

PLUMBING ABBREVIATIONS	
BT	BATH
BFP	BACKFLOW PREVENTER
CB	CATCH BASIN
CO	CLEAN OUT
CD	CONDENSATE DRAIN
CTE	CONNECT TO EXISTING
CW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
HR	DOMESTIC HOT WATER RECIRCULATION
DPAV	DRY PIPE ALARM VALVE
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FFD	FUNNEL FLOOR DRAIN
FHC	FIRE HOSE CABINET
HW	DOMESTIC HOT WATER
HB	HOSE BIBB
HD	HUB DRAIN
HHW	DOMESTIC WATER HEATER
LAV	LAVATORY
WM	WATER METER
MH	MANHOLE
NFHB	NON FREEZE HOSE BIB
NFWH	NON FREEZE WALL HYDRANT
RD	ROOF DRAIN
RIO	ROUGH-IN ONLY
R.O.	REVERSE OSMOSIS
RWL	RAIN WATER LEADER
S	SINK
SH	SHOWER
UR	URINAL
V	VENT
VB	VACUUM BREAKER
WC	WATER CLOSET
WPAV	WET PIPE ALARM VALVE
DN	DOWN

HVAC ABBREVIATIONS	
AD	ACCESS DOOR
AP	ACCESS PANEL
B	BASEBOARD HEATER
BD	BALANCING DAMPER
BDD	BACKDRAFT DAMPER
CC	COOLING COIL
CD	CONDENSATE
DG	DOOR GRILLE
EA	EXHAUST AIR
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
ET	EXPANSION TANK
OA	OUTSIDE AIR
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FFH	FORCE FLOW HEATER
FSD	FIRE & SMOKE DAMPER
FSF	FIRE STOP FLAP
MD	MOTORIZED DAMPER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
P	PUMP
RA	RETURN AIR
RF	RETURN FAN
RG	RETURN GRILLE
SA	SUPPLY AIR
SD	SPLITTER DAMPER
SF	SUPPLY FAN
SD	SPLITTER DAMPER
SG	SUPPLY GRILLE
SMD	SMOKE DAMPER
SR	SUPPLY REGISTER
UC	UNDER CUT DOOR
UH	UNIT HEATER
VVB	VARIABLE VOLUME BOX
VD	VOLUME DAMPER
WF	WALL FIN
MAU	MAKE UP AIR UNIT
TAD	TRANSFER DUCT
SAD	SUPPLY AIR DUCT
EAD	EXHAUST AIR DUCT

MECHANICAL LEGEND	
SITE PLAN	
	EXISTING BUILDING
	NEW BUILDING
	SITE BOUNDARY
	STORM PIPING
	WATERMAIN
	FIRE WATERMAIN
	SANITARY SEWER
	GAS LINE
	WATER METER
	CATCH BASIN
	MANHOLE
	GAS METER
PIPING/PLUMBING	
	SANITARY LINE UNDER GROUND
	SANITARY LINE ABOVE FLOOR
	MAKEUP AIR UNIT CONDENSATE LINE
	NATURAL GAS LINE
	DOMESTIC COLD WATER (CW)
	DOMESTIC HOT WATER (HW)
	DOMESTIC HOT WATER RECIRCULATION (HR)
	DOMESTIC TEMPERED WATER (TW)
	RAIN WATER PIPING UNDER GROUND
	RAIN WATER PIPING ABOVE GRADE
	FIRE/SPRINKLER PIPING
	HYDRONIC HEATING WATER SUPPLY (HWS)
	HYDRONIC HEATING WATER RETURN (HWR)
	HYDRONIC HEATING WATER LINE TO BE REMOVED
	PIPE UP
	PIPE DOWN
	CLEAN OUT
	PIPE HEAT TRACING
	PLUMBING FIXTURE TAG
	FLOOR DRAIN
	ROOF DRAIN
	HUB DRAIN
	WATER HAMMER ARRESTOR
	PLUG OR CAP
	REFRIGERANT GAS PIPES
	REFRIGERANT LIQUID PIPES

MECHANICAL LEGEND	
HVAC	
	NEW DUCTWORK
	EXISTING DUCTWORK TO BE REMOVED
	EXISTING DUCTWORK TO REMAIN
	INTERNAL ACOUSTICAL DUCT LINING TRANSITION RECTANGULAR TO ROUND
	TURNING VANES
	SPLITTER DAMPER
	DUCT REDUCER / ENLARGER
	SUPPLY DUCT UP
	RETURN OR EXHAUST UP
	SUPPLY TURNING DOWN
	RETURN OR EXHAUST DOWN
	FLEXIBLE DUCT
	DIFFUSER
	RETURN AIR GRILLE
	DUCT SILENCER
	BALANCING DAMPER
	FIRE DAMPER
	THERMOSTAT
	TEMPERATURE SENSOR
	CO2 SENSOR
	HVAC EQUIPMENT TAG
	1-SIZE IN mm; A-TYPE; 100-CAPACITY (CFM)
	GATE VALVE
	MOTORIZED VALVE
	CIRCUIT BALANCING VALVE
	CONVECTOR RADIATOR
	CABINET UNIT HEATER
	EXISTING TO BE DEMOLISHED
	EXISTING TO BE RELOCATED
	EXISTING TO REMAIN
	NEW TO MATCH EXISTING
	EXISTING AT RELOCATED LOCATION
	DENOTES COMPLETE WITH
	DENOTES CONNECT TO EXISTING
	DENOTES NOT TO SCALE
	DENOTES TYPICAL

DRAWING LIST	
M1.1	MECHANICAL LEGEND AND DRAWING LIST
M1.2	GROUND FLOOR KEY PLAN
M1.3	SECOND FLOOR KEY PLAN
M1.4	MECHANICAL EQUIPMENT SCHEDULES
M1.5	MECHANICAL EQUIPMENT SCHEDULES & DETAILS
M2.1	PART GROUND FLOOR PLAN - PLUMBING LAYOUT
M3.1	PART GROUND FLOOR H.V.A.C. DEMOLITION LAYOUT PLAN
M3.2	PART GROUND/SECOND/THIRD FLOOR H.V.A.C. NEW LAYOUT PLAN
M3.3	PART GROUND & THIRD FLOOR H.V.A.C. NEW LAYOUT PLAN
M3.4	MECHANICAL EQUIPMENT ROOF PLAN

Client
Halton District School Board
 2050 Guelph Line
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ALL CONSTRUCTION TO MEET ONTARIO BUILDING CODE REQUIREMENTS.

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Key Plan N.T.S.

Project North True North

No.	Revisions	Date
2	ISSUED FOR PERMIT	2021-01-21
1	ISSUED FOR COORDINATION	2020-08-25
No.	Issue	Date

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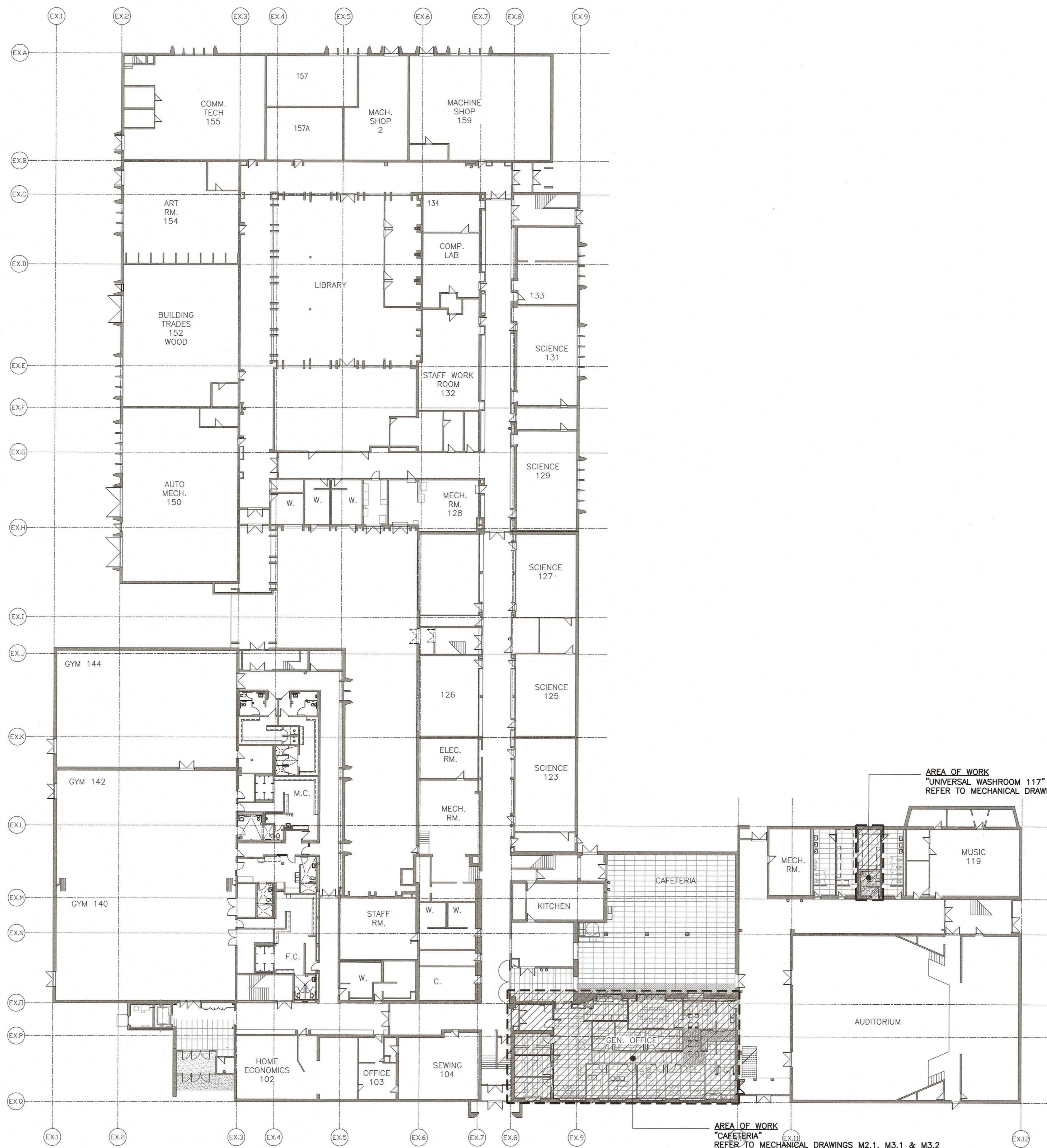
LICENSED PROFESSIONAL ENGINEER
 C. KURUPPU
 100053024
 01.21.21
 PROVINCE OF ONTARIO

Drawing Title:
MECHANICAL LEGEND & DRAWING LIST

Scale: N.T.S. Date: APR 2020

Drawn by: DH Checked by: CK

Job No. 20009 Drawing No. M1.1



GROUND FLOOR KEY PLAN
N.T.S.

Client
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2050 Guelph Line
Burlington, Ontario

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Drawing Title:
**GROUND FLOOR
KEY PLAN**

Scale:	N.T.S.	Date:	APR 2020
Drawn by:	DH	Checked by:	CK
Job No.	20009	Drawing No.	M1.2

PLUMBING FIXTURE SCHEDULE									
TAG	TYPE	SPECIFICATION	ACCESSORIES	CW	HW	WASTE	VENT	POWER	REMARKS
WC-1 (BF)	TOILET	AMERICAN STANDARD #3461.001.020, 'MADERA FLOWISE RIGHT HEIGHT ELONGATED', 419 MM HIGH TOILET, VITREOUS CHINA, FLOOR MOUNTED, OPERATES IN THE RANGE OF 4.2 L TO 6 L (1.1 US GAL TO 1.6 US GAL) PER FLUSH, ELONGATED BOWL, SIPHON JET FLUSH ACTION, CONDENSATE CHANNEL.	CENTOCO #820STS.001, EXTRA HEAVY DUTY TOILET SEAT, SOLID PLASTIC, OPEN FRONT WITH COVER. CHECK HINGES AND CHROMATED STEEL POSTS, WASHERS AND NUTS. INSTALLATION: TO MEET CODE REQUIREMENTS FOR BARRIER FREE ACCESS. SLOAN #REGAL SLOAN 111-1.28YG "REGAL" FACTORY SET, OR TECK #81T201-5, EXTERNAL ADJ. EXPOSED MANUAL FLUSHMETER FOR TOP SPUD TOILET, 4.8 L (1.28 US GAL) FACTORY SET FLOW, QUIET ACTION DIAPHRAGM TYPE WITH VACUUM BREAKER. CENTRE SEAT BUMPER ON VALVE, PRESSURE LOSS CHECK AND NON-HOLD OPEN FEATURE. PROVIDE FLOOR FLANGE, (SAME MATERIAL AS THE CONNECTING PIPE DRAIN), WITH ALL BRASS BOLTS AND WITH RUBBER GASKET.	1"	-	3"	1 1/2"	NO	
LAV-1 (BF)	BASIN	LAVATORY - WALL HUNG BARRIER FREE: AMERICAN STANDARD "MURRO", VITREOUS CHINA WALL HUNG LAVATORY, DRILLED TO ACCOMMODATE CONCEALED ARM SUPPORTS, AND WITH #0059.0200 SEMI-CHINA PEDESTAL.	SLOAN ETF-600-A-VPB-MIX60-A "OPTIMA" ELECTRONIC HARDWIRED "NO-TOUCH" FAUCET WITH SS BOX, MIXING VALVE, MCGUIRE #155A CP 32 MM (1.1/4") CAST PLUG WITH OPEN GRID STRAINER TRAP, MCGUIRE #8872C CP 32MM (1.1/4") CAST "P" TRAP WITH CLEANOUT. SUPPLIES: MCGUIRE H165LKN3RB CP SHORT RIGID ANGLE BASIN SUPPLY WITH OFFSET BRAIDED FLEX, RISER LOCKSHIELD STOP, ESCUTCHEON. CARRIER: ZURN ZX-1231 CONCEALED FIXTURE CARRIER WITH ARMS. NOTE: INSTALLATION SHALL MEET THE O.B.C. REQUIREMENTS FOR BARRIER FREE ACCESS. INSULATE SUPPLIES AND DRAIN AS REQUIRED BY CODE.	1/2"	1/2"	1 1/4"	1 1/4"	YES	
HD	HUB DRAIN	ZURN ZN-211-S-P CAST IRON HUB DRAIN AND 1/2" TRAP PRIMER CONNECTION OR EQUIVALENT EQUAL.							
FD	FLOOR DRAIN	ZURN ZN-211-B-P, CAST IRON FLOOR DRAIN WITH 5" ROUND NICKEL BRONZE STRAINER, MIFAB MI-GARD, AND 1/2" TRAP PRIMER CONNECTION OR EQUIVALENT EQUAL.				3"	1 1/2"		
CO	CLEANOUT	<ul style="list-style-type: none"> ZURN Z-1400-HD (FOR UNFINISHED FLOORS) ZURN ZN-1400-HD (FOR FINISHED FLOORS) ZURN ZN-1400-X (FOR LINOLEUM OR ASPHALT TILE FLOORS) 	<ul style="list-style-type: none"> ZURN ZN-1400-Z (FOR TERRAZZO FLOORS) ZURN ZN-1400-T (FOR CERAMIC TILE FLOORS) ZURN ZN-1400-CM (FOR CARPETED FLOORS) 						

NOTES:
1. EACH PLUMBING FIXTURE SHALL BE LOW WATER CONSUMPTION IN ACCORDANCE TO ONTARIO BUILDING CODE. - PER DV. B.764.
2. PROVIDE ALL REQUIRED FITTINGS, TRAPS, VALVES, FAUCETS AND ESCUTCHEONS TO COMPLETE EACH FIXTURE INSTALLATION.
3. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BEFORE ORDERING ANY FIXTURE.
4. ALL ANGLE STOPS TO BE DAHL 1/4 TURN MINI BALL VALVE.
5. CONTRACTOR'S RESPONSIBILITIES TO VERIFY ALL EQUIPMENTS AND ITEM QUANTITY.
6. GENERAL CONTRACTOR TO PROVIDE, INSTALL & HOOK-UP EQUIPMENTS.
7. CONTRACTOR TO CONFIRM ALL EQUIPMENT SPECS PRIOR TO CONSTRUCTION.
8. CONTRACTOR TO VERIFY ALL OUTLET LOCATIONS WITH OWNER.
9. PROVIDE ISOLATING VALVE ON, HOT AND COLD WATER LINES TO EACH PIECE OF PLUMBING FIXTURE. (TYPICAL UNLESS NOTED OTHERWISE)
10. WRAP ALL EXPOSED HOT WATER AND DRAIN PIPING AT HANDICAPPED LAVATORY WITH INSULATION.

GRILLE AND DIFFUSER SCHEDULE									
TAG	MANUFACTURER	MODEL	TYPE	FINISH	SIZE	NECK SIZE	MOUNTING	REMARKS	REMARKS
SA1	E.H. PRICE	SDGE	SUPPLY	B12	AS NOTED	---	DUCT	YES	DOUBLE DEFLECTION SPIRAL DUCT GRILLE EXTRUDED c/w AIR SCOOP
SA2	E.H. PRICE	ASCD	DIFFUSER	B12	600x600	AS NOTED	T-BAR	YES	
SA3	E.H. PRICE	ASCD	DIFFUSER	B12	300x300	AS NOTED	T-BAR	YES	
RA1	E.H. PRICE	80D	EGG CRATE	B12	AS NOTED	---	DUCT	---	
RA2	E.H. PRICE	630	LOUVERED FACE EXHAUST	B12	AS NOTED	---	DRYWALL/T-BAR	YES	
EX	EXISTING DIFFUSER/GRILLE								

NOTE:
1. ACCEPTABLE EQUIVALENT: KRUEGER, NAILOR, METALAIR

FAN SCHEDULE													
TAG	SERVICE	MANUFACTURER	MODEL No.	AIR QUANTITY (CFM)	STATIC PRESS. (in.wg.)	MOTOR RPM	ELECTRICAL			STARTER	MOUNTING ARRANGEMENT	WEIGHT (LBS)	REMARKS
							POWER (HP)	V/PH/HZ	FLA (A)				
EF-1	UNIVERSAL WASHROOM 117	GREENHECK	SP-A90	75	0.25	900	-	120/1/60	0.17	OCCUPANCY SENSOR	CEILING MTD	12	SEE NOTES 3,4,5, STANDARD WHITE POLYSTYRENE GRILLE

NOTES:
1. c/w 450mm ROOF CURB, BACKDRAFT DAMPER, BIRD SCREEN, DISCONNECT SWITCH,
2. PROVIDE EC MOTOR.
3. INLINE FANS C/W BACK DRAFT DAMPER, ROUND DUCT CONNECTION, MOUNTING BRACKETS, VIBRATION ISOLATORS
4. FAN DUCTWORK TO BE LINED WITH 1" INSULATION FOR MIN. 10'-0" FROM EXTERIOR
5. ACCEPTABLE EQUIVALENT: COOK

LOUVRE SCHEDULE									
TAG	SYSTEM	MANUFACTURER	MODEL NO.	TYPE	SIZE (WxH)	FREE AREA (SQ FT)	VELOCITY (fpm)	WATER PENETRATION S.F.	ACCESSORIES/REMARKS
L-1	ERV INTAKE	VENTEX	2435	4" DEEP LOUVER	SEE PLANS	-	-	-	c/w BIRDSCREEN, COLOR BY ARCHITECT
L-2	ERV EXHAUST	VENTEX	2415	4" DEEP LOUVER	SEE PLANS	-	-	-	c/w BIRDSCREEN, COLOR BY ARCHITECT
WB-1	WASHROOM EXHAUST	REVERSOMATIC	SWBW-8	SINGLE WALL BOX	9"x9"	-	-	-	c/w BACKDRAFT DAMPER, EXTRUDED ALUMINUM GRILLES, COLOUR BY ARCHITECT, FIELD PAINTED

NOTES:
1. ACCEPTABLE EQUIVALENT: EH PRICE

INDOOR ERV UNIT SCHEDULE													
TAG	SERVICE	MANUFACTURER	MODEL	AIR FLOW		EXCHANGER EFFICIENCY %		ELECTRICAL			WEIGHT (LBS)	DUCT HEATER TAG	REMARKS
				CFM	EX. SP. (INCH)	ENTHALPHY HEATING	ENTHALPHY COOLING	V/PH/HZ	MCA	MOC			
ERV-1	GRD FLR OFFICES	LOSSNAY	LGH-F470RX5-E	470	0.40	66	53	208/1/60	3.1	15	119	DH-1	c/w DUCT HEATER, REFER TO DUCT HEATER SCHEDULE

NOTES:
1. UNITS TO BE MOUNTED WITHIN CEILING SPACE c/w HANGING RODS AND VIBRATION ISOLATORS.
2. UNITS TO OPERATE THROUGH CO2 SENSOR
3. ERV UNIT TO BE INTERLOCKED WITH MOTORIZED DAMPERS IN SUPPLY AND EXHAUST LOUVERS
4. ACCEPTABLE EQUIVALENT: ALDES, VENTACITY

DUCT HEATER SCHEDULE								
TAG	SERVES	MANUFACTURER	MODEL	AIR FLOW (CFM)	CAPACITY (Kw)	ELECTRICAL		REMARKS
						V/PH/HZ	AMPS	
DH-1	ERV-1	THERMOLEC	SLIP-IN TYPE	470	5.0	208/1/60	24.05	SEE NOTES BELOW, S.C.R BY THERMOLEC, STAT 0-10VDC (CTH291) + DS600

NOTES:
1. INSTALL UNIT TO MANUFACTURER'S RECOMMENDATION.
2. EACH UNIT IS INTERLOCKED WITH THE RELATED UNIT
3. C/W AUTOMATIC RESET THERMAL CUT-OUT, AIR FLOW SENSOR, MANUAL RESET THERMAL CUT-OUT, SCR CONTROL
4. TEMPERATURE SENSOR, OPEN COIL ELEMENT, CORROSION RESISTANCE ENCLOSURE
5. BUILT IN ELECTRONIC TEMP. AND SENSOR AND COLLARS.

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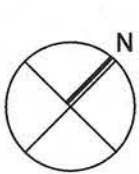
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**MECHANICAL
EQUIPMENT SCHEDULES**

Scale: N.T.S. Date: APR 2020

Drawn by: DH Checked by: CK

Job No. Drawing No.

20009

M1.4

FAN COIL (DX COOLING/HOT WATER HEATING)/CONDENSER UNIT SCHEDULE

FAN COIL UNIT												CONDENSING UNIT								
TAG	SERVICE	MAKE/MODEL	AIR FLOW		HOT WATER HEATING COIL			ELECTRICAL			WEIGHT (LBS)	REMARKS	TAG	MAKE MODEL	COOLING CAPACITY (MBH)	ELECTRICAL			WEIGHT (LBS)	REMARKS
			CFM	EX.SP IN	CAPACITY (MBH)	FLOW (GPM)	EWT/LWT	V/PH/Hz	MCA	MOCP						V/PH/Hz	MCA	MOCP		
FC-1	AS PER DWG #M3.4	TRANE BCHD054E1-LOA11A4Z	1,600	0.5	30.0	1.02	30.0/47.29	208/3/60	5.75	15	208.4	NOTE 1	CU-3	TRANE ATTA4048A3	48.0	208/3/60	18.0	30	190	NOTE 2
FC-2	AS PER DWG #M3.4	TRANE BCHD054E1-LOA11A4Z	1,600	0.5	40.0	1.36	30.0/53.05	208/3/60	5.75	15	208.4	NOTE 1	CU-4	TRANE ATTA4048A3	48.0	208/3/60	18.0	30	190	NOTE 2

- NOTES:**
- UNIT TO BE c/w ULTRA QUIET CONSTRUCTION, NON-FUSED DISCONNECT SWITCH, INTEGRAL MIX BOX WITH RA/OA DAMPER, 2" MERV8 FILTER, FREEZESTAT. DX COIL TO BE SUPPLIED WITH HARD SHUT-OFF TXV.
 - UNIT TO BE c/w IN BUILT CONTROLLER AND LOW VOLTAGE TRANSFORMER.
 - CONDENSING UNIT TO BE c/w CRANK CASE HEATER, HIGH & LOW PRESSURE SWITCHES, HARD START KIT AND TIME GUARD SHORT CYCLE PROTECTION. REFRIGERANT LINES MUST HAVE LONG RADIUS ELBOWS.
 - UNIT TO BE c/w CONDENSATE PUMP, LITTLE GIANT VMMP15, 230V/1/60, 0.6/0.5 AMPS, 75 WATTS
 - BASIS OF DESIGN: TRANE; ACCEPTABLE EQUIVALENT: MITSUBISHI, DAIKIN

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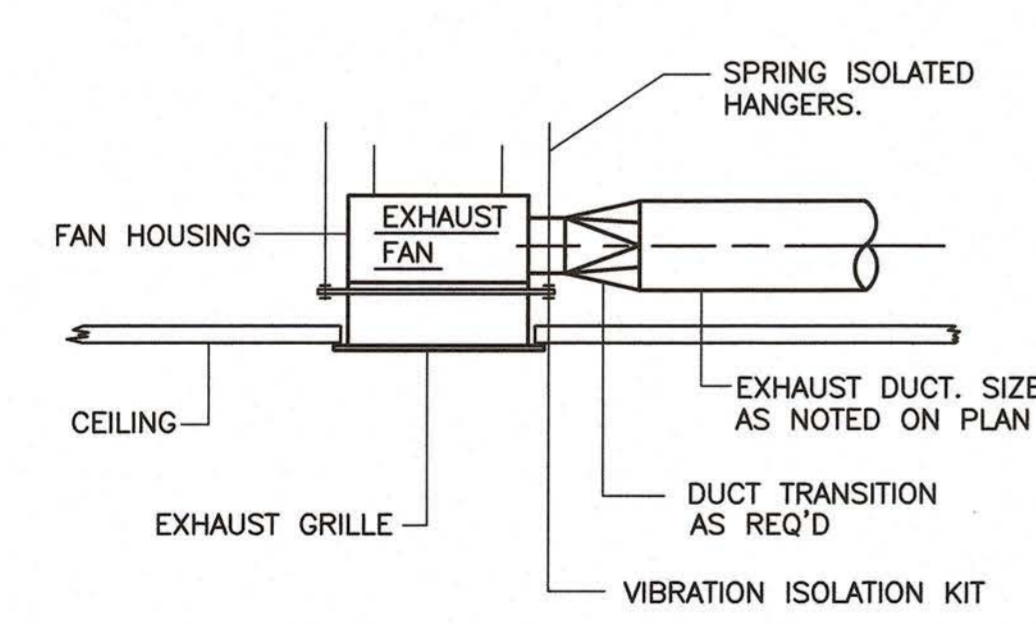
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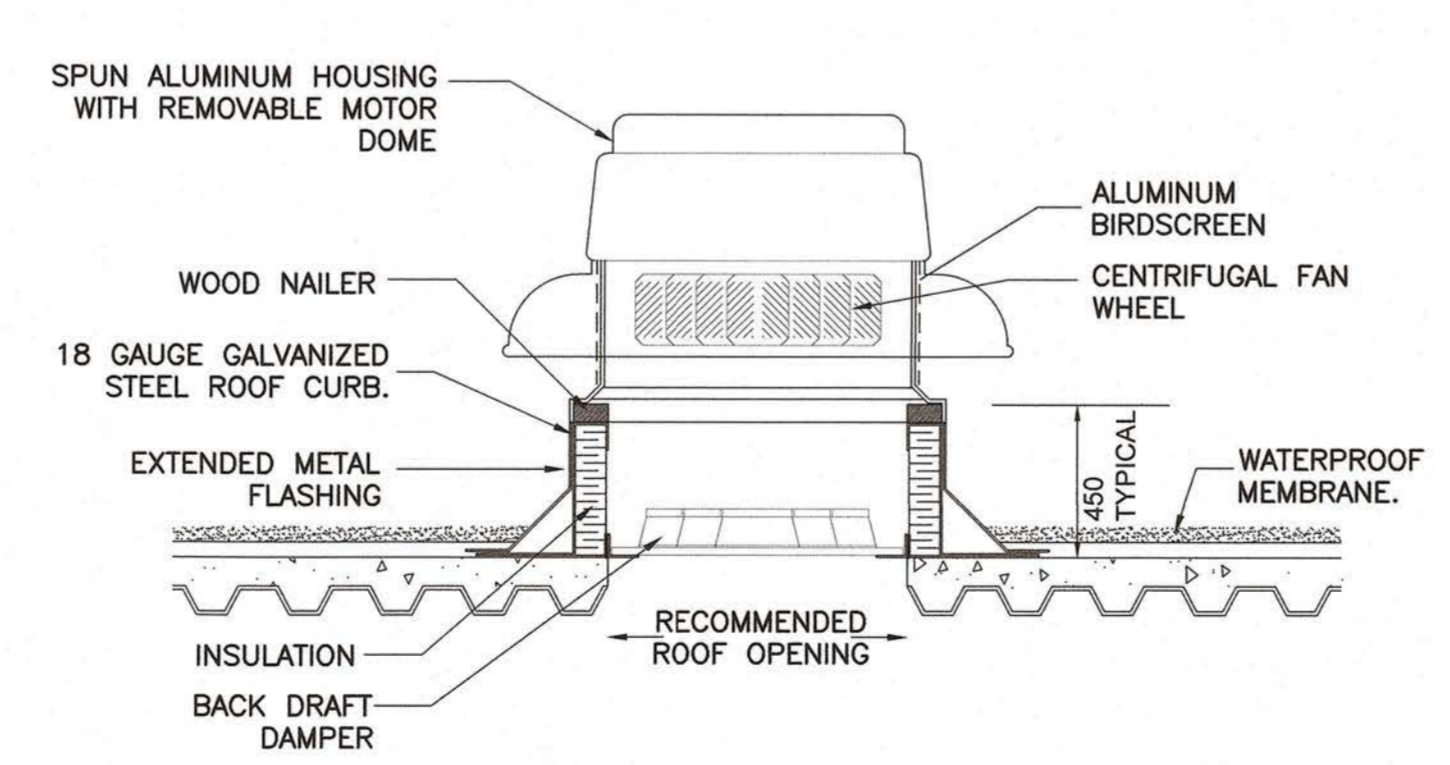
Drawing Title:
MECHANICAL EQUIPMENT SCHEDULES & DETAILS

Scale: N.T.S. Date: APR 2020
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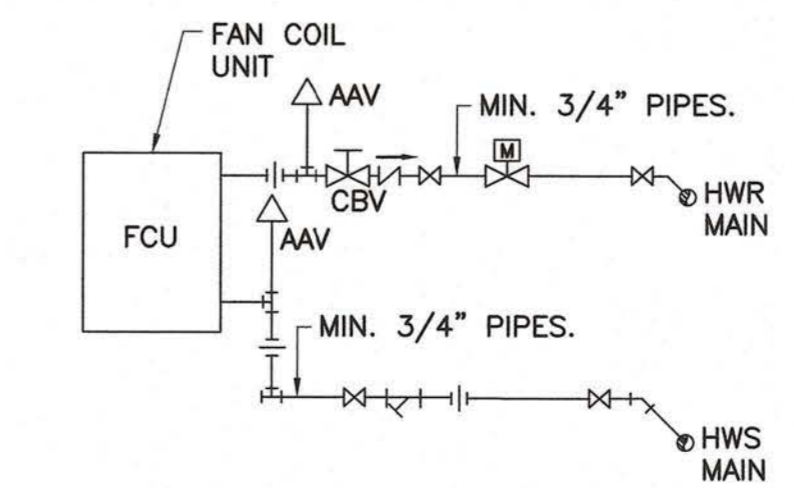
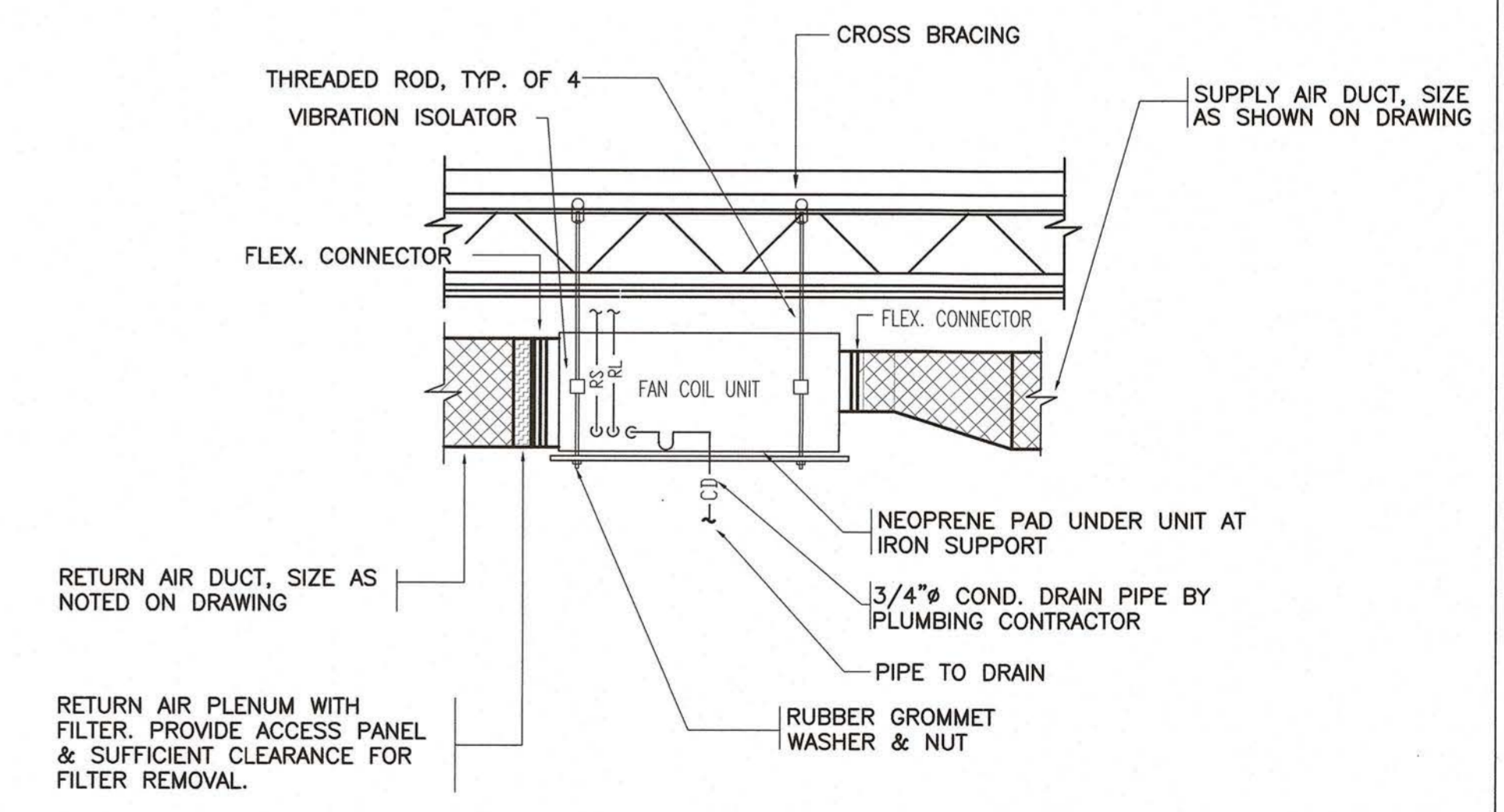
20009 M1.5



CEILING MOUNT CABINET EXHAUST FAN DETAIL
N.T.S.

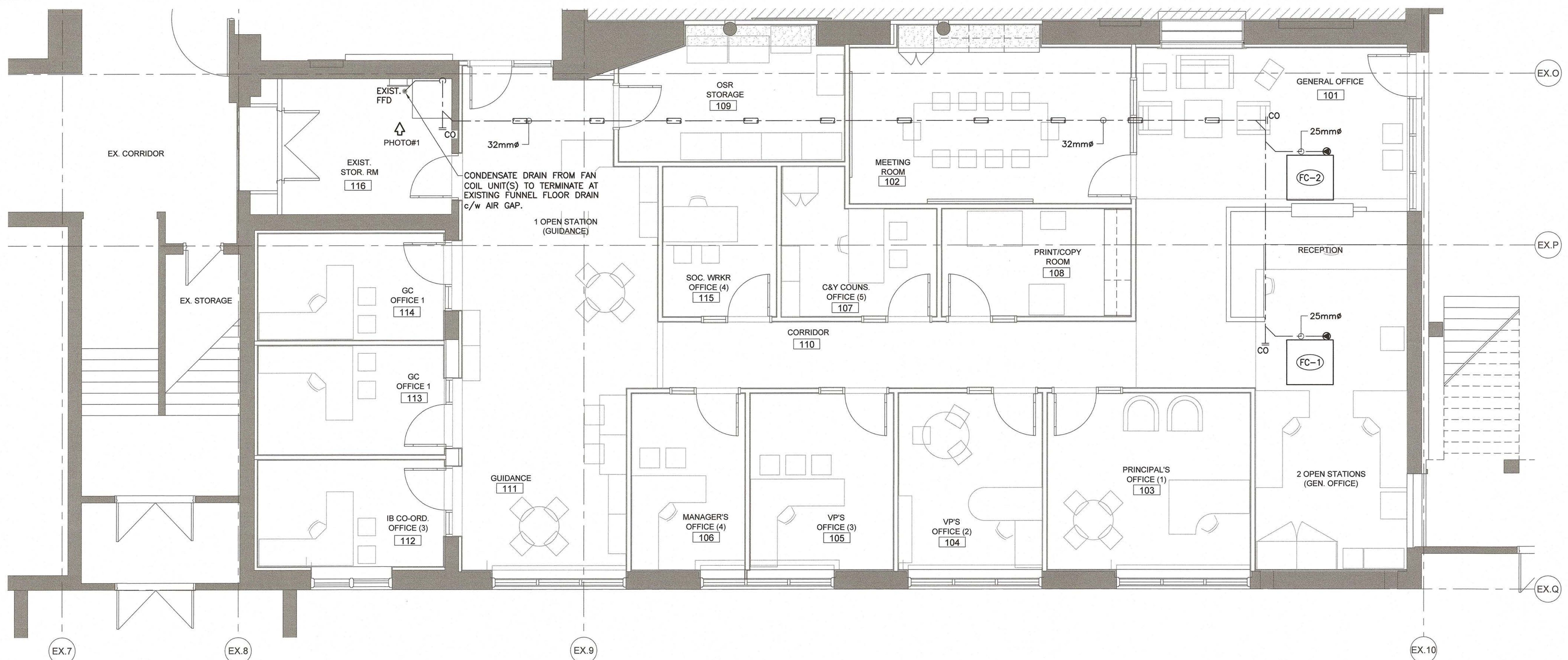


TYPICAL ROOF MOUNTED EXHAUST FAN DETAIL
N.T.S.

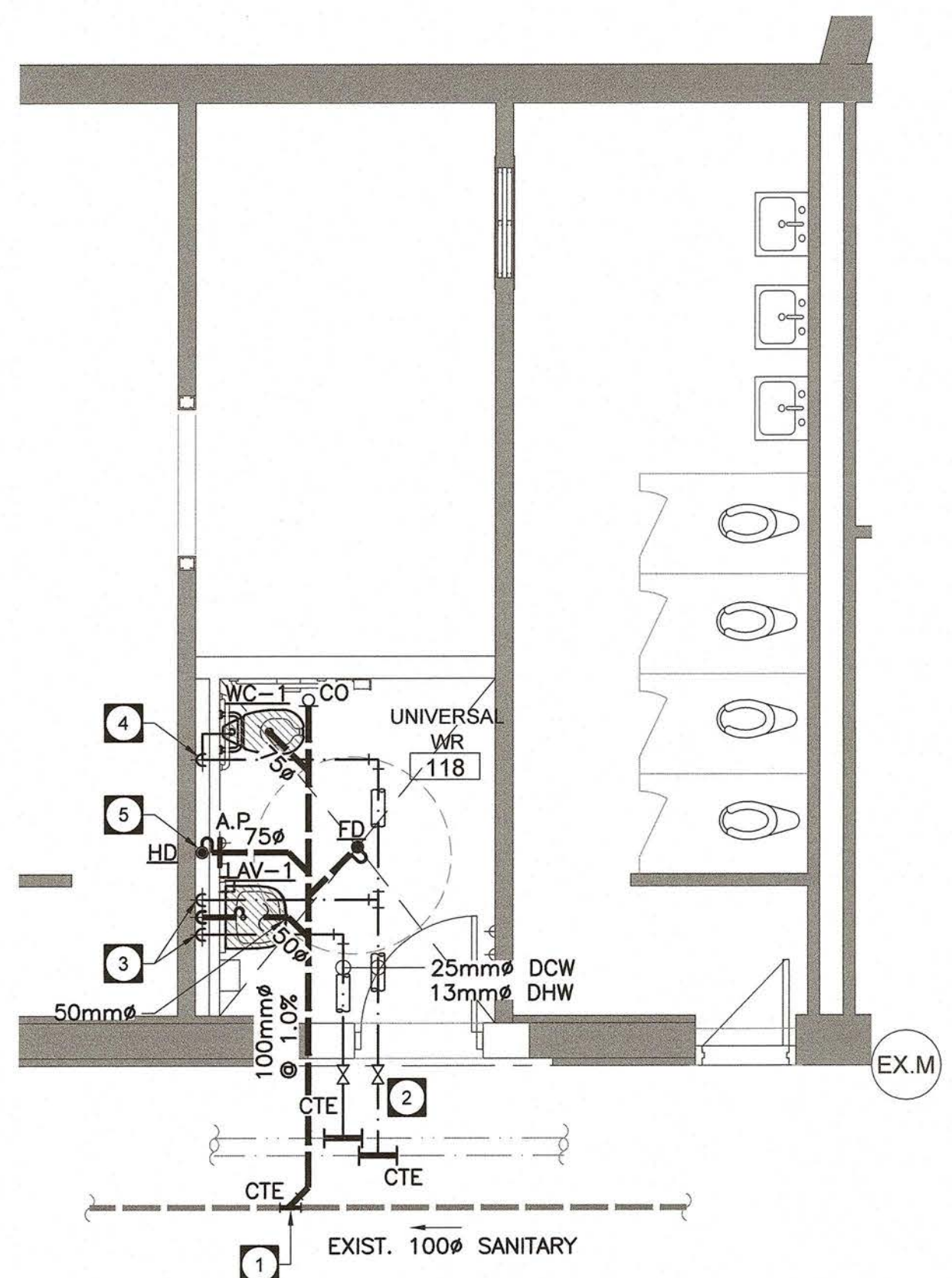


- NOTES:**
- ALL HEATING WATER SYSTEM PIPING TO BE ACCOMMODATED TO FAN COIL UNIT MANUFACTURER
 - THIS DRAWING INDICATES ONLY ONE CIRCUIT FOR CLARITY AND THERE ARE TWO SEPARATE PIPING SYSTEM FOR FAN COIL UNIT.
 - FAN COIL UNITS ARE FURNISHED WITH 2-WAY CONTROL VALVES.

FAN COIL UNIT INSTALLATION DETAILS
N.T.S.



PART GROUND FLOOR PLAN - NEW PLUMBING LAYOUT
SCALE: 1:50



PART GROUND FLOOR PLAN
UNIVERSAL WR 117 NEW PLUMBING LAYOUT
SCALE: 1:50

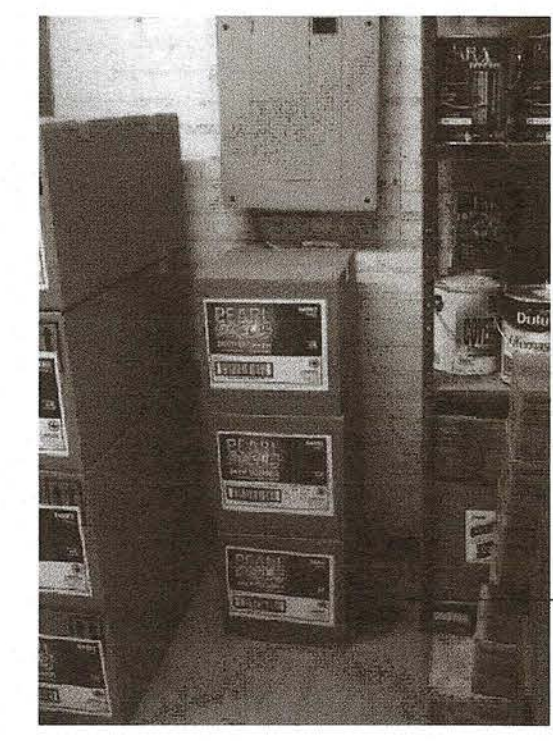
Every drainage pipe that has size of 3 in. or less shall have a downward slope in the direction of flow at least 1 in 50 (2 percent) as per OBC, Div. B, 7.4.8.1.(1).

Nominally horizontal piping inside a building shall be braced and supported at intervals specified in Div. B, 7.3.4.5. of the OBC.

REFER TO MECHANICAL SPECIFICATIONS BOOKLET DATED FEBRUARY 2, 2021 FOR HVAC AND PLUMBING SYSTEM INFORMATION.

GENERAL NOTES:

- THE EXISTING SERVICES SHOWN ON THIS DRAWING HAVE BEEN TAKEN FROM AS-BUILT DRAWINGS. THIS INFORMATION MUST NOT ASSUMED TO BE COMPLETE OR UP-TO-DATE. THIS MECHANICAL CONTRACTOR SHALL CARRYOUT A FULL SURVEY OF ALL EXISTING SERVICES AND STRUCTURE TO CONFIRM THE SIZE, LOCATION, DIRECTION OF FLOW AND INVERTS OF THESE SERVICES, BEFORE THE COMMENCEMENT OF ANY WORK. REPORT ANY DISCREPANCIES TO THE PROJECT MANAGER.
- THIS CONTRACTOR TO CARRY AN ALLOWANCE IN TENDER FOR PROBABLE MINIMUM 30 METERS (100'-0") DISTANCE FOR NEW SERVICES CONNECTION TO SUITABLE EXISTING SERVICES.
- CONTRACTOR SHALL SCAN FLOOR FOR EXACT LOCATION OF SANITARY PIPING AND FOR ANY INTERFERENCE BEFORE CORE DRILLING THE FLOOR. NO EXTRAS WILL BE ALLOWED FOR ANY NEGLIGENCE. COORDINATE WITH GENERAL CONTRACTOR FOR CUTTING AND PATCHING OF WALLS AND FLOORS.
- TEMPORARILY REMOVE AND/OR RELOCATE ALL EXISTING BUILDING SERVICES THAT ARE IN THE WAY OF MECHANICAL WORK BEING PERFORMED AND REINSTATE EXISTING SERVICES ONCE MECHANICAL WORK HAS BEEN COMPLETED.
- ALL PLUMBING WORK TO CONFORM TO ONTARIO BUILDING CODE, PROVIDE COMPLETE VENT SYSTEM TO MEET SECTION 7 OF ONTARIO BUILDING CODE. - PER DIV. B, 7.5.
- SANITARY DRAINAGE AND VENT PIPING ABOVE GRADE SHALL BE CERTIFIED TO CAN/CSA-B181.2 "PVC DRAIN, WASTE, AND VENT PIPE AND PIPE FITTINGS". DOMESTIC HOT AND COLD WATER PIPING SHALL BE TYPE "L" HARD COPPER TUBING WITH SOLDERED FITTINGS.
- IPEX SYSTEM XFR 15-50 PIPE AND FITTINGS C/W APPROVED FIRE STOPS IN AREA WHERE THE CEILING SPACE IS UTILIZED AS RETURN AIR PLENUM.
- COORDINATE PIPES WITH HVAC DUCTWORK, ELECTRICAL AND STRUCTURAL, OFFSET AS REQUIRED.
- PROVIDE FIRE STOPS TO APPROVED STANDARDS FOR ALL PIPING PENETRATIONS AT RATED WALLS. - PER DIV. B, 3.1.9.
- REVISE ANY 3" to 4" @ 1.0% SLOPE IF THERE IS A PROBLEM FOR INVERT OF SANITARY PIPE.
- ALL EQUIPMENT WITH WATER CONNECTIONS TO BE INSTALLED WITH SILICONE SEAL BETWEEN EQUIPMENT AND WALL AND/OR FLOOR. ALL SILICONE SEALS TO BE BY GENERAL CONTRACTOR AFTER EQUIPMENT IN FINAL LOCATION.
- PROVIDE ISOLATION VALVES TO DOMESTIC HOT & COLD WATER LINES TO ALL NEW PLUMBING FIXTURES. PROVIDE BACKFLOW PREVENTION DEVICES ON ALL APPLICABLE PLUMBING FIXTURES AS PER APPROPRIATE CODES AND STANDARDS.
- RUN ALL WATER LINES IN CEILING SPACE UNLESS OTHERWISE NOTED. DO NOT RUN WATER PIPES IN EXTERIOR WALLS.
- INSULATE ALL NEW AND EXISTING DOMESTIC HOT/COLD WATER PIPES WITH MINIMUM 12mm THICK INSULATION EXCEPT PIPING PERIMETER WALL WHICH REQUIRES 25mm COVER EXPOSED PIPES WITH PVC JACKETS. INSULATE CONDENSATE DRAIN PIPE WITH MINIMUM 12mm THICK INSULATION.
- ALL MECHANICAL EQUIPMENT AND FIXTURES SHALL BE INSTALLED WITH THE MINIMUM REQUIRED CLEARANCES FOR SAFETY, ACCESS, AND MAINTENANCE AS PER THE MOST STRINGENT OF:
 - MANUFACTURER'S RECOMMENDATIONS, AND
 - DIMENSIONED DESIGN DRAWINGS



SITE REFERENCE - PHOTO #1
N.T.S.

- DRAWING NOTES:
- APPROXIMATE LOCATION OF EXISTING 100mm ϕ SANITARY DRAIN LINE, CONNECT NEW DRAIN LINE TO EXISTING. EXACT POINT OF CONNECTION, LOCATION, SIZE, INVERT AND DIRECTION OF FLOW TO BE DETERMINED ON SITE BEFORE ANY PLUMBING IS STARTED.
 - APPROXIMATE LOCATION OF EXISTING DOMESTIC HOT & COLD WATER LINE(S) IN CEILING SPACE, CONNECT NEW LINE(S) TO EXISTING c/w NEW ISOLATION VALVES AND MAKE GOOD. INSULATE PIPING AS PER MECHANICAL SPECIFICATIONS. ALLOW FOR FREEZING OF PIPES. EXACT LOCATION OF EXISTING LINE(S) TO BE DETERMINED ON SITE PRIOR TO COMMENCING WITH THE WORK.
 - 13mm ϕ HOT AND COLD WATER LINES DOWN TO SERVE LAVATORY
 - 25mm ϕ COLD WATER LINES DOWN TO SERVE WATER CLOSET.
 - HUB DRAIN INSIDE CHASE c/w WALL ACCESS PANEL FOR CONDENSATE DRAIN FROM UNIT VENTILATOR(S) ABOVE.

Client
Halton District School Board
2050 Guelph Line
Burlington, Ontario

BURLINGTON CENTRAL
H.S. RENOVATIONS

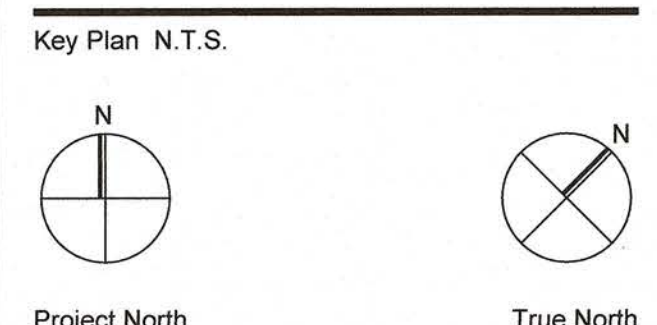
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ALL CONSTRUCTION TO MEET ONTARIO BUILDING CODE REQUIREMENTS.

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No.	Revisions	Date
2	ISSUED FOR PERMIT	2021-01-21
1	ISSUED FOR COORDINATION	2020-08-25
No.	Issue	Date

General Contractor shall check and verify all dimensions and report all errors and omissions to the Architect. Do not scale the drawings. Drawings shall not be used for construction purposes until issued by the Architect for construction.

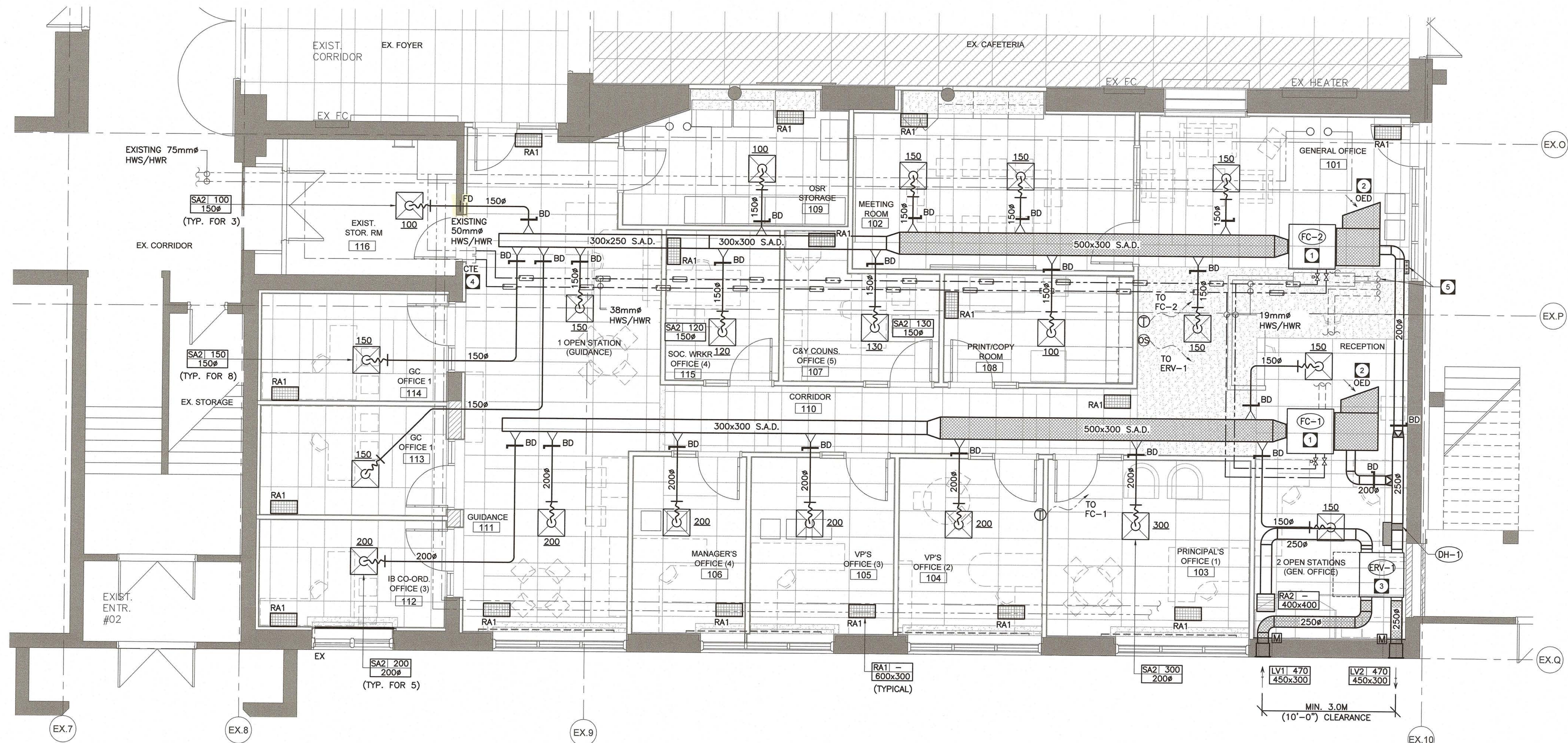


Drawing Title:
PART GROUND FLOOR PLAN - PLUMBING LAYOUT

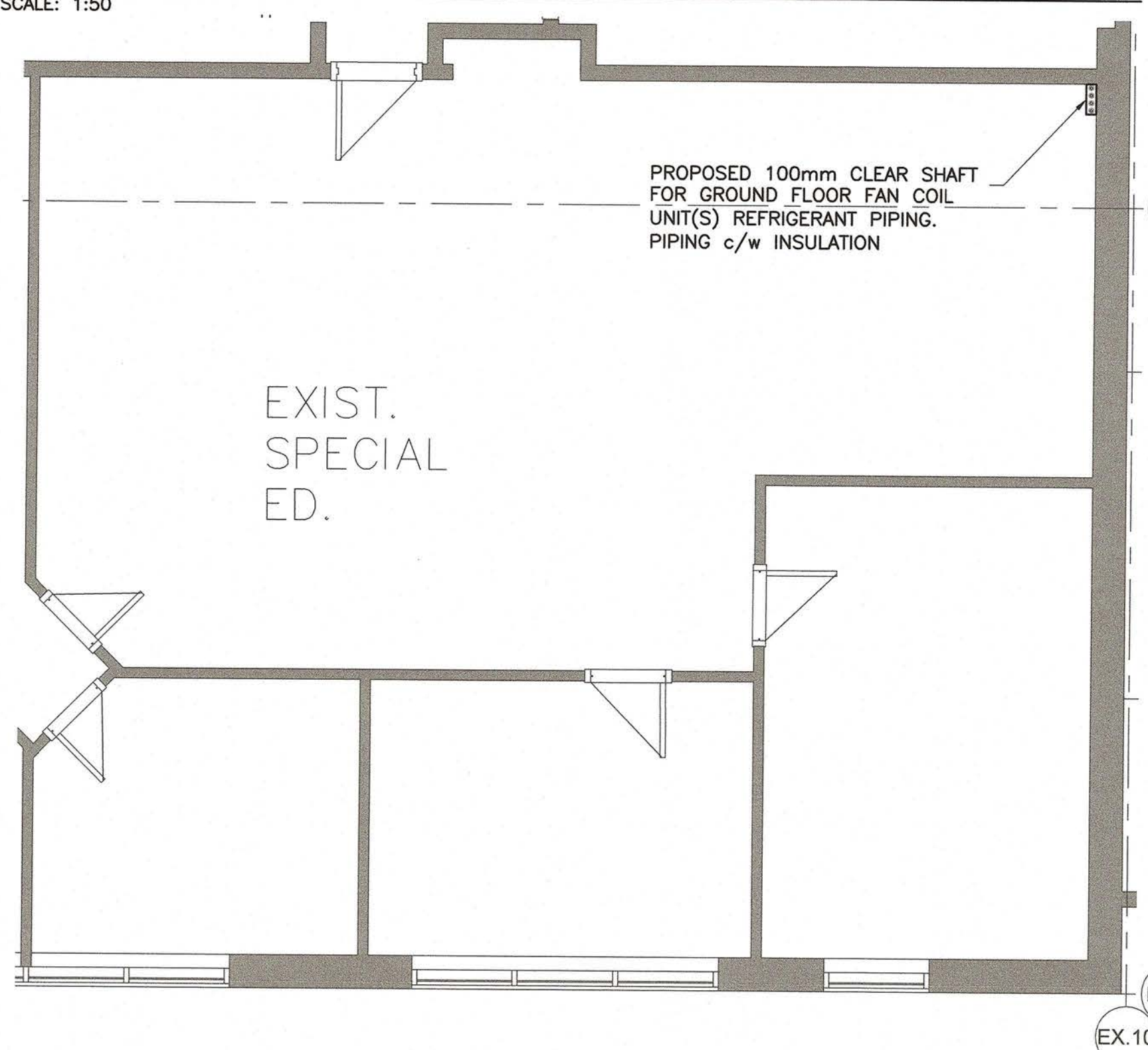
Scale: AS SHOWN Date: APR 2020

Drawn by: DH Checked by: CK

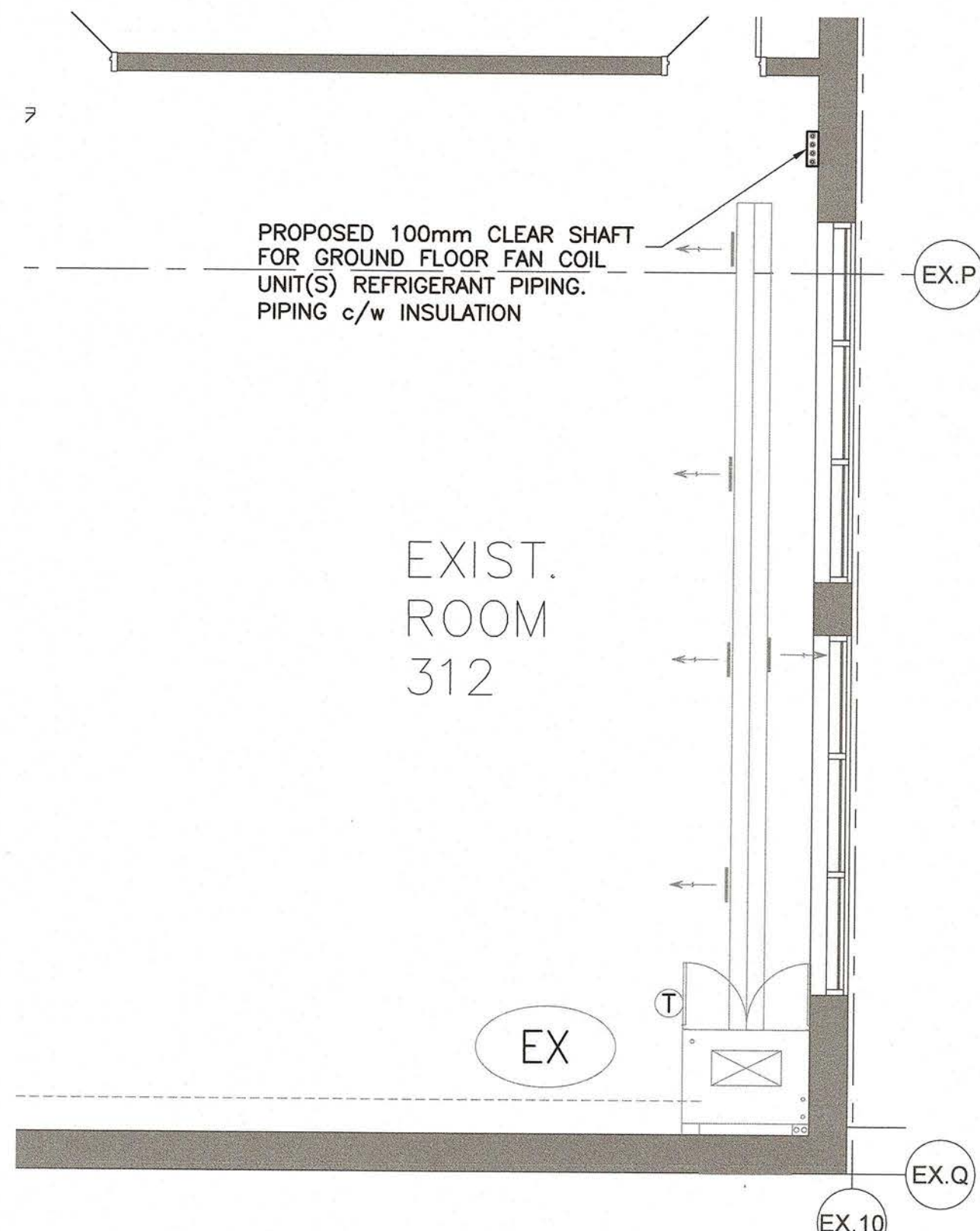
Job No. 20009 Drawing No. M2.1



PART GROUND FLOOR - NEW OFFICE AREA H.V.A.C. LAYOUT PLAN
SCALE: 1:50



PART SECOND FLOOR H.V.A.C. NEW LAYOUT PLAN
SCALE: 1:100



PART THIRD FLOOR H.V.A.C. NEW LAYOUT PLAN
SCALE: 1:100

Materials installed in a ceiling plenum shall have a maximum flame-spread rating of not more than 25 and a maximum smoke developed classification of not more than 50 except as specified in Div. B, 3.6.4.3.

Fire Dampers shall be installed as per Div. B, 3.1.8.9. and NFPA 80-2013, "Fire Doors and Other Opening Protectives".

NEW H.V.A.C. DRAWING NOTES:

- 1 NEW FAN COIL UNIT MOUNTED IN CEILING SPACE c/w HANGING RODS AND (4) VIBRATION ISOLATORS. INSTALL PER MANUFACTURER INSTRUCTIONS. MECHANICAL CONTRACTOR TO CONNECT CONDENSATE DRAIN FROM THE UNIT TO EXISTING FUNNEL FLOOR DRAIN IN RM114. INTERNALLY SOUND LINE THE RETURN AIR DUCTWORK WITH 25mm ACOUSTIC INSULATION. REFER TO MECHANICAL DRAWING M1.5 FOR FAN COIL UNIT SCHEDULE.
- 2 OPEN END DUCT IN CEILING SPACE COMPLETE WITH WIRE MESH ON INLET.
- 3 ERV UNIT MOUNTED IN CEILING SPACE c/w HANGERS AND VIBRATION ISOLATORS, UNIT TO BE DUCTED AS SHOWN. INSULATE FRESH AIR INTAKE, EXHAUST AND SUPPLY AIR DUCTS PER MECHANICAL SPECIFICATIONS. UNIT TO BE CONTROLLED BY OCCUPANCY SENSOR INSTALL ELECTRIC DUCT HEATER DOWN STREAM OF ERV PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DRAWING #M1.4 FOR ERV & DUCT HEATER SCHEDULES.
- 4 APPROXIMATE LOCATION OF EXISTING HWS/HWR LINE IN CEILING SPACE, CONNECT NEW LINE(S) TO EXISTING AND MAKE GOOD. EXACT POINT OF CONNECTION TO BE DETERMINED ON SITE BEFORE PRIOR TO ANY COMMENCEMENT OF WORK.
- 5 PROPOSED ROUTING FOR REFRIGERANT PIPING FOR FC-1 & FC-2, UP IN SHAFT THROUGH FLOORS ABOVE AND UP THROUGH ROOF TO CONDENSER UNIT(S) c/w CONTROL WIRING. INSULATE ALL REFRIGERANT PIPING RUNNING THROUGH SHAFT TO CONDENSING UNITS ON ROOF. REFER TO ROOF PLAN ON DRAWING #M3.4 FOR PROPOSED CONDENSER UNIT(S) LOCATION.

GENERAL NOTES:

- A. THIS DRAWING DOES NOT SHOW ALL CONCEALED PIPING, DUCT AND EQUIPMENT. CONTRACTOR TO COORDINATE WITH LIGHTING FIXTURES AND OTHER ELECTRICAL EQUIPMENT.
- B. INSULATE ALL SUPPLY, RETURN AND EXHAUST AIR DUCTWORK.
- C. COORDINATE TEMPERATURE SENSOR LOCATION WITH THE OWNER.
- D. ALL LOW VOLTAGE WIRING TO BE WITHIN EMT CONDUIT PROVIDED BY THIS DIVISION.
- E. CONTRACTOR TO COORDINATE WITH CONTROLS CONTRACTOR FOR COMPONENTS WIRED TO BAS SYSTEM.
- F. INSULATE ALL NEW CHILLED WATER SUPPLY & RETURN LINES WITH MINIMUM 25mm THICK INSULATION COMPLETE WITH VAPOUR BARRIER JACKET.
- G. TEMPORARILY REMOVE AND/OR RELOCATE ALL EXISTING BUILDING SERVICES THAT ARE IN THE WAY OF MECHANICAL WORK BEING PERFORMED AND REINSTATE EXISTING SERVICES ONCE MECHANICAL WORK HAS BEEN COMPLETED.

Client
Halton District School Board
2050 Guelph Line
Burlington, Ontario

**BURLINGTON CENTRAL
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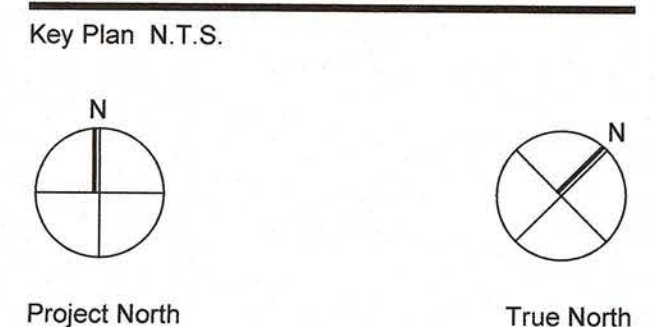
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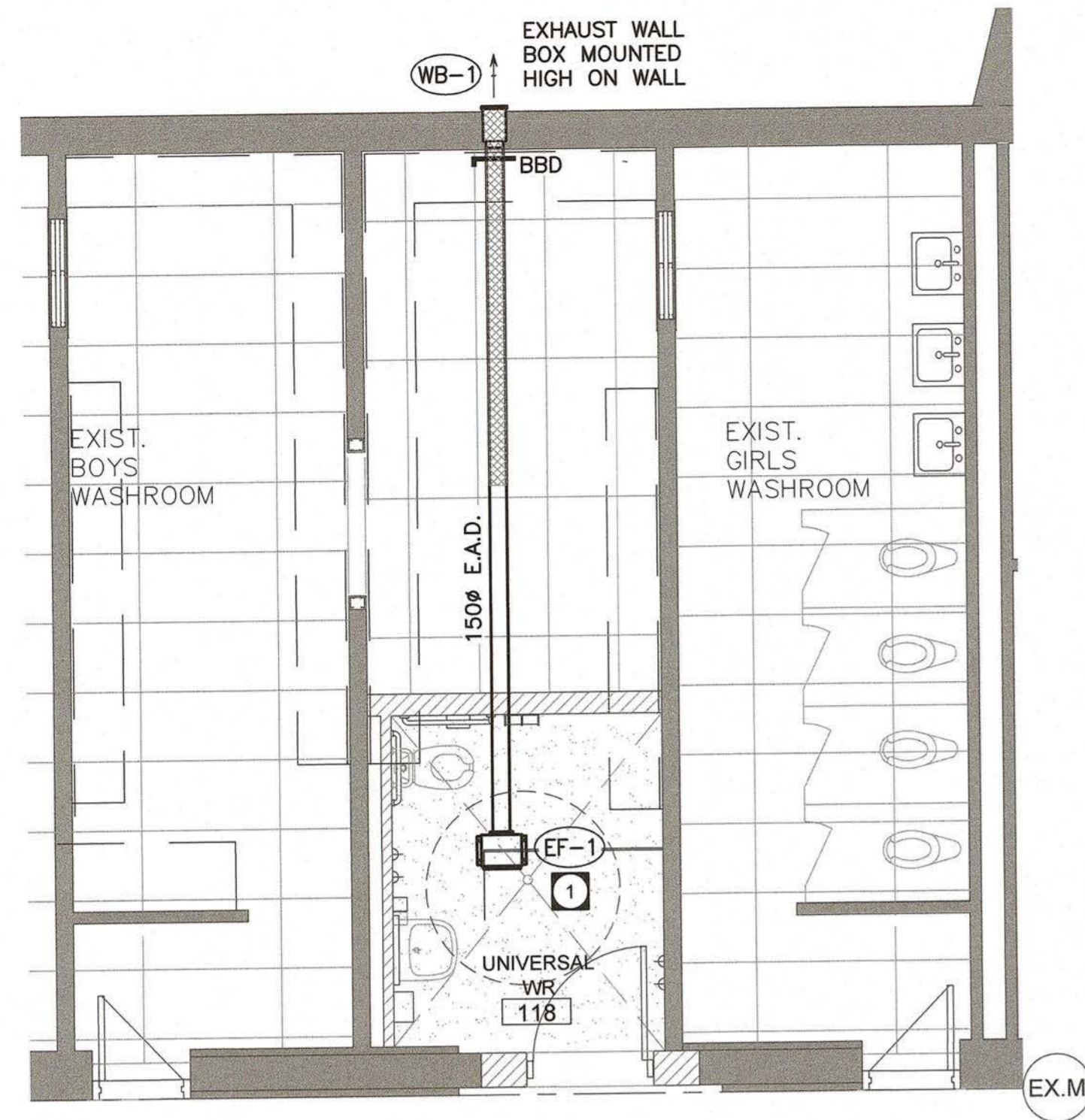
Project North		True North	
No.	Revisions	Date	
2	ISSUED FOR PERMIT	2021-01-21	
1	ISSUED FOR COORDINATION	2020-08-25	
No.	Issue	Date	

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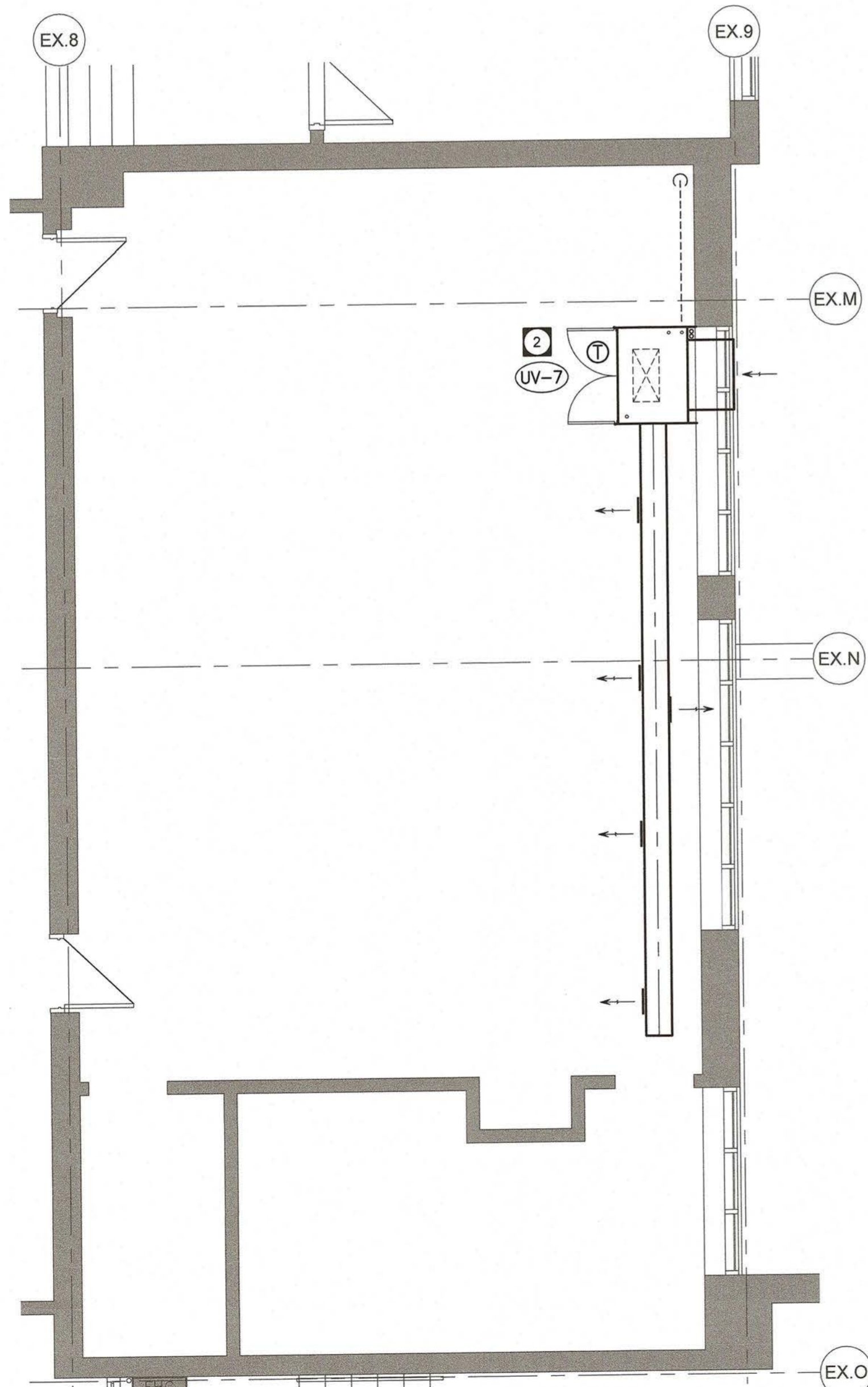


Drawing Title:
**PART GRD/2ND/3RD
NEW H.V.A.C.
LAYOUT PLAN**

Scale: AS SHOWN Date: APR 2020
Drawing No. 20009 Drawing No. M3.2



PART GROUND FLOOR PLAN
UNIVERSAL WR 117 NEW H.V.A.C. LAYOUT
SCALE: 1:50



PART THIRD FLOOR - EXISTING CLASSROOM 321
SCALE: 1:50

NEW H.V.A.C. DRAWING NOTES:

- 1 NEW CEILING MOUNTED INLINE EXHAUST FAN, REFER TO DRAWING M1.4 FOR FAN SCHEDULE (FAN TO OPERATE THROUGH OCCUPANCY SENSOR).
- 2 EXISTING UNIT VENTILATOR TO BE TEMPORARILY DISCONNECTED AND REMOVED TO ALLOW REMOVAL OF EXISTING WINDOW AND INSTALLATION OF NEW WINDOW.

GENERAL NOTES:

- A. THIS DRAWING DOES NOT SHOW ALL CONCEALED PIPING, DUCT AND EQUIPMENT. CONTRACTOR TO COORDINATE WITH LIGHTING FIXTURES AND OTHER ELECTRICAL EQUIPMENT.
- B. INSULATE ALL SUPPLY, RETURN AND EXHAUST AIR DUCTWORK.
- C. COORDINATE TEMPERATURE SENSOR LOCATION WITH THE OWNER.
- D. ALL LOW VOLTAGE WIRING TO BE WITHIN EMT CONDUIT PROVIDED BY THIS DIVISION.
- E. CONTRACTOR TO COORDINATE WITH CONTROLS CONTRACTOR FOR COMPONENTS WIRED TO BAS SYSTEM.
- F. INSULATE ALL NEW CHILLED WATER SUPPLY & RETURN LINES WITH MINIMUM 25mm THICK INSULATION COMPLETE WITH VAPOUR BARRIER JACKET.
- G. TEMPORARILY REMOVE AND/OR RELOCATE ALL EXISTING BUILDING SERVICES THAT ARE IN THE WAY OF MECHANICAL WORK BEING PERFORMED AND REINSTATE EXISTING SERVICES ONCE MECHANICAL WORK HAS BEEN COMPLETED.
- H. FOR ALL EXHAUST FAN REFER TO EXHAUST FAN INSTALLATION DETAIL ON MECHANICAL DRAWING M1.5.

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**BURLINGTON CENTRAL
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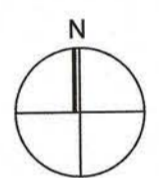


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Key Plan N.T.S.



Project North

True North

No.	Revisions	Date
2	ISSUED FOR PERMIT	2021-01-21
1	ISSUED FOR COORDINATION	2020-08-25
No.	Issue	Date

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Drawing Title:
**PART GRD & 3RD FLOOR
NEW H.V.A.C.
LAYOUT PLAN**

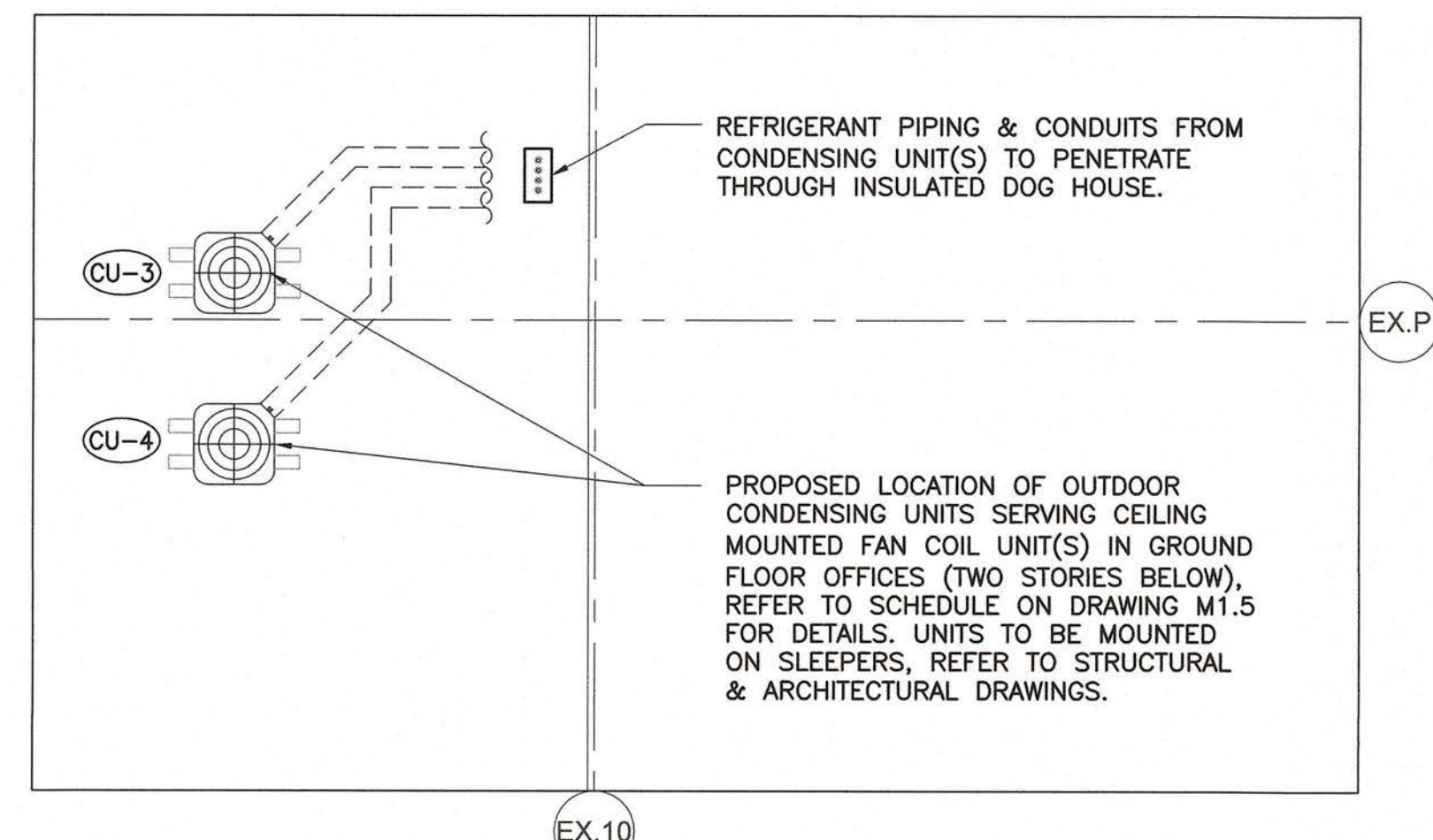
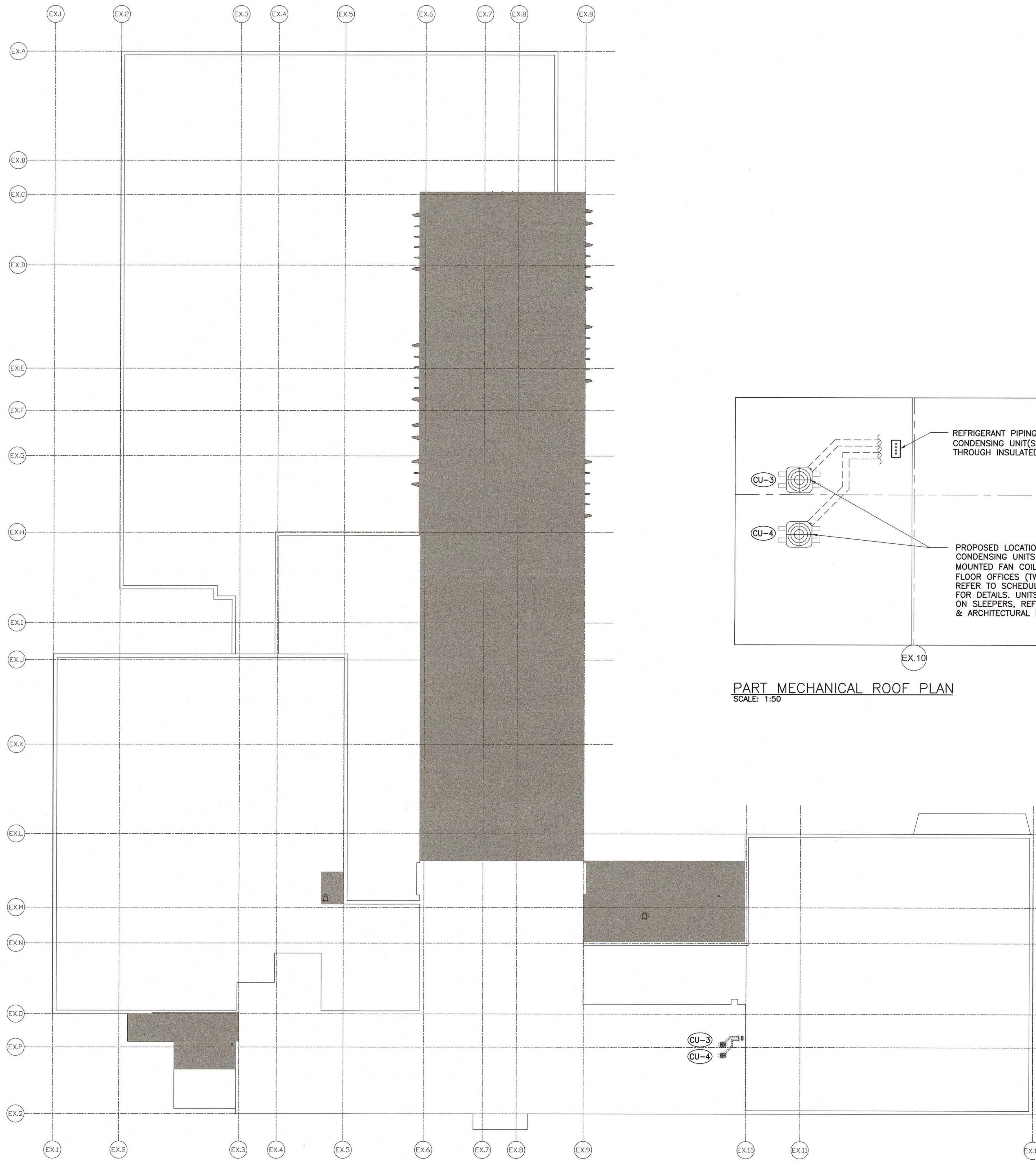
Scale: AS SHOWN Date: APR 2020

Drawn by: DH Checked by: CK

Job No. Drawing No.

20009

M3.3



PART MECHANICAL ROOF PLAN
SCALE: 1:50

MECHANICAL ROOF PLAN
SCALE: 1:250

Client
Halton District School Board
2050 Guelph Line
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**BURLINGTON CENTRAL
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Key Plan N.T.S.

Project North True North

No.	Revisions	Date

No.	Issue	Date
2	ISSUED FOR PERMIT	2021-01-21
1	ISSUED FOR COORDINATION	2020-08-26

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Drawing Title:
**MECHANICAL
ROOF PLAN**

Scale: AS SHOWN	Date: APR 2020
Drawn by: DH	Checked by: CK
Job No. 20009	Drawing No. M3.4