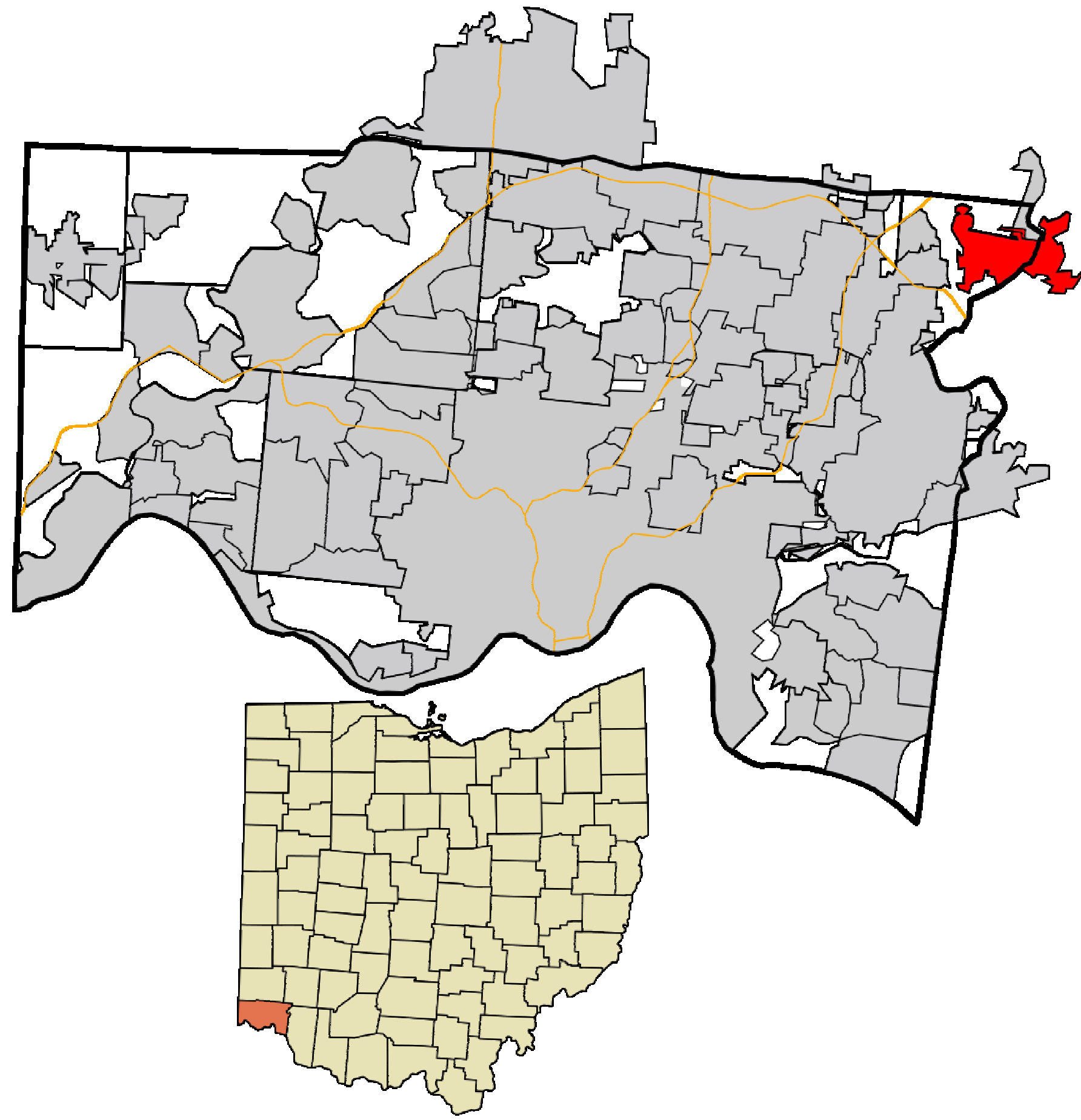
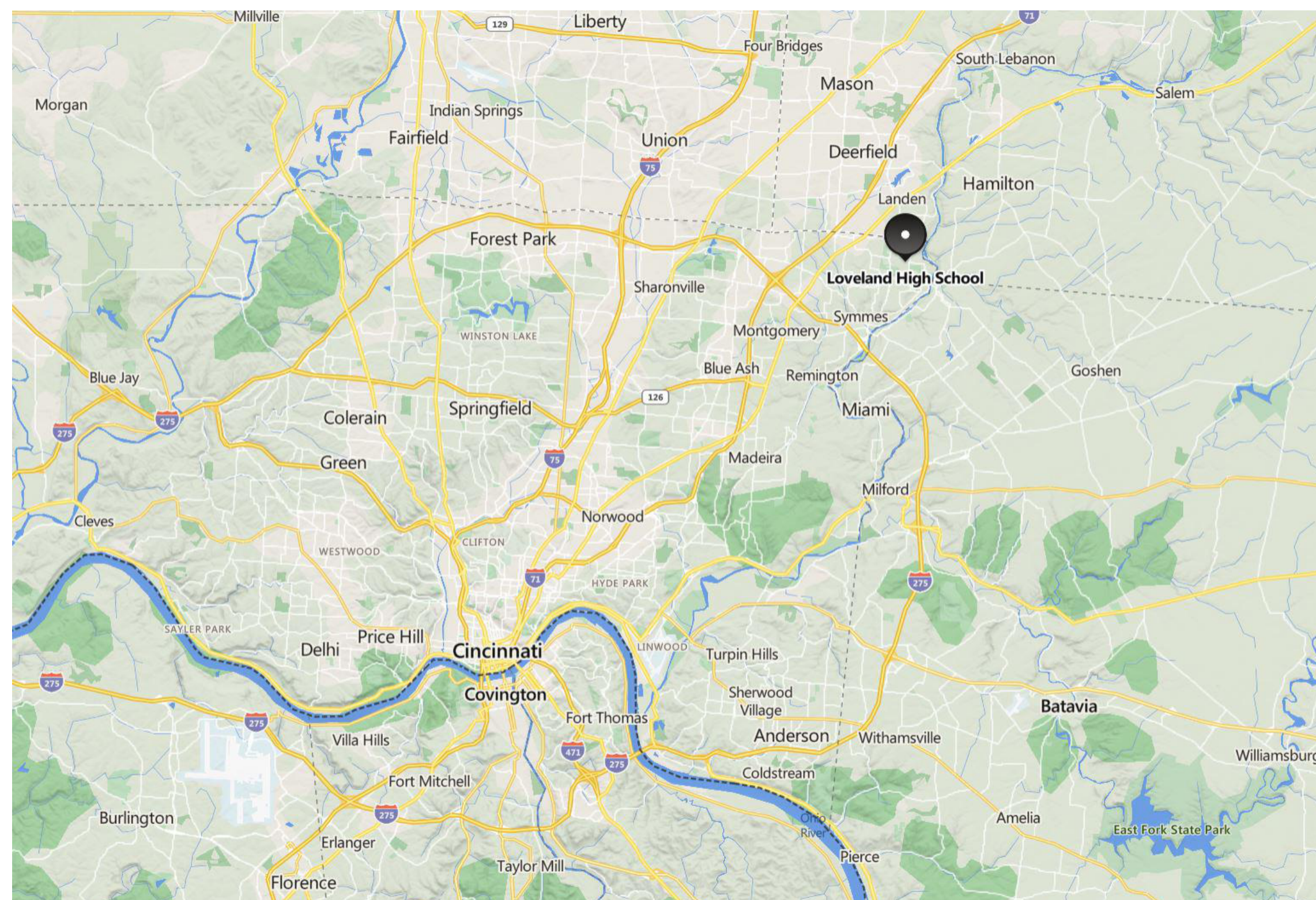


PROJECT LOCATION

VICINITY MAP: STATE



VICINITY MAP: CITY



GENERAL INFORMATION

GOVERNING REGULATIONS

- OHIO BUILDING CODE2015
- INTERNATIONAL MECHANICAL CODE.....2015
- INTERNATIONAL ENERGY CONSERVATION CODE.....2012
- NATIONAL ELECTRICAL CODE (NEC)NFPA 702017

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE UPGRADE OF THE EXISTING HVAC CONTROLS THROUGHOUT THE ENTIRE SCHOOL. THE PROJECT ALSO INCLUDES THE ADDITION OF INDOOR AIR QUALITY IMPROVEMENTS THROUGHOUT THAT WILL INCREASE INDOOR AIR QUALITY IN THE CLASSROOMS AND REDUCE AND MONITOR OVERALL VOCs THROUGHOUT THE BUILDING.



Loveland
CITY SCHOOL DISTRICT

LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE

LOVELAND CITY SCHOOL DISTRICT
1 Tiger Trail, Loveland, OH 45140

BID DOCUMENTS

02/21/2023
PURSUANT TO R.C. 153.12, THE ESTIMATED COST OF THIS PROJECT IS \$1,100,000.

LOVELAND PROJECT MANAGER : JOHN AMES
CMTA Project Manager: KYLE WAYMEYER
(kwaymeyer@cmta.com)



BUILDING SCIENCE LEADERSHIP



BID DOCUMENTS

LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE

LOVELAND CITY SCHOOL DISTRICT

1 Tiger Trail, Loveland, OH 45140

COVER SHEET

CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS

M000

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GENERAL NOTES - MECHANICAL

- 1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE GENERAL AND SPECIAL CONDITIONS, GENERAL CONDITIONS - MECHANICAL, OF THE PROJECT SPECIFICATIONS AND TO ALL OTHER CONTRACT DOCUMENTS AS THEY APPLY TO THIS BRANCH OF WORK. ATTENTION IS ALSO DIRECTED TO ALL OTHER SECTIONS OF THE CONTRACT DOCUMENTS WHICH AFFECTS THE WORK AND WHICH ARE HEREBY MADE A PART OF THE WORK SPECIFIED.

GENERAL NOTES - DEMOLITION

- A. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR AREAS IN WHICH THE CEILING IS REMAINING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE EXISTING CEILING AS REQUIRED AND REINSTALLATION. TEMPORARILY SUPPORT LIGHTS, DIFFUSERS, CEILING ETC. REPLACE BROKEN CEILING TILES WITH NEW AT NO ADDITIONAL COST TO OWNER. FIELD VERIFY EXACT REQUIREMENTS.

ABBREVIATIONS

Table with 2 columns: Abbreviation (e.g., ADJ, AFF, AFR) and Description (e.g., ADJUSTABLE, ABOVE FINISHED FLOOR, ABOVE FINISHED ROOF).

ABBREVIATIONS (CONTINUED)

Table with 2 columns: Abbreviation (e.g., NO, NTS, OD) and Description (e.g., NORMALLY OPEN OR NUMBER, NOT TO SCALE, OUTSIDE DI (-AMETER, -MENSION)).

GENERAL SYMBOLS

Table with 2 columns: Symbol (e.g., #, triangle, XXXX) and Description (e.g., TAGGED NOTE DESIGNATOR, REVISION TRIANGLE, ROOM TAG).

PHASING NOTES

- A. THIS PROJECT INTERFACES EXTENSIVELY WITH EXISTING BUILDING SERVICES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND PHASE ALL TIE-INS AND INTERRUPTIONS OF EXISTING SERVICES TO MINIMIZE OR ELIMINATE DOWNTIME.

HAZARDOUS MATERIALS NOTES

- A. THE CONTRACTOR IT IS HEREBY ADVISED THAT IS POSSIBLE THAT ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS ARE OR WERE PRESENT IN THIS BUILDING(S). ANY WORKER, OCCUPANT, VISITOR, ETC., WHO ENCOUNTERS ANY MATERIAL OF WHOSE CONTENT THEY ARE NOT CERTAIN SHALL PROMPTLY REPORT THE EXISTENCE AND LOCATION OF THAT MATERIAL TO THE OWNER.

HVAC LEGEND

Table with 2 columns: Symbol (e.g., square with X, circle with X) and Description (e.g., SUPPLY AIR DIFFUSER, RETURN AIR GRILLE, EXHAUST AIR DIFFUSER).

MECHANICAL PIPING LEGEND

Table with 2 columns: Symbol (e.g., circle with arrow, circle with X) and Description (e.g., PIPE ELBOW TURNING UP, PIPE ELBOW TURNING DOWN, PIPE TEE).

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT

Table with 2 columns: Field (CLIENT/CMTA JOB #, DATE, DRAWN, CHECKED) and Value (0LHS22, 02/21/2023, KTW, BKR).

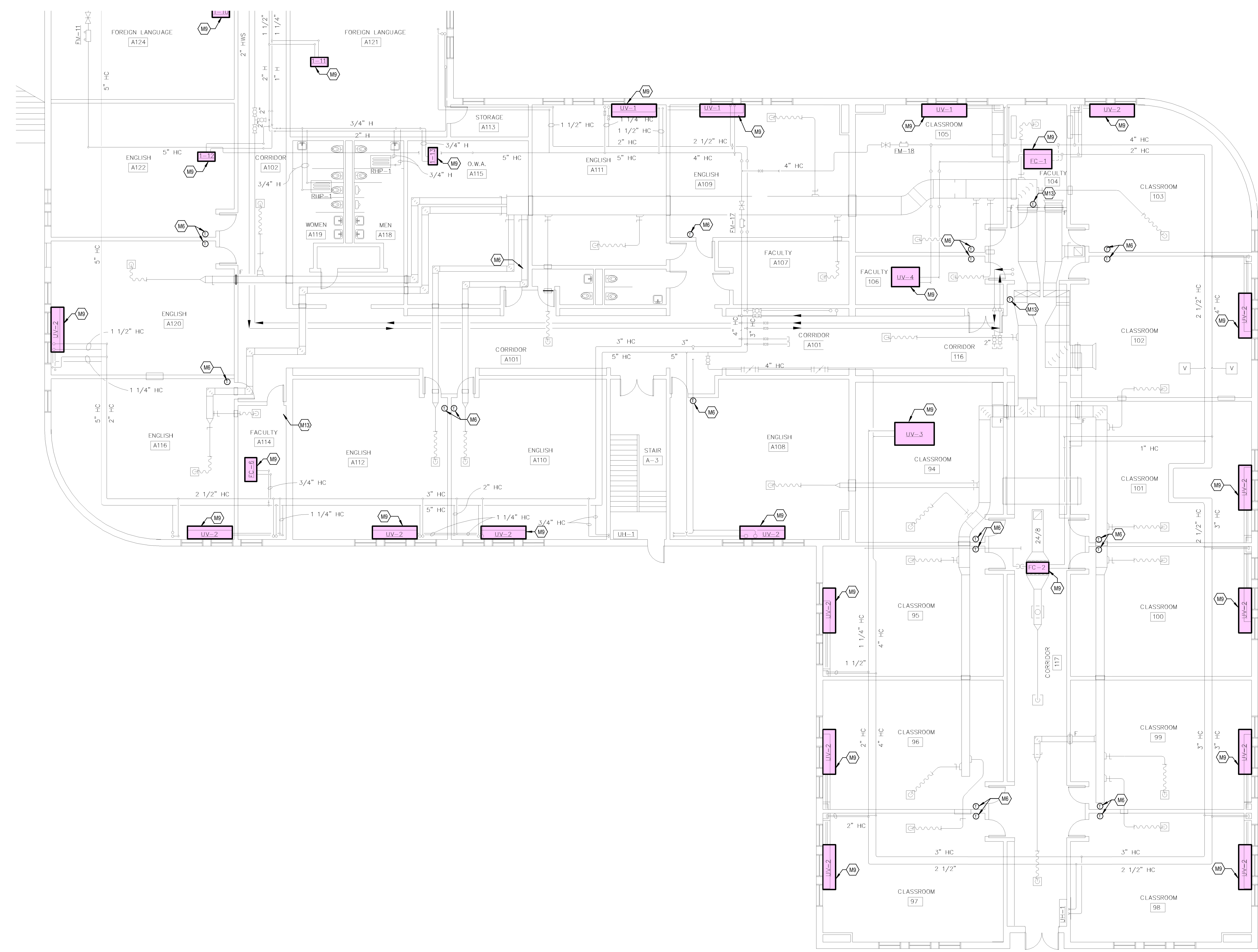
Table with 2 columns: REVISIONS (Header and empty rows).

TAGGED NOTES	
M6	DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
M9	PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M13	DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.

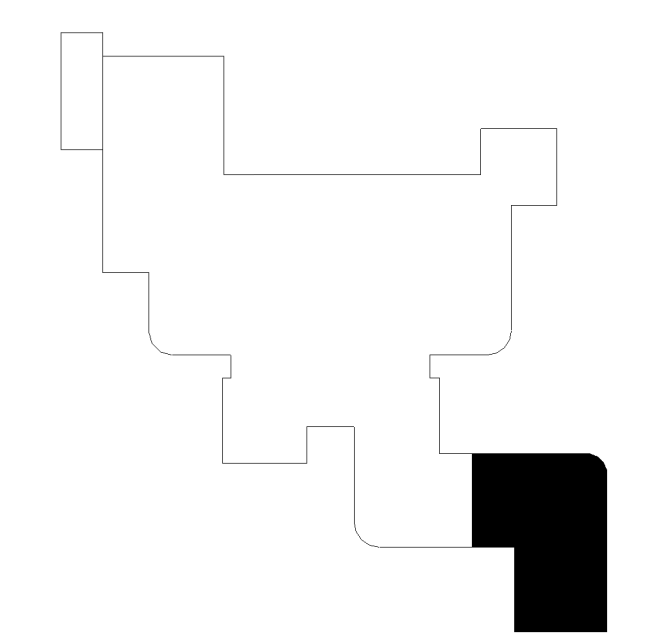


BID DOCUMENTS

LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE
 LOVELAND CITY SCHOOL DISTRICT
 1 Tiger Trail, Loveland, OH 45140
 LOWER LEVEL TEMPERATURE CONTROLS PLAN A



KEY PLAN



1 M100 LOWER LEVEL TEMPERATURE CONTROLS PLAN A
 1/8" = 1'-0"

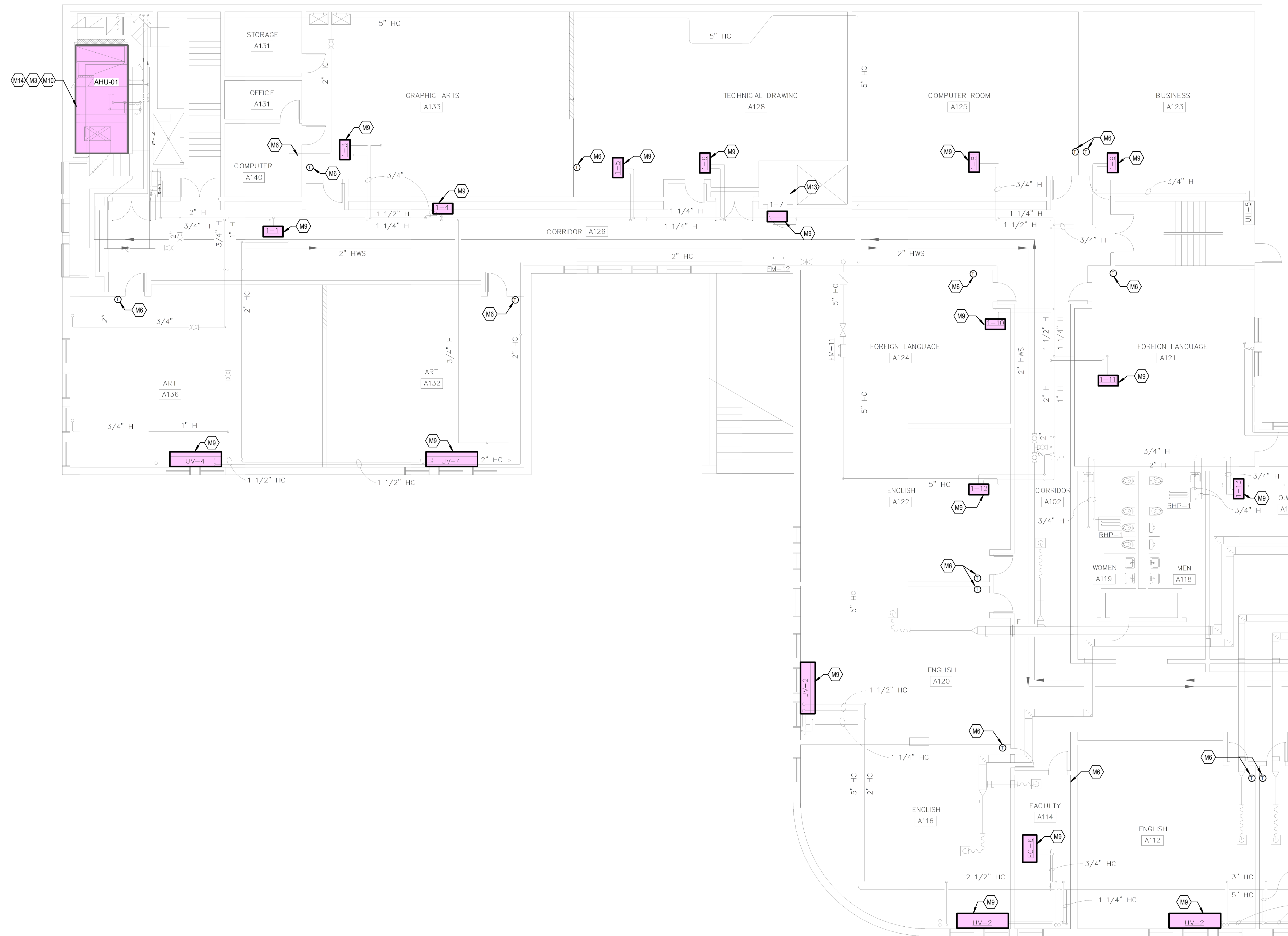
CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS	

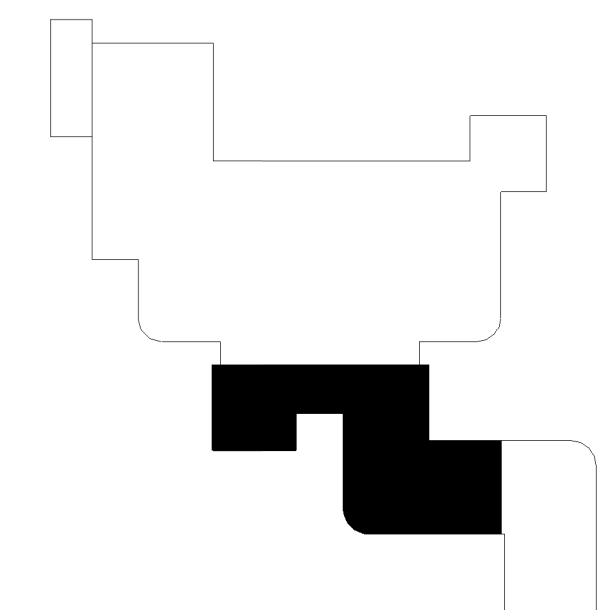
M100

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TAGGED NOTES	
M3	PROVIDE GPS-MOD NEEDLEPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, UNIT TO BE INSTALLED AT FACE OF CHILLED WATER COIL. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
M6	DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
M9	PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M10	PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALONTRIUM JACE) FOR AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M13	DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
M14	PROVIDE NEW CO2 SENSOR IN THE MAIN RETURN DUCT AND MODULATE TO OA DAMPER TO MAINTAIN A CO2 CONCENTRATION BELOW 1000 PPM.

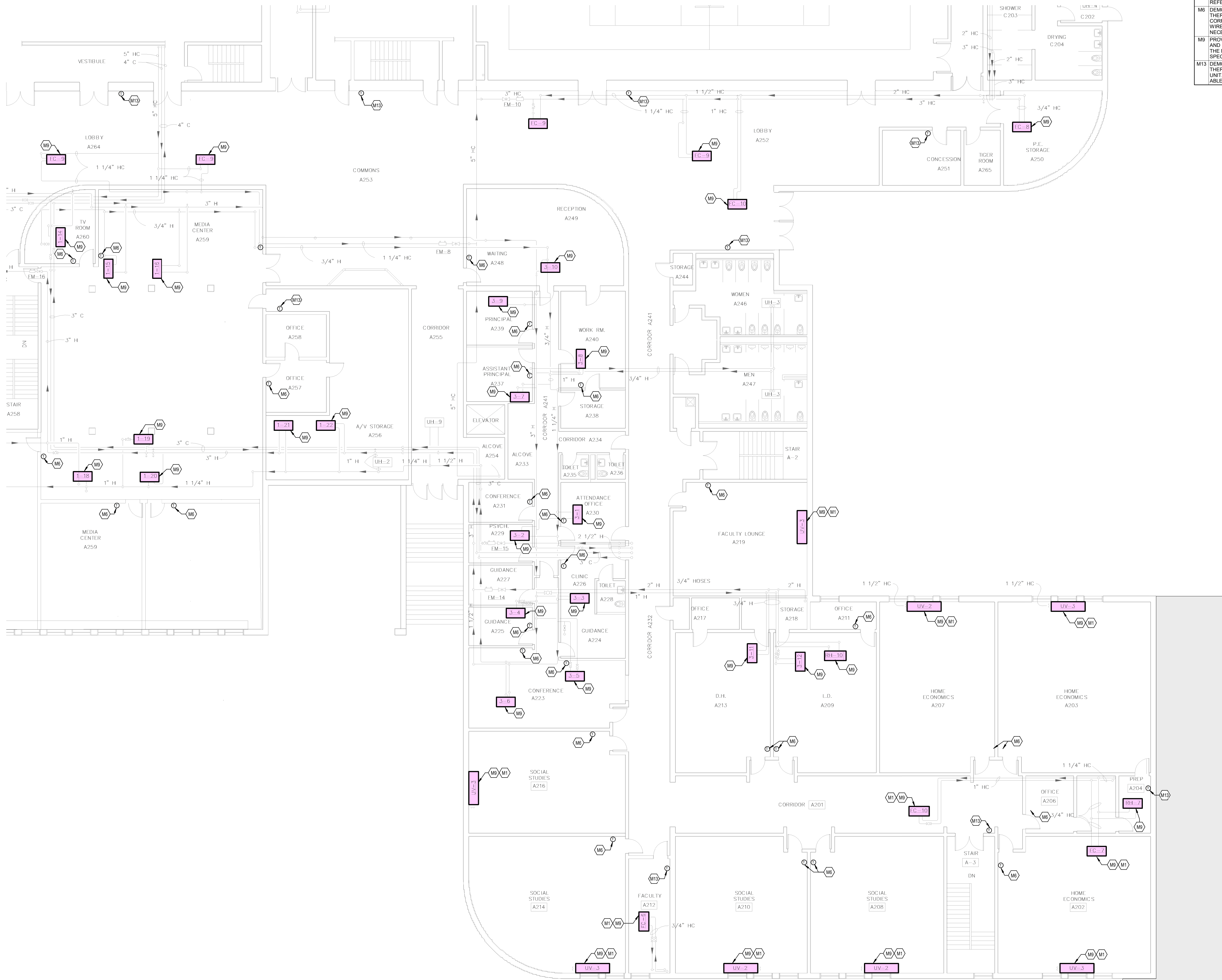


KEY PLAN



CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BRK

REVISIONS	



- TAGGED NOTES**
- M1 PROVIDE GPS-FC48-AC NEEDPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, CAPABLE OF HANDLING UP TO 4,800 CFM FOR IN HVAC UNIT. UNIT TO BE INSTALLED AT FAN INLET. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
 - M6 DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M9 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
 - M13 DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.



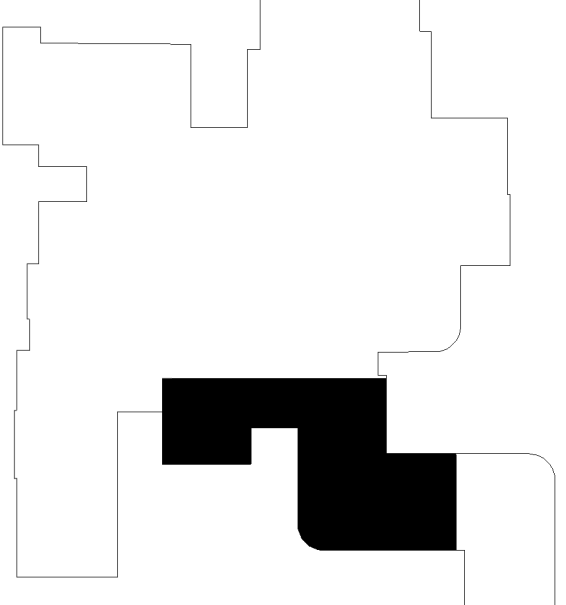
BID DOCUMENTS

LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE
 LOVELAND CITY SCHOOL DISTRICT
 1 Tiger Trail, Loveland, OH 45140
 1ST FLOOR TEMPERATURE CONTROLS PLAN A

CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	Author
CHECKED:	Checker

REVISIONS

KEY PLAN



1ST FLOOR TEMPERATURE CONTROLS PLAN A
 1/8" = 1'-0"

M201

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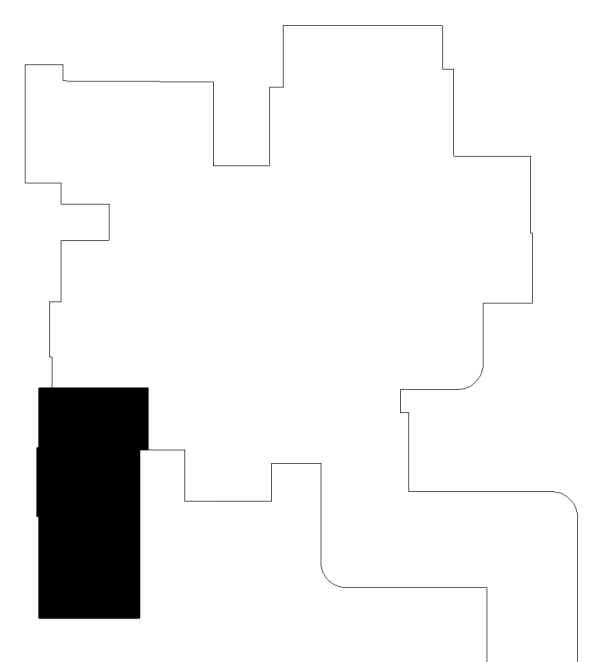
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1ST FLOOR TEMPERATURE CONTROLS PLAN B
 1/8" = 1'-0"

- TAGGED NOTES**
- M1 PROVIDE GPS-FC48-AC NEEDPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, CAPABLE OF HANDLING UP TO 4,800 CFM FOR IN HVAC UNIT. UNIT TO BE INSTALLED AT FAN INLET. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
 - M4 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE INTO THE NEW BAS.
 - M5 DEMOLISH EXISTING SENSOR. INSTALL NEW VOC SENSOR TO CONTROL THE FAN AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M6 DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M9 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
 - M13 DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.

KEY PLAN



BID DOCUMENTS

LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE
 LOVELAND CITY SCHOOL DISTRICT
 1 Tiger Trail, Loveland, OH 45140
 1ST FLOOR TEMPERATURE CONTROLS PLAN B

CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS

M202

- TAGGED NOTES**
- M1 PROVIDE GPS-FC48-AC NEEDPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, CAPABLE OF HANDLING UP TO 4,800 CFM FOR IN HVAC UNIT. UNIT TO BE INSTALLED AT FAN INLET. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
 - M2 PROVIDE RELAY FOR EXHAUST FAN FOR ENABLE/DISABLE AND TIE TO BAS TIME SCHEDULE.
 - M6 DEMOLISH EXISTING THERMOSTAT SENSOR, INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M9 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
 - M13 DEMOLISH EXISTING THERMOSTAT SENSOR, INSTALL NEW THERMOSTAT AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.



BID DOCUMENTS

LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE

LOVELAND CITY SCHOOL DISTRICT

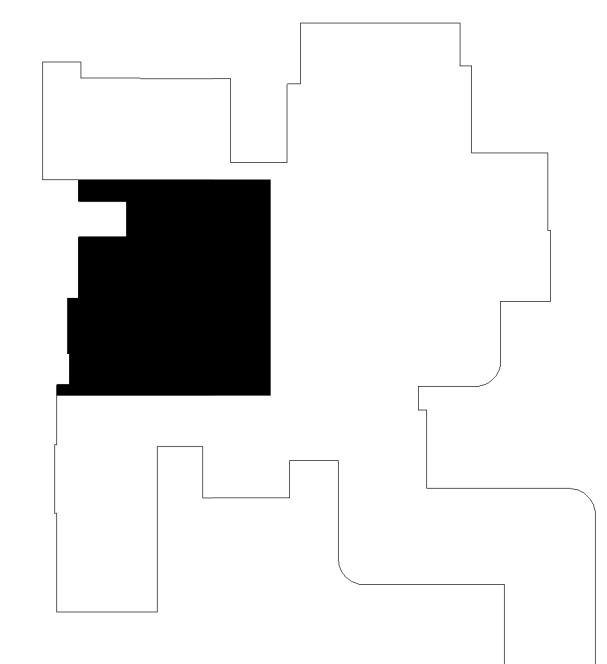
1 Tiger Trail, Loveland, OH 45140

1ST FLOOR TEMPERATURE CONTROLS PLAN C



1 M203 1/8" = 1'-0" 1ST FLOOR TEMPERATURE CONTROLS PLAN C

KEY PLAN



CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS

M203

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TAGGED NOTES	
M1	PROVIDE GPS-FC48-AC NEEDPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, CAPABLE OF HANDLING UP TO 4,800 CFM FOR IN HVAC UNIT. UNIT TO BE INSTALLED AT FAN INLET. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
M6	DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
M9	PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M13	DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.



BID DOCUMENTS

LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE

LOVELAND CITY SCHOOL DISTRICT

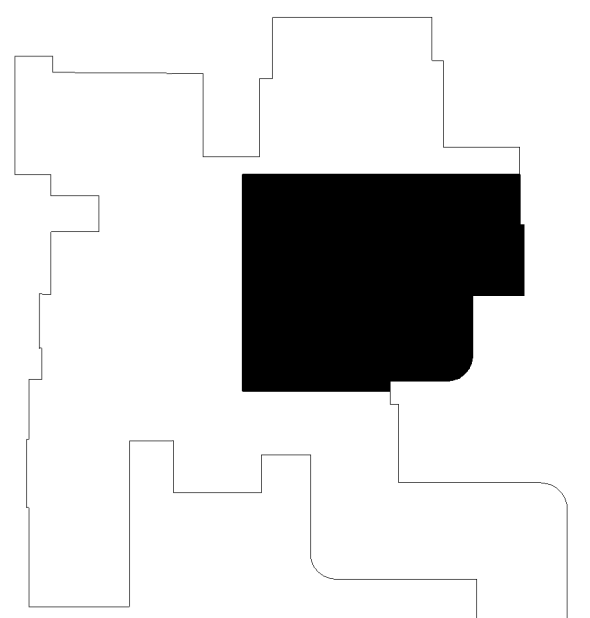
1 Tiger Trail, Loveland, OH 45140

1ST FLOOR TEMPERATURE CONTROLS PLAN D



1 M204 1ST FLOOR TEMPERATURE CONTROLS PLAN D
1/8" = 1'-0"

KEY PLAN



CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS	

M204

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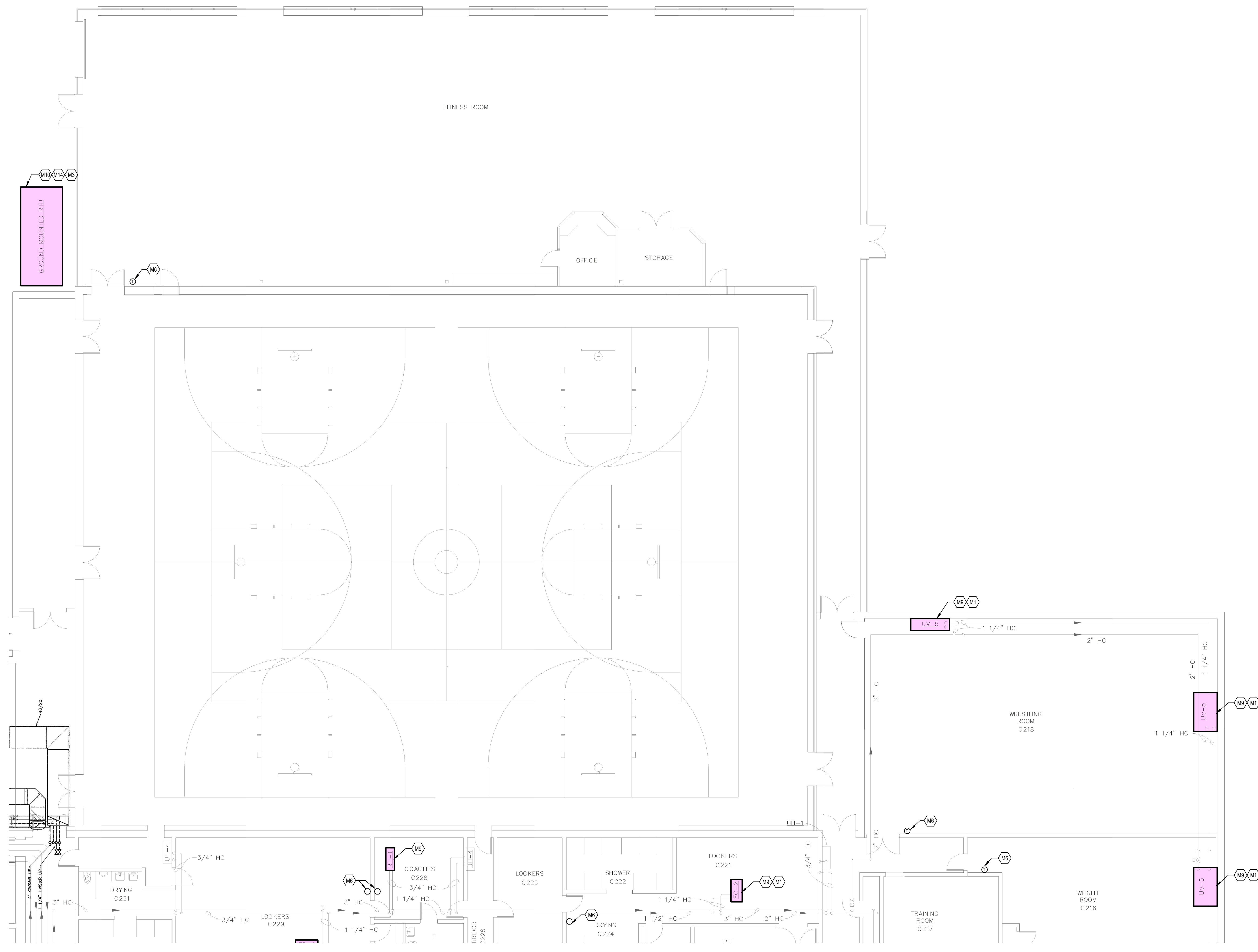
LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE

LOVELAND CITY SCHOOL DISTRICT

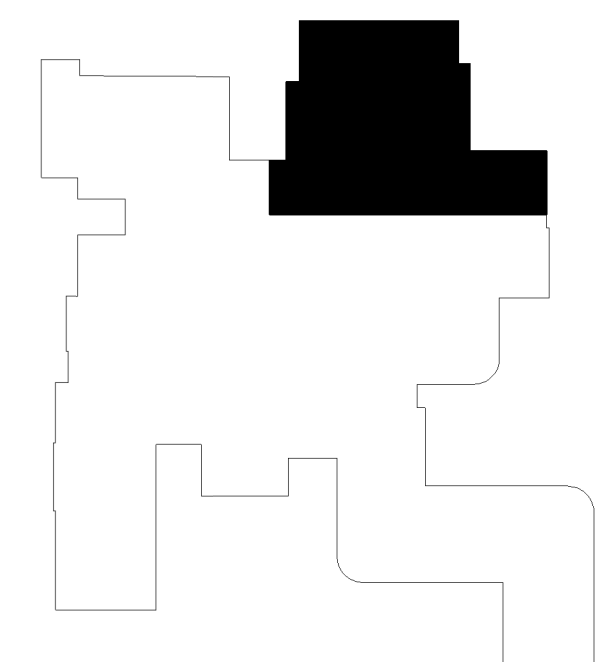
1 Tiger Trail, Loveland, OH 45140

1ST FLOOR TEMPERATURE CONTROLS PLAN E

TAGGED NOTES	
M1	PROVIDE GPS-FC48-AC NEEDPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, CAPABLE OF HANDLING UP TO 4,800 CFM FOR IN HVAC UNIT. UNIT TO BE INSTALLED AT FAN INLET. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
M3	PROVIDE GPS-IMOD NEEDPOINT BIPOLAR IONIZATION UNIT, OR EQUAL. UNIT TO BE INSTALLED AT FACE OF CHILLED WATER COIL. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
M6	DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING, RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
M9	PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M10	PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALONTRIDIUM JACE) FOR AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M14	PROVIDE NEW CO2 SENSOR IN THE MAIN RETURN DUCT AND MODULATE TO OA DAMPER TO MAINTAIN A CO2 CONCENTRATION BELOW 1000 PPM.



KEY PLAN



1 1ST FLOOR TEMPERATURE CONTROLS PLAN E
1/8" = 1'-0"

CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

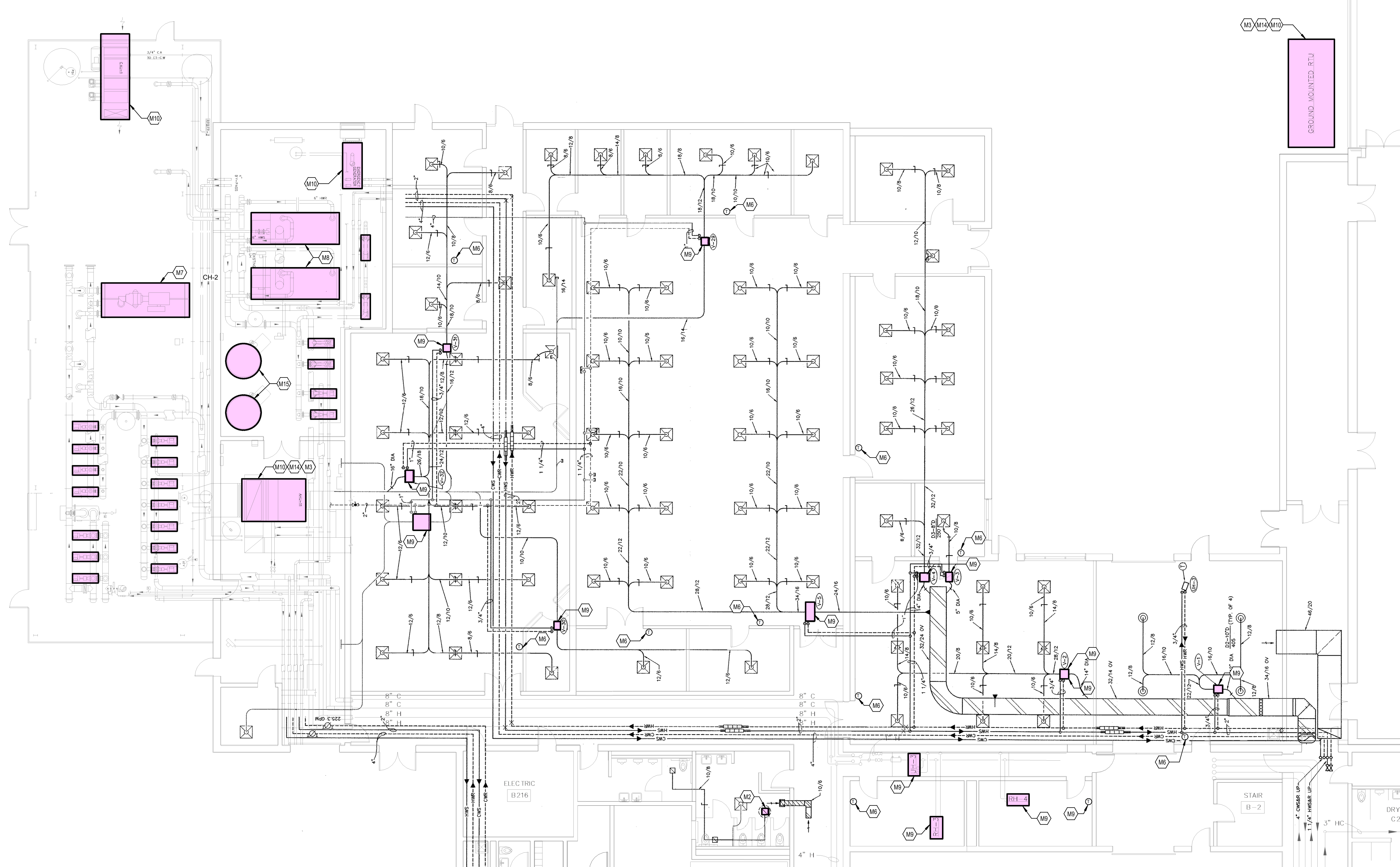
REVISIONS	

M205

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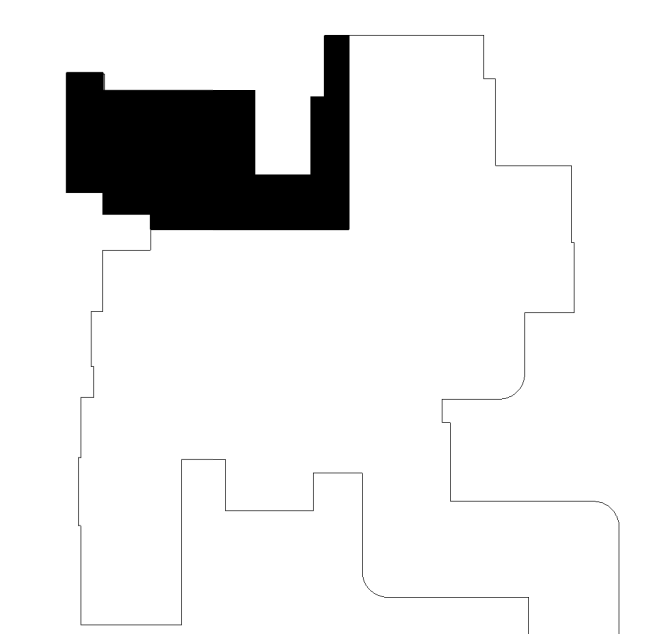
LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE
LOVELAND CITY SCHOOL DISTRICT
1 Tiger Trail, Loveland, OH 45140
1ST FLOOR TEMPERATURE CONTROLS PLAN F

TAGGED NOTES	
M2	PROVIDE RELAY FOR EXHAUST FAN FOR ENABLE/DISABLE AND TIE TO BAS TIME SCHEDULE
M3	PROVIDE GPS-MOD NEED-POINT BIPOLAR IONIZATION UNIT, OR EQUAL, UNIT TO BE INSTALLED AT FACE OF CHILLED WATER COIL. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
M6	DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
M7	PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALON/TRIDUUM JACE) FOR THE CHILLED WATER PLANT AND INTEGRATE THE EXISTING CHILLER AND ALL ASSOCIATED PUMPS INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M8	PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALON/TRIDUUM JACE) FOR THE HOT WATER PLANT AND INTEGRATE THE EXISTING BOILERS AND ALL ASSOCIATED PUMPS INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M9	PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M10	PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALON/TRIDUUM JACE) FOR AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M14	PROVIDE NEW CO2 SENSOR IN THE MAIN RETURN DUCT AND MODULATE TO CO DAMPER TO MAINTAIN A CO2 CONCENTRATION BELOW 1000 PPM.
M15	PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALON/TRIDUUM JACE) FOR THE DOMESTIC HOT WATER PLANT AND INTEGRATE THE EXISTING WATER HEATERS AND ALL ASSOCIATED PUMPS INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.



1 M206 1/8" = 1'-0" 1ST FLOOR TEMPERATURE CONTROLS PLAN F

KEY PLAN



CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS

M206

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LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE

LOVELAND CITY SCHOOL DISTRICT

1 Tiger Trail, Loveland, OH 45140

2ND FLOOR TEMPERATURE CONTROLS PLAN A

TAGGED NOTES

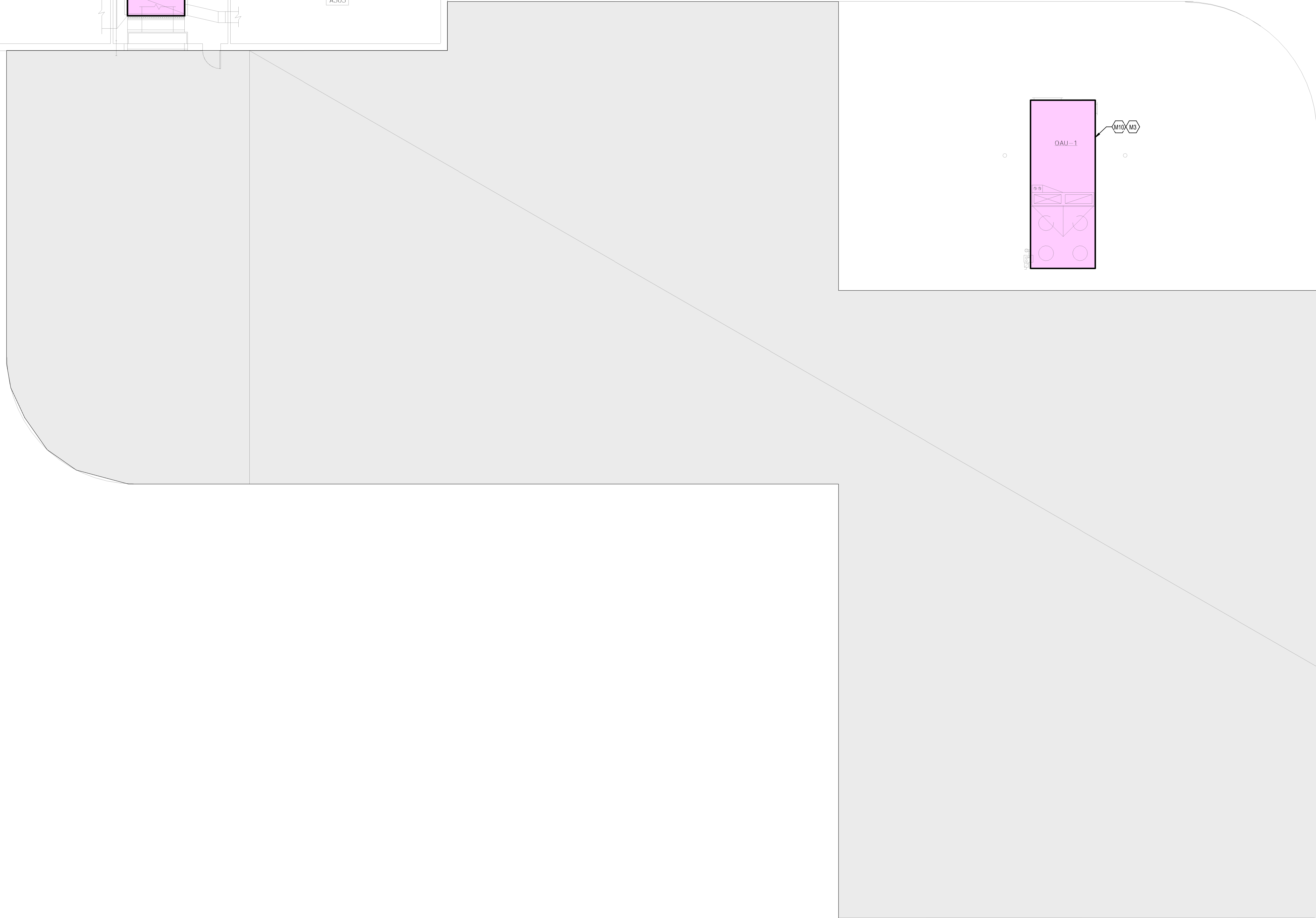
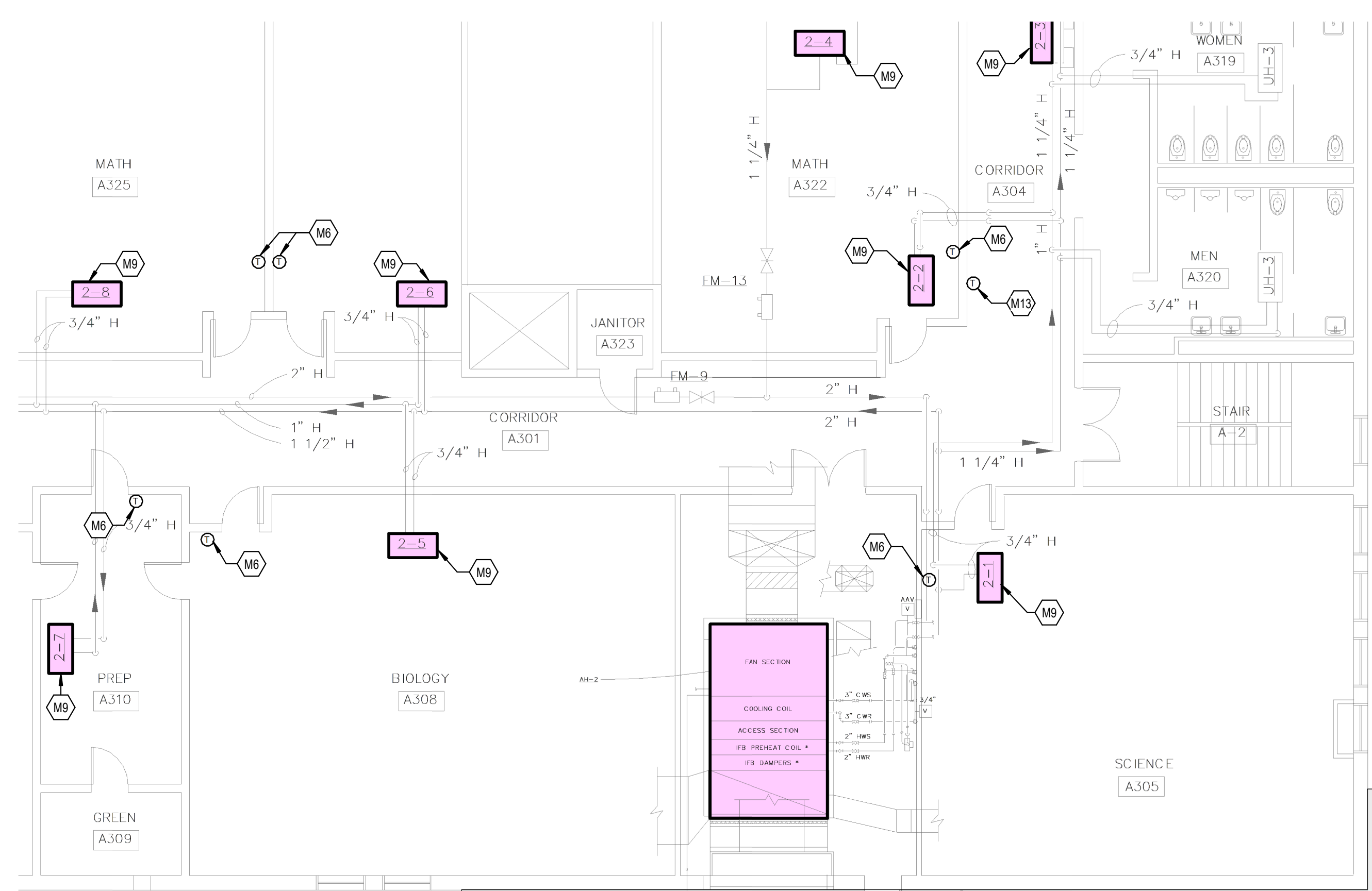
M3 PROVIDE GPS-MOD NEEDLEPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, UNIT TO BE INSTALLED AT FACE OF CHILLED WATER COIL. REFER TO SPECIFICATIONS FOR MORE INFORMATION.

M6 DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.

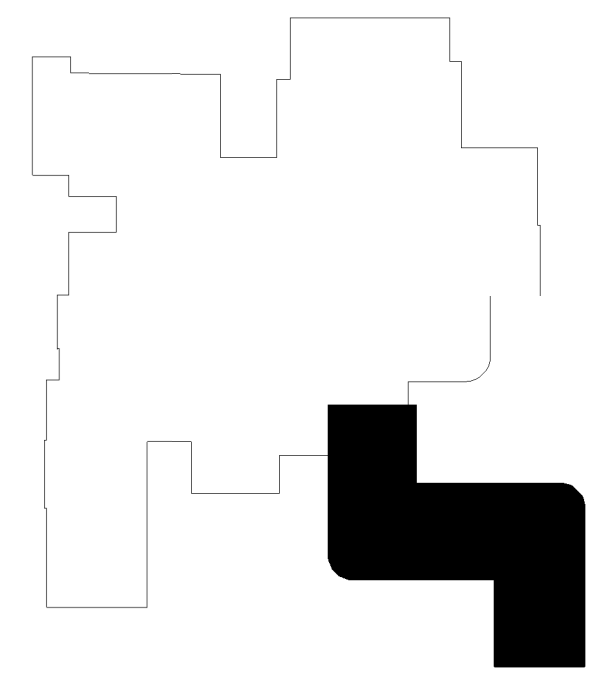
M9 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.

M10 PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALON TRIUMPH JACE) FOR AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.

M13 DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.



KEY PLAN



1 M301 2ND FLOOR TEMPERATURE CONTROLS PLAN A
1/8" = 1'-0"

CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS

M301

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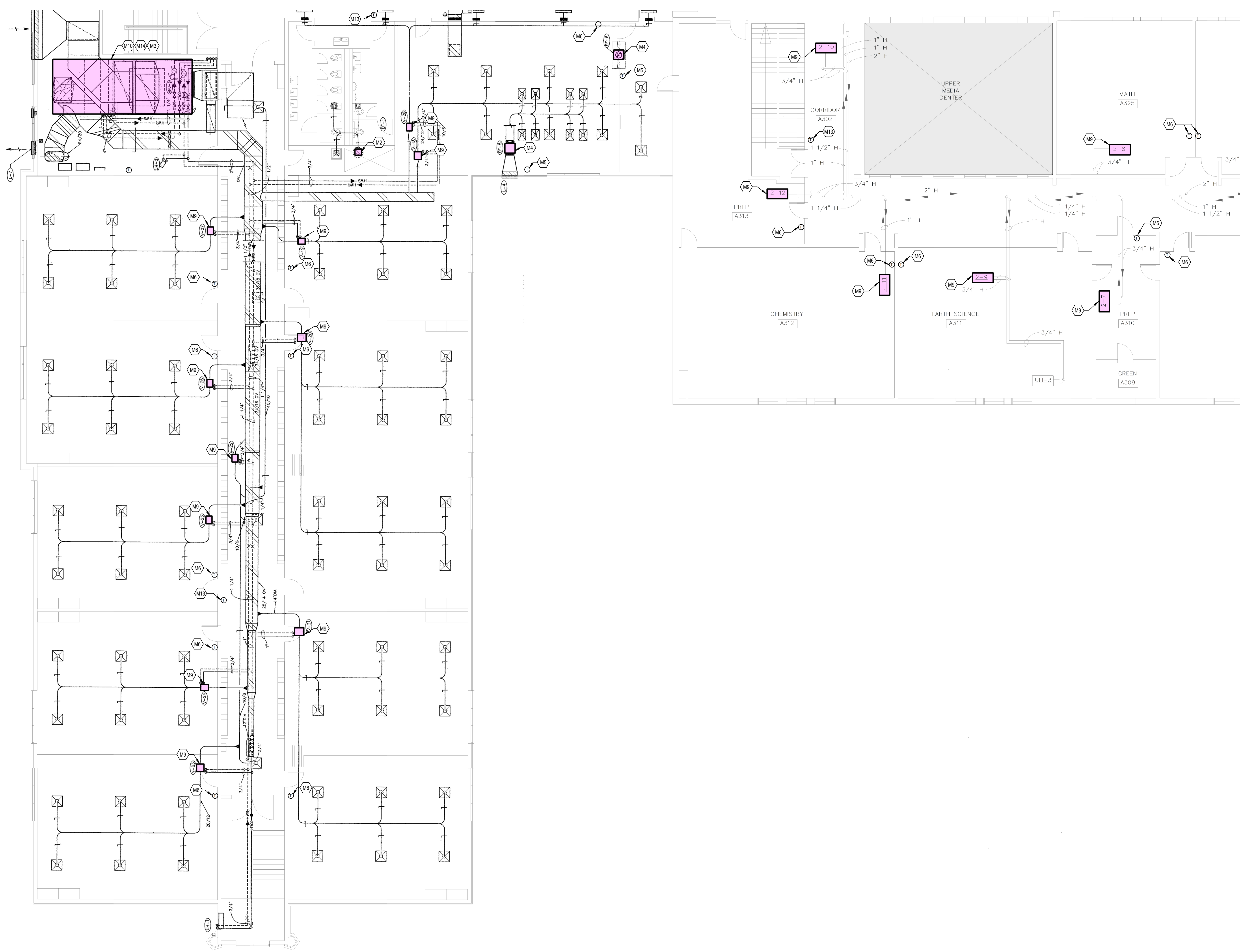
LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE
LOVELAND CITY SCHOOL DISTRICT
1 Tiger Trail, Loveland, OH 45140
2ND FLOOR TEMPERATURE CONTROLS PLAN B

CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS

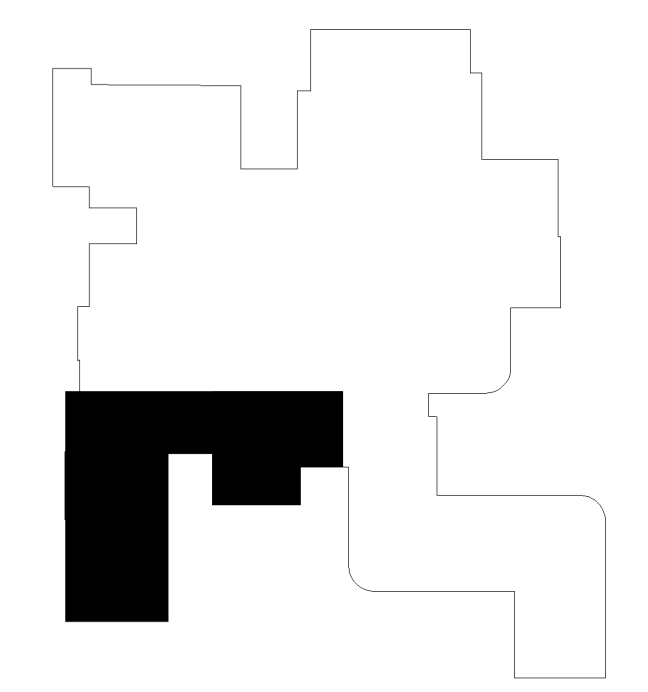
M302

- TAGGED NOTES**
- M2 PROVIDE RELAY FOR EXHAUST FAN FOR ENABLE/DISABLE AND TIE TO BAS TIME SCHEDULE
 - M3 PROVIDE GPS-MOD NEEDPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, UNIT TO BE INSTALLED AT FACE OF CHILLED WATER COIL. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
 - M4 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE INTO THE NEW BAS.
 - M5 DEMOLISH EXISTING SENSOR. INSTALL NEW VOC SENSOR TO CONTROL THE FAN AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M6 DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M9 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
 - M10 PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALONTRIDIUM JACE) FOR AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
 - M13 DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M14 PROVIDE NEW CO2 SENSOR IN THE MAIN RETURN DUCT AND MODULATE TO OR DAMPER TO MAINTAIN A CO2 CONCENTRATION BELOW 1000 PPM.



1 M302 2ND FLOOR TEMPERATURE CONTROLS PLAN B
1/8" = 1'-0"

KEY PLAN

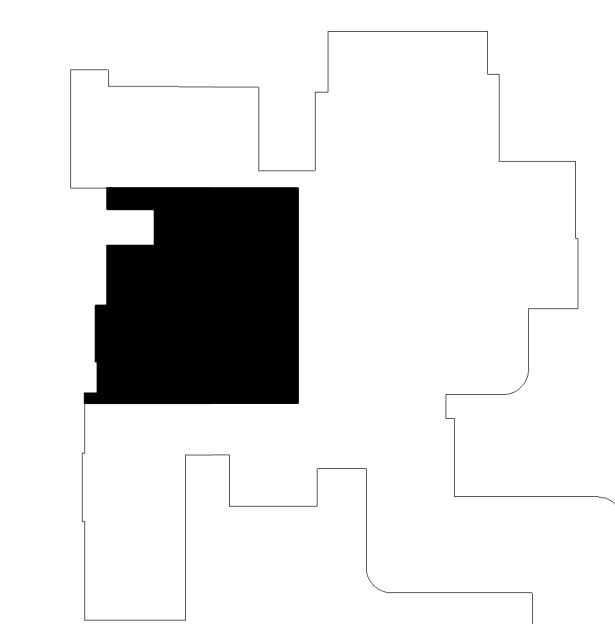


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- TAGGED NOTES**
- M3 PROVIDE GPS-MOD NEEDPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, UNIT TO BE INSTALLED AT FACE OF CHILLED WATER COIL. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
 - M4 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE INTO THE NEW BAS.
 - M5 DEMOLISH EXISTING SENSOR, INSTALL NEW VOC SENSOR TO CONTROL THE FAN AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M6 DEMOLISH EXISTING THERMOSTAT SENSOR, INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M9 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
 - M10 PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALON/TRIDIUM JACE) FOR AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
 - M13 DEMOLISH EXISTING THERMOSTAT SENSOR, INSTALL NEW THERMOSTAT AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
 - M14 PROVIDE NEW CO2 SENSOR IN THE MAIN RETURN DUCT AND MODULATE TO OA DAMPER TO MAINTAIN A CO2 CONCENTRATION BELOW 1000 PPM.
 - M16 PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALON/TRIDIUM JACE) FOR 2-PIPE CHANGEOVER SYSTEM AND INTEGRATE THE EXISTING WATER HEATERS AND ALL ASSOCIATED PUMPS INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.



KEY PLAN



1 M303 2ND FLOOR TEMPERATURE CONTROLS PLAN C
1/8" = 1'-0"

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CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS

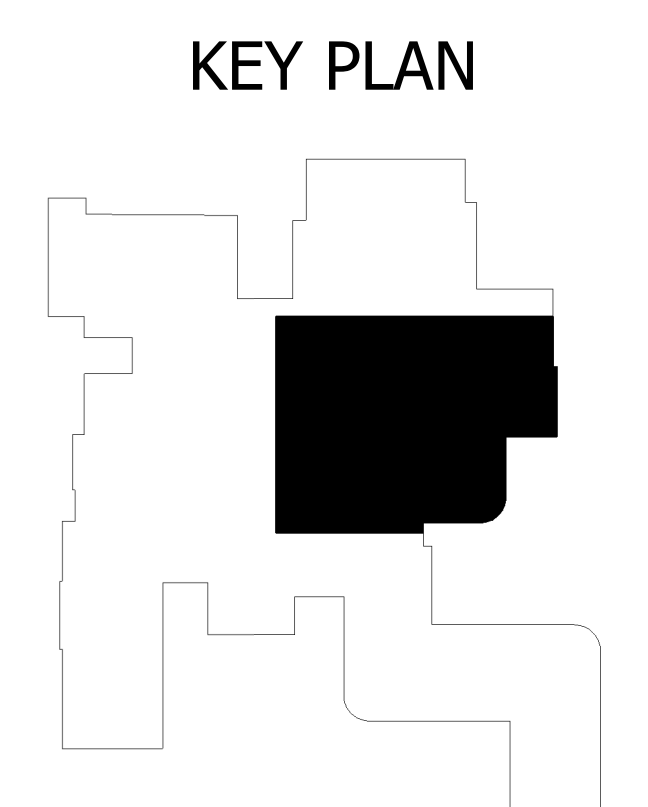
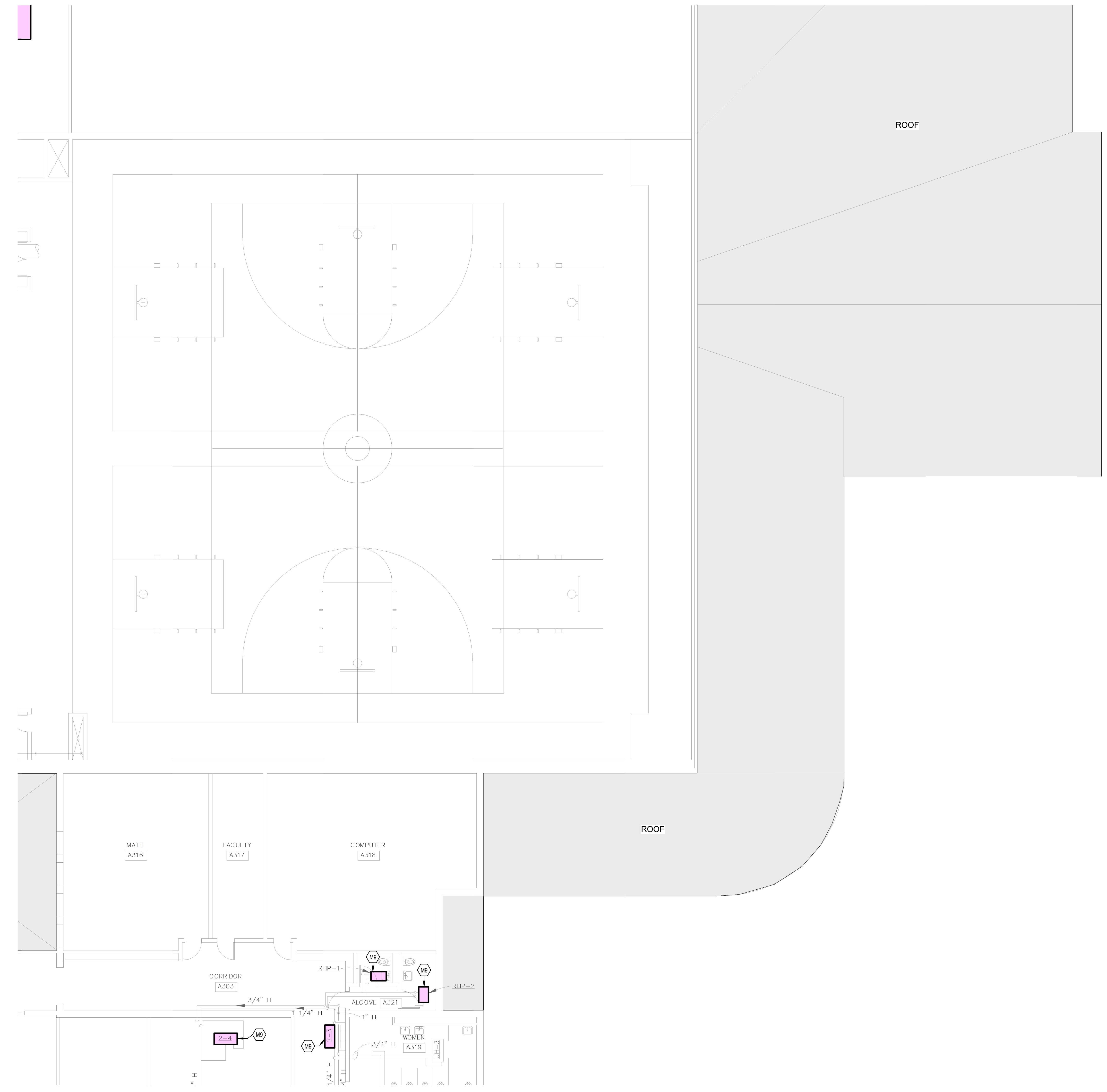
M303

TAGGED NOTES
 M9 PROVIDE NEW UNITARY CONTROLLER (SIEMENS TALON DXR) AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.



BID DOCUMENTS

LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE
 LOVELAND CITY SCHOOL DISTRICT
 1 Tiger Trail, Loveland, OH 45140
 2ND FLOOR TEMPERATURE CONTROLS PLAN D



1 M304 2ND FLOOR TEMPERATURE CONTROLS PLAN D
 1/8" = 1'-0"

CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
DRAWN:	KTW
CHECKED:	BKR

REVISIONS

M304

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TAGGED NOTES	
M3	PROVIDE GPS-MOD NEEDPOINT BIPOLAR IONIZATION UNIT, OR EQUAL, UNIT TO BE INSTALLED AT FACE OF CHILLED WATER COIL. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
M6	DEMOLISH EXISTING THERMOSTAT SENSOR. INSTALL NEW THERMOSTAT AND VOC SENSOR AND FULLY INTEGRATE WITH CORRESPONDING UNIT. RUN NEW CONTROL WIRING. RE-USE WIRE MOLDING AS ABLE AND INSTALL NEW WIRE MOLDING AS NECESSARY.
M10	PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALONTRIDIUM JACE) FOR AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.
M14	PROVIDE NEW CO2 SENSOR IN THE MAIN RETURN DUCT AND MODULATE TO OR DAMPER TO MAINTAIN A CO2 CONCENTRATION BELOW 1000 PPM.



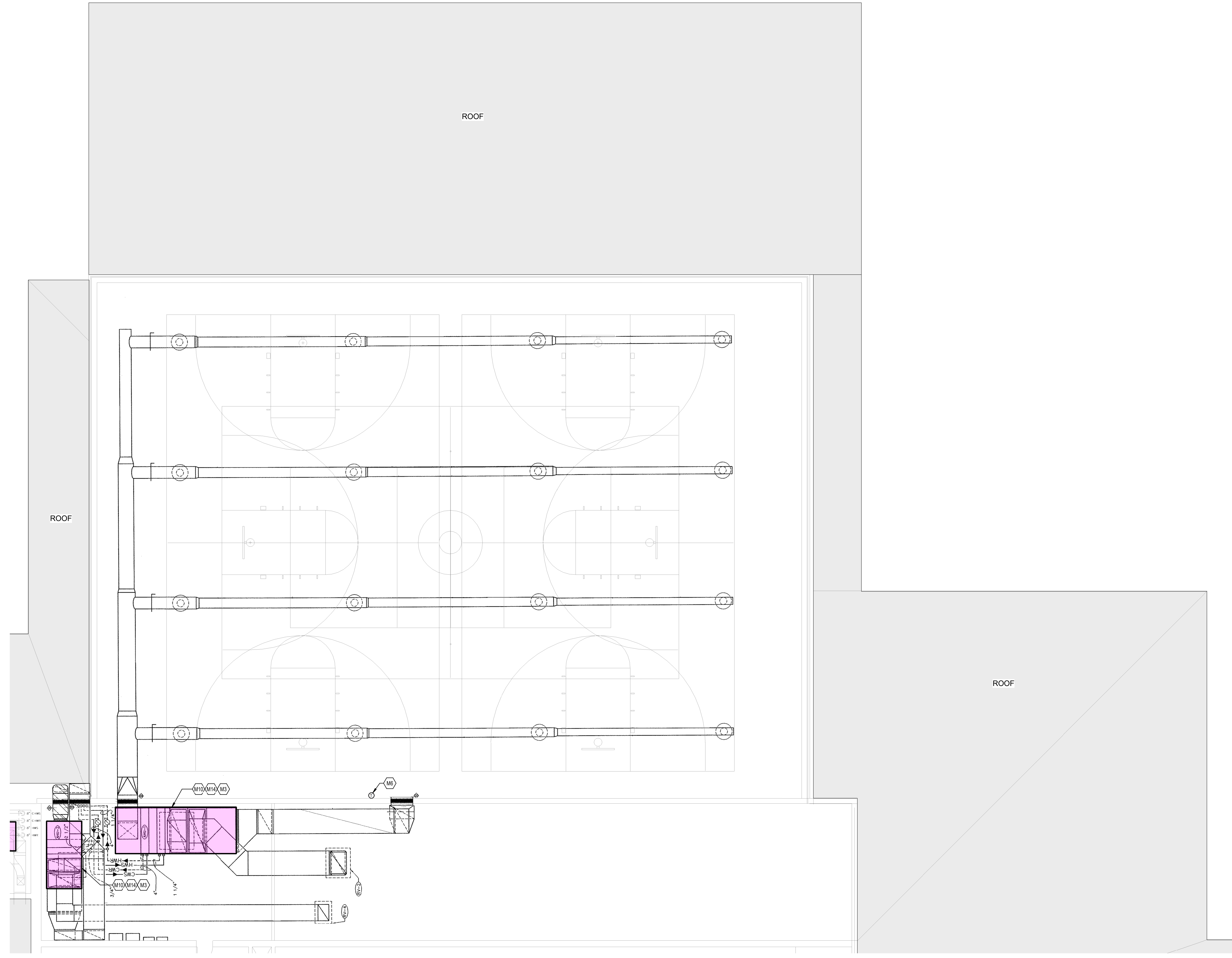
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LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE

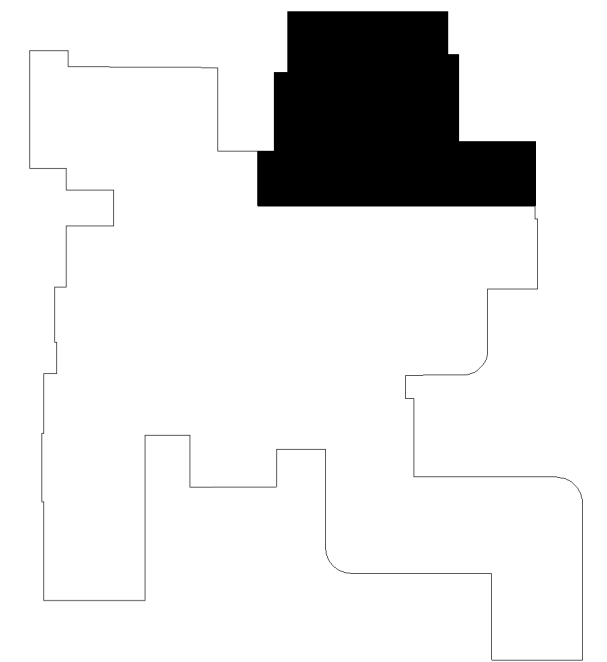
LOVELAND CITY SCHOOL DISTRICT

1 Tiger Trail, Loveland, OH 45140

2ND FLOOR TEMPERATURE CONTROLS PLAN E



KEY PLAN



1 2ND FLOOR TEMPERATURE CONTROLS PLAN E
M305 1/8" = 1'-0"

CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
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REVISIONS	

M305

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TAGGED NOTES
 M10 PROVIDE NEW NETWORK CONTROLLER (SIEMENS TALONTRIDIUM JACE) FOR AND INTEGRATE ALL EXISTING POINTS AND SEQUENCES INTO THE NEW BUILDING AUTOMATION SYSTEM PER THE SPECIFICATIONS.



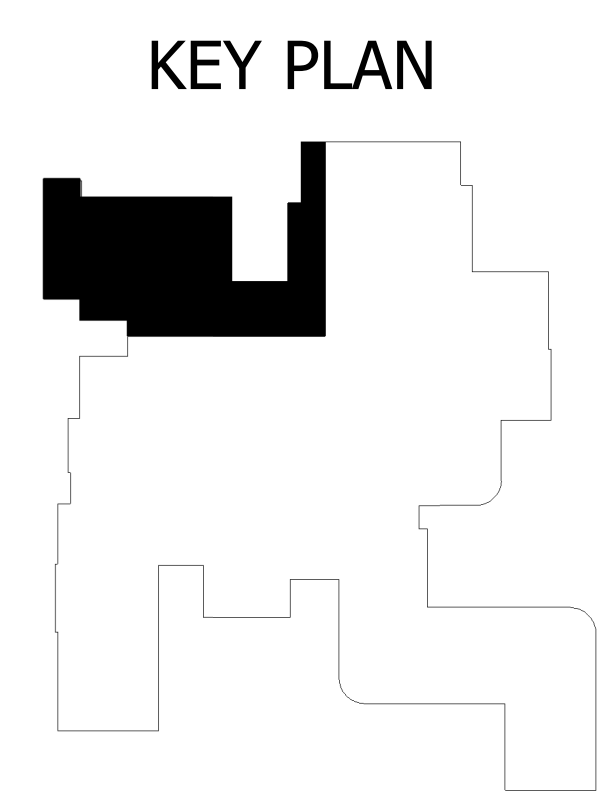
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LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE
 LOVELAND CITY SCHOOL DISTRICT
 1 Tiger Trail, Loveland, OH 45140
 2ND FLOOR TEMPERATURE CONTROLS PLAN F

CLIENT/CMTA JOB #:	OLHS22
DATE:	02/21/2023
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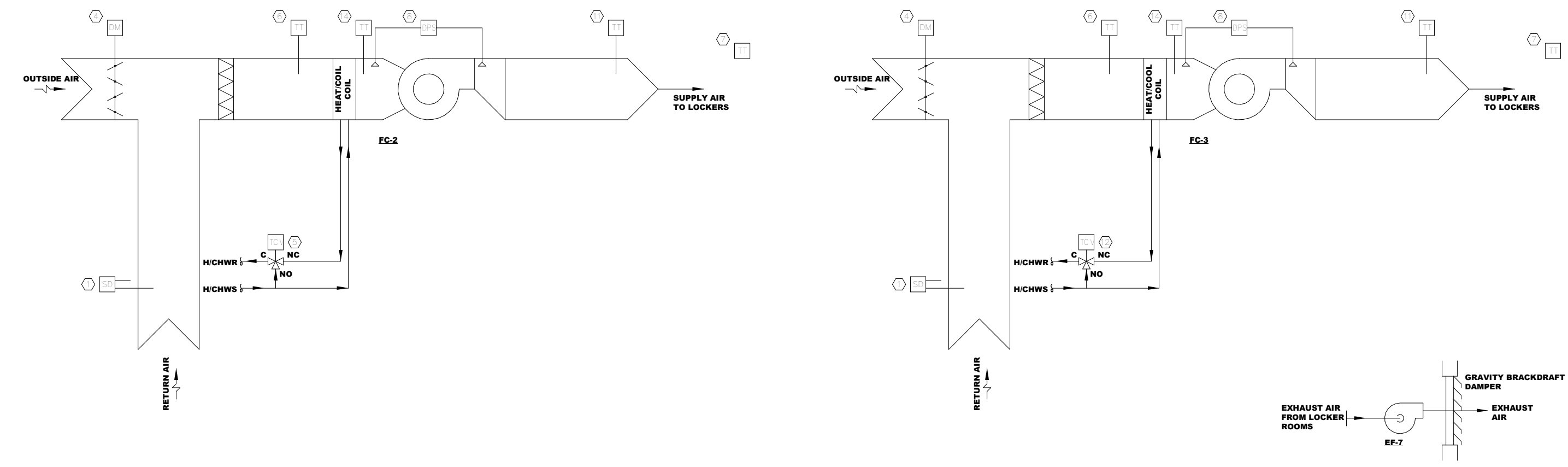
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LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE
 LOVELAND CITY SCHOOL DISTRICT
 1 Tiger Trail, Loveland, OH 45140

MECHANICAL LEGEND

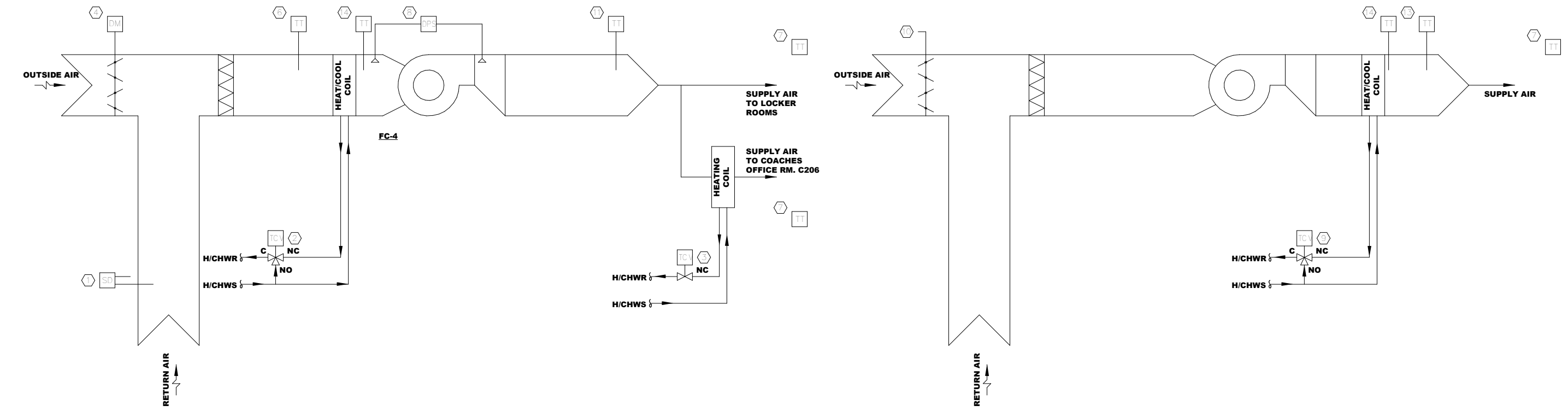


FAN COIL UNIT FC-2 CONTROL DIAGRAM
 SCALE: NONE

FAN COIL UNIT FC-3 CONTROL DIAGRAM
 SCALE: NONE

DRAWING NOTES:

- SD-RA, DUCT SMOKE DETECTOR.
- TOV-AC, BIPOLAR, STAEFA, 0.17" 2W AC, CNTL. VALVE, C-10.6, SPN-11.1, PD-1.88.
- TOV-AC, BIPOLAR, STAEFA, 0.17" 2W AC, CNTL. VALVE, C-10.7, SPN-11.2, PD-2.08.
- DM-GA, ARJ1010F, STAEFA, MODULATING FAILSAFE DPR ACTUATOR.
- TOV-AC, BIPOLAR, STAEFA, 1.0" 2W AC, CNTL. VALVE, C-10.3, SPN-13.7, PD-2.38.
- TT-RA, FK-T30, STAEFA, DUCT TEMP SENSOR.
- TT-RA, RB-1011, STAEFA, ROOM TEMP SENSOR WITH 5/8" SET PT ADJUSTMENT AND OCCUPIED OVERRIDE SWITCH.
- TT-RA, RB-1010, STAEFA, INTFC CONTROLS, DIFFERENTIAL PRESS SWITCH W 0.05-0.5 TYPING CTY, SET 1.0" WC.
- TOV-AC, BIP., STAEFA, 2W AC.
- TOV-AC, BIP. AND MANUAL BALANCING DAMPER PRESENT ON FC-2,7 AND 8. FC-3 AND 10 ARE 100% OA UNITS.
- TT-RA, FK-T30, STAEFA, DUCT TEMP SENSOR.
- TT-RA, RB-1011, STAEFA, ROOM TEMP SENSOR WITH 5/8" SET PT ADJUSTMENT AND OCCUPIED OVERRIDE SWITCH.
- TT-RA, FB-R1030, STAEFA, DUCT TEMP SENSOR.
- TT-FL, FREEZE/STAT.

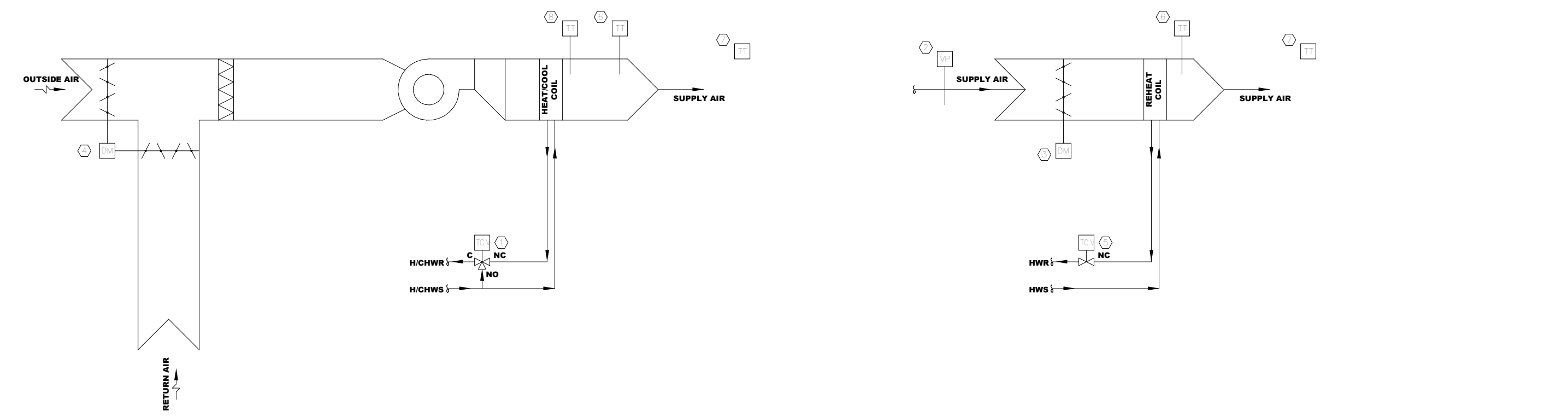


FAN COIL UNIT FC-4 CONTROL DIAGRAM
 SCALE: NONE

FAN COIL UNIT FC-5,6,7,8,9,10 CONTROL DIAGRAM
 SCALE: NONE

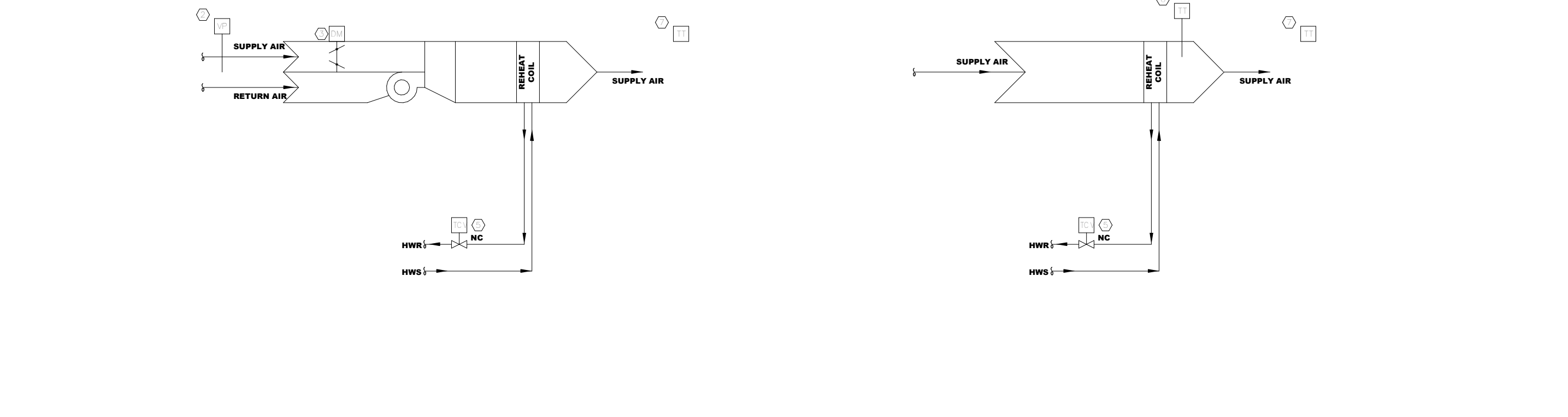
DRAWING NOTES:

- EXISTING EQUIPMENT**
- TOV-AC, BIP., STAEFA, 2W AC.
 - VP-1, BHS-2VP, STAEFA, THERMAL ANEMOMETER VELOCITY SENSOR.
 - DM-G, BHS-100, STAEFA, DAMPER ACTUATOR.
 - DM-GA, ARJ1010F, STAEFA, MODULATING FAILSAFE DPR ACTUATOR.
 - TOV-AC, BIP., STAEFA, 2W AC, CNTL. VALVE.
 - TT-RA, FB-R1030, STAEFA, DUCT TEMP SENSOR.
 - TT-RA, RB-1011, STAEFA, ROOM TEMP SENSOR WITH 5/8" SET PT ADJUSTMENT AND OCCUPIED OVERRIDE SWITCH.
 - TT-FL, FREEZE/STAT.



UNIT VENTILATORS UV1,2,3,4 AND 5 CONTROL DIAGRAM
 SCALE: NONE

VARIABLE AIR VOLUME BOX CONTROL DIAGRAM
 SCALE: NONE



PARALLEL FAN POWERED BOX 9-1,2,3 AND 4 CONTROL DIAGRAM
 SCALE: NONE

REHEAT COIL CONTROL DIAGRAM
 SCALE: NONE

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REVISIONS

M401

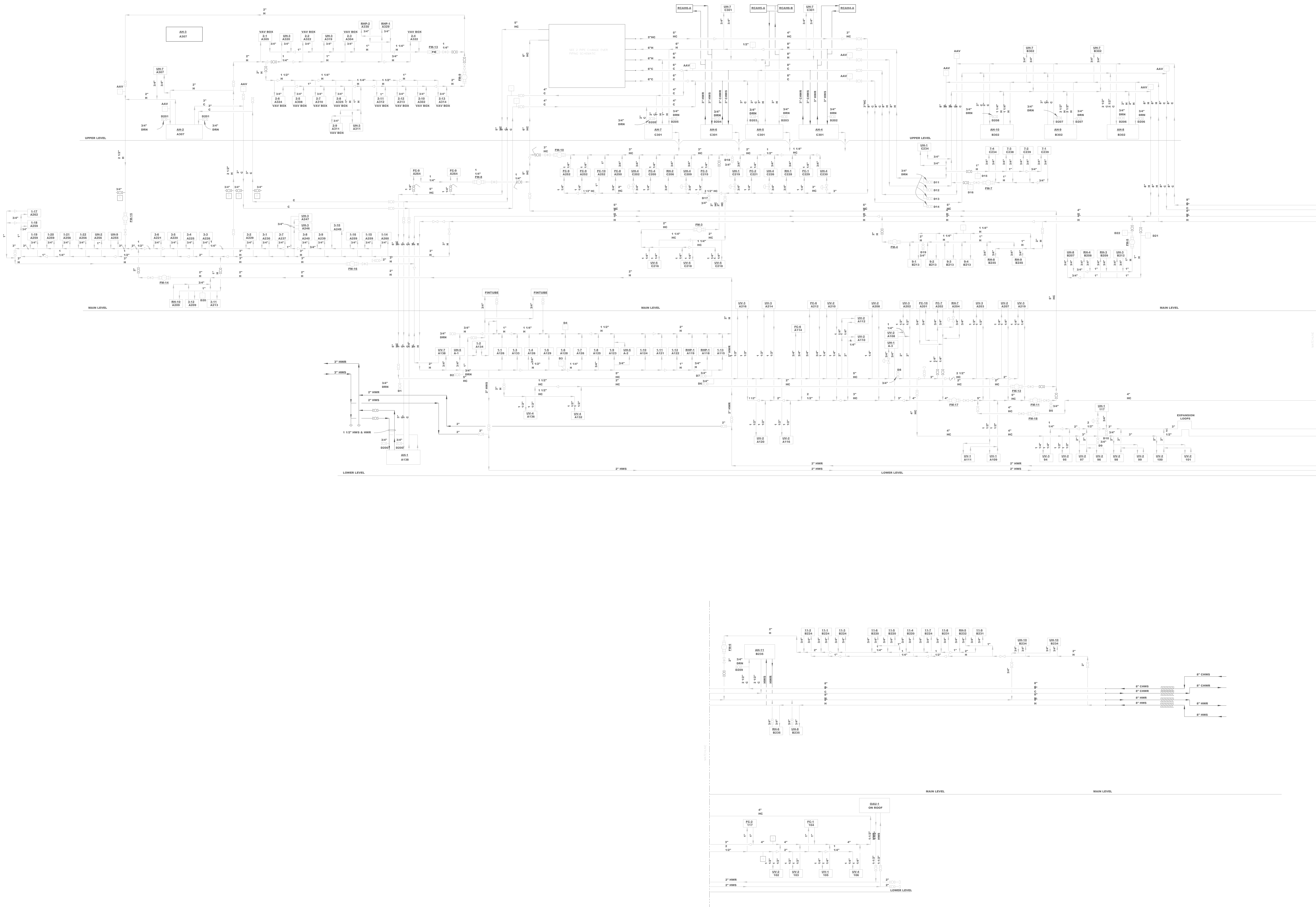
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LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE

LOVELAND CITY SCHOOL DISTRICT

1 Tiger Trail, Loveland, OH 45140

MECHANICAL LEGEND



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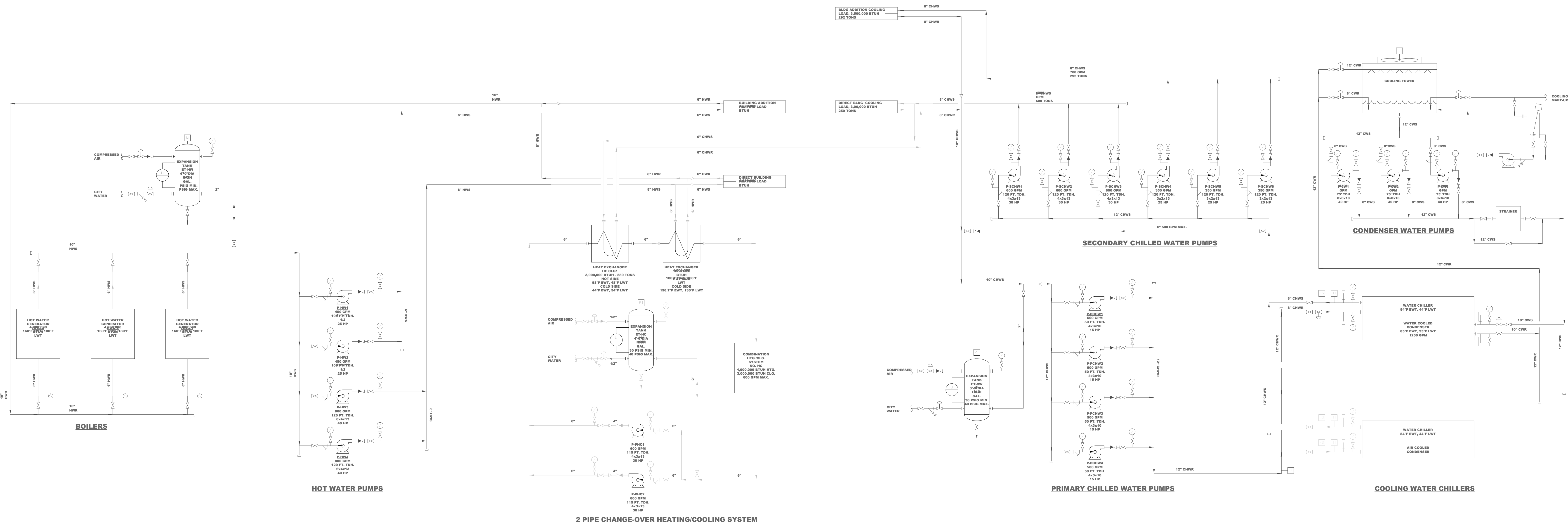
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LOVELAND HIGH SCHOOL HVAC CONTROLS UPDATE

LOVELAND CITY SCHOOL DISTRICT

1 Tiger Trail, Loveland, OH 45140

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REVISIONS

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