

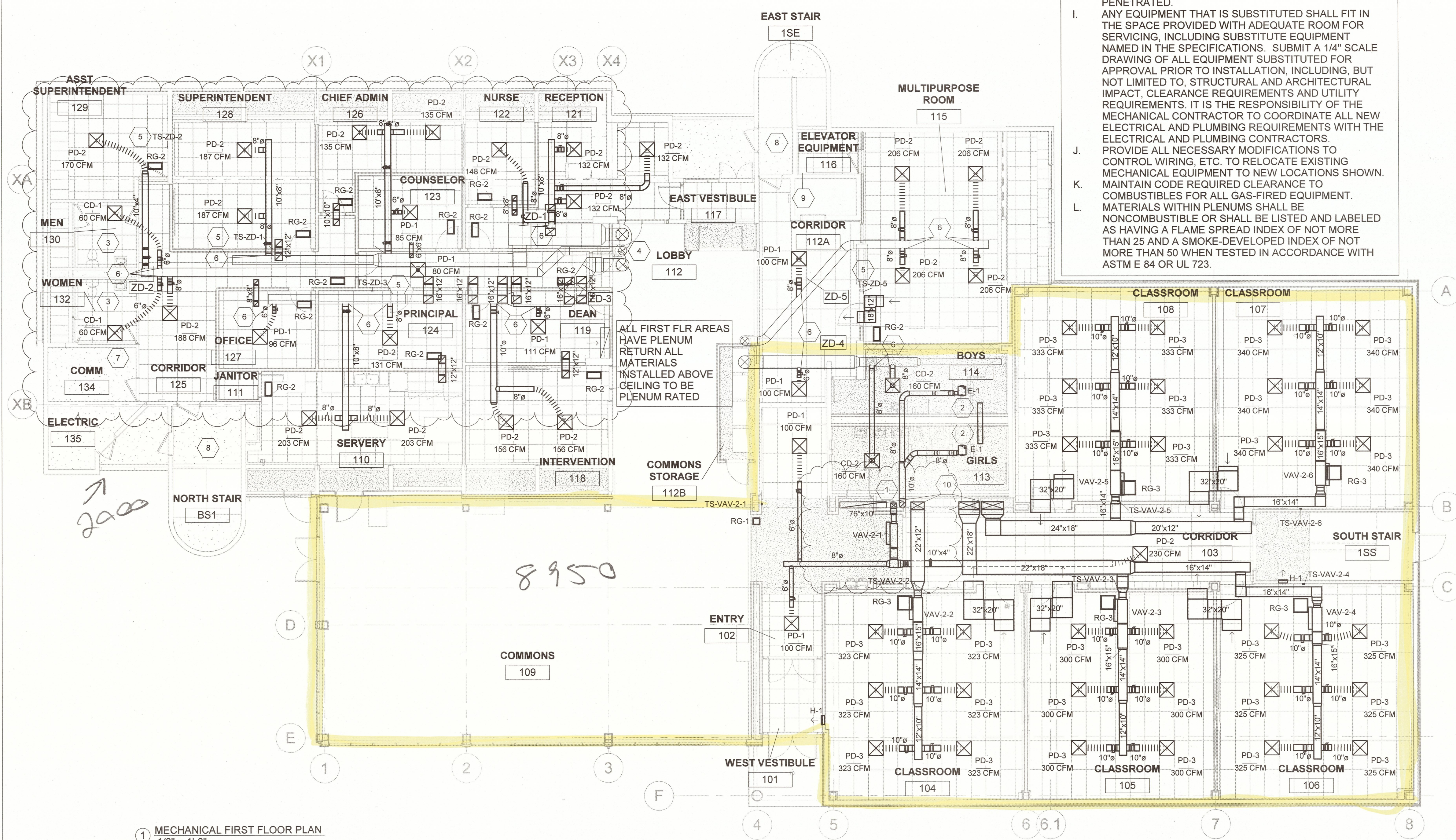
Air Terminal Schedule					
TAG	Description	Inlet Size	Manufacturer	Model	Comments
CD-1	High Performance Square Cone Diffuser	6"ø	Titus	TMS-04-24x24-3-26	
CD-2	High Performance Square Cone Diffuser	8"ø	Titus	TMS-04-24x24-3-26	
CND-1	Concentric Supply / Return Diffusers	18"x28"-18"x28"	Titus	CSR	
EG-1	Return Grille with 35 Degree Deflection	14"x14"	Titus	350RS	
PD-1	Architectural Square Plaque Diffuser	6"ø	Titus	OMNI-04-3-24x24-26	
PD-2	Architectural Square Plaque Diffuser	8"ø	Titus	OMNI-04-3-24x24-26	
PD-3	Architectural Square Plaque Diffuser	10"ø	Titus	OMNI-04-3-24x24-26	
RG-1	Return Grille with 35 Degree Deflection	10"x10"	Titus	350FS	
RG-2	Return Grille with 35 Degree Deflection	22"x10"	Titus	350FS	
RG-3	Return Grille with 35 Degree Deflection	22"x22"	Titus	350FS	

Keynote Legend	
Key Value	Keynote Text
1	DUCT EXHAUST UP THROUGH ROOF WITH RAIN-PROOF CAP.
2	PROVIDE EXHAUST FAN. FAN TO BE CONTROLLED BY TIME CLOCK.
3	EXISTING EXHAUST FAN TO REMAIN IN BATHROOM.
4	EXISTING RTU AND DUCTMAINS TO REMAIN.
5	EXISTING ZONE DAMPER THERMOSTATS TO BE MOVED TO LOCATION SHOWN ON DRAWING
6	CONNECT NEW DUCTWORK TO EXISTING DUCT MAINS
7	EXISTING MINI-SPLIT SYSTEM TO STAY IN COMM ROOM.
8	EXISTING HEATERS TO REMAIN IN EXISTING STAIRWELLS.
9	ELEVATOR ROOM AND EQUIPMENT EXISTING TO REMAIN.
10	DUCTWORK TO GO UP THROUGH THE WALL CAVITY AND CONNECT TO DUCT MAIN ON SECOND FLOOR.

- General Legend**
- A. FOR FULL SCHEDULES, SPECIFICATIONS, AND COMPLETE LISTING SEE DETAIL SHEETS.
  - B. COORDINATE ROUTING OF ALL WORK WITH OTHER TRADES. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER CONNECTIONS TO ALL MECHANICAL EQUIPMENT.
  - C. INSTALL ALL EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. MAINTAIN ALL CODE RECOMMENDED CLEARANCES FOR ACCESS AND MAINTENANCE.
  - D. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS, AND FINAL CEILING DIFFUSER LOCATIONS.
  - E. MAINTAIN ALL CODE REQUIRED SERVICE CLEARANCES. FOLLOW CLEARANCE TO COMBUSTIBLE DISTANCE PER MANUFACTURER'S INSTRUCTIONS.
  - F. PROVIDE BACKDRAFT DAMPERS FOR ALL EXHAUST SYSTEMS AND EITHER LOUVER, BRICK VENT, OR CAPS AT ALL EXTERIOR BUILDING PENETRATIONS.
  - G. ROUTE ALL AIR CONDITIONER CONDENSATE TO NEARBY FLOOR DRAIN. PROVIDE MINIMUM SLOPE OF 1/8" PER FOOT. SIZE CONDENSATE PER SECTION 307.2.2 OF THE OHIO MECHANICAL CODE.
  - H. PROVIDE AN APPROVED THROUGH PENETRATION FIRESTOP FOR ALL PIPING INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479. FIRESTOP SHALL HAVE A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCHES OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL OR FLOOR PENETRATED.
  - I. ANY EQUIPMENT THAT IS SUBSTITUTED SHALL FIT IN THE SPACE PROVIDED WITH ADEQUATE ROOM FOR SERVICING, INCLUDING SUBSTITUTE EQUIPMENT NAMED IN THE SPECIFICATIONS. SUBMIT A 1/4" SCALE DRAWING OF ALL EQUIPMENT SUBSTITUTED FOR APPROVAL PRIOR TO INSTALLATION, INCLUDING, BUT NOT LIMITED TO, STRUCTURAL AND ARCHITECTURAL IMPACT, CLEARANCE REQUIREMENTS AND UTILITY REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE ALL NEW ELECTRICAL AND PLUMBING REQUIREMENTS WITH THE ELECTRICAL AND PLUMBING CONTRACTORS. PROVIDE ALL NECESSARY MODIFICATIONS TO CONTROL WIRING, ETC. TO RELOCATE EXISTING MECHANICAL EQUIPMENT TO NEW LOCATIONS SHOWN. MAINTAIN CODE REQUIRED CLEARANCE TO COMBUSTIBLES FOR ALL GAS-FIRED EQUIPMENT. MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.
  - J.
  - K.
  - L.

Mechanical Scope of Work	
MODIFY EXISTING ZONE DAMPER SYSTEM TO HANDLE NEW FLOOR LAYOUT IN EXISTING STRUCTURE. FOR ADDITION, PROVIDE RTU UNIT WITH INDOOR VAV BOXES WITH ELECTRIC REHEAT.	
Codes Referenced	
-	2017 OHIO MECHANICAL CODE (2015 IMC)
-	2017 OHIO BUILDING CODE (2018 KBC (2015 IBC))
-	ASHRAE 90.1-2010 (2012 IECC)
HVAC Design Conditions Commercial	
<b>COOLING</b>	<b>HEATING</b>
OUTDOOR: 93 DB / 75 WB	OUTDOOR: 0 DB
INDOOR: 72	INDOOR: 72

SYMBOLS LEGEND - HVAC	
⊠	CEILING DIFFUSER
→	SIDE WALL GRILL
←	RETURN WALL GRILL
↔	AIR FLOW DIRECTION
14x10	DUCTWORK
14x10	LINED DUCTWORK
⊠	TYPICAL SUPPLY DUCT DN
⊠	TYPICAL RETURN DUCT DN
⊠	TYPICAL EXHAUST DUCT
⊠	TURNING VANES
⊠	FLEXIBLE DUCT, 8'-0" LONG MAX.
⊠	TYPICAL ROUND DUCT DN
⊠	ROUND DUCT UP
⊠	DUCT SMOKE DETECTOR
FD	1.5 HR FIRE DAMPER
MD	MVD MANUAL VOLUME DAMPER
⊠	DROPPED CEILING/SOFFIT



1 MECHANICAL FIRST FLOOR PLAN  
1/8" = 1'-0"

**Cincinnati College Preparatory Academy**  
**Building Addition and Renovation**  
 1413 Linn Street  
 Cincinnati, Ohio 45214



TEAMWORK • COLLABORATION  
 SHARED SUCCESS  
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 MEP Consulting Services, Inc. in OH  
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DESIGNED COMM. NO.  
 ZWS 9711  
 DRAWN DATE  
 RTT 02/23/23  
 CHECKED PROJ. MGR.  
 SSS JACK RAHN

**MECHANICAL FIRST FLOOR PLAN**

DRAWING NUMBER ISSUE  
**M100 3**



NO. DATE DESCRIPTION PERMIT  
 1 2-23-23 23 PERMIT REV. 1  
 2 05-08-23 23 PERMIT REV. 2  
 3 11-01-23 23 ENGINEERING CHANGE #1

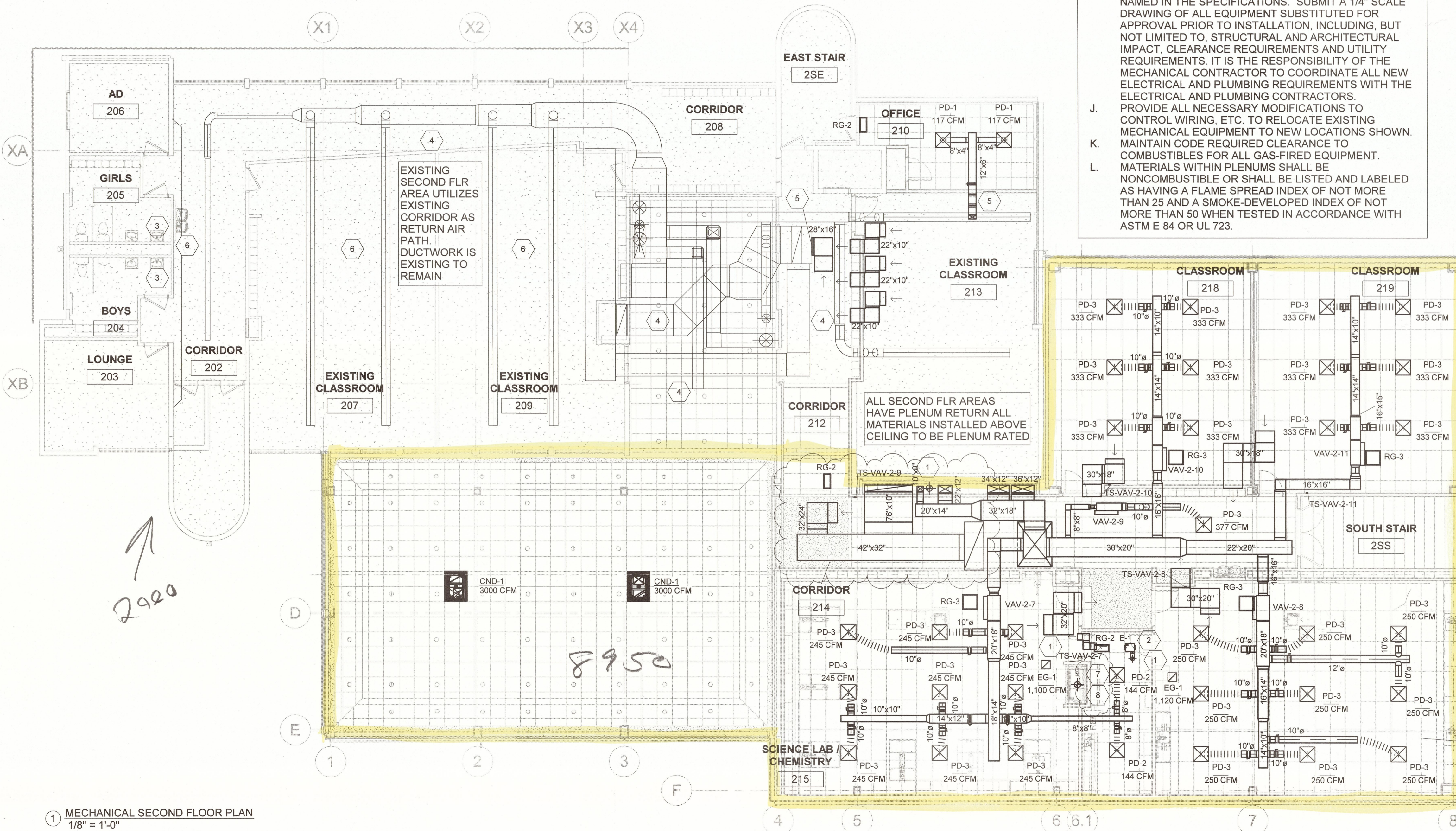
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5	CONNECT NEW DUCTWORK TO EXISTING DUCT MAINS
6	EXISTING HVAC EQUIPMENT, DUCTWORK AND ACCESSORIES TO REMAIN IN EXISTING SECOND FLOOR ROOMS.
7	NEW EXHAUST HOOD INSERT TO BE PROVIDED AND INSTALLED BY OTHERS IN SCIENCE LAB-CHEMISTRY 215 IN ADDITION TO GENERAL ROOM EXHAUST. REFER TO HOOD MANUFACTURER INSTALLATION INSTRUCTIONS.
8	SCIENCE LAB-CHEMISTRY 215 PROVIDED WITH CODE REQUIRED GENERAL EXHAUST AT A RATE OF 1,100CFM AND HAS A SEPARATE LAB HOOD CAPABLE OF EXHAUSTING 1,100 CFM FOR A MAXIMUM TOTAL ROOM EXHAUST RATE OF 2,020 CFM. MAKE-UP AIR FOR THE LAB HOOD EXHAUST AND GENERAL EXHAUST PROVIDED BY RTU-2 USING VAV-2-7 (736 CFM) AND RETURN AIR PLENUM (1,464 CFM). REFER TO BUILDING AIR SUMMARY FOR BALANCE SUMMARY FOR SECOND FLOOR CLASSROOM ADDITION.

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	RETURN WALL GRILL
	AIR FLOW DIRECTION
	DUCTWORK
	LINED DUCTWORK
	TYPICAL SUPPLY DUCT DN
	TYPICAL RETURN DUCT DN
	TYPICAL EXHAUST DUCT
	TURNING VANES
	FLEXIBLE DUCT, 8'-0" LONG MAX.
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	ROUND DUCT UP
	DUCT SMOKE DETECTOR
	1.5 HR FIRE DAMPER
	MVD MANUAL VOLUME DAMPER
	DROPPED CEILING/SOFFIT



1 MECHANICAL SECOND FLOOR PLAN  
1/8" = 1'-0"

**Cincinnati College Preparatory Academy**  
**Building Addition and Renovation**  
 1413 Linn Street  
 Cincinnati, Ohio 45214



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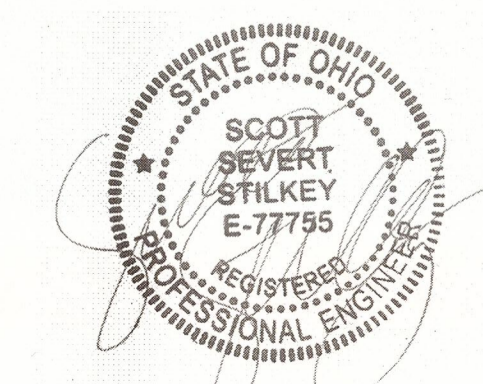
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DESIGNED COMM. NO.  
 ZWS 9711  
 DRAWN DATE  
 RTT 02/23/23  
 CHECKED PROJ. MGR.  
 SSS JACK RAHN

**MECHANICAL SECOND FLOOR PLAN**

DRAWING NUMBER ISSUE  
**M101 3**



NO.	DATE	DESCRIPTION
1	2-23-23	PERMIT
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