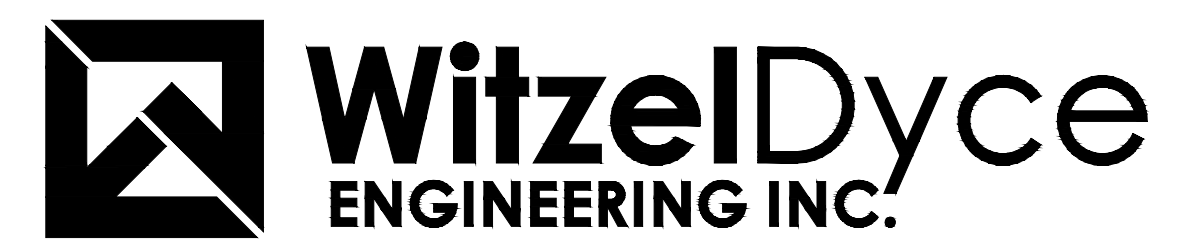




LEXINGTON PUBLIC SCHOOL HVAC UPGRADES

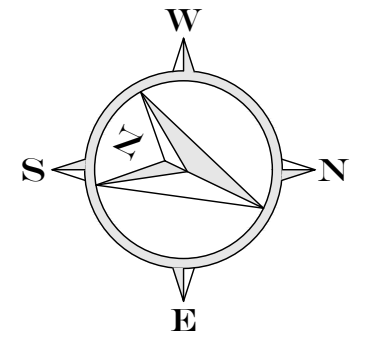
STRUCTURAL
ENGINEERS



826 King Street North, Unit 20
Waterloo, Ontario, N2J 4G8
www.witzeldyce.com

MECHANICAL/ELECTRICAL
ENGINEERS





KEY PLAN

NO.	DATE	REVISION
2	2024.05.15	ISSUE FOR TENDER #24-7587-RFT & PERMIT
1	2024.05.03	ISSUED FOR BID & PERMIT

WitzelDyce
ENGINEERING INC.
826 King Street North, Unit 20
Waterloo, Ontario, N2J 4G8
www.witzeldyce.com



PROJECT
LEXINGTON PS HVAC UPGRADES
431 FORESTLAWN ROAD WATERLOO

DRAWING
ROOF FRAMING PLAN AND SECTIONS

DESIGNER ISS/MCJ	PROJECT NO. 15369-101
DRAWN BJD	DRAWING NO. S1
DATE MAY 2024	
SCALE AS NOTED	

CONSTRUCTION NOTES:

- A. GENERAL**
- ALL WORK SHALL CONFORM TO THE ONTARIO BUILDING CODE AND ALL STANDARDS REFERENCED WITHIN, LOCAL REGULATIONS AND BYLAWS, AND THE OCCUPATIONAL HEALTH AND SAFETY ACT FOR CONSTRUCTION PROJECTS. THE LATEST VERSIONS OF STANDARDS SHALL APPLY.
 - READ THESE DRAWINGS IN CONJUNCTION WITH ALL RELATED CONTRACT DOCUMENTS AND CONSULTANT DRAWINGS.
 - THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS WHICH MAY ADVERSELY AFFECT THE PROPER COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS IN RELATION TO THE DRAWINGS AND NOTIFY THE ENGINEER TO ALL DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.
 - DRAWINGS ARE NOT TO BE SCALED.
 - THE DESIGN DOCUMENTS ARE PREPARED SOLELY FOR THE USE WITH THE PARTY WHOM THE ENGINEER HAS ENTERED INTO CONTRACT. THERE ARE NO REPRESENTATIONS MADE TO ANY PARTY WITH WHOM THE ENGINEER HAS NOT ENTERED INTO CONTRACT.
 - THE ENGINEER SHALL BE GIVEN MINIMUM 24 HOURS NOTICE BY THE CONTRACTOR FOR ALL CONSTRUCTION REVIEWS. SITE VISITS AND REVIEWS BY THE ENGINEER OR THEIR REPRESENTATIVES ARE INTENDED FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THE REVIEWS SHALL NOT MEAN THAT THE ENGINEER HAS SEEN ALL CONSTRUCTION PROCEDURES. REVIEW BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ERRORS AND OMISSIONS AND FOR MEETING ALL THE REQUIREMENTS OF THE CONSTRUCTION AND CONTRACT DOCUMENTS.
 - THE CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS FOR CONSTRUCTION LOADS AND TEMPORARY BRACING TO ENSURE SAFETY AND THE BUILDING IS PLUMB AND IN TRUE ALIGNMENT AT ALL PHASES OF CONSTRUCTION AS PER O. REG 213/91. ALL BRACING MEMBERS SHOWN ON THE DRAWINGS ARE DESIGNED FOR THE FINISHED STRUCTURE AND MAY NOT BE SUFFICIENT FOR ERECTION PURPOSES. SHORING AND BRACING IS REQUIRED UNTIL PROPOSED STRUCTURE IS PROPERLY IN PLACE. SHORING AND BRACING SHALL BE DESIGNED, REVIEWED AND APPROVED BY A PROFESSIONAL ENGINEER. SHOP DRAWINGS SHALL BE SUBMITTED WITH P. ENG'S STAMP FOR OUR REVIEW PRIOR TO CONSTRUCTION. NO SUBSTITUTIONS FROM THE SPECIFIED PRODUCTS AND MATERIALS ARE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.
- B. STRUCTURAL STEEL**
- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST VERSION OF CAN/CSA-S16 AND THE CISC CODE OF STANDARD PRACTICE.
 - STRUCTURAL STEEL SHALL CONFORM TO THE LATEST VERSION OF CAN/CSA G40.20, G40.21 GRADE 350W CLASS C FOR H.S.S., G40.21 GRADE 350W FOR W SHAPE SECTIONS AND G40.21 GRADE 300W FOR CHANNELS, ANGLES AND MISCELLANEOUS METAL.
 - WELDING SHALL CONFORM TO CSA W59 AND CSA W47 DIVISION 1 OR DIVISION 2.1 BY THE CANADIAN WELDING BUREAU. WELDING SHALL BE COMPLETED BY CWB CERTIFIED FABRICATOR AND ERECTOR TO THE CSA STANDARDS W178.1 AND W178.2.
 - STRUCTURAL STEEL MEMBERS SHALL NOT BE SPICED WITHOUT THE APPROVAL OF THE ENGINEER.
 - ALL STRUCTURAL STEEL IS TO BE SHOP PRIME PAINTED UNLESS NOTED OTHERWISE. ALL COATINGS ARE TO BE TOUCHED UP ON SITE WITH APPROVED PAINT FOR PRIMED STEEL.



ROOF FRAMING PLAN
1/8"=1'-0"

DESIGN LOADS:
D.L. = 20 PSF
L.L. = 48 PSF

LEGEND	
SYMBOL	DESCRIPTION
BAS	BUILDING AUTOMATION SYSTEM
CO	CLEANOUT
CO2	CARBON DIOXIDE
CTE	CONNECT TO EXISTING
CJ	CONDENSING UNIT
CV	CONTROL VALVE
DN	DOWN
DS	DUCTLESS SPLIT
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EX	EXISTING
E/A	EXHAUST AIR
FC	FAN COIL
FF	FORCE FLOW HEATER
HP	HEAT PUMP
HPG	HIGH PRESSURE GAS
HV	HEATING / VENTILATING
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
H/L	HIGH LEVEL
L/L	LOW LEVEL
MAU	MAKEUP AIR UNIT
MOP	MOP SINK
NTS	NOT TO SCALE
OAT	OUTDOOR AIR TEMPERATURE
O/A	OUTDOOR AIR
PRV	PRESSURE REDUCING VALVE
PV	PLUMBING VENT
RAT	RETURN AIR TEMPERATURE
RD	ROOF DRAIN
REL	RELOCATE FROM THIS LOCATION
REL'D	RELOCATE TO THIS LOCATION
RTU	ROOF TOP UNIT
R/A	RETURN AIR
SAT	SUPPLY AIR TEMPERATURE
SD	SPLITTER DAMPER
S/A	SUPPLY AIR
TD	TRANSFER DUCT
TO	TRANSFER OPENING
UH	UNIT HEATER
VT	VARIABLE VOLUME & TEMPERATURE
WB	WALLBOX
WF	WALLFN HEATER
WH	WATER HEATER
-----	EXISTING TO REMAIN
-----	EXISTING TO BE REMOVED/RELOCATED
(N)-----	REFERS TO NOTE ON THE SAME DRAWING/DETAIL
(HVAC-T)	EQUIPMENT TAG
1	DUCT / PIPE CAP
.....	DOMESTIC COLD WATER PIPING
.....	DOMESTIC HOT WATER PIPING
.....	DOMESTIC HOT WATER RECIRCULATION PIPING
-----	HWS HEATING WATER SUPPLY PIPING
-----	HWR HEATING WATER RETURN PIPING
-----	C CONDENSATE PIPING
-----	G LOW PRESSURE NATURAL GAS PIPING (1" (175MM) WC)
-----	HPG HIGH PRESSURE NATURAL GAS PIPING (2 PSI)
-----	R REFRIGERATION PIPING
-----	R2 REFRIGERATION PIPING (2 PIPES)
-----	V VENT PIPING
(T) 1	THERMOSTAT & RADIANT HEAT ZONE CONTROLLED
(S) CO2	SENSOR / MONITOR (TYPE AS NOTED)
○	PIPING TURNING DOWN
●	PIPING TURNING UP
○	ISOLATION VALVE
○	PRESSURE REGULATING VALVE (PRV)
	CONNECT TO EXISTING
(M)	GAS METER
⊗	RECTANGULAR SUPPLY DUCT UP / DN
⊗	RECTANGULAR RETURN OR EXHAUST DUCT UP / DN
---	FLEXIBLE DUCT
---	RIGID ROUND DUCT (SINGLE LINE DESIGNATION)
---	MANUAL BALANCING DAMPER
---	FIRE DAMPER
FS	COMBINATION FIRE & SMOKE DAMPER
250	AIRFLOW (CFM)
2017-A	GRILLE/DIFFUSER SIZE (IN) & TYPE
2017-A	GRILLE/DIFFUSER TYPE
2017	GRILLE/DIFFUSER SIZE (IN)
ZZZZZ	ACOUSTIC LINING
=====	THERMAL INSULATION
---	DUCT SIZE TRANSITION
○	ROUND BRANCHES TURNING DOWN
○	ROUND BRANCHES TURNING UP
---	MOTORIZED DAMPER
---	TRANSFER OPENING
○	CONTROLLER & UNIT CONTROLLED
---	TRANSFER DUCT
---	EXISTING TO REMAIN
---	EXISTING TO BE REMOVED

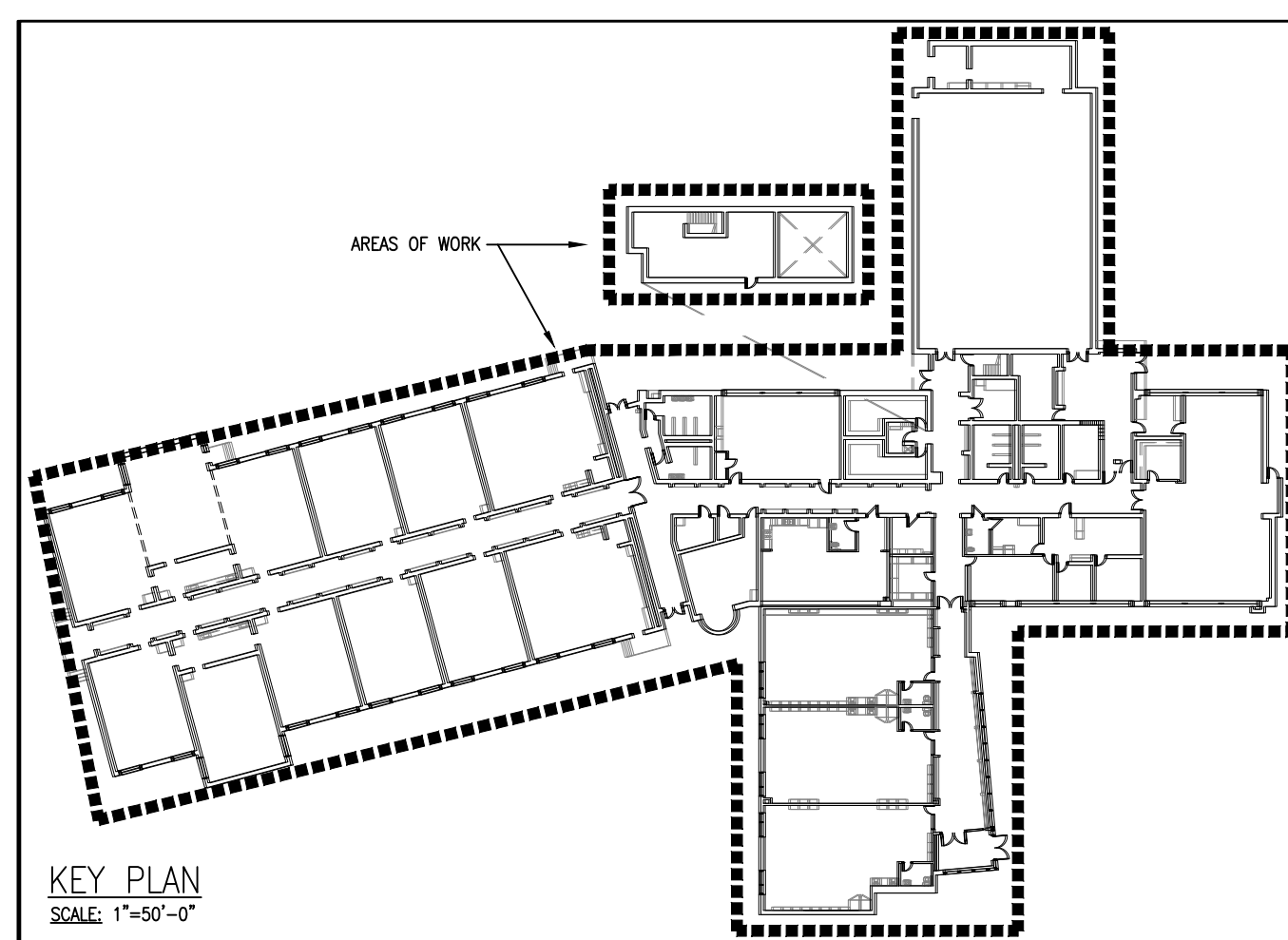
DUCTLESS AIR CONDITIONER SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
DS-2	WALL-MOUNTED (DUCTLESS SPLIT) INDOOR UNIT AIR FLOW: 500 CFM (235 L/S) ON HIGH COOLING: 1.5 TON / 18.0 MBH (12.2 KW) TOTAL, 13.3 (3.8 KW) SENSIBLE	DAIKIN FAQ18TANAU	208-1-60, 0.5 MCA, 15 MOCP, 42" W X 10" D X 12" H (1050MM X 250MM X 300MM), 31 LBS (14 KG). PROVIDE: - WALL-MOUNT BRACKET. - DIRECT DRIVE FAN C/W VARIABLE SPEED DRIVE. - ELECTRONIC EXPANSION VALVE. - R-410A REFRIGERANT. - REMOTE CONTROLLER (NAVIGATION II BR1E73). - CONTROLS INTERFACE (DKN PLUS AZAWSPKDC). - CONDENSATE PUMP (LITTLE GIANT EC-1K-DV). - LINE SET COVER.
HP-2	HEAT PUMP OUTDOOR UNIT COOLING: 1.5 TON / 18.0 MBH (5.2 KW) TOTAL	DAIKIN RZR18TBUVA	208-1-60, 29.1 MCA, 35 MOCP, 37" W X 13" D X 39" H (925MM X 325MM X 975MM), 172 LBS (78 KG). PROVIDE: - VARIABLE SPEED SCROLL COMPRESSOR. - SOLENOID VALVE. - 4-WAY VALVE. - DISTRIBUTION HEADERS. - CAPILLARIES. - FILTERS. - SHUT-OFF VALVES. - OIL SEPARATORS. - SERVICE PORTS. - REFRIGERATION REGULATOR. - HIGH PRESSURE SWITCH. - CONTROL CIRCUIT FUSES. - FUSIBLE PLUG. - OVERLOAD RELAY. - INVERTER OVERLOAD PROTECTOR. - COMPRESSORS & MOTOR THERMAL PROTECTORS. - OVER CURRENT PROTECTION. - ANTI-RECYCLING TIMER. - SIGHT GLASS. - LIQUID LINE DRYER. - COIL GUARD ON INLET & OUTLET. - WIND BAFFLES. - R-410A REFRIGERANT. - 1.5' (450MM) ROOF SUPPORT SUPPLIED WITH OUTDOOR UNIT. - EXTENDED WARRANTIES (10 YEAR COMPRESSOR).
DS-3A,3B	WALL-MOUNTED (DUCTLESS SPLIT) INDOOR UNIT AIR FLOW: 500 CFM (235 L/S) ON HIGH COOLING: 1.5 TON / 18.0 MBH (12.2 KW) TOTAL, 13.3 (3.8 KW) SENSIBLE	DAIKIN FAQ218PVU	208-1-60, 0.4 MCA, 15 MOCP, 42" W X 10" D X 12" H (1050MM X 250MM X 300MM), 31 LBS (14 KG). PROVIDE: - WALL-MOUNT BRACKET. - DIRECT DRIVE FAN C/W VARIABLE SPEED DRIVE. - ELECTRONIC EXPANSION VALVE. - R-410A REFRIGERANT. - REMOTE CONTROLLER (NAVIGATION II BR1E73). - CONTROLS INTERFACE (DKN PLUS AZAWSPKDC). - CONDENSATE PUMP (LITTLE GIANT EC-1K-DV). - LINE SET COVER.
HP-3	HEAT PUMP OUTDOOR UNIT COOLING: 3 TON / 36.0 MBH (10.5 KW) TOTAL	DAIKIN RXT036TBUVA	208-1-60, 16.5 MCA, 20 MOCP, 37" W X 13" D X 39" H (925MM X 325MM X 975MM), 172 LBS (78 KG). PROVIDE: - VARIABLE SPEED SCROLL COMPRESSOR. - SOLENOID VALVE. - 4-WAY VALVE. - DISTRIBUTION HEADERS. - CAPILLARIES. - FILTERS. - SHUT-OFF VALVES. - OIL SEPARATORS. - SERVICE PORTS. - REFRIGERATION REGULATOR. - HIGH PRESSURE SWITCH. - CONTROL CIRCUIT FUSES. - FUSIBLE PLUG. - OVERLOAD RELAY. - INVERTER OVERLOAD PROTECTOR. - COMPRESSORS & MOTOR THERMAL PROTECTORS. - OVER CURRENT PROTECTION. - ANTI-RECYCLING TIMER. - SIGHT GLASS. - LIQUID LINE DRYER. - COIL GUARD ON INLET & OUTLET. - WIND BAFFLES. - R-410A REFRIGERANT. - 1.5' (450MM) ROOF SUPPORT SUPPLIED WITH OUTDOOR UNIT. - EXTENDED WARRANTIES (10 YEAR COMPRESSOR).
DS-4A	WALL-MOUNTED (DUCTLESS SPLIT) INDOOR UNIT AIR FLOW: 500 CFM (235 L/S) ON HIGH COOLING: 1.5 TON / 18.0 MBH (12.2 KW) TOTAL, 13.3 (3.8 KW) SENSIBLE	DAIKIN FAQ218PVU	208-1-60, 0.4 MCA, 15 MOCP, 42" W X 10" D X 12" H (1050MM X 250MM X 300MM), 31 LBS (14 KG). PROVIDE: - WALL-MOUNT BRACKET. - DIRECT DRIVE FAN C/W VARIABLE SPEED DRIVE. - ELECTRONIC EXPANSION VALVE. - R-410A REFRIGERANT. - REMOTE CONTROLLER (NAVIGATION II BR1E73). - CONTROLS INTERFACE (DKN PLUS AZAWSPKDC). - CONDENSATE PUMP (LITTLE GIANT EC-1K-DV). - LINE SET COVER.
DS-4B,4C,4D,4E	WALL-MOUNTED (DUCTLESS SPLIT) INDOOR UNIT AIR FLOW: 260 CFM (122 L/S) ON HIGH COOLING: 0.6 TON / 7.5 MBH (2.1 KW) TOTAL, 6.0 (1.7 KW) SENSIBLE	DAIKIN FAQ077PVU	208-1-60, 0.3 MCA, 15 MOCP, 32" W X 10" D X 12" H (800MM X 250MM X 300MM), 27 LBS (12 KG). PROVIDE: - WALL-MOUNT BRACKET. - DIRECT DRIVE FAN C/W VARIABLE SPEED DRIVE. - ELECTRONIC EXPANSION VALVE. - R-410A REFRIGERANT. - REMOTE CONTROLLER (NAVIGATION II BR1E73). - CONTROLS INTERFACE (DKN PLUS AZAWSPKDC). - CONDENSATE PUMP (LITTLE GIANT EC-1K-DV). - LINE SET COVER.
HP-4	HEAT PUMP OUTDOOR UNIT COOLING: 4 TON / 47.4 MBH (13.8 KW) TOTAL	DAIKIN RXT048TBUVA	208-1-60, 29.1 MCA, 35 MOCP, 37" W X 13" D X 39" H (925MM X 325MM X 975MM), 176 LBS (79 KG). PROVIDE: - VARIABLE SPEED SCROLL COMPRESSOR. - SOLENOID VALVE. - 4-WAY VALVE. - DISTRIBUTION HEADERS. - CAPILLARIES. - FILTERS. - SHUT-OFF VALVES. - OIL SEPARATORS. - SERVICE PORTS. - REFRIGERATION REGULATOR. - HIGH PRESSURE SWITCH. - CONTROL CIRCUIT FUSES. - FUSIBLE PLUG. - OVERLOAD RELAY. - INVERTER OVERLOAD PROTECTOR. - COMPRESSORS & MOTOR THERMAL PROTECTORS. - OVER CURRENT PROTECTION. - ANTI-RECYCLING TIMER. - SIGHT GLASS. - LIQUID LINE DRYER. - COIL GUARD ON INLET & OUTLET. - WIND BAFFLES. - R-410A REFRIGERANT. - 1.5' (450MM) ROOF SUPPORT SUPPLIED WITH OUTDOOR UNIT. - EXTENDED WARRANTIES (10 YEAR COMPRESSOR).

NOTES:
- DESIGN CONDITIONS:
- WINTER: -6F (-21C) DB OAT, 70F (22C) DB / 53F (12C) WB RAT.
- SUMMER: 85F (29C) DB / 74F (23C) WB OAT, 75F (24C) DB / 63F (18C) WB RAT.
- PROVIDE:
- THREE PIPE INSULATED JOINTS IN QUANTITIES TO SUIT VRF SYSTEM LAYOUT.

ROOFTOP UNIT SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
HW-1	ROOFTOP UNIT AIR FLOW: SUPPLY: 3400 CFM (1604 L/S) AT 0.7" WC (0.18 KPA) ESP OUTDOOR: SET TO 815 CFM (290 L/S), CAPABLE TO 1520 CFM (717 L/S) GAS HEATING (16:1 TURNDOWN): INPUT (NATURAL GAS): 400 CFH (3.0 L/S) OUTPUT: 320 MBH (93.6 KW)	DAIKIN DAW11A	208-3-60, 22.4 MCA, 30 MOCP, 91" L X 58" W X 57" H (2275MM X 1425MM), 1534 LB (695 KG). PROVIDE: - 1" (25MM) DOUBLE WALL CONSTRUCTION C/W R7 SPRAY FOAM INSULATION. - HINGED ACCESS DOORS. - DIRECT DRIVE AIR FOL FANS C/W ECM DRIVES. - POWERED EXHAUST. - ECONOMIZER OPERATION. - OUTDOOR (LOW LEAKAGE) & RETURN OPPOSED BLADE DAMPERS. - EXHAUST GRAVITY BACKDRAFT DAMPER. - INDIRECT-FIRED HEATING C/W STAINLESS STEEL HEAT EXCHANGER. - STAINLESS STEEL CONDENSATE DRAIN PAN. - COMBINATION MERV 8 & MERV 13 DISPOSABLE FILTERS, ACCOUNT FOR 0.75" WC (18 KPA) DIRTY FILTER PRESSURE DROP. - TERMINAL STRIP CONTROLS SUITABLE FOR CONTROLS TRADE. - LOCAL CONTROL DISPLAY. - NON-FUSED DISCONNECT. - PHASE / BROWNOUT PROTECTION. - THRU-THE-BASE ELEC / CONTROL WIRING CONNECTIONS. - 2" (50MM) HIGH INSULATED ROOF CURB C/W FULL PERIMETER NEOPRENE TOP GASKET SUITABLE FOR BOTTOM SUPPLY & RETURN CONNECTIONS. - EXTENDED WARRANTIES (5 YEAR COMPRESSOR, 10 YEAR HEAT EXCHANGER).
HWC-6	ROOFTOP UNIT AIR FLOW: SUPPLY: 2000 CFM (943 L/S) AT 1.4" WC (0.35 KPA) ESP OUTDOOR: SET TO 700 CFM (330 L/S), CAPABLE TO 1510 CFM (712 L/S) HEAT PUMP HEATING: 72.7 MBH (21.2 KW) AT 50F (10C) OAT GAS HEATING (5:1 TURNDOWN): INPUT (NATURAL GAS): 160 CFH (1.2 L/S) OUTPUT: 128 MBH (37.4 KW) ELEC (DX) COOLING: 6 TON (NOMINAL) / 84.8 MBH (24.8 KW) TOTAL, 57.9 MBH (16.9 KW) SENSIBLE	DAIKIN DPS006A	208-3-60, 36.6 MCA, 50 MOCP, 67" L X 87" W X 41" H (1675MM X 2175MM X 1025MM), 1514 LB (686 KG). PROVIDE: - 1" (25MM) DOUBLE WALL CONSTRUCTION C/W R7 SPRAY FOAM INSULATION. - HINGED ACCESS DOORS. - DIRECT DRIVE AIR FOL FANS C/W ECM DRIVES. - POWERED EXHAUST. - ECONOMIZER OPERATION. - OUTDOOR (LOW LEAKAGE) & RETURN OPPOSED BLADE DAMPERS. - EXHAUST GRAVITY BACKDRAFT DAMPER. - INDIRECT-FIRED HEATING C/W STAINLESS STEEL HEAT EXCHANGER. - MODULATING COOLING CONTROL C/W INVERTER COMPRESSOR. - HOT GAS REHEAT. - HAIL GUARDS. - R-410A REFRIGERANT. - STAINLESS STEEL CONDENSATE DRAIN PAN. - COMBINATION MERV 8 & MERV 13 DISPOSABLE FILTERS, ACCOUNT FOR 0.75" WC (18 KPA) DIRTY FILTER PRESSURE DROP. - TERMINAL STRIP / REFRIGERATION ONLY CONTROLS SUITABLE FOR CONTROLS TRADE. - LOCAL CONTROL DISPLAY. - NON-FUSED DISCONNECT. - PHASE / BROWNOUT PROTECTION. - THRU-THE-BASE ELEC / CONTROL WIRING CONNECTIONS. - 2" (50MM) HIGH INSULATED ROOF CURB C/W FULL PERIMETER NEOPRENE TOP GASKET SUITABLE FOR BOTTOM SUPPLY & RETURN CONNECTIONS. - EXTENDED WARRANTIES (5 YEAR COMPRESSOR, 10 YEAR HEAT EXCHANGER).

NOTES:
- DESIGN CONDITIONS:
- WINTER: -6F (-21C) DB OAT, 70F (22C) DB / 53F (12C) WB RAT.
- SUMMER: 85F (29C) DB / 74F (23C) WB OAT, 75F (24C) DB / 63F (18C) WB RAT.

DIFFUSER & GRILLE SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
A	FIXED SINGLE DEFLECTION TRANSFER GRILLE	KRUEGER S80-H-F22-NONE-01-00-00-44	PROVIDE 0.75" (19MM) BLADE SPACING, 35 DEGREE HORIZONTAL FRONT BLADES, SURFACE-MOUNT FRAME, SCREW HOLE MOUNTING, WHITE.
B	EGOCRATE TRANSFER / RETURN GRILLE	KRUEGER EG05-F22-NONE-01-00-00-44	PROVIDE 0.5" (13MM) CORE, SURFACE-MOUNT FRAME, SCREW HOLE MOUNTING, WHITE.
C	ADJUSTABLE SQUARE DIFFUSER	KRUEGER 1450A-04-F23-24X24-44	PROVIDE LAY-IN T-BAR FRAME, 24"X24" (600X600MM) PANEL SIZE.



DRAWING LIST	
M-1	DRAWING LIST, LEGEND, KEY PLAN & SCHEDULES
M-2	DETAILS
M-3	GROUND FLOOR PIPING DEMOLITION PLANS
M-4	GROUND FLOOR DUCTWORK DEMOLITION PLANS
M-5	ROOF & PENTHOUSE MECHANICAL DEMOLITION PLANS
M-6	GROUND FLOOR PIPING RENOVATION PLANS
M-7	GROUND FLOOR DUCTWORK RENOVATION PLANS
M-8	ROOF & PENTHOUSE MECHANICAL RENOVATION PLANS

05			
04			
03			
02	05.15.24	ISSUE FOR TENDER #24-7567-RFT & PERMIT	K.K.
01	03.22.24	ISSUE FOR REVIEW	K.K.

ORIENTATION

JOB NO: 24017

MNE ENGINEERING

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PROJECT:
**LEXINGTON PUBLIC SCHOOL
HVAC UPGRADES**

431 FORESTLAWN RD WATERLOO, ON
CLIENT:
WATERLOO REGION DISTRICT SCHOOL BOARD

DRAWING:
**DRAWING LIST, LEGEND, KEY
PLAN & SCHEDULES**

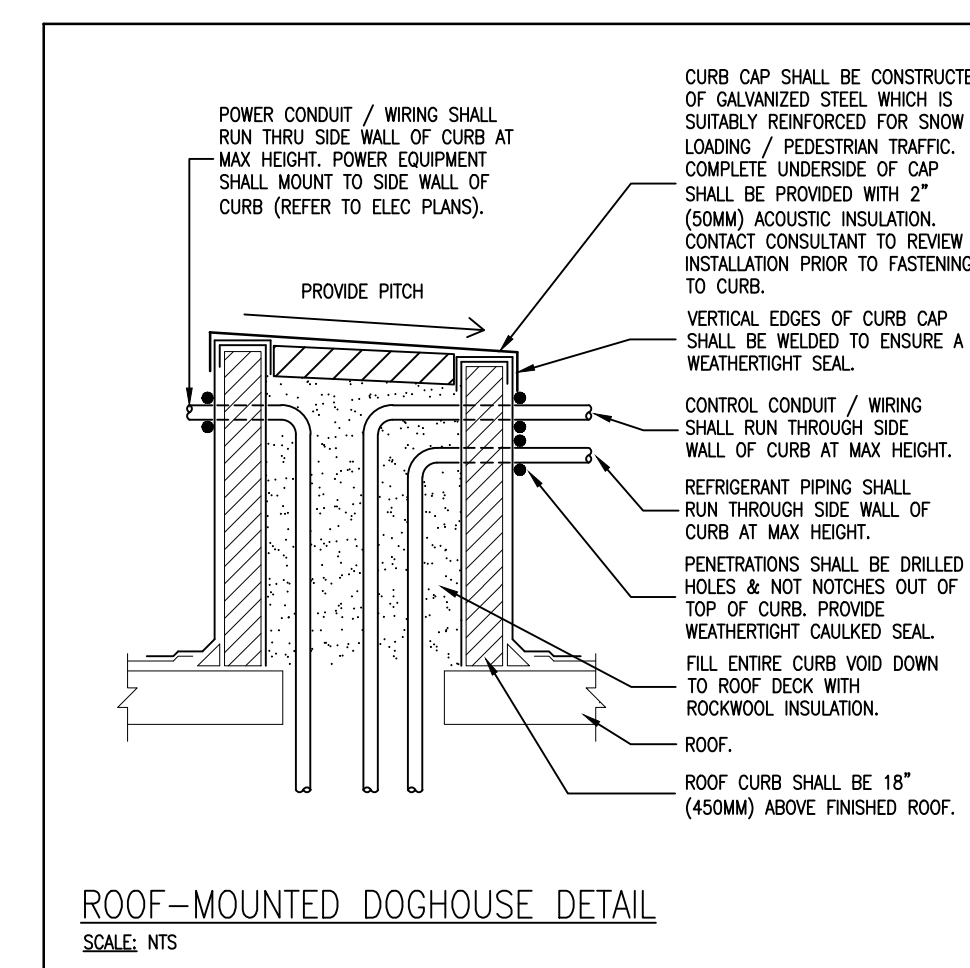
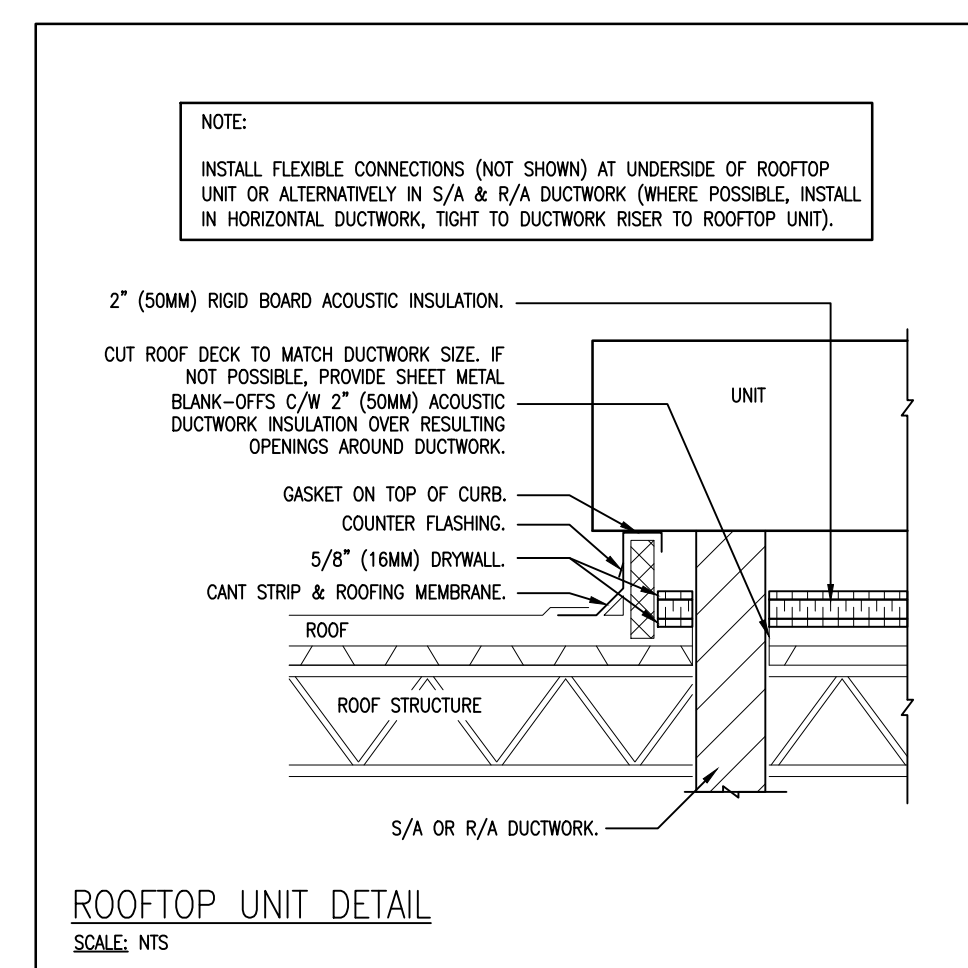
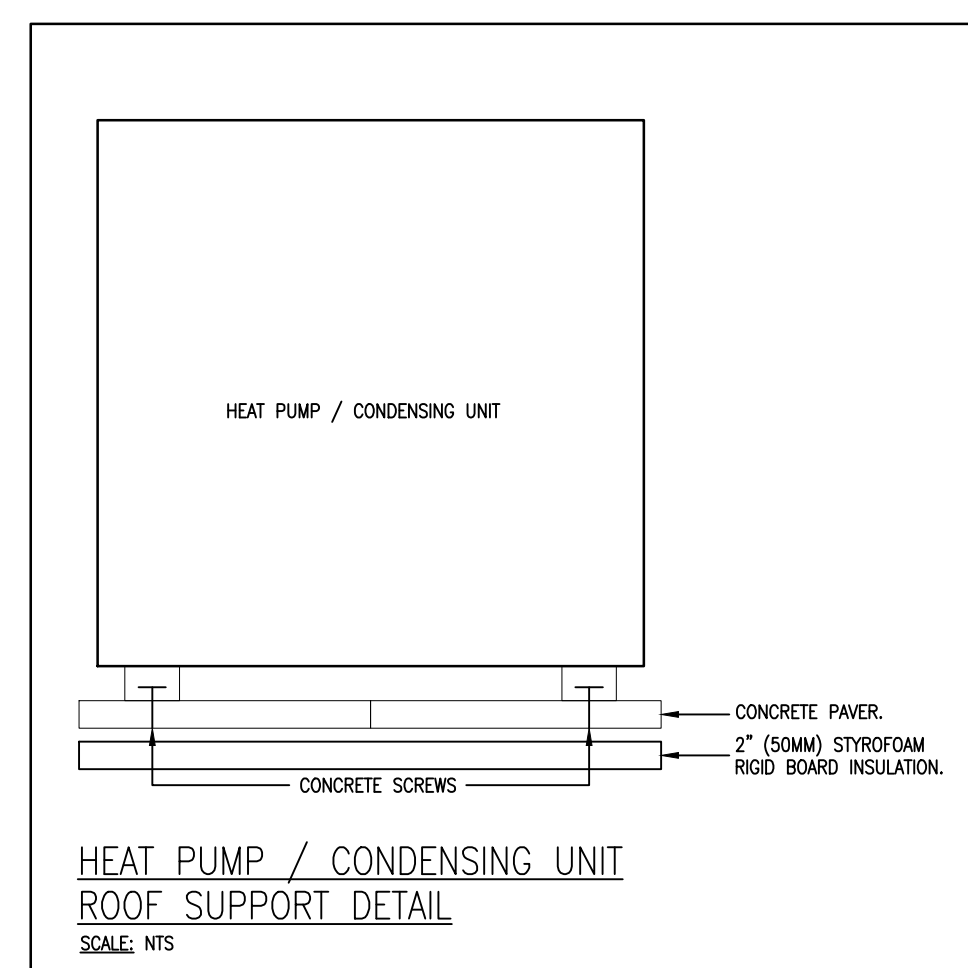
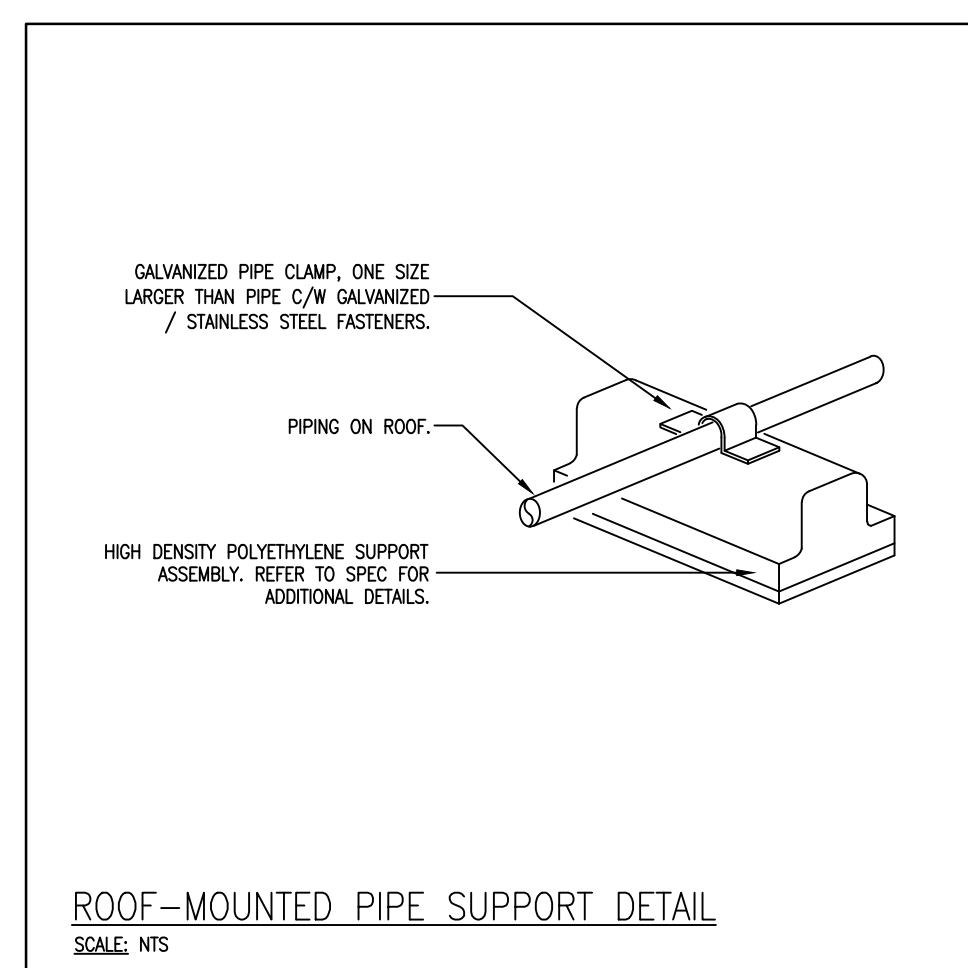
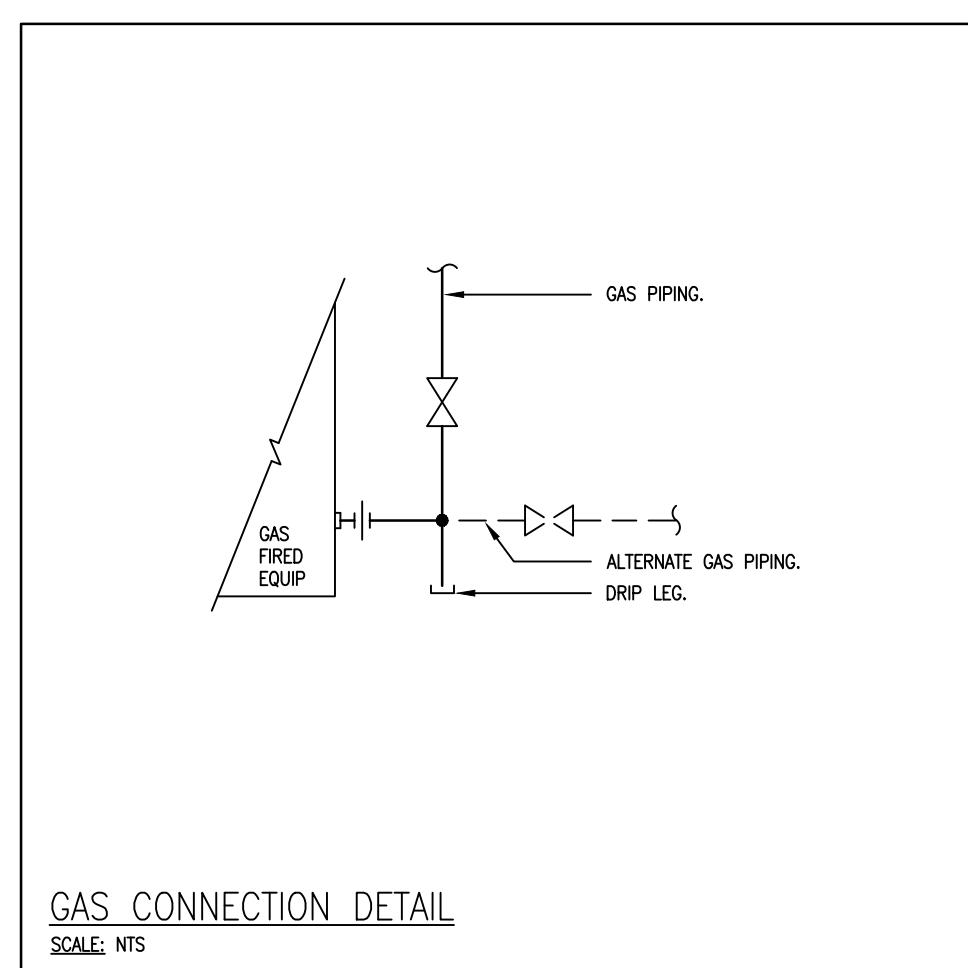
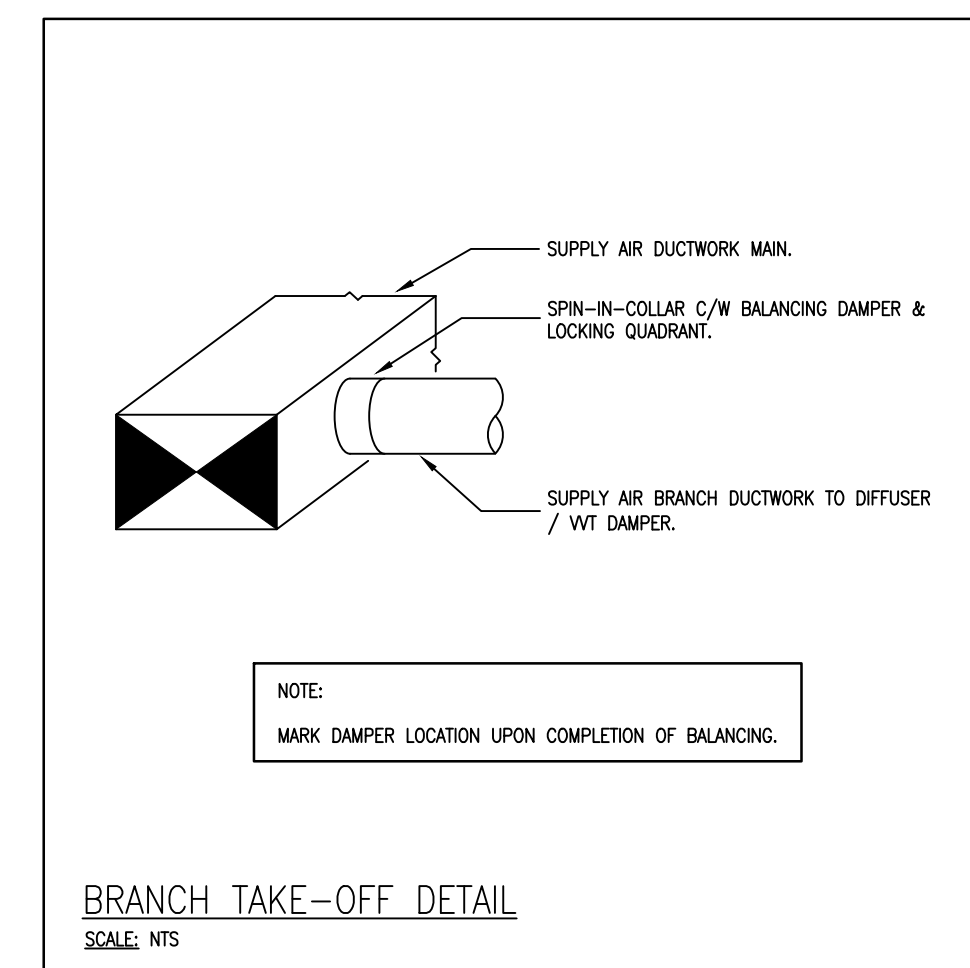
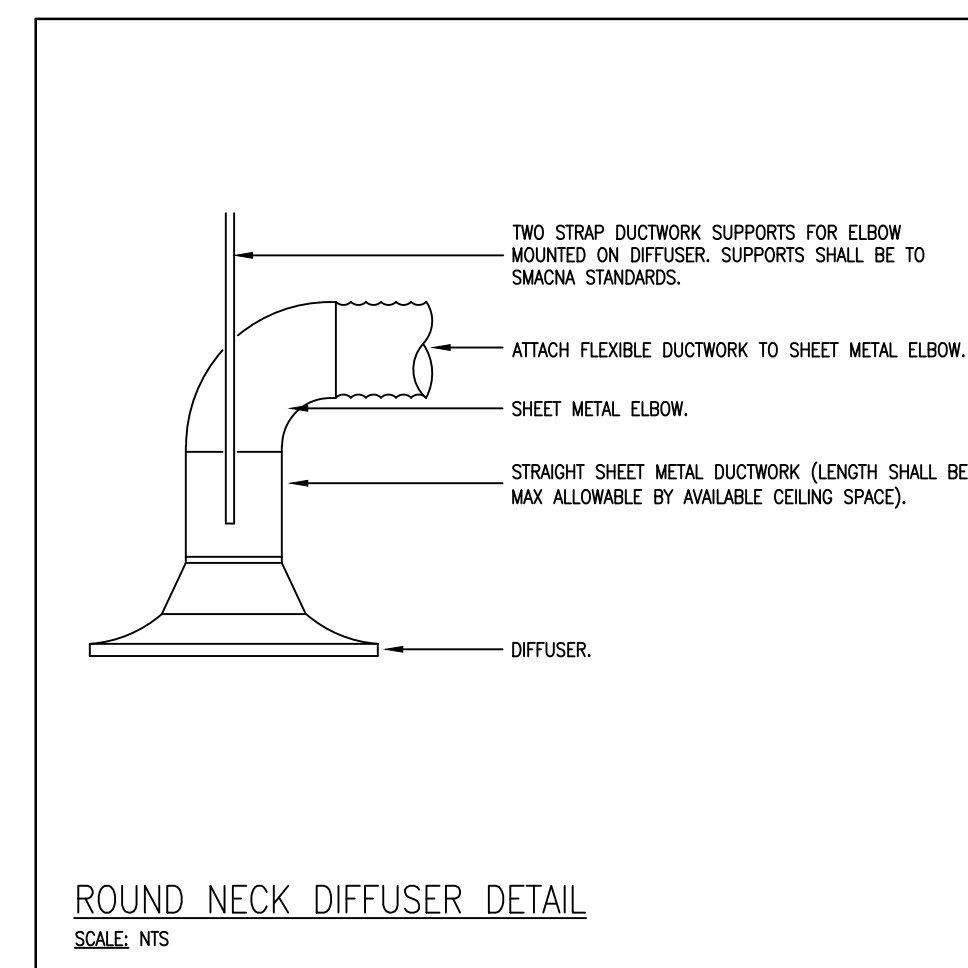
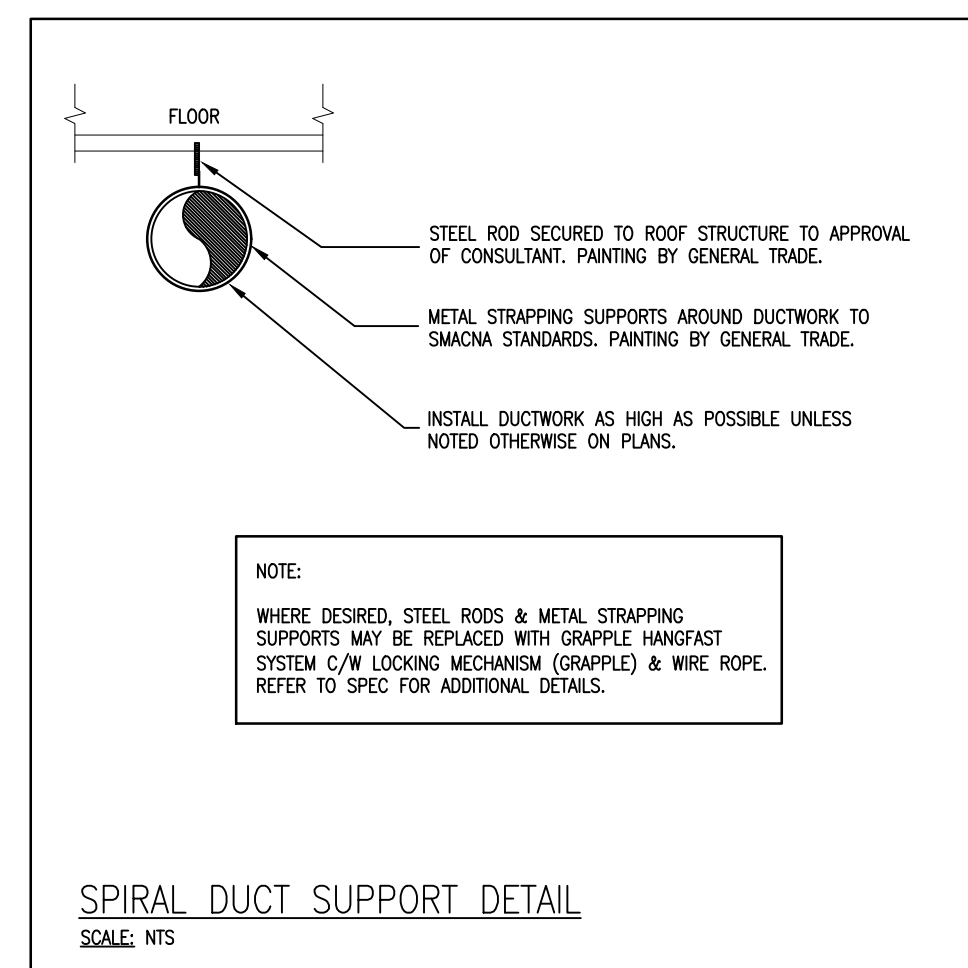
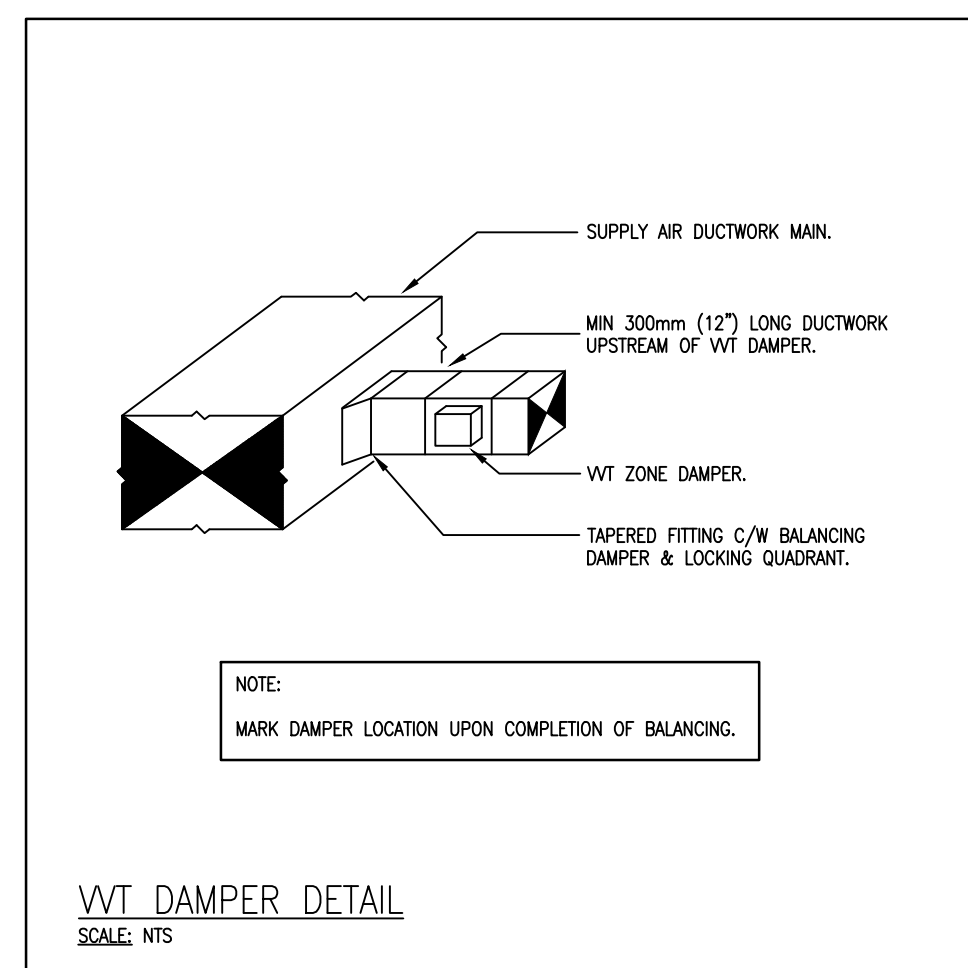
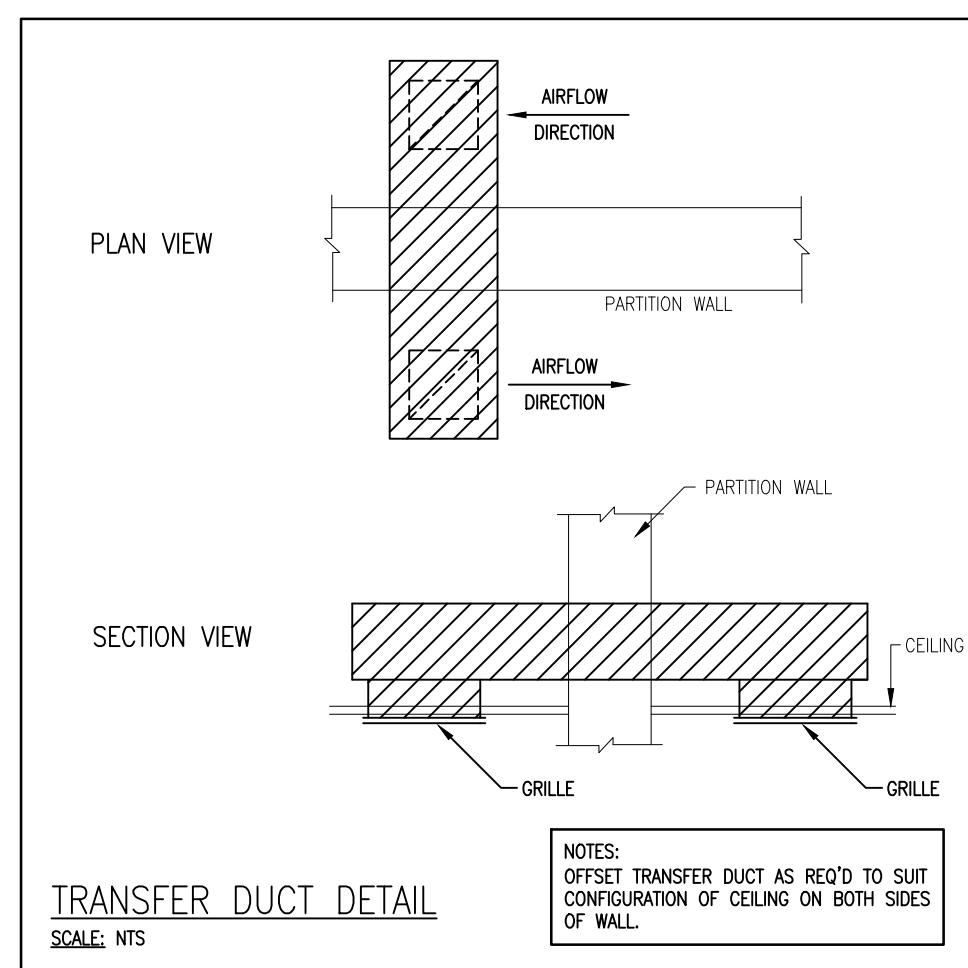
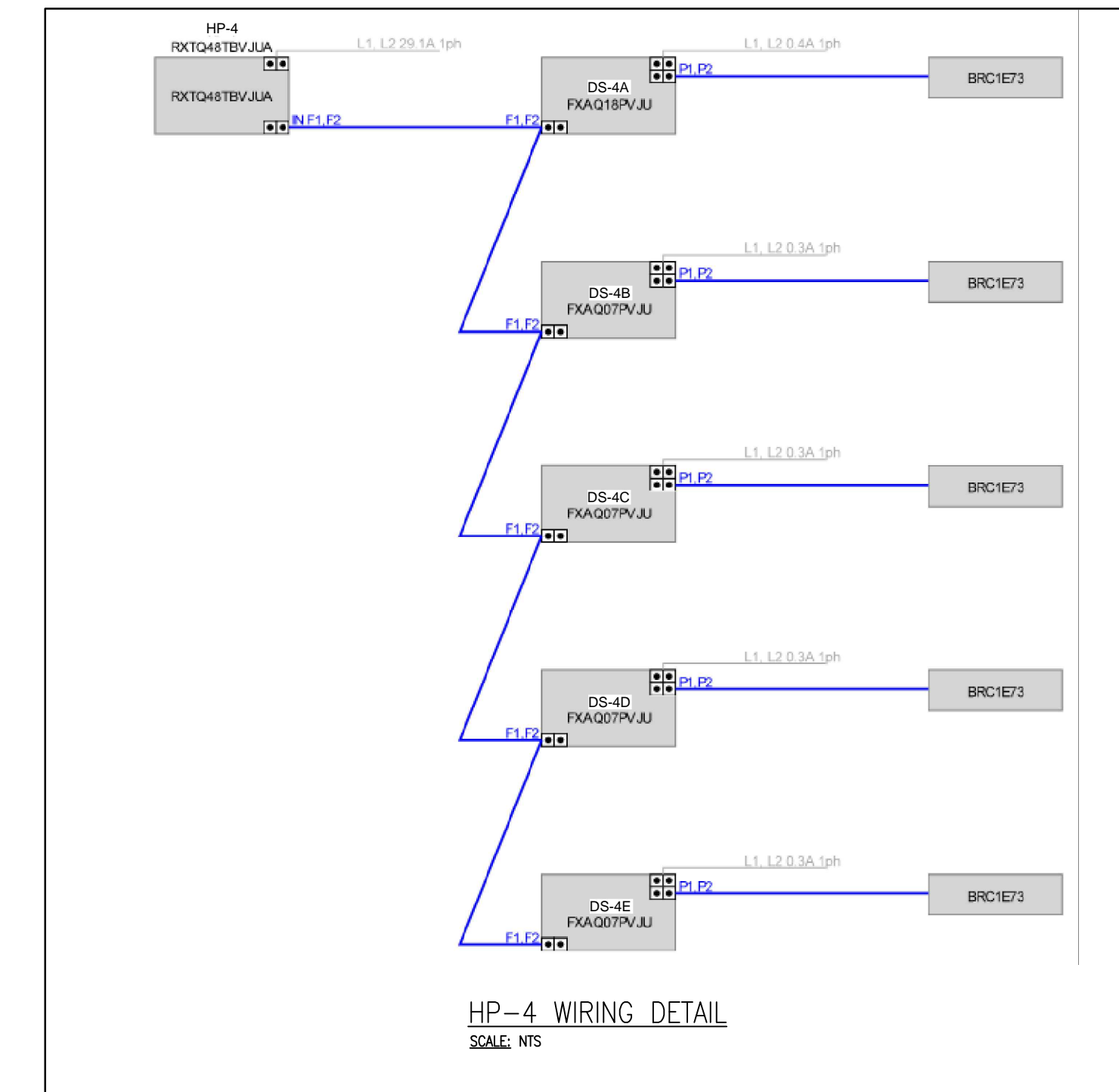
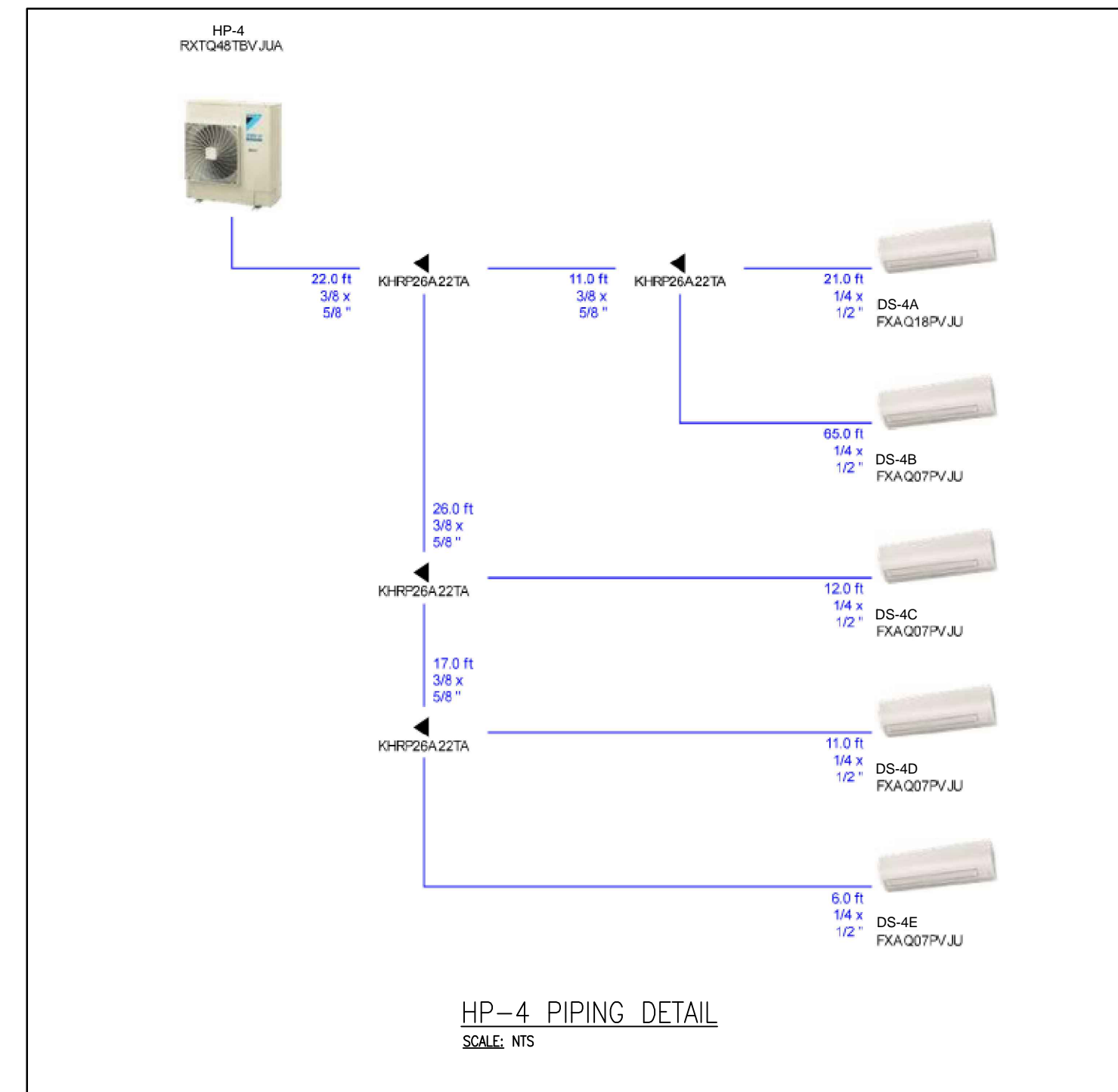
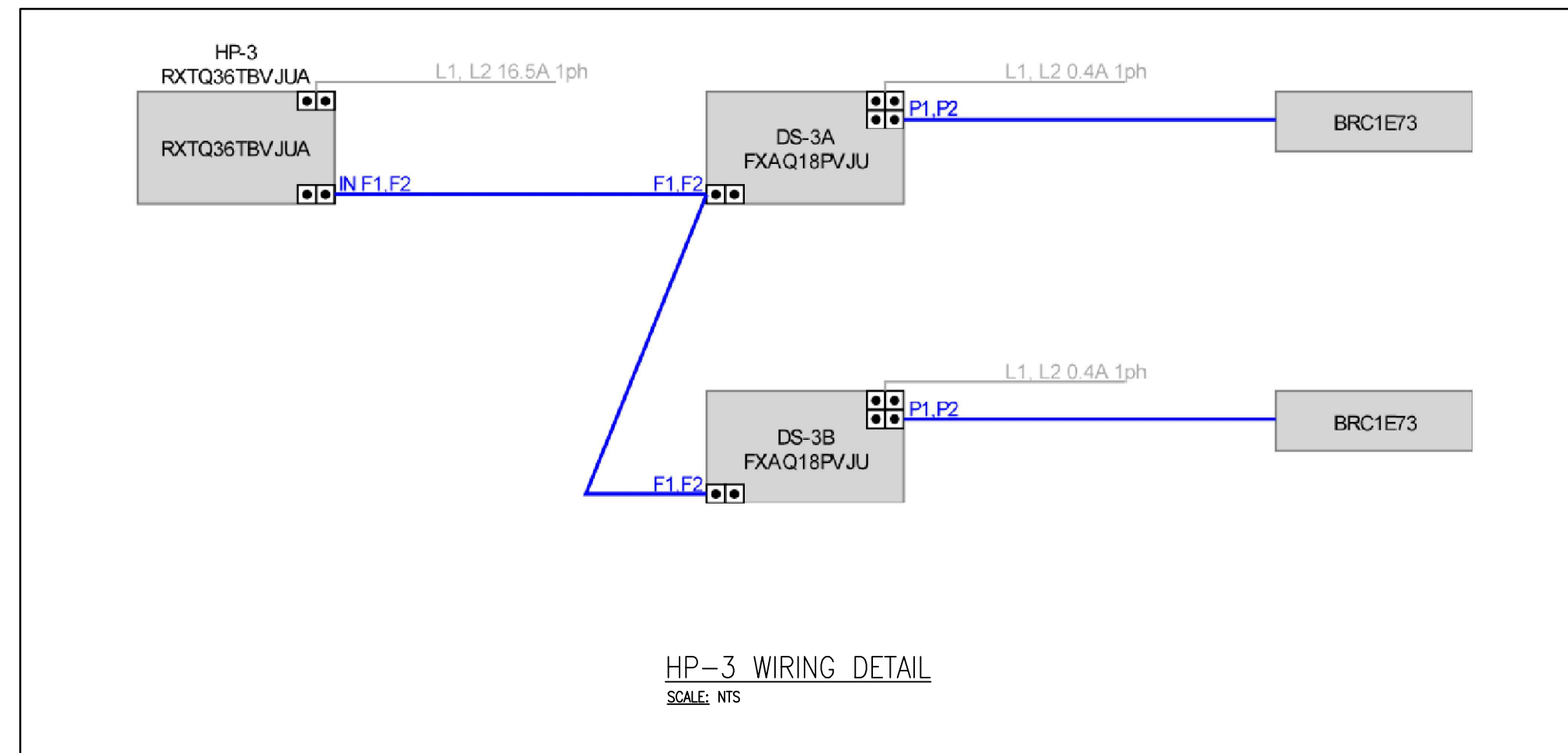
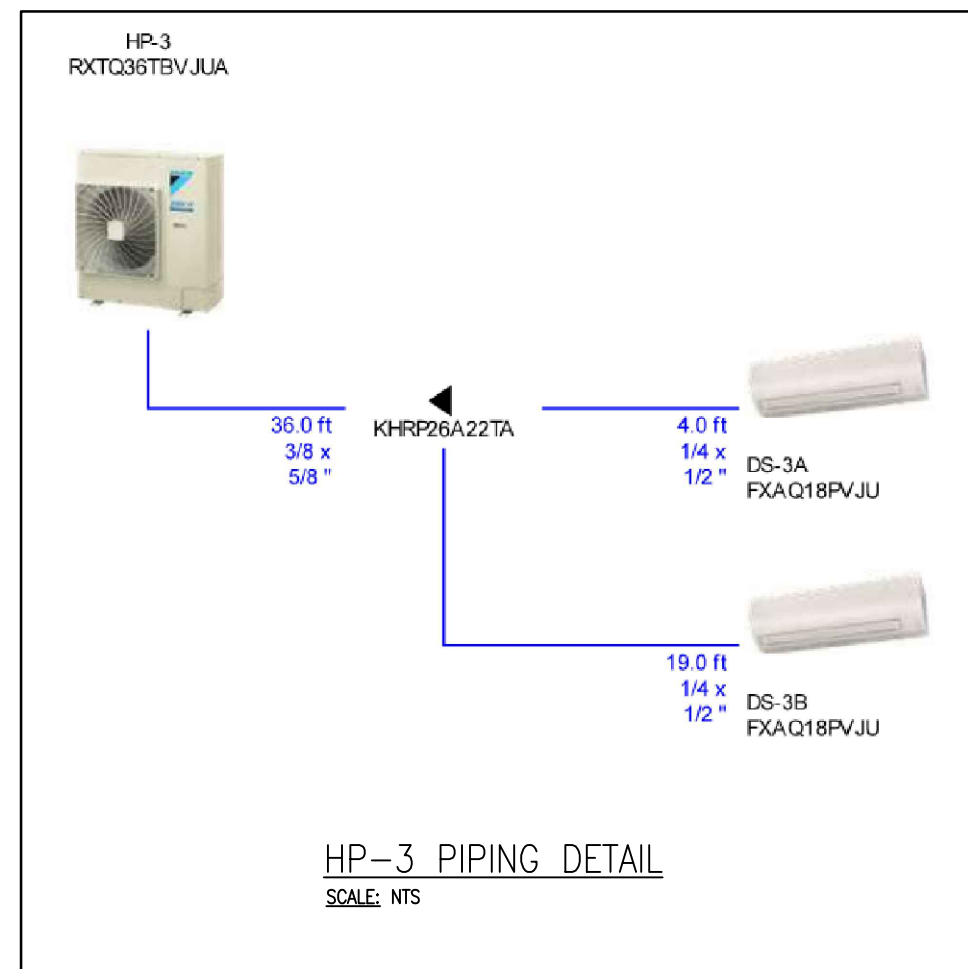
SCALE: AS NOTED

DATE: MARCH 2024

DRAWN: K.K.

CHECKED: K.K.

DWG NO.: M-1 SHEET NO.: 1 OF 8



NO.	DATE	REVISION	BY
05			
04			
03			
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WATERLOO REGION DISTRICT SCHOOL BOARD

431 FORESTLAWN RD WATERLOO, ON

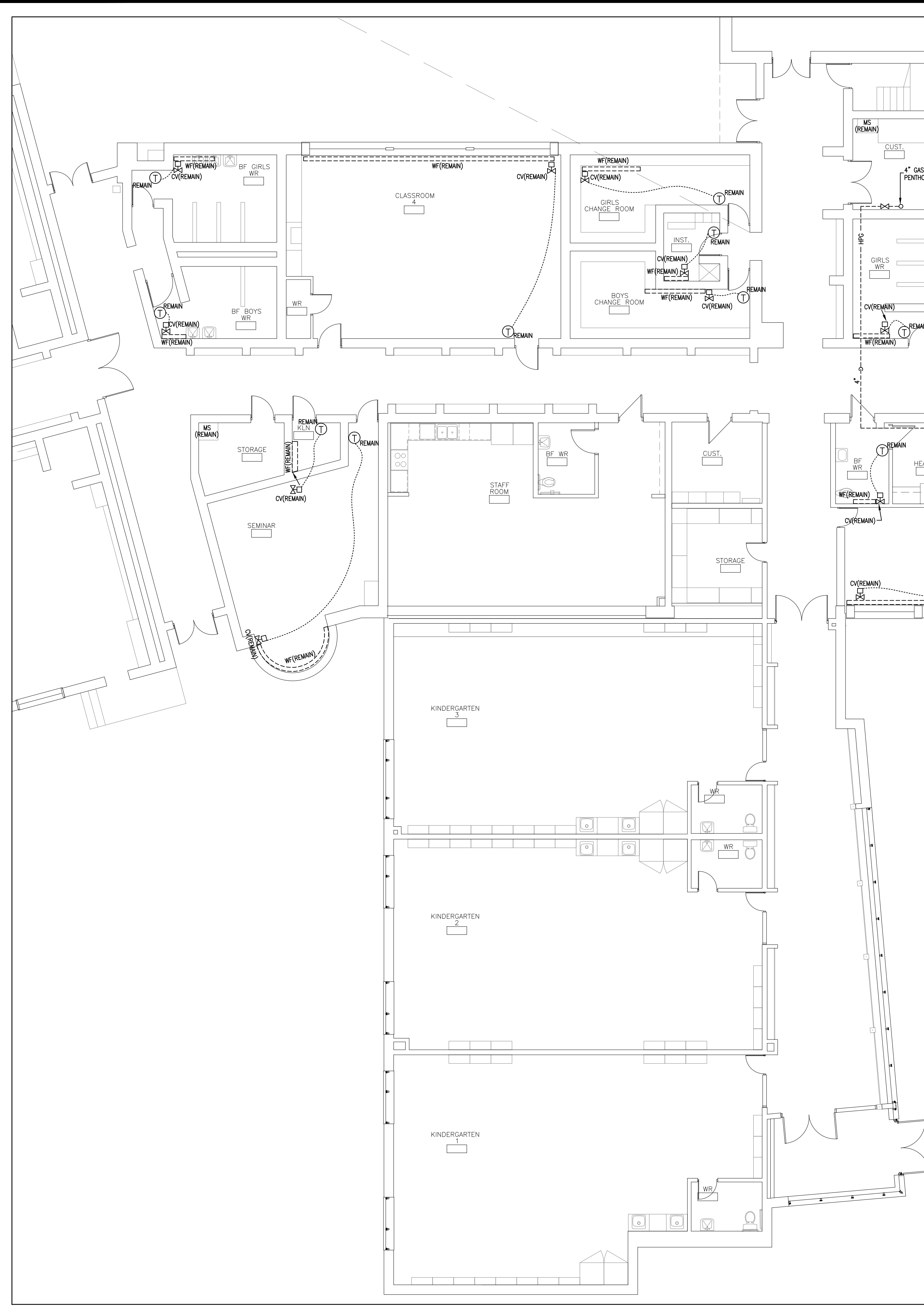
DRAWING:
DETAILS

SCALE: AS NOTED

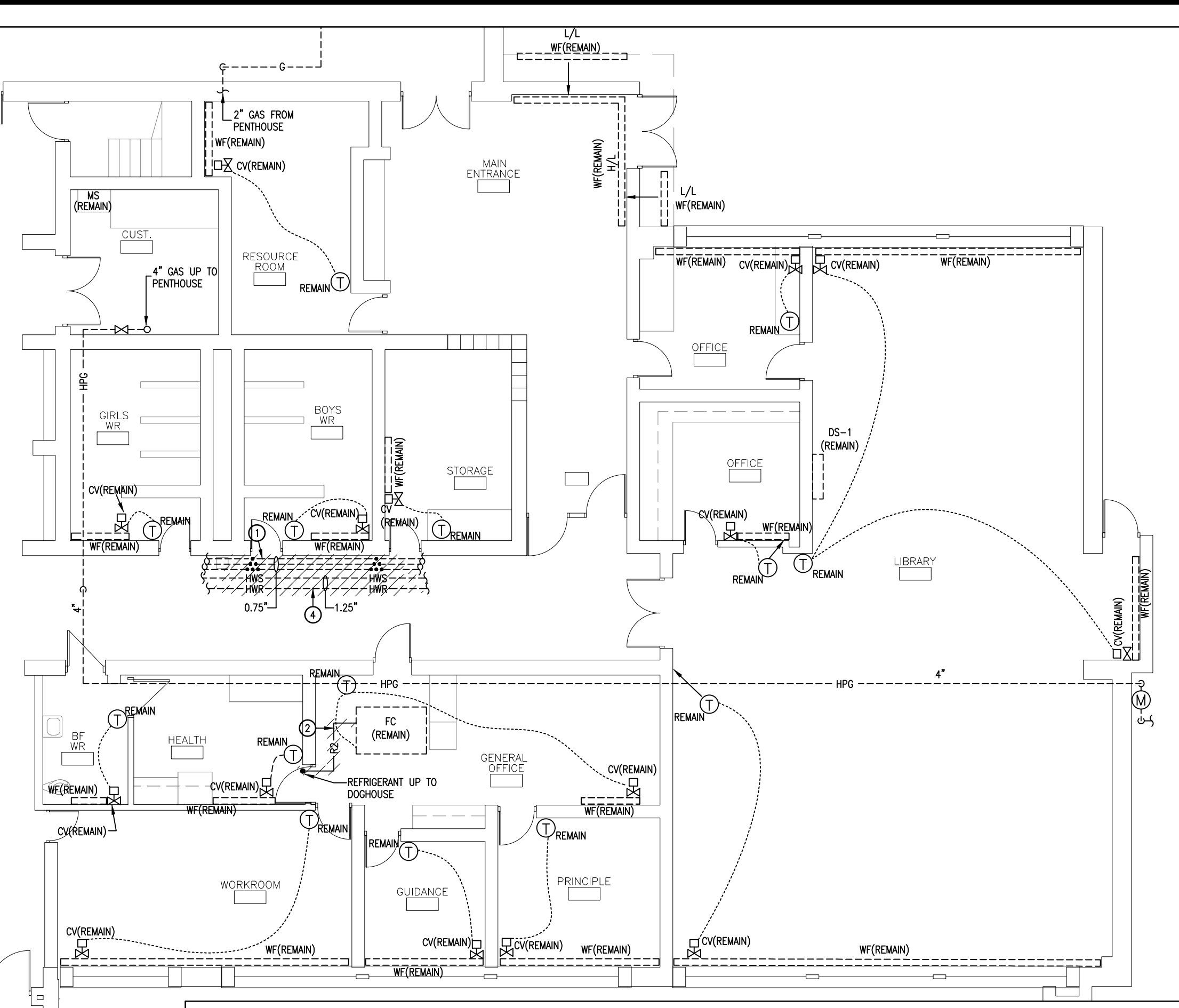
DATE: MARCH 2024

DRAWN: K.K.

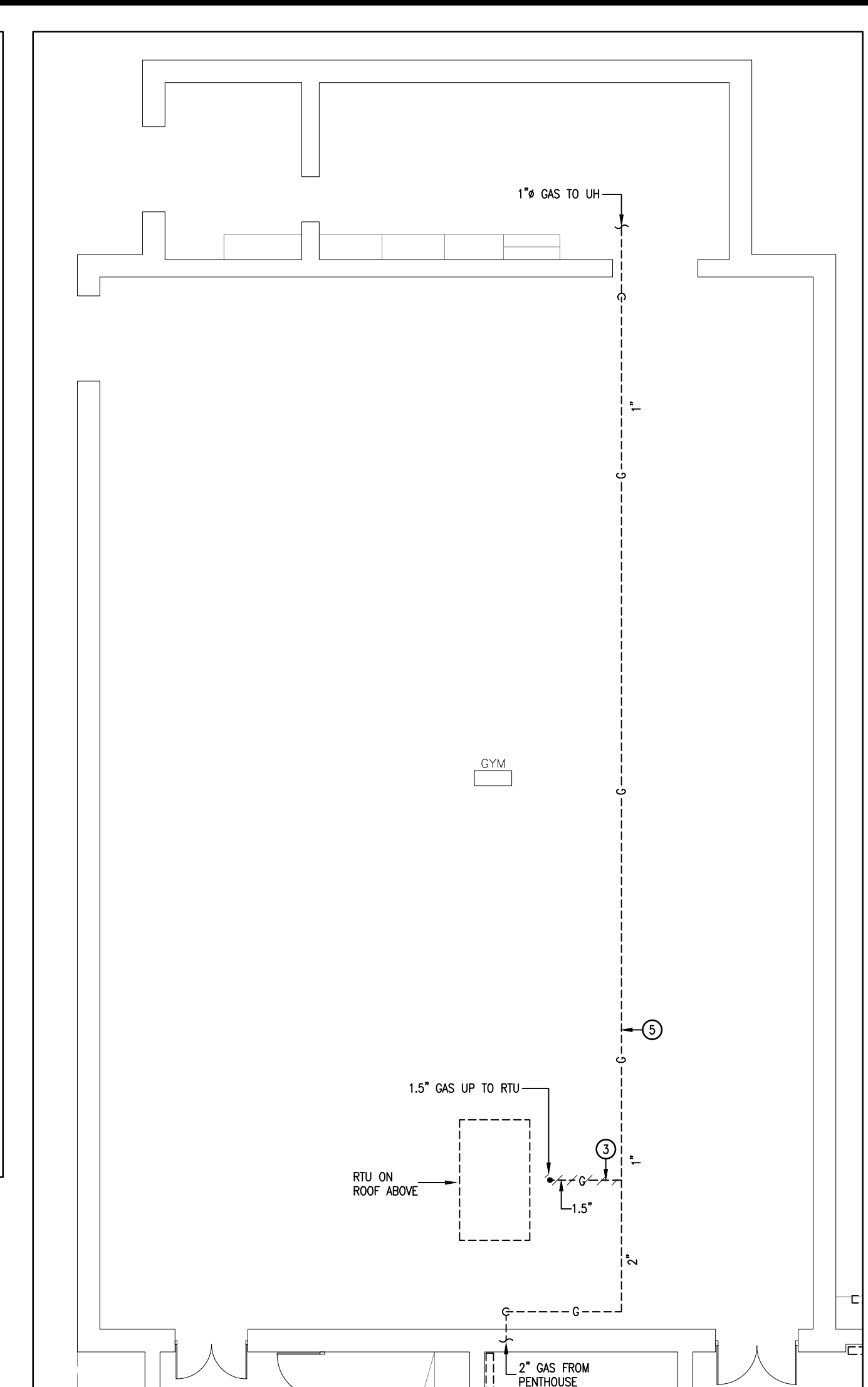
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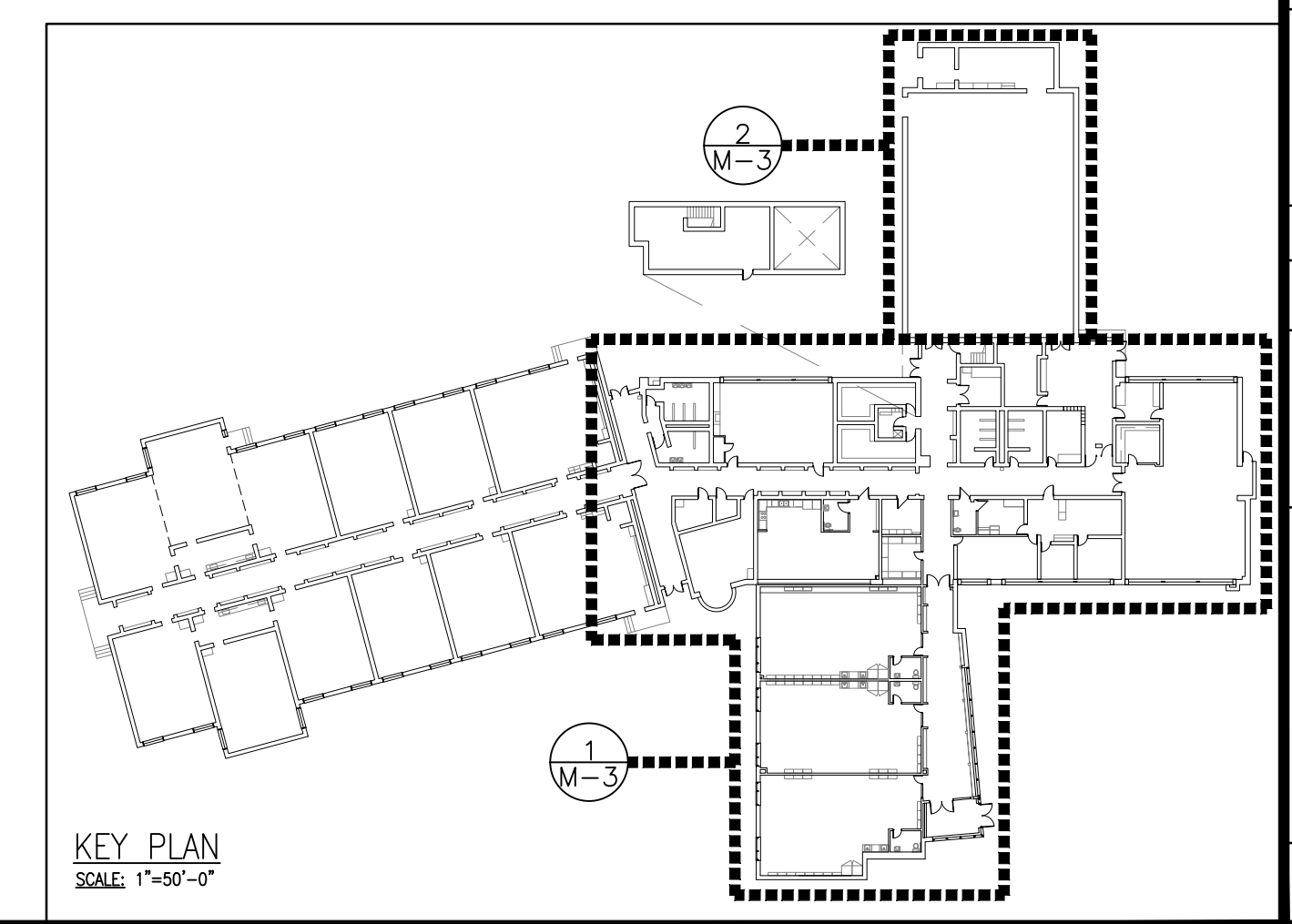
1 PARTIAL GROUND FLOOR PIPING DEMOLITION PLAN
SCALE: 1/8"=1'-0"



- DRAWING NOTES:
- ① REMOVE DOMESTIC WATER PIPING AS REQUIRED TO SUIT ROOFTOP UNIT INSTALLATION.
 - ② REMOVE REFRIGERANT PIPING, WIRING, ETC BETWEEN FAN COIL & CONDENSING UNIT ON ROOF AS REQUIRED TO SUIT RELOCATION OF CONDENSING UNIT.
 - ③ REMOVE GAS PIPING BETWEEN MAIN & ROOFTOP UNIT AS REQUIRED TO SUIT REPLACEMENT ROOFTOP UNIT.
 - ④ REMOVE HEATING WATER PIPING C/W BRANCHES AS REQUIRED TO SUIT ROOFTOP UNIT INSTALLATION.
 - ⑤ GAS PIPING ROUTED AT HIGH LEVEL IN GYM.



2 GYM PIPING DEMOLITION PLAN
SCALE: 1/8"=1'-0"



KEY PLAN
SCALE: 1"=50'-0"

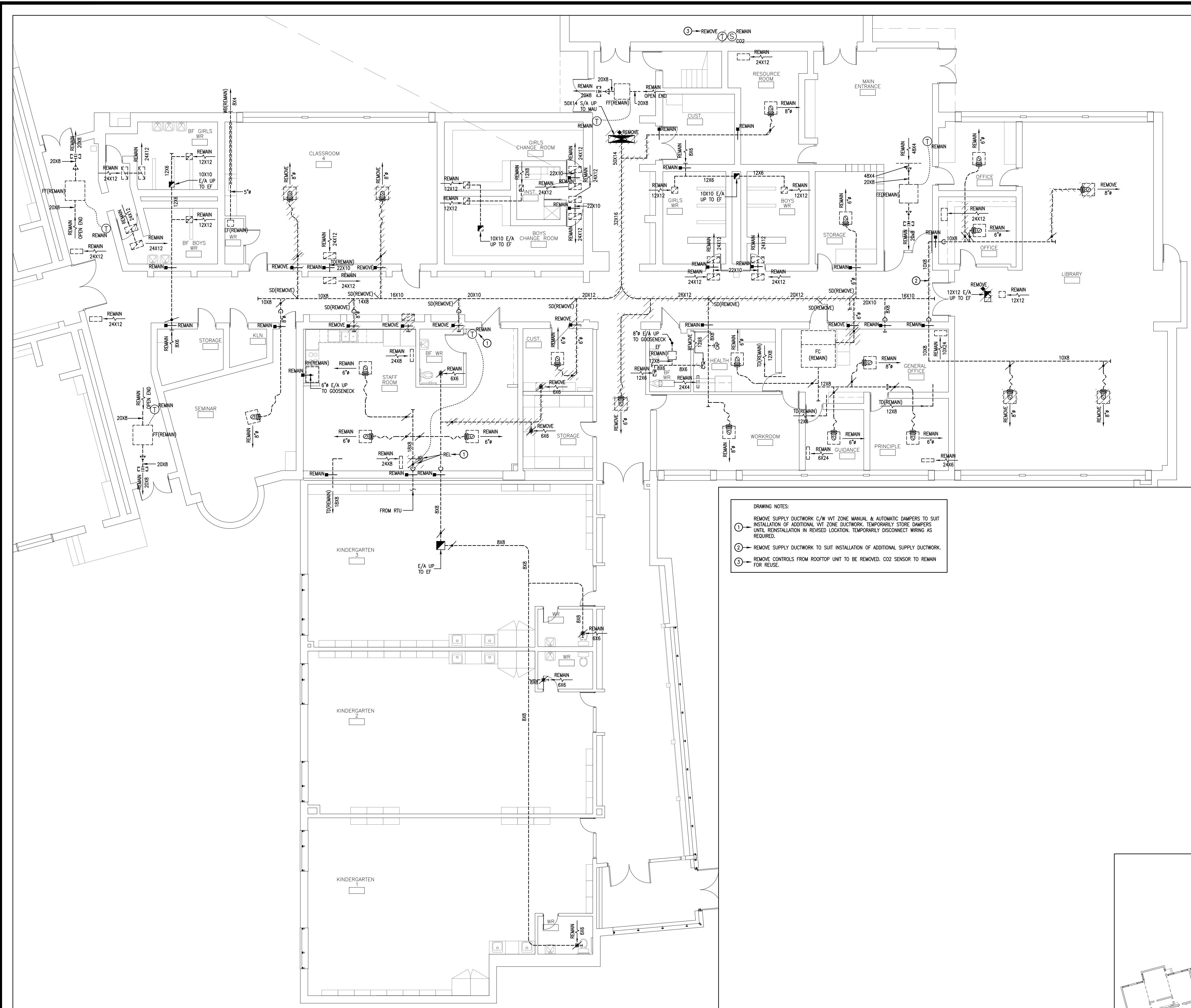
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02	05.15.24	ISSUE FOR TENDER #24-7567-RFT & PERMIT	K.K.
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ORIENTATION JOB NO: 24017

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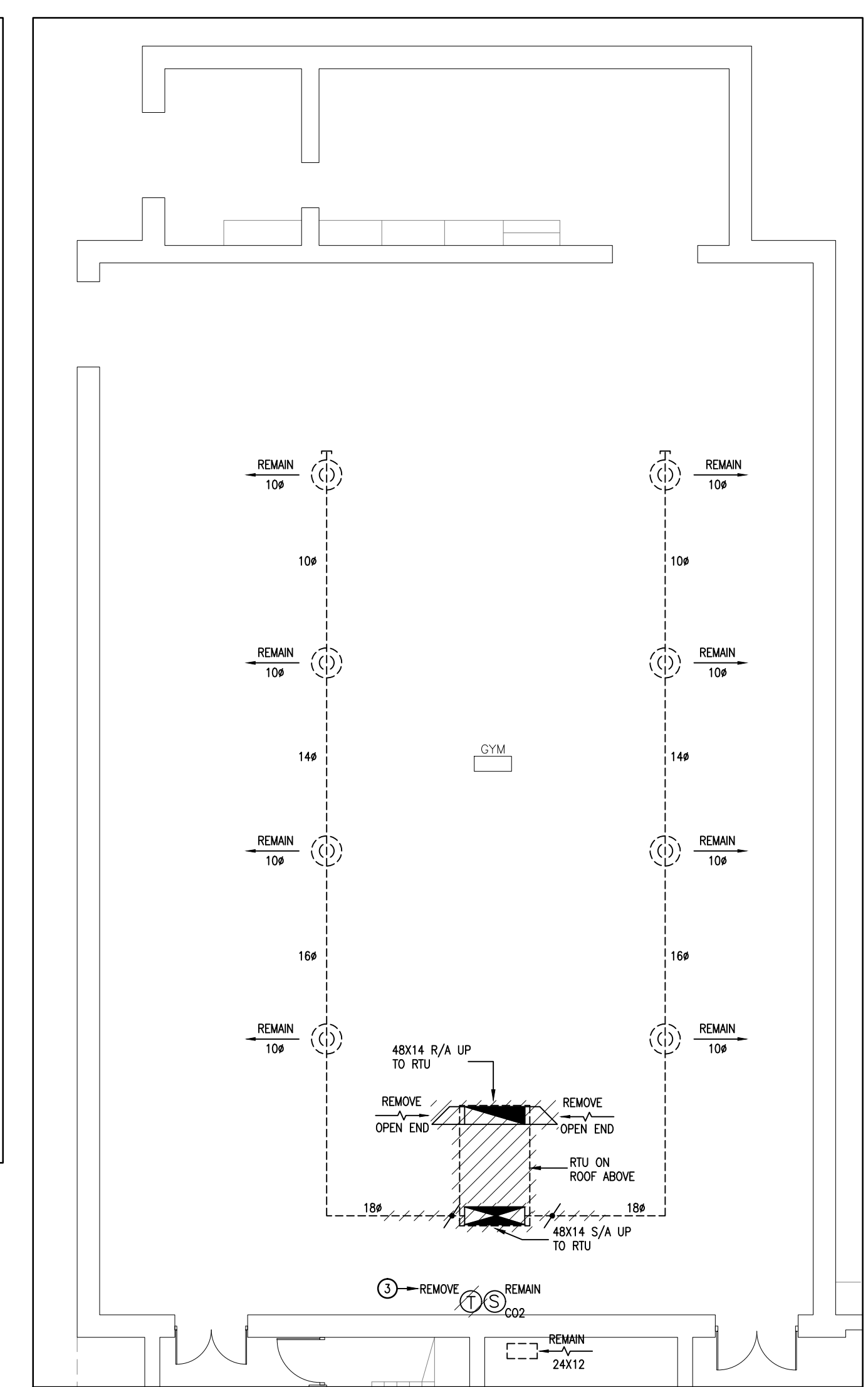
PROJECT: LEXINGTON PUBLIC SCHOOL HVAC UPGRADES
CLIENT: WATERLOO REGION DISTRICT SCHOOL BOARD
DRAWING: GROUND FLOOR PIPING DEMOLITION PLANS

DWG NO.: M-3	SHEET NO.: 3 OF 8
SCALE: AS NOTED	DATE: MARCH 2024
DRAWN: K.K.	CHECKED: K.K.

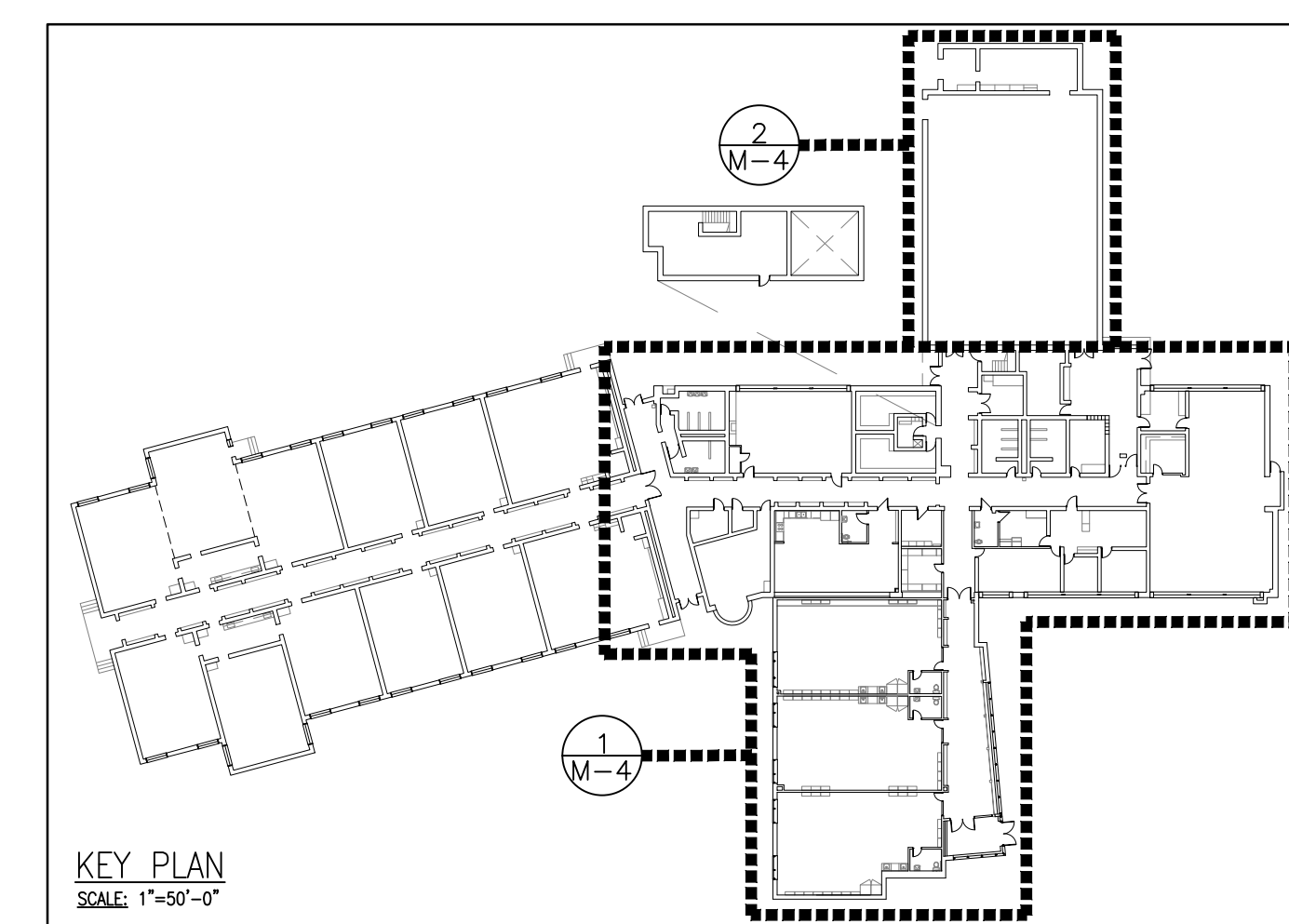


1 PARTIAL GROUND FLOOR DUCTWORK DEMOLITION PLAN
SCALE: 1/8"=1'-0"

DRAWING NOTES:
 1 REMOVE SUPPLY DUCTWORK C/W VLT ZONE MANUAL & AUTOMATIC DAMPERS TO SUIT INSTALLATION OF ADDITIONAL VLT ZONE DUCTWORK. TEMPORARILY STORE DAMPERS UNTIL REINSTALLATION IN REVISED LOCATION. TEMPORARILY DISCONNECT WIRING AS REQUIRED.
 2 REMOVE SUPPLY DUCTWORK TO SUIT INSTALLATION OF ADDITIONAL SUPPLY DUCTWORK.
 3 REMOVE CONTROLS FROM ROOFTOP UNIT TO BE REMOVED. CO2 SENSOR TO REMAIN FOR REUSE.



2 GYM DUCTWORK DEMOLITION PLAN
SCALE: 1/8"=1'-0"

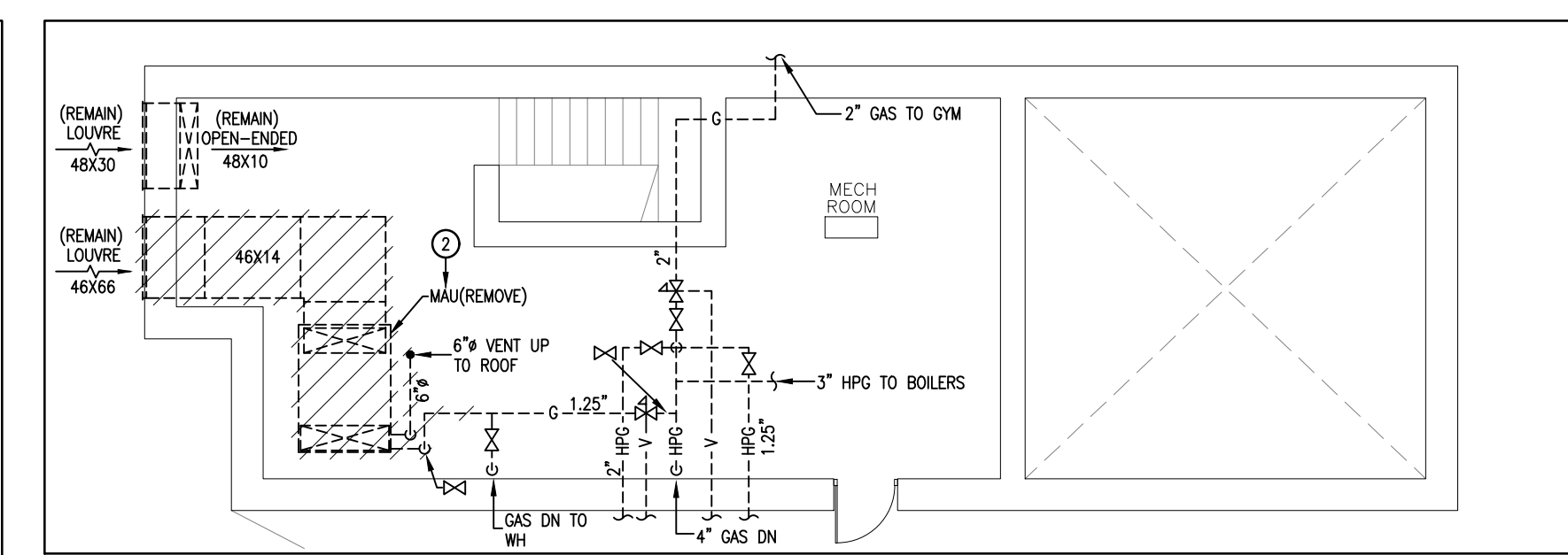


KEY PLAN
SCALE: 1"=50'-0"

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NO.	DATE	REVISION	BY
ORIENTATION		JOB NO: 24017	
PROJECT: LEXINGTON PUBLIC SCHOOL HVAC UPGRADES CLIENT: WATERLOO REGION DISTRICT SCHOOL BOARD DRAWING: GROUND FLOOR DUCTWORK DEMOLITION PLANS			
431 FORESTLAWN RD		WATERLOO, ON	
SCALE: AS NOTED DATE: MARCH 2024 DRAWN: K.K. CHECKED: K.K.			
DWG NO.: M-4		SHEET NO.: 4 OF 8	

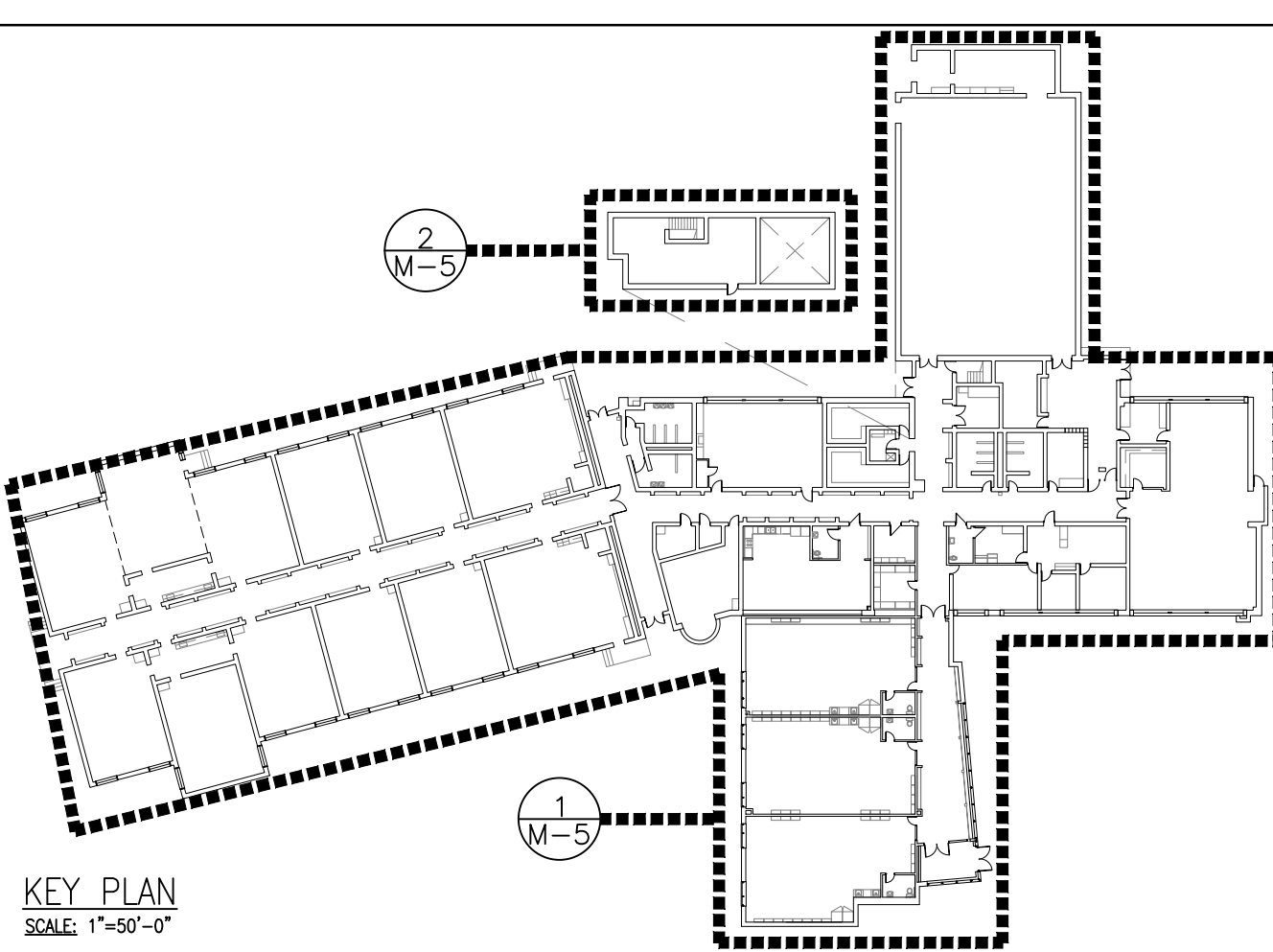


1 ROOF MECHANICAL DEMOLITION PLAN
M-5 SCALE: 1/16"=1'-0"



2 PENTHOUSE MECHANICAL DEMOLITION PLAN
M-5 SCALE: 1/8"=1'-0"

- DRAWING NOTES:
- ① REMOVE ROOFTOP UNIT C/W CURB, DUCTWORK, GAS PIPING, CONTROLS, ETC.
 - ② REMOVE MAKE-UP AIR UNIT C/W DUCTWORK, VENTING, GAS PIPING, CONTROLS, ETC.
 - ③ REMOVE GAS PIPING TO MAIN AT HIGH LEVEL IN GYM.
 - ④ REMOVE CAP ON DOGHOUSE, DOGHOUSE TO REMAIN.
 - ⑤ REMOVE EXHAUST FAN C/W CURB, DUCTWORK, CONTROLS, ETC.
 - ⑥ REMOVE & TEMPORARILY STORE CONDENSING UNIT C/W PIPERS, ETC.
 - ⑦ REMOVE REFRIGERANT PIPING, WIRING, ETC. BETWEEN FAN COIL & CONDENSING UNIT AS REQUIRED TO SUIT RELOCATION OF CONDENSING UNIT.
 - ⑧ REMOVE MAKE-UP AIR UNIT VENTING.



KEY PLAN
SCALE: 1"=50'-0"

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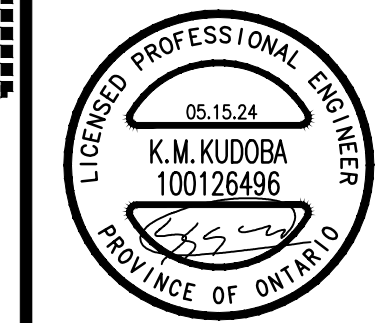
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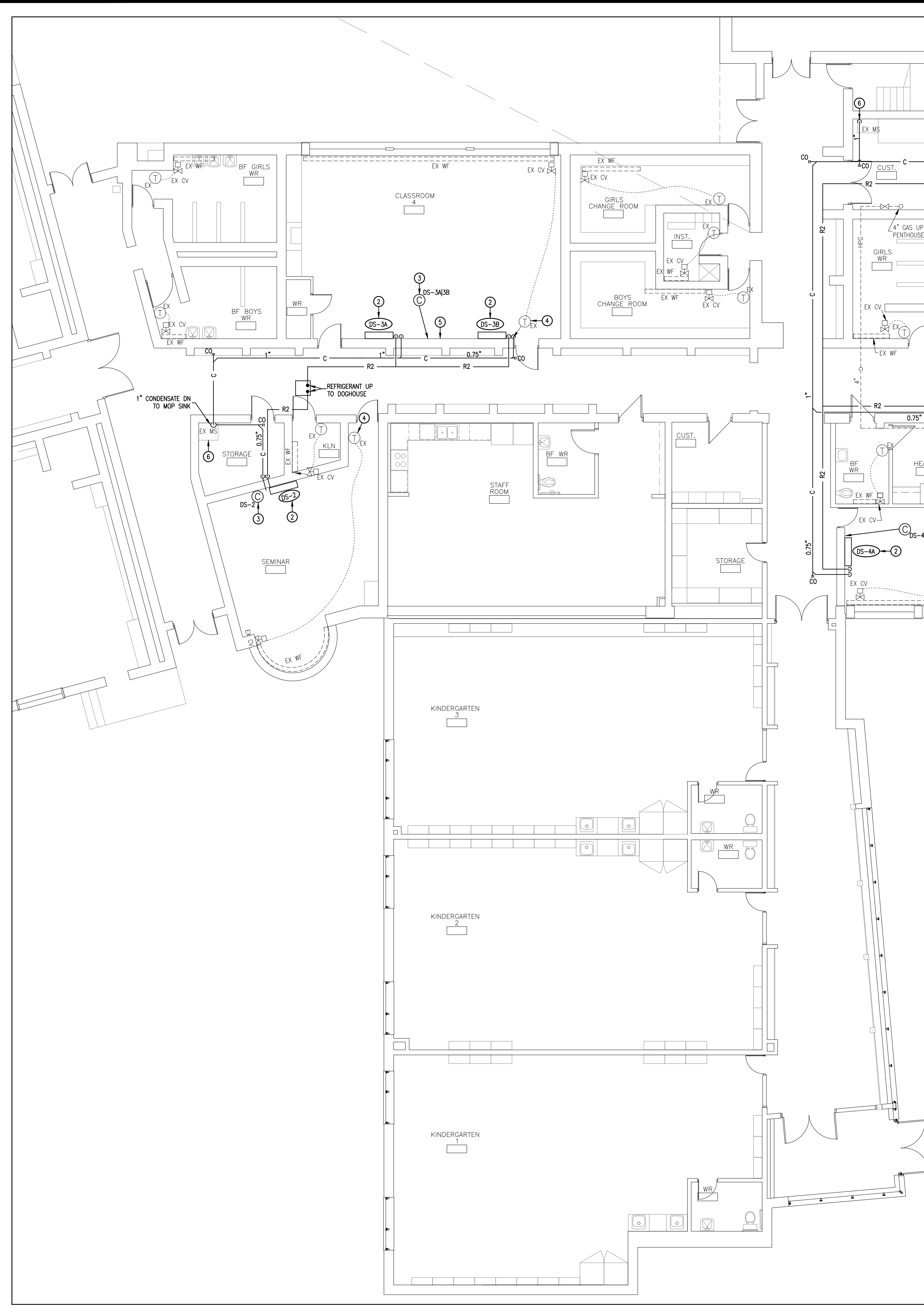
PROJECT: LEXINGTON PUBLIC SCHOOL HVAC UPGRADES
431 FORESTLAWN RD WATERLOO, ON
CLIENT: WATERLOO REGION DISTRICT SCHOOL BOARD

DRAWING: ROOF & PENTHOUSE MECHANICAL DEMOLITION PLANS

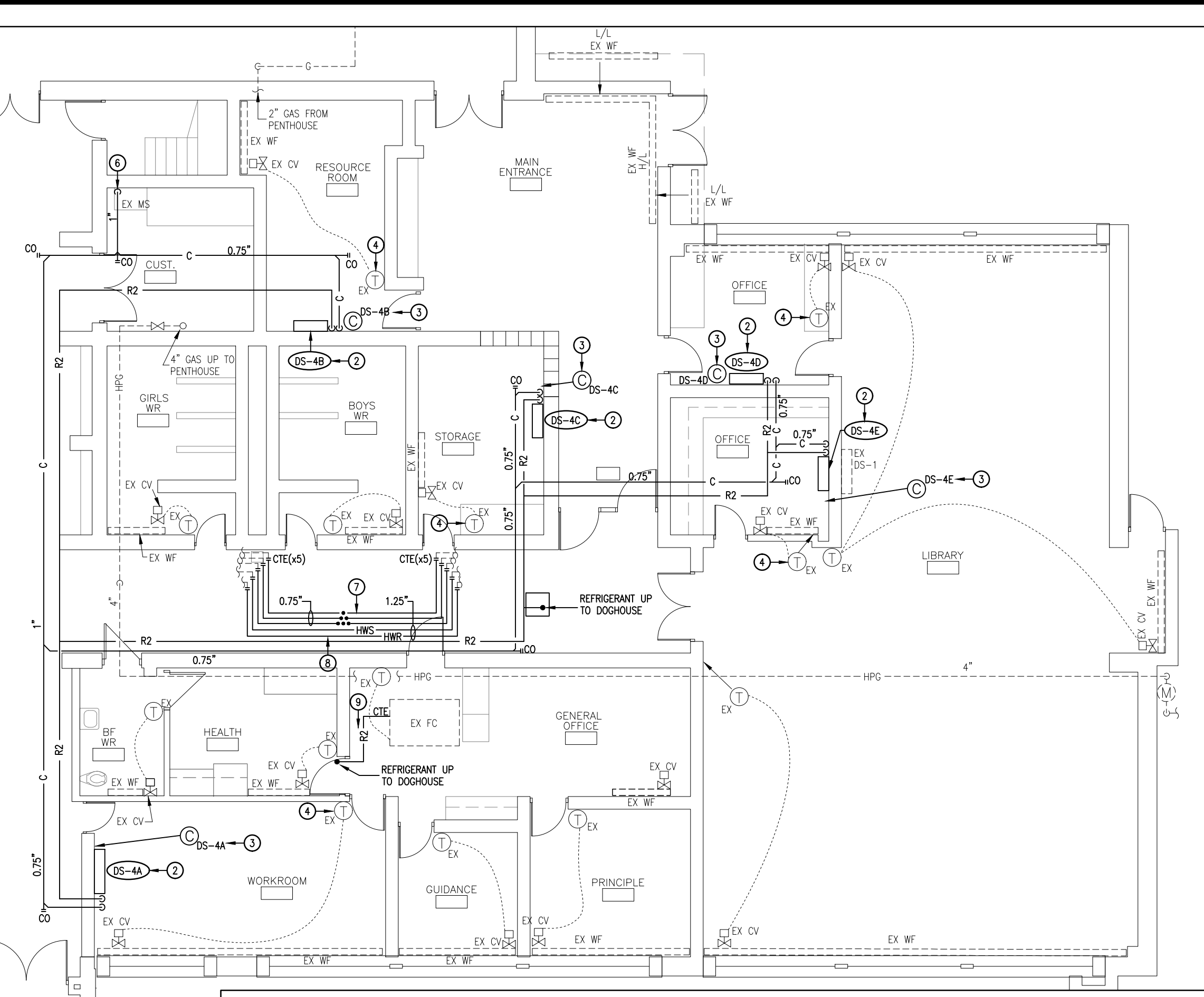
SCALE:	AS NOTED
DATE:	MARCH 2024
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CHECKED:	K.K.

DWG NO.: M-5 SHEET NO.: 5 OF 8

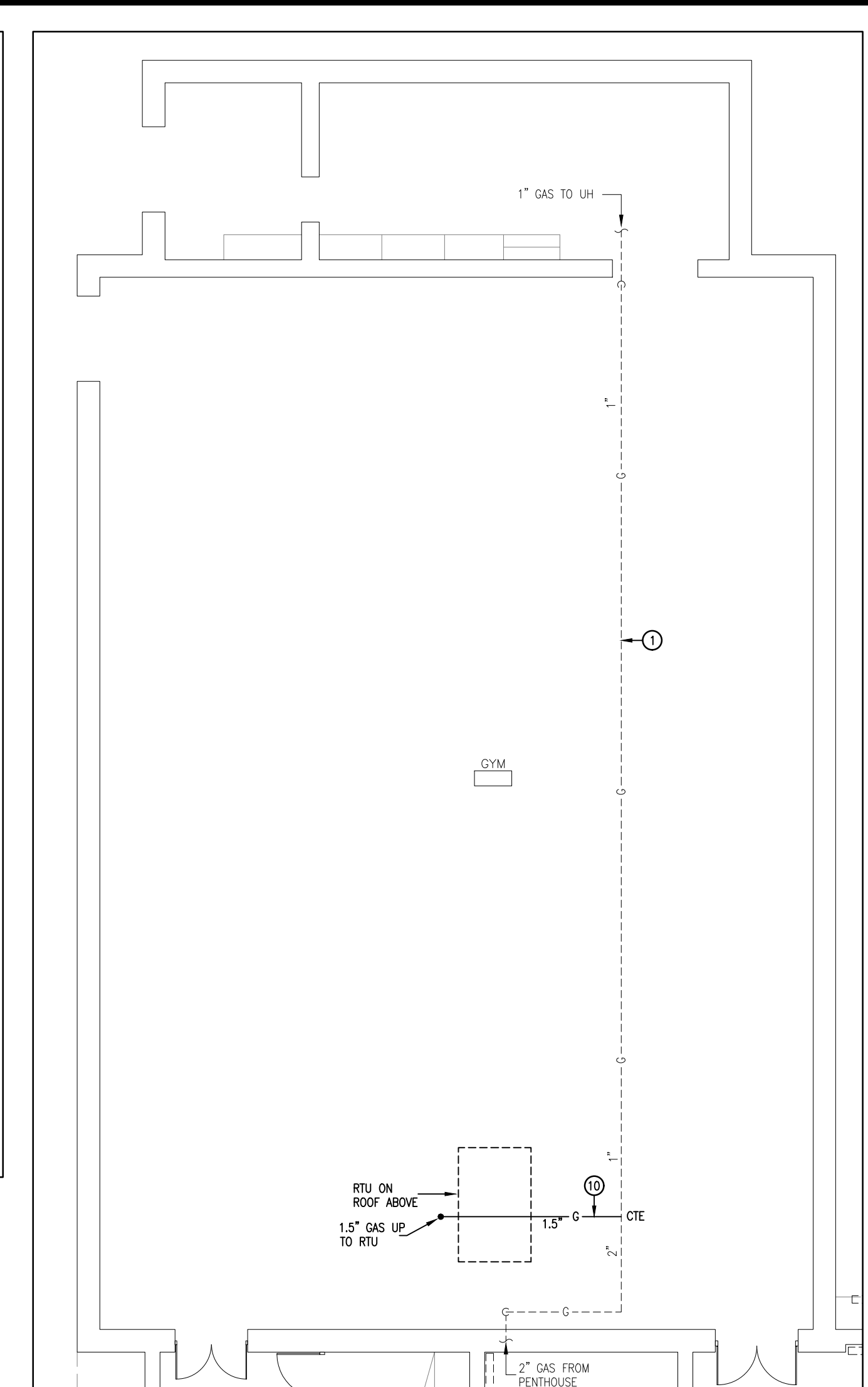




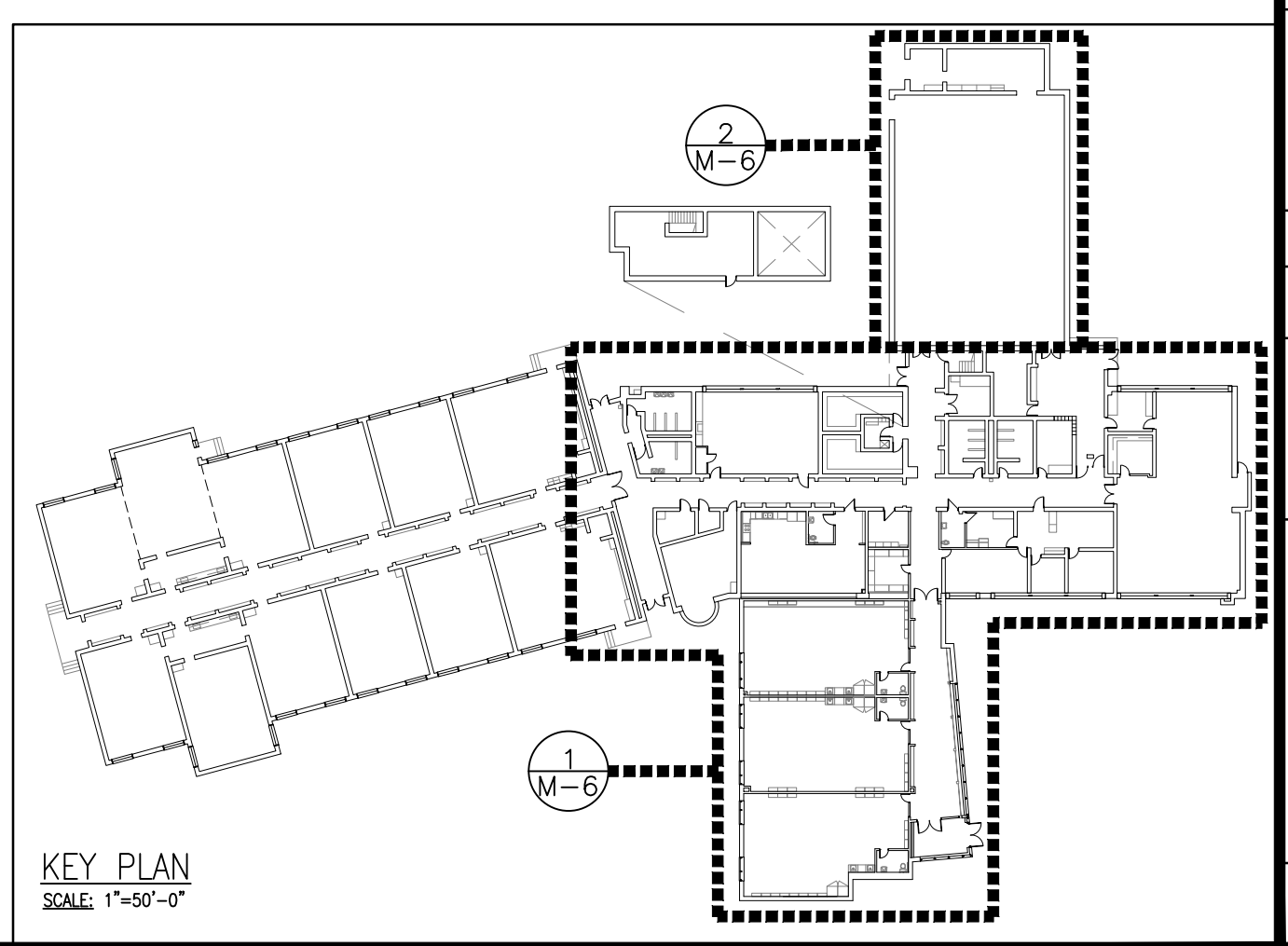
1 PARTIAL GROUND FLOOR PIPING RENOVATION PLAN
M-6 SCALE: 1/8"=1'-0"



- DRAWING NOTES:
- ① GAS PIPING ROUTED AT HIGH LEVEL IN CYM.
 - ② INSTALL DUCTLESS SPLIT INDOOR UNIT AT HIGH LEVEL ON WALL. PROVIDE LINESET COVER WHERE REQUIRED TO CONCEAL REFRIGERANT PIPING, CONDENSATE PIPING / PUMP & WIRING.
 - ③ INSTALL DUCTLESS SPLIT INDOOR UNIT CONTROLLER ON WALL ABOVE SUSPENDED CEILING AS IT IS INTENDED FOR SERVICE USE ONLY. SET LOCAL CONTROLS FOR LOW SET-POINT OF 66°F (19°C) WITH "ALWAYS ON" TIME SCHEDULE.
 - ④ BAG TO UTILIZE EX TEMP SENSOR TO ENABLE / DISABLE DUCTLESS SPLIT INDOOR UNIT CONTROLLER.
 - ⑤ REVISE EX CORK BOARD TO SUIT DUCTLESS SPLIT INDOOR UNIT INSTALLATIONS.
 - ⑥ CONDENSATE PIPING TO DISCHARGE INTO EX MOP SINK C/W AIR GAP BETWEEN PIPING & FIXTURE FLOOD LEVEL RIM.
 - ⑦ PROVIDE DOMESTIC WATER PIPING AS REQUIRED TO SUIT ROOFTOP UNIT INSTALLATION.
 - ⑧ PROVIDE HEATING WATER PIPING C/W BRANCHES & ISOLATION VALVES AS REQUIRED TO SUIT ROOFTOP UNIT INSTALLATION.
 - ⑨ PROVIDE REFRIGERANT PIPING BETWEEN FAN COIL & RELOCATED CONDENSING UNIT.
 - ⑩ PROVIDE GAS PIPING BETWEEN MAIN & REPLACEMENT ROOFTOP UNIT.



2 GYM PIPING RENOVATION PLAN
M-6 SCALE: 1/8"=1'-0"



KEY PLAN
SCALE: 1"=50'-0"

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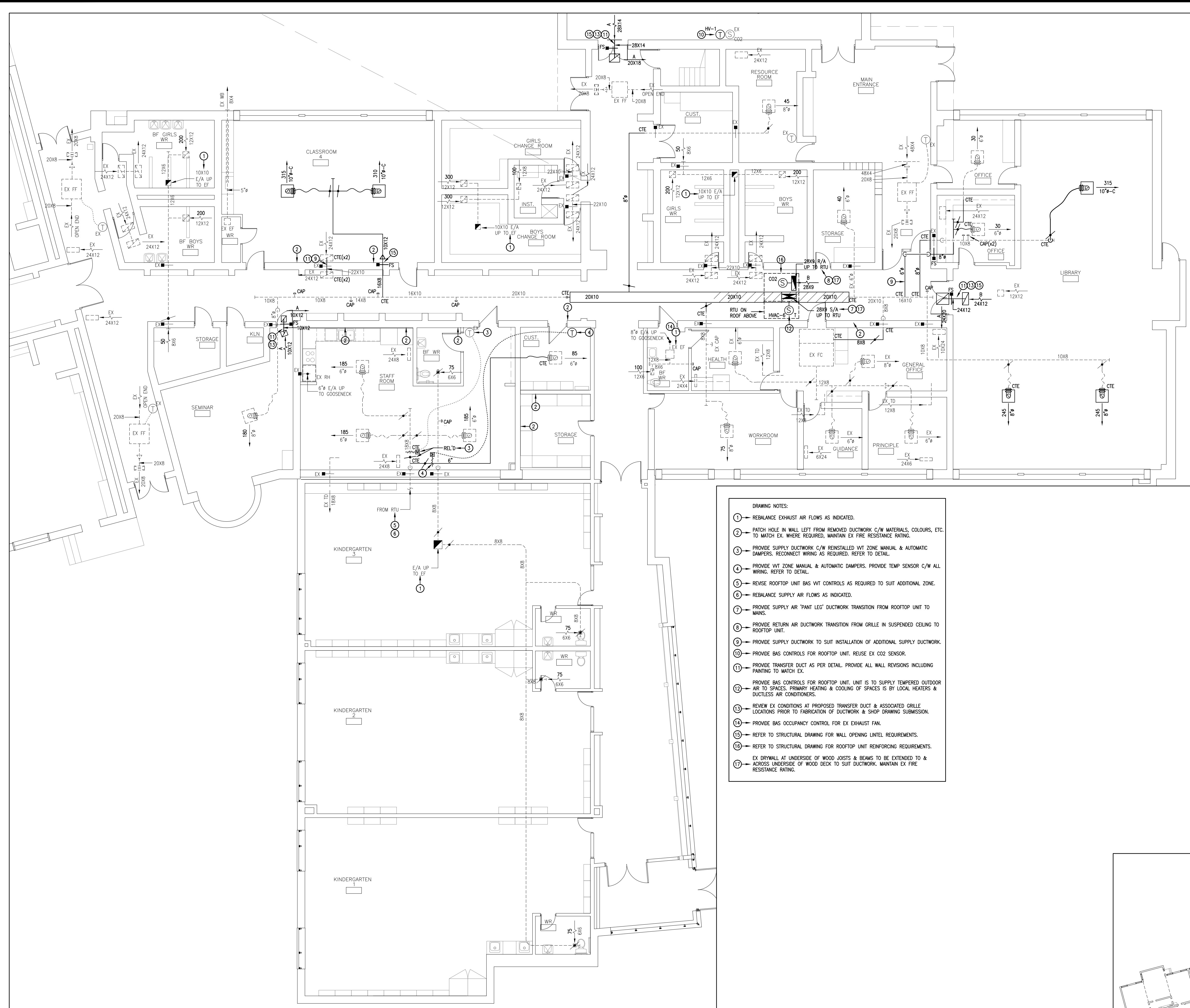
MNE ENGINEERING MNE Engineering Inc.
22 Keveo Place - Box A
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PROJECT: LEXINGTON PUBLIC SCHOOL HVAC UPGRADES
CLIENT: 431 FORESTLAWN RD WATERLOO, ON
WATERLOO REGION DISTRICT SCHOOL BOARD

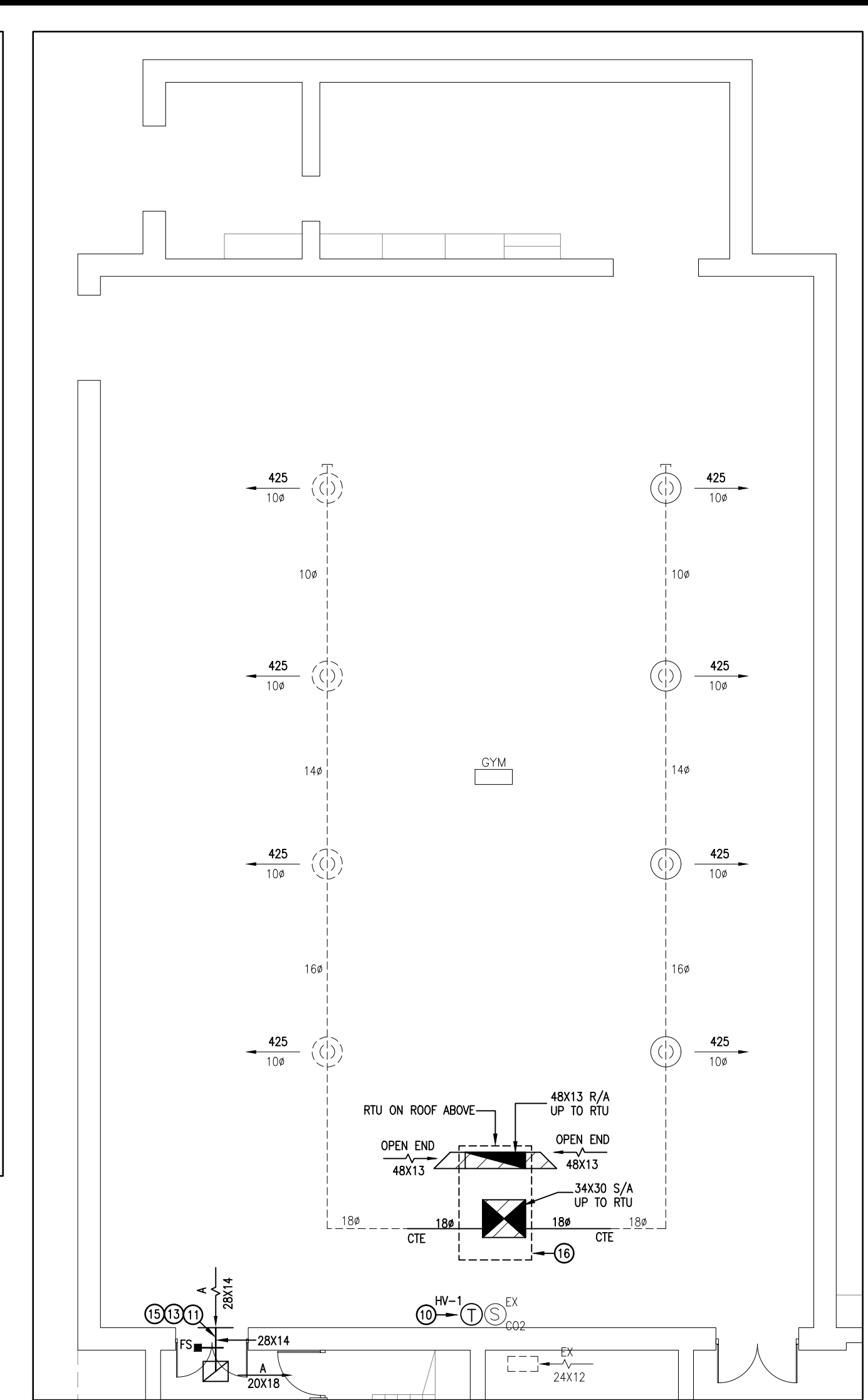
DRAWING: GROUND FLOOR PIPING RENOVATION PLANS

SCALE:	AS NOTED
DATE:	MARCH 2024
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CHECKED:	K.K.

DWG NO.: M-6 SHEET NO.: 6 OF 8

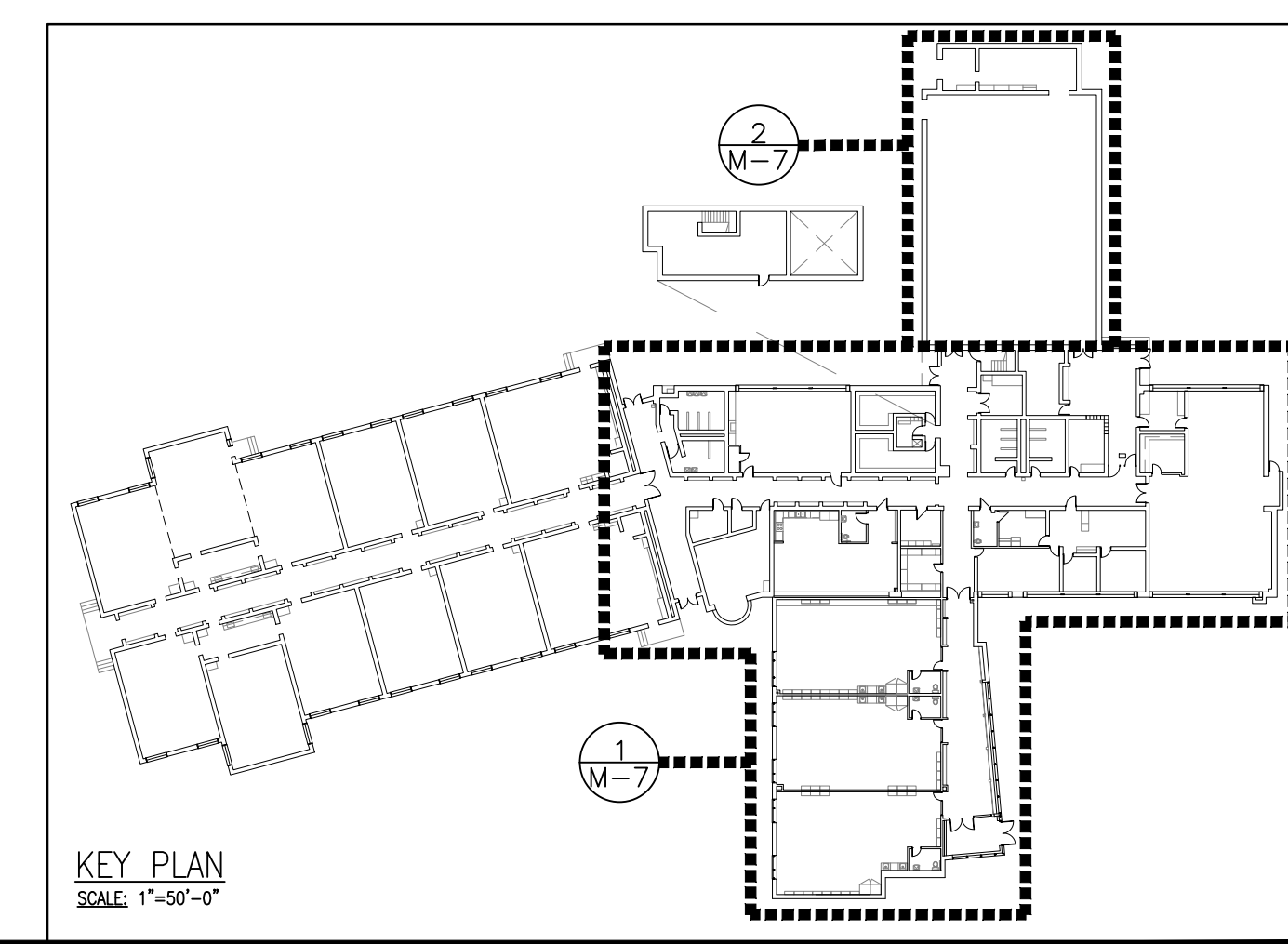


1 PARTIAL GROUND FLOOR DUCTWORK RENOVATION PLAN
SCALE: 1/8"=1'-0"



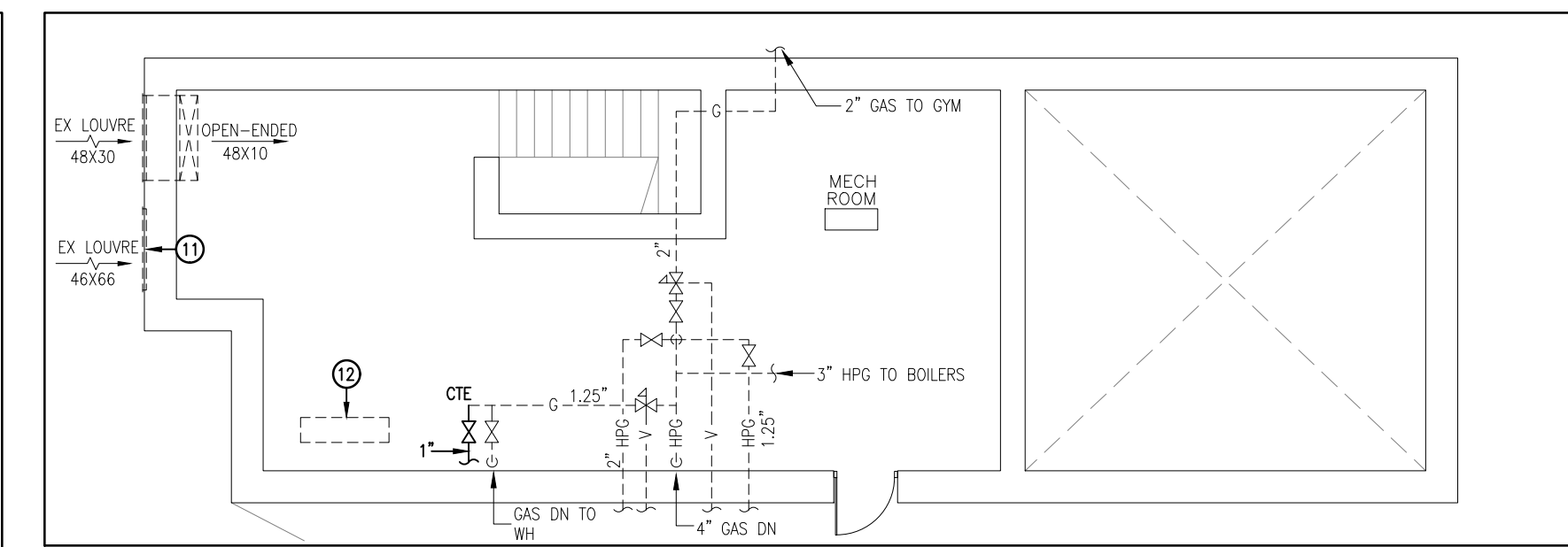
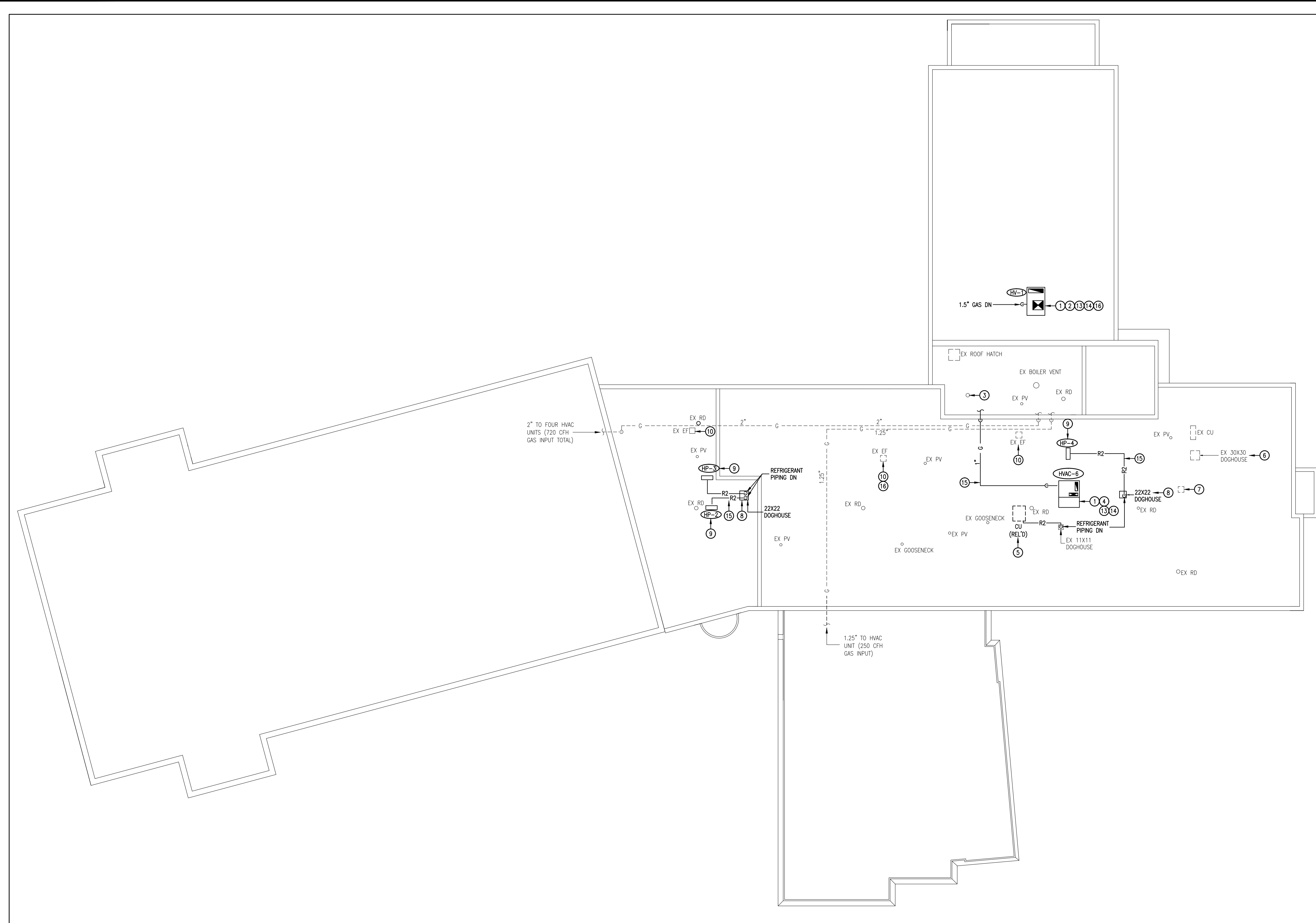
2 GYM DUCTWORK RENOVATION PLAN
SCALE: 1/8"=1'-0"

- DRAWING NOTES:**
- 1 - RESURGENCE EXHAUST AIR FLOWS AS INDICATED.
 - 2 - PATCH HOLE IN WALL LEFT FROM REMOVED DUCTWORK C/W MATERIALS, COLOURS, ETC. TO MATCH EX. WHERE REQUIRED, MAINTAIN EX FIRE RESISTANCE RATING.
 - 3 - PROVIDE SUPPLY DUCTWORK C/W RENAISSANCE W/IT ZONE MANUAL & AUTOMATIC DAMPERS. RECONNECT WIRING AS REQUIRED. REFER TO DETAIL.
 - 4 - PROVIDE W/IT ZONE MANUAL & AUTOMATIC DAMPERS. PROVIDE TEMP SENSOR C/W ALL WIRING. REFER TO DETAIL.
 - 5 - REVISE ROOFTOP UNIT BAS W/IT CONTROLS AS REQUIRED TO SUIT ADDITIONAL ZONE.
 - 6 - REBALANCE SUPPLY AIR FLOWS AS INDICATED.
 - 7 - PROVIDE SUPPLY AIR "PAINT LEG" DUCTWORK TRANSITION FROM ROOFTOP UNIT TO MAINS.
 - 8 - PROVIDE RETURN AIR DUCTWORK TRANSITION FROM GRILLE IN SUSPENDED CEILING TO ROOFTOP UNIT.
 - 9 - PROVIDE SUPPLY DUCTWORK TO SUIT INSTALLATION OF ADDITIONAL SUPPLY DUCTWORK.
 - 10 - PROVIDE BAS CONTROLS FOR ROOFTOP UNIT. REUSE EX CO2 SENSOR.
 - 11 - PROVIDE TRANSFER DUCT AS PER DETAIL. PROVIDE ALL WALL REVISIONS INCLUDING PAINTING TO MATCH EX.
 - 12 - PROVIDE BAS CONTROLS FOR ROOFTOP UNIT. UNIT IS TO SUPPLY TEMPERED OUTDOOR AIR TO SPACES. PRIMARY HEATING & COOLING OF SPACES IS BY LOCAL HEATERS & DUCTLESS AIR CONDITIONERS.
 - 13 - REVIEW EX CONDITIONS AT PROPOSED TRANSFER DUCT & ASSOCIATED GRILLE LOCATIONS PRIOR TO FABRICATION OF DUCTWORK & SHOP DRAWING SUBMISSION.
 - 14 - PROVIDE BAS OCCUPANCY CONTROL FOR EX EXHAUST FAN.
 - 15 - REFER TO STRUCTURAL DRAWING FOR WALL OPENING LINTEL REQUIREMENTS.
 - 16 - REFER TO STRUCTURAL DRAWING FOR ROOFTOP UNIT REINFORCING REQUIREMENTS.
 - 17 - EX DRYWALL AT UNDERSIDE OF WOOD JOISTS & BEAMS TO BE EXTENDED TO & ACROSS UNDERSIDE OF WOOD DECK TO SUIT DUCTWORK. MAINTAIN EX FIRE RESISTANCE RATING.



KEY PLAN
SCALE: 1"=50'-0"

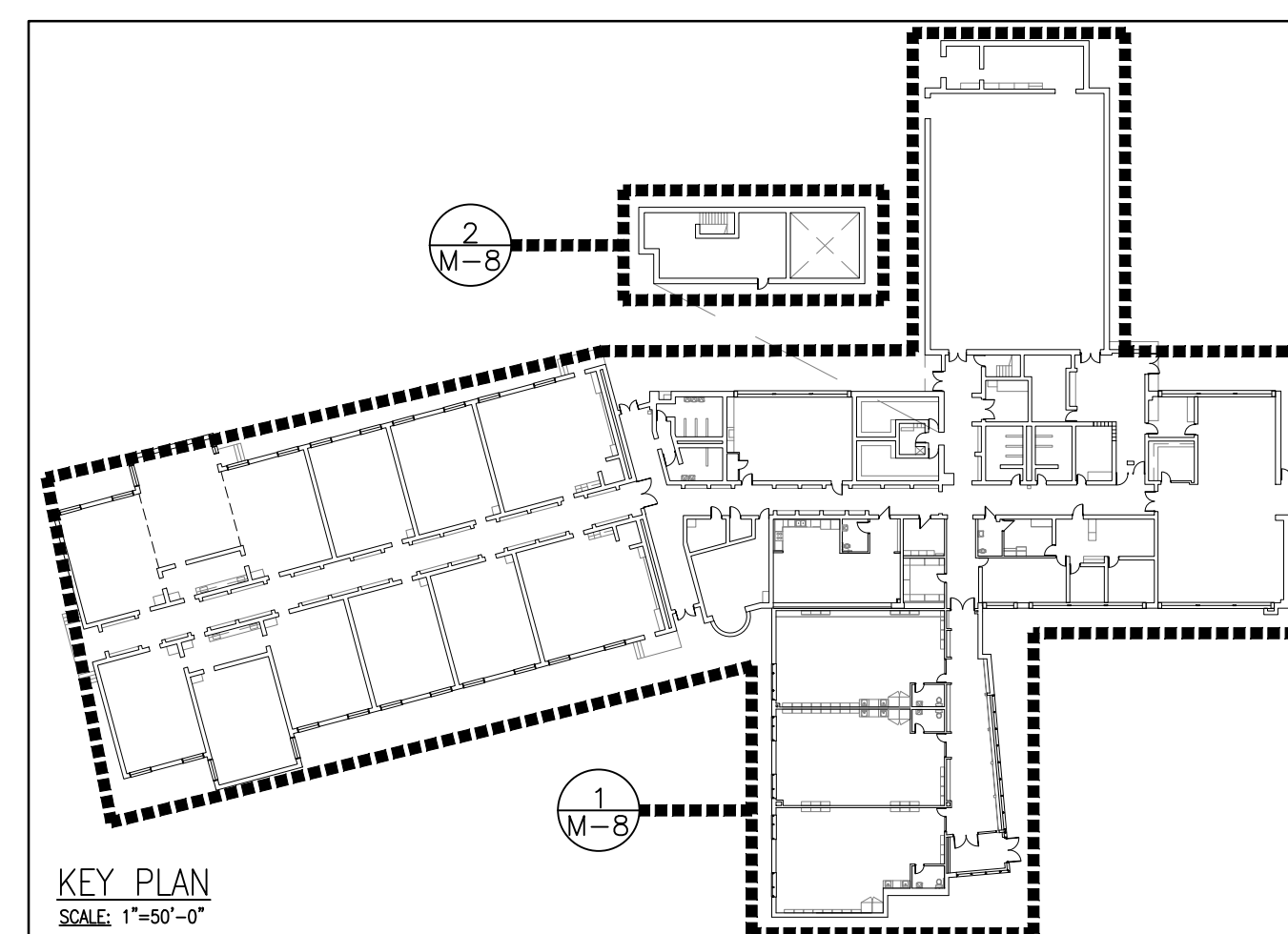
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MNE Engineering Inc. 22 Kevo Place - Box A Kitchener, Ontario N2C 2G5 (519) 894-9408 www.mneengineering.co			
PROJECT: LEXINGTON PUBLIC SCHOOL HVAC UPGRADES			
431 FORESTLAWN RD WATERLOO, ON			
CLIENT: WATERLOO REGION DISTRICT SCHOOL BOARD			
DRAWING: GROUND FLOOR DUCTWORK RENOVATION PLANS			
SCALE: AS NOTED			
DATE: MARCH 2024			
DRAWN: K.K.			
CHECKED: K.K.			
DWG NO.: M-7	SHEET NO.: 7 OF 8		



2 PENTHOUSE MECHANICAL RENOVATION PLAN
M-8 SCALE: 1/8"=1'-0"

- DRAWING NOTES:
- 1 → INSTALL ROOFTOP UNIT C/W ROOF CURB, ETC. REFER TO DETAIL.
 - 2 → PROVIDE ROOFING TO SUIT ROOFTOP UNIT REMOVAL C/W CURB, GAS PIPING, ETC. & ROOFTOP UNIT INSTALLATION C/W CURB, GAS PIPING, ETC.
 - 3 → PROVIDE ROOFING TO SUIT VENTING REMOVAL.
 - 4 → PROVIDE ROOFING TO SUIT ROOFTOP UNIT INSTALLATION C/W CURB, ETC.
 - 5 → REINSTALL CONDENSING UNIT TO SUIT CLEARANCE REQUIREMENTS OF NEW ROOFTOP UNIT AS PER DETAIL.
 - 6 → PROVIDE CAP ON EX DOGHOUSE. REFER TO DETAIL.
 - 7 → PROVIDE ROOFING TO SUIT EXHAUST FAN REMOVAL.
 - 8 → PROVIDE DOGHOUSE C/W 13"x13" INSIDE DIMENSIONS. REFER TO DETAIL. PROVIDE ROOFING TO SUIT DOGHOUSE INSTALLATION.
 - 9 → INSTALL HEAT PUMP AS PER DETAIL. REFER TO REFRIGERANT PIPING & WIRING DETAILS.
 - 10 → REBALANCE EXHAUST AIR FLOWS AS INDICATED.
 - 11 → PROVIDE INSULATED BLANK-OFF PANEL C/W WEATHERTIGHT SEAL OVER ENTIRE INTERIOR OF EX LOUVER.
 - 12 → PATCH HOLE IN FLOOR LEFT FROM REMOVED DUCTWORK C/W MATERIALS, ETC. TO MATCH EX. MAINTAIN EX FLOOR FIRE RESISTANCE RATING & STRUCTURAL INTEGRITY.
 - 13 → PROVIDE GAS PIPING C/W VALVE AS PER DETAIL.
 - 14 → PROVIDE DUCT CLEANING BY A PROFESSIONAL DUCT CLEANING COMPANY. CLEAN ALL DUCTS ASSOCIATED WITH ROOFTOP UNIT. UPON COMPLETION, SUBMIT REPORT INDICATING SATISFACTORY COMPLETION OF WORK.
 - 15 → INSTALL PIPING AS PER DETAIL.
 - 16 → PROVIDE GAS INTERLOCK FOR EXHAUST FAN TO OPERATE DURING OPERATION OF ROOFTOP UNIT HW-1.

1 ROOF MECHANICAL RENOVATION PLAN
M-8 SCALE: 1/16"=1'-0"



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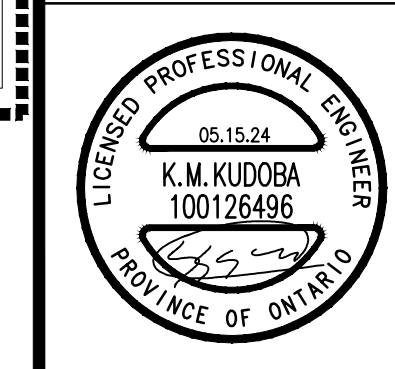
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PROJECT: LEXINGTON PUBLIC SCHOOL HVAC UPGRADES
431 FORESTLAWN RD WATERLOO, ON
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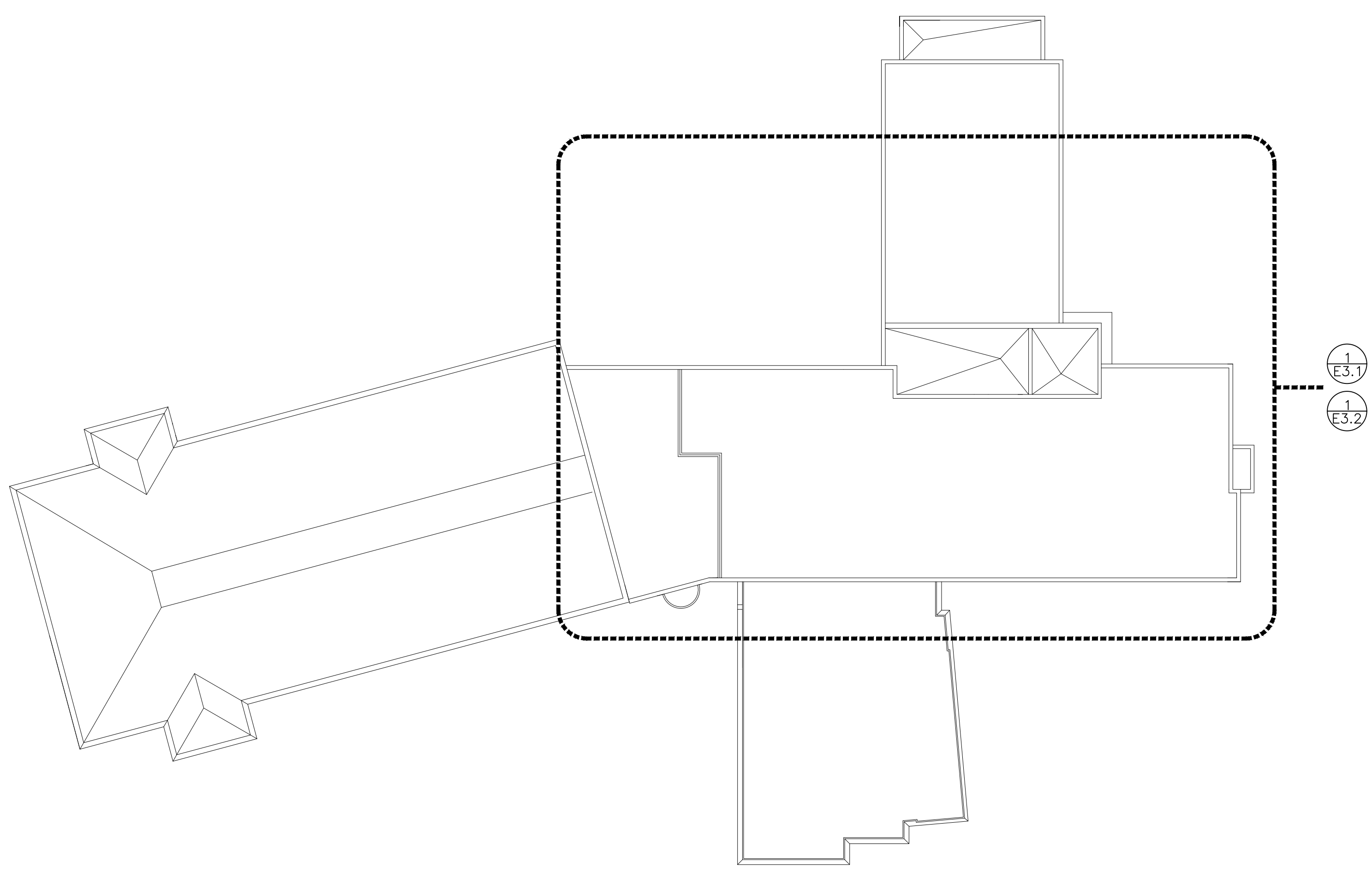
DRAWING: ROOF & PENTHOUSE MECHANICAL RENOVATION PLANS

SCALE: AS NOTED
DATE: MARCH 2024
DRAWN: K.K.
CHECKED: K.K.

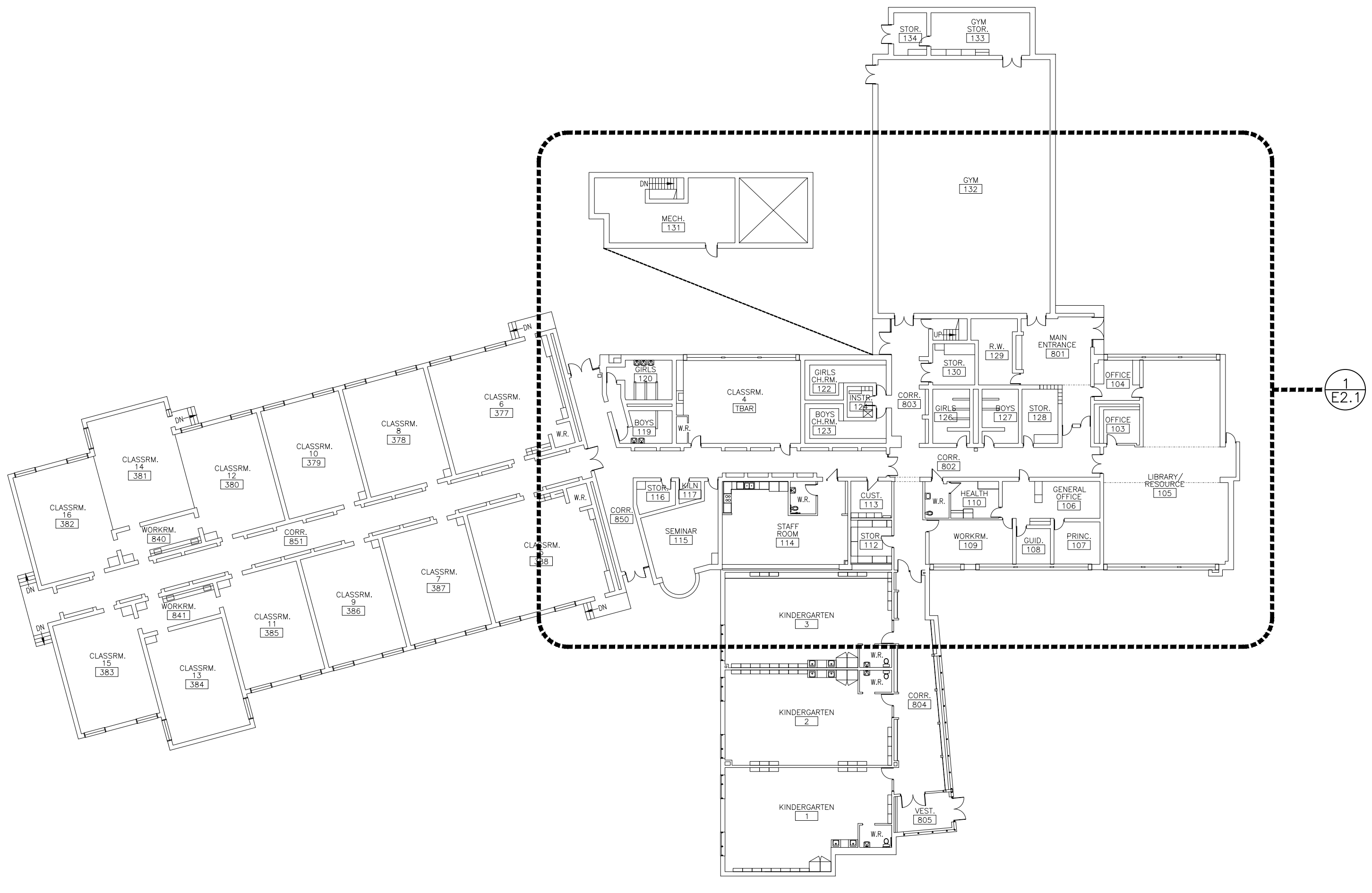
DWG NO.: M-8 SHEET NO.: 8 OF 8



USE	SYMBOL	DESCRIPTION	USE	SYMBOL	DESCRIPTION
LIGHTING			RECEPTACLES		
✓	[Symbol]	LINEAR LUMINAIRE 'x'	✓	[Symbol]	DUPLEX RECEPTACLE
✓	[Symbol]	SURFACE LINEAR LUMINAIRE 'x'	✓	[Symbol]	RECEPTACLE - COUNTER HEIGHT
✓	[Symbol]	SUSPENDED LINEAR LUMINAIRE 'x'	✓	[Symbol]	RECEPTACLE IN KICK SPACE
✓	[Symbol]	CEILING MOUNTED LUMINAIRE 'x'	✓	[Symbol]	SPLIT RECEPTACLE
✓	[Symbol]	WALL MOUNTED LUMINAIRE 'x'	✓	[Symbol]	GFCI RECEPTACLE
✓	[Symbol]	POLE MOUNTED LUMINAIRE 'x'	✓	[Symbol]	UPS-BACKED RECEPTACLE
✓	[Symbol]	SPOT OR FLOOD LUMINAIRE 'x'	✓	[Symbol]	RECEPTACLE, 20A, T-SLOT
✓	[Symbol]	WALL SCONCE LUMINAIRE 'x'	✓	[Symbol]	SPECIAL FUNCTION RECEPTACLE
✓	[Symbol]	NIGHT LUMINAIRE	✓	[Symbol]	2-POLE OR 3-POLE RECEPTACLE
✓	[Symbol]	EMERGENCY LUMINAIRE - WALL	✓	[Symbol]	FLOOR/TABLE MOUNTED OUTLET
✓	[Symbol]	EMERGENCY LUMINAIRE - CEILING	✓	[Symbol]	CEILING/DECK MOUNTED OUTLET
✓	[Symbol]	EMERGENCY BATTERY PACK 'x'	✓	[Symbol]	RACEWAY POWER OUTLET
✓	[Symbol]	EXIT SIGN 'x'	✓	[Symbol]	CORD REEL
SWITCHING & CONTROLS			EQUIPMENT & DISTRIBUTION		
✓	[Symbol]	SWITCH	✓	[Symbol]	MOTOR
✓	[Symbol]	MULTIPLE GANG SWITCHES	✓	[Symbol]	NON-FUSED DISCONNECT SWITCH
✓	[Symbol]	3-WAY SWITCH	✓	[Symbol]	FUSED DISCONNECT SWITCH
✓	[Symbol]	4-WAY SWITCH	✓	[Symbol]	MANUAL STARTER
✓	[Symbol]	SWITCH 'x'	✓	[Symbol]	COMBINATION STARTER
✓	[Symbol]	OCCUPANCY SENSOR WALL SWITCH	✓	[Symbol]	MAGNETIC STARTER
✓	[Symbol]	VACANCY SENSOR WALL SWITCH	✓	[Symbol]	RELAY/CONTACTOR
✓	[Symbol]	OCCUPANCY/VACANCY SENSOR 'x'	✓	[Symbol]	EQUIPMENT IDENTIFIER
✓	[Symbol]	DAYLIGHT SENSOR	✓	[Symbol]	DISTRIBUTION PANEL
✓	[Symbol]	PHOTO CELL	✓	[Symbol]	ELECTRIC BASEBOARD HEATER
✓	[Symbol]	DIMMER SWITCH 'x'	✓	[Symbol]	ELECTRIC FAN FORCED HEATER
✓	[Symbol]	VARIABLE SPEED CONTROLLER	✓	[Symbol]	ELECTRIC HEATER IDENTIFIER
✓	[Symbol]	TIME SWITCH	✓	[Symbol]	CONDUIT/FEEDER ABOVE GRADE
✓	[Symbol]	TIME CLOCK	✓	[Symbol]	CONDUIT/FEEDER BELOW GRADE
✓	[Symbol]	PUSH BUTTON SWITCH	✓	[Symbol]	PROTECTIVE GUARD
✓	[Symbol]	THERMOSTAT (RA=REVERSE ACTING)	✓	[Symbol]	JUNCTION BOX
✓	[Symbol]	FIRESTAT	✓	[Symbol]	SERVICE POLE
✓	[Symbol]	POWER DOOR OPERATOR BUTTON	✓	[Symbol]	CLOCK
✓	[Symbol]	POWER DOOR INDICATOR/LOCK	✓	[Symbol]	DIRECT CONNECTION
✓	[Symbol]	CALL STATION	✓	[Symbol]	BAS RELAY
✓	[Symbol]	EMERGENCY PUSH BUTTON	✓	[Symbol]	HANGER
COMMUNICATIONS			FIRE ALARM & DETECTION		
✓	[Symbol]	VOICE OUTLET	✓	[Symbol]	ADDRESSABLE SMOKE DETECTOR
✓	[Symbol]	DATA OUTLET	✓	[Symbol]	ADDRESSABLE FIXED HEAT DETECTOR
✓	[Symbol]	DATA & VOICE OUTLET	✓	[Symbol]	ADDRESSABLE R.O.R. HEAT DETECTOR
✓	[Symbol]	AUDIO/VIDEO INLET/OUTLET	✓	[Symbol]	DETECTOR WITH RELAY BASE
✓	[Symbol]	OUTLET ABOVE MILLWORK	✓	[Symbol]	DETECTOR WITH DUCT HOUSING
✓	[Symbol]	FLOOR/TABLE MOUNTED OUTLET	✓	[Symbol]	DETECTOR WITH CARBON MONOXIDE SENSING
✓	[Symbol]	CEILING/DECK MOUNTED OUTLET	✓	[Symbol]	CONVENTIONAL SMOKE DETECTOR
✓	[Symbol]	RACEWAY COMMUNICATIONS OUTLET	✓	[Symbol]	CONVENTIONAL FIXED HEAT DETECTOR (H-HIGH TEMP)
✓	[Symbol]	MICROPHONE/MIXER	✓	[Symbol]	CONVENTIONAL R.O.R. HEAT DETECTOR (H-HIGH TEMP)
✓	[Symbol]	PUBLIC ADDRESS CEILING SPEAKER	✓	[Symbol]	ADDRESSABLE PULL STATION
✓	[Symbol]	ASSISTIVE LISTENING CEILING SPEAKER	✓	[Symbol]	CONVENTIONAL PULL STATION
✓	[Symbol]	ASSISTIVE LISTENING RECEIVER/AMPLIFIER	✓	[Symbol]	INPUT MODULE
✓	[Symbol]	ASSISTIVE LISTENING DOME SENSOR	✓	[Symbol]	RELAY MODULE
✓	[Symbol]	WALL SPEAKER 'x'	✓	[Symbol]	ADDRESSABLE ZONE ISOLATOR
✓	[Symbol]	DOOR/PROGRAM BELL	✓	[Symbol]	ELECTRONICALLY SUPERVISED VALVE
✓	[Symbol]	AUDIO/VISUAL BEACON	✓	[Symbol]	LOW PRESSURE SWITCH
✓	[Symbol]	VOLUME CONTROL	✓	[Symbol]	FLOW SWITCH
SECURITY			✓	[Symbol]	BELL
✓	[Symbol]	SURVEILLANCE CAMERA 'x'	✓	[Symbol]	BELL/STROBE
✓	[Symbol]	CARD PROXIMITY READER	✓	[Symbol]	HORN
✓	[Symbol]	FOB PROXIMITY READER	✓	[Symbol]	HORN/STROBE
✓	[Symbol]	ELECTRIC EGRESS DEVICE	✓	[Symbol]	SPEAKER
✓	[Symbol]	ELECTROMAGNETIC LOCK	✓	[Symbol]	SPEAKER/STROBE
✓	[Symbol]	DOOR CONTACT	✓	[Symbol]	STROBE
✓	[Symbol]	DOOR STRIKE	✓	[Symbol]	SPECIAL FUNCTION SIGNAL
✓	[Symbol]	MOTION SENSOR	✓	[Symbol]	SIGNALING DEVICE - CEILING
✓	[Symbol]	ELECTRONIC KEYPAD	✓	[Symbol]	END OF LINE RESISTOR
✓	[Symbol]	SIREN	✓	[Symbol]	FIRE FIGHTER EMERGENCY TELEPHONE
✓	[Symbol]	INTEGRATION MODULE BOX	✓	[Symbol]	DOOR HOLDER
✓	[Symbol]	NURSE CALL STATION 'x'	✓	[Symbol]	DOOR CLOSER
✓	[Symbol]	NURSE CALL DOME LIGHT	✓	[Symbol]	SMOKE ALARM
✓	[Symbol]		✓	[Symbol]	FIRE SMOKE DAMPER
INCIDENTALS					
✓	[Symbol]	ER EXISTING, TO REMAIN UNCHANGED	✓	[Symbol]	AFG ABOVE FINISHED GRADE
✓	[Symbol]	REL EXISTING, TO BE RELOCATED	✓	[Symbol]	AFF ABOVE FINISHED FLOOR
✓	[Symbol]	RELD RELOCATED	✓	[Symbol]	AFB ABOVE FINISHED CEILING
✓	[Symbol]	MOD EXISTING, TO BE MODIFIED	✓	[Symbol]	BFG BELOW FINISHED GRADE
✓	[Symbol]	DEL EXISTING, TO BE DELETED	✓	[Symbol]	BFF BELOW FINISHED FLOOR
✓	[Symbol]	WET LOCATION (*CATEGORY 1)	✓	[Symbol]	BFC BELOW FINISHED CEILING
✓	[Symbol]	CORROSIVE LOCATION (*CATEGORY 2)	✓	[Symbol]	WP WEATHER PROOF
✓	[Symbol]		✓	[Symbol]	MPS MECHANICAL POWER SUPPLY
CEILING TYPES					
✓	[Symbol]	NON FIRE-RATED LAY-IN TILE	✓	[Symbol]	PLS PLASTER
✓	[Symbol]	DRYWALL	✓	[Symbol]	MFL METAL PAN DECK
✓	[Symbol]	CONCRETE	✓	[Symbol]	OWS OPEN WEB STEEL JOISTS
✓	[Symbol]	12x12" ACOUSTIC TILE	✓	[Symbol]	WDD WOOD DECK



2 ROOF ELECTRICAL KEY PLAN
E1.1 SCALE: 1"=25'-0"



1 MAIN FLOOR ELECTRICAL KEY PLAN
E1.1 SCALE: 1"=25'-0"

DRAWING LIST:

E1.1	ELECTRICAL LEGEND & KEY PLANS
E2.1	PARTIAL ELECTRICAL FLOOR PLANS
E3.1	PARTIAL EXISTING ELECTRICAL ROOF PLAN
E3.2	PARTIAL REVISED ELECTRICAL ROOF PLAN
E4.1	ELECTRICAL PANEL SCHEDULES
E4.2	ELECTRICAL SCHEDULES, DETAILS & SCHEMATICS

NO.	DATE	REVISION	BY
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03			
02	05.15.24	ISSUE FOR TENDER #24-7567-RFT & PERMIT	A.W.G.
01	03.22.24	ISSUE FOR REVIEW	J.A.G.

ORIENTATION: PROJECT NORTH

JOB NO: 24017

MNE ENGINEERING

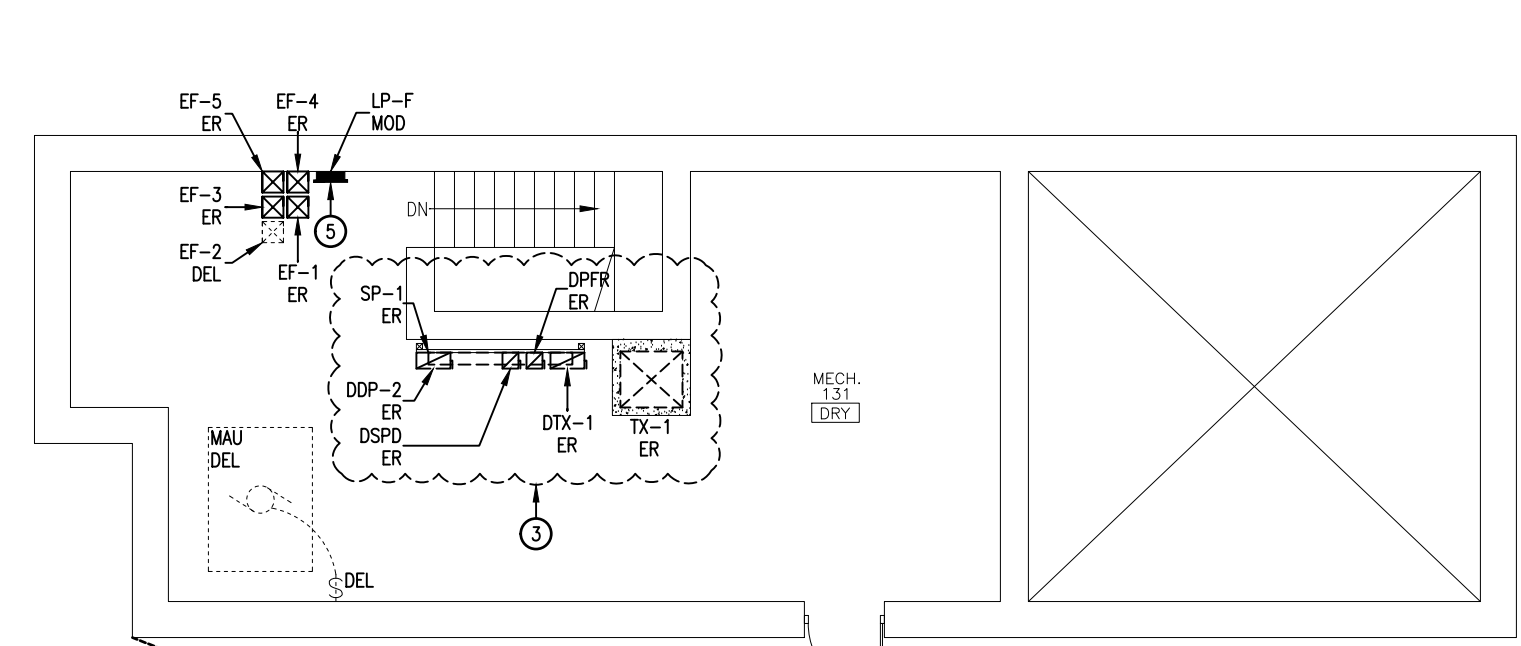
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PROJECT:
**LEXINGTON PUBLIC SCHOOL
HVAC UPGRADES**

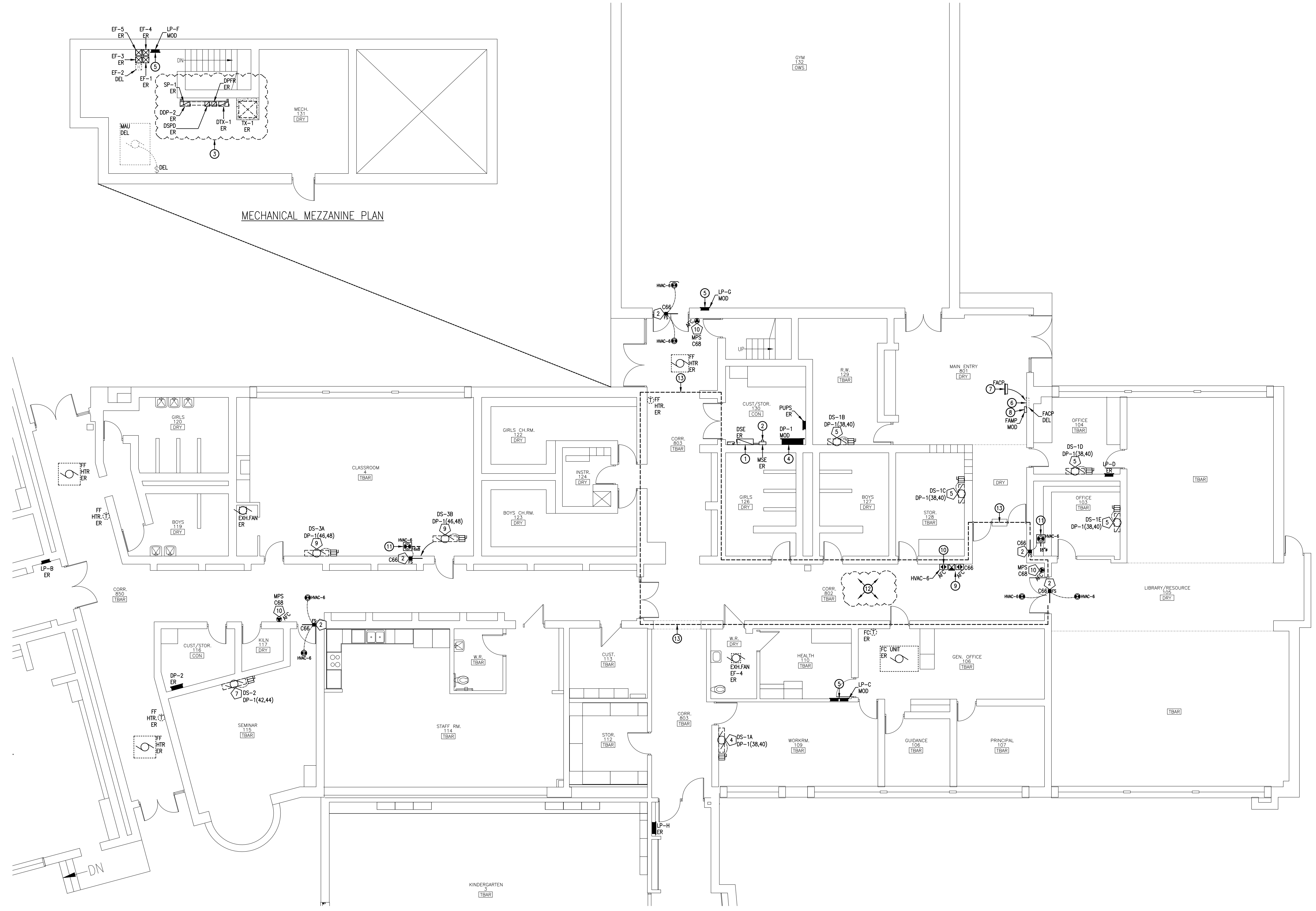
431 FORESTLAWN ROAD WATERLOO, ON
CLIENT:
WATERLOO REGION DISTRICT SCHOOL BOARD

DRAWING:
**ELECTRICAL LEGEND
& KEY PLANS**

	SCALE: AS NOTED
	DATE: MARCH 2024
	DRAWN: J.A.G.
	CHECKED: A.W.G.
DWG NO.: E1.1	SHEET NO.: 1 OF 6



MECHANICAL MEZZANINE PLAN



1 PARTIAL ELECTRICAL FLOOR PLAN
E.2.1 SCALE: 1/8"=1'-0"

DRAWING NOTES:

- 1- EXISTING 400A, 600/347V, 3ø, 4-WIRE MAIN ELECTRICAL SERVICE ENTRANCE DISCONNECT SWITCH (FUSED @ 200A) SHALL REMAIN.
- 2- EXISTING UTILITY METER SHALL REMAIN.
- 3- EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT (SPLITTER, DISCONNECTS, STEP-DOWN TRANSFORMER, ETC.) LOCATED IN THIS AREA SHALL REMAIN.
- 4- EXISTING MAIN 400A, 120/208V, 3ø, 4-WIRE, FPE CDP #A-4002748 DISTRIBUTION PANEL SHALL BE DELETED AND REPLACED WITH NEW IN THE SAME LOCATION AS FOLLOWS:
 - REFER TO THE ASSOCIATED UPDATED PANEL SCHEDULE FOR NEW PANEL DETAILS AND BRANCH DEVICES.
- 5- EXISTING DISTRIBUTION PANEL SHALL REMAIN. REFER TO THE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL DETAILS AND MODIFICATIONS TO THE BRANCH DEVICES.
- 6- LOCATION OF THE EXISTING FLUSH MOUNTED FIRE ALARM CONTROL PANEL (FACP) TO BE DELETED.
 - CUT, PATCH AND FINISH EXISTING BUILDING CONSTRUCTION AS REQUIRED.
 - REFER TO THE 'FIRE DETECTION & ALARM SYSTEM SCHEMATICS' FOR DETAILS.
- 7- PROVIDE A NEW SEMI-FLUSH MOUNTED FIRE ALARM CONTROL PANEL (FACP) IN THE APPROXIMATE LOCATION OF THE DELETED FIRE ALARM CONTROL PANEL.
 - THE CONTROL PANEL IS BEING USED AS THE BUILDING ANNUNCIATOR. ENSURE OPERATING CONTROLS ARE INSTALLED AT 60" (1.5m) AFF.
 - REFER TO THE 'FIRE DETECTION & ALARM SYSTEM SCHEMATICS' FOR DETAILS.
- 8- EXISTING FIRE ALARM MONITORING PANEL (FAMP) SHALL REMAIN AND BE REWORKED AS REQUIRED TO ACCOMMODATE THE FACP REPLACEMENT.
- 9- REFER TO THE 'SMOKE DAMPER WIRING SCHEMATIC'. CONNECT/PROGRAM NEW DETECTORS TO THE EXISTING LOCAL AREA INITIATING ZONE.
- 10- PROVIDE CLEARLY LABELED FIRE ALARM RELAY & CONNECTIONS. COORDINATE WITH THE MECHANICAL SUBCONTRACTOR FOR EQUIPMENT SHUT-DOWN ON A FIRE ALARM CONDITION.
- 11- CONFIRM EXACT DUCT SIZE ON SITE PRIOR TO ORDERING EQUIPMENT. WHERE APPLICABLE, SIZES INDICATED ARE APPROXIMATE ONLY.
- 12- COORDINATE ON SITE WITH THE MECHANICAL CONTRACTOR TO RELOCATE/ROUTE ALL THE EXISTING CEILING/DECK MOUNTED CONDUITS, JUNCTION BOXES, ETC. LOCATED IN APPROXIMATELY THIS AREA TO PERMIT THE NEW DUCT RISERS AND STRUCTURAL MODIFICATIONS. VERIFY EXACT EXTENT OF WORK ON SITE PRIOR TO CLOSE OF BIDS.
- 13- INCLUDE FOR THE TEMPORARY DISCONNECTION, REMOVAL AND REINSTALLATION OF ALL CEILING MOUNTED ELECTRICAL DEVICES (LIGHTING FIXTURES, EXIT/EMERGENCY LIGHTING FIXTURES, PA SPEAKERS, FIRE ALARM DEVICES, ETC.) WITHIN THIS DELINEATION TO PERMIT THE MECHANICAL DUCTWORK MODIFICATIONS. COORDINATE EXACT AREAS AFFECTED ON SITE WITH THE MECHANICAL CONTRACTOR.

GENERAL NOTES:

- DEMOLITION:**
REFER TO THE 'ELECTRICAL SPECIFICATIONS' FOR PROCEDURE REGARDING EQUIPMENT BEING DELETED. OWNERS SHALL HAVE FIRST RIGHT OF REFUSAL.
- EXISTING EQUIPMENT:**
MECHANICAL EQUIPMENT INDICATED TO BE DELETED SHALL BE REMOVED BY THE MECHANICAL SUBCONTRACTOR. UNLESS OTHERWISE INDICATED, THE ELECTRICAL SUBCONTRACTOR SHALL DISCONNECT AND REMOVE ALL LINE VOLTAGE POWER WIRING BACK TO THE POINT OF DISTRIBUTION. INCLUDE FOR DISCONNECTING ALL LINE VOLTAGE FEEDS TO CONTROL DEVICES.
ALL LOW VOLTAGE CONTROL CABLING SHALL BE REMOVED BY THE MECHANICAL SUBCONTRACTOR.
- DISTRIBUTION PANEL REPLACEMENTS:**
IN GENERAL, ALL EXISTING PANELS BEING REPLACED SHALL REQUIRE THE FOLLOWING:
 - DISCONNECT EXISTING FEEDERS & BRANCH WIRING.
 - REWORK EXISTING FEEDERS, BRANCH WIRING AND CONDUITS AS REQUIRED.
 - REMOVE EXISTING TUB, INTERIOR, BREAKERS & TRIM.
 - RELOCATE ADJACENT BOXES AND WIRING DEVICES (IF APPLICABLE).
 - CUT, PATCH & FINISH EXISTING BUILDING CONSTRUCTION AS REQUIRED.
 - INSTALL NEW TUB, INTERIOR, BREAKERS & TRIM.
 - CONNECT EXISTING FEEDERS & BRANCH WIRING. EXTEND EXISTING BRANCH WIRING WHERE REQUIRED.
 - PROVIDE DIGITAL PHOTO OF THE INSTALLED PANEL WITH THE COVER OFF.
 - PROVIDE ACCURATE TYPED PANEL DIRECTORY. INCLUDE FOR TRACKING OF ALL EXISTING BRANCH WIRING TO CONFIRM CONNECTED LOADS.
 - PROVIDE NEW NAMEPLATE AS SPECIFIED.
 - UPDATE LABELS ON CONNECTED WIRING DEVICE TAGS (IF APPLICABLE).

05			
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PROJECT:
**LEXINGTON PUBLIC SCHOOL
HVAC UPGRADES**

CLIENT:
431 FORESTLAWN ROAD WATERLOO, ON
WATERLOO REGION DISTRICT SCHOOL BOARD

DRAWING:
**PARTIAL ELECTRICAL
FLOOR PLANS**

SCALE: AS NOTED

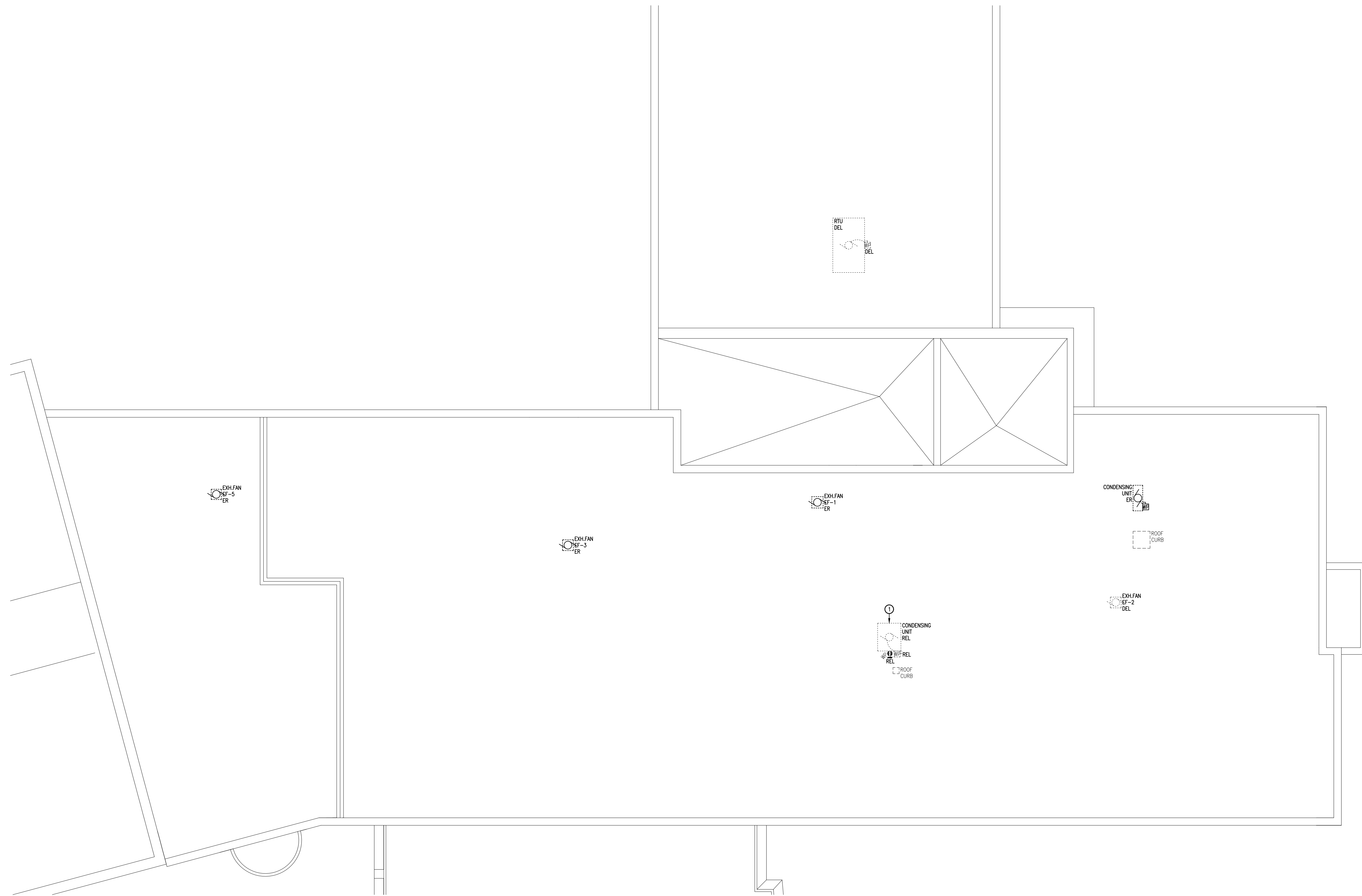
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DRAWN: J.A.G.

CHECKED: A.W.G.

EXISTING ROOF NOTES:

- ① DISCONNECT THE EXISTING BRANCH WIRING SERVING THE CONDENSER AND RECEPTACLE. CUT BACK WIRING TO INTERIOR OF THE BUILDING AT UNDERSIDE OF ROOF DECK. PROVIDE A JUNCTION BOXES (IF REQUIRED) AND NEW BRANCH WIRING OF SUITABLE LENGTH TO ACCOMMODATE THE RELOCATED EQUIPMENT. BRANCH WIRING TO REROUTED ALONGSIDE THE EXISTING/NEW REFRIGERATION PIPING.

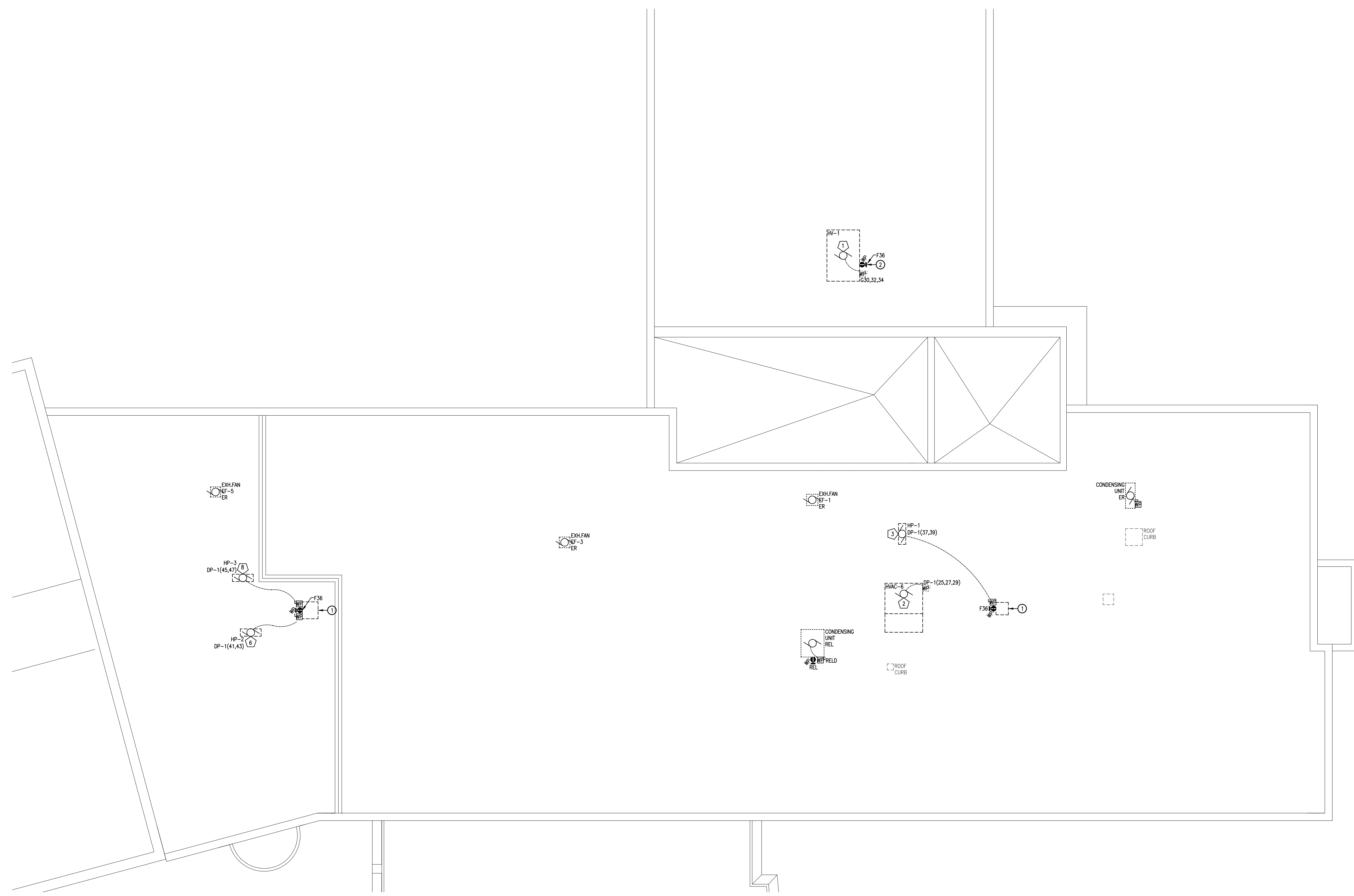


① PARTIAL EXISTING ELECTRICAL ROOF PLAN
E3.1 SCALE: 1/8"=1'-0"

05			
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PROJECT: LEXINGTON PUBLIC SCHOOL HVAC UPGRADES			
CLIENT: 431 FORESTLAWN ROAD WATERLOO, ON WATERLOO REGION DISTRICT SCHOOL BOARD			
DRAWING: PARTIAL EXISTING ELECTRICAL ROOF PLAN			
		SCALE:	AS NOTED
		DATE:	MARCH 2024
		DRAWN:	J.A.G.
		CHECKED:	A.W.G.
DWG NO.:	E3.1	SHEET NO.:	3 OF 6

REVISED ROOF NOTES:

- ① - APPROXIMATE LOCATION OF THE ROOF CURB PROVIDED BY THE GENERAL/MECHANICAL TRADE. REFER TO THE 'ROOF CURB DETAIL'.
- ② - MOUNT RECEPTACLE ON SIDE OF EQUIPMENT. CONFIRM EXACT LOCATION WITH THE MECHANICAL CONTRACTOR.
 - BRANCH WIRING TO BE ROUTED THROUGH THE ROOF CURB WHEREVER POSSIBLE.



1 PARTIAL REVISED ELECTRICAL ROOF PLAN
 E3.2 SCALE: 1/8"=1'-0"

05			
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PROJECT: LEXINGTON PUBLIC SCHOOL HVAC UPGRADES			
CLIENT: 431 FORESTLAWN ROAD WATERLOO, ON WATERLOO REGION DISTRICT SCHOOL BOARD			
DRAWING: PARTIAL REVISED ELECTRICAL ROOF PLAN			
		SCALE:	AS NOTED
		DATE:	MARCH 2024
		DRAWN:	J.A.G.
		CHECKED:	A.W.G.
DWG NO.:	E3.2	SHEET NO.:	4 OF 6

