

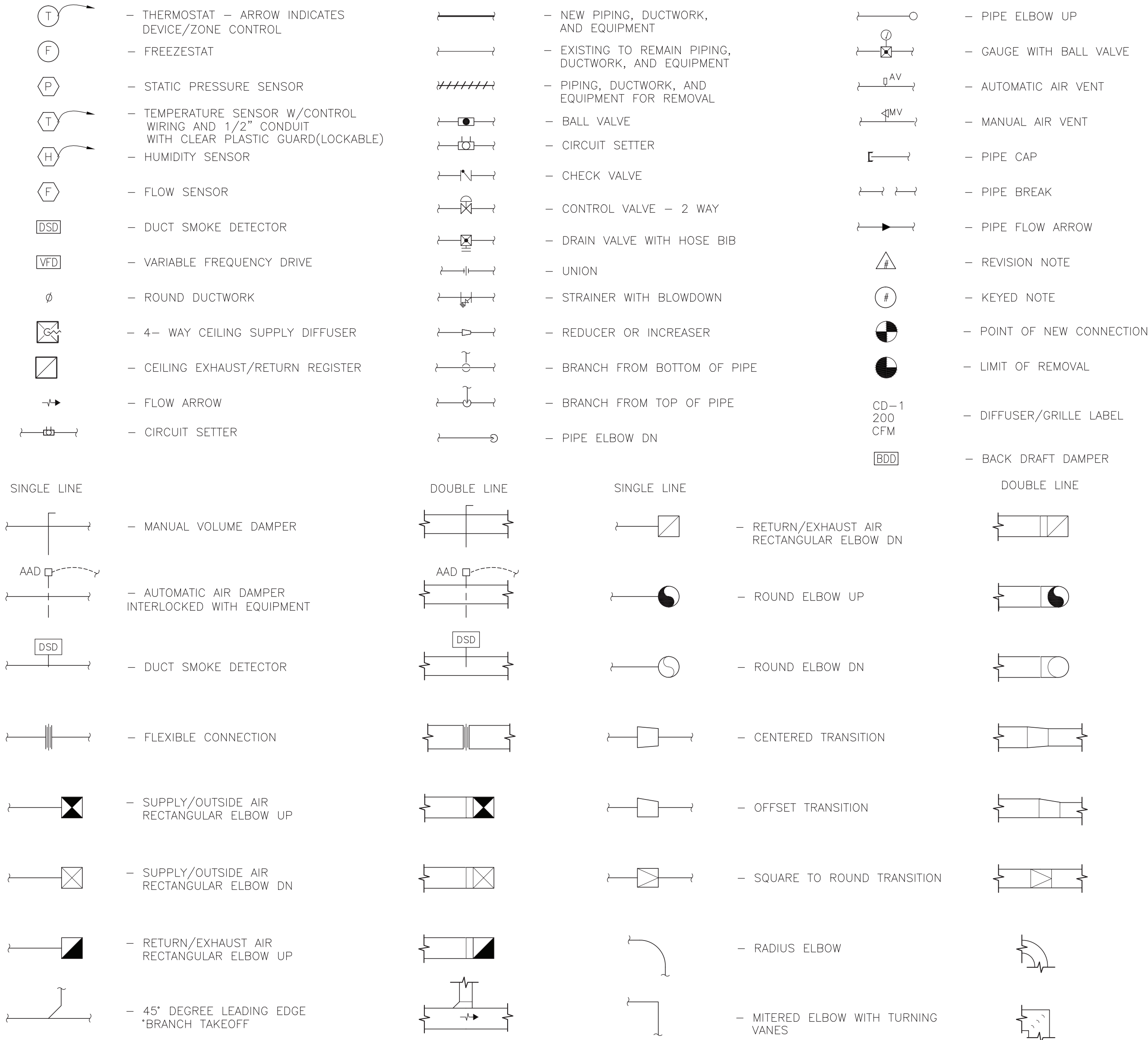
MECHANICAL GENERAL NOTES:

- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IT IS NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT; HOWEVER, CONTRACT DOCUMENTS REQUIRE COMPONENTS AND MATERIALS WHETHER OR NOT INDICATED OR SPECIFICALLY SPECIFIED TO MAKE THE SYSTEMS BEING INSTALLED COMPLETE, CODE COMPLIANT, TESTED AND OPERATIONAL.
- CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS, DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.
- ALL MATERIALS, EQUIPMENT, METHODS OF INSTALLATION, REMOVALS AND DISPOSAL SHALL BE IN ACCORDANCE WITH THE STANDARDS, REGULATIONS, CODES, ORDINANCES, AND LAWS OF LOCAL, STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE LAWFUL JURISDICTION.
- PERFORM WORK, PROVIDE MATERIALS AND EQUIPMENT FOR SYSTEMS SHOWN, SPECIFIED AND DESCRIBED ON DRAWINGS. COMPLETELY COORDINATE ALL TRADES OF THIS CONTRACT AND PROVIDE COMPLETE AND FULLY FUNCTIONAL INSTALLATION. ALL WORK IN THIS SET TO BE COMPLETED UNDER THIS CONTRACT, UNLESS OTHERWISE INDICATED.
- PROTECT ALL EXISTING AND NEW BUILDING ELEMENTS (INSTALLED BY OTHER CONTRACTS) FROM DAMAGE. CONTRACTOR SHALL RESTORE ALL DAMAGED ELEMENTS TO ORIGINAL OR BETTER CONDITION.
- WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. MAINTAIN MAXIMUM HEAD ROOM AT ALL TIMES. DO NOT RUN PIPES, DUCTS, AND CONDUIT EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON DRAWINGS.
- MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. MAINTAIN MANUFACTURER'S EQUIPMENT CLEARANCES.
- CONTRACTOR IS RESPONSIBLE FOR ALL WORK RELATED TO ISOLATING, SHUTTING DOWN, DRAINING, FILLING AND TESTING SYSTEMS TO ALLOW FOR COMPLETION OF WORK. INTERRUPTIONS TO EXISTING SERVICES AND SYSTEMS SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AND DURATION APPROVED BY THE OWNER AND UTILITY AS APPLICABLE. INCLUDE ALL PREMIUM TIME ASSOCIATED WITH INTERRUPTIONS. ALL SYSTEM INTERRUPTIONS SHALL BE SCHEDULED WITH OWNER, UTILITY AND COORDINATED WITH OTHER TRADE WORK.
- ALL EQUIPMENT PIPING, WIRING, INSULATION ETC. INSTALLED IN HVAC AIR PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
- SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS, PARTITIONS AND FLOORS WITH UL RATED MATERIALS/METHODS EQUIVALENT TO FIRE RATING OF ASSEMBLY.
- COORDINATE ALL WALL/FOUNDATION PENETRATIONS WITH GENERAL CONTRACT AND SEAL WEATHERTIGHT. PROVIDE STAINLESS STEEL ESCUTCHEON PLATE/TRIM RING FOR EACH ABOVE GRADE PENETRATION (BOTH SIDES).
- PROVIDE PROPER ACCESS TO EQUIPMENT THAT REQUIRES INSPECTION, REPLACEMENT OR REPAIR. ACCESS PANELS/DOORS SHALL BE A MINIMUM OF 12"x12", UNLESS OTHERWISE NOTED.
- DO NOT SUPPORT EQUIPMENT FROM SUSPENDED CEILINGS. ALL SUPPORT SHALL BE FROM BUILDING STRUCTURE OR FROM CEILING SUSPENSION SYSTEM WHICH HAS BEEN REINFORCED. SUPPORTS SHALL BE SELECTED AND INSTALLED TO PROVIDE A VIBRATION FREE INSTALLATION.
- CLEANING DURING MECHANICAL WORK: THE MECHANICAL ROOM AND ROOMS WHERE WORK WILL BE DONE TO MINIMIZE DISTURBANCE IN THE BUILDINGS. WORKERS ARE TO USE PATHWAYS AND FACILITIES AGREED UPON WITH THE DISTRICT DESIGNEE IN WRITING. THE AREA OUTSIDE THE BUILDING WHERE CUTTING WELDING OR STORAGE IS ALLOWED IS TO BE FENCED AT ALL TIMES. THE CONTRACTOR WILL ON A DAILY BASIS CLEAN THE GROUNDS AND THE BUILDING OF ANY DEBRIS OR GARBAGE GENERATED BY THEIR WORK.
- PROTECT EXISTING SURFACES AND EQUIPMENT NOT MARKED FOR REMOVAL OR MODIFICATION. CONTRACTOR RESPONSIBLE FOR REPAIR OF EXISTING SURFACES AND/OR EQUIPMENT TO THE APPROVAL OF THE OWNER.
- EACH CONTRACTOR RESPONSIBLE FOR RETURNING WALLS, CEILINGS AND SURFACES THEY DISTURB THAT ARE NOT SCHEDULED FOR REPLACEMENT BACK TO ORIGINAL CONDITIONS.

HVAC REMOVAL NOTES:

- THE SCOPE OF REMOVAL SHOWN ON "REMOVALS" DRAWING IS DIAGRAMMATIC ONLY AND INDICATES THE INTENT OF THE WORK TO BE PERFORMED AND NOT THE COMPLETE SCOPE OF DEMOLITION AND/OR REMOVAL WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE OR RELOCATE ANY RELATED MECHANICAL DEVICES/ITEMS EVEN IF NOT SPECIFICALLY INDICATED TO BE REMOVED ON THESE DRAWINGS IN ORDER TO ACCOMMODATE NEW WORK.
- EQUIPMENT/ITEMS SHOWN CROSS HATCHED ON DRAWINGS ARE ITEMS TO BE REMOVED. ANY DEVICES/ITEMS REMOVED SHALL INCLUDE (BUT SHALL NOT BE LIMITED TO) THE REMOVAL OF ALL ASSOCIATED PIPING, CONTROLS, ETC. THAT ARE NOT INCORPORATED IN THE NEW LAYOUT. THE CONTRACTOR SHALL PERFORM ALL WORK REQUIRED TO INSURE CONTINUITY OF SERVICE TO EXISTING REMAINING EQUIPMENT. NO EXTRAS RELATING TO THE SCOPE OF WORK DESCRIBED WILL BE ALLOWED.
- EQUIPMENT, PIPING, ETC. REQUIRED TO RECONNECT SHALL BE INSTALLED CONCEALED WITHIN THE SUSPENDED CEILINGS, PARTITIONS AND/OR WALLS, FLOORS. NO SURFACE MOUNTED OR EXPOSED EQUIPMENT, PIPING, ETC., SHALL BE PERMITTED, UNLESS SPECIFICALLY INDICATED.
- ALL ITEMS TO BE REMOVED SHALL BE REVIEWED WITH THE OWNER PRIOR TO REMOVAL. OWNER SHALL HAVE FIRST SALVAGE RIGHTS. ITEMS THE OWNER WISHES TO KEEP SHALL BE REMOVED WITH CARE AND STORED AS DIRECTED BY OWNER. ITEMS THE OWNER DOES NOT WISH TO KEEP SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

MECHANICAL SYMBOLS



HVAC NEW WORK NOTES

- CONTROL WORK COORDINATED THROUGH ITC NORTH USING NEW BMS SYSTEM: JCI FACILITATOR.
- CONTRACTOR RESPONSIBLE TO MAINTAIN A SEALED INSULATED BARRIER FOR DUCTWORK AND ASSOCIATED TO PREVENT FORMATION OF CONDENSATION. PROVIDE NEW INSULATION ON NEW DUCTWORK INSTALLATIONS. DAMAGED AREAS OF EXISTING DUCTWORK INSULATION SHALL BE RECORDED BY THE CONTRACTOR AND BE SUBMITTED TO THE ENGINEER. CONTRACTOR TO REPAIR/REPLACE AND SEAL WITH ADHESIVE ALUMINUM TAPE. REPAIR OR REPLACEMENT OF EXISTING DUCTWORK INSULATION THAT IS NOT ALREADY NOTED ON THE DRAWINGS SHALL BE PROVIDED ON T&M BASIS AGAINST THE CONTRACT ALLOWANCE — REFER TO SPECIFICATIONS.

HVAC ABBREVIATIONS

AAD	AUTOMATIC AIR DAMPER
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AHU	AIR HANDLING UNIT
AMP	AMPERAGE
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BMS	BUILDING MANAGEMENT SYSTEM
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CH	CABINET HEATER
CLG	CEILING
C	CONDENSATE
DB	DRYBULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL (SYSTEM)
DEG	DEGREE
DIA	DIAMETER
DN	DOWN
DP	DEWPOINT TEMPERATURE
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
F	FAHRENHEIT
FD	FIRE DAMPER
FF	FINAL FILTER
FLR	FLOOR
FPM	FEET PER MINUTE
FSTAT	FREEZESTAT
FT	FEET
FT HD	FEET OF HEAD
FT WG	FEET OF WATER GAUGE
FV	FACE VELOCITY
G	GAS
GAL	GALLON
GPM	GALLONS PER MINUTE
HD	HEAD
HP	HORSEPOWER
L	LOUVER
MAT	MIXED AIR TEMPERATURE
MAU	MAKE-UP AIR UNIT
MBH	1,000 BTU/HR
MCA	MINIMUM BRANCH CIRCUIT AMPACITY
MD	MOTORIZED DAMPER
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
PD	PRESSURE DROP
R	REMOVE
RA	RETURN AIR
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
S	SATISFACTORY
SAT	SUPPLY AIR TEMPERATURE
SEN	SENSIBLE HEAT
SG	SPECIFIC GRAVITY
SP	STATIC PRESSURE
TAB	TESTING, ADJUSTING, BALANCE
TSTAT	THERMOSTAT
TYP	TYPICAL
UC	UNDER CUT
VD	VOLUME DAMPER
WB	WETBULB
WG	WATER GAUGE
ΔT	TEMPERATURE DIFFERENCE
IC	IRRIGATION CONTRACTOR

ENGINEER:



CONSULTANT(S):



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WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL — 89 SANFORDVILLE ROAD, WARWICK, NY 10990

SED NO. 44-21-01-01-06-0-001-042

PROJECT NO.	05-21-04 05-20-06
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SCALE	AS NOTED

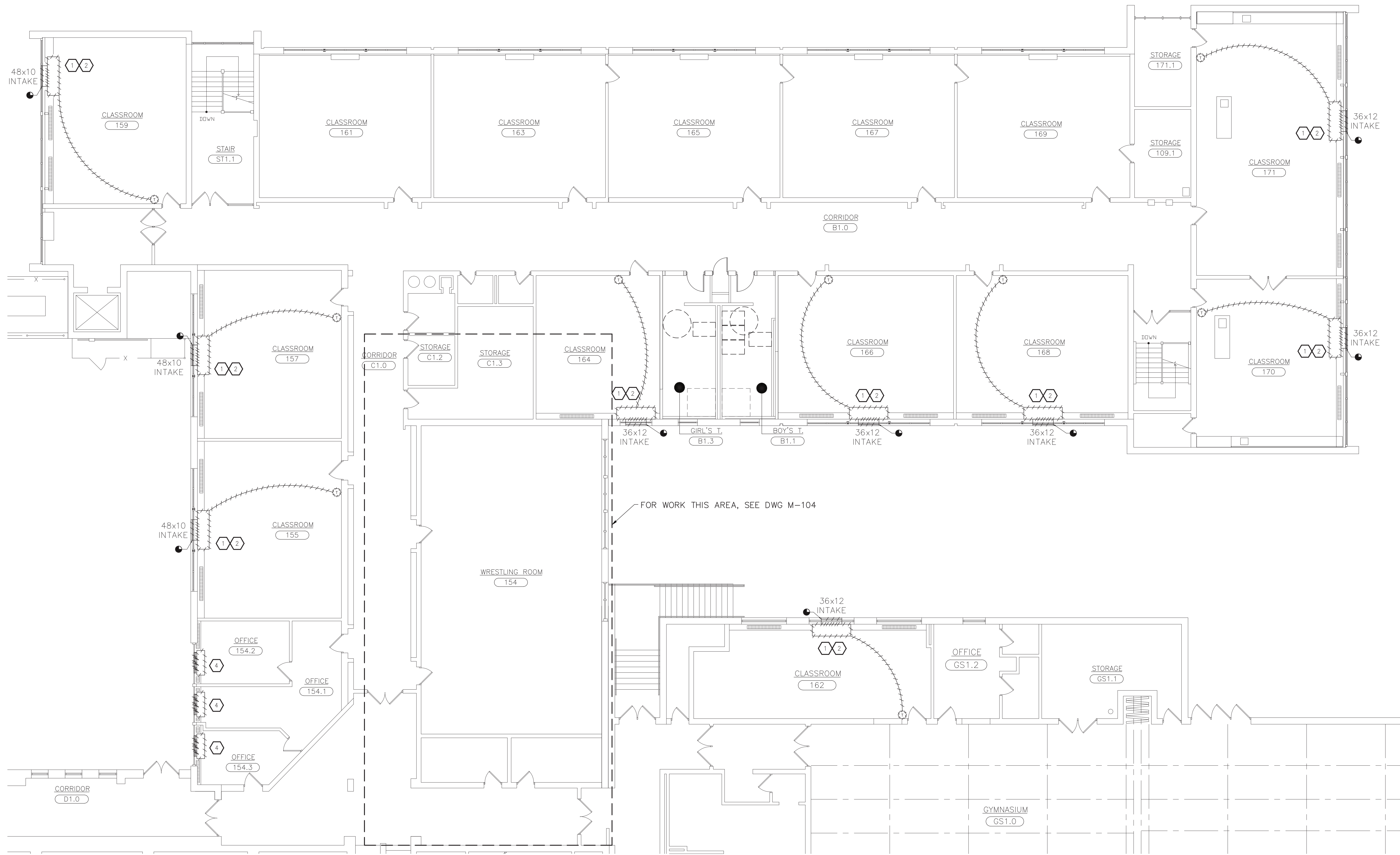
SHEET TITLE

ABBREVIATIONS  
AND SYMBOLS

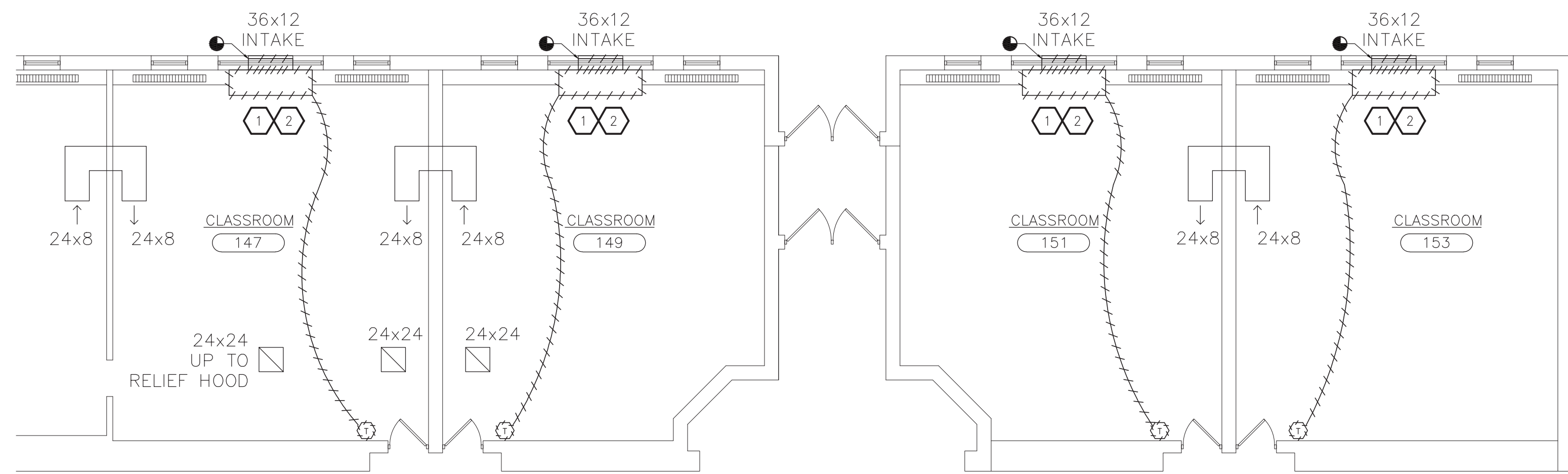
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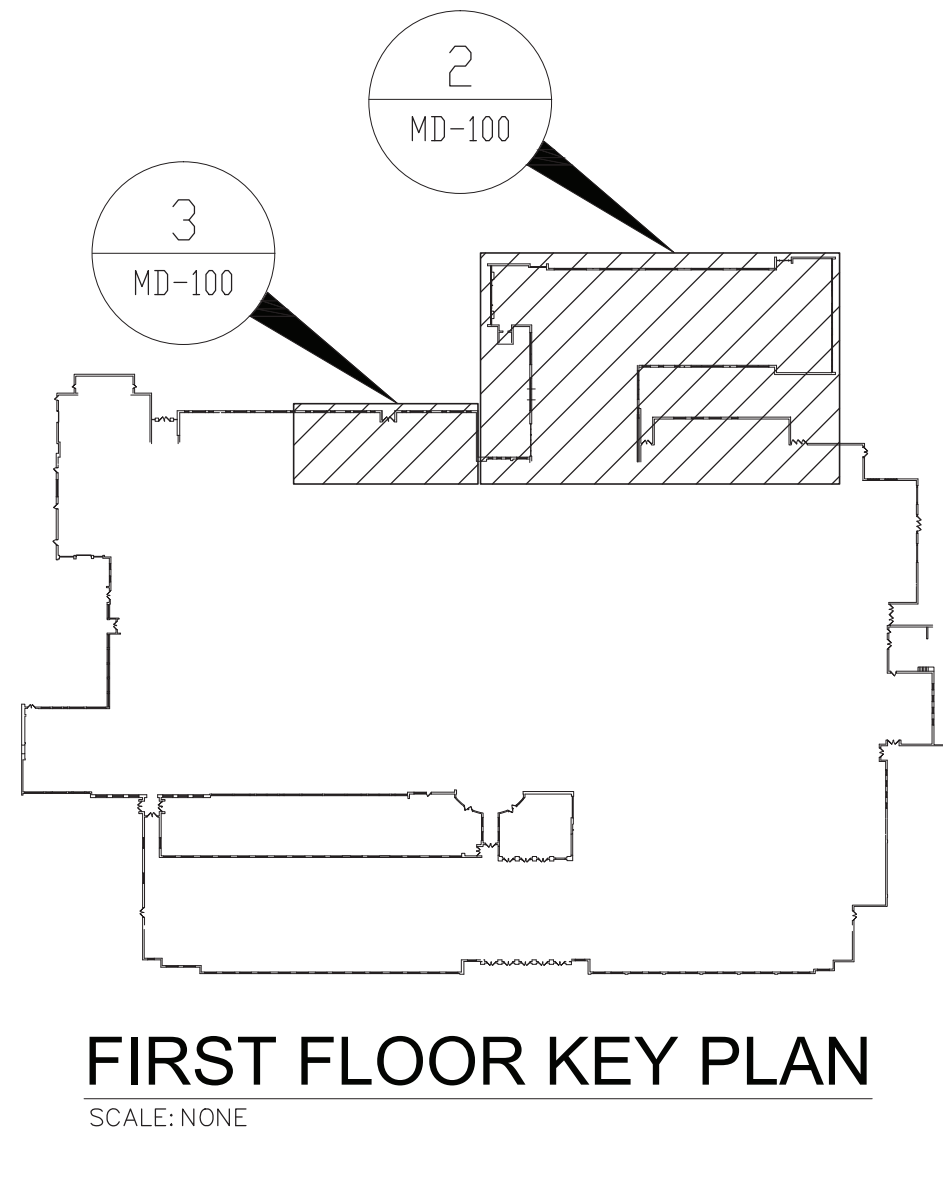
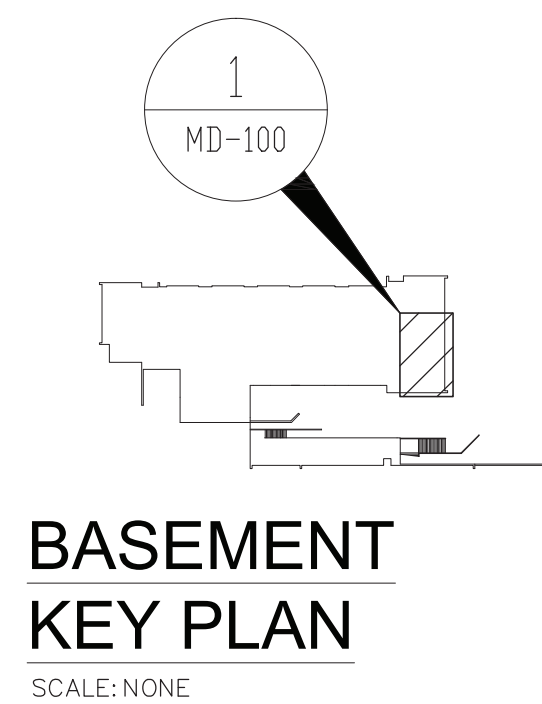


**2 PARTIAL FIRST FLOOR PLAN - REMOVALS**  
SCALE: 1/8"=1'-0"  
ALL WORK THIS AREA PART OF ALTERNATE (ALT. H-)



**3 PARTIAL FIRST FLOOR PLAN - REMOVALS**  
SCALE: 1/8"=1'-0"  
ALL WORK THIS AREA PART OF ALTERNATE (ALT. H-)

- KEYED NOTES - REMOVALS:**
- 1 REMOVE INTAKE DUCTWORK/ DUCT SLEEVES, EXISTING INTAKE LOUVER TO REMAIN.
  - 2 REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR, CUT BACK EXISTING PIPING SERVICING UNIT, REMOVE VALVES AND ASSOCIATED, CUT BACK PORTION OF EXISTING FIN TUBE RADIATION AND COVER AS NECESSARY, DISCONNECT EXISTING CONTROLS.
  - 3 REMOVE EXISTING THERMOSTATS/TEMPERATURE SENSORS, INCLUDING CONTROL WIRING, WIRE MOLDING, CONDUIT, AND ASSOCIATED, BMS CONTROL WIRING TO BE REUSED.
  - 4 REMOVE FAN COIL UNIT, INTAKE DUCT SLEEVE, AND LOUVER, CUT BACK EXISTING PIPING SERVICING UNIT, REMOVE VALVES AND ASSOCIATED, CUT BACK PORTION OF EXISTING FIN TUBE RADIATION AND COVER AS NECESSARY, DISCONNECT EXISTING CONTROLS.



- GENERAL NOTES:**
1. PROVIDE ALL ALTERATIONS, RESTORATIONS, AND REPLACEMENTS NECESSARY TO ACCOMMODATE NEW WORK, INCLUDING FIN TUBE COVERS.
  2. NEATLY FIRESTOP ALL INTERIOR WALL AND FLOOR PENETRATIONS.
  3. SEE UV-C LIGHTING SCHEDULES FOR NEW AND EXISTING EQUIPMENT.

**1 PARTIAL BASEMENT FLOOR PLAN - REMOVALS**  
SCALE: 1/8"=1'-0"  
ALL WORK THIS AREA PART OF ALTERNATE (ALT. H-)

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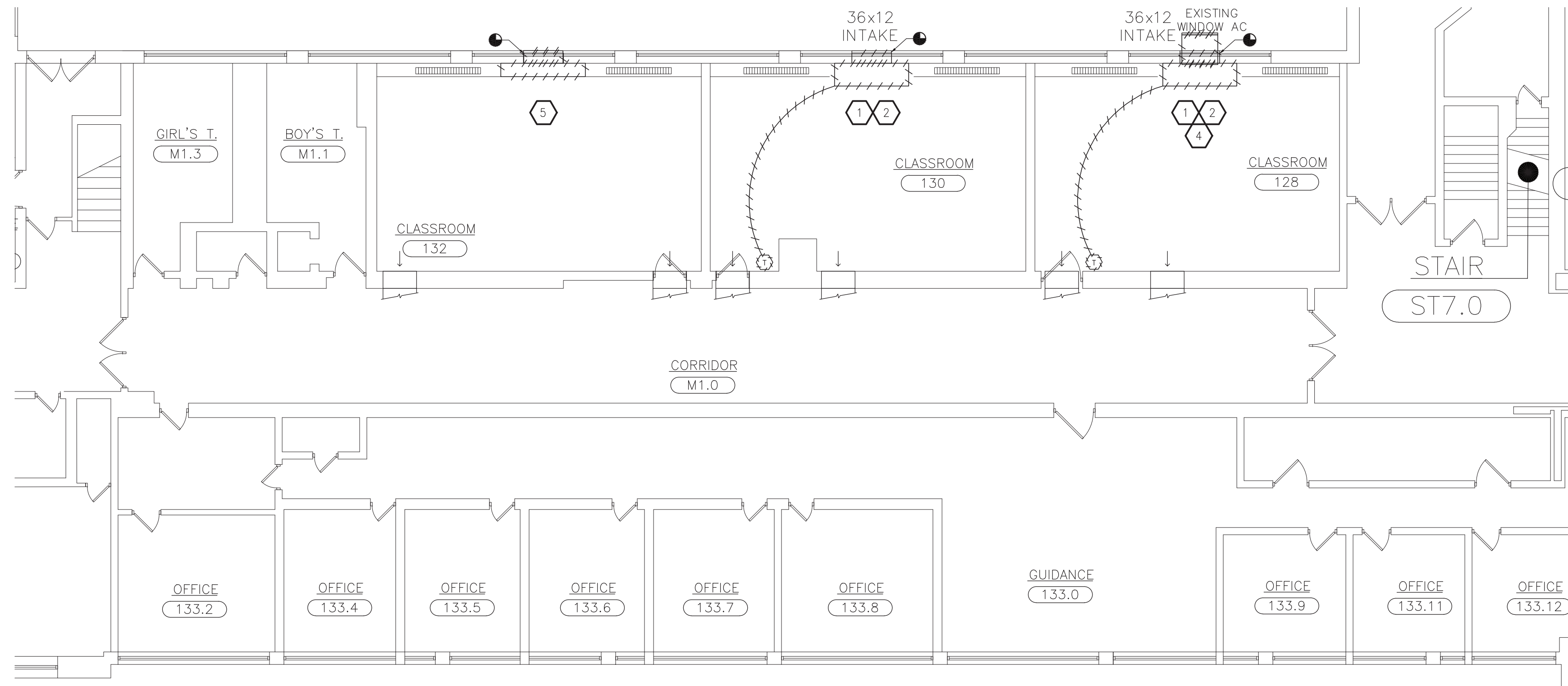
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JACK G. D'ANGELO  
No. 059446  
Professional Engineer

WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990  
SED NO. 44-21-01-06-0-001-042

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SHEET SIZE	30" x 42"
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SHEET TITLE <b>PARTIAL BASEMENT AND FIRST FLOOR PLANS - REMOVALS</b>	
SHEET NO. <b>MD-100</b>	

FILE PATH - N:\1 - PROJECT DIRECTORIES\1 - E & R Projects\05 - Warwick Valley CSD\05-21-04 Warwick Federal Grant Project\CAD\Packaging\Isd\warv105-21-04-MD0-MD04, M110.dwg



## 2 PARTIAL FIRST FLOOR PLAN - REMOVALS

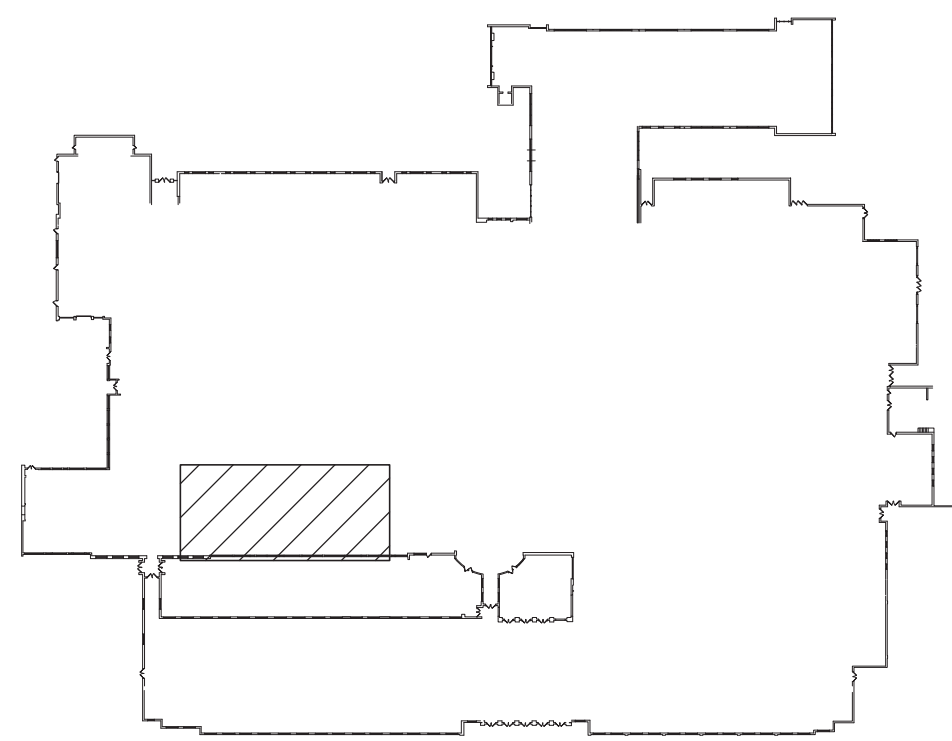
SCALE: 1/8"=1'-0"

### KEYED NOTES - REMOVALS:

- 1 REMOVE INTAKE DUCTWORK/ DUCT SLEEVES, EXISTING INTAKE LOUVER TO REMAIN.
- 2 REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR. CUT BACK EXISTING PIPING SERVICING UNIT, REMOVE VALVES AND ASSOCIATED. CUT BACK PORTION OF EXISTING FIN TUBE RADIATION AND COVER AS NECESSARY. DISCONNECT EXISTING CONTROLS.
- 3 REMOVE EXISTING THERMOSTATS/TEMPERATURE SENSORS, INCLUDING CONTROL WIRING, WIRE MOLDING, CONDUIT, AND ASSOCIATED. BMS CONTROL WIRING TO BE REUSED.
- 4 CAREFULLY REMOVE EXISTING WINDOW AIR CONDITIONER AND INSULATED PANEL AND TURN OVER TO DISTRICT.
- 5 CUT AND MODIFY RADIANT PIPING AND COVER TO PREPARE FOR NEW WORK. CUT HOLE IN MASONRY FOR NEW SLEEVE AND LINTEL.

### GENERAL NOTES:

1. PROVIDE ALL ALTERATIONS, RESTORATIONS, AND REPLACEMENTS NECESSARY TO ACCOMMODATE NEW WORK, INCLUDING FIN TUBE COVERS.
2. PROVIDE FIRESTOP AT ALL INTERIOR WALL AND FLOOR PENETRATIONS.
3. SEE UV-C LIGHTING SCHEDULES FOR NEW AND EXISTING EQUIPMENT.



FIRST FLOOR KEY PLAN  
SCALE: NONE



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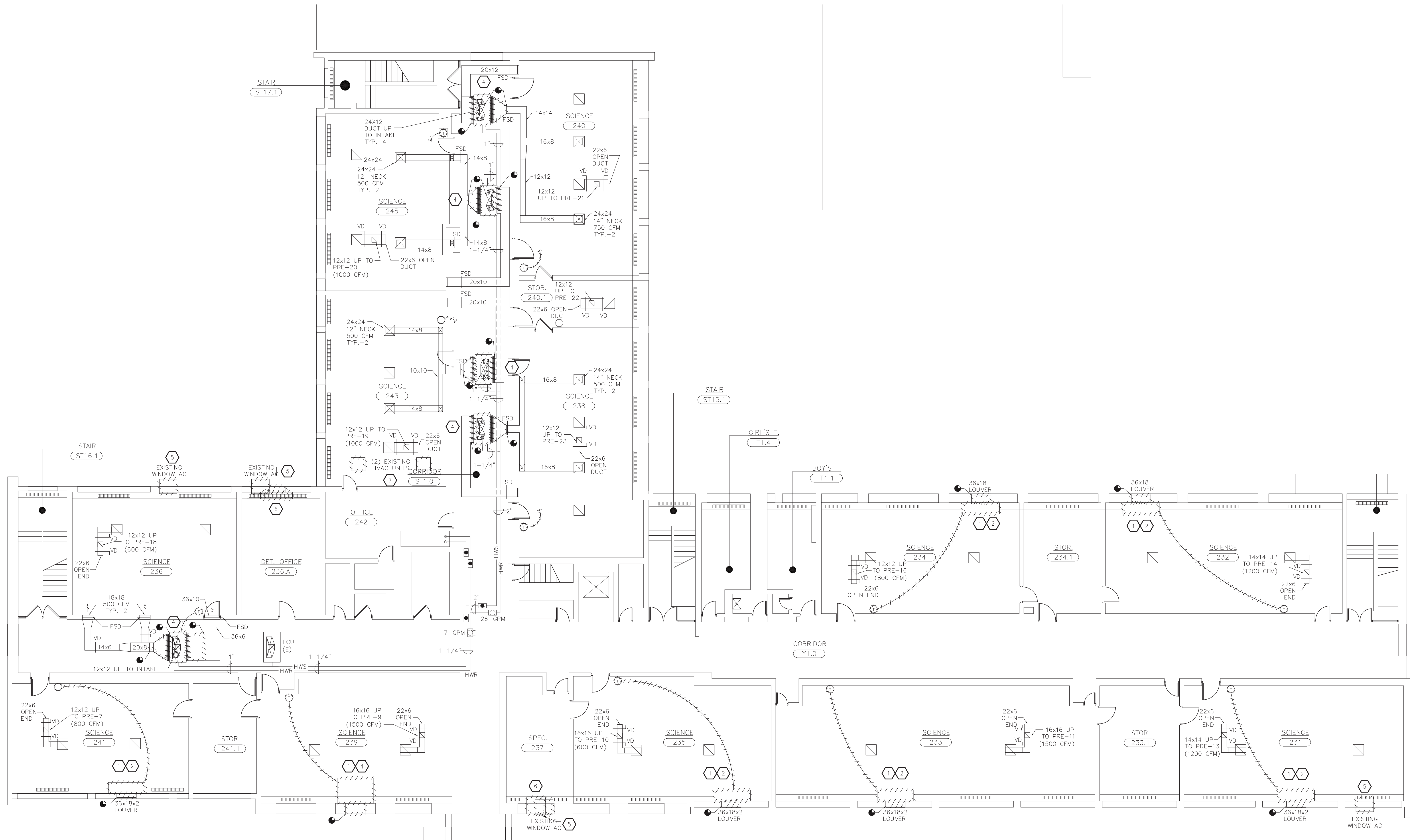
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SHEET SIZE	30" X 42"
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SHEET TITLE	PARTIAL FIRST FLOOR PLAN - REMOVALS
SHEET NO.	MD-101

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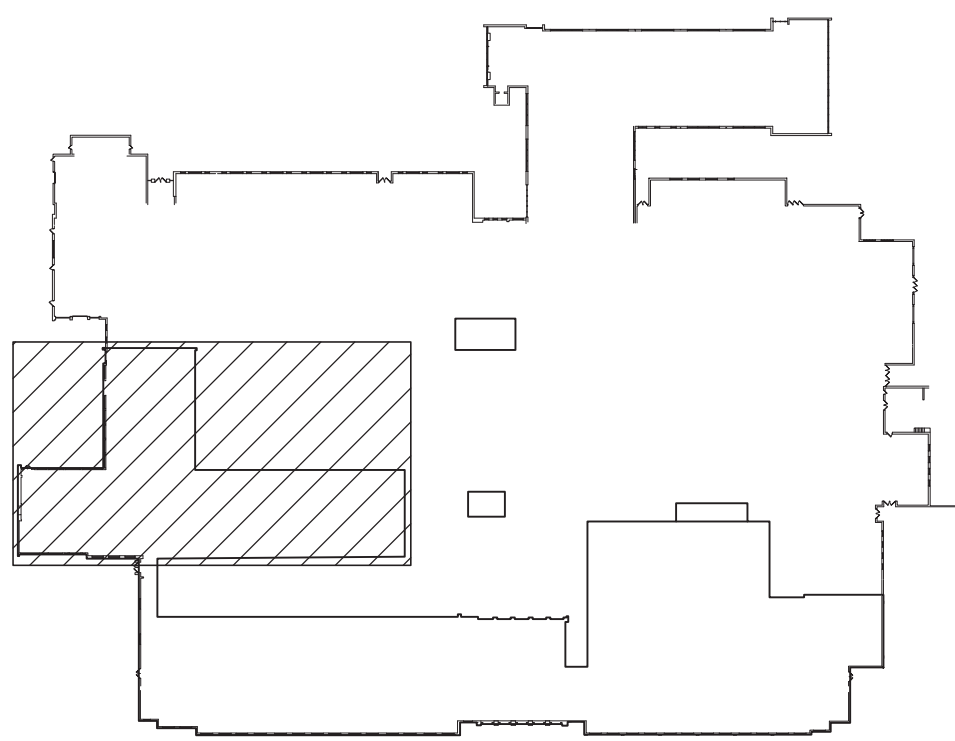
1 PARTIAL SECOND FLOOR PLAN - REMOVALS  
SCALE: 1/8"=1'-0"

KEYED NOTES — REMOVALS:

- 1 REMOVE INTAKE DUCTWORK / DUCT SLEEVES, EXISTING INTAKE LOUVER TO REMAIN.
- 2 REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR. CUT BACK EXISTING PIPING SERVING UNIT. REMOVE VALVES AND ASSOCIATED. CUT BACK PORTION OF EXISTING FIN TUBE RADIATION AND COVER AS NECESSARY. DISCONNECT EXISTING CONTROLS.
- 3 REMOVE EXISTING THERMOSTATS/TEMPERATURE SENSORS, INCLUDING CONTROL WIRING, WIRE MOLDING, CONDUIT, AND ASSOCIATED. BMS CONTROL WIRING TO BE REUSED.
- 4 REMOVE EXISTING CEILING HUNG UNIT VENTILATOR. CUT BACK EXISTING PIPING SERVING UNIT. REMOVE VALVES AND ASSOCIATED. CUT BACK PORTION OF EXISTING DUCTWORK. REMOVE VIBRATION ISOLATORS AND UNIT SUPPORTS. DISCONNECT EXISTING CONTROLS.
- 5 CAREFULLY REMOVE EXISTING WINDOW AIR CONDITIONER AND INSULATED PANEL AND TURN OVER TO DISTRICT.
- 6 CUT AND MODIFY RADIANT PIPING AND COVER TO PREPARE FOR NEW WORK. CUT HOLE IN MASONRY FOR NEW SLEEVE AND LINTEL.
- 7 REMOVE INDICATED EXISTING HVAC EQUIPMENT IN CLASSROOM AND ANY CORRESPONDING ROOF EQUIPMENT IN ITS ENTIRETY. CUT AND CAP PIPING SERVING UNIT. PATCH AND SEAL ROOF AT PENETRATIONS.

GENERAL NOTES:

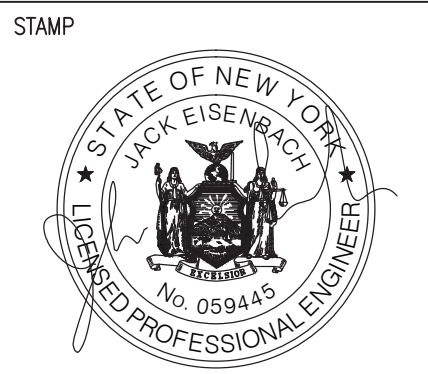
1. PROVIDE ALL ALTERATIONS, RESTORATIONS, AND REPLACEMENTS NECESSARY TO ACCOMMODATE NEW WORK, INCLUDING FIN TUBE COVERS.
2. PROVIDE FIRESTOP AT ALL INTERIOR WALL AND FLOOR PENETRATIONS.
3. SEE UV-C LIGHTING SCHEDULES FOR NEW AND EXISTING EQUIPMENT.



SECOND FLOOR KEY PLAN  
SCALE: NONE

ENGINEER:  
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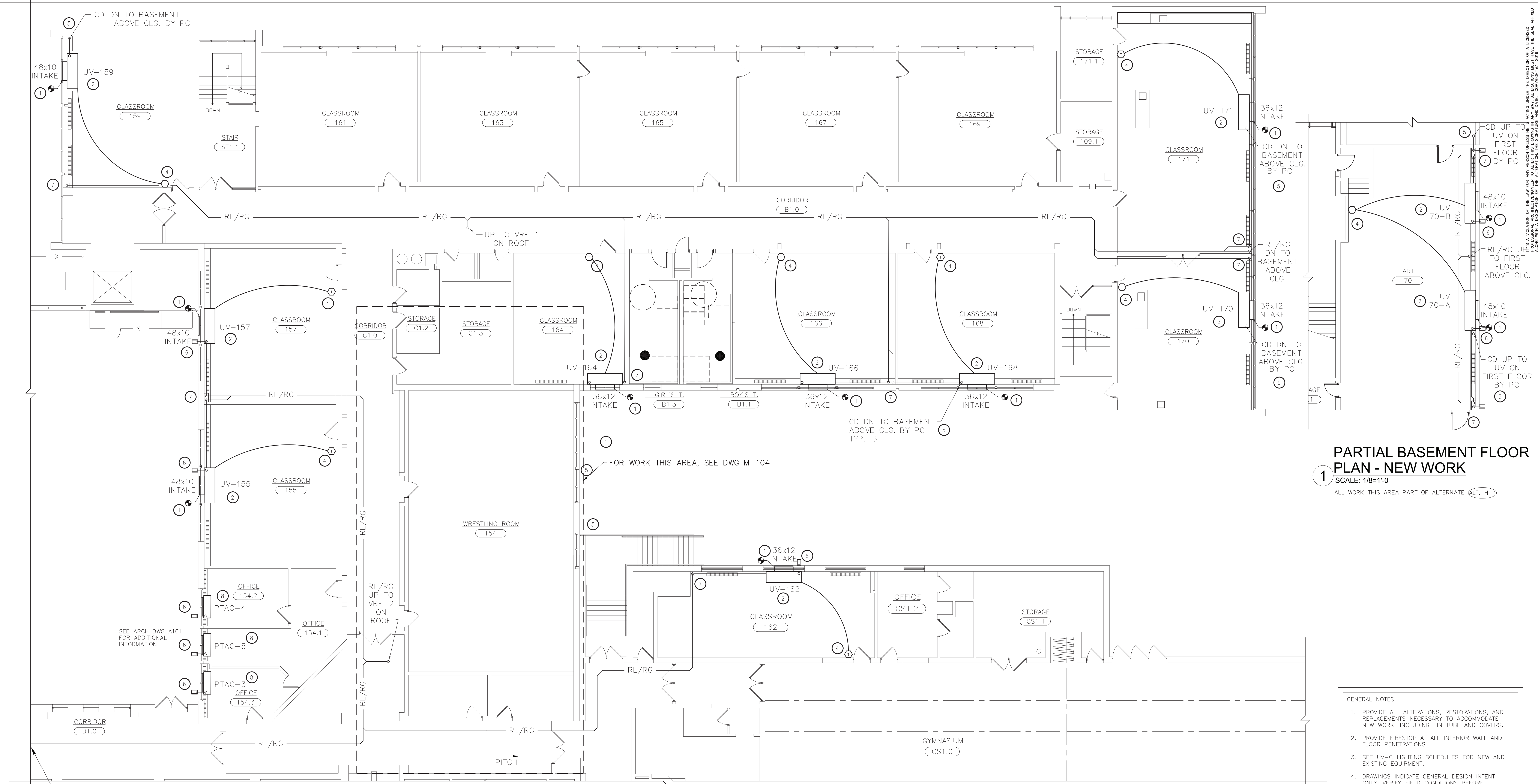


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SHEET TITLE	PARTIAL SECOND FLOOR PLAN - REMOVALS
SHEET NO.	

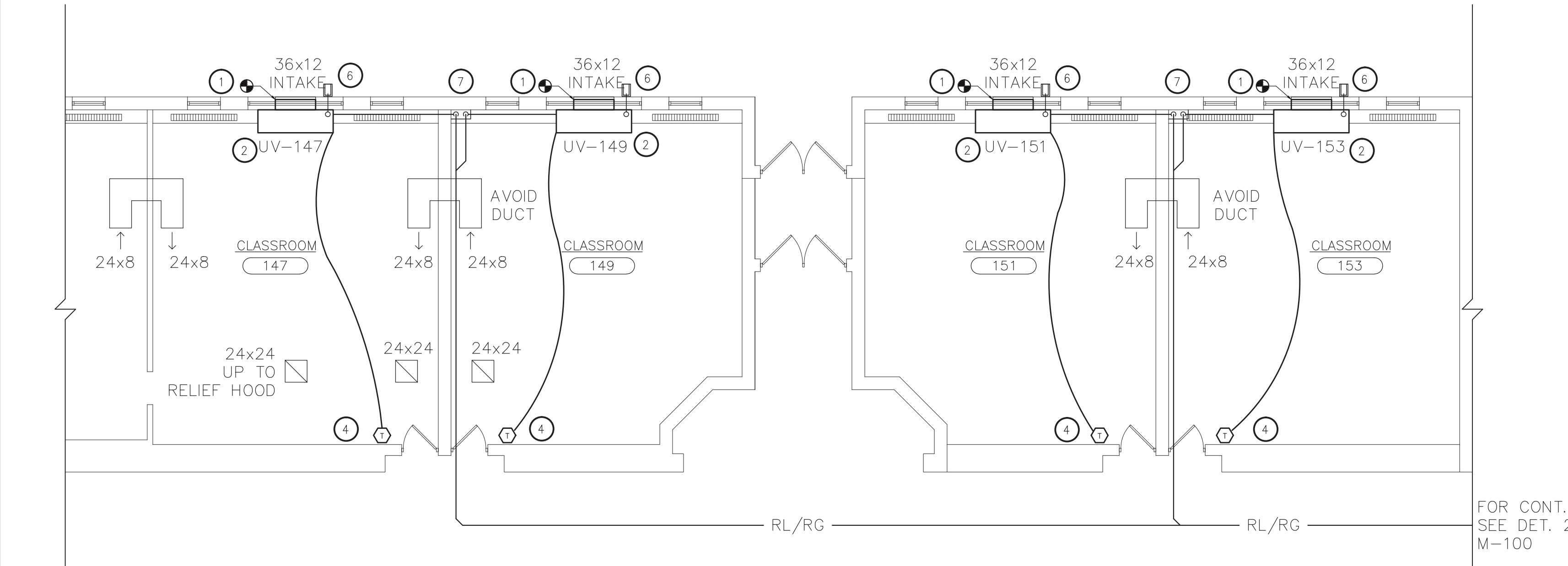
MD-102





**PARTIAL BASEMENT FLOOR PLAN - NEW WORK**  
SCALE: 1/8"=1'-0"  
ALL WORK THIS AREA PART OF ALTERNATE (ALT. H-1)

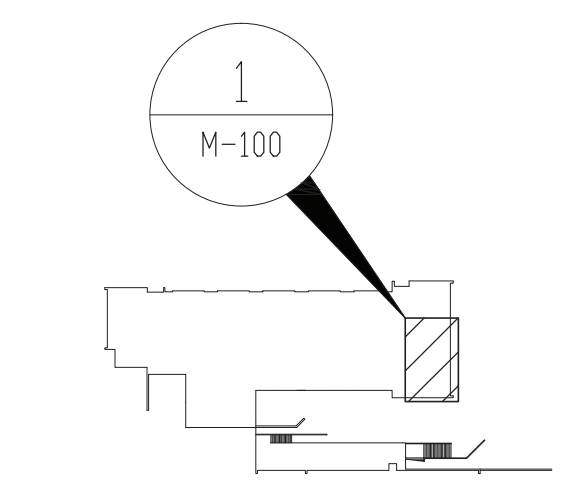
**PARTIAL FIRST FLOOR PLAN - NEW WORK**  
SCALE: 1/8"=1'-0"  
ALL WORK THIS AREA PART OF ALTERNATE (ALT. H-1)



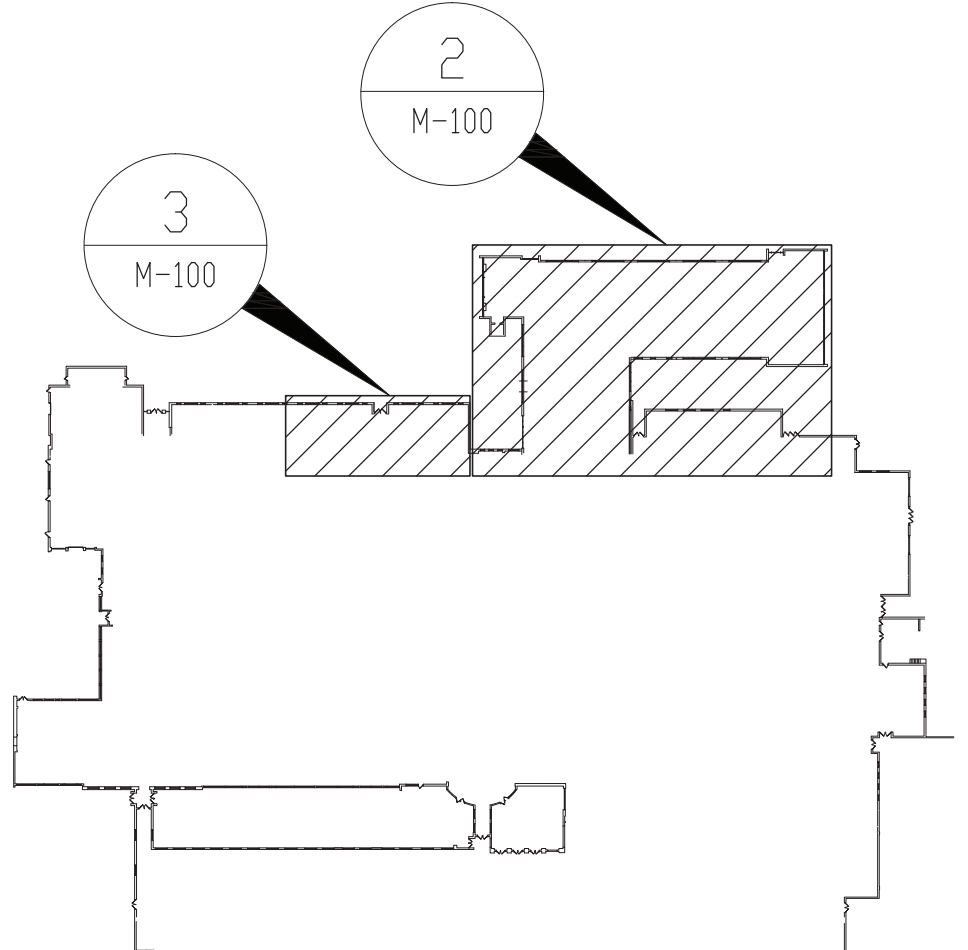
**PARTIAL FIRST FLOOR PLAN - NEW WORK**  
SCALE: 1/8"=1'-0"  
ALL WORK THIS AREA PART OF ALTERNATE (ALT. H-1)

- KEYED NOTES - NEW WORK:**
- 1 PROVIDE INTAKE SLEEVE THROUGH WALL AND CONNECT TO EXISTING INTAKE LOUVER. PROPERLY SUPPORT SLEEVE, CAULK GAPS, AND SEAL AROUND SLEEVE AND INTAKE LOUVER TO MAKE WEATHERTIGHT. VERIFY INTAKE LOUVER IN FIELD.
  - 2 PROVIDE NEW FLOOR MOUNTED UNIT VENTILATORS. SEE SCHEDULE ON M-502. PROVIDE AND CONNECT NEW INSULATED REFRIGERATION PIPING. EXTEND AND PROVIDE PIPING WITH NEW VALVES AND ASSOCIATED TO CONNECT EXISTING HOT WATER PIPING TO NEW UNIT. RECONNECT EXISTING FIN TUBE RADIATION TO RUN BEHIND NEW UNITS. PROVIDE UNIT WITH DRAIN PAN BELOW UNIT COILS AND CONNECT TO CONDENSATE PIPING. RECONNECT AND REUSE CONTROLS WHEN APPLICABLE. PROVIDE ALTERATIONS TO CONTROLS TO MAKE COMPATIBLE WITH NEW UNITS. FIELD VERIFY COIL CONNECTION SIDES BEFORE ORDERING MATERIALS AND EQUIPMENT. REUSE ELECTRICAL CIRCUITS. PROVIDE POWER TO UV'S VRF CONTROLS AND ASSOCIATED.
  - 3 ALL NEW EQUIPMENT TO BE CONNECTED TO AND MONITORED BY THE BMS. COORDINATE WITH DISTRICT CONTROLS VENDOR.
  - 4 PROVIDE NEW WIRED TEMPERATURE SENSOR, CONNECT TO SPECIFIED NEW UNIT AND TO BMS. PROVIDE CONTROL WIRING, WIRE MOLDING, CONDUIT, AND ASSOCIATED TO MATCH EXISTING. MOUNT LOCATION AND WIRE PATH TO MATCH EXISTING. BMS CONTROL WIRING TO BE REUSED WHEN APPLICABLE. VERIFY IN FIELD.
  - 5 INDICATED CONDENSATE PIPING AND CONNECTION TO BE PROVIDED BY PLUMBING CONTRACTOR. MECHANICAL CONTRACTOR TO FURNISH PC WITH SPLASHBLOCKS WHERE APPLICABLE. PC WORK SHOWN FOR REFERENCE ONLY.
  - 6 PROVIDE 3/4" COPPER CONDENSATE PIPING TO THE EXTERIOR. SEE DETAILS FOR MORE INFORMATION. MAKE PENETRATIONS TO EXTERIOR WEATHERTIGHT. PROVIDE SPLASHBLOCKS SLOPED AWAY FROM FOUNDATION.
  - 7 PROVIDE AND SUPPORT SHEET METAL PIPE CHASES FOR REFRIGERANT AND/OR CONDENSATE LINES. MATCH ADJACENT FIN TUBE COVER MATERIALS AND COLORS. FIELD VERIFY DIMENSIONS. COORDINATE WITH PLUMBING CONTRACTOR WORK.
  - 8 PROVIDE NEW PTAC UNIT WITH WALL SLEEVE AND LOUVER. SEE SCHEDULE ON M-502. PROVIDE CONTROLLER TO CONNECT TO BMS; EXTEND AND PROVIDE PIPING WITH NEW VALVES AND ASSOCIATED TO CONNECT EXISTING HOT WATER PIPING TO NEW UNIT. RECONNECT EXISTING FIN TUBE RADIATION TO RUN BEHIND NEW UNITS. PROVIDE CONTROLS COMPATIBLE WITH NEW UNIT. FIELD VERIFY COIL CONNECTION SIDES IN FIELD. REUSE ELECTRICAL CIRCUITS.

- GENERAL NOTES:**
1. PROVIDE ALL ALTERATIONS, RESTORATIONS, AND REPLACEMENTS NECESSARY TO ACCOMMODATE NEW WORK, INCLUDING FIN TUBE AND COVERS.
  2. PROVIDE FIRESTOP AT ALL INTERIOR WALL AND FLOOR PENETRATIONS.
  3. SEE UV-C LIGHTING SCHEDULES FOR NEW AND EXISTING EQUIPMENT.
  4. DRAWINGS INDICATE GENERAL DESIGN INTENT ONLY. VERIFY FIELD CONDITIONS BEFORE ORDERING MATERIALS AND EQUIPMENT. IDENTIFY CONFLICTS AND SUBMIT IN WRITING TO ENGINEER.
  5. TO ENSURE COMPLIANCE WITH ASHRAE-15, DO NOT RUN REFRIGERANT PIPING IN ROOMS OTHER THAN THOSE SHOWN UNLESS APPROVED BY ENGINEER.
  6. FIN TUBE COVERS THAT MUST BE ALTERED TO ACCOMPLISH WORK SHALL REQUIRE THE ADDITION OF FIN TUBE COVER CAPS/ TRIM TO MATCH EXISTING TO COVER NEWLY FORMED GAPS AND SHARP EDGES. COVERS SHALL REMAIN PROPERLY SUPPORTED. ANY WALL NEWLY EXPOSED AFTER ALTERATION TO BE PAINTED TO MATCH SURROUNDING CONDITIONS.



**BASEMENT KEY PLAN**  
SCALE: NONE



**FIRST FLOOR KEY PLAN**  
SCALE: NONE

ENGINEER:

**ER**

Eisenbach & Ruhke Engineering, P.C.  
291 Cassel Street - Union, NY 10981  
Tel: 914.898.4444  
www.erenge.com

CONSULTANT(S):

**FULLER D'ANGELO P.C.**

ARCHITECTS PLANNERS

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STAMP

STATE OF NEW YORK  
JULIO A. RUHKE  
No. 059445  
REGISTERED PROFESSIONAL ENGINEER

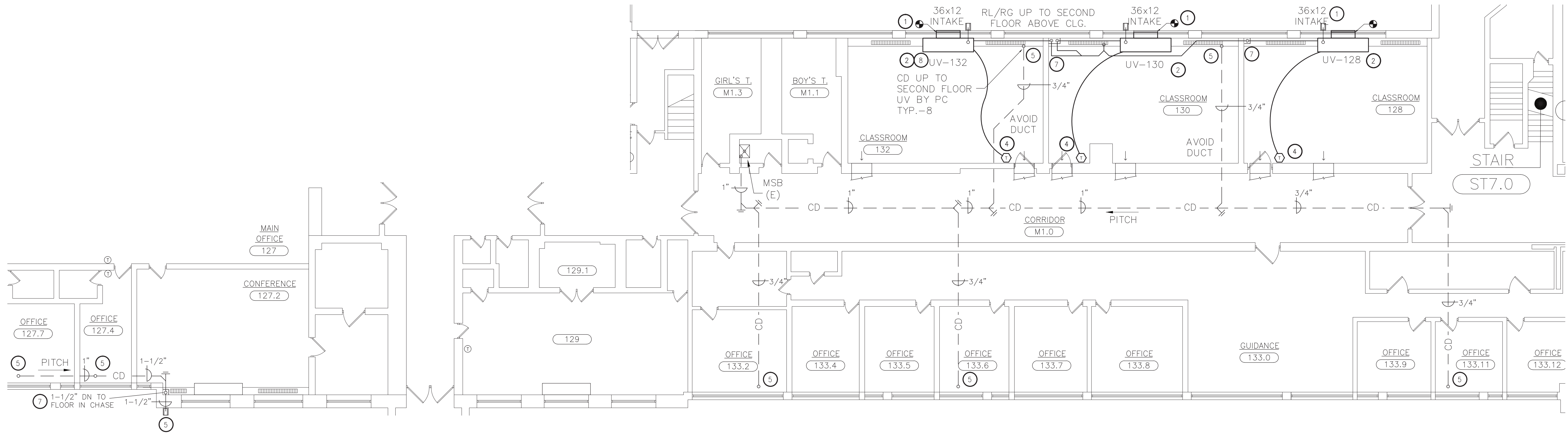
WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990

SED NO. 44-21-01-06-0-001-042

PROJECT NO.	05-21-04 05-20-06
ISSUED FOR BID	11.09.2022
SED SET	10.19.2022
REVISION	DATE
DRAWN BY	
CHECKED BY	
SHEET SIZE	30" x 42"
SCALE	AS NOTED
SHEET TITLE	
PARTIAL BASEMENT AND FIRST FLOOR PLANS - NEW WORK	
SHEET NO.	
M-100	

FILE PATH - N:\1 - PROJECT DIRECTORIES\1 - E & R Projects\05 - Warwick Valley CSD\05-21-04 Warwick Federal Grant Project\05-21-04-M100-M104, M110.dwg





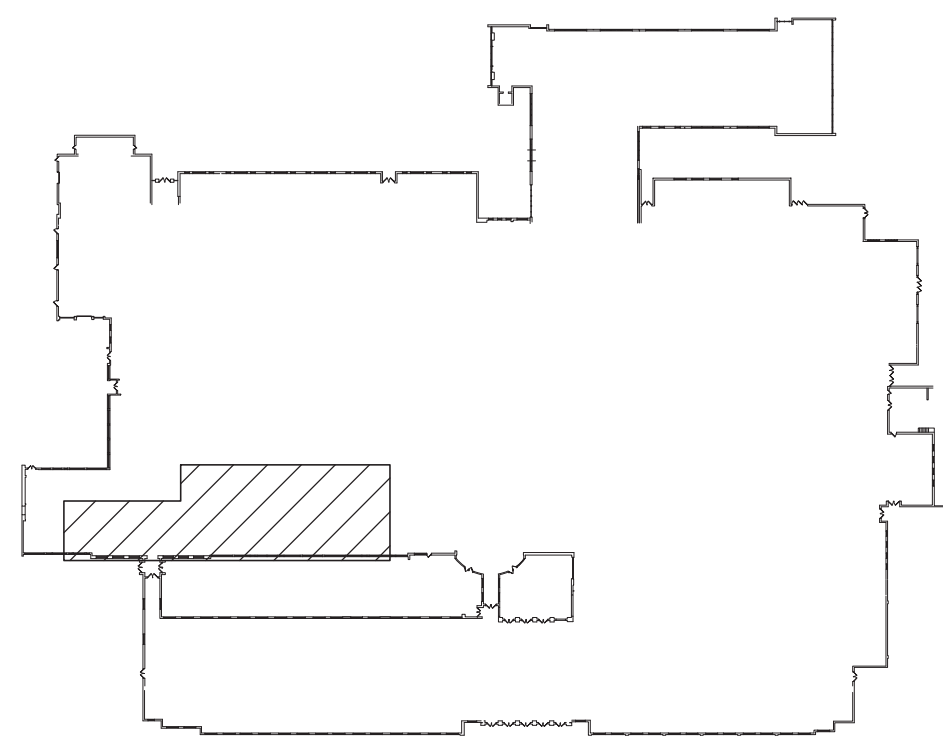
2 PARTIAL FIRST FLOOR PLAN - NEW WORK  
SCALE: 1/8"=1'-0"

KEYED NOTES - NEW WORK:

- 1 PROVIDE INTAKE SLEEVE THROUGH WALL AND CONNECT TO NEW INTAKE LOUVER. PROPERLY SUPPORT SLEEVE, CAULK GAPS, AND SEAL AROUND SLEEVE AND INTAKE LOUVER TO MAKE WEATHERTIGHT. PROVIDE LINTEL.
- 2 PROVIDE NEW FLOOR MOUNTED UNIT VENTILATORS. SEE SCHEDULE ON M-502. PROVIDE AND CONNECT NEW INSULATED REFRIGERATION PIPING. EXTEND AND PROVIDE PIPING WITH NEW VALVES AND ASSOCIATED TO CONNECT EXISTING HOT WATER PIPING TO NEW UNIT. RECONNECT EXISTING FIN TUBE RADIATION TO RUN BEHIND NEW UNITS. PROVIDE UNIT WITH DRAIN PAN BELOW UNIT COILS AND CONNECT TO CONDENSATE PIPING. RECONNECT AND REUSE CONTROLS WHEN APPLICABLE. PROVIDE ALTERATIONS TO CONTROLS TO MAKE COMPATIBLE WITH NEW UNITS. FIELD VERIFY COIL CONNECTION SIDES BEFORE ORDERING MATERIALS AND EQUIPMENT. REUSE ELECTRICAL CIRCUITS. PROVIDE POWER TO UV'S VRF CONTROLS AND ASSOCIATED.
- 3 ALL NEW EQUIPMENT TO BE CONNECTED TO AND MONITORED BY THE BMS. COORDINATE WITH DISTRICT CONTROLS VENDOR.
- 4 PROVIDE NEW WIRED TEMPERATURE SENSOR, CONNECT TO SPECIFIED NEW UNIT AND TO BMS. PROVIDE CONTROL WIRING, WIRE MOLDING, CONDUIT, AND ASSOCIATED TO MATCH EXISTING. PROVIDE BMS CONTROL WIRING. VERIFY IN FIELD.
- 5 INDICATED CONDENSATE PIPING AND CONNECTION TO BE PROVIDED BY PLUMBING CONTRACTOR. MECHANICAL CONTRACTOR TO FURNISH PC WITH SPLASHBLOCKS WHERE APPLICABLE. PC WORK SHOWN FOR REFERENCE ONLY.
- 6 PROVIDE 3/4" COPPER CONDENSATE PIPING TO THE EXTERIOR. SEE DETAILS FOR MORE INFORMATION. MAKE PENETRATIONS TO EXTERIOR WEATHERTIGHT. PROVIDE SPLASHBLOCKS SLOPED AWAY FROM FOUNDATION.
- 7 PROVIDE AND SUPPORT SHEET METAL PIPE CHASES FOR REFRIGERANT AND/OR CONDENSATE LINES. MATCH ADJACENT FIN TUBE COVER MATERIALS AND COLORS. FIELD VERIFY DIMENSIONS. COORDINATE WITH PLUMBING CONTRACTOR WORK.
- 8 EXTEND UNIT VENTILATOR HYDRONIC HEATING CIRCUIT TO NEW UNIT VENTILATOR FROM NEAREST MAIN. VERIFY IN FIELD PRIOR TO BID.

GENERAL NOTES:

1. PROVIDE ALL ALTERATIONS, RESTORATIONS, AND REPLACEMENTS NECESSARY TO ACCOMMODATE NEW WORK, INCLUDING FIN TUBE AND COVERS.
2. PROVIDE FIRESTOP AT ALL INTERIOR WALL AND FLOOR PENETRATIONS.
3. SEE UV-C LIGHTING SCHEDULES FOR NEW AND EXISTING EQUIPMENT.
4. DRAWINGS INDICATE GENERAL DESIGN INTENT ONLY. VERIFY FIELD CONDITIONS BEFORE ORDERING MATERIALS AND EQUIPMENT. IDENTIFY CONFLICTS AND SUBMIT IN WRITING TO ENGINEER.
5. TO ENSURE COMPLIANCE WITH ASHRAE-15, DO NOT RUN REFRIGERANT PIPING IN ROOMS OTHER THAN THOSE SHOWN UNLESS APPROVED BY ENGINEER.
6. FIN TUBE COVERS THAT MUST BE ALTERED TO ACCOMPLISH WORK SHALL REQUIRE THE ADDITION OF FIN TUBE COVER CAPS/ TRIM TO MATCH EXISTING TO COVER NEWLY FORMED GAPS AND SHARP EDGES. COVERS SHALL REMAIN PROPERLY SUPPORTED. ANY WALL NEWLY EXPOSED AFTER ALTERATION TO BE PAINTED TO MATCH SURROUNDING CONDITIONS.



FIRST FLOOR KEY PLAN  
SCALE: NONE



ENGINEER:  
**Eisenbach & Ruhke Engineering, P.C.**  
293 Glenwood Street - Union, NY 13501  
(315) 735-1118, Fax (315) 735-1105  
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CONSULTANT(S):  
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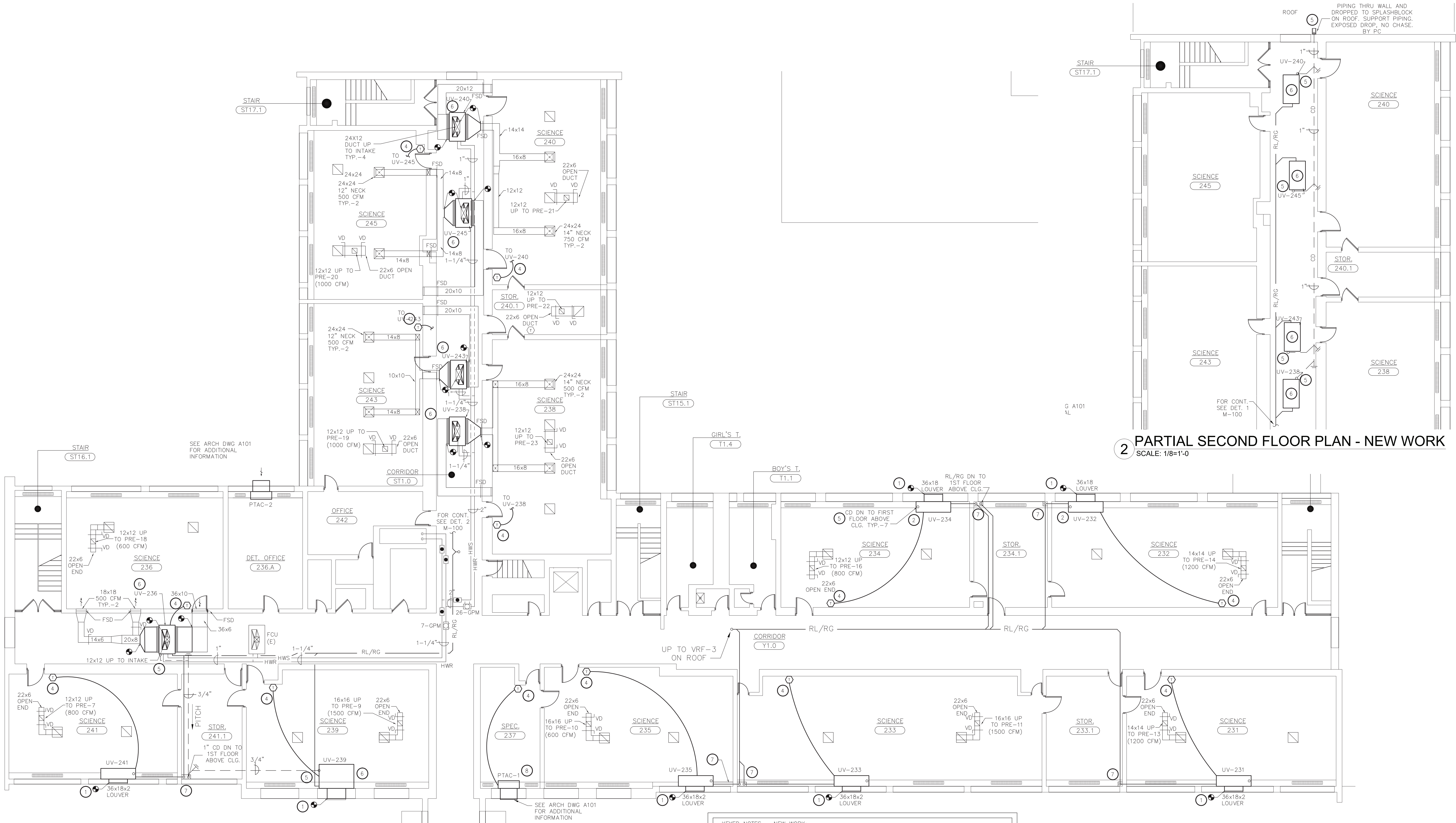


WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990  
SED NO. 44-21-01-06-0-001-042

PROJECT NO.	05-21-04 05-20-06
ISSUED FOR BID	11.09.2022
SET	10.19.2022
REVISION	DATE
DRAWN BY	
CHECKED BY	
SHEET SIZE	30" X 42"
SCALE	AS NOTED
SHEET TITLE	PARTIAL FIRST FLOOR PLAN - NEW WORK
SHEET NO.	

M-101

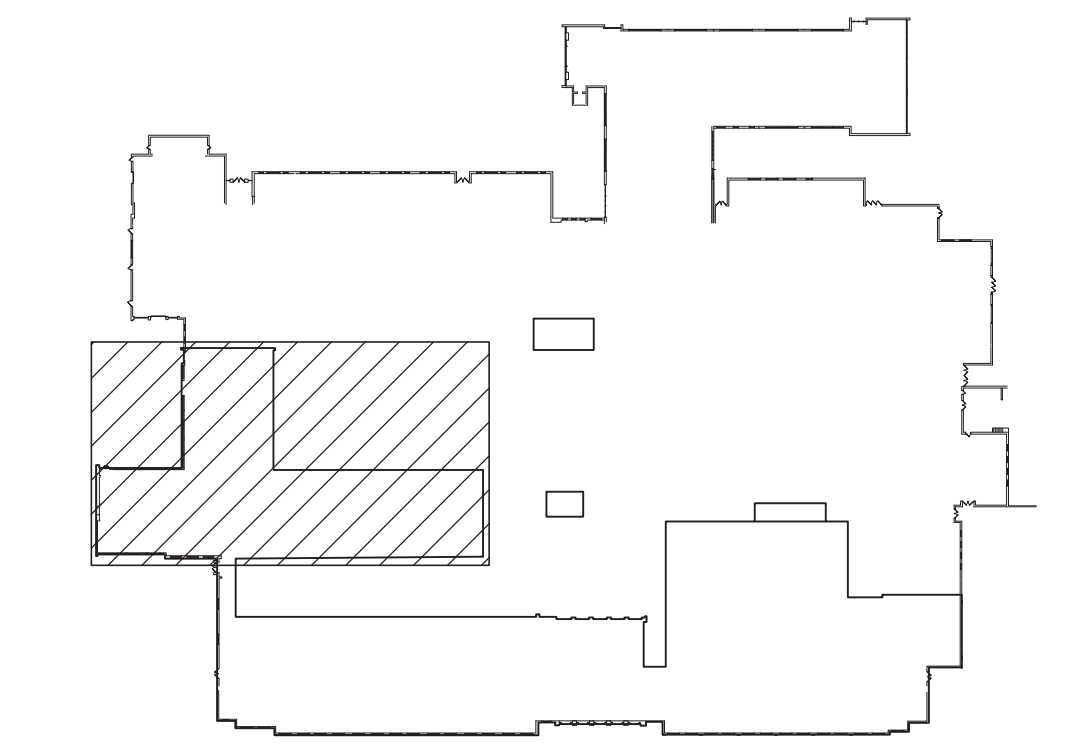




1 PARTIAL SECOND FLOOR PLAN - NEW WORK  
SCALE: 1/8"=1'-0"

- KEYED NOTES - NEW WORK:
- 1 PROVIDE INTAKE SLEEVE THROUGH WALL AND CONNECT TO EXISTING INTAKE LOUVER. PROPERLY SUPPORT SLEEVE, CAULK GAPS, AND SEAL AROUND SLEEVE AND INTAKE LOUVER TO MAKE WEATHERTIGHT.
  - 2 PROVIDE NEW FLOOR MOUNTED UNIT VENTILATOR. SEE SCHEDULE ON M-502. PROVIDE AND CONNECT NEW INSULATED REFRIGERATION PIPING. EXTEND AND PROVIDE PIPING WITH NEW VALVES AND ASSOCIATED TO CONNECT EXISTING HOT WATER PIPING TO NEW UNIT. RECONNECT EXISTING FIN TUBE RADIATION TO RUN BEHIND NEW UNITS. PROVIDE UNIT WITH DRAIN PAN BELOW UNIT COILS AND CONNECT TO CONDENSATE PIPING. RECONNECT AND REUSE CONTROLS WHEN APPLICABLE. PROVIDE ALTERATIONS TO CONTROLS TO MAKE COMPATIBLE WITH NEW UNITS. FIELD VERIFY COIL CONNECTION SIDES BEFORE ORDERING MATERIALS AND EQUIPMENT. REUSE ELECTRICAL CIRCUITS. PROVIDE POWER TO UV'S VRF CONTROLS AND ASSOCIATED.
  - 3 ALL NEW EQUIPMENT TO BE CONNECTED TO AND MONITORED BY THE BMS. COORDINATE WITH DISTRICT CONTROLS VENDOR.
  - 4 PROVIDE NEW WIRED TEMPERATURE SENSOR, CONNECT TO SPECIFIED NEW UNIT AND TO BMS. PROVIDE CONTROL WIRING, WIRE MOLDING, CONDUIT, AND ASSOCIATED TO MATCH EXISTING. MOUNT LOCATION AND WIRE PATH TO MATCH EXISTING. BMS CONTROL WIRING TO BE REUSED WHEN APPLICABLE. VERIFY IN FIELD.
  - 5 INDICATED CONDENSATE PIPING AND CONNECTION TO BE PROVIDED BY PLUMBING CONTRACTOR. MECHANICAL CONTRACTOR TO FURNISH PC WITH SPLASHBLOCKS WHERE APPLICABLE. PC WORK SHOWN FOR REFERENCE ONLY.
  - 6 PROVIDE NEW HORIZONTAL UNIT VENTILATOR. SEE SCHEDULE ON M-502. PROVIDE AND CONNECT NEW INSULATED REFRIGERATION PIPING. EXTEND AND PROVIDE PIPING WITH NEW VALVES AND ASSOCIATED TO CONNECT EXISTING HOT WATER PIPING TO NEW UNIT. PROVIDE DUCTWORK TO CONNECT AND TRANSITION SUPPLY, RETURN, AND OUTSIDE AIR DUCTWORK TO NEW UNIT. PROVIDE VIBRATION ISOLATORS AND FLEXIBLE CONNECTIONS. SUPPORT UNIT AND DUCTWORK FROM STRUCTURE. PROVIDE INSULATION TO DUCTWORK. RECONNECT AND REUSE CONTROLS WHEN APPLICABLE. PROVIDE ALTERATIONS TO CONTROLS TO MAKE COMPATIBLE WITH NEW UNITS. FIELD VERIFY COIL CONNECTION SIDES IN FIELD. SEE SPECIFICATIONS REGARDING AN ALLOWANCE FOR REPAIR AND REPLACEMENT OF DUCTWORK INSULATION AS NEEDED.
  - 7 PROVIDE AND SUPPORT SHEET METAL PIPE CHASES FOR REFRIGERANT PIPING AND/OR CONDENSATE PIPING. MATCH ADJACENT FIN TUBE COVER MATERIALS AND COLORS. FIELD VERIFY DIMENSIONS. COORDINATE WITH PLUMBING CONTRACTOR WORK.
  - 8 PROVIDE NEW PTAC UNIT WITH WALL SLEEVE AND LOUVER. SEE SCHEDULE ON M-502. PROVIDE CONTROLLER TO CONNECT TO BMS. EXTEND AND PROVIDE PIPING WITH NEW VALVES AND ASSOCIATED TO CONNECT EXISTING HOT WATER PIPING TO NEW UNIT. RECONNECT EXISTING FIN TUBE RADIATION TO RUN BEHIND NEW UNITS. PROVIDE CONTROLS COMPATIBLE WITH NEW UNIT. FIELD VERIFY COIL CONNECTION SIDES IN FIELD. REUSE ELECTRICAL CIRCUITS.

- GENERAL NOTES:
1. PROVIDE ALL ALTERATIONS, RESTORATIONS, AND REPLACEMENTS NECESSARY TO ACCOMMODATE NEW WORK, INCLUDING FIN TUBE AND COVERS.
  2. PROVIDE FIRESTOP AT ALL INTERIOR WALL AND FLOOR PENETRATIONS.
  3. SEE UV-C LIGHTING SCHEDULES FOR NEW AND EXISTING EQUIPMENT.
  4. DRAWINGS INDICATE GENERAL DESIGN INTENT ONLY. VERIFY FIELD CONDITIONS BEFORE ORDERING MATERIALS AND EQUIPMENT. IDENTIFY CONFLICTS AND SUBMIT IN WRITING TO ENGINEER.
  5. TO ENSURE COMPLIANCE WITH ASHRAE-15, DO NOT RUN REFRIGERANT PIPING IN ROOMS OTHER THAN THOSE SHOWN UNLESS APPROVED BY ENGINEER.
  6. FIN TUBE COVERS THAT MUST BE ALTERED TO ACCOMPLISH WORK SHALL REQUIRE THE ADDITION OF FIN TUBE COVER CAPS/ TRIM TO MATCH EXISTING TO COVER NEWLY FORMED GAPS AND SHARP EDGES. COVERS SHALL REMAIN PROPERLY SUPPORTED. ANY WALL NEWLY EXPOSED AFTER ALTERATION TO BE PAINTED TO MATCH SURROUNDING CONDITIONS.



SECOND FLOOR KEY PLAN  
SCALE: NONE

2 PARTIAL SECOND FLOOR PLAN - NEW WORK  
SCALE: 1/8"=1'-0"

IT IS A VIOLATION OF THE LAW FOR ANY PERSON UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ARCHITECT/ENGINEER TO ALTER THE DRAWING IN ANY WAY. ALL ALTERATIONS MUST HAVE THE SEAL, ATTACHED ALONG WITH A DESCRIPTION OF THE ALTERATION, THE SIGNATURE AND DATE. COPYRIGHT © 2019

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www.eengpc.com

CONSULTANT(S):

**FULLER  
D'ANGELO  
P.C.**

**ARCHITECTS  
PLANNERS**

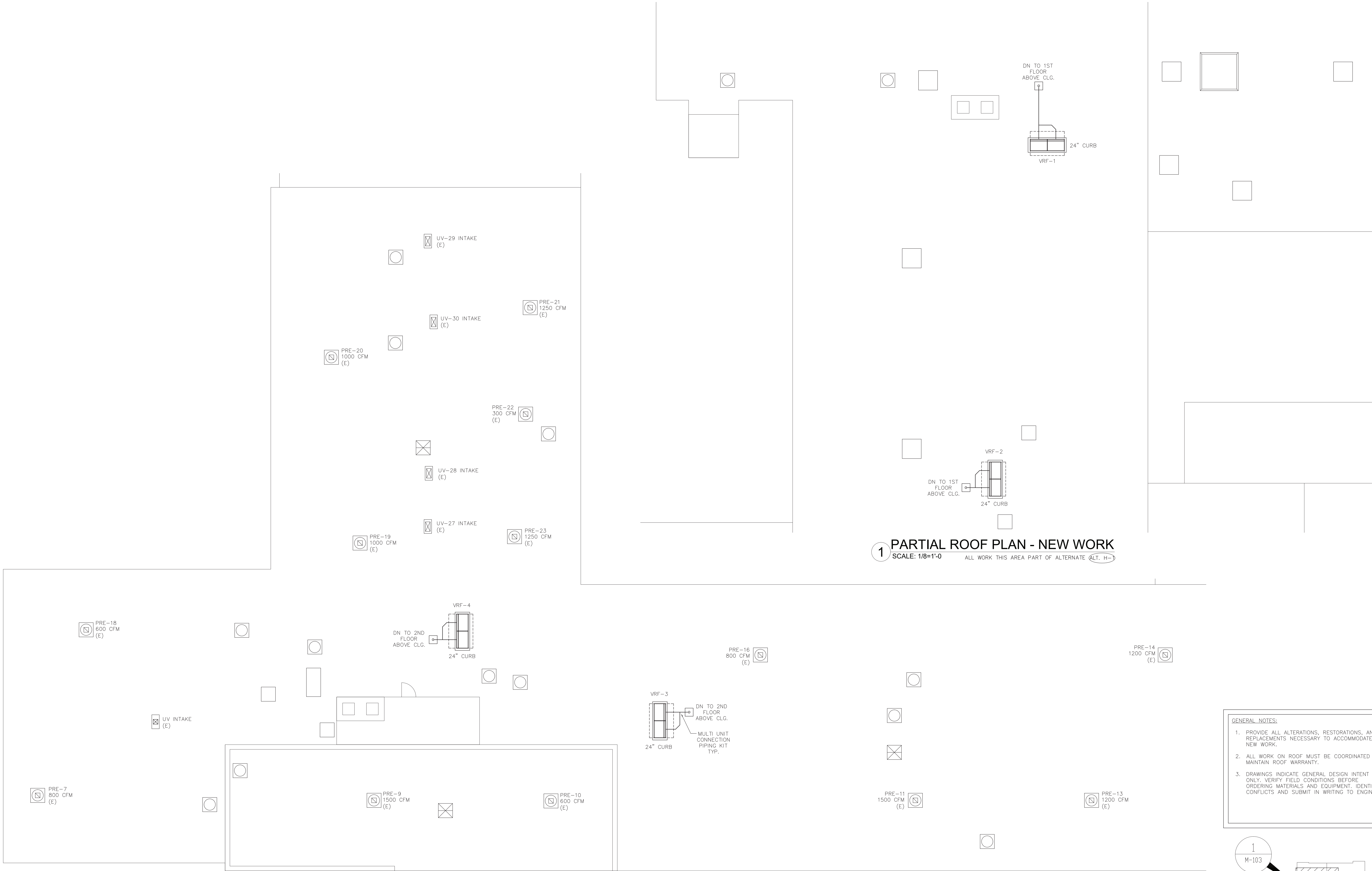
48 KNOLLWOOD ROAD  
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STATE OF NEW YORK  
JACK D'ANGELO  
No. 059447  
Professional Engineer

WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990  
SED NO. 44-21-01-06-0-001-042

PROJECT NO.	05-21-04 05-20-06
ISSUED FOR BID	11.09.2022
SED SET	10.19.2022
REVISION	DATE
DRAWN BY	
CHECKED BY	
SHEET SIZE	30" X 42"
SCALE	AS NOTED
SHEET TITLE	
PARTIAL SECOND FLOOR PLAN - NEW WORK	
SHEET NO.	
M-102	





1 PARTIAL ROOF PLAN - NEW WORK  
SCALE: 1/8"=1'-0" ALL WORK THIS AREA PART OF ALTERNATE ALT. H-1

2 PARTIAL ROOF PLAN - NEW WORK  
SCALE: 1/8"=1'-0"

KEYED NOTES - NEW WORK:

1 PROVIDE NEW VRF ON NEW 24" CURB. PROVIDE MULTI-UNIT CONNECTION PIPING KIT, REFRIGERANT PIPING, INSULATION, ROOF PIPING SUPPORTS, AND ROOF PIPE PORTAL SEAL ROOF PENETRATION TO BE WEATHER TIGHT AND TO MAINTAIN ROOF WARRANTY. CONNECT VRF TO EMS.

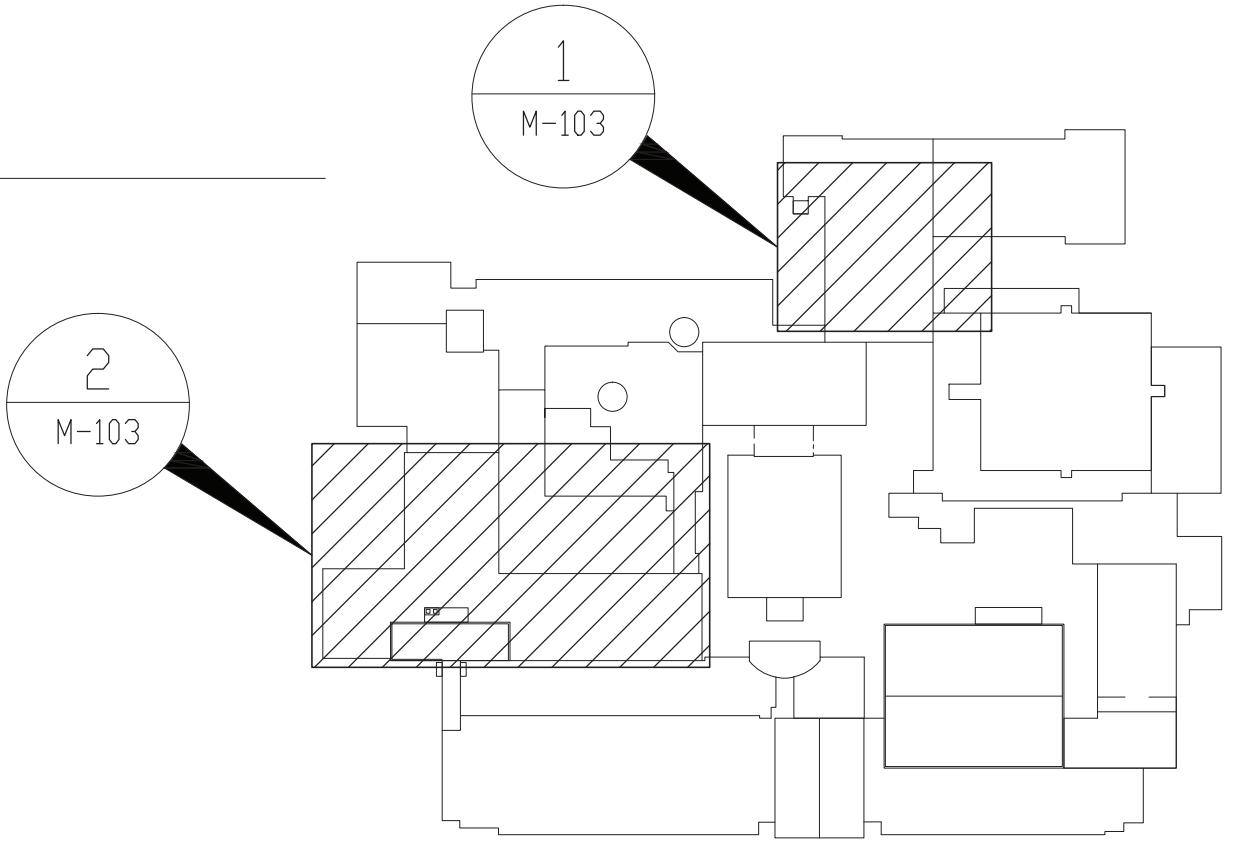
2 PLACEMENT OF VRFS AND PENETRATIONS ARE APPROXIMATE. VERIFY FIELD CONDITIONS. COORDINATE WITH ALL TRADES.

GENERAL NOTES:

1. PROVIDE ALL ALTERATIONS, RESTORATIONS, AND REPLACEMENTS NECESSARY TO ACCOMMODATE NEW WORK.

2. ALL WORK ON ROOF MUST BE COORDINATED TO MAINTAIN ROOF WARRANTY.

3. DRAWINGS INDICATE GENERAL DESIGN INTENT ONLY. VERIFY FIELD CONDITIONS BEFORE ORDERING MATERIALS AND EQUIPMENT. IDENTIFY CONFLICTS AND SUBMIT IN WRITING TO ENGINEER.



ROOF KEY PLAN  
SCALE: NONE



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ENGINEER:

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293 Glenview Street - Union, NY 13501  
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CONSULTANT(S):

**FULLER  
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ARCHITECTS  
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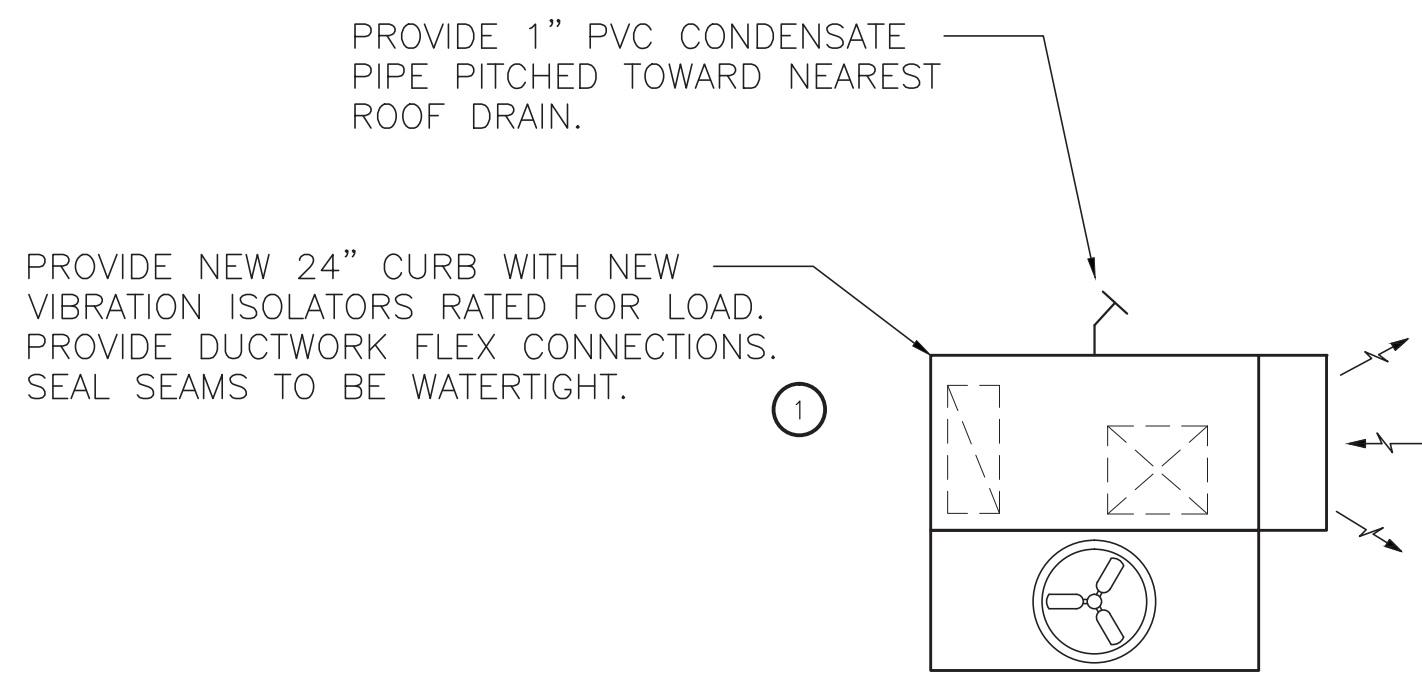
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STATE OF NEW YORK  
JACK D'ANGELO  
No. 059447  
REGISTERED PROFESSIONAL ENGINEER

WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET, WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990  
SED NO. 44-21-01-06-0-001-042

PROJECT NO.	05-21-04 05-20-06
ISSUED FOR BID	11.09.2022
SED SET	10.19.2022
REVISION	DATE
DRAWN BY	
CHECKED BY	
SHEET SIZE	30" X 42"
SCALE	AS NOTED
SHEET TITLE	PARTIAL ROOF PLAN - NEW WORK
SHEET NO.	M-103

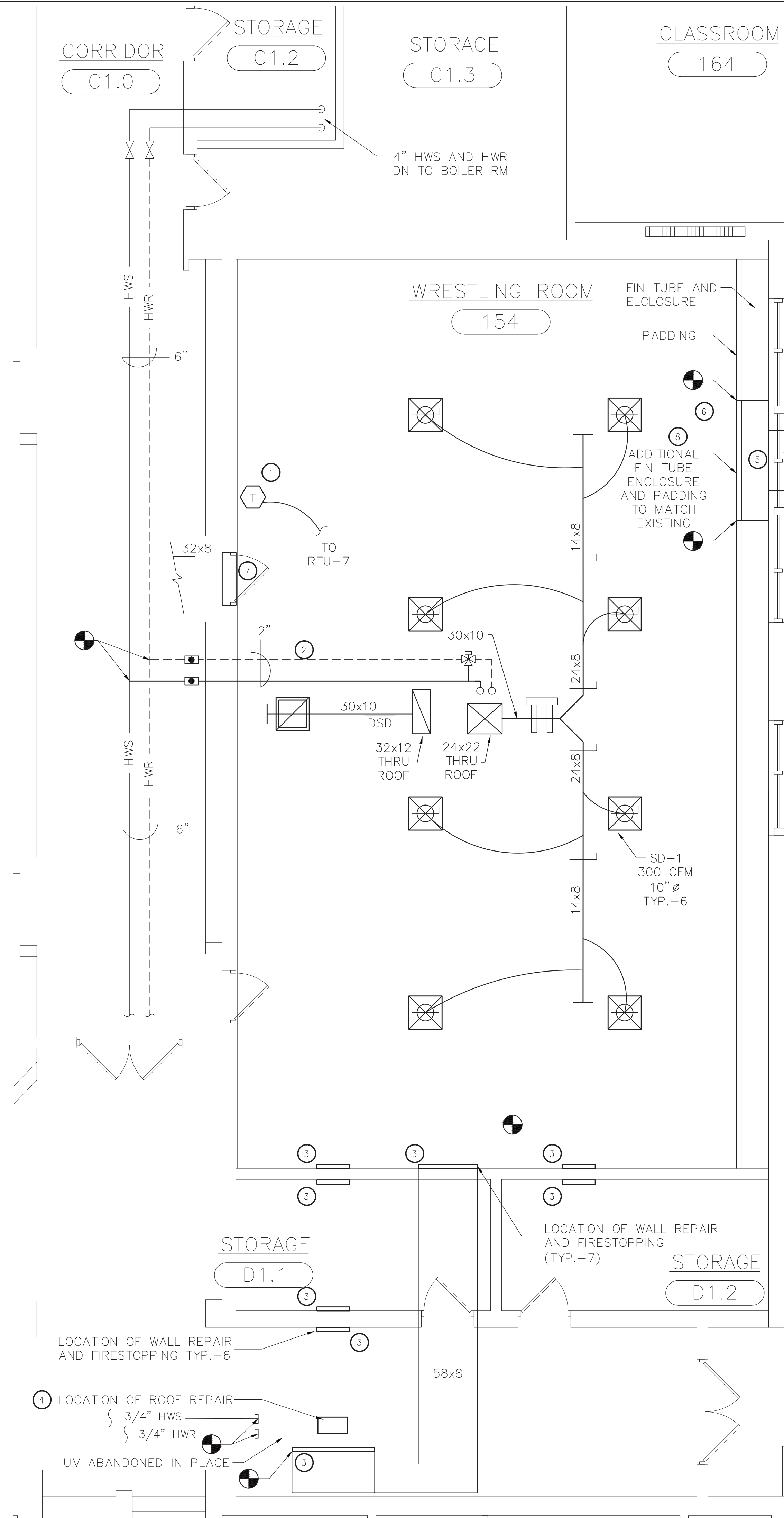




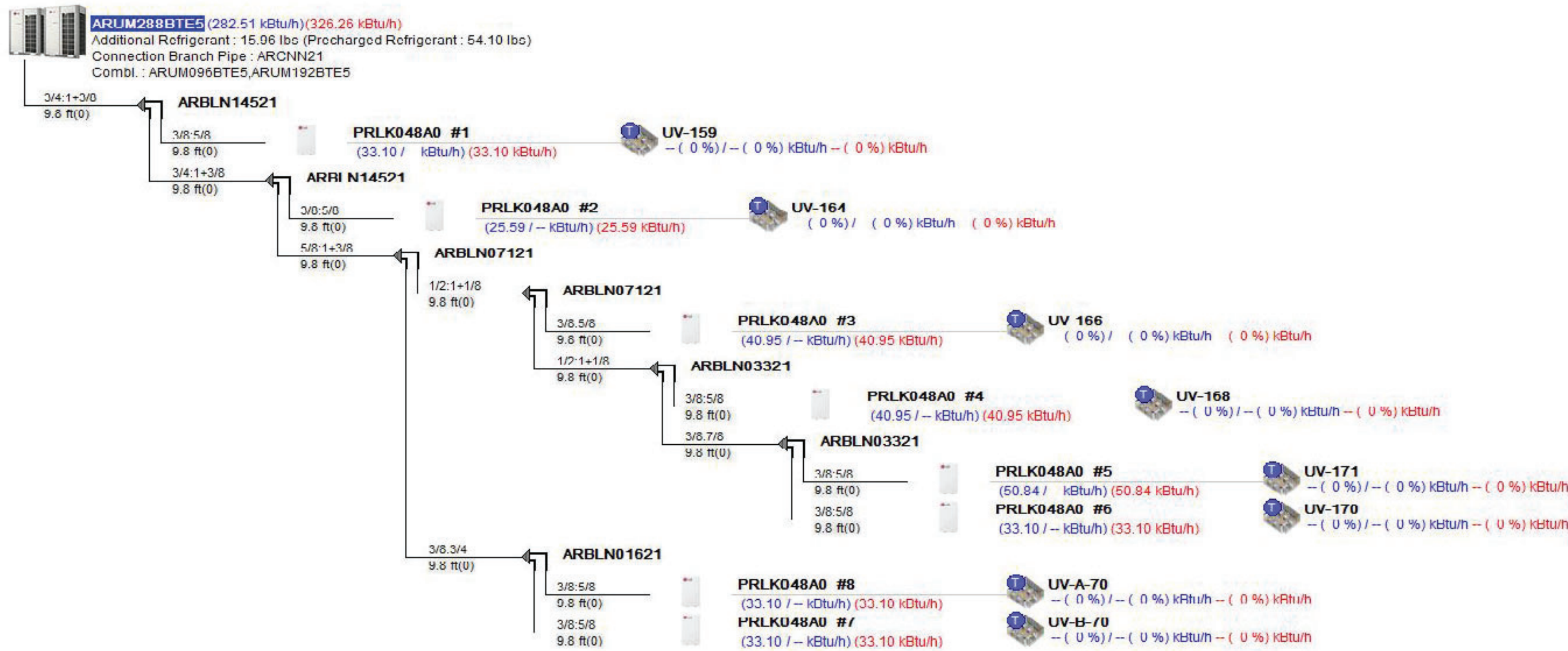
PROVIDE NEW 24" CURB WITH NEW VIBRATION ISOLATORS RATED FOR LOAD. PROVIDE DUCTWORK FLEX CONNECTIONS. SEAL SEAMS TO BE WATERTIGHT.

PROVIDE 1" PVC CONDENSATE PIPE PITCHED TOWARD NEAREST ROOF DRAIN.

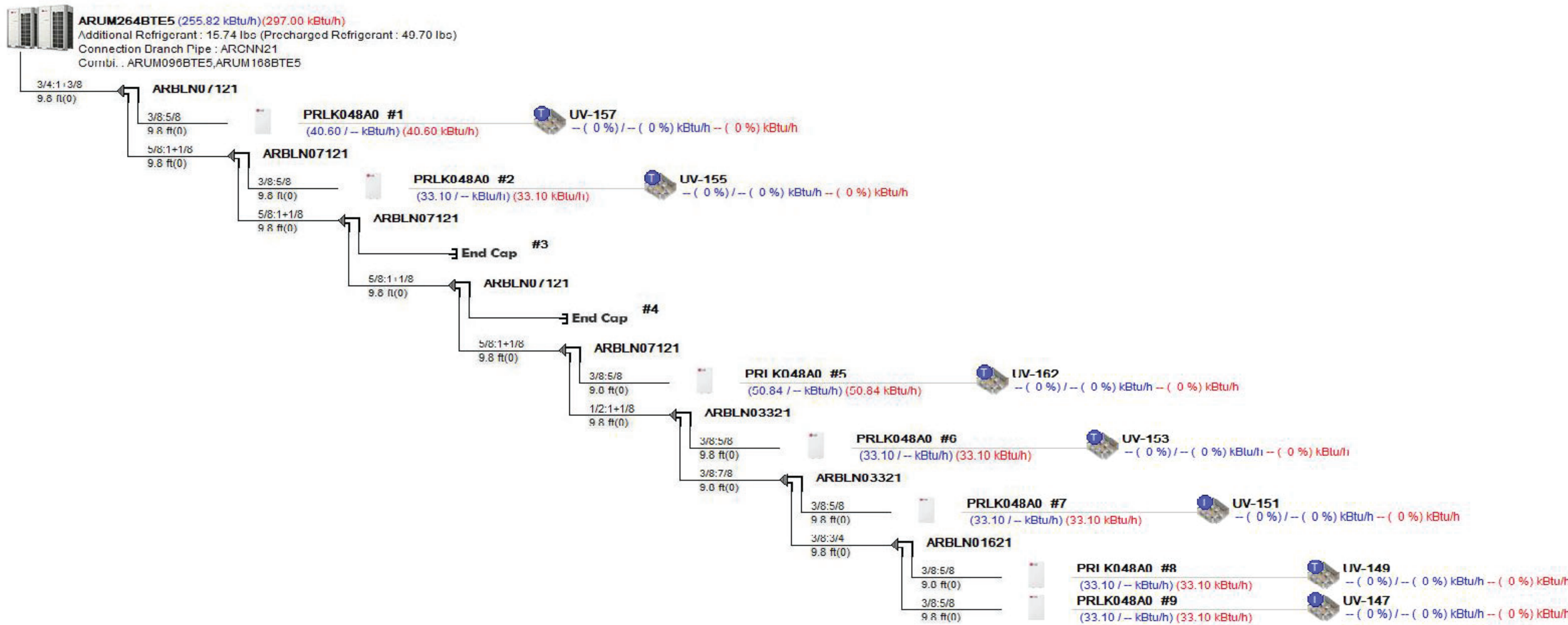
3 PARTIAL ROOF PLAN - WRESTLING ROOM - NEW WORK  
SCALE: 1/4"=1'-0"



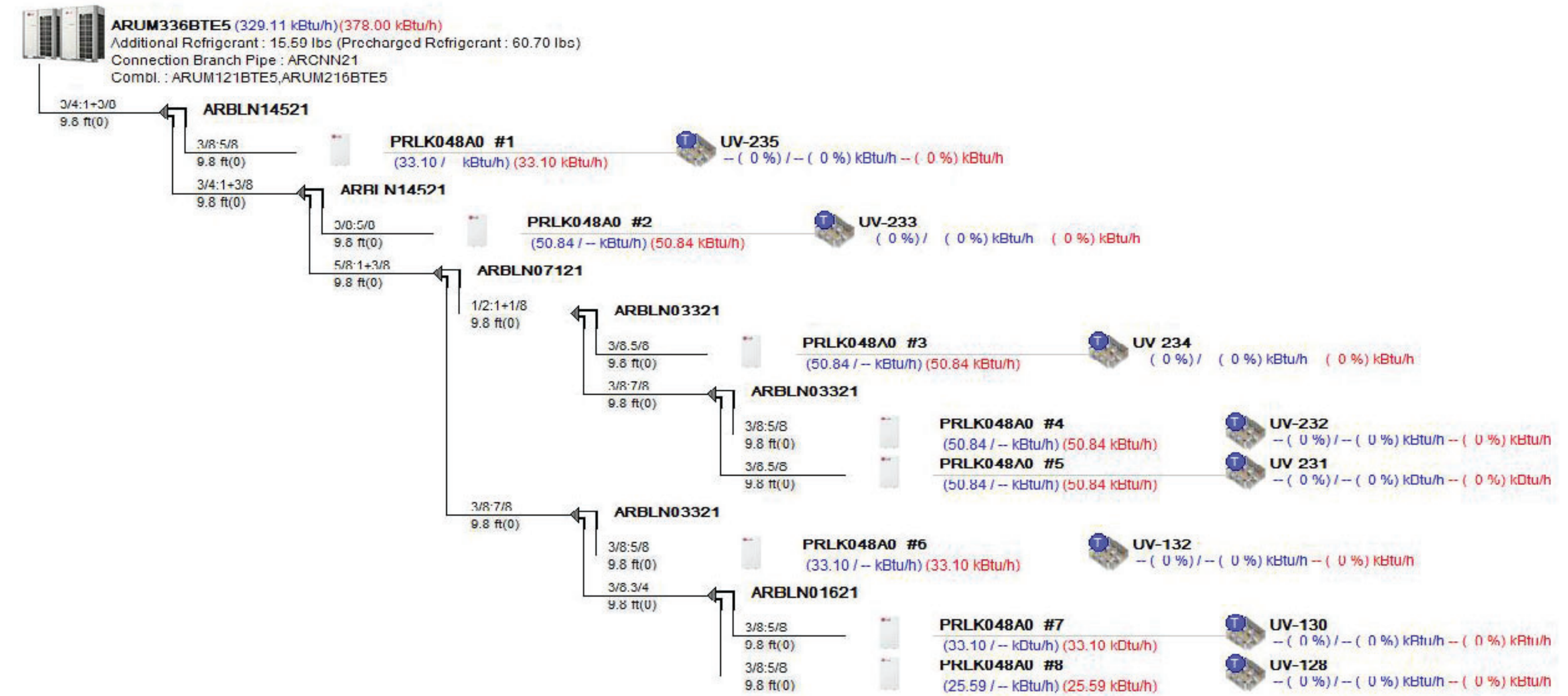




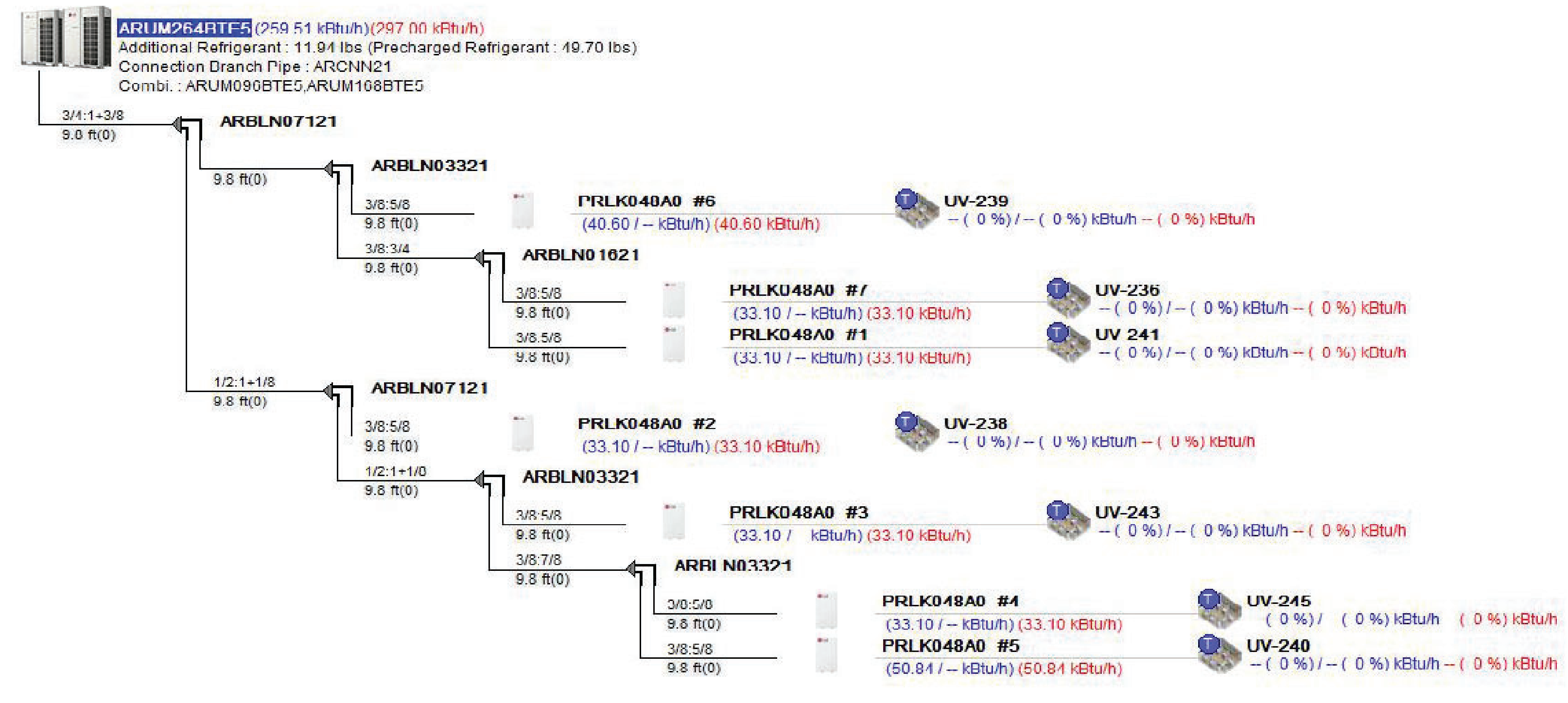
1 ONE LINE DIAGRAM - VRF-1  
SCALE: NONE ALL WORK THIS AREA PART OF ALTERNATE (ALT. H-1)



2 ONE LINE DIAGRAM - VRF-2  
SCALE: NONE ALL WORK THIS AREA PART OF ALTERNATE (ALT. H-1)



3 ONE LINE DIAGRAM - VRF-3  
SCALE: NONE



4 ONE LINE DIAGRAM - VRF-4  
SCALE: NONE



GENERAL NOTES:  
1. GENERAL INTENT FOR SYSTEM ROUTING AND SIZING FOR BIDDING PURPOSES ONLY. PIPE SIZING AND ROUTING SHALL BE VERIFIED WITH MANUFACTURER AND BE BASED ON FINAL LOCATIONS OF EQUIPMENT. INSTALL AND CHARGE SYSTEM PER MANUFACTURER RECOMMENDATIONS.

ENGINEER:  
**Eisenbach & Ruhke Engineering, P.C.**  
291 Genesee Street - Utica, NY 13501  
TEL: 315.735.1188 FAX: 315.735.8464  
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CONSULTANT(S):  
**FULLER D'ANGELO P.C.**  
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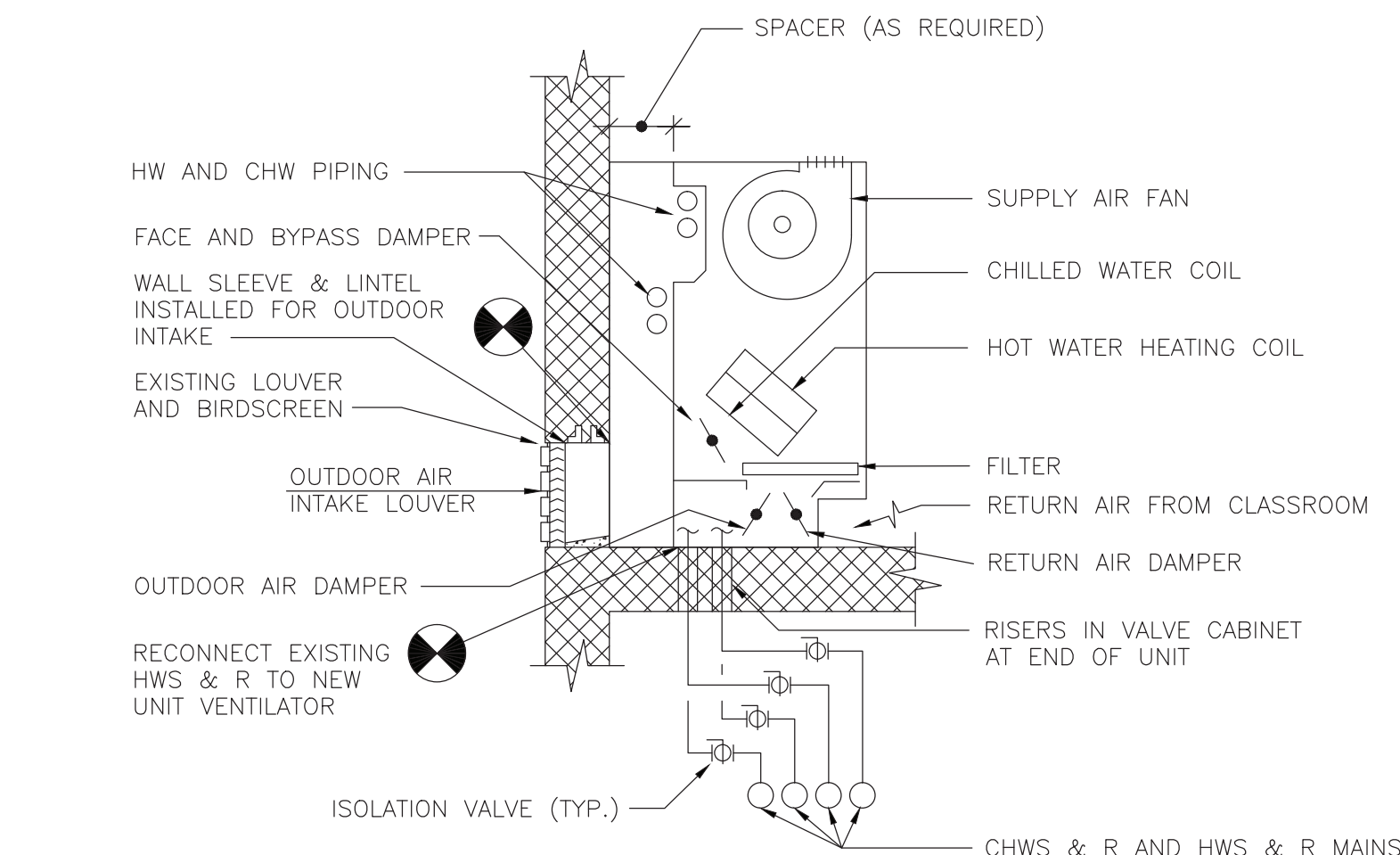
STATE OF NEW YORK  
JACK D'ANGELO  
No. 059447  
Professional Engineer

WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990  
SED NO. 44-21-01-06-0-001-042

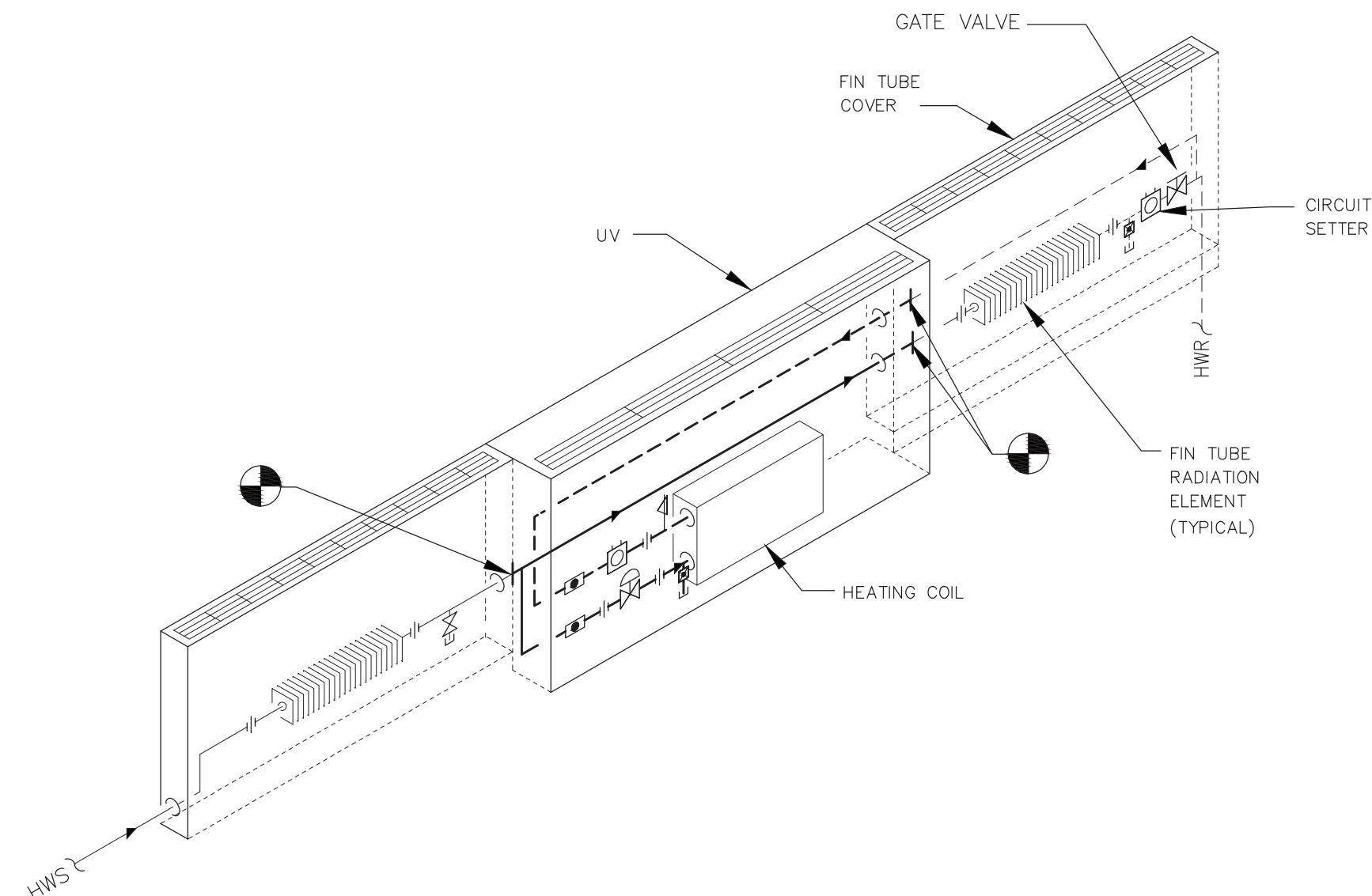
PROJECT NO.	05-21-04 06-20-06
ISSUED FOR BID	11.09.2022
SET SET	10.19.2022
REVISION	DATE
DRAWN BY	
CHECKED BY	
SHEET SIZE	30" X 42"
SCALE	AS NOTED
SHEET TITLE VRF SYSTEM TREES	
SHEET NO. M-111	

FILE PATH - N:\1 - PROJECT DIRECTORIES\1 - E & R Projects\05 - Warwick Valley CSD\05-21-04-M111-04-M111.dwg  
Project Location: Warwick Valley Central School District  
Project Name: High School Unit Ventilator Replacement and Air Conditioning Upgrade  
Project No: 05-21-04  
Sheet No: M-111  
Scale: AS NOTED  
Date: 11.09.2022  
Drawn By: [Redacted]  
Checked By: [Redacted]  
Project Manager: [Redacted]  
Client: Warwick Valley Central School District  
Contract No: [Redacted]  
Contract Value: [Redacted]  
Contract Start Date: [Redacted]  
Contract End Date: [Redacted]  
Contract Status: [Redacted]  
Contract Description: [Redacted]  
Contract Location: [Redacted]  
Contract Owner: [Redacted]  
Contract Designer: [Redacted]  
Contract Engineer: [Redacted]  
Contract Architect: [Redacted]  
Contract Planner: [Redacted]  
Contract Consultant: [Redacted]  
Contract Specialist: [Redacted]  
Contract Advisor: [Redacted]  
Contract Analyst: [Redacted]  
Contract Researcher: [Redacted]  
Contract Writer: [Redacted]  
Contract Editor: [Redacted]  
Contract Reviewer: [Redacted]  
Contract Approver: [Redacted]  
Contract Signatory: [Redacted]  
Contract Seal: [Redacted]  
Contract Stamp: [Redacted]  
Contract Mark: [Redacted]  
Contract Initial: [Redacted]  
Contract Signature: [Redacted]  
Contract Date: [Redacted]  
Contract Time: [Redacted]  
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Contract Country: [Redacted]  
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Contract Fax: [Redacted]



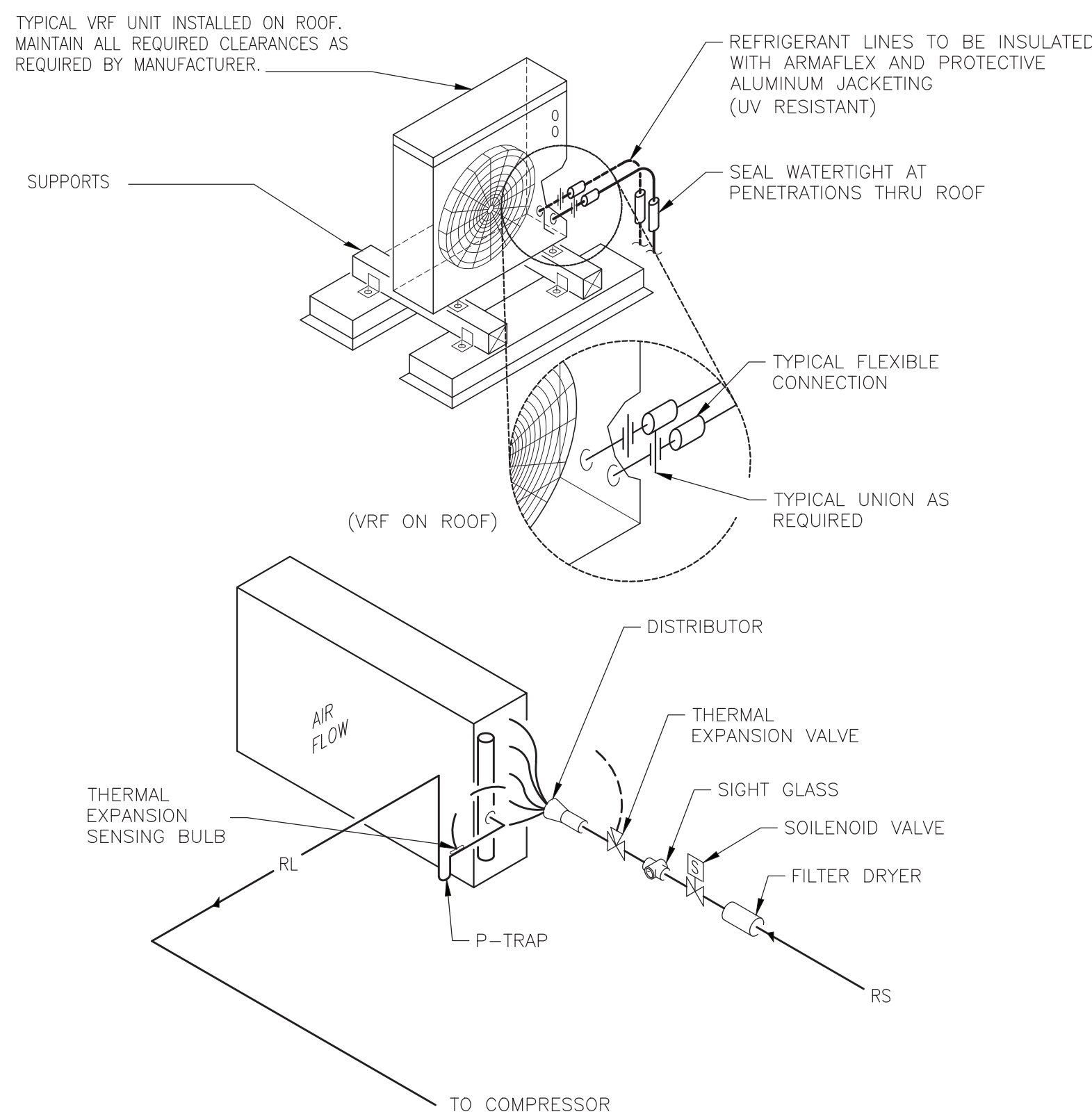


**8 VERTICAL UNIT VENTILATOR DETAIL**  
SCALE: NONE



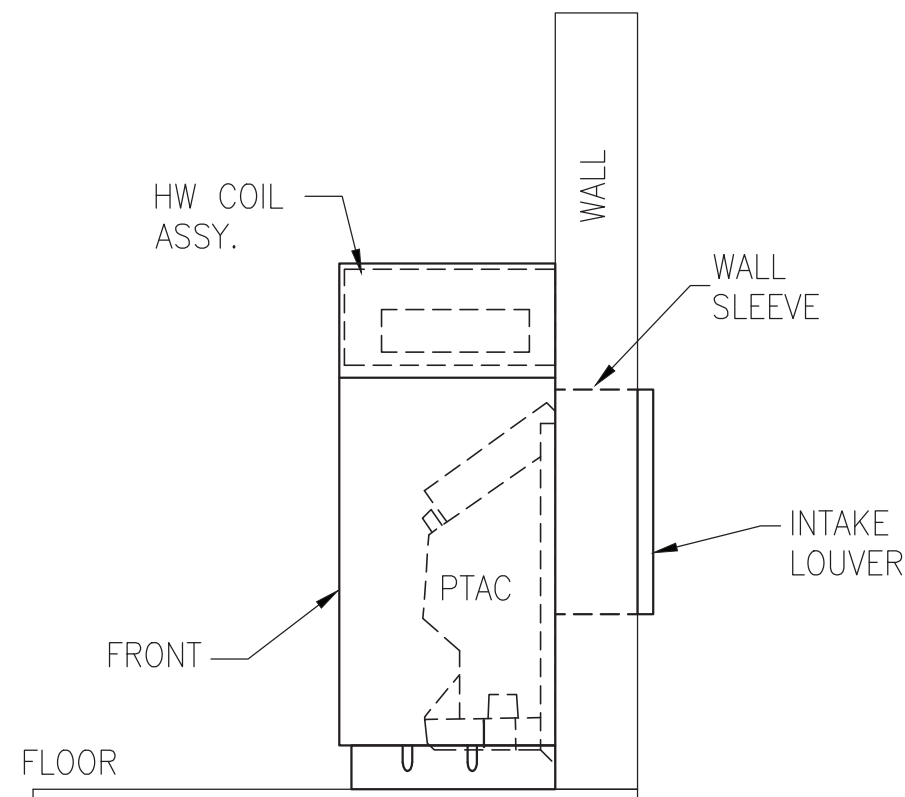
- NOTES:
1. LOCATE CONTROL VALVES, SHUTOFF VALVES, AND CIRCUIT SETTERS SO THAT THEY ARE EASILY ACCESSIBLE FOR INSPECTION AND MAINTENANCE. PROVIDE ACCESS DOORS IN APPROPRIATE LOCATIONS WHERE INSTALLATION REQUIRES VALVES AND/OR CIRCUIT SETTERS TO BE CONCEALED.
  2. WHEN FIN RADIATION IS INSTALLED IN CLASSROOMS WITH UNIT VENTILATORS, VALVES ARE LOCATED BEHIND OPEN SHELVING OR FIN TUBE ENCLOSURE AS APPLICABLE.
  3. PROVIDE ENCLOSURES AS REQUIRED TO CONCEAL REFRIGERANT LINES.
  4. MODIFY FIN-TUBE ENCLOSERS AS REQUIRED TO PERMIT NEW UV INSTALLATIONS. REUSE/MODIFY END CAPS AS APPLICABLE.
  5. PNEUMATIC LINES FEEDING EXISTING WALL HUNG THERMOSTAT MUST BE PLUGGED AND THERMOSTAT REMOVED

**9 TYPICAL CLASSROOM UNIT VENT W/FT R PIPING DETAIL**  
SCALE: NONE



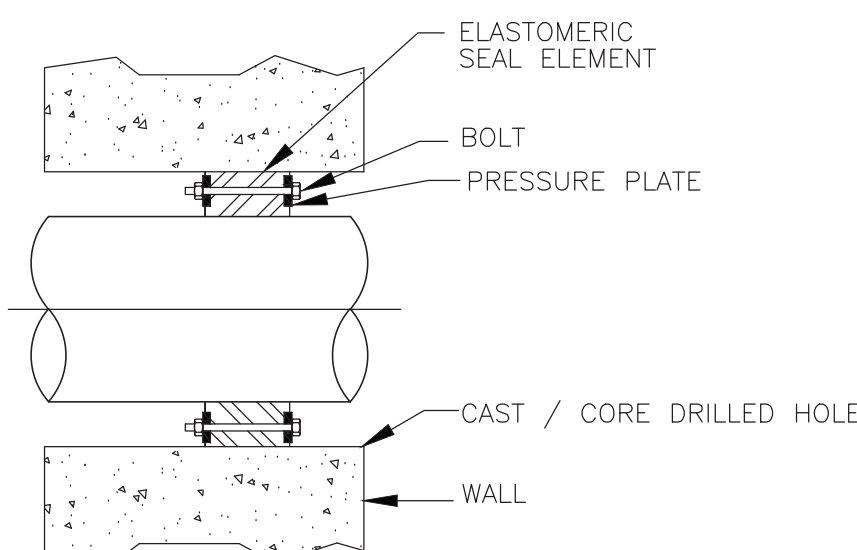
- NOTES:
1. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
  2. PROVIDE ENCLOSURES AS REQUIRED TO CONCEAL REFRIGERANT LINES

**10 PIPING CONNECTIONS AT DIRECT EXPANSION COOLING COIL**  
SCALE: NONE

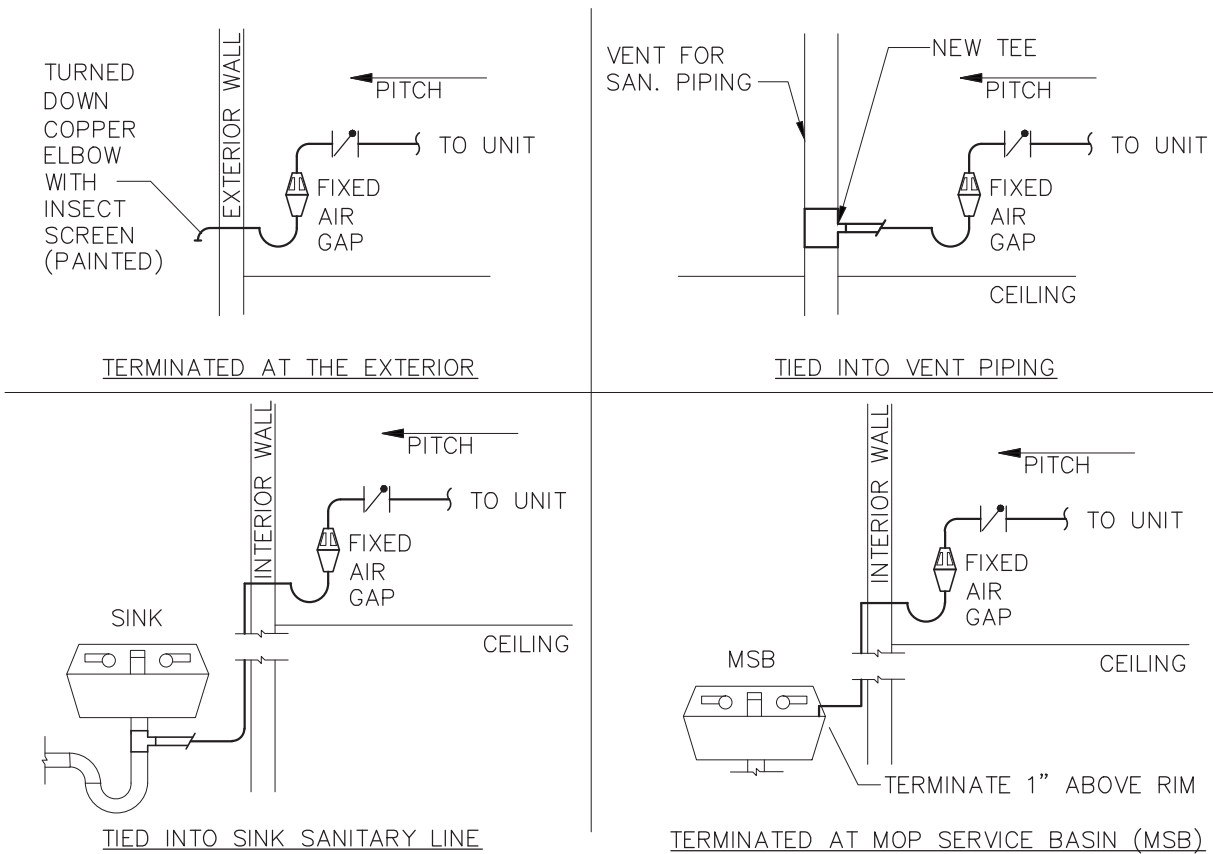


- NOTES:
1. LOCATE CONTROL VALVES, SHUTOFF VALVES, AND CIRCUIT SETTERS SO THAT THEY ARE EASILY ACCESSIBLE FOR INSPECTION AND MAINTENANCE. PROVIDE ACCESS DOORS IN APPROPRIATE LOCATIONS WHERE INSTALLATION REQUIRES VALVES AND/OR CIRCUIT SETTERS TO BE CONCEALED. CONSULT MANUFACTURER DATA FOR BRANDS AND TYPES.
  2. WHEN FIN RADIATION IS INSTALLED IN CLASSROOMS WITH UNIT VENTILATORS, VALVES ARE LOCATED BEHIND OPEN SHELVING OR FIN TUBE ENCLOSURE AS APPLICABLE.
  3. PROVIDE ENCLOSURES AS REQUIRED TO CONCEAL REFRIGERANT LINES.
  4. MODIFY FIN-TUBE ENCLOSERS AS REQUIRED TO PERMIT NEW INSTALLATIONS. REUSE/MODIFY END CAPS AS APPLICABLE.

**4 PTAC HYDRONIC CABINET**  
SCALE: NONE

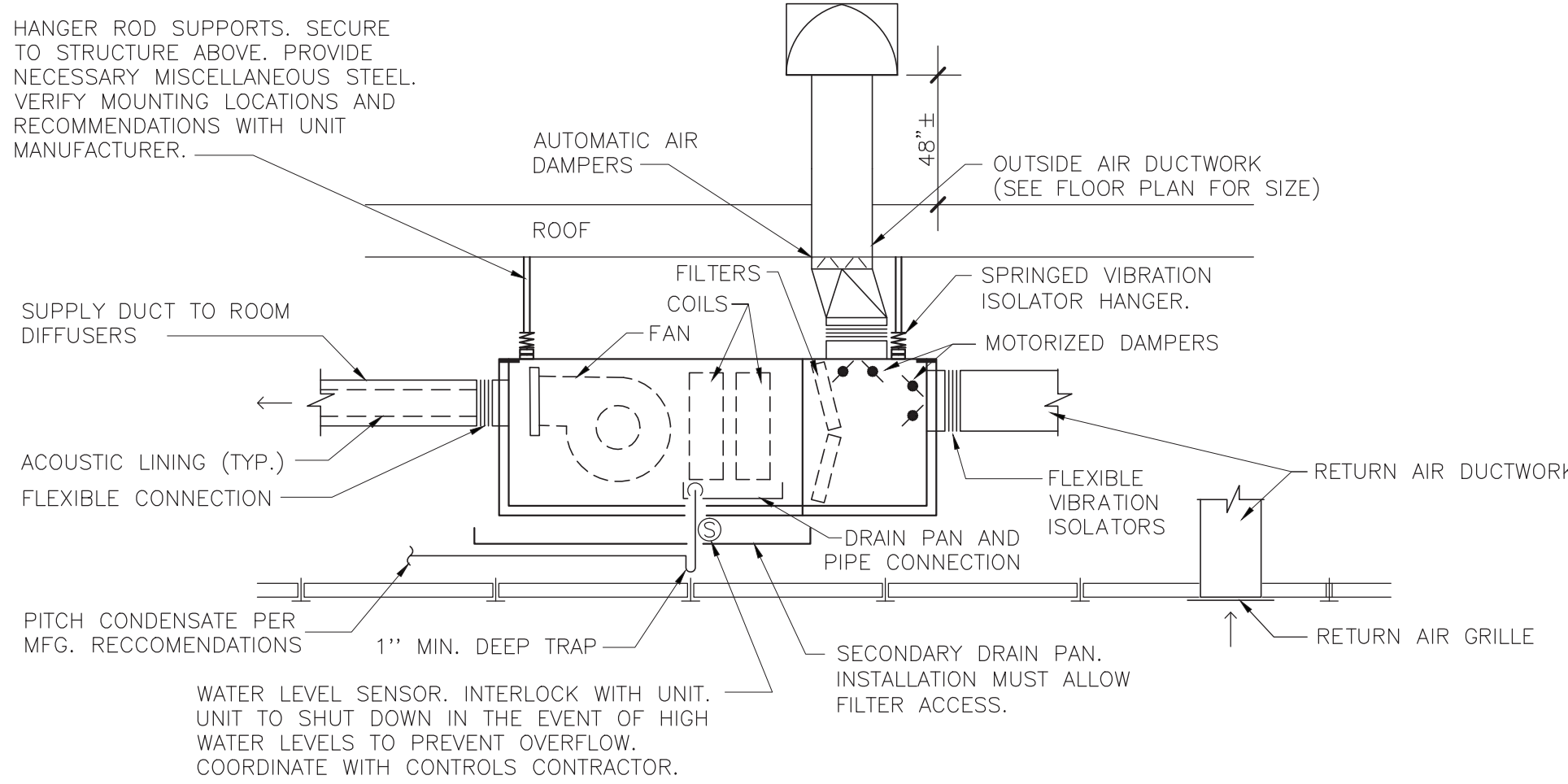


**5 PIPE SLEEVE AT WALL PENETRATION**  
SCALE: NONE



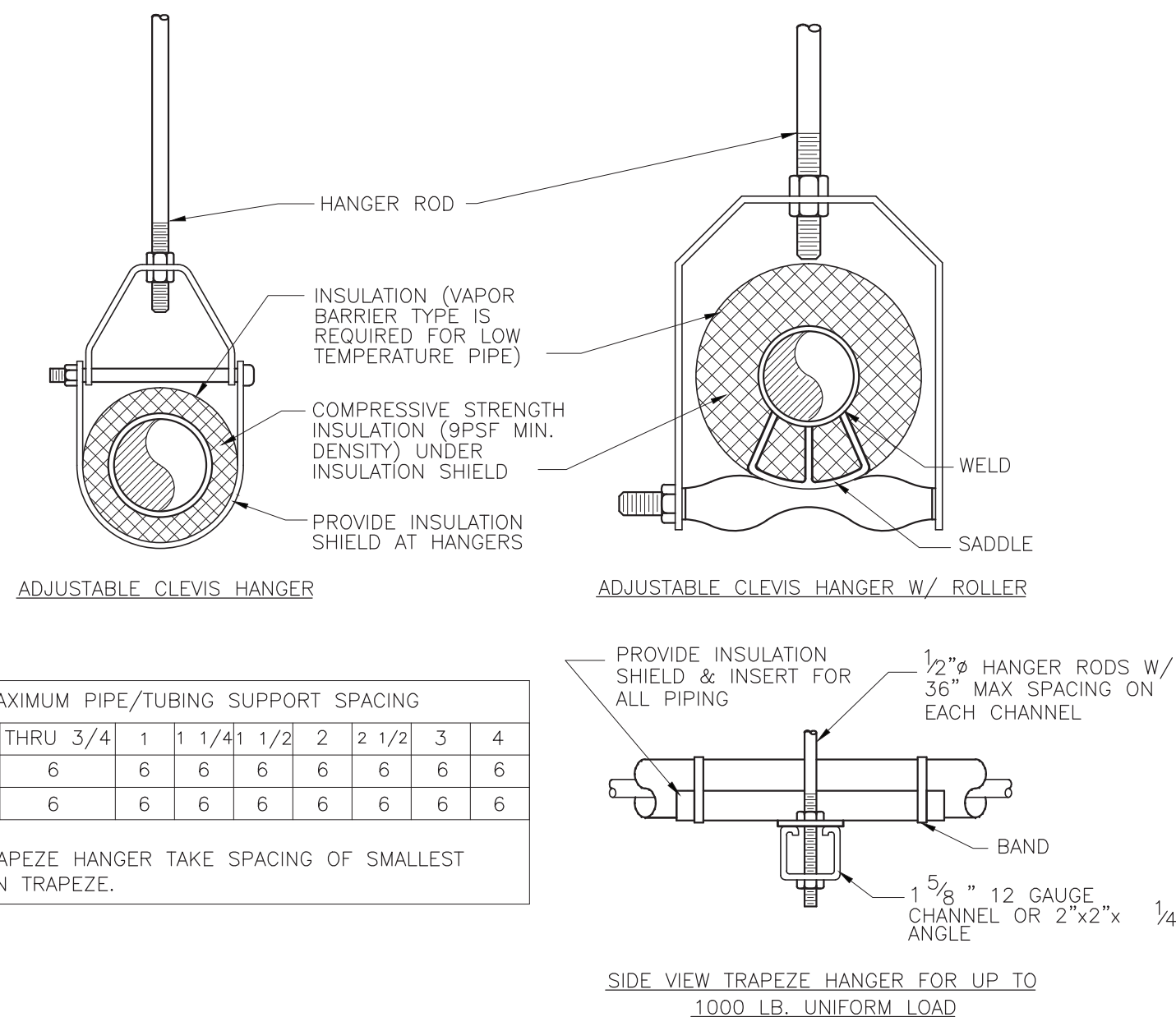
- NOTE:  
RUN CONDENSATE PIPING WITH TRAP AND VENT FROM ALL EVAPORATOR COILS TO LOCATION SPECIFIED. PROVIDE INSULATION AND SUPPORT. SIZE TO BE 3/4" UNLESS OTHERWISE SPECIFIED.  
PIPING AT WALL PENETRATIONS TO BE SLEEVED, CHANGEOVER FROM PVC TO COPPER FOR EXTERIOR TERMINATION TO BEGIN BEFORE EXTERIOR WALL PENETRATION.  
(TYPICAL FROM ALL EVAPORATOR / DX COILS)  
SEE M DWGS FOR LOCATIONS

**6 CONDENSATE LINE CONNECTION DETAIL**  
SCALE: NONE

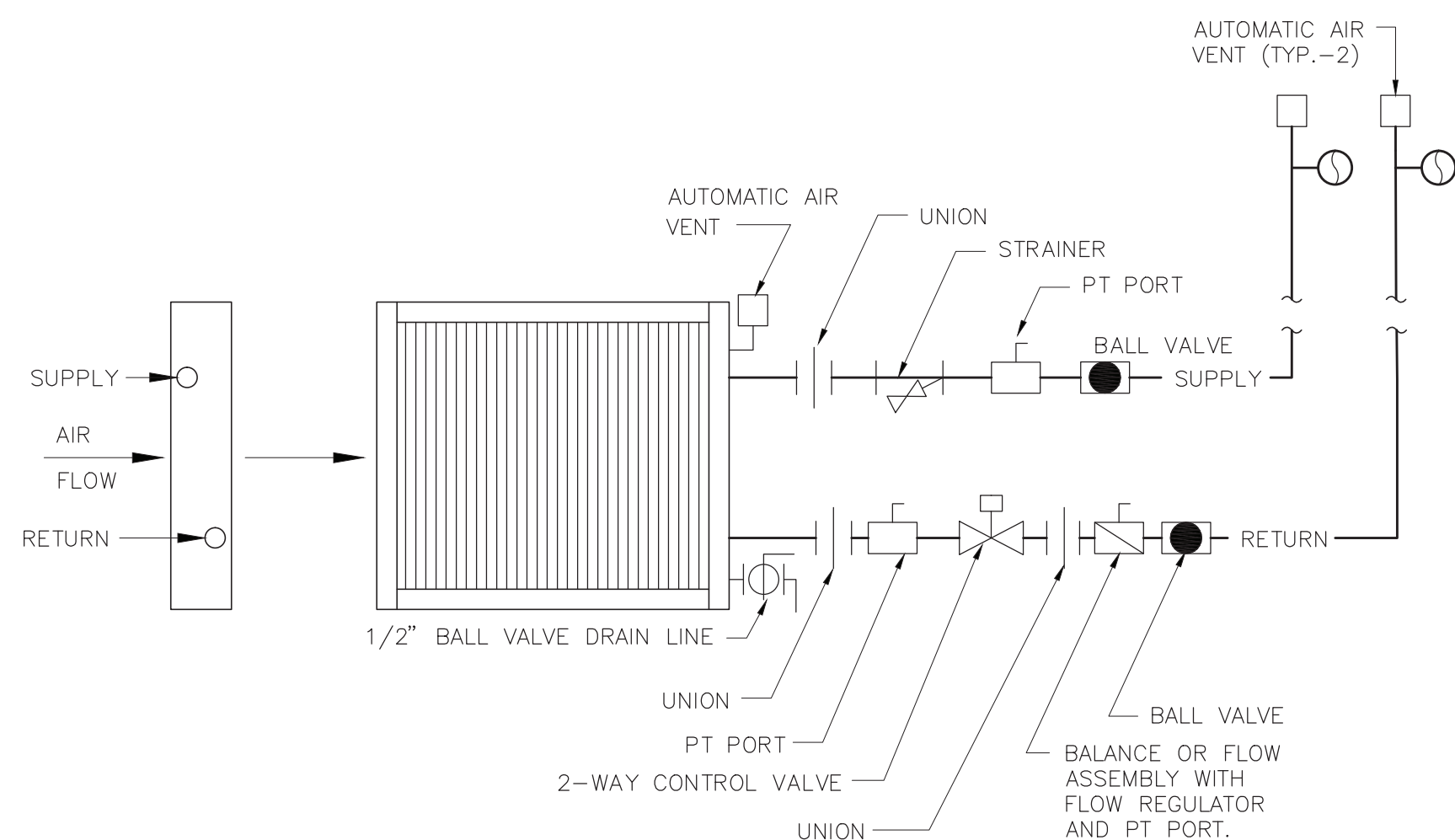


- NOTES:
1. COORDINATE EXACT LOCATION OF UNITS WITH EXISTING AND NEW BUILDING COMPONENTS TO ALLOW PROPER UNIT CONNECTIONS AND MAINTENANCE.

**7 CEILING HUNG (HORIZONTAL) UNIT VENTILATOR DETAIL**  
SCALE: NONE

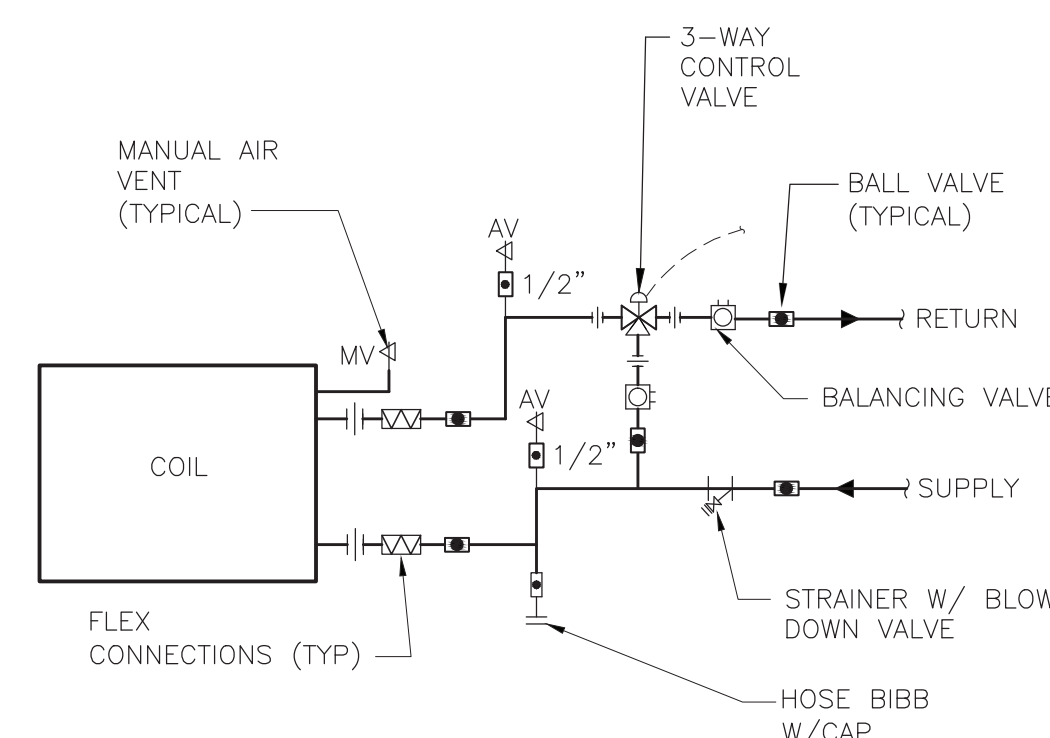


**1 PIPE SUPPORT DETAIL**  
SCALE: NONE



- NOTES:
1. LOCATE CONTROL VALVES, SHUTOFF VALVES, AND CIRCUIT SETTERS SO THAT THEY ARE EASILY ACCESSIBLE FOR INSPECTION AND MAINTENANCE. PROVIDE ACCESS DOORS IN APPROPRIATE LOCATIONS WHERE INSTALLATION REQUIRES VALVES AND/OR CIRCUIT SETTERS TO BE CONCEALED.
  2. WHEN FIN RADIATION IS INSTALLED IN CLASSROOMS WITH UNIT VENTILATORS, VALVES ARE LOCATED BEHIND OPEN SHELVING, UV CABINET, OR FIN TUBE ENCLOSURE AS APPLICABLE.
  3. PROVIDE ENCLOSURES AS REQUIRED TO CONCEAL REFRIGERANT LINES.
  4. PROVIDE AIR VENTS AT ALL HIGH POINTS IN PIPING SYSTEM.
  5. PROVIDE ALL VALVES AND ASSOCIATED SHOWN.
  6. INSULATE SUPPLY AND RETURN.

**2 UNIT VENTILATOR, FAN COIL UNIT, HYDRONIC PTAC HOT WATER COIL DETAIL**  
SCALE: NONE



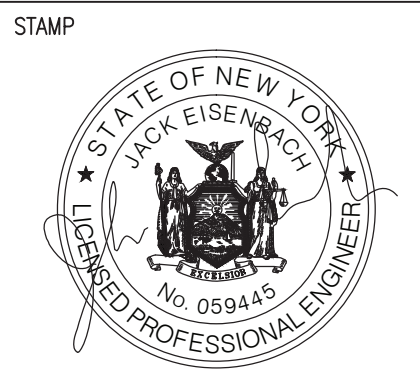
- NOTES:
1. SUPPORT PIPES FROM STRUCTURE OR FLOOR STANCHION AS APPLICABLE.
  2. COILS MOUNTED IN DUCTS TO BE PROVIDE WITH ACCESS PANELS UPSTREAM OF THE COIL.
  3. PIPE COIL TO ALLOW REMOVAL OF COIL WITHOUT REMOVING PIPING BEYOND UNIONS OR FLANGES.
  4. FOR UNITS PROVIDED WITH OTHER THAN ONE COIL, PROVIDE FLOW BALANCER, FLANGES, FLEXIBLE CONNECTOR, DRAINS, AND AIR VENTS FOR EACH COIL.
  5. COOLING COIL SIMILAR

**3 COIL PIPING DETAIL 3 WAY VALVE**  
SCALE: NONE

IT IS A VIOLATION OF THE LAW FOR ANY PERSON UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ARCHITECT/ENGINEER TO ALTER THE DRAWINGS IN ANY WAY. ALL ALTERATIONS MUST HAVE THE SEAL, ATTACHED AND BE A DESCRIPTION OF THE ALTERATION, THE SIGNATURE AND DATE. COPYRIGHT © 2019

ENGINEER:  
**Eisenbach & Ruhke Engineering, P.C.**  
291 Concord Street - Union, NY 13501  
607-335-7300 FAX 607-335-7300  
www.eengpc.com

CONSULTANT(S):  
**FULLER D'ANGELO P.C.**  
ARCHITECTS PLANNERS  
48 KNOLLWOOD ROAD  
ELMHURST NEW YORK 10523  
TEL: 914-892-4444  
FAX: 914-892-1717  
WWW.FULLERDANGELO.COM  
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WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990  
SED NO. 44-21-01-06-0-001-042

PROJECT NO.	05-21-04 05-20-06
ISSUED FOR BID	11.09.2022
SED SET	10.19.2022
REVISION	DATE
DRAWN BY	
CHECKED BY	
SHEET SIZE	30" X 42"
SCALE	AS NOTED
SHEET TITLE	
DETAILS	
SHEET NO.	

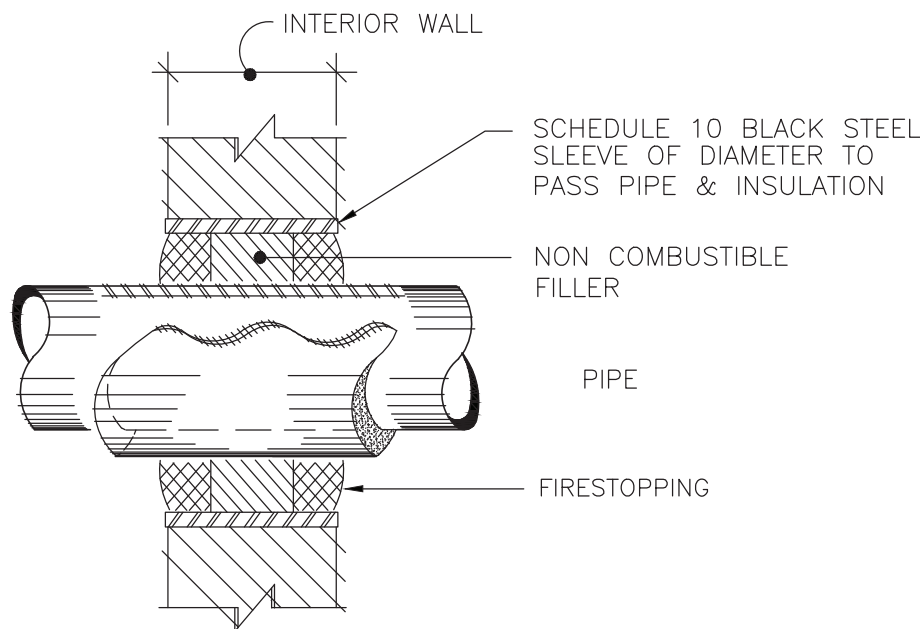
M-500

FILE PATH - N:\1 - PROJECT DIRECTORIES\1 - E & R Projects\05 - Warwick Valley CSD\05-21-04 Projects\05 - Warwick Valley Central School District\Warwick Valley High School Unit Ventilator Replacement and Air Conditioning Upgrade.dwg

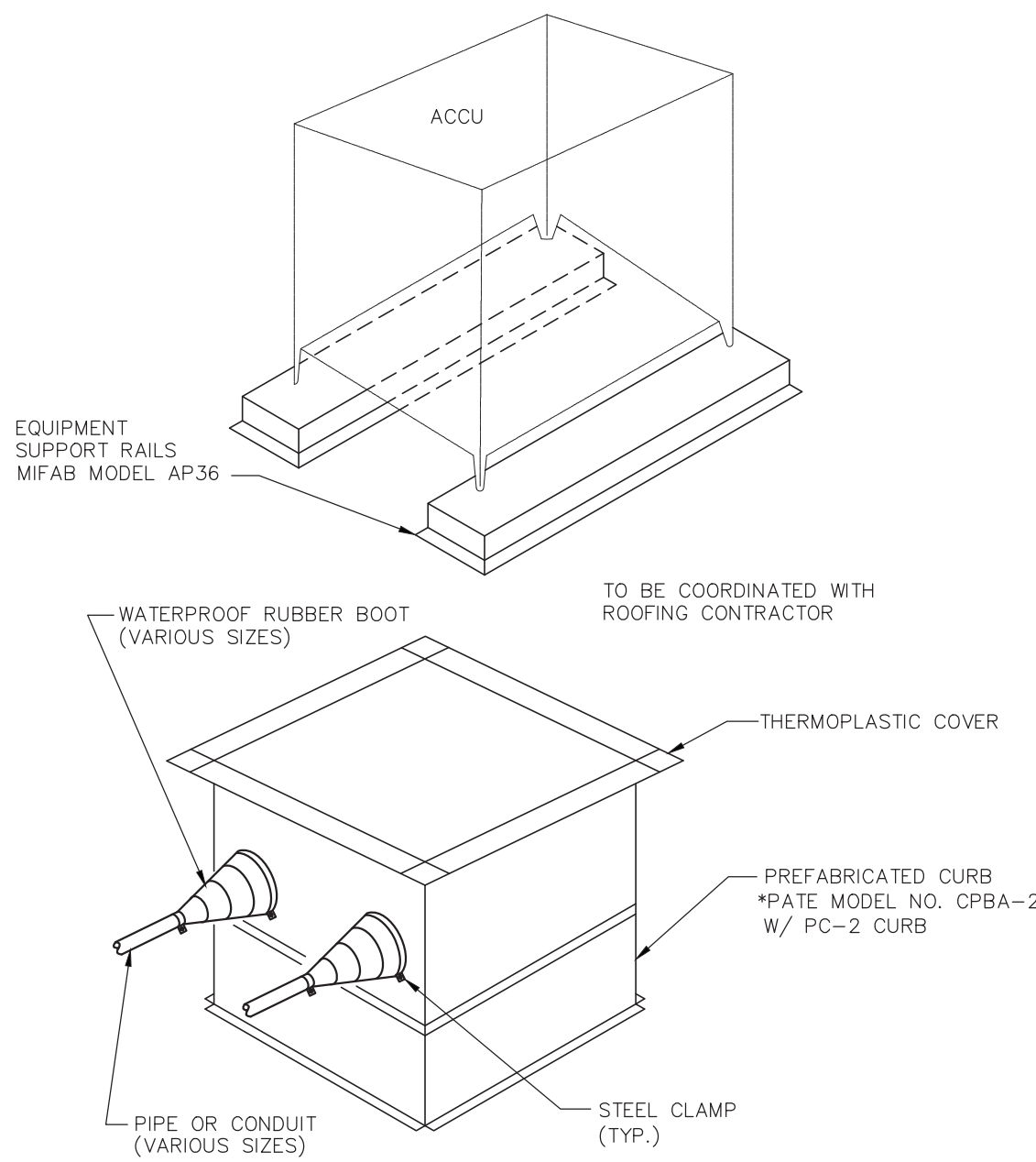


**COORDINATION NOTE:**

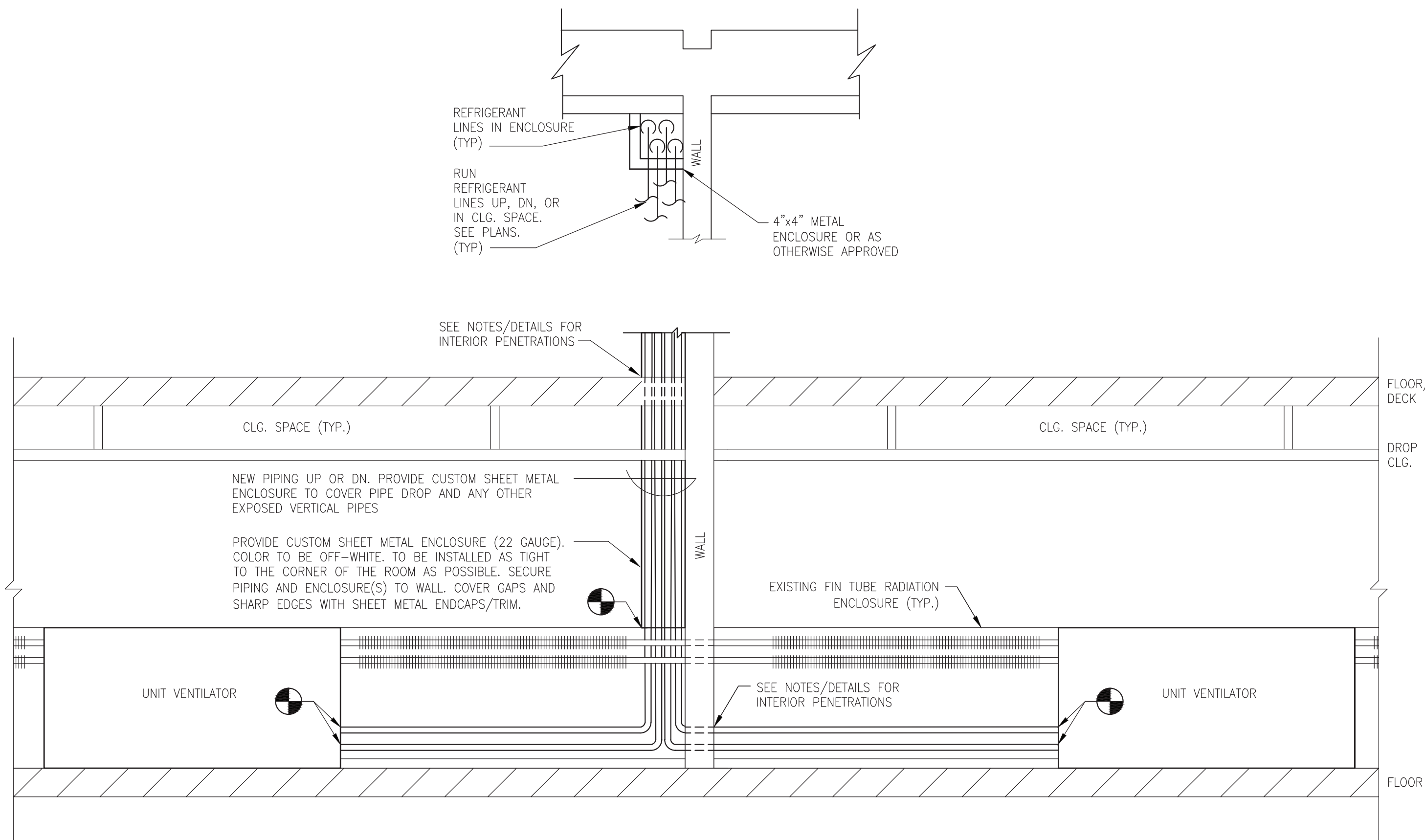
1. COORDINATION- IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL AND MECHANICAL CONTRACTORS TO COORDINATE THEIR WORK. THE HVAC CONTRACTOR SHALL TAKE THE LEAD IN THE COORDINATION EFFORT AND PRODUCE THE COORDINATION DRAWINGS. COORDINATION DRAWINGS SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO STARTING ANY WORK. CEILING SPACE IS VERY LIMITED AND DUCTWORK/PIPING INSTALLATION AND LOCATION IS CRITICAL. THE PURPOSE OF THESE DRAWINGS IS TO COORDINATE THE LOCATIONS OF ALL PIPING, DUCTWORK, AND ASSOCIATED ELECTRICAL EQUIPMENT. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC). MECHANICAL EQUIPMENT CANNOT INFILTRATE THE ELECTRICAL EQUIPMENTS WORKING CLEARANCE AND WORKING SPACE, NOR CAN IT BE INSTALLED DIRECTLY ABOVE OR BELOW TO THE STRUCTURE, AS IDENTIFIED WITHIN THE NEC, ARTICLE 110 - "REQUIREMENTS FOR ELECTRICAL INSTALLATION". THIS COORDINATION IS REQUIRED FOR ALL PHASES OF THIS PROJECT. FAILURE TO FOLLOW THIS PROCEDURE DOES NOT RELIEVE THE CONTRACTOR FROM THE DUTIES AND WILL NOT CONSTITUTE A REASON FOR A CHANGE ORDER.



**4 PIPE SLEEVE AT WALL PENETRATION**  
SCALE: NONE



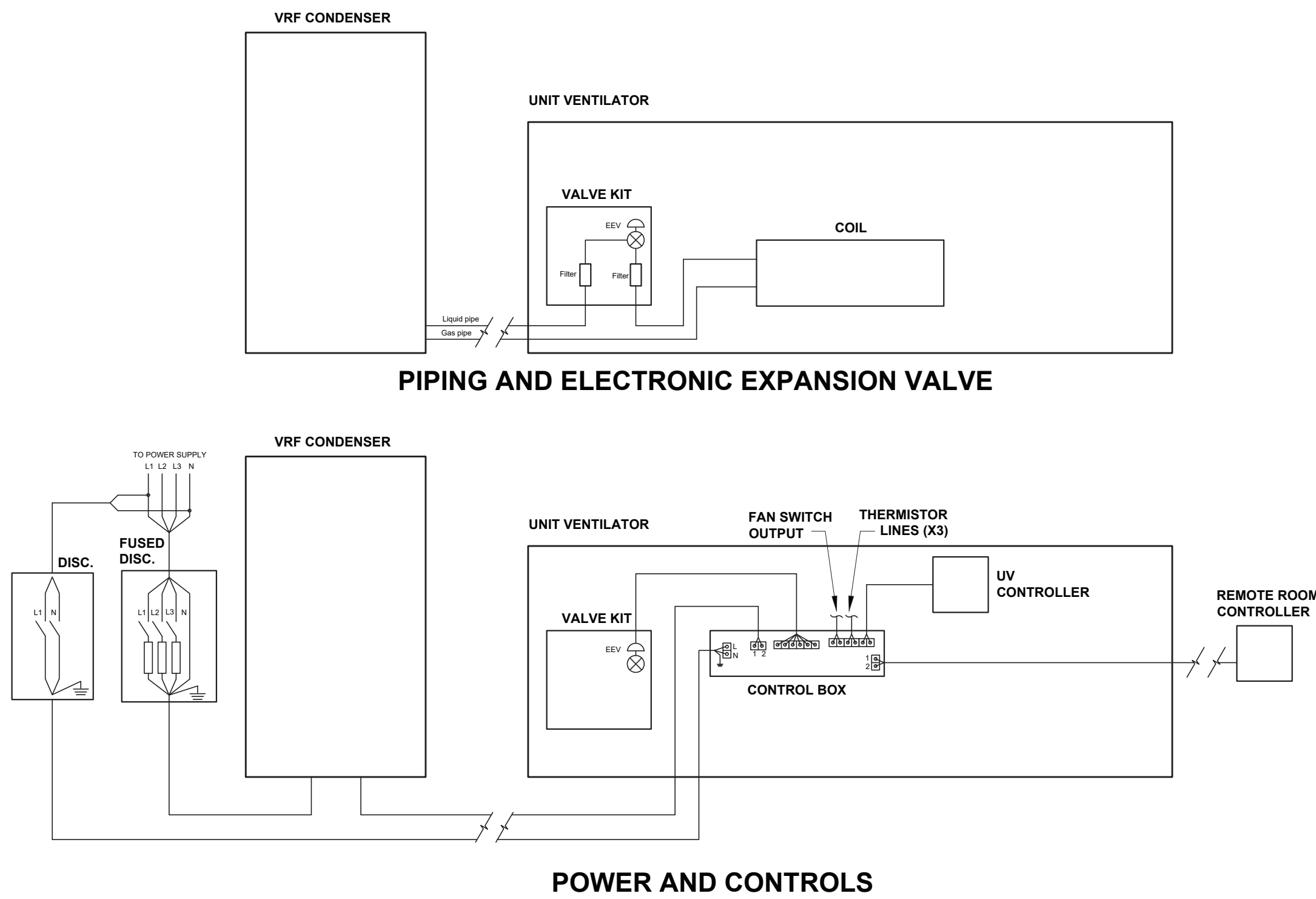
**5 PIPE/CONDUIT CURB ASSEMBLY DETAILS**  
SCALE: NONE



**1 CUSTOM PIPING ENCLOSURE DETAIL (TYPICAL)**  
SCALE: NONE

**NEW WORK NOTES:**

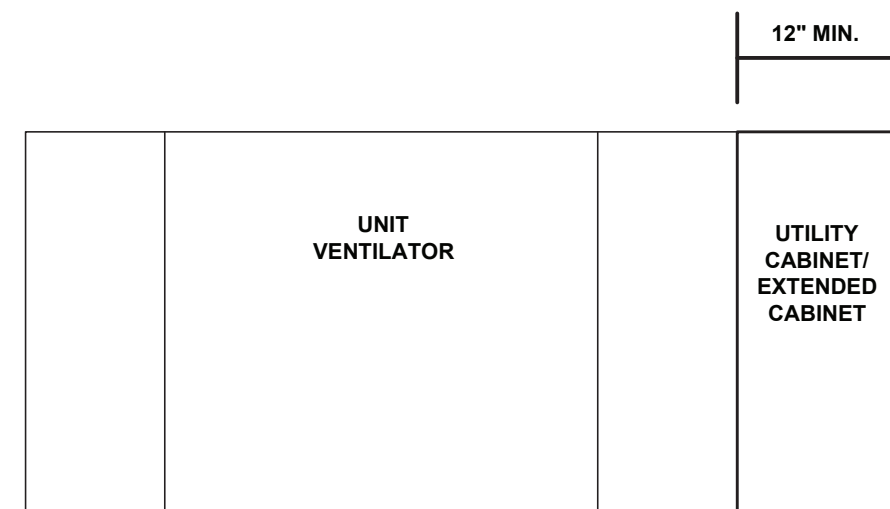
SEE MANUFACTURER INSTALLATION RECOMMENDATIONS. ACTUAL PIPING PATHS WILL VARY. SEE DRAWINGS FOR INTENT. VERIFY COIL CONNECTION SIDES BEFORE ORDERING EQUIPMENT.



**2 VRF-UNIT VENTILATOR PIPING AND ELECTRICAL DETAILS**  
SCALE: NONE

**NEW WORK NOTES:**

SEE MANUFACTURER RECOMMENDATIONS REGARDING THERMISTOR PLACEMENT. MULTI UNIT POWER OPTION NOT SHOWN BUT IS TO BE INCLUDED. EVV TO BE POWERED PER MANUFACTURER RECOMMENDATIONS.



**3 UNIT VENTILATOR EXTENDED CABINET**  
SCALE: NONE

**NEW WORK NOTES:**

UTILITY/ EXTENDED CABINET TO MATCH UNIT VENTILATOR CABINET HEIGHT, DEPTH, COLOR, APPEARANCE AND MANUFACTURER. COIL CONNECTION SIDE TO BE VERIFIED IN FIELD BEFORE ORDERING EQUIPMENT. MAKE ALL ALTERATIONS TO FIN TUBE AND COVERS AS NECESSARY. UTILITY CABINET TO HOUSE VRF CONTROL BOX AND VRF ELECTRONIC EXPANSION VALVE.

ENGINEER:

**Eisenbach & Ruhke Engineering, P.C.**  
291 Genesee Street - Utica, NY 13501  
TEL: 315.252.1118 FAX: 315.252.1845  
www.eandru.com

CONSULTANT(S):

**FULLER  
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P.C.**

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**WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE**  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990

SED NO. 44-21-01-06-0-001-042

PROJECT NO.	05-21-04 05-20-06
ISSUED FOR BID	11.09.2022
SET SET	10.19.2022
REVISION	DATE
DRAWN BY	
CHECKED BY	
SHEET SIZE	30" X 42"
SCALE	AS NOTED
SHEET TITLE	
DETAILS	
SHEET NO.	

**M-501**



ROOFTOP UNIT SCHEDULE																																					
MARK	SERVICE	MODEL NO.	CFM	O/A MIN	FAN MOTOR (HP) (SUPPLY)/ (EXHAUST)	TYPE	COOLING										HEATING										ELECTRICAL						UNIT WEIGHT (LB)	REMARKS			
							TEMPERATURE (°F)					CAPACITY					GPM	ENT. WATER (°F)	LVG. WATER (°F)	EER	TYPE	TEMPERATURE (°F)			CAPACITY MBH	GPM	ENT. FLUID (°F)	LVG. FLUID (°F)	V/PH/HZ	MCA (A)	MOP (A)	FACTORY DISC.			VFD	GFCI OUTLET	ECONOMIZER
							ENT. AIR DB	WB	LVG. AIR DB	WB	OD AMB DB/WB	TONS	TOTAL	SENS.	MBH	ENT. AIR DB						LVG. AIR DB	TOTAL														
(HS)	RTU-7	WRESTLING ROOM	AAON--RN--008	2400	517	(1.77)/(1.2)	PKG. DX -- R410A REFRIG.	80	66	56	53	95/75	8	90	68	--	--	--	12.5	HOT WATER	56	94	102	20	180	170	208/3/60	50	70	YES	YES	YES	YES	1279	SEE NOTES 1-7		

NOTE 1: PROVIDE DAMPERS SHOWN ON THE DRAWINGS AND ADDITIONAL DAMPERS AS NECESSARY FOR AIR BALANCING OR AS NEEDED TO COMPLY WITH EECNYS C403.7.7 REQUIREMENTS FOR INTAKES AND EXHAUST OPENINGS.  
NOTE 2: OBSERVE REQUIRED AND RECOMMENDED CLEARANCES FOR UNIT DURING PLACEMENT. INSTALL UNIT ACCORDING TO MANUFACTURER RECOMMENDATIONS.  
NOTE 3: MAINTAIN MINIMUM OF 10' FROM ROOF EDGE WHEN PLACING UNIT.

UNIT VENTILATOR SCHEDULE (30)																									
MARK	SERVICE	MFR / MODEL	TYPE	TOTAL CFM	O/A MIN	DX COOLING COIL			HEATING COIL				MOTOR (ECM)		ELECTRICAL				LOUVER SIZE	REMARKS					
						TOT. MBH	SENS. MBH	ROWS	MBH	ROWS	FLUID	EWT	LWT	QTY	HP	VOLTAGE	FLA	MCA			MOP				
BASEMENT																									
UV-70-A	ART CLASS. 70	MAUVF3-P1FFB223	VERTICAL	1000	282	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-70-B		MAUVF3-P1FFB223	VERTICAL	1000	282	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
FIRST FLOOR																									
UV-128	CLASSROOM 128	MAUVF2-P1FFB223	VERTICAL	750	283	23.4	15.6	4	47.2	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9				
UV-130	CLASSROOM 130	MAUVF3-P1FFB223	VERTICAL	1000	297	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9				
UV-132	CLASSROOM 132	MAUVF3-P1FFB223	VERTICAL	1000	310	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20		SEE NOTES 1,2,3,6,8,9				
UV-147	CLASSROOM 147	MAUVF3-P1FFB223	VERTICAL	1000	417	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-149	CLASSROOM 149	MAUVF3-P1FFB223	VERTICAL	1000	414	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-151	CLASSROOM 151	MAUVF3-P1FFB223	VERTICAL	1000	415	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-153	CLASSROOM 153	MAUVF3-P1FFB223	VERTICAL	1000	430	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-155	CLASSROOM 155	MAUVF3-P1FFB223	VERTICAL	1000	429	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-157	CLASSROOM 157	MAUVF3-P1FFB223	VERTICAL	1000	402	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-159	CLASSROOM 159	MAUVF3-P1FFB223	VERTICAL	1000	401	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-162	CLASSROOM 162	MAUVF5-P1FFB223	VERTICAL	1500	356	49.3	31.7	4	62.9	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-164	CLASSROOM 164	MAUVF2-P1FFB223	VERTICAL	750	297	23.4	15.6	4	47.2	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-166	CLASSROOM 166	MAUVF4-P1FFB223	VERTICAL	1250	417	37.3	24.3	4	58.9	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-168	CLASSROOM 168	MAUVF4-P1FFB223	VERTICAL	1250	415	37.3	24.3	4	58.9	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-170	CLASSROOM 170	MAUVF4-P1FFB223	VERTICAL	1250	415	37.3	24.3	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
UV-171	CLASSROOM 171	MAUVF5-P1FFB223	VERTICAL	1500	653	49.3	31.7	4	62.9	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9	ALT. H-D			
SECOND FLOOR																									
UV-231	SCI. LAB 231	MAUVF5-P1FFB223	VERTICAL	1500	434	49.3	31.7	4	62.9	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9				
UV-232	SCI. LAB 232	MAUVF5-P1FFB223	VERTICAL	1500	520	49.3	31.7	4	62.9	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9				
UV-233	SCI. LAB 233	MAUVF5-P1FFB223	VERTICAL	1500	609	49.3	31.7	4	62.9	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9				
UV-234	SCI. LAB 234	MAUVF5-P1FFB223	VERTICAL	1500	377	49.3	31.7	4	62.9	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9				
UV-235	SCI. LAB 235	MAUVF3-P1FFB223	VERTICAL	1000	499	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9				
UV-236	SCI. LAB 236	MAUHF3-PAADD223	HORIZONTAL	1000	342	32.9	21.5	4	46.7	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,4,6,8,9				
UV-238	SCI. LAB 238	MAUHF3-PAADD223	HORIZONTAL	1000	459	32.9	21.5	4	46.7	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,4,6,8,9				
UV-239	SCI. LAB 239	MAUHF4-PA--D223	HORIZONTAL	1250	397	37.3	24.3	4	58.9	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9,10				
UV-240	SCI. LAB 240	MAUHF5-PAADD223	HORIZONTAL	1500	438	49.3	31.7	4	64.3	2	WATER	180	150	1	3/4	115/60/1		12.00	20	NOTE 3	SEE NOTES 1,2,3,4,6,8,9				
UV-241	SCI. LAB 241	MAUVF3-P1FFB223	VERTICAL	1000	337	32.9	21.5	4	54.6	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,6,8,9				
UV-243	SCI. LAB 243	MAUHF3-PAADD223	HORIZONTAL	1000	396	32.9	21.5	4	46.7	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,4,6,8,9				
UV-245	SCI. LAB 245	MAUHF3-PAADD223	HORIZONTAL	1000	375	32.9	21.5	4	46.7	2	WATER	180	150	1	1/3	115/60/1		6.30	20	NOTE 3	SEE NOTES 1,2,3,4,6,8,9				

NOTE 1: PROVIDE ADDITIONAL DAMPERS AS NECESSARY TO AID IN AIR BALANCING.  
NOTE 2: DAMPERS CONTROLLING OUTDOOR AIR INTAKE VOLUME TO BE MOTORIZED.  
NOTE 3: CONNECT NEW UNIT VENTILATOR TO EXISTING LOUVER/INTAKE. PROVIDE NEW SLEEVE AND SEAL CONNECTIONS TO BE WEATHER TIGHT. PROVIDE NECESSARY MODIFICATIONS NEEDED FOR NEW CONNECTION.  
NOTE 4: SECURELY HANG FROM STRUCTURE USING STEEL THREADED RODS AND FRAMING. MUST INSTALL UNIT TO ALLOW FOR MAINTENANCE CLEARANCES AND FILTER CHANGES. REFER TO MANUFACTURER'S RECOMMENDATIONS.  
NOTE 5: NOT USED  
NOTE 6: PROVIDE CONDENSATE PAN. PITCH DRAIN LINE WITH MINIMUM 1/8" PER 12" SLOPE. PROVIDE CONDENSATE PUMP WHEN MINIMUM PITCH CANNOT BE MET. DISCHARGE TO A NEARBY VENT LINE OR TO EXTERIOR WHEN POSSIBLE. SEE DETAIL.  
NOTE 7: NOT USED  
NOTE 8: PROVIDE VRF COMPATIBLE UNITS, WHICH INCLUDE VRF ELECTRONIC EXPANSION VALVE KITS, VRF COMMUNICATION BOXES, ETC. PROVIDE 12" MINIMUM EXTENDED UTILITY CABINET FROM SAME MANUFACTURER TO MATCH NEW UV CABINET. HOUSE EEV AND CONTROLS IN UTILITY CABINET.  
NOTE 9: SEE PLANS FOR CONDENSATE PIPING AND ASSOCIATED. COORDINATE WITH PLUMBING CONTRACTOR.  
NOTE 10: BOTTOM RETURN, BOTTOM SUPPLY, REAR OA CONFIGURATION.

PTAC SCHEDULE																						
MARK	SERVICE	BRAND/MODEL NO.	TYPE	MAX CFM	MIN OA CFM	MAX OA CFM	COOLING COIL				HEATING COIL				ELECTRICAL				UNIT WEIGHT (LB)	LOUVER SIZE	REMARKS	
							EAT DB	WB	OUTPUT (MBH)	EER	EAT DB (°F)	OUTPUT (MBH)	GPM	EWT	V/PH/Hz	MCA (A)	MOP (A)	FACTORY DISC.				
PTAC-1	CLASSROOM 237	AMANA/PTC092G00H	THRU WALL PACKAGE TERMINAL AC W/HYDRONIC HEAT	310	60	65	78.0	85.0	9.0	11.3	42.0	16.9	1	180	115/1/60	8.3	15	YES	102	16"x42"	SEE NOTES 1-7	
PTAC-2	DET. OFFICE 236.A	AMANA/PTC092G00H	THRU WALL PACKAGE TERMINAL AC W/HYDRONIC HEAT	310	55	65	78.0	85.0	9.0	11.3	42.0	16.9	1	180	115/1/60	8.3	15	YES	102	16"x42"	SEE NOTES 1-7	
PTAC-5	OFFICE 154.1	AMANA/PTC092G00H	THRU WALL PACKAGE TERMINAL AC W/HYDRONIC HEAT	310	35	65	78.0	85.0	9.0	11.3	42.0	16.9	1	180	115/1/60	8.3	15	YES	102	16"x42"	SEE NOTES 1-7 <b>ALT. H-D</b>	
PTAC-4	OFFICE 154.2	AMANA/PTC072G00H	THRU WALL PACKAGE TERMINAL AC W/HYDRONIC HEAT	310	25	65	78.0	85.0	7.0	11.9	42.0	14.9	1	180	115/1/60	6.9	15	YES	98	16"x42"	SEE NOTES 1-7 <b>ALT. H-D</b>	
PTAC-3	OFFICE 154.3	AMANA/PTC072G00H	THRU WALL PACKAGE TERMINAL AC W/HYDRONIC HEAT	310	25	65	78.0	85.0	7.0	11.9	42.0	14.9	1	180	115/1/60	6.9	15	YES	98	16"x42"	SEE NOTES 1-7 <b>ALT. H-D</b>	
NOTE 1: PROVIDE NEW WALL SLEEVE (WS900E). REPAIR OR ALTER EXISTING WALL PENETRATION AS NEEDED. MAINTAIN STRUCTURAL INTEGRITY. SEAL CONNECTIONS TO BE WEATHER TIGHT.																						
NOTE 2: PROVIDE REQUIRED AND RECOMMENDED CLEARANCES FOR UNIT BEFORE CUTTING OR INSTALLING. INSTALL UNIT ACCORDING TO MANUFACTURER RECOMMENDATIONS.																						
NOTE 3: PROVIDE DRAIN KIT (DK900D). DRAIN ALL CONDENSATE TO EXTERIOR.																						
NOTE 4: PROVIDE HYDRONIC WATER KIT (HWK03E) WITH 1/2" I.D. (5/8" O.D.) CONNECTIONS.																						
NOTE 5: PROVIDE HARD WIRE KIT AND Tie INTO EXISTING CIRCUIT.																						
NOTE 6: PROVIDE EXTRUDED ALUMINUM AMUSTA PTAC LOUVER (AGK01). COLOR TO MATCH NEAREST ADJACENT LOUVER COLORS OR AS SELECTED BY DISTRICT.																						
NOTE 7: DAMPER THAT MODULATES OA MUST BE MOTORIZED AND CONTROLLED TO AUTOMATICALLY CLOSE WHEN THE UNIT FAN IS DE-ENERGIZED.																						

VRF SCHEDULE																
MARK	SERVICE	BRAND/MODEL NO.	TYPE	CAPACITY (TONS)	AMBIENT TEMP. (°F)	TOTAL UNIT POWER (KW) COOLING/HEATING	EER AHRI	REFRIG.	CONNECTIONS		UNIT ELECTRICAL DATA			WEIGHT LBS.	REMARKS	
									L	G	VOLTAGE	MOPD	MCA			
VRF-1	SEE DWG M-111	LG ARUM288BTES	AIR SOURCE HEAT PUMP	24	95	18.94 / 22.20	12.5	R410A	3/4"	1-3/8"	208/3PH	40+80	29+58	534+694	SEE NOTES 1,2,3,4,5,6 (ALT. H-D)	
VRF-2	SEE DWG M-111	LG ARUM264BTES	AIR SOURCE HEAT PUMP	22	95	17.56 / 20.72	12.5	R410A	3/4"	1-3/8"	208/3PH	40+70	29+54	534+666	SEE NOTES 1,2,3,4,5,6 (ALT. H-D)	
VRF-3	SEE DWG M-111	LG ARUM336BTES	AIR SOURCE HEAT PUMP	28	95	23.09 / 26.95	10.8	R410A	3/4"	1-3/8"	208/3PH	40+80	31+61	534+688	SEE NOTES 1,2,3,4,5,6	
VRF-4	SEE DWG M-111	LG ARUM264BTES	AIR SOURCE HEAT PUMP	22	95	17.56 / 20.72	11.5	R410A	3/4"	1-3/8"	208/3PH	40+70	29+54	534+666	SEE NOTES 1,2,3,4,5,6	



HIGH SCHOOL UV-C LIGHTING SCHEDULE (ALTERNATE)							
NEW UV-C CIRCUIT MARK	LOCATION/SERVICE	HVAC UNIT TYPE	HVAC UNIT NOMINAL AIR FLOW (CFM)	UV-C INSTALL LOCATION	UV-C FIXTURE MODEL NO.	UV-C FIXTURE VOLTAGE/PH	HVAC UNIT VOLTAGE/PH
FIRST FLOOR							
UVC-HS-79	128	UV *	750	115/1	IN CABINET	UV-FCU-CL 90H-P-B-VENT	1 110-240/1
UVC-HS-80	130	UV *	1000	115/1	IN CABINET	UV-FCU-CL 90H-P-B-VENT	1 110-240/1
UVC-HS-81	132	UV *	1000	115/1	IN CABINET	UV-FCU-CL 90H-P-B-VENT	1 110-240/1
UVC-HS-82	154 Wrestling Rm	RTU *	2400	208/3		UV-FCU-CL 90H-P-B-VENT	1 110-240/1
SECOND FLOOR							
UVC-HS-83	231	UV *	1500	115/1	IN CABINET	UV-FCU-CL 90H-P-B-VENT	1 110-240/1
UVC-HS-84	232	UV *	1500			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-85	233	UV *	1500			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-86	234	UV *	1500			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-87	235	UV *	1000			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-88	236	HORIZ. UV *	1000			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-89	238	HORIZ. UV *	1000			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-90	239	UV *	1250			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-91	240	HORIZ. UV *	1500			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-92	241	UV *	1000			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-93	243	HORIZ. UV *	1000			UV-FCU-CL 90H-P-B-VENT	1
UVC-HS-94	245	HORIZ. UV *	1000	↓	↓	UV-FCU-CL 90H-P-B-VENT	1 ↓
(*) INDICATES UNIT IS PROVIDED NEW AS PART OF CURRENT PROJECT. REFER TO M DRAWINGS FOR MORE INFORMATION. DO NOT PROVIDE UV-C FIXTURES TO EXISTING TO BE REMOVED EQUIPMENT.							

HIGH SCHOOL UV-C LIGHTING SCHEDULE							ALL WORK THIS AREA PART OF ALTERNATE (ALT. H-1)	
NEW UV-C CIRCUIT MARK	LOCATION/SERVICE	HVAC UNIT TYPE	HVAC UNIT NOMINAL AIR FLOW (CFM)	UV-C INSTALL LOCATION	UV-C FIXTURE MODEL NO.	UV-C FIXTURE VOLTAGE/PH	QTY.	HVAC UNIT VOLTAGE/PH
BASEMENT								
UVC-HS-95	70	UV *	1500	115/1	IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	110-240/1
UVC-HS-96		UV *	1500	115/1	IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	110-240/1
FIRST FLOOR								
UVC-HS-97	Main Office Conference Rm.	UV	1000	115/1	IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	110-240/1
UVC-HS-98	Main Office	HORIZ. UV	1000		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-99	147	UV *	1000		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-100	149	UV *	1000		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-101	151	UV *	1000		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-102	153	UV *	1000		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-103	155	UV *	1000		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-104	157	UV *	1000		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-105	159	UV *	1000		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-106	162	UV *	1500		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-107	164	UV *	750		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-108	166	UV *	1250		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-109	168	UV *	1250		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-110	170	UV *	1250		IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	
UVC-HS-111	171	UV *	1500	▽	IN CABINET	UV-FCU-CL 90H-P-B-VENT	1	▽
(*) INDICATES UNIT IS PROVIDED NEW AS PART OF CURRENT PROJECT. REFER TO M DRAWINGS FOR MORE INFORMATION. DO NOT PROVIDE UV-C FIXTURES TO EXISTING TO BE REMOVED EQUIPMENT.								

ALTERNATE NOTE  
(ALT. H-1) EQUIPMENT AND ASSOCIATED WORK WITH THIS MARK TO BE PROVIDED AS PART OF ALTERNATE H-1 ONLY. ALL OTHER UNMARKED WORK TO BE PROVIDED AS PART OF BASE BID.

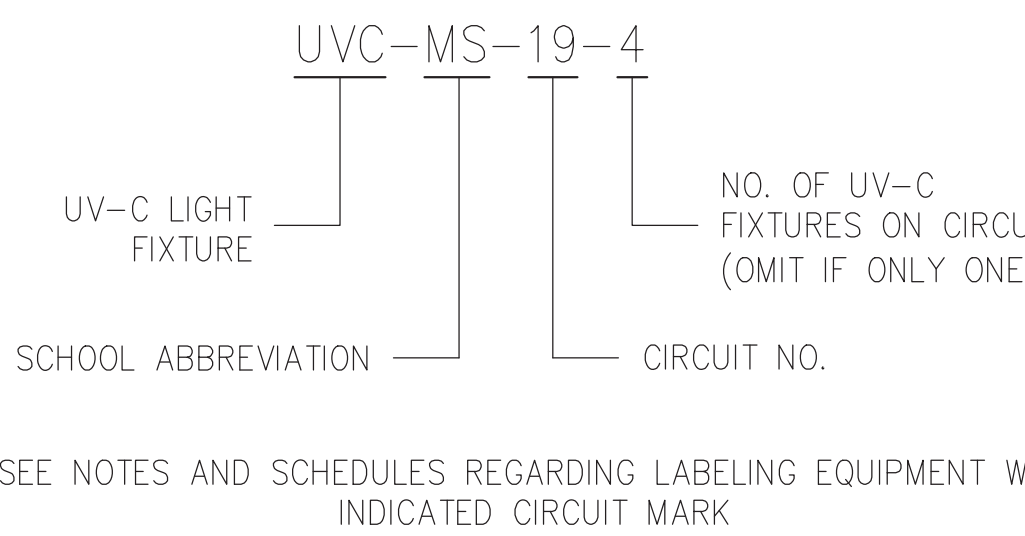
UV-C LIGHT FIXTURE SPECIFICATION AND INSTALLATION NOTES

- NOTE 1: PROVIDE UV-C LIGHT FIXTURES AND BULBS FROM COGNITUV BRAND, NO SUBSTITUTION, AND ANY HARDWARE, SHIELDING, WIRING, DRIVERS, RELAYS, TRANSFORMERS, AND ALL APPURTENANCES NECESSARY FOR INSTALLATION.
- NOTE 2: PROVIDE POWER TO LIGHT FIXTURES USING 2#12 -W1#12 GRD WIRING. PROVIDE 3/4" CONDUIT OR METAL CLADDING TO POWER AND CONTROL WIRING. POWER AND CONTROL WIRING TO BE IN SEPARATE CONDUIT/MC TO AVOID INTERFERENCE.
- NOTE 3: UV-C CONTRACTOR TO PROVIDE AND COORDINATE CUTTING, PATCHING, SEALING, AND REINSULATING OF DISTURBED DUCTWORK. REINFORCE DUCTWORK TO MAINTAIN RIGIDITY AND PROVIDE SUPPORT TO PREVENT DUCTWORK SAGGING, DEFORMATION, OR VIBRATION. TEST AND SEAL ALL PENETRATIONS TO BE AIRTIGHT.
- NOTE 4: EACH UV-C LIGHTING CIRCUIT MUST INCLUDE AN INDIVIDUAL SERVICE SWITCH. ONE SERVICE SWITCH MUST DISCONNECT POWER FROM ALL UV-C FIXTURES ON THE CIRCUIT. THIS SERVICE SWITCH SHALL NOT DISCONNECT POWER TO THE HVAC UNIT, CONTROLLER, OR FAN. THE SERVICE SWITCH FACE PLATES MUST INDICATE ON AND OFF DIRECTIONS.
- NOTE 5: THE SERVICE SWITCH SHALL HAVE A STATUS INDICATING LED, EITHER INCORPORATED INTO THE SWITCH OR OTHERWISE ADDED. THE SERVICE SWITCH LED SHALL ILLUMINATE ONLY IF THE UV-C FIXTURE(S) ARE ON AND ILLUMINATED. IF THERE ARE FACTORY-MOUNTED STATUS LEDS ON THE UV-C FIXTURES AND THEY ARE VISIBLE FROM THE OUTSIDE OF THE FIXTURE, THE SWITCH STATUS LED MAY BE OMITTED.
- NOTE 6: UV-C LIGHTING AND ALL APPURTENANCES MUST BE POSITIONED TO BE ACCESSIBLE WITHIN REASON TO ALLOW FOR CLEANING, MAINTENANCE, AND REPLACEMENT OF BULB(S). VERIFY PLACEMENT BASED ON FIELD CONDITIONS. PROVIDE PAINTED ACCESS PANELS AS NEEDED.
- NOTE 7: TIE INTO SPECIFIED HVAC EQUIPMENT CONTROLS. REFER TO THE UV-C ACTIVATION CONDITIONS DETAIL REGARDING WHEN THE UV-C FIXTURE(S) SHALL BE ACTIVATED.
- NOTE 8: CONNECT TO BMS CONTROLS AND INTEGRATE TO TRIP TROUBLE CODES FOR MALFUNCTIONS, SUCH AS A NON-FUNCTIONAL BALLAST OR BULB. PROVIDE UV-C FIXTURE WITH OPTIONS AND EQUIPMENT TO COMMUNICATE WITH EXISTING BMS. VERIFY IN FIELD.
- NOTE 9: AFFIX 1" PLASTIC OR VINYL LABELS TO EACH UV-C LIGHT FIXTURE AND SERVICE SWITCH WITH THE CORRESPONDING UV-C CIRCUIT MARK NOTED ABOVE. EACH UV-C FIXTURE TO BE MARKED WITH AN APPROPRIATE WARNING LABEL. PROVIDE PLASTIC OR VINYL PURPLE MARKERS TO APPROXIMATELY MARK LOCATIONS OF UV-C FIXTURES ABOVE CEILINGS. AFFIX TO T-BAR FOR DROP CEILINGS. AFFIX A LABEL READING "UV-C ON" NEAR ALL STATUS INDICATING LEDS, WHETHER FACTORY-MOUNTED OR OTHERWISE. FOR CIRCUITS THAT REQUIRE POWER TO COME FROM A NEARBY AVAILABLE POWER PANEL, AFFIX LABEL TO CIRCUIT SWITCH INDICATING PANEL'S ROOM NUMBER, PANEL NAME, AND BREAKER NUMBER.
- NOTE 10: CONTROLS TO BE COORDINATED WITH DISTRICT CONTROLS VENDER.
- NOTE 11: ALL LOCATIONS, ORIENTATIONS, AND TYPES OF UV-C LIGHT FIXTURES ARE APPROXIMATE. DETERMINE FINAL LOCATION/ORIENTATION BASED ON MANUFACTURER'S RECOMMENDATIONS AND FIELD CONDITIONS.
- NOTE 12: FOR UNITS WITH FIXTURES INDICATED TO BE MOUNTED "IN CABINET", PROVIDE AT LEAST ONE (1) SNAP-ACTION TYPE SWITCH TO EACH OF THE SCHEDULED HVAC UNITS' (UV, AHU, RTU, ETC.) ACCESS DOORS/PANELS AND/OR ADJACENT DUCTWORK ACCESS DOORS/PANELS. HARDWIRE POWER TO SWITCHES TO AUTOMATICALLY TURN OFF ALL UV-C LIGHTS ON THE APPLICABLE UV-C CIRCUIT IF ANY PANELS ARE OPENED. PROVIDE ALL WIRING AND APPURTENANCES. SEE SCHEDULE FOR UNIT TYPES. VERIFY ACCESS DOORS/PANELS IN FIELD.
- NOTE 13: "IN CABINET" INSTALLATIONS SHALL MAKE USE OF LIGHT SHIELDING AND REQUIRE PROPER AIMING DURING INSTALLATION. REFER TO MANUFACTURER'S RECOMMENDATIONS.

HVAC UNIT LEGEND

- RTU - ROOF TOP UNIT  
AHU - AIR HANDLING UNIT  
UV - VERTICAL UNIT VENTILATOR - FLOOR MOUNTED  
HORIZ. UV - HORIZONTAL UNIT VENTILATOR - CEILING HUNG  
FCU - VERTICAL FAN COIL UNIT - FLOOR MOUNTED  
HORIZ. FCU - HORIZONTAL FAN COIL UNIT - CEILING HUNG  
VRF - VARIABLE REFRIGERANT FLOW SYSTEM  
HRU - HEAT RECOVERY UNIT  
MAU - MAKE-UP AIR UNIT

CIRCUIT NAMING CONVENTION



ENGINEER:

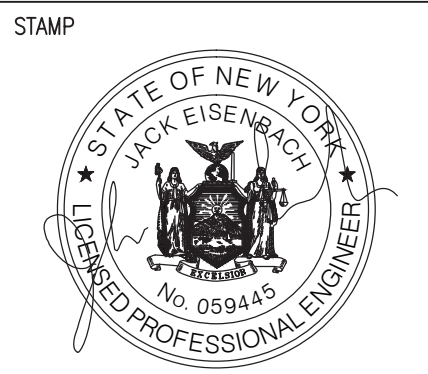
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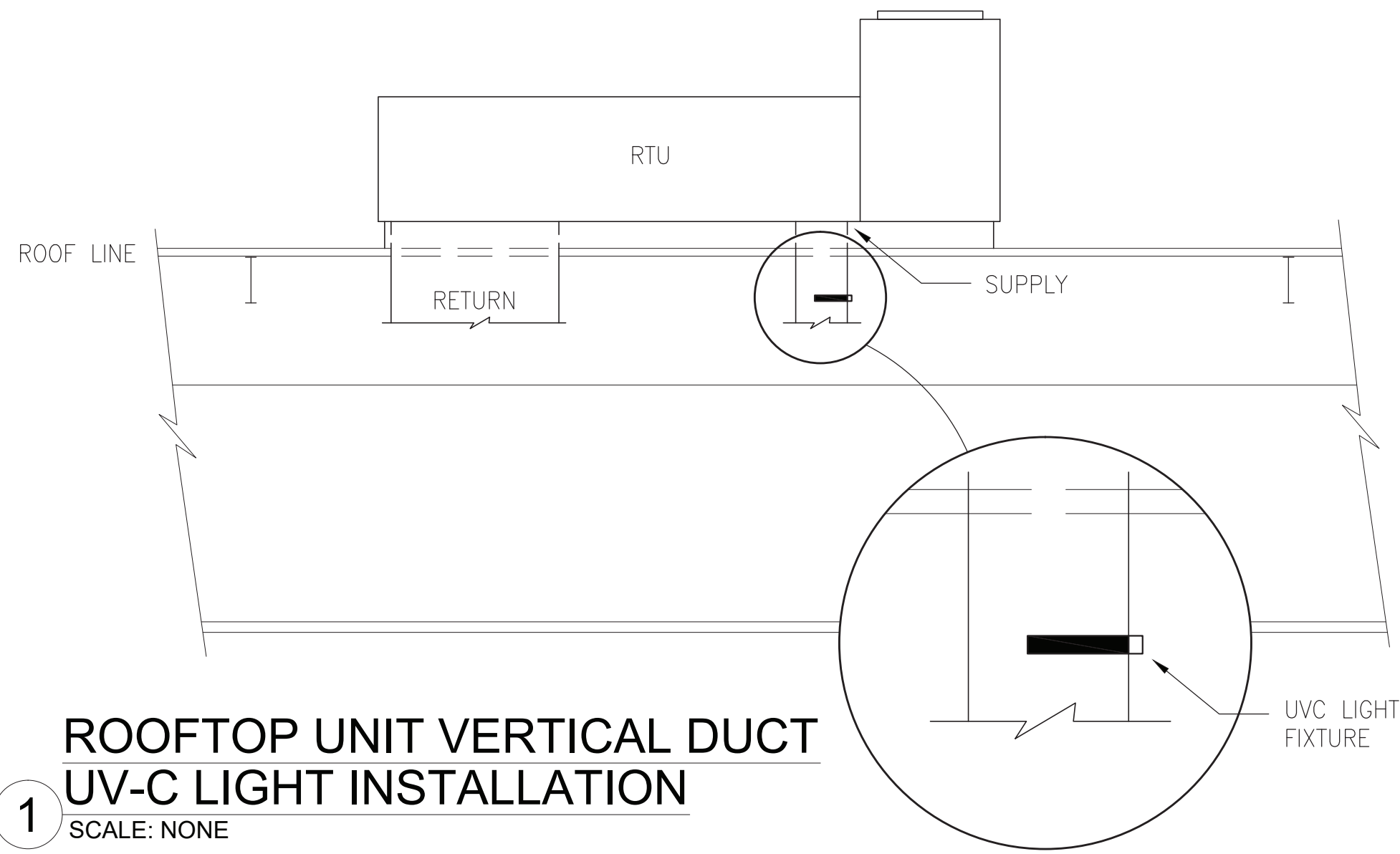


WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990  
SED NO. 44-21-01-06-0-001-042

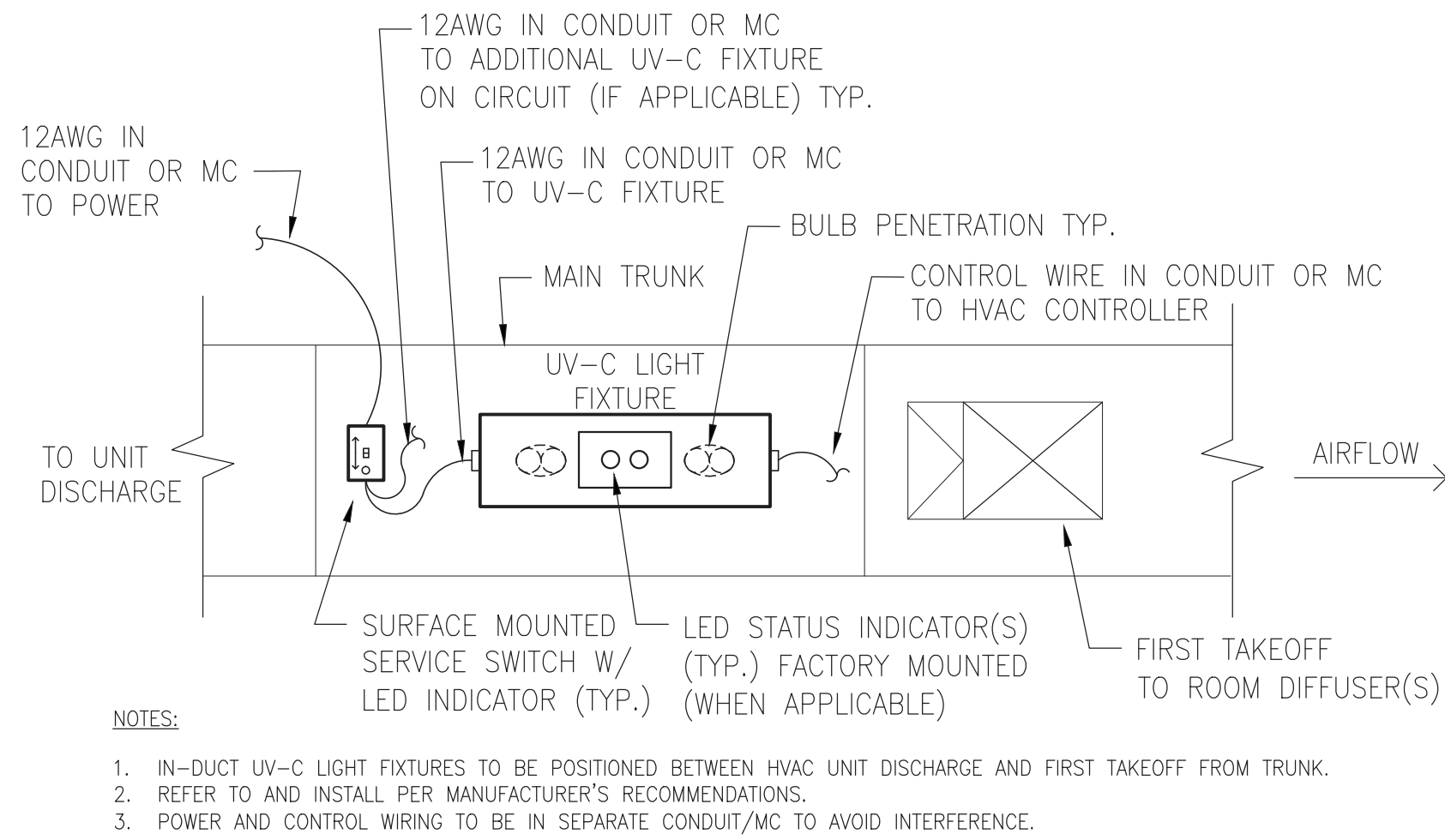
PROJECT NO.	05-21-04 05-20-06
ISSUED FOR BID	11.09.2022
SED SET	10.19.2022
REVISION	DATE
DRAWN BY	
CHECKED BY	
SHEET SIZE	30" X 42"
SCALE	AS NOTED
SHEET TITLE	
HIGH SCHOOL UV-C LIGHT FIXTURE SCHEDULE	
SHEET NO.	

M-503

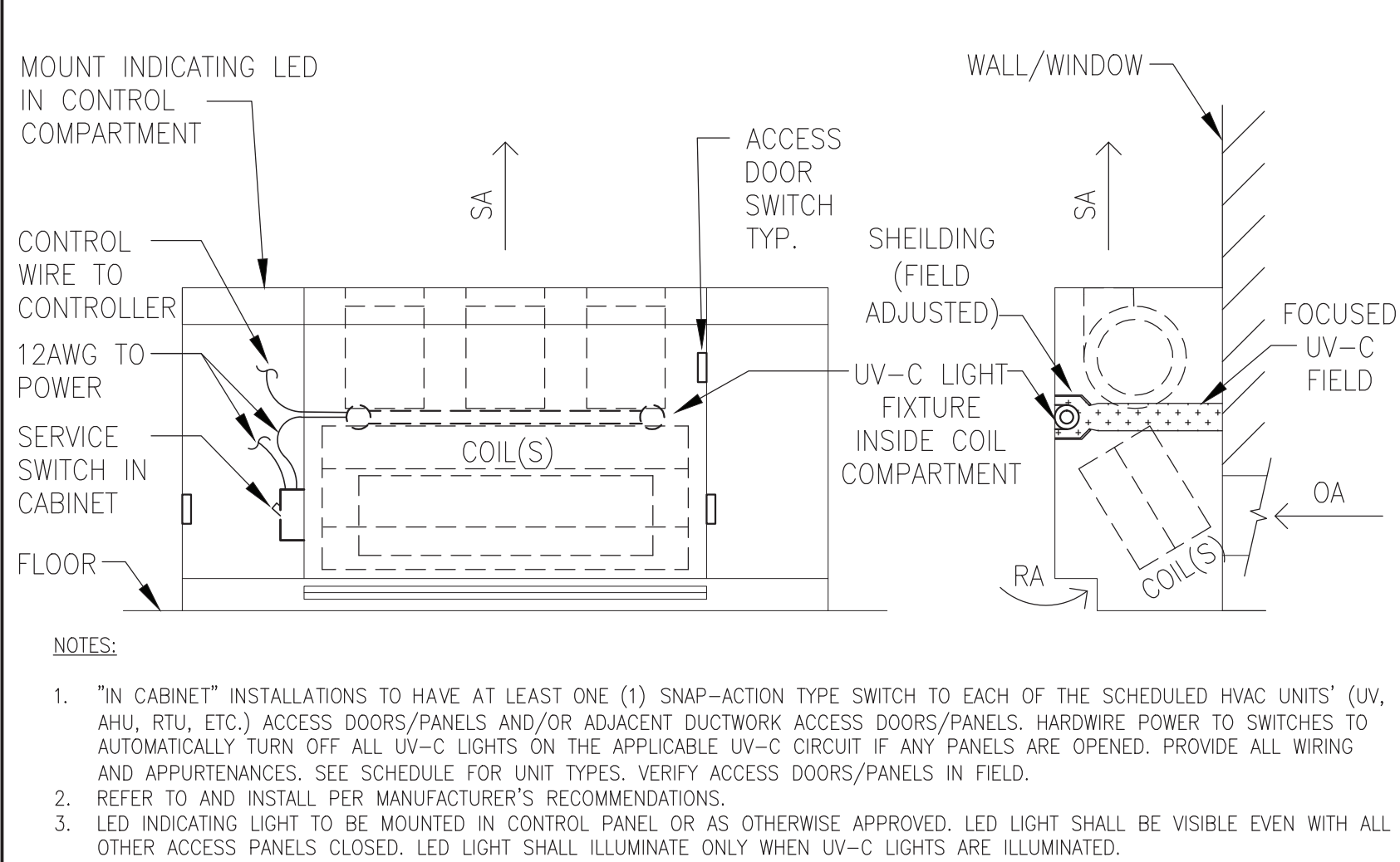




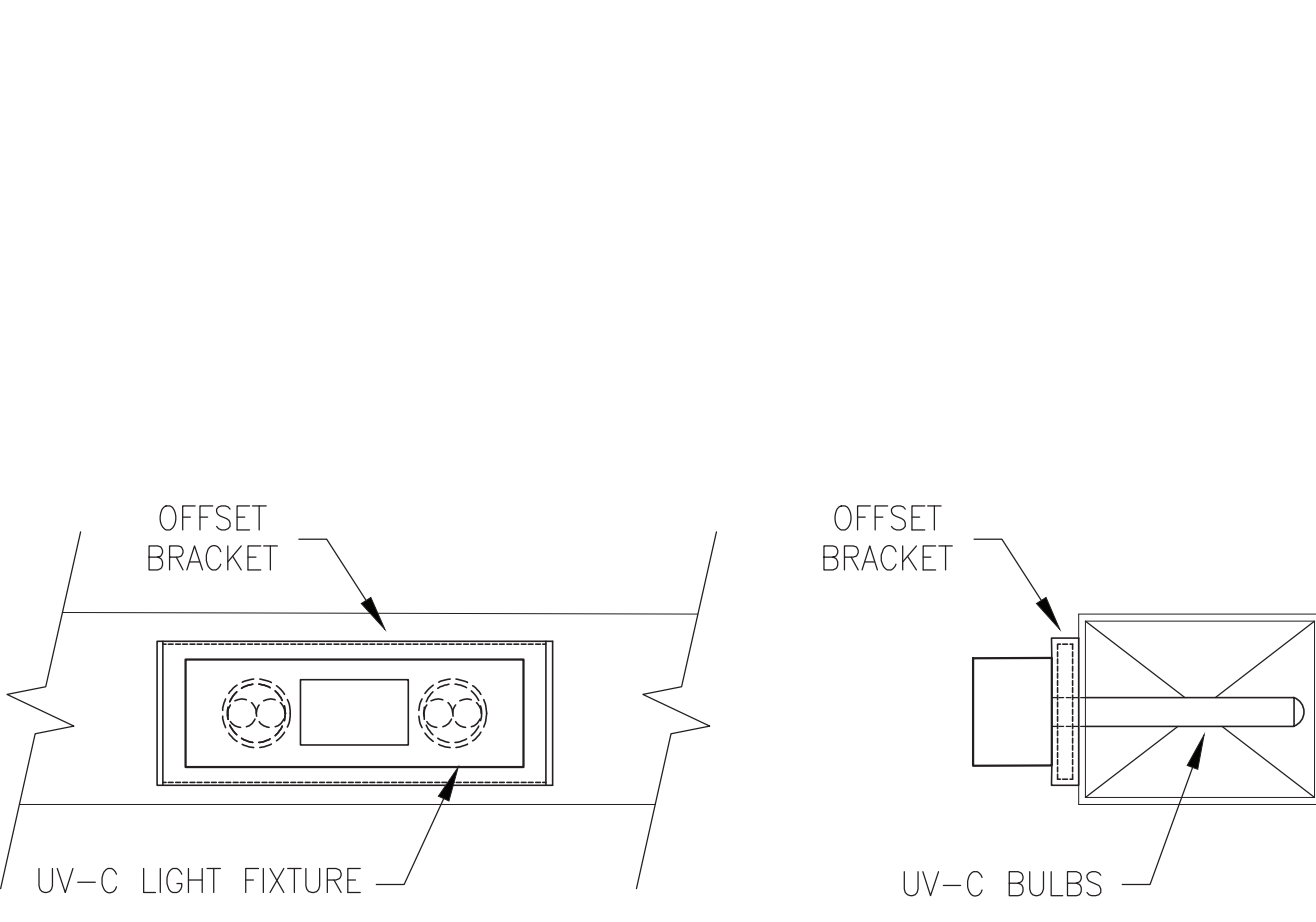
1 ROOFTOP UNIT VERTICAL DUCT UV-C LIGHT INSTALLATION  
SCALE: NONE



2 DUCTWORK UV-C LIGHT TYPICAL INSTALLATION DETAIL  
SCALE: NONE



3 VERTICAL UV/FCU UV-C LIGHT TYPICAL INSTALLATION DETAIL  
SCALE: NONE



4 OFFSET BRACKET PLACEMENT FOR HIGH WATTAGE BULB IN SMALL DUCT  
SCALE: NONE

EQUIPMENT:	LABELS REQUIRED:
UV-C LIGHT FIXTURES	<ul style="list-style-type: none"><li>UV-C CIRCUIT MARK</li><li>"UV-C ON" AT INDICATING LEDS</li><li>WARNING LABEL (BY MANUFACTURER)</li><li>BLANK LABEL ON CEILINGS FOR QUICK LOCATION (WHEN APPLICABLE)</li></ul>
SERVICE SWITCH	<ul style="list-style-type: none"><li>UV-C CIRCUIT MARK</li><li>"UV-C ON" AT INDICATING LEDS (WHEN APPLICABLE)</li><li>PANEL LOCATION, NAME, BREAKER # (WHEN APPLICABLE)</li></ul>

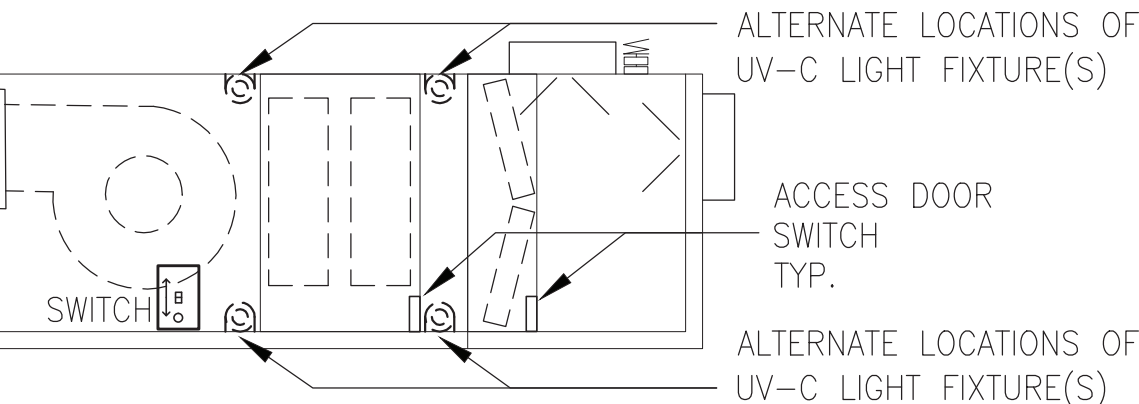
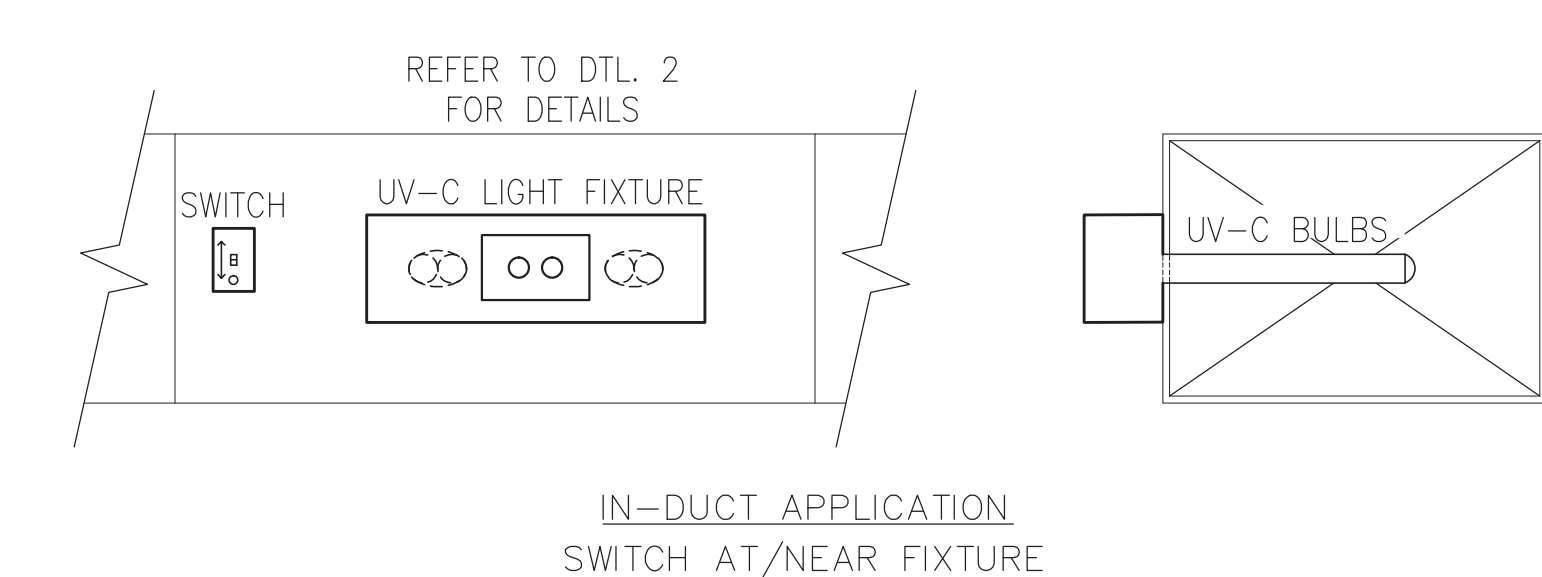
NOTE: LABEL COLOR TO BE PURPLE, OR AS SELECTED BY DISTRICT

5 LABELING REQUIREMENTS AND LOCATIONS  
SCALE: NONE

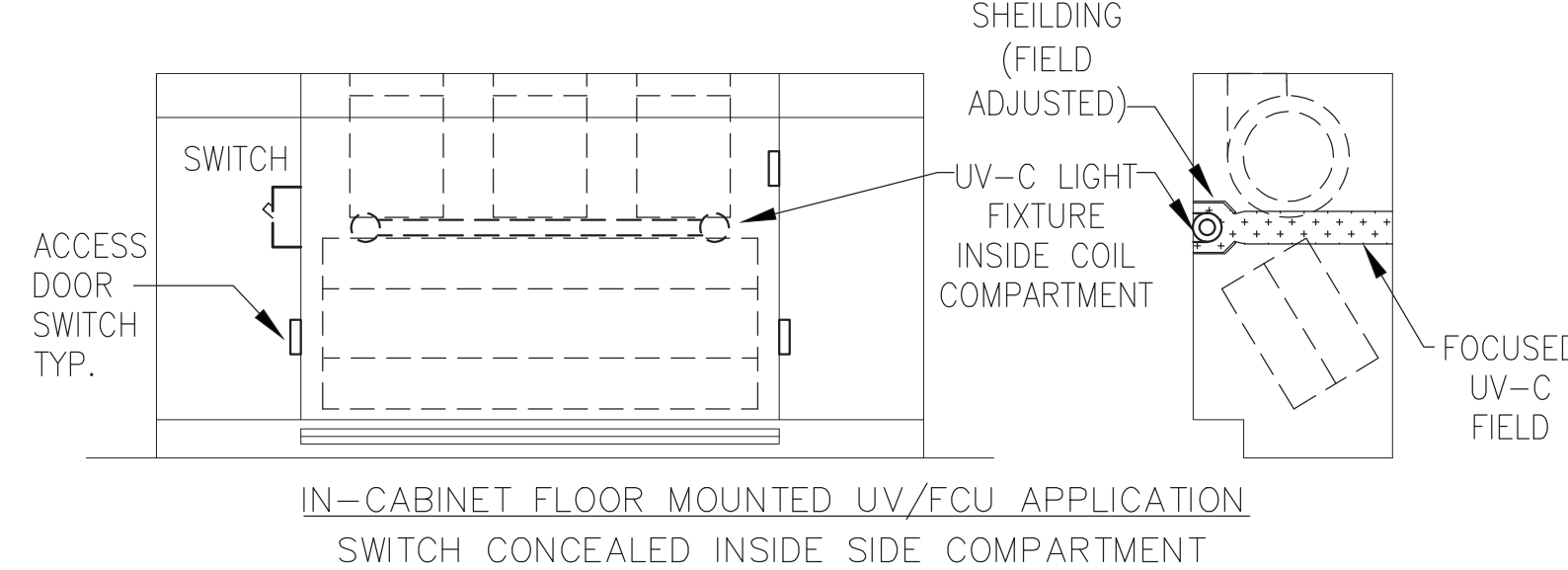
UV-C & LED "OFF" CONDITIONS (REASONS IN BOLD)		"ON" CONDITIONS	
"UNOCCUPIED MODE" UNIT/ FAN (ON)	"OCCUPIED MODE" UNIT/ FAN (ON)	"OCCUPIED MODE" UNIT/ FAN (ON)	"OCCUPIED MODE" UNIT/ FAN (ON)
NOTE 1	NOTE 2	NOTE 3	NOTE 4

- NOTES:
- UV-C FIXTURES SHALL NOT ENGAGE DURING "UNOCCUPIED" MODE. "OCCUPIED MODE" TO BE ACTIVE WITHIN THE TIME FRAME FROM ONE HOUR BEFORE SCHOOL UNTIL ONE HOUR AFTER SCHOOL "UNOCCUPIED MODE" TO BE ACTIVE OUTSIDE OF THAT TIME FRAME (COORDINATE TIME-FRAME SETTING WITH DISTRICT REPRESENTATIVE), OR AS DEFINED BY THE HVAC EQUIPMENT.
  - THE DISCONNECTING SWITCH IN THE "OFF" POSITION SHALL NOT ILLUMINATE THE LED AND SHALL DISCONNECT ALL UV-C LIGHTS ON THE CIRCUIT. UV-C FIXTURES SHALL NOT ENGAGE IF THE DISCONNECTING SWITCH IS "OFF".
  - HVAC UNITS WITH UV-C LIGHT FIXTURES INSTALLED INSIDE OF THE UNIT'S CABINET (WHEN APPLICABLE) SHALL HAVE SNAP SWITCH SENSORS INSTALLED TO ALL ACCESS DOORS. IF ANY ACCESS DOOR SNAP SWITCH SENSORS ARE OPEN THE UV-C FIXTURES SHALL NOT ENGAGE.
  - THE UV-C LIGHT FIXTURES AND DISCONNECTING SWITCH LED SHALL ENGAGE AND ILLUMINATE ONLY WHEN: DURING "OCCUPIED MODE", WHEN THE HVAC UNIT IS "ON", ALL SNAP SWITCH SENSORS ARE CLOSED, AND DISCONNECTING SWITCH IS "ON".

6 UV-C LIGHT FIXTURE ACTIVATION CONDITIONS  
SCALE: NONE

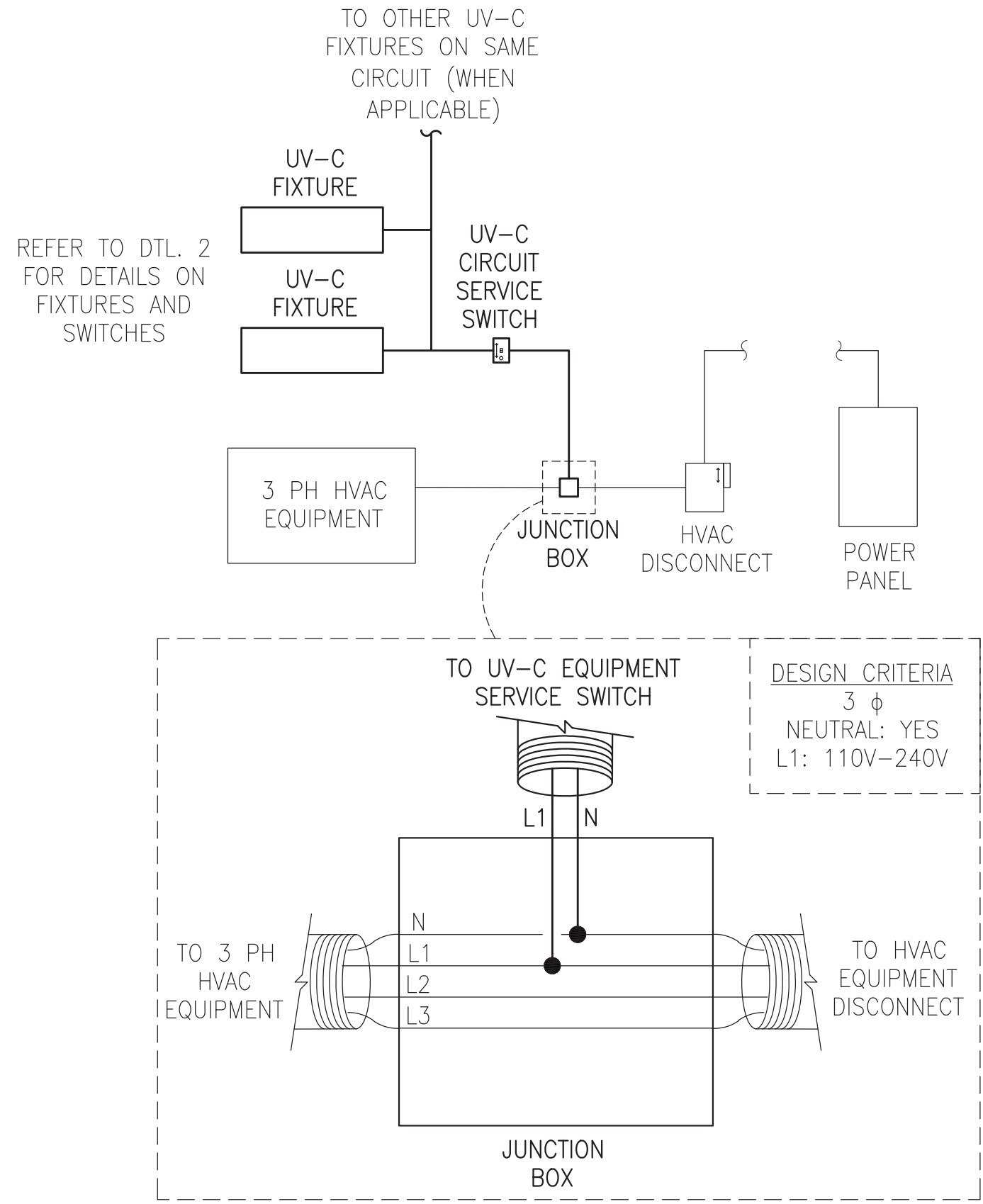


IN-CABINET HORIZONTAL AHU/UV/FCU APPLICATION  
SWITCH ON EXTERIOR OF HVAC UNIT



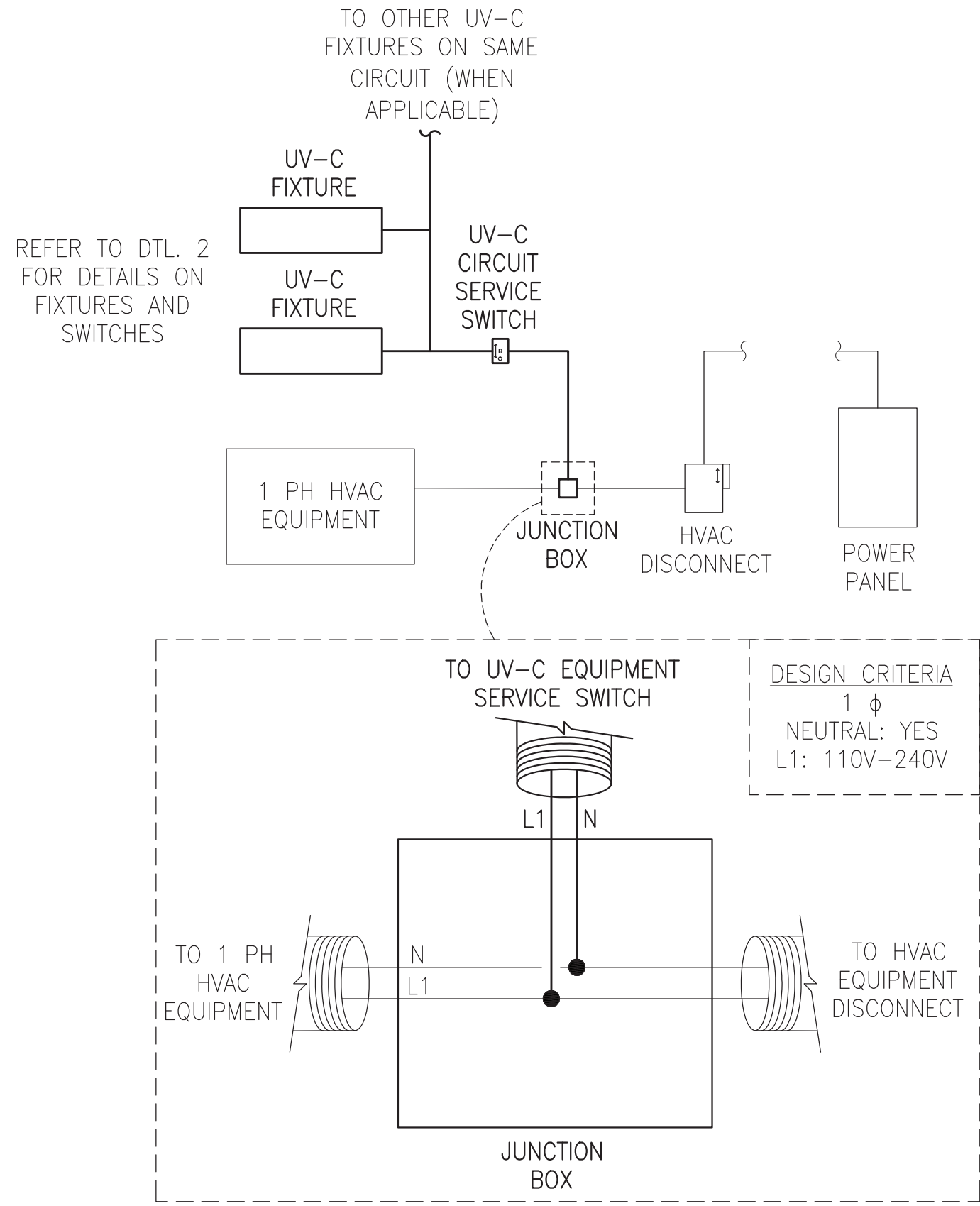
- NOTES:
- ARRANGEMENTS OF HVAC COMPONENTS AND UV-C LIGHT FIXTURE INSTALLATION LOCATIONS AND QUANTITIES MAY VARY. INSTALL PER SCHEDULE AND MANUFACTURER RECOMMENDATIONS.
  - ALL ACCESS DOORS TO BE OUTFITTED WITH SENSOR SWITCHES TO AUTOMATICALLY DISCONNECT POWER TO UV-C FIXTURES WHEN ACCESS DOORS ARE REMOVED FROM UNITS WITH UV-C INSTALLATIONS INSIDE THE CABINET.
  - ALL SWITCHES AND FIXTURES TO BE INSTALLED AWAY FROM SOURCES OF CONDENSATION OR OTHER MOISTURE. FOR IN-DUCTWORK APPLICATIONS, MOUNT DISCONNECT SWITCH AT OR NEAR THE UV-C LIGHT INSTALLATION. FOR IN-CABINET APPLICATIONS FOR EXPOSED UVS OR FCUS, MOUNT DISCONNECT SWITCH INSIDE THE SIDE CABINET OR CONTROL AREA OF THE CABINET. FOR IN-CABINET APPLICATIONS FOR UNITS THAT ARE LOCATED ABOVE CEILING OR ARE OTHERWISE CONCEALED, DISCONNECT SWITCH TO BE MOUNTED DIRECTLY TO THE OUTSIDE OF THE UNIT.

7 UV-C LIGHT FIXTURE & DISCONNECT SWITCH INSTALLATION LOCATIONS  
SCALE: NONE



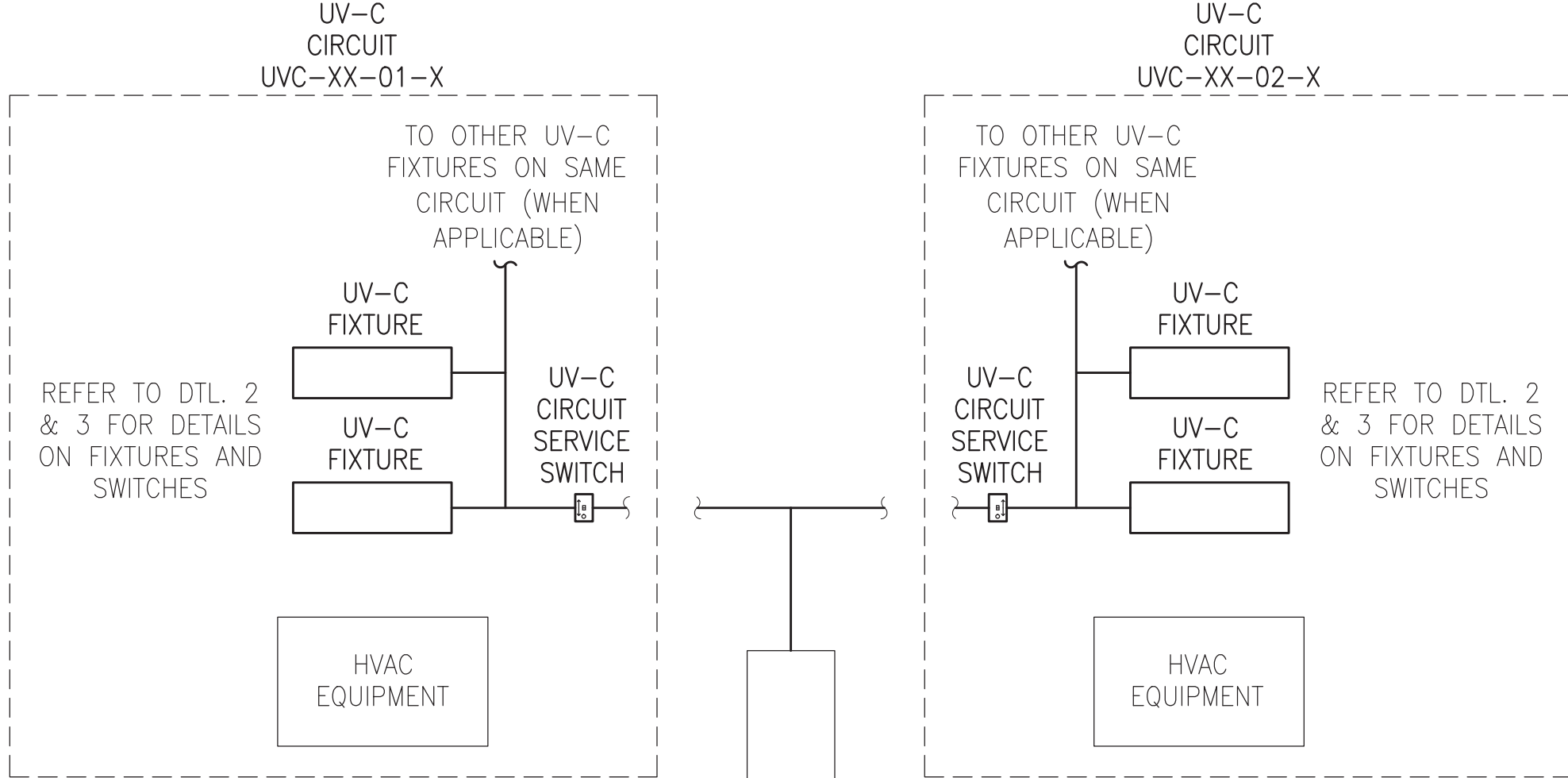
8 UV-C POWER DIAGRAM THREE PHASE W/ NEUTRAL & L1=110V-240V  
SCALE: NONE

- NOTES:
- CIRCUIT MAY BE POWERED FROM HVAC EQUIPMENT'S POWER CIRCUIT WHEN A NEUTRAL WIRE IS PRESENT. BEFORE TAPPING, ONE LEG'S CIRCUIT VOLTAGE MUST TEST TO THE SPECIFIED VOLTAGE RANGE ABOVE. INSTALL 4"x4"x2" JUNCTION BOX BETWEEN HVAC DISCONNECT AND HVAC EQUIPMENT AS SHOWN.



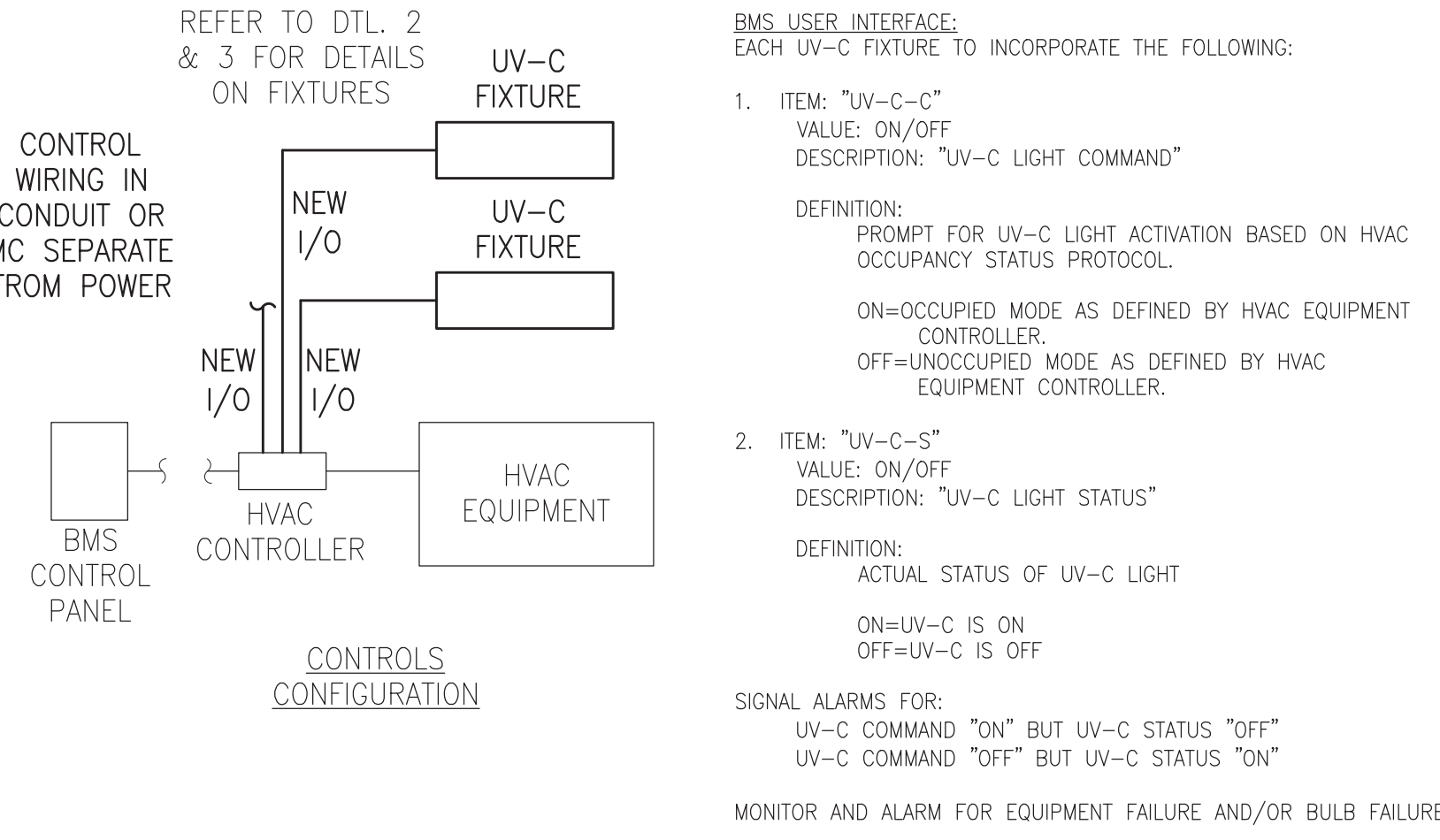
9 UV-C POWER DIAGRAM SINGLE PHASE W/ NEUTRAL & L1=110V-240V  
SCALE: NONE

- NOTES:
- CIRCUIT MAY BE POWERED FROM HVAC EQUIPMENT'S POWER CIRCUIT WHEN A NEUTRAL WIRE IS PRESENT. BEFORE TAPPING, CIRCUIT VOLTAGE MUST TEST TO THE SPECIFIED VOLTAGE RANGE ABOVE. INSTALL 4"x4"x2" JUNCTION BOX BETWEEN HVAC DISCONNECT AND HVAC EQUIPMENT AS SHOWN.



10 UV-C POWER DIAGRAM THREE PHASE W/O NEUTRAL AND/OR 240V-480V  
SCALE: NONE

- NOTES:
- UV-C CIRCUIT MUST BE POWERED FROM AN AVAILABLE NEARBY PANEL IF NEUTRAL IS NOT PRESENT IN HVAC EQUIPMENT POWER CIRCUIT, OR EXCEEDS THE VOLTAGE RANGE NOTED ABOVE. SEE UV-C SCHEDULES FOR PROPOSED POWER SOURCES. DO NOT TAP INTO OTHER UNSPECIFIED EXISTING CIRCUITS. UV-C CIRCUITS TO BE GROUPED TOGETHER WHENEVER FEASIBLE. PROVIDE NEW BREAKER, CLEARLY IDENTIFY ROOM NUMBER, PANEL NAME, AND BREAKER NUMBER AT UV-C FIXTURE SERVICE SWITCH. IDENTIFY NEW CIRCUIT AT PANEL.



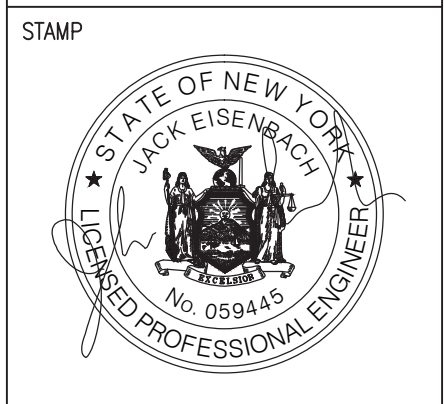
11 UV-C CONTROLS DIAGRAM  
SCALE: NONE

- NOTES:
- UV-C EQUIPMENT SHALL BE INTEGRATED INTO THE EXISTING BMS AS SHOWN. ACTIVATION PROTOCOL SHALL BE BASED UPON THE "UV-C FIXTURE ACTIVATION CONDITIONS" DETAIL.

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WARWICK VALLEY CENTRAL SCHOOL DISTRICT  
HIGH SCHOOL UNIT VENTILATOR REPLACEMENT AND  
AIR CONDITIONING UPGRADE  
225 WEST STREET EXT. WARWICK, NY 10990  
WV HIGH SCHOOL - 89 SANFORDVILLE ROAD, WARWICK, NY 10990  
FD NO. 44-21-01-01-06-0-001-042

PROJECT NO.	05-21-04 05-20-06
ISSUED FOR BID	11.09.2022
SET SET	10.19.2022
REVISION	DATE
DRAWN BY	
CHECKED BY	
SHEET SIZE	30" X 42"
SCALE	AS NOTED
SHEET TITLE	
UV-C LIGHT FIXTURE DETAILS	
SHEET NO.	
M-504	



