

ADDENDUM

Bid Addendum #1

PROJECT: Johnston County Public Schools
Four Oaks Elementary School HVAC Renovation

CPL PROJECT NO.: R23.00325.00

DATE: March 7, 2025

Include this Addendum as part of the Contract Documents. It supplements portions of the original specifications and drawings, the extent of which shall remain, except as revised herein:

CONTRACTOR BID QUESTIONS:

1. **Are the chillers required to have shell and tube heat exchangers?**
Answer: Yes.
2. **Can you please confirm if the intent of these projects is for the Prime Contractor to be a General Contractor or a Mechanical Contractor?**
Answer: Correct, these projects are to be bid by General Contractor as Prime. Updated Bid form to reflect.
3. **Are there roof warranties on any of the schools that need to be maintained? If so, can contact information be provided for the roofer holding the warranty at each school?**
Answer: Yes, there are roof warranties at CES & SSES, Muter is Roofer for Cleveland ES, Eastern Corp for South Smithfield
4. **The drawings indicate that the contractor is to receive the equipment ordered by the Owner and provide a warranty. Is the warranty provided by the contractor only for workmanship defects in the installation, or will the contractor also be responsible for coordinating with the manufacturer for material warranty items?**
Answer: Equipment pre-purchase included Manufacturer warranty for the equipment, Contractor will need to provide workmanship and coordinate with Manufacturer to maintain MNFR warranty.
5. **Who is the service provider for fire alarm for each of the schools? Can contact information be provided?**
Answer: A Symplex System and uses Johnston Controls
6. **Is a field office required for this project, or will the contractor be allowed to use a classroom or lounge?**
Answer: Field Office will not be required from JCPS, that is up to the contractor to decide if they need, however use of the school building for meetings will be limited to meetings with Owner/Architect.

- 7. Are temporary facilities (i.e. restrooms and handwash stations) required for this project, or is the contractor allowed to use the restrooms at the school as long as they are kept clean?**

Answer: Temporary facilities will be required for Contractor as no school restrooms will be allowed to be used by contractors or any construction workers.

- 8. Is duct cleaning required for existing duct to remain in any or all of the schools?**

Answer: Duct cleaning of existing ductwork is not required. The specification refers to newly installed ductwork.

- 9. Can a contact be provided for the fuel oil supplier for all applicable schools where fuel oil tanks are to be decommissioned?**

Answer: Go Energy is fuel oil provider

- 10. Is a identification of Minority Business Participation form required to be submitted for each school bid, or will one combined form need to be provided for all schools?**

Answer: Only 1 MWBE form is required to be provided for each bid package, no matter whether you provide a price for 1, 2, or all 3 schools.

TO THE SPECIFICATIONS:

SECTION 012300 – ALTERNATES

- Updated to include additional Owner preferred.

TO THE DRAWINGS:

H201.2 – GROUND FLOOR AND MEZZANINE HVAC PLAN – AREA 2

- ADD drawings in its entirety, with attached new drawing.

H201.3AB – GROUND FLOOR HVAC DUCTWORK PLAN - AREA 3A AND 3B

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

H301.1FG– GROUND FLOOR HVAC PIPING PLAN – AREA 1F AND 1G

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

H301.2 – GROUND FLOOR AND MEZZANINE HVAC PIPING PLAN – AREA 2

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

H301.3AB – GROUND FLOOR HVAC PIPING PLAN – AREA 3A AND 3B

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

H900 – HVAC SCHEDULES

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

H901 – HVAC SCHEDULES

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

E101-2 - GROUND FLOOR AND MEZZANINE ELECTRICAL DEMOLITION PLAN - AREA 2

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Johnston County Public Schools
Four Oaks Elementary School – HVAC Renovation
CPL Project Number: R23.00325.00

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

E201-1BC - GROUND FLOOR ELECTRICAL POWER AND SYSTEMS PLAN - AREA 1B & 1C

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

E201-2 - GROUND FLOOR & MEZZANINE POWER AND SYSTEMS PLAN - AREA 2

- REPLACE drawings in its entirety, with attached new drawing of same number and new name.

E201-3AB - GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 3A & 3B

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

E301-1BC - GROUND FLOOR LIGHTING PLAN - AREA 1B & 1C

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

E900 - ELECTRICAL EQUIPMENT AND LUMINAIRE SCHEDULES

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

E902 - ELECTRICAL PANEL SCHEDULES

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

E903 - ELECTRICAL PANEL SCHEDULES

- REPLACE drawings in its entirety, with attached new drawing of same number and name.

ATTACHMENTS:

Specification Sections: 004100 Bid Form, 012300 Alternates

Drawing Sheets: H201.2, H201.3AB, H301.1FG, H301.2, H301.3AB, H900, H901, E101-2, E201-1BC, E201-2, E201-3AB, E301-1BC, E900, E902, E903

End of Bid Addendum 1

SECTION 00 41 00

BID PROPOSAL FORM
STIPULATED SUM

JOHNSTON COUNTY PUBLIC SCHOOLS
MULTIPLE PROJECTS – HVAC REPLACEMENT
CLEVELAND, FOUR OAKS, & SOUTH SMITHFIELD ELEMENTARY SCHOOLS

DATE: _____

The Undersigned, as Bidder, declares that he understands this bid package is broken into three separate and distinct projects, and has examined the site of each project and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the Contract Documents relative thereto and he has taken special note that work shall be guaranteed for a period of one year after acceptance by Owner; and he has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The bidder understands this project is Single Prime - General Contractor led and an active G.C. license in North Carolina will be required. The bidder understands that he may submit pricing for any or all of the individual projects, and **JOHNSTON COUNTY PUBLIC SCHOOLS** reserves the right to select the successful contractor for any combination of these projects, or none at all, at JCPS' sole discretion.

The bidder proposes and agrees if this bid is accepted to contract with **JOHNSTON COUNTY PUBLIC SCHOOLS** for the furnishing of all materials, equipment, tools, means of transportation and labor necessary to complete the construction of the work described in these documents in full and complete accordance with the Contract Documents, plans, and specifications as prepared by CPL Architects & Engineers, and to the full and entire satisfaction of the Owner, with the understanding that no money will be allowed for extra work except as set forth in the Contract Documents for the sum of:

(bid forms for each school on following pages)

CLEVELAND ELEMENTARY SCHOOL BID FORM

BASE BID

_____ Dollars (\$_____)

ALLOWANCES

General Construction Work Base Bid to include a General Contingency Allowance as specified in Section 01 21 00 – Allowances and listed below:

General Contingency: \$150,000.00

ALTERNATES

Should any of the alternates as described in the contract documents be accepted, the amount written below shall be the amount to be "added to" the total bid. If the alternate is left blank, then the Alternate would not change if the base bid is accepted.

The bidder agrees to construct the Alternate as described in the Contract documents for the following price. Acceptance of the alternate does not increase the contract time.

Alternate No. 1 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Pumps by B&G.

Add _____ Dollars (\$_____)

Alternate No. 2 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Pumps by Taco.

Add _____ Dollars (\$_____)

Alternate No. 3 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Valves and Actuators by Belimo.

Add _____ Dollars (\$_____)

Alternate No. 4 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Controls by Honeywell.

Add _____ Dollars (\$_____)

Alternate No. 5 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Controls by Distech.

Add _____ Dollars (\$_____)

UNIT PRICES

1. Steel Bollard..... \$_____ per each

2. Fire Extinguisher..... \$_____ per each

TOTAL BID AMOUNT – Cleveland Elementary School

_____ (\$_____)

The total bid amount includes alternated and allowances – does **NOT** include unit prices.

Principal SUB-BIDDERS for CES: The undersigned further states that this bid is based on quotations received from the following subcontractors for the categories of work listed; he further agrees that if he is the successful Bidder, he will contract with the listed subcontractors for the performance of this work:

Mechanical Subcontractor:	_____	License No:	_____
Plumbing Subcontractor:	_____	License No:	_____
Electrical Subcontractor:	_____	License No:	_____

FOUR OAKS ELEMENTARY SCHOOL BID FORM

BASE BID

_____ Dollars (\$_____)

ALLOWANCES

General Construction Work Base Bid to include a General Contingency Allowance as specified in Section 01 21 00 – Allowances and listed below:

General Contingency: \$250,000.00

ALTERNATES

Should any of the alternates as described in the contract documents be accepted, the amount written below shall be the amount to be “added to” the total bid. If the alternate is left blank, then the Alternate would not change if the base bid if accepted.

The bidder agrees to construct the Alternate as described in the Contract documents for the following price. Acceptance of the alternate does not increase the contract time.

Alternate No. 1 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Pumps by B&G.

Add _____ Dollars (\$_____)

Alternate No. 2 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Pumps by Taco.

Add _____ Dollars (\$_____)

Alternate No. 3 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Valves and Actuators by Belimo.

Add _____ Dollars (\$_____)

Alternate No. 4 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Controls by Honeywell.

Add _____ Dollars (\$_____)

Alternate No. 5 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Controls by Distech.

Add _____ Dollars (\$_____)

Alternate No. 6 – Building 02 FCUs

State the amount to be added to the Base Bid to provide new Fand Coil Units in Building 02.

Add _____ Dollars (\$_____)

UNIT PRICES

- | | |
|---------------------------|------------------|
| 1. Steel Bollard..... | \$_____ per each |
| 2. Fire Extinguisher..... | \$_____ per each |

TOTAL BID AMOUNT – Four Oaks Elementary School

_____ (\$_____)

The total bid amount includes alternated and allowances – does **NOT** include unit prices.

Principal SUB-BIDDERS for FOES: The undersigned further states that this bid is based on quotations received from the following subcontractors for the categories of work listed; he further agrees that if he is the successful Bidder, he will contract with the listed subcontractors for the performance of this work:

Mechanical Subcontractor: _____	License No: _____
Plumbing Subcontractor: _____	License No: _____
Electrical Subcontractor: _____	License No: _____

SOUTH SMITHFIELD ELEMENTARY SCHOOL BID FORM

BASE BID

_____ Dollars (\$_____)

ALLOWANCES

General Construction Work Base Bid to include a General Contingency Allowance as specified in Section 01 21 00 – Allowances and listed below:

General Contingency: \$150,000.00

ALTERNATES

Should any of the alternates as described in the contract documents be accepted, the amount written below shall be the amount to be "added to" the total bid. If the alternate is left blank, then the Alternate would not change if the base bid is accepted.

The bidder agrees to construct the Alternate as described in the Contract documents for the following price. Acceptance of the alternate does not increase the contract time.

Alternate No. 1 – Replace ACT Ceilings

State the amount to be added to the Base Bid to replace ACT Ceilings as shown on architectural plans.

Add _____ Dollars (\$_____)

Alternate No. 2 – Replace Light Fixtures

State the amount to be added to the Base Bid to replace light fixtures as shown on the electrical plans.

Add _____ Dollars (\$_____)

Alternate No. 3 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Pumps by B&G.

Add _____ Dollars (\$_____)

Alternate No. 4 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Pumps by Taco.

Add _____ Dollars (\$_____)

Alternate No. 5 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Valves and Actuators by Belimo.

Add _____ Dollars (\$_____)

Alternate No. 6 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Controls by Honeywell.

Add _____ Dollars (\$_____)

Alternate No. 7 (Owner Preferred Alternate)

State the amount to be added to the Base Bid to provide Controls by Distech.

Add _____ Dollars (\$_____)

UNIT PRICES

- | | |
|---------------------------|------------------|
| 1. Steel Bollard..... | \$_____ per each |
| 2. Fire Extinguisher..... | \$_____ per each |

TOTAL BID AMOUNT – South Smithfield Elementary School

_____ (\$_____)

The total bid amount includes alternated and allowances – does **NOT** include unit prices.

Principal SUB-BIDDERS for SSES: The undersigned further states that this bid is based on quotations received from the following subcontractors for the categories of work listed; he further agrees that if he is the successful Bidder, he will contract with the listed subcontractors for the performance of this work:

Mechanical Subcontractor:	_____	License No:	_____
Plumbing Subcontractor:	_____	License No:	_____
Electrical Subcontractor:	_____	License No:	_____

The Undersigned further agrees that in case of failure on his part to execute the said Contract and to furnish the bond within ten (10) consecutive calendar days after written notice being given of the award of the Contract, the check, cash, or bid bond accompanying this bid shall be paid into the funds of the Owner's account set aside for this project, as liquidated damages for such failure; otherwise the check, cash, or bid bond accompanying this proposal shall be returned to the Undersigned.

The Bidder acknowledges receipt of all Addenda as listed below and has taken them into account in preparation of his proposal.

Addendum No. 01 dated _____.

Respectfully submitted this _____ day of _____ 2025.

(Name of Firm or Corporation making bid)

By:

Printed Name and Title: (Owner, Partner, President or Vice-President)

Address:

Email:

License # _____

(CORPORATE SEAL)

END OF SECTION

SECTION 01 23 00
ALTERNATES
PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of Alternates.
- B. Submission procedures.

1.02 RELATED REQUIREMENTS

- A. Document 00 41 00 - Bid Form: List of alternates on the Bid Form.
- B. Document 00 52 00 - Agreement Form: Incorporating monetary value of accepted Alternates.

1.03 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

1.04 SCHEDULE OF ALTERNATES

- A. Alternate No. 01 – (Owner Preferred):
 - 1. Provide Pumps by Manufacturer: B & G, no substitutions.
- B. Alternate No. 02 – (Owner Preferred):
 - 1. Provide Pumps by Manufacturer: Taco, no substitutions.
- C. Alternate No. 03 – (Owner Preferred):
 - 1. Provide Valves and Actuators by Manufacturer: Belimo, no substitutions.
- D. Alternate No. 04 – (Owner Preferred):
 - 1. Provide Controls by Manufacturer: Honeywell, no substitutions.
- E. Alternate No. 05 – (Owner Preferred):
 - 1. Provide Controls by Manufacturer: Distech, no substitutions.
- F. Alternate No. 06 – Building 02 FCUs.
 - 1. Provide price to replace all existing FCU's in Building 02 with new.

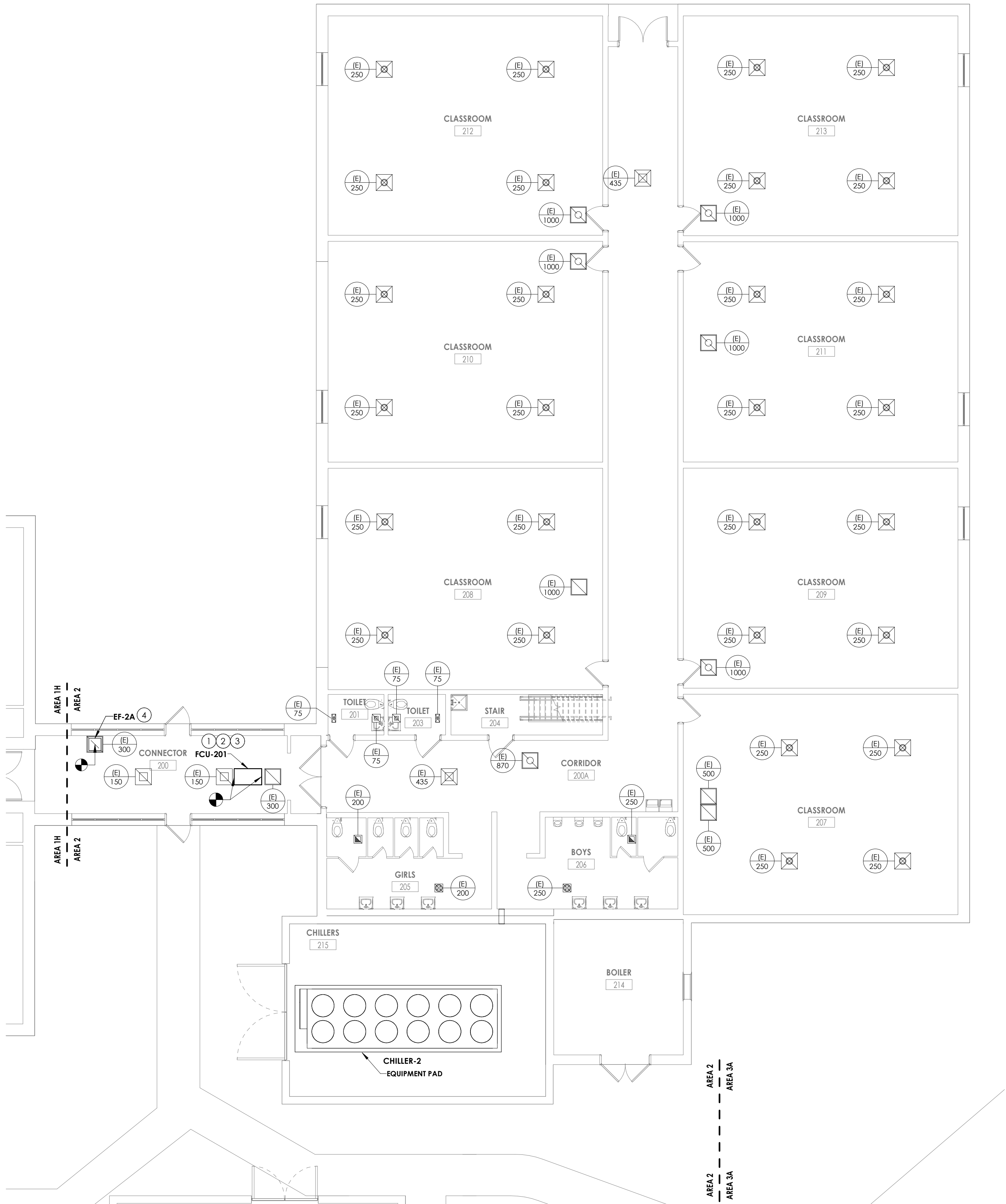
PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

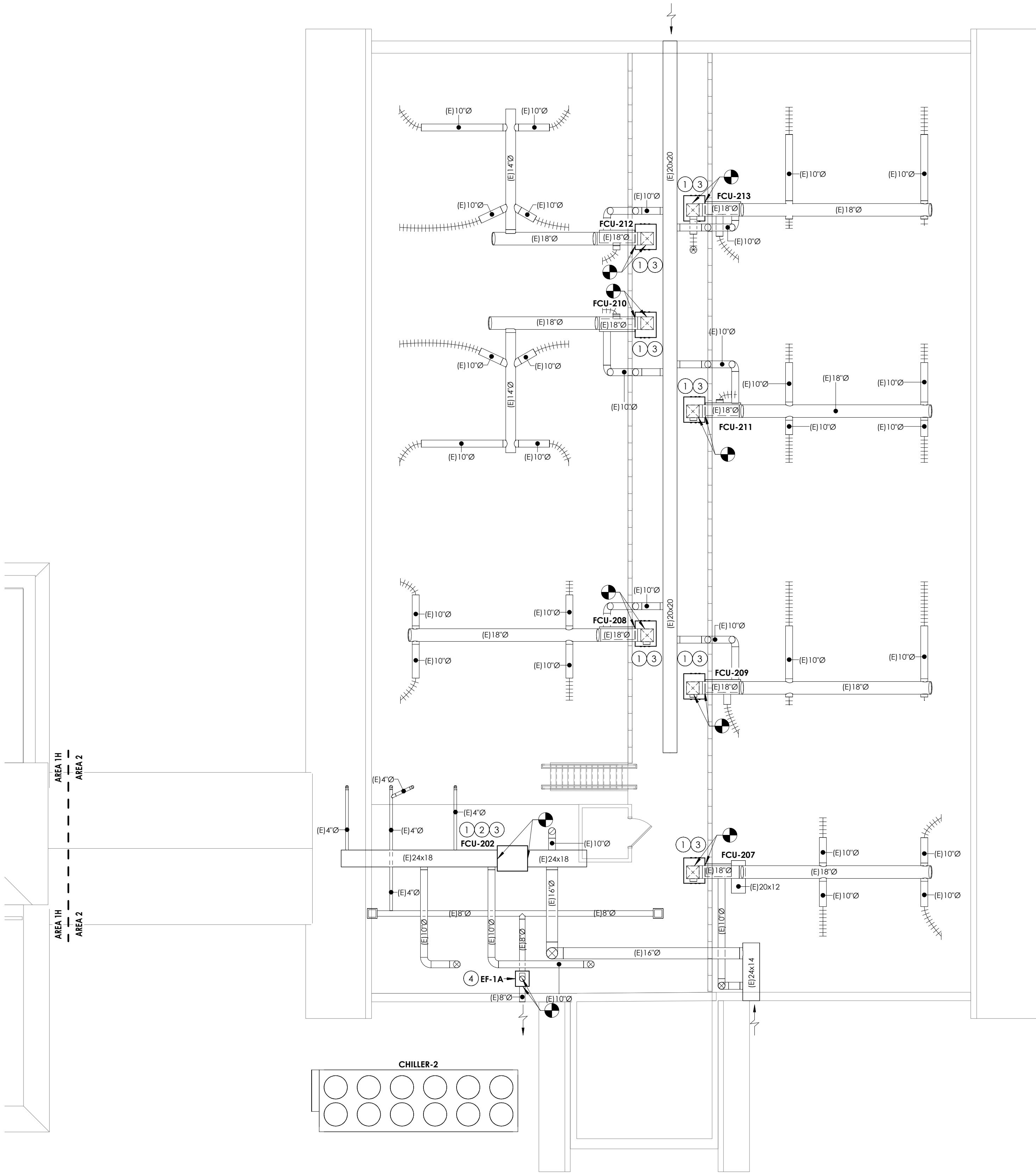
END OF SECTION

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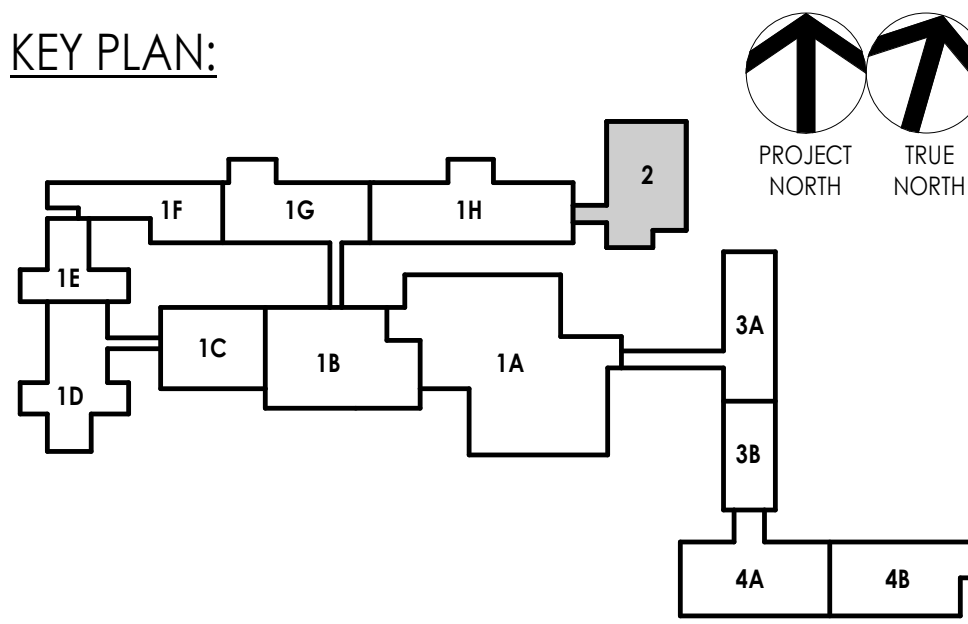


1 GROUND FLOOR HVAC PLAN - AREA 2 (ALTERNATE NO. 5)
H201.2 1/8" = 1'-0"



2 MEZZANINE HVAC DUCTWORK PLAN - AREA 2 (ALTERNATE NO. 5)
H201.2 1/8" = 1'-0"

KEY PLAN:

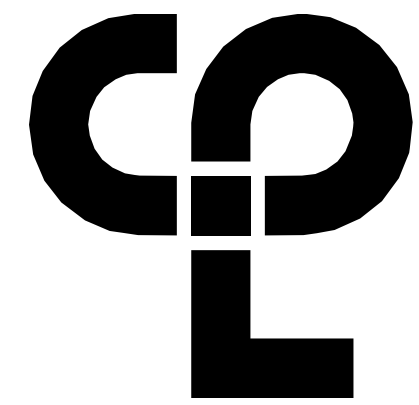


GENERAL NOTES

1. REFERENCE CONTROL SCHEMATICS FOR IF TEMPERATURE, HUMIDITY, CO2, OR SOME COMBINATION. GENERAL TRIANGLE IS LOCATION ONLY, NOT A CONTRACTOR EXCISE FOR TEMPERATURE ONLY WALL MODULES.

KEY NOTES

1. UPDATE ALL ASSOCIATED LABELING ON EQUIPMENT, ELECTRICAL, ETC.
2. FCU TO BE CONTROLLED BASE ON THE RETURN AIR TEMPERATURE AND RETURN AIR HUMIDITY.
3. REMOVE FAN COIL UNIT AND REPLACE WITH SIMILAR CARRIER MAKE AND MODEL WITH SAME HORSE POWER RATING AND POWER REQUIREMENTS. RECONNECT TO EXISTING DUCTWORK AS CLOSE AS POSSIBLE.
4. REMOVE AND REPLACE EXHAUST FAN WITH SIMILAR GREENHECK MAKE AND MODEL WITH SAME HORSE POWER RATING AND POWER REQUIREMENTS. RECONNECT TO EXISTING DUCTWORK AS CLOSE AS POSSIBLE.



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PROJECT INFORMATION

Project Number: R23.00325
Client Name: JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT
Project Name: FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address: 180 W Hatcher St., Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

Rev	Date	Description
1	3/7/2025	Bid Addendum #1

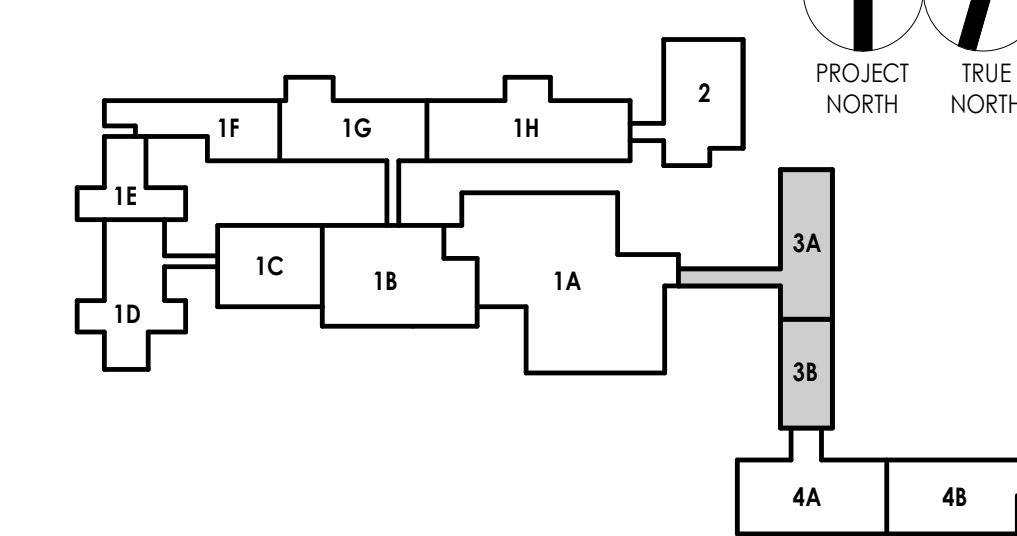
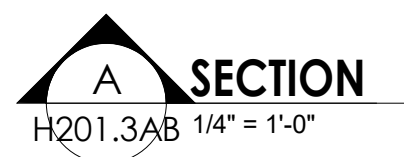
PROFESSIONAL STAMPS



SHEET INFORMATION

Issue: 03/07/2025 Scale: 1/8" = 1'-0"
Project Status: BID SET
Drawn By: KAB Checked By: RM
Drawing Title: GROUND FLOOR AND MEZZANINE HVAC PLAN - AREA 2

Drawing Number: FOES H201.2



- ① PROVIDE INLINE EXHAUST FAN WITH ASSOCIATED DUCTWORK AND CONTROLS. EXTEND DUCT THROUGH WINDOW SPANDREL PANEL WITH LOUVER AND TERMINATE WITH BAROMETRIC BACKDRAFT DAMPER.
- ② PROVIDE NEW FAN COIL UNIT WITH ASSOCIATED DUCTWORK, PIPING, AND CONTROLS.

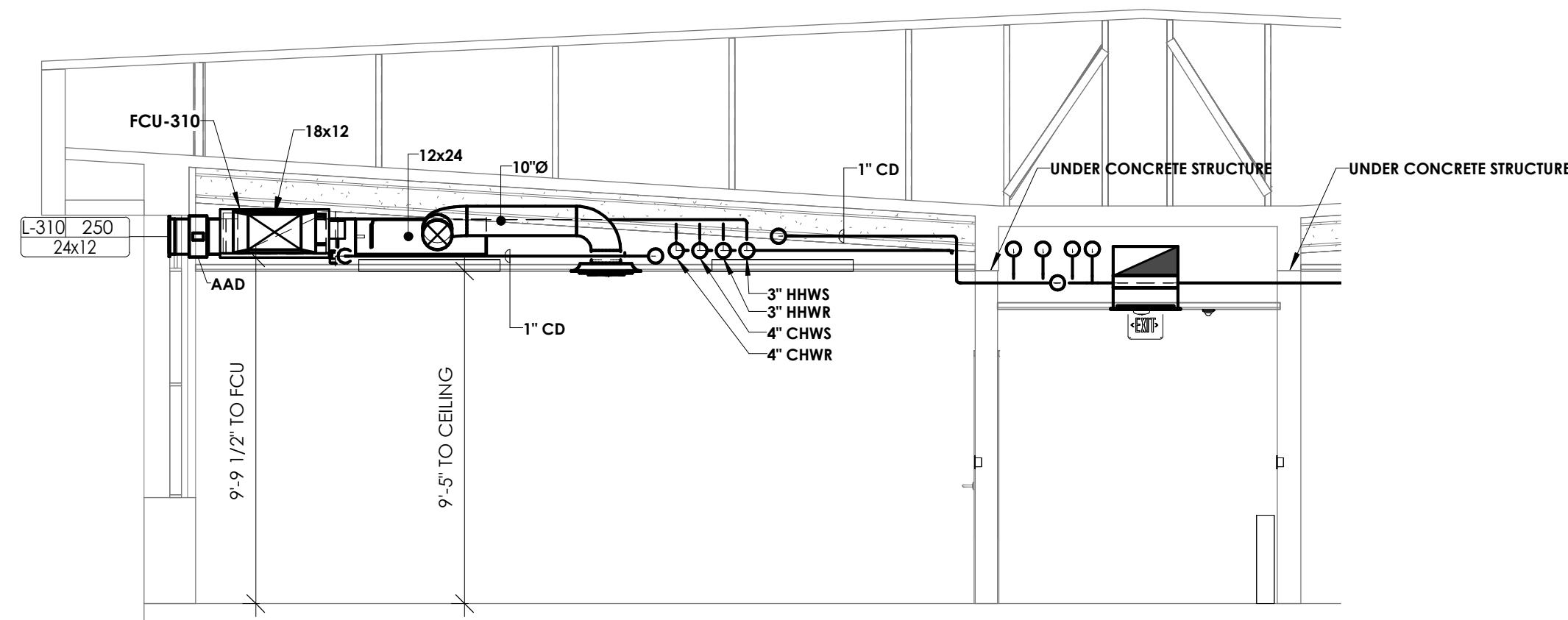


PROJECT ISSUE & REVISION SCHEDULE		
vv	Date	Description
1	3/7/2025	Bid Addendum #1

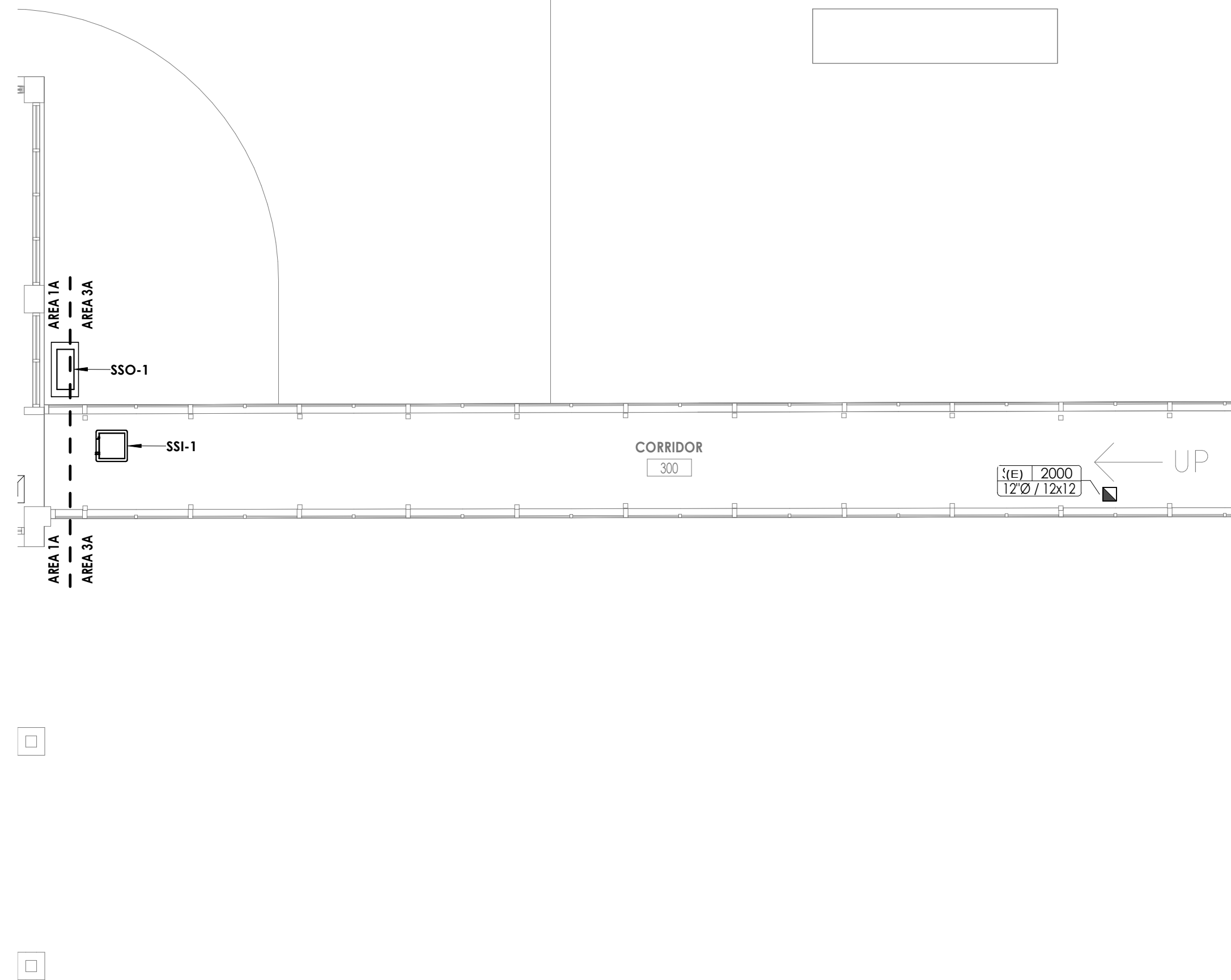
Drawing Number

FOES

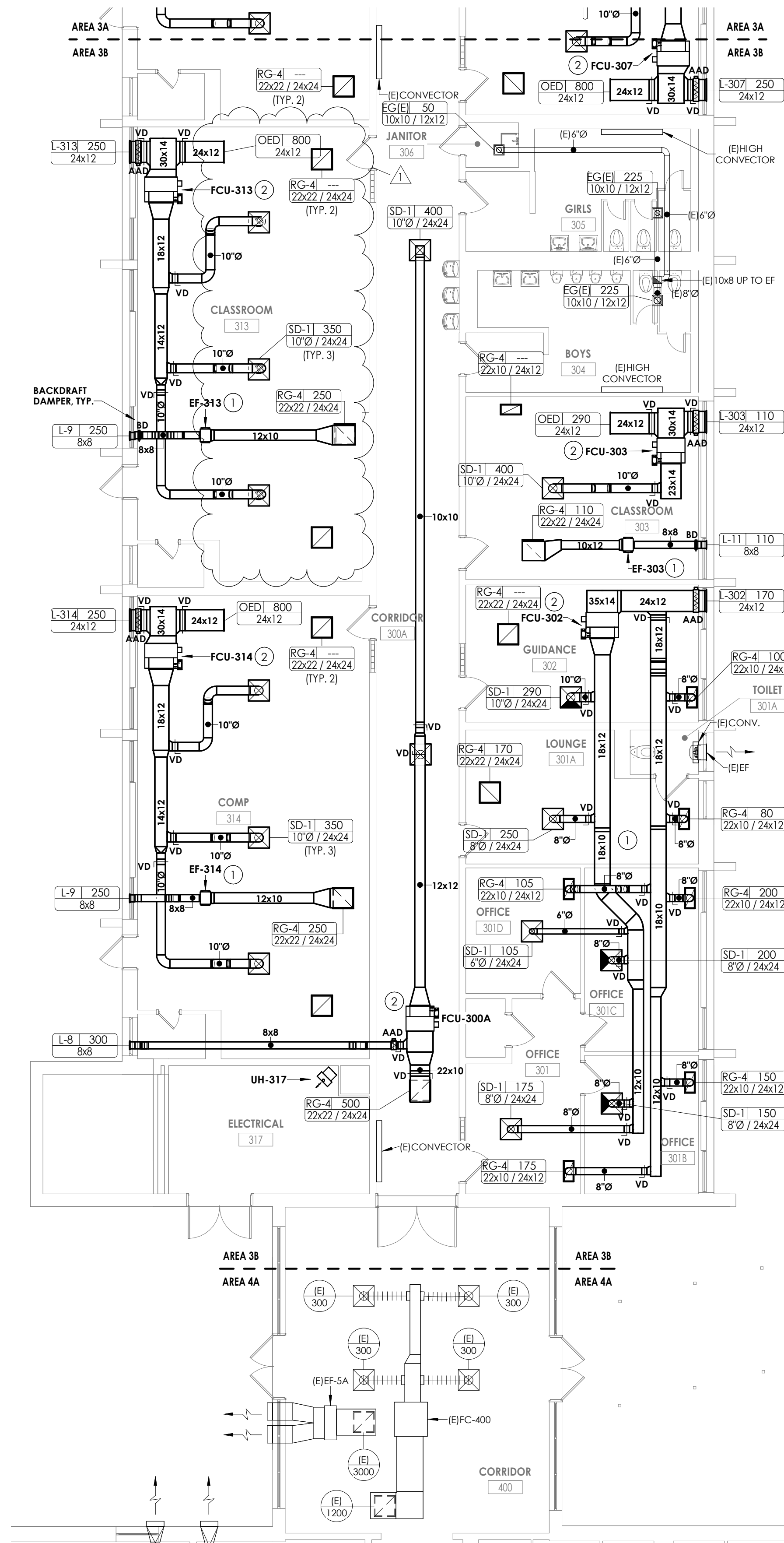
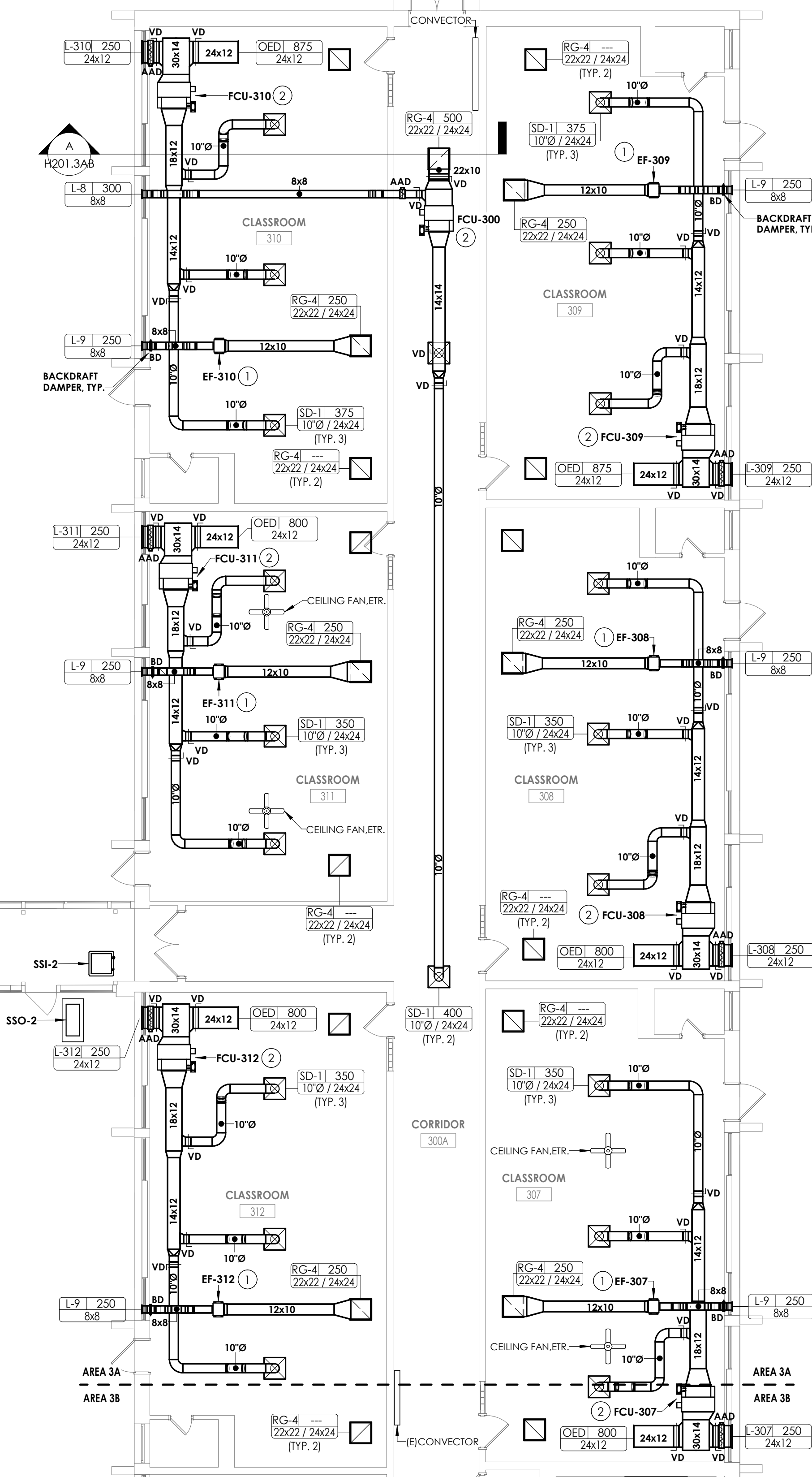
H201.3AB



A SECTION
H201.3AB 1/4" = 1'-0"

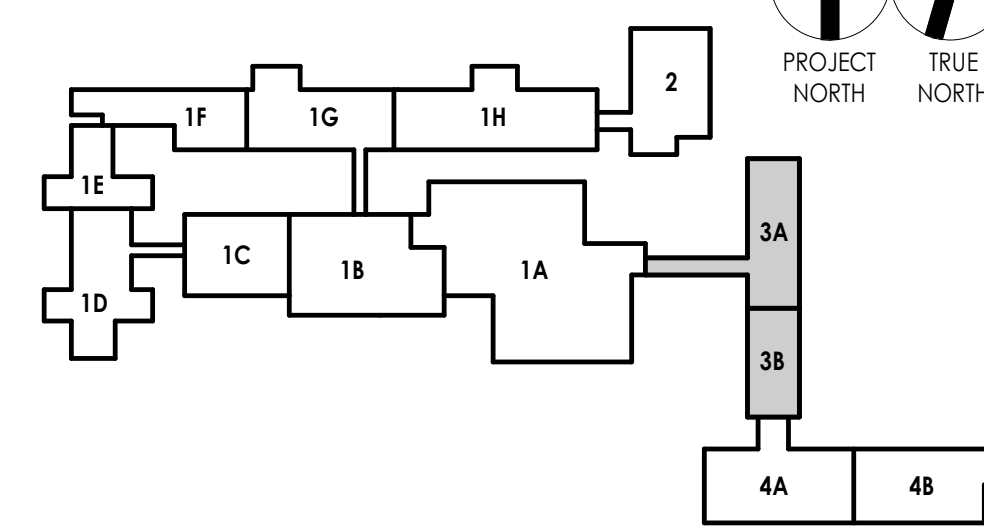


1 GROUND FLOOR HVAC DUCTWORK PLAN - AREA 3A
H201.3AB 1/8" = 1'-0"



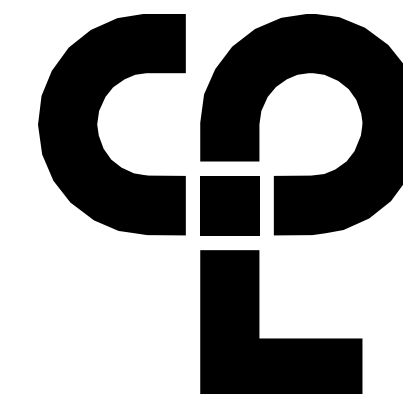
2 GROUND FLOOR HVAC DUCTWORK PLAN - AREA 3B
H201.3AB 1/8" = 1'-0"

KEY PLAN:



KEY NOTES

- 1 PROVIDE INLINE EXHAUST FAN WITH ASSOCIATED DUCTWORK AND CONTROLS. EXTEND DUCT THROUGH WINDOW SPANDREL PANEL WITH LOUVER AND TERMINATE WITH BAROMETRIC BACKDRAFT DAMPER.
- 2 PROVIDE NEW FAN COIL UNIT WITH ASSOCIATED DUCTWORK, PIPING, AND CONTROLS.



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Rev	Date	Description
1	3/17/2025	Bid Addendum #1

PROFESSIONAL STAMPS

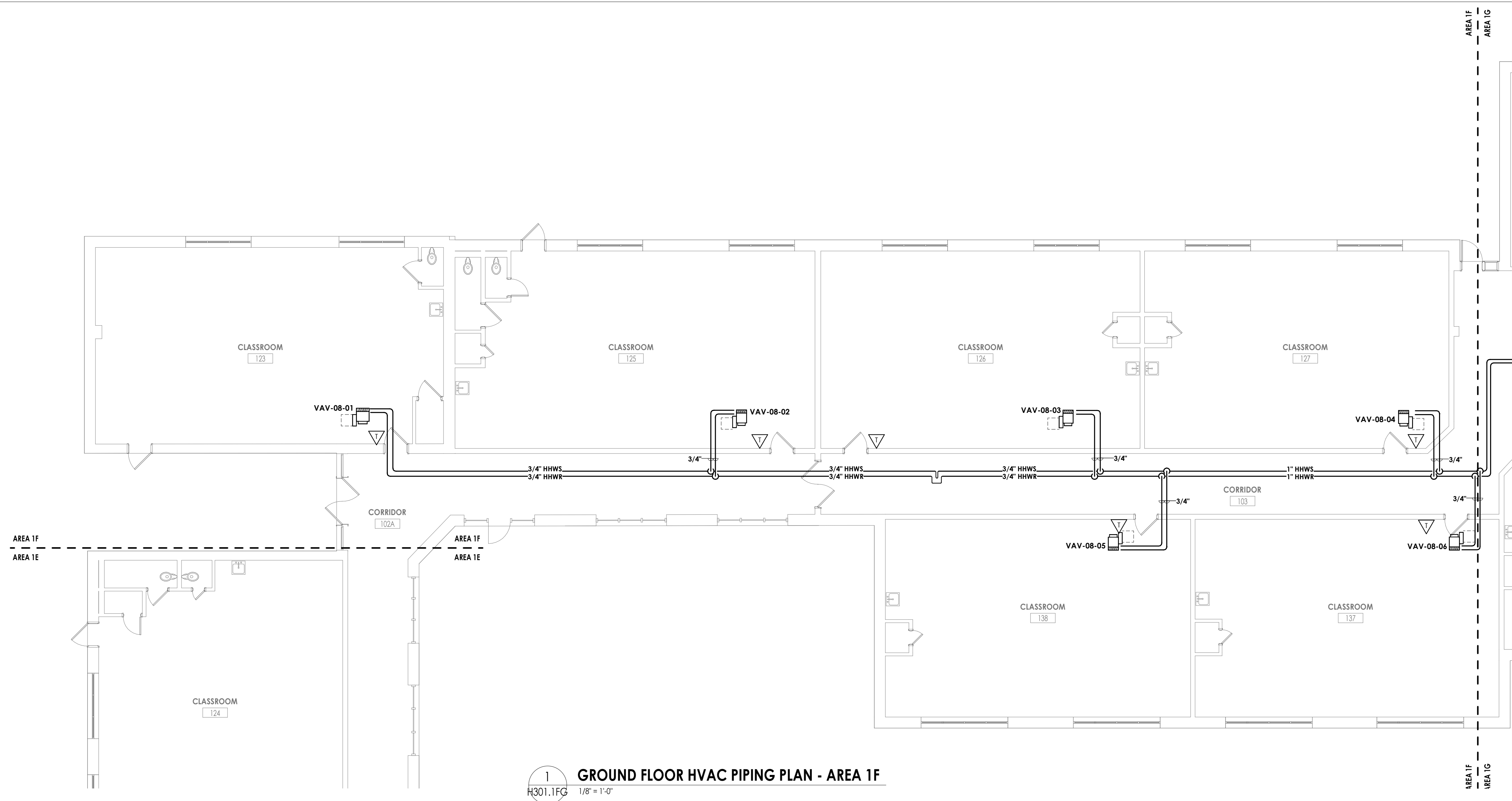


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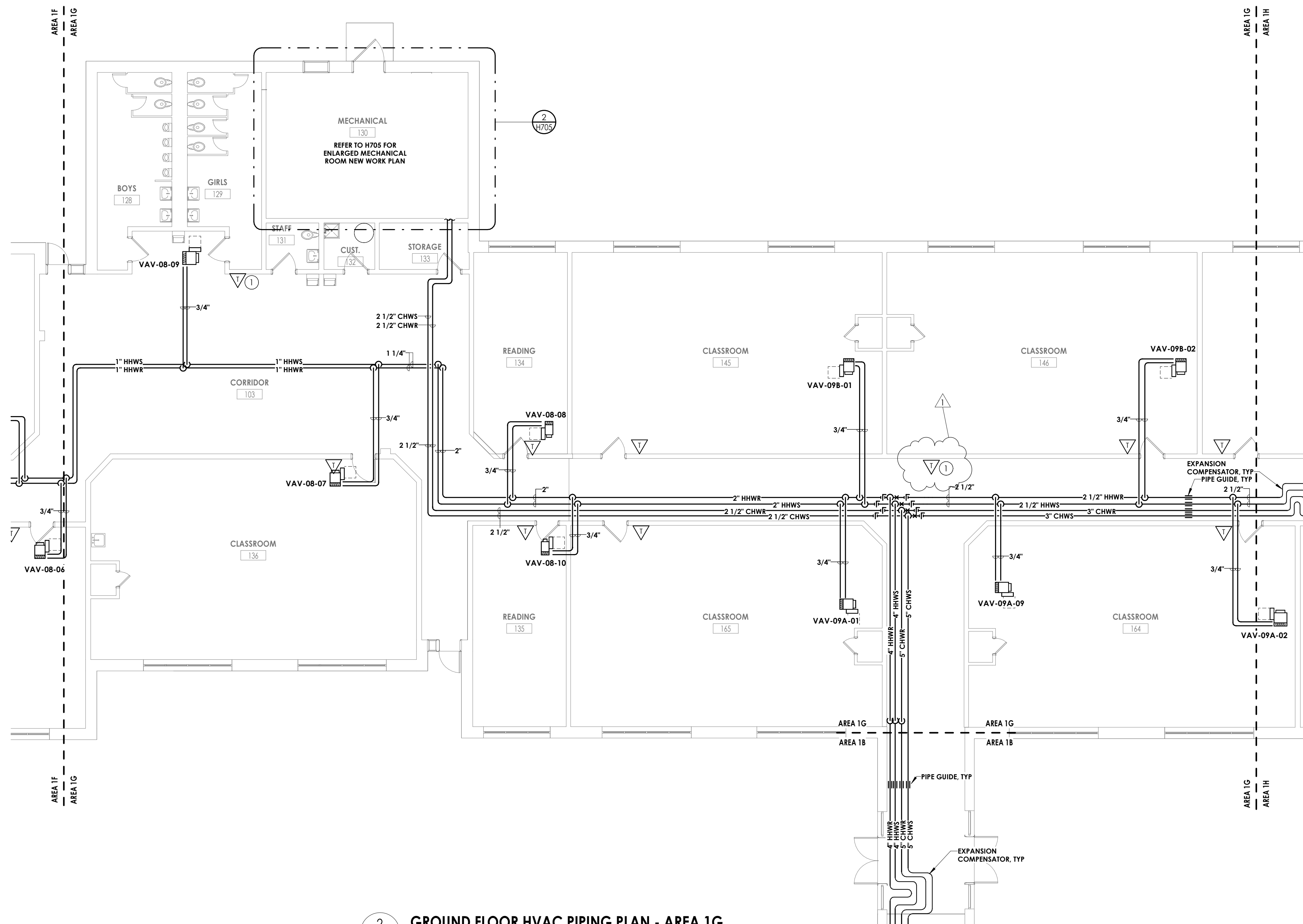
Scale: As indicated
Project Status: BID SET
Drawn By: KAB
Checked By: RM
Drawing Title: GROUND FLOOR HVAC DUCTWORK PLAN - AREA 3A AND 3B
Drawing Number:

FOES
H201.3AB

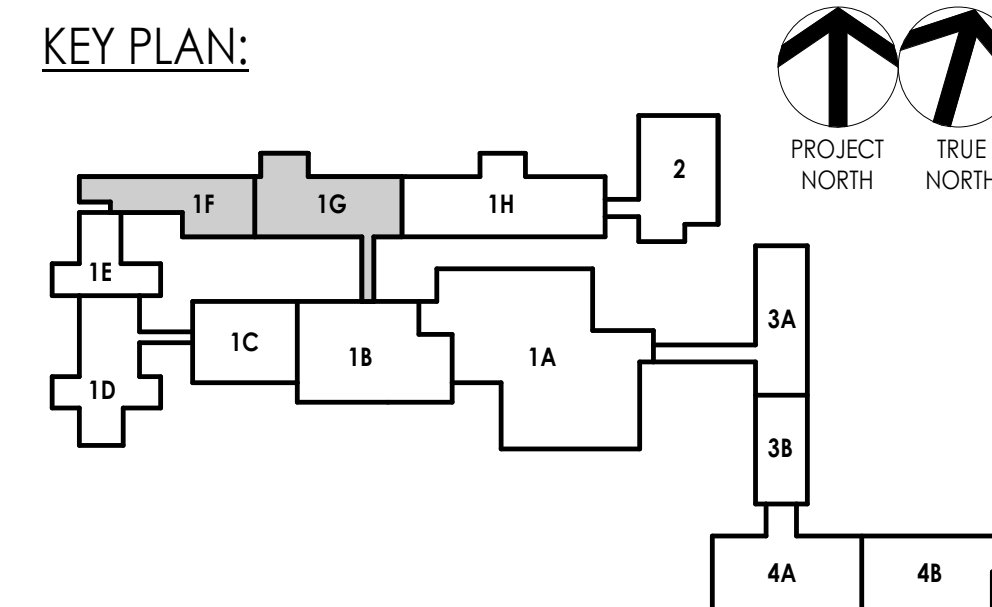
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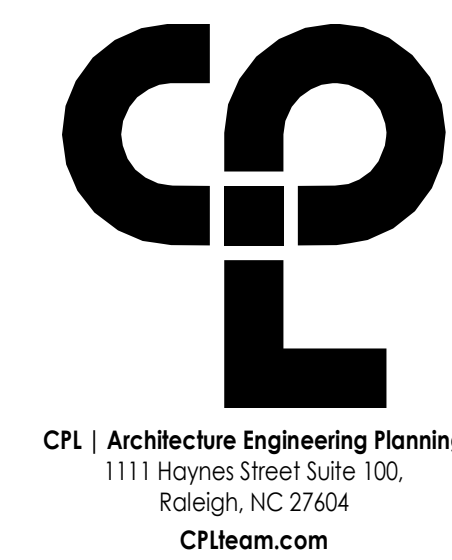
1 GROUND FLOOR HVAC PIPING PLAN - AREA 1F
H301.1FG 1/8" = 1'-0"



2 GROUND FLOOR HVAC PIPING PLAN - AREA 1G
H301.1FG 1/8" = 1'-0"



GENERAL NOTES	
1.	REFERENCE CONTROL SCHEMATICS FOR IF TEMPERATURE, HUMIDITY, CO2, OR SOME COMBINATION. GENERAL TRIANGLE IS LOCATION ONLY, NOT A CONTRACTOR EXCUSE FOR TEMPERATURE ONLY WALL MODULES.
KEY NOTES	
1	PROVIDE FLAT PLATE TEMPERATURE SENSOR AND NO RELATIVE HUMIDITY SENSOR IN THIS LOCATION.



PROJECT INFORMATION
Project Number: R23.00325
Client Name: JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT
Project Name: FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION

Project Address: 180 W Hatcher St., Four Oaks, NC 27524

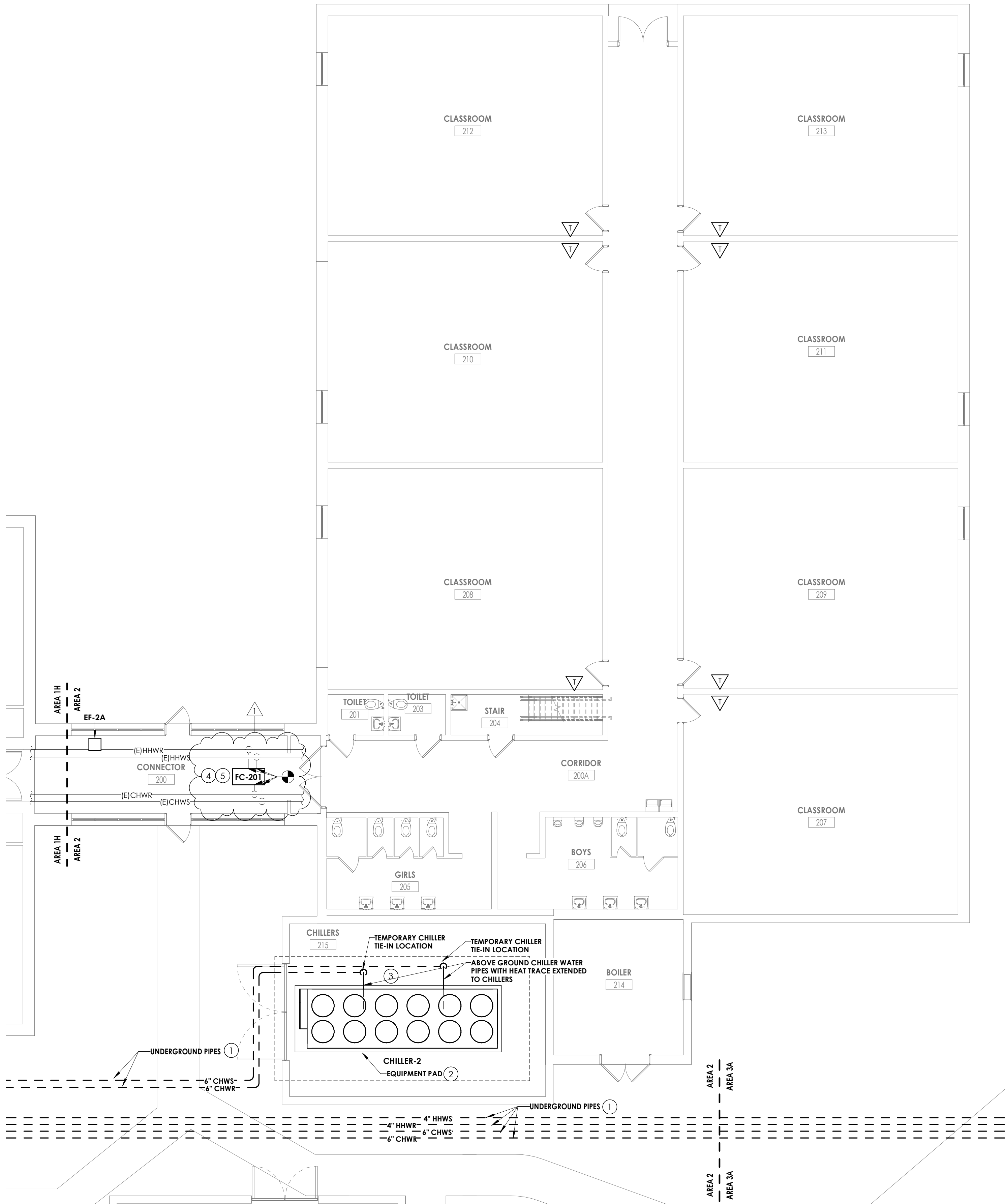
PROJECT ISSUE & REVISION SCHEDULE	
Rev	Description
1	3/7/2025 Bid Addendum #1

PROFESSIONAL STAMPS

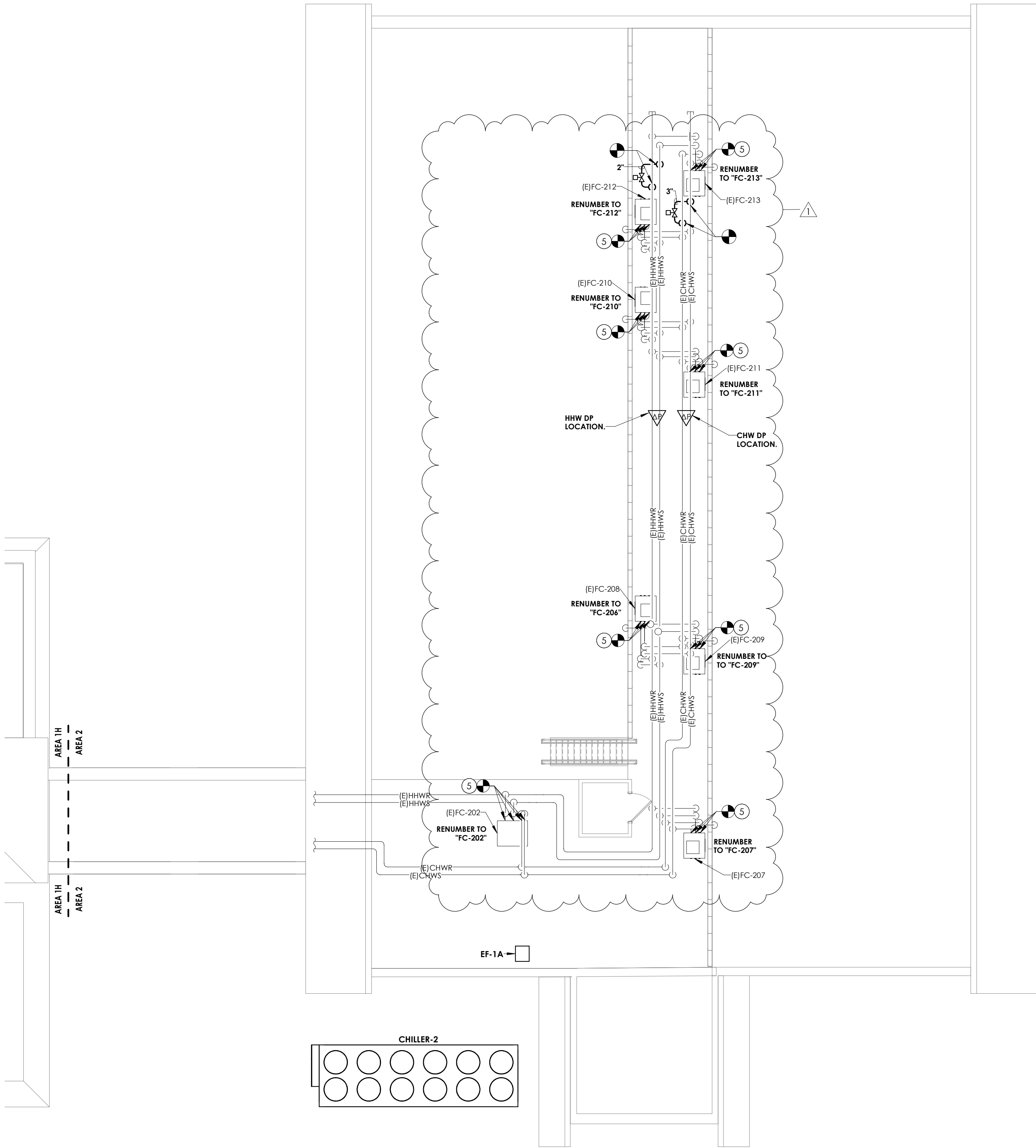


SHEET INFORMATION
Issue: 02/17/2025
Project Status: BID SET
Drawn By: KAB
Drawing Title: GROUND FLOOR HVAC PIPING PLAN - AREA 1F AND 1G
Drawing Number: FOES H301.1FG

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1
H301.2
GROUND FLOOR HVAC PIPING PLAN - AREA 2
1/8" = 1'-0"



2
H301.2
MEZZANINE HVAC PIPING PLAN - AREA 2
1/8" = 1'-0"

GENERAL NOTES

1. REFERENCE CONTROL SCHEMATICS FOR IF TEMPERATURE, HUMIDITY, CO2, OR SOME COMBINATION. GENERAL TRIANGLE IS LOCATION ONLY, NOT A CONTRACTOR EXCUSE FOR TEMPERATURE ONLY WALL MODULES.

KEY NOTES

1 UNDERGROUND PIPES, PROVIDE BACKFILL, PROVIDE GRAVEL SURFACE. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND UTILITIES IN AREAS OF NEW UNDERGROUND WORK PRIOR TO EXCAVATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO ADJACENT UNDERGROUND UTILITIES AND SHALL INCUR ALL ASSOCIATED REPAIR COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH TRENCHING, SAW CUTTING, ETC. AND FOR FULL RESTORATION OF EXISTING CONDITIONS.

2 PROVIDE NEW REINFORCED CONCRETE HOUSEKEEPING PADS FOR NEW CHILLERS.

3 COORDINATE PIPE ROUTING TO MAINTAIN THE EQUIPMENT MANUFACTURER'S RECOMMENDED CLEARANCES AND TO ALLOW SERVICE ACCESS. PROVIDE SUPPORTS PER DETAIL AND SPECIFICATION.

4 FCU TO BE CONTROLLED BASE ON THE RETURN AIR TEMPERATURE AND RETURN AIR HUMIDITY.

5 **ALTERNATE NO. 5:** REMOVE FAN COIL UNIT AND REPLACE WITH SIMILAR CARRIER MAKE AND MODEL WITH SAME HORSE POWER RATING AND POWER REQUIREMENTS. RECONNECT TO EXISTING PIPING AS CLOSE AS POSSIBLE.

KEY PLAN:

PROJECT NORTH

TRUE NORTH

SHEET INFORMATION

Date: 02/17/2025

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

Project Status: BID SET

Drawn By: KAB

Checked By: RM

Drawing Title: GROUND FLOOR HVAC PIPING PLAN - AREA 2

Drawing Number: FOES H301.2

CPL | Architecture Engineering Planning
1111 Hayes Street Suite 100,
Raleigh, NC 27604
CPLteam.com

PROJECT INFORMATION

Project Number: R23.00325
Client Name: JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT
Project Name: FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION
Project Address: 180 W Hatcher St,
Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

Rev	Date	Description
1	3/7/2025	Bid Addendum #1

REGISTER, GRILLE, AND DIFFUSER SCHEDULE							
TAG	MANUFACTURER	MODEL	APPLICATION	MATERIAL	TYPE	FINISH	NOTES
OED	-	-	-	-	OPEN ENDED DUCT	-	-
RG-1	TTUS	50F	SURFACE MOUNT	ALUMINUM	EGGCRATE RETURN GRILLE	WHITE ENAMEL	3
RG-2	TTUS	30FL	SURFACE MOUNT	ALUMINUM	EXTERIOR SOFFIT RA/EA	BY ARCH.	1.2,3
RG-3	TTUS	50F	LAY-IN	ALUMINUM	EGGCRATE RETURN GRILLE	WHITE ENAMEL	1,3
RG-4	TTUS	350RL	LAY-IN	STEEL	LOUVERED GRILLE	WHITE ENAMEL	1,3
SD-1	TTUS	1WS	LAY-IN	STEEL	L-CONE DIFFUSER	WHITE ENAMEL	3
SD-2	TTUS	300PL	LAY-IN	ALUMINUM	LOUVERED DOUBLE DEFLECTION GRILLE	WHITE ENAMEL	1,3
SD-3	TTUS	300PL	SURFACE MOUNT	ALUMINUM	LOUVERED DOUBLE DEFLECTION GRILLE	WHITE ENAMEL	1,3
SD-4	TTUS	TDC	LAY-IN	STEEL	LOUVERED FACE DIFFUSER	WHITE ENAMEL	1,3

- NOTES:
1. 1/2 INCH BLADE SPACING, 45-DEGREE DEFLECTION.
2. COLOR BY ARCHITECT.
3. COORDINATE WITH ARCHITECTURAL CEILING PLANS, LIGHTS, ETC.

UNIT HEATER SCHEDULE (HYDRONIC)																
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	NOMINAL CAPACITY (MBH)	AIR FLOW (CFM)	FLOW GPM	P.D (FT.WG.)	HEATING CAPACITY (MBH)	EWT (°F)	LWT (°F)	ELECTRICAL				NOTES
												V	PH	HZ	MOTOR RATING (HP)	
UH-106	106 - CHILLER	HEATER	MODINE	V-78	42.6	1155	2.5	0.1	26.7	140	100	120	1	60	1/15	1.2,3
UH-317	317 - ELECTRICAL	HEATER	MODINE	H58/HC-24	12.6	230	0.7	0.1	7.6	140	100	120	1	60	1/25	1.2,3
NOTES:																
1. PROVIDE FACTORY MOUNTED AND WIRED DISCONNECT.																
2. PROVIDE WITH THERMOSTAT.																
3. COLOR BY ARCHITECT.																

AIR SEPARATOR SCHEDULE											
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	INLET/OUTLET SIZE	FLOW (GPM)	PRESSURE DROP (FTWG)	FLUID	HEIGHT (IN.)	DIAMETER (IN.)	NOTES
AS-1	106A - BOILER ROOM	HEATING HOT WATER	TACO	ACT04-125	4"/4"	260	1.99	WATER	32.0	16.0	1
AS-2	106 - CHILLER	CHILLED WATER	TACO	ACT08-125	8"/8"	1100	1.98	WATER	52.0	24.0	1
NOTES: 1. DESIGN PRESSURE 125 PSIG.											

HOOD INFORMATION													
TAG	HOOD NUMBER	MANUFACTURER	MODEL	LENGTH	MAX COOKING TEMP	HOOD TYPE	APPLIANCE DUTY CFM/FI	DESIGN CFM/FI	TOTAL EXHAUST AIR FLOW	DIAMETER	RISER 1 AIR FLOW	RISER 2 AIR FLOW	HOOD CONFIGURATION
HOOD-1	1	CAPTIVEAIRE	10530 NID	10'-0"	650 °F	I	HEAVY	420	4200	16"	2100	0.750 in-wg	430 SS 100% ALONE

CONVECTOR SCHEDULE (HYDRONIC)														
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	STYLE	HEIGHT (IN.)	LENGTH (IN.)	DEPTH (IN.)	FLOW (GPM)	WPD (FT.WG.)	BTUH	EWT (°F)	LWT (°F)	NOTES
CONV-1	104 - CORRIDOR	HEATER	MODINE	SF-04-64-18	FULLY EXPOSED FLOOR, SLOPED TOP	18	64	6	1.02	2.0	9,945	140.0	120.0	1,2,3,4
NOTES:														
1. PROVIDE ALL NECESSARY ACCESSORIES INCLUDING END TRIM, END ENCLOSURE, CORNER PIECES AND ACCESS DOOR AT VALVE LOCATION.														
2. COORDINATE PIPING CONNECTION LOCATIONS IN THE FIELD.														
3. PROVIDE CUSTOM COLOR SELECTED BY ARCHITECT.														
4. MOUNTED HEIGHT ABOVE FINISHED FLOOR IS 9'-0".														

CONDENSING BOILER SCHEDULE																							
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	FUEL	MAX. INPUT (MBH)	MIN. OUTPUT (MBH)	MAX. OUTPUT (MBH)	EFFICIENCY RANGE	EFFICIENCY 80°F TO 180°F	GAS PRESSURE		MAX. WATER FLOW (GPM)	MIN. WATER FLOW (GPM)	EWT (°F)	LWT (°F)	FLUE SIZE	ELECTRICAL					NOTES
											MIN.	MAX.						V	PH	HZ	MCA	FLA	MOCPP
B-1	BOILER ROOM	HHW	AERCO	BKM2000	PROPANE	2000	1710-1920	1920	87%-98%	94.60%	4"WC	14"WC	350	25	120	160	8"Ø	120	1	60	-	18	-
B-2	BOILER ROOM	HHW	AERCO	BKM2000	PROPANE	2000	1710-1920	1920	87%-98%	94.60%	4"WC	14"WC	350	25	120	160	8"Ø	120	1	60	-	18	-
NOTES:																							
1. PROVIDE THE MANUFACTURER'S RECOMMENDED CONDENSATE NEUTRALIZATION KIT.																							
2. FURNISH DISCONNECT.																							
3. PROVIDE ON CONCRETE HOUSEKEEPING PAD.																							
4. 20:1 TURNDOWN.																							
5. COORDINATE CONTROLS INTEGRATION WITH BUILDING MANAGEMENT SYSTEM.																							
6. PROVIDE BOILER SAFETY SHUT-DOWN SWITCH.																							

AIR HANDLING UNIT SCHEDULE (HHW/CHW, PART 1/2) (FURNISHED BY OWNER)																															
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	ARRANGEMENT	SUPPLY FAN														EXHAUST FAN											
						A/R FLOW (CFM)	ESP (IN.H2O)	TOTAL S.P. (IN.H2O)	NUMBER OF MOTORS	BHP	MOTOR HP	TYPE	DRIVE	ELECTRICAL				STANDARD MIN. OA (CFM)	MAKE-UP MIN OA (CFM)	MAX. DCV OA (CFM)	AIRFLOW (CFM)	ESP (IN.W.G.)	NUMBER OF MOTORS	BHP	MOTOR HP	TYPE	DRIVE	ELECTRICAL			
														V	PH	HZ	FLA											V	PH	HZ	FLA
AHU-1	MECH 8	GYM	CARRIER	39M114W	HHW/CHW	7800	2	3.75	1	8.4	10	AIRFOIL	DIRECT	460	3	40	12	2843	-	3445	-	-	-	-	-	-	-	-	-	-	-
AHU-2	CHILLER 106	KITCHEN	CARRIER	39M103W	HHW/CHW	1134	1.5	2.31	1	1.2	1.5	AIRFOIL	DIRECT	460	3	40	2	1134	-	-	1134	1.5	1	0.80	1	AIRFOIL	DIRECT	460	3	40	1.6
AHU-3	CHILLER 106	CAFE	CARRIER	39M125W	HHW/CHW	11050	2	2.92	1	9.9	10	AIRFOIL	DIRECT	460	3	40	12.5	1173	4200+1200	5115	11050	1.6	1	6.9	7.5	AIRFOIL	DIRECT	460	3	40	9.7

AIR HANDLING UNIT SCHEDULE (HHW/CHW, PART 2/2) (FURNISHED BY OWNER)													
TAG	HOT WATER HEATING COIL						CHILLED WATER COOLING COIL						NOTES
	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	CAPACITY (MBH)	FLUID TYPE	GPM	WPD (FT.WG.)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	WEIGHT (LBS)
AHU-1	43.4	98.3	140	100	438.7	WATER	22.3	2.7	84.2	69.5	53.8	53.6	1.2,3,4,5
AHU-2	19	89.9	140	100	100.6	WATER	5.1	0.2	93.0	76.0	52.5	52.5	1.2,3,4,5
AHU-3	42	97.3	140	100	699.5	WATER	35.5	4.8	80.0	67.0	53.7	53.6	1.2,3,4,5

NOTES:
1. EQUIPMENT IN THIS SCHEDULE IS TO BE FURNISHED BY THE OWNER AND INSTALLED IN THIS CONTRACT. REFER TO APPENDIX 1 - OWNER PROVIDED SUPPLEMENTAL INFORMATION FOR MANUFACTURERS EQUIPMENT INFORMATION AND COORDINATE WITH OWNER'S REPRESENTATIVE FOR AN ADDITIONAL PRODUCT INFORMATION REQUIRED FOR INSTALLATION, TESTING AND STARTUP.
2. PROVIDE FACTORY MOUNTED AND WIRED DISCONNECT.
3. DUCT CONNECTION ARRANGEMENT PER PLAN AND SECTION VIEW DRAWINGS.
4. PROVIDE WITH NEW EQUIPMENT PAD.
5. CONTRACTOR IS RESPONSIBLE FOR VYDS ON SUPPLY AND EXHAUST FAN.

AIR HANDLING UNIT SCHEDULE (CHW PART 1/2) (FURNISHED BY OWNER)																															
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	ARRANGEMENT	AIR FLOW (CFM)	ESP (IN.H2O)	TOTAL S.P. (IN.H2O)	NUMBER OF MOTORS	SUPPLY FAN										STANDARD MIN. OA (CFM)	MAX. DCV OA (CFM)	RETURN FAN									
										BHP	MOTOR HP	TYPE	DRIVE	V	PH	HZ	FLA	BHP	MOTOR HP			TYPE	DRIVE	V	PH	HZ	FLA				
AHU-4	MECH	MEDIA	CARRIER	39M117W	CHW	8800	2	3.76	1	10.3	15	AIRFOIL	DIRECT	460	3	40	17.7	730	1786	8800	1.63	1	6.5	7.5	AIRFOIL	DIRECT	460	3	40	60	9.7
AHU-5	MECH	ART & MUSIC	CARRIER	39M117W	CHW	8996	2	3.59	1	10.3	15	AIRFOIL	DIRECT	460	3	40	17.7	600	1534	-	-	-	-	-	-	-	-	-	-	-	-
AHU-6	MECH 134	TECH CLERKS & MAIN OFFICE	CARRIER	39M121W	CHW	9167	2	3.36	1	8.3	10	AIRFOIL	DIRECT	460	3	40	12.5	710	1390	9167	1.59	1	5.2	7.5	AIRFOIL	DIRECT	460	3	40	60	9.7
AHU-7	MECH	KINDER CLERK	CARRIER	39M121W	CHW	14900	2	3.19	1	17.4	20	AIRFOIL	DIRECT	460	3	40	24.0	500	2390	-	-	-	-	-	-	-	-	-	-	-	-

AIR HANDLING UNIT SCHEDULE (CHW PART 2/2) (FURNISHED BY OWNER)																	
TAG	CHILLED WATER COOLING COIL								FILTERS						NOTES		
	EAT [°F]	LAT [°F]	EWT [°F]	LWT [°F]	TOTAL CAPACITY [MBH]	SENSIBLE CAPACITY [MBH]	EWT [°F]	LWT [°F]	FLUID TYPE	GPM	WPD (FT. WG.)	VELOCITY [FPM]	EFFICIENCY	PRE		FAN	WEIGHT (LBS)
AHU-4	78.5	65.6	52.9	52.5	331.5	239.9	45.0	55.0	WATER	46.1	11.7	520	MERV 13	8A	13A	4,390	1,2,3,4,5
AHU-5	76.7	64.6	54.0	53.6	286.2	217.7	45.0	55.0	WATER	57.1	7.4	531	MERV 13	8A	13A	2,747	1,2,3,4,5
AHU-6	80.0	67.0	51.0	51.0	421.7	281.9	45.0	55.0	WATER	84.1	12.4	427	MERV 13	8A	13A	4,875	1,2,3,4,5
AHU-7	77.3	64.5	54.5	53.8	521.5	411.2	45.0	55.0	WATER	104.0	5.6	460	MERV 13	8A	13A	7,748	1,2,3,4,5

NOTES:

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7. EQUIPMENT IN THIS SCHEDULE IS TO BE FURNISHED BY THE OWNER AND INSTALLED IN THIS CONTRACT. REFER TO APPENDIX 1 - OWNER PROVIDED SUPPLEMENTAL INFORMATION FOR MANUFACTURER'S EQUIPMENT INFORMATION AND COORDINATE WITH OWNER'S REPRESENTATIVE FOR AN ADDITIONAL PRODUCT INFORMATION REQUIRED FOR INSTALLATION, TESTING AND STARTUP.

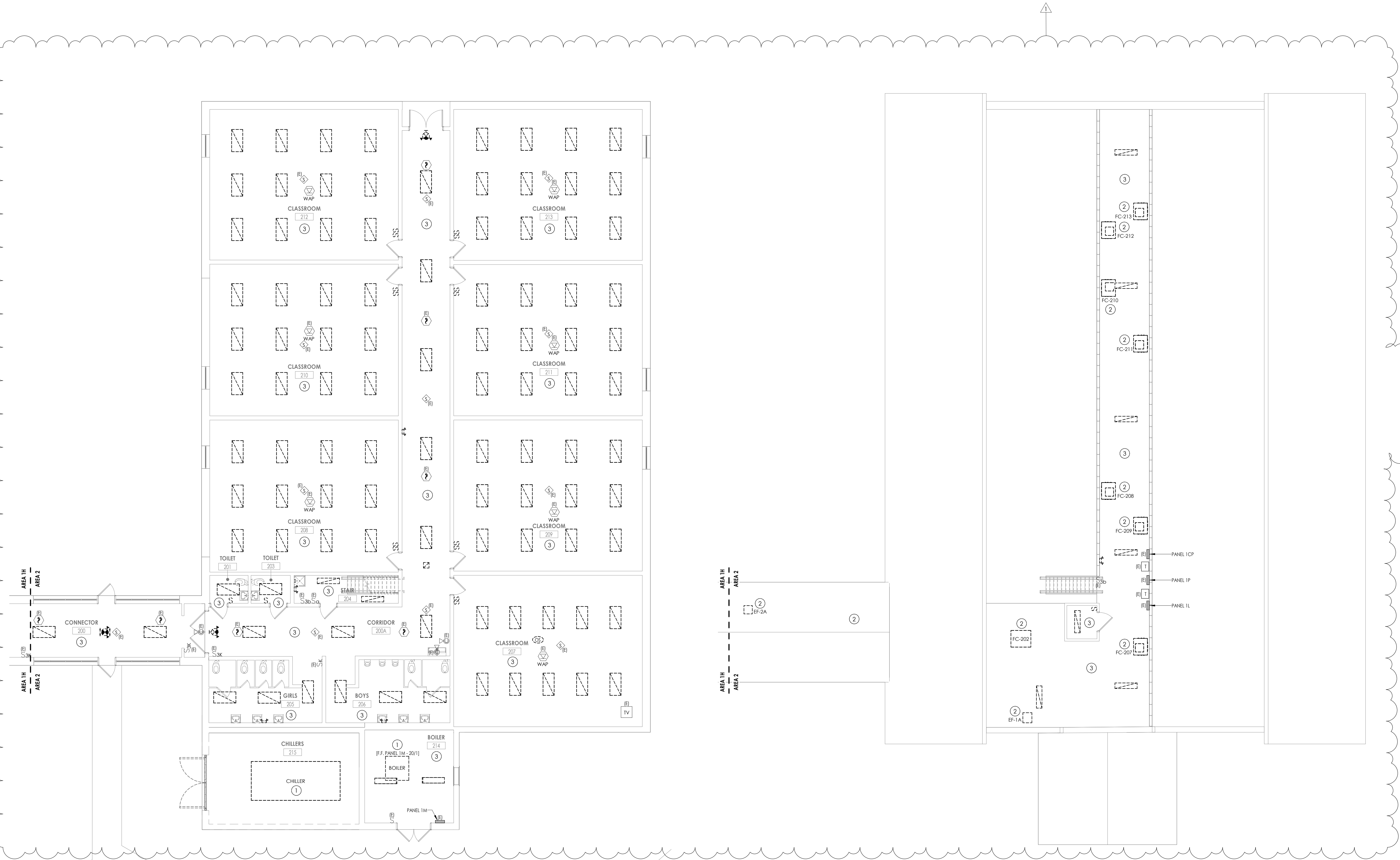
8. PROVIDE WITH FACTORY MOUNTED AND WIRED DISCONNECT.

9. DUCT CONNECTION ARRANGEMENT PER PLAN AND SECTION VIEW DRAWINGS.

10. PROVIDE WITH NEW EQUIPMENT PAD.

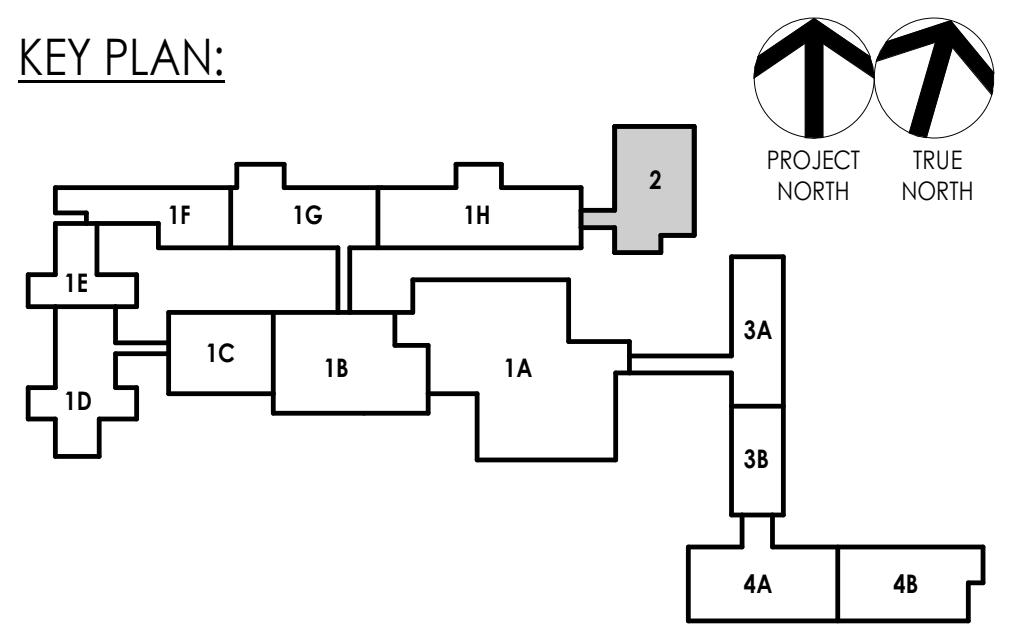
11. CONTRACTOR IS RESPONSIBLE FOR VFD ON SUPPLY AND EXHAUST FAN.

FAN COIL UNIT SCHEDULE (FURNISHED BY OWNER)																																				
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	ARRANGEMENTS	AIR FLOW (CFM)	ESP (IN.WG.)	NUMBER OF MOTORS	FAN		TYPE	DRIVE	MINIMUM OA (CFM)	CHILLED WATER COOLING COIL				FLUID TYPE	GPM	WPD (FT.WG.)	HOT WATER RE-HEATING COIL				FLUID TYPE	GPM	WPD (FT.WG.)	FILTER		ELECTRICAL				WEIGHT (LBS)	NOTES	
									MOTOR HP	CAPACITY (MBH)				EAT (°F)	EWB (°F)	LDB (°F)	LWB (°F)				EAT (°F)	LAT (°F)	EWB (°F)	LWT (°F)				VELOCITY	EFFICIENCY	V	PH	HZ	MCA			FLA
FCU-128	MECH 128.1	STORAGE	CARRIER	420VA20	VERT. FLOOR	1760	1.0	1	1	FORWARD CURVE	DIRECT	510	80.0	66.6	55.0	54.5	67.6	47.3	45	55	WATER	13.5	7.7	53	97	140	100	78.6	WATER	4	1.9	-	-	-	350	1.3
FCU-139	MECH 139	STORAGE	CARRIER	420VA20	VERT. FLOOR	1815	1.0	1	1	FORWARD CURVE	DIRECT	459	80.0	66.6	55.0	54.5	67.6	47.3	45	55	WATER	13.5	7.7	53	97	140	100	78.6	WATER	4	1.9	-	-	-	350	1.3
FCU-300	CORRIDOR 300A	CORRIDOR - 300A	CARRIER	420CA08	HORIZ. CEILING	800	0.37	1	1/2	FORWARD CURVE	DIRECT	300	81.8	72.8	63.6	62.0	32.1	16.7	45	55	WATER	6.4	19.1	49.7	77.2	140	100	24.9	WATER	1.3	2.3	-	-	-	11.5	1.2,3
FCU-300A	CORRIDOR 300A	CORRIDOR - 300A	CARRIER	420CA08	HORIZ. CEILING	800	0.37	1	1/2	FORWARD CURVE	DIRECT	300	81.8	72.8	63.6	62.0	32.1	16.7	45	55	WATER	6.4	19.1	49.7	77.2	140	100	24.9	WATER	1.3	2.3	-	-	-	11.5	1.2,3
FCU-301	CLRM 301C	OFFICES 301	CARRIER	420CA06	HORIZ. CEILING	450	0.25	1	1/2	FORWARD CURVE	DIRECT	400	80.0	66.6	55.0	54.5	67.6	47.3	45	55	WATER	2.8	4.7	44.9	85.0	140	100	13.7	WATER	0.7	0.9	-	-	-	10.0	1.2,3
FCU-302	GUIDANCE 302	OFFICE 301A/302	CARRIER	420CA06	HORIZ. CEILING	450	0.30	1	1/2	FORWARD CURVE	DIRECT	110	78.9	65.5	62.2	60.0	18.1	12.5	45	55	WATER	2.8	9.6	58.8	85.0	140	100	14.8	WATER	0.7	0.7	-	-	-	10.0	1.2,3
FCU-303	CLRM 303	CLRM 303	CARRIER	420CA06	HORIZ. CEILING	400	0.25	1	1/2	FORWARD CURVE	DIRECT	110	80.6	68.5	62.0	59.7	14.3	10.2	45	55	WATER	2.8	4.7	54.8	85.0	140	100	14.7	WATER	0.7	0.9	-	-	-	10.0	1.2,3
FCU-307	CLRM 307	CLRM 307	CARRIER	420CA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	56.2	81.4	140	100	36.7	WATER	1.9	5.3	-	-	-	10.0	1.2,3
FCU-308	CLRM 308	CLRM 308	CARRIER	420CA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	56.2	81.4	140	100	36.7	WATER	1.9	5.3	-	-	-	10.0	1.2,3
FCU-309	CLRM 309	CLRM 309	CARRIER	420CA12	HORIZ. CEILING	1125	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	56.2	81.4	140	100	36.7	WATER	1.9	5.3	-	-	-	10.0	1.2,3
FCU-310	CLRM 310	CLRM 310	CARRIER	420CA12	HORIZ. CEILING	1125	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	56.2	81.4	140	100	36.7	WATER	1.9	5.3	-	-	-	10.0	1.2,3
FCU-311	CLRM 311	CLRM 311	CARRIER	420CA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	56.2	81.4	140	100	36.7	WATER	1.9	5.3	-	-	-	10.0	1.2,3
FCU-312	CLRM 312	CLRM 312	CARRIER	420CA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	56.2	81.4	140	100	36.7	WATER	1.9	5.3	-	-	-	10.0	1.2,3
FCU-313	CLRM 313	CLRM 313	CARRIER	420CA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	56.2	81.4	140	100	36.7	WATER	1.9	5.3	-	-	-	10.0	1.2,3
FCU-314	CLRM 314	CLRM 314	CARRIER	420CA12	HORIZ. CEILING	1050	0.25	2	1/2	FORWARD CURVE	DIRECT	250	80.0	66.6	62.2	59.7	35.2	25.5	45	55	WATER	7.0	9.6	56.2	81.4	140	100	36.7	WATER	1.9	5.3	-	-	-	10.0	1.2,3
NOTES:																																				
1. FACTORY MOUNTED AND WIRED DISCONNECT.																																				
2. PROVIDE WITH LOW PROFILE CONDENSATE PUMP.																																				
3. EQUIPMENT IN THIS SCHEDULE IS TO BE FURNISHED BY THE OWNER AND INSTALLED IN THIS LOCATION. REFER TO APPENDIX 1 - OWNER PROVIDED SUPPLEMENTAL INFORMATION FOR MANUFACTURER'S EQUIPMENT INFORMATION AND COORDINATE WITH OWNER'S REPRESENTATIVE FOR AN ADDITIONAL PRODUCT INFORMATION REQUIRED FOR INSTALLATION, TESTING AND STARTUP.																																				



1 GROUND FLOOR ELECTRICAL DEMOLITION PLAN - AREA 2
1/8" = 1'-0"

2 MEZZANINE ELECTRICAL DEMOLITION PLAN - AREA 2
1/8" = 1'-0"



GENERAL NOTES

A. ALL ITEMS SHOWN ARE TO BE REMOVED UNLESS LABELED AS (E) EXISTING. REMOVAL OF DEVICE INCLUDES ITS ASSOCIATED CABLING/BRANCH CIRCUIT WIRING, AND RACEWAY.

B. ANY EXISTING DEVICE TO REMAIN, LABELED AS (E) SHALL REMAIN IN PLACE AS WELL AS ITS ASSOCIATED CIRCUITING AND CONDUIT, UNLESS OTHERWISE NOTED.

C. THE CONTRACTOR SHALL REMOVE THE EXISTING ELECTRIC IN AREAS OF NEW RENOVATIONS TO ACCOMMODATE NEW CONSTRUCTION. REROUTING OF EXISTING MAY BE REQUIRED AT NEW OPENINGS IN EXISTING CONSTRUCTION OR INTERFERENCE WITH OTHER NEW WORK AS NOTED IN THE FOLLOWING NOTES.

D. DRAWINGS INDICATE SPECIFIC ITEMS TO BE REMOVED AND/OR RELOCATED IN ORDER TO INDICATE GENERAL SCOPE. ADDITIONAL ITEMS NOT INDICATED, BUT NECESSARY FOR PROJECT RENOVATIONS, SHALL BE REMOVED, RELOCATED AND/OR REROUTED. THE CONTRACTOR SHALL ASSUME WITHIN THE BASE BID A NOMINAL AMOUNT OF BRANCH CIRCUITS, FIXTURES, DEVICES, AND SYSTEMS WIRING WITHIN WALLS OR OPENINGS BEING REMOVED OR RELOCATED AS REQUIRED TO ACCOMMODATE THE NEW CONSTRUCTION.

E. WHERE DEVICES, FIXTURES, ETC. ARE INDICATED TO BE REMOVED, THEY AND THEIR RELATED WIRING/CONDUIT SHALL BE REMOVED BACK TO THE SOURCE PANELBOARD UNLESS OTHERWISE NOTED. ON CIRCUITS WHERE OTHER DEVICES, FIXTURES, ETC. ARE FOUND THAT MUST REMAIN, MAINTAIN CIRCUIT CONTINUITY BY PROVIDING ADDITIONAL WIRING TO FEED THROUGH TO THESE REMAINING ITEMS. RELOCATE ANY CIRCUITS THAT REMAIN TO AVOID CONFLICT WITH NEW CONSTRUCTION AS REQUIRED. PROPERLY TERMINATE ALL WIRING.

F. COORDINATE DEMOLITION OF EQUIPMENT, DEVICES, ETC. WITH OTHER DISCIPLINES AS APPLICABLE. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS AND NOTES FOR COORDINATION.

G. DRAWINGS ARE GRAPHICAL REPRESENTATIONS OF APPROXIMATE EQUIPMENT AND DEVICE LOCATIONS. CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE EXACT EXTENT OF ELECTRICAL WORK REQUIRED TO COMPLETE THE PROJECT. EXISTING CONDITIONS ARE TAKEN FROM FIELD OBSERVATION AND EXISTING BUILDING DOCUMENTS. OTHER ELECTRICAL ITEMS MAY EXIST FOR WHICH THE CONTRACTOR IS RESPONSIBLE.

H. CONTRACTOR SHALL PROPERLY DISPOSE OF ALL ITEMS, EQUIPMENT, PANELS, LIGHT FIXTURES, ETC. BEING REMOVED AS PART OF THIS PROJECT. THE OWNER SHALL HAVE THE RIGHT OF RETAINING ANY ITEMS BEING REMOVED.

I. CONTRACTOR SHALL PROVIDE NEW COVERPLATES ON ALL BOXES OF UNUSED AND/OR REMOVED FLUSH MOUNT DEVICES UPON COMPLETION OF PROJECT.

J. FIREPROOFING AND/OR FIRE STOP MATERIALS REMOVED FROM FIRE RATED WALLS AND CEILINGS AS A RESULT OF DEMOLITION SHALL BE RE-INSTALLED USING AN APPROVED METHOD AS DESCRIBED IN ASSOCIATED PROJECT SPECIFICATIONS.

K. CONTRACTOR SHALL PROTECT ALL SMOKE DETECTORS FROM DUST, DEBRIS, AND DAMAGE DURING CONSTRUCTION IN ACCORDANCE WITH NFPA 72.

L. EXISTING HVAC EQUIPMENT PANELBOARD AND CIRCUIT BREAKER INFORMATION IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING BUILDING DOCUMENTS AND IS SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUITING.

M. EXISTING LOW VOLTAGE SYSTEM DEVICES, AND POWER DEVICES ON CEILINGS INDICATED WITH "E" AND NOT INDICATED AS BEING DEMOLISHED (DASHED, HATCHED, OR OTHERWISE NOTED) ARE SHOWN FOR REFERENCE PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEMPORARILY SUSPEND AND PROTECT OR REMOVE AND REINSTALL ALL EXISTING TO REMAIN CEILING DEVICES AS REQUIRED FOR DEMOLITION AND NEW WORK PHASES.

N. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN DEVICES DURING CONSTRUCTION. DAMAGED EXISTING TO REMAIN DEVICES SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

KEY NOTES

1 DISCONNECT EXISTING MECHANICAL EQUIPMENT. REMOVE CIRCUITING BACK TO SOURCE PANEL.

2 DISCONNECT EXISTING MECHANICAL EQUIPMENT. EXISTING CIRCUITING SHALL REMAIN TO SERVE NEW UNIT.

3 REMOVE EXISTING LIGHT FIXTURE(S) AND LIGHTING CONTROL DEVICE(S) IN THIS AREA UNLESS INDICATED WITH "E". EXISTING LIGHTING BRANCH CIRCUITING SHALL REMAIN TO SERVE NEW FIXTURE(S) AND CONTROL(S).

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JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT

PROJECT INFORMATION

Project Number: R23.00325
Client Name: JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT
Project Name: FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION
Project Address: 180 W Hotcher St, Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

Rev	Date	Description
1	3/7/2025	Bid Addendum #1

PROFESSIONAL STAMPS

ANTHONY R. MARCHETTI
MECHANICAL ENGINEER
18177
NORTH CAROLINA
PROFESSIONAL ENGINEER

SHEET INFORMATION

Issue: 02/17/2025
Project Status: BID SET
Drawn By: JAE
Drawing Title: GROUND FLOOR AND MEZZANINE ELECTRICAL DEMOLITION PLAN - AREA 2
Checked By: ARM
Drawing Number: FOES E101.2



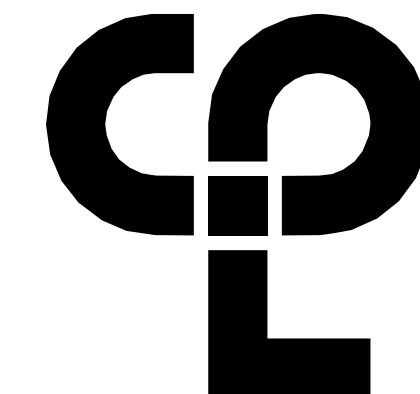
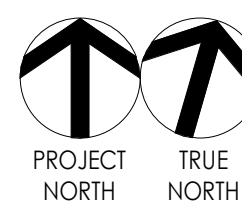
GENERAL NOTES

- D. EXISTING DEVICES AND LABELS AS "IT" ARE EXISTING AND ARE SHOWN FOR REFERENCE ONLY. ALL OF THESE EQUIPMENT AND DEVICES SHALL REMAIN OPERATIONAL FOLLOWING CONSTRUCTION. REFER TO E100 SERIES DEMOLITION DRAWINGS FOR EXISTING TO REMAIN CEILING DEVICES.
- B. NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH AND CONNECTED TO EXISTING FIRE ALARM SYSTEM. EXISTING FIRE ALARM SYSTEM IS SHIPKEE #1000. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL AND LABOR COSTS ASSOCIATED WITH NEW FIRE ALARM DEVICES SHOWN. ASSOCIATED CABLING, TESTING, ETC. FOR A COMPLETE OPERATIONAL FIRE ALARM SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL WORK ASSOCIATED WITH FIRE ALARM SYSTEM AND FINAL PROGRAMMING OF SYSTEM WITH FIRE ALARM VENDOR.
- C. THE MINIMUM CANDIDATE RATING OF FIRE ALARM VISUAL NOTIFICATION DEVICES IS INDICATED ADJACENT TO DEVICE. IF CANDIDATE RATING IS NOT INDICATED, MINIMUM ALLOWABLE SETTING IS 15 CANDIDA.
- D. ALL NEW LOW VOLTAGE SYSTEMS CABLING SUCH AS PUBLIC ADDRESS, FIRE ALARM, TEL-COM, ETC. SHALL BE INSTALLED AS OPEN-RUN SYSTEMS AND SUPPORTED VIA J-HOOKS AND BRIDAL RINGS AT INTERVALS NOT EXCEEDING 5'0". CONDUIT SLEEVES WITH PLASTIC END BUSHINGS SHALL BE USED FOR ALL WALL PENETRATIONS. IN NONACCESSIBLE AREAS, ALL WALL PENETRATIONS FOR WALL CABLING SHALL BE INSTALLED IN CONDUIT. ALL CABLING SHALL BE PLUMB RATED.
- E. FIELD VERIFY EXISTING RECEPTACLES WITH 25% OF FINAL HVAC EQUIPMENT LOCATIONS IN ACCORDANCE WITH NEC 210.4A. WHERE RECEPTACLES DO NOT MEET DISTANCE REQUIREMENT, PROVIDE NEW RECEPTACLE WITH 25% OF HVAC EQUIPMENT AND CIRCUIT TO NEAREST AVAILABLE CONVENIENCE RECEPTACLE BAY. WHERE AREA IS NONACCESSIBLE, PROVIDE NEW RECEPTACLE IN ADJACENT SPACES SHALL BE TEMPER RESISTANT, RECEPTACLES IN MECHANICAL SPACES WITH EXTERIOR DOORS SHALL BE GFCI, AND EXTERIOR RECEPTACLES SHALL BE GFCI, WEATHER RESISTANT, WITH WEATHERPROOF US V COVERS.
- F. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELBOARDS SHALL BE UL LISTED, LABELED FOR USE IN, AND HAVE MATCHING INTERRUPTING RATING OF EXISTING PANELBOARD.
- G. PROVIDE PANELBOARDS USED DURING PROJECT WITH UPDATED TYPED DIRECTORIES INDICATING LOAD AND LOCATION.
- H. EQUIPMENT DESIGNATED WITH A NUMBER INSIDE OF A HEXAGON ($\boxed{\text{#}}$) ARE SCHEDULED ON DRAWING E900.
- I. ALL NEW EXPOSED INTERIOR AND EXTERIOR REWAYWAY SHALL BE PAINTED TO MATCH EXISTING CEILING AND/OR WALL FINISH. CONTRACTOR SHALL USE APPROVED DISTINCT PAINT COLOR/TYPE OR APPROVED EQUIVARIANT.
- J. FOR ALL VERTICAL AND HORIZONTAL RUNS INGRESSIBLE BLOCK CONDUIT SHALL TRANSITION TO SINGLE OR DUAL SLEET WIREMUD IN EXPOSED LOCATIONS.
- K. CONTRACTOR IS RESPONSIBLE FOR SEALING ALL CONDUIT PENETRATIONS THROUGH INTERIOR WALLS, EXTERIOR WALLS, DOOR FRAMES, ETC. ANY CONDUIT THAT PENETRATES THROUGH FIRE-RESISTANT BARRIER SHALL BE PROVIDED WITH FIRE PROOF SEAL.

KEY NOTES

- ① PROVIDE ADDRESSABLE FAN SHUTDOWN RELAYS (T) TO SHUTDOWN ASSOCIATED MECHANICAL EQUIPMENT FANS (UPON ACTIVATION) OF FIRE ALARM SYSTEM. COORDINATE REQUIREMENTS AND SHUTDOWN SEQUENCING WITH MECHANICAL CONTRACTOR IN ORDER TO FINAL COMMENSURING. PROVIDE QUANTITY AND PROGRAMMING REQUIRED FOR SHUTDOWN OPERATION.
- ② PROVIDE DETECTOR IN SUPPLY (S) AND RETURN (R) PRIOR TO BRANCHING OF DUCTWORK AND PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE ASSOCIATED REMOTE TEST STATIONS GROUPED TOGETHER WITH MECHANICAL SPACE AT 3' ABOVE FINISHED FLOOR. COORDINATE WITH MECHANICAL CONTRACTOR ON PLAN FOR REFERENCE ONLY. PROVIDE QUANTITY REQUIRED FOR INTENDED OPERATION. PROVIDE (1) REMOTE TEST STATION FOR EACH DETECTOR DUCT.
- ③ CONNECT NEW RECEPTACLE TO EXISTING RECEPTACLE BRANCH CIRCUIT INDICATED. WIRE WITH (2) #12, #12 @ 3' @ 3" CONDUIT.
- ④ PROVIDE SMOKE DRAWER REFER TO DETAIL ON DRAWING 5500 FOR ADDITIONAL REQUIREMENTS INCLUDING DETECTOR AND REMOTE TEST STATION. REMOTE TEST STATION(S) SHALL BE LOCATED WITH MECHANICAL SPACE ADJACENT TO PANEL INDICATED AT TEST STATIONS. CIRCUIT SMOKE DRAWER ACTUATOR TO ACHIEVE REMOVED AT NEXT AVAILABLE SPACE 20" TIE BREAKER.

KEY PLAN:



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PROJECT INFORMATION

Project Number
P23.0032

**JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT**

**FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION**

Project Address
180 W Hatcher St,
Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

vv	Date	Description
1	3/7/2025	Bid Addendum #1

PROFESSIONAL STAMPS



SHEET INFORMATION

000769

JAE

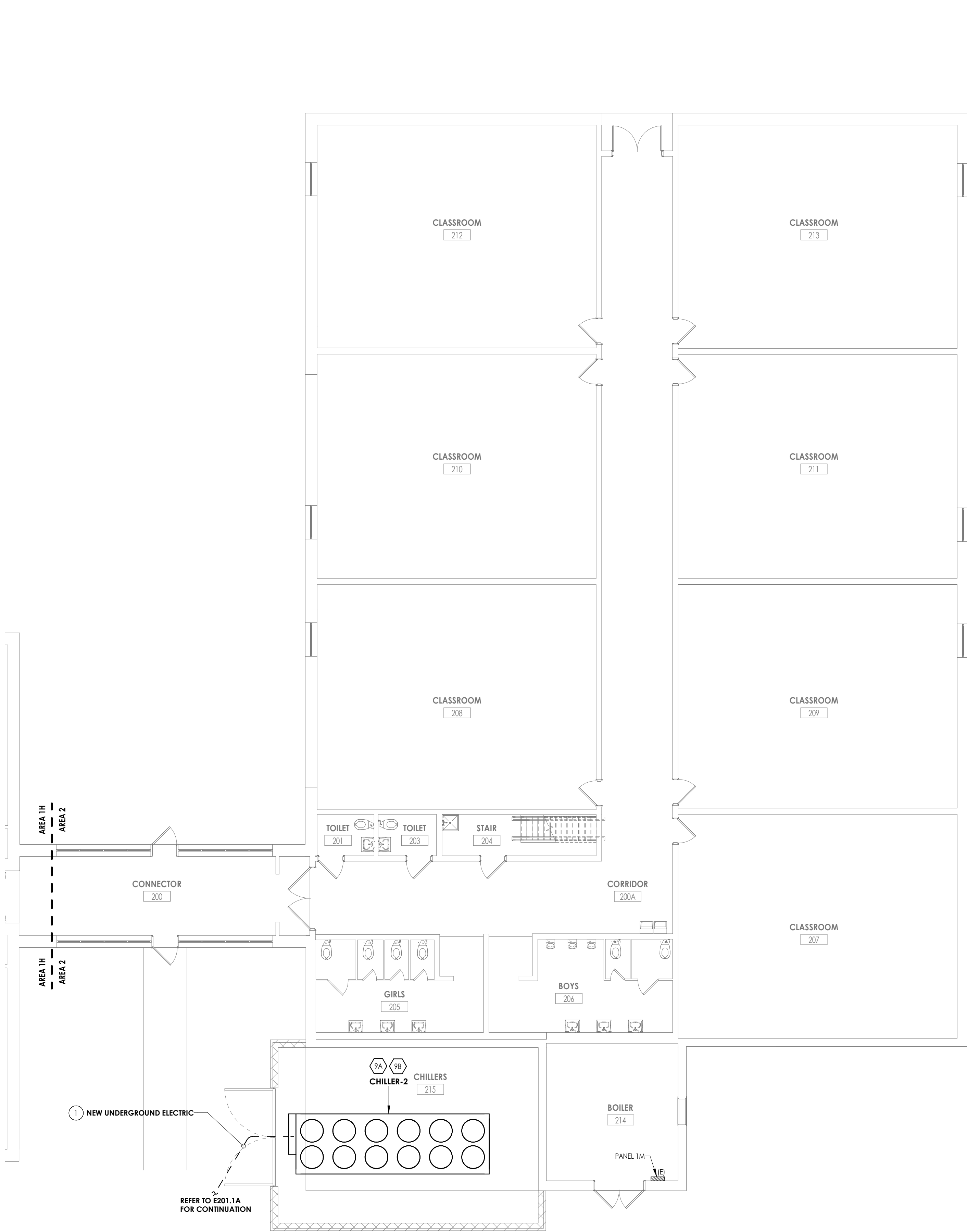
Drawing Title
GROUND FLOOR ELECTRICAL
POWER AND SYSTEMS PLAN -
AREA 1B & 1C

Drawing Num

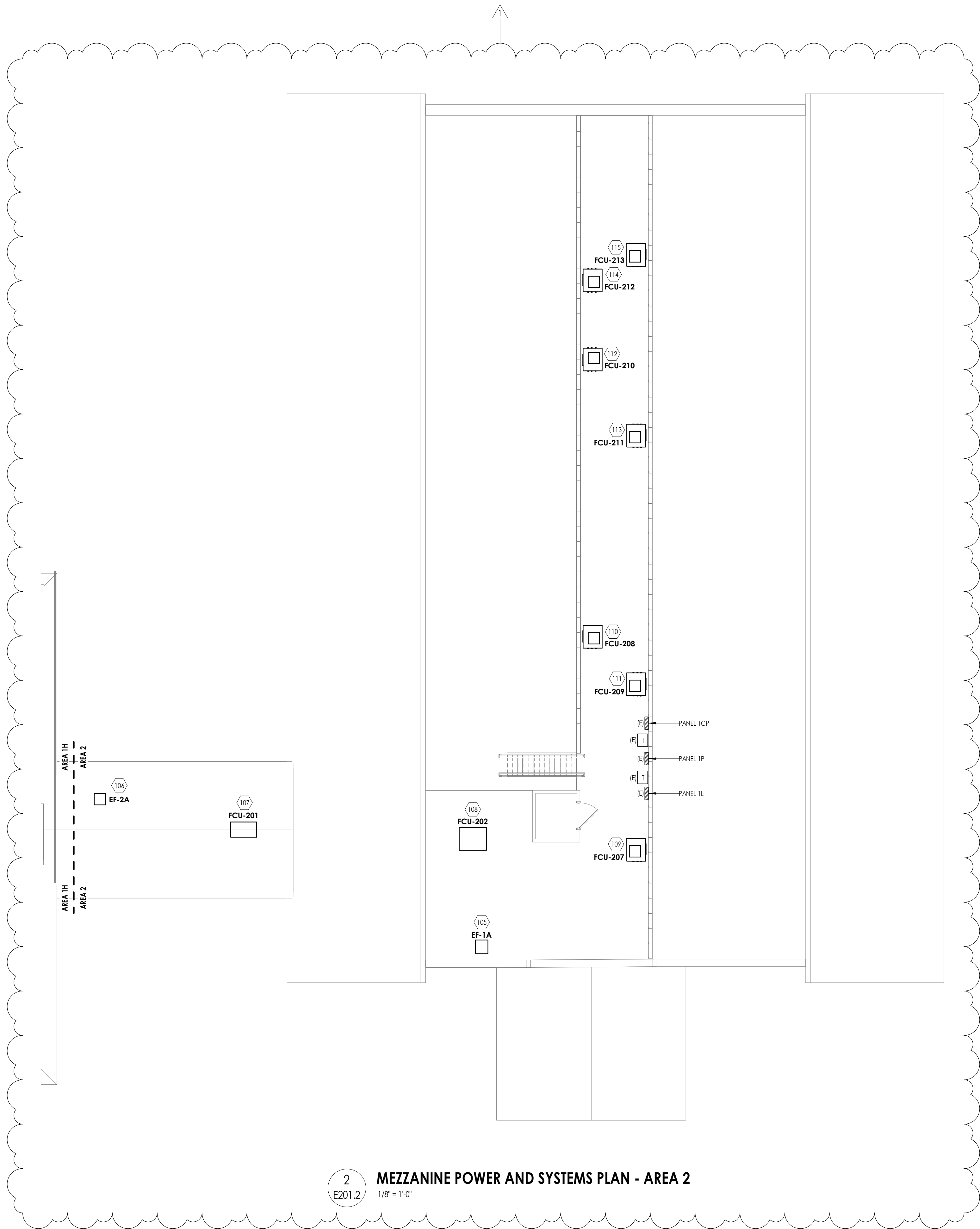
Drawing Number

FOES
E201.1BC

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1
E201.2
GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 2
1/8" = 1'-0"



2
E201.2
MEZZANINE POWER AND SYSTEMS PLAN - AREA 2
1/8" = 1'-0"

GENERAL NOTES

A. EQUIPMENT AND DEVICES LABELED AS "E" ARE EXISTING AND ARE SHOWN FOR REFERENCE ONLY. ALL OF THESE EQUIPMENT AND DEVICES SHALL REMAIN OPERATIONAL FOLLOWING CONSTRUCTION. REFER TO E100 SERIES DEMOLITION DRAWINGS FOR EXISTING TO REMAIN CEILING DEVICES.

B. NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH AND CONNECTED TO EXISTING FIRE ALARM SYSTEM. EXISTING FIRE ALARM SYSTEM IS SIMPLEX 4100U. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL AND LABOR COSTS ASSOCIATED WITH NEW FIRE ALARM DEVICES SHOWN. ASSOCIATED CABLING, TESTING, ETC. FOR A COMPLETE OPERATIONAL FIRE ALARM SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL WORK ASSOCIATED WITH FIRE ALARM SYSTEM AND FINAL PROGRAMMING OF SYSTEM WITH FIRE ALARM VENDOR.

C. THE MINIMUM CANDELA RATING OF FIRE ALARM VISUAL NOTIFICATION DEVICES IS INDICATED ADJACENT TO DEVICE. IF CANDELA RATING IS NOT INDICATED, MINIMUM ALLOWABLE SETTING IS 15 CANDELA.

D. ALL NEW LOW VOLTAGE SYSTEMS CABLING SUCH AS PUBLIC ADDRESS, FIRE ALARM, TEL-COM, ETC. SHALL BE INSTALLED AS OPEN-AIR SYSTEMS AND SUPPORTED VIA J-HOOKS AND BRIDAL RINGS AT INTERVALS NOT EXCEEDING 5'-0". CONDUIT SLEEVES WITH PLASTIC END BUSHINGS SHALL BE USED FOR ALL WALL PENETRATIONS. IN INACCESSIBLE LOCATIONS AND AREAS OPEN TO STRUCTURE CABLING SHALL BE INSTALLED IN CONDUIT. ALL CABLING SHALL BE PLENUM RATED.

E. FIELD VERIFY EXISTING RECEPTACLE WITHIN 25' OF FINAL HVAC EQUIPMENT LOCATIONS IN ACCORDANCE WITH NEC 210.63. WHERE RECEPTACLES DO NOT MEET DISTANCE REQUIREMENT, PROVIDE NEW RECEPTACLE WITHIN 25' OF HVAC EQUIPMENT AND CIRCUIT TO NEAREST AVAILABLE CONVENIENCE RECEPTACLE BRANCH CIRCUIT IN AREA. INTERIOR RECEPTACLES IN STUDENT OCCUPIED SPACES SHALL BE TAMPER RESISTANT. RECEPTACLES IN MECHANICAL SPACES WITH EXTERIOR DOORS SHALL BE GFCI, AND EXTERIOR RECEPTACLES SHALL BE GFCI, WEATHER-RESISTANT, WITH WEATHERPROOF IN-USE COVERS.

F. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELBOARDS SHALL BE U.L. LISTED/LABELED FOR USE IN, AND HAVE MATCHING INTERRUPTING RATING OF EXISTING PANELBOARD.

G. PROVIDE PANELBOARDS USED DURING PROJECT WITH UPDATED TYPED DIRECTORIES INDICATING LOAD AND LOCATION.

H. EQUIPMENT DESIGNATED WITH A NUMBER INSIDE OF A HEXAGON (#) ARE SCHEDULED ON DRAWING E900.

I. ALL NEW EXPOSED INTERIOR AND EXTERIOR RACEWAY SHALL BE PAINTED TO MATCH EXISTING CEILING AND/OR WALL FINISH. CONTRACTOR SHALL USE APPROVED DISTRICT PAINT COLOR/TYPE OR APPROVED EQUIVALENT.

J. FOR ALL VERTICAL AND HORIZONTAL RUNS ALONG INACCESSIBLE BLOCK, CONDUIT SHALL TRANSITION TO SINGLE OR DUAL STEEL WIREMOLD IN EXPOSED LOCATIONS.

K. CONTRACTOR IS RESPONSIBLE FOR SEALING ALL CONDUIT PENETRATIONS THROUGH INTERIOR WALLS, EXTERIOR WALLS, DOOR FRAMES, ETC. ANY CONDUIT THAT PASSES THROUGH FIRE/SMOKE BARRIER SHALL BE PROVIDED WITH FIRE PROOF SEALS.

KEY NOTES

1 PROVIDE UNDERGROUND CONDUITS REQUIRED FROM CHILLER 2 TO BUILDING. SIZE PER EQUIPMENT WIRING SCHEDULE. ELBOW CONDUITS THROUGH EXISTING EXTERIOR WALL AND SEAL WATER-TIGHT. EXTERIOR ABOVE GRADE EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL. UNDERGROUND CONDUIT ELBOWS AND SWEEPS SHALL BE RIGID GALVANIZED STEEL. ALL OTHER UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT. CONDUIT ROUTE SHOWN IS FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND UTILITIES IN AREAS OF NEW UNDERGROUND WORK PRIOR TO EXCAVATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO ADJACENT UNDERGROUND UTILITIES AND SHALL INCUR ALL ASSOCIATED REPAIR COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH TRENCHING, SAW CUTTING, ETC. AND FOR FULL RESTORATION OF EXISTING CONDITIONS.

KEY PLAN:

PROJECT NORTH
TRUE NORTH

FOES E201.2

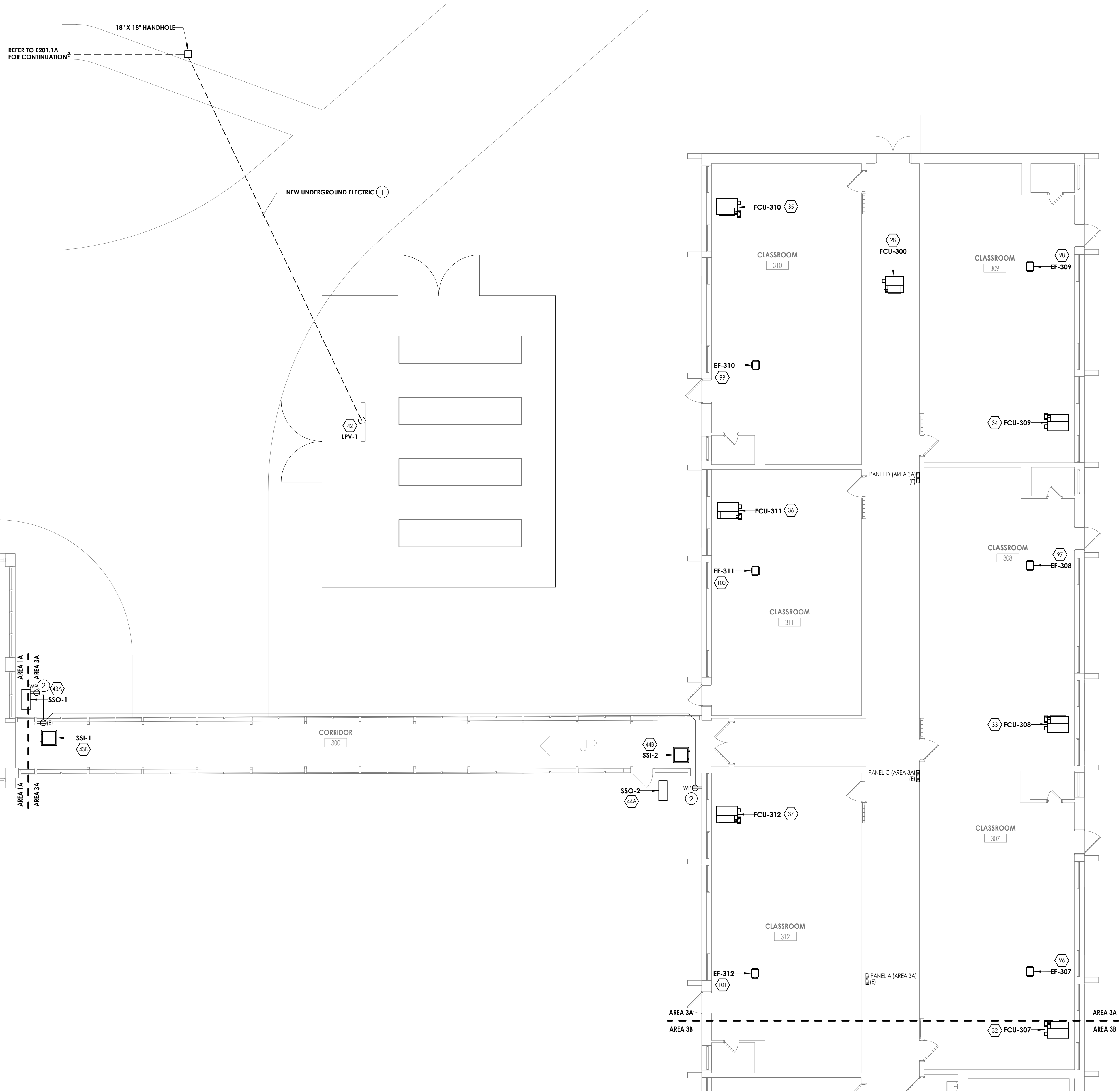
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PROJECT INFORMATION
Project Number
R23.00325
Client Name
JOHNSTON COUNTY PUBLIC SCHOOL DISTRICT
Project Name
FOUR OAKS ELEMENTARY SCHOOL HVAC RENOVATION
Project Address
180 W Hotcher St,
Four Oaks, NC 27524

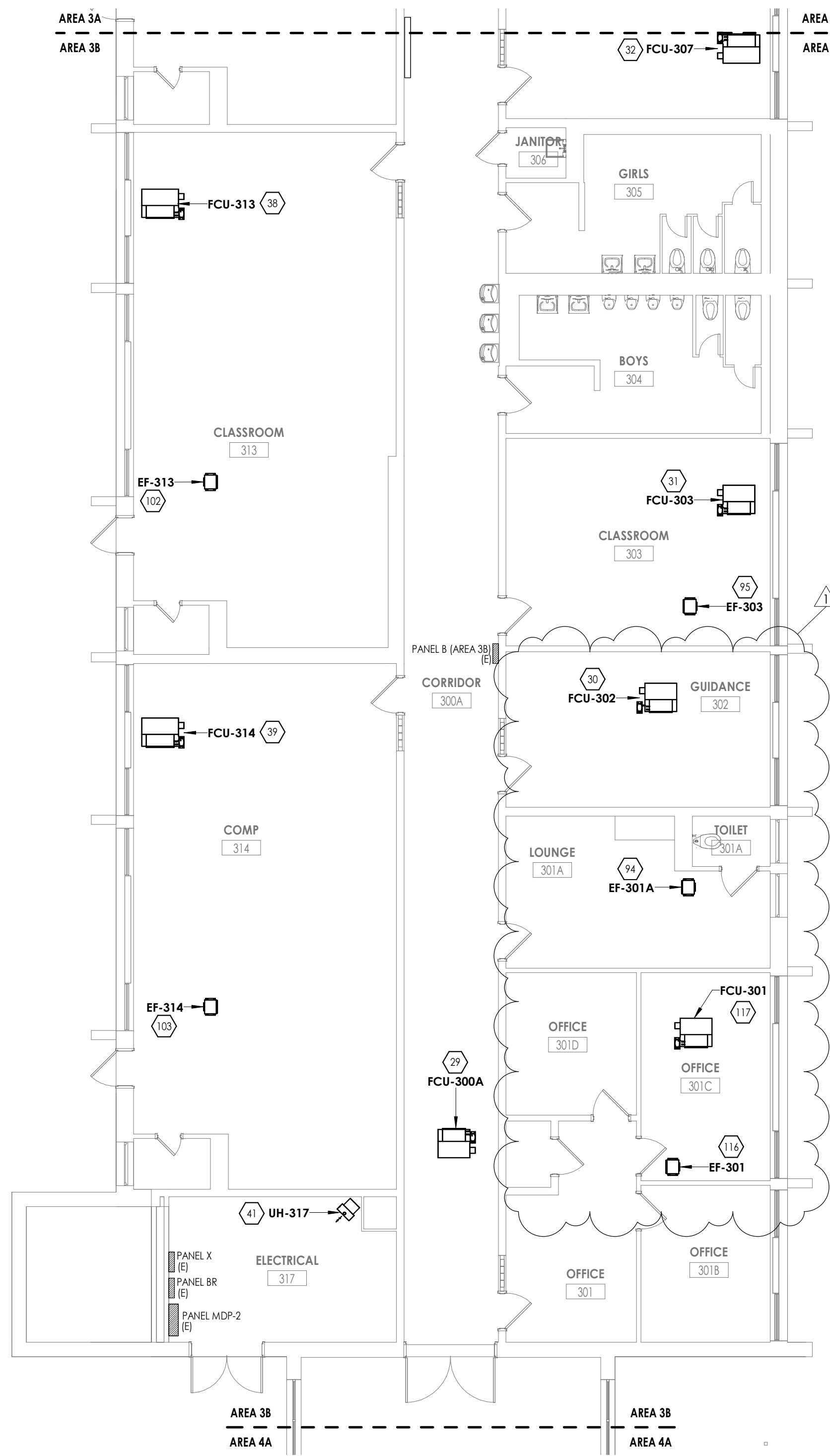
PROJECT ISSUE & REVISION SCHEDULE
Rev Date Description
1 3/7/2025 Bid Addendum #1

PROFESSIONAL STAMPS

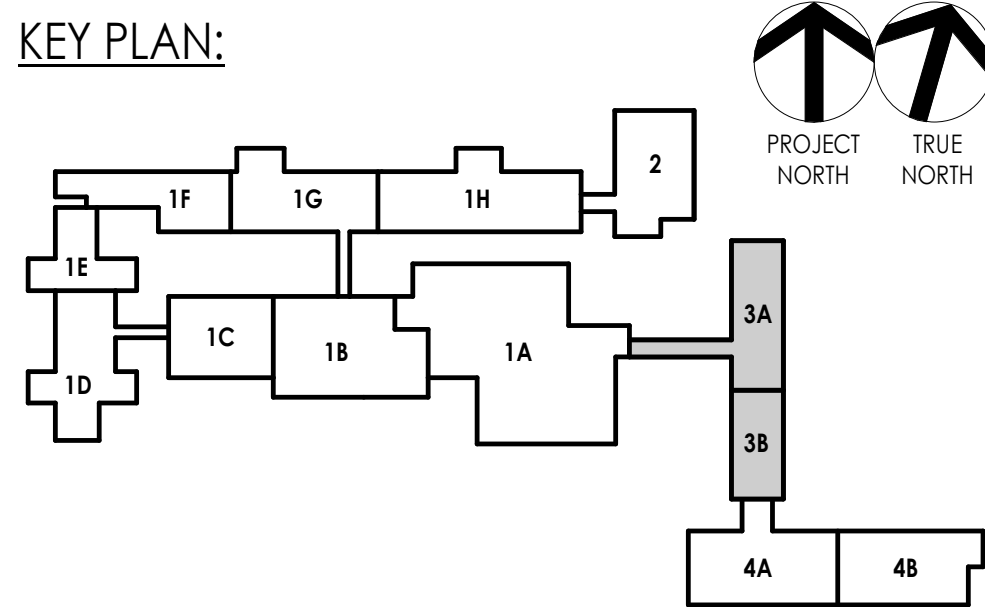
SHEET INFORMATION
Issued 02/17/2025 Scale 1/8" = 1'-0"
Project Status BID SET
Drawn By JAE Checked By ARM
Drawing Title GROUND FLOOR & MEZZANINE POWER AND SYSTEMS PLAN - AREA 2
Drawing Number



1 GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 3A
E201.3AB 1/8" = 1'-0"



2 GROUND FLOOR POWER AND SYSTEMS PLAN - AREA 3B
E201.3AB 1/8" = 1'-0"





GENERAL NOTES

- A. EQUIPMENT, FIXTURES, AND DEVICES (LABELED AS "E") ARE EXISTING AND ARE TO BE REFERRED TO AS "EXISTING EQUIPMENT". FIXTURES, AND DEVICES SHALL REMAIN OPERATIONAL FOLLOWING CONSTRUCTION.
- B. REFER TO LUMINAIRE SCHEDULE ON DRAWING 6900 FOR FIXTURE DESIGNATION TYPES, DESCRIPTIONS, AND SPECIFICATIONS.
- C. ALL HALF SHADED LUMINAIRES AND LUMINAIRES DESIGNATED WITH "EM" SHALL INDICATE EMERGENCY LUMINAIRES. LUMINAIRE SHALL CONTAIN 90 MINUTE BATTERY UNIT TO OPERATE UPON LOSS OF NORMAL POWER. WIRE FIXTURE ACCORDING TO MANUFACTURER'S WIRING DIAGRAM. WHERE SHOWN AS SWITCHED, PROVIDE FIXTURE WITH (2) HOT LEGS FROM SAME POWER SOURCE.
- D. LUMINAIRES DESIGNATED WITH "NL" INDICATE NIGHTLIGHTS AND SHALL BE UNSWITCHED AND REMAIN ON AT ALL TIMES.
- E. NEW LIGHTING CONTROLS SHOWN (OCCUPANCY SENSORS, VACANCY SENSORS, PHOTOCELLS, SWITCHES, DIMMERS, ETC) SHALL BE LOW VOLTAGE DEVICES AND COMPLY WITH LUMINAIRE PROVIDED. PROVIDE ALL ASSOCIATED CONTROL UNITS, POWER PACKS, WIRING, AND ACCESSORIES REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
- F. CONNECT ALL CONTROL UNITS AND POWER PACKS TO ASSOCIATED ROOM LIGHTING BRANCH CIRCUIT AHEAD OF LOCAL AREA SWITCHING.
- G. UNLESS NOTED OTHERWISE VIA KEYNOTE, IN EACH ROOM/AREA SHOWN ON THE PLAN, CONNECT NEW LIGHT FIXTURES TO EXISTING LIGHTING BRANCH CIRCUITING LEAD FROM DEMOLITION, REWORK AND EXISTING CIRCUITING AS REQUIRED TO SERVE NEW LIGHTING AND CONTROL LAYOUT.
- H. CONNECT NEW EMERGENCY LIGHTING UNITS WITH BATTERY PACKS TO LIGHTING BRANCH CIRCUITING WITHIN AREA AHEAD OF SWITCHING.
- I. CONNECT NEW EXT SIGNS TO EXISTING EXT SIGN BRANCH CIRCUIT WHERE AVAILABLE WITHIN AREA, OTHERWISE, CONNECT TO LIGHTING BRANCH CIRCUITING WITHIN AREA AHEAD OF SWITCHING.
- J. PROVIDE OWNER WITH ADDITIONAL 5% ATTIC SPACE FOR EACH TYPE OF LIGHT FIXTURE AND LIGHTING CONTROL.
- K. NEW WALL MOUNTED FIXTURES REPLACING EXISTING WALL MOUNTED FIXTURES SHALL BE MOUNTED AT SAME HEIGHT AS DEMOLISHED FIXTURES IN SAME LOCATION, UNLESS NOTED OTHERWISE.
- L. NEW SUSPENDED FIXTURES REPLACING EXISTING SUSPENDED FIXTURES SHALL BE MOUNTED AT SAME HEIGHT AS DEMOLISHED FIXTURE, UNLESS NOTED OTHERWISE.

KEY NOTES

- ① HANG TYPE "S" FIXTURES WITHIN SPACE AT APPROXIMATELY 10'-0" ABOVE FINISHED FLOOR. FIELD LOCATE AROUND AND BELOW DUCTWORK, PIPING, ETC. FOR BEST ILLUMINATION OF SPACE.
- ② PROVIDE INTERIOR DAYLIGHTING SENSOR TO CONTROL LIGHT FIXTURES IN DAYLIGHTING ZONE SHOWN. FIXTURES SHALL BE PROGRAMMED TO DIM BASED UPON AVAILABLE NATURAL LIGHT. PROVIDE ROOM LIGHTING CONTROLS. QUANTITY OF DAYLIGHTING ZONE AUTOMATICALLY DIMS ACCORDING TO DAYLIGHT CONTRIBUTION.
 - ALL LIGHTING ZONES TURN OFF AUTOMATICALLY AFTER OCCUPANTS LEAVE SPACE.
- ③ CENTER TYPE "D" FIXTURES WITHIN RECESSED AREA. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF FIXTURES WITHIN RECESSED AREA DURING CONSTRUCTION WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN AND DURING INSTALLATION. FOR BIDDING PURPOSES, ASSUME HANG OF FIXTURES SHALL BE HUNG WITH BOTTOM OF LENS FLUSH WITH ACEL CEILING, AND OTHER HALF OF LENS (EVERY OTHER LENS SHALL BE HUNG WITH BOTTOM OF LENS < BEING AT CEILING.
- ④ TYPE "R1", "R2", AND "R3" FIXTURES SHALL BE INTERLOCKED TOGETHER AND CABLE HUNG. COORDINATE EXACT LOCATIONS, MOUNTING HEIGHT, AND TILT OF FIXTURES WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN AND DURING INSTALLATION. BOTTOM OF FIXTURES SHALL BE NO LOWER THAN 6'-0" ABOVE FINISHED FLOOR.



PROJECT INFORMATION

Client Name
**JOHNSTON COUNTY PUBLIC
SCHOOL DISTRICT**

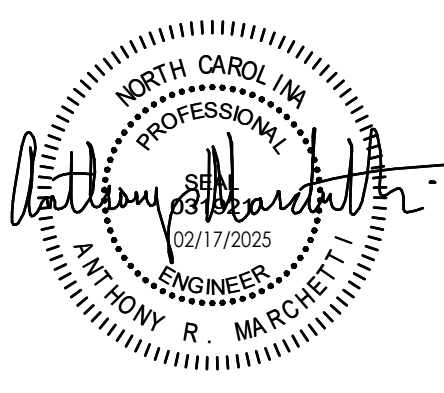
Project Name
**FOUR OAKS ELEMENTARY
SCHOOL HVAC RENOVATION**

Project Address
80 W Hatcher St,
Four Oaks, NC 27524

PROJECT ISSUE & REVISION SCHEDULE

Date	Description
3/7/2025	Bid Addendum #1

PROFESSIONAL STAMPS



HEET INFORMATION

Issued 12/17/2025 Scale 1/8" = 1'-0"

Project Status
PMD SET

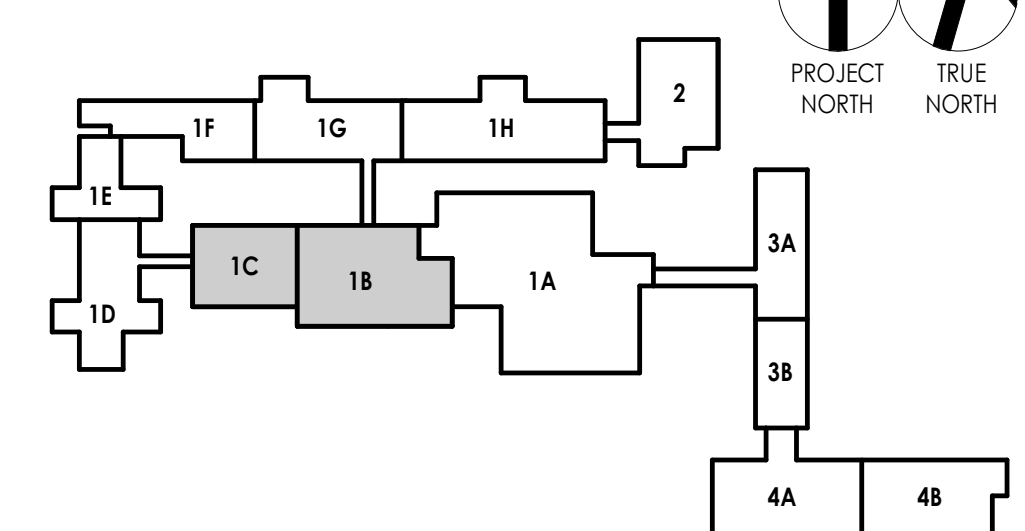
Drawn By
JAE

Checked By
ARM

Drawing Title
GROUND FLOOR LIGHTING PLAN
AREA 1B & 1C

Drawing Number
FOES
E301.1BC

KEY PLAN:



EQUIPMENT WIRING SCHEDULE												
	MARK	LOCATION	VOLTS	PH	HP	FLA	WIRING/CONDUIT	BREAKER	PANEL	CCT	REMARKS	
1	AHU-1 SUPPLY	MECHANICAL 139	480 V	3	10	14 A	(3)#10, #10G IN 1" C	30/3	T	27,29.31	2	
2A	AHU-2 SUPPLY	CHILLER 106	480 V	3	1.5	3 A	(3)#12, #12G IN 3/4" C	15/3	V	25,27.29	4	
3	AHU-2 EXHAUST	CHILLER 106	480 V	3	1	2.1 A	(3)#12, #12G IN 3/4" C	15/3	V	25,27.29	4	
3A	AHU-3 SUPPLY	CHILLER 106	480 V	3	10	14 A	(3)#10, #10G IN 1" C	30/3	V	13.5	2	
3B	AHU-3 EXHAUST	CHILLER 106	480 V	3	7.5	11 A	(3)#12, #12G IN 3/4" C	20/3	V	7.9, 11	4	
4A	AHU-4 SUPPLY	NEW MECHANICAL 128.1	480 V	3	15	21 A	(3)#8, #10G IN 1" C	40/3	T	26,28.30	2	
4B	AHU-4 RETURN	NEW MECHANICAL 128.1	480 V	3	7.5	11 A	(3)#12, #12G IN 3/4" C	20/3	T	13,15,17	2	
5	AHU-5 SUPPLY	MECHANICAL 111	480 V	3	15	21 A	(3)#10, #10G IN 1" C	40/3	N	13.5	2	
5A	AHU-6 SUPPLY	MECHANICAL 134	480 V	3	10	14 A	(3)#10, #10G IN 1" C	30/3	K	33,35.37	2	
6B	AHU-6 RETURN	MECHANICAL 134	480 V	3	7.5	11 A	(3)#12, #12G IN 3/4" C	20/3	K	13.5	4	
7A	AHU-7 SUPPLY	MECH 105	480 V	3	20	27 A	(3)#8, #10G IN 1" C	50/3	A (AREA 1D)	13.5	2	
7B	EF-AHU-7	MECH 105	480 V	3	10	14 A	(3)#10, #10G IN 1" C	30/3	A (AREA 1D)	7.9, 11	2	
8A	CHILLER-1	CHILLER YARD	480 V	3	332 A	2 SETS (3)#40, #2G IN 3" C	450/3	MSB		26,27.29	2, 7	
8B	CHILLER-1 HEAT TRACE	CHILLER YARD	120 V	1	10 A	(2)#12, #12G IN 3/4" C	20/1	W	17	4		
9A	CHILLER-2	CHILLER YARD	480 V	3	332 A	2 SETS (3)#40, #2G IN 3" C	450/3	MSB	26,28.30	2, 7		
9B	CHILLER-2 HEAT TRACE	CHILLER YARD	120 V	1	10 A	(2)#12, #12G IN 3/4" C	20/1	IM	5	4		
10	CHP-1	CHILLER 106	480 V	3	15	21 A	(3)#8, #10G IN 1" C	40/3	V	14,16,18	2	
11	CHP-2	CHILLER 106	480 V	3	15	21 A	(3)#8, #10G IN 1" C	40/3	V	24.6	2	
12	CHW PUMP-1	CHILLER 106	480 V	3	16.7	21 A	(3)#8, #10G IN 1" C	40/3	VA	10,12,14	2	
13	CHW PUMP-2	CHILLER 106	480 V	3	16.7	21 A	(3)#8, #10G IN 1" C	40/3	VA	16,18,20	2	
14	CHW PUMP-3	CHILLER 106	480 V	3	7.5	11 A	(3)#12, #12G IN 3/4" C	20/3	VA	9,11,13	2	
15	CHW PUMP-4	CHILLER 106	480 V	3	7.5	11 A	(3)#12, #12G IN 3/4" C	20/3	VA	15,17,19	2	
16	HHW PUMP-1	BOILER 106A	480 V	3	7.5	11 A	(3)#12, #12G IN 3/4" C	20/3	VA	21,23,25	2	
17	HHW PUMP-2	BOILER 106A	480 V	3	7.5	11 A	(3)#12, #12G IN 3/4" C	20/3	VA	22,24,26	2	
18	HHW PUMP-3	BOILER 106A	480 V	3	1.5	3 A	(3)#12, #12G IN 3/4" C	15/3	V	28,30,32	4	
19	HHW PUMP-4	BOILER 106A	480 V	3	1.5	3 A	(3)#12, #12G IN 3/4" C	15/3	V	28,30,32	4	
20	P-B-1	BOILER 106A	208 V	3	1	1.7 A	(2)#12, #12G IN 3/4" C	15/2	W	24.6	2	
21	P-B-2	BOILER 106A	208 V	3	1	3.7 A	(3)#12, #12G IN 3/4" C	15/3	W	24.6	2	
22	B-1	BOILER 106A	120 V	1	1	16 A	(2)#12, #12G IN 3/4" C	20/1	W	13	2, 7	
23	B-2	BOILER 106A	120 V	1	1	16 A	(2)#12, #12G IN 3/4" C	20/1	W	37	2, 7	
24	KITCHEN-107	ROOF ABOVE KITCHEN 107	120 V	1	1	6.9 A	(2)#12, #12G IN 3/4" C	20/1	R	24	1, 5	
25	MAIL-1	ROOF ABOVE KITCHEN 107	208 V	3	1.5	6 A	(2)#12, #12G IN 3/4" C	15/2	R	7.9, 11	2	
26	FCU-128	MECHANICAL 128	208 V	3	3	3.7 A	(3)#12, #12G IN 3/4" C	15/3	U	24.6	2	
27	FCU-139	MECHANICAL 139	208 V	3	3	3.7 A	(3)#12, #12G IN 3/4" C	15/3	U	13.5	2	
28	FCU-300	CORRIDOR 300	208 V	1	2.4 A	(2)#12, #12G IN 3/4" C	15/2	D (AREA 3A)	19,21	2, 10		
29	FCU-300A	CORRIDOR 300A	208 V	1	2.4 A	(2)#12, #12G IN 3/4" C	15/2	B (AREA 3B)	30,39	2, 10		
30	FCU-302	CORRIDOR 302	208 V	1	3.7 A	(2)#12, #12G IN 3/4" C	15/2	B (AREA 3B)	31,33	2, 10		
31	FCU-303	CORRIDOR 303	208 V	1	2.1 A	(2)#12, #12G IN 3/4" C	15/2	B (AREA 3B)	31,33	2, 10		
32	FCU-307	CORRIDOR 307	208 V	1	4.1 A	(2)#12, #12G IN 3/4" C	15/2	C (AREA 3A)	25,27	2, 10		
33	FCU-308	CORRIDOR 308	208 V	1	4.1 A	(2)#12, #12G IN 3/4" C	15/2	D (AREA 3A)	31,33	2, 10		
34	FCU-309	CORRIDOR 309	208 V	1	1.4 A	(2)#12, #12G IN 3/4" C	15/2	D (AREA 3A)	31,33	2, 10		
35	FCU-310	CORRIDOR 310	208 V	1	4.1 A	(2)#12, #12G IN 3/4" C	15/2	D (AREA 3A)	35,37	2, 10		
36	FCU-311	CORRIDOR 311	208 V	1	4.1 A	(2)#12, #12G IN 3/4" C	15/2	D (AREA 3A)	35,37	2, 10		
37	FCU-312	CORRIDOR 312	208 V	1	4.1 A	(2)#12, #12G IN 3/4" C	15/2	C (AREA 3A)	39,31	2, 10		
38	FCU-313	CLASSROOM 313	208 V	1	4.1 A	(2)#12, #12G IN 3/4" C	15/2	B (AREA 3B)	25,27	2, 10		
39	FCU-314	CLASSROOM 314	208 V	1	4.1 A	(2)#12, #12G IN 3/4" C	15/2	B (AREA 3B)	35,37	2, 10		
40	UH-106	CHILLER 106	120 V	1	1/15	1 A	(2)#12, #12G IN 3/4" C	20/1	W	9	1	
41	UH-317	ELECTRICAL 317	120 V	1	1/25	1 A	(2)#12, #12G IN 3/4" C	20/1	X	17	2	
42	LPV-1	LP TANK YARD	480 V	3	22 A	(3)#8, #10G IN 1" C	30/3	MSB	56,58,60	2, 6		
43A	SSO-1	CORRIDOR 300 EXTERIOR	208 V	1	27 A	(2)#8, #10G IN 1" C	40/2	U	39,41	1		
43B	SS-1	CORRIDOR 300	208 V	1	0 A	(2)#12, #12G IN 3/4" C	40/2	U		9.10		
44A	SSO-2	CORRIDOR 300 EXTERIOR	208 V	1	27 A	(2)#8, #10G IN 1" C	40/2	U	39,41	1		
44B	SS-2	CORRIDOR 300	208 V	1	0 A	(2)#12, #12G IN 3/4" C	40/2	U		9.10		
45	EF-1	LAUNDRY 136 TOILET	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	U	7	1		
46	EF-2	TOILET 113	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	U	7	1		
47	EF-3	MOP 105	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	15/1	R	4	2, 3		
48	EF-4	CLASSROOM 116A KILN	120 V	1	0.5 A	(2)#12, #12G IN 3/4" C	15/1	M	30	2, 3		
49	EF-5	MECHANICAL	480 V	3	1-1/2	3 A	(3)#12, #12G IN 3/4" C	15/3	N	7.9, 11	2	
50	EF-6	MECHANICAL 111	120 V	1	4.9 A	(2)#12, #12G IN 3/4" C	15/1	P	20	2		
51	EF-7	TOILET 124	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	15/1	M	41	2, 3		
52	EF-8	TOILET 132A	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	P	26	1		
53	EF-9	TOILET 133A	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	P	26	1		
54	EF-10	PLANNING 139A TOILET	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	P	26	1		
55	EF-12	ROOF ABOVE DISHWASHING 104	120 V	1	1/4	5.8 A	(2)#12, #12G IN 3/4" C	15/1	R	28	2, 3	
56	EF-13	CLASSROOM 108A TOILET	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	P	28	1		
57	EF-14	CLASSROOM 107A TOILET	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	P	28	1		
58	EF-15	CHILLER 106	120 V	1	1/2	9.8 A	(2)#12, #12G IN 3/4" C	20/1	W	7	1	
59	EF-16	ROOF ABOVE KITCHEN 107	208 V	3	1	4.6 A	(3)#12, #12G IN 3/4" C	15/3	R	13,15,17	3, 4	
60	EF-17	ROOF ABOVE GYM 118	208 V	3	1/2	2.4 A	(3)#12, #12G IN 3/4" C	15/3	U	8,10,12	3, 4	
61	EF-18	ROOF ABOVE GYM 118	208 V	3	1/2	2.4 A	(3)#12, #12G IN 3/4" C	15/3	U	8,10,12	3, 4	
62	EF-19	ROOF ABOVE MECHANICAL 139	120 V	1	1/6	4.4 A	(2)#12, #12G IN 3/4" C	15/1	U	11	2, 3	
63	EF-20	ROOF ABOVE WOMENS 121	120 V	1	1/15	1.3 A	(2)#12, #12G IN 3/4" C	15/1	A (AREA 1A)	20	2, 3	
64	EF-21	TOILET 113	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	M	39	4		
65	EF-22	TOILET 114	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	M	39	4		
66	EF-23	CLASSROOM 108 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	16	1, 8		
67	EF-24	CLASSROOM 108 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	16	1, 8		
68	EF-25	CLASSROOM 109 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	14	1, 8		
69	EF-26	CLASSROOM 109 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	14	1, 8		
70	EF-27	CLASSROOM 107 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	12	1, 8		
71	EF-28	CLASSROOM 107 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	12	1, 8		
72	EF-29	CLASSROOM 110 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	10	1, 8		
73	EF-30	CLASSROOM 110 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	10	1, 8		
74	EF-31	CLASSROOM 111 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	8	1, 8		
75	EF-32	CLASSROOM 111 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	8	1, 8		
76	EF-33	CUST 116	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	18	1		
77	EF-34	ELEC 117	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	18	1		
78	EF-35	STAFF 115	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	18	1		
79	EF-36	CLASSROOM 112 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	20	1, 8		
80	EF-37	CLASSROOM 112 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	20	1, 8		
81	EF-38	CLASSROOM 113 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	22	1, 8		
82	EF-39	CLASSROOM 113 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	C (AREA 1D)	22	1, 8		
83	EF-40	CLASSROOM 124 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	B (AREA 1D)	13	1, 8		
84	EF-41	CLASSROOM 124 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	B (AREA 1D)	13	1, 8		
85	EF-42	CLASSROOM 123 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	B (AREA 1D)	15	1, 8		
86	EF-43	CLASSROOM 125 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	B (AREA 1D)	15	1, 8		
87	EF-44	CLASSROOM 125 TOILET ROOM	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	B (AREA 1D)	15	1, 8		
88	EF-45	MECHANICAL 130	120 V	1	4.9 A	(2)#12, #12G IN 3/4" C	15/1	F	24	2		
89	EF-46	STAFF 131	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	F	35	1		
90	EF-47	CUST 132	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	F	35	1		
91	EF-48	MECHANICAL 150	120 V	1	4.9 A	(2)#12, #12G IN 3/4" C	15/1	H	28	2		
92	EF-49	CUST 132	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	H	30	1		
93	EF-50	TOILET 153	120 V	1	0.2 A	(2)#12, #12G IN 3/4" C	20/1	H	30	1		
94	EF-301A	LOUNGE 301A	120 V	1	1.3 A	(2)#12, #12G IN 3/4" C	20/1	B (AREA 3B)				

PANEL P		VOLTAGE:		208/120		3 PH 4W		A/C RATING:		EXISTING		REMARKS:	
		FEEDER AMP:		225		MLO		MOUNTING:		ENCLOSURE:		WESTINGHOUSE PRL1	
		LUGS:		225		MLO		MOUNTING:		ENCLOSURE:		WESTINGHOUSE PRL1	
(Existing)		LUGS:		225		MLO		MOUNTING:		ENCLOSURE:		WESTINGHOUSE PRL1	
BKR	NOTE	LOAD DESCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD DESCRIPTION	NOTE	BKR			
20/1	E	RECEPTS. A101, A111, A114	1080	1	A	2	720	RECEPTS. A101, A, B, C	E	20/1			
20/1	E	FWC-A101	360	3	B	4	924	RECEPTS. A107, EF-1	R	20/1			
20/1	E	RECEPTS. A101	540	5	A	6	360	RECEPTS. A104	E	20/1			
20/1	E	RECEPTS. A115	720	7	A	8	540	RECEPTS. A108	E	20/1			
20/1	E	RECEPTS. A115	1080	9	A	10	720	RECEPTS. A108	E	20/1			
20/1	E	RECEPTS. A102	360	11	B	12	1080	RECEPTS. A108, A, B, COMMODO MTR	E	20/1			
20/1	E	RECEPTS. A116, A116B	540	13	A	14	540	RECEPTS. A117	E	20/1			
20/1	E	RECEPTS. A116	540	15	B	16	720	RECEPTS. A117	E	20/1			
20/1	E	RECEPTS. A116	720	17	A	18	900	RECEPTS. A117	E	20/1			
20/1	E	RECEPTS. A118, A119	900	19	A	20	588	EF-6 (MECH RM. 111)	N	15/1			
20/1	E	RECEPTS. A119	540	21	B	22	0	SPACE	N	-			
20/1	E	RECEPTS. A118, A120	540	23	A	24	0	SPACE	N	-			
20/1	E	RECEPTS. A101, A120	720	25	A	26	72	EF-8, EF-9, & EF-10 (132, 133, 139...	R	20/1			
20/1	E	MEDIA CORNER SMART BOARD	900	27	A	28	48	EF-13 & EF-14 (107A & 108A TLTS)	R	20/1			
20/1	E	SPARE	0	29	B	30	180	EWG	E	20/1			
20/1	E	EXISTING LOAD	0	31	A	32	180	EWG	E	20/1			
20/1	E	MEDIA HEADEND	360	33	B	34	540	RECEPTS. A120	E	20/1			
20/1	E	TV RETRIEVAL	360	35	A	36	540	RECEPTS. A120	E	20/1			
-	E	SPACE	0	37	A	38	5490	PANEL PP	E	100/3			
-	E	SPACE	0	39	A	40	540		E	20/1			
-	E	SPACE	0	41	B	42	8070		E	20/1			
Connected Load Per Phase			PH A:	12090	PH B:	12152	PH C:	13650					
Lighting			HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA		Amps		
Connected VA			4232	0	28380	0	0	5280	37892		105.2		
Demand Factor			1.25	1.00	1.00	NEC	0.00	1.00	28702		79.7		
Demand VA			4232	0	19190	0	0	5280	28702		79.7		

PANEL A (AREA 1D) (Existing)		VOLTAGE: FEEDER AMP: LUGS:		480/277 225	3 PH 4W MLO	A/C RATING: MOUNTING: ENCLOSURE:		EXISTING NEMA 1	REMARKS: WESTINGHOUSE PRL2 ELEC RM. 117		
		FEED:		225		MLO		EXISTING NEMA 1		REMARKS: WESTINGHOUSE PRL2 ELEC RM. 117	
		PHASE		CTKT		VA		LOAD DESCRIPTION		NOTE	
BKR	NOTE	LOAD DESCRIPTION	VA	CKT	PHASE	CTKT	VA	LOAD DESCRIPTION	NOTE	BKR	
50/3	↓	AHU-7 SUPPLY	7479	1	A	2	0	SPARE	R	20/3	
↓	↓	↓	7479	3	B	4	0	↓	↓	↓	
↓	↓	↓	7479	5	A	6	0	↓	↓	↓	
30/3	↓	EF-AHU-7	3878	7	A	8	2500	OUTSIDE LIGHTS VIA TIMECLOCK	E	20/1	
↓	↓	↓	3878	9	B	10	2500	LIGHTS C113	E	20/1	
↓	↓	↓	3878	11	C	12	2500	LIGHTS C112	E	20/1	
20/1	E	LIGHTS C114, C119, C105, C106	2500	13	A	14	2500	CORRIDOR LIGHTS	E	20/1	
20/1	E	LIGHTS C107	2500	15	B	16	2500	CORRIDOR LIGHTS	E	20/1	
20/1	E	LIGHTS C108	2500	17	C	18	2500	EMERGENCY LIGHTS	E	20/1	
20/1	E	LIGHTS C111	2500	19	A	20	0	SPARE	E	20/1	
20/1	E	LIGHTS C110	2500	21	B	22	0	SPARE	E	20/1	
20/1	E	LIGHTS C109	2500	23	A	24	0	SPARE	E	20/1	
20/1	E	LIGHTS C124	2500	25	A	26	0	SPARE	E	20/1	
20/1	E	LIGHTS C125	2500	27	B	28	0	SPARE	E	20/1	
20/1	E	SPARE	0	29	C	30	0	SPARE	E	20/1	
20/1	E	SPARE	0	31	A	32	0	SPARE	E	20/1	
20/1	E	SPARE	0	33	B	34	0	SPACE	E	-	
20/1	E	SPARE	0	35	A	36	0	SPACE	E	-	
20/1	E	SPARE	0	37	A	38	0	SPACE	E	-	
20/1	E	SPARE	0	39	B	40	0	SPACE	E	-	
-	E	SPACE	0	41	C	42	0	SPACE	E	-	
110/3 SUB		PANEL B TRANSFORMER	14752	A		0		SUB			
			14626	B		0					
			11880	C		0					
Connected Load Per Phase			PH A:	38609	PH B:	38483	PH C:	33237			
Lighting		HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA		Amps	
35000		38609	0	23940	0	11780	1000	110329		132.7	
Demand Factor		1.25	1.00	1.00	NEC	0.00	1.00	112109		134.9	
Demand VA		43750	38609	0	16970	0	11780	112109		134.9	

PANEL F (Existing)		VOLTAGE: FEEDER AMP: LUGS:		208/120 100	3 PH 4W MLO	A/C RATING: MOUNTING: ENCLOSURE:		22K Surface NEMA 1	REMARKS: WESTINGHOUSE PRL1		
		FEED:		100		MLO		22K Surface		REMARKS: WESTINGHOUSE PRL1	
		PHASE		CTKT		VA		LOAD DESCRIPTION		NOTE	
BKR	NOTE	LOAD DESCRIPTION	VA	CTKT	PHASE	CTKT	VA	LOAD DESCRIPTION	NOTE	BKR	
20/1	E	RECEPTACLES C136	720	1	A	2	180	RECEPTACLES C131	E	20/1	
20/1	E	RECEPTACLES C136	720	3	B	4	360	EWG	E	20/1	
20/1	E	RECEPTACLES C136	540	5	A	6	360	RECEPTACLES C121, C123	E	20/1	
20/1	E	RECEPTACLES C135	360	7	A	8	0	SPACE	E	-	
20/1	E	RECEPTACLES C135	360	9	B	10	0	SPACE	E	-	
20/1	E	RECEPTACLES C134	360	11	C	12	540	RECEPTACLES C137	E	20/1	
20/1	E	RECEPTACLES C133	540	13	A	14	540	RECEPTACLES C137	E	20/1	
20/1	E	HOTWATER #2	540	15	B	16	360	RECEPTACLES C137	E	20/1	
20/1	E	RECEPTACLES C138	540	17	C	18	540	RECEPTACLES C127	E	20/1	
20/1	E	RECEPTACLES C126	540	19	A	20	540	RECEPTACLES C127	E	20/1	
20/1	E	RECEPTACLES C126	540	21	B	22	360	RECEPTACLES C127	E	20/1	
20/1	E	RECEPTACLES C126	540	23	C	24	588	EF-45 (MECH 130)	N	15/1	
20/1	E	RECEPTACLES C134	360	25	A	26	0	SPARE	R	20/3	
20/1	E	RECEPTACLES C130, C131, C132	360	27	B	28	0	↓	↓	↓	
20/1	E	RECEPTACLES C130, C131, C132	360	29	A	30	0	↓	↓	↓	
20/1	R	SMOKE DAMPER	125	31	A	32	0	SPARE	E	20/1	
20/1	R	SPARE	0	33	B	34	0	SPARE	E	20/1	
20/1	R	EF-46 & EF-47 (RMS 131 & 132)	48	35	B	36	0	SPARE	E	20/1	
20/1	E	CLOSET LIGHTS	50	37	A	38	0	SPARE	E	20/1	
20/1	E	RECEPTACLES CL38	180	39	B	40	0	SPARE	E	20/1	
20/1	E	SPACE	0	41	C	42	0	SPACE	E	-	
Connected Load Per Phase			PH A:	3955	PH B:	3780	PH C:	4416			
Lighting		HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA		Amps	
Connected VA		50	761	180	11160	0	0	12151		33.7	
Demand Factor		1.25	1.00	1.00	NEC	0.00	1.00	11584		32.2	
Demand VA		63	761	180	10580	0	0	11584		32.2	

PANEL 1P (Existing)			VOLTAGE:		208/120	3 PH 4W	225		MCB	A/C RATING: 10k		REMARKS: SQUARE D AREA 2 MEZZANINE	
			FEEDER AMP:		175	MAINS:	FEED:		ENCLOSURE:		NEMA 1		
			BKR	NOTE	LOAD DESCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD DESCRIPTION	NOTE	BKR
20/1	E	RECEPTS. RM 208	540	1	A	2	1176	EF-1A		R	20/1		
20/1	E	RECEPTS. RM 210	540	3	B	4	1176	EF-2A		R	20/1		
20/1	E	RECEPTS. RM 212	540	5	C	6	800	RECIRC PUMP E.W.C.		E	20/1		
20/1	E	RECEPTS. RM 209	540	7	A	8	1800	FCU-207		R	20/1		
20/1	E	RECEPTS. RM 211	540	9	B	10	1800	FCU-208		R	20/1		
20/1	E	RECEPTS. RM 213	540	11	A	12	1800	FCU-209		R	20/1		
20/1	E	RECEPTS. CORR. 200A, 207	540	13	B	14	1800	FCU-210		R	20/1		
20/1	E	RECEPTS. UTILITY PLATFORM	540	15	C	16	1800	FCU-211		R	20/1		
20/1	E	E.W.C. CORR. 201A	540	17	A	18	1800	FCU-212		R	20/1		
20/1	E	RECEPTS. RM 202, 203	540	19	B	20	1800	FCU-213		R	20/1		
20/1	E	RECEPTS. EXTERIOR	540	21	A	22	1800	FCU-202, 203		R	20/1		
20/1	E	LOUVERS	500	23	C	24	1176	FCU-201		R	20/1		
20/1	E	SPARE	0	25	A	26	0	SPARE		E	20/1		
20/1	E	CONTROLS	500	27	B	28	0	SPARE		E	20/1		
20/1	E	SPARE	0	29	C	30	0	SPARE		E	20/1		
20/1	E	SPARE	0	31	A	32	0	SPARE		E	20/1		
20/2	E	WATER HEATER	1664	33	B	34	0	SPARE		E	20/1		
↓	↓	↓	1664	35	C	36	0	SPARE		E	20/1		
-	E	SPACE	0	37	A	38	0	SPACE		E	-		
-	E	SPACE	0	39	B	40	0	SPACE		E	-		
-	E	SPACE	0	41	C	42	0	SPACE		E	-		
Connected Load Per Phase			PH A:	8736	PH B:	10900	PH C:	9360					
Connected VA		Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA		Ammps		
Demand Factor		1.25	1.00	1.00	1.00	1.00	1.00	1.00	28996		80.5		
Demand VA		0	22556	0	5940	0	0	500	28996		80.5		

PANEL MDP-2		VOLTAGE:	208/120	3 PH 4W	A/C RATING:		EXISTING	REMARKS:	
FEEDER AMP:		800	MOUNTING:		MOUNTING:		EXISTING	REMARKS:	
LUGS:			FEED:		ENCLOSURE:		NEMA 1	SQUARE D H-ONE	
BKR	NOTE	LOAD DESCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD DESCRIPTION	NOTE
100/2	E	PANEL BR	8200	1	A	2	13440	PANEL A (AREA 3A)	E 200/3
↓	↓	↓	8420	3	B	4	10500	↓	↓
225/3	E	PANEL C (AREA 3A)	2964	5	A	6	10380	↓	↓
↓	↓	↓	2226	7	B	8	3787	PANEL D (AREA 3A)	E 225/3
↓	↓	↓	1326	9	A	10	4991	↓	↓
225/3	E	PANEL B (AREA 3B)	6255	11	A	12	4069	↓	↓
↓	↓	↓	5741	13	B	14	14940	PANEL X	E 225/3
↓	↓	↓	3976	15	A	16	12920	↓	↓
150/2	E	EXISTING LOAD	0	17	B	18	0	↓	↓
↓	↓	↓	0	19	A	20	0	EXISTING LOAD	E 100/3
100/2	E	CLASSROOM TRAILER	6960	21	B	22	0	↓	↓
↓	↓	↓	6960	23	A	24	0	↓	↓
-	E	SPACE	6960	25	B	26	0	SPACE	E -
-	E	SPACE	0	27	A	28	0	SPACE	E -
-	E	SPACE	0	29	B	30	0	SPACE	E -
-	E	SPACE	5817	31	A	32	3878	SPACE	E -
-	E	SPACE	5817	33	B	34	3878	SPACE	E -
-	E	SPACE	5817	35	A	36	3878	SPACE	E -
-	E	SPACE	3047	37	B	38	0	SPACE	E -
-	E	SPACE	3047	39	A	40	0	SPACE	E -
-	E	SPACE	3047	41	B	42	0	SPACE	E -
Connected Load Per Phase			PH A:	68036	PH B:	61834	PH C:	43370	
Lighting			HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA
0			38200	92181	0	31960	0	2400	8500
Demand Factor			1.25	1.00	1.00	NEC	0.00	1.00	1.00
Demand VA			47750	92181	0	20980	0	2400	8500
									171811
									476.9

PANEL D (AREA 3A)		VOLTAGE:	208/120	3 PH 4W	A/C RATING:		22K	REMARKS:	
FEEDER AMP:		225	MOUNTING:		MOUNTING:		Surface	WESTINGHOUSE PRL1	
LUGS:			FEED:		ENCLOSURE:		NEMA 1	CORR. 300	
BKR	NOTE	LOAD DESCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD DESCRIPTION	NOTE
20/1	E	SPARE	0	1	A	2	0	SPARE	E 20/1
20/1	E	SPARE	0	3	B	4	0	SPARE	E 20/1
20/1	E	SPARE	0	5	A	6	0	SPARE	E 20/1
20/1	E	RECEPTACLES RM 108	720	7	B	8	0	SPARE	E 20/1
20/1	E	RECEPTACLES RM 310 SMART BOARD	1080	9	A	10	0	SPARE	E 20/1
20/1	E	RECEPTACLES RM 309	720	11	B	12	0	SPARE	E 20/1
20/1	R	EF-308, EF-309	312	13	A	14	800	RADIATION - HALLWAY	E 20/1
20/1	R	EF-310, EF-311	312	15	B	16	2496	WELL HEATER	E 30/2
20/1	E	SPARE	0	17	A	18	2496	↓	↓
15/2	N	FCU-300	250	19	B	20	0	SPARE	E 20/1
↓	↓	↓	250	21	A	22	0	SPARE	E 70/2
70/2	E	SPARE	0	23	B	24	0	↓	↓
↓	↓	↓	0	25	A	26	0	SPACE	E -
70/2	E	SPARE	0	27	B	28	0	SPACE	E -
↓	↓	↓	0	29	A	30	0	SPACE	E -
15/2	N	FCU-308, FCU-309	853	31	B	32	0	SPACE	E -
↓	↓	↓	853	33	A	34	0	SPACE	E -
15/2	N	FCU-310, FCU-311	853	35	B	36	0	SPACE	E -
↓	↓	↓	853	37	A	38	0	SPACE	E -
-	E	SPACE	0	39	B	40	0	SPACE	E -
-	E	SPACE	0	41	A	42	0	SPACE	E -
Connected Load Per Phase			PH A:	3787	PH B:	4991	PH C:	4069	
Lighting			HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA
0			9527	0	2520	0	800	800	12847
Demand Factor			1.25	1.00	1.00	NEC	0.00	1.00	1.00
Demand VA			0	9527	0	2520	0	800	12847
									35.7

PANEL B (AREA 3B)		VOLTAGE:	208/120	3 PH 4W	A/C RATING:		22K	REMARKS:	
FEEDER AMP:		225	MOUNTING:		MOUNTING:		Surface	SQUARE D H-ONE	
LUGS:			FEED:		ENCLOSURE:		NEMA 1	CORR. 300	
BKR	NOTE	LOAD DESCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD DESCRIPTION	NOTE
xxx/1	E	SPARE	0	1	A	2	1250	LOUNGE W/H	E xxx/1
xxx/1	E	SPARE	0	3	B	4	1250	HWH ROOM 112	E xxx/1
xxx/1	E	SPARE	0	5	A	6	300	FIRE ALARM PANEL	E xxx/1
xxx/1	E	RECEPTACLES - RM 105	720	7	B	8	0	SPARE	E xxx/1
xxx/1	E	RECEPTACLES - RM 115	720	9	A	10	0	SPARE	E xxx/1
xxx/1	E	ENERGY MANAGEMENT	500	11	B	12	720	ROOM 314 COMPUTER REC	E xxx/2
xxx/1	E	RADIATION UNIT - TEACH. TOILET	800	13	A	14	0	EXISTING LOAD	E xxx/2
20/2	E	RADIATION UNIT - MEN'S RM (114)	900	15	B	16	0	↓	↓
↓	↓	↓	900	17	A	18	0	SPARE	E xxx/3
20/2	E	RADIATION UNIT - WOMEN'S RM (113)	900	19	B	20	0	↓	↓
↓	↓	↓	900	21	A	22	0	↓	↓
20/1	N	EF-301, EF-301A, EF-303	336	23	B	24	0	SPACE	E -
20/1	N	EF-313, EF-314	312	25	A	26	0	SPACE	E -
15/2	N	FCU-300A, FCU-301	448	27	B	28	0	SPACE	E 70/2
↓	↓	↓	603	31	A	30	0	↓	↓
15/2	N	FCU-302, FCU-303	603	31	B	32	0	SPACE	E -
↓	↓	↓	603	33	A	34	0	SPACE	E 20/2
15/2	N	FCU-313, FCU-314	770	35	B	36	0	↓	↓
↓	↓	↓	770	37	A	38	900	RADIATION - HALLWAY	E 30/2
-	E	SPACE	0	39	B	40	900	↓	↓
-	E	SPACE	0	41	A	42	0	SPACE	E -
Connected Load Per Phase			PH A:	6255	PH B:	5741	PH C:	3976	
Lighting			HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA
0			8411	0	2160	0	0	5400	15971
Demand Factor			1.25	1.00	1.00	NEC	0.00	1.00	1.00
Demand VA			0	8411	0	2160	0	5400	15971
									44.3

PANEL X		VOLTAGE:	208/120	1 PH 3W	A/C RATING:		22K	REMARKS:	
FEEDER AMP:		225	MOUNTING:		MOUNTING:		Surface	WESTINGHOUSE PRL1	
LUGS:			FEED:		ENCLOSURE:		NEMA 1		
BKR	NOTE	LOAD DESCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD DESCRIPTION	NOTE
20/1	E	LIGHTS 5-116	1200	1	A	2	1200	LIGHTS 5-118, 5-119	E 20/1
20/1	E	LIGHTS 5-116	1200	3	B	4	1200	LIGHTS 5-115	E 20/1
20/1	E	LIGHTS 5-113, 5-114	1200	5	A	6	1000	EMERGENCY LIGHTS	E 20/1
20/1	E	EXHAUST FAN - BATHROOMS	500	7	B	8	1200	LIGHTS 5-120, 5-122	E 20/1
20/1	E	TELEPHONE CKT.	500	9	A	10	900	RECEPTS. 5-115, 5-116	E 20/1
20/1	E	RECEPTS. 5-118, 5-119	720	11	B	12	540	RECEPTS. 5-117	E 20/1
20/1	E	WEC	360	13	A	14	900	RECEPTS. 5-120, 5-122	E 20/1
20/1	E	EWG	360	15	B	16	540	RECEPTS. 5-104	E 20/1
20/1	N	UH-317 (ELEC 317)	120	17	A	18	540	RECEPTS. 5-104	E 20/1
-	E	SPACE	0	19	B	20	360	RECEPTS. 5-104	E 20/1
20/1	E	RECEPTS. LAB CASEWORK 5-105	720	21	A	22	540	RECEPTS. 5-104	E 20/1
20/1	E	RECEPTS. 5-104	540	23	B	24	5760	AC UNIT 5-117	E 60/2
-	E	SPACE	0	25	A	26	5760	↓	↓
-	E	SPACE	0	27	B	28	0	SPACE	E 20/1
-	E	SPACE	0	29	A	30	0	SPACE	E 20/1
-	E	SPACE	0	31	B	32	0	SPACE	E 20/1
-	E	SPACE	0	33	A	34	0	SPACE	E -
-	E	SPACE	0	35	B	36	0	SPACE	E -
-	E	SPACE	0	37	A	38	0	SPACE	E -
-	E	SPACE	0	39	B	40	0	SPACE	E -
-	E	SPACE	0	41	A	42	0	SPACE	E -
Connected Load Per Phase			PH A:	14940	PH B:	12920			
Lighting			HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA
8200			120	0	19540	0	0	0	27860
Demand Factor			1.25	1.00	1.00	NEC	0.00	1.00	1.00
Demand VA			10250	120	0	14770	0	0	25140
									133.9

PANEL		C (AREA 3A)		VOLTAGE:		208/120		3 PH 4W		A/C RATING:		22K		REMARKS:			
				FEEDER AMP:		225		MAINS:		MOUNTING:		Surface		SQUARE D HOOD			
				LUGS:				FEED:		ENCLOSURE:		NEMA 1		CORR. 300			
BKR	NOTE	LOAD DESCRIPTION		VA	CKT	PHASE	CKT	VA	LOAD DESCRIPTION		NOTE	BKR					
20/1	E	SPARE		0	1	A	2	312	EF-307 & EF-312		R	20/1					
20/1	E	SPARE		0	3		B	4	0	SPARE		E	20/1				
20/1	E	SPARE		0	5			A	6	0	SPARE		E	20/1			
20/1	E	SMART BOARD RM 312		900	7	B			8	0	SPARE		E	20/1			
20/1	E	RECEPTACLES RM 107		900	9		A		10	0	SPARE		E	20/1			
20/1	E	RECEPTACLES RM 307		900	11			B	12	0	SPARE		E	20/1			
20/1	E	SPARE		0	13	A			14	900	RADIATION UNIT - HALLWAY		E	20/2			
20/1	E	SPARE		0	15		B		16	900	↓		↓				
70/2	E	SPARE		0	17			A	18	0	SPARE		E	20/1			
↓	↓	↓		0	19	B			20	0	SPARE		E	70/2			
70/2	E	SPARE		0	21		A		22	0	↓		↓				
↓	↓	↓		0	23			B	24	0	SPARE		E	70/2			
15/2	N	FCU-307		426	25	A			26	0	↓		↓				
↓	↓	↓		426	27		B		28	0	SPACE		E	-			
15/2	N	FCU-312		426	29			A	30	0	SPACE		E	-			
↓	↓	↓		426	31	B			32	0	SPACE		E	-			
-	E	SPACE		0	33		A		34	0	SPACE		E	-			
-	E	SPACE		0	35			B	36	0	SPACE		E	-			
-	E	SPACE		0	37	A			38	0	SPACE		E	-			
-	E	SPACE		0	39		B		40	0	SPACE		E	-			
-	E	SPACE		0	41			A	42	0	SPACE		E	-			
Connected Load Per Phase PH A:				2964		PH B:			2226		PH C:		1326				
Lighting				HVAC		Motors			Recept.		Refrig		Kitchen		Misc		Total VA
0				2016		0		2700		0		1800		0		6516	
Demand Factor				1.25		1.00		1.00		NEC		0.00		1.00		18.1	
Demand VA				0		2016		0		2700		0		1800		6516	