







ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
BCU	BUILDING CONTROL UNIT
BTU	BRITISH THERMAL UNIT
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
COMM.	COMMUNICATION
CV	CONTROL VALVE
(D)	DEMOLISH
DB	DRY BULB
DCV	DEMAND CONTROLLED VENTILATION
DEG. F	DEGREES FAHRENHEIT
DIA	DIAMETER
DX	DIRECT EXPANSION
'E'	ELECTRICAL CONTRACTOR
(E)	EXISTING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATING
ESP	EXTERNAL STATIC PRESSURE
FAI	FRESH AIR INTAKE
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FT. H2O	FEET OF WATER
'G'	GENERAL CONSTRUCTION CONTRACTOR
GPM	GALLONS PER MINUTE
GPH	GALLONS PER HOUR
H	HEIGHT
'H'	HVAC CONTRACTOR
HP	HORSEPOWER
IN.	INCHES
IN. W.C. (W.G.)	INCHES WATER COLUMN (WATER GAUGE)
KW	KILOWATTS
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LCD	LIQUID CRYSTAL DISPLAY
LDB	LEAVING DRY BULB TEMPERATURE
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
M	METER
MAX	MAXIMUM
MBH	1,000 BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
MNF	MANUFACTURER
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OAI	OUTDOOR AIR INTAKE
OD	OUTER DIAMETER
OED	OPEN ENDED DUCT
'P'	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PSIG	LBS / SQUARE INCH (GAUGE PRESSURE)
RA	RETURN AIR
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SEER	SEASONAL ENERGY EFFICIENCY RATING
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TYP	TYPICAL
VFD	VARIABLE FREQUENCY DRIVE
W	WIDTH
WB	WET BULB
WMS	WIRE MESH SCREEN

DUCTWORK LEGEND		
SYMBOL	ABBREV	DESCRIPTION
		DUCTWORK BRANCH CONNECTION
	VD	VOLUME DAMPER
	CD	ROUND FACE SUPPLY DIFFUSER
	SEE AIR DEVICE SCHEDULE	SIDEWALL SUPPLY, RETURN OR EXHAUST GRILLE/REGISTER
	SEE AIR DEVICE SCHEDULE	SQUARE FACE SUPPLY DIFFUSER
	SEE AIR DEVICE SCHEDULE	BOTTOM RETURN OR EXHAUST GRILLE/REGISTER
		FLEX DUCT
	FC	FLEXIBLE CONNECTION
		TURNING VANES
		RECTANGULAR TO ROUND TRANSITION
	AL	ACOUSTICAL LINING
		END CAP
	SEE AIR DEVICE SCHEDULE	SUPPLY DIFFUSER WITH DIRECTIONAL FLOW (SOLID HATCH INDICATES BLANK OFF PANEL)
		SUPPLY DUCT DROP (TURN DOWN)
		RETURN/EXHAUST DUCT DROP (TURN DOWN)
		SUPPLY DUCT RISE
		RETURN/EXHAUST DUCT RISE
	DSD	DUCT SMOKE DETECTOR
	MD	MOTORIZED DAMPER WITH ACTUATOR
	OR	ACCESS DOOR
	FD/AD	FIRE DAMPER WITH ACCESS DOOR
	FSD/AD	FIRE SMOKE DAMPER WITH ACCESS DOOR
		FAN
		WORK TO BE REMOVED
		POINT OF DISCONNECTION FROM EXISTING
		POINT OF CONNECTION TO EXISTING

LIST OF DRAWINGS		
1	M000.00	MECHANICAL LEGENDS, SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES
2	M100.00	MECHANICAL SECOND FLOOR CONSTRUCTION PART PLAN
3	M101.00	MECHANICAL SECOND FLOOR CONSTRUCTION PART PLAN
4	M102.00	MECHANICAL SECOND FLOOR CONSTRUCTION PART PLAN
5	M500.00	MECHANICAL EQUIPMENT DETAILS AND SCHEDULES

PIPING LEGEND		
SYMBOL	ABBREV	DESCRIPTION
		NEW WORK
		WORK TO BE REMOVED
		PIPING DOWN/ PIPING UP
		BALL VALVE WITH HOSE END CONNECTION
	TH	THERMOMETER
	U	UNION
	FPC	FLEXIBLE PIPE CONNECTION
		DIRECTION OF FLOW
	PSR	PRESSURE SAFETY AND RELIEF VALVE
	PRV	PRESSURE REDUCING VALVE
	BV	BALL VALVE
	BA	BALANCING VALVE
	BFV	BUTTERFLY VALVE
		TEMPERATURE SENSOR WITH THERMOWELL
	GA	GATE VALVE
	GB	GLOBE VALVE
	AV	AUTOMATIC AIR VENT
	CV	2-WAY ELECTRONIC CONTROL VALVE
	CV	3-WAY ELECTRONIC CONTROL VALVE
	CV	2-WAY PNEUMATIC CONTROL VALVE
	CV	3-WAY PNEUMATIC CONTROL VALVE
		PLUG VALVE
	STR	STRAINER
	STR	STRAINER WITH BLOW OFF VALVE WITH HOSE END CONNECTION
	FD	FLOOR DRAIN
		AIR SEPARATOR
		STEAM TRAPS (INDICATE TYPE)
	CH	CHECK VALVE
	PG	PRESSURE GAUGE WITH GAUGE COCK
	RED	REDUCER
	CO	CLEANOUT END CAP
		PIPE GUIDE
		PIPE ANCHOR
		CAPPED PIPE
		PUMP
		POINT OF DISCONNECTION FROM EXISTING
		POINT OF CONNECTION TO EXISTING
	TDV	TRIPLE DUTY VALVE

CONTROLS LEGEND	
SYMBOL	DESCRIPTION
	CARBON MONOXIDE SENSOR
	THERMOSTAT
	DIGITAL TEMPERATURE SENSOR
	HUMIDITY SENSOR
	CARBON DIOXIDE SENSOR
	PRESSURE SENSOR

GENERAL NOTES

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
2. THE CONTRACTOR, BY PRESENTING THEIR BID FOR THE WORK, REPRESENTS THAT HE/SHE HAS INSPECTED THE SITE AND IS COMPLETELY FAMILIAR WITH THE SCOPE OF WORK AND ALL FIELD CONDITIONS RELATED TO, AND AFFECTING THE WORK AND ITS PERFORMANCE. EXCEPTIONS AFFECTING THE WORK AND ITS PERFORMANCE, OR CONFLICTS BETWEEN FIELD CONDITIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE SUBMISSION OF BIDS.
3. PERFORM ALL WORK IN ACCORDANCE WITH THE PLUMBING CODE, FIRE CODE, MECHANICAL CODE, ENERGY CONSERVATION CONSTRUCTION CODE, AND FUEL GAS CODE OF NEW YORK STATE AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
4. COMPLY WITH THE NATIONAL ELECTRIC CODE AND THE REQUIREMENTS OF DIVISION 26 FOR ALL ELECTRICAL INSTALLATIONS.
5. FIRE STOP ALL OPENINGS IN FIRE RATED CONSTRUCTION FOR PIPING, DUCTWORK, CONDUIT, ETC. PROVIDE FIRE DAMPERS AND ACCESS DOORS IN ALL OPENINGS IN FIRE RATED FLOORS, PARTITIONS, AND WALLS FOR DUCTWORK AS PER THE MECHANICAL CODE OF NEW YORK STATE. (SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED CONSTRUCTION.)
6. DO NOT SCALE DRAWINGS. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. COORDINATE CONTRACT DOCUMENTS, PROJECT REQUIREMENTS, WORK OF OTHERS, AND EQUIPMENT AND MATERIALS PURCHASED WITH FIELD DIMENSIONS. INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S REQUIREMENTS TO PROVIDE PROPER CLEARANCE FOR INSTALLATION, OPERATION, AND MAINTENANCE. CONTRACTOR'S INTENDED MEANS AND METHODS OF INSTALLATION AND CONTRACTOR'S FABRICATED ITEMS SHALL ENSURE A PROPER "FIT" AND INSTALLATION. BRING ANY COMMENTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER DURING THE SUBMITTAL PHASE FOR RESOLUTION PRIOR TO PURCHASING ANY EQUIPMENT.
7. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM AND SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION. MAINTAIN A MINIMUM OF 6'-8" CLEARANCE FROM FINISHED FLOOR TO UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.
8. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION. MAKE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK. OBTAIN THE APPROVAL OF THE ARCHITECT/ENGINEER FOR MODIFICATIONS.
9. PROVIDE PRODUCTS OF ONE MANUFACTURER WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF MATERIAL OR EQUIPMENT IS REQUIRED.
10. INSTALL ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS. REFER TO DETAILS FOR ADDITIONAL PIPING AND EQUIPMENT INSTALLATION REQUIREMENTS.
11. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER TO ENSURE MANUFACTURER CERTIFIED ACCURACY.
12. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL PIPING AND DUCT TRANSITIONS REQUIRED FOR FINAL CONNECTIONS TO EQUIPMENT.
13. COORDINATE LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS WITH ALL OTHER TRADES. COORDINATE ALL PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURE WITH GENERAL CONSTRUCTION WORK.
14. COORDINATE INSTALLATION OF SUPPLY AND RETURN GRILLES WITH INSTALLATION OF FINISHED CEILINGS.
15. COMPLETE ALL PRESSURE TESTS BEFORE ANY MECHANICAL EQUIPMENT, DUCTWORK, OR PIPING INSULATION IS APPLIED.
16. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). PERFORM ALL TESTING, ADJUSTING, AND BALANCING IN ACCORDANCE WITH THE SPECIFICATIONS.
17. MAKE ALL ATTACHMENTS TO JOISTS, TRUSSES, OR JOIST GIRDERS AT PANEL POINTS. PROVIDE FORGED OR CAST BEAM CLAMPS; THE USE OF ROLLED STEEL C-CLAMPS IS NOT PERMITTED. REFER TO SPECIFICATION SECTION 230529 FOR ADDITIONAL INFORMATION.
18. PROVIDE CONCRETE PADS A MINIMUM OF 6 INCHES HIGH FOR ALL FLOOR MOUNTED EQUIPMENT. EXTEND PAD 4 INCHES BEYOND THE EQUIPMENT ON ALL SIDES.
19. INTERNALLY LINE ALL SUPPLY, RETURN AND OUTDOOR AIR DUCTWORK WITHIN 20 FEET UPSTREAM AND DOWNSTREAM OF FANS/AIR HANDLING EQUIPMENT WITH 1" THICK ACOUSTIC DUCT LINER. INTERNALLY LINED DUCTWORK MEETING THIS REQUIREMENT SHALL ALSO BE PROVIDED WITH EXTERNALLY APPLIED INSULATION AS REQUIRED BY THE SPECIFICATIONS. SEE SPECIFICATION SECTION 230719 FOR ADDITIONAL REQUIREMENTS.
20. PROVIDE TRAPPED DRAIN PIPING FROM DRAIN PANS OF ALL COOLING COILS, FANS, AND OTHER ACTIVE DRAINS EXPOSED TO SYSTEM AIR STREAM. PROVIDE TRAP AT CONNECTION, WATER SEAL DEPTH 1 INCH GREATER THAN UNIT OPERATING PRESSURE. DIRECT DRAINS TO NEAREST FLOOR DRAIN, MOP SINK, OR OTHER LOCATION APPROVED BY THE ARCHITECT/ENGINEER.
21. INSTALL PIPING, DUCTWORK, AND CONDUIT CONCEALED IN AREAS HAVING HUNG CEILINGS AND/OR FURRED SPACES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

WORK IN EXISTING AREAS

1. EXISTING CONDITIONS, INCLUDING EQUIPMENT, DUCT AND PIPE SIZES AND LOCATIONS, INDICATED ON THE DRAWINGS ARE DIAGRAMMATIC. CONFIRM ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH THE WORK.
2. CUT AND ROUGH PATCH EXISTING CONSTRUCTION AS REQUIRED FOR THE PERFORMANCE OF THE WORK. FINISH PATCHING AND FLASHING REQUIREMENTS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS. PERFORM ALL CUTTING AND PATCHING WORK IN A MANNER SUCH THAT ANY EXISTING WARRANTIES/GUARANTEES ARE NOT VOIDED. USE QUALIFIED PERSONNEL IN PERFORMANCE OF THE WORK.

CONTRACT 'M' SCOPE NOTES


1. FURNISH ALL LOUVERS FOR INSTALLATION BY CONTRACT 'G'. SUBMIT LOUVER COLOR AND CONFIGURATION TO THE ARCHITECT/ENGINEER FOR APPROVAL.
2. INSTALL SMOKE DETECTORS IN DUCTWORK WHERE A SMOKE DAMPER OR FIRE SMOKE DAMPER IS INSTALLED. SMOKE DETECTOR SUPPLY AND WIRING IS PART OF CONTRACT 'E'.
3. FURNISH AND INSTALL ALL NECESSARY CONTROL WIRING, CONDUIT, AND ACCESSORIES AS REQUIRED TO PROVIDE FULLY FUNCTIONING SYSTEMS AND SEQUENCES OF OPERATION.
4. FURNISH ALL LINTELS FOR DUCT AND PIPE PENETRATIONS IN INTERIOR MASONRY WALLS FOR INSTALLATION BY CONTRACT 'G'.
5. FURNISH ALL SLEEVES FOR PIPE AND CONDUIT FLOOR, WALL, PARTITION, AND ROOF PENETRATIONS FOR INSTALLATION BY CONTRACT 'G'.
6. REMOVE CHASE ENCLOSURE COVER WHEN PERFORMING WORK IN ANY CHASE, AND REINSTALL THE CHASE ENCLOSURE COVER WHEN WORK IS COMPLETE.
7. PERFORM ALL CUTTING AND ROUGH PATCHING AS REQUIRED IN THE EXECUTION OF THE WORK. FINISH PATCHING AND FLASHING IS PART OF CONTRACT 'G'.

LEGENDS/ABBREVIATIONS NOTES

1. ABBREVIATIONS AND SYMBOLS ON THIS SHEET DO NOT DEFINE THE SCOPE OF WORK.

EXISTING SYSTEM PRE-MODIFICATION/DEMOLITION TESTING:

1. OBTAIN THE SERVICES OF A TESTING AND BALANCING COMPANY TO PERFORM OPERATIONAL TESTS PRIOR TO THE [MODIFICATION / DEMOLITION] OF THE EXISTING AIR SYSTEM(S). SUBMIT REPORT TO ENGINEER FOR REVIEW/RECORD PURPOSES WITH FINDINGS INCLUDING, BUT NOT LIMITED TO, EXISTING FAN CURVES, PRESSURE READINGS, AIRFLOW MEASUREMENTS, ENTERING AIR TEMPERATURE, LEAVING AIR TEMPERATURE, EQUIPMENT/MOTOR NAMEPLATE DATA, ETC.
2. OBTAIN THE SERVICES OF A TESTING AND BALANCING COMPANY TO PERFORM OPERATIONAL TESTS PRIOR TO THE [MODIFICATION / DEMOLITION] OF THE EXISTING HYDRONIC SYSTEM(S). SUBMIT REPORT TO ENGINEER FOR REVIEW/RECORD PURPOSES WITH FINDINGS INCLUDING, BUT NOT LIMITED TO, EXISTING PUMP CURVES, PRESSURE READINGS, HYDRONIC FLOW MEASUREMENTS, ENTERING WATER TEMPERATURE, LEAVING WATER TEMPERATURE, EQUIPMENT/MOTOR NAMEPLATE DATA, ETC.
3. VERIFY EXISTING EQUIPMENT CALLED TO BE REPLACED 'IN-KIND' IS OPERATIONAL (HAS POWER AND RESPONDS TO EXISTING CONTROLS) PRIOR TO PERFORMING ANY DISCONNECTIONS OR REMOVALS. REPORT ANY DEFICIENCIES IN EXISTING SERVICES OR CONTROLS EXPECTED TO BE RE-USED FOR THE 'IN-KIND' REPLACEMENT TO ENGINEER IN WRITING PRIOR TO REMOVALS. CONTRACTOR IS RESPONSIBLE TO CORRECT ANY DEFICIENCIES NOT REPORTED PRIOR TO DEMOLITION TO PROVIDE A FULLY OPERATIONAL EQUIPMENT REPLACEMENT.



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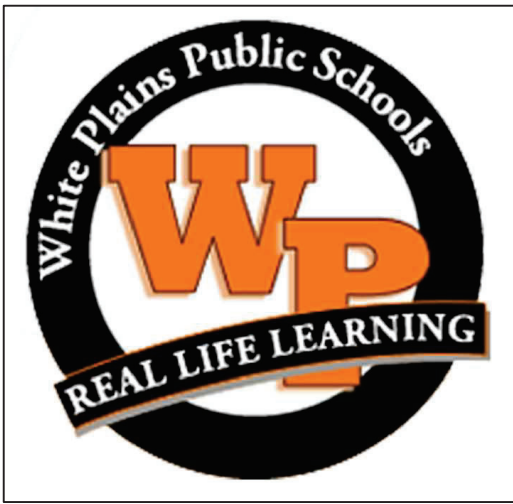
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PAUL D. FOERTH, P.E. NY PROFESSIONAL ENGINEER LIC. NO. 099422 <small>*IN ACCORDANCE WITH ARTICLE 145, SECTION 7009 OF THE NYS EDUCATION LAW, ALTERATION OF THIS DOCUMENT EXCEPT BY LICENSE PROFESSIONAL IS ILLEGAL.*</small>			02/28/2025 EXP. DATE
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PROJECT NO.: WPSD2301	DATE: OCTOBER 2024	SCALE: AS SHOWN	

CLIENT

**WHITE PLAINS CITY
SCHOOL DISTRICT**

UPGRADES AT CHURCH STREET ELEMENTARY SCHOOL



**295 Church St
White Plains, NY 10603**

SED PROJECT CONTROL
66-22-00-01-0-004-021

CONTRACT M
HEATING VENTILATION AND AIR
CONDITIONING

STATUS

BID SUBMISSION

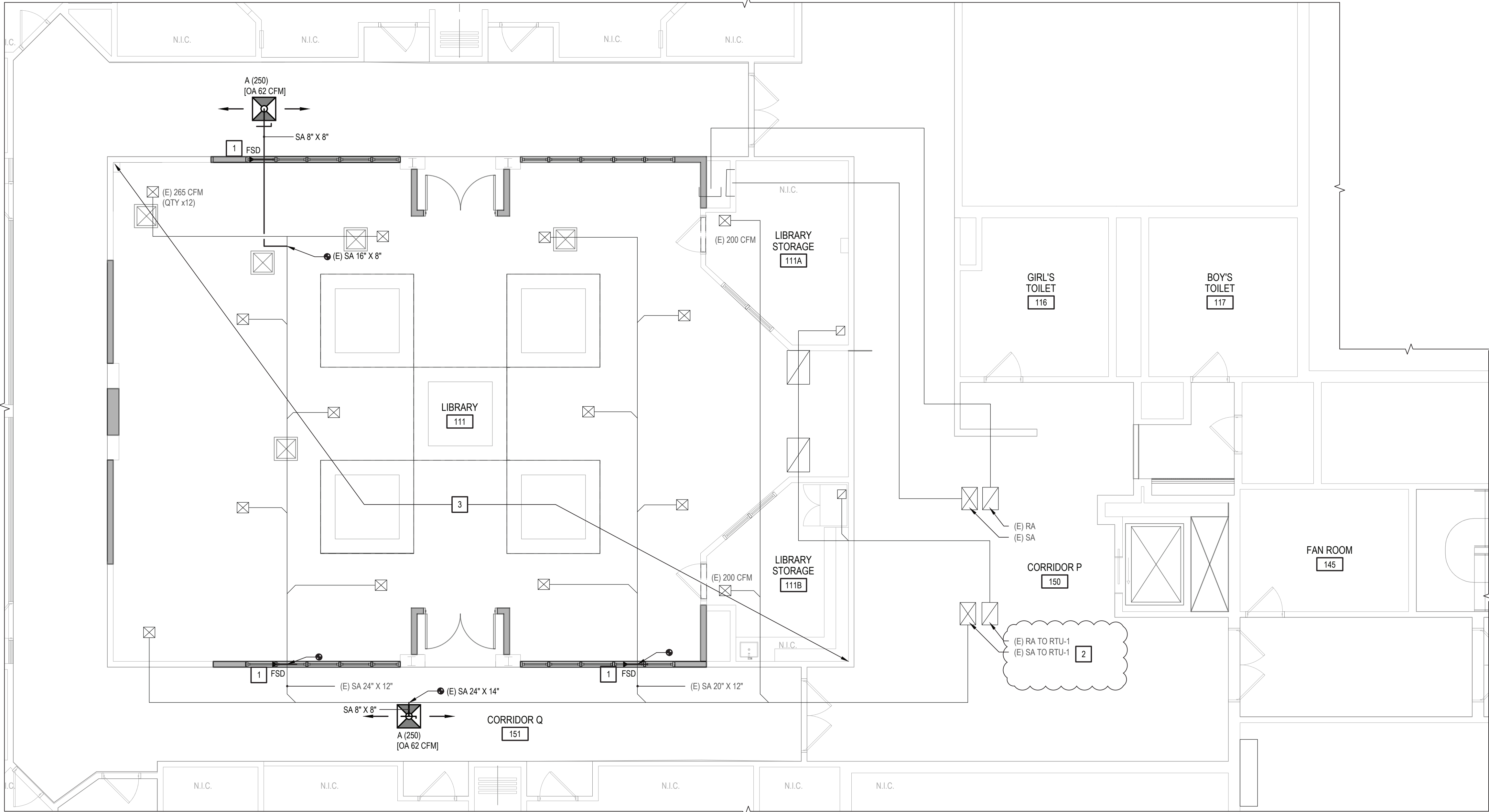
SHEET TITLE

MECHANICAL LEGENDS, SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

DRAWING No.

M000.00

X:\wpd\white plains central school district\10351\wpd2301 - church street es renovations and upgrades\102\m-cad\Con-Drawings\110 Mechanical Second Floor Plan.dwg, Last Modified: Oct 25, 2024, 4:27pm, Plotted on: Oct 25, 2024, 8:46am By: rhaugentian



1 MECHANICAL SECOND FLOOR PART PLAN - MEDIA CENTER
SCALE: 3/16"=1'-0"

MECHANICAL SCOPE NOT SHOWN ON PLAN:
LOCATION: FIRST FLOOR KITCHEN AND SERVING LINE

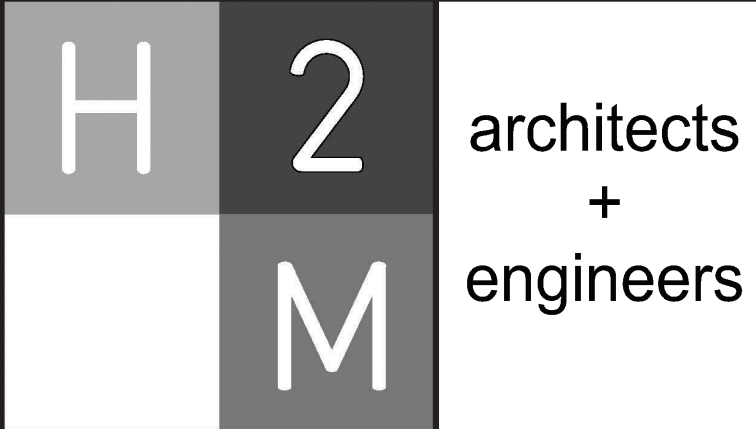
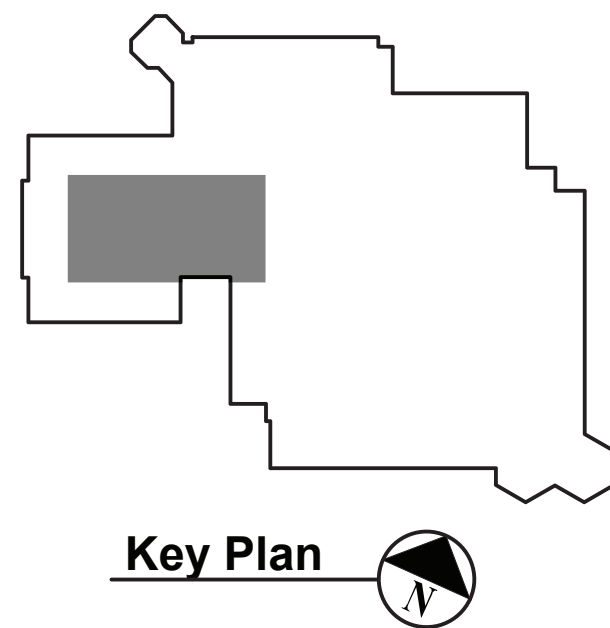
EXISTING RADIATOR SERVING STEAM LINE TO REMAIN. CONTRACT 'M' SHALL REMOVE. MAINTAIN THE EXISTING THERMOSTAT DURING DEMOLITION. UPON COMPLETION OF ARCHITECTURE SCOPE, CONTRACT 'M' TO REINSTALL THERMOSTAT. CONTRACT 'M' TO COORDINATE WITH CONTRACT 'G'. REFER TO ARCHITECTURE PLANS AD102 AND A102.

GENERAL MECHANICAL NOTES

- SUBMIT EQUIPMENT SHOP DRAWINGS TO ENGINEER FOR REVIEW/APPROVAL PRIOR TO PURCHASE.
- COORDINATE ALL INDOOR AIR TERMINAL LOCATIONS WITH CEILING GRID AND EXISTING LIGHTING FIXTURES.
- ALL DUCTING SHALL BE INSTALLED PER SPECIFICATION. REFER TO ADDITIONAL DETAILS ON DRAWINGS M500.
- CONTRACTOR SHALL INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS/ SPECIFICATIONS SUCH THAT ALL REQUIRED CLEARANCES FOR DOOR SWINGS AND MAINTENANCE ARE ADHERED TO.
- CONTRACTOR SHALL COORDINATE ALL DIFFUSER/GRILLE LOCATIONS WITH EXISTING/NEW CEILING GRID LAYOUT.
- ALL NEW DUCTWORK SHALL BE ROUTED AS CLOSE AS POSSIBLE TO STRUCTURAL BAR JOISTS.
- VIBRATION ISOLATION HANGERS SHALL BE USED FOR ALL DUCTWORK.
- THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ADJOINING SURFACES OUTSIDE THE CONTRACT AREA OR SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE EXISTING CONDITIONS AND/OR FINISHES DAMAGED DURING CONSTRUCTION INCLUDING PATCHING AND PAINTING DEEMED NECESSARY BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL TAKE CARE AS TO ADEQUATELY PROTECT ALL ADJOINING AREAS INCLUDING HVAC OPENINGS FROM DUST AND DEBRIS DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO WIPE DOWN AND CLEAN ALL ROOMS UPON COMPLETION OF THE PROJECT.
- CONTRACTORS SITE ACCESS AND BUILDING ENTRY POINT SHALL BE AS DIRECTED BY OWNER. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WALLS, FLOOR, AND FINISHES WITHIN STAIRWELLS AND ALL OTHER AREAS USED FOR ACCESS TO CONTRACT AREAS FROM DAMAGE DURING THE PROJECT DURATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE EXISTING CONDITIONS AND/OR FINISHES DAMAGED DURING CONSTRUCTION INCLUDING PATCHING AND PAINTING DEEMED NECESSARY BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CONSTRUCTION DEBRIS AND UNWANTED MATERIAL OFF SITE IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT / ENGINEER OF ANY DEFECTIVE OR NON-WORKING EQUIPMENT PRIOR TO WORK STARTING AND FOLLOWING INSTALLATION OF NEW FINISHES VERIFY ALL ITEMS ARE IN PROPER WORKING ORDER UPON COMPLETION.
- THE CONTRACTOR SHALL PROVIDE ALL SCAFFOLDING / SHORING / TEMPORARY MEASURES TO PERFORM ALL WORK IN A SAFE MANNER. ALL SCAFFOLDING / SHORING / TEMPORARY SUPPORTS ARE TO BE DESIGNED, STAMPED AND SIGNED BY A 'NYS LICENSED PROFESSIONAL ENGINEER' AND SUBMITTED TO THE ARCHITECT FOR THEIR REVIEW AND APPROVAL. ALL COSTS ARE TO BE INCLUDED WITHIN THE BASE BID.

KEYED NOTES

- DUCT MOUNTED FIRE SMOKE DAMPER TO BE SIZED TO FIT DUCTWORK, TO BE VERIFIED IN FIELD. REFER TO DETAIL #1 ON M500 FOR THE DUCT MOUNTED FIRE SMOKE DAMPER DETAIL.
- CONTRACTOR TO INCREASE EXISTING RTU-1 OUTDOOR AIR INTAKE TO 25% (MINIMUM 1,020 CFM). REBALANCE EXISTING SUPPLY AIR DIFFUSERS.
- CONTRACT 'M' TO REMOVE AND STORE EXISTING CEILING DIFFUSERS DURING CEILING REPLACEMENT. CONTRACT 'M' TO REINSTALL DIFFUSERS AFTER CEILING REPLACEMENT AND COORDINATE WITH CONTRACT 'G'.



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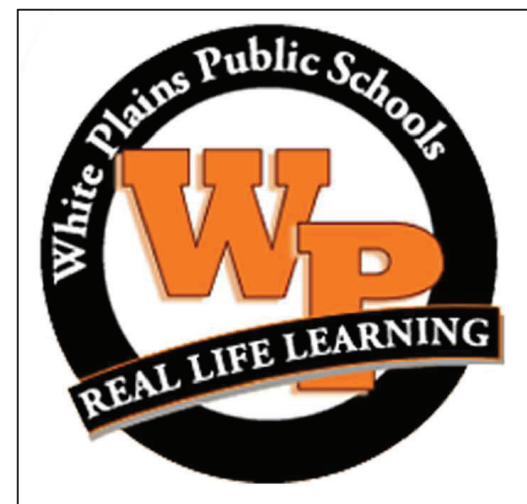
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**SED PROJECT CONTROL
66-22-00-01-0-004-021**

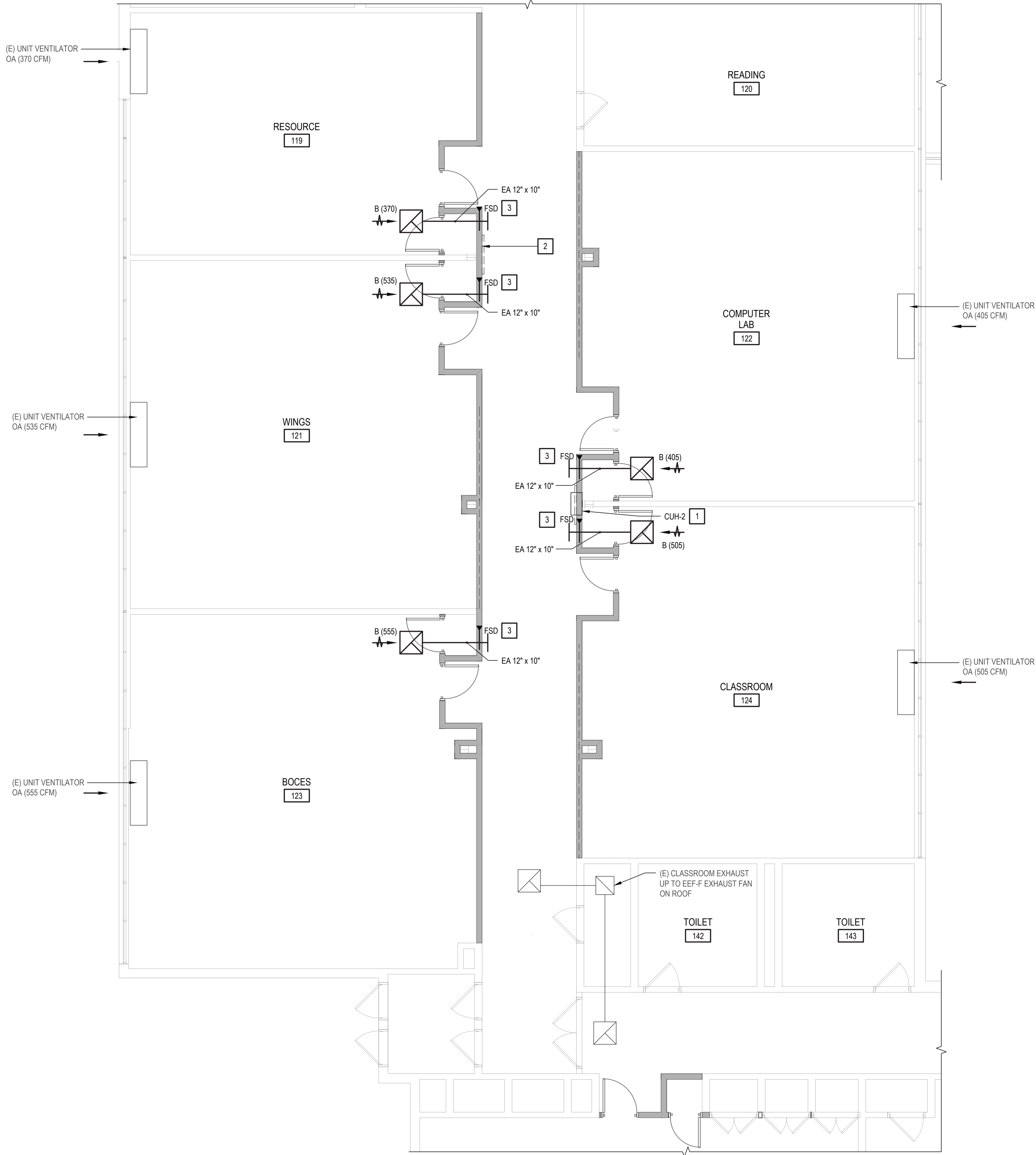
**CONTRACT M
HEATING VENTILATION AND AIR
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STATUS
BID SUBMISSION

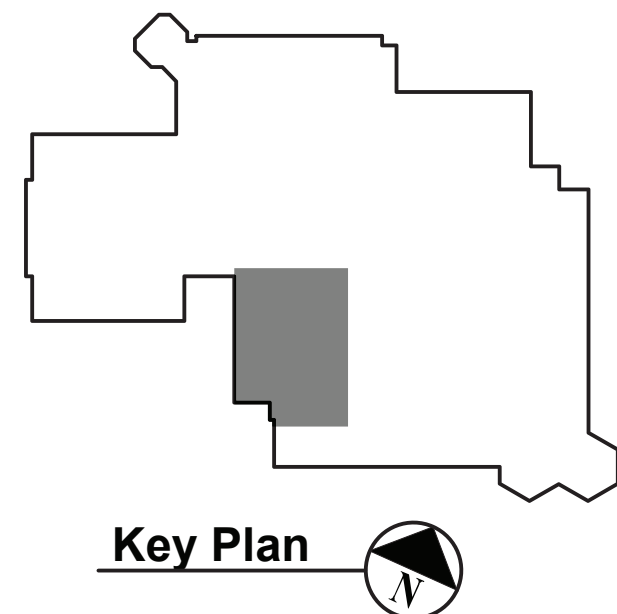
SHEET TITLE
**MECHANICAL SECOND FLOOR
CONSTRUCTION PART PLAN**

DRAWING No.
M100.00

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1 MECHANICAL SECOND FLOOR PART PLAN - CLASSROOMS
SCALE: 3/16"=1'-0"

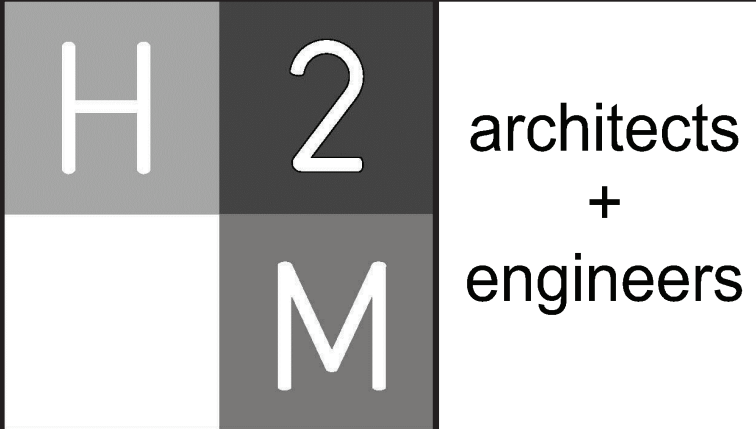


GENERAL MECHANICAL NOTES

- SUBMIT EQUIPMENT SHOP DRAWINGS TO ENGINEER FOR REVIEW/APPROVAL PRIOR TO PURCHASE.
- COORDINATE ALL INDOOR AIR TERMINAL LOCATIONS WITH CEILING GRID AND EXISTING LIGHTING FIXTURES.
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- CONTRACTORS SITE ACCESS AND BUILDING ENTRY POINT SHALL BE AS DIRECTED BY OWNER. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WALLS, FLOOR, AND FINISHES WITHIN STAIRWELLS AND ALL OTHER AREAS USED FOR ACCESS TO CONTRACT AREAS FROM DAMAGE DURING THE PROJECT DURATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE EXISTING CONDITIONS AND/OR FINISHES DAMAGED DURING CONSTRUCTION INCLUDING PATCHING AND PAINTING DEEMED NECESSARY BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CONSTRUCTION DEBRIS AND UNWANTED MATERIAL OFF SITE IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT / ENGINEER OF ANY DEFECTIVE OR NON-WORKING EQUIPMENT PRIOR TO WORK STARTING AND FOLLOWING INSTALLATION OF NEW FINISHES VERIFY ALL ITEMS ARE IN PROPER WORKING ORDER UPON COMPLETION.
- THE CONTRACTOR SHALL PROVIDE ALL SCAFFOLDING / SHORING / TEMPORARY MEASURES TO PERFORM ALL WORK IN A SAFE MANNER. ALL SCAFFOLDING / SHORING / TEMPORARY SUPPORTS ARE TO BE DESIGNED, STAMPED AND SIGNED BY A "NYS LICENSED PROFESSIONAL ENGINEER" AND SUBMITTED TO THE ARCHITECT FOR THEIR REVIEW AND APPROVAL. ALL COSTS ARE TO BE INCLUDED WITHIN THE BASE BID.

KEYED NOTES

- REPLACE EXISTING CABINET HEATER RECESSED IN SAME LOCATION AS EXISTING. RECONNECT TO EXISTING HOT WATER PIPING. CONTRACTOR SHALL PATCH WALL TO MATCH EXISTING.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING CABINET HEATER. EXISTING HOT WATER PIPING TO BE CUT AND CAPPED AND ABANDONED IN WALL.
- DUCT MOUNTED FIRE SMOKE DAMPER TO BE SIZED TO FIT NEW DUCTWORK. TO BE VERIFIED IN FIELD. REFER TO DETAIL #1 ON M500 FOR THE DUCT MOUNTED FIRE SMOKE DAMPER DETAIL. EXHAUST DUCTWORK TO LEAD TO A WIRE MESH GRILLE IN THE CORRIDOR.



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CONSULTANTS:

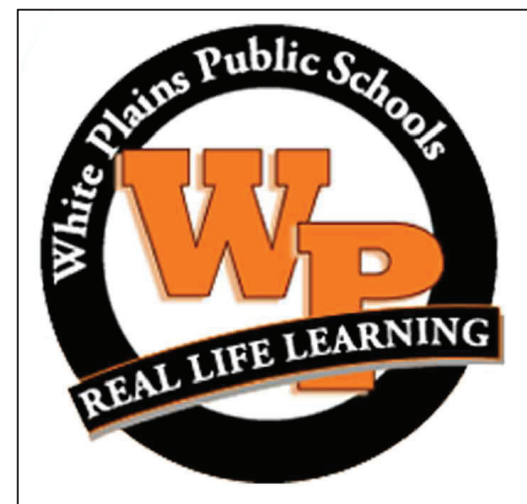
MARK	DATE	DESCRIPTION
	10-28-2024	BID SET



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PROJECT No.: WPSD2301	DATE: OCTOBER 2024	SCALE: AS SHOWN	EXP. DATE: 02/28/2025

CLIENT
**WHITE PLAINS CITY
SCHOOL DISTRICT**

**UPGRADES AT CHURCH STREET
ELEMENTARY SCHOOL**



295 Church St
White Plains, NY 10603
**SED PROJECT CONTROL
66-22-00-01-0-004-021**

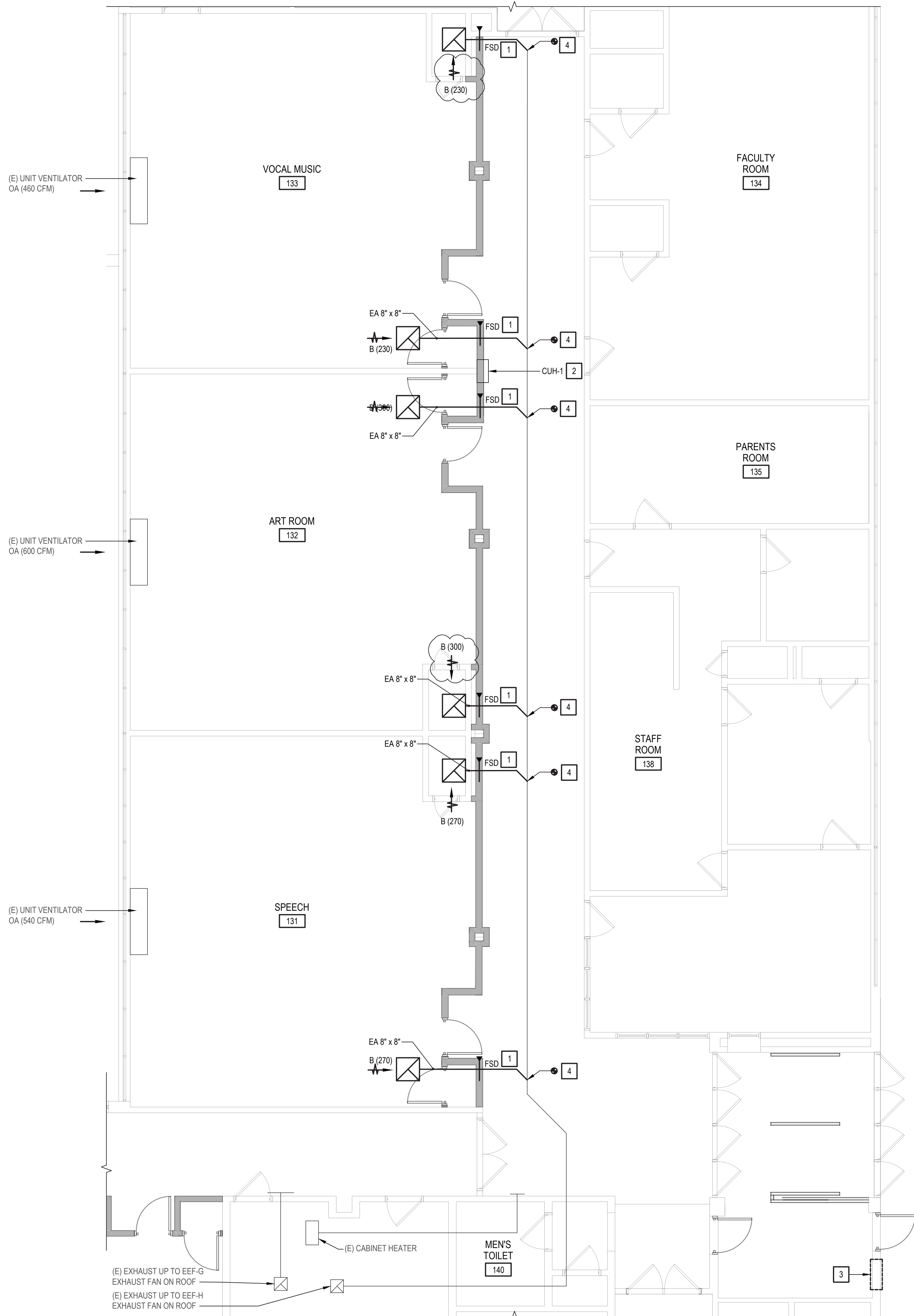
**CONTRACT M
HEATING VENTILATION AND AIR
CONDITIONING**

STATUS
BID SUBMISSION

SHEET TITLE
**MECHANICAL SECOND FLOOR
CONSTRUCTION PART PLAN**

DRAWING No.
M101.00

X:\wpd\white plains central school district\10951\wpd2301_church street es renovations and upgrades\102\m-cad\Con-2\m-cad\10 Mechanical Second Floor Plan.dwg Last Modified: Oct 25, 2024, 4:27pm Plotted on: Oct 25, 2024, 8:06am By: mshagopian



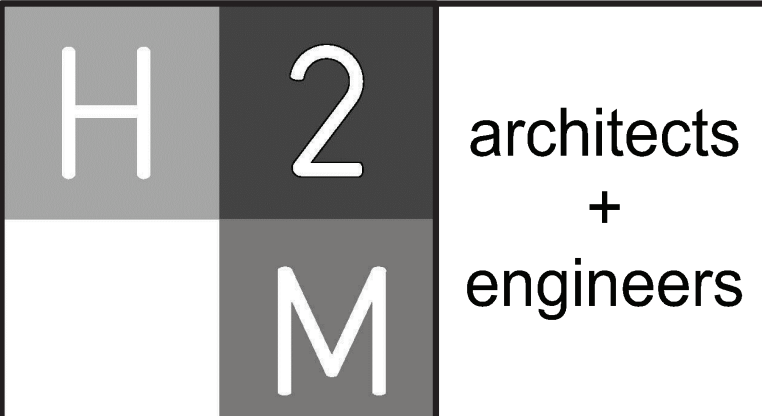
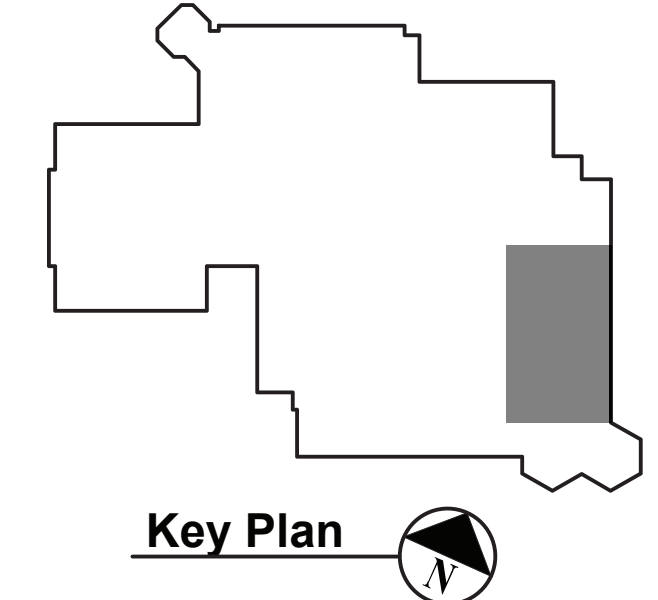
1 MECHANICAL SECOND FLOOR PART PLAN - SPECIALIZED CLASSROOMS
SCALE: 3/16"=1'-0"

GENERAL MECHANICAL NOTES

- SUBMIT EQUIPMENT SHOP DRAWINGS TO ENGINEER FOR REVIEW/APPROVAL PRIOR TO PURCHASE.
- COORDINATE ALL INDOOR AIR TERMINAL LOCATIONS WITH CEILING GRID AND EXISTING LIGHTING FIXTURES.
- ALL DUCTING SHALL BE INSTALLED PER SPECIFICATION. REFER TO ADDITIONAL DETAILS ON DRAWINGS M500.
- CONTRACTOR SHALL INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS/ SPECIFICATIONS SUCH THAT ALL REQUIRED CLEARANCES FOR DOOR SWINGS AND MAINTENANCE ARE ADHERED TO.
- CONTRACTOR SHALL COORDINATE ALL DIFFUSER/GRILLE LOCATIONS WITH EXISTING/NEW CEILING GRID LAYOUT.
- ALL NEW DUCTWORK SHALL BE ROUTED AS CLOSE AS POSSIBLE TO STRUCTURAL BAR JOISTS.
- VIBRATION ISOLATION HANGERS SHALL BE USED FOR ALL DUCTWORK.
- THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ADJOINING SURFACES OUTSIDE THE CONTRACT AREA OR SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE EXISTING CONDITIONS AND/OR FINISHES DAMAGED DURING CONSTRUCTION INCLUDING PATCHING AND PAINTING DEEMED NECESSARY BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL TAKE CARE AS TO ADEQUATELY PROTECT ALL ADJOINING AREAS INCLUDING HVAC OPENINGS FROM DUST AND DEBRIS DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO WIPE DOWN AND CLEAN ALL ROOMS UPON COMPLETION OF THE PROJECT.
- CONTRACTORS SITE ACCESS AND BUILDING ENTRY POINT SHALL BE AS DIRECTED BY OWNER. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WALLS, FLOOR, AND FINISHES WITHIN STAIRWELLS AND ALL OTHER AREAS USED FOR ACCESS TO CONTRACT AREAS FROM DAMAGE DURING THE PROJECT DURATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE EXISTING CONDITIONS AND/OR FINISHES DAMAGED DURING CONSTRUCTION INCLUDING PATCHING AND PAINTING DEEMED NECESSARY BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
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KEYED NOTES


- DUCT MOUNTED FIRE SMOKE DAMPER TO BE SIZED TO FIT ASSUMED 12X12 DUCT, TO BE VERIFIED IN FIELD. REFER TO DETAIL #1 ON M500 FOR THE DUCT MOUNTED FIRE SMOKE DAMPER DETAIL.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING CABINET HEATER. REPLACE EXISTING CABINET HEATER RECESSED IN SAME LOCATION AS EXISTING. RECONNECT TO EXISTING HOT WATER PIPING. CONTRACTOR SHALL PATCH WALL TO MATCH EXISTING.
- EXISTING CABINET HEATER AND ASSOCIATED PIPING IN WALL TO BE DEMOLISHED.
- EXISTING DUCTWORK TO BE REMOVED AND NEW DUCTWORK CONNECT TO THE MAIN EXISTING DUCTWORK BRANCH AT THIS POINT.



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**WHITE PLAINS CITY
SCHOOL DISTRICT**

UPGRADES AT CHURCH STREET
ELEMENTARY SCHOOL



295 Church St
White Plains, NY 10603
SED PROJECT CONTROL
66-22-00-01-0-004-021

**CONTRACT M
HEATING VENTILATION AND AIR
CONDITIONING**

STATUS
BID SUBMISSION

SHEET TITLE
**MECHANICAL SECOND FLOOR
CONSTRUCTION PART PLAN**

DRAWING No.
M102.00

X:\wpd\white plains central school district - 0351\wpd2301 - church street es renovations and upgrades\02-mech\Con-Details\M500 Mechanical Equipment Details and Schedules.dwg, Last Modified: Oct 25, 2024, 8:47am Plotted on: Oct 25, 2024, 8:46am By: mscaplan

FIRE SMOKE DAMPERS

EQUIPMENT NO.	SYSTEM SERVED	QUANTITY	PERFORMANCE/CONSTRUCTION REQUIREMENTS			BASIS OF DESIGN INFORMATION				REMARKS
			VELOCITY (FPM)	PRESSURE (IN. WG)	FIRE RATING (HRS)	MNF	MODEL NO.	NOMINAL DIMENSIONS W x H (IN.)	ELECTRICAL DATA	
									ACTUATOR TYPE (VAC)	
FSD	EXHAUST	14	2000	6	1.5	GREENHECK	FSD-211	12 x 12	120	1-3

NOTES:

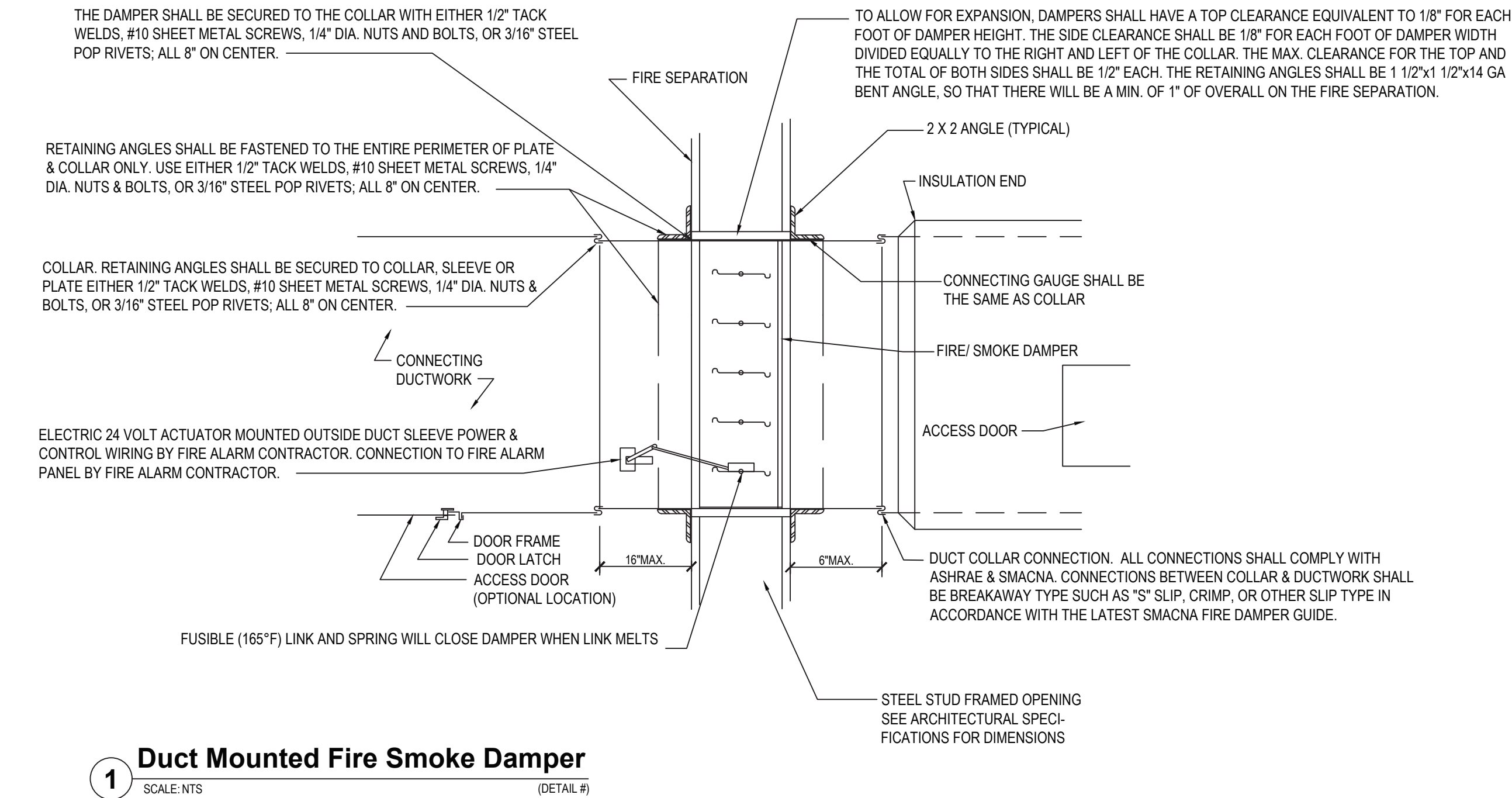
- UL 555 LISTED
- PROVIDE LINTEL
- TIE INTO EXISTING FIRE ALARM SYSTEM

CABINET UNIT HEATERS



EQUIPMENT NO.	AREA SERVED	PERFORMANCE/CONSTRUCTION REQUIREMENTS				BASIS OF DESIGN INFORMATION				REMARKS
		AIRFLOW (CFM)	TOTAL CAPACITY (MBH)	HEATING COIL DATA		MNF	MODEL NO.	NOMINAL DIMENSIONS L x W x H	NOMINAL OPERATING WEIGHT (LBS.)	
				ELECTRIC DATA						
				VOLTS/ PHASE	TOTAL KW					
CUH-1	CORRIDOR L	300	20.5	208 / 1	6	STELPRO	ACBH0681CT	24 x 12 x 26	77	1-2
CUH-2	CORRIDOR N	300	20.5	208 / 1	6	STELPRO	ACBH0681CT	24 x 12 x 26	77	1-2

NOTES:

- FACTORY PROVIDED DISCONNECT SWITCH (MODEL CBHDS 80A)
- FACTORY PROVIDED TAMPER-PROOF SINGLE POLE THERMOSTAT (MODEL CBHT1)

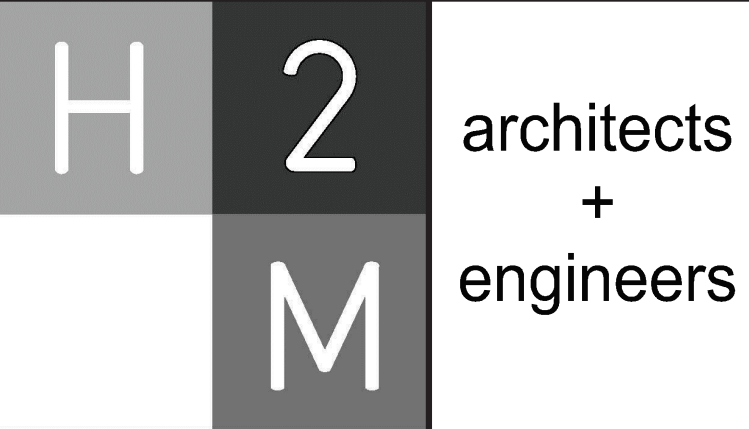


AIR OUTLETS

DESIGNATION	SYMBOL	BASIS OF DESIGN: MNF/ MODEL NO.	TYPE	NOM. FACE SIZE (IN)	AIR FLOW RANGE (CFM)		NECK SIZE DIAMETER (IN.)	REMARKS
					MIN	MAX		
A		NAILOR/UNI	SQUARE FACE CEILING DIFFUSER	24 X 24 UNLESS OTHERWISE NOTED ON DRAWINGS	0	200	6	1-6
					201	315	8	
					316	450	10	
					451	650	12	
		NAILOR/6145H	EXHAUST GRILLE	24x24 UNLESS OTHERWISE NOTED ON DRAWINGS	651	850	14	1-6
					SEE DRAWINGS	SEE DRAWINGS	NA	

NOTES:

- PROVIDE ALUMINUM CONSTRUCTION FOR ALL AIR TERMINALS IN SHOWER ROOMS, TOILETS, JANITORS' CLOSETS AND OTHER HUMID AREAS.
- FOR CONSTRUCTION DETAILS AND ACCESSORIES SEE THE SPECIFICATIONS.
- FOR VARIABLE VOLUME SYSTEMS SELECT DIFFUSER NECK SIZES SUCH THAT BOTH MAXIMUM AND MINIMUM AIR FLOWS FALL WITHIN MANUFACTURER'S CATALOGUED MAXIMUM AND MINIMUM AIR FLOW RATINGS. MAXIMUM AIR FLOW PRODUCING AN NC RATING OF 25 TO 30 AND MINIMUM FLOW PRODUCING A LISTED THROW.
- PROVIDE OPPOSED BLADE DAMPER FOR ALL REGISTERS.
- PROVIDE OPPOSED BLADE DAMPER AND EQUALIZING GRID FOR ALL DIFFUSERS.
- PROVIDE MOUNTING FRAMES TO MATCH CEILING IN WHICH UNIT IS INSTALLED, COUNTERSINK ALL MOUNTING SCREWS.



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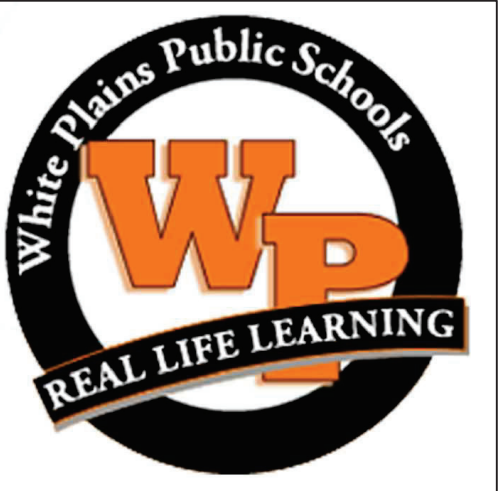


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WHITE PLAINS CITY SCHOOL DISTRICT

UPGRADES AT CHURCH STREET ELEMENTARY SCHOOL



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CONTRACT M
HEATING VENTILATION AND AIR
CONDITIONING

STATUS
BID SUBMISSION

SHEET TITLE
MECHANICAL EQUIPMENT
DETAILS AND SCHEDULES

DRAWING No.
M500.00

VENTILATION INDEX BASED ON 2020 NEW YORK STATE MECHANICAL CODE - SECTION 403.3									
ROOM #	TYPE	AREA (FT2)	OCCUPANT DENSITY #/1000 FT2	PEOPLE OUTDOOR AIRFLOW RATE (CFM/PERSON)	AREA OUTDOOR AIRFLOW RATE (CFM/FT2)	# OCCUPANTS/ ROOM	BREATHING ZONE OUTDOOR AIRFLOW (CFM)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ZONE OUTDOOR AIRFLOW (CFM)
		Az	a	Rp	Ra	Pz	Vbz	Ez	Voz
111 LIBRARY	LIBRARY	2272	10	5	0.12	23	388	0.8	485
151 CORRIDOR Q	CORRIDORS	1516	0	0	0.06	0	91	0.8	114
119 RESOURCE	CLASSROOMS (AGE 9 PLUS)	615	35	10	0.12	22	294	0.8	368
121 WINGS	CLASSROOMS (AGE 9 PLUS)	890	35	10	0.12	32	427	0.8	534
122 COMPUTER LAB	COMPUTER LAB	842	25	10	0.12	22	322	0.8	403
123 BOCES	CLASSROOMS (AGE 9 PLUS)	934	35	10	0.12	33	443	0.8	554
124 CLASSROOM	CLASSROOMS (AGE 9 PLUS)	847	35	10	0.12	30	402	0.8	503
131 SPEECH/PUBLISHING	CLASSROOMS (AGE 9 PLUS)	898	35	10	0.12	32	428	0.8	535
132 ART CLASSROOM	ART CLASSROOM	863	20	10	0.18	18	336	0.8	420
133 VOCAL MUSIC	MUSIC	858	35	10	0.06	31	362	0.8	453