAIR LIGHTING	12	12
12	12	EMG LIGHTING	20/1	0.43	9 # 10	0.65	20/1	EMG LIGHTING	12	12
10	10	EXTERIOR LTG	20/1	0.55	11 # 12	0.53	20/1	EMG LIGHTING	12	12
		SPARE	20/1		13 # 14			SPACE		
		SPARE	20/1		15 # 16			SPACE		
		SPARE	20/1		17 # 18			SPACE		
		SPARE	20/1		19 # 20			SPACE		
		SPARE	20/1		21 # 22			SPACE		
		SPARE	20/1		23 # 24			SPACE		
		SPARE	20/1		25 # 26	2.36	-	PANEL EEP11	**	**
		SPARE	27 # 28	3.18	50/3			VIA	**	**
		SPARE	29 # 30	1.25	-			TRANSFORMER TX12	**	**

PANEL LOAD SUMMARY:	LIGHTING:	5.22	KVA
	RECEPT & MISC:	6.78	KVA
	MOTORS:	0.00	KVA
	HEATING:	0.00	KVA
	TOTAL:	12.00	KVA

PANEL ID:	HDP11	VOLTAGE:	277/480
LOCATION:	ELECTRICAL ROOM 100E1	PHASE:	3
MOUNTING:	SURFACE	WIRE:	4
MAIN TYPE:	LUGS	MAIN SIZE:	800 AMPS
		AIC RATING:	42,000

LEGEND: LO: LOCK ON DEVICE
PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)

BE-JOB# 22-120						
BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION
PANEL H11	400/3	61.98	1 # 2	18.17	100/3	RTU-3
PANEL LDP11 VIA TRANSFORMER TX11	175/3	31.01	3 # 4	19.94	100/3	RTU-4
200A SPACE		73.75	5 # 6	18.17		SPARE
100A SPACE		28.97	7 # 8	19.94		100A SPACE

PANEL LOAD SUMMARY:	LIGHTING:	0.00	KVA
	FROM OTHER PANELS:	294.87	KVA
	MOTORS:	114.33	KVA
	HEATING:	0.00	KVA
	TOTAL:	409.20	KVA

PANEL ID:	H11	VOLTAGE:	277/480
LOCATION:	ELECTRICAL 100E1	PHASE:	3
MOUNTING:	SURFACE	WIRE:	4
MAIN TYPE:	LUGS	MAIN SIZE:	400 AMPS
		MINIMUM AIC RATING:	22,000

LEGEND: LO: LOCK ON DEVICE
PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)
** SEE ONE LINE DIAGRAM

BE-JOB# 22-120										
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE
12	12	YAV-101	20/1	4.00	1 # 2	4.50	20/1	YAV-118	12	12
10	8	YAV-102	35/1	7.50	3 # 4	8.50	40/1	YAV-119	8	10
10	10	YAV-103	30/1	6.00	5 # 6	5.00	25/1	YAV-120	10	10
12	12	YAV-104	20/1	3.50	7 # 8	4.17	-	-	12	12
10	10	YAV-105	30/1	6.50	9 # 10	4.17	20/3	YAV-121	12	-
12	10	YAV-106	30/1	6.50	11 # 12	4.17	-	-	12	-
12	12	YAV-107	20/1	4.00	13 # 14	4.50	25/1	YAV-123	10	10
10	10	-	-	5.67	15 # 16	4.00	20/1	YAV-124	12	12
-	10	YAV-108	30/3	5.67	17 # 18	8.67	-	-	8	10
-	10	-	-	5.67	19 # 20	8.67	40/3	YAV-128	8	-
10	10	YAV-110	25/1	5.00	21 # 22	8.67	-	-	8	-
10	8	YAV-111	35/1	7.00	23 # 24	10.00	50/1	YAV-129	6	10
10	10	YAV-112	25/1	4.50	25 # 26	3.50	20/1	YAV-130	12	12
12	12	YAV-113	15/1	3.00	27 # 28	5.17	-	-	10	-
12	12	YAV-114	15/1	3.00	29 # 30	5.17	25/3	YAV-131	10	-
12	12	YAV-115	20/1	3.50	31 # 32	5.17	-	-	10	-
10	6	YAV-116	45/1	9.00	33 # 34	3.50	-	-	12	12
10	8	YAV-117	40/1	8.00	35 # 36	3.50	20/3	YAV-132	12	-
		SPARE	25/1	37 # 38	3.50	-	-	-	12	-
		SPARE	30/1	39 # 40				SPARE		
		SPARE	35/1	41 # 42				SPARE		

PANEL LOAD SUMMARY:	LIGHTING:	8.72	KVA
	RECEPT & MISC:	0.00	KVA
	MOTORS:	0.00	KVA
	HEATING:	202.54	KVA
	TOTAL:	211.26	KVA

PANEL ID:	EEP11	VOLTAGE:	120/208	EMG-ESSENTIAL
LOCATION:	ELECTRICAL 100E1	PHASE:	3	
MOUNTING:	SURFACE	WIRE:	4	
MAIN TYPE:	BREAKER	MAIN SIZE:	100 AMPS	MINIMUM AIC RATING: 10,000

LEGEND: LO: LOCK ON DEVICE
FA: FIRE ALARM IDENTIFICATION PER 760.121(B) AND LOCK ON DEVICE

BE-JOB# 22-120										
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE
12	12	ELEV. MACH RM RECEPT	20/1	0.18	1 # 2	1.18	20/1 FA	SPRINKLER AIR COMP.	10	10
10	10	MOTORIZED DOOR	20/1	1.00	3 # 4	1.18	20/1 FA	SPRINKLER AIR COMP.	10	10
10	10	MOTORIZED DOOR	20/1	1.00	5 # 6	0.25	20/1 FA	SMOKE DAMPER	12	12
12	12	MOTORIZED DOOR	20/1	1.00	7 # 8			SPARE		
12	12	MOTORIZED DOOR	20/1	1.00	9 # 10			SPARE		
		SPARE	20/1		11 # 12			SPARE		
		SPARE	20/1		13 # 14			SPARE		
		SPARE	20/1		15 # 16			SPARE		
		SPARE	20/1		17 # 18			SPARE		
		SPARE	20/1		19 # 20			SPARE		
		SPARE	20/1		21 # 22			SPARE		
		SPARE	20/1		23 # 24			SPARE		
		SPARE	20/1		25 # 26			SPARE		
		SPARE	27 # 28		27 # 28			SPARE		
		SPARE	29 # 30		29 # 30			SPARE		

PANEL LOAD SUMMARY:	LIGHTING:	0.00	KVA
	RECEPT & MISC:	0.18	KVA
	MOTORS:	6.60	KVA
	HEATING:	0.00	KVA
	TOTAL:	6.78	KVA

PANEL ID:	EOH11	VOLTAGE:	277/480	EMG-OPTIONAL
LOCATION:	ELECTRICAL 100E1	PHASE:	3	
MOUNTING:	SURFACE	WIRE:	4	
MAIN TYPE:	LUGS	MAIN SIZE:	100 AMPS	MINIMUM AIC RATING: 22,000

LEGEND: LO: LOCK ON DEVICE
PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)
** SEE ONE LINE DIAGRAM

BE-JOB# 22-120										
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	

PANEL ID: P16		VOLTAGE: 120/208									
LOCATION: ELECTRICAL 100E1		PHASE: 3									
MOUNTING: SURFACE		WIRE: 4									
MAIN TYPE: LUGS		MAIN SIZE: 150 AMPS MINIMUM AIC RATING: 22,000									
LEGEND: LO: LOCK ON DEVICE PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)											
BE-JOB# 22-120											
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE	
12	12	RECEPTACLES	20/1	1.08	1 2	0.90	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	1.08	3 4	1.08	20/1	RECEPTACLES	10	10	
12	12	EWC	20/1	1.00	5 6	1.08	20/1	RECEPTACLES	10	10	
12	12	RECEPTACLES	20/1	1.08	7 8	0.72	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	0.90	9 10	1.08	20/1	RECEPTACLES	10	10	
12	12	RECEPTACLES	20/1	1.08	11 12	1.08	20/1	RECEPTACLES	10	10	
12	12	RECEPTACLES	20/1	0.72	13 14	0.90	20/1	ROOF RECEPTACLES	10	10	
12	12	RECEPTACLES	20/1	0.72	15 16	0.53	15/1	EF-7	12	12	
12	12	RECEPTACLES	20/1	0.90	17 18	0.53	15/1	EF-8	12	12	
12	12	PROJECTOR	20/1	0.18	19 20		20/1	SPARE			
12	12	RECEPTACLES	20/1	0.90	21 22		20/1	SPARE			
12	12	KIOSK	20/1	1.00	23 24		20/1	SPARE			
10	6	HOT BOX	15/2	1.00	25 26		20/1	SPARE			
-	6	HEATER	-	1.00	27 28		20/1	SPARE			
		SPARE	20/1		29 30		20/1	SPARE			
		SPARE	20/1		31 32		20/1	SPARE			
		SPARE	20/1		33 34		20/1	SPARE			
		SPARE	20/1		35 36		20/1	SPARE			
		SPACE	20/1		37 38		20/1	SPACE			
		SPACE	20/1		39 40		20/1	SPACE			
		SPACE	20/1		41 42		20/1	SPACE			
PANEL LOAD SUMMARY:				LIGHTING: 0.00 KVA	RECEPT & MISC: 16.48 KVA		6.58	KVA PHASE A			
				MOTORS: 2.06 KVA	7.29		KVA PHASE B				
				HEATING: 2.00 KVA	6.67		KVA PHASE C				
				TOTAL: 20.54 KVA							

PANEL ID: P17		VOLTAGE: 120/208									
LOCATION: CORRIDOR 100C4A		PHASE: 3									
MOUNTING: FLUSH		WIRE: 4									
MAIN TYPE: LUGS		MAIN SIZE: 200 AMPS MINIMUM AIC RATING: 22,000									
LEGEND: LO: LOCK ON DEVICE PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)											
BE-JOB# 22-120											
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE	
12	12	RECEPTACLES	20/1	1.08	1 2	0.90	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	0.72	3 4	1.08	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	1.08	5 6	0.90	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	1.08	7 8	1.08	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	1.08	9 10	1.26	20/1	RECEPTACLES	8	8	
12	12	HVAC SENSOR	15/1	0.50	11 12	1.50	20/1	HAND DRYER	8	8	
10	10	HVAC SENSOR	15/1	0.50	13 14	1.50	20/1	HAND DRYER	8	8	
		SPARE	20/1		15 16	0.36	20/1	ROOF RECEPTACLES	12	12	
		SPARE	20/1		17 18	0.53	15/1	EF-1	12	12	
		SPARE	20/1		19 20	0.53	15/1	EF-2	12	12	
		SPARE	20/1		21 22	0.53	15/1	EF-3	12	12	
		SPARE	20/1		23 24	0.53	15/1	EF-12	12	12	
		SPARE	20/1		25 26	0.53	15/1	EF-13	12	12	
		SPARE	20/1		27 28	0.53	15/1	EF-14	12	12	
		SPARE	20/1		29 30		20/1	SPARE			
		SPARE	20/1		31 32		20/1	SPARE			
		SPARE	20/1		33 34		20/1	SPARE			
		SPARE	20/1		35 36		20/1	SPARE			
		SPACE	20/1		37 38		20/1	SPACE			
		SPACE	20/1		39 40		20/1	SPACE			
		SPACE	20/1		41 42		20/1	SPACE			
PANEL LOAD SUMMARY:				LIGHTING: 0.00 KVA	RECEPT & MISC: 14.80 KVA		7.20	KVA PHASE A			
				MOTORS: 3.00 KVA	5.56		KVA PHASE B				
				HEATING: 0.00 KVA	5.04		KVA PHASE C				
				TOTAL: 17.80 KVA							

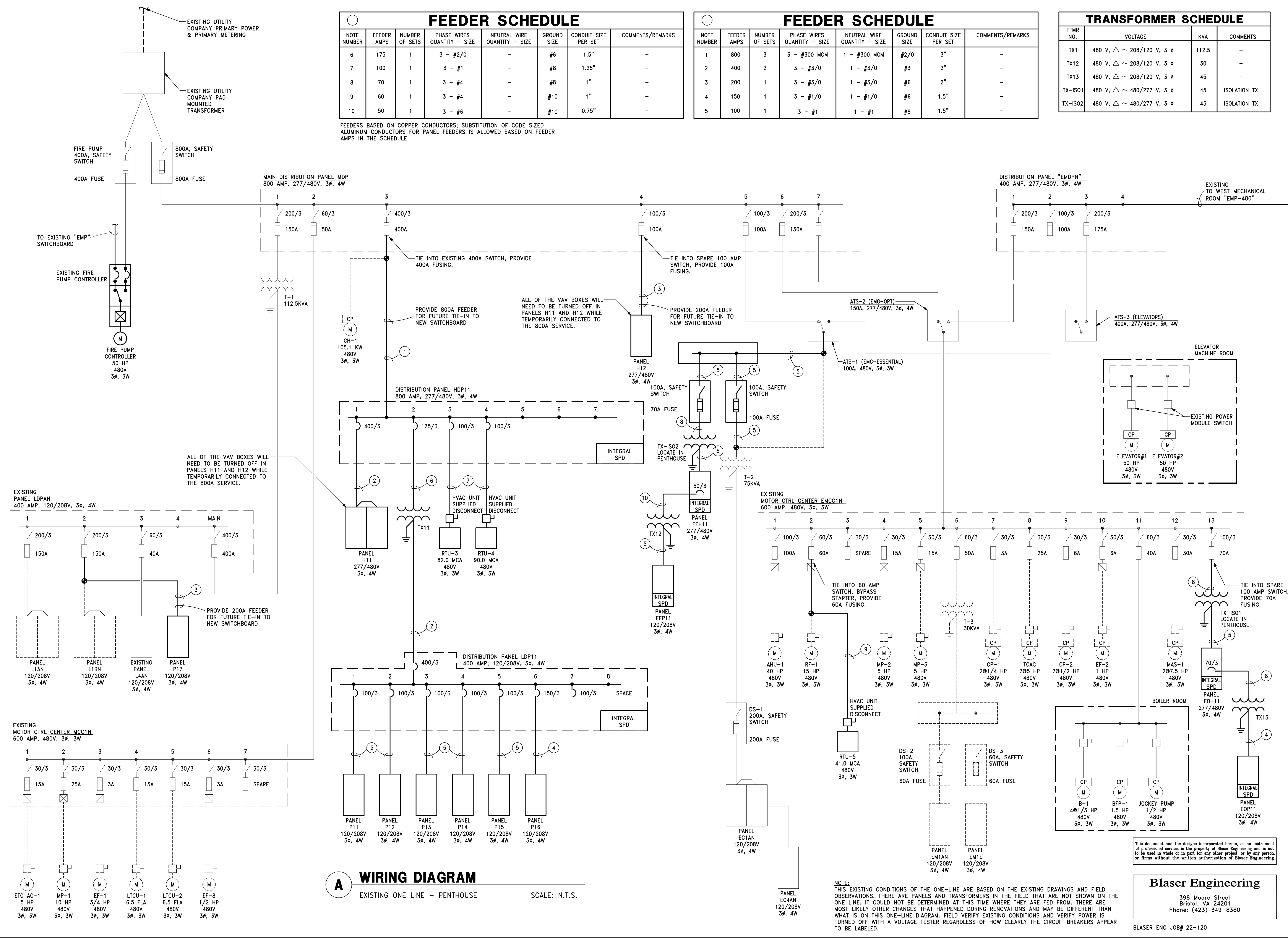
PANEL ID: P13		VOLTAGE: 120/208									
LOCATION: COUNTY CLERK		PHASE: 3									
MOUNTING: FLUSH		WIRE: 4									
MAIN TYPE: LUGS		MAIN SIZE: 100 AMPS MINIMUM AIC RATING: 10,000									
LEGEND: LO: LOCK ON DEVICE PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)											
BE-JOB# 22-120											
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE	
12	12	RECEPTACLES	20/1	1.08	1 2	0.72	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	1.08	3 4	0.72	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	1.08	5 6	0.90	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	0.90	7 8	1.08	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	1.08	9 10	1.08	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	0.72	11 12	1.08	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	0.90	13 14	1.08	20/1	RECEPTACLES	12	12	
		SPARE	20/1		15 16	0.53	15/1	EF-9	12	12	
		SPARE	20/1		17 18		20/1	SPARE			
		SPARE	20/1		19 20		20/1	SPARE			
		SPARE	20/1		21 22		20/1	SPARE			
		SPACE	20/1		23 24		20/1	SPACE			
		SPACE	20/1		25 26		20/1	SPACE			
		SPACE	20/1		27 28		20/1	SPACE			
		SPACE	20/1		29 30		20/1	SPACE			
PANEL LOAD SUMMARY:				LIGHTING: 0.00 KVA	RECEPT & MISC: 13.50 KVA		5.76	KVA PHASE A			
				MOTORS: 0.53 KVA	4.49		KVA PHASE B				
				HEATING: 0.00 KVA	3.78		KVA PHASE C				
				TOTAL: 14.03 KVA							

PANEL ID: P14		VOLTAGE: 120/208									
LOCATION: TRUSTEE		PHASE: 3									
MOUNTING: FLUSH		WIRE: 4									
MAIN TYPE: LUGS		MAIN SIZE: 100 AMPS MINIMUM AIC RATING: 10,000									
LEGEND: LO: LOCK ON DEVICE PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)											
BE-JOB# 22-120											
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE	
12	12	RECEPTACLES	20/1	1.08	1 2	0.53	15/1	EF-9	12	12	
12	12	RECEPTACLES	20/1	0.90	3 4		20/1	SPARE			
12	12	RECEPTACLES	20/1	0.72	5 6		20/1	SPARE			
12	12	RECEPTACLES	20/1	0.72	7 8		20/1	SPARE			
12	12	RECEPTACLES	20/1	1.08	9 10		20/1	SPARE			
12	12	RECEPTACLES	20/1	1.08	11 12		20/1	SPARE			
12	12	RECEPTACLES	20/1	0.90	13 14		20/1	SPARE			
12	12	RECEPTACLES	20/1	1.08	15 16		20/1	SPARE			
12	12	HVAC SENSOR	15/1	0.50	17 18		20/1	SPARE			
12	12	COPIER	20/1	1.50	19 20		20/1	SPARE			
		SPACE	20/1		21 22			SPACE			
		SPACE	20/1		23 24			SPACE			
		SPACE	20/1		25 26			SPACE			
		SPACE	20/1		27 28			SPACE			
		SPACE	20/1		29 30			SPACE			
PANEL LOAD SUMMARY:				LIGHTING: 0.00 KVA	RECEPT & MISC: 9.56 KVA		4.73	KVA PHASE A			
				MOTORS: 0.53 KVA	3.06		KVA PHASE B				
				HEATING: 0.00 KVA	2.30		KVA PHASE C				
				TOTAL: 10.09 KVA							

PANEL ID: P15		VOLTAGE: 120/208									
LOCATION: BUILDING / ZONING		PHASE: 3									
MOUNTING: FLUSH		WIRE: 4									
MAIN TYPE: LUGS		MAIN SIZE: 100 AMPS MINIMUM AIC RATING: 10,000									
LEGEND: LO: LOCK ON DEVICE PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)											
BE-JOB# 22-120											
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE	
12	12	RECEPTACLES	20/1	1.26	1 2	0.90	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	1.08	3 4	1.08	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	0.90	5 6	0.90	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	1.08	7 8	0.72	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	0.54	9 10	0.90	20/1	RECEPTACLES	12	12	
12	12	RECEPTACLES	20/1	0.54	11 12	0.53	15/1	EF-4	12	12	
12	12	RECEPTACLES	20/1	1.08	13 14	0.53	15/1	EF-5	12	12	
12	12	RECEPTACLES	20/1	0.90	15 16	0.53	15/1	EF-6	12	12	
		SPARE	20/1		17 18		20/1	SPARE			
		SPARE	20/1		19 20		20/1	SPARE			
		SPACE	20/1		21 22		20/1	SPACE			
		SPACE	20/1		23 24		20/1	SPACE			
		SPACE	20/1		25 26			SPACE			
		SPACE	20/1		27 28			SPACE			
		SPACE	20/1		29 30			SPACE			
PANEL LOAD SUMMARY:				LIGHTING: 0.00 KVA	RECEPT & MISC: 13.47 KVA		5.57	KVA PHASE A			
				MOTORS: 0.00 KVA	5.03		KVA PHASE B				
				HEATING: 0.00 KVA	2.87		KVA PHASE C				
				TOTAL: 13.47 KVA							

PANEL ID: LDP11		VOLTAGE: 120/208				
LOCATION: ELECTRICAL ROOM 100E1		PHASE: 3				
MOUNTING: SURFACE		WIRE: 4				
MAIN TYPE: BREAKER		MAIN SIZE: 400 AMPS AIC RATING: 22,000				
LEGEND: LO: LOCK ON DEVICE PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)						
BE-JOB# 22-120						
BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION
PANEL P11	100/3	3.23	1 2	4.73		PANEL P14
PANEL P12	100/3	5.14	3 4	5.03		PANEL P15
PANEL P13	100/3	4.49	5 6	7.29		PANEL P16
SPACE	100/3	3.78	7 8	6.67		SPACE
PANEL LOAD SUMMARY:		LIGHTING: 0.00 KVA	RECEPT & MISC: 83.61 KVA		31.01	KVA PHASE A
		MOTORS: 0.00 KVA	28.97		KVA PHASE B	
		HEATING: 0.00 KVA	23.63		KVA PHASE C	
		TOTAL: 83.61 KVA				

PANEL ID: P11		VOLTAGE: 120/208								
LOCATION: REGISTER OF DEEDS		PHASE: 3								
MOUNTING: FLUSH		WIRE: 4								
MAIN TYPE: LUGS		MAIN SIZE: 100 AMPS MINIMUM AIC RATING: 10,000								
LEGEND: LO: LOCK ON DEVICE PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD)										
BE-JOB# 22-120										
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE
12	12	RECEPTACLES	20/1	1.08	1 2	0.53	15/1	EF-11	12	12
12	12	RECEPTACLES	20/1	0.90	3 4		20/1	SPARE		
12	12	RECEPTACLES	20/1	0.18	5 6		20/1	SPARE		
12	12	RECEPTACLES	20/1	0.18	7 8		20/1	SPARE		
12	12	RECEPTACLES	20/1	1.26	9 10		20/1	SPARE		
12	12	RECEPTACLES	20/1	0.72	11 12		20/1	SPARE		
12	12	RECEPTACLES	20/1	0.72	13					



NOTE NUMBER	FEEDER AMPS	NUMBER OF SETS	PHASE WIRES QUANTITY - SIZE	NEUTRAL WIRE QUANTITY - SIZE	GROUND SIZE	CONDUIT SIZE PER SET	COMMENTS/REMARKS
6	175	1	3 - #2/0	-	#6	1.5"	-
7	100	1	3 - #1	-	#8	1.25"	-
8	70	1	3 - #4	-	#8	1"	-
9	60	1	3 - #4	-	#10	1"	-
10	50	1	3 - #6	-	#10	0.75"	-

FEEDERS BASED ON COPPER CONDUCTORS; SUBSTITUTION OF CODE SIZED ALUMINUM CONDUCTORS FOR PANEL FEEDERS IS ALLOWED BASED ON FEEDER AMPS IN THE SCHEDULE

NOTE NUMBER	FEEDER AMPS	NUMBER OF SETS	PHASE WIRES QUANTITY - SIZE	NEUTRAL WIRE QUANTITY - SIZE	GROUND SIZE	CONDUIT SIZE PER SET	COMMENTS/REMARKS
1	800	3	3 - #300 MCM	1 - #300 MCM	#2/0	3"	-
2	400	2	3 - #3/0	1 - #3/0	#3	2"	-
3	200	1	3 - #3/0	1 - #3/0	#6	2"	-
4	150	1	3 - #1/0	1 - #1/0	#6	1.5"	-
5	100	1	3 - #1	1 - #1	#8	1.5"	-

TFMR NO.	VOLTAGE	KVA	COMMENTS
TX1	480 V, Δ ~ 208/120 V, 3 #	112.5	-
TX12	480 V, Δ ~ 208/120 V, 3 #	30	-
TX13	480 V, Δ ~ 208/120 V, 3 #	45	-
TX-IS01	480 V, Δ ~ 480/277 V, 3 #	45	ISOLATION TX
TX-IS02	480 V, Δ ~ 480/277 V, 3 #	45	ISOLATION TX

A WIRING DIAGRAM
EXISTING ONE LINE - PENTHOUSE SCALE: N.T.S.

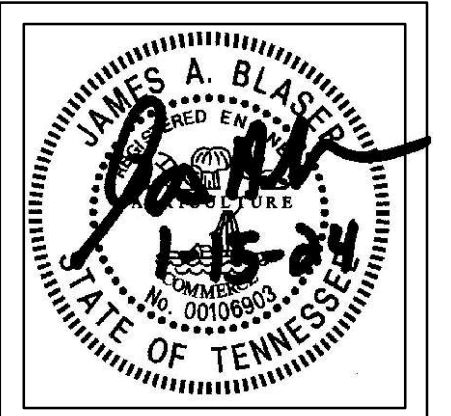
NOTE: THIS EXISTING CONDITIONS OF THE ONE-LINE ARE BASED ON THE EXISTING DRAWINGS AND FIELD OBSERVATIONS. THERE ARE PANELS AND TRANSFORMERS IN THE FIELD THAT ARE NOT SHOWN ON THE ONE LINE. IT COULD NOT BE DETERMINED AT THIS TIME WHERE THEY ARE FED FROM, THERE ARE MOST LIKELY OTHER CHANGES THAT HAPPENED DURING RENOVATIONS AND MAY BE DIFFERENT THAN WHAT IS ON THIS ONE-LINE DIAGRAM. FIELD VERIFY EXISTING CONDITIONS AND VERIFY POWER IS TURNED OFF WITH A VOLTAGE TESTER REGARDLESS OF HOW CLEARLY THE CIRCUIT BREAKERS APPEAR TO BE LABELED.

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BLASER ENG JOB# 22-120

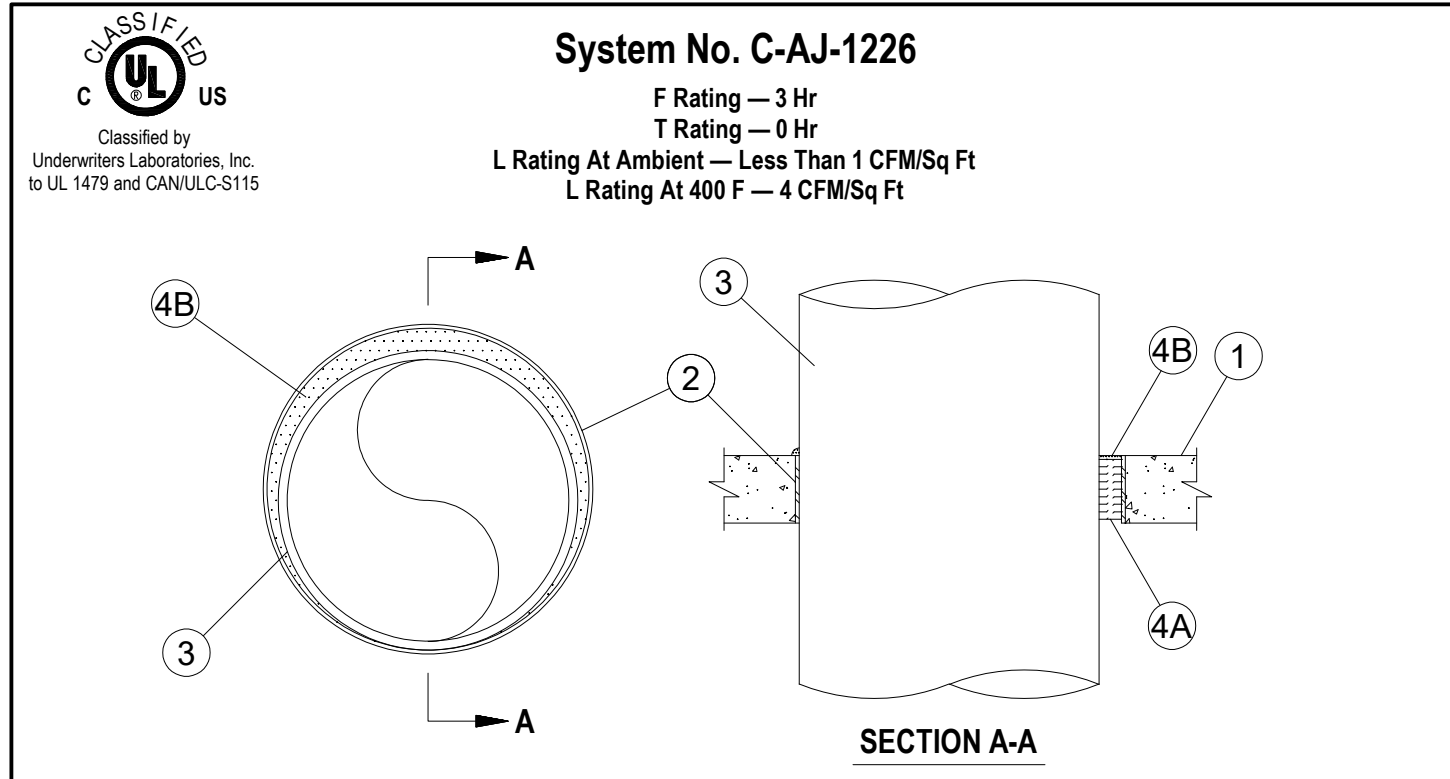
Revisions	Description	Date	No.



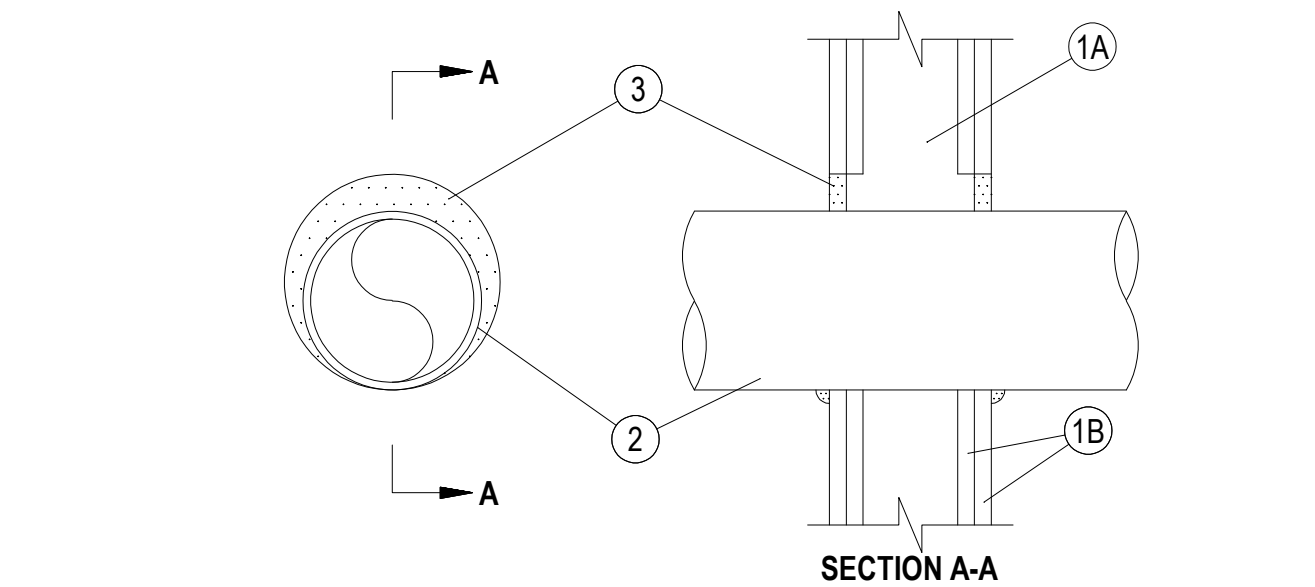
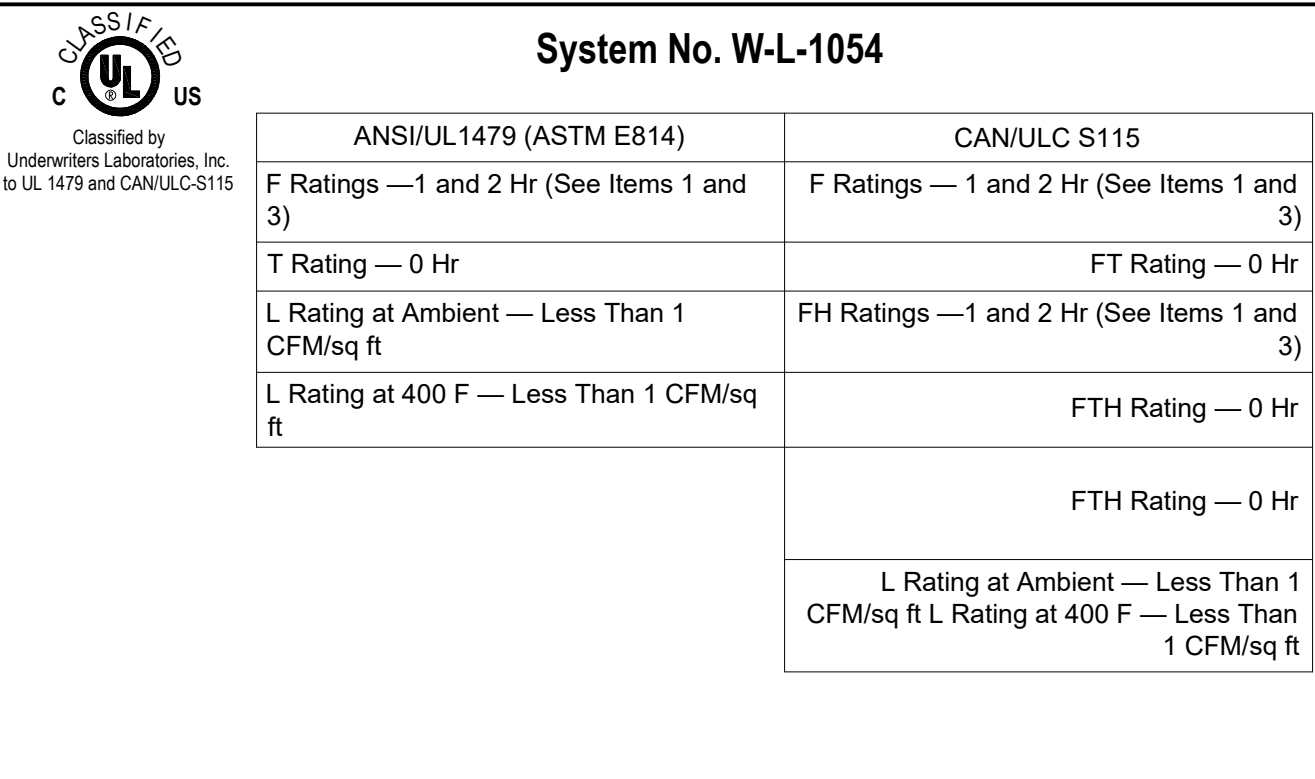
Renovations for First Floor
Greene County Government
Greeneville, Tennessee

a. dave wright architect
110 S. Main Street
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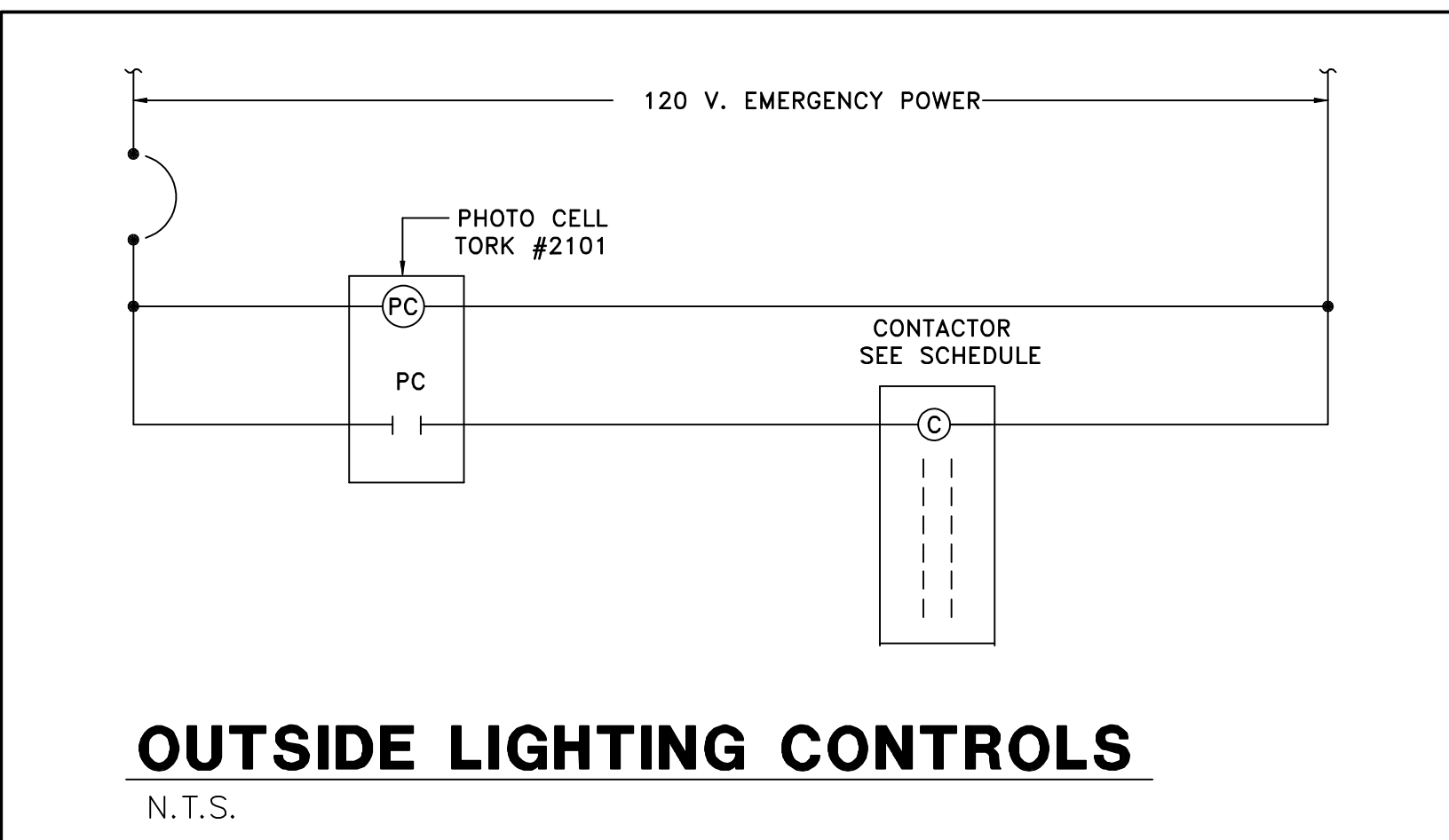
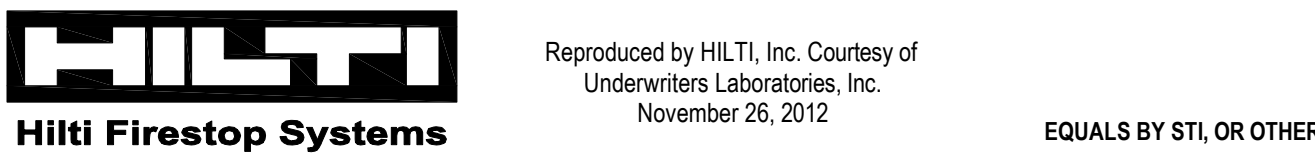
Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	23-116
Scale:	as noted
Date:	01-15-24
File Name:	22120 electrical
Drawing Title:	Penthouse Electrical Service One-Line Diagram
Sheet No.	E7.1



- System No. C-AJ-1226**
 F Rating — 3 Hr
 T Rating — 0 Hr
 L Rating At Ambient — Less Than 1 CFM/Sq Ft
 L Rating At 400 F — 4 CFM/Sq Ft
- Floor or Wall Assembly — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 32 in.
 - Metallic Sleeve — (Optional) Nom 32 in. diam (or smaller) Schedule 40 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces or extending a max of 3 in. above floor or beyond both surfaces of wall.
 - Sheet Metal Sleeve — (Optional) Max 6 in. diam, min 26 ga galv steel provided with a 26 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. larger than the sleeve diam. The sleeve is to be cast in place and may extend a max of 4 in. below the bottom of the deck and a max of 1 in. above the top surface of the concrete floor.
 - Sheet Metal Sleeve — (Optional) - Max 12 in. diam, min 24 ga galv steel provided with a 24 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. larger than the sleeve diam. The sleeve is to be cast in place and may extend a max of 4 in. below the bottom of the deck and a max of 1 in. above the top surface of the concrete floor.
 - Through-Penetrant — One metallic pipe, tube or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between penetrant and periphery of opening shall be min 0 in. (point contact) to max 1-7/8 in. Penetrant may be installed with continuous point contact. Penetrant to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic penetrants may be used:
 - Steel Pipe — Nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe — Nom 30 in. diam (or smaller) cast or ductile iron pipe.
 - Copper Pipe — Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
 - Copper Tubing — Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
 - Conduit — Nom 4 in. diam (or smaller) steel electrical metallic tubing (EMT).
 - F. Conduit — Nom 4 in. diam (or smaller) steel electrical metallic tubing (EMT).
 - Firestop System — The firestop system shall consist of the following:
 - Packing Material — Min 4 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or sleeve or from both surfaces of wall or sleeve as required to accommodate the required thickness of fill material.
 - Fill, Void or Cavity Material* — Sealant — Min 1/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or sleeve or with both surfaces of wall or sleeve. At the point or continuous contact locations between penetrant and concrete or sleeve, a min 1/4 in. diam bead of fill material shall be applied at the concrete or sleeve/ pipe penetrant interface on the top surface of floor and on both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant



- System No. W-L-1054**
 ANS/UL1479 (ASTM E814) CAN/ULC S115
 F Ratings — 1 and 2 Hr (See Items 1 and 3) F Ratings — 1 and 2 Hr (See Items 1 and 3)
 T Rating — 0 Hr FT Rating — 0 Hr
 L Rating at Ambient — Less Than 1 CFM/sq ft FH Ratings — 1 and 2 Hr (See Items 1 and 3)
 L Rating at 400 F — Less Than 1 CFM/sq ft FTH Rating — 0 Hr
 L Rating at Ambient — Less Than 1 CFM/sq ft L Rating at 400 F — Less Than 1 CFM/sq ft
- Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.
 - Gypsum Board* — 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. for steel stud walls. Max diam of opening is 14-1/2 in. for wood stud walls.
 - Through-Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. Pipe may be installed with continuous point contact. Pipe, conduit or tubing may be installed at an angle not greater than 45 degrees from perpendicular. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe — Nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe — Nom 30 in. diam (or smaller) cast or ductile iron pipe.
 - Conduit — Nom 4 in. diam (or smaller) steel electrical metallic tubing or 6 in. diam steel conduit.
 - Copper Tubing — Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
 - Copper Pipe — Nom 6 in. diam (or smaller) regular (or heavier) copper pipe.
 - Fill, Void or Cavity Material* — Sealant — Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant



OUTSIDE LIGHTING CONTROLS

N. T. S.

CONTACTOR SCHEDULE				
CONTACTOR NUMBER	NUMBER OF POLES	CIRCUITS CONTROLLED	CONTROL SOURCE	LOCATION/ AREA
1	2	EEH11-11	PC-ON/PC-OFF	EXTERIOR LIGHTING

SYMBOLS LIST FOR PLANS

SOME SYMBOLS MAY NOT BE USED. MOUNTING HEIGHTS ARE TO TOP.

SYMBOL	DESCRIPTION	MOUNTING HEIGHT UNLESS NOTED OTHERWISE
P1 P1	PANELBOARD: SURFACE MOUNTED, FLUSH MOUNTED PANEL DESIGNATION AS SHOWN	72"
[]	DISTRIBUTION PANELBOARD	72"
—○—	CONDUIT, RISER UP	----
—○—	CONDUIT, RISER DOWN	----
—UC—	UNDERGROUND COMMUNICATIONS CONDUIT	----
—UE(E)—	EXISTING UNDERGROUND COMMUNICATIONS CONDUIT	----
—UE—	UNDERGROUND UTILITY POWER / SERVICE ENTRANCE CONDUIT	----
—PO(E)—	EXISTING OVERHEAD UTILITY LINES	----
---	LOW VOLTAGE WIRING IN CONDUIT	----
---	CONDUIT ROUTED UNDER FLOORSPACE OR UNDERGROUND	----
P1-1	HOME RUN TO PANELBOARD AS NOTED; CIRCUITS MAY SHARE CONDUITS BACK TO PANELBOARD WHERE ALLOWED BY THE NEC; ALL CIRCUITS SHALL HAVE DEDICATED NEUTRALS. CROSS LINES INDICATE THE NUMBER OF CONDUCTORS WHERE MORE THAN 2 PLUS THE GROUND.	----
—	FLEXIBLE METAL CONDUIT OR LIQUID-TIGHT FLEXIBLE METAL CONDUIT	----
T1	TRANSFORMER: (TYPE AS NOTED OR IN TRANSFORMER SCHEDULE)	SEE DRAWINGS
FACP FACP	FIRE ALARM CONTROL PANEL: SURFACE MOUNTED, FLUSH MOUNTED	72"
[]	FIRE ALARM DUAL ACTION MANUAL PULL STATION, PUSH IN THEN PULL DOWN	48"
[]	FIRE ALARM VISUAL DEVICE	84"
[]	COMBINATION FIRE ALARM AUDIBLE AND VISUAL DEVICE	84"
[]	CEILING MOUNTED FIRE ALARM SMOKE DETECTOR; HEAT DETECTOR	----
[]	DUCT MOUNTED FIRE ALARM SMOKE DETECTOR, PROVIDE WITH REMOTE TEST AND INDICATOR STATION, AND ACCESSORIES NECESSARY TO SHUT DOWN THE MECHANICAL UNIT. DUCT SMOKE DETECTOR TO BE PROVIDED IN BOTH SUPPLY AND RETURN DUCTS.	----
[]	FIRE ALARM MAGNETIC DOOR HOLDER	72"
[]	FIRE ALARM TAMPER SWITCH	----
[]	FIRE ALARM FLOW SWITCH	----
[]	COMBINATION SMOKE / CARBON MONOXIDE DETECTOR	----
[]	FIRE ALARM PRESSURE SWITCH	----
[]	SOUND SYSTEM SPEAKER, CEILING MOUNTED; WALL MOUNTED	94"
[]	TELEVISION VIDEO OUTLET	20"
[]	HDMI VIDEO OUTLET	20"
[]	CARD READER / KEY FOB SCANNER; PROVIDE WITH ALL ACCESSORIES AS REQUIRED.	48"
[]	SPLICE, CONNECT EXISTING TO NEW	----

- SYMBOLS LIST NOTES:
- STRAIGHT LINES BETWEEN DEVICES INDICATE SWITCHED CIRCUIT.
 - ALL SPECIAL SWITCHES DENOTED AS 3, 4, ETC. SHALL HAVE ALL REQUIRED WIRING PROVIDED TO HAVE AN OPERABLE SYSTEM AS INTENDED BY THE ENGINEER. THIS INCLUDES ALL POWER, NEUTRAL, AND TRAVELER WIRES AS REQUIRED.
 - ALL DEVICES WITH SUBSCRIPT "E" ARE EXISTING TO REMAIN.
 - ALL DEVICES WITH SUBSCRIPT "D" ARE EXISTING TO BE REMOVED.

SYMBOLS LIST FOR PLANS

1. SOME SYMBOLS MAY NOT BE USED. 2. MOUNTING HEIGHTS ARE TO TOP.

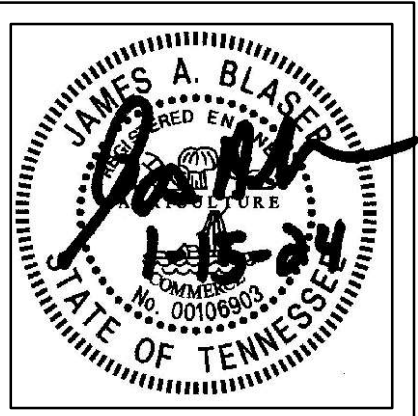
SYMBOL	DESCRIPTION	MOUNTING HEIGHT UNLESS NOTED OTHERWISE
[]	LIGHTING FIXTURE: TYPE "R1"; SEE LIGHTING FIXTURE SCHEDULE	----
R2 W2 W2	CEILING OR WALL MOUNTED LIGHTING FIXTURE TYPE TYPE "R2", "W2"; SEE LIGHTING FIXTURE SCHEDULE	SEE DRAWINGS
[]	EXIT SIGN FIXTURE (WITH DIRECTIONAL ARROWS AS SHOWN) (TYPE AND MOUNTING AS NOTED; SEE LIGHTING FIXTURE SCHEDULE) SHADED AREA DENOTES FACE	96"
[]	EMERGENCY LIGHTING UNIT REMOTE HEAD; TYPE "W1" SEE LIGHTING FIXTURE SCHEDULE	84"
[]	LIGHTING FIXTURE WITH EMERGENCY GENERATOR CONNECT AND UL924 TRANSFER DEVICE ON THE CIRCUIT. "NL" DENOTES NIGHT LIGHT	----
[]	SITE LIGHTING FIXTURE (TYPE AND MOUNTING AS NOTED; SEE LIGHTING FIXTURE SCHEDULE)	----
[]	GROUND MOUNTED FLOOD LIGHT; TYPE "G1" SEE LIGHTING FIXTURE SCHEDULE	----
[]	WALL PACK AREA LIGHT; TYPE "W1" SEE LIGHTING FIXTURE SCHEDULE	----
S	SINGLE POLE SWITCH	48"
S2;3;4;K;P;T	SPECIAL SWITCH: 2-POLE; 3-WAY; 4-WAY; KEY OPERATED; SWITCH WITH PILOT LIGHT; TIMER SWITCH	48"
[]	DIMMING-ON/OFF ENTRY STATION, LOW VOLTAGE CONTROL, AND COMPATIBLE WITH CEILING OCCUPANCY SENSOR	48"
[]	OCCUPANCY SENSOR WITH DIMMING, WALL MOUNTED	48"
[]	TOUCHSCREEN WALL STATION, TOUCHSCREEN DIMMING CONTROL	48"
[]	OCCUPANCY SENSOR, WALL MOUNTED WHERE SHOWN ON WALL ADJACENT TO DOOR, OTHERWISE CEILING MOUNTED	48"
[]	OCCUPANCY SENSOR, CORNER MOUNT PER MANUFACTURERS DIRECTION	----
[]	SWITCH PACK COMPATIBLE WITH CEILING OCCUPANCY SENSORS	----
[]	DIMMING MODULE COMPATIBLE WITH CEILING OCCUPANCY SENSORS	----
[]	ENTRY/OVERRIDE STATION, LIGHTING CONTROL SYSTEM	----
[]	DUPLEX RECEPTACLE	20"
[]	SIMPLEX RECEPTACLE	20"
[]	QUADRUPLEX (DOUBLE DUPLEX) RECEPTACLE	20"
[]	EMERGENCY POWER RECEPTACLE; QUADRUPLEX RECEPTACLE	20"
[]	"WR" RATED DUPLEX RECEPTACLE, WEATHERPROOF IN USE COVER AND GROUND FAULT INTERRUPTER	20"
[]	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTER	20"
[]	DUPLEX RECEPTACLE, EXISTING LOCATION TO REMAIN	----
[]	DUPLEX RECEPTACLE, TO BE RELOCATED AS NOTED EXTEND EXISTING CIRCUIT TO NEW DEVICE LOCATION	20"
[]	SPECIAL PURPOSE RECEPTACLE (TYPE AS NOTED OR IN SPECIFICATIONS)	SEE DRAWINGS
[]	DUPLEX RECEPTACLE, RECESSED IN FLOOR WITH FLUSH MOUNTED BRASS COVER	----
[]	VOICE/DATA OUTLET ROUGH-IN, WALL MOUNTED; RECESSED IN FLOOR WITH FLUSH MOUNTED BRASS COVER	20"
[]	GANGED FLOOR RECESSED DUPLEX RECEPTACLE AND VOICE/DATA OUTLET WITH FLUSH MOUNTED BRASS COVER	----
[]	SINGLE SERVICE PRE-WIRED MULTIPLE OUTLET RACEWAY	SEE DRAWINGS
[]	JUNCTION BOX, CEILING OR WALL MOUNTED; RECESSED FLOOR MOUNTED	SEE DRAWINGS
[]	JUNCTION BOX AND TOGGLE TYPE SAFETY SWITCH	----
[]	MOTOR (BY DIVISION 1-15)	----
[]	MAGNETIC MOTOR STARTER (STARTER SIZE, FUSE SIZE, NO. OF POLES -AS NOTED) "3R" DENOTES NEMA "3R" ENCLOSURE	60"
[]	MANUAL MOTOR STARTER	60"
[]	SAFETY SWITCH (SWITCH SIZE, FUSE SIZE, NO. OF POLES -AS NOTED) "NF" DENOTES NONFUSED, PROVIDE 3R ENCLOSURES WHERE LOCATED OUTDOORS. PROVIDE FINAL CONNECTIONS TO EQUIPMENT.	60"
[]	COMBINATION MOTOR STARTER (STARTER SIZE, FUSE SIZE, NO. OF POLES -AS NOTED) PROVIDE 3R ENCLOSURES WHERE LOCATED OUTDOORS. PROVIDE WITH H-O-A CONTROLS. PROVIDE FINAL CONNECTIONS TO EQUIPMENT.	60"
[]	CONTROL PANEL	SEE DRAWINGS
[]	FIRE RETARDANT TELEPHONE/DATA TERMINAL BOARD "ITB"	60"

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BLASER ENG JOB# 22-120

Revisions	Description	Date	No.



Renovations for First Floor
Greene County Government
 Greeneville, Tennessee

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Job No:	23-116
Scale:	as noted
Date:	01-15-24
File Name:	22120 electrical
Drawing Title:	Legned & Details
Sheet No.	E8.1

DIVISION 26 - ELECTRICAL

SECTION 26 00 05 ELECTRICAL GENERAL PROVISIONS

1. REFERENCE
 - A. REFER TO INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, SPECIAL CONDITIONS, DIVISION 1 – GENERAL REQUIREMENTS, RESPONSIBILITIES AND METHODS RELATING TO ELECTRICAL WORK.
2. DESCRIPTION
 - A. FURNISH ALL MATERIALS, LABOR, TOOLS AND EQUIPMENT TO COMPLETE AND LEAVE READY FOR OPERATION ALL ELECTRICAL SYSTEMS AS CALLED FOR IN THESE SPECIFICATIONS OR SHOWN ON THE DRAWINGS AND ANY AND ALL DETAILS ESSENTIAL TO COMPLETE THE WORK.
3. QUALITY
 - A. CONTRACTOR SHALL PROVIDE WORK OF HIGHEST QUALITY, CONFORMING TO THE ACCEPTED PRACTICES AND STANDARDS OF THE TRADES INVOLVED. FURTHER DEFINITION OF QUALITY IS GIVEN BY VARIOUS LAWS, CODES, STANDARDS AND REGULATIONS.
4. CODES
 - A. ALL WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL CODES.
 - B. ALL EQUIPMENT SHALL BE PROPERLY RATED FOR THE SEISMIC ACTIVITY ZONE FOR WHICH IT IS INSTALLED.
5. CONTRACT DRAWINGS
 - A. DRAWINGS ARE SCHEMATIC AND SHOW APPROXIMATE LOCATIONS AND EXTENT OF WORK. EXACT LOCATIONS MUST BE COORDINATED WITH OTHER TRADES AND VERIFIED IN THE FIELD. THE RIGHT IS RESERVED TO RELOCATE ANY ELEMENT UP TO TEN (10) FEET AT NO INCREASE IN COST PROVIDED THE CONTRACTOR IS NOTIFIED BEFORE COMMENCEMENT OF WORK.
6. PERMITS, FEES AND NOTICES
 - A. UNLESS OTHERWISE EXCLUDED IN THE CONTRACT DOCUMENTS, EACH CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND GOVERNMENTAL FEES, LICENSES AND INSPECTIONS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF HIS WORK.
7. GUARANTEE
 - A. CONTRACTOR SHALL GUARANTEE HIS WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
8. EXAMINATION OF SITE
 - A. CONTRACTOR SHOULD VISIT THE SITE OF THE PROPOSED PROJECT, CERTAIN EXISTING CONDITIONS MAY AFFECT THE MANNER OR SEQUENCE OF THE PERFORMANCE OF THE WORK.
9. RECORD DRAWINGS
 - A. CONTRACTOR SHALL MAINTAIN AT THE JOB SITE, ONE COPY OF THE DRAWINGS WHICH SHALL BE USED EXCLUSIVELY FOR RECORDING ANY INSTALLATION DEVIATION FROM THE CONTRACT DRAWINGS. SUBMIT DRAWINGS TO ARCHITECT UPON COMPLETION OF PROJECT.
10. CUTTING AND PATCHING
 - A. EACH CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING REQUIRED FOR HIS OWN WORK. WORK MUST BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER, ACCEPTABLE TO THE ARCHITECT. PATCH TO MATCH ADJACENT SURFACE CONSTRUCTION.
11. TESTS
 - A. THE CONTRACTOR SHALL BEAR ALL COSTS OF SUCH INSPECTIONS, TESTS OR APPROVALS, AS REQUIRED BY LOCAL AUTHORITIES.
12. SUBMITTALS
 - A. MATERIALS AND EQUIPMENT INSTALLED IN THIS WORK SHALL MEET ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND NO MATERIALS OR EQUIPMENT SHALL BE ORDERED UNTIL SUBMITTALS ARE REVISED AND APPROVED BY THE ARCHITECT OR ENGINEER.
 - B. REQUIRED SUBMITTALS INCLUDE:
 - 1) WIRING DEVICES AND PLATES
 - 2) LIGHTING FIXTURES
 - 3) LIGHTING CONTROLS & OCCUPANCY SENSORS
 - 4) TIME CLOCK, PHOTO ELECTRIC CONTROLS, AND CONTACTORS
 - 5) CIRCUIT BREAKER PANELBOARD, TRANSFORMERS, & SAFETY SWITCHES
 - 6) SURGE SUPPRESSION DEVICE (SPD)
 - 7) FIRE ALARM SYSTEM DEVICES

SECTION 26 05 19 CONDUCTORS AND CONNECTORS

1. FURNISH AND INSTALL ALL ELECTRICAL CONDUCTORS FOR FEEDERS, BRANCH CIRCUIT WIRING, AND SYSTEM WIRING.
2. ALL WIRE SHALL BE UL LISTED COPPER, 600 VOLT RATED.
3. ALL WIRE SHALL BE STRANDED IN SIZES #8 AND LARGER.
4. WIRE SHALL BE TYPE THHN/THWN.
5. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.
6. ALL 120 VOLT CIRCUITS OVER 75 FEET IN LENGTH SHALL HAVE ALL OF THE CONDUCTORS UPSIZED ONE WIRE SIZE. (I.E. ALL #12 AWG WILL BECOME #10 AWG)
7. ALL CONDUCTORS ARE TO BE IDENTIFIED, BRANCH CIRCUITS AND FEEDERS BY COLOR CODING AS FOLLOWS:

120/208V PHASE A – BLACK PHASE B – RED PHASE C – BLUE NEUTRAL – WHITE GROUND – GREEN	277/480V PHASE A – BROWN PHASE B – ORANGE PHASE C – YELLOW NEUTRAL – GRAY W/ WHITE STRIPE GROUND – GREEN W/ YELLOW STRIPE
---	--
8. THE COLOR CODING ON #6 AND SMALLER CONDUCTORS SHALL BE CONTINUOUS IN LENGTH. NO TAPING, PAINTING OR OTHER MEANS OF CODING WILL BE ACCEPTABLE. THE COLOR CODING ON #4 AND LARGER CONDUCTORS SHALL BE IN THE FORM OF COLORED TAPE VISIBLE AT EACH POINT OF ACCESS OR VIEW. COLOR CODING SHALL CONFORM TO THE REQUIREMENTS OF NEC ARTICLE 200.6.
9. FOR #10 AND SMALLER BRANCH CIRCUIT AND FIXTURE CONDUCTOR SPLICES, USE "LIVE SPRING", PRESSURE CABLE CONNECTORS LISTED FOR 600 VOLT (1000 VOLT WHEN ENCLOSED IN FIXTURE OR SIGN).
10. FOR TERMINAL CONNECTIONS ON COPPER, NO. 8 OR LARGER, OR WHERE MULTIPLE CONNECTIONS ARE MADE TO ONE TERMINAL, USE SOLDERLESS LUGS, MECHANICAL TYPE AS NECESSARY.
11. FOR SPLICES ON CONDUCTORS LARGER THAN #10, COMPRESSION TYPE BARREL SPLICES SHALL BE USED.

SECTION 26 05 26 GROUNDING

1. GROUNDING OF THE ELECTRICAL SYSTEM SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
2. METAL ENCLOSURES, CABLE TRAYS, OR RACEWAYS FOR CONDUCTORS OR EQUIPMENT SHALL BE GROUNDED.
3. EXPOSED NONCURRENT-CARRYING METAL PARTS OF FIXED EQUIPMENT LIKELY TO BECOME ENERGIZED SHALL BE GROUNDED.
4. BONDING SHALL BE PROVIDED AND CONFORM TO ALL REQUIREMENTS OF NEC ARTICLE 250 PART V.
5. ALL RACEWAYS SHALL CONTAIN A GROUNDING CONDUCTOR.

SECTION 26 05 33 PANELBOARDS, WIRING DEVICES, AND PLATES

1. THE FOLLOWING ARE THE ONLY APPROVED MANUFACTURERS FOR PANELBOARDS, AND SAFETY SWITCHES:
 - A. SQUARE D
 - B. SIEMENS
 - C. EATON
 - D. ABB/GENERAL ELECTRIC
2. PANELBOARDS:
 - A. CIRCUIT BREAKERS: QUICK-MAKE, QUICK-BREAK, THERMAL-MAGNETIC, TRIP INDICATING, WITH COMMON TRIP ON ALL MULTI-POLE BREAKERS. BRANCH CIRCUIT BREAKERS, FEEDING CONVENIENCE OUTLETS SHALL HAVE SENSITIVE INSTANTANEOUS TRIP SETTINGS OF NOT MORE THAN 10 TIMES THE TRIP RATING OF THE BREAKER IN ORDER TO GIVE "FLASH PROTECTION" FOR FRAYED STRANDED WIRE CORDS. CONNECTIONS TO THE BUSS BOLT-ON TYPE.
 - B. ALL BREAKERS USED TO PANEL SWITCH LIGHTING CIRCUITS SHALL BE UL LISTED SWD (SWITCHING DUTY) RATED AT APPLIED VOLTAGE. ALL BREAKERS USED TO SERVE PACKAGE TYPE AIR CONDITIONING EQUIPMENT SHALL BE UL LISTED "HACR".
 - C. BUS BAR CONNECTIONS TO THE BRANCH CIRCUIT BREAKERS SHALL BE "PHASE SEQUENCE" TYPE. THREE-PHASE, FOUR-WIRE BUSSING SHALL BE SUCH THAT ANY THREE ADJACENT SINGLE-POLE BREAKERS ARE INDIVIDUALLY CONNECTED TO EACH OF THE THREE DIFFERENT PHASES. ALL BUSSING SHALL BE COPPER OR TIN PLATED ALUMINUM.
 - D. PROVIDE ARC ENERGY REDUCTION ON ALL CIRCUIT BREAKERS 1200 AMP AND ABOVE PER (2017) NEC 240.87.
 - E. FRONTS SHALL INCLUDE DOORS AND HAVE FLUSH, C.P. STEEL, CYLINDER LOCKS WITH CATCHES AND SPRING-LOADED DOOR PULLS. FRONTS SHALL HAVE ADJUSTABLE INDICATING TRIM CLAMPS WHICH ARE CONCEALED WHEN THE DOORS ARE CLOSED. DOORS SHALL BE MOUNTED BY CONCEALED HINGES. FRONTS SHALL NOT BE REMOVABLE WITH DOOR IN LOCKED POSITION. A CIRCUIT DIRECTORY FRAME AND CARD WITH A CLEAR PLASTIC COVERING SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. FRONTS SHALL BE OF CODE GAUGE, FULL FINISHED STEEL WITH RUST-INHIBITING PRIMER AND BAKED ENAMEL FINISH. MINIMUM PANELBOARD WIDTH TO BE 20".
 - F. FOR EACH PANEL, FURNISH ONE CIRCUIT BREAKER LOCK OFF DEVICE.
 - G. DIRECTORY CARDS SHALL BE TYPED AND PROTECTED WITH CLEAR PLASTIC. INDICATE CIRCUITS USE SUCH AS "LIGHTING-OFFICE 105". VERIFY PROPER ROOM IDENTIFICATION.
 - H. PROVIDE UPDATED PANEL DIRECTORY CARDS REFLECTING THE CHANGES MADE IN THESE DOCUMENTS.
3. WIRING DEVICE:
 - A. DEVICES SHALL BE "SPECIFICATION" GRADE AND TAMPER RESISTANT.
 - B. RECEPTACLES SHALL BE 20 AMP; HAVE GROUNDING TERMINAL AND SHALL BE "SELF-GROUNDING".
 - C. DEVICES SHALL BE WHITE IN COLOR, OR AS SELECTED BY THE ARCHITECT.
 - D. EMERGENCY DEVICES SHALL BE RED IN COLOR.
 - E. PLATES SHALL BE SAME MANUFACTURER AS DEVICES AND SHALL BE 0.04" THICK BRUSHED STAINLESS STEEL.
 - F. DEVICES ON OPPOSITE SIDES OF A RATED PARTITION SHALL BE SEPARATED BY A MINIMUM OF 24".
 - G. PROVIDE FIRE RATED MOLDABLE PUTTY PADS ON THE ELECTRICAL BOXES LOCATED IN A RATED PARTITION.
 - H. ALL UNUSED OUTLET BOXES SHALL HAVE BLANK COVER PLATES INSTALLED.
4. SAFETY SWITCHES:
 - A. SHALL BE OF FUSIBLE AND OF HEAVY DUTY CONSTRUCTION.
 - B. PROVIDE NEMA 3R RATED SWITCHES OUTDOORS.
 - C. PROVIDE FUSING AS SHOWN ON THE EQUIPMENT NAMEPLATE.
5. SURFACE RACEWAY:
 - A. PROVIDE SURFACE METAL RACEWAY WHERE CONCEALED CONDUIT INSTALLATION IS NOT POSSIBLE IN FINISHED SPACES. ALL LOCATIONS MUST BE APPROVED BY THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
 - B. USE JUNCTION BOX AT CONDUIT CONNECTION WITH SUITABLE COVERS, ELBOWS, SPECIAL FITTINGS, ETC. AS REQUIRED OR SHOWN.
 - C. RACEWAYS SHALL BE SURFACE-MOUNTED, COLD ROLLED, GALVANIZED STEEL WITH A BASE THICKNESS OF 0.05" AND A COVER THICKNESS OF 0.05". OUTSIDE SURFACES OF BASE AND COVER SHALL MATCH WALL COLOR.
 - D. PROVIDE ALL NECESSARY FITTINGS AS REQUIRED FOR A COMPLETE INSTALLATION.

SECTION 26 05 33.13 RACEWAYS, FITTINGS, AND SUPPORTS

1. ALL CONDUCTORS SHALL BE ENCLOSED IN A CONTINUOUS GROUNDED RACEWAY SYSTEM.
2. ALL CONDUITS SHALL BE RUN WITH-IN THE WALL CAVITY. AREAS WHERE CONCEALED CONDUITS ARE NOT POSSIBLE SHALL BE APPROVED BY THE ARCHITECT PRIOR TO ANY WORK PROCEEDING.
3. ALL CONDUITS SHALL BE RIGID HEAVY WALL GALVANIZED STEEL, UNLESS NOTED BELOW, MINIMUM 3/4 INCH TRADE SIZE.
4. EMT MAY BE USED AS FOLLOWS:
 - A. IN INTERIOR PARTITIONS INSIDE BUILDING
 - B. ABOVE SUSPENDED CEILINGS INSIDE BUILDING
 - C. EXPOSED ABOVE 9 FOOT A.F.F. INSIDE BUILDING (EXCEPT HAZARDOUS LOCATIONS) IN UNFINISHED AREAS.

5. INTERMEDIATE GALVANIZED STEEL CONDUIT MAY BE USED IN LIEU OF RIGID STEEL CONDUIT WITHIN THE BUILDING INTERIOR.
6. MC CABLE MAY BE USED AS FOLLOWS:
 - A. TYPE "MC" CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING IN DRY LOCATIONS (IN WALLS OR ABOVE CEILINGS) BETWEEN LIGHTING FIXTURES, OR POWER OUTLETS. HOMERUNS, MULTI-WIRE BRANCH CIRCUITS, AND CIRCUIT RUNS WITH – MULTIPLE CIRCUITS SHALL OCCUR IN CONDUIT. CONVERSION FROM "MC" CABLE TO CONDUIT SHALL OCCUR WITHIN 10 FEET OF FIRST UTILIZATION DEVICE CONNECTION TO CIRCUIT.
 - B. THREE CONDUCTOR, THHN/THWN INSULATED, ALUMINUM OR GALVANIZED STEEL INTERLOCKED ARMOR TYPE MC POWER CABLE FOR USE IN CIRCUITS NOT EXCEEDING 600 VOLTS PHASE TO PHASE AT CONDUCTOR TEMPERATURES OF 90°C IN DRY LOCATIONS FOR NORMAL OPERATION.
 - C. CABLE ASSEMBLY SHALL INCLUDE FULL-SIZE GROUNDING CONDUCTOR, AND FULL-SIZE ISOLATED GROUNDING CONDUCTOR (IF APPLICABLE), WITH SUITABLE FILLERS AND BINDER TAPE WITH ANTI-SHORT BUSHINGS.
 - D. TYPE "MC" CABLE SHALL BE OF THE SINGLE CIRCUIT TYPE ONLY.
7. FLEXIBLE STEEL CONDUIT (UP TO THREE FEET IN LENGTH) SHALL BE USED FOR CONNECTIONS TO MOTORS, VIBRATING EQUIPMENT, AND CONNECTIONS FOR WHICH RIGID, IMC, OR EMT CONDUIT IS NOT APPLICABLE. FLEXIBLE STEEL CONDUIT UP TO SIX FEET IN LENGTH SHALL BE USED FOR CONNECTIONS TO LIGHTING FIXTURES. A GREEN GROUNDING CONDUCTOR SHALL BE INSTALLED IN EACH FLEXIBLE CONDUIT. ALL RUNS SHALL BE TERMINATED IN INSULATED FLEXIBLE CONDUIT FITTINGS. MINIMUM SIZE TO BE 1/2 INCH.
8. LIQUID TIGHT FLEXIBLE STEEL CONDUIT (UP TO THREE FEET IN LENGTH) AND APPROPRIATE FITTINGS SHALL BE USED FOR CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP.
9. PVC CONDUIT MAY ONLY BE USED UNDERGROUND OUTSIDE THE BUILDING OR UNDER CONCRETE SLABS ON GRADE WITHIN THE BUILDING. CONDUITS AND ELBOWS TURNING UP INTO THE BUILDING SPACE SHALL BE RIGID STEEL.
10. FLEXIBLE CONDUIT OR TYPE MC CABLE MAY BE USED TO CONNECT OUTLETS INSTALLED WITHIN BUILT UP CASEWORK.
11. CONDUITS LARGER THAN ONE INCH SHALL HAVE GROUNDING TYPE BUSHINGS.
12. ALL CONDUIT AND EMT FITTINGS SHALL BE DIE CAST ZINC OR GALVANIZED STEEL. CONNECTORS AND COUPLINGS SHALL BE THREADED, COMPRESSION OR SETSCREW TYPE. CONCRETE TIGHT, CONDUIT BODIES SHALL BE MALLEABLE IRON, THREADED FOR HEAVYWALL CONDUIT AND COMPRESSION OR SETSCREW TYPE FOR EMT, WITH CADMIUM FINISH AND CADMIUM PLATED SHEET STEEL COVERS. PROVIDE NEOPRENE COVER GASKETS FOR CONDUIT BODY COVERS EXPOSED TO THE WEATHER.
13. OUTLETS, JUNCTION, PULL BOXES, ETC. WHEN OVERHEAD SHALL BE INDEPENDENTLY SUPPORTED AND SHALL NOT DEPEND UPON CONDUIT FOR SUPPORT. WHERE RUN IS NOT SUPPORTED BY SLABS, WALLS, ETC., USE GALVANIZED PIPE STRAPS, TRAPEZE HANGERS, BEAM CLAMPS, CHANNEL AND FITTINGS, ETC. SUPPORT WITHIN 3' OF EACH OUTLET BOX, JUNCTION BOX, CABINET OR FITTING. SUPPORT AT LEAST EVERY 10 FEET.

SECTION 26 09 00 CONTACTORS, PHOTO-ELECTRIC CONTROLS & TIME CLOCKS

1. CONTACTORS SHALL BE SUITABLE FOR CONTINUOUS DUTY WITH ALL TYPES OF LOADS, AND BE INDUSTRIAL DUTY AND RATED 600 VOLTS.
2. CONTACTORS SHALL HAVE 120 VOLT COILS UNLESS NOTED OTHERWISE.
3. CONTACTORS SHALL HAVE TOTALLY ENCLOSED SILVER ALLOY DOUBLE BREAK POWER CONTACTS CAPABLE OF MAKING AND BREAKING ANY LOAD WITHIN THE RATING OF THE CONTACTOR WITHOUT THE ASSISTANCE OF AUXILIARY ARCING CONTACTS. ALL CONTACTS MUST BE REMOVABLE WITHOUT DISTURBING LINE OR LOAD WIRING.
4. PHOTO-ELECTRIC CONTROLS SHALL BE CONSTRUCTED OF CADMIUM SULPHIDE CELL HERMETICALLY SEALED GLASS TO STEEL AND HAVE TOTALLY ENCLOSED CONTACTS, NORMALLY CLOSED, SNAP ACTION, RATED 1800 VA.
5. THE TIME CLOCK SHALL BE 7 DAY, DIGITAL, AUTO-ADJUSTING ASTRONOMICAL TIME CLOCK WITH SUPER CAPACITOR MEMORY BACKUP. TORK EWZ101 SERIES OR EQUAL.

SECTION 26 09 23 OCCUPANCY SENSORS

1. OCCUPANCY SENSORS SHALL BE MANUFACTURED BY SENSORSWITCH OR EQUAL.
2. OCCUPANCY SENSOR COLOR SHALL BE WHITE WHEN MOUNTED ON THE CEILING, AND MATCH THE WALL RECEPTACLES WHERE WALL MOUNTED.
3. WALL BOX OCCUPANCY SENSOR USED IN OFFICES AND PRIVATE TOILETS SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH WSX-PDT SERIES.
4. WALL BOX OCCUPANCY SENSORS WITH DIMMING SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH WSX-PDT-D SERIES.
5. WALL BOX OCCUPANCY SENSOR USED IN PRIVATE TOILETS WITH EXHAUST FANS SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, 2 POLE, SENSORSWITCH WSX-PDT-2P SERIES. THE 2 SWITCHES SHALL HAVE INDICATORS FOR LIGHT OR FAN OPERATION.
6. CEILING MOUNTED OCCUPANCY SENSORS USED IN RESTROOMS SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH CM-PDT SERIES OVER THE TOILET STALLS, AND PIR ONLY IN THE RESTROOM VESTIBULE AREA, SENSORSWITCH CM SERIES.
7. CEILING MOUNTED OCCUPANCY SENSORS USED IN HIGH HUMIDITY AREAS SUCH AS SHOWER AREAS SHALL BE RATED FOR HIGH HUMIDITY.
8. CEILING MOUNTED OCCUPANCY SENSORS USED IN TRAINING AND CONFERENCE ROOMS SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH CM-PDT SERIES.
9. CEILING CORNER MOUNTED OCCUPANCY SENSORS USED IN PRIVATE OFFICES SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH WVR-PDT SERIES.
10. CEILING MOUNTED OCCUPANCY SENSORS USED IN OFFICES SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH CM-PDT SERIES.
11. CONTRACTOR SHALL PROVIDE THE PROPER OCCUPANCY SENSOR MODEL FOR THE CEILING HEIGHT AND SQUARE FOOTAGE OF THE ROOM/AREA SERVED.
12. SWITCHPACKS SHALL BE HEAVY DUTY, 120/277 VOLT, 20 AMP OUTPUT. UNIT SHALL ALSO PROVIDE LOW VOLTAGE TO POWER OCCUPANCY SENSORS.
13. WALL OCCUPANCY SENSORS SHALL BE INITIALLY SET TO TURN THE LIGHTS OFF AFTER 15 MINUTES OF NOT SENSING MOVEMENT, AND SHALL BE MANUAL "ON".

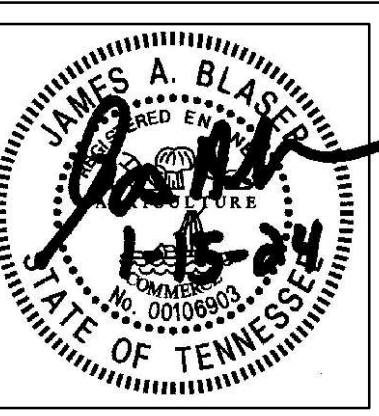
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BLASER ENG JOB# 22-120

No.	Description	Date



Renovations for First Floor
Greene County Government
Greeneville, Tennessee



Drawn: J. Blaser
Checked: J. Blaser
Job No: 23-116
Scale: as noted
Date: 01-15-24
File Name: 22120 electrical
Drawing Title: Electrical Specifications
Sheet No. E8.2

DIVISION 26 - ELECTRICAL (CONTINUED)

SECTION 26 09 43 LIGHTING CONTROLS

1. THE LIGHTING CONTROL SYSTEM SHALL HAVE ALL COMPONENTS NECESSARY TO MAKE THE SYSTEM OPERATIONAL. THIS INCLUDES THE CONTROLLER, OCCUPANCY SENSORS WITH DAYLIGHT SENSING, RELAY/DIMMING CONTROL PACK, DIMMING/ENTRY STATIONS, TOUCHSCREEN CONTROLLERS, POWER SUPPLIES, ALL CONTROL WIRING, ETC.
2. PART NUMBERS:
 - 2.1. POWER/RELAY PACK WITH 0-10V DIMMING CONTROL, nLIGHT nPP16 SERIES OR EQUAL.
 - 2.2. POWER/RELAY PACK WITH 120 VOLT LINE/PHASE DIMMING CONTROL, nLIGHT nPP-PCD SERIES OR EQUAL.
 - 2.3. OCCUPANCY SENSOR, nCM PDT SERIES OR EQUAL. PROVIDE SENSOR SUITABLE FOR THE APPLICATION.
 - 1.4. DIMMING/ENTRY STATION, nPODMA SERIES OR EQUAL.
 - 1.5. 4 BUTTON DIMMING SCENE CONTROLLER, nPODMA-4S SERIES OR EQUAL.
 - 1.8. DIGITAL TIME CLOCK, nPOD nDTC SERIES OR EQUAL.
 - 1.9. TOUCHSCREEN WALL SWITCH, nPOD TOUCH SERIES OR EQUAL, COORDINATE DEVICE COLOR WITH THE ARCHITECT.
2. OPERATIONS:
 - 2.1. COORDINATE INTENDED OPERATION OF THE LIGHTING AND BUSINESS HOURS WITH THE OWNER / TENANT PRIOR TO PROGRAMMING.
 - 2.2. COMMON AREAS AND CORRIDORS ARE TO BE CONTROLLED BY THE DIGITAL TIME CLOCK DURING NORMAL OPERATING HOURS AND CONTROLLED BY THE OCCUPANCY SENSORS AT ALL OTHER TIMES.

SECTION 26 22 13 DRY TYPE DISTRIBUTION TRANSFORMERS

1. TRANSFORMERS 30KVA - 1500KVA THREE PHASE SHALL BE ENCLOSED IN AN OPEN, VENTILATED, DRIP-PROOF ENCLOSURE, SELF BRACING, WITH REMOVABLE FRONT AND REAR COVER PANELS TO PROVIDE EASY ACCESS TO A TERMINAL COMPARTMENT LOCATED BELOW THE CORE AND COILS.
2. TRANSFORMER COILS SHALL BE INSULATED WITH A UL RATED 220 DEGREE C SYSTEM. PROVIDE TRANSFORMER WITH 150 DEGREE C TEMPERATURE RISE.
3. TRANSFORMERS SHALL HAVE AVERAGE SOUND LEVELS WHICH DO NOT EXCEED THE LEVELS ESTABLISHED BY NEMA AND ANSI STANDARDS.
4. TRANSFORMERS SHALL HAVE AT LEAST (6) 2-1/2X 2 + 4-FCAN AND FCBN TAPS.
5. ENCLOSURE SHALL BE DEGREASED, CLEANED, PRIMED AND FINISHED WITH A GRAY ENAMEL PAINT.
6. TRANSFORMERS SHALL MEET THE ENERGY EFFICIENCY STANDARDS SET FORTH IN THE DEPARTMENT OF ENERGY 2016 STANDARDS (10 CFR PART 431).
7. MANUFACTURERS SHALL BE ACME TRANSFORMER, SQUARE D, SIEMENS, EATON, FEDERAL PACIFIC, AND ABB/GENERAL ELECTRIC.

SECTION 26 30 00 TELEPHONE SERVICE

1. PROVIDE THE NECESSARY CONDUITS, OUTLETS, PLATES, CABINETS, AND PLYWOOD MOUNTING BOARDS AS SHOWN AND/OR AS REQUESTED BY THE TELEPHONE UTILITY.
2. UNLESS SPECIFICALLY NOTED, MINIMUM CONDUIT SIZE SHALL BE 3/4". CONDUIT SERVING 2 OR MORE PHONES SHALL BE 1" OR LARGER, AS NOTED.
3. TELEPHONE BACKBOARDS SHALL BE FIRE RETARDANT 3/4" GRADE B-C PLYWOOD OF WIDTH SHOWN IN DRAWINGS, 6 FOOT HIGH AND MOUNTED 2 FEET ABOVE THE FLOOR.
4. PROVIDE EMPTY CONDUIT SYSTEMS FOR TELEPHONE COMPANY.
5. ALL UNUSED DATA/TELEPHONE BOXES SHALL HAVE BLANK COVER PLATES INSTALLED.

SECTION 26 43 13 SURGE SUPPRESSION

1. SPD UNITS AND ALL COMPONENTS SHALL BE DESIGNED, MANUFACTURED, AND TESTED IN ACCORDANCE WITH THE LATEST APPLICABLE UL STANDARD (ANSI/UL 1449 3RD EDITION).
2. THE MANUFACTURER SHALL BE ISO 9000 CERTIFIED AND HAVE PRODUCED SIMILAR ELECTRICAL EQUIPMENT FOR A MINIMUM PERIOD OF FIVE (5) YEARS.
3. ELECTRICAL REQUIREMENTS:
 - 3.1. MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV) SHALL NOT BE LESS THAN 125% OF THE SYSTEM OPERATING VOLTAGE.
 - 3.2. THE SUPPRESSION SYSTEM SHALL INCORPORATE THERMALLY PROTECTED METAL-OXIDE VARISTORS (MOVs) AS THE CORE SURGE SUPPRESSION COMPONENT FOR THE SERVICE ENTRANCE AND ALL OTHER DISTRIBUTION LEVELS.
 - 3.3. PROTECTION MODES - THE SPD MUST PROTECT ALL MODES OF THE ELECTRICAL SYSTEM. THE REQUIRED PROTECTION MODES ARE L-N, L-G, L-L, N-G
4. NOMINAL DISCHARGE CURRENT (IN) - ALL SPDs APPLIED TO THE DISTRIBUTION SYSTEM SHALL HAVE A 20KA IN RATING REGARDLESS OF THEIR TYPE OR VOLTAGE. SPDs HAVING AN IN LESS THAN 20KA SHALL BE REJECTED.
5. ANSI/UL 1449 3RD EDITION VOLTAGE PROTECTION RATING (VPR) - THE MAXIMUM ANSI/UL 1449 3RD EDITION VPR FOR THE DEVICE SHALL NOT EXCEED THE FOLLOWING:

MODES	208Y/120	480Y/277
L-N; L-G; N-G	700	1200
L-L	1200	2000
6. SPD DESIGN:
 - 6.1. THE SPD SHALL BE MAINTENANCE FREE AND SHALL NOT REQUIRE ANY ANY USER INTERVENTION THROUGHOUT ITS LIFE.
 - 6.2. THE UNIT SHALL INCLUDE A HIGH-PERFORMANCE EMI/RFI NOISE REJECTION FILTER. NOISE ATTENUATION FOR ELECTRIC LINE NOISE SHALL BE UP TO 50 DB FROM 10 KHZ TO 100 MHZ.
 - 6.3. THE SPD SHALL PROVIDE THE FOLLOWING INTEGRAL MONITORING OPTIONS:
 - 6.3.1. UNIT SHALL HAVE A GREEN / RED SOLID-STATE INDICATOR LIGHT THAT REPORTS THE STATUS OF THE PROTECTION ON EACH PHASE.
 - 6.3.2. THE SPD MUST INCLUDE FORM C DRY CONTACTS (ONE NO AND ONE NC) FOR REMOTE ANNUNCIATION OF ITS STATUS. BOTH THE NO AND NC CONTACTS SHALL CHANGE STATE UNDER ANY FAULT CONDITION.
 - 6.3.3. SPD SHALL CONTAIN AN AUDIBLE ALARM THAT WILL BE ACTIVATED UNDER ANY FAULT CONDITION. THERE SHALL ALSO BE AN AUDIBLE ALARM SILENCE BUTTON USED TO SILENCE THE AUDIBLE ALARM AFTER IT HAS BEEN ACTIVATED.
 - 6.3.4. SPD SHALL BE EQUIPPED WITH AN LCD DISPLAY THAT INDICATES TO THE USER HOW MANY SURGES HAVE OCCURRED. ONGOING SURGE COUNT SHALL BE STORED IN NON-VOLATILE MEMORY.

- 6.4. SAFETY REQUIREMENTS:
 - 6.4.1. THE SPD SHALL MINIMIZE POTENTIAL ARC FLASH HAZARDS BY CONTAINING NO USER SERVICEABLE / REPLACEABLE PARTS AND SHALL BE MAINTENANCE FREE. SPDs CONTAINING ITEMS SUCH AS REPLACEABLE MODULES, REPLACEABLE FUSES, OR REPLACEABLE BATTERIES SHALL NOT BE ACCEPTED. SPDs REQUIRING ANY MAINTENANCE OF ANY SORT SUCH AS PERIODIC TIGHTENING OF CONNECTIONS SHALL NOT BE ACCEPTED.
 - 6.4.2. SPDs DESIGNED TO INTERFACE WITH THE ELECTRICAL ASSEMBLY VIA CONDUCTORS SHALL REQUIRE NO USER CONTACT WITH THE INSIDE OF THE UNIT. SUCH UNITS SHALL HAVE ANY REQUIRED CONDUCTORS BE FACTORY INSTALLED.
- 6.5. SYSTEM APPLICATION:
 - 6.5.1. ALL SPDs SHALL BE TESTED AND DEMONSTRATE SUITABILITY FOR APPLICATION WITHIN ANSI/IEEE C62.41 CATEGORY C, B, AND A ENVIRONMENTS.
 - 6.5.2. MINIMUM SURGE CURRENT CAPACITY BASED ON ANSI/IEEE C62.41. DEVICE IS CAPABLE OF WITHSTANDING AS FOLLOWS:

CATEGORY	APPLICATION	PER PHASE	PER MODE
B	HIGH EXPOSURE ROOF TOP LOCATIONS (DISTRIBUTION PANELBOARDS) 600-1600v	150 KA	75 KA
A	BRANCH LOCATIONS (PANELBOARDS, MCCS, BUSWAY) 200-400 amp panels	100 KA	50 KA
7. SPD TYPE - ALL SPDs INSTALLED ON THE LINE SIDE OF THE SERVICE ENTRANCE DISCONNECT SHALL BE TYPE 1 SPDs. ALL SPDs INSTALLED ON THE LOAD SIDE OF THE SERVICE ENTRANCE DISCONNECT SHALL BE TYPE 1 OR TYPE 2 SPDs.
8. THE MANUFACTURER SHALL PROVIDE A FULL FIVE (5) YEAR WARRANTY FROM THE DATE OF SHIPMENT AGAINST ANY SPD PART FAILURE WHEN INSTALLED IN COMPLIANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND ANY APPLICABLE NATIONAL OR LOCAL CODE.

SECTION 26 50 00 LIGHTING FIXTURES

1. FURNISH LIGHTING FIXTURES, LAMPS AND DRIVERS/BALLAST AS INDICATED ON THE DRAWINGS OR APPROVED EQUALS TO SPECIFIED FIXTURES.
2. FURNISH ALL REQUIRED INSTALLATION ACCESSORIES FOR THE FIXTURES AS REQUIRED FOR THE SPECIFIC LOCATION WHETHER OR NOT INCLUDED IN THE MANUFACTURER'S CATALOG NUMBER. SUCH ACCESSORIES INCLUDE PLASTER FRAMES, RINGS, FLANGES, CANOPES, STEM HANGERS, AND SUSPENSION STRAPS.
3. INSTALL LAMPS IN ALL FIXTURES INSTALLED UNDER THIS CONTRACT IN ACCORDANCE WITH THE FIXTURE SCHEDULE ON THE DRAWINGS.
4. ALL LIGHT FIXTURES SHALL BE UL LISTED.
5. FIXTURES SHALL BE SECURELY MOUNTED TO ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS. WIRE SUPPORTED FROM THE STRUCTURE SHALL BE PROVIDED FOR FIXTURES INSTALLED IN LAY-IN CEILINGS. PROVIDE MEANS OF SUPPORT AS REQUIRED IN NEC ARTICLE 410.16.
6. FLUSH FIXTURES WITH LIGHT SPILLING BETWEEN FRAME AND CEILING TO HAVE FELT GASKETS INSTALLED BETWEEN TRIM AND CEILING.
7. ALL BALLASTED FIXTURES SHALL HAVE A DISCONNECTING MEANS AT THE FIXTURE PER THE REQUIREMENTS OF NEC 410.130.

SECTION 28 31 00 FIRE ALARM SYSTEM

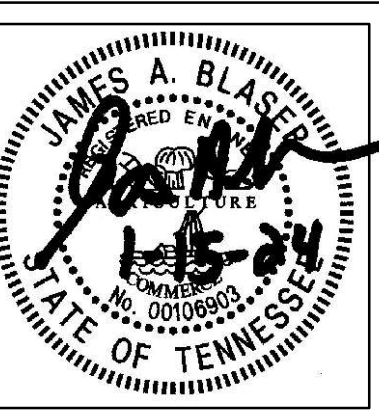
1. PROVIDE ALL EQUIPMENT AND ACCESSORIES REQUIRED FOR A COMPLETE LOCAL, MANUAL AND AUTOMATICALLY ACTUATED, ELECTRICALLY OPERATED, ADDRESSABLE ANNUNCIATED FIRE ALARM SYSTEM WITH BATTERY BACKUP.
2. THE FIRE ALARM SYSTEM DEVICES SHALL BE FULLY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM. PROVIDE ALL NECESSARY COMPONENTS AS REQUIRED TO MAKE THE SYSTEM OPERATE AS ONE SYSTEM.
3. FIRE ALARM INSTALLATION SHALL BE U.L LISTED AND CONFORM TO THE REQUIREMENTS OF NFPA 72, NFPA 101, LOCAL BUILDING CODES, AND THE NEC.
4. ACTUATION DEVICES SHALL INCLUDE DUAL ACTION MANUAL PULL STATIONS, SMOKE DETECTORS, DUCT SMOKE DETECTORS, AND WATER FLOW AND TAMPER SWITCHES.
5. ALARM AND ALERTING DEVICES SHALL MATCH EXISTING DEVICES WITH VISUAL DISPLAY.
6. ALL FIRE ALARM JUNCTION BOXES SHALL BE PAINTED RED.
7. CONTROL FUNCTIONS SHALL INCLUDE AIR HANDLING UNIT SHUTDOWN, RELEASE SECURITY DOORS, & AUTOMATIC NOTIFICATION OF EMERGENCY CENTER.
8. PROVIDE CONTROL MODULES ON ALL MAGNETICALLY HELD DOORS USED FOR EGRESS.
9. PROVIDE AN ADDITIONAL POWER SUPPLY TO POWER NEW DEVICES, OR IF THE EXISTING POWER SUPPLY IS LARGE ENOUGH, PROVIDE UPDATED BATTERY CALCULATIONS SHOWING THE EXISTING POWER SUPPLY AND BATTERIES ARE SIZED TO ACCOMMODATE THE EXISTING AND NEW DEVICE LOAD.
10. CONTRACTOR SHALL PROVIDE FOR SYNCHRONIZATION OF THE FIRE ALARM STROBES AND HORN/STROBES. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT, COMPONENTS, AND SYSTEM UPGRADES AS NECESSARY TO SYNCHRONIZE THE FIRE ALARM NOTIFICATION APPLIANCES WITH-IN THE WORK AREA.
11. CONTRACTOR SHALL PROVIDE FIRE ALARM SHOP DRAWINGS FOR THE BUILDING DEPARTMENT REVIEW AND APPROVAL PRIOR TO THE INSTALLATION OF THE FIRE ALARM SYSTEM.
12. ALL DEVICES EXISTING AND NEW SHALL BE TESTED UPON COMPLETION OF THE INSTALLATION PRIOR TO THE FIRE MARSHAL/BUILDING OFFICIAL WALK-THRU. ALL NON-WORKING DEVICES SHALL BE REPAIRED OR REPLACED.

SECTION 28 31 10 EMERGENCY RESPONDER RADIO COVERAGE

1. BUILDING SHALL BE TESTED FOR EMERGENCY RESPONDER RADIO COVERAGE.
2. TESTS SHALL BE PERFORMED AFTER THE INTERIOR AND EXTERIOR WALLS, DOORS, AND WINDOWS HAVE BEEN CONSTRUCTED.
3. IF THE INTERIOR AND/OR EXTERIOR COVERAGE DOES NOT MEET THE MINIMUM REQUIREMENTS OF THE INTERNATIONAL FIRE CODE SECTION 510, THEN PROVIDE A DISTRIBUTED ANTENNA SYSTEM COMPATIBLE WITH LOCAL EMERGENCY RESPONDER REQUIREMENTS TO BOOST THE SIGNAL TO CODE REQUIRED LEVELS.
4. SYSTEM DESIGN, DESIGN APPROVAL, INSTALLATION, AND FINAL ACCEPTANCE BY THE AUTHORITIES HAVING JURISDICTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. FINAL DEVICE TYPES, QUANTITIES, AND LOCATIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL PROVIDE ALL REQUIRED ROUGH-INS, POWER CONNECTIONS, FIRE ALARM SYSTEM MONITORING, BACKUP BATTERIES, AND WIRING PER THE APPROVED PLANS.
6. COORDINATE REQUIREMENTS AND DEVICE LOCATIONS WITH OTHER TRADES AND THE GENERAL CONTRACTOR.
7. INCLUDE FEE FOR TESTING THE BUILDING AS PART OF THE ELECTRICAL BID AND WORST CASE SCENARIO (FULL COVERAGE) PRICING AS A SEPARATE LINE ITEM. THE PRICING WILL BE ADJUSTED AFTER THE TEST RESULTS DETERMINE THE REQUIRED EQUIPMENT.

END OF SPECIFICATIONS

Revisions					
Description					
Date					
No.					



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