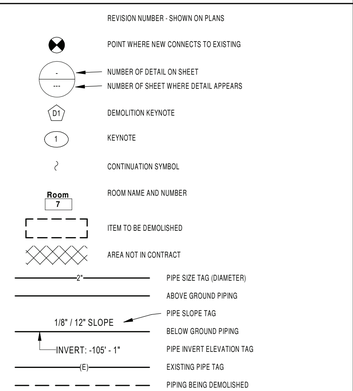
GENERAL MECHANICAL SYMBOLS



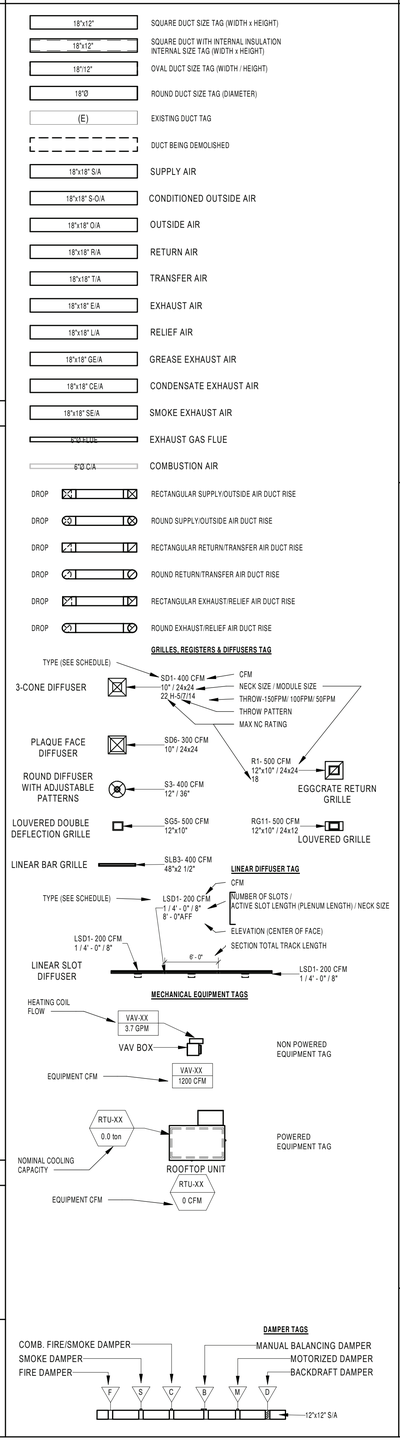
ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MU/A	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEAN OUT	REC	RECESSED
FD	FLOOR DRAIN	RED	REDUCER
FDC	FIRE DEPARTMENT CONNECTION	RH	RELATIVE HUMIDITY
FL	FLOOR	RL/A	RELIEF AIR
FO	FUEL OIL	RM	ROOM
FOV	FUEL OIL VENT	RPM	REVOLUTIONS PER MINUTE
FOR	FUEL OIL RETURN	RW	RAIN WATER
FOS	FUEL OIL SUPPLY	SF	SQUARE FOOT
FPM	FEET PER MINUTE	S/A	SUPPLY AIR
FS	FLOOR SINK	SAN	SANITARY
FT	FOOT/FEET	SF	SQUARE FOOT
FTR	FIN TUBE RADIATION	SD	SMOKE DAMPER
GAL	GALLON	SM	SURFACE MOUNT
GF	GAS-FIRED	SP	STANDPIPE
GC	GENERAL CONTRACTOR	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	STM	STEAM
GW	GREASE WASTE	T	THERMOSTAT
HB	HOSE BIB	TD	TEMPERATURE DROP
HP	HORSE POWER	TDR	TRENCH DRAIN
HTG	HEATING	TEMP	TEMPERATURE
HTR	HEATER	TYP	TYPICAL
HW	HOT WATER	UG	UNDERGROUND
HYD	HYDRANT	VAC	VACUUM
ID	INDIRECT	V	VENT
IN	INCH	VAV	VARIABLE AIR VOLUME
INV	INVERT	VENT	VENTILATION
LB	POUND	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

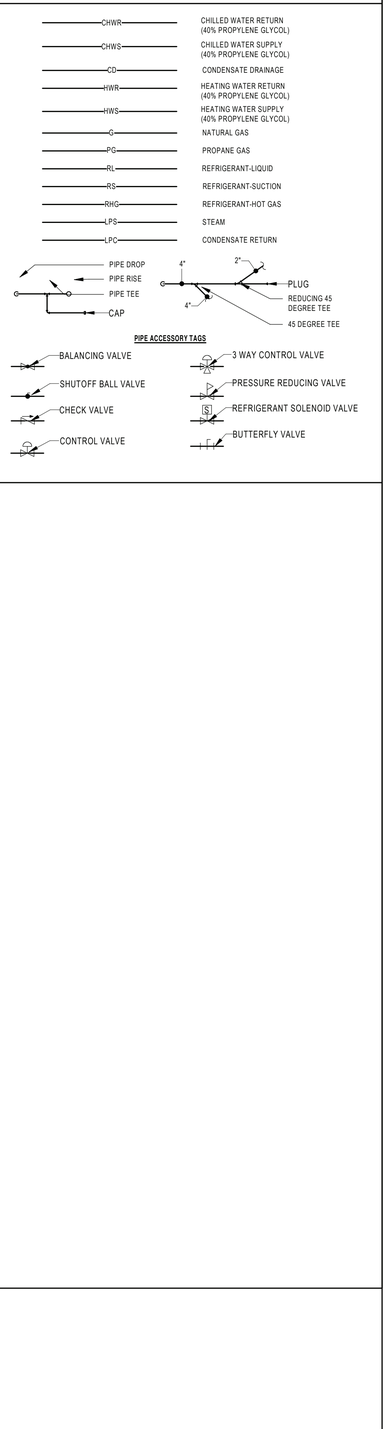
EQUIPMENT ABBREVIATIONS

ACU	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	P	PUMP
AHU	AIR HANDLING UNIT	PRE	POWER ROOF EXHAUSTER
AS	AIR SEPARATOR	RTH	ROOF TOP HOOD
B	BOILER	UH	UNIT HEATER
CH	CHILLER	WH	WATER HEATER
CUH	CABINET UNIT HEATER		
DHC	DUCT MOUNTED COIL		
DCP	DOMESTIC WATER CIRCULATING PUMP		
EF	EXHAUST FAN		
DOAS	DEDICATED OUTDOOR AIR SYSTEM		

HVAC SYMBOLS



PIPING SYMBOLS



HVAC SHEET INDEX CONTINUED

GENERAL NOTES

A. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE SIZE AND GENERAL ARRANGEMENT OF PIPING, DUCTWORK, EQUIPMENT, AND SPECIALTIES. MINOR ADJUSTMENTS TO LOCATIONS AND ROUTINGS SHOWN SHALL BE DETERMINED IN THE FIELD BEFORE AND AS THE WORK PROGRESSES.

B. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCEMENT OF ANY WORK OR SHOP FABRICATION. ANY REQUIRED CHANGES TO WORK SHOWN ON DRAWINGS SHALL BE COORDINATED WITH ARCHITECT/ENGINEER AND OTHER TRADES PRIOR TO CONSTRUCTION.

C. DRAWINGS DO NOT INDICATE ALL OFFSETS, CHANGES IN ELEVATION, ETC. WHICH MAY BE REQUIRED BY ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL PROVIDE FOR SUCH CHANGES IN PIPING, DUCTWORK, OR EQUIPMENT LOCATIONS AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS AND THE WORK OF OTHER CONTRACTS.

D. THE WORK INCLUDED IN THIS CONTRACT ENCOMPASSES BOTH THE DRAWINGS AND SPECIFICATIONS. WORK INCLUDED ON THE DRAWINGS ONLY, OR INTHE SPECIFICATIONS ONLY, SHALL BE INCORPORATED AS IF INCLUDED IN BOTH. SYSTEMS ARE INTENDED TO BE COMPLETE AND FULLY FUNCTIONING. THE CONTRACTOR SHALL PROVIDE SUCH COMPONENTS AS NECESSARY FOR A FULLY FUNCTIONING SYSTEM.

E. COORDINATE THE WORK OF THIS CONTRACT WITH THE WORK OF OTHER CONTRACTS. COORDINATE WITH G.C. FOR ALL ROOF PENETRATIONS, SOFFITS, CHASES, AND PADS. COORDINATE WITH ELECTRICAL CONTRACTOR, SPECIFICATIONS, AND POWER OUTLET SCHEDULE ON DRAWINGS FOR DETERMINATION OF RESPONSIBILITY TO FURNISH AND INSTALL ELECTRICAL COMPONENTS OF MECHANICAL EQUIPMENT. COORDINATE SHUTDOWN OF EXISTING SYSTEMS WITH OWNER.
COORDINATE THE WORK OF THIS CONTRACT WITH THE WORK OF OTHER CONTRACTS. COORDINATE WITH G.C. FOR ALL ROOF PENETRATIONS, SOFFITS, CHASES, AND PADS. COORDINATE WITH ELECTRICAL CONTRACTOR, SPECIFICATIONS, AND POWER OUTLET SCHEDULE ON DRAWINGS FOR DETERMINATION OF RESPONSIBILITY TO FURNISH AND INSTALL ELECTRICAL COMPONENTS OF MECHANICAL EQUIPMENT. COORDINATE SHUTDOWN OF EXISTING SYSTEMS WITH OWNER.

F. PHASE INSTALLATION OF EQUIPMENT, PIPING, AND DUCTWORK TO ENSURE CONSTRUCTABILITY, AND THAT CONSTRUCTION PROCEEDS IN AN EFFICIENT, ORGANIZED, AND ORDERLY MANNER. PIPING TO BE SLOPED SHALL TAKE PRECEDENCE OVER PRESSURE PIPING AND DUCTWORK AND EQUIPMENT LOCATIONS.

G. MECHANICAL CONTRACTOR SHALL SEAL ALL PIPING AND DUCT PENETRATIONS IN ACCORDANCE WITH THE NEW YORK STATE BUILDING CODE AND NFPA.

H. MECHANICAL CONTRACTOR SHALL PROVIDE ALL CONTROL WIRING NOT PROVIDED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.

I. EXCEPT AS NOTED IN SPECIFICATIONS, ALL CUTTING AND PATCHING OF BUILDING COMPONENTS REQUIRED TO ACCOMMODATE THE WORK OF THIS CONTRACT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. ALL PATCHING SHALL MATCH THE EXISTING COMPONENTS AND FINISHES. CUTTING AND PATCHING WORK SHALL BE PERFORMED BY PERSONNEL TRAINED AND REGULARLY EMPLOYED FOR SUCH SERVICES.

J. INSTALL ALL PIPING, DUCTWORK, EQUIPMENT, AND SPECIALTIES TO ALLOW MAXIMUM CLEARANCE AND AVOID INTERFERENCE WITH THE OPERATION AND MAINTENANCE OF ALL EQUIPMENT, NEW OR EXISTING. DO NOT INSTALL ANYTHING ABOVE OR WITHIN 3 FT. IN FRONT OF ELECTRICAL GEAR.

K. PROVIDE HINGED ACCESS DOORS OR PANELS WHETHER SHOWN OR NOT FOR ACCESS TO ALL DAMPERS, FILTERS, COILS, FANS, VALVES, OR ANY SERVICEABLE EQUIPMENT WHICH IS NOT READILY ACCESSIBLE. ACCESS DOORS AND PANELS INSTALLED IN FINISHED WALLS OR CEILINGS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 083100. ACCESS DOORS INSTALLED IN DUCTWORK SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 233300.

L. MECHANICAL CONTRACTOR SHALL PROVIDE NECESSARY SUPPORT FRAMING, STIFFENERS, BRACING, AND HANGERS WHETHER SHOWN OR NOT TO ENSURE A COMPLETE AND DURABLE SYSTEM. SUPPORT FRAMING CONNECTIONS SHALL BE WELDED UNLESS SPECIFICALLY SHOWN OTHERWISE. ACTUAL SUPPORTS MAY VARY FROM THOSE SHOWN IN DETAILS AS REQUIRED BY ACTUAL EQUIPMENT FURNISHED OR FIELD CONDITIONS.

M. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTION MANUAL OR MANUFACTURER'S REPRESENTATIVE'S WRITTEN INSTRUCTIONS.

N. ABOVE FINISH FLOOR (AFF) DIMENSIONS SHOWN ON DRAWINGS INDICATE CLEAR DIMENSIONS FROM FINISH FLOOR (FF) TO BOTTOM OF UNIT UNLESS INDICATED OTHERWISE.

O. DUCT DIMENSIONS SHOWN ON DRAWINGS ARE SHOWN AS "SIDE SEEN" X "SIDE NOT SEEN" AND INDICATE CLEAR INSIDE DIMENSIONS. ROUND DUCT MAY BE SUBSTITUTED FOR RECTANGULAR DUCT, AS APPROVED, PROVIDING CROSS-SECTIONAL AREA IS MAINTAINED. SUBSTITUTE SIZES ACCORDING TO THE TABLE OF EQUIVALENT RECTANGULAR DUCT DIMENSIONS, ASHRAE HANDBOOK OF FUNDAMENTALS. FIELD VERIFY CLEARANCE FOR ROUND DUCT IN LIEU OF RECTANGULAR.

P. ALL DUCTWORK AND HANGERS SHALL BE CONSTRUCTED ACCORDING TO SMACNA STANDARDS AND CLASSIFICATIONS. PROVIDE SINGLE THICKNESS TURNING VANES IN 90° SQUARE/RECTANGULAR ELBOWS. PROVIDE MANUAL DAMPERS IN ALL DUCT BRANCH TAKE OFFS WHETHER SHOWN OR NOT. DAMPERS OVER 12" EQUIVALENT DIAMETER SHALL BE OPPOSED BLADE TYPE. BRANCH DUCTS AND SLEEVES TO REGISTERS SHALL BE THE SAME SIZE AS THE NOMINAL REGISTER SIZE UNLESS INDICATED OTHERWISE.

Q. MECHANICAL CONTRACTOR SHALL PROVIDE SHUTOFF VALVES ON THE ASSOCIATED PIPING OF EACH PIECE OF MECHANICAL EQUIPMENT TO ALLOW ISOLATION FOR SERVICE AND REPAIR WHETHER SHOWN OR NOT.

GENERAL DEMOLITION NOTES

A. PERFORM DEMOLITION IN AN ORGANIZED AND CAREFUL MANNER. LEAVE AREAS UNDER DEMOLITION CLEAN AND ORDERLY AT THE END OF EACH SHIFT.

B. MECHANICAL CONTRACTOR IS RESPONSIBLE TO PROPERLY DRAIN OR DISCHARGE MECHANICAL SYSTEMS PRIOR TO START OF DEMOLITION. COORDINATE WITH OWNER AND ALL APPLICABLE CODES FOR WASTE FLUID DISPOSAL.

C. PROTECT BUILDING OR SYSTEM COMPONENTS SCHEDULED TO REMAIN. PROVIDE FOR REPAIRS TO EXISTING BUILDING OR SYSTEM COMPONENTS IMPACTED BY DEMOLITION UNDER THIS CONTRACT.

D. MINIMIZE INTERFERENCE TO OWNER OCCUPIED AREAS OR AREAS NOT INCLUDED IN SCOPE OF WORK THROUGHOUT DEMOLITION PHASE.

E. COORDINATE DEMOLITION WORK OF THIS CONTRACT WITH WORK OF OTHER CONTRACTS AND THE OWNER. COORDINATE WITH ASBESTOS ABATEMENT CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORK.

F. IDENTIFY ANY REMAINING OR ABANDONED UTILITIES WITHIN DEMOLITION AREAS. IDENTIFICATION TAGS SHALL BE IN ACCORDANCE WITH MECHANICAL IDENTIFICATION SPECIFICATION.

G. REMOVE ALL DEMOLISHED MATERIALS FROM THE WORK SITE AS WORK PROGRESSES UNLESS NOTED OTHERWISE. OWNER RETAINS THE RIGHT TO KEEP ANY MATERIALS OR EQUIPMENT REMOVED, TURN OVER SUCH ITEMS TO OWNER UPON REQUEST.

H. COMPLETELY REMOVE ABANDONED PIPING, DUCTWORK, OR EQUIPMENT. BRANCH WORK TO BE DEMOLISHED SHALL BE COMPLETELY REMOVED BACK TO POINT OF DISCONNECTION.

I. BLANK OFF, PLUG, OR CAP BRANCH PIPING OR DUCTWORK TO BE DEMOLISHED AT THE POINT OF DISCONNECTION FROM MAIN.

J. COMPLETELY REMOVE PIPE HANGERS, STRAPS, CLAMPS, SUPPORTS AND PADS ASSOCIATED WITH DUCTWORK, PIPING, OR EQUIPMENT BEING DEMOLISHED.

K. ALL ELECTRICAL POWER WIRING DISCONNECT AND REMOVAL ASSOCIATED WITH MECHANICAL EQUIPMENT REMOVAL IS THE RESPONSIBILITY OF DIVISION 26. ALL CONTROL WIRING REMOVAL IS THE RESPONSIBILITY OF THIS CONTRACT. COORDINATE ACCORDINGLY.

ESTIMATED SYSTEM VOLUMES:

CHILLED WATER SYSTEM: APPROXIMATELY 2860 GALLONS
HOT WATER SYSTEM: APPROXIMATELY 2840 GALLONS

ALL SYSTEMS ARE 40% PROPYLENE GLYCOL

HVAC SHEET INDEX

KEY PLAN:

SED CONTROL NO. 44-18-00-05-0-005-015

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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

MECHANICAL GENERAL NOTES, LEGENDS & ABBREVIATIONS

BUILDING	SHEET NUMBER
MS	MS000

RE-BID

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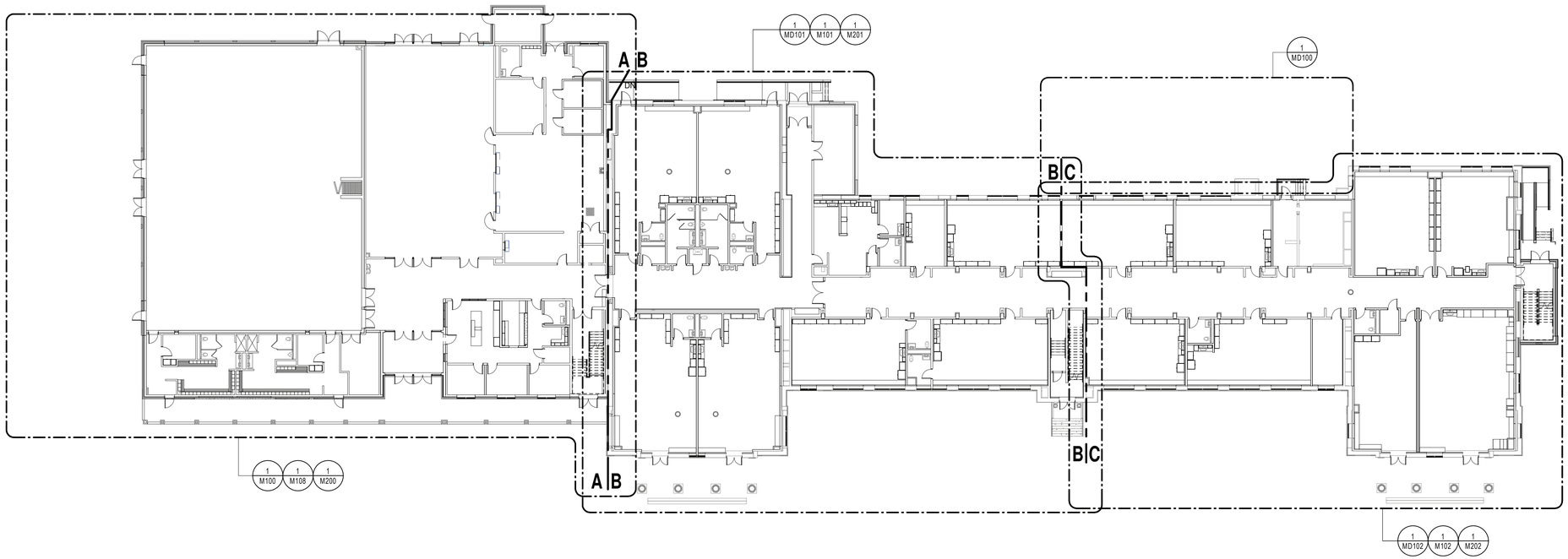
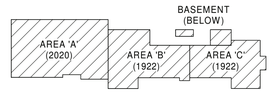


1 REFERENCE PLAN - FIRST FLOOR & BASEMENT
SCALE: 1" = 20'-0"

KEY PLAN:



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Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

REFERENCE PLAN - FIRST FLOOR & BASEMENT

BUILDING	SHEET NUMBER
MS	MR100
	RE-BID

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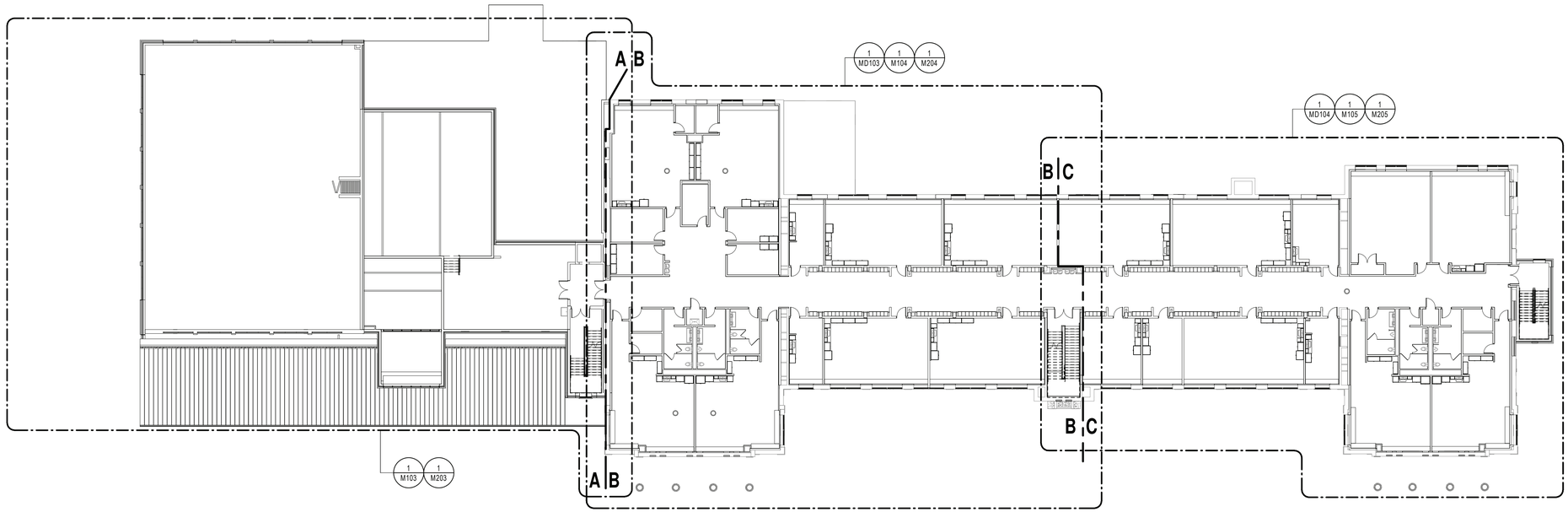
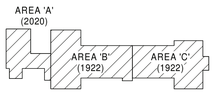


1 REFERENCE PLAN - SECOND FLOOR
SCALE: 1" = 20'-0"

KEY PLAN:



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ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

REFERENCE PLAN - SECOND FLOOR

BUILDING	SHEET NUMBER
MS	MR101 RE-BID

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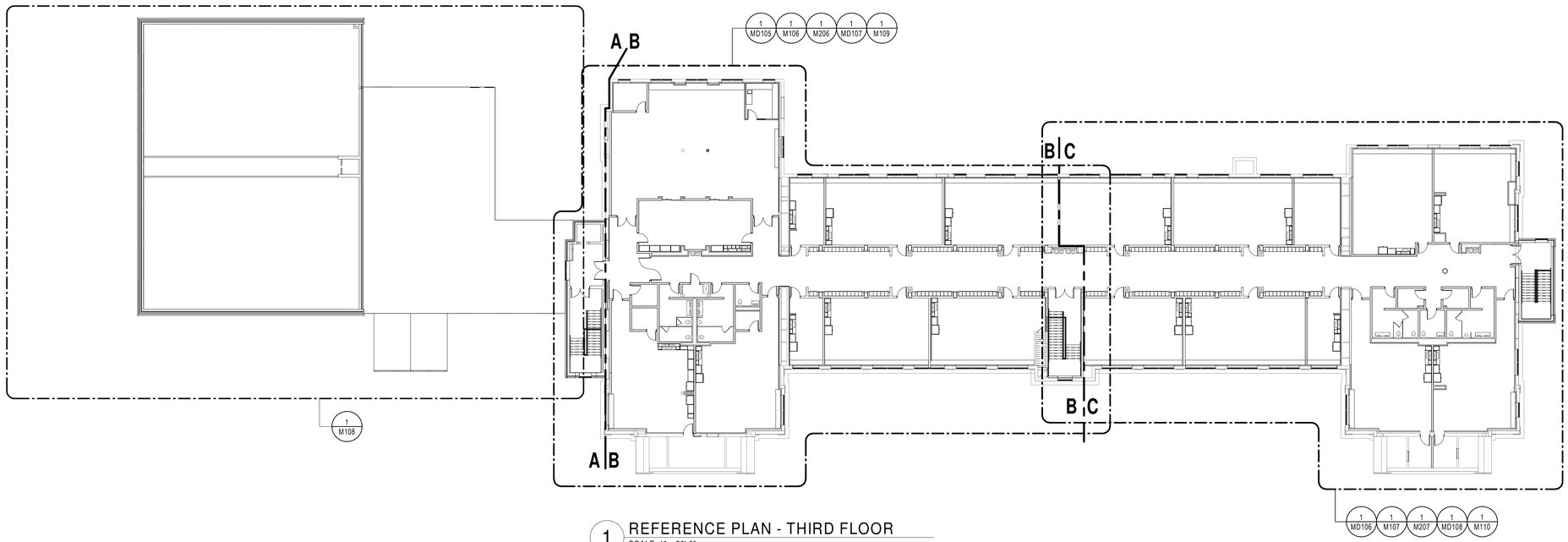
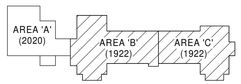


1 REFERENCE PLAN - THIRD FLOOR
SCALE: 1" = 20'-0"

KEY PLAN:



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PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

REFERENCE PLAN - THIRD FLOOR

BUILDING	SHEET NUMBER
MS	MR102 RE-BID

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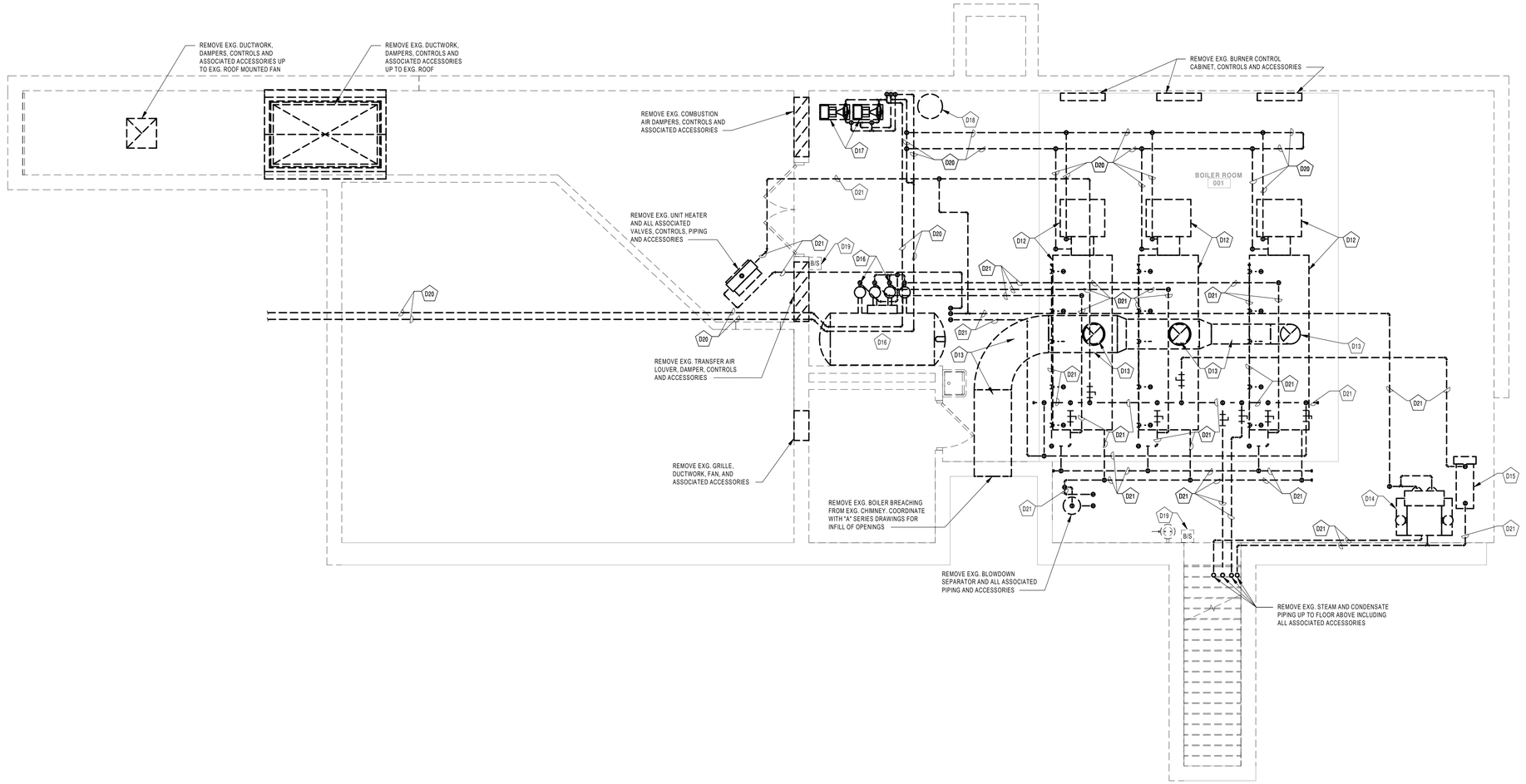


1 DEMOLITION PLAN - BASEMENT
SCALE: 1/4" = 1'-0"

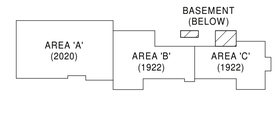
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

D12 REMOVE EXISTING BOILER, BURNER AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
D13 REMOVE EXISTING BOILER BREACHING AND ALL ASSOCIATED ACCESSORIES.
D14 REMOVE EXISTING STEAM CONDENSATE RECEIVER AND PUMPS ALONG WITH ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
D15 REMOVE EXISTING STEAM TO DOMESTIC HOT WATER HEAT EXCHANGER AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
D16 REMOVE EXISTING BOILER FEED TANK AND PUMPS ALONG WITH ALL ASSOCIATED VALVES, PIPING AND ACCESSORIES.
D17 REMOVE EXISTING FUEL OIL TRANSFER PUMPS AND ALL ASSOCIATED PIPING, VALVES AND ACCESSORIES.
D18 REMOVE EXISTING WATER TREATMENT TANK, PUMPS, PIPING AND ACCESSORIES.
D19 REMOVE EXISTING BOILER/BURNER EMERGENCY SHUT DOWN SWITCH AND ALL ASSOCIATED WIRING AND ACCESSORIES.
D20 REMOVE EXISTING FUEL OIL PIPING, VALVES, HANGERS AND ALL ASSOCIATED ACCESSORIES.
D21 REMOVE EXISTING STEAM, CONDENSATE AND BOILER FEED PIPING IN ITS ENTIRETY INCLUDING ALL VALVES, HANGERS AND ACCESSORIES.

KEY PLAN:



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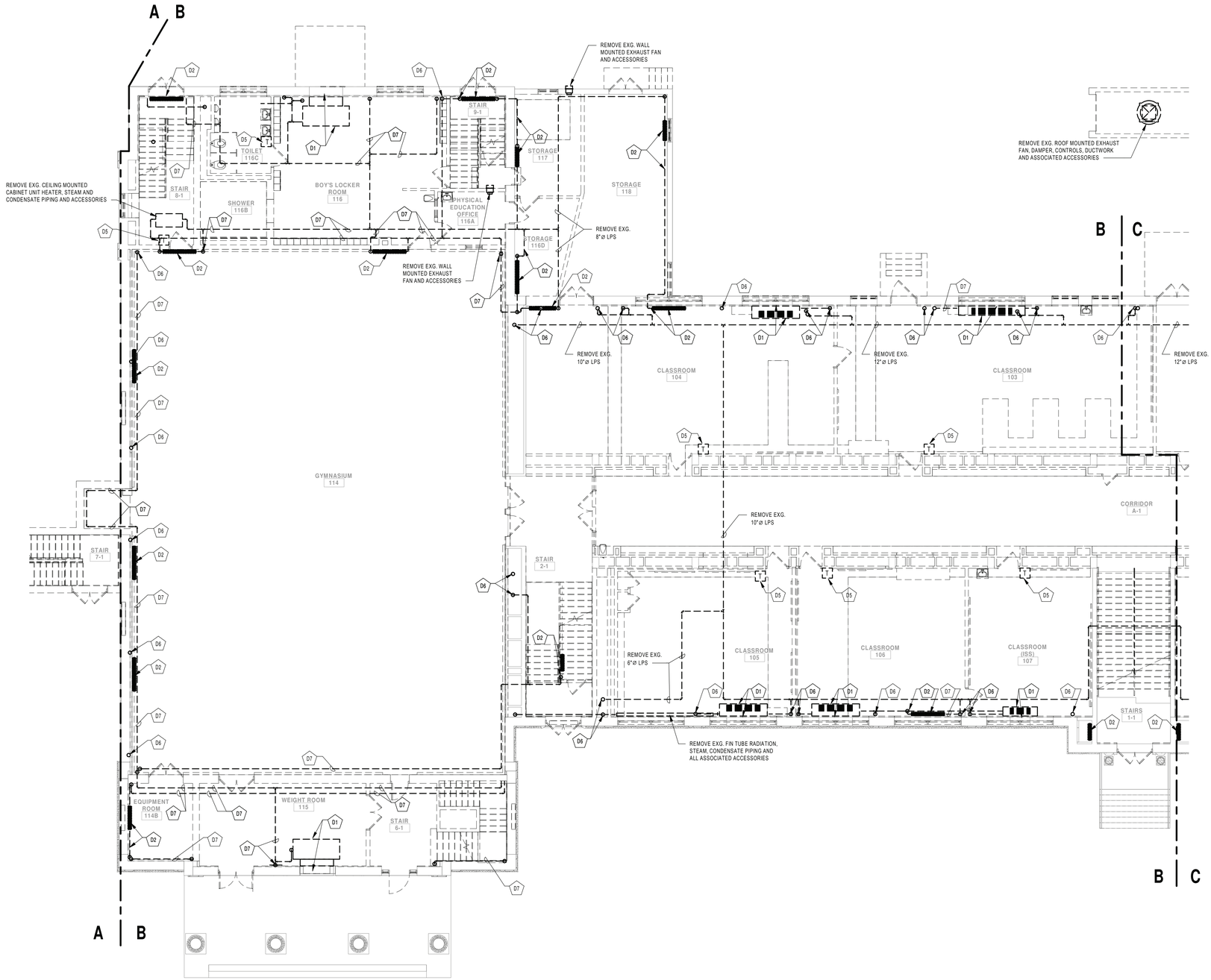
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DEMOLITION PLAN - BASEMENT

BUILDING: MS
SHEET NUMBER: MD100
RE-BID

2/2/2022 4:37:43 PM



1 DEMOLITION PLAN - FIRST FLOOR AREA B
SCALE: 1/8" = 1'-0"

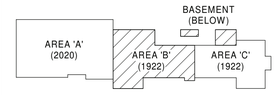
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

- D1 REMOVE EXISTING UNIT VENTILATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES. EXISTING INTAKE LOUVER AND WALL SLEEVE TO REMAIN. WALL INFILL TO BE COMPLETED AS INDICATED ON "A" SERIES DRAWINGS.
- D2 REMOVE EXISTING CAST IRON RADIATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D5 REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED WIRING AND/OR PNEUMATIC TUBING.
- D6 REMOVE EXISTING STEAM AND CONDENSATE PIPING RISER AND ALL ASSOCIATED ACCESSORIES.
- D7 REMOVE EXISTING STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DEMOLITION PLAN - FIRST FLOOR AREA B

BUILDING	SHEET NUMBER
MS	MD101 RE-BID

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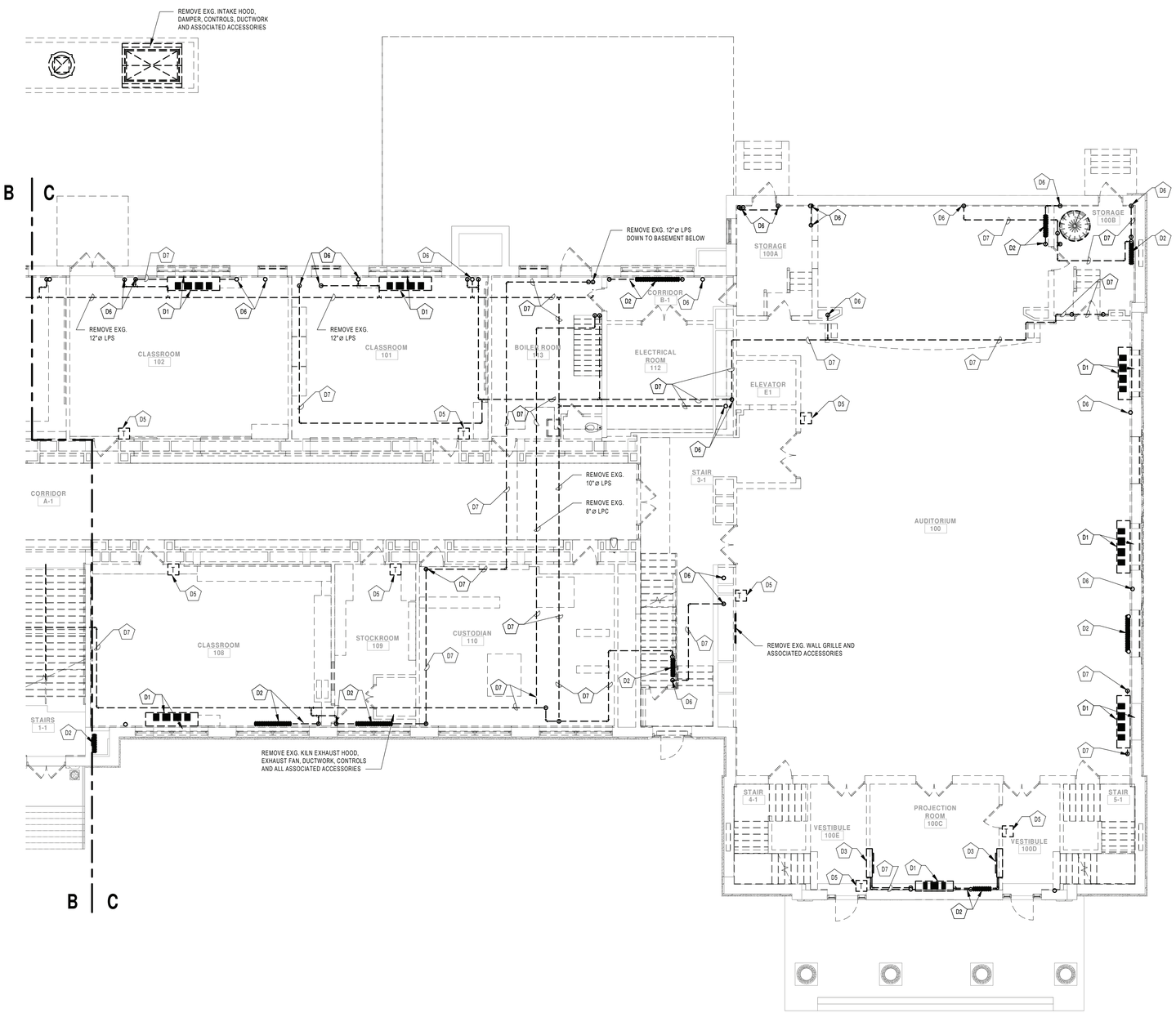


1 DEMOLITION PLAN - FIRST FLOOR AREA C
SCALE: 1/8" = 1'-0"

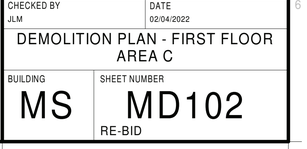
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

- D1 REMOVE EXISTING UNIT VENTILATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES. EXISTING INTAKE LOUVER AND WALL SLEEVE TO REMAIN. WALL INFILL TO BE COMPLETED AS INDICATED ON "A" SERIES DRAWINGS.
- D2 REMOVE EXISTING CAST IRON RADIATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D3 REMOVE EXISTING RECESSED CONVECTOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D5 REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED WIRING AND/OR PNEUMATIC TUBING.
- D6 REMOVE EXISTING STEAM AND CONDENSATE PIPING RISER AND ALL ASSOCIATED ACCESSORIES.
- D7 REMOVE EXISTING STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

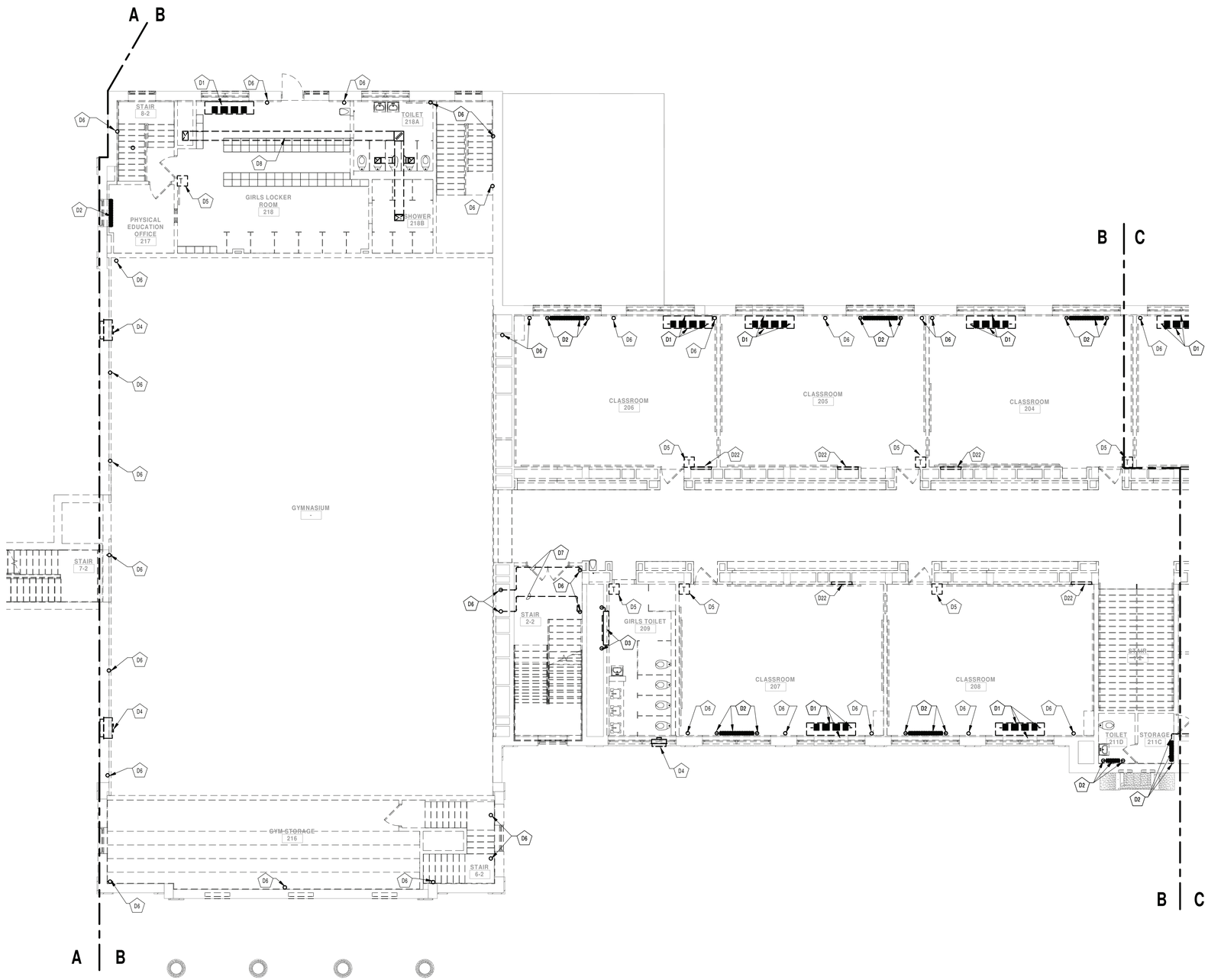
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DEMOLITION PLAN - FIRST FLOOR AREA C

BUILDING	SHEET NUMBER
MS	MD102
	RE-BID

2/2/2022 4:38:03 PM



1 DEMOLITION PLAN - SECOND FLOOR AREA B
SCALE: 1/8" = 1'-0"

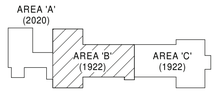
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

- D1 REMOVE EXISTING UNIT VENTILATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES. EXISTING INTAKE LOUVER AND WALL SLEEVE TO REMAIN. WALL INFILL TO BE COMPLETED AS INDICATED ON "A" SERIES DRAWINGS.
- D2 REMOVE EXISTING CAST IRON RADIATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D3 REMOVE EXISTING RECESSED CONVECTOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D4 REMOVE EXISTING WALL MOUNTED EXHAUST FAN, DUCTWORK, CONTROLS AND ALL ASSOCIATED ACCESSORIES.
- D5 REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED WIRING AND/OR PNEUMATIC TUBING.
- D6 REMOVE EXISTING STEAM AND CONDENSATE PIPING RISER AND ALL ASSOCIATED ACCESSORIES.
- D7 REMOVE EXISTING STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D8 REMOVE EXISTING DUCTWORK, DIFFUSER, DAMPER AND ALL ASSOCIATED ACCESSORIES.
- D22 REMOVE EXISTING WALL GRILL

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

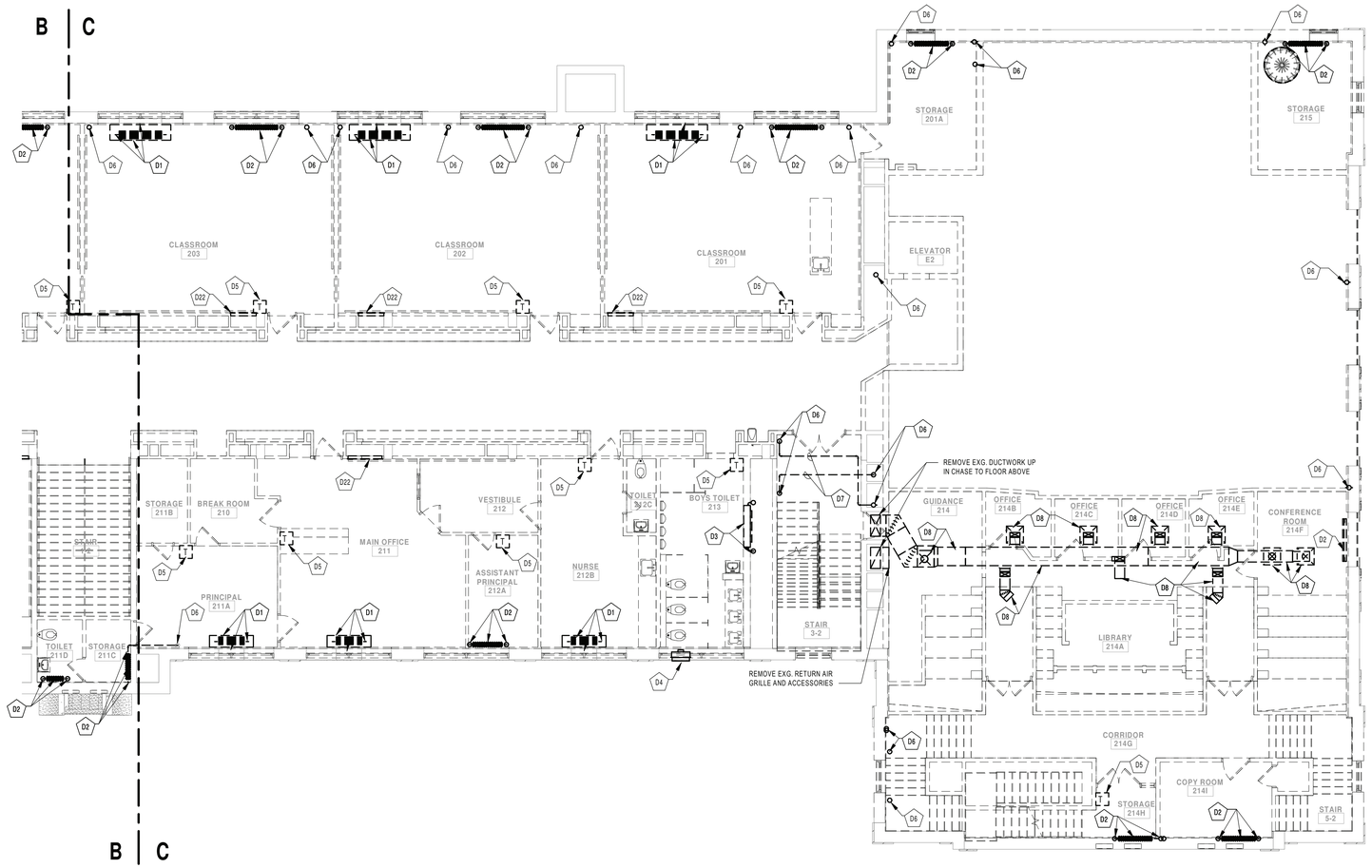
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DEMOLITION PLAN - SECOND FLOOR AREA B

BUILDING	SHEET NUMBER
MS	MD103 RE-BID

2/2/2022 4:38:12 PM



1 DEMOLITION PLAN - SECOND FLOOR AREA C
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

D1 REMOVE EXISTING UNIT VENTILATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES. EXISTING INTAKE LOUVER AND WALL SLEEVE TO REMAIN. WALL INFILL TO BE COMPLETED AS INDICATED ON "A" SERIES DRAWINGS.

D2 REMOVE EXISTING CAST IRON RADIATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.

D3 REMOVE EXISTING RECESSED CONVECTOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.

D4 REMOVE EXISTING WALL MOUNTED EXHAUST FAN, DUCTWORK, CONTROLS AND ALL ASSOCIATED ACCESSORIES.

D5 REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED WIRING AND/OR PNEUMATIC TUBING.

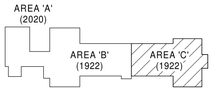
D6 REMOVE EXISTING STEAM AND CONDENSATE PIPING RISER AND ALL ASSOCIATED ACCESSORIES.

D7 REMOVE EXISTING STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.

D8 REMOVE EXISTING DUCTWORK, DIFFUSER, DAMPER AND ALL ASSOCIATED ACCESSORIES.

D22 REMOVE EXISTING WALL GRILL

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

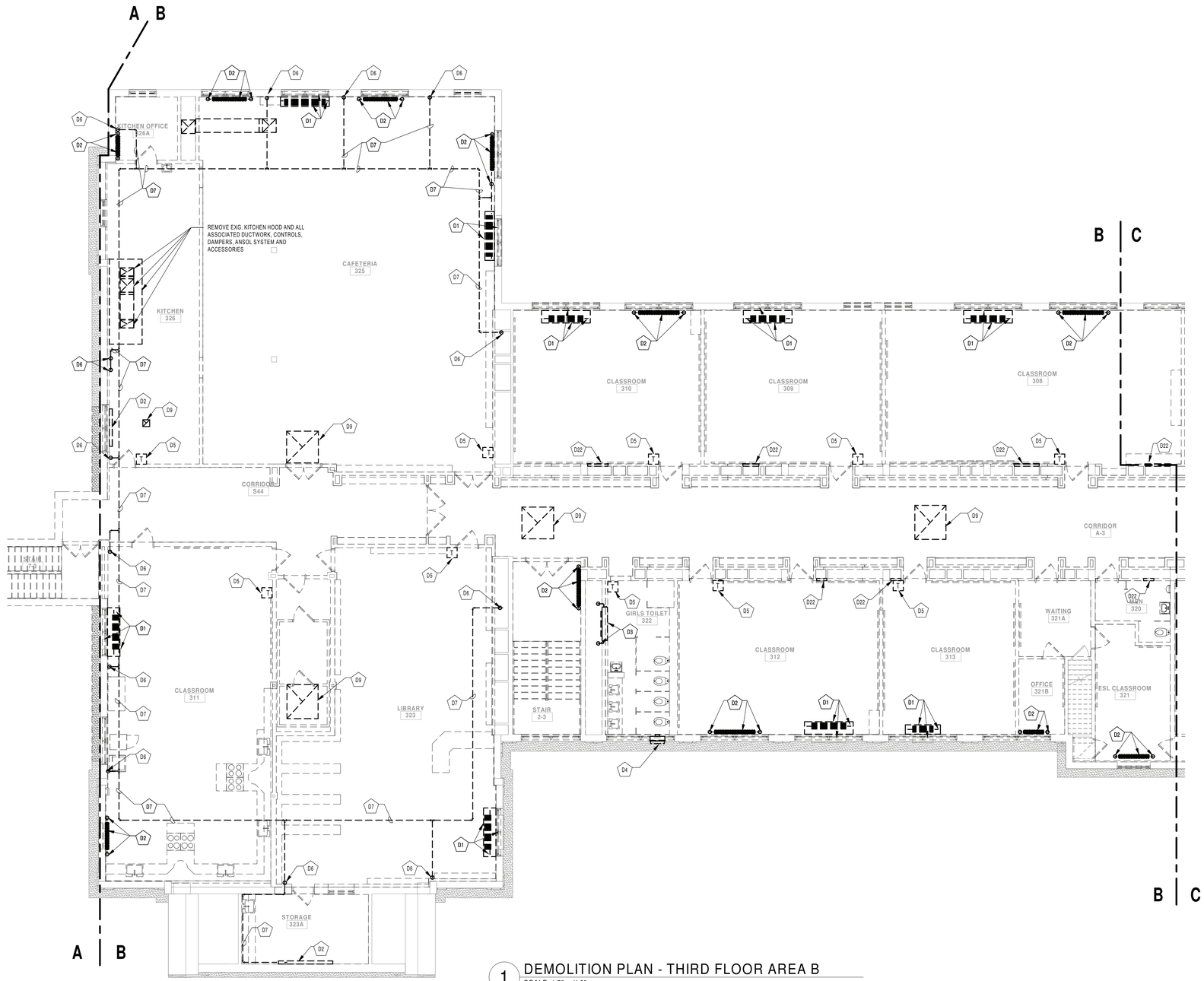
DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DEMOLITION PLAN - SECOND FLOOR AREA C

BUILDING: MS

SHEET NUMBER: MD104
RE-BID

2/2/2022 4:38:21 PM



1 DEMOLITION PLAN - THIRD FLOOR AREA B
SCALE: 1/8" = 1'-0"

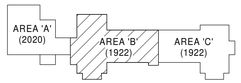
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

- D1 REMOVE EXISTING UNIT VENTILATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES. EXISTING INTAKE LOUVER AND WALL SLEEVE TO REMAIN. WALL INFILL TO BE COMPLETED AS INDICATED ON "A" SERIES DRAWINGS.
- D2 REMOVE EXISTING CAST IRON RADIATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D3 REMOVE EXISTING RECESSED CONVECTOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D4 REMOVE EXISTING WALL MOUNTED EXHAUST FAN, DUCTWORK, CONTROLS AND ALL ASSOCIATED ACCESSORIES.
- D5 REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED WIRING AND/OR PNEUMATIC TUBING.
- D6 REMOVE EXISTING STEAM AND CONDENSATE PIPING RISER AND ALL ASSOCIATED ACCESSORIES.
- D7 REMOVE EXISTING STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D9 REMOVE EXISTING DUCTWORK UP TO ROOF ABOVE INCLUDING ALL ASSOCIATED DAMPERS, CONTROLS AND ACCESSORIES.
- D22 REMOVE EXISTING WALL GRILL

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

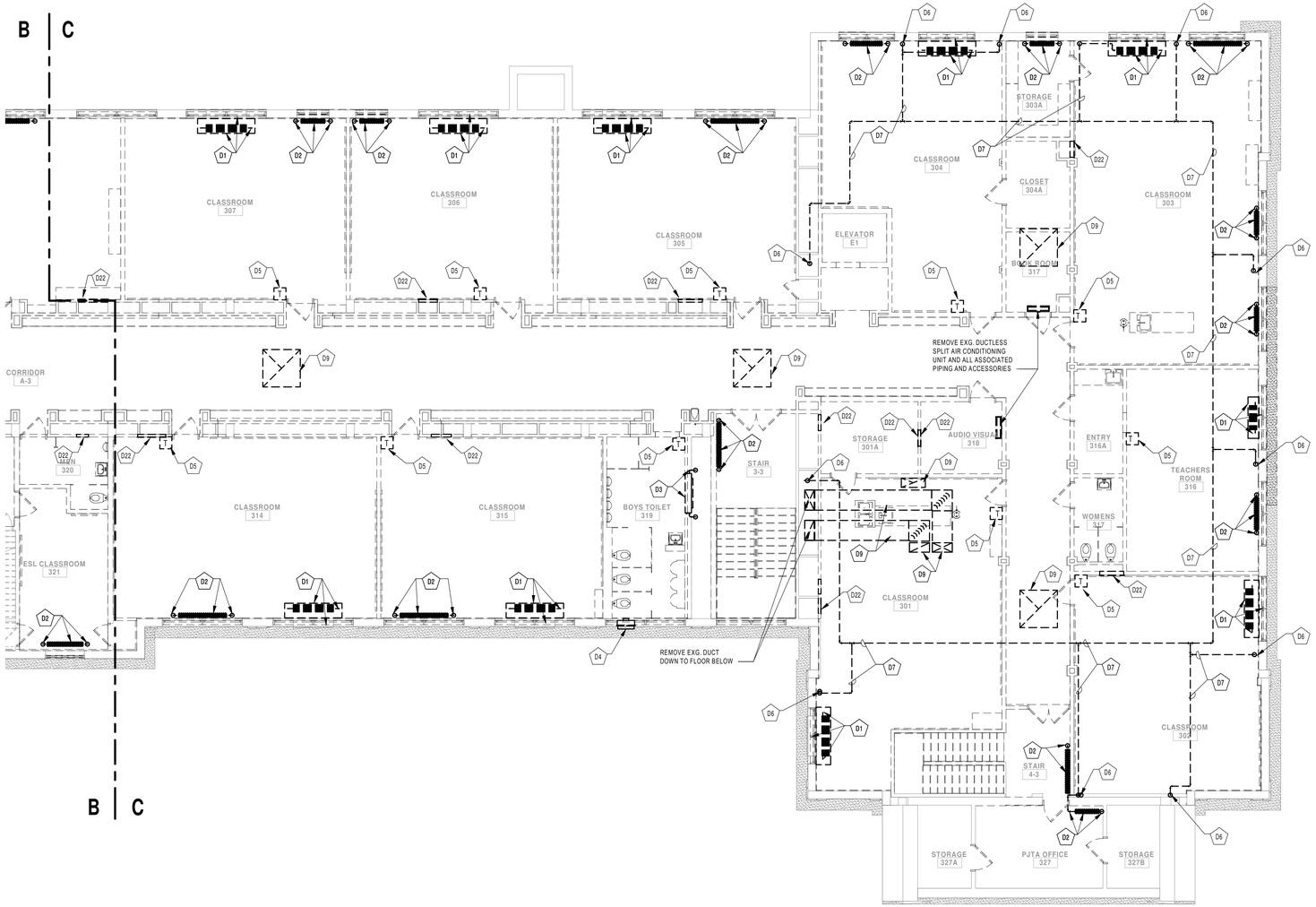
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DEMOLITION PLAN - THIRD FLOOR AREA B

BUILDING	SHEET NUMBER
MS	MD105 RE-BID

2/2/2022 4:38:31 PM



1 DEMOLITION PLAN - THIRD FLOOR AREA C
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

- D1 REMOVE EXISTING UNIT VENTILATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES. EXISTING INTAKE LOUVER AND WALL SLEEVE TO REMAIN. WALL INFILL TO BE COMPLETED AS INDICATED ON "A" SERIES DRAWINGS.
- D2 REMOVE EXISTING CAST IRON RADIATOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
- D3 REMOVE EXISTING RECESSED CONVECTOR, STEAM AND CONDENSATE PIPING AND ALL ASSOCIATED VALVES, CONTROLS AND ACCESSORIES.
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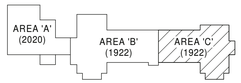
- D22 REMOVE EXISTING WALL GRILL

KEY PLAN:



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Port Jervis - Orange County - New York

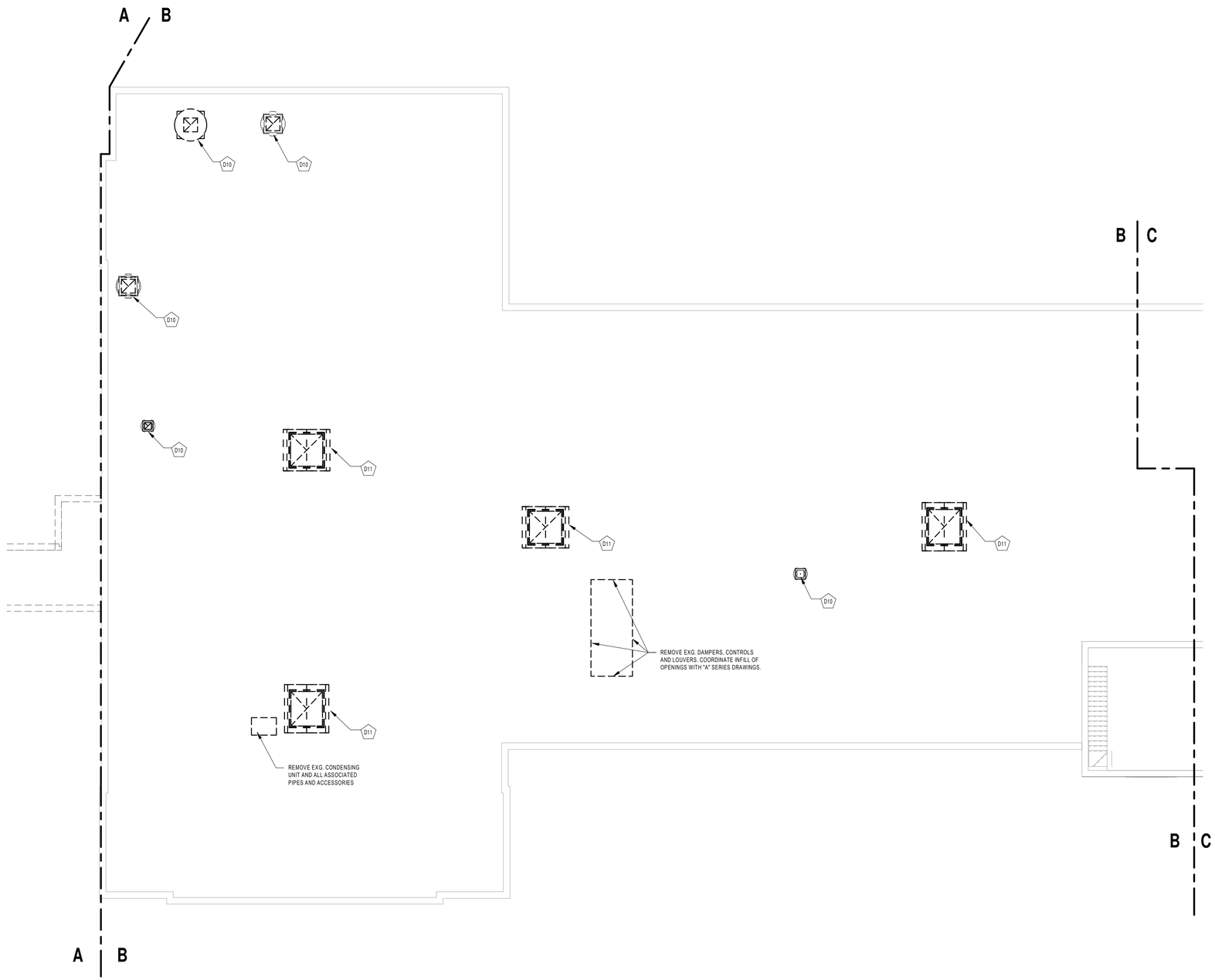
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DEMOLITION PLAN - THIRD FLOOR AREA C

BUILDING	SHEET NUMBER
MS	MD106 RE-BID

2/2/2022 4:38:41 PM



1 DEMOLITION PLAN - ROOF AREA B
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

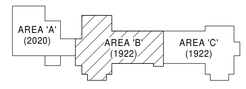
1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

D10 REMOVE EXISTING ROOF MOUNTED EXHAUST FAN, ASSOCIATED DUCTWORK, DAMPERS, CONTROLS AND ACCESSORIES.

D11 REMOVE EXISTING ROOF MOUNTED HOOD, ASSOCIATED DUCTWORK, DAMPERS, CONTROLS AND ACCESSORIES.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

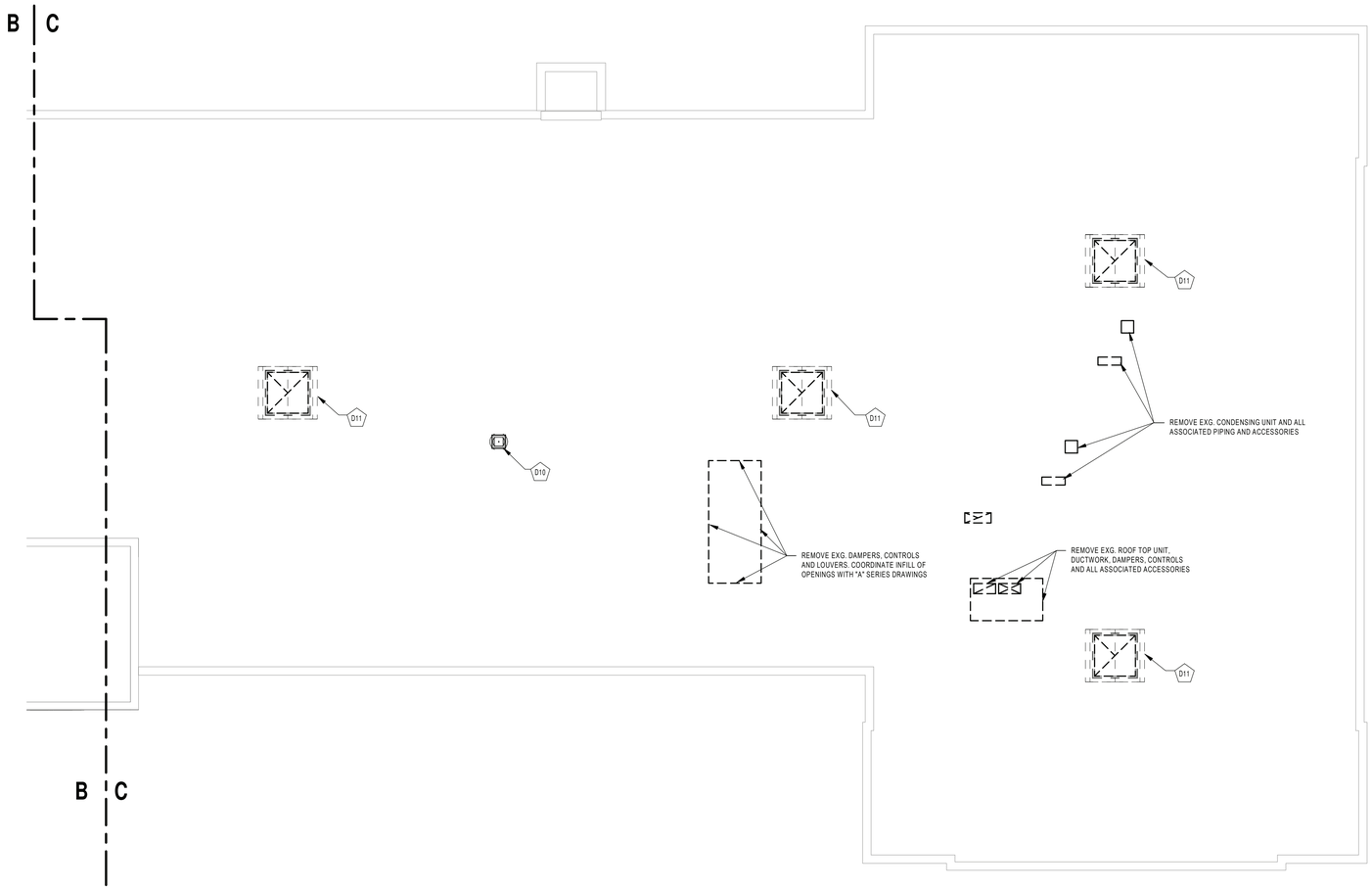
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DEMOLITION PLAN - ROOF AREA B

BUILDING	SHEET NUMBER
MS	MD107 RE-BID

2/2/2022 4:38:46 PM



1 DEMOLITION PLAN - ROOF AREA C
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

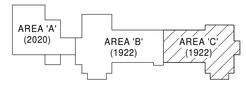
1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

D10 REMOVE EXISTING ROOF MOUNTED EXHAUST FAN, ASSOCIATED DUCTWORK, DAMPERS, CONTROLS AND ACCESSORIES.

D11 REMOVE EXISTING ROOF MOUNTED HOOD, ASSOCIATED DUCTWORK, DAMPERS, CONTROLS AND ACCESSORIES.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

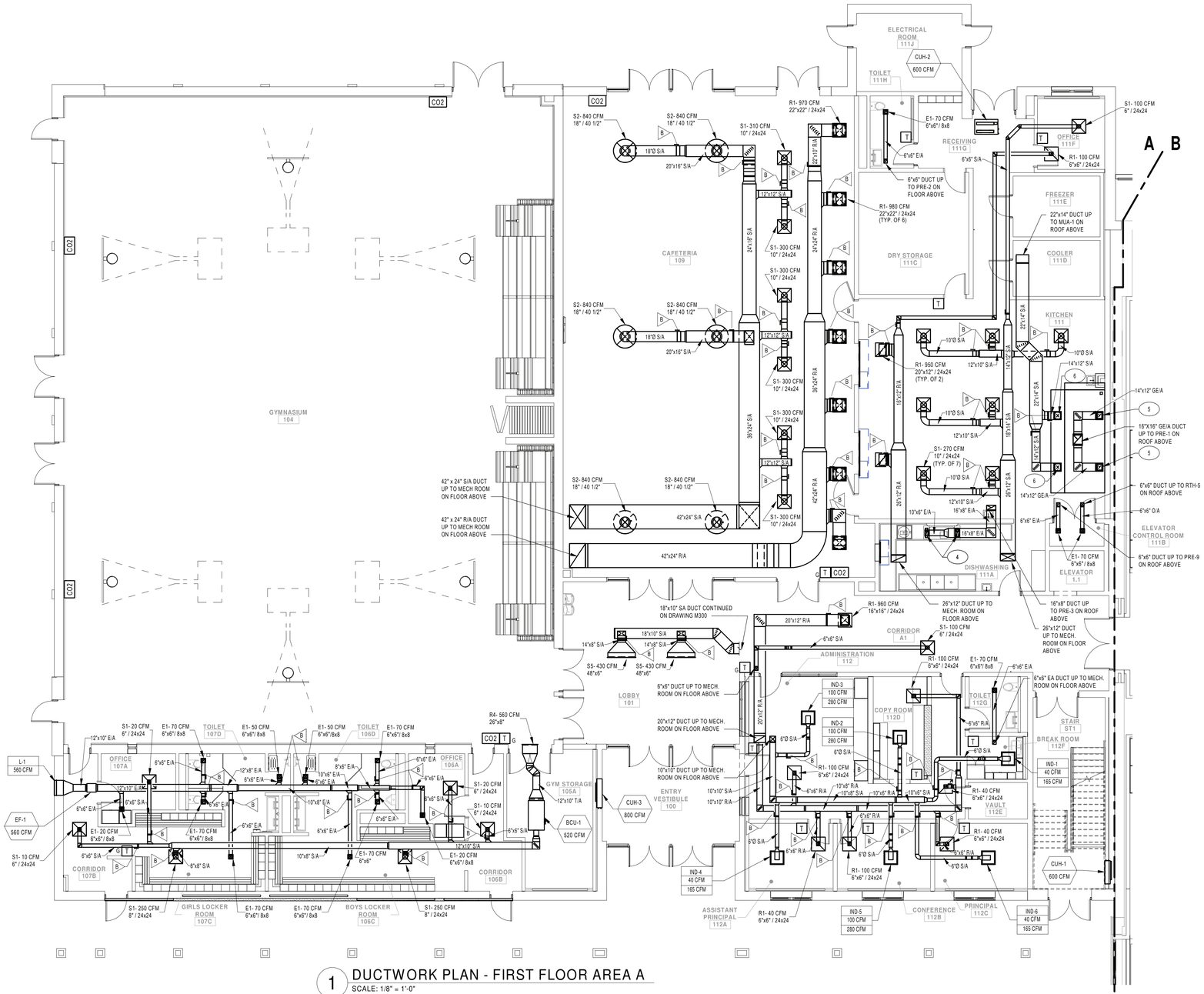
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DEMOLITION PLAN - ROOF AREA C

BUILDING	SHEET NUMBER
MS	MD108 RE-BID

2/2/2022 4:38:50 PM



1 DUCTWORK PLAN - FIRST FLOOR AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

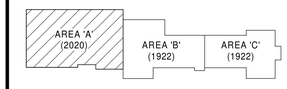
KEYNOTE LEGEND

4 10"x6" STAINLESS STEEL DUCT DOWN AND CONNECT TO DISHWASHER EXHAUST OUTLETS. COORDINATE WITH CONTRACTOR RESPONSIBLE FOR KITCHEN EQUIPMENT.

5 CONNECT 14"x12" DUCT TO EXHAUST AIR CONNECTION ON KITCHEN HOOD. COORDINATE WITH CONTRACTOR RESPONSIBLE FOR KITCHEN EQUIPMENT.

6 CONNECT 14"x12" DUCT TO SUPPLY AIR CONNECTION ON KITCHEN HOOD. COORDINATE WITH CONTRACTOR RESPONSIBLE FOR KITCHEN EQUIPMENT.

KEY PLAN:



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Port Jervis - Orange County - New York

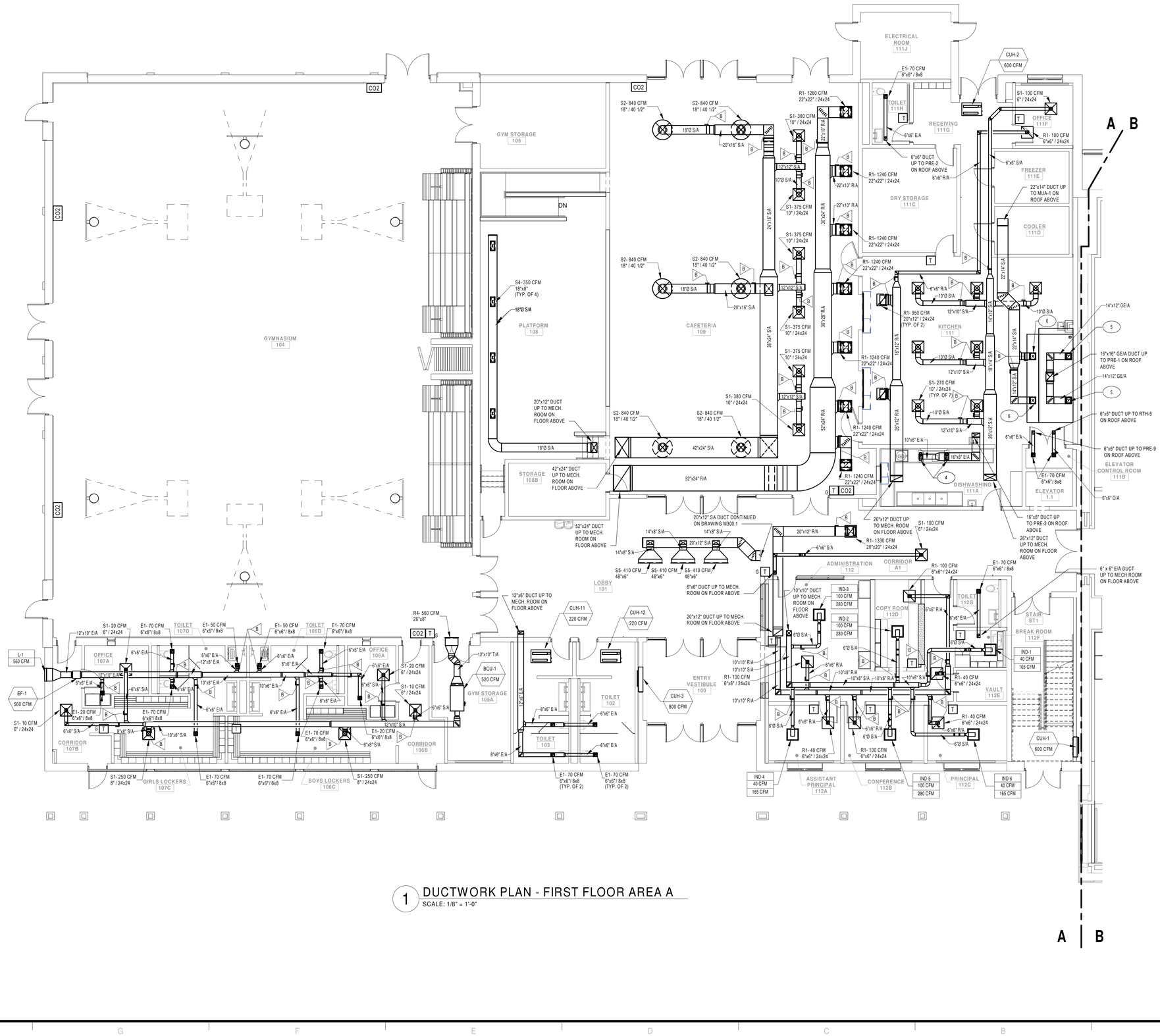
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - FIRST FLOOR AREA A

BUILDING	SHEET NUMBER
MS	M100 RE-BID

2/2/2022 4:30:04 PM



1 DUCTWORK PLAN - FIRST FLOOR AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

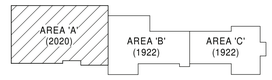
KEYNOTE LEGEND

4 10"x6" STAINLESS STEEL DUCT DOWN AND CONNECT TO DISHWASHER EXHAUST OUTLETS. COORDINATE WITH CONTRACTOR RESPONSIBLE FOR KITCHEN EQUIPMENT.

5 CONNECT 14"x12" DUCT TO EXHAUST AIR CONNECTION ON KITCHEN HOOD. COORDINATE WITH CONTRACTOR RESPONSIBLE FOR KITCHEN EQUIPMENT.

6 CONNECT 14"x12" DUCT TO SUPPLY AIR CONNECTION ON KITCHEN HOOD. COORDINATE WITH CONTRACTOR RESPONSIBLE FOR KITCHEN EQUIPMENT.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

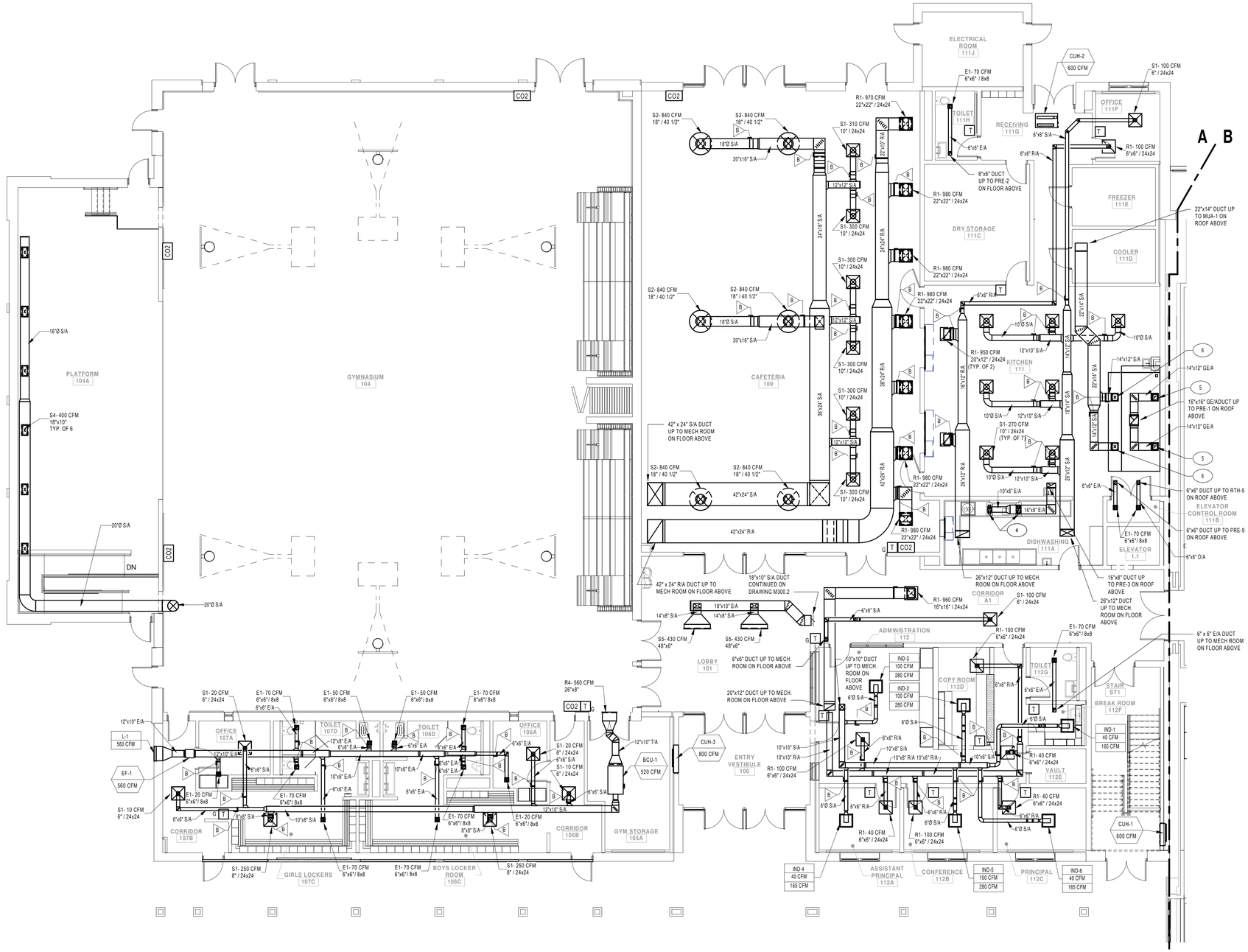
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DUCTWORK PLAN - FIRST FLOOR AREA A - ALTERNATE MC1

BUILDING	SHEET NUMBER
MS	M100.1 RE-BID

2/2/2022 4:30:14 PM



1 DUCTWORK PLAN - FIRST FLOOR AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

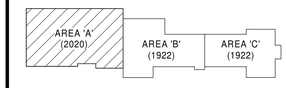
KEYNOTE LEGEND

4 10"x6" STAINLESS STEEL DUCT DOWN AND CONNECT TO DISHWASHER EXHAUST OUTLETS. COORDINATE WITH CONTRACTOR RESPONSIBLE FOR KITCHEN EQUIPMENT.

5 CONNECT 14"x12" DUCT TO EXHAUST AIR CONNECTION ON KITCHEN HOOD. COORDINATE WITH CONTRACTOR RESPONSIBLE FOR KITCHEN EQUIPMENT.

6 CONNECT 14"x12" DUCT TO SUPPLY AIR CONNECTION ON KITCHEN HOOD. COORDINATE WITH CONTRACTOR RESPONSIBLE FOR KITCHEN EQUIPMENT.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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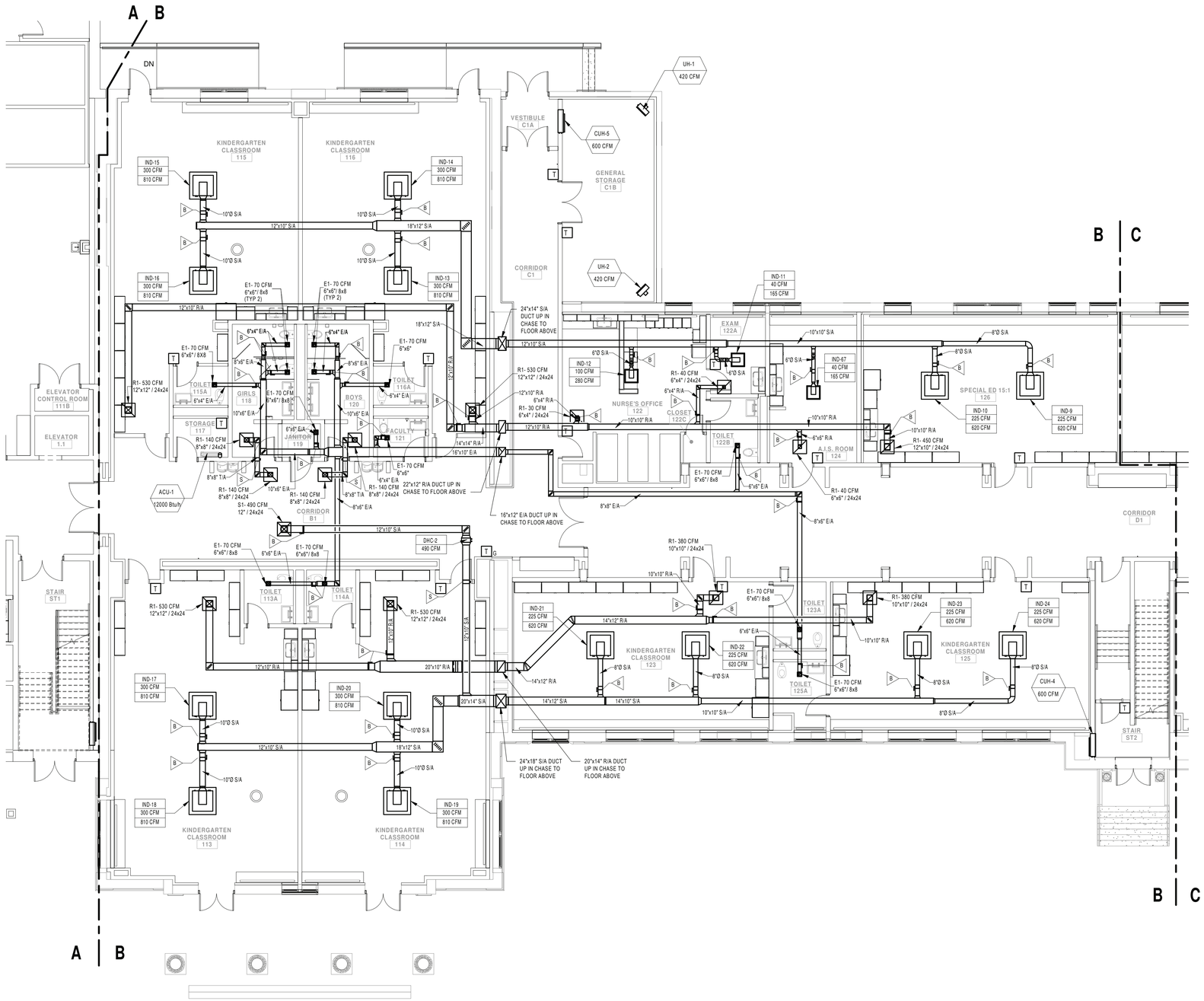
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - FIRST FLOOR AREA A - ALTERNATE MC2

BUILDING	SHEET NUMBER
MS	M100.2 RE-BID

2/2/2022 4:30:24 PM

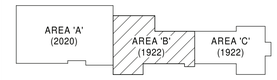


1 DUCTWORK PLAN - FIRST FLOOR AREA B
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

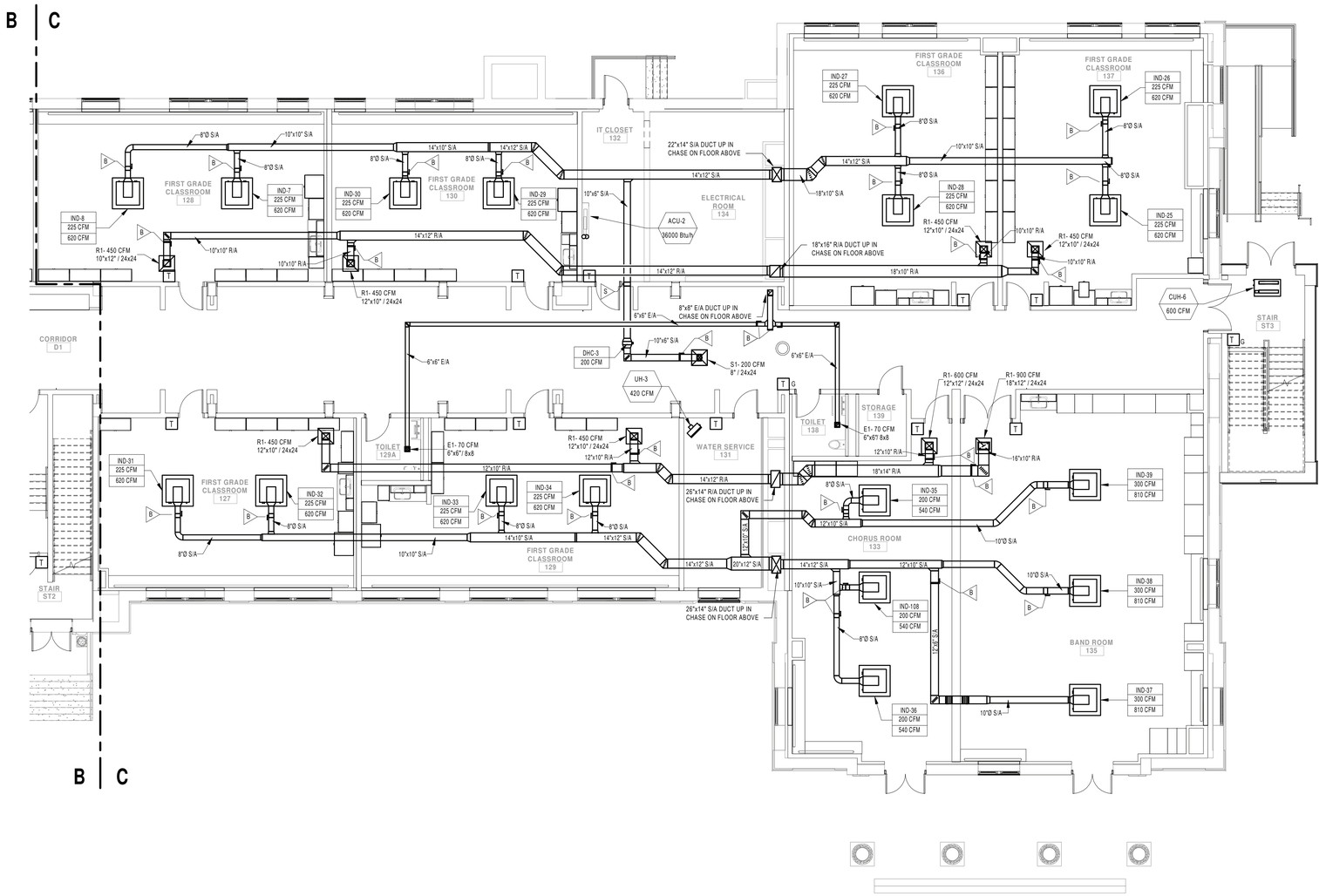
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - FIRST FLOOR AREA B

BUILDING	SHEET NUMBER
MS	M101
	RE-BID

2/2/2022 4:30:33 PM

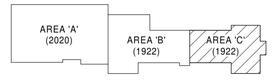


1 DUCTWORK PLAN - FIRST FLOOR AREA C
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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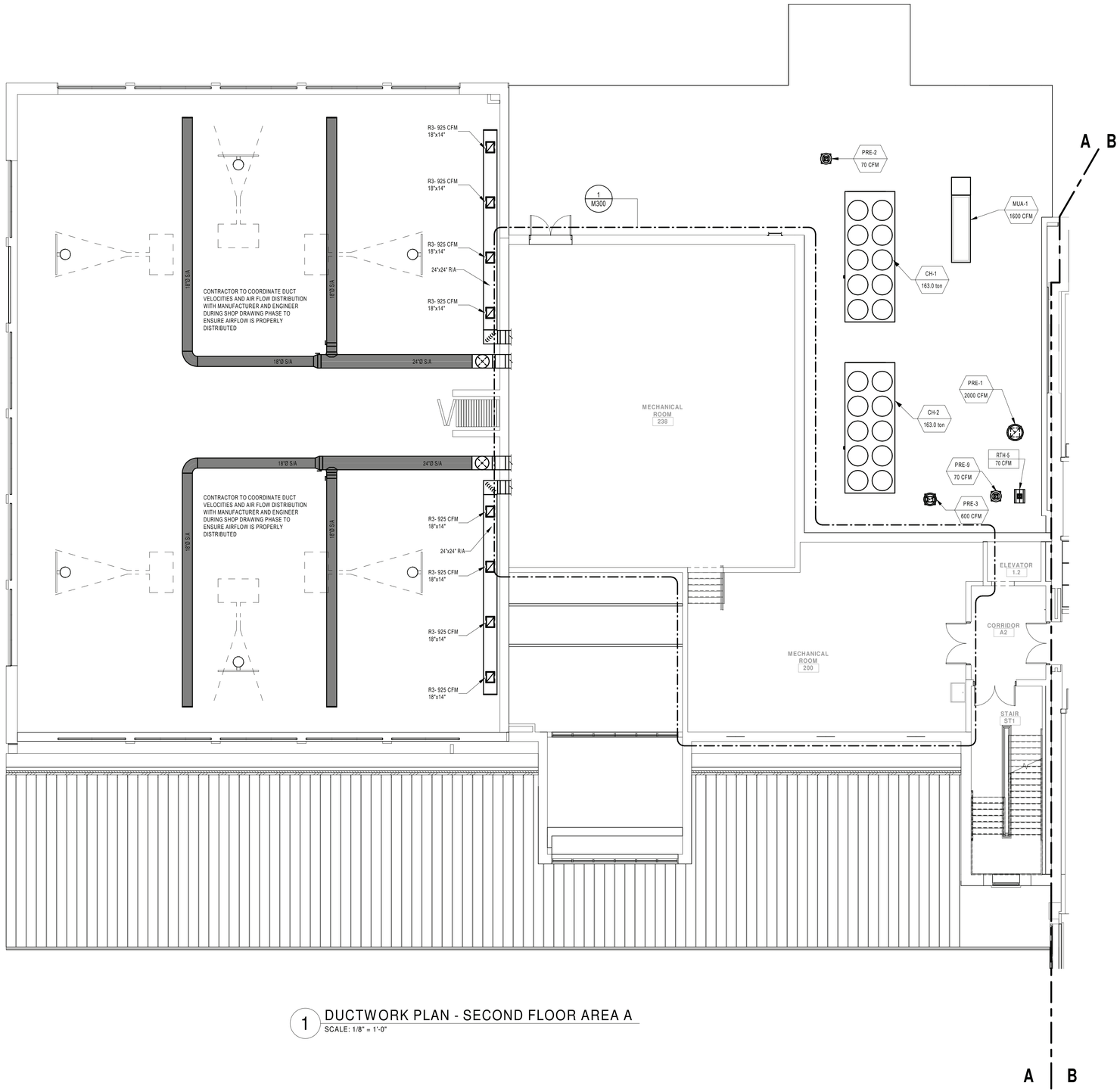
DUCTWORK PLAN - FIRST FLOOR AREA C

BUILDING	SHEET NUMBER
MS	M102 RE-BID

2/2/2022 4:30:41 PM



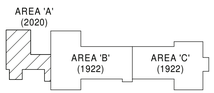
1 DUCTWORK PLAN - SECOND FLOOR AREA A

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

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

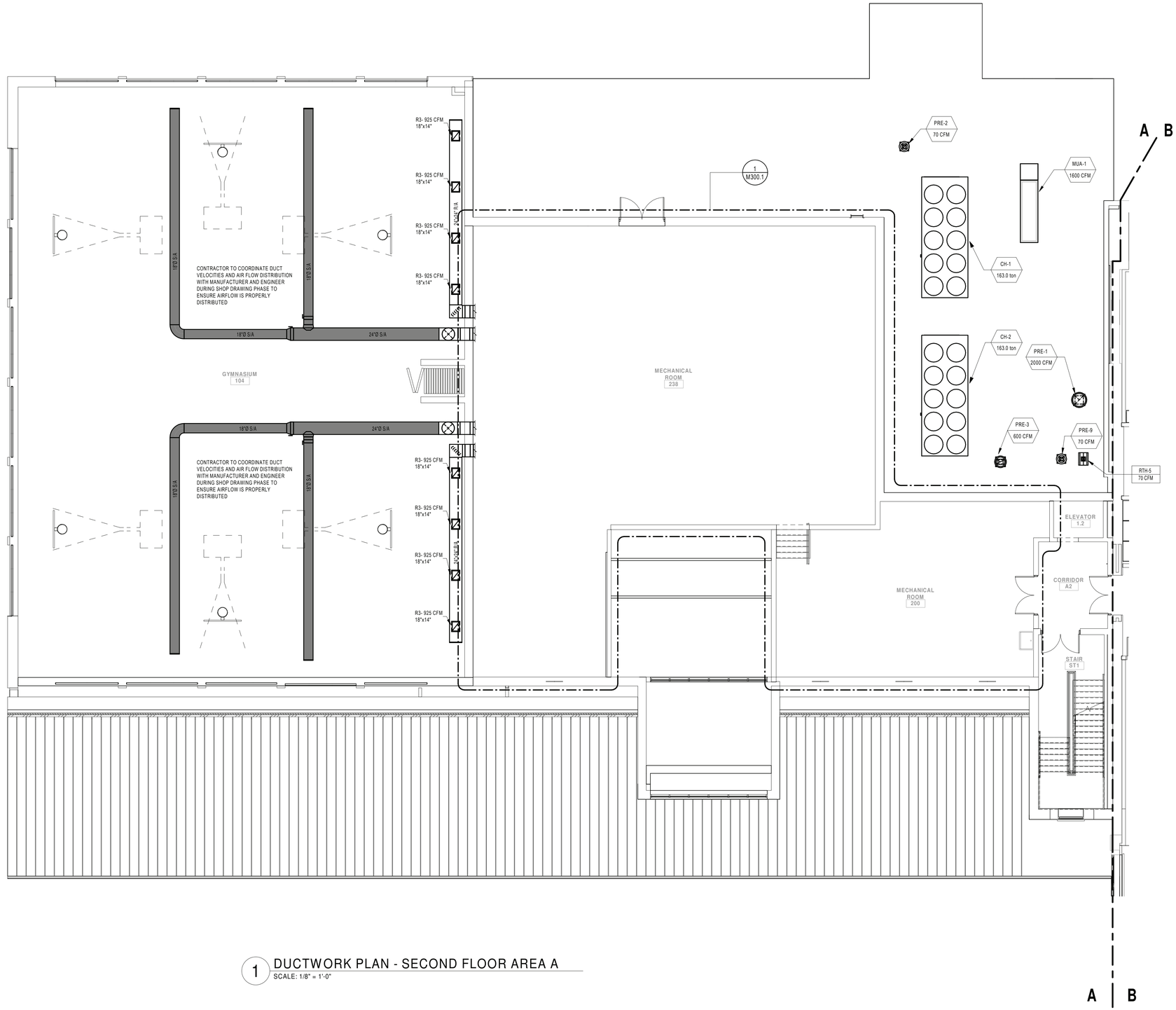
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - SECOND FLOOR AREA A

BUILDING	SHEET NUMBER
MS	M103 RE-BID

2/2/2022 4:30:46 PM

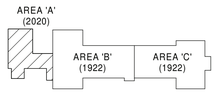


1 DUCTWORK PLAN - SECOND FLOOR AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

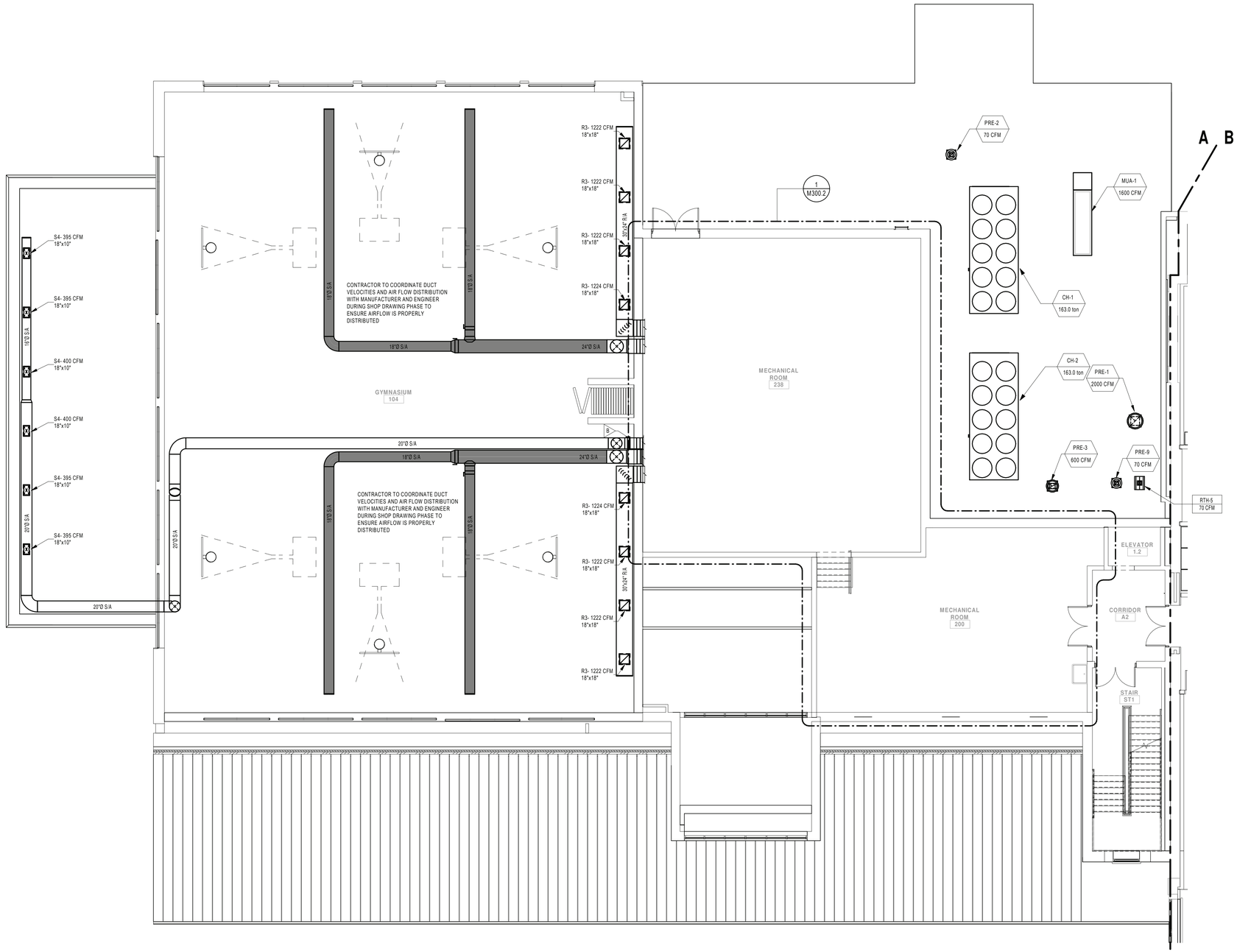
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DUCTWORK PLAN - SECOND FLOOR AREA A - ALTERNATE MC1

BUILDING: MS
SHEET NUMBER: M103.1
RE-BID

2/3/2022 9:16:32 AM

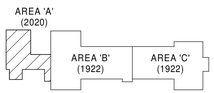


1 DUCTWORK PLAN - SECOND FLOOR AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

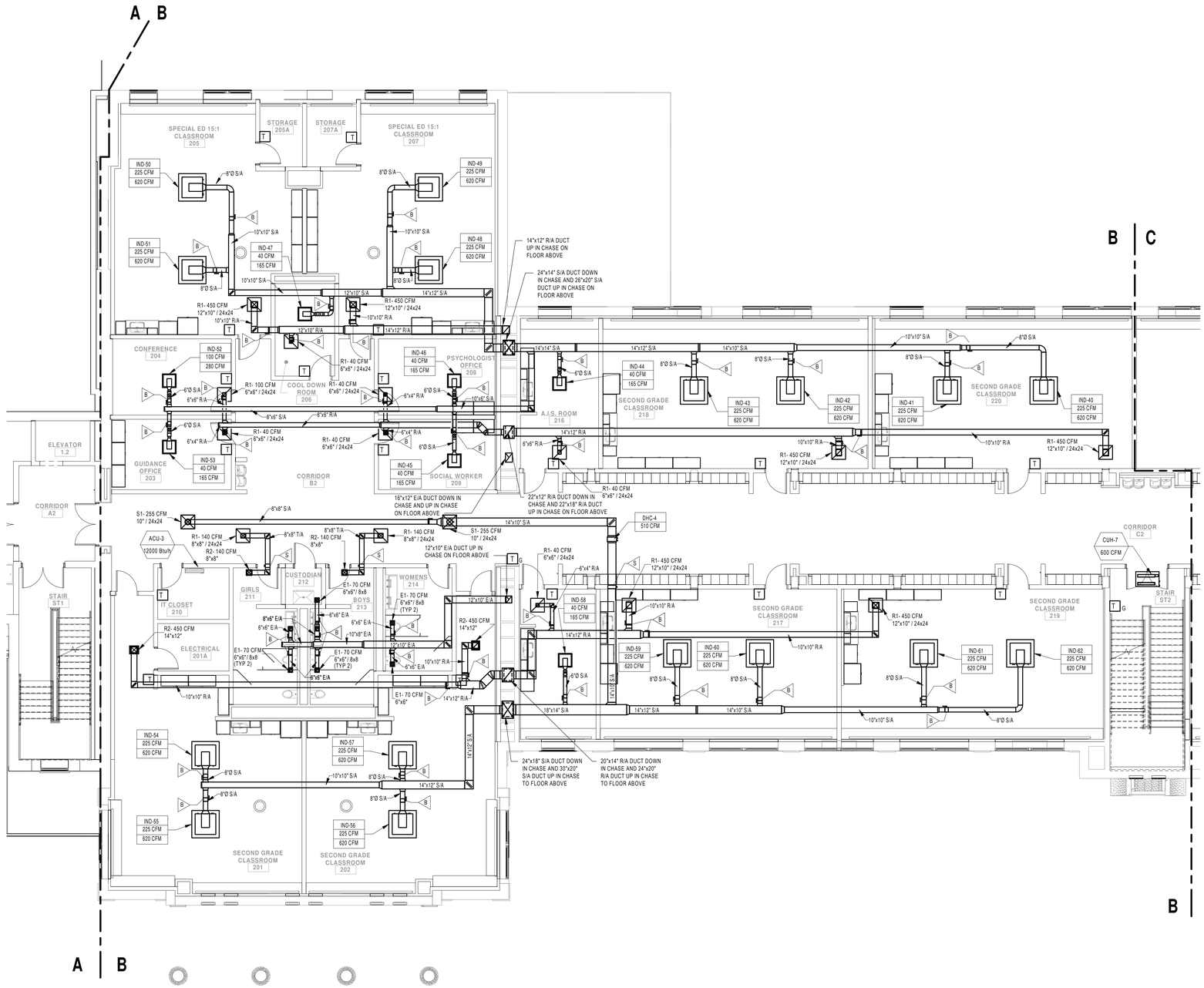
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DUCTWORK PLAN - SECOND FLOOR AREA A - ALTERNATE MC2

BUILDING	SHEET NUMBER
MS	M103.2 RE-BID

2/2/2022 4:30:53 PM

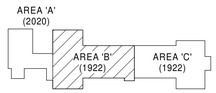


1 DUCTWORK PLAN - SECOND FLOOR AREA B
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

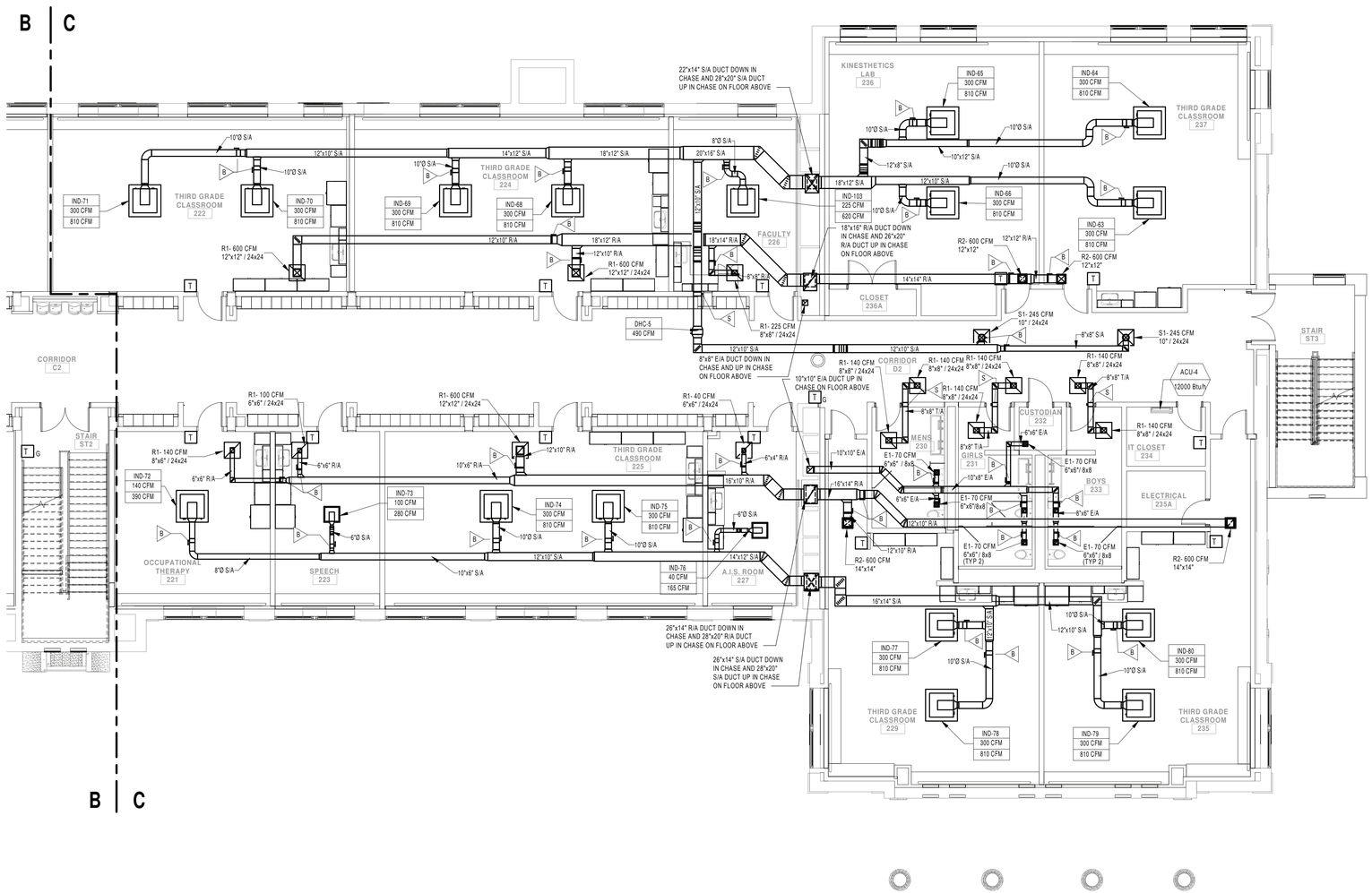
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - SECOND FLOOR AREA B

BUILDING	SHEET NUMBER
MS	M104 RE-BID

2/2/2022 4:31:02 PM

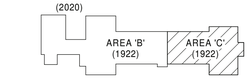


1 DUCTWORK PLAN - SECOND FLOOR AREA C
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

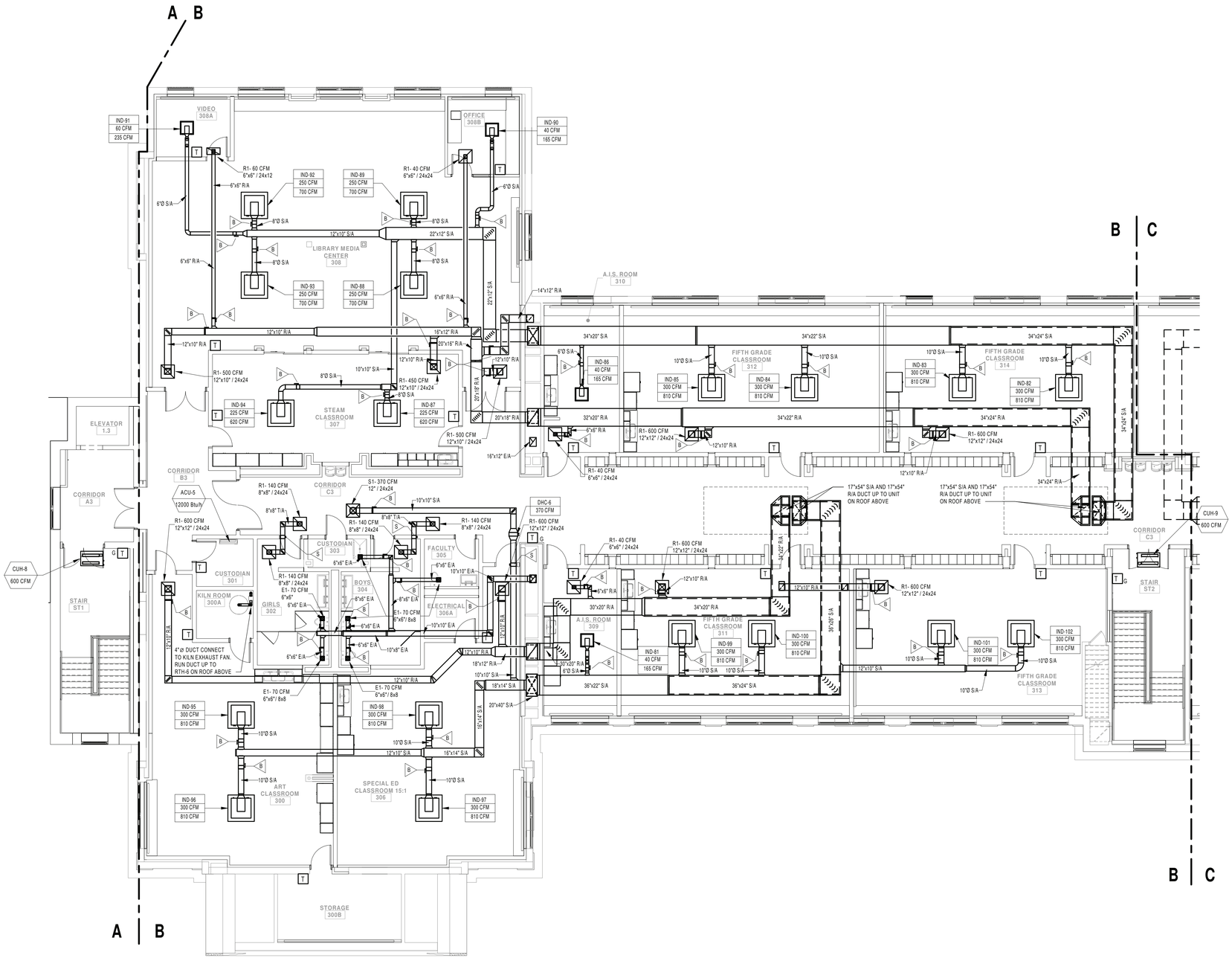
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DUCTWORK PLAN - SECOND FLOOR AREA C

BUILDING	SHEET NUMBER
MS	M105
	RE-BID

2/2/2022 4:31:11 PM

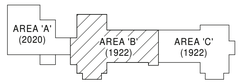


1 DUCTWORK PLAN - THIRD FLOOR AREA B
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

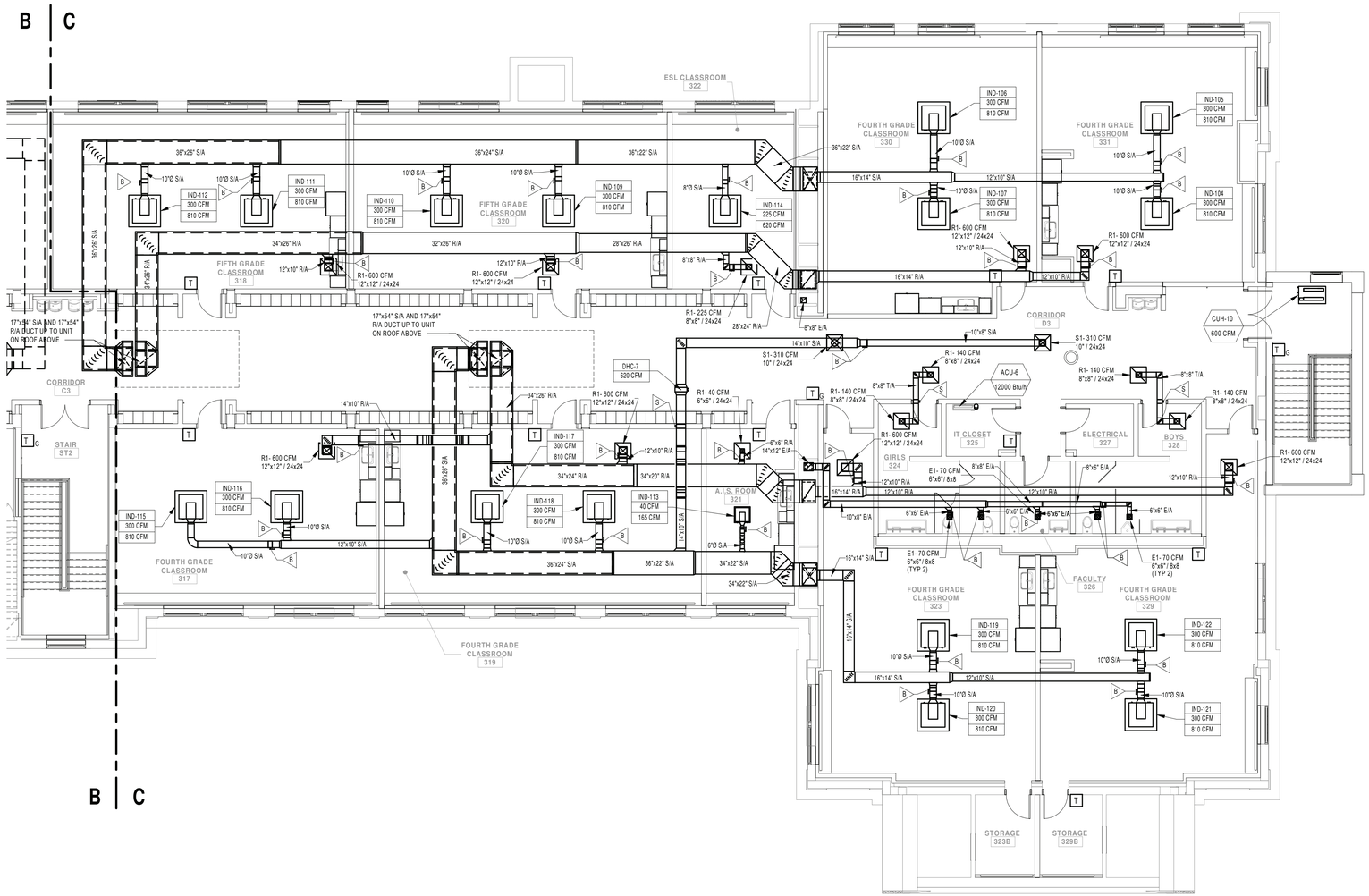
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DUCTWORK PLAN - THIRD FLOOR AREA B

BUILDING	SHEET NUMBER
MS	M106 RE-BID

2/2/2022 4:31:19 PM

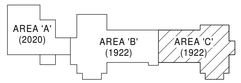


1 DUCTWORK PLAN - THIRD FLOOR AREA C
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

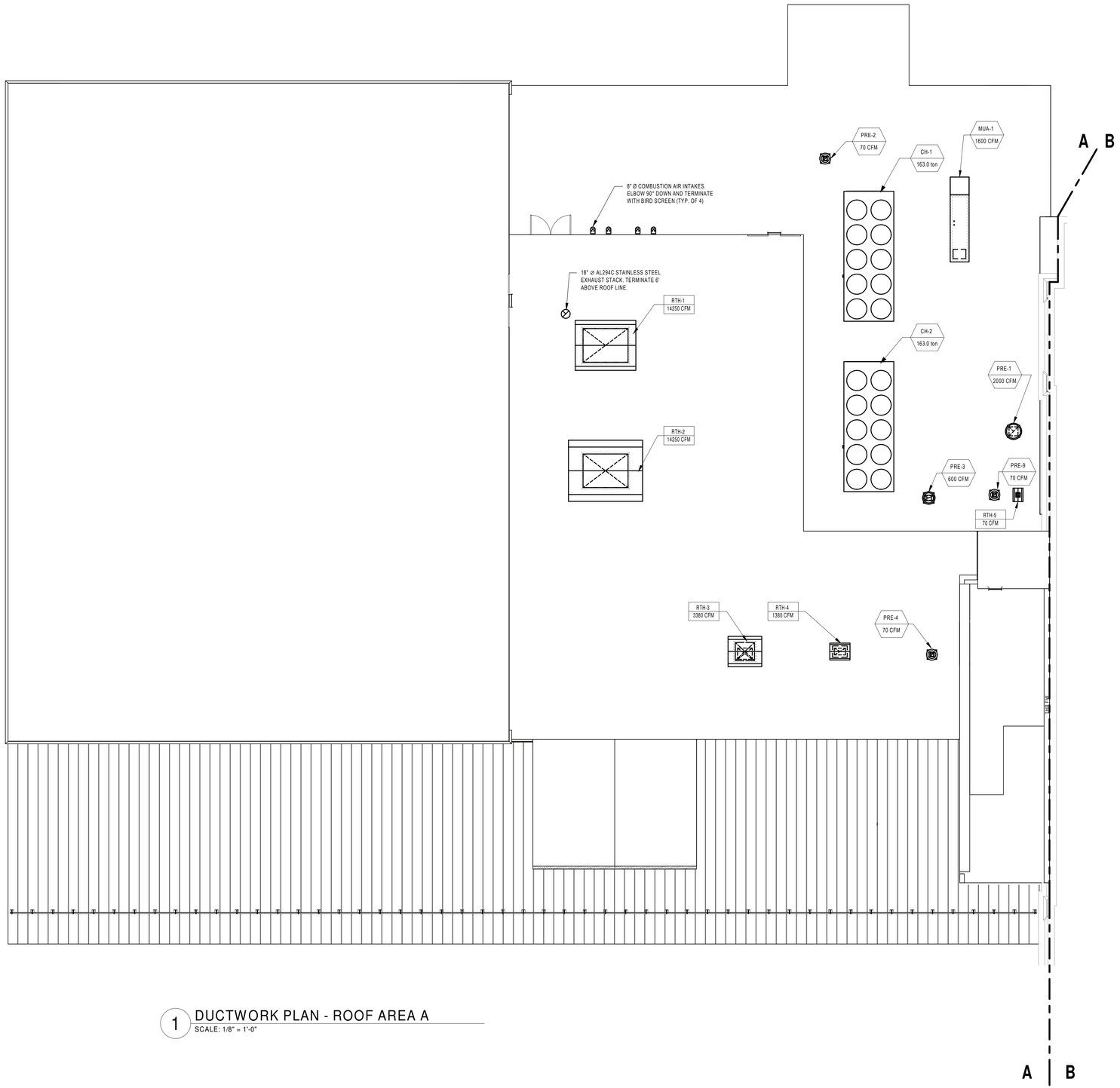
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - THIRD FLOOR AREA C

BUILDING	SHEET NUMBER
MS	M107 RE-BID

2/2/2022 4:31:27 PM

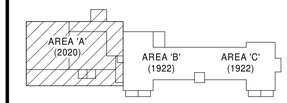


1 DUCTWORK PLAN - ROOF AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

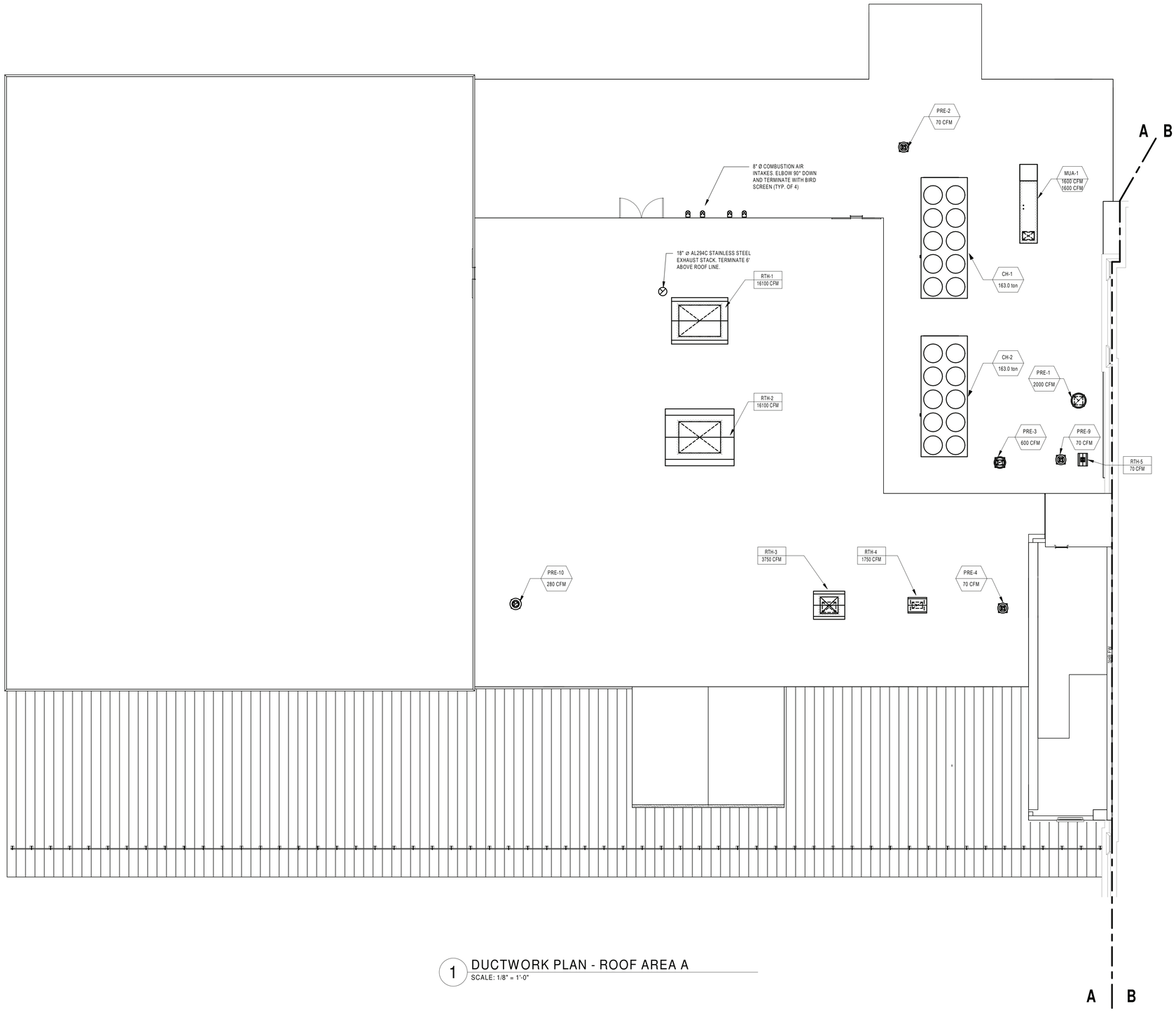
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - ROOF AREA A

BUILDING	SHEET NUMBER
MS	M108 RE-BID

2/3/2022 9:16:35 AM

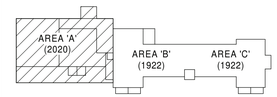


1 DUCTWORK PLAN - ROOF AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

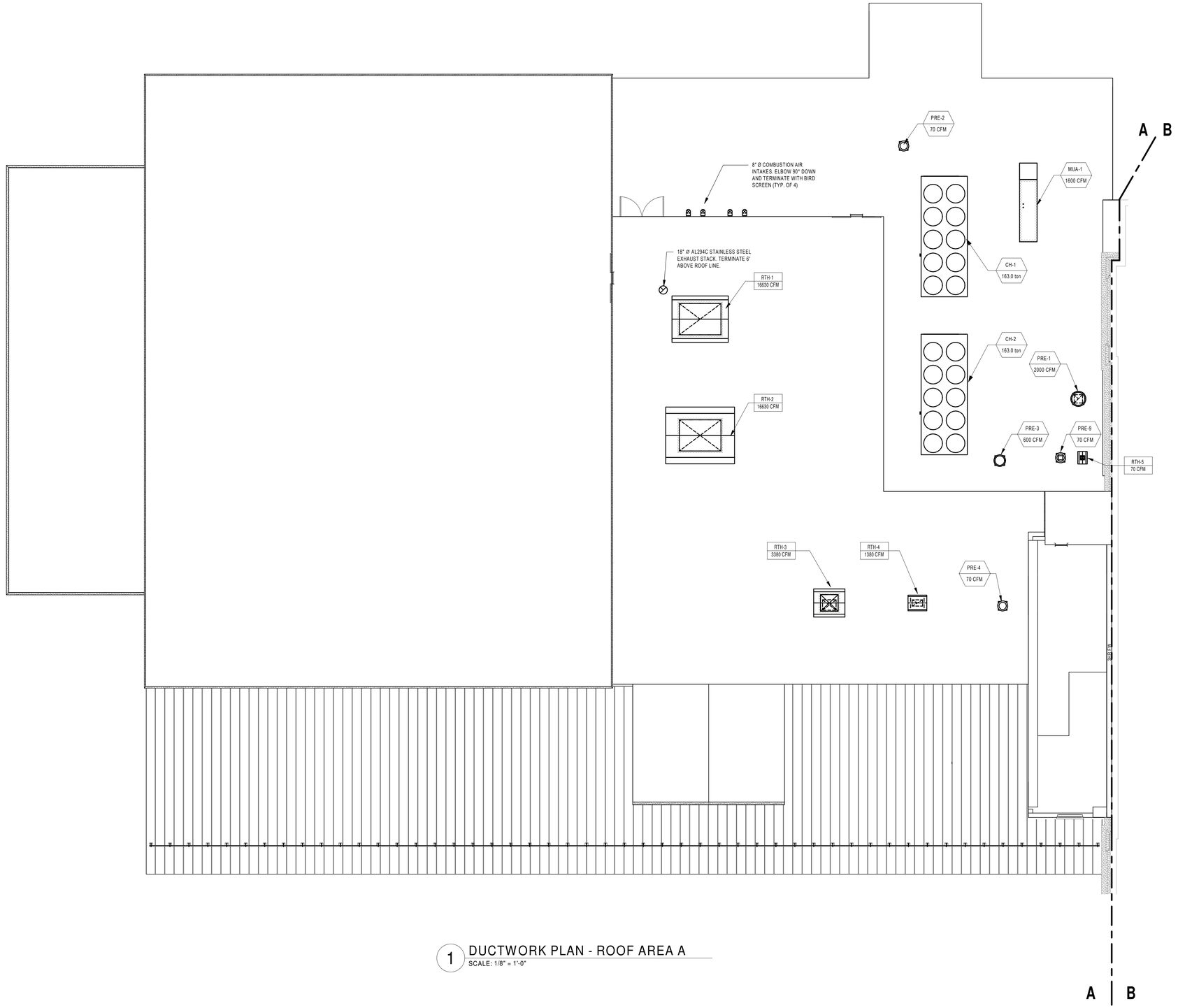
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - ROOF AREA A - ALTERNATE MC1

BUILDING	SHEET NUMBER
MS	M108.1 RE-BID

2/3/2022 9:16:38 AM

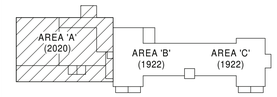


1 DUCTWORK PLAN - ROOF AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

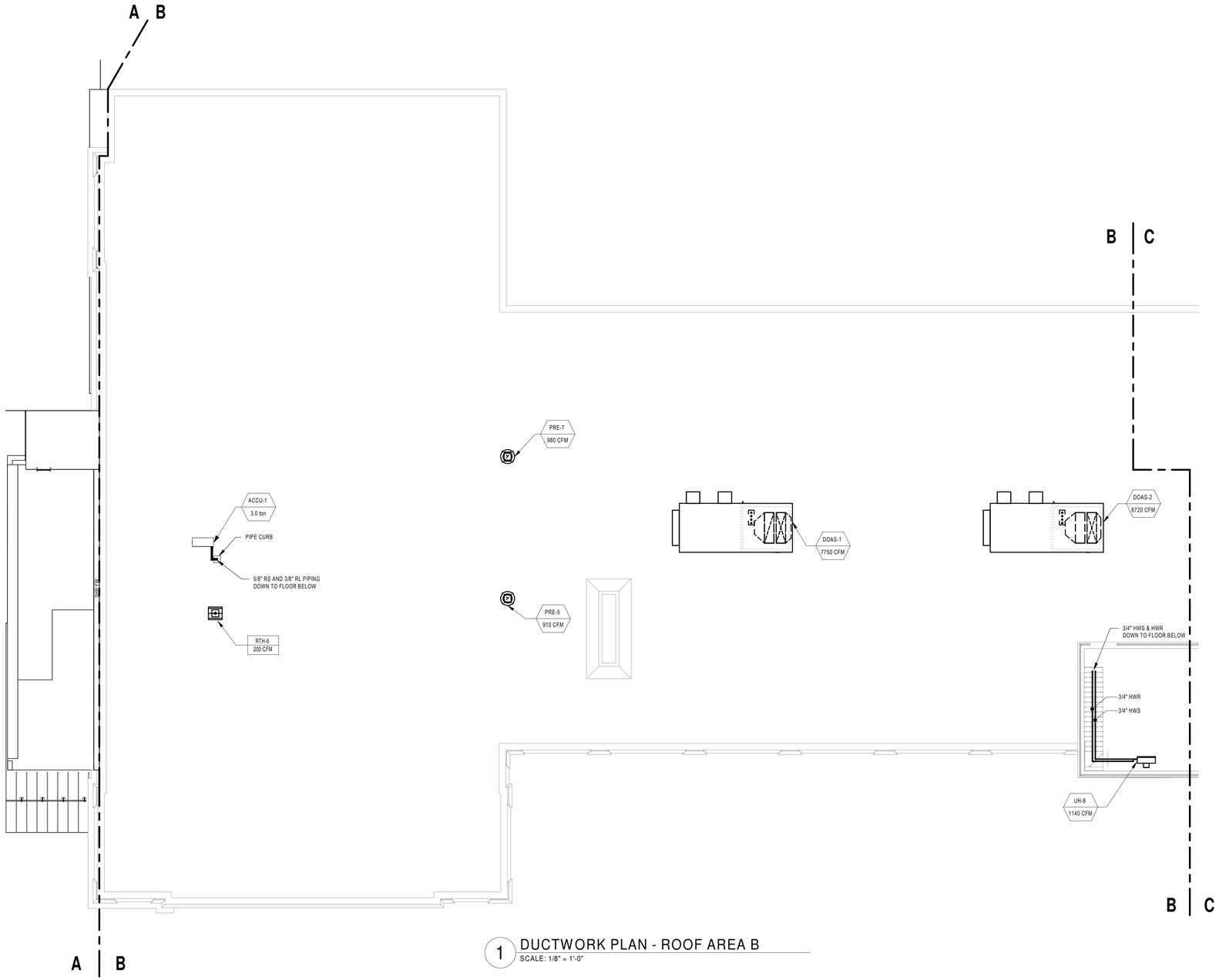
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - ROOF AREA A - ALTERNATE MC2

BUILDING	SHEET NUMBER
MS	M108.2 RE-BID

2/3/2022 9:16:41 AM

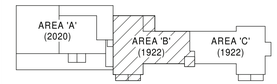


1 DUCTWORK PLAN - ROOF AREA B
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

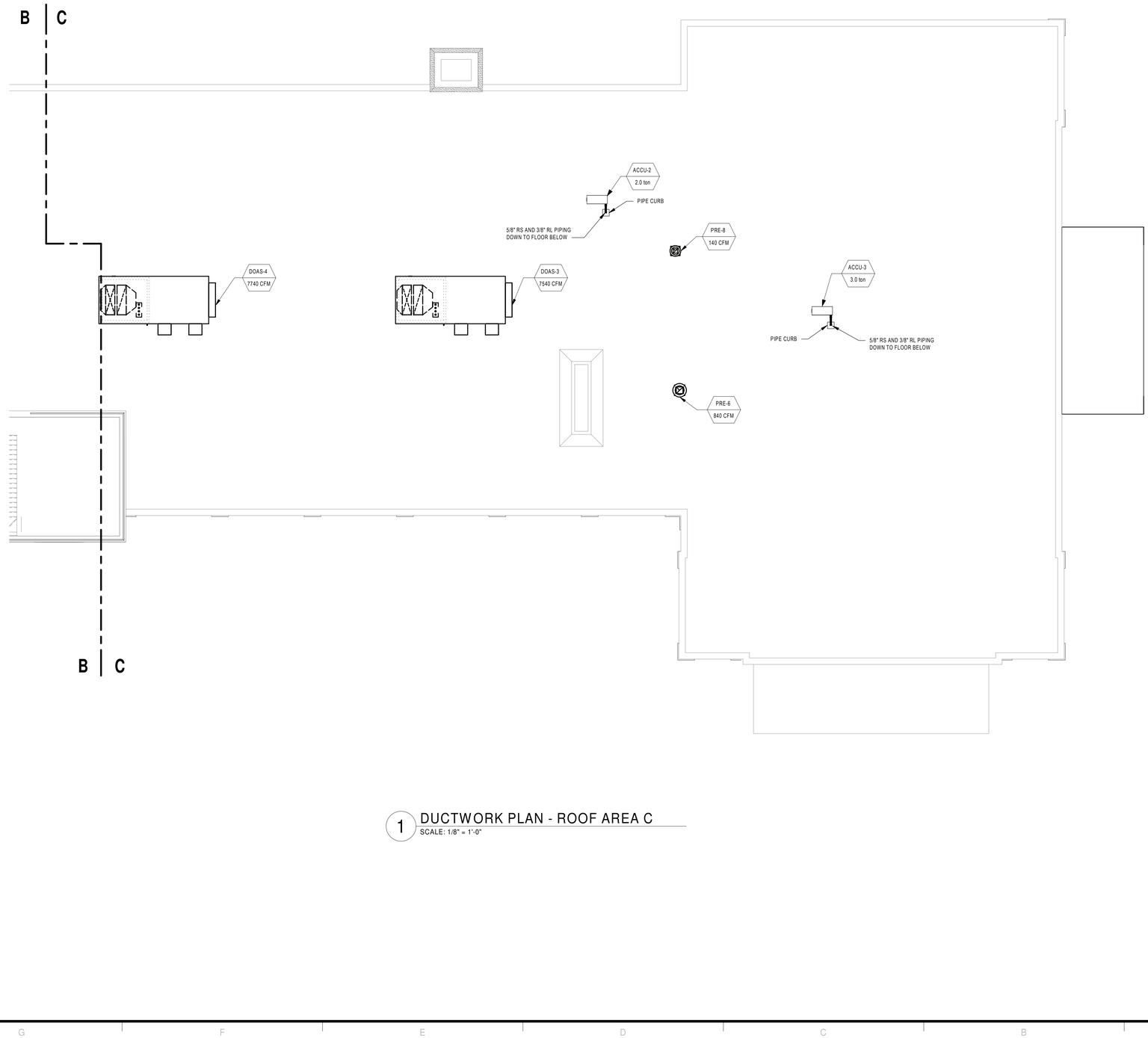
DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK PLAN - ROOF AREA B

BUILDING
MS

SHEET NUMBER
M109
RE-BID

2/2/2022 4:31:50 PM

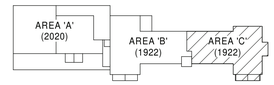


1 DUCTWORK PLAN - ROOF AREA C
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

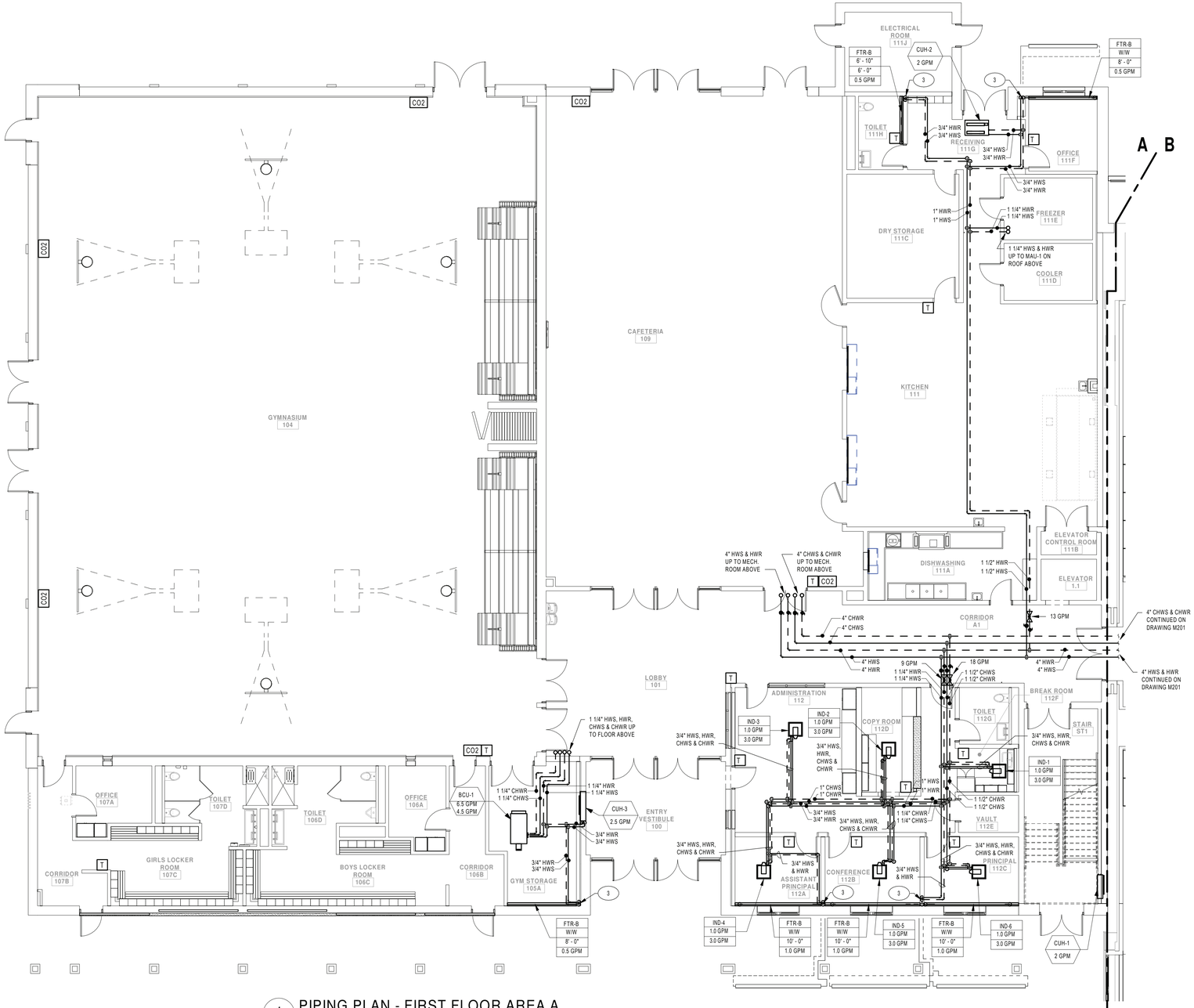
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

DUCTWORK PLAN - ROOF AREA C

BUILDING	SHEET NUMBER
MS	M110 RE-BID

2/2/2022 4:31:55 PM



1 PIPING PLAN - FIRST FLOOR AREA A
SCALE: 1/8" = 1'-0"

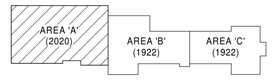
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEYNOTE LEGEND

3 3/4" HWS AND HWR DOWN IN CHASE OR WALL TO SERVE FIN TUBE RADIATION.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

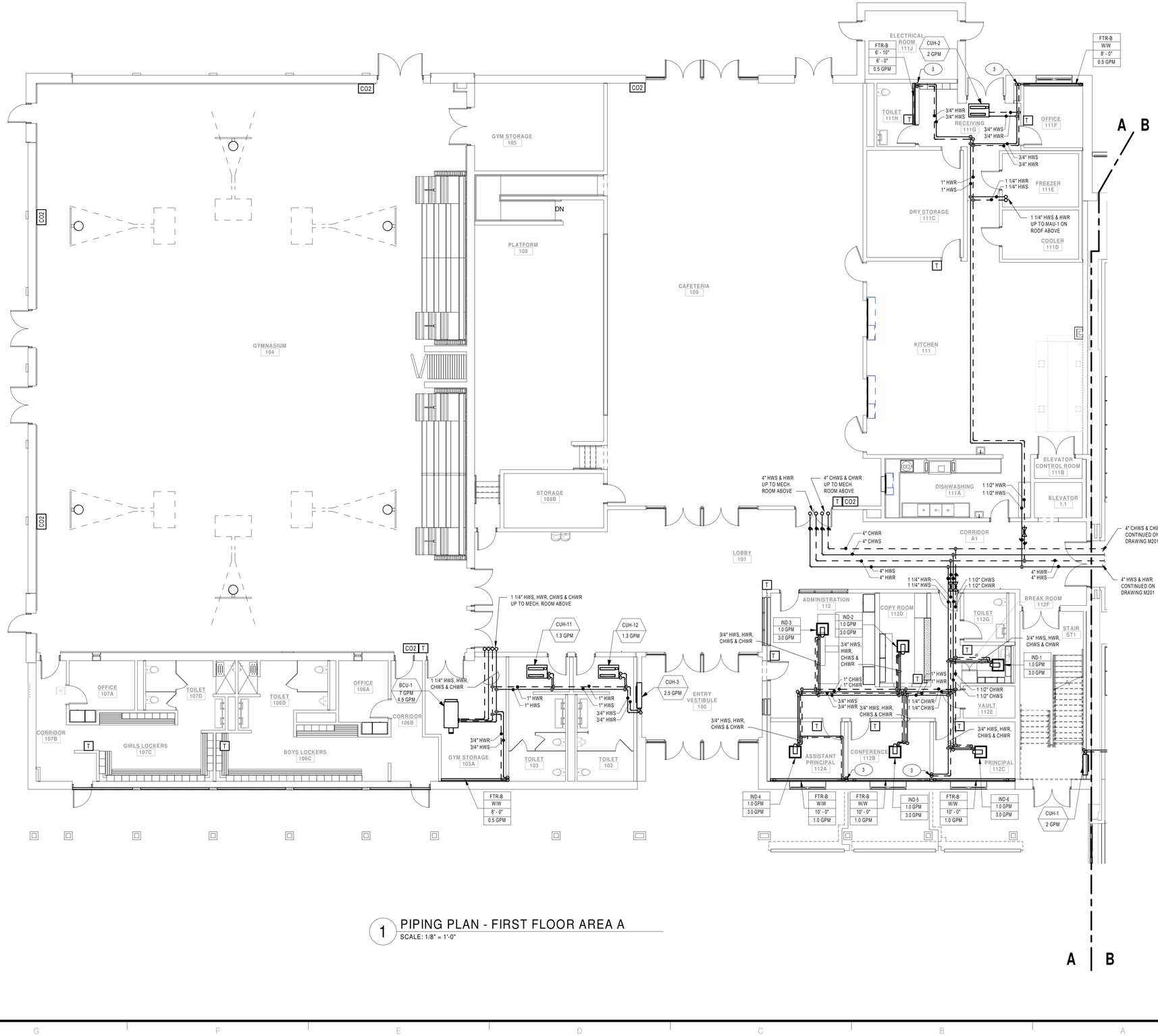
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

PIPING PLAN - FIRST FLOOR AREA A

BUILDING	SHEET NUMBER
MS	M200 RE-BID

2/2/2022 4:32:04 PM



1 PIPING PLAN - FIRST FLOOR AREA A
SCALE: 1/8" = 1'-0"

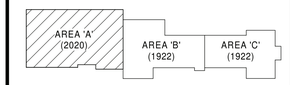
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEYNOTE LEGEND

3 3/4" HWS AND HWR DOWN IN CHASE OR WALL TO SERVE FIN TUBE RADIATION.

KEY PLAN:



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ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

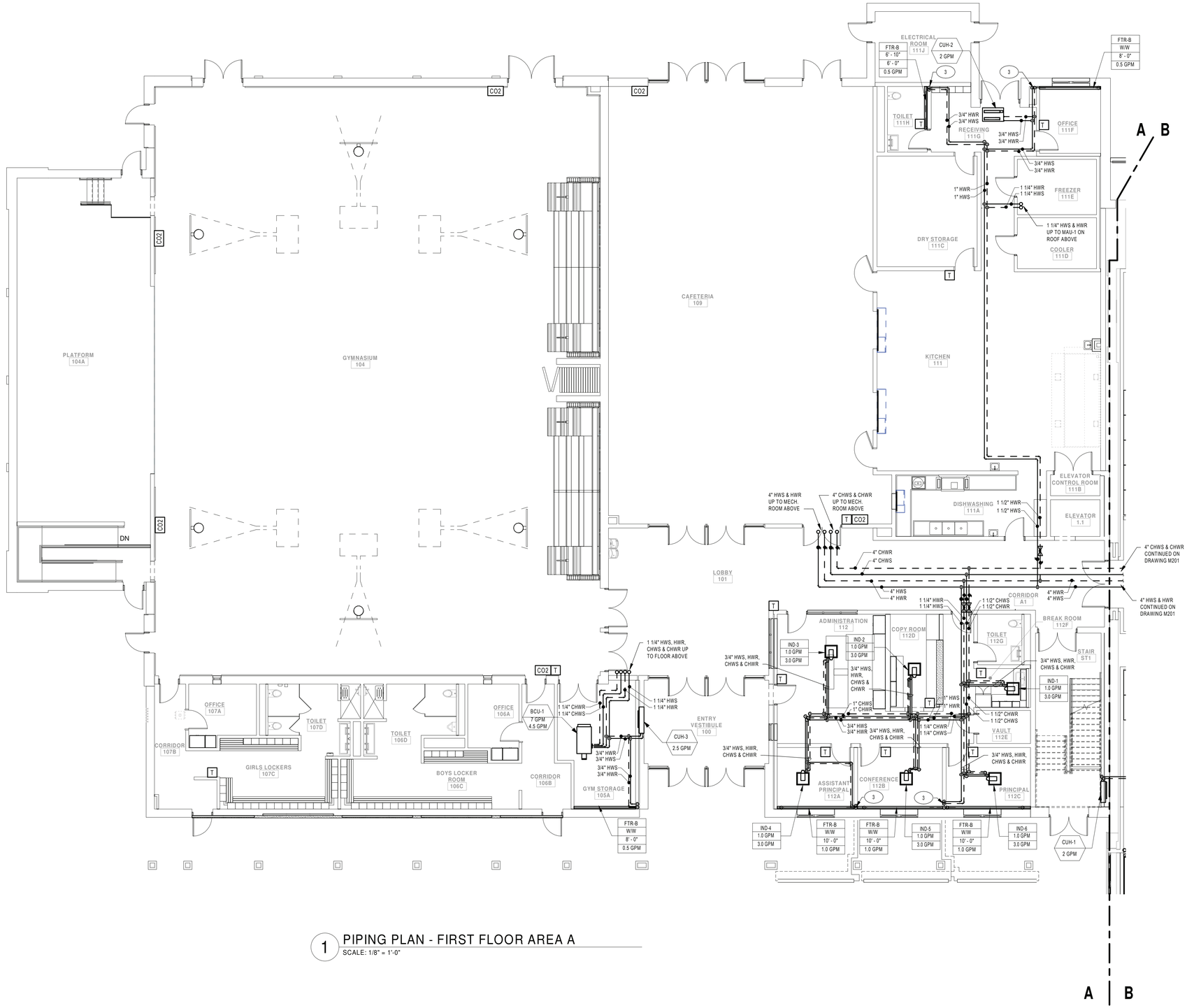
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

PIPING PLAN - FIRST FLOOR AREA A - ALTERNATE MC1

BUILDING	SHEET NUMBER
MS	M200.1 RE-BID

2/2/2022 4:32:13 PM



1 PIPING PLAN - FIRST FLOOR AREA A
SCALE: 1/8" = 1'-0"

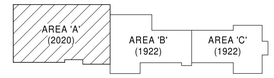
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEYNOTE LEGEND

3 3/4" HWS AND HWR DOWN IN CHASE OR WALL TO SERVE FIN TUBE RADIATION.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

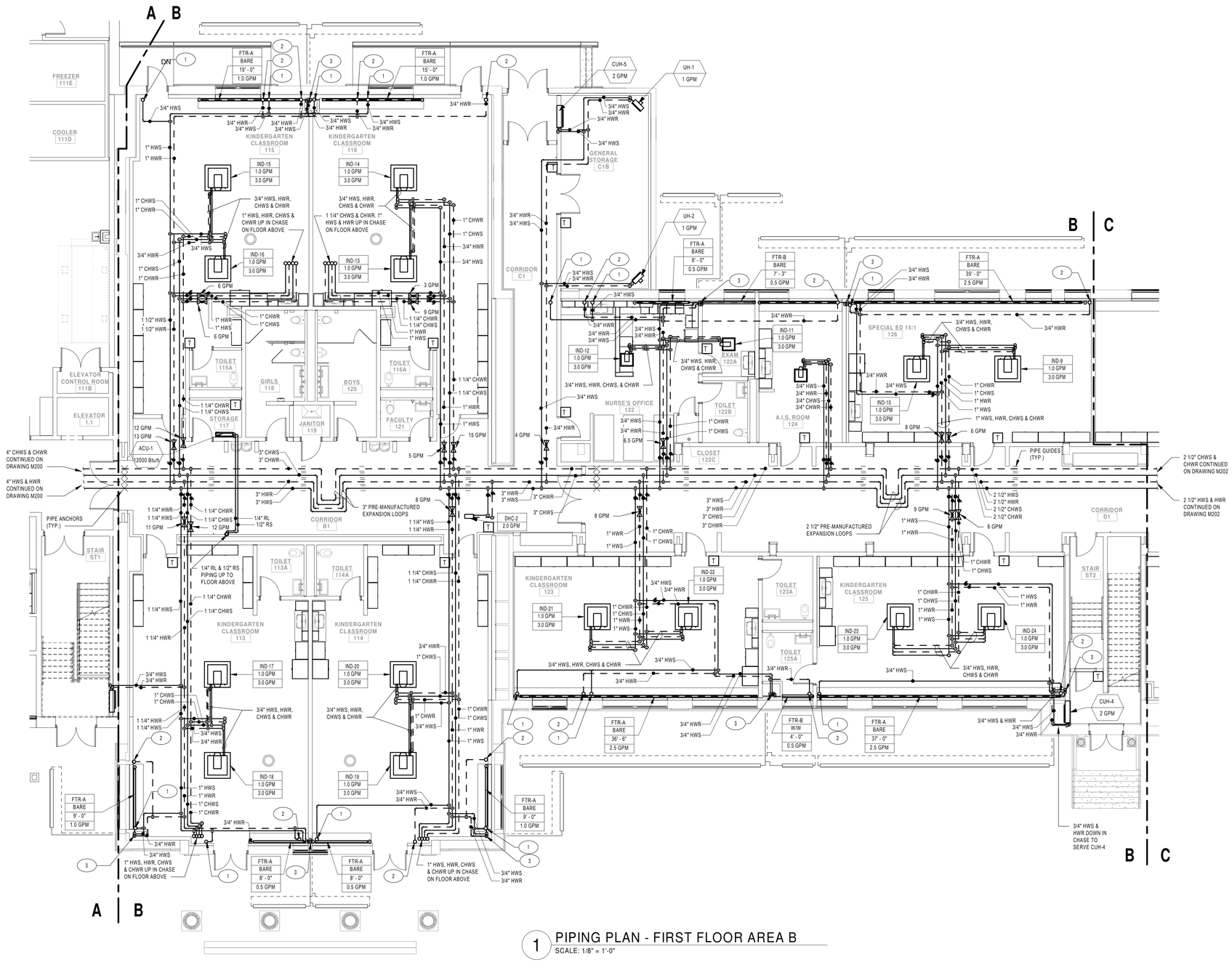
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

PIPING PLAN - FIRST FLOOR AREA A - ALTERNATE MC2

BUILDING	SHEET NUMBER
MS	M200.2 RE-BID

2/2/2022 4:32:22 PM



1 PIPING PLAN - FIRST FLOOR AREA B
SCALE: 1/8" = 1'-0"

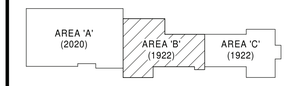
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEYNOTE LEGEND

1 3/4" HWS UP TO FIN TUBE RADIATION ON FLOOR ABOVE.
2 3/4" HWR UP TO FIN TUBE RADIATION ON FLOOR ABOVE.
3 3/4" HWS AND HWR DOWN IN CHASE OR WALL TO SERVE FIN TUBE RADIATION.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

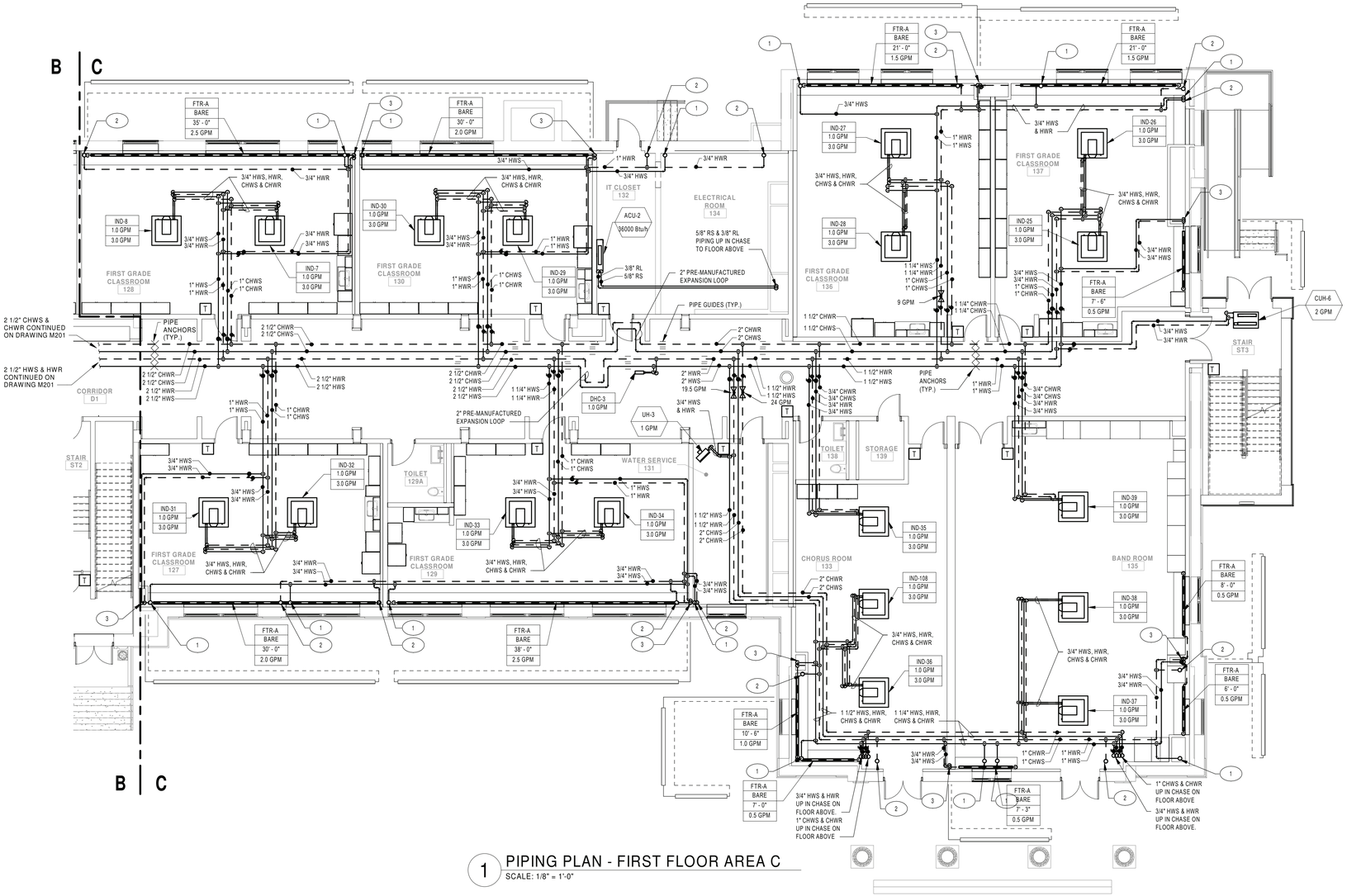
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

PIPING PLAN - FIRST FLOOR AREA B

BUILDING	SHEET NUMBER
MS	M201 RE-BID

2/2/2022 4:32:39 PM



1 PIPING PLAN - FIRST FLOOR AREA C
SCALE: 1/8" = 1'-0"

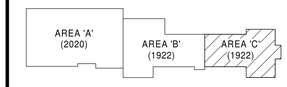
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEYNOTE LEGEND

1 3/4" HWS UP TO FIN TUBE RADIATION ON FLOOR ABOVE.
2 3/4" HWR UP TO FIN TUBE RADIATION ON FLOOR ABOVE.
3 3/4" HWS AND HWR DOWN IN CHASE OR WALL TO SERVE FIN TUBE RADIATION.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

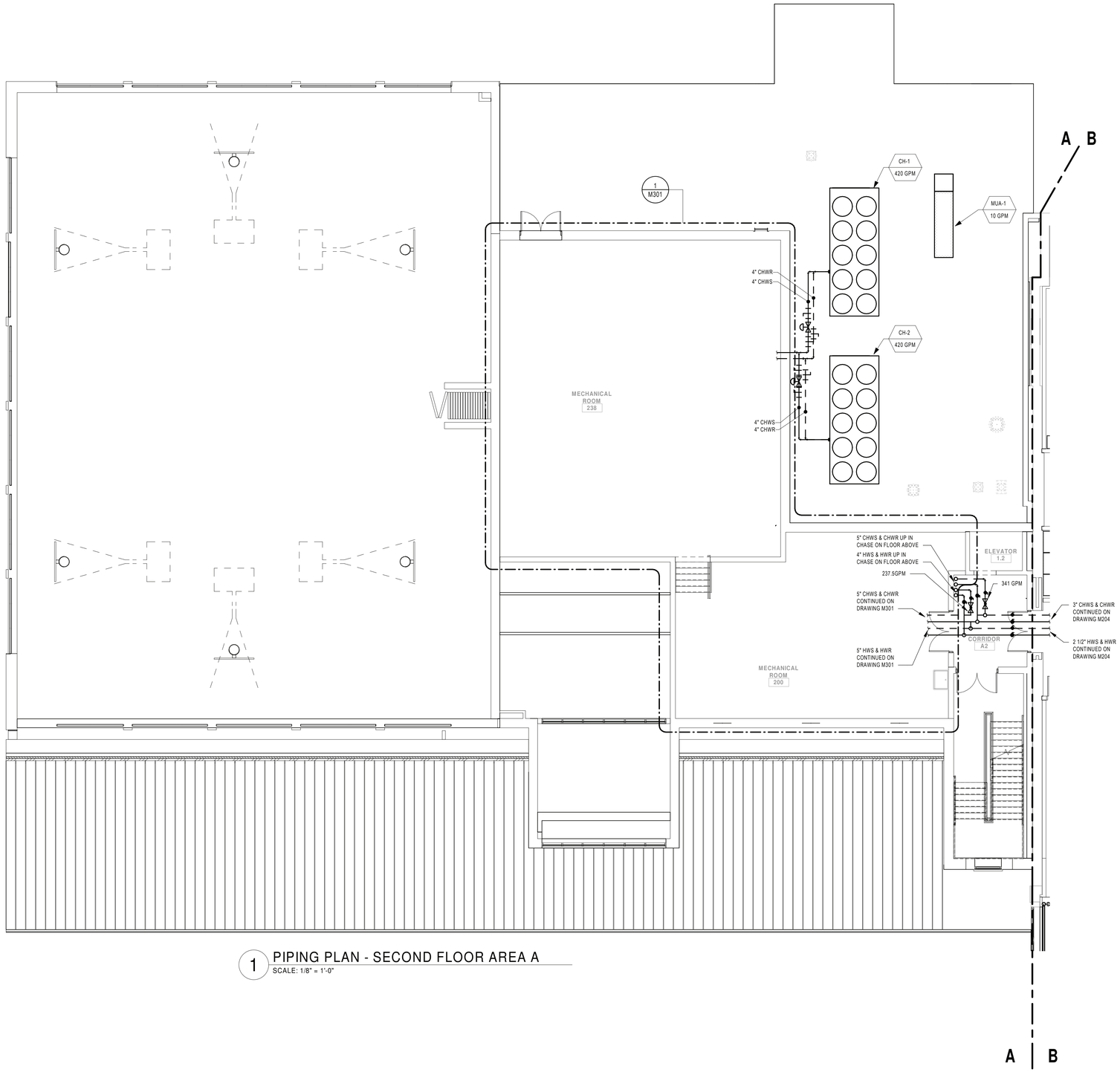
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

PIPING PLAN - FIRST FLOOR AREA C

BUILDING	SHEET NUMBER
MS	M202 RE-BID

2/2/2022 4:32:53 PM



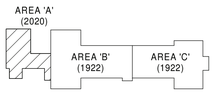
1 PIPING PLAN - SECOND FLOOR AREA A

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

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

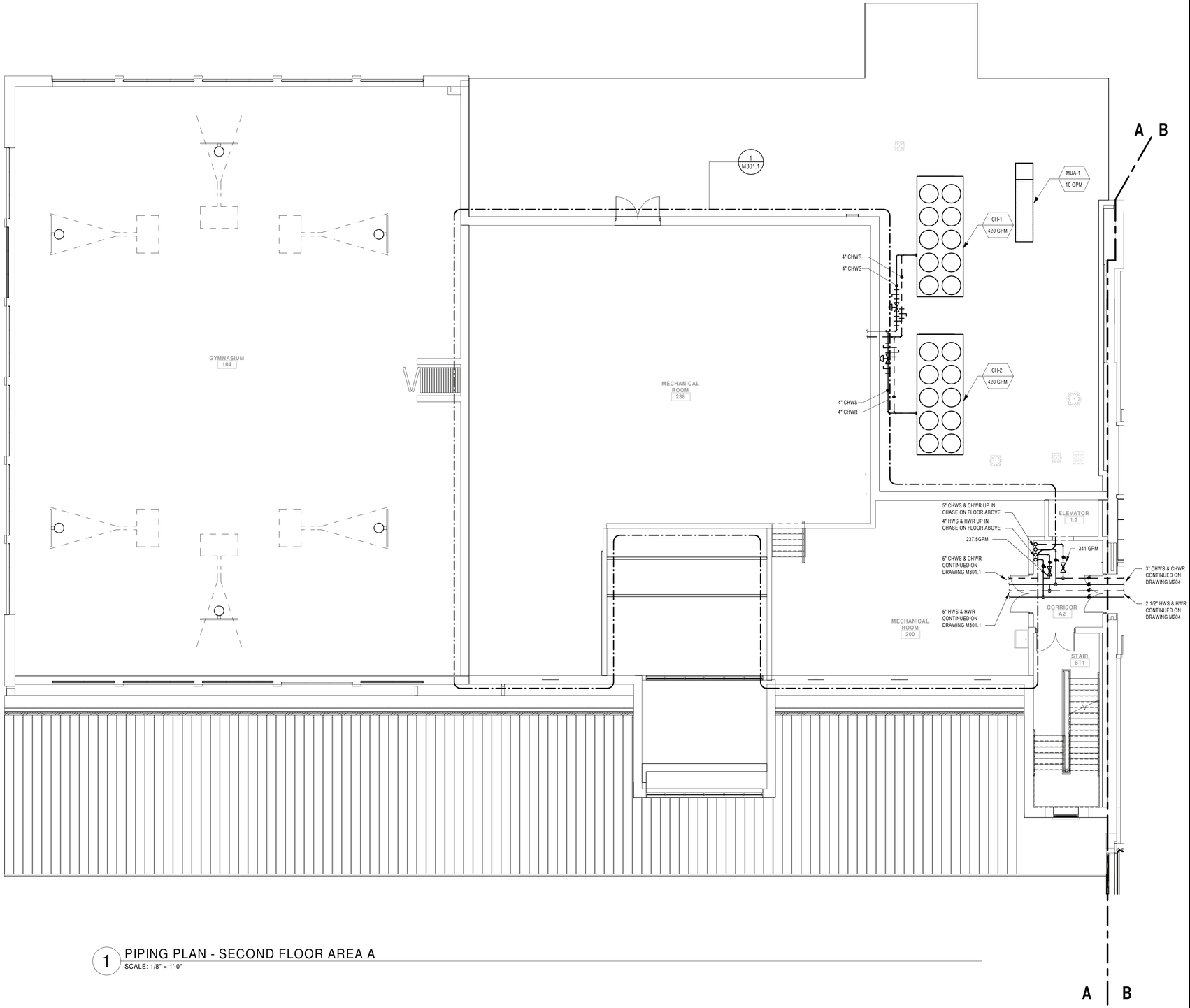
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

PIPING PLAN - SECOND FLOOR AREA A

BUILDING	SHEET NUMBER
MS	M203
	RE-BID

2/2/2022 4:32:59 PM

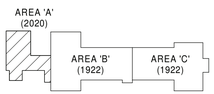


1 PIPING PLAN - SECOND FLOOR AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

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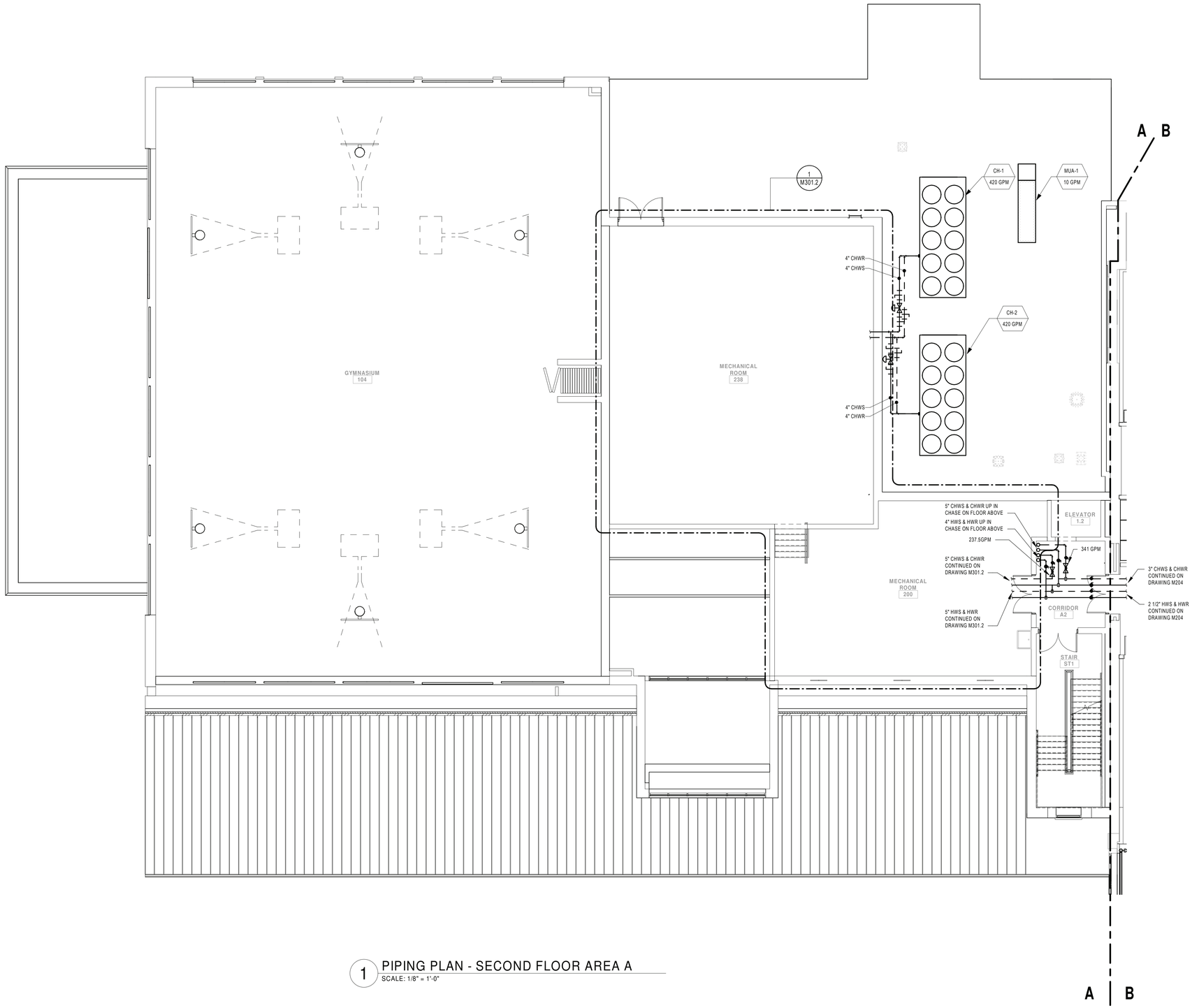
PIPING PLAN - SECOND FLOOR AREA A - ALTERNATE MC1

BUILDING	SHEET NUMBER
MS	M203.1 RE-BID

2/2/2022 4:33:04 PM

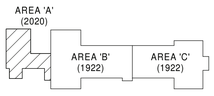


1 PIPING PLAN - SECOND FLOOR AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

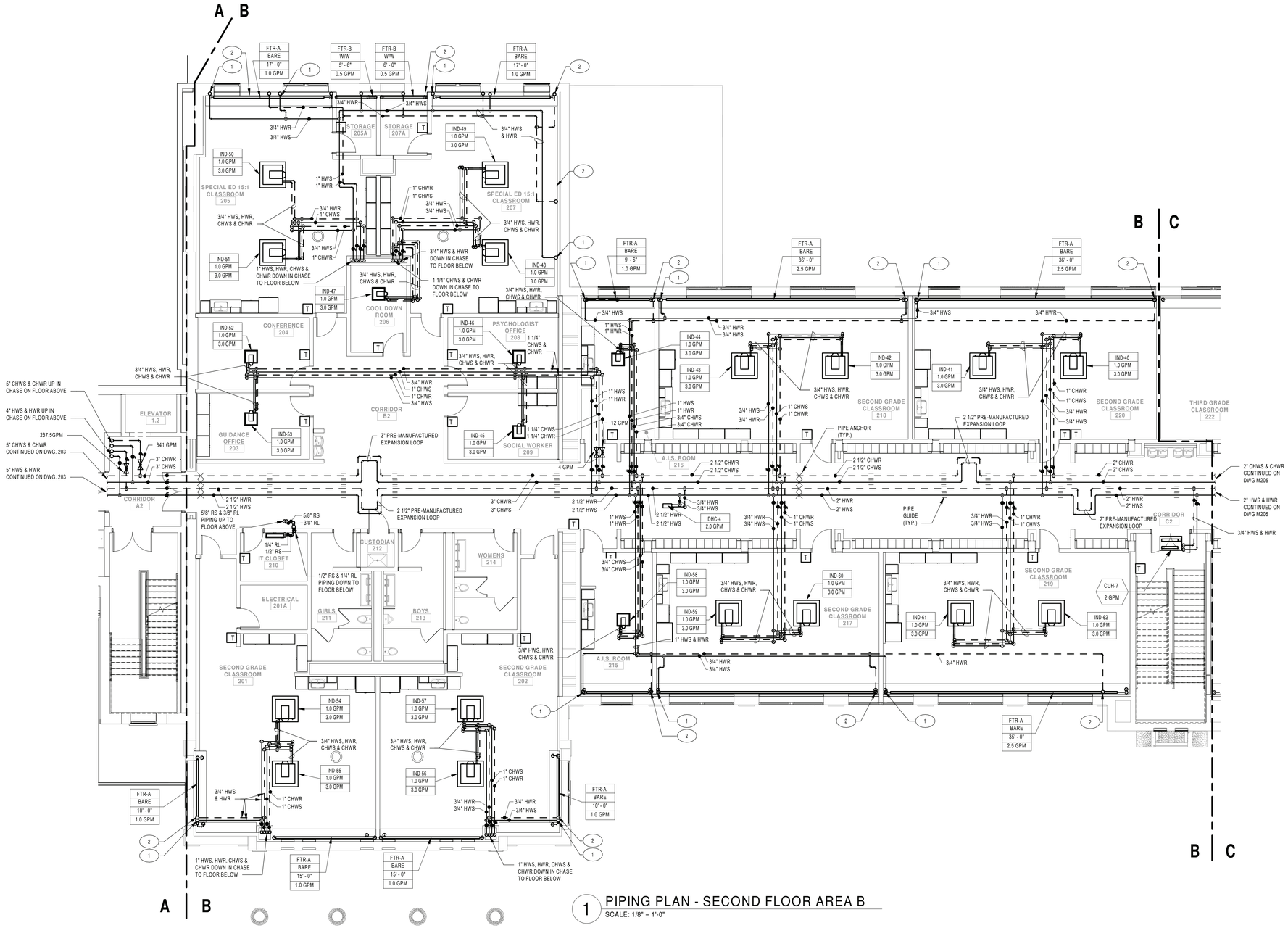
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

PIPING PLAN - SECOND FLOOR
AREA A - ALTERNATE MC2

BUILDING	SHEET NUMBER
MS	M203.2 RE-BID

2/2/2022 4:33:09 PM



1 PIPING PLAN - SECOND FLOOR AREA B
SCALE: 1/8" = 1'-0"

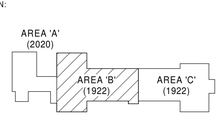
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEYNOTE LEGEND

1. 3/4" HWS UP TO FIN TUBE RADIATION ON FLOOR ABOVE.
2. 3/4" HWR UP TO FIN TUBE RADIATION ON FLOOR ABOVE.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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REV	DATE	DESCRIPTION

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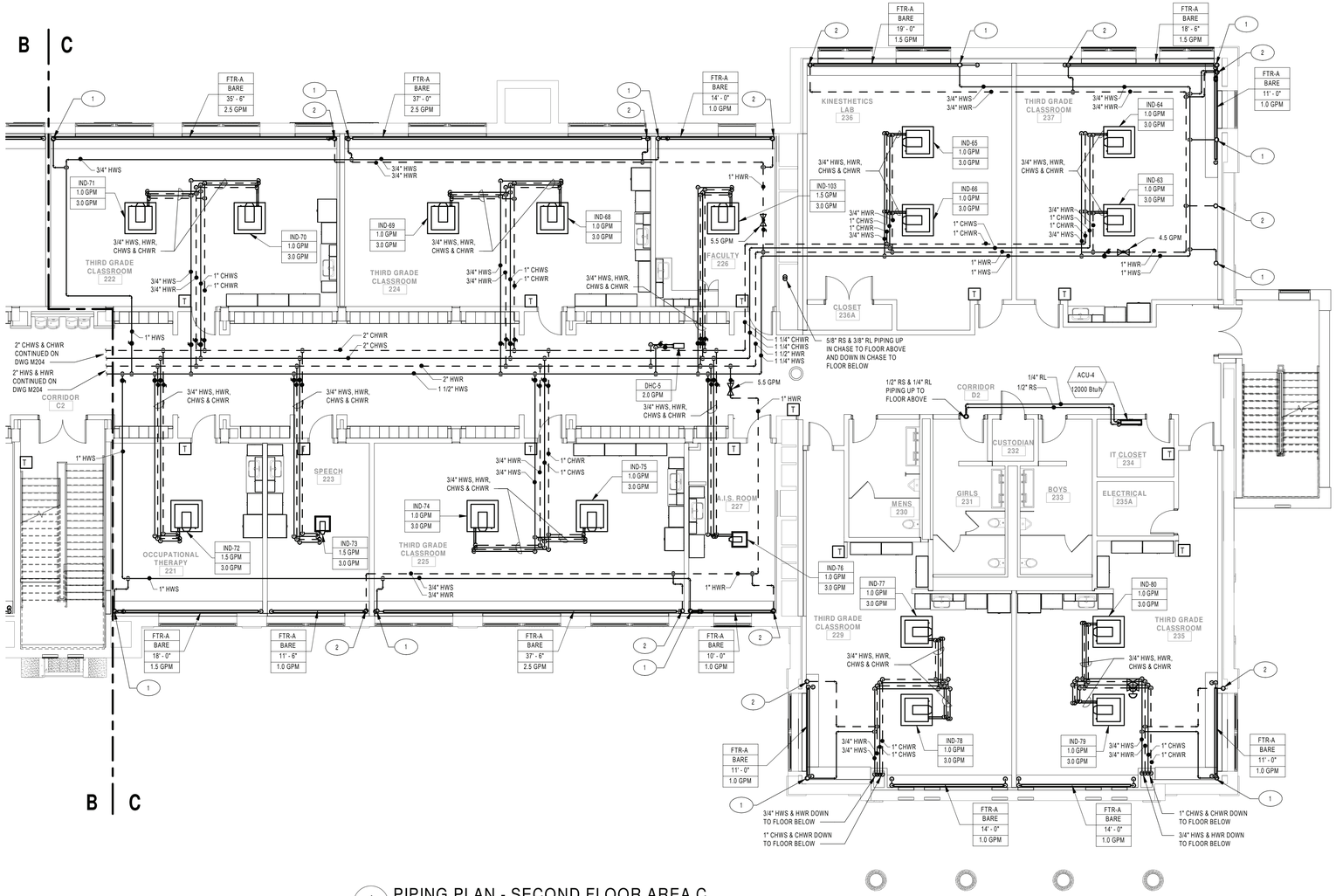
CHECKED BY: JLM	DATE: 02/04/2022

PIPING PLAN - SECOND FLOOR AREA B

BUILDING	SHEET NUMBER
MS	M204
	RE-BID

2/2/2022 4:33:25 PM



1 PIPING PLAN - SECOND FLOOR AREA C

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

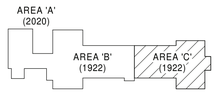
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEYNOTE LEGEND

1 3/4" HWS UP TO FIN TUBE RADIATION ON FLOOR ABOVE.
2 3/4" HWR UP TO FIN TUBE RADIATION ON FLOOR ABOVE.

KEY PLAN:



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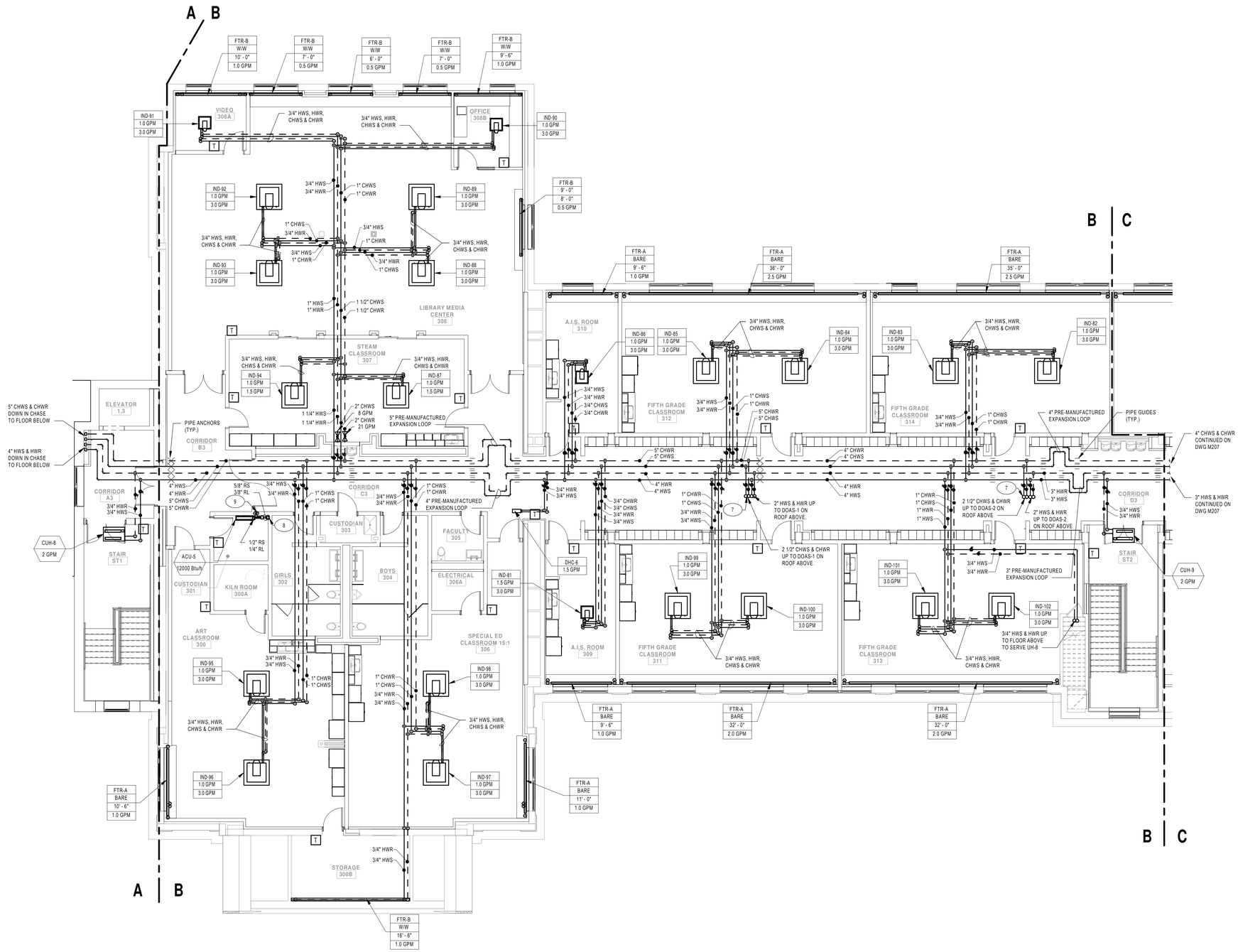
PIPING PLAN - SECOND FLOOR AREA C

BUILDING	SHEET NUMBER
MS	M205 RE-BID

2/2/2022 4:33:39 PM



1 PIPING PLAN - THIRD FLOOR AREA B
SCALE: 1/8" = 1'-0"

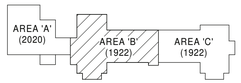
GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEYNOTE LEGEND

7 CONTROL VALVE AND ALL PIPING ACCESSORIES SERVING THE DOAS UNIT TO BE IN CEILING SPACE BELOW ROOF.
8 5/8" RS AND 3/8" RL PIPING UP TO ROOF ABOVE.
9 5/8" RS AND 3/8" RL PIPING DOWN TO FLOOR BELOW.

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

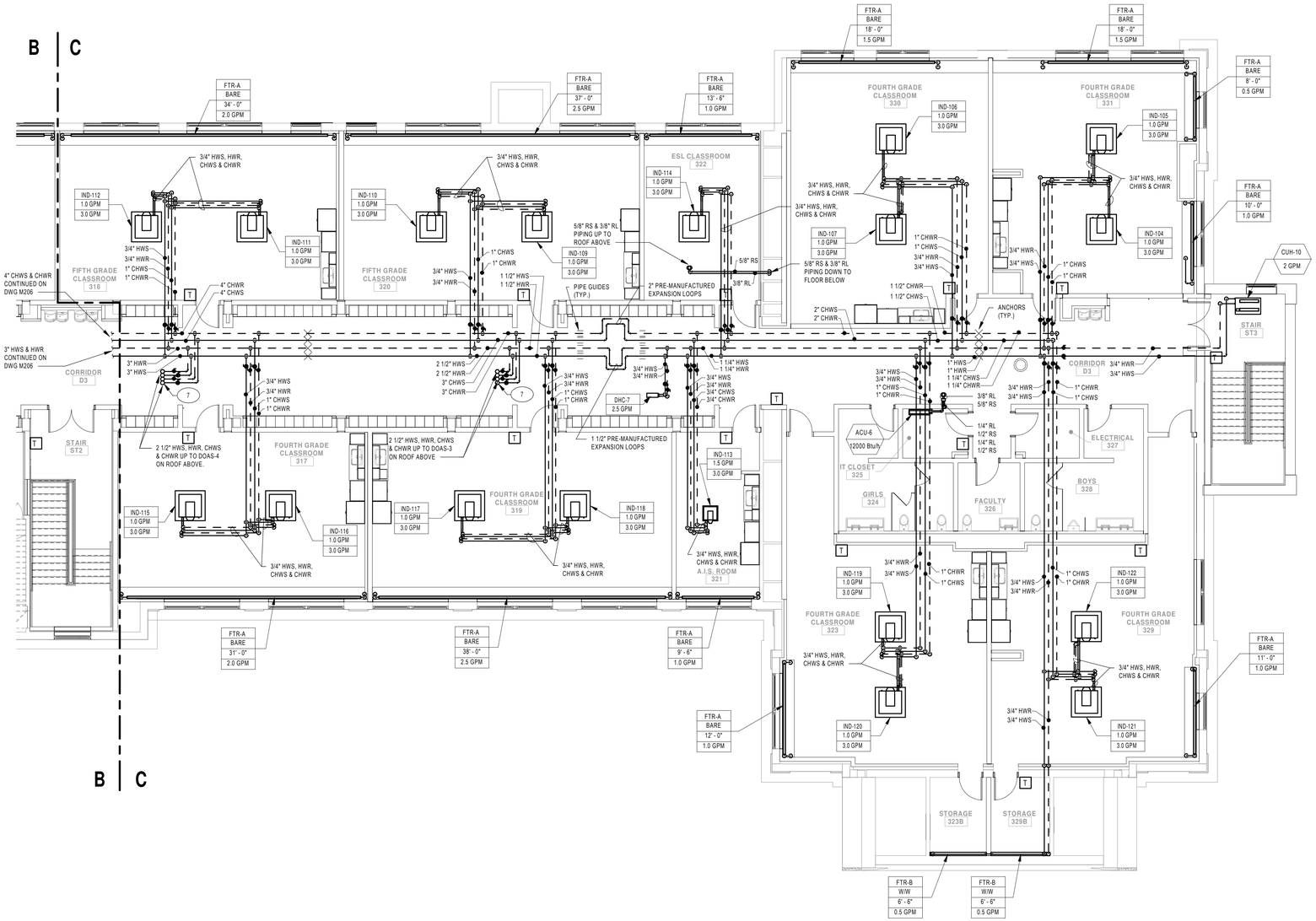
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

PIPING PLAN - THIRD FLOOR AREA B

BUILDING	SHEET NUMBER
MS	M206 RE-BID

2/2/2022 4:33:53 PM

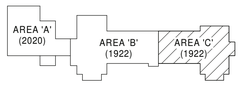


1 PIPING PLAN - THIRD FLOOR AREA C
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

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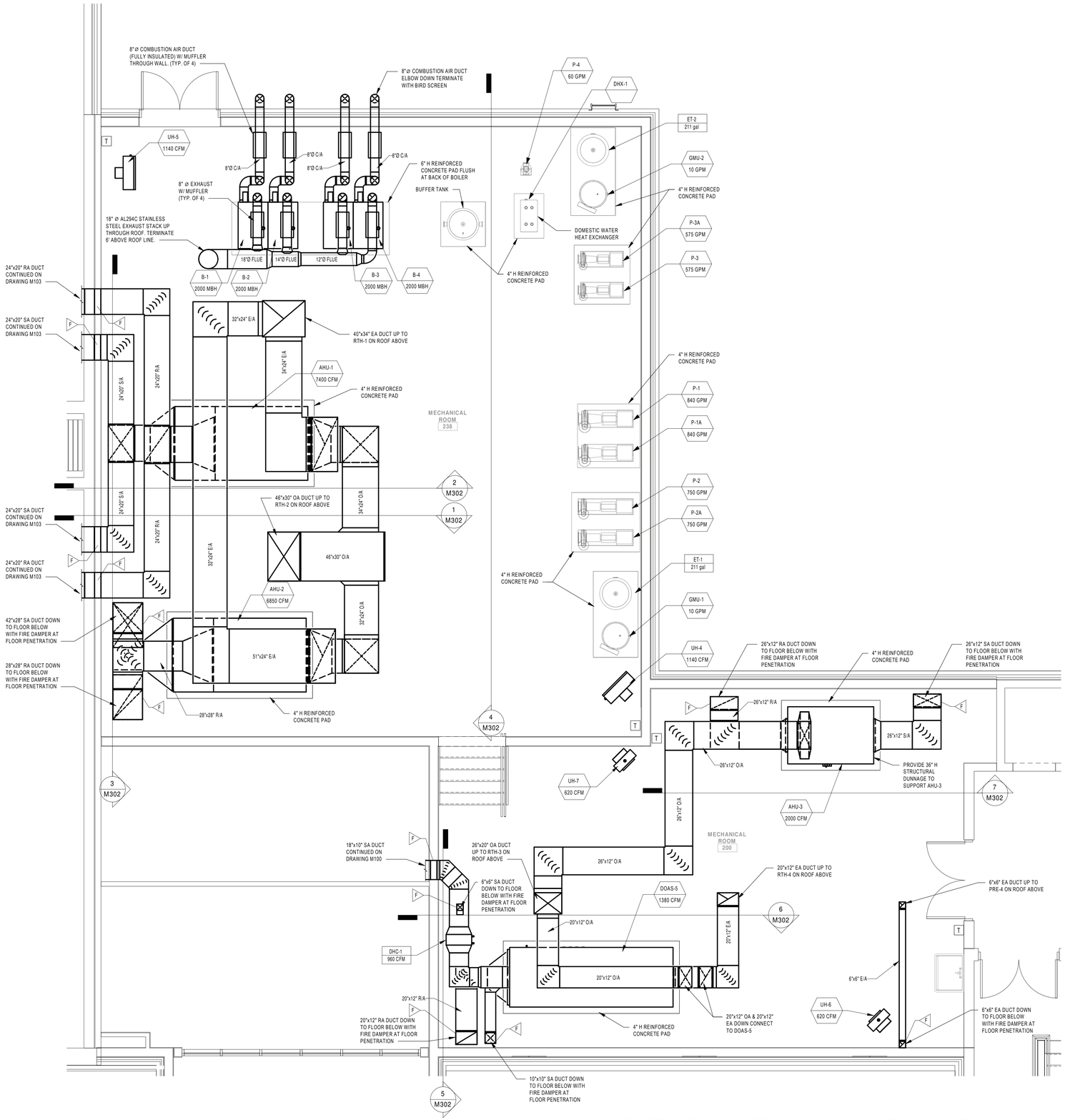
DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

PIPING PLAN - THIRD FLOOR AREA C

BUILDING	SHEET NUMBER
MS	M207 RE-BID

2/2/2022 4:34:06 PM



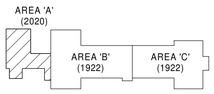
1 DUCTWORK PLAN - SECOND FLOOR MECHANICAL ROOM (DUCTWORK ONLY. PIPING NOT SHOWN FOR CLARITY)

SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

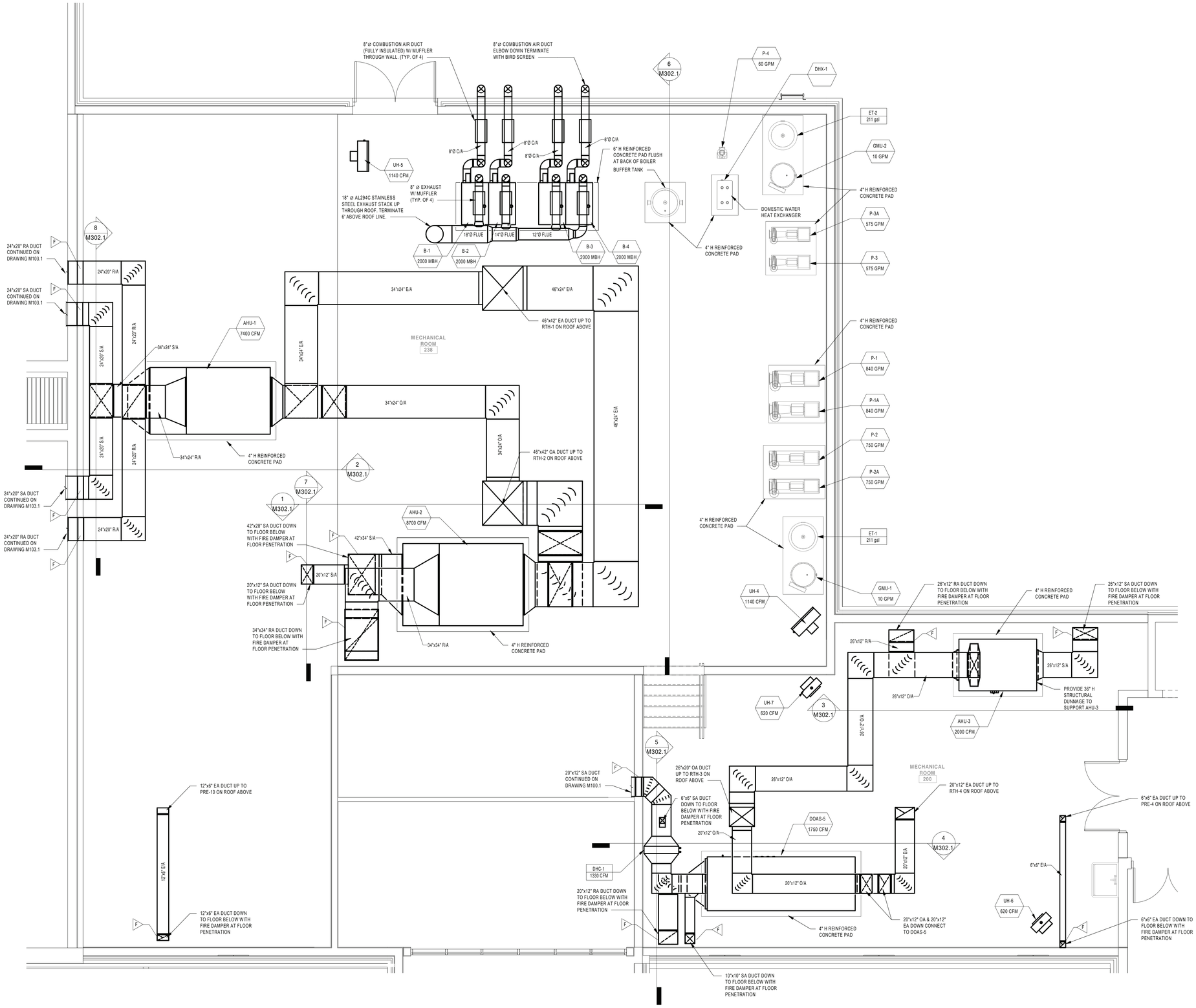
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

ENLARGED PLANS

BUILDING	SHEET NUMBER
MS	M300 RE-BID

2/7/2022 1:25:16 PM

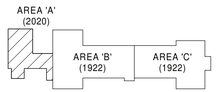


1 DUCTWORK PLAN - SECOND FLOOR MECHANICAL ROOM
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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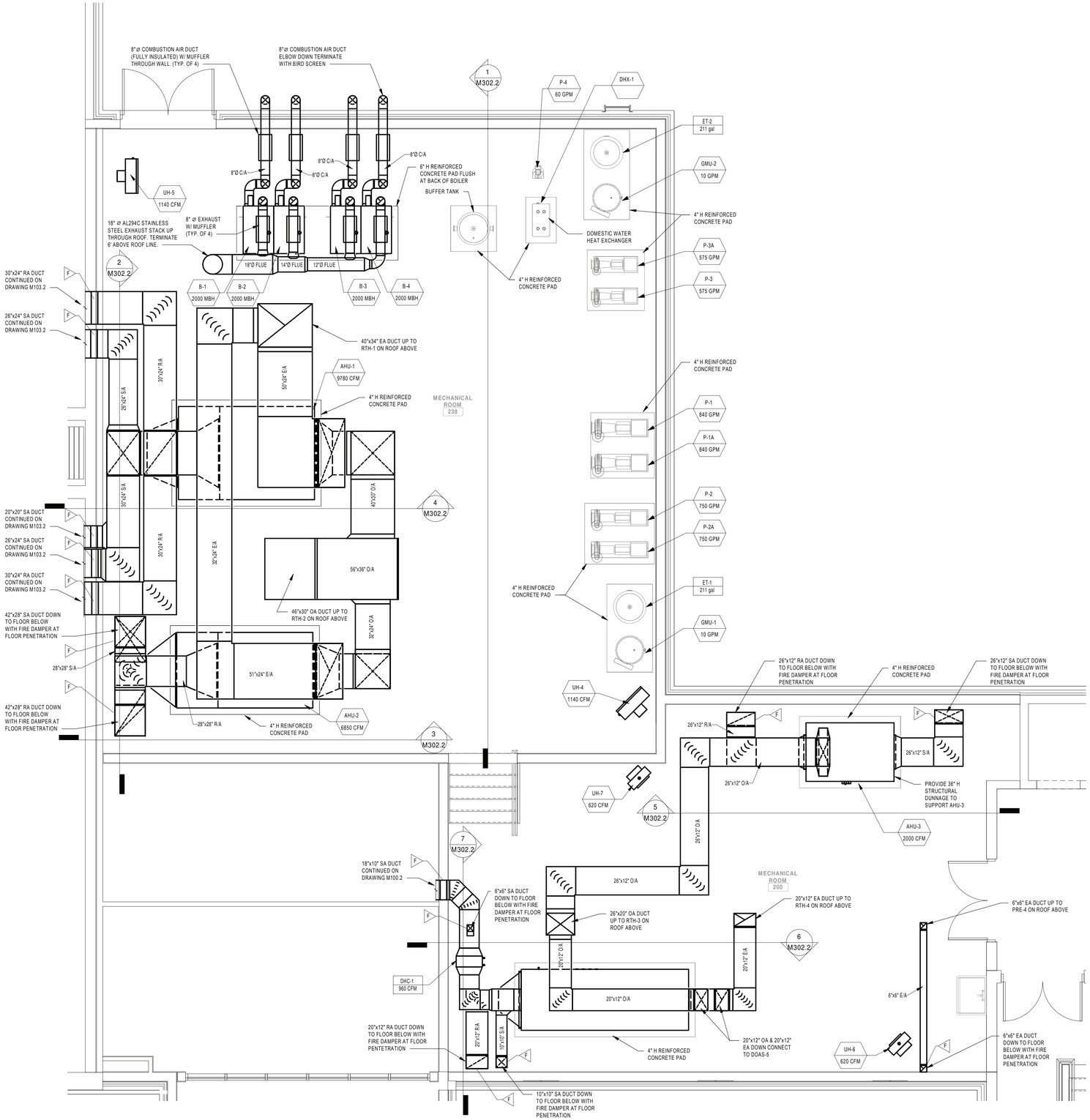
CHECKED BY: JLM	DATE: 02/04/2022

ENLARGED PLANS - ALTERNATE MC1

BUILDING	SHEET NUMBER
MS	M300.1 RE-BID

2/7/2022 1:27:57 PM

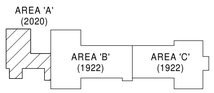


1 SECOND FLOOR MECHANICAL ROOM
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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Port Jervis - Orange County - New York

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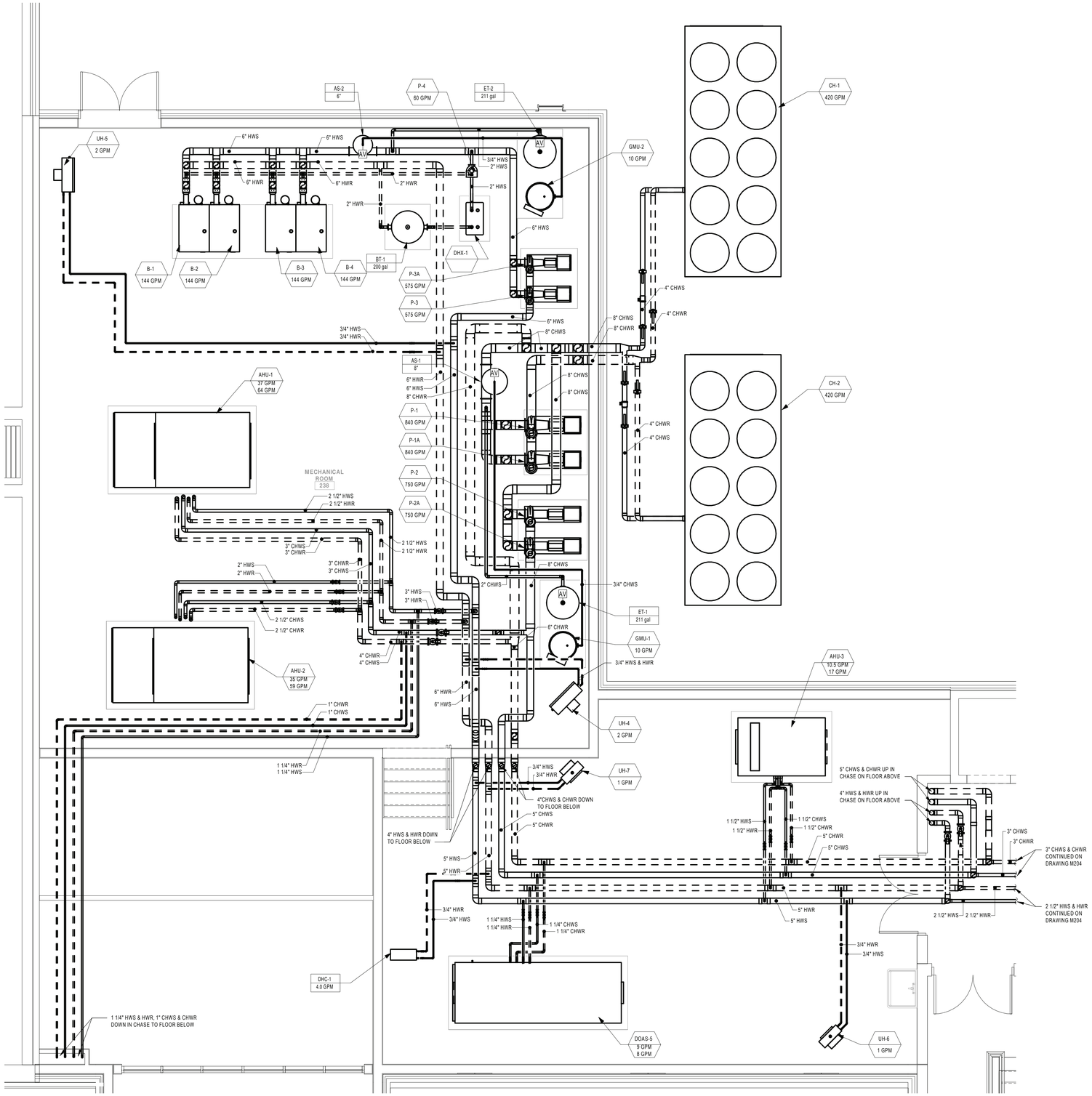
CHECKED BY: JLM	DATE: 02/04/2022

ENLARGED PLANS - ALTERNATE MC2

BUILDING	SHEET NUMBER
MS	M300.2 RE-BID

2/7/2022 1:25:27 PM



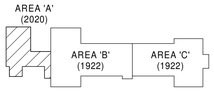
1 PIPING PLAN - SECOND FLOOR MECHANICAL ROOM

SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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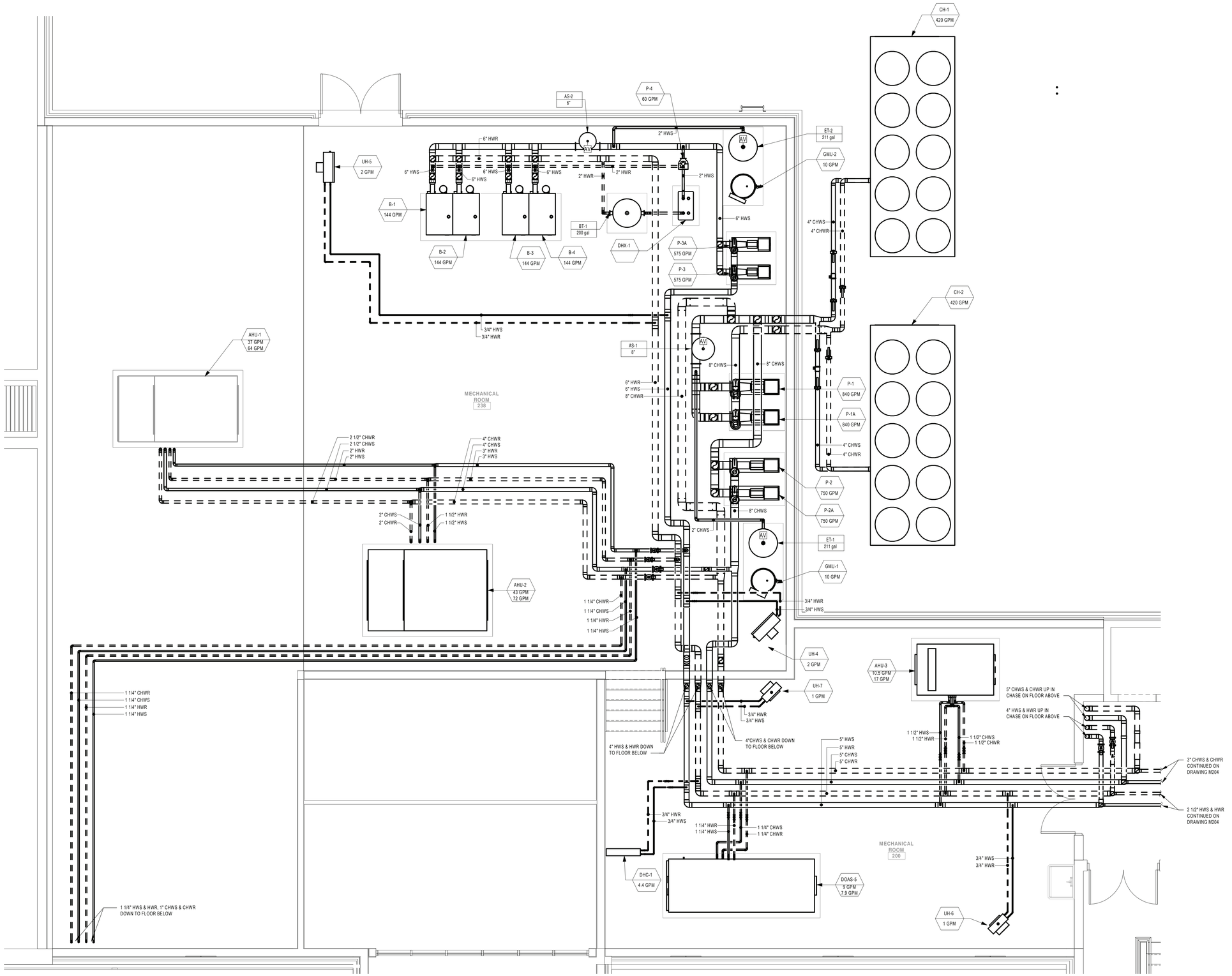
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

ENLARGED PLANS

BUILDING	SHEET NUMBER
MS	M301 RE-BID

2/7/2022 1:25:37 PM

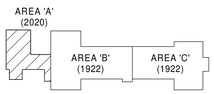


1 PIPING PLAN - SECOND FLOOR MECHANICAL ROOM
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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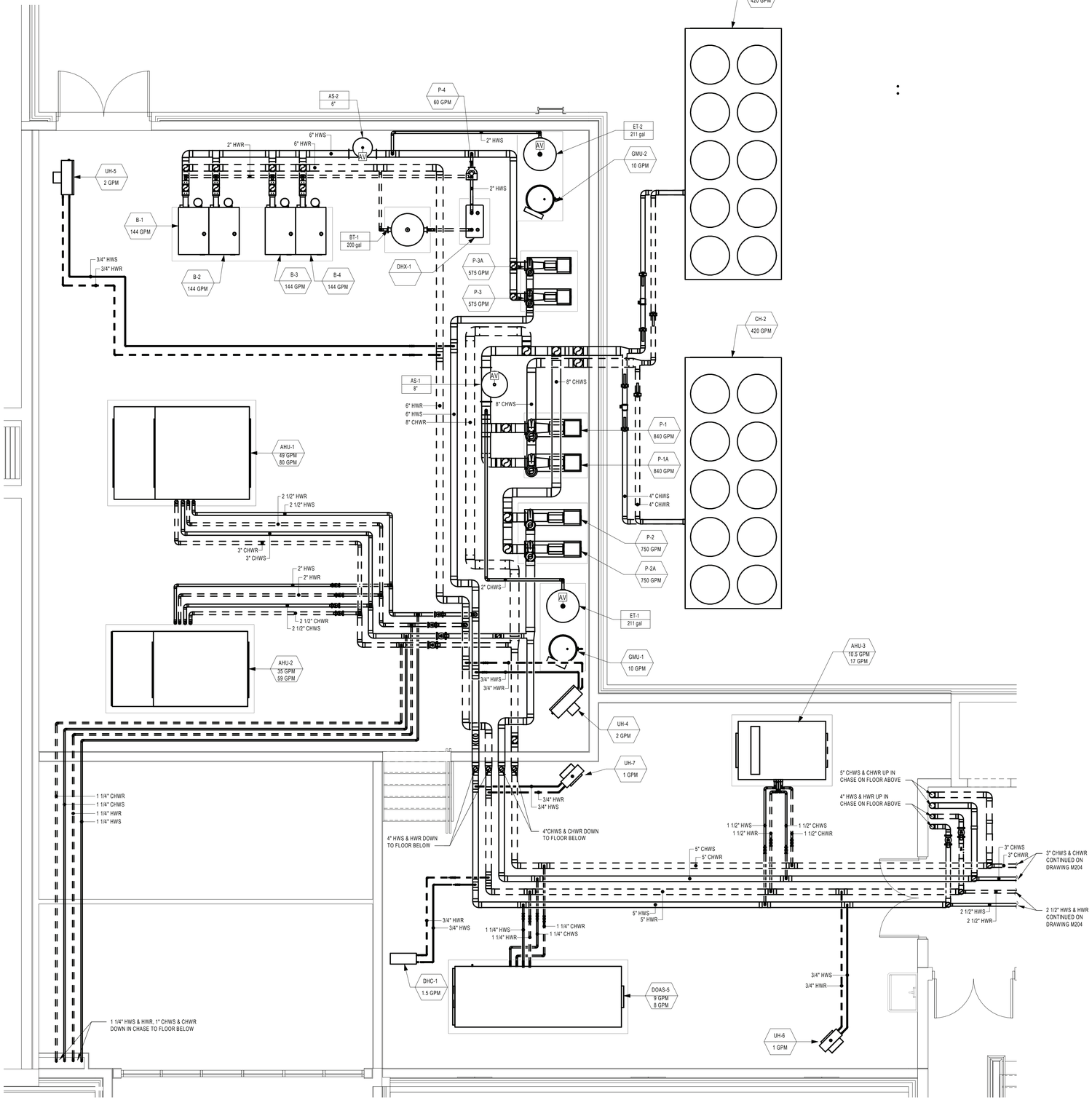
CHECKED BY: JLM	DATE: 02/04/2022

ENLARGED PLANS - ALTERNATE MC1

BUILDING	SHEET NUMBER
MS	M301.1 RE-BID

2/7/2022 1:25:47 PM

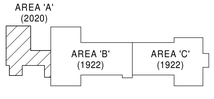


1 PIPING PLAN - SECOND FLOOR MECHANICAL ROOM
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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Port Jervis - Orange County - New York

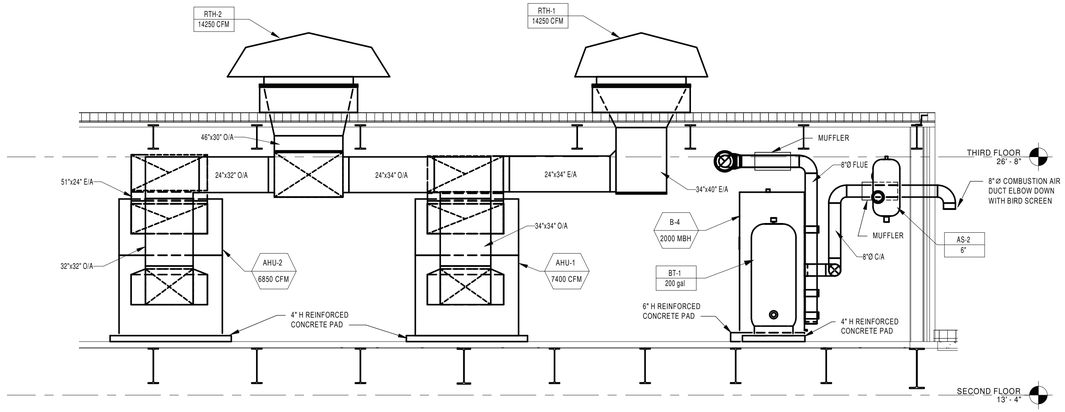
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

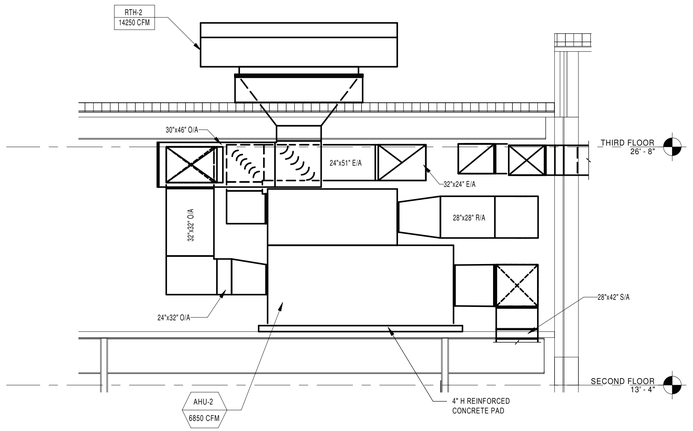
ENLARGED PLANS - ALTERNATE MC2

BUILDING	SHEET NUMBER
MS	M301.2 RE-BID

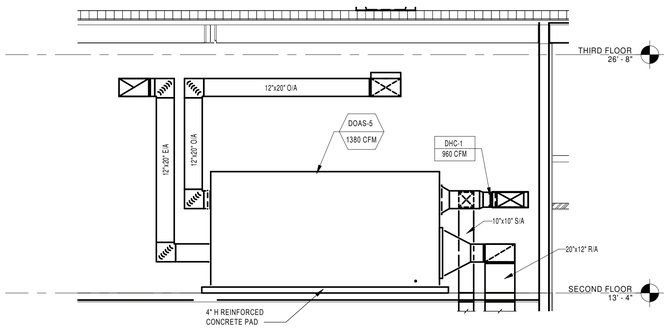
2/7/2022 1:25:57 PM



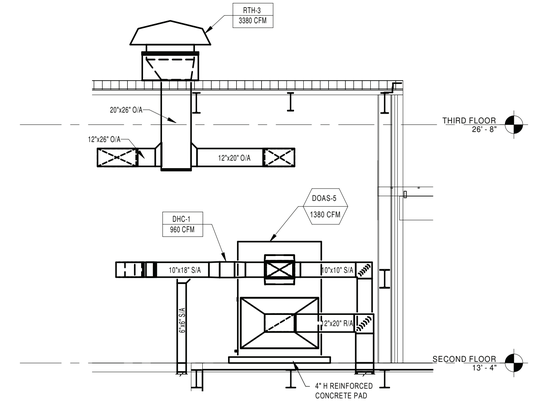
4 MECHANICAL ROOM 238 SECTION
SCALE: 1/4" = 1'-0"



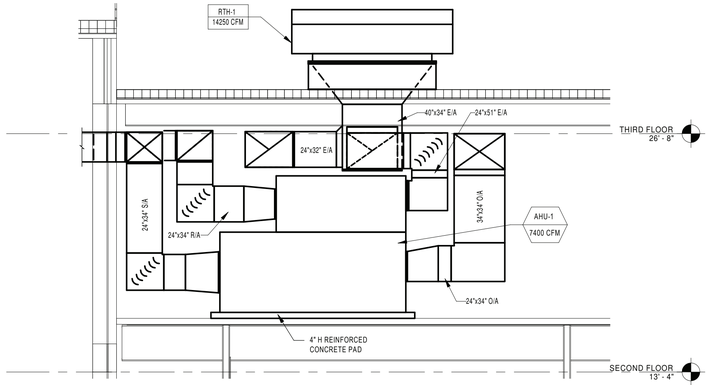
1 AHU-2 SECTION
SCALE: 1/4" = 1'-0"



6 DOAS-5 SECTION
SCALE: 1/4" = 1'-0"



5 DOAS-5 SECTION
SCALE: 1/4" = 1'-0"



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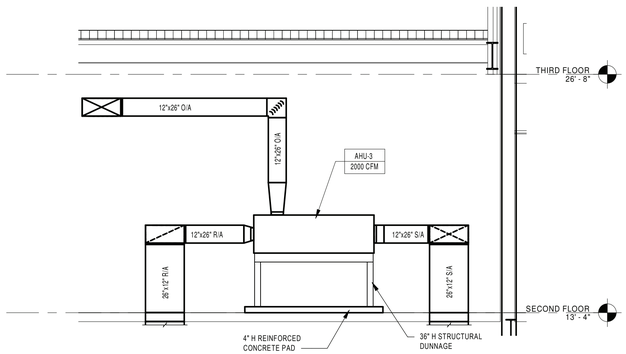
SCALE: 1/4" = 1'-0"



7 AHU-3 SECTION
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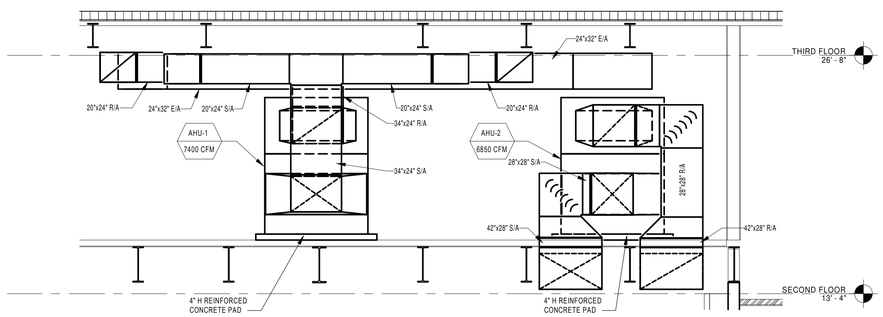
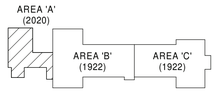


3 AHU-1 & AHU-2 SECTION
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

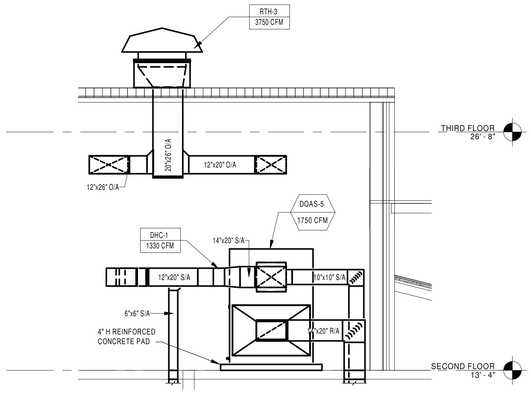
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

SECTIONS

BUILDING	SHEET NUMBER
MS	M302
	RE-BID

2/2/2022 4:35:02 PM



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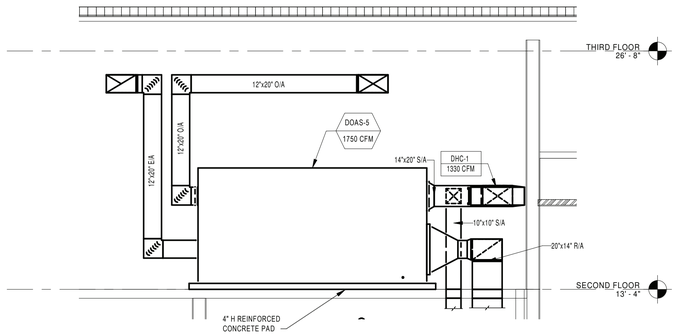

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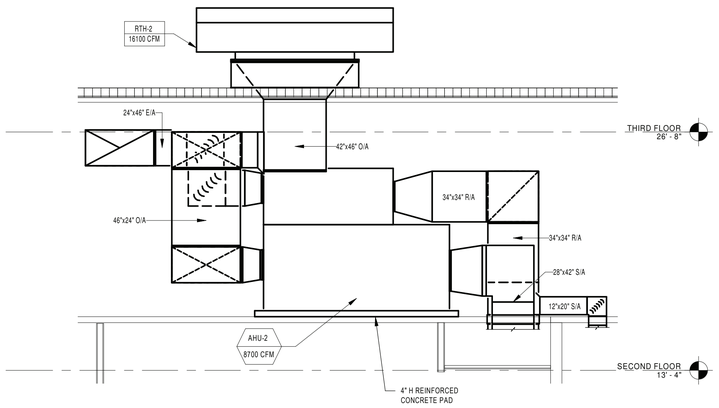

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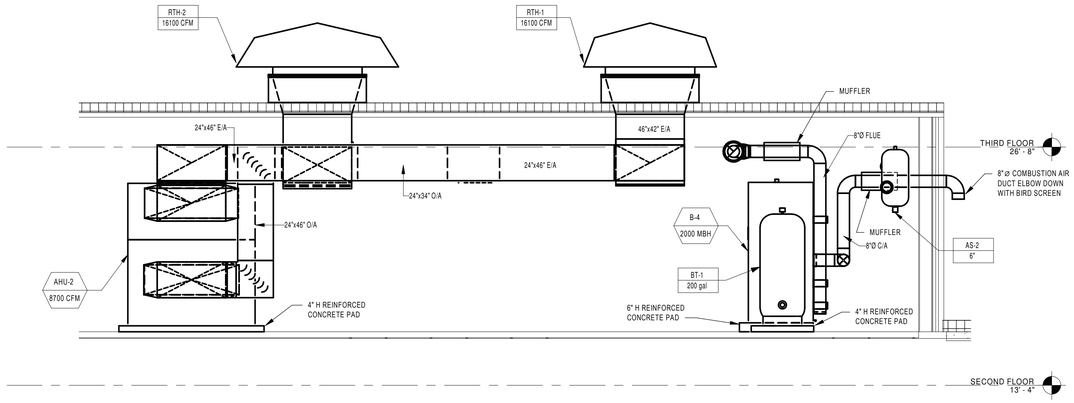

6 MECHANICAL ROOM 238 SECTION
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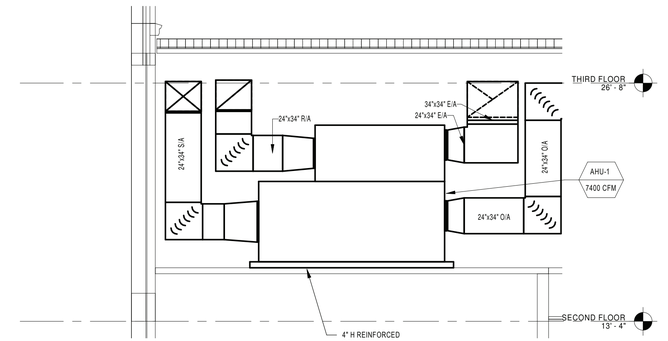

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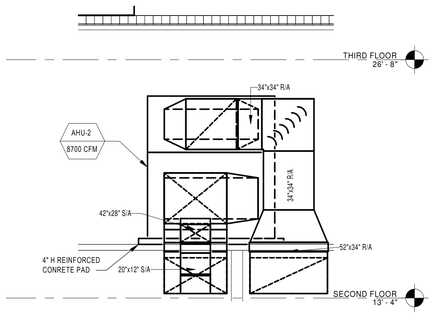

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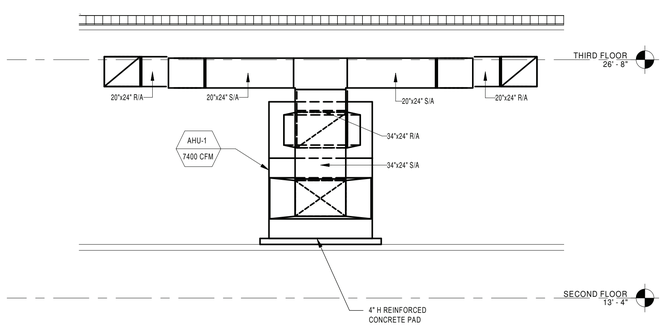

8 AHU-1 SECTION
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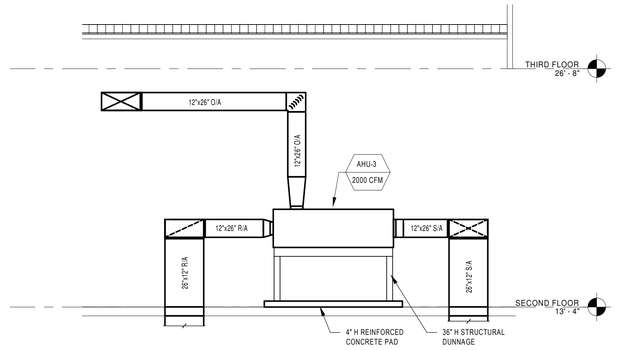
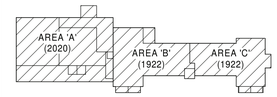


3 AHU-3 SECTION
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

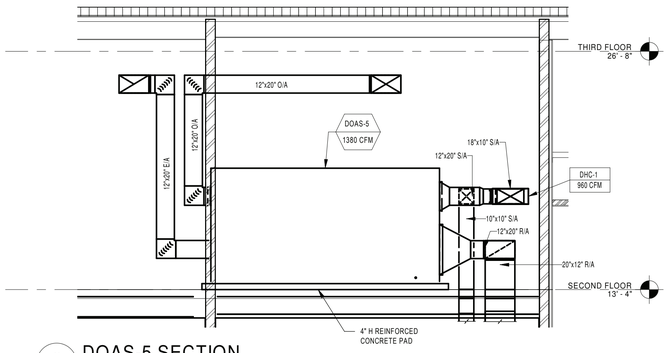
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

SECTIONS - ALTERNATE MC1

BUILDING	SHEET NUMBER
MS	M302.1 RE-BID

2/2/2022 4:35:14 PM



6 DOAS-5 SECTION
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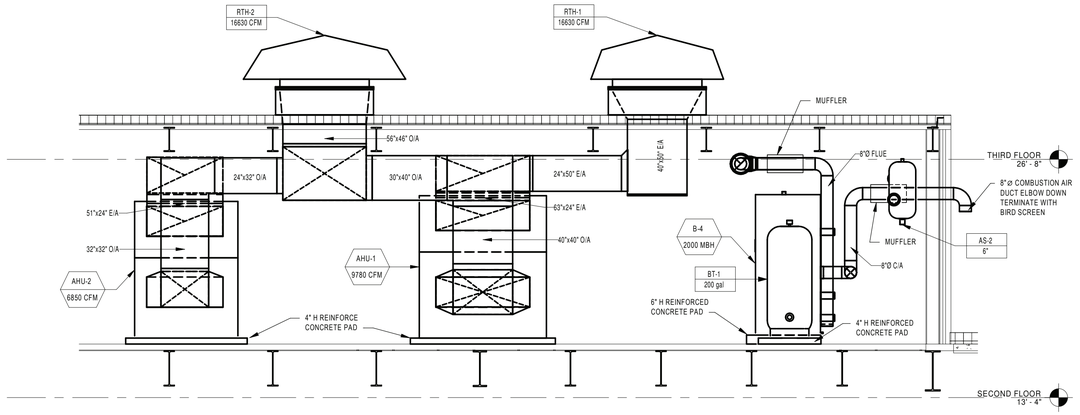
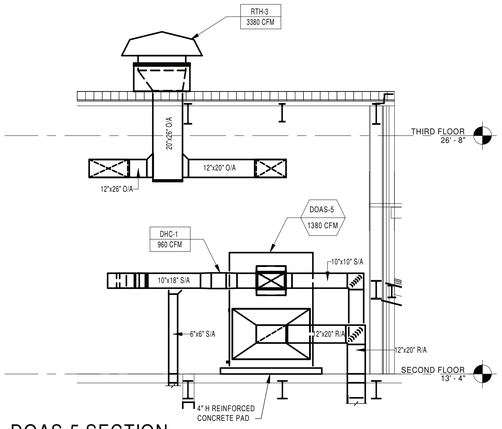
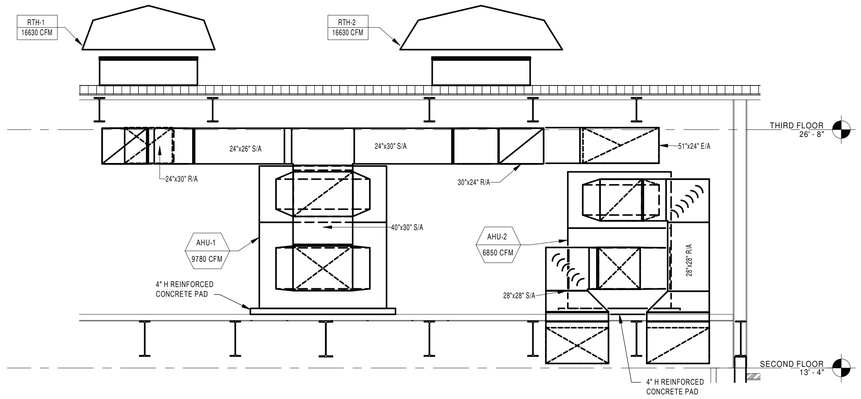


1 MECHANICAL ROOM 238 SECTION
SCALE: 1/4" = 1'-0"



7 DOAS-5 SECTION
SCALE: 1/4" = 1'-0"



2 AHU-1 & AHU-2 SECTION
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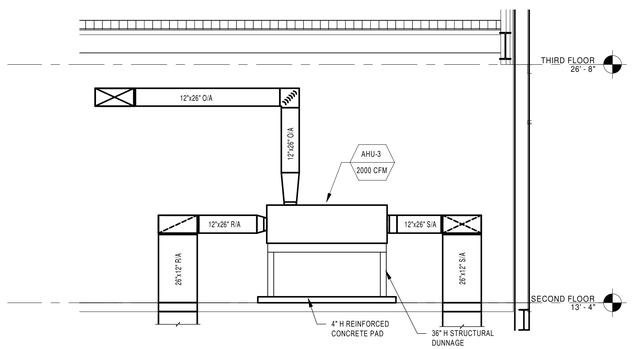

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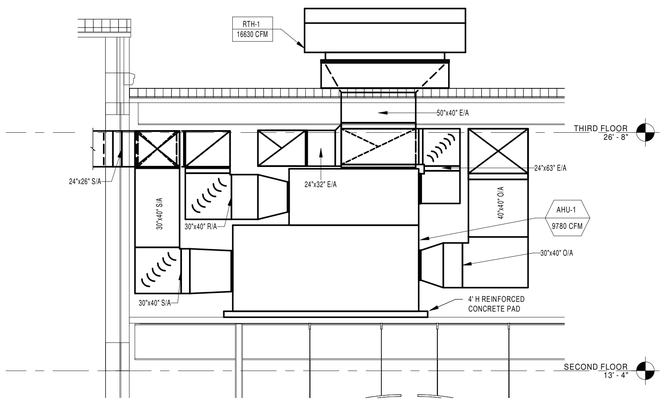

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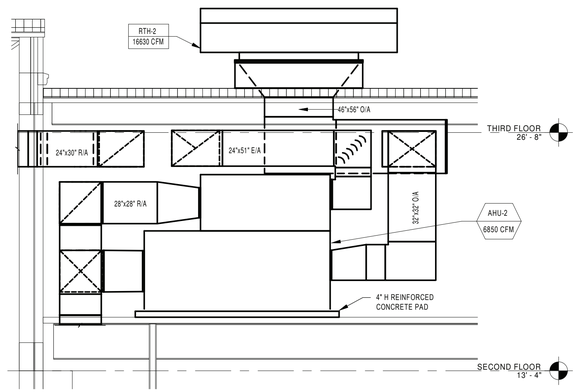
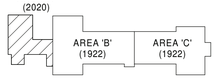


3 AHU-2 SECTION
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING MS000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

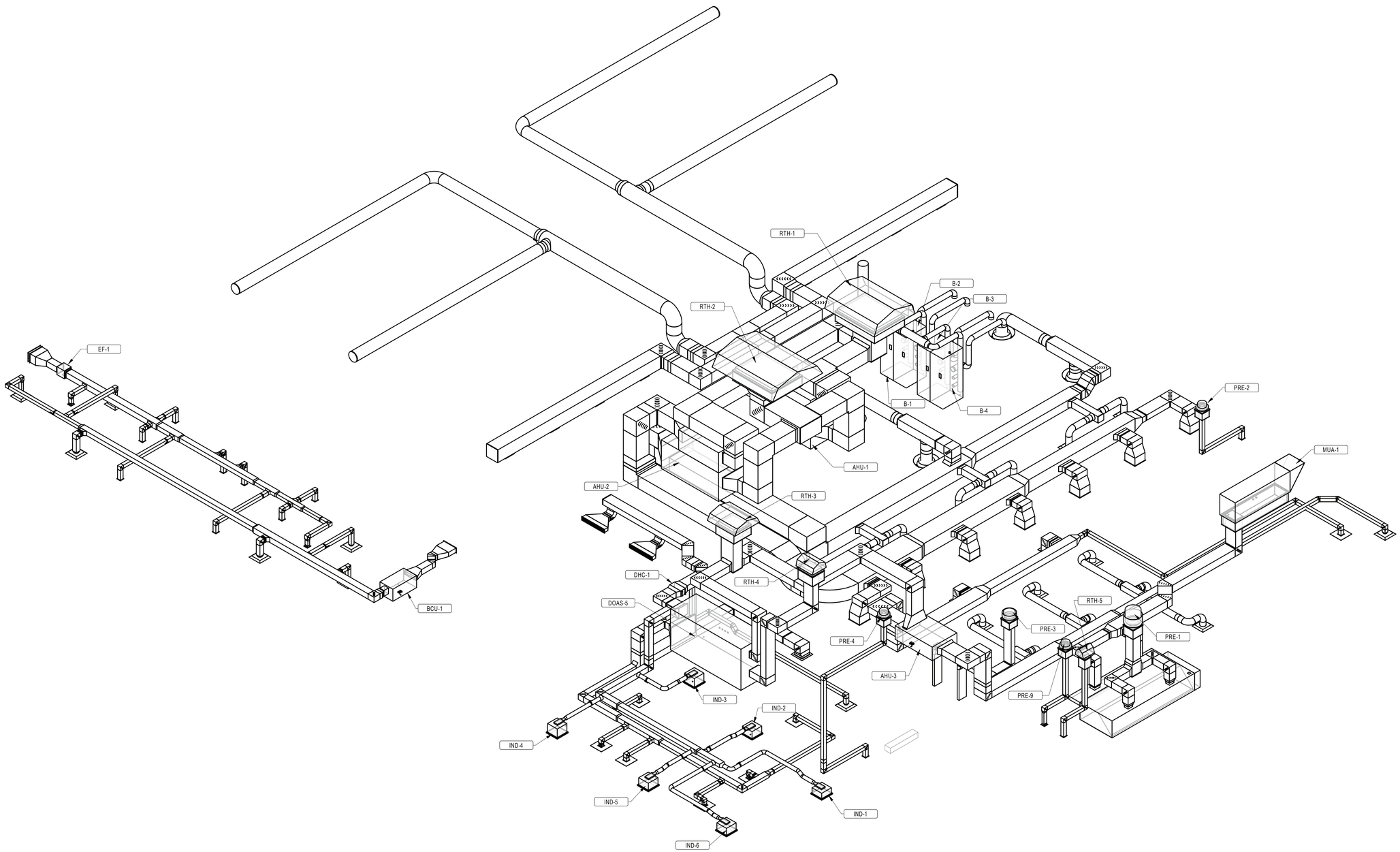
REV	DATE	DESCRIPTION

DRAWN BY	PROJECT NUMBER
AJZ	2019-011
CHECKED BY	DATE
JLM	02/04/2022

SECTIONS - ALTERNATE MC2

BUILDING	SHEET NUMBER
MS	M302.2
	RE-BID

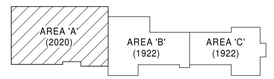
2/2/2022 4:35:24 PM



1 DUCTWORK ISOMETRIC - AREA A
SCALE: NOT TO SCALE

FOR REFERENCE ONLY REFER TO FLOOR PLANS
FOR ALL DUCT SIZES AND DAMPER LOCATIONS

KEY PLAN:



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Port Jervis - Orange County - New York

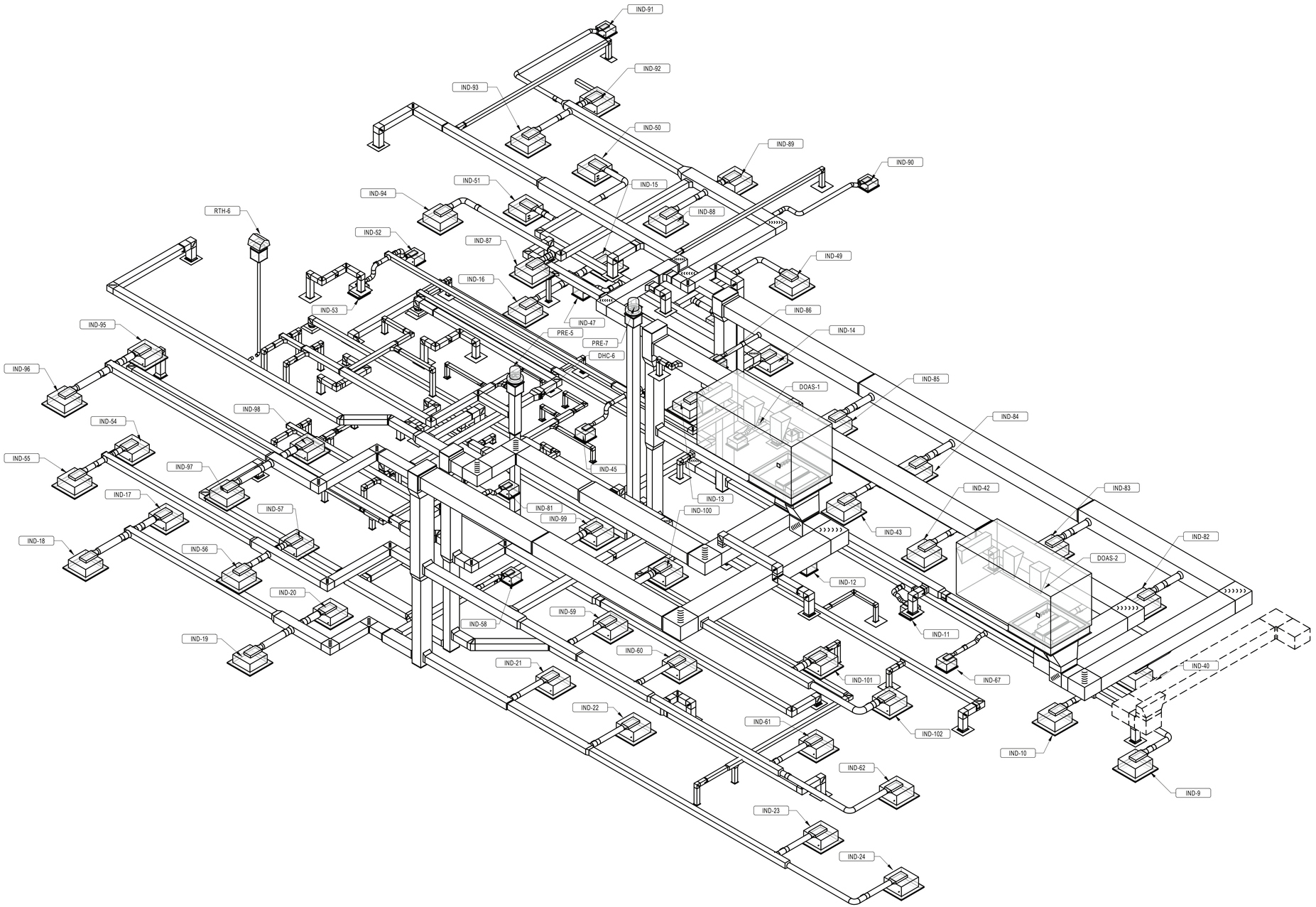
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK ISOMETRIC AREA A

BUILDING	SHEET NUMBER
MS	M303
	RE-BID

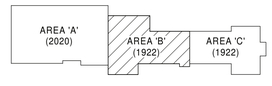
2/2/2022 4:35:29 PM



1 DUCTWORK ISOMETRIC - AREA B
SCALE: NOT TO SCALE

FOR REFERENCE ONLY REFER TO FLOOR PLANS
FOR ALL DUCT SIZES AND DAMPER LOCATIONS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

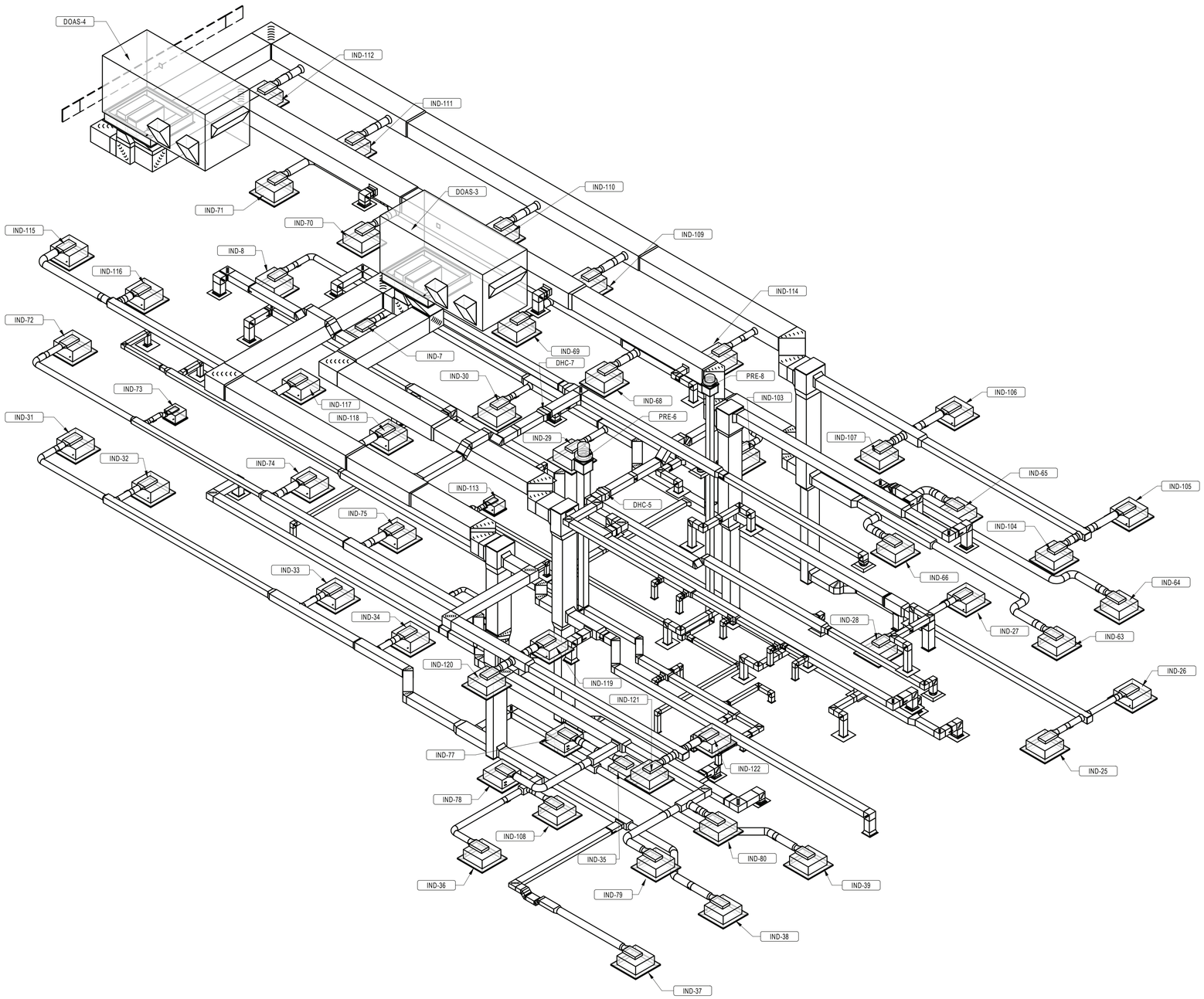
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

DUCTWORK ISOMETRIC AREA B

BUILDING	SHEET NUMBER
MS	M304 RE-BID

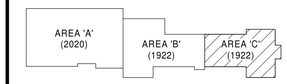
2/2/2022 4:35:35 PM



1 DUCTWORK ISOMETRIC - AREA C
SCALE: NOT TO SCALE

FOR REFERENCE ONLY REFER TO FLOOR PLANS
FOR ALL DUCT SIZES AND DAMPER LOCATIONS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

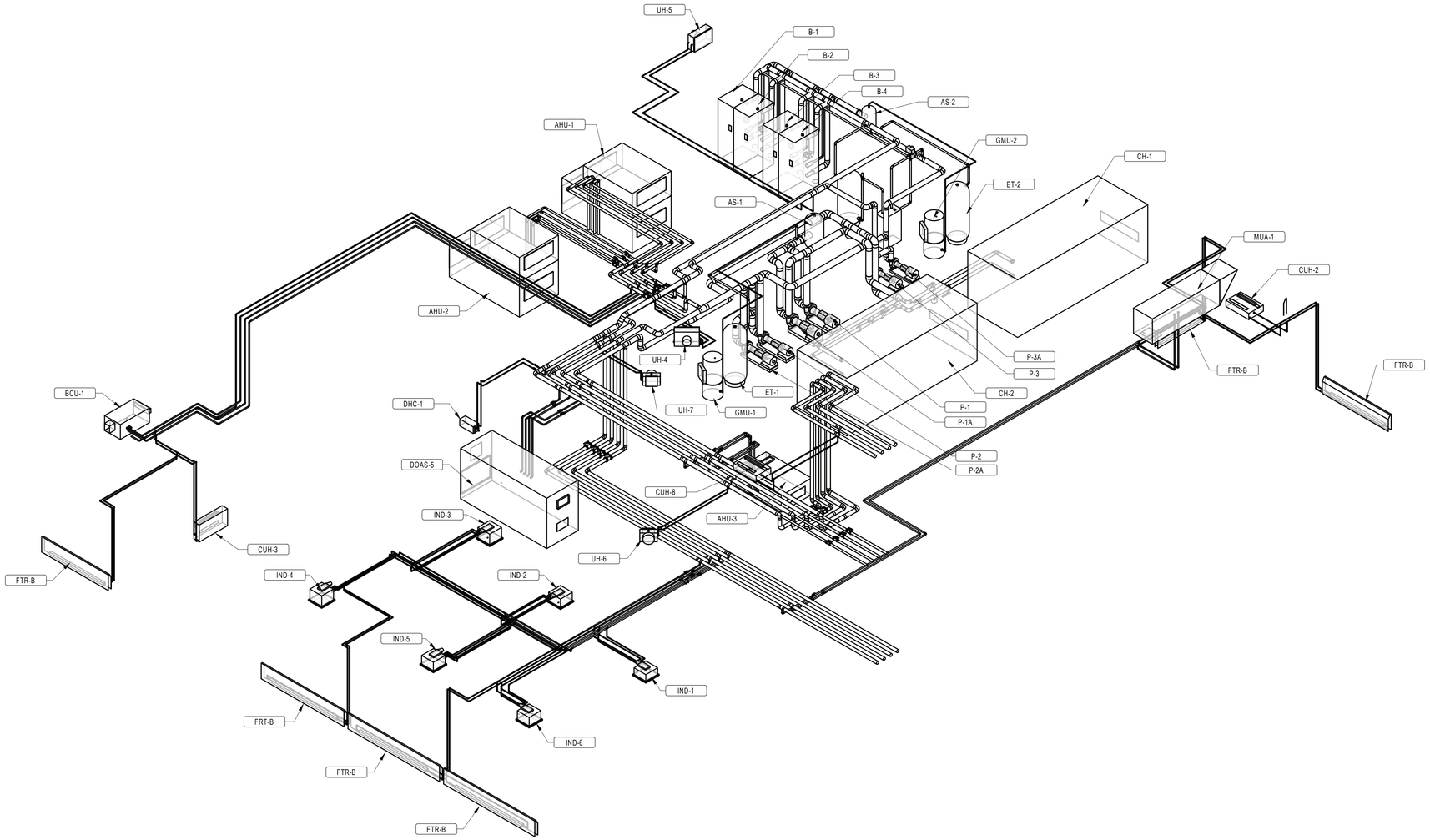
REV	DATE	DESCRIPTION

DRAWN BY Author	PROJECT NUMBER 2019-011
CHECKED BY Checker	DATE 02/04/2022

DUCTWORK ISOMETRIC AREA C

BUILDING	SHEET NUMBER
MS	M305 RE-BID

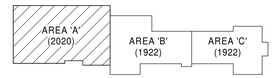
2/2/2022 4:35:40 PM



1 PIPING ISOMETRIC - AREA A
SCALE: NOT TO SCALE

FOR REFERENCE ONLY REFER TO FLOOR PLANS
FOR ALL PIPE SIZES AND VALVE LOCATIONS

KEY PLAN:



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Port Jervis - Orange County - New York

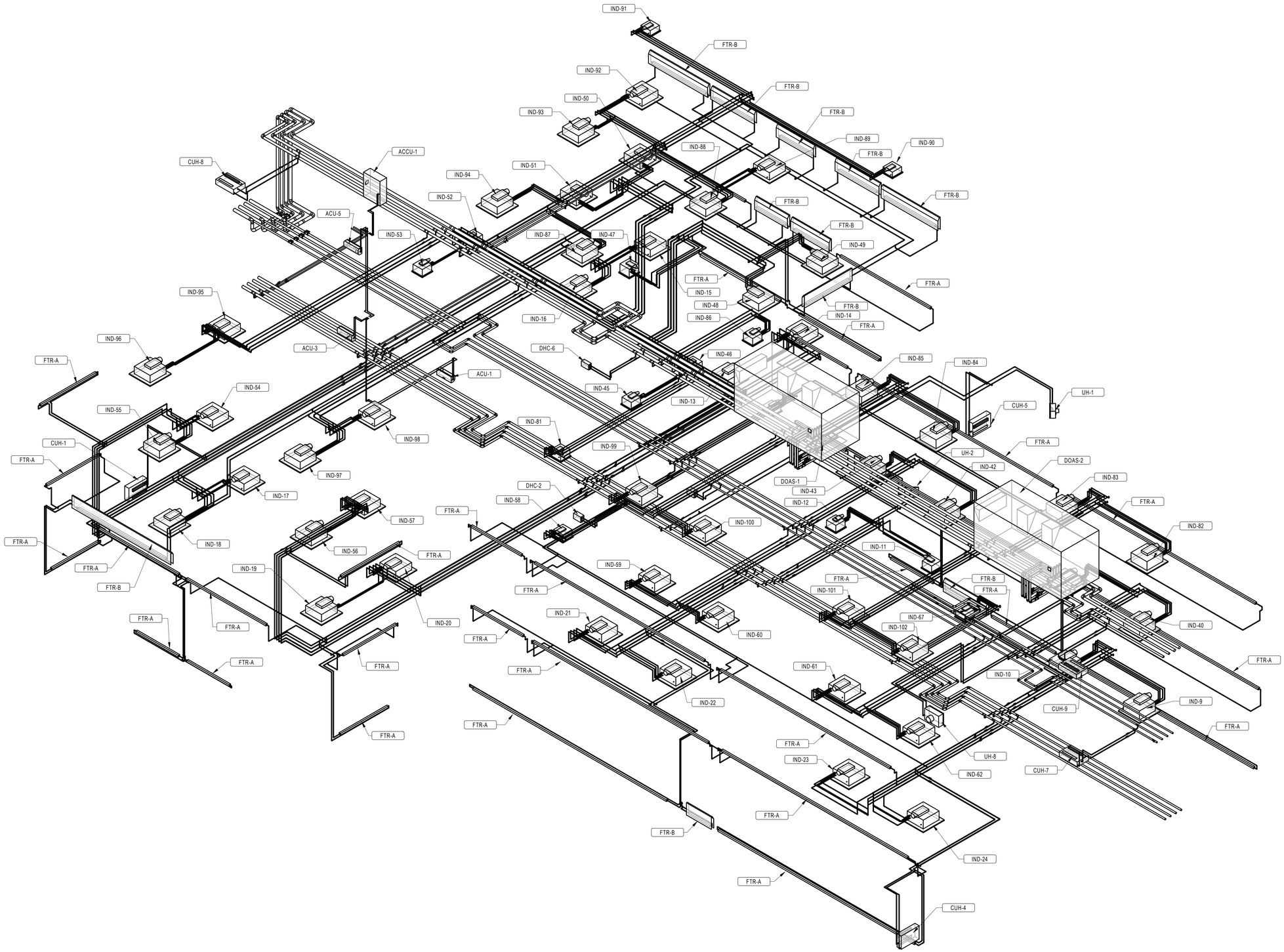
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

PIPING ISOMETRIC AREA A

BUILDING	SHEET NUMBER
MS	M306 RE-BID

2/2/2022 4:35:46 PM



1 PIPING ISOMETRIC - AREA B
SCALE: NOT TO SCALE

FOR REFERENCE ONLY REFER TO FLOOR PLANS
FOR ALL PIPE SIZES AND VALVE LOCATIONS

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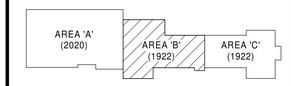

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PORT JERVIS CITY SCHOOL DISTRICT
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Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

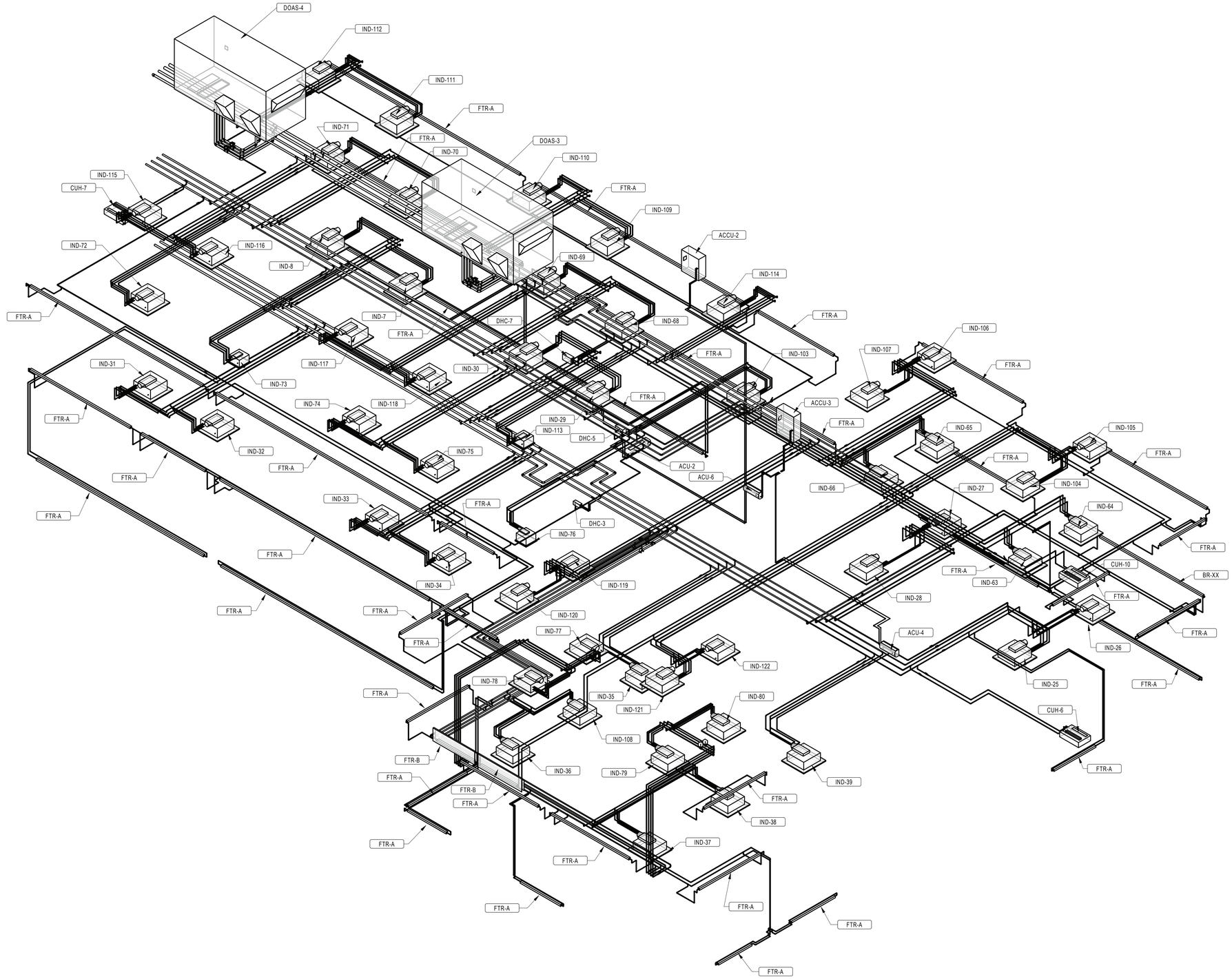
DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

PIPING ISOMETRIC AREA B

BUILDING: MS

SHEET NUMBER: M307
RE-BID

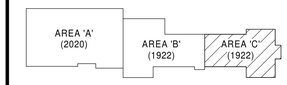
2/2/2022 4:35:59 PM



1 PIPING ISOMETRIC - AREA C
SCALE: NOT TO SCALE

FOR REFERENCE ONLY REFER TO FLOOR PLANS
FOR ALL PIPE SIZES AND VALVE LOCATIONS

KEY PLAN:



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PORT JERVIS CITY SCHOOL DISTRICT
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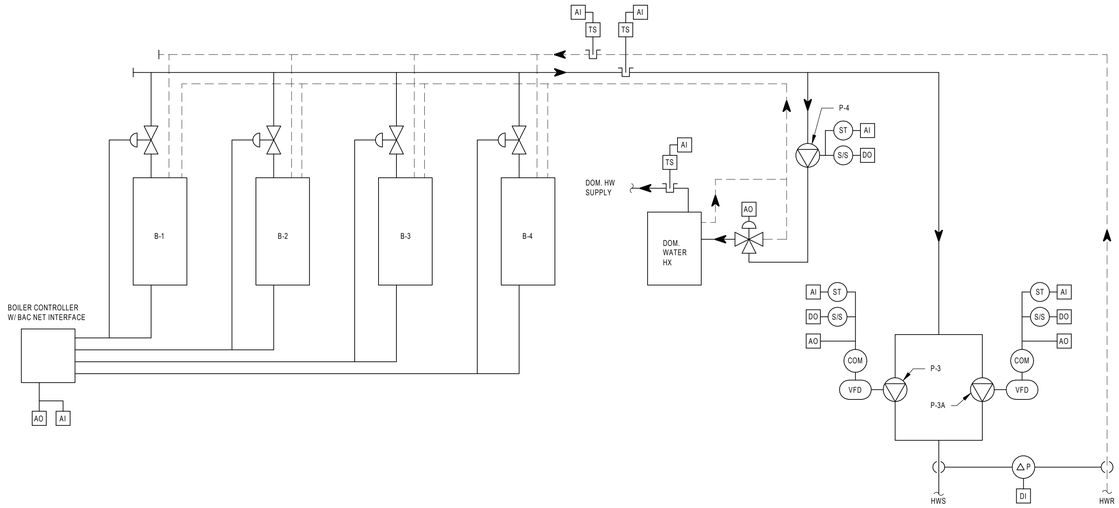
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

PIPING ISOMETRIC AREA C

BUILDING	SHEET NUMBER
MS	M308 RE-BID

2/2/2022 4:36:10 PM



1 HEATING BOILER PLANT
SCALE: NOT TO SCALE

BOILER PLANT - SEQUENCE OF OPERATIONS:

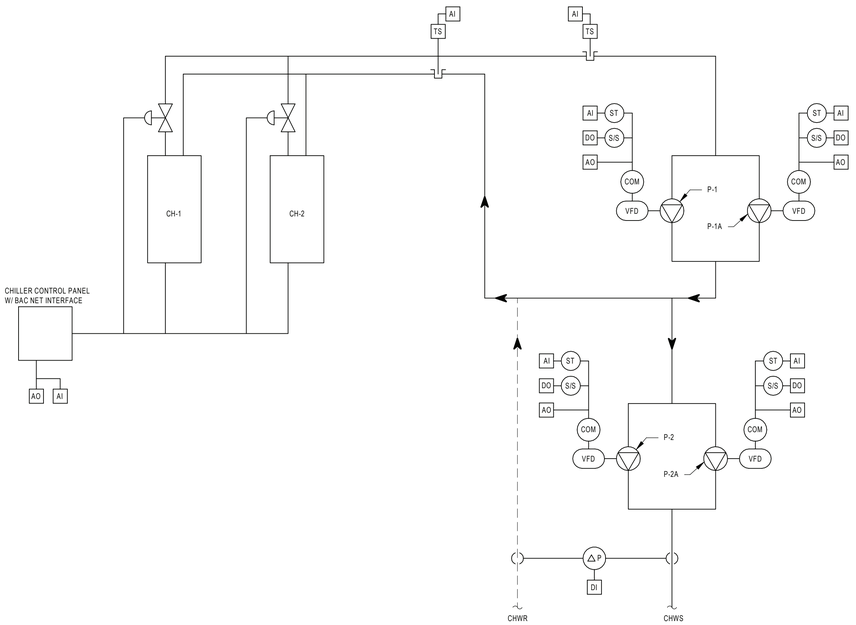
1. THE BOILER PLANT CONSIST OF FOUR BOILERS. THE BOILERS ARE EQUIPPED WITH FACTORY SUPPLIED BOILER CONTROLS WITH A BAC NET INTERFACE. BOILER CONTROLS WILL CONTROL THE BOILERS TO MAXIMIZE EFFICENCY, SEQUENCING OF BOILERS AND CONTROL VALVE AT EACH BOILER.
   A. THE BOILERS SHALL BE ENABLED BY THE BUILDING AUTOMATION SYSTEM (BAS) WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 60 DEG. F (ADJUSTABLE). WHEN ENABLED THE BAS SHALL SEND THE BOILER CONTROL PANEL A SIGNAL INDICATING THE HWS TEMPERATURE TO BE MAINTAINED. THE HOT WATER SUPPLY TEMPERATURE SHALL BE CALCULATED BASED UPON THE ADJUSTABLE RESET WATER SCHEDULE.

OUTSIDE AIR TEMP.	HWS TEMP.
0 DEG. F	130 DEG. F
60 DEG. F	90 DEG. F

   B. THE BOILERS SHALL BE ENABLED DURING THE UNOCCUPIED MODE WHEN THE OUTSIDE AIR IS AT THE OCCUPIED ENABLED SETPOINT MINUS 5 DEG. F (ADJUSTABLE). THE HOT WATER SUPPLY TEMPERATURE SHALL BE BASED ON THE SAME RESET WATER SCHEDULE ABOVE.
   C. DISABLE THE HEATING PLANT AT 5 DEG. F ABOVE THE OCCUPIED ENABLE SETPOINT.
   D. WHEN ENABLED, THE BOILER CONTROL PANEL SHALL STAGE THE BOILERS TO MAINTAIN HOT WATER TEMPERATURE.
   E. ALARMS: PROVIDE AN ALARM FOR EACH OF THE FOLLOWING:
      1. FAULT ALARM (OUTPUT FROM BOILER CONTROL PANEL)
      2. HOT WATER SUPPLY TEMPERATURE SETPOINT LOW/HIGH LIMITS
      3. HOT WATER RETURN TEMPERATURE SETPOINT LOW/HIGH LIMITS

2. VARIABLE SPEED CIRCULATING PUMPS (HOT WATER LOOP)
   A. THE HOT WATER SYSTEM CONSIST OF PRIMARY AND BACK-UP WATER PUMPS. THE SYSTEM SHALL OPERATE AS FOLLOWS:
      1. THE PUMPS SHALL OPERATE IN A LEAD/LAG ARRANGEMENT, SELECTION OF LEAD PUMP SHALL BE EVALUATED ON A WEEKLY BASIS. THE PUMP WITH THE LEAST RUNTIME SHALL BE LEAD PUMP.
      2. WHEN HOT WATER SYSTEM IS OPERATING, THE LEAD PUMP SHALL START, THE BAS SYSTEM SHALL UTILIZE CURRENT SENSING SWITCHES TO CONFIRM THE PUMPS ARE IN THE DESIRED STATE (IE ON OR OFF) AND GENERATE AN ALARM IF STATUS DEVIATES FROM THE BAS START/STOP CONTROL.
      3. SHOULD LEAD WATER PUMP GO INTO ALARM, THE LAG LOOP WATER PUMP SHALL BE STARTED.
      4. THE HOT WATER PUMPS SHALL INCORPERATE VARIABLE SPEED DRIVES TO ADJUST PUMP MOTOR SPEED AND ASSOCIATED VOLUMETRIC FLOW. A DIFFERENTIAL PRESSURE SENSOR SHALL BE INSTALLED IN THE PIPING SYSTEM 2/3 OF THE DISTANCE AWAY FROM THE PUMPS BASED UPON THE FARTHEST PIPED UNIT. THE PRESSURE SENSOR SHALL CONTROL THE PUMP DRIVE TO MAINTAIN AN ACCEPTABLE PRESSURE BASED UPON OVERALL BALANCING OF THE SYSTEM.
      5. EACH HOT WATER TERMINAL UNIT OPERATES TO MAINTAIN SPACE TEMPERATURE WITH AN ASSOCIATED TWO-WAY CONTROL VALVE. THIS VALVE OPENS AND CLOSES CAUSING THE PRESSURE IN THE HOT WATER LOOP TO CHANGE. THE VARIABLE SPEED DRIVE SHALL ADJUST TO COMPENSATE FOR THE FLOW REQUIRED BY AN ADJUSTABLE DIFFERENTIAL PRESSURE SETPOINT.

3. DOMESTIC HOT WATER HEATING
   A. ON A CALL FOR DOMESTIC WATER HEATING, THE BOILER PLANT SHALL BE ENABLED, AND THE HEATING HOT WATER PLANT SHALL PROVIDE A MINIMUM OF 125 DEG. F BOILER WATER.
   B. DOMESTIC BOILER WATER PUPM (P-4) SHALL RUN ON A CALL FOR DOMESTIC WATER HEATING.
   C. THREE-WAY VALVE AT THE DOMESTIC WATER HEAT EXCHANGER SHALL MODULATE TO PROVIDE A DOMESTIC HOT WATER TEMPERATURE OF 120 DEG. F (ADJUSTABLE) AS SENSED AT THE DOMESTIC WATER SUPPLY OFF FROM THE HEAT EXCHANGER.
   D. SAFETIES:
      1. PROVIDE AN ALARM UPON FAILURE OF DOMESTIC BOILER WATER PUMP.
      2. DOMESTIC WATER SUPPLY TEMPERATURE SETPOINT LOW/HIGH LIMITS.



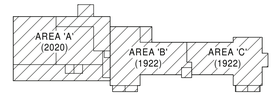
2 CHILLED WATER PLANT
SCALE: NOT TO SCALE

CHILLER PLANT - SEQUENCE OF OPERATIONS:

1. THE CHILLER PLANT CONSISTS OF TWO AIR COOLED CHILLERS. THE CHILLERS ARE EQUIPPED WITH FACTORY SUPPLIED CHILLER CONTROLS WITH A BAC NET INTERFACE. CHILLER CONTROLS WILL CONTROL CHILLERS TO MAXIMIZE EFFICENCY, SEQUENCE OF CHILLERS AND CONTROL VALVE AT EACH CHILLER.
   A. THE CHILLERS SHALL BE ENABLED BY THE BUILDING AUTOMATION SYSTEM (BAS) ABOVE 60 DEG. F (ADJUSTABLE). WHEN ENABLED THE CHILLERS SHALL RUN TO MAINTAIN A CHILLED WATER SUPPLY TEMPERATURE OF 45 DEG. F (ADJUSTABLE).
   B. THE CHILLERS SHALL BE ENABLED DURING THE UNOCCUPIED MODE WHEN THE OUTSIDE AIR TEMPERATURE IS AT THE OCCUPIED SETPOINT PLUS 5 DEG. F (ADJUSTABLE). THE CHILLED WATER SETPOINT SHALL BE BASED UPON THE SAME AS THE OCCUPIED SETPOINT NOTED ABOVE.
   C. DISABLE THE CHILLER PLANT AT 5 DEG. F BELOW THE OCCUPIED ENABLED SETPOINT.
   D. WHEN ENABLED, THE CHILLER PLANT SHALL STAGE ON THEIR COMPRESSORS AND ON THE CHILLERS TO MAINTAIN CHILLED WATER TEMPERATURE SETPOINT.
   E. ALARMS: PROVIDE AN ALARM FOR EACH OF THE FOLLOWING:
      1. FAULT ALARMS (ALL OUTPUT ALARMS AND DIAGNOSTICS FOR THE CHILLER CONTROL PANELS VIA BAC NET INTERFACE)
      2. CHILLED WATER SUPPLY TEMPERATURE SETPOINT LOW/HIGH LIMITS.
      3. CHILLED WATER RETURN TEMPERATURE SETPOINT LOW/HIGH LIMITS.

2. VARIABLE SPEED CIRCULATING PUMPS (CHILLED WATER LOOP)
   A. THE CHILLED WATER LOOP CONSISTS OF A PRIMARY LOOP (P-1, P-1A) AND A SECONDARY LOOP (P-2, P-2A). THE PRIMARY LOOP SHALL MAINTAIN THE WATER FLOW THROUGH THE CHILLER EVAPORATORS. THE SECONDARY LOOP WILL PROVIDE CHILLED WATER FLOW THROUGH THE ENTIRE BUILDING. EACH SET OF PUMPS SHALL OPERATE AS FOLLOWS:
      1. THE PUMPS SHALL OPERATE IN A LEAD/LAG ARRANGEMENT, SELECTION OF THE LEAD PUMP SHALL EVALUATED ON A WEEKLY BASIS. THE PUMP WITH THE LEAST RUN TIME SHALL BE THE LEAD PUMP.
      2. WHEN THE CHILLED WATER SYSTEM IS OPERATING, THE LEAD PUMP SHALL START, THE BAS SYSTEM SHALL UTILIZE CURRENT SENSING SWITCHES TO CONFIRM THE PUMPS ARE IN THE DESIRED STATE (IE ON OR OFF) AND GENERATE AN ALARM IF STATUS DEVIATES FROM THE BAS START/STOP CONTROL.
      3. SHOULD THE LEAD WATER PUMP GO INTO ALARM, THE LAG PUMP SHALL BE STARTED.
      4. THE CHILLED WATER PUMPS (BOTH PRIMARY AND SECONDARY) SHALL INCORPORATE VARIABLE SPEED DRIVES TO ADJUST PUMP MOTOR SPEED AND ASSOCIATED VOLUMETRIC FLOW. A DIFFERENTIAL PRESSURE SENSOR SHALL BE INSTALLED IN THE PIPING SYSTEM 2/3 OF THE DISTANCE AWAY FROM THE PUMPS BASED UPON THE FARTHEST PIPED UNIT. THE PRESSURE SENSOR SHALL CONTROL THE PUMP DRIVE TO MAINTAIN AN ACCEPTABLE PRESSURE BASED UPON THE OVERALL BALANCING OF THE SYSTEM.

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

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BCA ARCHITECTS ENGINEERS

Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

CONTROL SCHEMATICS & SEQUENCE OF OPERATIONS

BUILDING	SHEET NUMBER
MS	M400 RE-BID

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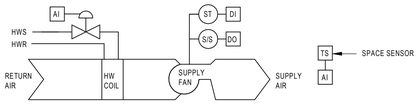
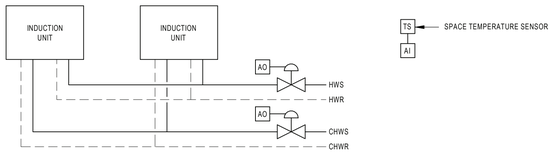


CABINET UNIT HEATER - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:
   A. ON DROP IN SPACE TEMPERATURE BELOW THE OCCUPIED HEATING SETPOINT, CYCLE THE FAN ON AND OPEN CONTROL VALVE TO MAINTAIN SPACE OCCUPIED SETPOINT. FAN SHALL HAVE DELAYED SHUT OFF AFTER VALVE CLOSES. USE 5 DEG. F (ADJUSTABLE) DEADBAND TO MINIMIZE SHORT CYCLING.
2. UNOCCUPIED MODE:
   A. ON DROP IN SPACE TEMPERATURE BELOW UNOCCUPIED HEATING SETPOINT, CYCLE THE FAN ON AND OPEN CONTROL VALVE TO MAINTAIN SPACE OCCUPIED SETPOINT, FAN SHALL HAVE A DELAYED SHUT OFF AFTER VALVE CLOSES. USE 5 DEG. F (ADJUSTABLE) DEADBAND TO MINIMIZE SHORT CYCLING.
3. SAFETIES:
   A. PROVIDE CURRENT SENSOR TO SENSE THE STATUS OF THE FANS. WHEN FAN MOTOR AMP DRAW IS OUT OF NORMAL RANGE, GENERATE AN ALARM.
   B. PROVIDE AN ALARM IF THE SPACE TEMPERATURE FALLS BELOW THE SPACE TEMPERATURE SETPOINT.

6 CABINET UNIT HEATER (CUH-1,2,3,4,5,6,7,8,9,10)

SCALE: NOT TO SCALE

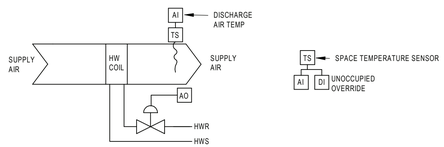


INDUCTION AIR UNIT - SEQUENCE OF OPERATION

1. INDUCTION AIR UNITS CONSIST OF A HOT WATER COIL AND A CHILLED WATER COIL.
2. OCCUPIED MODE:
   A. WHEN THE SPACE TEMPERATURE IS BELOW THE HEATING SETPOINT (ADJUSTABLE), THE TWO-WAY CONTROL VALVE ON THE HOT WATER LOOP SHALL OPEN AND MODULATE TO MAINTAIN THE OCCUPIED HEATING SETPOINT.
   B. WHEN THE SPACE TEMPERATURE RISES ABOVE THE COOLING SETPOINT (ADJUSTABLE), THE TWO-WAY CONTROL VALVE ON THE CHILLED WATER LOOP SHALL OPEN AND MODULATE TO MAINTAIN THE OCCUPIED COOLING SETPOINT.
3. UNOCCUPIED MODE:
   A. FIRST STAGE OF UNOCCUPIED HEATING IS WITH THE ASSOCIATED FIN TUBE RADIATION.
   B. IF FIN TUBE RADIATION CANNOT MAINTAIN THE UNOCCUPIED HEATING SETPOINT (ADJUSTABLE). OPEN THE HEATING TWO-WAY CONTROL VALVE AT THE INDUCTION AIR UNIT TO MAINTAIN THE UNOCCUPIED SETPOINT.
   C. IF THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED ECONOMIZER COOLING SETPOINT, ALLOW ECONOMIZER COOLING WITH THE HEATING AND COOLING VALVES CLOSED.
4. SAFETIES:
   A. IF THE SPACE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY 10 DEG. F, THE HEATING CONTROL VALVE SHALL BE OPEN 100% AND AN ALARM SHALL BE GENERATED.

7 INDUCTION AIR UNIT (IND-1-122)

SCALE: NOT TO SCALE

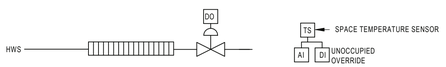


DUCT MOUNTED HEATING COIL - SEQUENCE OF OPERATIONS:

1. HEATING MODE:
   A. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE HEATING SETPOINT AND THE RELATED FAN SYSTEM HAS BEEN ENABLED, THE 2-WAY CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE HEATING SETPOINT SUBJECT TO DISCHARGE HIGH LIMIT OF 110 DEG. F (ADJUSTABLE) AND DISCHARGE LOW LIMIT OF 70 DEG. F (ADJUSTABLE).
2. SAFETIES:
   A. PROVIDE AN ALARM IN CASE OF DISCHARGE AIR TEMPERATURE LOW/HIGH LIMITS.

8 DUCT MOUNTED HEATING COIL (DHC-1,2,3,4,5,6,7)

SCALE: NOT TO SCALE

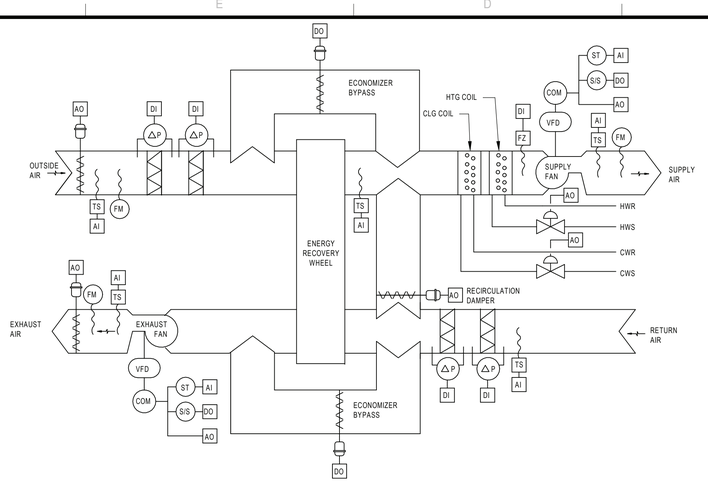


FIN TUBE RADIATION - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:
   A. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE OCCUPIED HEATING SETPOINT, THE CONTROL VALVE SHALL MODULATE OPEN TO MAINTAIN OCCUPIED SPACE SETPOINT.
2. UNOCCUPIED MODE:
   A. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE UNOCCUPIED HEATING SETPOINT, THE CONTROL VALVE SHALL MODULATE OPEN TO MAINTAIN UNOCCUPIED SPACE SETPOINT.
3. WARM-UP MODE:
   A. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE OCCUPIED HEATING SETPOINT, THE CONTROL VALVE SHALL MODULATE OPEN TO MAINTAIN OCCUPIED SPACE SETPOINT.
4. SAFETIES:
   A. IF THE SPACE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY 10 DEG. F (ADJUSTABLE), THE CONTROL VALVE SHALL OPEN 100%. AN ALARM SHALL BE ACTIVATED.

9 FIN TUBE RADIATION

SCALE: NOT TO SCALE

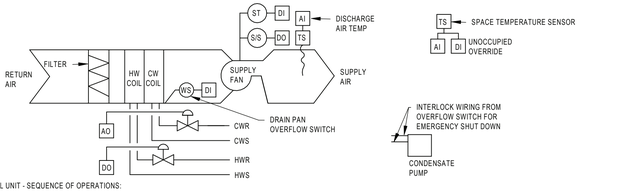


DOAS UNIT - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:
   A. SUPPLY AND EXHAUST FANS SHALL RUN CONTINUOUSLY, THE EXHAUST DAMPER AND OUTSIDE AIR DAMPER SHALL BE FULLY OPEN 100%.
   B. HEAT RECOVERY WHEEL SHALL OPERATE.
      a. UNIT MANUFACTURER SHALL CONTROL THE HEAT RECOVERY WHEEL TO ELIMINATE FROSTAS REQUIRED BY OPERATING CONDITIONS.
   C. WHEN THE DISCHARGE AIR TEMPERATURE IS ABOVE OR BELOW THE HEATING OR COOLING SETPOINT, MODULATE EITHER THE HOT WATER CONTROL VALVE OR THE CHILLED WATER CONTROL VALVE TO MAINTAIN A HEATING MODE SETPOINT OF 70 DEG. F (ADJUSTABLE) OR A COOLING MODE SETPOINT OF 75 DEG. F (ADJUSTABLE).
   D. DURING THE COOLING MODE, AND WHEN THE RETURN AIR ENTHALPY IS HIGHER THAN THE OUTDOOR ENTHALPY, THE UNIT DAMPERS SHALL OPEN TO BY-PASS THE WHEEL AND THE WHEEL SHALL BE OFF WITH THE HEATING CONTROL VALVE FULLY CLOSED.
2. UNOCCUPIED MODE:
   A. THE SUPPLY AND EXHAUST FANS SHALL BE OFF.
   B. THE OUTSIDE AIR AND EXHAUST AIR DAMPER SHALL BE FULLY CLOSED.
   C. IF THE FIN TUBE RADIATION CANNOT MAINTAIN THE UNOCCUPIED SPACE TEMPERATURE SETPOINT OF 68 DEG. F (ADJUSTABLE), OPERATE THE SUPPLY FAN WITH RECIRCULATION DAMPER FULLY OPEN 100% TO ALLOW ASSOCIATED INDUCTION AIR UNITS TO PROVIDE ADDITIONAL UNOCCUPIED HEAT.
3. WARM-UP MODE:
   A. THE UNIT SHALL START PER OPTIMUM PROGRAM.
   B. THE OUTSIDE AIR, EXHAUST AND ECONOMIZER DAMPERS ARE TO BE CLOSED WITH RECIRCULATION DAMPER OPEN 100%.
   C. THE HEATING CONTROL VALVE SHALL MODULATE TO MAINTAIN OCCUPIDE DISCHARGE AIR SETPOINT.
4. SAFETIES / OTHER CONTROL FUNCTIONS:
   A. PROVIDE AN ALARM IN CASE OF DISCHARGE AIR TEMPERATURE LOW/HIGH LIMITS (60 DEG. F/80 DEG. F).
   B. PROVIDE AN ALARM IN CASE OF SUPPLY OR EXHAUST FAN FAILURE.
   C. A SEPARATE LOW LIMIT FREEZE STAT WITH AUTOMATIC RESET SHALL BE INSTALLED WITH SENSING ELEMENT SERPENTINED ACROSS THE FACE OF THE COIL; WHENEVER FREEZE-UP CONDITIONS ARISE (36 DEG. F ADJUSTABLE) THE SUPPLY AND EXHAUST FANS SHALL STOP, THE OUTSIDE AND EXHASUT AIR DAMPERS SHALL CLOSE 100%, THE HEATING CONTROL VALVE SHALL OPEN 100% AND AN ALARM SHALL BE ACTIVATED.
   D. A FILTER PRESSURE SWITCH SHALL BE PROVIDED FOR EACH FILTER, AND AN ALARM SHALL BE GENERATED WHEN THE PRESSURE DROP ACROSS THE FILTER EXCEEDS THE PREDETERMINED SETPOINT.

3 DEDICATED OUTDOOR AIR SYSTEM (DOAS-1,2,3,4,5)

SCALE: NOT TO SCALE

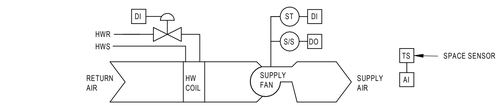


BLOWER COIL UNIT - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:
   A. VENTILATION AND MAKE-UP AIR IS PROVIDED FROM GYMNASIUM SPACE.
   B. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE HEATING SETPOINT, CYCLE THE FAN ON AND THE 2-WAY CONTROL VALVE FULL OPEN TO MAINTAIN SPACE HEATING SETPOINT, SUBJECT TO DISCHARGE HIGH LIMIT OF 110 DEG. F (ADJUSTABLE) AND DISCHARGE LOW LIMIT OF 70 DEG. F (ADJUSTABLE).
   C. WHEN THE SPACE TEMPERATURE IS ABOVE THE COOLING SETPOINT, CYCLE THE FAN ON AND THE RESPECTIVE COOLING VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE WITH THE HEATING VALVE FULLY CLOSED. USE 5 DEG. F (ADJUSTABLE) DEADBAND BETWEEN HEATING AND COOLING SETPOINTS.
2. UNOCCUPIED MODE:
   A. ON DROP IN SPACE TEMPERATURE BELOW THE UNOCCUPIED HEATING SETPOINT, CYCLE THE FAN ON AND HEATING COIL CONTROL VALVE FULL OPEN AS REQUIRED TO MAINTAIN REDUCED SPACE TEMPERATURE. USE 5 DEG. F (ADJUSTABLE) DEADBAND AS REQUIRED TO MINIMIZE SHORT CYCLING.
   B. A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO OCCUPIED MODE FOR 1 HOUR (ADJUSTABLE). AT EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.
3. WARM-UP MODE:
   A. THE UNIT SHALL START PER AN OPTIMUM START PROGRAM.
4. SAFETIES:
   A. WHERE DRAIN PAN OVERFLOW SWITCH IS PROVIDED, INTERLOCK WIRING SHALL DISABLE THE UNIT, WHEN THE OVERFLOW SWITCH IS TRIPPED. AN ALARM SHALL BE ACTIVATED.
   B. PROVIDE ALARM IN CASE OF DISCHARGE AIR TEMPERATURE LOW/HIGH LIMITS.

4 BLOWER COIL UNIT (BCU-1)

SCALE: NOT TO SCALE

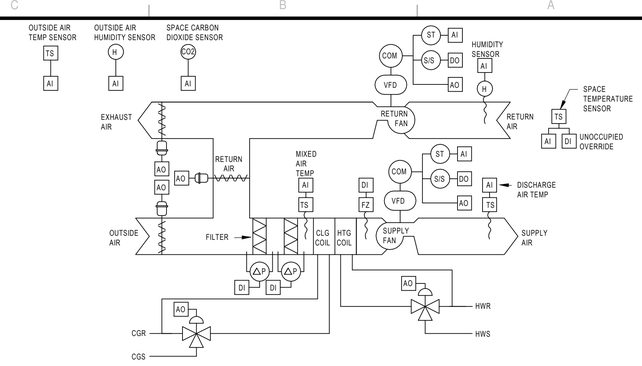


UNIT HEATER - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:
   A. ON DROP IN SPACE TEMPERATURE BELOW OCCUPIED HEATING SETPOINT, CYCLE THE FAN ON AND OPEN CONTROL VALVE FULL TO MAINTAIN SPACE OCCUPIED SETPOINT, FAN SHALL HAVE DELAYED SHUT OFF AFTER VALVE CLOSES. USE 5 DEG. F (ADJUSTABLE) DEADBAND TO MINIMIZE SHORT CYCLING.
2. UNOCCUPIED MODE:
   A. ON DROP IN SPACE TEMPERATURE BELOW UNOCCUPIED HEATING SETPOINT, CYCLE THE FAN ON AND OPEN CONTROL VALVE FULL TO MAINTAIN SPACE OCCUPIED SETPOINT, FAN SHALL HAVE A DELAYED SHUT OFF AFTER VALVE CLOSES. USE 5 DEG. F (ADJUSTABLE) DEADBAND TO MINIMIZE SHORT CYCLING.
3. SAFETIES:
   A. PROVIDE CURRENT SENSOR TO SENSE THE STATUS OF THE FANS. WHEN FAN MOTOR AMP DRAW IS OUT OF NORMAL RANGE, GENERATE AN ALARM AT THE OWS.

5 UNIT HEATER (UH-1,2,3,4,5,6,7,8)

SCALE: NOT TO SCALE

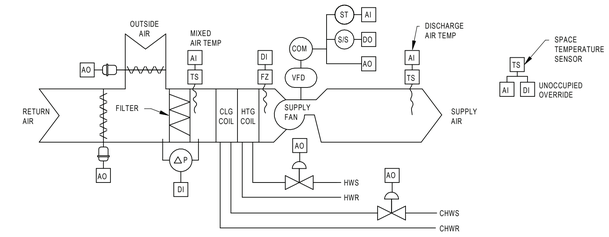


AIR HANDLING UNIT WITH RETURN FAN - SEQUENCE OF OPERATIONS TO INCLUDE DEMAND CONTROL VENTILATION (AHU-1 & AHU-2)

1. OCCUPIED MODE:
   A. SUPPLY AND RETURN FANS SHALL RUN CONTINUOUSLY AT THE FREQUENCIES DETERMINED BY THE BALANCING CONTRACTOR.
   B. THE OUTSIDE, RETURN AND EXHAUST AIR DAMPERS SHALL OPEN TO THE POSITION TO MAINTAIN THE MINIMUM OUTSIDE AIR QUANTITY INDICATED IN AIR HANDLING UNIT SCHEDULE. MINIMUM LEVEL BASED OFF THE CO_2 LEVEL DETECTORS- SEE "CARBON DIOXIDE DEMAND CONTROL VENTILATION" BELOW.
   C. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE HEATING SETPOINT, THE HEATING CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE HEATING SETPOINT SUBJECT TO DISCHARGE HIGH LIMIT OF 110 DEG. F (ADJUSTABLE) AND DISCHARGE LOW LIMIT OF 70 DEG. F (ADJUSTABLE).
   D. WHEN THE SPACE TEMPERATURE RISES 3 DEG. F (ADJUSTABLE) ABOVE THE SPACE HEATING SETPOINT, AND THE OUTSIDE AIR ENTHALPY IS LOWER THAN THE SPACE ENTHALPY, THE OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL MODULATE OPEN AND THE RETURN DAMPER SHALL MODULATE CLOSED TO MAINTAIN THE SPACE SETPOINT. THIS SHALL BE DONE SUBJECT TO LOW LIMIT OF 55 DEG. F (ADJUSTABLE) AND WITH THE HEATING VALVE FULLY CLOSED.
   E. WHEN THE SPACE TEMPERATURE IS ABOVE THE COOLING SETPOINT (ADJUSTABLE), AND THE OUTSIDE AIR CANNOT COOL THE SPACE, THE COOLING CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE WITH THE HEATING VALVE FULLY CLOSED. USE 5 DEG. F (ADJUSTABLE) DEADBAND BETWEEN HEATING AND COOLING SETPOINTS.
2. UNOCCUPIED MODE:
   A. THE SUPPLY AND RETURN FANS SHALL BE OFF.
   B. THE OUTSIDE AIR DAMPER AND EXHAUST AIR DAMPER SHALL BE FULLY CLOSED, AND THE RETURN AIR DAMPER SHALL BE FULLY OPEN.
   C. WHERE SPACE HAS FINNED TUBE RADIATION, RADIATION SHALL PROVIDE FIRST STAGE UNOCCUPIED HEATING.
   D. ON DROP IN SPACE TEMPERATURE BELOW THE UNOCCUPIED HEATING SETPOINT, CYCLE THE SUPPLY FAN AND THE HEATING COIL CONTROL VALVE FULL OPEN AS REQUIRED TO MAINTAIN REDUCED SPACE TEMPERATURE. USE 5 DEG. F (ADJUSTABLE) DEADBAND AS REQUIRED TO MINIMIZE SHORT CYCLING.
   E. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED ECONOMIZER COOLING SETPOINT, ALLOW ECONOMIZER COOLING WITH THE COOLING AND HEATING VALVE CLOSED 100%.
   F. A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO OCCUPIED MODE FOR 1 HOUR (ADJUSTABLE). AT EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.
3. WARM-UP MODE:
   A. THE UNIT SHALL START PER AN OPTIMUM START PROGRAM.
   B. THE OUTSIDE AIR DAMPER AND EXHAUST AIR DAMPER SHALL BE FULLY CLOSED, AND THE RETURN AIR DAMPER SHALL BE FULLY OPEN.
   C. THE SUPPLY AND RETURN FANS SHALL RUN AND THE HEATING CONTROL VALVE SHALL MODULATE TO MAINTAIN OCCUPIED SETPOINT.
4. SAFETIES:
   A. DIFFERENTIAL PRESSURE ACROSS THE AIR FILTERS SHALL GENERATE AN ALARM WHENEVER THE DIFFERENTIAL PRESSURE EXCEEDS IT'S ADJUSTABLE SETPOINT.
   B. A SEPARATE LOW LIMIT FREEZE STAT WITH AUTOMATIC RESET SHALL BE INSTALLED WITH SENSING ELEMENT SERPENTINED ACROSS THE FACE OF THE COIL; WHENEVER FREEZE-UP CONDITIONS ARISE (36 DEG. F ADJUSTABLE) THE SUPPLY AND RETURN FAN SHALL STOP, THE OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL CLOSE 100%, THE HEATING CONTROL VALVE SHALL OPEN 100% AND AN ALARM SHALL BE ACTIVATED.
   C. PROVIDE AN ALARM IN CASE OF DISCHARGE AIR TEMPERATURE LOW/HIGH LIMITS.
5. CARBON DIOXIDE DEMAND CONTROL VENTILATION:
   A. UNITS EQUIPPED WITH CO_2 SENSORS (DVC) SHALL OPERATE WITH NORMAL SEQUENCE OF OPERATION EXCEPT AS LISTED BELOW:
   B. GENERAL: CO_2 SYSTEM SHALL MEASURE RELATIVE CO_2 BETWEEN CONTROLLED SPACE AND OUTDOOR REFERENCE CONTINUOUSLY. UNLESS OTHERWISE NOTED, SENSING POINTS SHALL BE AS FOLLOWS:
      a. SPACE: CO_2 ROOM SENSOR (4 IN THE GYMNASIUM AND 2 IN THE CAFETRIA) - ALL LOCATED WITHIN SPACE CONTROLED. (BASED ON SQUARE FOOTAGE OF THE SPACE)
      b. OUTDOOR: OUTSIDE AIR DUCT UPSTREAM OF OUTSIDE AIR DAMPER, (1) SENSOR PER BUILDING.
   C. PRE-PURGE: UNIT WILL START (30) MINUTES BEFORE NORMAL OCCUPANCY TIMES, OUTSIDE AIR DAMPER WILL MODULATE TO EVENT OCCUPANCY POSTION.
   D. POST-PURGE: BEFORE UNIT CAN GO INTO UNOCCUPIED CONDITION, THE CO_2 CONDITION IN THE SPACE MUST BE EQUAL TO THE OUTDOOR AIR LEVEL. TO REACH THIS LEVEL, THE OUTDOOR AIR DAMPER WILL BE OPEN TO MAXIMUM OCCUPANCY POSITION.
   E. VENTILATION MODE: NORMAL OPERATION SHALL BE DEFINED AS OCCURRING DURING OCCUPIED "DAY" MODE AND NO FAULT CONDITIONS PRESENT (I.E. - NO FAILURES OR FREEZE CONDITIONS.) SEE CO_2 SYSTEM PARAMETER SCHEDULE FOR NORMAL/EVENT OUTSIDE AIR REQUIREMENTS.
      a. OUTSIDE AIR CONTROL SHALL BE SET FOR A NORMAL MINIMUM POSITION BASED ON REGULAR OCCUPANCY QUANTITY.
      b. WHEN THE SPACE CO_2 LEVEL IS 100 PPM ABOVE OUTSIDE AIR LEVEL, THE UNIT SHALL IMMEDIATELY BEGIN TO MODULATE FURTHER OPEN FOR ADDITIONAL OUTSIDE AIR. WHEN SPACE CO_2 LEVEL IS 700 PPM ABOVE OUTSIDE AIR AMBIENT LEVEL, THE UNIT OUTSIDE AIR AND RETURN AIR DAMPERS SHALL MODULATE TO MAINTAIN CO_2 LEVELS BELOW 700 PPM.
   F. DURING NORMAL OCCUPIED CYCLE, OR DURING A SPECIAL EVENT (I.E. BASKETBALL), DCV CO_2 CONTROL CAN BE OVERRIDDEN BY ECONOMIZER OVERRIDE TO ALLOW FREE COOLING. IF CO_2 LEVELS IN SPACE EXCEED SET POINT, SYSTEM SHALL ALERT OPERATOR(S) TO INCREASED OCCUPANCY. SYSTEM SHALL AUTOMATICALLY MODULATE DAMPER SYSTEM TO ALLOW INTRODUCTION OF ADDITIONAL OUTSIDE AIR.
   G. WHEN CO_2 LEVELS FALL, CYCLE SHALL REVERSE TO CLOSE DAMPERS TO NORMAL OUTSIDE AIR MINIMUM POSITION.
   H. IF CO_2 SENSOR GOES OFFLINE OR MALFUNCTIONS, OUTSIDE AIR DAMPERS SHALL BE POSITIONED TO 50% OF VENTILATION LEVEL. SYSTEM SHALL SIGNAL ALARM TO OPERATOR.
   I. SYSTEM SHALL MAINTAIN A CLOCK CALENDAR TO NOTIFY OPERATOR OF MAINTENANCE AND CALIBRATION SCHEDULE FOR DCV SYSTEM.
   J. SOFTWARE PARAMETERS: CONTRACTOR MUST PROVIDE PROPORTIONAL INTEGRAL DERIVATIVE FOR ALL CO_2 CONTROLLERS WITH EACH SYSTEM.
   K. PROVIDE PROVISION FOR EXTENDED COMISSIONING (1) YEAR TO CHECK CALIBRATION OF CO_2 SENSOR. RETEST CO_2 SENSOR LEVELS TO ENSURE TARGET PER PERSON.
   L. RECORD KEEPING: CONTRACTOR IS TO RECORD SPACE AND OUTSIDE AIR CO_2 CONDITIONS AT 15-MINUTE INTERVALS. RECORDS OF CO_2 CONCENTRATIONS MUST BE KEPT FOR A MINIMUM OF (3) YEARS.
   M. AFTER UNIT HAS BEEN IN SERVICE FOR ONE YEAR, CONTRACTOR/COMMISSIONING AGENT IT TO RETURN AND CHECK CALIBRATION OF CO_2 SENSOR, MONITOR/TEST CO_2 LEVELS TO ENSURE TARGET PER PERSON VENTILATION RATES ARE MET AND MAINTAINED
   N. CONTRACTOR TO PROVIDE GRAPHIC SCREEN FOR OCCUPIED/UNOCCUPIED SCHEDULING PER AREA INDICATING PROGRAM UNOCCUPIED OVERRIDE ON A GIVEN AREA FOR NO MORE THAN (4) HOURS.
   O. UNOCCUPIED CYCLE: SEE ABOVE "UNOCCUPIED MODE."

1 AIR HANDLING UNIT (AHU-1,2)

SCALE: NOT TO SCALE



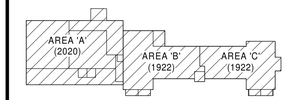
AIR HANDLING UNIT - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:
   A. SUPPLY FAN SHALL RUN CONTINUOUSLY AT THE FREQUENCIES DETERMINED BY THE BALANCING CONTRACTOR.
   B. THE OUTSIDE AIR AND RETURN AIR DAMPERS SHALL OPEN TO THE POSITION REQUIRED TO MAINTAIN THE MINIMUM OUTSIDE AIR QUANTITY INDICATED. OUTSIDE AIR DAMPER SHALL NEVER BE POSITIONED BELOW THIS MINIMUM POSITION EXCEPT IN CASE OF ALARM.
   C. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE HEATING SETPOINT, THE HEATING CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE HEATING SETPOINT SUBJECT TO DISCHARGE AIR HIGH LIMIT OF 110 DEG. F (ADJUSTABLE) AND DISCHARGE LOW LIMIT OF 70 DEG. F (ADJUSTABLE).
   D. WHEN THE SPACE TEMPERATURE RISES 3 DEG. F (ADJUSTABLE) ABOVE THE SPACE HEATING SETPOINT, AND THE OUTSIDE AIR ENTHALPY IS LOWER THAN THE SPACE ENTHALPY, THE OUTSIDE AIR DAMPER SHALL MODULATE OPEN AND THE RETURN AIR DAMPER SHALL MODULATE CLOSED TO MAINTAIN THE SPACE SETPOINT. THIS SHALL BE DONE SUBJECT TO LOW LIMIT OF 55 DEG. F (ADJUSTABLE) AND WITH THE HEATING VALVE FULLY CLOSED.
   E. WHEN THE SPACE TEMPERATURE IS ABOVE THE COOLING SETPOINT (ADJUSTABLE), AND THE OUTSIDE AIR CANNOT COOL THE SPACE, THE COOLING CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE WITH THE HEATING VALVE FULLY CLOSED. USE 5 DEG. F (ADJUSTABLE) DEADBAND BETWEEN THE HEATING AND COOLING SETPOINTS.
2. UNOCCUPIED MODE:
   A. THE SUPPLY FAN SHALL BE OFF.
   B. THE OUTSIDE AIR DAMPER SHALL BE FULLY CLOSED AND THE RETURN DAMPER FULLY OPEN.
   C. WHERE SPACE HAS FINNED TUBE RADIATION, RADIATION SHALL PROVIDE FIRST STAGE UNOCCUPIED HEATING.
   D. ON A DROP IN SPACE TEMPERATURE BELOW THE UNOCCUPIED HEATING SETPOINT, CYCLE THE SUPPLY FAN ON AND THE HEATING CONTROL VALVE FULL OPEN AS REQUIRED TO MAINTAIN REDUCED SPACE TEMPERATURE. USE 5 DEG. F (ADJUSTABLE) DEADBAND TO MINIMIZE SHORT CYCLING.
   E. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED ECONOMIZER COOLING SETPOINT, ALLOW ECONOMIZER COOLING WITH THE COOLING AND HEATING VALVES CLOSED 100%.
   F. A TIMED LOCAL OVERRIDE CONTROL SHALL ALL AN OCCUPANT TO OVERIDE THE SCHEDULE AND PLACE THE UNIT INTO OCCUPIED MODE FOR 1 HOUR (ADJUSTABLE). AT EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.
3. WARM UP MODE:
   A. THE UNIT SHALL START PER AN OPTIMUM START PROGRAM.
   B. THE OUTSIDE AIR DAMPER SHALL BE FULLY CLOSED AND THE RETURN AIR DAMPER FULLY OPEN.
   C. THE SUPPLY FAN SHALL RUN AND THE HEATING CONTROL VALVE SHALL MODULATE TO MAINTAIN OCCUPIED SETPOINT.
4. SAFETIES:
   A. DIFFERENTIAL PRESSURE ACROSS THE AIR FILTERS SHALL GENERATE AN ALARM WHENEVER THE DIFFERENTIAL PRESSURE EXCEEDS ITS ADJUSTABLE SETPOINT.
   B. A SEPERATE LOW LIMIT FREEZE STAT WITH AUTOMATIC RESET SHALL BE INSTALLED WITH SENSING ELEMENT SERPENTINED ACROSS THE FACE OF THE COIL; WHENEVER FREEZE-UP CONDITIONS ARISE (36 DEG. F ADJUSTABLE) THE SUPPLY FAN SHALL STOP, THE OUTSIDE AIR DAMPER SHALL CLOSE 100%; THE HEATING CONTROL VALVE SHALL OPEN 100% AND AN ALARM SHALL BE ACTIVATED.
   C. PROVIDE AN ALARM IN CASE OF DISCHARGE AIR TEMPERATURE LOW/HIGH LIMITS.

2 AIR HANDLING UNIT (AHU-3)

SCALE: NOT TO SCALE

KEY PLAN:



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Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

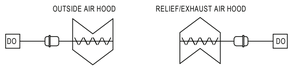
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

CONTROL SCHEMATICS & SEQUENCE OF OPERATIONS

BUILDING	SHEET NUMBER
MS	M401 RE-BID

2/2/2022 4:36:18 PM

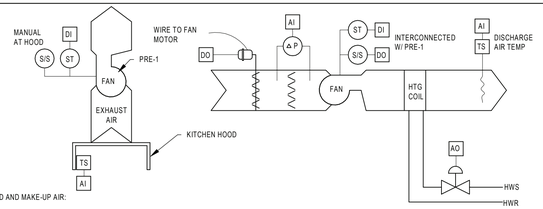


ROOF TOP HOOD - INTAKE OR RELIEF/EXHAUST - SEQUENCE OF OPERATIONS:

1. INTERLOCK THE OPERATION OF THE ROOFTOP HOODS WITH THEIR ASSOCIATED HEATING AND/OR COOLING EQUIPMENT.
2. OCCUPIED MODE:
   A. AUTOMATIC AIR DAMPER SHALL REMAIN OPEN WHEN THE ASSOCIATED HEATING AND/OR COOLING EQUIPMENT IS OPERATING IN THE OCCUPIED MODE.
3. UNOCCUPIED MODE:
   A. AUTOMATIC AIR DAMPER SHALL BE CLOSED.
4. WARM-UP MODE:
   A. AUTOMATIC AIR DAMPER SHALL BE CLOSED.

5 ROOF TOP HOODS (RTH-1,2,3,4)

SCALE: NOT TO SCALE



KITCHEN HOOD AND MAKE-UP AIR:

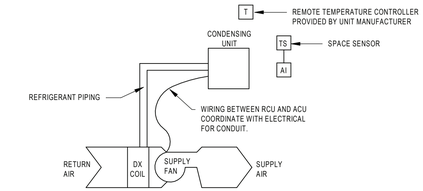
OCCUPIED MODE:
1. KITCHEN HOOD EXHAUST FAN PRE-1, TO BE MANUALLY TURNED ON AT THE HOOD. PROVIDE STATUS OF FAN AT THE OPERATOR WORK STATION AND INTERLOCK OPRATION OF MAKE-UP AIR UNIT (MAU-1)
2. WHEN KITCHEN HOOD IS ENABLED AND IS IN OPERATION AS SENSED BY A CURRENT SWITCH, MAKE-UP AIR UNIT (MAU-1) O.A. DAMPER SHALL OPEN 100% AND THE SUPPLY AIR FAN SHALL START.
3. TWO-WAY CONTROL VALVE ON MAKE-UP AIR UNIT (MAU-1) COIL SHALL MODULATE TO MAINTAIN A DISCHARGE AIR TEMPERATURE OF 70 DEG. F (ADJUSTABLE).

UNOCCUPIED MODE:
1. WHEN KITCHEN HOOD EXHAUST FAN PRE-1 IS MANUALLY OFF, MONITOR THE TEMPERATURE BELOW THE HOOD. IF THE TEMPERATURE BELOW THE HOOD DROPS 5 DEG. F (ADJUSTABLE) BELOW THE SPACE TEMPERATURE SETPOINT TURN ON THE EXHAUST FAN TO LOW SPEED AND INTERLOCK THE MAKE-UP AIR UNIT UNTIL THE TEMPERATURE BELOW THE HOOD IS 5 DEG. F (ADJUSTABLE) ABOVE THE SPACE TEMP. SETPOINT.

ALARMS: PROVIDE AN ALARM FOR EACH OF THE FOLLOWING:
1. UPON FAILURE OF THE FAN.
2. A FILTER PRESSURE SWITCH SHALL BE PROVIDED FOR EACH FILTER AND AN ALARM SHALL BE GENERATED WHICH THE PRESSURE DROP ACROSS THE FILTER EXCEEDS THE PREDETERMINED SETPOINT.

6 KITCHEN EXHAUST HOOD & MAU SCHEMATIC

SCALE: NOT TO SCALE

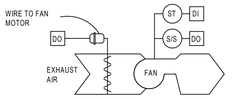


DUCTLESS SPLIT SYSTEMS - COOLING ONLY - SEQUENCE OF OPERATIONS:

1. UNITS SHALL BE CONTROLLED WITH THE UNIT PROVIDED CONTROL AND THERMOSTAT.
2. MONITOR ROOM TEMPERATURE BY A SPACE TEMPERATURE SENSOR.
3. GENERATE AN ALARM WHEN THE TEMPERATURE GOES ABOVE OR BELOW ROOM TEMPERATURE BAND (ADJUSTABLE).

1 DUCTLESS SPLIT SYSTEM (ACU-1,2,3,4,5,6) (ACCU-1,2,3)

SCALE: NOT TO SCALE



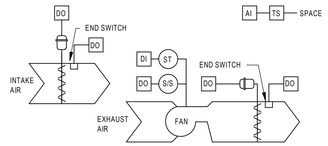
EXHAUST FAN - CONTSTANT SPEED - SEQUENCE OF OPERATIONS:

INTERLOCK THE OPERATION OF THE EXHAUST FANS AND AUTOMATIC DAMPERS WITH THEIR RESPECTIVE HEATING AND COOLING EQUIPMENT.

1. OCCUPIED MODE:
   A. THE EXHAUST FAN SHALL RUN CONTINUOUSLY AND THE AUTOMATIC AIR DAMPER SHALL OPEN.
2. UNOCCUPIED MODE:
   A. THE EXHAUST FAN SHALL BE OFF AND THE AUTOMATIC AIR DAMPER SHALL BE CLOSED.
3. WARM-UP MODE:
   A. THE EXHAUST FAN SHALL BE OFF AND THE AUTOMATIC AIR DAMPER SHALL BE CLOSED.
4. SAFETIES:
   A. UPON A FAILTURE OF THE FAN, AS SENSED BY A CURRENT SENSING STATUS SWITCH, AN ALARM SHALL BE ACTIVATED.

2 EXHAUST FAN - CONSTANT SPEED (PRE-2,4,5,6,7,8) (EF-1)

SCALE: NOT TO SCALE

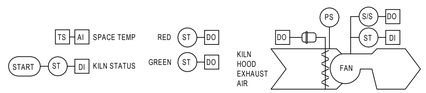


ELEVATOR MACHINE ROOM EXHAUST FAN - SEQUENCE OF OPERATIONS:

1. ALL MODES:
   A. REVERSE ACTING ELECTRIC THERMOSTAT SHALL OPEN THE AUTOMATIC AIR DAMPERS AT THE EXHAUST FAN AND INTAKE HOOD WHEN THE SPACE TEMPERATURE IS ABOVE 72 DEG. F (ADJUSTABLE). IF THE SPACE TEMPERATURE IS ABOVE 80 DEG. F (ADJUSTABLE) THE EXHAUST FAN SHALL RUN.
2. SAFETIES:
   A. IF FAN IS IN RUN MODE AND THE EXHAUST AIR DAMPER OR INTAKE AIR DAMPER IS CLOSED, AN ALARM SHALL BE ACTIVATED.
   B. UPON A FAILURE OF THE FAN, AS SENSED BY A CURRENT SENSING STATUS SWITCH, AN ALARM SHALL BE ACTIVATED.

3 ELEVATOR MACHINE ROOM (PRE-9,RTH-5)

SCALE: NOT TO SCALE



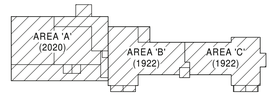
KILN HOOD EXHAUST FAN - SEQUENCE OF OPERATIONS:

1. ALL MODES:
   A. CONTROL KILN HOOD EXHAUST FAN TO RUN BASED ON TWO INPUTS:
      1. INTERLOCK EXHAUST FAN TO RUN WHENEVER KILN IS ENABLED TO FIRE, BASED ON SENSED POWER TO KILN CONTROLLER, NOT KILN HEATING ELEMENT CURRENT DRAW.
      2. ENABLE AND RUN THE EXHAUST FAN WHEN TEMPERATURE IS 2 DEG. F (ADJUSTABLE) ABOVE HEATING SETPOINT OF KILN ROOM.
      3. WHEN THE EXHAUST FAN IS ENABLED TO RUN BY EITHER INPUT ABOVE, OPEN FAN INLET DAMPER AND PROVE OPEN WITH END SWITCH, THEN START FAN.
2. SAFETIES:
   A. MONITOR EXHAUST FAN STATUS WITH CURRENT TRANSDUCER. IF EXHAUST FAN RUNS BEYOND A PREDETERMINED TIME PERIOD (ADJUSTABLE), GENERATE AN ALARM.
      1. CALIBRATE CURRENT TRANSDUCER FOR NORMAL RUN CURRENT DURING COMMISSIONING AND ALARM ON ABNORMALLY LOW (BROKEN BELT ETC.) OR ABNORMALLY HIGH (APPROACHING STALL ETC.) MOTOR CURRENT DRAW.
      2. PROVIDE SENSOR HOUSING WITH TWIN PILOT LIGHTS - ONE RED FOR ABNORMAL OPERATION AND ONE GREEN FOR NORMAL OPERATION. WHEN IN ALARM PER 2 ABOVE OR IF DAMPER END SWITCH FAILS TO PROVE OPEN, LIGHT RED LIGHT. DURING NORMAL OPERATION, LIGHT GREEN LIGHT. PROVIDE SIGNAGE NEAR LIGHTS AS FOLLOWS "RED LIGHT INDICATED ALARM CONDITION - DO NOT USE KILN HOOD. USE KILN HOOD ONLY IF GREEN LIGHT IS ON."

4 KILN HOOD EXHAUST

SCALE: NOT TO SCALE

KEY PLAN:



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REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

CONTROL SCHEMATICS & SEQUENCE OF OPERATIONS

BUILDING	SHEET NUMBER
MS	M402
	RE-BID

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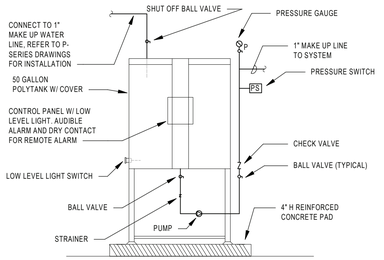
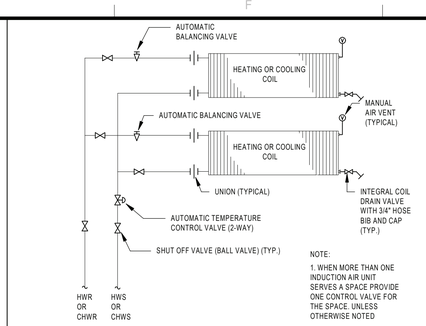


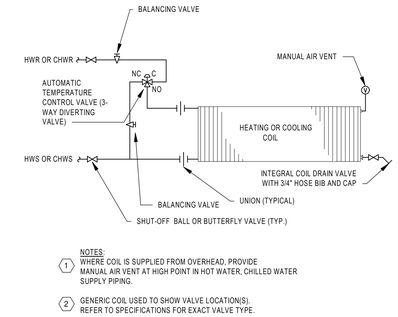
16 TYPICAL AUTOMATIC GLYCOL FEED TANK AND PUMP DETAIL

SCALE: NOT TO SCALE



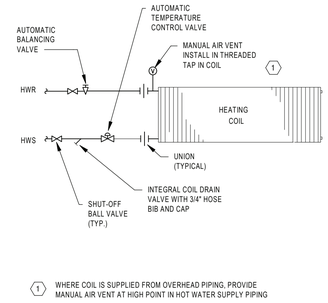
12 INDUCTION AIR UNIT HW AND CW COIL PIPING SCHEMATIC

SCALE: NOT TO SCALE



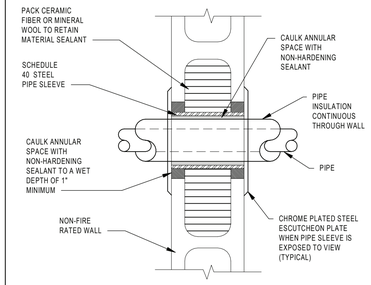
9 DOAS HW & CW COIL PIPING SCHEMATIC

SCALE: NOT TO SCALE



5 CABINET HEATER AND UNIT HEATER HOT WATER PIPING SCHEMATIC

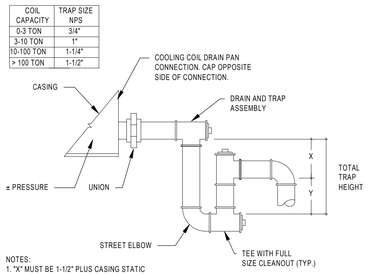
SCALE: NOT TO SCALE



1 NON-FIRE RATED CMU WALL PIPE SLEEVE DETAIL

SCALE: NOT TO SCALE

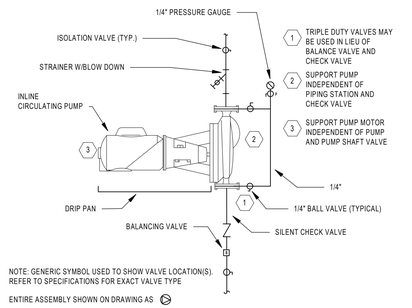
COIL CAPACITY	TRAP SIZE NPS
0-3 TON	3/4"
3-10 TON	1"
10-100 TON	1-1/4"
> 100 TON	1-1/2"



NOTES:
1. "X" MUST BE 1-1/2" PLUS CASING STATIC PRESSURE. MINIMUM 2".
2. "Y" MUST BE 1-1/2" MINUS CASING STATIC PRESSURE. MINIMUM 2".
EXAMPLE: CASING AT (-1") WG
X = 1-1/2" + (-1) = 1/2". USE 2"
Y = 1-1/2" - (-1) = 2-1/2"

17 CONDENSATE TRAP DETAIL (+ OR - PRESSURE)

SCALE: NOT TO SCALE

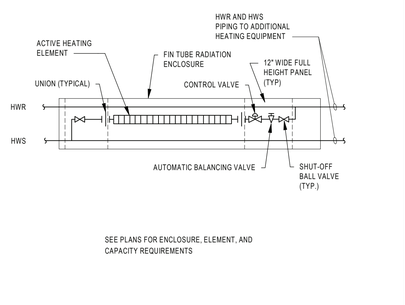


NOTE: GENERIC SYMBOL USED TO SHOW VALVE LOCATION(S). REFER TO SPECIFICATIONS FOR EXACT VALVE TYPE

ENTIRE ASSEMBLY SHOWN ON DRAWING AS

13 INLINE CIRCULATION PUMP PIPING SCHEMATIC

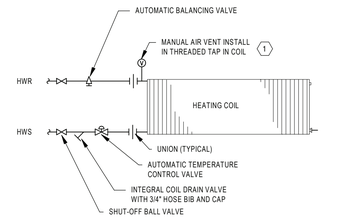
SCALE: NOT TO SCALE



SEE PLANS FOR ENCLOSURE, ELEMENT, AND CAPACITY REQUIREMENTS

10 H.W.FIN TUBE RADIATION PIPING SCHEMATIC (VALVE CONROL)

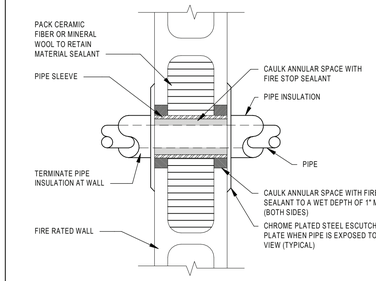
SCALE: NOT TO SCALE



NOTE:
1 WHERE COIL IS SUPPLIED FROM OVERHEAD PIPING, PROVIDE MANUAL AIR VENT AT HIGH POINT IN HOT WATER SUPPLY PIPING

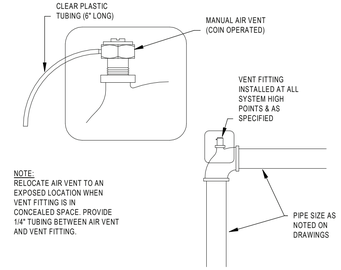
6 DUCT HEATING COIL PIPING SCHEMATIC (DHC-1,2,3,4,5,6)

SCALE: NOT TO SCALE



2 FIRE RATED CMU WALL PIPE SLEEVE DETAIL

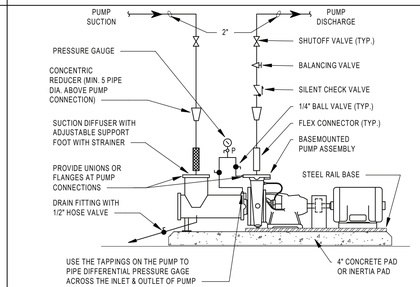
SCALE: NOT TO SCALE



NOTE:
RELOCATE AIR VENT TO AN EXPOSED LOCATION WHEN VENT FITTING IS IN CONCEALED SPACE. PROVIDE 1/4" TUBING BETWEEN AIR VENT AND VENT FITTING.

18 MANUAL AIR VENT DETAIL

SCALE: NOT TO SCALE

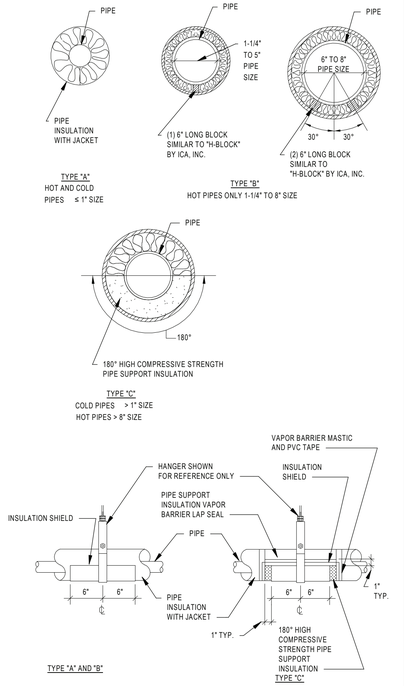


1. TRIPLE DUTY VALVES MAY BE USED IN LIEU OF BALANCE STATION AND CHECK VALVE. SEPARATE SHUT-OFF VALVE REQUIRED.
2. SUPPORT PIPING INDEPENDENTLY OF PUMP AND SUCTION DIFFUSER.
3. SHIM AND GROUT PER SPECIFICATIONS.

NOTES:
GENERIC SYMBOL USED TO SHOW VALVE LOCATION(S). REFER TO SPECIFICATIONS FOR EXACT VALVE TYPE.

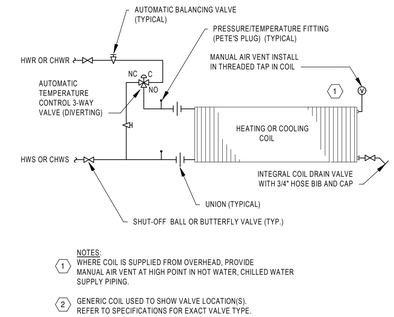
14 BASEMOUNTED PUMP DETAIL

SCALE: NOT TO SCALE



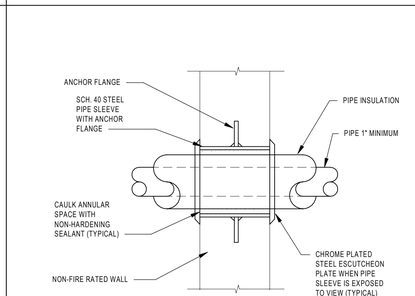
11 INSULATION SHIELD AND BLOCKING DETAIL

SCALE: NOT TO SCALE



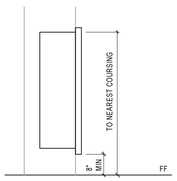
7 AHU COIL HOT WATER (AHU-1, 2, & 3) & CHILLED WATER PIPING SCHEMATIC

SCALE: NOT TO SCALE



3 NON-FIRE RATED WALL POURED CONCRETE PIPE SLEEVE DETAIL

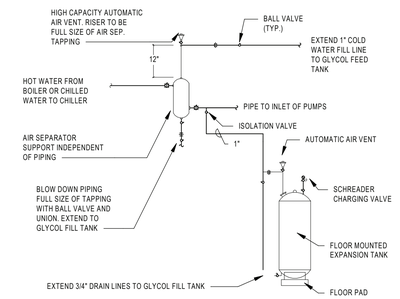
SCALE: NOT TO SCALE



NOTE: COORDINATE WALL OPENINGS WITH G.C.

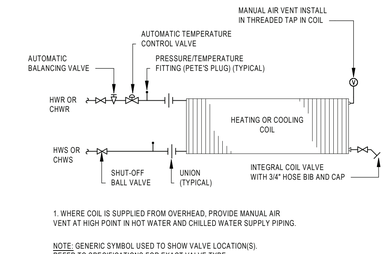
19 TYPICAL CUH MOUNTING DETAIL

SCALE: NOT TO SCALE



15 AIR, MAKE UP WATER, AND PRESSURE CONTROL DETAIL

SCALE: NOT TO SCALE

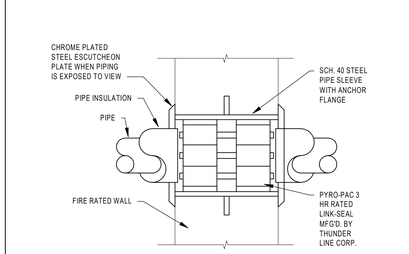


1. WHERE COIL IS SUPPLIED FROM OVERHEAD, PROVIDE MANUAL AIR VENT AT HIGH POINT IN HOT WATER AND CHILLED WATER SUPPLY PIPING.

NOTE: GENERIC SYMBOL USED TO SHOW VALVE LOCATION(S). REFER TO SPECIFICATIONS FOR EXACT VALVE TYPE.

8 BLOWER COIL UNIT HOT WATER (BCU-1) & CHILLED WATER PIPING SCHEMATIC

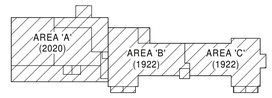
SCALE: NOT TO SCALE



4 PIPE SLEEVE POURED CONCRETE FIRE RATED WALL DETAIL

SCALE: NOT TO SCALE

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

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Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

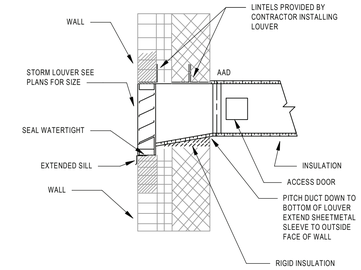
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

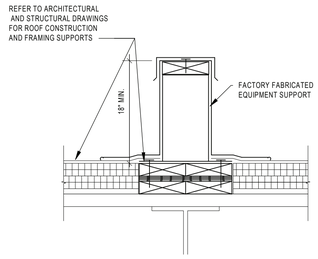
MECHANICAL DETAILS

BUILDING	SHEET NUMBER
MS	M500 RE-BID

2/2/2022 4:36:29 PM

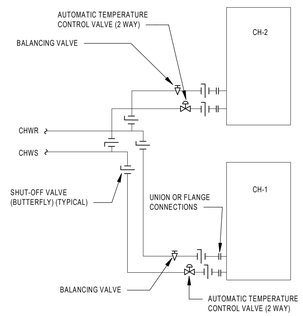


9 TYPICAL LOUVER DETAIL
SCALE: NOT TO SCALE

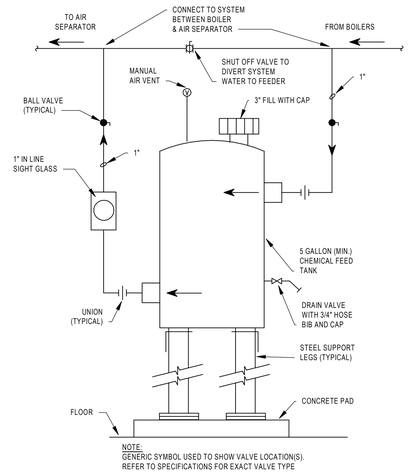


NOTES:
1. COORDINATE LOCATION OF ROOF SUPPORTS WITH CONTRACTOR RESPONSIBLE FOR STRUCTURAL STEEL SUPPORTS.
2. USE THIS DETAIL FOR NEW CONSTRUCTION WORK WHEN H.C. PROVIDES THE ROOF CURB AND TURNS OVER THE G.C. FOR INSTALLATION.

5 ROOF EQUIPMENT SUPPORT DETAIL
SCALE: NOT TO SCALE

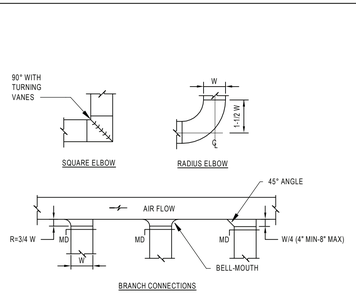


2 CHILLER PIPING SCHEMATIC
SCALE: NOT TO SCALE



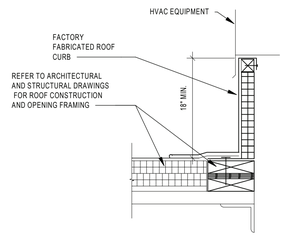
NOTE:
GENERIC SYMBOL USED TO SHOW VALVE LOCATION(S). REFER TO SPECIFICATIONS FOR EXACT VALVE TYPE

1 WATER TREATMENT FEEDER DETAIL
SCALE: NOT TO SCALE



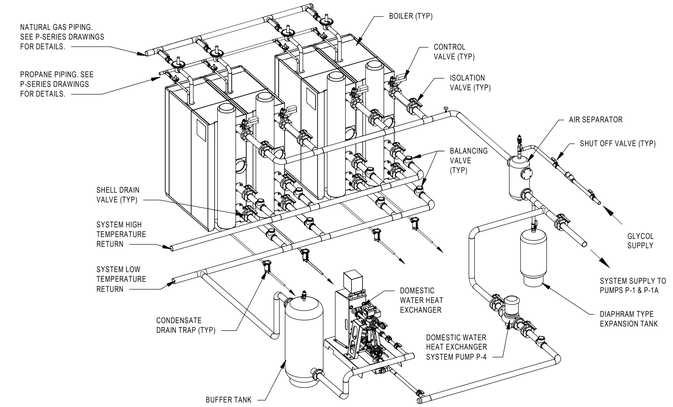
NOTES:
1. ELBOW AND BRANCH CONNECTION STYLE CHOICE AT CONTRACTOR DISCRETION.
2. BRANCH TAKE-OFFS APPLY TO BOTH ROUND AND RECTANGULAR DUCTWORK.

10 DUCTWORK DETAILS
SCALE: NOT TO SCALE

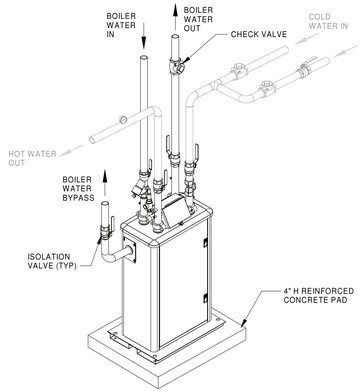


NOTE:
1. COORDINATE ROOF OPENING LOCATION AND SIZE WITH CONTRACTOR RESPONSIBLE FOR ROOFING WORK AND FOR STRUCTURAL STEEL SUPPORTS.
2. USE THIS DETAIL FOR NEW CONSTRUCTION WORK WHEN H.C. PROVIDES THE ROOF CURB AND TURNS OVER TO THE G.C. FOR THE INSTALLATION.

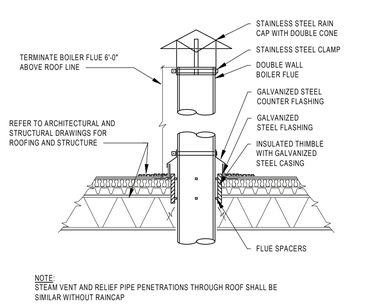
6 ROOF CURB DETAIL
SCALE: NOT TO SCALE



3 BOILER PIPING SCHEMATIC
SCALE: NOT TO SCALE

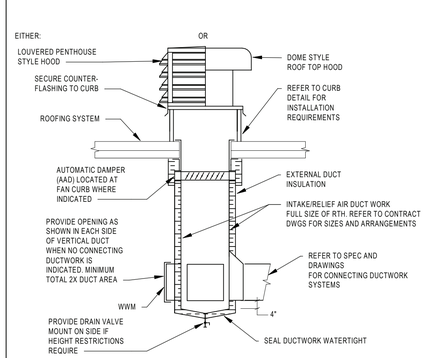


13 DOMESTIC HOT WATER HEAT EXCHANGER DETAIL
SCALE: NOT TO SCALE

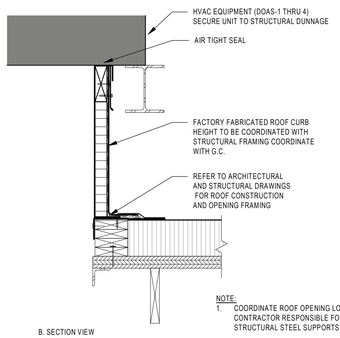


NOTE:
STEAM VENT AND RELIEF PIPE PENETRATIONS THROUGH ROOF SHALL BE SIMILAR WITHOUT RAINCAP

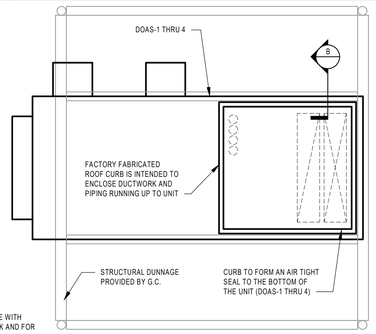
11 BOILER FLUE THROUGH ROOF DETAIL
SCALE: NOT TO SCALE



7 RELIEF/INTAKE AIR ROOF-TOP HOOD
SCALE: NOT TO SCALE



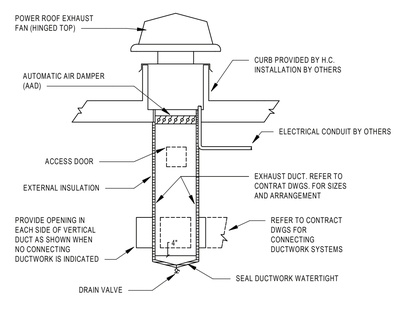
B. SECTION VIEW



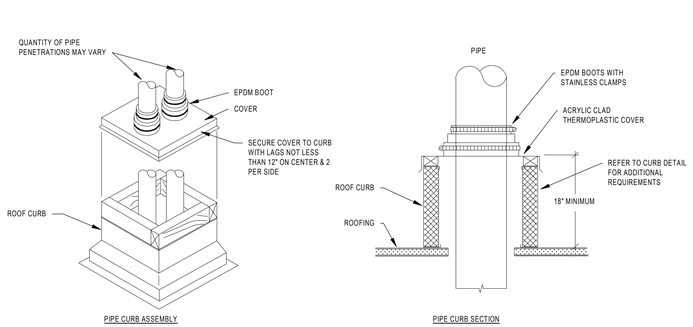
A. PLAN VIEW

NOTE:
1. COORDINATE ROOF OPENING LOCATION AND SIZE WITH CONTRACTOR RESPONSIBLE FOR ROOFING WORK AND FOR STRUCTURAL STEEL SUPPORTS.

12 DOAS CURB DETAIL
SCALE: NOT TO SCALE



8 POWERED ROOF EXHAUST FAN DETAIL
SCALE: NOT TO SCALE

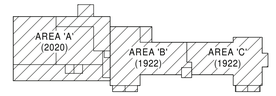


PIPE CURB ASSEMBLY

PIPE CURB SECTION

4 PIPE CURB ASSEMBLY AND SECTION DETAIL
SCALE: NOT TO SCALE

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

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Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

MECHANICAL DETAILS

BUILDING	SHEET NUMBER
MS	M501
	RE-BID

2/7/2022 1:26:01 PM

INDUCTION AIR UNIT SCHEDULE (IND)

	LOCATION								HEATING COIL DATA									COOLING COIL DATA												
										AIRSIDE		WATERSIDE				GLYCOL				AIRSIDE				WATERSIDE				GLYCOL		
ID	NAME	NO.	MANUFACTURER	MODEL NO.	NOZZLE QTY	SUPPLY AIRFLOW	PRIMARY OUTSIDE AIRFLOW	SP	TOTAL CAPACITY	EAT(db)	LAT(db)	FLOW	EWT	LWT	PD	TYPE	%	TOTAL CAPACITY	SENSIBLE CAPACITY	EAT(db)	EAT(wb)	LAT(db)	LAT(wb)	GPM	EWT	LWT	PD	TYPE	%	NOTES
IND-1	BREAK ROOM	112F	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3
IND-2	COPY ROOM	112D	NUCLIMATE	MINI Q360	38	280 CFM	100 CFM	0.50 in-wg	4805 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	7104 Btu/h	6073 Btu/h	75.0 °F	62.5 °F	55.0 °F	53.6 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-3	ADMINISTRATION	112	NUCLIMATE	MINI Q360	38	280 CFM	100 CFM	0.50 in-wg	4805 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	7104 Btu/h	6073 Btu/h	75.0 °F	62.5 °F	55.0 °F	53.6 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,5
IND-4	ASSISTANT PRINCIPAL	112A	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,5
IND-5	CONFERENCE	112B	NUCLIMATE	MINI Q360	38	280 CFM	100 CFM	0.50 in-wg	4805 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	7104 Btu/h	6073 Btu/h	75.0 °F	62.5 °F	55.0 °F	53.6 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-6	PRINCIPAL	112C	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-7	FIRST GRADE CLASSROOM	128	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-8	FIRST GRADE CLASSROOM	128	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-9	FIRST GRADE CLASSROOM	126	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-10	FIRST GRADE CLASSROOM	126	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-11	EXAM	122A	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-12	NURSE'S OFFICE	122	NUCLIMATE	MINI Q360	38	280 CFM	100 CFM	0.50 in-wg	4805 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	7104 Btu/h	6073 Btu/h	75.0 °F	62.5 °F	55.0 °F	53.6 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-13	KINDERGARTEN CLASSROOM	116	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-14	KINDERGARTEN CLASSROOM	116	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-15	KINDERGARTEN CLASSROOM	115	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-16	KINDERGARTEN CLASSROOM	115	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-17	KINDERGARTEN CLASSROOM	113	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-18	KINDERGARTEN CLASSROOM	113	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-19	KINDERGARTEN CLASSROOM	114	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-20	KINDERGARTEN CLASSROOM	114	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-21	KINDERGARTEN CLASSROOM	123	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-22	KINDERGARTEN CLASSROOM	123	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-23	KINDERGARTEN CLASSROOM	125	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-24	KINDERGARTEN CLASSROOM	125	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-25	FIRST GRADE CLASSROOM	137	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-26	FIRST GRADE CLASSROOM	137	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-27	FIRST GRADE CLASSROOM	136	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-28	FIRST GRADE CLASSROOM	136	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-29	SPECIAL ED. 15:1	130	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-30	SPECIAL ED. 15:1	130	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-31	FIRST GRADE CLASSROOM	127	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-32	FIRST GRADE CLASSROOM	127	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-33	FIRST GRADE CLASSROOM	129	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-34	FIRST GRADE CLASSROOM	129	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-35	CHORUS ROOM	133	NUCLIMATE	Q360	31	540 CFM	200 CFM	0.25 in-wg	9070 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	14900 Btu/h	12420 Btu/h	75.0 °F	62.5 °F	53.0 °F	52.2 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-36	CHORUS ROOM	133	NUCLIMATE	Q360	31	540 CFM	200 CFM	0.25 in-wg	9070 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	14900 Btu/h	12420 Btu/h	75.0 °F	62.5 °F	53.0 °F	52.2 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-37	BAND ROOM	135	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-38	BAND ROOM	135	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-39	BAND ROOM	135	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-40	SECOND GRADE CLASSROOM	220	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-41	SECOND GRADE CLASSROOM	220	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-42	SECOND GRADE CLASSROOM	218	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-43	SECOND GRADE CLASSROOM	218	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-44	A.I.S. ROOM	216	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3
IND-45	SOCIAL WORKER	209	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-46	PSYCHOLOGIST OFFICE	208	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-47	COOL DOWN ROOM	206	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,5
IND-48	SPECIAL ED 15:1 CLASSROOM	207	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-49	SPECIAL ED 15:1 CLASSROOM	207	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-50	SPECIAL ED 15:1 CLASSROOM	205	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-51	SPECIAL ED 15:1 CLASSROOM	205	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-52	CONFERENCE	204	NUCLIMATE	MINI Q360	38	280 CFM	100 CFM	0.50 in-wg	4805 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	7104 Btu/h	6073 Btu/h	75.0 °F	62.5 °F	55.0 °F	53.6 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-53	GUIDANCE OFFICE	203	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-54	SECOND GRADE CLASSROOM	201	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-55	SECOND GRADE CLASSROOM	201	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-56	SECOND GRADE CLASSROOM	202	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-57	SECOND GRADE CLASSROOM	202	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-58	A.I.S. ROOM	215	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-59	SECOND GRADE CLASSROOM	217	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-60	SECOND GRADE CLASSROOM	217	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-61	SECOND GRADE CLASSROOM	219	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-62	SECOND GRADE CLASSROOM	219	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-63	THIRD GRADE CLASSROOM	237	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-64	THIRD GRADE CLASSROOM	237	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-65	KINESTHETICS LAB	236	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-66	KINESTHETICS LAB	236	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-67	A.I.S. ROOM	124	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-68	THIRD GRADE CLASSROOM	224	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-69	THIRD GRADE CLASSROOM	224	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-70	THIRD GRADE CLASSROOM	222	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-71	THIRD GRADE CLASSROOM	222	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-72	OCCUPATIONAL THERAPY	221	NUCLIMATE	Q360	24	390 CFM	140 CFM	0.20 in-wg	8885 Btu/h	70.0 °F	95.0 °F	1.5 GPM	130 °F	100 °F	8.2 ftH2O	PG	40	11882 Btu/h	9493 Btu/h	75.0 °F	62.5 °F	50.6 °F	50.2 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-73	SPEECH	223	NUCLIMATE	MINI Q360	38	280 CFM	100 CFM	0.50 in-wg	5426 Btu/h	70.0 °F	95.0 °F	1.5 GPM	130 °F	100 °F	3.2 ftH2O	PG	40	7104 Btu/h	6073 Btu/h	75.0 °F	62.5 °F	55.0 °F	53.6 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-74	THIRD GRADE CLASSROOM	225	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-75	THIRD GRADE CLASSROOM	225	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-76	A.I.S. ROOM	227	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-77	THIRD GRADE CLASSROOM	229	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-78	THIRD GRADE CLASSROOM	229	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-79	THIRD GRADE CLASSROOM	235	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-80	THIRD GRADE CLASSROOM	235	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-81	A.I.S. ROOM	309	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4683 Btu/h	70.0 °F	95.0 °F	1.5 GPM	130 °F	100 °F	3.2 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-82	FIFTH GRADE CLASSROOM	314	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-83	FIFTH GRADE CLASSROOM	314	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-84	FIFTH GRADE CLASSROOM	312	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-85	FIFTH GRADE CLASSROOM	312	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-86	A.I.S. ROOM	310	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-87	STEAM CLASSROOM	307	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	14026 Btu/h	12885 Btu/h	75.0 °F	62.5 °F	56.2 °F	55.2 °F	1.5 GPM	45 °F	55 °F	2.6 ftH2O	PG	40	1,2,3
IND-88	LIBRARY MEDIA CENTER	308	NUCLIMATE	Q360	31	700 CFM	250 CFM	0.45 in-wg	9799 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	17560 Btu/h	15168 Btu/h	75.0 °F	62.5 °F	54.8 °F	53.7 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-89	LIBRARY MEDIA CENTER	308	NUCLIMATE	Q360	31	700 CFM	250 CFM	0.45 in-wg	9799 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	17560 Btu/h	15168 Btu/h	75.0 °F	62.5 °F	54.8 °F	53.7 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-90	OFFICE	308B	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4298 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3
IND-91	VIDEO	308A	NUCLIMATE	MINI Q360	24	235 CFM	60 CFM	0.45 in-wg	5103 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	1.5 ftH2O	PG	40	6071 Btu/h	5134 Btu/h	75.0 °F	62.5 °F	54.8 °F	53.4 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3
IND-92	LIBRARY MEDIA CENTER	308	NUCLIMATE	Q360	31	700 CFM	250 CFM	0.45 in-wg	9799 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	17560 Btu/h	15168 Btu/h	75.0 °F	62.5 °F	54.8 °F	53.7 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-93	LIBRARY MEDIA CENTER	308	NUCLIMATE	Q360	31	700 CFM	250 CFM	0.45 in-wg	9799 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	17560 Btu/h	15168 Btu/h	75.0 °F	62.5 °F	54.8 °F	53.7 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-94	STEAM CLASSROOM	307	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	14026 Btu/h	12885 Btu/h	75.0 °F	62.5 °F	56.2 °F	55.2 °F	1.5 GPM	45 °F	55 °F	2.6 ftH2O	PG	40	1,2,3
IND-95	ART CLASSROOM	300	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-96	ART CLASSROOM	300	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-97	SPECIAL ED CLASSROOM 15:1	306	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-98	SPECIAL ED CLASSROOM 15:1	306	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-99	FIFTH GRADE CLASSROOM	311	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4

NOTES:

1 PROVIDE UNIT WITH COOLING CONDENSATE DRAIN PAN
2 PROVIDE A CONDENSATE TRAP, TRAP TO BE PROVIDED BY UNIT MANUFACTURER
3 UNIT TO BE FULLY INSULATED
4 PROVIDE UNIT WITH A 3" EXTENSION COLLAR, TO RAISE CONDENSATE OUTLET DIMENSION ABOVE CEILING
5 PROVIDE UNIT WITH A 6" EXTENSION COLLAR, TO RAISE CONDENSATE OUTLET DIMENSION ABOVE CEILING

KEY PLAN:

SED CONTROL NO. 44-18-00-05-0-005-015

BCA Architects & Engineers
Ithaca | Saratoga Springs | Watertown
WWW.THEBCGROUP.COM

PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY
AJZ

PROJECT NUMBER
2019-011

CHECKED BY
JLM

DATE
02/04/2022

MECHANICAL EQUIPMENT SCHEDULES

BUILDING
MS

SHEET NUMBER
M600
RE-BID

2/2/2022 4:36:42 PM

INDUCTION AIR UNIT SCHEDULE (IND)

ID	LOCATION NAME	NO.	MANUFACTURER	MODEL NO.	NOZZLE QTY	SUPPLY AIRFLOW	PRIMARY OUTSIDE AIRFLOW	SP	HEATING COIL DATA										COOLING COIL DATA												NOTES
									TOTAL CAPACITY	AIRSIDE		WATERSIDE				GLYCOL			TOTAL CAPACITY	SENSIBLE CAPACITY	AIRSIDE				WATERSIDE				GLYCOL		
										EAT(db)	LAT(db)	FLOW	EWT	LWT	PD	TYPE	%				EAT(db)	EAT(wb)	LAT(db)	LAT(wb)	GPM	EWT	LWT	PD	TYPE	%	
IND-100	FIFTH GRADE CLASSROOM	311	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-101	FIFTH GRADE CLASSROOM	313	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-102	FIFTH GRADE CLASSROOM	313	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-103	FACULTY	226	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	11187 Btu/h	70.0 °F	95.0 °F	1.5 GPM	130 °F	100 °F	8.2 ftH2O	PG	40		16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-104	FOURTH GRADE CLASSROOM	331	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.0 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-105	FOURTH GRADE CLASSROOM	331	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-106	FOURTH GRADE CLASSROOM	330	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-107	FOURTH GRADE CLASSROOM	330	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-108	CHORUS ROOM	133	NUCLIMATE	Q360	31	540 CFM	200 CFM	0.25 in-wg	9070 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		14900 Btu/h	12420 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3
IND-109	FIFTH GRADE CLASSROOM	320	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-110	FIFTH GRADE CLASSROOM	320	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-111	FIFTH GRADE CLASSROOM	318	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-112	FIFTH GRADE CLASSROOM	318	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-113	A.I.S. ROOM	321	NUCLIMATE	MINI Q360	24	165 CFM	40 CFM	0.20 in-wg	4683 Btu/h	70.0 °F	95.0 °F	1.5 GPM	130 °F	100 °F	3.2 ftH2O	PG	40		4991 Btu/h	3976 Btu/h	75.0 °F	62.5 °F	51.9 °F	51.1 °F	3.0 GPM	45 °F	55 °F	3.4 ftH2O	PG	40	1,2,3,4
IND-114	ESL CLASSROOM	322	NUCLIMATE	Q360	31	620 CFM	225 CFM	0.35 in-wg	9479 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		16262 Btu/h	13813 Btu/h	75.0 °F	62.5 °F	54.0 °F	53.0 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-115	FOURTH GRADE CLASSROOM	317	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-116	FOURTH GRADE CLASSROOM	317	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-117	FOURTH GRADE CLASSROOM	319	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-118	FOURTH GRADE CLASSROOM	319	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3,4
IND-119	FOURTH GRADE CLASSROOM	323	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-120	FOURTH GRADE CLASSROOM	323	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-121	FOURTH GRADE CLASSROOM	329	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3
IND-122	FOURTH GRADE CLASSROOM	329	NUCLIMATE	Q360	38	810 CFM	300 CFM	0.45 in-wg	10121 Btu/h	70.0 °F	95.0 °F	1.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40		19188 Btu/h	16947 Btu/h	75.0 °F	62.5 °F	55.8 °F	54.5 °F	3.0 GPM	45 °F	55 °F	9.9 ftH2O	PG	40	1,2,3

NOTES:
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5 PROVIDE UNIT WITH A 6" EXTENSION COLLAR, TO RAISE CONDENSATE OUTLET DIMENSION ABOVE CEILING

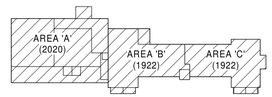
VENTILATION AIR SCHEDULE

NO.	NAME	ROOM AREA (S.F.)	OCCUPANT DENSITY	OCCUPANT NUMBER	CFM PER PERSON	CFM PER SQFT	ZONE OA AIRFLOW	ZONE AIR DISTRIBUTION EFFECTIVENESS	TOTAL REQUIRED OA	ACTUAL OA	CFM PER SQFT EA	REQUIRED EA	ACTUAL EA
101	LOBBY	837	150	126	5	0.06	680.22	0.8	851	860	0	0	0
104	GYMNASIUM	6682	7	47	20	0.18	2142.76	0.8	2679	3200	0	0	0
106A	OFFICE	93	5	1	5	0.06	10.58	0.8	14	20	0	0	0
106B	CORRIDOR	125	0	0	0	0.06	7.5	0.8	10	10	0	0	0
106C	LOCKER ROOM	240	0	0	0	0	0	0.8	0	250	0.25	60	70
106D	TOILET	151	0	0	0	0	0	0.8	0	0	0	190	190
107A	OFFICE	98	5	1	5	0.06	10.88	0.8	14	20	0	0	0
107B	CORRIDOR	128	0	0	0	0.06	7.68	0.8	10	10	0	0	0
107C	LOCKER ROOM	215	0	0	0	0	0	0.8	0	250	0.25	53.75	70
107D	TOILET	138	0	0	0	0	0	0.8	0	0	0	190	190
109	CAFETERIA	2987	100	244	7.5	0.18	2367.66	0.8	2960	2975	0	0	0
111	KITCHEN	1244	20	25	7.5	0.12	336.78	0.8	421	425	0.7	870.8	0
111A	DISHWASHING	240	20	5	7.5	0.12	66.3	0.8	83	90	0.7	168	0
111B	ELEVATOR MACHINE ROOM	26	0	0	0	0	0	0.8	0	0	0	0	70
111C	DRY STORAGE	284	0	0	0	0	0	0.8	0	0	0	0	0
111D	COOLER	103	0	0	0	0	0	0.8	0	0	0	0	0
111E	FREEZER	112	0	0	0	0	0	0.8	0	0	0	0	0
111F	OFFICE	105	5	1	5	0.06	11.3	0.8	15	0	0	0	0
111G	RECEIVING	148	0	0	0	0	0	0.8	0	0	0	0	0
111H	TOILET	67	0	0	0	0	0	0.8	0	0	0	70	70
112	ADMIN	507	10	6	5	0.06	60.42	0.8	76	100	0	0	0
112A	ASSISTANT PRINCIPAL	121	5	1	5	0.06	12.26	0.8	16	40	0	0	0
112B	CONFERENCE	134	50	7	5	0.06	43.04	0.8	54	100	0	0	0
112C	PRINCIPAL	133	5	1	5	0.06	12.98	0.8	17	40	0	0	0
112D	COPY ROOM	117	0	0	10	0.12	14.04	0.8	18	40	0	0	0
112F	BREAK ROOM	53	5	1	10	0.06	8.18	0.8	11	40	0	0	0
112G	TOILET	57	0	0	0	0	0	0.8	0	0	0	70	70
113	CLRM	1138	25	29	10	0.12	426.56	0.8	534	600	0	0	0
113A	TOILET	57	0	0	0	0	0	0.8	0	0	0	70	70
114	CLRM	1125	25	29	10	0.12	425	0.8	532	600	0	0	0
114A	TOILET	57	0	0	0	0	0	0.8	0	0	0	70	70
115	CLRM	1022	25	26	10	0.12	382.64	0.8	479	600	0	0	0
115A	TOILET	46	0	0	0	0	0	0.8	0	0	0	70	70
116	CLRM	1022	25	26	10	0.12	382.64	0.8	479	600	0	0	0
116A	TOILET	46	0	0	0	0	0	0.8	0	0	0	70	70
117A	STORAGE	46	0	0	0	0	0	0.8	0	0	0	0	0
118	GIRLS	163	0	0	0	0	0	0.8	0	0	0	140	140
119	JANITOR	28	0	0	0	0	0	0.8	0	0	0	70	70
120	BOYS	162	0	0	0	0	0	0.8	0	0	0	140	140
121	FACULTY	46	0	0	0	0	0	0.8	0	0	0	70	70
122	NURSE	470	5	3	5	0.06	43.2	0.8	54	40	0	0	0
122A	EXAM	95	5	1	5	0.06	10.7	0.8	14	40	0	0	0
122B	TOILET	66	0	0	0	0	0	0.8	0	0	0	70	70
123	CLRM	823	25	21	10	0.12	308.76	0.8	386	450	0	0	0
123A	TOILET	76	0	0	0	0	0	0.8	0	0	0	70	70
124	AIS	277	5	2	5	0.06	26.62	0.8	34	40	0	0	0
125	CLRM	826	25	21	10	0.12	309.12	0.8	387	450	0	0	0
125A	TOILET	71	0	0	0	0	0	0.8	0	0	0	70	70
126	CLRM	819	25	21	10	0.12	308.28	0.8	386	450	0	0	0
127	CLRM	723	25	19	10	0.12	276.76	0.8	346	450	0	0	0
128	CLRM	806	25	21	10	0.12	306.72	0.8	384	450	0	0	0
129	CLRM	805	25	21	10	0.12	306.6	0.8	384	450	0	0	0
129A	TOILET	61	0	0	0	0	0	0.8	0	0	0	70	70
130	CLRM	712	25	18	10	0.12	265.44	0.8	332	450	0	0	0
133	CHORUS	807	35	29	10	0.12	386.84	0.8	484	600	0	0	0
133A	TOILET	55	0	0	0	0	0	0.8	0	0	0	70	70
136	CLRM	901	25	23	10	0.12	338.12	0.8	423	450	0	0	0
137	CLRM	845	25	22	10	0.12	321.4	0.8	402	450	0	0	0
201	CLRM	909	25	23	10	0.12	339.08	0.8	424	450	0	0	0
202	CLRM	905	25	23	10	0.12	338.6	0.8	424	450	0	0	0
203	GUIDANCE	178	5	1	5	0.06	15.68	0.8	20	40	0	0	0
204	CONFERENCE	190	50	10	5	0.06	61.4	0.8	77	40	0	0	0
205	CLRM	815	25	21	10	0.12	307.8	0.8	385	450	0	0	0
206	COOL DOWN ROOM	116	5	1	5	0.06	11.96	0.8	15	40	0	0	0
207	CLRM	815	25	21	10	0.12	307.8	0.8	385	450	0	0	0
208	PSYCHOLOGIST OFFICE	187	5	1	5	0.06	16.22	0.8	21	40	0	0	0
209	SOCIAL WORKER	173	5	1	5	0.06	15.38	0.8	20	40	0	0	0
211	GIRLS	168	0	0	0	0	0	0.8	0	0	0	140	140

VENTILATION AIR SCHEDULE

NO.	NAME	ROOM AREA (S.F.)	OCCUPANT DENSITY	OCCUPANT NUMBER	CFM PER PERSON	CFM PER SQFT	ZONE OA AIRFLOW	ZONE AIR DISTRIBUTION EFFECTIVENESS	TOTAL REQUIRED OA	ACTUAL OA	CFM PER SQFT EA	REQUIRED EA	ACTUAL EA
212	CUSTODIAN	28	0	0	0	0	0	0.8	0	0	0	70	70
213	BOYS	167	0	0	0	0	0	0.8	0	0	0	140	140
214	FACULTY	144	0	0	0	0	0	0.8	0	0	0	70	70
215	AIS	245	5	2	5	0.06	24.7	0.8	31	40	0	0	0
216	AIS	245	5	2	5	0.06	24.7	0.8	31	40	0	0	0
217	CLRM	740	25	19	10	0.12	278.8	0.8	349	450	0	0	0
218	CLRM	837	25	21	10	0.12	310.44	0.8	389	450	0	0	0
219	CLRM	826	25	21	10	0.12	309.12	0.8	387	450	0	0	0
220	CLRM	819	25	21	10	0.12	308.28	0.8	386	450	0	0	0
221	CLRM	425	25	11	10	0.12	161	0.8	202	225	0	0	0
222	CLRM	806	35	29	10	0.12	386.72	0.8	484	600	0	0	0
223	SPEECH	284	5	2	5	0.06	27.04	0.8	34	100	0	0	0
224	CLRM	852	35	30	10	0.12	402.24	0.8	503	600	0	0	0
225	CLRM	840	35	30	10	0.12	400.8	0.8	501	600	0	0	0
226	FAC	335	35	12	10	0.12	160.2	0.8	201	225	0	0	0
227	AIS	261	5	2	5	0.06	25.66	0.8	33	40	0	0	0
229	CLRM	870	35	31	10	0.12	414.4	0.8	518	600	0	0	0
230	MENS	137	0	0	0	0	0	0.8	0	0	0	140	140
231	GIRLS	167	0	0	0	0	0	0.8	0	0	0	140	140
232	CUSTODIAN	29	0	0	0	0	0	0.8	0	0	0	70	70
233	BOYS	167	0	0	0	0	0	0.8	0	0	0	140	140
235	CLRM	867	35	31	10	0.12	414.04	0.8	518	600	0	0	0
236	CLRM	857	35	30	10	0.12	402.84	0.8	504	600	0	0	0
237	CLRM	841	35	30	10	0.12	400.92	0.8	502	600	0	0	0
300	ART CLRM	826	20	17	10	0.18	316.68	0.8	399	600	0.7	579	600
300A	KILN ROOM	62	0	0	0	0	0	0.8	0	0	0	0	0
302	GIRLS	184	0	0	0	0	0	0.8	0	0	0	140	140
303	CUSTODIAN	36	0	0	0	0	0	0.8	0	0	0	70	70
304	BOYS	201	0	0	0	0	0	0.8	0	0	0	140	140
305	FACULTY	58	0	0	0	0	0	0.8	0	0	0	70	70
306	CLRM	918	35	33	10	0.12	440.16	0.8	551	600	0	0	0
307	CLRM	615	35	22	10	0.12	293.8	0.8	368	450	0	0	0
308	LIBRARY	1920	10	20	5	0.12	330.4	0.8	413	1000	0	0	0
308A	VIDEO	105	5	1	5	0.06	11.3	0.8	15	60	0	0	0
308B	OFFICE	127	5	1	5	0.06	12.62	0.8	16	40	0	0	0
309	AIS	242	5	2	5	0.06	24.52	0.8	31	40	0	0	0
310	AIS	250	5	2	5	0.06	25	0.8	32	40	0	0	0
311	CLRM	761	35	27	10	0.12	361.32	0.8	452	600	0	0	0
312	CLRM	853	35	30	10	0.12	402.36	0.8	503	600	0	0	0
313	CLRM	793	35	28	10	0.12	375.16	0.8	469	600	0	0	0
314	CLRM	827	35	29	10	0.12	389.24	0.8	487	600	0	0	0
317	CLRM	721	35	26	10	0.12	346.52	0.8	434	600	0	0	0
318	CLRM	812	35	29	10	0.12	387.44	0.8	485	600	0	0	0
319	CLRM	879	35	31	10	0.12	415.48	0.8	520	600	0	0	0
320	CLRM	869	35	31	10	0.12	414.28	0.8	518	600	0	0	0
321	AIS	243	5	2	5	0.06	24.58	0.8	31	40	0	0	0
322	CLRM	338	35	12	10	0.12	160.56	0.8	201	225	0	0	0
323	CLRM	862	35	31	10	0.12	413.44	0.8	517	600	0	0	0
324	GIRLS	192	0	0	0	0	0	0.8	0	0	0	140	140
326	FACULTY	75	0	0	0	0	0	0.8	0	0	0	70	70
328	BOYS	197	0	0	0	0	0	0.8	0	0	0	140	140
329	CLRM	856	35	30	10	0.12	402.72	0.8	504	600	0	0	0
330	CLRM	889	35	32	10	0.12	426.68	0.8	534	600	0	0	0
331	CLRM	790	35	28	10	0.12	374.8	0.8	469	600	0	0	0
A1	CORRIDOR	432	0	0	0	0.06	25.92	0.8	33	100	0	0	0
B1 & C1	CORRIDOR	1380	0	0	0	0.06	82.8	0.8	104	490	0	0	0
D1	CORRIDOR	3245	0	0	0	0.06	194.7	0.8	244	200	0	0	0
A2 & B2	CORRIDOR	1170	0	0	0	0.06	70.2	0.8	88	510	0	0	0
C2 & D2	CORRIDOR	3547	0	0	0	0.06	212.82	0.8	267	490	0	0	0
A3, B3 & C3	CORRIDOR	960	0	0	0	0.06	57.6	0.8	72	370	0	0	0
D3 & E3	CORRIDOR	3613	0	0	0	0.06	216.78	0.8	271	620	0	0	0
108 ALT MC1	PLATFORM	842	70	59	10	0.06	640.52	0.8	801	805	0	0	0
101 ALT MC1	LOBBY	1280	150	192	5	0.06	1036.8	0.8	1296	1300	0	0	0
102 ALT MC1	TOILET	194	0	0	0	0	0	0.8	0	0	0	140	140
103 ALT MC1	TOILET	194	0	0	0	0	0	0.8	0	0	0	140	140
104A ALT MC2	PLATFORM	1073	70	10	10	0.06	824.38	0.8	1031	1035	0	0	0

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

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BCA ARCHITECTS ENGINEERS

Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011
CHECKED BY: JLM	DATE: 02/04/2022

MECHANICAL EQUIPMENT SCHEDULES

BUILDING	SHEET NUMBER
MS	M601 RE-BID

2/2/2022 4:36:50 PM

DEDICATED OUTDOOR AIR SYSTEM SCHEDULE (DOAS)

ID	LOCATION NAME	LOCATION NO.	MANUF.	MODEL NO.	ARRANGEMENT	SUPPLY AIR CFM	OA %	WINTER OUTSIDE AIR EAT(db)	WINTER OUTSIDE AIR EAT(wb)	WINTER OUTSIDE AIR LAT(db)	WINTER OUTSIDE AIR LAT(wb)	SUMMER OUTSIDE AIR EAT(db)	SUMMER OUTSIDE AIR EAT(wb)	SUMMER OUTSIDE AIR LAT(db)	SUMMER OUTSIDE AIR LAT(wb)	EXHAUST AIR CFM	WINTER EXHAUST AIR EAT(db)	WINTER EXHAUST AIR EAT(wb)	WINTER EXHAUST AIR LAT(db)	WINTER EXHAUST AIR LAT(wb)	SUMMER EXHAUST AIR EAT(db)	SUMMER EXHAUST AIR EAT(wb)	SUMMER EXHAUST AIR LAT(db)	SUMMER EXHAUST AIR LAT(wb)	HEATING COIL DATA TOTAL CAPACITY	AIRSIDE EAT(db)	AIRSIDE LAT(db)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL TYPE	GLYCOL %	COOLING COIL DATA CAP TOTAL	CAP SENSIBLE	AIRSIDE EAT(db)	AIRSIDE EAT(wb)	AIRSIDE LAT(db)	AIRSIDE LAT(wb)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL TYPE	GLYCOL %	ELECTRICAL DATA SUPPLY FAN ESP	SUPPLY FAN HP	EXHAUST FAN ESP	EXHAUST FAN HP	FLA	MCA	MOCP	VOLT	PH	UNIT WEIGHT	NOTES
DOAS-1	ROOF	-	PETRA	PAH-100	Downflow	7750 CFM	100	0.0 °F	0.0 °F	42.1 °F	39.6 °F	97.0 °F	72.0 °F	82.8 °F	66.5 °F	6100 CFM	65.0 °F	54.3 °F	10.8 °F	10.8 °F	75.0 °F	63.0 °F	93.4 °F	70.7 °F	640700 Btu/h	0.0 °F	70.0 °F	48.0 GPM	130 °F	100 °F	6.0 ftH2O	PG	40	258600 Btu/h	228700 Btu/h	82.8 °F	66.5 °F	55.5 °F	55.5 °F	59.0 GPM	45 °F	55 °F	8.5 ftH2O	PG	40	2.00 in-wg	15.00 hp	1.50 in-wg	7.50 hp	32.0 A	33.0 A	50.0 A	480 V	3	8500 lb	1,2,3,4,5,6,7,8,9,10,11,12,13
DOAS-2	ROOF	-	PETRA	PAH-100	Downflow	6720 CFM	100	0.0 °F	0.0 °F	49.7 °F	44.9 °F	97.0 °F	72.0 °F	80.2 °F	65.5 °F	6510 CFM	65.0 °F	54.3 °F	14.4 °F	14.4 °F	75.0 °F	63.0 °F	92.2 °F	70.0 °F	561700 Btu/h	0.0 °F	70.0 °F	42.0 GPM	130 °F	100 °F	10.0 ftH2O	PG	40	220300 Btu/h	186900 Btu/h	80.2 °F	65.5 °F	54.6 °F	54.5 °F	49.0 GPM	45 °F	55 °F	12.0 ftH2O	PG	40	2.00 in-wg	10.00 hp	1.50 in-wg	10.00 hp	28.0 A	29.1 A	40.0 A	480 V	3	8500 lb	1,2,3,4,5,6,7,8,9,10,11,12,13
DOAS-3	ROOF	-	PETRA	PAH-100	Downflow	7540 CFM	100	0.0 °F	0.0 °F	46.5 °F	42.7 °F	97.0 °F	72.0 °F	81.3 °F	65.9 °F	6920 CFM	65.0 °F	54.3 °F	15.7 °F	15.6 °F	75.0 °F	63.0 °F	91.7 °F	69.8 °F	599600 Btu/h	0.0 °F	70.0 °F	45.0 GPM	130 °F	100 °F	5.0 ftH2O	PG	40	254100 Btu/h	214800 Btu/h	81.3 °F	65.9 °F	54.5 °F	54.4 °F	57.0 GPM	45 °F	55 °F	15.5 ftH2O	PG	40	2.00 in-wg	15.00 hp	1.50 in-wg	10.00 hp	35.0 A	35.7 A	50.0 A	480 V	3	8500 lb	1,2,3,4,5,6,7,8,9,10,11,12,13
DOAS-4	ROOF	-	PETRA	PAH-100	Downflow	7740 CFM	100	0.0 °F	0.0 °F	46.2 °F	42.5 °F	97.0 °F	72.0 °F	81.5 °F	66.0 °F	7050 CFM	65.0 °F	54.3 °F	11.6 °F	11.6 °F	75.0 °F	63.0 °F	93.1 °F	70.6 °F	640200 Btu/h	0.0 °F	70.0 °F	48.0 GPM	130 °F	100 °F	6.0 ftH2O	PG	40	250300 Btu/h	219700 Btu/h	81.5 °F	66.0 °F	55.3 °F	55.3 °F	59.0 GPM	45 °F	55 °F	8.5 ftH2O	PG	40	2.00 in-wg	15.00 hp	1.50 in-wg	10.00 hp	35.0 A	35.7 A	50.0 A	480 V	3	8500 lb	1,2,3,4,5,6,7,8,9,10,11,12,13
DOAS-5	MECH	200	PETRA	PAH-16	Horizontal	1380 CFM	100	0.0 °F	0.0 °F	55.8 °F	48.9 °F	97.0 °F	72.0 °F	77.6 °F	64.2 °F	1380 CFM	65.0 °F	54.3 °F	10.6 °F	10.6 °F	75.0 °F	63.0 °F	93.8 °F	70.7 °F	104300 Btu/h	0.0 °F	70.0 °F	9.0 GPM	130 °F	100 °F	6.0 ftH2O	PG	40	34780 Btu/h	32750 Btu/h	77.6 °F	64.2 °F	55.8 °F	55.7 °F	8.0 GPM	45 °F	55 °F	3.5 ftH2O	PG	40	2.00 in-wg	3.60 hp	1.50 in-wg	2.40 hp	6.4 A	8.0 A	15.0 A	480 V	3	5000 lb	1,2,3,4,5,6,7,10,14

DEDICATED OUTDOOR AIR SYSTEM SCHEDULE (DOAS) ALTERNATE MC1

ID	LOCATION NAME	LOCATION NO.	MANUF.	MODEL NO.	ARRANGEMENT	SUPPLY AIR CFM	OA %	WINTER OUTSIDE AIR EAT(db)	WINTER OUTSIDE AIR EAT(wb)	WINTER OUTSIDE AIR LAT(db)	WINTER OUTSIDE AIR LAT(wb)	SUMMER OUTSIDE AIR EAT(db)	SUMMER OUTSIDE AIR EAT(wb)	SUMMER OUTSIDE AIR LAT(db)	SUMMER OUTSIDE AIR LAT(wb)	EXHAUST AIR CFM	WINTER EXHAUST AIR EAT(db)	WINTER EXHAUST AIR EAT(wb)	WINTER EXHAUST AIR LAT(db)	WINTER EXHAUST AIR LAT(wb)	SUMMER EXHAUST AIR EAT(db)	SUMMER EXHAUST AIR EAT(wb)	SUMMER EXHAUST AIR LAT(db)	SUMMER EXHAUST AIR LAT(wb)	HEATING COIL DATA TOTAL CAPACITY	AIRSIDE EAT(db)	AIRSIDE LAT(db)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL TYPE	GLYCOL %	COOLING COIL DATA CAP TOTAL	CAP SENSIBLE	AIRSIDE EAT(db)	AIRSIDE EAT(wb)	AIRSIDE LAT(db)	AIRSIDE LAT(wb)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL TYPE	GLYCOL %	ELECTRICAL DATA SUPPLY FAN ESP	SUPPLY FAN HP	EXHAUST FAN ESP	EXHAUST FAN HP	FLA	MCA	MOCP	VOLT	PH	UNIT WEIGHT	NOTES
DOAS-5	MECH	200	PETRA	PAH-24	Horizontal	1750 CFM	100	0.0 °F	0.0 °F	55.8 °F	48.9 °F	97.0 °F	72.0 °F	77.6 °F	64.2 °F	1750 CFM	65.0 °F	54.3 °F	10.6 °F	10.6 °F	75.0 °F	63.0 °F	93.8 °F	70.7 °F	104300 Btu/h	0.0 °F	70.0 °F	9.0 GPM	130 °F	100 °F	6.0 ftH2O	PG	40	34780 Btu/h	32750 Btu/h	77.6 °F	64.2 °F	55.8 °F	55.7 °F	7.9 GPM	45 °F	55 °F	2.5 ftH2O	PG	40	2.00 in-wg	3.60 hp	1.50 in-wg	2.50 hp	12.4 A	8.1 A	15.0 A	480 V	3	5200 lb	1,2,3,4,5,6,7,10,14

NOTES:
1. PROVIDE UNIT WITH HEAT RECOVERY WHEEL WITH BY-PASS DAMPERS.
2. PROVIDE UNIT WITH DOUBLE WALL CONSTRUCTION WITH A MIX OF R13 INSULATION
3. PROVIDE UNIT WITH 2" MERV 8 AND 4" MERV 14 FILTERS
4. PROVIDE UNIT WITH DIRECT DRIVE MOTORS WITH VARIABLE DRIVES
5. PROVIDE UNIT WITH RECIRCULATION DAMPER
6. REFER TO CONTROL SCHEMATIC DRAWINGS FOR ADDITIONAL INFORMATION
7. REFER TO DETAIL DRAWINGS FOR UNIT CONFIGURATIONS
8. PROVIDE 18" H INSULATED ROOF CURB
9. INSTALL UNIT ON REINFORCED STRUCTURAL STEEL, REFER TO "S" SERIES DRAWINGS
10. PROVIDE UNIT WITH SINGLE POINT ELECTRICAL CONNECTION WITH INTEGRAL FUSED DISCONNECT AND CONVENIENCE RECEPTACLES ACCESSIBLE FROM OUTSIDE UNIT ENCLOSURE
11. PROVIDE OA AND EA WEATHER HOOD
12. ALL HYDRONIC PIPING (HWS & HWR, CHWS & CHWR) IS RUN UP INTO UNIT FROM WITHIN THE ROOF CURB
13. ALL ELECTRICAL CIRCUITRY IS TO RUN UP INTO UNIT FROM WITHIN ROOF CURB
14. EC RESPONSIBLE FOR CONNECTING WIRING AT UNIT SPLITS

AIR HANDLING UNIT SCHEDULE (AHU)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	SUPPLY FAN DATA SA CFM	SUPPLY FAN DATA OA CFM	SUPPLY FAN DATA PRESS ESP	SUPPLY FAN DATA PRESS TSP	SUPPLY FAN DATA MOTOR QTY	SUPPLY FAN DATA MOTOR POWER	RETURN FAN AIRFLOW DESIGN	RETURN FAN PRESS ESP	RETURN FAN PRESS TSP	RETURN FAN MOTOR QTY	RETURN FAN MOTOR POWER	HEATING COIL DATA TOTAL CAPACITY	AIRSIDE EAT(db)	AIRSIDE LAT(db)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL Propylene	GLYCOL %	COOLING COIL DATA CAP TOTAL	CAP SENSIBLE	AIRSIDE EAT(db)	AIRSIDE EAT(wb)	AIRSIDE LAT(db)	AIRSIDE LAT(wb)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL Propylene	GLYCOL %	FLA	MCA	MOCP	VOLT	PH	UNIT WEIGHT	NOTES
AHU-1	MECHANICAL ROOM		PETRA	PAH-80	7400 CFM	3200 CFM	2.00 in-wg	4.70 in-wg	2	6.70 hp	7400 CFM	1.50 in-wg	2.10 in-wg	2	3.90 hp	497300 Btu/h	40.0 °F	102.4 °F	37.0 GPM	130 °F	100 °F	9.0 ftH2O	Yes	40%	277700 Btu/h	227100 Btu/h	83.0 °F	67.0 °F	54.7 °F	54.6 °F	64.0 GPM	45 °F	55 °F	12.5 ftH2O	Yes	40	0.0 A	25.0 A	30.0 A	480 V	3	6800 lb	1,2,3,4,5,6,7,8,9
AHU-2	MECHANICAL ROOM		PETRA	PAH-80	6850 CFM	2975 CFM	2.00 in-wg	4.60 in-wg	2	6.70 hp	6850 CFM	1.50 in-wg	2.10 in-wg	2	3.90 hp	469300 Btu/h	40.0 °F	104.0 °F	35.0 GPM	130 °F	100 °F	8.0 ftH2O	Yes	40%	257600 Btu/h	210500 Btu/h	83.0 °F	67.0 °F	54.6 °F	54.6 °F	59.0 GPM	45 °F	55 °F	11.0 ftH2O	Yes	40	0.0 A	25.0 A	30.0 A	480 V	3	6800 lb	1,2,3,4,5,6,7,8,9
AHU-3	MECHANICAL ROOM	200	PETRA	CM-24	2000 CFM	425 CFM	1.50 in-wg	4.80 in-wg	1	3.60 hp	0 CFM	0.00 in-wg	0.00 in-wg	0	0.00 hp	136000 Btu/h	40.0 °F	103.0 °F	10.5 GPM	130 °F	100 °F	11.5 ftH2O	Yes	40%	74600 Btu/h	60800 Btu/h	83.0 °F	67.0 °F	54.9 °F	54.7 °F	17.0 GPM	45 °F	55 °F	18.5 ftH2O	Yes	40	7.6 A	5.0 A	15.0 A	480 V	3	1200 lb	1,2,3,4,5,6,7,8,9,10

AIR HANDLING UNIT SCHEDULE (AHU) ALTERNATE MC1

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	SUPPLY FAN DATA SA CFM	SUPPLY FAN DATA OA CFM	SUPPLY FAN DATA PRESS ESP	SUPPLY FAN DATA PRESS TSP	SUPPLY FAN DATA MOTOR QTY	SUPPLY FAN DATA MOTOR POWER	RETURN FAN AIRFLOW DESIGN	RETURN FAN PRESS ESP	RETURN FAN PRESS TSP	RETURN FAN MOTOR QTY	RETURN FAN MOTOR POWER	HEATING COIL DATA TOTAL CAPACITY	AIRSIDE EAT(db)	AIRSIDE LAT(db)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL Propylene	GLYCOL %	COOLING COIL DATA CAP TOTAL	CAP SENSIBLE	AIRSIDE EAT(db)	AIRSIDE EAT(wb)	AIRSIDE LAT(db)	AIRSIDE LAT(wb)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL Propylene	GLYCOL %	FLA	MCA	MOCP	VOLT	PH	UNIT WEIGHT	NOTES
AHU-2	MECHANICAL ROOM		PETRA	PAH-100	8700 CFM	3780 CFM	2.00 in-wg	4.70 in-wg	2	7.00 hp	8700 CFM	1.50 in-wg	2.10 in-wg	2	3.90 hp	577100 Btu/h	40.0 °F	100.0 °F	43.0 GPM	130 °F	100 °F	5.0 ftH2O	Yes	40%	312100 Btu/h	261200 Btu/h	83.0 °F	67.0 °F	53.3 °F	55.2 °F	72.0 GPM	45 °F	55 °F	10.0 ftH2O	Yes	40	0.0 A	27.2 A	35.0 A	480 V	3	7500 lb	1,2,3,4,5,6,7,8,9

AIR HANDLING UNIT SCHEDULE (AHU) ALTERNATE MC2

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	SUPPLY FAN DATA SA CFM	SUPPLY FAN DATA OA CFM	SUPPLY FAN DATA PRESS ESP	SUPPLY FAN DATA PRESS TSP	SUPPLY FAN DATA MOTOR QTY	SUPPLY FAN DATA MOTOR POWER	RETURN FAN AIRFLOW DESIGN	RETURN FAN PRESS ESP	RETURN FAN PRESS TSP	RETURN FAN MOTOR QTY	RETURN FAN MOTOR POWER	HEATING COIL DATA TOTAL CAPACITY	AIRSIDE EAT(db)	AIRSIDE LAT(db)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL Propylene	GLYCOL %	COOLING COIL DATA CAP TOTAL	CAP SENSIBLE	AIRSIDE EAT(db)	AIRSIDE EAT(wb)	AIRSIDE LAT(db)	AIRSIDE LAT(wb)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL Propylene	GLYCOL %	FLA	MCA	MOCP	VOLT	PH	UNIT WEIGHT	NOTES
AHU-1	MECHANICAL ROOM		PETRA	PAH-100	9780 CFM	4235 CFM	2.00 in-wg	5.00 in-wg	2	7.00 hp	9780 CFM	1.50 in-wg	2.10 in-wg	2	3.90 hp	659300 Btu/h	40.0 °F	102.6 °F	49.0 GPM	130 °F	100 °F	6.0 ftH2O	Yes	40%	347300 Btu/h	292100 Btu/h	83.0 °F	67.0 °F	55.4 °F	55.3 °F	80.0 GPM	45 °F	55 °F	11.5 ftH2O	Yes	40	0.0 A	27.2 A	35.0 A	480 V	3	7500 lb	1,2,3,4,5,6,7,8,9

NOTES:
1. PROVIDE UNIT WITH DOUBLE WALL CONSTRUCTION WITH A MIX OF R13 INSULATION
2. PROVIDE UNIT WITH 4" MERV 14 FILTERS
3. PROVIDE UNIT WITH DIRECT DRIVE MOTORS WITH VARIABLE SPEED DRIVES
4. PROVIDE UNIT WITH SINGLE POINT ELECTRICAL CONNECTION WITH INTEGRAL FUSED DISCONNECT
5. INSTALL UNIT ON 4" H REINFORCED CONCRETE PAD
6. REFER TO CONTROL SCHEMATIC DRAWINGS FOR MORE INFORMATION
7. REFER TO DETAIL DRAWINGS FOR UNIT CONFIGURATIONS
8. UNIT TO BE BUILT IN SECTIONS TO ALLOW ACCESS TO THE BUILDING
9. MC IS RESPONSIBLE FOR UNIT ASSEMBLY. EC RESPONSIBLE FOR CONNECTING WIRING BETWEEN UNIT SPLITS
10. PROVIDE 36" H STRUCTURAL DUNNAGE TO SUPPORT UNIT

HYDRONIC MAKEUP AIR UNIT SCHEDULE (MAU)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	ARRANGEMENT	AIRFLOW SUPPLY	AIRFLOW OA %	AIRFLOW DCV	FAN PRESS ESP	FAN DRIVE TYPE	FAN MOTOR QTY	FAN MOTOR POWER	FAN MOTOR ECM	HEATING COIL CAP	HEATING COIL AIRSIDE EAT(db)	HEATING COIL AIRSIDE LAT(db)	HEATING COIL WATERSIDE ROWS	HEATING COIL WATERSIDE FLOW	HEATING COIL WATERSIDE EWT	HEATING COIL WATERSIDE LWT	HEATING COIL WATERSIDE PD	HEATING PLANT GLYCOL TYPE	HEATING PLANT GLYCOL %	FILTER TYPE	FILTER EFF	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	INTERLOCK ID	NOTES
MUA-1	ROOF	-	GREENHECK	MSX-P112-H12-MF	HYDRONIC	DOWNFLOW	1600 CFM	100	Yes	0.50 in-wg	DIRECT	1	1.00 hp	No	120300 Btu/h	0.0 °F	69.6 °F	3	10.0 GPM	130 °F	104 °F	0.4 ftH2O	PG	40	THROWAWAY	MERV-13	927 lb	4.6 A	6.2 A	15.0 A	208 V	3	EF-1	1,2,3

NOTES:
1. PROVIDE WITH MOTORIZED INTAKE AIR DAMPER
2. PROVIDE WITH A 18" H INSULATED ROOF CURB
3. PROVIDE UNIT WITH VARIABLE SPEED DRIVE FOR SOFT START AND BALANCING

BOILER SCHEDULE (B)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	GAS-FIRED HEAT EXCHANGER GAS BURNER INPUT	GAS BURNER INPUT @ MIN FIRE	GAS BURNER CAP	GAS BURNER CAP @ MIN FIRE	FUEL STAGES	FUEL TYPE	FUEL PRESS AVAIL	WATERSIDE FLOW DESIGN	WATERSIDE FLOW MIN @ MIN FIRE	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	WATERSIDE VOL	HEATING PLANT GLYCOL TYPE	HEATING PLANT GLYCOL %	THERMAL EFF	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	NOTES
B-1	MECHANICAL ROOM		AERCO	BMK PLATINUM 2000	CONDENSING	2000000 Btu/h	100000 Btu/h	1840000 Btu/h	92000 Btu/h	20	NG	0.3 ftH2O	143.8 GPM	25.0 GPM	110 °F	140 °F	6.9 ftH2O	40.0 gal	PG	40	95%	802 lb	16.0 A	20.0 A	25.0 A	120 V	1	1,2,3,4,5,6,7
B-2	MECHANICAL ROOM		AERCO	BMK PLATINUM 2000	CONDENSING	2000000 Btu/h	100000 Btu/h	1840000 Btu/h	92000 Btu/h	20	NG	0.3 ftH2O	143.8 GPM	25.0 GPM	110 °F	140 °F	6.9 ftH2O	40.0 gal	PG	40	95%	802 lb	16.0 A	20.0 A	25.0 A	120 V	1	1,2,3,4,5,6,7
B-3	MECHANICAL ROOM		AERCO	BMK PLATINUM 2000	CONDENSING	2000000 Btu/h	100000 Btu/h	1840000 Btu/h	92000 Btu/h	20	NG	0.3 ftH2O	143.8 GPM	25.0 GPM	110 °F	140 °F	6.9 ftH2O	40.0 gal	PG	40	95%	802 lb	16.0 A	20.0 A	25.0 A	120 V	1	1,2,3,4,5,6,7
B-4	MECHANICAL ROOM		AERCO	BMK PLATINUM 2000	CONDENSING	2000000 Btu/h	100000 Btu/h	1840000 Btu/h	92000 Btu/h	20	NG	0.3 ftH2O	143.8 GPM	25.0 GPM	110 °F	140 °F	6.9 ftH2O	40.0 gal	PG	40	95%	802 lb	16.0 A	20.0 A	25.0 A	120 V	1	1,2,3,4,5,6,7

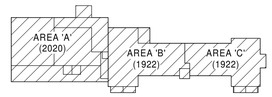
NOTES:
1. CONDENSATE DRAIN FOR BOILERS SHALL BE TIED TOGETHER AND RUN THROUGH A CONDENSATE TRAP AND NEUTRALIZATION TANK BY UNIT MANUFACTURER
2. PROVIDE BOILER CONTROL PANEL FOR CONTROL OF ALL BOILERS AND INCLUDE A BACNET INTERFACE FOR BUILDING AUTOMATION SYSTEM
3. PROVIDE BOILER WITH TWO-WAY CONTROL VALVE INTEGRATED IN BOILER CONTROL SEQUENCE
4. INSTALL BOILERS ON A 6" H REINFORCED CONCRETE PAD TO ALLOW FOR CONDENSATE DRAIN
5. COMBUSTION AIR TO BE FULLY INSULATED AND DUCTED INDIVIDUALLY UP THROUGH ROOF TO A GOOSENECK HOOD
6. BOILER VENT IS TO BE AL294C STAINLESS STEEL AND SHALL BE MANIFOLDED TO A SINGLE FLUE UP THROUGH ROOF, TERMINATE 6 FEET ABOVE ROOF WITH A RAIN CAP
7. PROVIDE AN INTAKE AND EXHAUST MUFFLER FOR EACH BOILER

AIR COOLED CHILLER SCHEDULE (CH)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	EVAPORATOR COOLING HEAT EXCHANGER COOLING CAP	LOAD: CHILLED WATER FLOW DESIGN	LOAD: CHILLED WATER FLOW MIN	LOAD: CHILLED WATER EWT	LOAD: CHILLED WATER LWT	LOAD: CHILLED WATER PD	LOAD: CHILLED WATER VOL	COOLING PLANT GLYCOL TYPE	COOLING PLANT GLYCOL %	CONDENSER FAN MOTOR QTY	CONDENSER FAN MOTOR POWER	CONDENSER FAN ECM	COMPRESSOR TYPE	COMPRESSOR REFRIGERANT TYPE	COMPRESSOR REFRIGERANT CHARGE	COMPRESSOR UNLOAD STEPS	SUMMER AMBIENT DBT	FL	IPLV	NPLV	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	NOTES
CH-1	ROOF	-	QUANTECH	QTC3160TSE46XFBSXXX	MODULAR	163.6 ton	420.0 GPM	150.0 GPM	54 °F	44 °F	45.2 ftH2O	10.0 gal	PG	40	4	2.00 hp	Yes	SCROLL	R410A	177 lb	6	93.0 °F	1.2	16.65	16.51	8816 lb	94.0 A	372.0 A	400.0 A	480 V	3	1,2,3,4,5,6,7,8,9,10
CH-2	ROOF	-	QUANTECH	QTC3160TSE46XFBSXXX	MODULAR	163.6 ton	420.0 GPM	150.0 GPM	54 °F	44 °F	45.2 ftH2O	10.0 gal	PG	40	4	2.00 hp	Yes	SCROLL	R410A	177 lb	6	93.0 °F	1.2	16.65	16.51	8816 lb	94.0 A	372.0 A	400.0 A	480 V	3	1,2,3,4,5,6,7,8,9,10

NOTES:
1. PROVIDE CHILLER CONTROL PANEL FOR CONTROL OF BOTH CHILLERS AND INCLUDE A BACNET INTERFACE FOR BUILDING AUTOMATION SYSTEM
2. PROVIDE CHILLER WITH TWO-WAY CONTROL VALVE INTEGRATED IN CHILLER CONTROL SEQUENCE
3. INTALL AND SECURE CHILLER ON STRUCTURAL SUPPORT BEAM WITH VIBRATION ISOLATORS
4. PROVIDE UNIT WITH SINGLE POINT ELECTRICAL CONNECTION WITH INTEGRAL FUSED DISCONNECT
5. PROVIDE CHILLER WITH A SOUND ATTENUATION PACKAGE
6. PROVIDE CONTROL TRANSFORMER
7. PROVIDE SERVICE ISOLATION VALVES
8. PROVIDE ELECTRONIC EXPANSION VALVES
9. PROVIDE LOW SOUND FAN WITH VSD CONTROL
10. PROVIDE LOUVERED ENCLOSURE PANELS

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

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Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

MECHANICAL EQUIPMENT SCHEDULES

BUILDING MS

SHEET NUMBER M602

RE-BID

2/2/2022 4:37:04 PM

BLOWER COIL UNIT SCHEDULE (BCU)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	SUPPLY AIR FLOW	OUTSIDE AIR FLOW	FAN PRESS ESP	FAN PRESS TSP	FAN MOTOR POWER	HEATING COIL DATA TOTAL CAP	HEATING COIL DATA AIRSIDE EAT(db)	HEATING COIL DATA AIRSIDE LAT(db)	HEATING COIL DATA WATERSIDE FLOW	HEATING COIL DATA WATERSIDE EWT	HEATING COIL DATA WATERSIDE LWT	HEATING COIL DATA WATERSIDE PD	HEATING COIL DATA GLYCOL Propylene	HEATING COIL DATA GLYCOL %	COOLING COIL DATA CAP TOTAL	COOLING COIL DATA CAP SENSIBLE	COOLING COIL DATA AIRSIDE EAT(db)	COOLING COIL DATA AIRSIDE EAT(wb)	COOLING COIL DATA AIRSIDE LAT(db)	COOLING COIL DATA AIRSIDE LAT(wb)	COOLING COIL DATA WATERSIDE FLOW	COOLING COIL DATA WATERSIDE EWT	COOLING COIL DATA WATERSIDE LWT	COOLING COIL DATA WATERSIDE PD	COOLING COIL DATA GLYCOL TYPE	COOLING COIL DATA GLYCOL %	FLA	MCA	MOCP	VOLT	PH	NOTES
BCU-1	GYM STORAGE	105A	IEC	HDY06	520 CFM	0 CFM	0.20 in-wg	1.90 in-wg	0.50 hp	29900 Btu/h	40.0 °F	93.2 °F	6.5 GPM	130 °F	120 °F	15.2 ftH2O	Yes	40	19300 Btu/h	15300 Btu/h	83.0 °F	67.0 °F	56.1 °F	55.0 °F	4.5 GPM	45 °F	55 °F	4.6 ftH2O	PG	40	1.0 A	1.0 A	15.0 A	480 V	3	1,2,3,4,5,6

NOTES:
1 HANG UNIT FROM STRUCTURE WITH VIBRATION ISOLATORS
2 PROVIDE UNIT WITH MERV 13 FITLERS
3 PROVIDE UNIT WITH DIRECT DRIVVE MOTORS WITH VARIABLE SPEED DRIVES
4 PROVIDE UNIT WITH SINGLE POINT ELECTRICAL CONNECTION WITH INTEGRAL FUSED DISCONNECT
5 REFER TO CONTROL SCHEMATIC DRAWINGS FOR MORE INFORMATION
6 REFER TO DETAIL DRAWINGS FOR UNIT CONFIGURATIONS

DUCT MOUNTED COIL SCHEDULE (DHC)

ID	ROOM NAME	ROOM NO.	MANUFACTURER	MODEL NO.	TYPE	CFM	CAP	EAT(db)	LAT(db)	GPM	EWT	LWT	WPD	GLYCOL TYPE	GLYCOL %	UNIT DIMENSIONS WIDTH	UNIT DIMENSIONS HEIGHT	UNIT WEIGHT	NOTES
DHC-1	MECHANICAL ROOM	200	NATIONWIDE COILS	HW58F	STANDARD	960 CFM	52000 Btu/h	50.0 °F	100.2 °F	4.0 GPM	130 °F	100 °F	3.5 ftH2O	PG	40	2' - 0"	10 1/2"	26 lb	1,2
DHC-2	CORRIDOR	B1	NATIONWIDE COILS	HW58S	STANDARD	490 CFM	26200 Btu/h	50.0 °F	99.6 °F	2.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	1' - 4"	10 1/2"	31 lb	1,2
DHC-3	CORRIDOR	D1	NATIONWIDE COILS	HW38S	STANDARD	200 CFM	10100 Btu/h	50.0 °F	96.8 °F	1.0 GPM	130 °F	100 °F	4.7 ftH2O	PG	40	1' - 2"	6"	14 lb	1,2
DHC-4	CORRIDOR	C2	NATIONWIDE COILS	HW58S	STANDARD	510 CFM	25500 Btu/h	50.0 °F	96.4 °F	2.0 GPM	130 °F	100 °F	3.6 ftH2O	PG	40	1' - 4"	10 1/2"	31 lb	1,2
DHC-5	CORRIDOR	C2	NATIONWIDE COILS	HW58S	STANDARD	490 CFM	26200 Btu/h	50.0 °F	99.6 °F	2.0 GPM	130 °F	100 °F	3.8 ftH2O	PG	40	1' - 4"	10 1/2"	31 lb	1,2
DHC-6	CORRIDOR	C3	NATIONWIDE COILS	HW38S	STANDARD	370 CFM	18800 Btu/h	50.0 °F	97.1 °F	1.5 GPM	130 °F	100 °F	5.0 ftH2O	PG	40	1' - 4"	10"	22 lb	1,2
DHC-7	CORRIDOR	D3	NATIONWIDE COILS	HW58S	STANDARD	620 CFM	30500 Btu/h	50.0 °F	95.6 °F	2.5 GPM	130 °F	100 °F	3.9 ftH2O	PG	40	1' - 6"	10 1/2"	30 lb	1,2

DUCT MOUNTED COIL SCHEDULE (DHC) ALTERNATE MC1

ID	ROOM NAME	ROOM NO.	MANUFACTURER	MODEL NO.	TYPE	CFM	CAP	EAT(db)	LAT(db)	GPM	EWT	LWT	WPD	GLYCOL TYPE	GLYCOL %	UNIT DIMENSIONS WIDTH	UNIT DIMENSIONS HEIGHT	UNIT WEIGHT	NOTES
DHC-1	MECHANICAL ROOM	200	NATIONWIDE COILS	HW58F	STANDARD	1330 CFM	58000 Btu/h	50.0 °F	90.4 °F	4.4 GPM	130 °F	100 °F	4.5 ftH2O	PG	40	3' - 0"	1' - 0"	26 lb	1,2

NOTES:
1 REFER TO DUCT MOUNTED COIL DETAIL FOR MORE INFORMATION
2 COIL, COIL SLEEVE AND ASSOCIATED DUCTWORK TO BE FULLY INSULATED

CIRCULATING PUMP SCHEDULE (P)

ID	LOCATION NAME	LOCATION NO.	SYSTEM	MANUFACTURER	MODEL NO.	TYPE	ARRANGEMENT	PUMP FLOW DESIGN	PUMP FLOW MIN	PUMP HEAD	PUMP NPSHR	PUMP SPEED (RPM)	PUMP EFF	PUMP DRIVE TYPE	MOTOR POWER	MOTOR ECM	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	NOTES
P-1	MECHANICAL ROOM		CHILLED WATER	BELL & GOSSETT	E-1510 5BD	END SUCTION	BASE MOUNT	840.0 GPM	253.0 GPM	75.0 FT	14.1 ftH2O	1770	82.7%	DIRECT	25.00 hp	No	780 lb	34.0 A	42.5 A	90.0 A	480 V	3	1,2,3,4,5
P-1A	MECHANICAL ROOM		CHILLED WATER	BELL & GOSSETT	E-1510 5BD	END SUCTION	BASE MOUNT	840.0 GPM	253.0 GPM	75.0 FT	14.1 ftH2O	1770	82.7%	DIRECT	25.00 hp	No	780 lb	34.0 A	42.5 A	90.0 A	480 V	3	1,2,3,4,5
P-2	MECHANICAL ROOM		CHILLED WATER	BELL & GOSSETT	E-1510 4BD	END SUCTION	BASE MOUNT	750.0 GPM	180.0 GPM	70.0 FT	8.8 ftH2O	1770	80.9%	DIRECT	25.00 hp	No	765 lb	34.0 A	42.5 A	90.0 A	480 V	3	1,2,3,4,5
P-2A	MECHANICAL ROOM		CHILLED WATER	BELL & GOSSETT	E-1510 4BD	END SUCTION	BASE MOUNT	750.0 GPM	180.0 GPM	70.0 FT	8.8 ftH2O	1770	80.9%	DIRECT	25.00 hp	No	765 lb	34.0 A	42.5 A	90.0 A	480 V	3	1,2,3,4,5
P-3	MECHANICAL ROOM		HEATING WATER	BELL & GOSSETT	E-1510 3BD	END SUCTION	BASE MOUNT	575.0 GPM	147.0 GPM	80.0 FT	7.6 ftH2O	1770	83.0%	DIRECT	20.00 hp	No	590 lb	27.0 A	33.8 A	70.0 A	480 V	3	1,2,3,4,5
P-3A	MECHANICAL ROOM		HEATING WATER	BELL & GOSSETT	E-1510 3BD	END SUCTION	BASE MOUNT	575.0 GPM	147.0 GPM	80.0 FT	7.6 ftH2O	1770	83.0%	DIRECT	20.00 hp	No	590 lb	27.0 A	33.8 A	70.0 A	480 V	3	1,2,3,4,5
P-4	MECHANICAL ROOM		HEATING WATER	BELL & GOSSETT	E-90 2AAC	INLINE	INLINE	60.0 GPM	21.3 GPM	45.0 FT	5.0 ftH2O	3450	66.7%	DIRECT	2.00 hp	Yes	50 lb	7.5 A	9.4 A	20.0 A	208 V	3	5

NOTES:
1 PROVIDE A VARIABLE SPEED DRIVE WITH PUMP
2 MOUNT PUMP ON 4" REINFORCED PAD AND INCLUDE A SPRING ISOLATED INERTIA PAD WITH EACH PUMP
3 ALIGN PUMP MOTOR, MOTOR SHAFT, AND IMPELLER PRIOR TO GROUNDING BASE
4 PROVIDE SUCTION DIFFUSER
5 REFER TO PUMP INSTALLATION DETAIL FOR MORE INFORMATION

EXPANSION TANK SCHEDULE (ET)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	SHELL	BLADDER	SYSTEM	TYPE	ARRANGEMENT	VOL	ACCEPTANCE VOL	MAX ACCEPTANCE FACTOR	PRESS RELIEF	PRECHARGE PRESS	UNIT DIMENSIONS DIAMETER	UNIT DIMENSIONS HEIGHT	ASME	UNIT WEIGHT	NOTES
ET-1	MECHANICAL ROOM	238	BELL & GOSSETT	B-800	CARBON STEEL	BUTYL RUBBER	CHILLED WATER	BLADDER	VERTICAL	211.0 gal	211.0 gal	1.00	125 psi	12 psi	30"	81 3/4"	Yes	2352 lb	1,2
ET-2	MECHANICAL ROOM	238	BELL & GOSSETT	B-800	CARBON STEEL	BUTYL RUBBER	HEATING WATER	BLADDER	VERTICAL	211.0 gal	211.0 gal	1.00	125 psi	12 psi	30"	81 3/4"	Yes	2352 lb	1,2

NOTES:
1 MOUNT TANK ON 4" H REINFORCED CONCRETE PAD
2 REFER TO EXPANSION TANK DETAIL FOR MORE INFORMATION

CABINET UNIT HEATER SCHEDULE (CUH)

ID	ROOM NAME	ROOM NO.	MANUFACTURER	MODEL NO.	TYPE	AIRFLOW	HEATING COIL CAP	HEATING COIL AIRSIDE EAT(db)	HEATING COIL AIRSIDE LAT(db)	HEATING COIL WATERSIDE FLOW	HEATING COIL WATERSIDE EWT	HEATING COIL WATERSIDE LWT	HEATING COIL WATERSIDE PD	HEATING PLANT GLYCOL TYPE	HEATING PLANT GLYCOL %	HP	VOLT	PH	FLA	MOCP	NOTES
CUH-1	STAIR	ST1	SIGMA CORPORATION	SFF-R-O6	RECESSED WALL	600 CFM	20500 Btu/h	60.0 °F	93.6 °F	2.00 GPM	130 °F	110 °F	0.5 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3
CUH-2	RECEIVING	111G	SIGMA CORPORATION	SFF-CR-O6	RECESSED CEILING	600 CFM	20500 Btu/h	60.0 °F	93.6 °F	2.00 GPM	130 °F	110 °F	0.5 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3,4
CUH-3	VESTIBULE	100	SIGMA CORPORATION	SFF-R-O8	RECESSED WALL	800 CFM	31300 Btu/h	60.0 °F	98.6 °F	2.50 GPM	130 °F	110 °F	0.3 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3
CUH-4	STAIR	ST2	SIGMA CORPORATION	SFF-R-O6	RECESSED WALL	600 CFM	20500 Btu/h	60.0 °F	93.6 °F	2.00 GPM	130 °F	110 °F	0.5 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3
CUH-5	VESTIBULE	C1A	SIGMA CORPORATION	SFF-R-O6	RECESSED WALL	600 CFM	20500 Btu/h	60.0 °F	93.6 °F	2.00 GPM	130 °F	110 °F	0.5 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3
CUH-6	STAIR-1	ST3-1	SIGMA CORPORATION	SFF-CR-O6	RECESSED CEILING	600 CFM	20500 Btu/h	60.0 °F	93.6 °F	2.00 GPM	130 °F	110 °F	0.5 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3,4
CUH-7	STAIR-2	ST2-2	SIGMA CORPORATION	SFF-CR-O6	RECESSED CEILING	600 CFM	20500 Btu/h	60.0 °F	93.6 °F	2.00 GPM	130 °F	110 °F	0.5 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3,4
CUH-8	STAIR-2	ST1-2	SIGMA CORPORATION	SFF-CR-O6	RECESSED CEILING	600 CFM	20500 Btu/h	60.0 °F	93.6 °F	2.00 GPM	130 °F	110 °F	0.5 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3,4
CUH-9	STAIR-3	ST2-3	SIGMA CORPORATION	SFF-CR-O6	RECESSED CEILING	600 CFM	20500 Btu/h	60.0 °F	93.6 °F	2.00 GPM	130 °F	110 °F	0.5 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3,4
CUH-10	STAIR-2	ST3-2	SIGMA CORPORATION	SFF-CR-O6	RECESSED CEILING	600 CFM	20500 Btu/h	60.0 °F	93.6 °F	2.00 GPM	130 °F	110 °F	0.5 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3,4

CABINET UNIT HEATER SCHEDULE (CUH) ALTERNATE MC1

ID	ROOM NAME	ROOM NO.	MANUFACTURER	MODEL NO.	TYPE	AIRFLOW	HEATING COIL CAP	HEATING COIL AIRSIDE EAT(db)	HEATING COIL AIRSIDE LAT(db)	HEATING COIL WATERSIDE FLOW	HEATING COIL WATERSIDE EWT	HEATING COIL WATERSIDE LWT	HEATING COIL WATERSIDE PD	HEATING PLANT GLYCOL TYPE	HEATING PLANT GLYCOL %	HP	VOLT	PH	FLA	MOCP	NOTES
CUH-11	TOILET	103	SIGMA CORPORATION	SFF-CR-O2	RECESSED CEILING	220 CFM	6480 Btu/h	55.0 °F	97.4 °F	1.25 GPM	130 °F	110 °F	0.2 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3,4
CUH-12	TOILET	102	SIGMA CORPORATION	SFF-CR-O2	RECESSED CEILING	220 CFM	6480 Btu/h	55.0 °F	97.4 °F	1.25 GPM	130 °F	110 °F	0.2 ftH2O	PG	40	0.10 hp	120 V	1	1.9 A	15.0 A	1,2,3,4

NOTES:
1 PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH
2 PROVIDE COLOR CHART FOR SELECTION BY ARCHITECT
3 PROVIDE WITH KEYED ACCESS DOORS AND SECURITY FASTENERS
4 PROVIDE WITH SAFETY CHAIN

UNIT HEATER SCHEDULE (UH)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	CFM	CAP	AIRSIDE EAT(db)	AIRSIDE LAT(db)	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	GLYCOL TYPE	GLYCOL %	FLA	MOCP	VOLT	PH	NOTES
UH-1	GENERAL STORAGE	124	SIGMA CORPORATION	030H	HORIZONTAL	420 CFM	8000 Btu/h	55.0 °F	72.6 °F	1.0 GPM	130 °F	100 °F	0.1 ftH2O	PG	40	1.1 A	15.0 A	120 V	1	1,2,3
UH-2	GENERAL STORAGE	124	SIGMA CORPORATION	030H	HORIZONTAL	420 CFM	8000 Btu/h	55.0 °F	72.6 °F	1.0 GPM	130 °F	100 °F	0.1 ftH2O	PG	40	1.1 A	15.0 A	120 V	1	1,2,3
UH-3	WATER SERVICE	131	SIGMA CORPORATION	030H	HORIZONTAL	420 CFM	8000 Btu/h	55.0 °F	72.6 °F	1.0 GPM	130 °F	100 °F	0.1 ftH2O	PG	40	1.1 A	15.0 A	120 V	1	1,2,3
UH-4	MECHANICAL ROOM	238	SIGMA CORPORATION	084H	HORIZONTAL	1140 CFM	20900 Btu/h	55.0 °F	72.0 °F	2.0 GPM	130 °F	100 °F	0.2 ftH2O	PG	40	2.0 A	15.0 A	120 V	1	1,2,3
UH-5	MECHANICAL ROOM	238	SIGMA CORPORATION	084H	HORIZONTAL	1140 CFM	20900 Btu/h	55.0 °F	72.0 °F	2.0 GPM	130 °F	100 °F	0.2 ftH2O	PG	40	2.0 A	15.0 A	120 V	1	1,2,3
UH-6	MECHANICAL ROOM	200	SIGMA CORPORATION	030H	HORIZONTAL	620 CFM	10100 Btu/h	55.0 °F	70.1 °F	1.0 GPM	130 °F	100 °F	0.1 ftH2O	PG	40	2.0 A	15.0 A	120 V	1	1,2,3
UH-7	MECHANICAL ROOM	200	SIGMA CORPORATION	030H	HORIZONTAL	620 CFM	10100 Btu/h	55.0 °F	70.1 °F	1.0 GPM	130 °F	100 °F	0.1 ftH2O	PG	40	2.0 A	15.0 A	120 V	1	1,2,3
UH-8	ROOF	-	SIGMA CORPORATION	084H	HORIZONTAL	1140 CFM	20900 Btu/h	55.0 °F	72.0 °F	2.0 GPM	130 °F	100 °F	0.2 ftH2O	PG	40	2.0 A	15.0 A	120 V	1	1,2,3

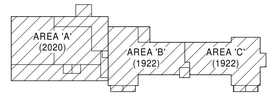
NOTES:
1 MOUNT UNIT FROM STRUCTURE WITH VIBRATION ISOLATORS
2 PROVIDE WITH UNIT MOUNTED DISCONNECT AND ECM MOTORS
3 REFER TO CONTROL SCHEMATIC DRAWINGS FOR MORE INFORMATION

GLYCOL MAKE-UP UNIT SCHEDULE

ID	LOCATION NAME	LOCATION NO.	SYSTEM NAME	MANUFACTURER	MODEL NO.	TYPE	PUMP FLOW	PUMP HEAD	PUMP DISCHARGE PRESS	MOTOR QTY	MOTOR POWER	MOTOR RPM	MOTOR ECM	UNIT VOL	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	NOTES
GMU-1	MECH	238	CHWS 6	BELL & GOSSETT	GMU-30		10.0 GPM	70.0 FT	30.3 psi	1	0.50 hp	3600	No	55.0 gal	160 lb	9.8 A	12.3 A	20.0 A	120 V	1	
GMU-2	MECH	238	HWS 38	BELL & GOSSETT	GMU-30		10.0 GPM	70.0 FT	30.3 psi	1	0.50 hp	3600	No	55.0 gal	160 lb	9.8 A	12.3 A	20.0 A	120 V	1	

NOTES:

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

BCA Architects & Engineers
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PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY: AJZ
PROJECT NUMBER: 2019-011
CHECKED BY: JLM
DATE: 02/04/2022

MECHANICAL EQUIPMENT SCHEDULES

BUILDING: MS
SHEET NUMBER: M603
RE-BID

2/2/2022 4:37:20 PM

FAN SCHEDULE (EF) (PRE)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	ARRANGEMENT	FAN DESCRIPTION	AIRFLOW DESIGN	PRESS ESP	RPM	WHEEL TYPE	WHEEL DIA	DRIVE TYPE	MOTOR QTY	MOTOR POWER	MOTOR RPM	MOTOR ECM	SOUND PRESS LEVEL (dBA)	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	INTERLOCK ID	NOTES
EF-1	CORRIDOR	107B	GREENHECK	SQ 90	INLINE	HORIZONTAL	Exhaust Fan	560 CFM	0.25 in-wg	1554	BI	10 7/8"	DIRECT	1	0.10 hp	1725	No	54	50 lb	2.5 A	3.1 A	15.0 A	120 V	1		2,4
PRE-1	ROOF		GREENHECK	CUE-161	CENTRIFUGAL	UPFLOW	Exhaust Fan	2000 CFM	0.40 in-wg	745	BI	1' - 6 1/2"	BELT	1	0.50 hp	1725	No	55	116 lb	2.4 A	3.0 A	15.0 A	208 V	3	KITCHEN HOOD	1,2,3,4,5
PRE-2	ROOF		GREENHECK	G-060	CENTRIFUGAL	DOWNFLOW	Exhaust Fan	70 CFM	0.25 in-wg	1383	BI	8 1/8"	DIRECT	1	0.07 hp	1725	No	41	21 lb	1.3 A	1.6 A	15.0 A	120 V	1		1,2,3,4
PRE-3	ROOF		GREENHECK	CUE-090	CENTRIFUGAL	UPFLOW	Exhaust Fan	600 CFM	0.25 in-wg	1129	BI	11 3/16"	DIRECT	1	0.25 hp	1725	No	51	40 lb	2.9 A	3.6 A	15.0 A	120 V	1	DISHWASHER	1,2,3,4
PRE-4	ROOF		GREENHECK	G-060	CENTRIFUGAL	DOWNFLOW	Exhaust Fan	70 CFM	0.25 in-wg	1383	BI	8 1/8"	DIRECT	1	0.07 hp	1725	No	41	21 lb	1.8 A	2.3 A	15.0 A	120 V	1		1,2,3,4
PRE-5	ROOF		GREENHECK	G-099	CENTRIFUGAL	DOWNFLOW	Exhaust Fan	910 CFM	0.30 in-wg	1429	BI	11 3/16"	DIRECT	1	0.25 hp	1725	No	60	40 lb	2.9 A	3.6 A	15.0 A	120 V	1		1,2,3,4
PRE-6	ROOF		GREENHECK	G-099	CENTRIFUGAL	DOWNFLOW	Exhaust Fan	840 CFM	0.30 in-wg	1351	BI	11 3/16"	DIRECT	1	0.25 hp	1725	No	59	40 lb	2.9 A	3.6 A	15.0 A	120 V	1		1,2,3,4
PRE-7	ROOF		GREENHECK	G-099	CENTRIFUGAL	DOWNFLOW	Exhaust Fan	980 CFM	0.30 in-wg	1509	BI	11 3/16"	DIRECT	1	0.25 hp	1725	No	61	40 lb	2.9 A	3.6 A	15.0 A	120 V	1		1,2,3,4
PRE-8	ROOF		GREENHECK	G-070	CENTRIFUGAL	DOWNFLOW	Exhaust Fan	140 CFM	0.25 in-wg	1402	BI	8 1/8"	DIRECT	1	0.07 hp	1725	No	43	22 lb	1.3 A	1.6 A	15.0 A	120 V	1		1,2,3,4
PRE-9	ROOF		GREENHECK	G-060	CENTRIFUGAL	DOWNFLOW	Exhaust Fan	70 CFM	0.25 in-wg	1383	BI	8 1/8"	DIRECT	1	0.07 hp	1725	No	41	21 lb	1.3 A	1.6 A	15.0 A	120 V	1	RTH-5	1,2,3,4

FAN SCHEDULE (EF) (PRE)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	ARRANGEMENT	FAN DESCRIPTION	AIRFLOW DESIGN	PRESS ESP	RPM	WHEEL TYPE	WHEEL DIA	DRIVE TYPE	MOTOR QTY	MOTOR POWER	MOTOR RPM	MOTOR ECM	SOUND PRESS LEVEL (dBA)	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	INTERLOCK ID	NOTES
PRE-10	ROOF	-	GREENHECK	G-080	CENTRIFUGAL	DOWNFLOW	Exhaust Fan	280 CFM	0.50 in-wg	1645	BI	10 7/8"	DIRECT	1	0.10 hp	1725	No	56	28 lb	2.5 A	3.1 A	15.0 A	120 V	1		

NOTES:
1 PROVIDE WITH AN 18" H PRE-MANUFACTURED INSULATED ROOF CURB
2 PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH
3 PROVIDE WITH ALUMINUM BIRD SCREEN
4 PROVIDE WITH ECM MOTOR WITH 0-10V INPUT FOR CONTROL AND SPEED SWITCH FOR BALANCING
5 PROVIDE WITH VENTILATED CUURB, HINGED CURB CAP KIT, GREASE TRAP AND DRAIN CONNECTION, ECM MOTOR AND ECM MOTOR WIRING PACKAGE WITH CONTROL SWITCH AT HOOD
6 PROVIDE AN AUTOMATIC AIR DAMPER WITH FAN, AUTOMATIC AIR DAMPER PROVIDED AND COORDINATED WITH TC SUBCONTRACTOR

AIR COOLED CONDENSING UNIT SCHEDULE (ACCU)

ID	ROOM NAME	ROOM NO.	INTERLOCK ID	MANUFACTURER	MODEL NO.	TYPE	COMPRESSOR NOMINAL CAP	COMPRESSOR TYPE	REFRIGERANT TYPE	LOW AMBIENT KIT	SUMMER AMBIENT DBT	WINTER AMBIENT DBT	SEER	EER	UNIT WEIGHT	MCA	MOCP	VOLT	PH	NOTES
ACCU-1	ROOF	-	ACU-1, 3, 5	SAMSUNG	AM036TXMDCH/AA	DVM ECO HEAT PUMP	3 ton	TWIN BLDC ROTARY	R-410A	Yes	95.0 °F	0.0 °F	17.2	12.3	216 lb	23.0 A	40.0 A	208 V	1	1,2,3,4,5
ACCU-2	ROOF	-	ACU-2	SAMSUNG	AC036MXSCCC/AA	LOW AMBIENT SPLIT SYTEM	2 ton	TWIN BLDC ROTARY	R-410A	Yes	95.0 °F	0.0 °F	19.7	10.2	160 lb	24.0 A	30.0 A	208 V	1	1,2,3,4,5
ACCU-3	ROOF	-	ACU-4, 6	SAMSUNG	AM036TXMDCH/AA	DVM ECO HEAT PUMP	3 ton	TWIN BLDC ROTARY	R-410A	Yes	95.0 °F	0.0 °F	17.2	12.3	216 lb	23.0 A	40.0 A	208 V	1	1,2,3,4,5

NOTES:
1 INSTALL UNIT PER MANUFACTURERS RECOMMENDATIONS
2 MOUNT UNIT ON 18" H EQUIPMENT SUPPORT CURB
3 PROVIDE WITH VIBRATION ISOLATION
4 PROVIDE UNIT WITH LOW AMBIENT CONTROLS AND WIND BAFFLES FOR OPERATION DOWN TO -10 DEGREES FAHRENHEIT
5 RUN REFRIGERANT PIPING DOWN THROUGH ROOF WITHIN AN 18" H INSULATED ROOF CURB, CURB CAP AND PIPING BOOTS

AIR CONDITIONING UNIT SCHEDULE (ACU)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	CFM	CAP TOTAL	CAP SENSIBLE	AIRSIDE EAT(db)	AIRSIDE EAT(wb)	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	NOTES
ACU-1	STORAGE	117	SAMSUNG	AM012TNVDCH/AA	WALL MOUNTED	321 CFM	12000 Btu/h	11700 Btu/h	80.6 °F	66.2 °F	21 lb	0.25 A	0.31 A	15.0 A	208 V	1	1,2,3,4
ACU-2	IT CLOSET	132	SAMSUNG	AC036MNADCH/AA	WALL MOUNTED	477 CFM	36000 Btu/h	35000 Btu/h	80.6 °F	66.2 °F	32 lb	0.01 A	0.01 A	0.0 A	208 V	1	1,2,3,4,5
ACU-3	IT CLOSET	210	SAMSUNG	AM012TNVDCH/AA	WALL MOUNTED	321 CFM	12000 Btu/h	11700 Btu/h	80.6 °F	66.2 °F	21 lb	0.25 A	0.31 A	15.0 A	208 V	1	1,2,3,4
ACU-4	IT CLOSET	234	SAMSUNG	AM012TNVDCH/AA	WALL MOUNTED	321 CFM	12000 Btu/h	11700 Btu/h	80.6 °F	66.2 °F	21 lb	0.25 A	0.31 A	15.0 A	208 V	1	1,2,3,4
ACU-5	IT CLOSET	301	SAMSUNG	AM012TNVDCH/AA	WALL MOUNTED	321 CFM	12000 Btu/h	11700 Btu/h	80.6 °F	66.2 °F	21 lb	0.25 A	0.31 A	15.0 A	208 V	1	1,2,3,4
ACU-6	IT CLOSET	325	SAMSUNG	AM012TNVDCH/AA	WALL MOUNTED	321 CFM	12000 Btu/h	11700 Btu/h	80.6 °F	66.2 °F	21 lb	0.25 A	0.31 A	15.0 A	208 V	1	1,2,3,4

NOTES:
1 PROVIDE UNIT WITH HARD WIRED THERMOSTAT
2 MC IS RESPONSIBLE FOR FIELD REFRIGERANT PIPING AND SYSTEM REFRIGERANT CHARGING
3 UNIT MANUFACTURER TO CONFIRM REFRIGERANT PIPE SIZES
4 PROVIDE UNIT WITH FACTORY INSTALLED CONDENSATE PUMP
5 INDOOR UNIT TO BE POWERED FROM OUTDOOR UNIT

AIR SEPARATOR SCHEDULE (AS)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	SYSTEM	TYPE	ARRANGEMENT	DESIGN FLOW	MAX FLOW	PIPE SIZE	ASME	UNIT WEIGHT	NOTES
AS-1	MECHANICAL ROOM	238	BELL & GOSSETT	R-8F	CHILLED WATER	TANGENTIAL	HORIZONTAL	840.0 GPM	1300.0 GPM	8"	Yes	1211 lb	1
AS-2	MECHANICAL ROOM	238	BELL & GOSSETT	R-6F	HEATING WATER	TANGENTIAL	HORIZONTAL	575.0 GPM	700.0 GPM	6"	Yes	579 lb	1

NOTES:
1 INSTALL AS PER UNIT MANUFACTURERS RECOMMENDATIONS

BUFFER TANK SCHEDULE (BT)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	MATERIAL	SYSTEM	TYPE	ARRANGEMENT	TANK VOLUME	PIPE SIZE INLET	PIPE SIZE OUTLET	UNIT DIMENSIONS DIAMETER	HEIGHT TANK	HEIGHT OVERALL	OPTIONS INCLUDE JACKETING	OPTIONS INCLUDE INSULATION	UNIT WEIGHT	NOTES
BT-1	MECH	238	CEMLINE	V120SEB	STEEL	HEATING WATER		VERTICAL	200.0 gal	3"	3"	2' - 6"	6' - 0"	6' - 3"	No	Yes	2010 lb	

NOTES:

ROOFTOP HOOD SCHEDULE (RTH)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	ARRANGEMENT	DESIGN AIRFLOW	THROAT VELOCITY	THROAT AREA	PD	DAMPER TYPE	BIRD SCREEN	DIMENSIONS THROAT WIDTH	DIMENSIONS THROAT LENGTH	DIMENSIONS THROAT EXT HEIGHT	DIMENSIONS HOOD LENGTH	DIMENSIONS HOOD WIDTH	UNIT WEIGHT	NOTES
RTH-1	ROOF	-	GREENHECK	FGR	HOOD	EXHAUST	16630 CFM	499 FPM	33.3 SF	0.03 in-wg	AUTOMATIC	Yes	5' - 0"	6' - 8"	5"	9' - 0"	7' - 5"	387 lb	1,2,3
RTH-2	ROOF	-	GREENHECK	FGI	HOOD	INTAKE	16630 CFM	499 FPM	33.3 SF	0.03 in-wg	AUTOMATIC	Yes	5' - 0"	6' - 8"	5"	11' - 0"	9' - 1"	500 lb	1,2,3
RTH-3	ROOF	-	GREENHECK	FGI	HOOD	INTAKE	3750 CFM	496 FPM	7.6 SF	0.03 in-wg	AUTOMATIC	Yes	2' - 8"	2' - 10"	5"	5' - 0"	4' - 6"	125 lb	1,2,3
RTH-4	ROOF	-	GREENHECK	FGR	HOOD	EXHAUST	1750 CFM	485 FPM	3.6 SF	0.03 in-wg	AUTOMATIC	Yes	1' - 8"	2' - 2"	5"	3' - 0"	2' - 6"	69 lb	1,2,3
RTH-5	ROOF	-	GREENHECK	FGR	HOOD	INTAKE	70 CFM	158 FPM	0.4 SF	0.01 in-wg	AUTOMATIC	Yes	8"	8"	5"	2' - 0"	1' - 6"	37 lb	1,2,3
RTH-6	ROOF	-	GREENHECK	FGR	HOOD	EXHAUST	200 CFM	200 FPM	1.0 SF	0.01 in-wg	AUTOMATIC	Yes	1' - 0"	1' - 0"	5"	2' - 0"	1' - 10"	37 lb	1,2,3

NOTES:
1 PROVIDE AN 18" H INSULATED ROOF CURB WITH UNIT
2 PROIVIDE AN AUTOMATIC AIR DAMPENER (AAD) V/H DUCT AT ROOF OPENING. AAD TO BE FURNISHED BY THE TEMPERATURE CONTROL SUB-CONTRACTOR AND INSTALLED BY MC
3 PROVIDE WITH ALUMINUM BIRD SCREEN

FIN TUBE RADIATION SCHEDULE (FTR)

ID	MANUFACTURER	MODEL NO.	ENCLOSURE STYLE	ENCLOSURE HEIGHT	ENCLOSURE DEPTH	ENCLOSURE MOUNTING HEIGHT	ELEMENT PIPE DIA	ELEMENT FIN SIZE (SQ)	ELEMENT FIN/FT	ELEMENT MATERIAL TUBE/FIN	ELEMENT ROWS	ELEMENT WATERSIDE EWT	ELEMENT WATERSIDE LWT	ELEMENT GLYCOL TYPE	ELEMENT GLYCOL %	ELEMENT BTUH/LF	NOTES
FTR-A	SIGMA CORPORATION	44C075	BARE ELEMENT	30"	6"	30"	3/4"	4"	48	CU/AL	1	130 °F	110 °F	PG	40	507 Btu/h	1,2,3
FTR-B	SIGMA CORPORATION	SWE-S	SLOPED TOP	24"	5 1/4"	28"	3/4"	4"	48	CU/AL	1	130 °F	110 °F	PG	40	523 Btu/h	1,2

NOTES:
1 PROVIDE ALL WALL BRACKETS, END CAPS AND 12" WIDE FULL HEIGHT PANELS AS REQUIRED
2 COORDINATE INSTALLATION OF FIN ELEMENT AND BRACKETS WITH CONTRACTOR RESPONSIBLE FOR CASEWALL PRIOR TO INSTALLATION
3 ELEMENT TO BE INSTALLED BEHIND CASEWORK WITHIN A 30" H x 6" D SPACE

LOUVER SCHEDULE (L)

ID	LOCATION NAME	LOCATION NO.	SERVES	MANUFACTURER	MODEL NO.	QTY	MATERIAL	FINISH	TYPE	DESIGN AIRFLOW	FREE AREA	FREE AREA VELOCITY	PD	DAMPER TYPE	DIMENSIONS WIDTH	DIMENSIONS HEIGHT	UNIT WEIGHT	NOTES
L-1			EF-1	GREENHECK	ESD-435	1	ALUMINUM	MILL	DRAINABLE	560 CFM	1.1 SF	497 FPM	0.18 in-wg	AUTOMATIC	2' - 3 1/2"	1' - 5 1/2"	10 lb	

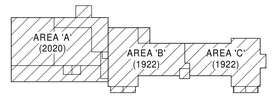
NOTES:

DOMESTIC HOT WATER TO WATER HEAT EXCHANGER SCHEDULE (DHX)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	MATERIAL	TYPE	SYSTEM	PRIMARY FLUID HEATING CAP	PRIMARY FLUID DESIGN FLOW	PRIMARY FLUID EWT	PRIMARY FLUID LWT	SECONDARY FLUID DESIGN FLOW	SECONDARY FLUID EWT	SECONDARY FLUID LWT	GLYCOL TYPE	GLYCOL %	UNIT DIMENSIONS LENGTH	UNIT DIMENSIONS WIDTH	UNIT DIMENSIONS DEPTH	UNIT WEIGHT	REMARKS
DHX-1	MECHANICAL ROOM	238	AERCO	SPDW-EV40	STAINLESS STEEL	DOUBLE WALL	DOMESTIC PREHEAT	671000 Btu/h	60.0 GPM	130 °F	99 °F	17.0 GPM	40 °F	120 °F	PG	40	2' - 6"	1' - 4"	2 13/16"	760 lb	1

NOTES:
1 PROVIDE UNIT WITH 120V/1PH, 2AMP ELECTRICAL CONNECTION

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-005-015

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Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
ADDITIONS AND ALTERATIONS TO:
PORT JERVIS MIDDLE SCHOOL
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011
CHECKED BY JLM	DATE 02/04/2022

MECHANICAL EQUIPMENT SCHEDULES

BUILDING MS

SHEET NUMBER M604

RE-BID

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