GENERAL MECHANICAL SYMBOLS

REVISION NUMBER - SHOWN ON PLANS

POINT WHERE NEW CONNECTS TO EXISTING

POINT WHERE DEMOLITION CONNECTS TO EXISTING

NUMBER OF DETAIL ON SHEET

NUMBER OF SHEET WHERE DETAIL APPEARS

KEYNOTE

DEMOLITION KEYNOTE

PIPE CONTINUATION SYMBOL

Room 7 — ROOM NAME AND NUMBER

ITEM TO BE DEMOLISHED

AREA NOT IN CONTRACT

2" — PIPE SIZE TAG (DIAMETER)

ABOVE GROUND PIPING

1/8" / 12" SLOPE — PIPE SLOPE TAG

BELOW GROUND PIPING

INVERT: -105' - 1" — PIPE INVERT ELEVATION TAG

(E) — EXISTING PIPE TAG

PIPING BEING DEMOLISHED

AIRFLOW DIRECTION ARROW

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

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

HVAC SYMBOLS

18"x12" — SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)

18"x12" — SQUARE DUCT WITH INTERNAL INSULATION
INTERNAL SIZE TAG (WIDTH x HEIGHT)

18"/12" — OVAL DUCT SIZE TAG (WIDTH / HEIGHT)

18"Ø — ROUND DUCT SIZE TAG (DIAMETER)

(E) — EXISTING DUCT TAG

DUCT BEING DEMOLISHED

18"x18" SA — SUPPLY AIR

18"x18" SOA — CONDITIONED OUTSIDE AIR

18"x18" OA — OUTSIDE AIR

18"x18" RA — RETURN AIR

18"x18" TA — TRANSFER AIR

18"x18" EA — EXHAUST AIR

18"x18" LA — RELIEF AIR

18"x18" GEA — GREASE EXHAUST AIR

18"x18" CEA — CONDENSATE EXHAUST AIR

18"x18" SEA — SMOKE EXHAUST AIR

6"Ø FLUE — EXHAUST GAS FLUE

6"Ø CA — COMBUSTION AIR

DROP — RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE

DROP — ROUND SUPPLY/OUTSIDE AIR DUCT RISE

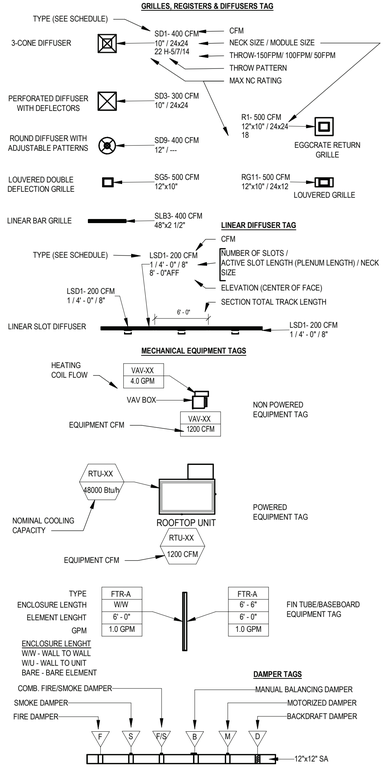
DROP — RECTANGULAR RETURN/TRANSFER AIR DUCT RISE

DROP — ROUND RETURN/TRANSFER AIR DUCT RISE

DROP — RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE

DROP — ROUND EXHAUST/RELIEF AIR DUCT RISE

GRILLES, REGISTERS & DIFFUSERS TAG



PIPING SYMBOLS

CHWR — CHILLED WATER RETURN

CHWS — CHILLED WATER SUPPLY

CD — CONDENSATE DRAINAGE

CWR — CONDENSER WATER RETURN

CWS — CONDENSER WATER SUPPLY

GWR — GEOTHERMAL WATER RETURN

GWS — GEOTHERMAL WATER SUPPLY

HWR — HEATING WATER RETURN

HWS — HEATING WATER SUPPLY

HGR — HEATING GLYCOL RETURN

HGS — HEATING GLYCOL SUPPLY

G — NATURAL GAS

LP — PROPANE GAS

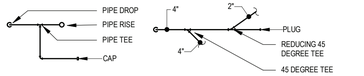
RL — REFRIGERANT-LIQUID

RS — REFRIGERANT-SUCTION

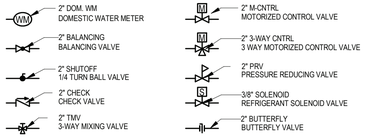
RHG — REFRIGERANT-HOT GAS

STM — STEAM

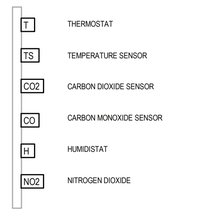
CDR — CONDENSATE RETURN



PIPE ACCESSORY TAGS



SENSORS



HVAC GENERAL NOTES

1 THE PRIME CONTRACTORS ARE MUTUALLY RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE WORK OF THE OTHER PRIME CONTRACTORS AND THAT OF THE OWNER AS OUTLINED IN THE GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT AND THE SUPPLEMENTARY CONDITIONS. COORDINATE EXISTING SYSTEM SHUT DOWNS IN ADVANCE WITH THE OWNER.

2 THE CONTRACT DRAWINGS ARE, IN PART, DIAGRAMMATIC AND ARE INTENDED TO CONVEY THE GENERAL SCOPE AND INTENT OF THE WORK AS WELL AS INDICATE THE GENERAL ARRANGEMENT OF THE EQUIPMENT. THE CONTRACTOR IS TO COMPLY WITH THE DRAWINGS FOR GENERAL LAYOUT OF THE WORK AND IF THERE ARE DISCREPANCIES, THE CONTRACTOR IS TO NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY. PROVIDE ALL RELATED ACCESSORIES REQUIRED FOR A COMPLETE OPERATIONAL AND SATISFACTORY INSTALLATION REQUIRED FOR CONTINUOUS USE BY OWNER.

3 AS NOTED ABOVE,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.

4 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

5 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.

6 THE WORK INCLUDED IN THIS CONTRACT ENCOMPASSES BOTH THE DRAWINGS AND SPECIFICATIONS. WORK INCLUDED ON THE DRAWINGS ONLY, OR IN THE SPECIFICATIONS ONLY, SHALL BE INCORPORATED AS IF INCLUDED IN BOTH. SYSTEMS ARE INTENDED TO BE COMPLETE AND FULLY FUNCTIONING

7 COORDINATE THE WORK OF THIS CONTRACT WITH THE WORK OF OTHER CONTRACTS.

8 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 LOCA

9 PROVIDE THROUGH THOUGH-PENETRATION AND MEMBRANE FIRESTOPPING SYSTEMS FOR ALL WORK PENETRATING VERTICAL AND HORIZONTAL FIRE-RATED AND SMOKE-RATED ASSEMBLIES. PROVIDE THROUGH PENETRATION FIRESTOPPING SYSTEMS AND MEMBRANE FIRESTOPPING SYSTEMS AT OPENINGS (VOIDS) CREATED BY REMOVALS OR DEMOLITION WORK AT FIRE-RATED AND SMOKE-RATED ASSEMBLIES. REFERENCE THE CODE COMPLIANCE (CC) DRAWINGS OR OTHER PLANS INDICATING FIRE-RATED AND SMOKE-RATED ASSEMBLIES AND THEIR LOCATIONS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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

11 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.

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

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

14 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.

15 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.

16 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

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

2 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.

3 PROTECT BUILDING OR SYSTEM COMPONENTS SCHEDULED TO REMAIN.

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

5 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.

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

7 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.

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

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

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

11 ALL ELECTRICAL POWER WIRING DISCONNECT AND REMOVAL ASSOCIATED WITH MECHANICAL EQUIPMENT REMOVAL IS INDICATED ON THE "E" SERIES DRAWINGS AND IN DIVISION 26. ALL CONTROL WIRING REMOVAL IS THE RESPONSIBILITY OF THIS CONTRACT. COORDINATE ACCORDINGLY.

MECHANICAL DESIGN CRITERIA

THE WORK OF THIS CONTRACT HAS BEEN DESIGNED IN ACCORDANCE WITH THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE AND THE MANUAL OF PLANNING STANDARDS FOR NEW YORK STATE SCHOOL BUILDINGS.

MECHANICAL DESIGN CRITERIA ARE BASED ON REQUIREMENTS FOR NEW YORK STATE ZONE 6 OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE AND THE NEAREST LOCATION TO THE SITE AS PUBLISHED IN THE ASHRAE HANDBOOK OF FUNDEMENTALS.

DESIGN VENTILATION RATES PROVIDED MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE NEW YORK STATE MECHANICAL CODE AND ASHRAE STANDARD 62 VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY.

DESIGN TEMPERATURES MAY BE MORE CONSERVATIVE THAN THE ABOVE MINIMUM REQUIREMENTS WHERE APPROPRIATE AND WITHIN THE LIMITS OF APPILICABLE CODES.

DESIGN CRITERIA:
WINTER OUTSIDE AIR: -20°F DB
SUMMER OUTSIDE AIR: 86°F DB; 71°F WB
WINTER INTERIOR SPACE: 70°F DB
SUMMER INTERIOR SPACE: 75° F DB; 55% RH

HVAC SHEET INDEX

KEY PLAN:

SED CONTROL NO. 27-01-00-01-0-024-009

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

BCA ARCHITECTS ENGINEERS

Port PRIDE

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

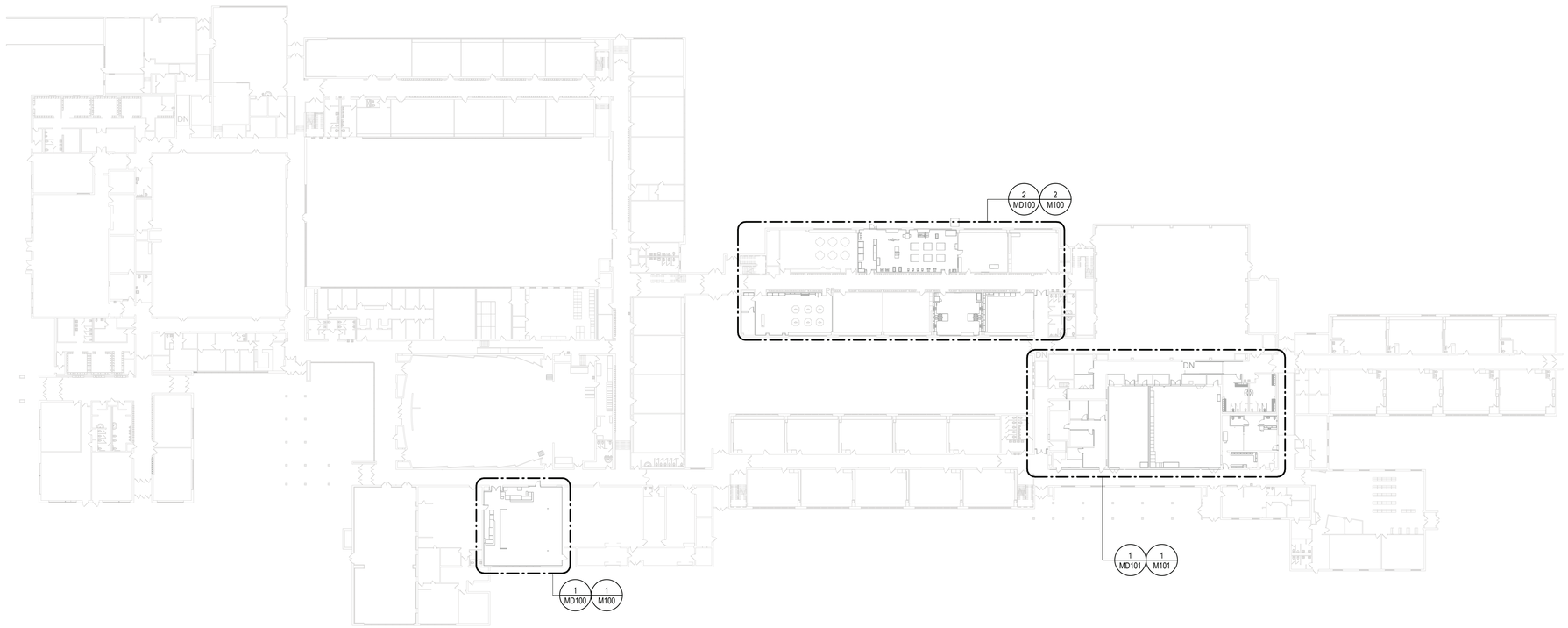
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

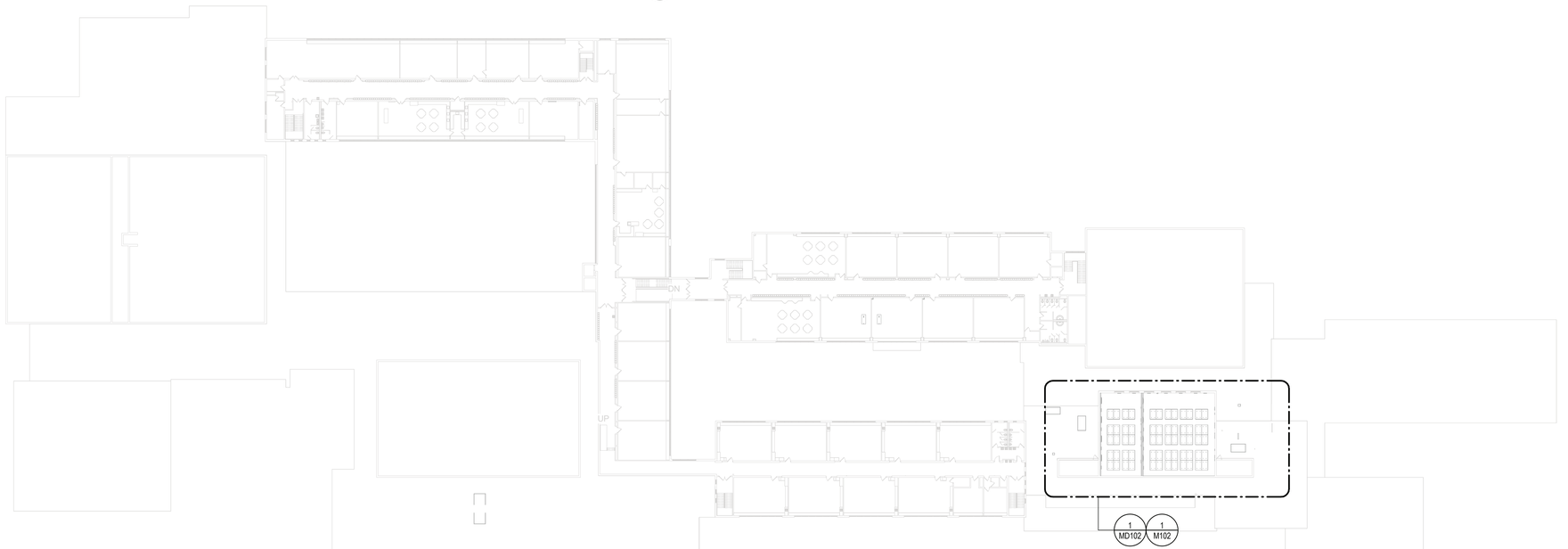
MECHANICAL GENERAL NOTES, LEGENDS & ABBREVIATIONS

BUILDING	SHEET NUMBER MS000

10/9/2023 11:59:39 AM

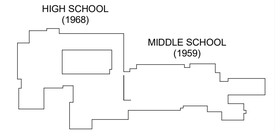


1 FIRST FLOOR PLAN
SCALE: 1" = 40'-0"



2 SECOND FLOOR PLAN
SCALE: 1" = 40'-0"

KEY PLAN:



SED CONTROL NO. 27-01-00-01-0-024-009

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

BCA ARCHITECTS ENGINEERS

Port PRIDE

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

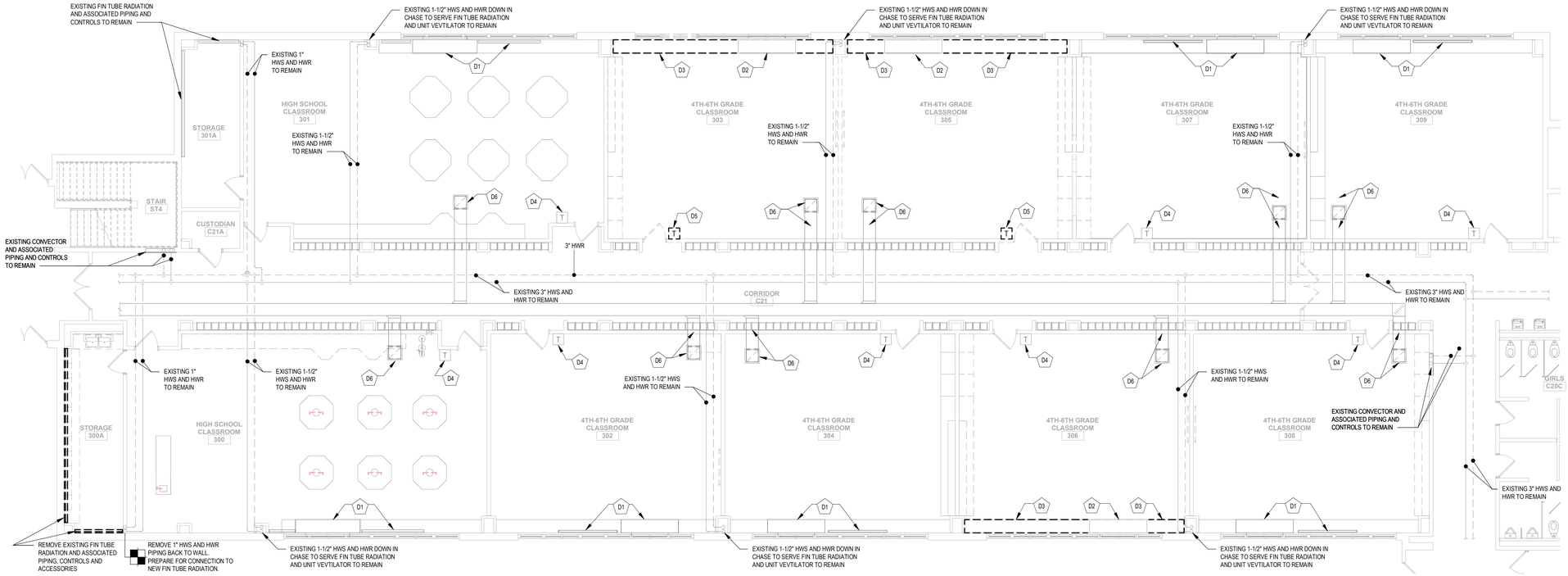
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

REFERENCE PLAN

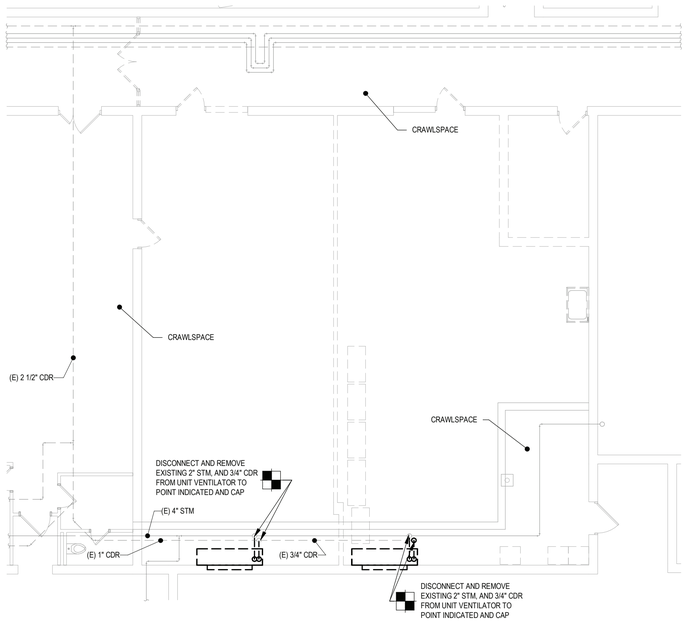
BUILDING	SHEET NUMBER
	MR100

10/9/2023 11:59:47 AM



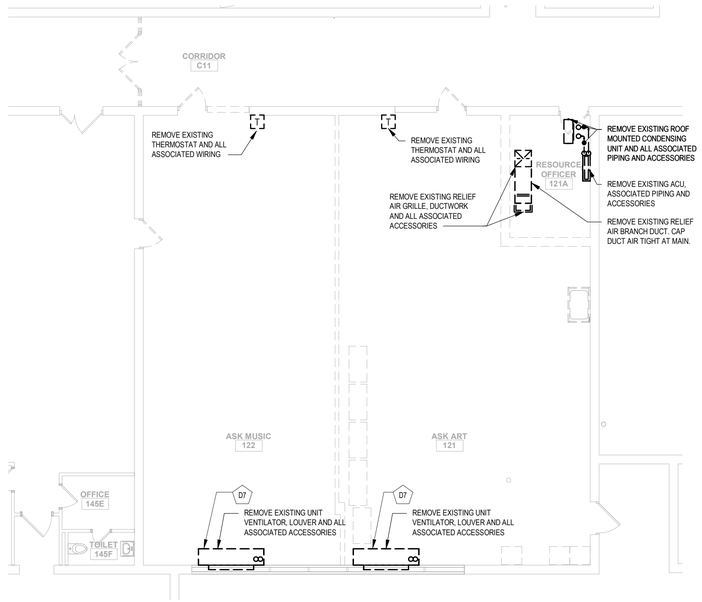
2 FIRST FLOOR AREA A - DEMOLITION PLAN

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



3 CRAWLSPACE AREA A - DEMOLITION PLAN

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



1 FIRST FLOOR AREA A - DEMOLITION PLAN

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

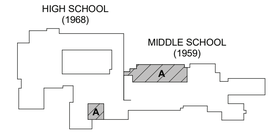
GENERAL NOTES:

1. SEE DRAWING M5000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

- D1 EXISTING UNIT VENTILATOR, INTAKE LOUVER, FIN TUBE RADIATION AND ALL ASSOCIATED PIPING, PIPING ACCESSORIES AND CONTROLS TO REMAIN.
- D2 EXISTING UNIT VENTILATOR, INTAKE LOUVER, UNIT VENTILATOR PIPING AND ALL ASSOCIATED CONTROLS ARE TO REMAIN.
- D3 REMOVE EXISTING UNIT VENTILATOR METAL SHELVING. EXISTING PIPING AND FIN TIBE RATIATION RUNNING BEHIND SHELVING IS TO REMAIN. PREPARE FOR THE INSTALLATION OF PIPE ENCLOSURE. REFER TO DRAWING M100 FOR MORE INFORMATION.
- D4 EXISTING TEMPERATURE SENSOR / THERMOSTAT TO REMAIN.
- D5 TEMPORARILY REMOVE EXISTING TEMPERATURE SENSOR / THERMOSTAT KEEP SAFE AND PREPARE WIRING FOR RE-INSTALLATION AS SHOWN ON DRAWING M100.
- D6 EXISTING RECIRCULATION AIR GRILLE AND ASSOCIATED RELIEF AIR.
- D7 REMOVE EXISTING 2" LPS AND 1" LPC PIPING DOWN TO PIPE TUNNEL BELOW. CAP LPS AND LPC AT MAIN BRANCH LINE.

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-012-040

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

PORT JERVIS CITY SCHOOL DISTRICT
RENOVATIONS TO:
KUHL ELEMENTRAY
Port Jervis - Orange County - New York

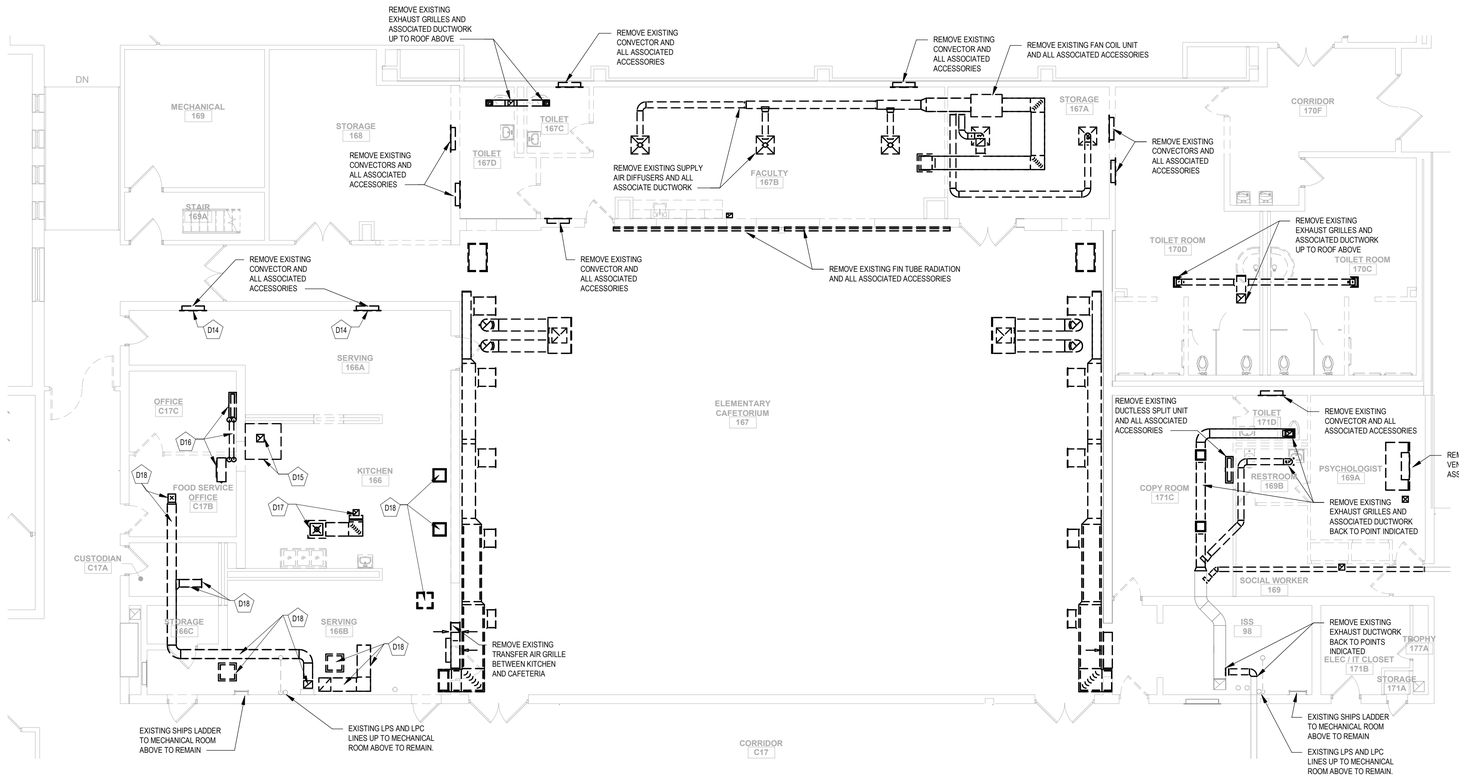
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

FIRST FLOOR PLANS - AREA A - DEMOLITION

BUILDING	SHEET NUMBER
AS	MD100

10/9/2023 11:59:51 AM



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

GENERAL NOTES:

1. SEE DRAWING M5000 FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS

DEMOLITION KEYNOTE LEGEND

D14 REMOVE EXISTING LPS AND LPC PIPING FROM CONNECTOR DOWN TO CRAWLSPACE BELOW AND CAP PIPING AT PIPING MAINS.

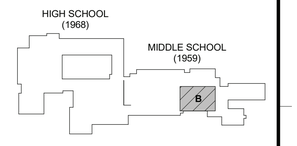
D15 REMOVE EXISTING EXHAUST HOOD, DUCT WORK AND EXHAUST FAN ON ROOF ABOVE AND ASSOCIATED ACCESSORIES.

D16 REMOVE EXISTING AIR CONDITIONING UNIT, REFRIGERANT PIPING, ROOF MOUNTED CONDENSING UNIT AND ALL ASSOCIATED ACCESSORIES.

D17 REMOVE EXISTING SUPPLY AIR DIFFUSER AND ASSOCIATED DUCT WORK UP TO ROOF ABOVE. CAP DUCT AT MAIN DUCT AIR AND WATER TIGHT. REPAIR INSULATION AT MAIN DUCT.

D18 REMOVE EXISTING EXHAUST GRILLES AND DUCT WORK UP TO MECHANICAL ROOM ON FLOOR ABOVE. REMOVE ASSOCIATED EXHAUST FANS AND ACCESSORIES, INCLUDING EXHAUST HOOD AND/OR LOUVER. COORDINATE THE PATCHING OF WALL/ROOF WITH THE GENERAL CONTRACTOR.

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-012-040

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

BCA ARCHITECTS ENGINEERS

Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
RENOVATIONS TO:
KUHL ELEMENTRAY
Port Jervis - Orange County - New York

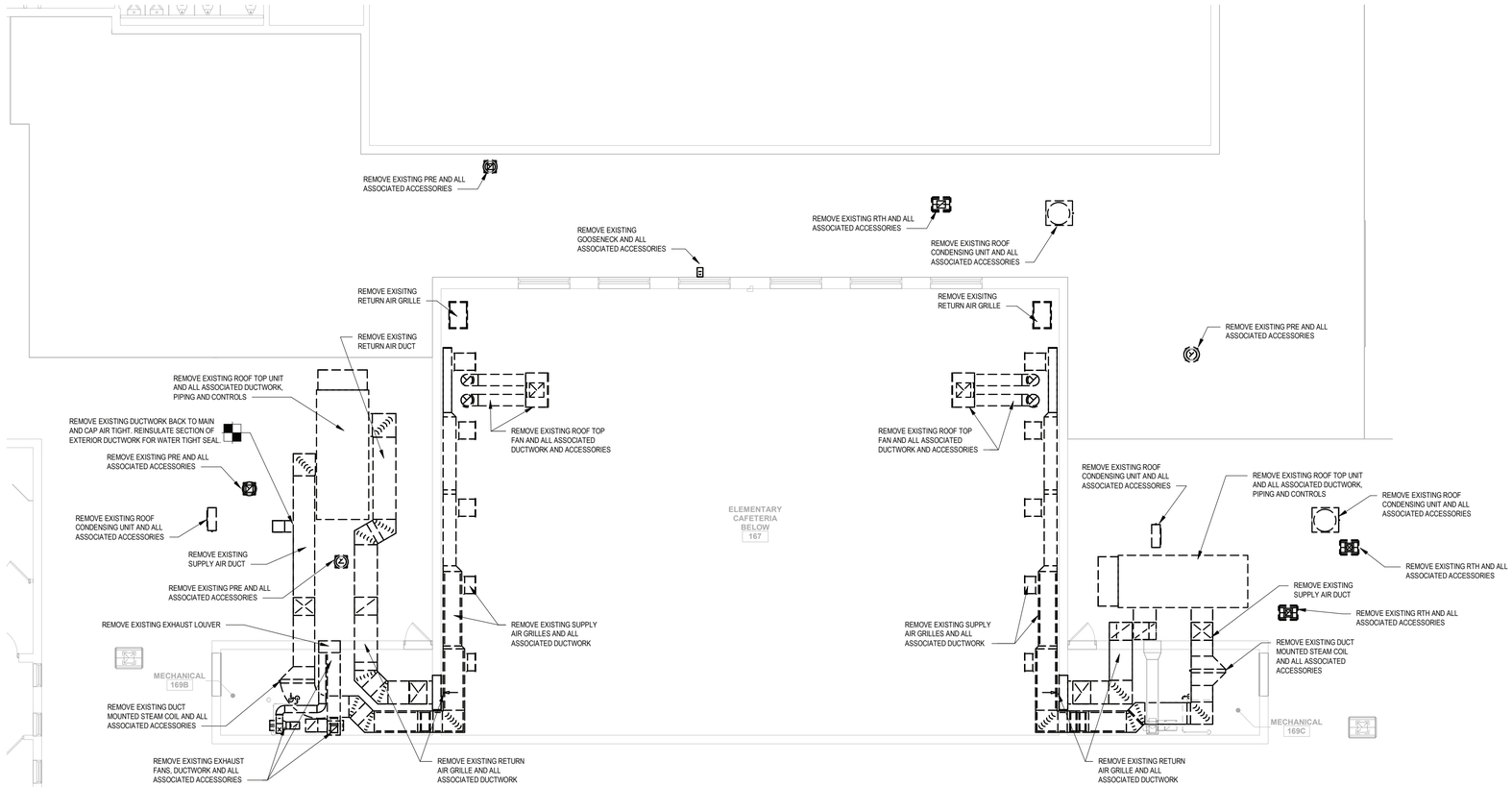
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

FIRST FLOOR PLAN - AREA B - DEMOLITION

BUILDING	SHEET NUMBER
AS	MD101

10/9/2023 11:59:54 AM



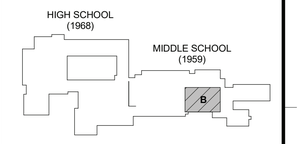
1 SECOND FLOOR AREA B- DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

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

DEMOLITION KEYNOTE LEGEND

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-012-040

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

BCA ARCHITECTS ENGINEERS

Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
RENOVATIONS TO:
KUHL ELEMENTRAY
Port Jervis - Orange County - New York

REV	DATE	DESCRIPTION

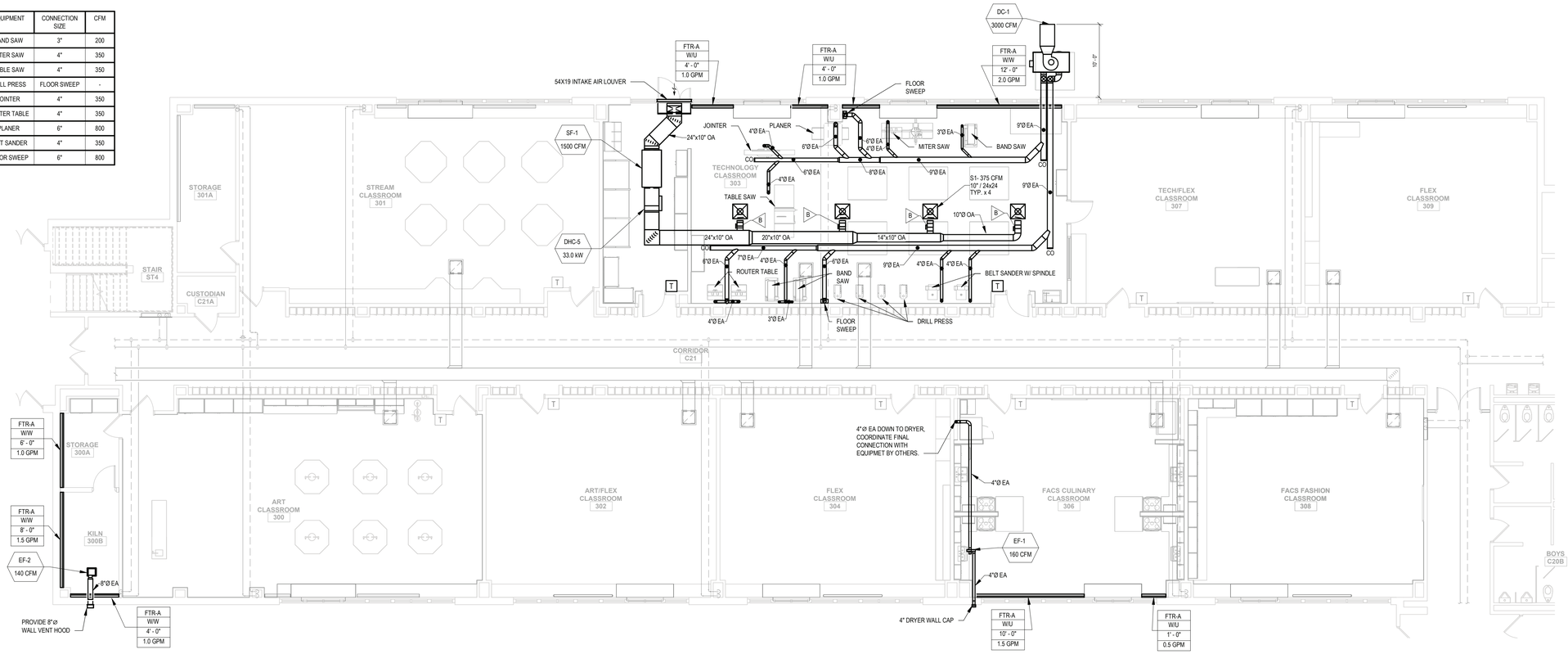
DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

SECOND FLOOR PLAN - AREA B - DEMOLITION

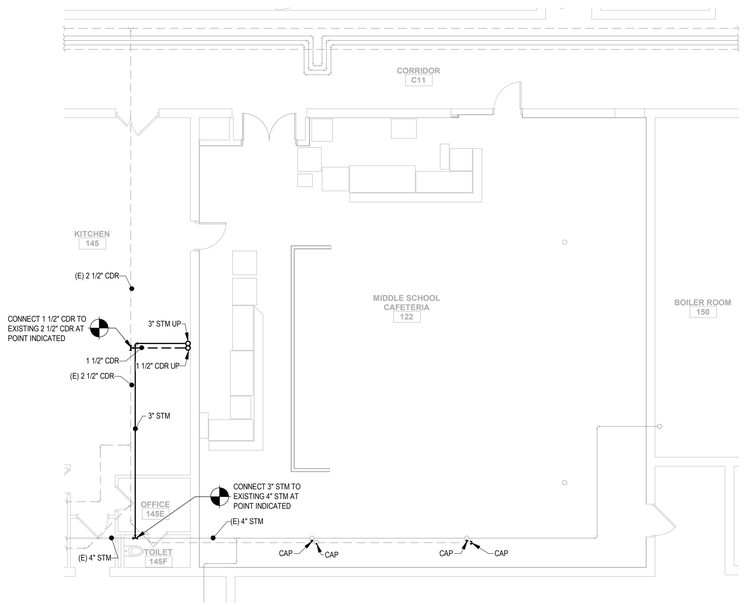
BUILDING	SHEET NUMBER
AS	MD102

10/9/2023 11:59:56 AM

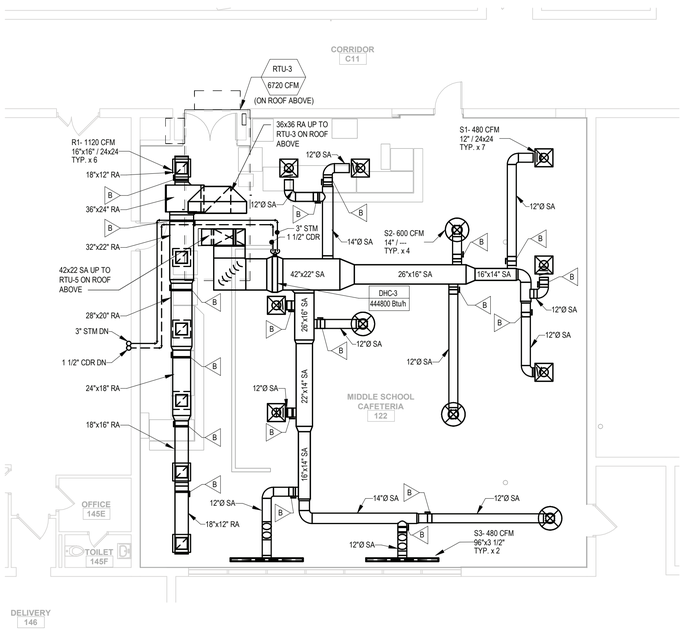
EQUIPMENT	CONNECTION SIZE	CFM
BAND SAW	3"	200
MITER SAW	4"	350
TABLE SAW	4"	350
DRILL PRESS	FLOOR SWEEP	-
JOINTER	4"	350
ROUTER TABLE	4"	350
PLANER	6"	800
BELT SANDER	4"	350
FLOOR SWEEP	6"	800



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



3 CRAWLSPACE PLAN - AREA A
SCALE: 1/8" = 1'-0"



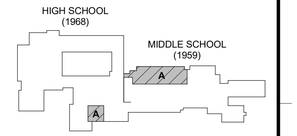
1 FIRST FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

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

KEYNOTE LEGEND

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-012-040

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

PORT JERVIS CITY SCHOOL DISTRICT
RENOVATIONS TO:
KUHL ELEMENTRAY
Port Jervis - Orange County - New York

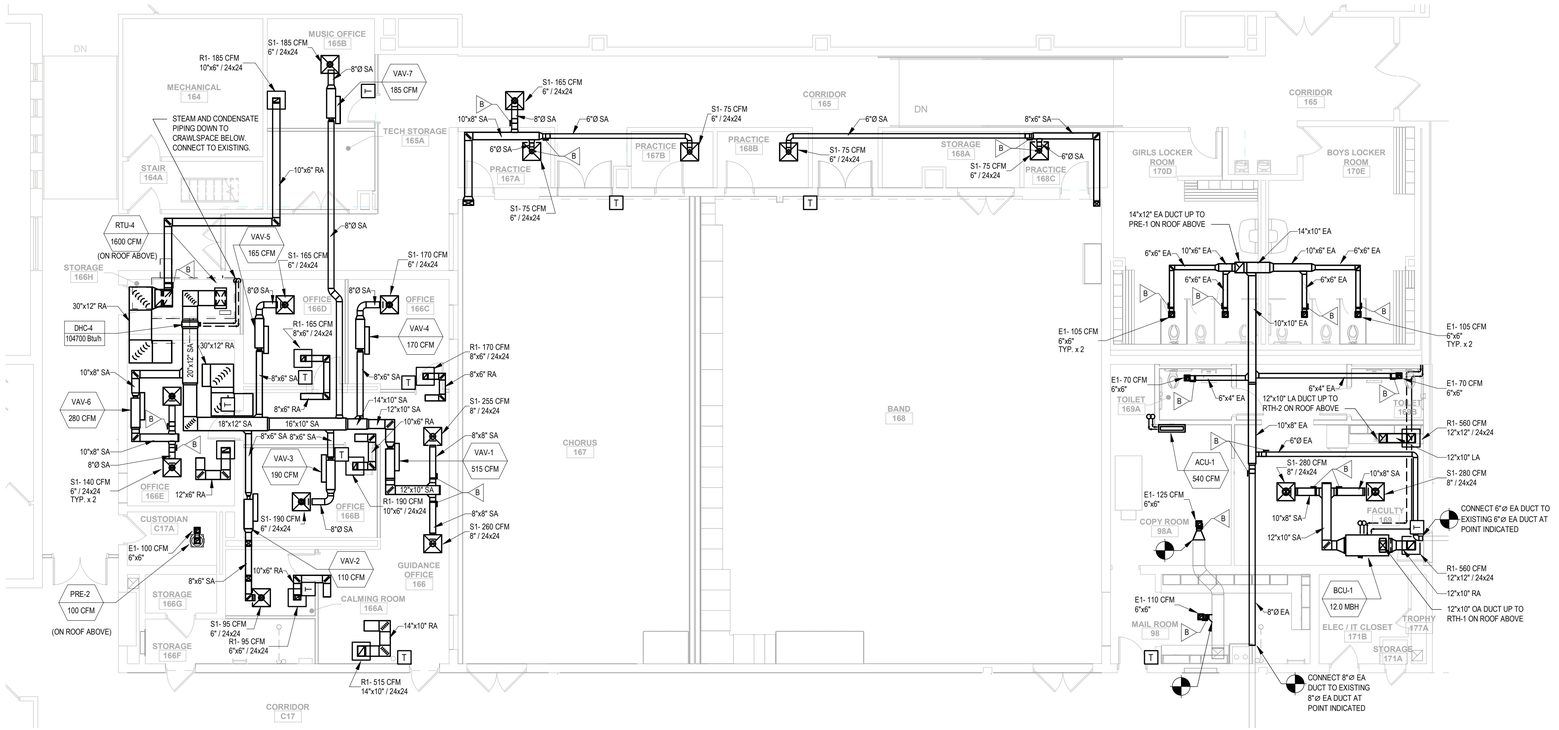
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

FIRST FLOOR PLANS - AREA A

BUILDING	SHEET NUMBER
AS	M100

10/9/2023 11:59:58 AM



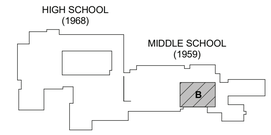
1 FIRST FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

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

KEYNOTE LEGEND

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-012-040

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

PORT JERVIS CITY SCHOOL DISTRICT
RENOVATIONS TO:
KUHL ELEMENTRAY
Port Jervis - Orange County - New York

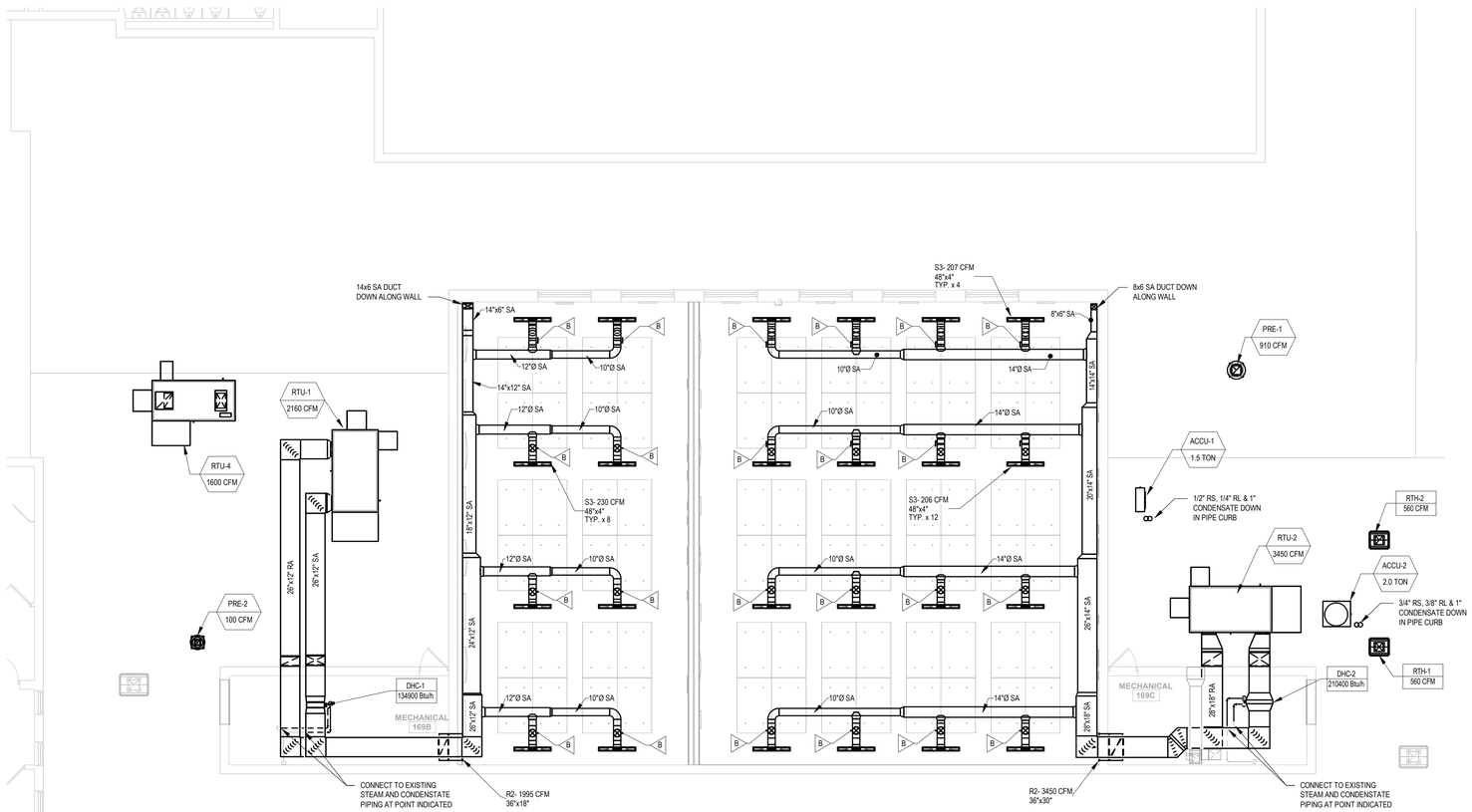
REV	DATE	DESCRIPTION
△		

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

FIRST FLOOR PLAN - AREA B

BUILDING	SHEET NUMBER
AS	M101

10/9/2023 12:00:00 PM



1 SECOND FLOOR PLAN - AREA B

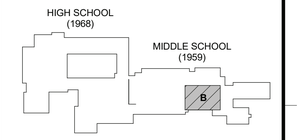
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

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

KEYNOTE LEGEND

KEY PLAN:



SED CONTROL NO. 44-18-00-05-0-012-040

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

BCA ARCHITECTS ENGINEERS

Port PRIDE

PORT JERVIS CITY SCHOOL DISTRICT
RENOVATIONS TO:
KUHL ELEMENTRAY
Port Jervis - Orange County - New York

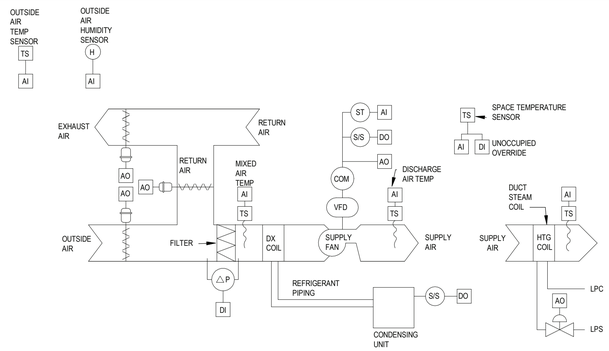
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

SECOND FLOOR PLAN - AREA B

BUILDING	SHEET NUMBER
AS	M102

10/9/2023 12:00:01 PM



ROOF TOP UNIT DX COOLING WITH DUCT STEAM COIL - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:

A. SUPPLY FAN SHALL RUN CONTINUOUSLY AT THE FREQUENCIES DETERMINED BY THE BALANCING CONTRACTOR.
B. THE OUTSIDE AIR, RETURN AIR AND EXHAUST 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, MODULATE THE CONTROL VALVE ON THE DUCT STEAM HEATING COIL TO MAINTAIN SPACE HEATING SETPOINT SUBJECT TO A DISCHARGE HIGH LIMIT OF 120 DEG. F (ADJUSTABLE) AND DISCHARGE LOW LIMIT OF 70 DEG. F (ADJUSTABLE).
D. WHEN THE SPACE TEMPERATURE IS 3 DEG. F (ADJUSTABLE) ABOVE THE COOLING SETPOINT, AND THE OUTSIDE AIR CANNOT COOL THE SPACE, THE RESPECTIVE CONDENSING UNIT SHALL BE CYCLED WITH THE STEAM HEATING CONTROL VALVE CLOSED TO MAINTAIN SPACE TEMPERATURE. USE 5 DEG. F (ADJUSTABLE) DEADBAND BETWEEN HEATING AND COOLING SETPOINTS.
E. DURING COOLING MODE, AND WHEN THE RETURN AIR ENTHALPY IS HIGHER THAN THE OUTDOOR ENTHALPY, THE UNIT DAMPERS SHALL OPEN TO OPERATE IN WHEEL BYPASS MODE AND THE WHEEL SHALL BE OFF AND THE STEAM CONTROL VALVE CLOSED. THIS SHALL BE DONE SUBJECT TO A HIGH LIMIT OF 55 DEG. F AND OUTDOOR ENTHALPY EXCEEDING RETURN AIR ENTHALPY AND A LOW LIMIT OF 55 DEG. F (ADJUSTABLE).

2. UNOCCUPIED MODE:

A. THE SUPPLY FAN SHALL BE OFF.
B. THE OUTSIDE AIR AND EXHAUST DAMPERS SHALL BE FULLY CLOSED AND THE RETURN DAMPER SHALL BE FULLY OPEN.
C. ON DROP IN SPACE TEMPERATURE BELOW THE UNOCCUPIED HEATING SETPOINT, CYCLE THE SUPPLY FAN ON AND FULLY OPEN STEAM CONTROL VALVE TO MAINTAIN REDUCED SPACE TEMPERATURE. USE 5 DEG. F (ADJUSTABLE) DEADBAND TO MINIMIZE SHORT CYCLING.
D. 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.
E. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED ECONOMIZER COOLING SETPOINT, 78°F (ADJUSTABLE), ALLOW ECONOMIZER COOLING WITH THE STEAM CONTROL VALVE AND THE MECHANICAL COOLING DISABLED.

3. WARM-UP MODE:

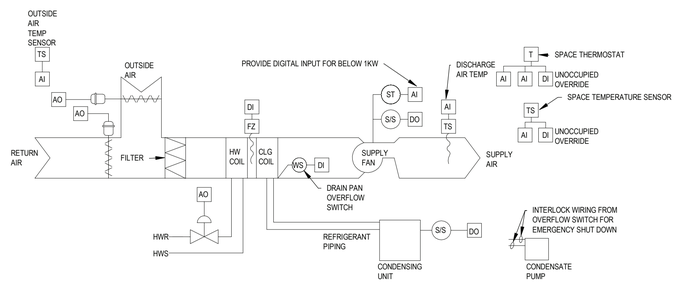
A. THE UNIT SHALL START PER AN OPTIMUM START PROGRAM.
B. THE OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL BE FULLY CLOSED, AND THE RETURN AIR DAMPER SHALL BE FULLY OPEN.
C. THE SUPPLY FAN SHALL RUN AND THE STEAM CONTROL VALVE SHALL MODULATE TO MAINTAIN OCCUPIED HEATING SETPOINT.

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 DISCHARGE FACE OF THE COIL; WHENEVER COIL FREEZE-UP CONDITIONS ARISE (36 DEG. F ADJUSTABLE) THE SUPPLY FAN SHALL STOP, THE OUTSIDE AIR AND EXHAUST AIR DAMPER SHALL CLOSE 100%, THE STEAM CONTROL VALVE SHALL OPEN 100% AND AN ALARM SHALL BE ACTIVATED.

3 RTU - DX CLG, DUCT STEAM COIL CONSTANT VOLUME (RTU-1, RTU-2)

SCALE:NOT TO SCALE



BLOWER COIL UNIT - HOT WATER (VALVE CONTROL) AND DX COOLING - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:

A. SUPPLY FAN AND ASSOCIATED EXHAUST FAN SHALL RUN CONTINUOUSLY.
B. THE OUTSIDE AIR DAMPER 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 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).
D. WHEN THE SPACE TEMPERATURE RISES ABOVE SPACE SETPOINT, AND THE OUTSIDE AIR TEMPERATURE IS LOWER THAN THE SPACE TEMPERATURE, THE OUTSIDE AIR DAMPER SHALL MODULATE OPEN AND THE ASSOCIATED RELIEF HOOD DAMPER SHALL OPEN TO MAINTAIN THE OCCUPIED SETPOINT. THIS SHALL BE DONE SUBJECT TO DISCHARGE LOW LIMIT OF 55 DEG. F (ADJUSTABLE) AND WITH THE HEATING VALVE FULLY CLOSED.
E. WHEN THE SPACE TEMPERATURE IS ABOVE THE COOLING SETPOINT, AND THE OUTSIDE AIR CANNOT COOL THE SPACE, THE RESPECTIVE CONDENSING UNIT SHALL BE CYCLED 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 FAN AND ASSOCIATED EXHAUST FAN SHALL BE OFF.
B. THE OUTSIDE AIR DAMPER AND THE ASSOCIATED RELIEF HOOD DAMPER SHALL BE FULLY CLOSED.
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 FAN ON AND 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. 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:

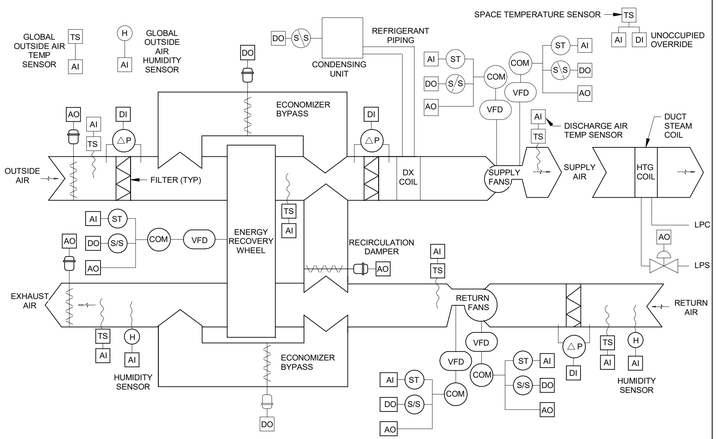
A. THE UNIT SHALL START PER AN OPTIMUM START PROGRAM.
B. THE OUTSIDE AIR DAMPER AND THE ASSOCIATED RELIEF HOOD DAMPER SHALL BE FULLY CLOSED, AND THE ASSOCIATED EXHAUST FAN SHALL BE OFF.
C. THE SUPPLY FAN SHALL RUN AND THE CONTROL VALVE SHALL MODULATE TO MAINTAIN OCCUPIED SETPOINT.

4. SAFETIES:

A. A SEPARATE LOW LIMIT FREEZE STAT WITH AUTOMATIC RESET SHALL BE INSTALLED WITH SENSING ELEMENT SERPENTINED ACROSS THE FACE OF THE COIL; WHENEVER COIL FREEZE-UP CONDITIONS ARISE (36 DEG. F ADJUSTABLE) THE SUPPLY FAN SHALL STOP, THE OUTSIDE AIR DAMPER SHALL CLOSE 100% AND CONTROL VALVE SHALL OPEN 100%. AN ALARM SHALL BE ACTIVATED.
B. WHERE DRAIN PAN OVERFLOW SWITCH IS PROVIDED, INTERLOCK WIRING SHALL DISABLE THE UNIT, WHEN THE OVERFLOW SWITCH IS TRIPPED. AN ALARM SHALL BE ACTIVATED.
C. WHERE CONDENSATE PUMP IS PROVIDED, INTERLOCK WIRING SHALL DISABLE THE UNIT, WHEN THE PUMP HAS FAILED OR ITS OVERFLOW SWITCH IS TRIPPED. AN ALARM SHALL BE ACTIVATED.

4 BCU - HW(VC) + DX CLG

SCALE:NOT TO SCALE



DX ROOF TOP UNIT, WITH DUCT STEAM COIL - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:

a. SUPPLY AND RETURN FANS SHALL RUN CONTINUOUSLY AT THE FREQUENCY DETERMINED BY THE BALANCING CONTRACTOR. THE EXHAUST DAMPER AND OUTSIDE AIR DAMPER SHALL OPEN TO MINIMUM VENTILATION POSITION.
b. HEAT RECOVERY WHEEL SHALL OPERATE.
c. UNIT MANUFACTURER SHALL CONTROL THE HEAT RECOVERY WHEEL TO ELIMINATE FROST AS REQUIRED BY OPERATING CONDITIONS.
d. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE HEATING SETPOINT, MODULATE THE CONTROL VALVE ON THE DUCT STEAM HEATING COIL TO MAINTAIN SPACE HEATING SETPOINT SUBJECT TO A DISCHARGE HIGH LIMIT OF 120 DEG. F (ADJUSTABLE) AND DISCHARGE LOW LIMIT OF 70 DEG. F (ADJUSTABLE).
e. WHEN THE SPACE TEMPERATURE IS 3 DEG. F (ADJUSTABLE) ABOVE THE COOLING SETPOINT, AND THE OUTSIDE AIR CANNOT COOL THE SPACE, THE RESPECTIVE CONDENSING UNIT SHALL BE CYCLED WITH THE STEAM HEATING CONTROL VALVE CLOSED TO MAINTAIN SPACE TEMPERATURE. USE 5 DEG. F (ADJUSTABLE) DEADBAND BETWEEN HEATING AND COOLING SETPOINTS.
f. DURING COOLING MODE, AND WHEN THE RETURN AIR ENTHALPY IS HIGHER THAN THE OUTDOOR ENTHALPY, THE UNIT DAMPERS SHALL OPEN TO OPERATE IN WHEEL BYPASS MODE AND THE WHEEL SHALL BE OFF AND THE STEAM CONTROL VALVE CLOSED. THIS SHALL BE DONE SUBJECT TO A HIGH LIMIT OF 55 DEG. F AND OUTDOOR ENTHALPY EXCEEDING RETURN AIR ENTHALPY AND A LOW LIMIT OF 55 DEG. F (ADJUSTABLE).

2. UNOCCUPIED MODE:

a. THE WHEEL, SUPPLY AND RETURN FANS SHALL BE OFF.
b. THE OUTSIDE AIR DAMPER AND EXHAUST AIR DAMPER SHALL BE FULLY CLOSED. RECIRCULATION DAMPER SHALL BE FULLY OPEN.
c. ON DROP IN SPACE TEMPERATURE BELOW THE UNOCCUPIED HEATING SETPOINT, CYCLE THE FANS ON AND FULLY OPEN STEAM CONTROL VALVE TO MAINTAIN REDUCED SPACE TEMPERATURE. USE 5 DEG. F (ADJUSTABLE) DEADBAND TO MINIMIZE SHORT CYCLING.
d. A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT IN OCCUPIED MODE FOR 1 HOUR (ADJUSTABLE). AT EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.
e. WHEN THE SPACE TEMPERATURE RISES 3 DEG. F (ADJUSTABLE) ABOVE THE UNOCCUPIED HEATING SETPOINT AND THE OUTSIDE ENTHALPY IS LOWER THAN THE SPACE ENTHALPY, THE FANS SHALL ENERGIZE, THE WHEEL BYPASS DAMPER SHALL OPEN, OUTSIDE AIR AND EXHAUST DAMPER SHALL MODULATE TO MAINTAIN THE UN OCCUPIED FREE COOLING SETPOINT. THIS SHALL BE DONE SUBJECT TO A HIGH LIMIT OF 55 DEG. F AND OUTDOOR ENTHALPY EXCEEDING RETURN AIR ENTHALPY AND A LOW LIMIT OF 55 DEG. F (ADJUSTABLE), AND WITH THE STEAM CONTROL VALVE FULLY CLOSED.

3. WARM-UP MODE:

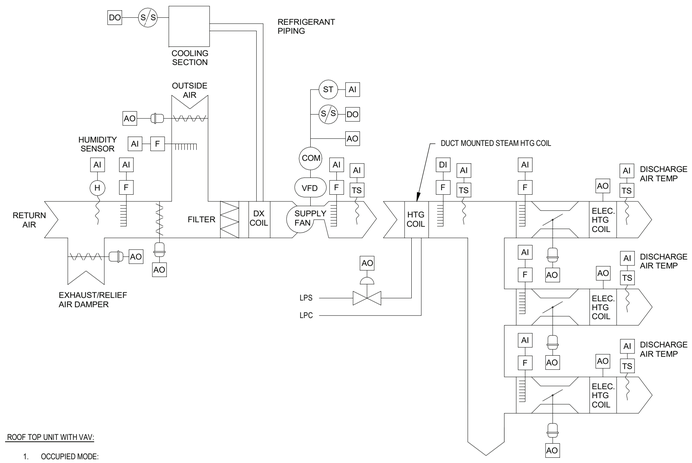
a. THE UNIT SHALL START PER OPTIMUM PROGRAM.
b. THE OUTSIDE AIR DAMPER, EXHAUST DAMPER, AND ECONOMIZER DAMPERS TO BE CLOSED, THE RECIRCULATION DAMPER SHALL BE FULLY OPEN.
c. THE SUPPLY FAN SHALL RUN AND THE STEAM CONTROL VALVE SHALL MODULATE TO MAINTAIN OCCUPIED SET POINT.

4. SAFETIES / OTHER CONTROL FUNCTIONS:

a. PROVIDE AN ALARM IN CASE OF DISCHARGE AIR TEMPERATURE LOW/HIGH LIMITS.
b. PROVIDE AN ALARM IN CASE OF SUPPLY OR RETURN FAN FAILURE.
c. A MANUAL RESET LOW LIMIT SHALL BE HARD WIRED TO STOP THE FAN IF THE COIL DISCHARGE TEMPERATURE DROPS BELOW THE SETPOINT. THE DDC SYSTEM SHALL MONITOR THE STATUS OF THIS LOW LIMIT.
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 SET POINT.
e. AN ECONOMIZER FAULT DETECTION AND DIAGNOSTICS SEQUENCE SHALL BE INCLUDED TO MONITOR AIR TEMPERATURES, HEATER AND COOLING CONDITIONS.
f. PROVIDE FROST CONTOL. MONITOR EXHAUST AIR TEMPERATURE AND HUMIDITY. MODULATE EXHAUST BYPASS DAMPER AS REQUIRED TO PREVENT ERW FROSTING.

2 RTU - DX CLG, ERW, RETURN FAN, DUCT STEAM COIL - CONSTANT VOLUME (RTU-3)

SCALE:NOT TO SCALE



ROOF TOP UNIT WITH VAV:

1. OCCUPIED MODE:

a. SUPPLY FAN SHALL RUN CONTINUOUSLY.
b. OUTSIDE AIR DAMPER SHALL OPEN TO MAINTAIN THE MINIMUM OUTSIDE AIR QUANTITY AS REQUIRED BY CODE. THE OUTSIDE AIR QUANTITY SHALL BE CALCULATED USING THE MULTIPLE SPACE FORMULA M4.1 FROM THE NYS MECHANICAL CODE. TO DETERMINE THE CORRECTED QUANTITY OF OUTSIDE AIR USING THE FORMULA THE FOLLOWING MUST BE MEASURED AND CALCULATED, POLL THE RESPECTIVE VAV BOX CONTROLLERS AND CALCULATE THE SPACE VENTILATION FRACTION FOR EACH VAV BOX (MINIMUM CFM SHOWN IN THE SCHEDULE FOR EACH VAV BOX / SPACE SUPPLY CFM), MEASURE TOTAL SYSTEM PRIMARY FLOW, SUM THE SPACE DESIGN VENTILATION CFM (TOTAL MINIMUM CFM SHOWN FOR ALL VAV BOXES IN THE SCHEDULE), CALCULATE THE CRITICAL SPACE (SPACE WITH THE LARGEST RATIO OF SPACE DESIGN VENTILATION CFM / SPACE SUPPLY CFM), WITH THE CRITICAL SPACE USE THIS TO CALCULATE THE REQUIRED QUANTITY OF OUTSIDE AIR USING THE FORMULA NOTED ABOVE. RUN THIS CALCULATION EVERY 5 MINUTES (ADJUSTABLE)
c. AIR FLOW MEASURING STATION IN OUTSIDE AIR DUCT UPSTREAM FROM THE UNIT SHALL CONTINUOUSLY MEASURE THE TOTAL OUTSIDE AIR FLOW TO THE SYSTEM. THE OUTSIDE, EXHAUST AND RETURN AIR DAMPERS SHALL BE POSITIONED TO PROVIDE AND MAINTAIN THE CALCULATED OUTSIDE AIR QUANTITY, CALCULATED AS DESCRIBED ABOVE.
d. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE HEATING SETPOINT, 68°F (ADJUSTABLE), THE DUCT MOUNTED STEAM HEATING CONTROL VALVE SHALL MODULATE TO MAINTAIN DISCHARGE HEATING SETPOINT OF 70 DEG. F (ADJUSTABLE).
e. EACH ZONE SERVED BY THE AIR HANDLING UNIT SHALL HEAT AT THE VAV BOXES TO MAINTAIN INDIVIDUAL SPACE SETPOINTS.
f. UPON A RISE IN SPACE TEMPERATURE (AVERAGE OF ALL VAV ZONES) ABOVE THE OCCUPIED MODE COOLING SETPOINT, 75°F (ADJUSTABLE) AND WHEN THE OUTSIDE AND RETURN AIR DIFFERENTIAL ENTHALPY IS ABOVE THE ECONOMIZER VALUE, THE RETURN, OUTSIDE AIR, AND EXHAUST DAMPERS SHALL MODULATE TO MAINTAIN OCCUPIED SETPOINT.
g. UPON A FURTHER RISE IN SPACE TEMPERATURE (AVERAGE OF ALL ZONES), AND OUTDOOR AIR CANNOT COOL, MODULATE THE MIXED AIR DAMPERS TO CALCULATED MINIMUM POSITION AND CYCLE THE CONDENSING UNIT TO SATISFY THE SPACE LOAD.

2. UNOCCUPIED MODE:

a. THE SUPPLY FAN SHALL BE OFF.
b. THE OUTSIDE AIR DAMPER AND THE ASSOCIATED EXHAUST/RELIEF DAMPER SHALL BE FULLY CLOSED, AND THE RETURN AIR DAMPER SHALL BE FULLY OPEN.
c. ON DROP IN SPACE TEMPERATURE BELOW THE UNOCCUPIED HEATING SETPOINT, CYCLE THE FAN ON AND THE DUCT HEATING CONTROL VALVE SHALL STAGE ON TO MAINTAIN REDUCED SPACE TEMPERATURE. USE 5 DEG. F (ADJUSTABLE) DEADBAND TO MINIMIZE SHORT CYCLING.
d. ENABLE HOT WATER COIL PUMP WHEN O.A. IS BELOW 40 DEG. F (ADJUSTABLE).
e. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED ECONOMIZER COOLING SETPOINT, 78°F (ADJUSTABLE), ALLOW ECONOMIZER COOLING WITH THE ELECTRIC HEATING AND THE MECHANICAL COOLING DISABLED.
f. A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT IN 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 THE ASSOCIATED EXHAUST/RELIEF DAMPER SHALL BE FULLY CLOSED, THE RETURN AIR DAMPER SHALL BE FULLY OPEN.
c. THE SUPPLY FAN SHALL RUN AND THE ELECTRIC HEATING COIL SHALL STAGE ON TO MAINTAIN OCCUPIED SETPOINT.

4. SAFETIES:

a. PROVIDE AN ALARM IN CASE OF DISCHARGE AIR TEMPERATURE LOW / HIGH LIMITS.
b. PROVIDE AN ALARM IN CASE OF MIXED AIR TEMPERATURE LOW / HIGH LIMITS.
c. PROVIDE AN ALARM IN CASE OF SUPPLY FAN FAILURE.
d. WITH SENSING ELEMENT SERPENTINE ACROSS THE FACE OF THE COIL AND SHALL ASSUME THE CONTROL OF DAMPERS AND VALVE (OUTSIDE AND EXHUAST/RELIEF AIR DAMPERS 100% CLOSED RETURN AIR FULLY OPEN AND CONTROL VALVE 100% OPEN) WHENEVER COIL FREEZE-UP CONDITIONS ARISE, AND AN ALARM SHALL BE ACTIVATED.
e. 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.

5. VAV BOX WITH HEAT OCCUPIED MODE:

a. UPON A CALL FOR COOLING, THE VAV DAMPER ACTUATOR SHALL MODULATE THE DAMPER BETWEEN MINIMUM AND MAXIMUM CFM SETPOINT TO MAINTAIN SPACE OCCUPIED SETPOINT WITH REHEAT COIL OFF.
b. UPON A CALL FOR HEATING, THE VAV DAMPER SHALL BE AT IT'S MINIMUM POSITION AND THE DUCT ELECTRIC HEAT COIL SHALL STAGE ON TO MAINTAIN SPACE OCCUPIED SETPOINT.

6. VAV BOX WITH HEAT UNOCCUPIED MODE:

a. UPON A CALL FOR HEAT, THE VAV DAMPER SHALL BE AT IT'S MINIMUM POSITION AND THE AND THE DUCT ELECTRIC HEAT COIL SHALL STAGE ON TO MAINTAIN SPACE UNOCCUPIED SETPOINT, SUBJECT TO THE OVERRIDE BUTTON ON SPACE SENSOR. THE VAV SHALL OPERATE IN THE OCCUPIED MODE FOR A PERIOD OF 2 HOURS (ADJUSTABLE) WITH THE AHU RUNNING.

7. VAV BOX WITH HEAT ALARMS:

a. AIRFLOW LOW/HIGH LIMITS AS MEASURED AT THE VAV AIRFLOW SENSOR.

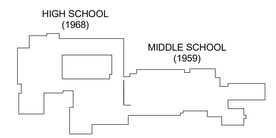
8. FAN SPEED CONTROL:

a. VARIABLE SPEED DRIVE SHALL ADJUST THE SUPPLY FAN SPEED TO MAINTAIN A CONSTANT DUCT STATIC PRESSURE AS SENSED BY A STATIC PRESSURE SENSOR LOCATED TWO-THIRDS OF THE WAY DOWNSTREAM OF THE FAN IN THE LONGEST OR MOST CRITICAL DUCT.

1 RTU - DX CLG, DUCT STEAM COIL W/ VAV (RTU-4)

SCALE:NOT TO SCALE

KEY PLAN:



SED CONTROL NO. 27-01-00-01-0-024-009

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

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

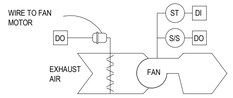
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011 PH2
CHECKED BY: JLM	DATE: 10/06/2023

CONTROL SCHEMATICS

BUILDING	SHEET NUMBER
	M400

10/9/2023 12:00:02 PM



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:

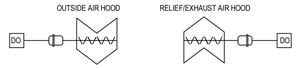
   A. THE EXHAUST FAN SHALL BE OFF AND THE AUTOMATIC AIR DAMPER SHALL BE CLOSED.

4. SAFETIES:

   A. UPON A FAILTURE OF THE FAN, AS SENSED BY A CURRENT SENSING STATUS SWITCH, AN ALARM SHALL BE ACTIVATED.

1 EF - CONSTANT SPEED

SCALE: NOT TO SCALE

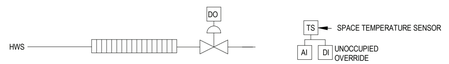


ROOF TOP HOOD - INTAKE OR RELIEF/EXHAUST - SEQUENCE OF OPERATIONS:

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.

2 RTH - INTAKE OR RELIEF

SCALE: NOT TO SCALE



FIN TUBE RADIATION - HOT WATER OR GLYCOL - WITH 2-WAY CONTROL VALVE - SEQUENCE OF OPERATIONS:

1. OCCUPIED MODE:

   A. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE OCCUPIED HEATING SETPOINT, THE CONTROL VALVE SHALL OPEN 100% 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 OPEN 100% TO MAINTAIN UNOCCUPIED SPACE SETPOINT.

3. WARM-UP MODE:

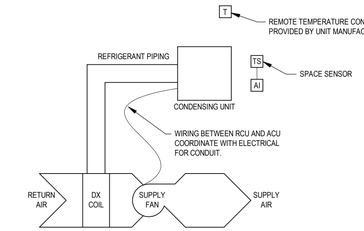
   A. WHEN THE SPACE TEMPERATURE IS AT OR BELOW THE OCCUPIED HEATING SETPOINT, THE CONTROL VALVE SHALL OPEN 100% TO MAINTAIN OCCUPIED SPACE SETPOINT.

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.

3 FIN TUBE RADIATION (FTR)

SCALE: NOT TO SCALE



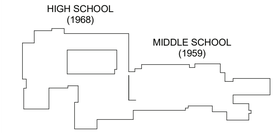
DUCTLESS SPLIT SYSTEMS - COOLING ONLY - SEQUENCE OF OPERATIONS:

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 RAND (ADJUSTABLE).

4 DUCTLESS SPLIT SYSTEM - COOLING ONLY

SCALE: NOT TO SCALE

KEY PLAN:



SED CONTROL NO. 27-01-00-01-0-024-009

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

BCA ARCHITECTS ENGINEERS

Port PRIDE

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

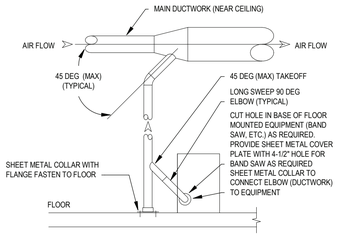
REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011 PH2
CHECKED BY: JLM	DATE: 10/06/2023

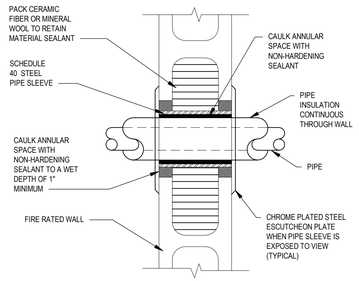
CONTROL SCHEMATICS

BUILDING	SHEET NUMBER
	M401

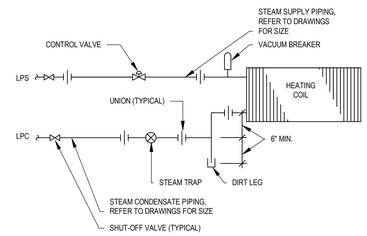
10/9/2023 12:00:03 PM



15 TYPICAL DROP TO EQUIPMENT DETAIL
SCALE:NOT TO SCALE

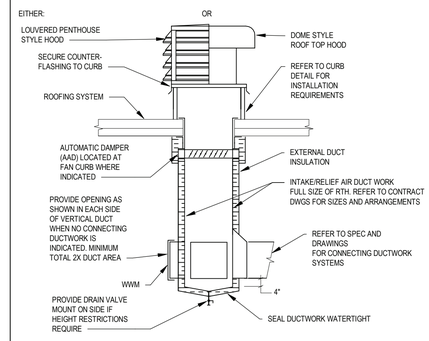


12 FIRE RATED CMU WALL PIPE SLEEVE DETAIL
SCALE:NOT TO SCALE

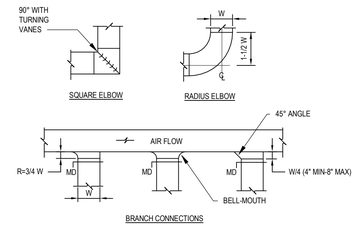


NOTES:
1. STEAM TRAP SIZED TO 3 TIMES COIL CAPACITY UNLESS OTHERWISE NOTED. FLOAT & THERMOSTATIC TYPE ABOVE 10 MBH. THERMOSTATIC TYPE UNDER 10 MBH
2. GENERIC SYMBOL USED TO SHOW VALVE LOCATION(S). REFER TO SPECIFICATIONS FOR EXACT VALVE TYPE.

8 STEAM COIL PIPING SCHEMATIC
SCALE:NOT TO SCALE

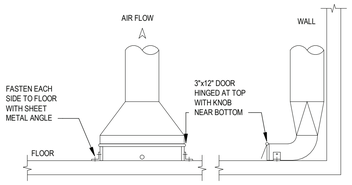


4 RELIEF INTAKE AIR ROOF-TOP HOOD
SCALE:NOT TO SCALE

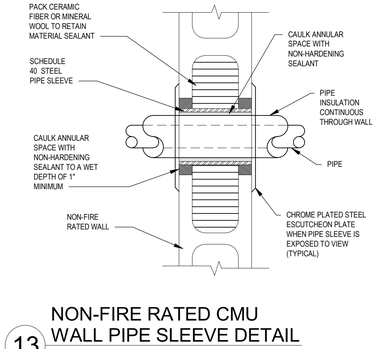


NOTES:
1. ELBOW AND BRANCH CONNECTION STYLE CHOICE AT CONTRACTOR DISCRETION.
2. BRANCH TAKE-OFFS APPLY TO BOTH ROUND AND RECTANGULAR DUCTWORK.

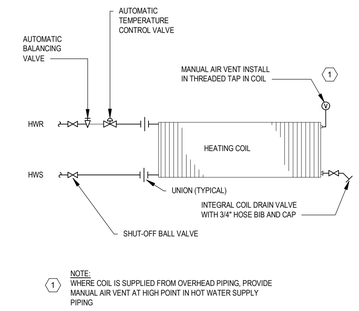
1 DUCTWORK DETAILS
SCALE:NOT TO SCALE



16 FLOOR SWEEP DETAIL
SCALE:NOT TO SCALE

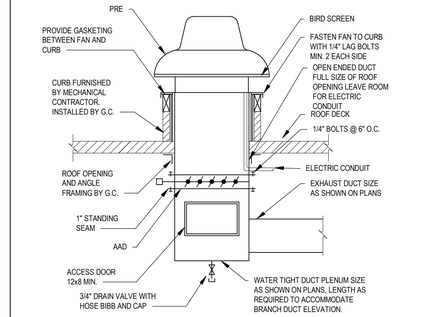


13 NON-FIRE RATED CMU WALL PIPE SLEEVE DETAIL
SCALE:NOT TO SCALE

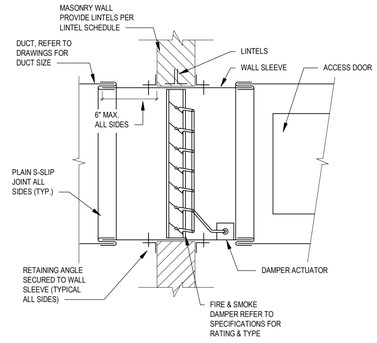


NOTE:
1 WHERE COIL IS SUPPLIED FROM OVERHEAD PIPING, PROVIDE MANUAL AIR VENT AT HIGH POINT IN HOT WATER SUPPLY PIPING

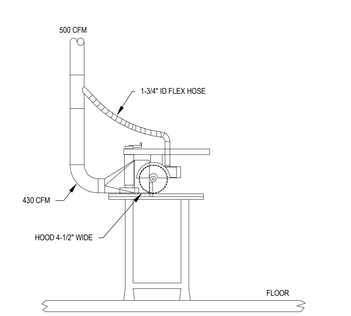
9 HOT WATER HEATING COIL PIPING SCHEMATIC
SCALE:NOT TO SCALE



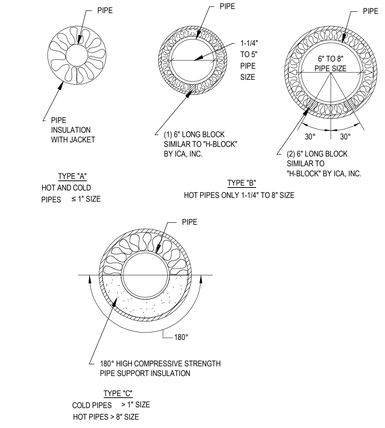
5 POWER ROOF EXHAUST WITH AAD DETAIL
SCALE:NOT TO SCALE



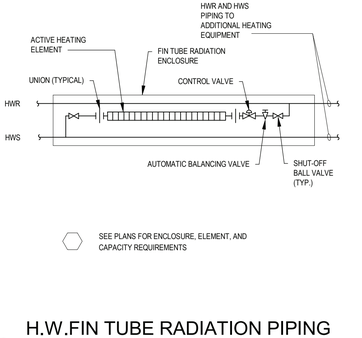
2 VERTICAL FIRE SMOKE DAMPER DETAIL
SCALE:NOT TO SCALE



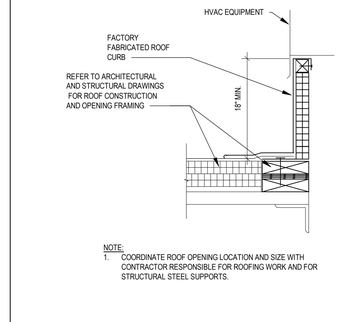
17 MITER SAW DETAIL
SCALE:NOT TO SCALE



14 INSULATION SHIELD AND BLOCKING DETAIL
SCALE:NOT TO SCALE



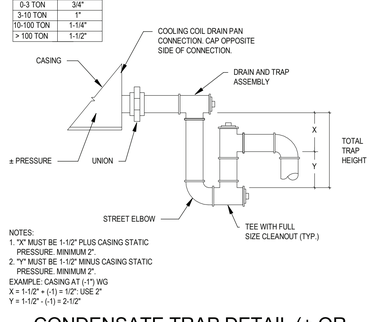
10 H.W.FIN TUBE RADIATION PIPING SCHEMATIC (VALVE CONROL)
SCALE:NOT TO SCALE



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

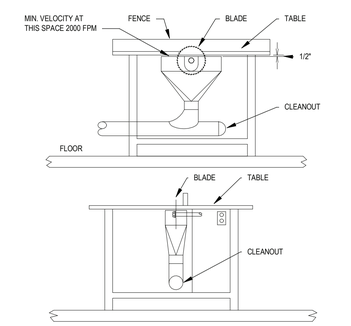
6 ROOF CURB DETAIL
SCALE:NOT TO SCALE

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"

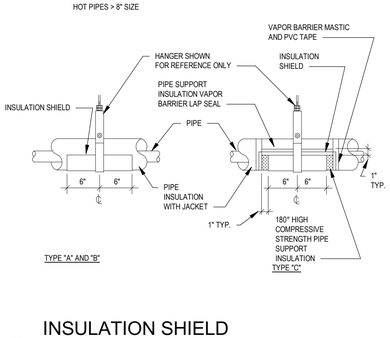


NOTES:
1. "X" MUST BE 1-1/2" PLUS CASING STATIC PRESSURE. MINIMUM 2".
2. "Y" MUST BE 1-1/2" MINUS CASING STATIC PRESSURE. MINIMUM 2".
EXAMPLE: CASING AT (-1") WG
X = 1-1/2" + (-1) = 1/2". USE 2"
Y = 1-1/2" - (-1) = 2-1/2"

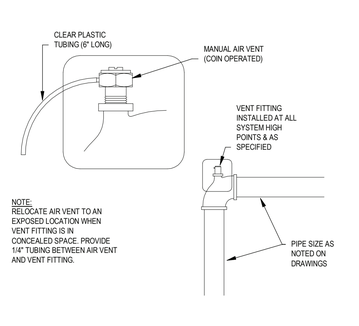
3 CONDENSATE TRAP DETAIL (+ OR - PRESSURE)
SCALE:NOT TO SCALE



18 TABLE SAW DETAIL
SCALE:NOT TO SCALE

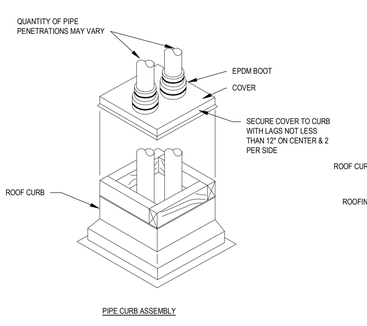


14 INSULATION SHIELD AND BLOCKING DETAIL
SCALE:NOT TO SCALE

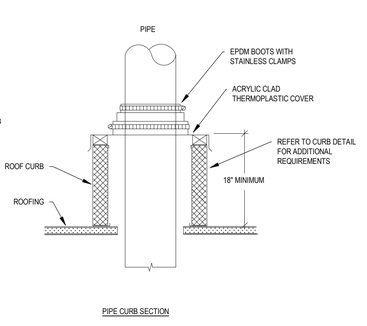


NOTE:
RELOCATE AIR VENT TO AN EXPOSED LOCATION WHEN VENT FITTING IS IN CONCEALED SPACE. PROVIDE 1/4" TUBING BETWEEN AIR VENT AND VENT FITTING.

11 MANUAL AIR VENT DETAIL
SCALE:NOT TO SCALE



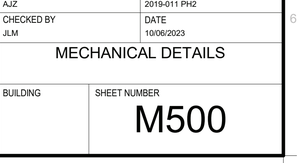
PIPE CURB ASSEMBLY



PIPE CURB SECTION

7 PIPE CURB ASSEMBLY
SCALE:NOT TO SCALE

KEY PLAN:



SED CONTROL NO. 27-01-00-01-0-024-009

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

BCA ARCHITECTS ENGINEERS

Port PRIDE

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

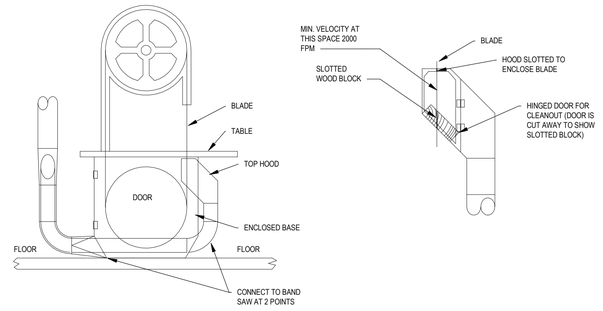
REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

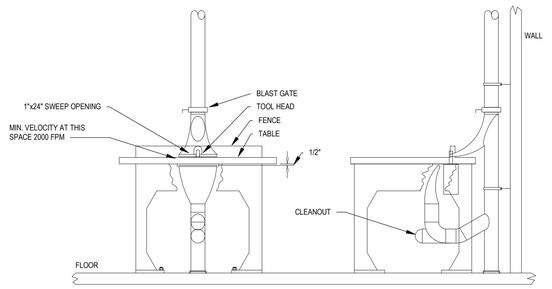
MECHANICAL DETAILS

BUILDING	SHEET NUMBER
	M500

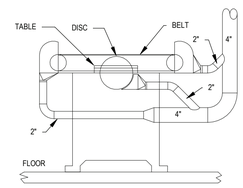
10/9/2023 12:00:06 PM



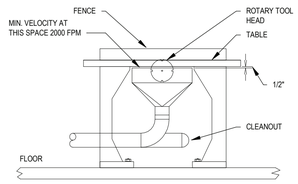
1 BAND SAW DETAIL
SCALE:NOT TO SCALE



2 ROUTER TABLE DETAIL
SCALE:NOT TO SCALE

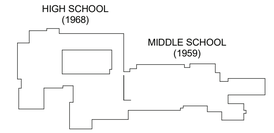


3 BELT SANDER DETAIL
SCALE:NOT TO SCALE



4 JOINTER AND PLANER DETAIL
SCALE:NOT TO SCALE

KEY PLAN:



SED CONTROL NO. 27-01-00-01-0-024-009

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

BCA ARCHITECTS ENGINEERS

Port PRIDE

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

REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

MECHANICAL DETAILS

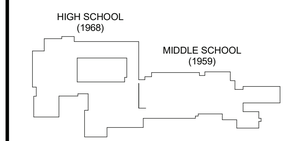
BUILDING	SHEET NUMBER
	M501

10/9/2023 12:05:44 PM

2020 NYSMC VENTILATION SCHEDULE

Number	Name	62.1 ASHRAE Ventilation Table	Area	Occupant Density	CFM/Person	CFM/SQFT	# OF PEOPLE CALCULATED	Zone Air Distribution Effectiveness	TOTAL MIN OA	Actual Supply OA CFM	OA CODE MET	PLUMBING FIXTURES	EXHAUST RATE CFM/SQFT	Exhaust CFM per Fixture	MIN Exhaust Rate	Actual Exhaust CFM	EXHAUST CFM MET
98	MAIL ROOM	Copy, Printing Rooms	217.4 SF	0	0	0	0	0.8	0	0	Yes	0	0.5	0	109	110	Yes
122	MIDDLE SCHOOL CAFETERIA	Cafeteria/Fast-Food Dining	2463.4 SF	100	7.5	0.18	247	0.8	2870	2875	Yes	0	0	0	0	0	Yes
165	CORRIDOR	Corridors	1339.6 SF	0	0	0.06	0	0.8	101	105	Yes	0	0	0	0	0	Yes
165B	MUSIC OFFICE	Office Space	146.7 SF	5	5	0.06	1	0.8	18	20	Yes	0	0	0	0	0	Yes
166	GUIDANCE OFFICE	Office Space	410.1 SF	5	5	0.06	3	0.8	50	55	Yes	0	0	0	0	0	Yes
166A	CALMING ROOM	Office Space	73.7 SF	5	5	0.06	1	0.8	12	20	Yes	0	0	0	0	0	Yes
166B	OFFICE	Office Space	149.6 SF	5	5	0.06	1	0.8	18	20	Yes	0	0	0	0	0	Yes
166C	OFFICE	Office Space	135.9 SF	5	5	0.06	1	0.8	17	20	Yes	0	0	0	0	0	Yes
166D	OFFICE	Office Space	132.2 SF	5	5	0.06	1	0.8	17	20	Yes	0	0	0	0	0	Yes
166E	OFFICE	Office Space	222.5 SF	5	5	0.06	2	0.8	30	40	Yes	0	0	0	0	0	Yes
167	CHORUS	Classrooms (age 9+)	1319.4 SF	35	10	0.12	47	0.8	786	790	Yes	0	0	0	0	0	Yes
167A	PRACTICE	Office Space	65.5 SF	5	5	0.06	1	0.8	12	15	Yes	0	0	0	0	0	Yes
167B	PRACTICE	Office Space	57.4 SF	5	5	0.06	1	0.8	11	15	Yes	0	0	0	0	0	Yes
168	BAND	Classrooms (age 9+)	2332.0 SF	35	10	0.12	82	0.8	1375	1400	Yes	0	0	0	0	0	Yes
168A	STORAGE	Storage	90.5 SF	0	0	0.12	0	0.8	14	20	Yes	0	0	0	0	0	Yes
168B	PRACTICE	Office Space	64.0 SF	5	5	0.06	1	0.8	12	15	Yes	0	0	0	0	0	Yes
168C	PRACTICE	Office Space	58.7 SF	5	5	0.06	1	0.8	11	15	Yes	0	0	0	0	0	Yes
168E	COPY ROOM	Copy, Printing Rooms	247.5 SF	0	0	0	0	0.8	0	40	Yes	0	0.5	0	124	125	Yes
169	FACULTY	Breakrooms	406.0 SF	50	5	0.12	21	0.8	193	200	Yes	0	0	0	0	0	Yes
169A	TOILET	Toliets - Public	50.2 SF	0	0	0	0	0.8	0	0	Yes	1	0	70	70	70	Yes
169B	TOILET	Toliets - Public	49.5 SF	0	0	0	0	0.8	0	0	Yes	1	0	70	70	70	Yes
170D	GIRLS	Toliets - Public	358.1 SF	0	0	0	0	0.8	0	0	Yes	3	0	70	210	210	Yes
170E	BOYS	Toliets - Public	371.8 SF	0	0	0	0	0.8	0	0	Yes	3	0	70	210	210	Yes
303	TECHNOLOGY CLASSROOM	Wood/Metal Shop	1686.3 SF	20	10	0.18	34	0.8	805	845	Yes	0	0.5	0	844	845	Yes

KEY PLAN:



SED CONTROL NO. 27-01-00-01-0-024-009

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

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

REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

MECHANICAL EQUIPMENT SCHEDULES

BUILDING	SHEET NUMBER
	M600

10/9/2023 12:00:07 PM

ROOF TOP UNIT SCHEDULE (DX RETURN FAN)

ID	LOCATION NAME	SERVES	MANUFACTURER	MODEL NO.	ARRANGEMENT	SUPPLY AIR FLOW	OUTSIDE AIR MIN	FAN TYPE	FAN PRESS ESP	FAN PRESS TSP	FAN DRIVE TYPE	FAN MOTOR POWER	SECONDARY FAN TYPE	SECONDARY FAN AIRFLOW DESIGN	SECONDARY FAN PRESS ESP	SECONDARY FAN PRESS TSP	SECONDARY FAN DRIVE TYPE	SECONDARY FAN MOTOR POWER	COOLING COIL NOMINAL CAP	COOLING COIL AIRSIDE CAP TOTAL	COOLING COIL AIRSIDE CAP SENSIBLE	COOLING COIL AIRSIDE EAT(db)	COOLING COIL AIRSIDE EAT(wb)	COOLING COIL AIRSIDE LAT(db)	COOLING COIL AIRSIDE LAT(wb)	COOLING COIL AIRSIDE ROWS	ENERGY RECOVERY WHEEL SUMMER DESIGN ENERGY RECOVERY EAT(db)	EAT(wb)	LAT(db)	LAT(wb)	ENERGY RECOVERY WHEEL WINTER DESIGN ENERGY RECOVERY EAT(db)	LAT(db)	FROST CONTROL	UNIT WEIGHT	MCA	MOCP	VOLT	PH	NOTES
RTU-3	ROOF	MS CAFFETERIA 122	PETRA	PPH-15	Downflow	6720 CFM	2875 CFM	PLENUM	1.00 in-wg	4.80 in-wg	VFD	10.00 hp	PLENUM	6720 CFM	0.50 in-wg	2.70 in-wg	DIRECT	7.50 hp	16 ton	186000 Btu/h	163000 Btu/h	76.9 °F	63.6 °F	54.9 °F	54.2 °F	6	94.0 °F	72.0 °F	76.9 °F	63.6 °F	0.0 °F	49.5 °F	MOD. WHEEL	7300 lb	52.4 A	60.0 A	480 V	3	1,2,3

NOTES:
1 PROVIDE WITH 18"H INSULATED ROOF CURB/SUPPORT
2 PROVIDE UNIT WITH SINGLE POINT ELECTRICAL CONNECTION WITH INTEGRAL FUSED DISCONNECT AND CONVENIENCE RECEPTACLES ACCESSIBLE FROM OUTSIDE UNIT ENCLOSURE
3 PROVIDE WITH HEAT RECOVERY WHEEL WITH BY-PASS DAMPERS

ROOF TOP UNIT SCHEDULE (DX)

ID	LOCATION NAME	SERVES	MANUFACTURER	MODEL NO.	ARRANGEMENT	SUPPLY AIR FLOW	OUTSIDE AIR MIN	FAN TYPE	FAN PRESS ESP	FAN PRESS TSP	FAN RPM	FAN DRIVE TYPE	FAN MOTOR POWER	COOLING COIL NOMINAL CAP	COOLING COIL AIRSIDE CAP TOTAL	COOLING COIL AIRSIDE CAP SENSIBLE	COOLING COIL AIRSIDE EAT(db)	COOLING COIL AIRSIDE EAT(wb)	COOLING COIL AIRSIDE LAT(db)	COOLING COIL AIRSIDE LAT(wb)	COOLING COIL AIRSIDE PD	COOLING COIL AIRSIDE ROWS	UNIT WEIGHT	MCA	MOCP	VOLT	PH	NOTES
RTU-1	ROOF	CHORUS	PETRA	PPH-7.5	Downflow	2160 CFM	925 CFM	PLENUM	1.50 in-wg	4.55 in-wg	0	VFD	7.50 hp	CU-AL	4 ton	0 Btu/h	0 Btu/h	83.0 °F	67.0 °F	54.6 °F	53.6 °F	0.00 in-wg	6	4350 lb	18.5 A	25.0 A	480 V	3	1,2,3
RTU-2	ROOF	BAND	PETRA	PPH-10	Downflow	3450 CFM	1460 CFM	PLENUM	1.50 in-wg	4.80 in-wg	0	VFD	7.50 hp	CU-AL	4 ton	0 Btu/h	0 Btu/h	83.0 °F	67.0 °F	54.7 °F	53.7 °F	0.00 in-wg	6	4500 lb	34.1 A	40.0 A	480 V	3	1,2,3
RTU-4	ROOF	GUIDANCE	PETRA	PPH-4	Downflow	1600 CFM	200 CFM	PLENUM	2.00 in-wg	5.30 in-wg	0	VFD	3.00 hp	CU-AL	4 ton	44000 Btu/h	38100 Btu/h	78.0 °F	64.0 °F	54.7 °F	54.0 °F	0.00 in-wg	6	3700 lb	12.1 A	15.0 A	480 V	3	1,2,3

NOTES:
1 PROVIDE WITH 18"H INSULATED ROOF CURB/SUPPORT
2 PROVIDE UNIT WITH SINGLE POINT ELECTRICAL CONNECTION WITH INTEGRAL FUSED DISCONNECT AND CONVENIENCE RECEPTACLES ACCESSIBLE FROM OUTSIDE UNIT ENCLOSURE
3 PROVIDE WITH ECONOMIZER SECTION

VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE (ELECTRIC)

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	NECK SIZE	TYPE	PRIMARY AIRFLOW MAX	PRIMARY AIRFLOW MIN	HEATING COIL DESCRIPTION	HEATING COIL CAP	HEATING COIL AIRSIDE DESIGN FLOW	HEATING COIL AIRSIDE EAT(db)	HEATING COIL AIRSIDE LAT(db)	HEATING ELEMENT QTY	HEATING ELEMENT POWER	HEATING ELEMENT SCR	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	NOTES
VAV-1	GUIDANCE OFFICE	166	TITUS	DESV	6"	SINGLE DUCT	515 CFM	100 CFM	Electric Heat	22159 Btu/h	515 CFM	50.0 °F	89.9 °F	1	6.5 kW	Yes	65 lb	18.0 A	22.6 A	25.0 A	208 V	3	
VAV-2	OFFICE	166B	TITUS	DESV	4"	SINGLE DUCT	110 CFM	20 CFM	Electric Heat	3950 Btu/h	110 CFM	50.0 °F	83.3 °F	1	1.5 kW	Yes	65 lb	4.2 A	5.2 A	15.0 A	208 V	3	
VAV-3	OFFICE	166B	TITUS	DESV	6"	SINGLE DUCT	190 CFM	20 CFM	Electric Heat	8523 Btu/h	190 CFM	50.0 °F	91.6 °F	1	2.5 kW	Yes	65 lb	6.9 A	8.7 A	15.0 A	208 V	3	
VAV-4	OFFICE	166C	TITUS	DESV	6"	SINGLE DUCT	170 CFM	20 CFM	Electric Heat	6820 Btu/h	170 CFM	50.0 °F	87.2 °F	1	2.0 kW	Yes	65 lb	5.6 A	6.9 A	15.0 A	208 V	3	
VAV-5	OFFICE	166D	TITUS	DESV	6"	SINGLE DUCT	165 CFM	20 CFM	Electric Heat	6815 Btu/h	165 CFM	50.0 °F	88.3 °F	1	2.0 kW	Yes	65 lb	5.6 A	6.9 A	15.0 A	208 V	3	
VAV-6	OFFICE	166E	TITUS	DESV	6"	SINGLE DUCT	280 CFM	40 CFM	Electric Heat	11927 Btu/h	280 CFM	50.0 °F	89.5 °F	1	3.5 kW	Yes	65 lb	9.7 A	12.1 A	15.0 A	208 V	3	
VAV-7	MUSIC OFFICE	165B	TITUS	DESV	6"	SINGLE DUCT	185 CFM	20 CFM	Electric Heat	8519 Btu/h	185 CFM	50.0 °F	92.7 °F	1	2.5 kW	Yes	65 lb	6.9 A	8.7 A	15.0 A	208 V	3	

NOTES:
1 INSTALL AS PER UNIT MANUFACTURERS RECOMMENDATIONS

ELECTRIC DUCT COIL SCHEDULE

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	HEATING COIL AIRSIDE DESIGN FLOW	HEATING COIL AIRSIDE EAT(db)	HEATING COIL AIRSIDE LAT(db)	HEATING ELEMENT QTY	HEATING ELEMENT TYPE	HEATING ELEMENT POWER	HEATING ELEMENT SCR	DUCT SIZE WIDTH	DUCT SIZE HEIGHT	FLA	MCA	MOCP	VOLT	PH	NOTES
DHC-5	TECHNOLOGY CLASSROOM	303	GREENHECK	IDHE		1500 CFM	0.0 °F	69.5 °F	1		33 kW	No	2' - 0"	1' - 0"	91.6 A	114.5 A	125.0 A	208 V	3	

NOTES:
1 INSTALL AS PER UNIT MANUFACTURERS RECOMMENDATIONS
2 COIL, COIL SLEEVE AND ASSOCIATED DUCTWORK TO BE FULLY INSULATED

STEAM DUCT MOUNTED COIL SCHEDULE

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	HEATING COIL CAP	HEATING COIL AIRSIDE DESIGN FLOW	HEATING COIL AIRSIDE EAT(db)	HEATING COIL AIRSIDE LAT(db)	STEAM PRESS	STEAM FLOW (LBS/HR)	UNIT WEIGHT	NOTES
DHC-1	MECHANICAL	169B	NATIONWIDE COILS	SDS8S020D08-19-5x24		134900 Btu/h	2160 CFM	40.0 °F	97.9 °F	2.0 psi	140	46 lb	1,2
DHC-2	MECHANICAL	169C	NATIONWIDE COILS	SDS8S01F14-24x36		210400 Btu/h	3450 CFM	40.0 °F	96.6 °F	2.0 psi	218	49 lb	1,2
DHC-3	MIDDLE SCHOOL CAFETERIA	122	NATIONWIDE COILS	SDS8S02D06-36x48		444800 Btu/h	6720 CFM	40.0 °F	101.4 °F	2.0 psi	460	120 lb	1,2
DHC-4	STORAGE	166H	NATIONWIDE COILS	SDS8S02D06-21x24		104700 Btu/h	1615 CFM	40.0 °F	100.1 °F	2.0 psi	108	49 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

BLOWER COIL UNIT SCHEDULE

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	SUPPLY AIR FLOW	OUTSIDE AIR FLOW	FAN PRESS ESP	FAN MOTOR QTY	FAN MOTOR POWER	FAN MOTOR RPM	COOLING COIL CAP TOTAL	COOLING COIL AIRSIDE EAT(db)	COOLING COIL AIRSIDE EAT(wb)	COOLING COIL AIRSIDE LAT(db)	COOLING COIL AIRSIDE LAT(wb)	COOLING COIL AIRSIDE ROWS	HEATING COIL AIRSIDE CAP	HEATING COIL AIRSIDE EAT(db)	HEATING COIL AIRSIDE LAT(db)	HEATING COIL AIRSIDE ROWS	HEATING COIL WATERSIDE FLOW	HEATING COIL WATERSIDE EWT	HEATING COIL WATERSIDE LWT	HEATING COIL WATERSIDE PD	FILTER TYPE	FILTER EFF	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	NOTES
BCU-1	FACULTY	169	VTS	AVS008e	585 CFM	250 CFM	1.00 in-wg	1	1.00 hp	2929	23800 Btu/h	83.1 °F	66.6 °F	55.0 °F	53.1 °F	4	34800 Btu/h	40.0 °F	95.1 °F	2	3.5 GPM	180 °F	160 °F	0.5 ftH2O	FLAT	MERV-13	235 lb	4.6 A	3.8 A	15.0 A	208 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 DRIVE 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

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	TECHNOLOGY CLASSROOM	303	SF-1	GREENHECK	ESD-435	1	ALUMINUM		DRAINABLE	1500 CFM	3.0 SF	486 FPM	0.18 in-wg	AUTOMATIC	4' - 9 1/2"	1' - 8 1/2"	0 lb	1

NOTES:
1 INSTALL AS PER UNIT MANUFACTURERS RECOMMENDATIONS

GRAVITY VENTILATOR SCHEDULE

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	FGI	HOOD	INTAKE	560 CFM	480 FPM	1.17 SF	0.01 in-wg	AUTOMATIC	Yes	1' - 0"	1' - 2"	0"	2' - 0"	1' - 9"	0 lb	1,2,3
RTH-2	ROOF	-	GREENHECK	FGR	HOOD	EXHAUST	560 CFM	480 FPM	1.17 SF	0.00 in-wg	AUTOMATIC	Yes	1' - 0"	1' - 2"	0"	2' - 0"	1' - 9"	0 lb	1,2,3

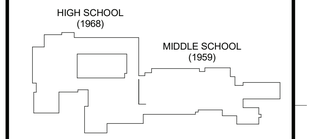
NOTES:
1 PROVIDE AN 18" H INSULATED ROOF CURB WITH UNIT
2 PROVIDE AN AUTOMATIC AIR DAMPENER (AAD) V/H DUCT AT ROOF OPENING. AAD TO BE FURNISHED BY THE TEMPERATURE CONTROL SUB-CONTRACTOR AND INSTALLED BY MC
3 PROVIDE WITH ALUMINUM BIRD SCREEN

FAN SCHEDULE

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	ARRANGEMENT	FAN AIRFLOW DESIGN	FAN AIRFLOW MIN	FAN PRESS ESP	FAN RPM	FAN DRIVE TYPE	FAN MOTOR POWER	FAN MOTOR RPM	FAN MOTOR ECM	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	INTERLOCK ID	NOTES
EF-1	FACS CULINARY CLASSROOM	306	TJERNLUND	LB2	HORIZONTAL	160 CFM	0 CFM	0.00 in-wg	0		0.00 hp	0	No	0 lb	0.5 A	0.6 A	15.0 A	120 V	1		
EF-2	KILN	300B	GREENHECK	SP-110-VG	ROUND OUTLET	140 CFM	0 CFM	0.00 in-wg	0	DIRECT	0.01 hp	940	Yes	12 lb	1.1 A	1.3 A	15.0 A	120 V	1		
PRE-1	ROOF	-	GREENHECK	G-103	DOWNFLOW	910 CFM	0 CFM	0.25 in-wg	0	DIRECT	0.10 hp	0	No	0 lb	5.8 A	7.3 A	15.0 A	120 V	1		
PRE-2	ROOF	-	GREENHECK	G-060	DOWNFLOW	100 CFM	0 CFM	0.00 in-wg	0	DIRECT	0.07 hp	0	No	0 lb	1.8 A	2.3 A	15.0 A	120 V	1		
SF-1	TECHNOLOGY CLASSROOM	303	GREENHECK	BCF-110-5	HORIZONTAL	1500 CFM	0 CFM	0.00 in-wg	0		0.50 hp	0	No	0 lb	9.8 A	12.3 A	20.0 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 AN AUTOMATIC AIR DAMPER WITH FAN, AUTOMATIC AIR DAMPER PROVIDED AND COORDINATED WITH TC SUBCONTRACTOR

KEY PLAN:



SED CONTROL NO. 27-01-00-01-0-024-009

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

BCA ARCHITECTS ENGINEERS

Port PRIDE

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

REV	DATE	DESCRIPTION

DRAWN BY AJZ	PROJECT NUMBER 2019-011 PH2
CHECKED BY JLM	DATE 10/06/2023

MECHANICAL EQUIPMENT SCHEDULES

BUILDING	SHEET NUMBER
	M601

10/9/2023 12:00:08 PM

SPLIT SYSTEM CONDENSING UNIT SCHEDULE

ID	DESCRIPTION	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	COMPRESSOR CAP	COMPRESSOR TYPE	REFRIGERANT TYPE	LOW AMBIENT KIT	SUMMER AMBIENT DBT	WINTER AMBIENT DBT	SEER	EER	UNIT WEIGHT	MCA	MOCP	VOLT	PH	INTERLOCK ID	REMARKS
ACCU-1	CONDENSING UNIT	ROOF	-	SAMSUNG	AC018BXSCCC/AA	LOW AMBIENT SPLIT SYSTEM	1.5 ton	TWIN BLDC ROTARY	R-410A	Yes	95.0 °F	0.0 °F	20	12	89 lb	13.5 A	15.0 A	208 V	1	ACU-1	1,2,3,4,5
ACCU-2	CONDENSING UNIT	ROOF	-	JOHNSON CONTROLS	RAC15024B21S		2.0 ton	SCROLL	R-410A	Yes	95.0 °F	0.0 °F	15.2	0	140 lb	16.5 A	25.0 A	208 V	1	BCU-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

WALL MOUNTED AIR CONDITIONER SCHEDULE

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	INTERLOCK ID	REMARKS
ACU-1	COPY ROOM	168E	SAMSUNG	PKA-A12HA	WALL MOUNTED	540 CFM	18000 Btu/h	0 Btu/h	80.6 °F	66.2 °F	21 lb	10.8 A	13.5 A	15.0 A	208 V	1	ACU-1	1,2,3,4,5

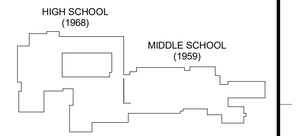
NOTES:
1 PROVIDE UNIT WITH HARD WIRED THERMOSTAT
2 MC IS RESPONSIBLE FOR FIELD REFRIGERANT PIPING AND SYSTEM REFRIGERANT CHARGING
3 UNIT MANUFACTURER TO CONFIRM REFRIGERANT PIPE SIZES
4 PROVIDE UNIT WITH FACTORY INSTALLED CONDENSATE PUMP
5 INDOOR UNIT TO BE POWERED FROM OUTDOOR UNIT

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	SWE-S	SLOPED TOP	24"	5 1/4"	28"	3/4"	3 1/4"	50	CU/AL	1	180 °F	160 °F		0	1313 Btu/h	

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

KEY PLAN:



SED CONTROL NO. 27-01-00-01-0-024-009

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

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

REV	DATE	DESCRIPTION

DRAWN BY: AJZ	PROJECT NUMBER: 2019-011 PH2
CHECKED BY: JLM	DATE: 10/06/2023

MECHANICAL EQUIPMENT SCHEDULES

BUILDING	SHEET NUMBER
	M602

10/9/2023 12:00:10 PM