



# LYDIA TRULL PUBLIC SCHOOL

COURTICE

ONTARIO



KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

## MECHANICAL UPGRADES

80 AVONDALE DR, COURTICE, ON L1E 3C2

### CONSULTANTS:

#### PRIME CONSULTANT

DEI CONSULTING ENGINEERS INC.  
55 NORTHLAND ROAD  
WATERLOO, ONTARIO  
N2V 1Y8

#### ELECTRICAL CONSULTANT

DEI CONSULTING ENGINEERS INC.  
55 NORTHLAND ROAD  
WATERLOO, ONTARIO  
N2V 1Y8



Consulting Engineers

MECHANICAL | ELECTRICAL | AQUATIC

55 Northland Road, Waterloo, ON N2V 1Y8  
Phone: 519-725-3555  
Website: deiassociates.ca

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### DRAWING LIST

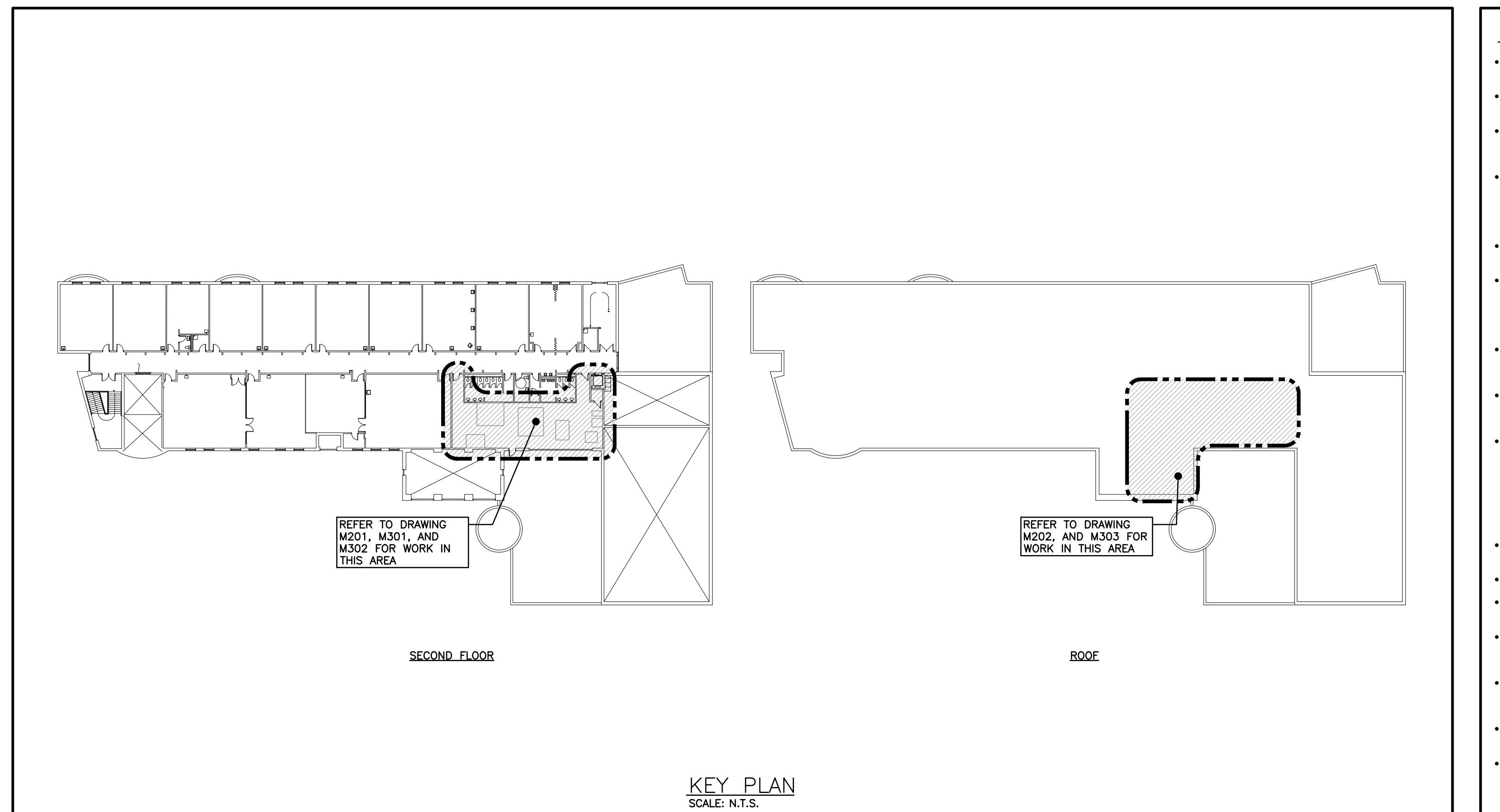
#### MECHANICAL

M101 LEGEND, SCHEDULES, & KEY PLAN  
M201 GENERAL TRADES PLANS – DEMOLITION & RENOVATION  
M202 GENERAL TRADES PLANS – DEMOLITION & RENOVATION  
M301 SECOND FLOOR MECHANICAL ROOM PLAN – DEMOLITION  
M302 SECOND FLOOR MECHANICAL ROOM PLAN – RENOVATION  
M303 ROOF PLAN – DEMOLITION & RENOVATION  
M401 SCHEMATICS & DETAILS

#### ELECTRICAL

E101 LEGEND, SCHEDULES, & KEY PLAN  
E201 SECOND FLOOR MECHANICAL ROOM PLAN – DEMOLITION & RENOVATION  
E202 ROOF PLAN – DEMOLITION & RENOVATION

SET NUMBER  
24300



#### FAN SCHEDULE

Item	Type	Service	Exhaust Air Data			Voltage	Manufacturer	Model	Remarks
			Capacity cfm	Size hp	SP in. wc				
RF-01	TUBULAR CENTRIFUGAL	AHU-1	20000	15	1.5	575/3/60	PENN BARRY	TUB-330	C/W VIBRATION ISOLATION HANGERS, BELT DRIVE
RF-02	FLOOR MOUNTED EXHAUST	AHU-2	3750	3	1.0	575/3/60	DAIKIN	CAH00BGVAC	C/W VIBRATION ISOLATION HANGERS, BELT DRIVE
RF-03	TUBULAR CENTRIFUGAL	AHU-3	4750	3	1.0	575/3/60	PENN BARRY	TUB-222	C/W VIBRATION ISOLATION HANGERS, BELT DRIVE

#### AIR COOLED CONDENSING UNIT SCHEDULE

Item	Type	Service	Capacity MBH	Compressor			Sgt. Cond. Fans	Electrical	Unit Weight lbs	Manufacturer	Model	Remarks	
				Type	No. Stages	No. Refrig.							
CU-1	OUTDOOR ROOF MOUNTED	AHU-1	1091	SCROLL	6	6	R410A	40	2	575/3/60	162.7	175	6400± DAIKIN RCS110D
CU-2	OUTDOOR ROOF MOUNTED	AHU-2	245	SCROLL	3	4	R410A	40	2	575/3/60	34.3	45	2850± DAIKIN RCS020D
CU-3	OUTDOOR ROOF MOUNTED	AHU-3	172	SCROLL	2	2	R410A	40	2	575/3/60	25.1	30	2750± DAIKIN RCS015D

#### PUMP SCHEDULE

Item	Type	Services	Capacity USgpm	Head ft	Size hp	Speed rpm	Electrical Voltage	Manufacturer & Model	Remarks					
EX-P-3	VERTICAL IN-LINE CENTRIFUGAL	GLYCOL SYSTEM	140	55	5	1800	575/3/60	BELL & GOSSETT E80 2x2x9.5C	REBALANCE EXISTING PUMP. PROVIDE NEW IMPELLER					
EX-P-4	VERTICAL IN-LINE CENTRIFUGAL	GLYCOL SYSTEM	140	55	5	1800	575/3/60	BELL & GOSSETT E80 2x2x9.5C	REBALANCE EXISTING PUMP. PROVIDE NEW IMPELLER					

#### AIR HANDLING UNIT SCHEDULE

Item	Type	Service	Supply Air Fan Data				Min. Position Outdoor Air %	Voltage	Cooling				Heating				Manufacturer	Model	Weight lbs	Remarks								
			Capacity cfm	Size hp	Drive	ESP in. wc			Medium	Coil type	Sens. Cap. MBH	Total Cap. MBH	Rows Fins/in	Entering db/wb	Leaving db/wb	Fan Vel. fpm	P.D. Air in.	Medium	Capacity GPM	EAT db °F	LAT db °F	EWT db °F	LWT db °F					
AHU-1	BUILT-UP INDOOR AIR HANDLING UNIT	UPPER & LOWER CLASSROOMS	24000	25	VARIABLE FREQUENCY DRIVE	2.0	30%	575/3/60	R454B	DX	658.7	1089.1	6/10	80.4/68.5	55.4/54.1	491.2	.82	50% P.GLYCOL	950.6	100	45.3	83.5	145	125	HAAKON	5200±	INTERCONNECT WITH CU-1 & RF-01	
AHU-2	BUILT-UP INDOOR AIR HANDLING UNIT	SECOND FLOOR CLASSROOMS	5750	7.5	VARIABLE FREQUENCY DRIVE	1.5	40%	575/3/60	R454B	DX	155.6	245.3	6/10	81/68.1	55.1/53.8	431	.67	50% P.GLYCOL	131.8	22.8	36	65	145	132.1	DAIKIN	CAH014GDM	1700±	INTERCONNECT WITH CU-2 & RF-02
AHU-3	BUILT-UP INDOOR AIR HANDLING UNIT	LIBRARY	5500	7.5	VARIABLE FREQUENCY DRIVE	2.0	25%	575/3/60	R454B	DX	133	205	6/10	81/69	54/53	360	0.6	50% P.GLYCOL	205	22.8	50	85	145	125	DAIKIN	CAH014GDM	1700±	INTERCONNECT WITH CU-3 & RF-03

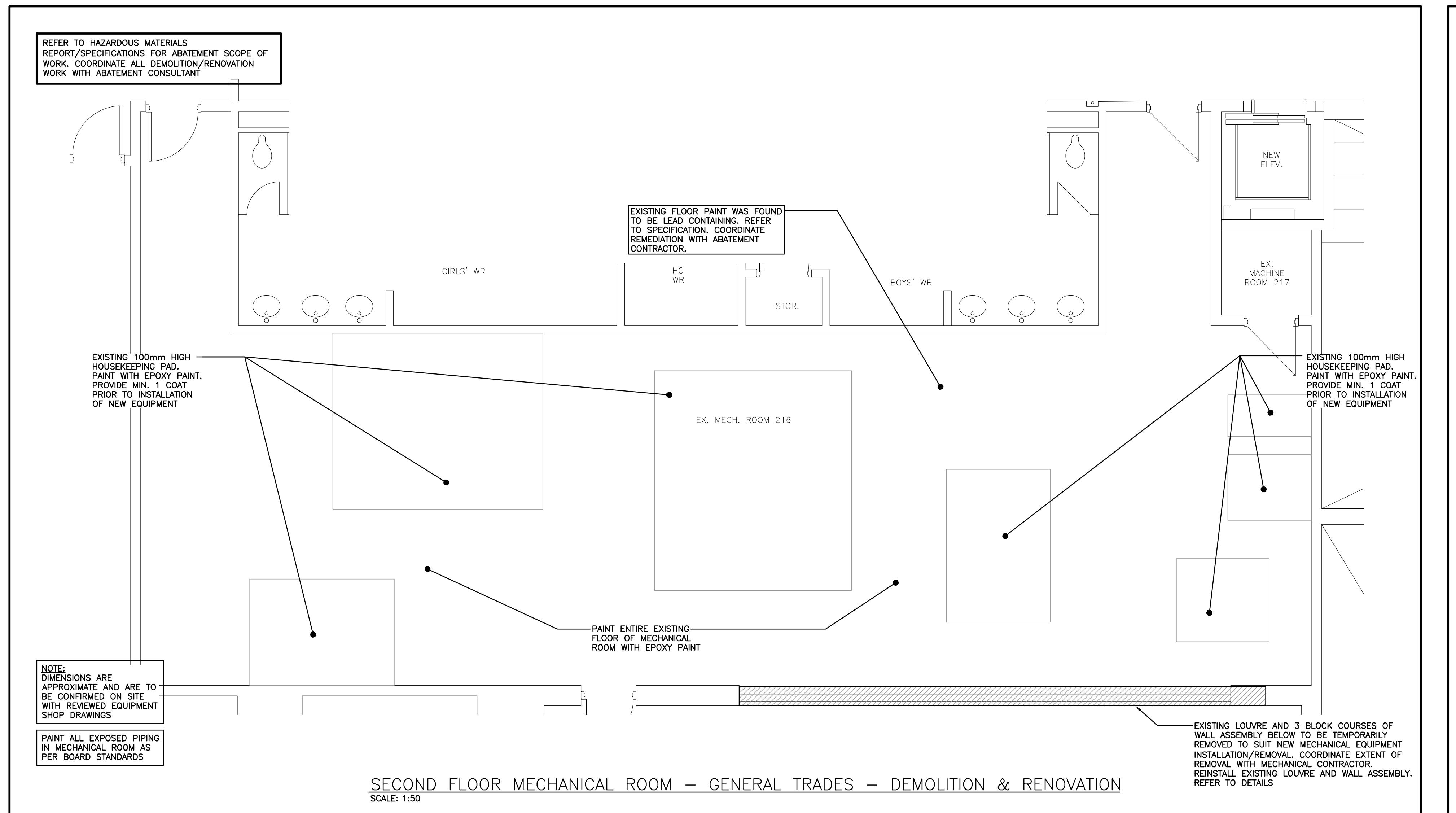
#### GENERAL ARCHITECTURAL NOTES

- ALL REFERENCES TO REMOVE MEANS REMOVE AND DISPOSE OF UNLESS OTHERWISE NOTED.
- ALL DRAWING MEASUREMENTS ARE FOR REFERENCE ONLY. ALL MEASUREMENTS TO BE CONFIRMED ON SITE.
- NOT ALL ACCESSORIES ARE INDICATED ON PLAN DRAWINGS. REFER TO ENLARGED PLANS, SPECIFICATIONS, MECHANICAL AND ELECTRICAL DRAWINGS FOR RELATED WORK.
- NEW EDGES TO PARTLY DEMOLISHED WALLS AND NEW OPENINGS TO EXISTING MASONRY WALLS SHALL NOT BE LEFT WITH SAW CUT OR BROKEN UNITS. SET NEW MASONRY UNITS IN THE ESTABLISHED COURSING PATTERN TO FORM THE NEW EDGE. ALL EXPOSED CONCRETE BLOCK CORNERS TO BE BULLNOSED UNLESS OTHERWISE NOTED.
- ALL REMAINING EXISTING FLOOR FINISHES TO BE MAINTAINED AND FULLY PROTECTED.
- ALL DEMOLITION WORK TO OCCUR AS IDENTIFIED. ALL DAMAGE OUTSIDE THESE AREAS TO BE MADE GOOD BY THE CONTRACTOR. WHEN WORK FOR MECHANICAL AND ELECTRICAL CONNECTIONS ARE REQUIRED TO TAKE PLACE OUTSIDE DESIGNATED AREAS, USE EXTREME CAUTION TO PREVENT ANY ADDITIONAL DAMAGE.
- VERIFY SITE DIMENSIONS AND DIMENSIONS OF NEW WORK BEFORE PROCEEDING WITH DEMOLITION OR REMOVAL OF EXISTING BUILDING MATERIALS.
- REFER TO DRAWINGS FOR REMOVAL OF ANY LIGHTING FIXTURES, DEVICES, RACEWAYS AND/OR EQUIPMENT MADE OBSOLETE BY WORK UNDER THIS CONTRACT. REFER TO ELECTRICAL DRAWINGS FOR RETROFIT.
- ALL WALL AND/OR ROOF OPENINGS CREATED THRU THE REMOVAL OF MECHANICAL AND ELECTRICAL SERVICES/EQUIPMENT SHALL BE PATCHED USING LIKE MATERIALS. MAKE GOOD, PROVIDE BACKING WHERE REQUIRED. MATCH EXISTING PATTERN AND FINISHES. BULLNOSE EXPOSED CONCRETE FURTHER EXTENT. MAINTAIN CONTINUITY OF ALL EXISTING HORIZONTAL AND VERTICAL FIRE SEPARATIONS WHERE NEW PENETRATIONS OCCUR WITHIN THE ENTIRE SCOPE OF WORK. PROVIDE FIRE STOPPING AND SMOKE SEAL AT NEW PENETRATIONS. MATCH EXISTING MATERIALS. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR EXTENT OF NEW MECHANICAL AND ELECTRICAL PENETRATIONS.
- DO NOT STOCKPILE CONSTRUCTION MATERIALS ADJACENT TO THE EXISTING BUILDING.
- EXISTING CEILINGS NOT NOTED SHALL REMAIN AS PRESENTLY INSTALLED.
- EXISTING ITEMS SHOWN BUT NOT NOTED AS BEING REMOVED OR RENOVATED SHALL REMAIN AS PRESENTLY INSTALLED.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ON SITE ALL EXISTING CEILING STYLES/LAYOUTS PRIOR TO THE COMMENCEMENT OF WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY CEILINGS REMOVED/DAMAGED DURING CONSTRUCTION THAT IS BEYOND THE MECHANICAL/ELECTRICAL SCOPE OF WORK.
- CEILINGS BEING REMOVED AND RE-INSTALLED ARE TO BE RE-INSTALLED AT SAME HEIGHT UNLESS OTHERWISE NOTED.
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- PATCH PAINT ALL NEW PARTITIONS, CHASES AND AFFECTED EXISTING SURFACES TO MATCH ADJACENT SURFACES.
- PROVIDE NEW FLOOR, BASE, FINISHES AND NEW CEILING TILES/GRID WHERE DAMAGED DUE TO RENOVATION. MATCH EXISTING.

#### MECHANICAL LEGEND

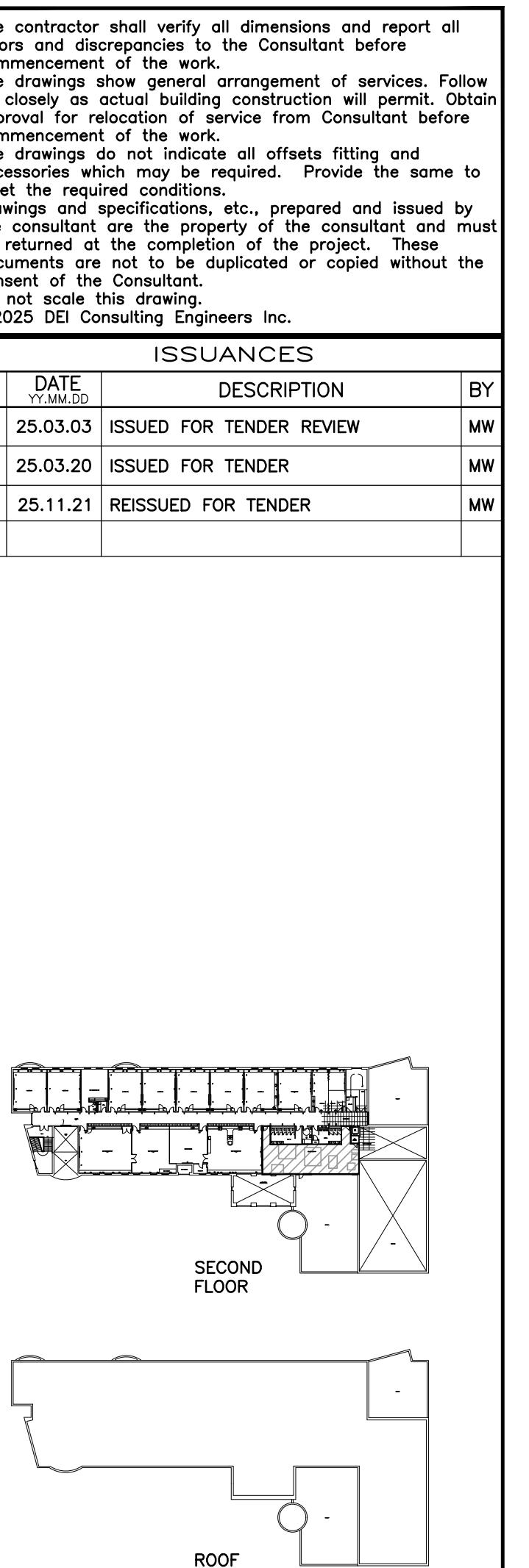
Item	Description	Item	Description
—	CUT EXISTING & CONNECT NEW PIPING	—	BALL VALVE
→	FLOW DIRECTION	—	BUTTERFLY VALVE
—	DOMESTIC COLD WATER PIPING	—	GATE VALVE
—	DOMESTIC HOT WATER PIPING	—	AIR VENT
—	DOMESTIC SANITARY PIPING ABOVE FLOOR	—	RISER VALVE
—	DOMESTIC SANITARY PIPING BELOW FLOOR	—	BALANCING VALVE
—	EXISTING STORM PIPING ABOVE FLOOR	—	INLINE PUMP
—	EXISTING STORM PIPING BELOW FLOOR	—	TRIPLE DUTY VALVE
—	CONDENSATE PIPING	—	FLOOR CLEANOUT
—	HEATING WATER SUPPLY PIPING	—	TEMPERATURE & PRESSURE RELIEF VALVE
—	HEATING WATER RETURN PIPING	—	PRESSURE GAUGE
—	GLYCOL HEATING SUPPLY	—	TEMPERATURE GAUGE
—	GLYCOL HEATING RETURN	—	THERMOMETER
—	NATURAL GAS PIPING	—	FLOW SWITCH
—	LOW PRESSURE STEAM PIPING (PRESSURE INDICATED)	—	PRESSURE REDUCING VALVE
—	REDUCED PRESSURE BACKFLOW PREVENTER	—	THERMOSTAT (WITH OR WITHOUT GUARD)
—	REDUCED PRESSURE BACKFLOW PREVENTER	—	SUPPLY AIR DUCT
—	UNION	—	RETURN/EXHAUST AIR DUCT
—	STRAINER	—	BALANCING DAMPER
—	DRAIN (SCHEMATIC)	—	OPPOSED BLADE DAMPER
—	SCREWED OR WELDED PIPE CAP	—	MOTORIZED DAMPER (OPPOSED BLADE)
—	PLUG VALVE	—	FIRE DAMPER
—	REFRIGERANT LIQUID	—	BACKDRAFT DAMPER
—	REFRIGERANT SUCTION	—	RIGID ROUND DUCT
—		Type	DIFFUSER/GRILLE SIZE (imp), TYPE & CAPACITY (cfm)
—		Type	HYDROMIC HEATING SIZE, TYPE & CAPACITY
—		AD	ACCESS DOOR
—		AFF	ABOVE FINISHED FLOOR
—		AFR	ABOVE FINISHED ROOF
—		EX	EXISTING DUCT (SIZE AS INDICATED)
—		HG	HOT GAS

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The drawings show general arrangement of services. Follow closely as



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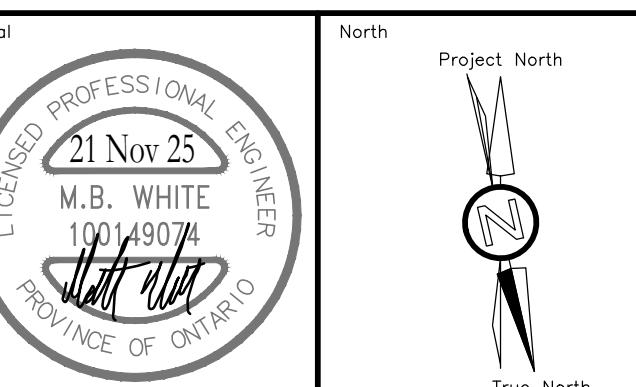
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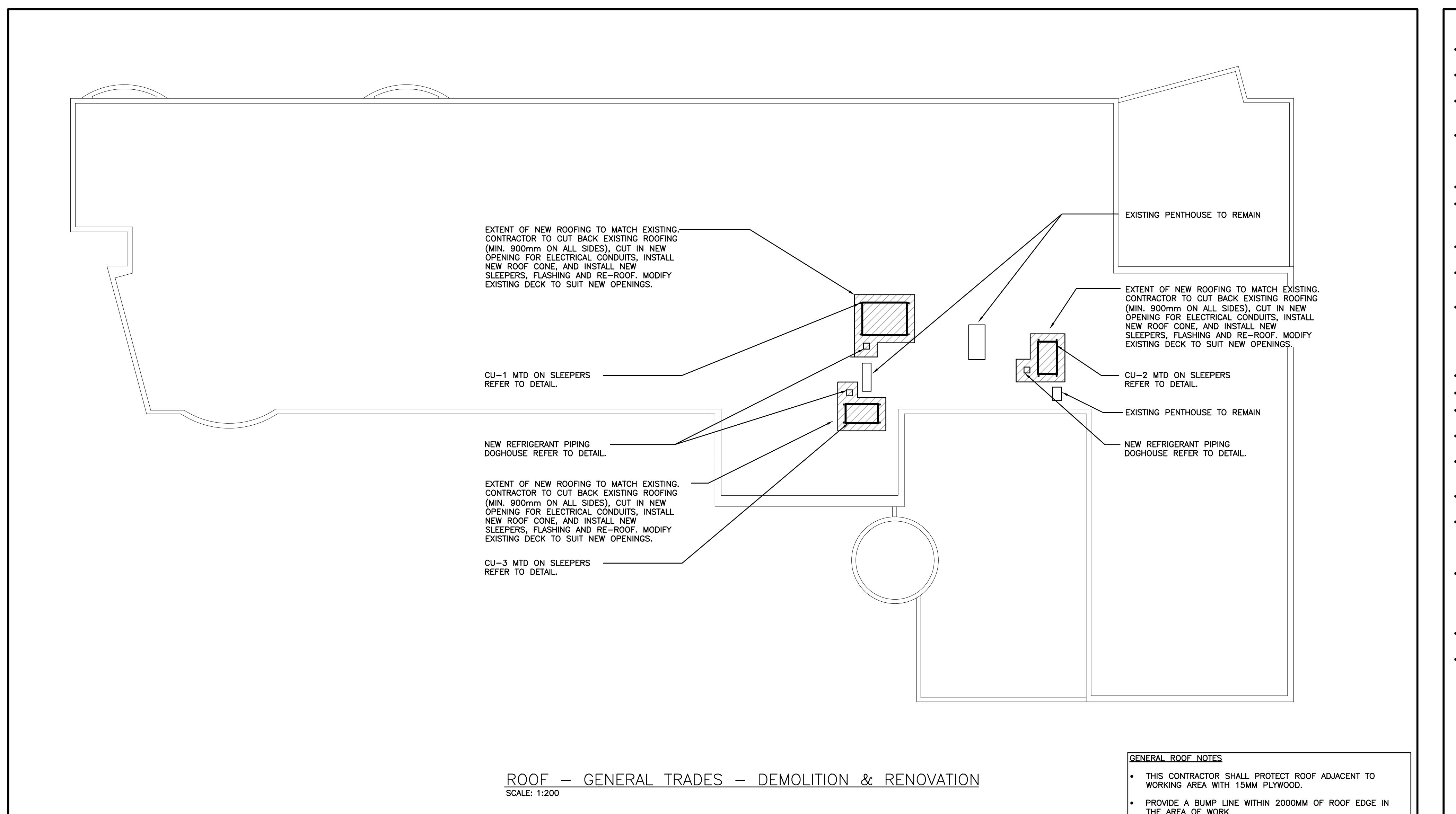
RENOVATION TO:  
**LYDIA TRULL PUBLIC SCHOOL MECHANICAL UPDATES**  
80 Avondale Dr, Courtice, ON L1E 3C2  
Sheet Title  
**GENERAL TRADES PLANS - DEMOLITION & RENOVATION**

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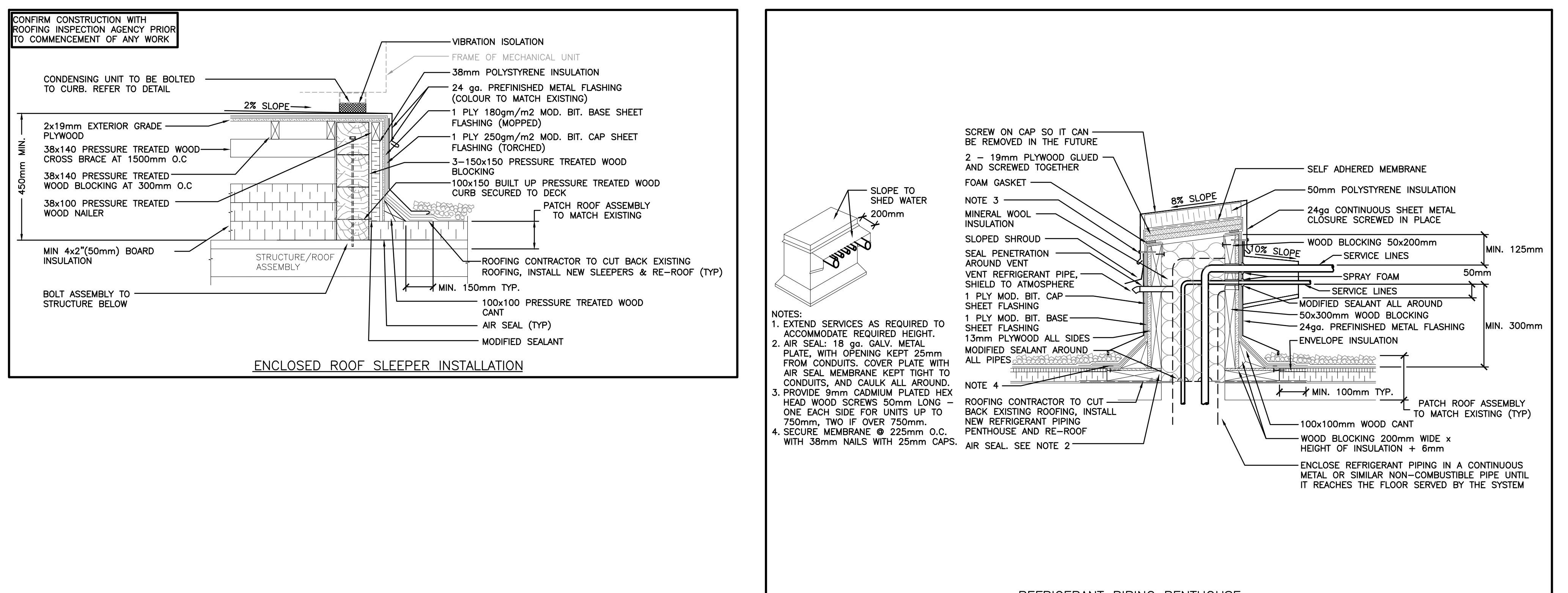
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Scale AS NOTED	Project Date SEPT 2024	Print Date SEPT 2024
Project No. 24300	Drawing No.	

**M201**

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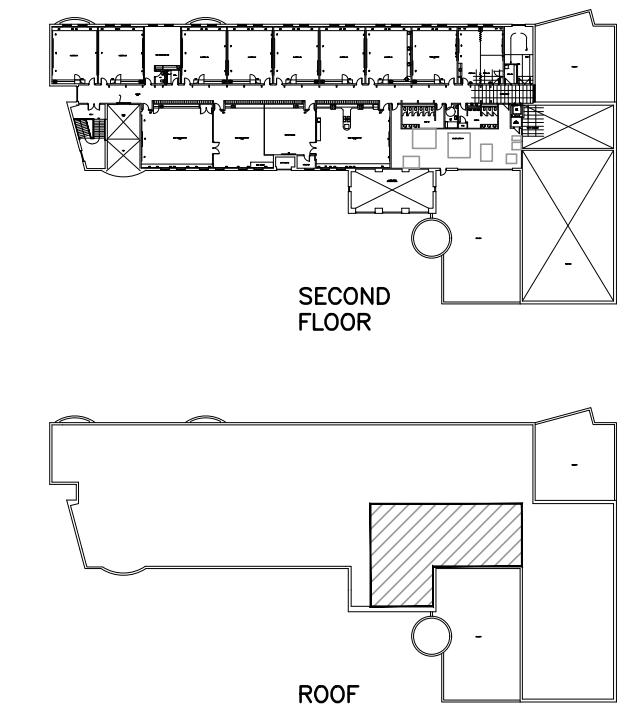
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#### ISSUANCES

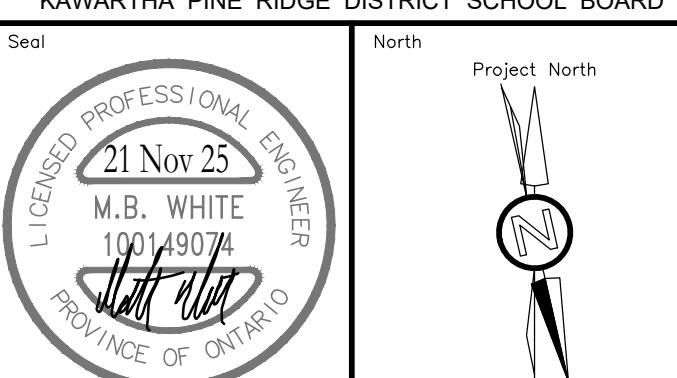
No	DATE YY/MM/DD	DESCRIPTION	BY
1	25.03.03	ISSUED FOR TENDER REVIEW	MW
2	25.03.20	ISSUED FOR TENDER	MW
3	25.11.21	REISSUED FOR TENDER	MW



#### LYDIA TRULL PUBLIC SCHOOL

COURTICE ONTARIO

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RENOVATION TO:  
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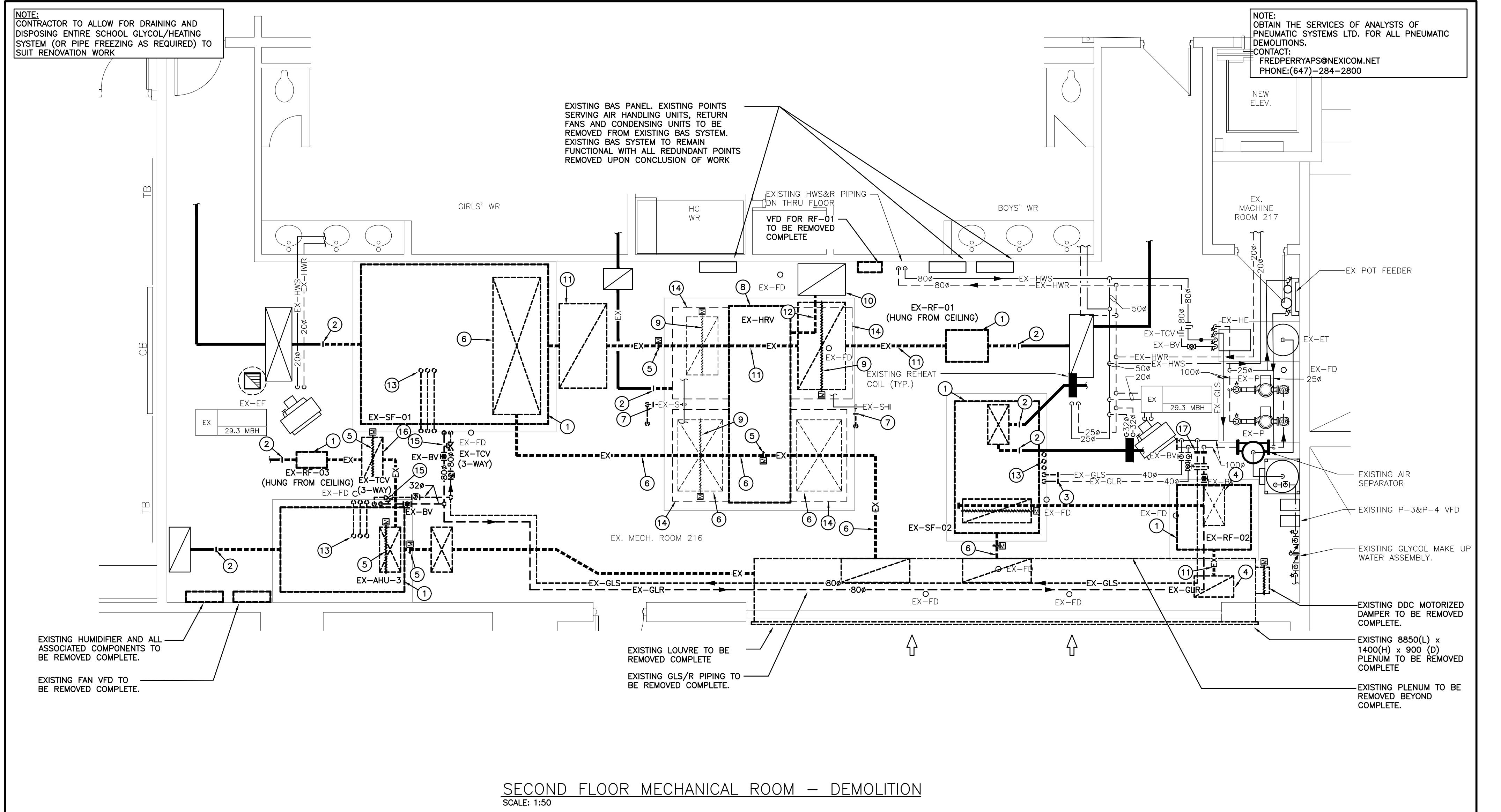
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Drawn by KB Checked by DB Approved by MW  
Scale AS NOTED Project Date SEPT 2024 Print Date SEPT 2024  
Project No. 24300 Drawing No. M202

M202



## GENERAL DEMOLITION NOTES

- EXISTING MECHANICAL ITEMS NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- EXISTING MECHANICAL ITEMS SHOWN BUT NOT NOTED AS BEING REMOVED OR RENOVATED SHALL REMAIN AS PRESENTLY INSTALLED AND OPERATING.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ON SITE ALL LOCATIONS AND SIZES OF ALL SERVICES & EQUIPMENT PRIOR TO THE COMMENCEMENT OF WORK.
- ALL OPENINGS THAT RESULT FROM THE REMOVAL OF EQUIPMENT OR SERVICES SHALL BE NEATLY PATCHED WITH SUITABLE NEW MATERIALS TO SUIT EXISTING CONSTRUCTION.
- PLUMBING VENTS ARE NOT INDICATED OR IDENTIFIED. REMOVE ALL REDUNDANT VENTS WHILE MAINTAINING INTEGRITY OF EXISTING SYSTEMS TO REMAIN.
- REMOVAL OF EXISTING PIPING, OR DUCT SYSTEMS INCLUDES REMOVAL OF ALL HANGERS, INSULATION, FITTINGS, ETC.
- MAINTAIN INTEGRITY OF EXISTING SYSTEMS THAT ARE TO REMAIN OR BE MODIFIED.
- INSTALL NEW SYSTEM OR SERVICES WHERE REQUIRED TO MAINTAIN SYSTEM OPERATION PRIOR TO DEMOLITION OF EXISTING SERVICES.
- THIS CONTRACTOR IS TO REMOVE & REPLACE CEILINGS AS REQUIRED FOR REMOVAL/REPLACEMENT OF SERVICES.
- CONTRACTOR TO CARRY IN THEIR PRICING TO DRAIN SYSTEM OR FREEZE PIPING TO COMPLETE WORK
- APPROXIMATE LOCATIONS/SIZES OF SANITARY PIPING ARE INDICATED. CONTRACTOR TO CAMERA DRAIN AND SCAN/XRAY FLOOR PRIOR TO ANY DEMOLITION

## SPECIFIC DEMOLITION NOTES

1. EXISTING UNIT AND ALL ASSOCIATED COMPONENTS TO BE REMOVED COMPLETE
2. EXISTING DUCTWORK TO BE CUT AND REMOVED BEYOND COMPLETE
3. EXISTING GLS&R PIPING TO BE CUT AND REMOVED BEYOND COMPLETE
4. EXISTING DUCTWORK TO BE CUT ON RISER & REMOVED BEYOND COMPLETE
5. EXISTING PNEUMATIC DAMPER TO BE REMOVED COMPLETE. REMOVE ALL EXPOSED REDUNDANT PNEUMATIC CONTROL TUBING AND CAP WHERE CONCEALED TO MAINTAIN SYSTEM FUNCTIONALITY.
6. EXISTING OUTDOOR AIR DUCT TO BE REMOVED COMPLETE.
7. EXISTING SPRINKLER PIPING TO BE TEMPORARILY REMOVED TO SUIT RENOVATION WORK.
8. EXISTING HEAT RECOVERY UNIT AND ALL ASSOCIATED COMPONENTS TO BE TEMPORARILY REMOVED AND RETAINED TO SUIT RENOVATION WORK.
9. EXISTING PNEUMATIC DAMPER ON RISER TO BE REMOVED COMPLETE. REMOVE ALL EXPOSED REDUNDANT PNEUMATIC CONTROL TUBING AND CAP WHERE CONCEALED TO MAINTAIN SYSTEM FUNCTIONALITY
10. EXISTING 1100X800 EXHAUST DUCT SHALL BE CUT ON RISER AND REMOVED BEYOND COMPLETE.
11. EXISTING RETURN DUCT TO BE REMOVED COMPLETE.
12. EXISTING EXHAUST DUCT TO BE REMOVED COMPLETE.
13. EXISTING REFRIGERANT PIPING UP THRU ROOF TO BE REMOVED COMPLETE.
14. PLENUM SERVING HRU TO BE REMOVED COMPLETE.
15. EXISTING PNEUMATIC HEATING VALVE TO BE REMOVED COMPLETE.
16. EXISTING 850X400 RELIEF DUCT TO BE CUT ON RISER AND REMOVED BEYOND COMPLETE.
17. EXISTING GLS&R PIPING TO BE CUT, CAPPED AT MAIN AND REMOVED BEYOND COMPLETE

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

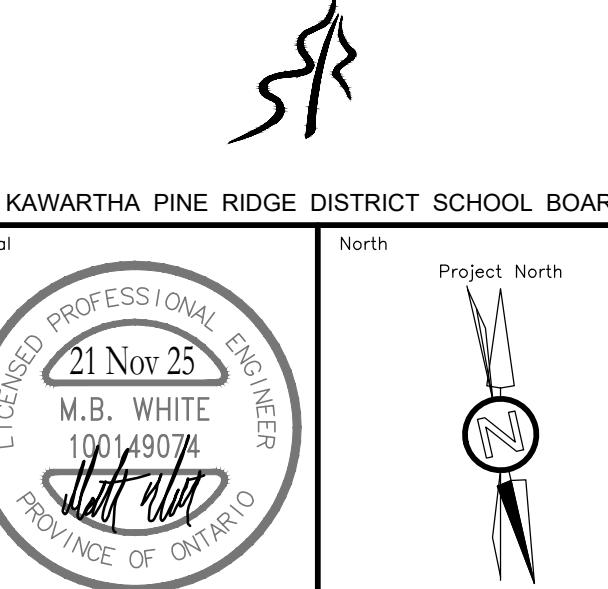
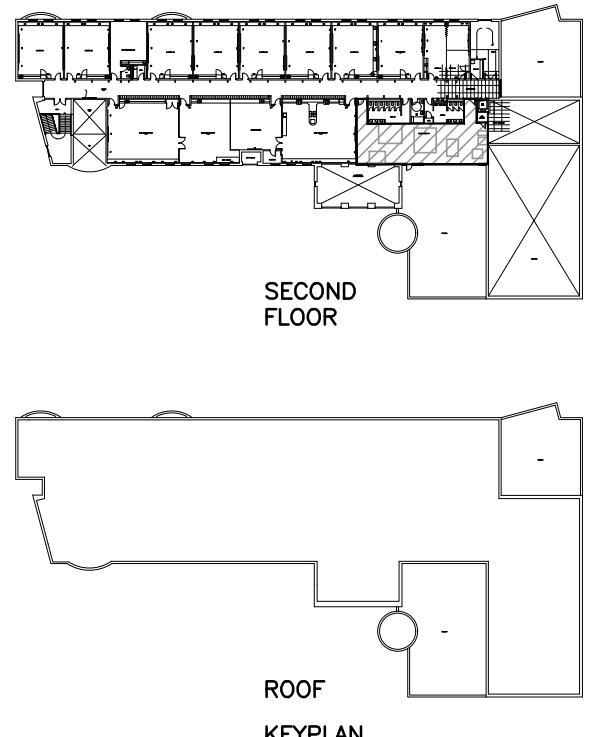
The drawings show general arrangement of services. Follow closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.

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Do not scale this drawing.

ISSUANCES		
DATE YY.MM.DD	DESCRIPTION	BY
25.03.03	ISSUED FOR TENDER REVIEW	MW
25.03.20	ISSUED FOR TENDER	MW
25.11.21	REISSUED FOR TENDER	MW



ENOVATION TO:  
**LYDIA TRULL PUBLIC  
SCHOOL MECHANICAL  
GRADES**

Avondale Dr, Courtice, ON L1E 3C2

---

Street Title

**SECOND FLOOR MECHANICAL  
ROOM PLAN - DEMOLITION**



Consulting Engineers

# **MECHANICAL | ELECTRICAL | AQUATIC**

Website: [delassociates.ca](http://delassociates.ca)

Own by	Checked by	Approved by
<b>DR</b>	<b>DR</b>	<b>MW</b>

B	DB	MW
1	Project B1	Project B1

RECEIVED **NOTED** **SEPT 2024** **SEPT 2024**

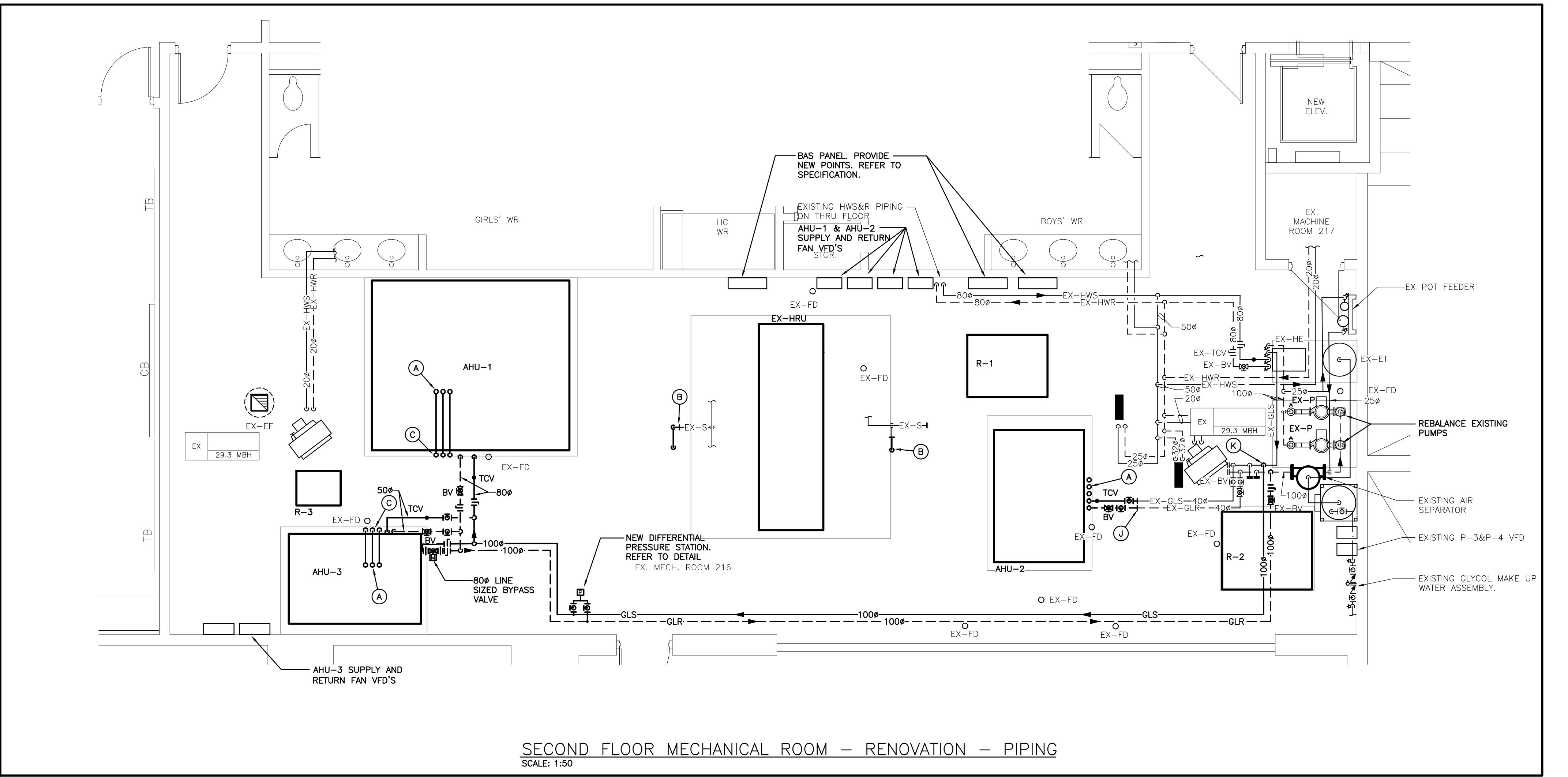
Project No. Drawing No.

M30

24300 | M30

www.english-test.net

24300 | M301



## GENERAL RENOVATION NOTES

- CLEAN AND VACUUM EXISTING DUCTWORK ADJACENT TO NEW CONNECTIONS ± 10'-0" IN EACH DIRECTION.
- CO-ORDINATE ANY OWSJ BRIDGING RELOCATION OR REMOVAL/REPLACEMENT WITH THE GENERAL CONTRACTOR. PAY ALL COSTS REQUIRED TO MODIFY BRIDGING FOR INSTALLATION OF DUCTWORK.
- SANITARY VENT PIPING IS NOT SHOWN. PROVIDE ALL NECESSARY VENT PIPING FROM ALL FIXTURES FOR A COMPLETE SYSTEM TO ALL LOCAL PLUMBING CODE & LOCAL AUTHORITY REQUIREMENTS, CONNECTED TO EXISTING VENTS OR NEW VENTS AS REQUIRED. CO-ORDINATE VENT LOCATION(S) WITH GENERAL CONTRACTOR. MAINTAIN MINIMUM 3700mm (12'-0") FROM ANY AIR INLET. INSTALL VENT PIPING HIGH IN JOIST SPACE.
- CO-ORDINATE FINAL GRILLES/DIFFUSERS LOCATIONS ON SITE.
- CONTRACTOR TO CARRY IN THEIR PRICING TO DRAIN SYSTEM OR FREEZE PIPING TO COMPLETE WORK

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.

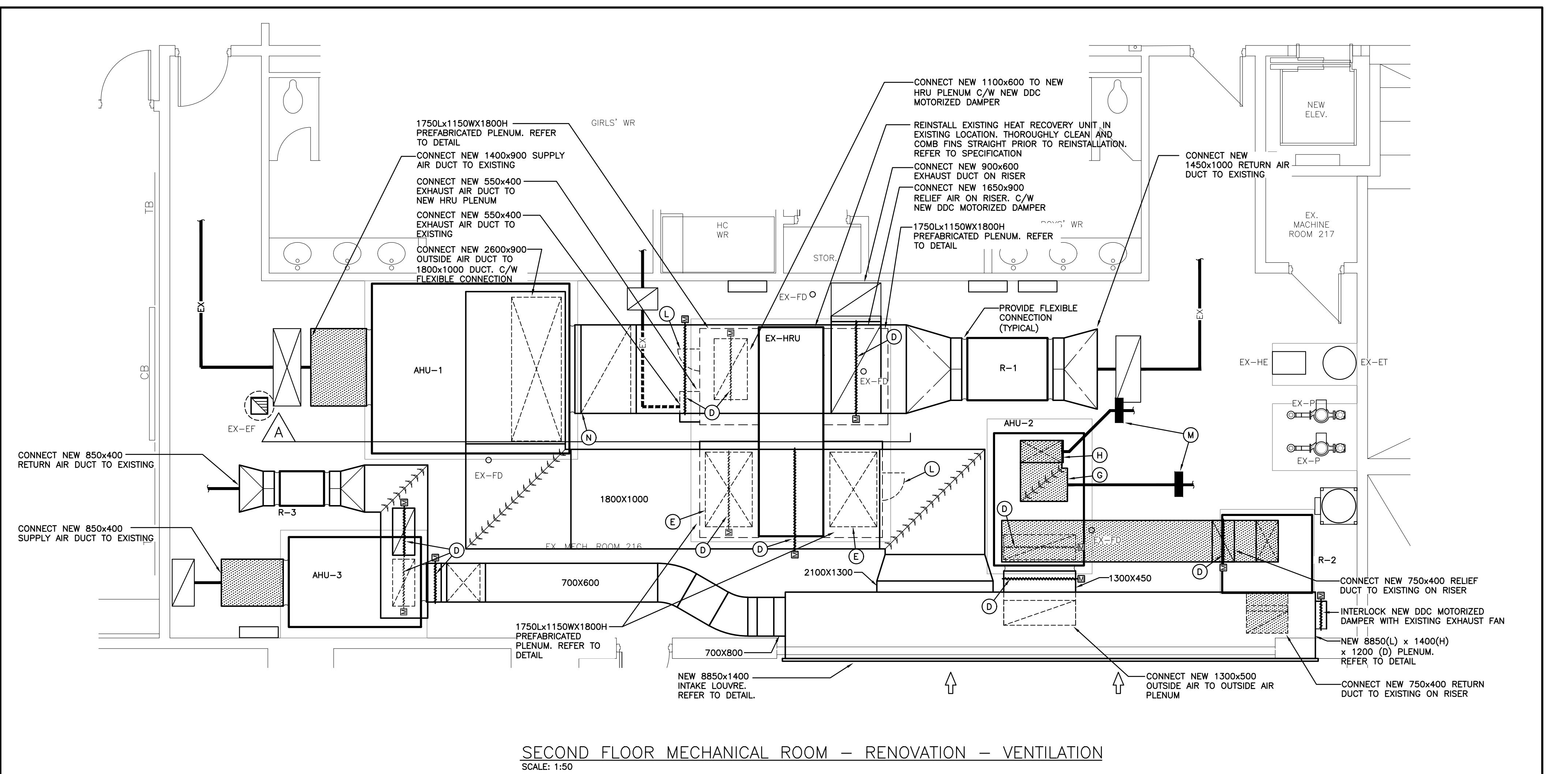
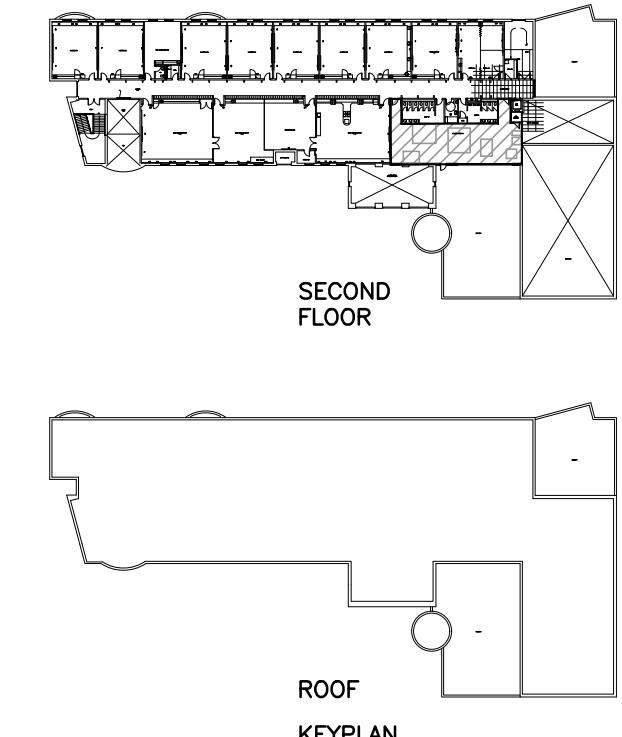
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No	DATE YY.MM.DD	DESCRIPTION	BY
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2	25.03.20	ISSUED FOR TENDER	MW
3	25.11.21	REISSUED FOR TENDER	MW

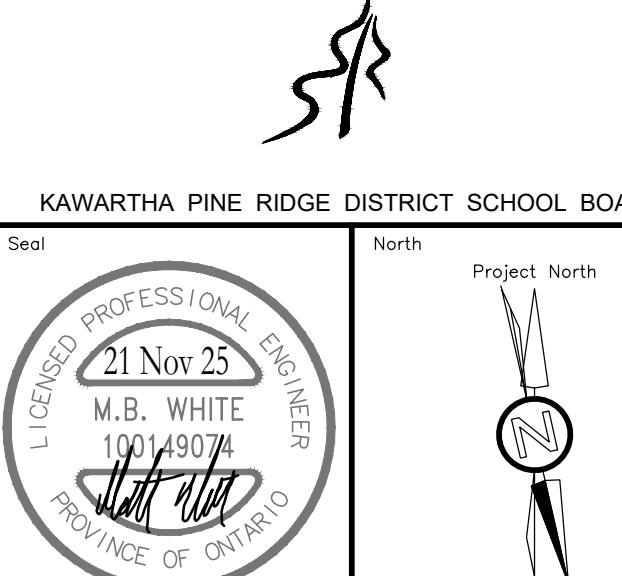
## SPECIFIC RENOVATION NOTES

- A. NEW REFRIGERANT PIPING UP THRU ROOF IN DOGHOUSE. REFER TO DETAIL. NUMBER OF CIRCUITS AND SIZING AS PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
- B. REINSTALL TEMPORARILY REMOVED SPRINKLER PIPING.
- C. NEW REFRIGERANT PIPING DN TO UNIT. REFER TO DETAIL. NUMBER OF CIRCUITS AND SIZING AS PER MANUFACTURERS RECOMMENDATIONS.
- D. NEW DDC INSULATED MOTORIZED DAMPER.
- E. NEW 1350x850 OUTSIDE AIR DUCT DN TO NEW HRU PLENUM
- F. CONNECT NEW 850X400 RELIEF AIR DUCT TO EXISTING ON RISER. C/W NEW DDC INSULATED MOTORIZED DAMPER.
- G. CONNECT NEW 600X600 SUPPLY AIR DUCT TO EXISTING.
- H. CONNECT NEW 375X350 DUCT TO EXISTING.
- J. CONNECT NEW 40Ø GLS/R PIPING TO EXISTING GLS/R PIPING
- K. CONNECT NEW 100Ø GLS/R PIPING TO EXISTING 100Ø GLS/R HEADER.
- L. PROVIDE 1500Hx600W ACCESS DOOR IN PREFABRICATED PLENUM.
- M. THOROUGHLY CLEAN EXISTING REHEAT COIL AND COMB FINS STRAIGHT PRIOR TO DUCT REINSTALLATION. REFER TO SPECIFICATION.
- N. OFFSET 1600x900 OA DUCT DN AND CONNECT TO UNIT.



## GENERAL SPRINKLER NOTES

1. SUBMIT PRELIMINARY DESIGN & HYDRAULIC CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER, AND MANUFACTURERS' PRODUCT SHEETS FOR SHOP DRAWING SUBMISSION AS SPECIFIED PRIOR TO COMMENCING WORK.
- ENSURE DESIGN MEETS OR EXCEEDS PRESENT NFPA 13 STANDARDS. ENSURE SPRINKLER SYSTEMS ARE INSTALLED TO NFPA 13 STANDARDS. UPON COMPLETION, SPRINKLER CONTRACTOR TO PROVIDE REPRODUCIBLE DRAWING (AT 1/8"=1'-0" SCALE) AND HYDRAULIC CALCULATIONS OF AS-BUILT CONDITION.
- SPRINKLER CONTRACTOR'S 'PROFESSIONAL ENGINEER' TO PROVIDE O.B.C. AND NFPA REQUIRED INSPECTION AND CERTIFICATION.
- REFER TO ARCHITECTURAL DRAWINGS FOR REFLECTED CEILING PLAN.
- PROVIDE SPRINKLER HEAD TYPES AS FOLLOWS:
  - 1. PROVIDE UPRIGHT HEADS WITHIN 12" OF EXPOSED DECK THROUGHOUT EXPOSED STRUCTURE AREAS. PROVIDE HEAD GUARDS IN AREAS WHERE HEADS ARE BELOW 8'-0" & STORAGE ROOMS.
- SPRINKLER HEADS TO BE IN CENTRELINE OF JOIST/BEAM BAYS.
- FINAL NUMBER AND LOCATION OF SPRINKLER HEADS TO BE DETERMINED BY CONTRACTOR'S HYDRAULIC CALCULATIONS AND APPROVED DRAWINGS.
- SPRINKLER PIPING TO BE COORDINATED WITH OTHER SERVICES PRIOR TO INSTALLATION
- SPRINKLER CONTRACTOR TO VISIT SITE AND EVALUATE EXISTING CONDITIONS PRIOR TO TENDER CLOSING. INCLUDE ALL MODIFICATIONS IN TENDER PRICE.
- EXISTING SPRINKLER SYSTEM TO BE RENOVATED/MODIFIED TO SUIT NEW LAYOUT. CONTRACTOR IS RESPONSIBLE TO SURVEY EXISTING SYSTEMS FOR CREATION OF SHOP DWGS.
- PROVIDE SPRINKLER HEADS UNDER ALL DUCTWORK AND EQUIPMENT OVER 1200mm WIDE.
- COMMISSIONING OF INTEGRATED TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEM.
  - 1. SPRINKLER CONTRACTOR TO PROVIDE SERVICES WITH THE FIRE COMMISSIONING AGENT (FCA) TO MEET THEIR REQUIREMENTS OF ADMINISTRATION, VERIFICATION, AND FINAL SIGNOFF TO THE LOCAL AUTHORITIES AND CONSULTANT. THE FCA IS BEING RETAINED BY THE ELECTRICAL CONTRACTOR, HOWEVER, THIS CONTRACTOR'S WORK TO SATISFY THE FCA REQUIREMENTS SHALL BE INCLUDED IN THE TENDER PRICE.
  - 2. CHECK/TEST: MOVEMENT OF ALL VALVES, CREATE WATER FLOW AT ALL DEVICES TO VERIFY DETECTION AT FIRE ALARM PANEL.
  - 3. PERFORM ALL WORK IN ACCORDANCE WITH NFPA 3.
  - 4. RETURN SPRINKLER SYSTEM TO NORMAL OPERATION ON COMPLETION OF TESTING
- REFER TO DEMOLITION PLANS FOR DEMOLITION SCOPE.



**RENOVATION TO:**

# LYDIA TRULL PUBLIC SCHOOL MECHANICAL UPGRADES

80 Avondale Dr, Courtice, ON L1E 3C2

Sheet Title

# SECOND FLOOR MECHANICAL ROOM PLAN - RENOVATION



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# Consulting Engineers

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## MECHANICAL | ELECTRICAL | AQUATIC

Phone: 519-725-3555  
Website: deiassociates.ca

Drawn by KB	Checked by DB	Approved by MW
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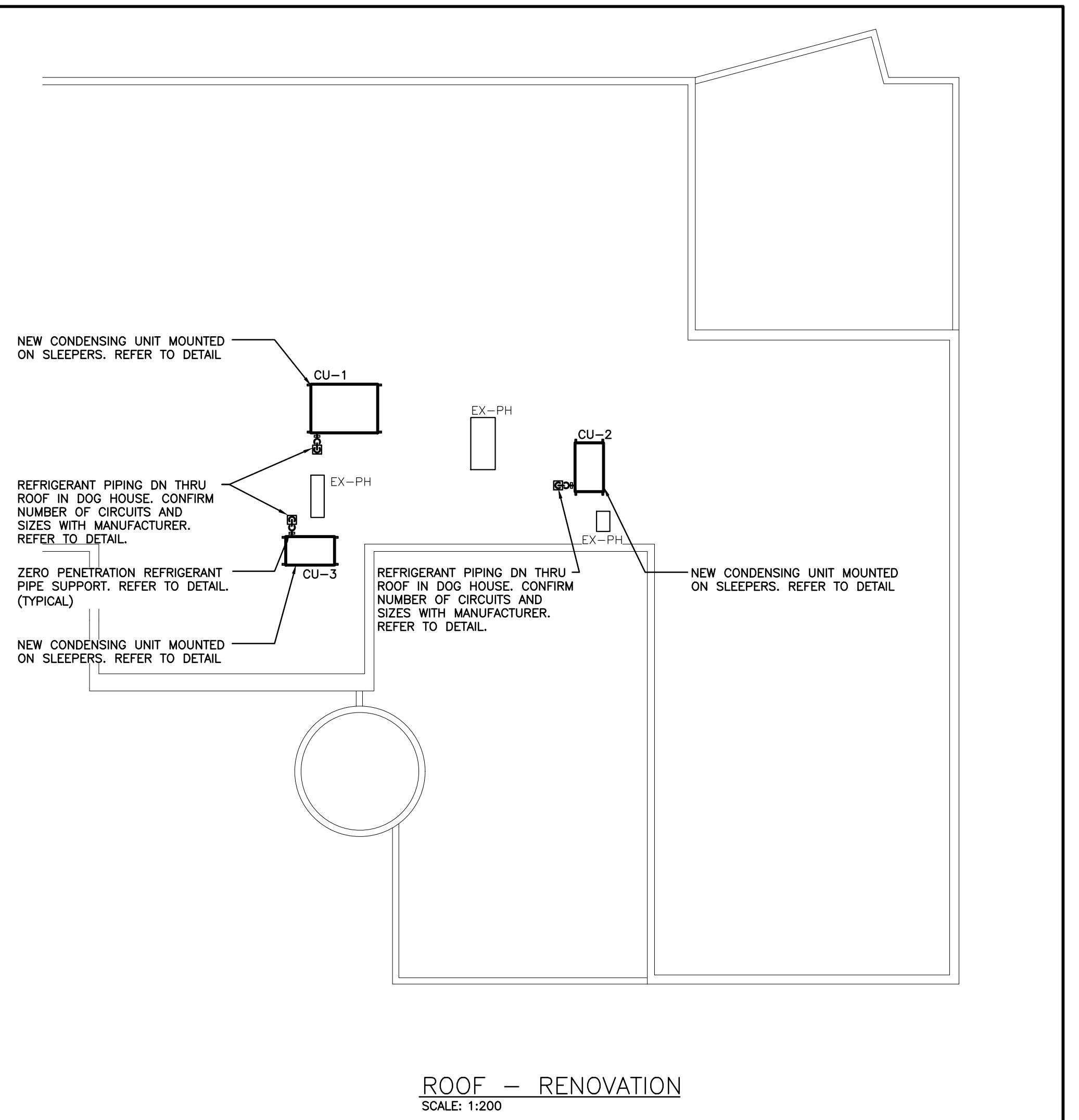
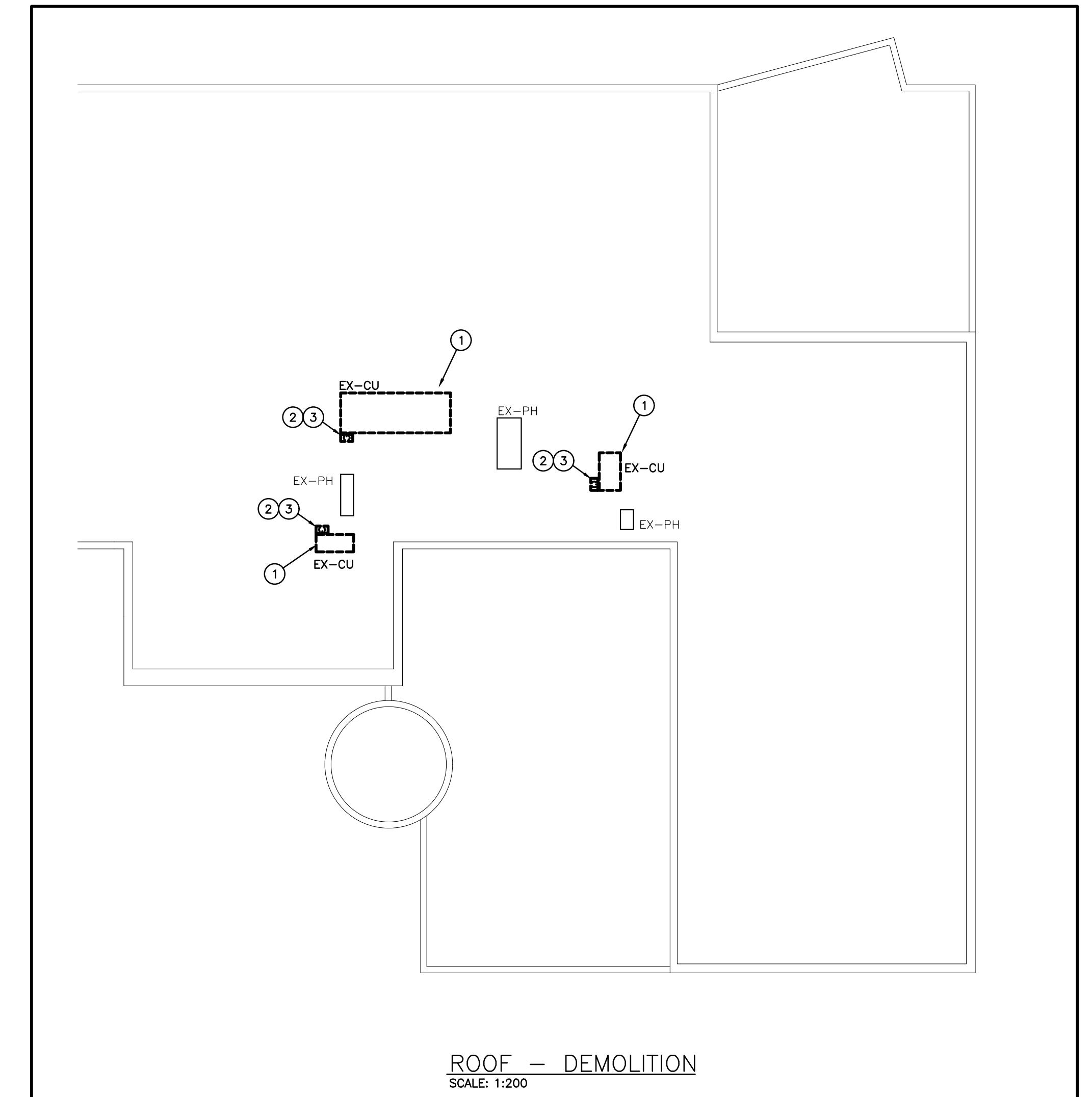
Scale	Project Date	Print Date
AS NOTED	SEPT 2024	SEPT 2024

AS NOTED	SEPT 2024	SEPT 2024
Project No.	Drawing No.	

24300 M302

24500 MJ02

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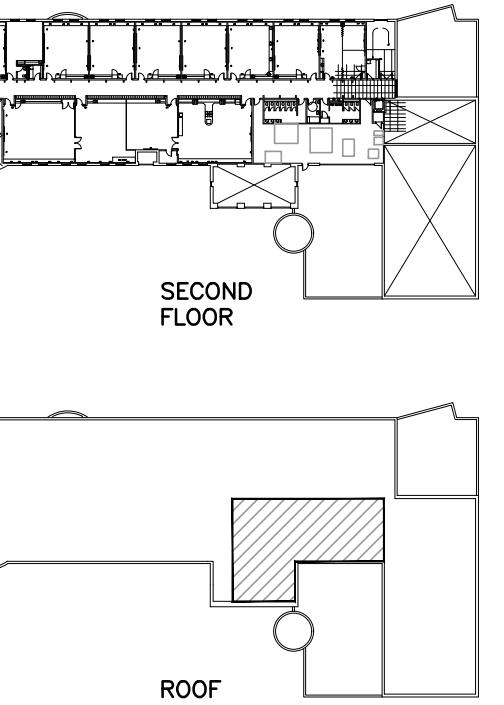
**GENERAL DEMOLITION NOTES**

- MAINTAIN MINIMUM 3700mm (12'-0") LATERAL DISTANCE BETWEEN SANITARY VENTS AND ALL AIR INTAKE/EXHAUST OPENINGS.
- MAINTAIN MINIMUM 3000mm (10'-0") LATERAL DISTANCE BETWEEN PRV, FUEL FIRED APPLIANCE, AND/OR EXHAUST VENTS AND ALL AIR INTAKE/EXHAUST OPENINGS.
- ALL EQUIPMENT SHALL BE MINIMUM 3.0M FROM EDGE OF ROOF.

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.  
The drawings show general arrangement of services. Follow closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.  
These drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.  
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1	25.03.03	ISSUED FOR TENDER REVIEW	MW
2	25.03.20	ISSUED FOR TENDER	MW
3	25.11.21	REISSUED FOR TENDER	MW



**SPECIFIC DEMOLITION NOTES**

1. EXISTING CONDENSING UNIT AND ALL ASSOCIATED COMPONENTS TO BE REMOVED COMPLETE.
2. EXISTING DOGHOUSE AND ALL ASSOCIATED COMPONENTS TO BE REMOVED COMPLETE. PROVIDE NEW DOGHOUSE AS PER DETAIL.
3. EXISTING REFRIGERANT PIPING TO BE REMOVED COMPLETE

**GENERAL RENOVATION NOTES**

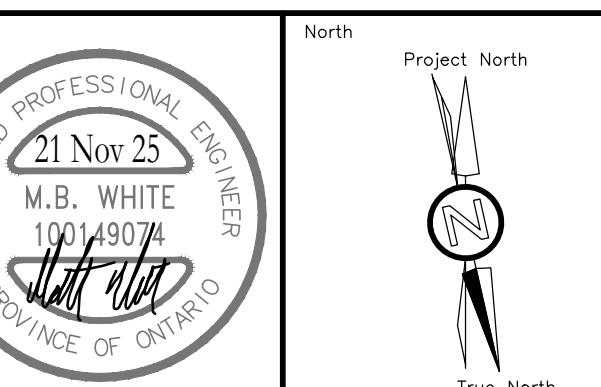
- MAINTAIN MINIMUM 3700mm (12'-0") LATERAL DISTANCE BETWEEN SANITARY VENTS AND ALL AIR INTAKE/EXHAUST OPENINGS.
- MAINTAIN MINIMUM 3000mm (10'-0") LATERAL DISTANCE BETWEEN PRV, FUEL FIRED APPLIANCE, AND/OR EXHAUST VENTS AND ALL AIR INTAKE/EXHAUST OPENINGS.
- ALL EQUIPMENT SHALL BE MINIMUM 3.0M FROM EDGE OF ROOF.
- MAINTAIN MINIMUM 7500mm (25'-0") FROM COOLING TOWER EXHAUST TO ANY INTAKE/MECHANICAL OPENING

LYDIA TRULL PUBLIC SCHOOL

COURTICE ONTARIO



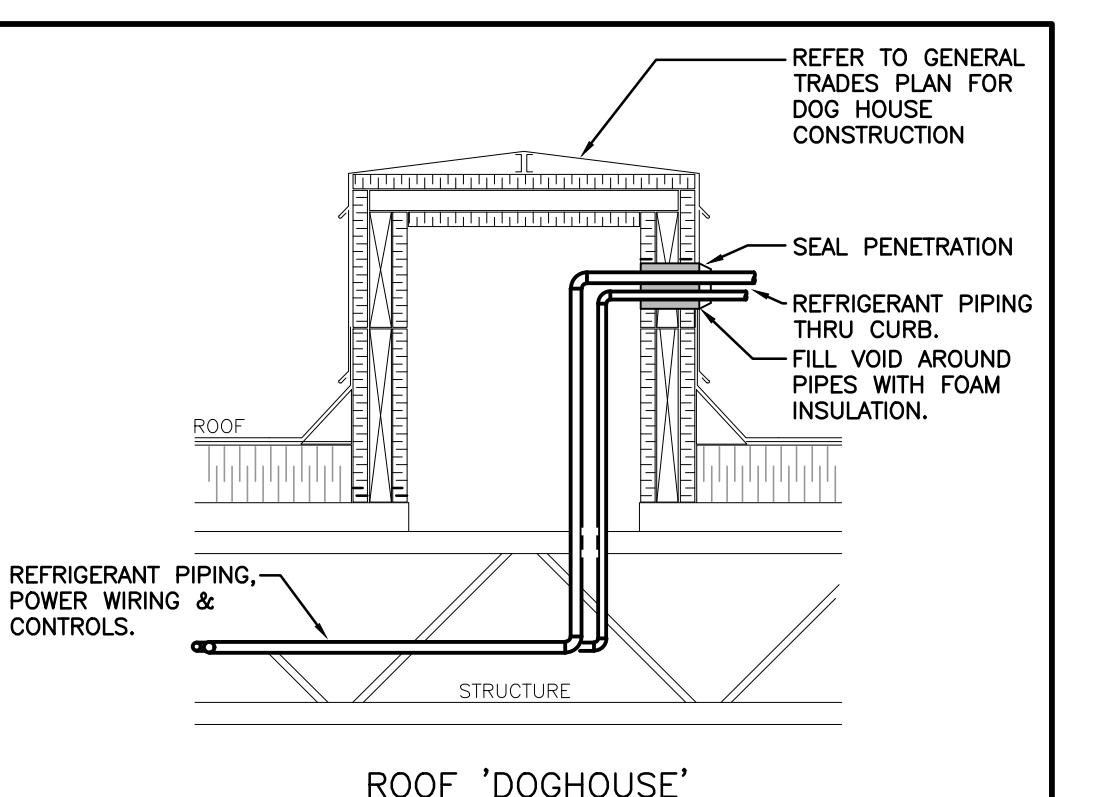
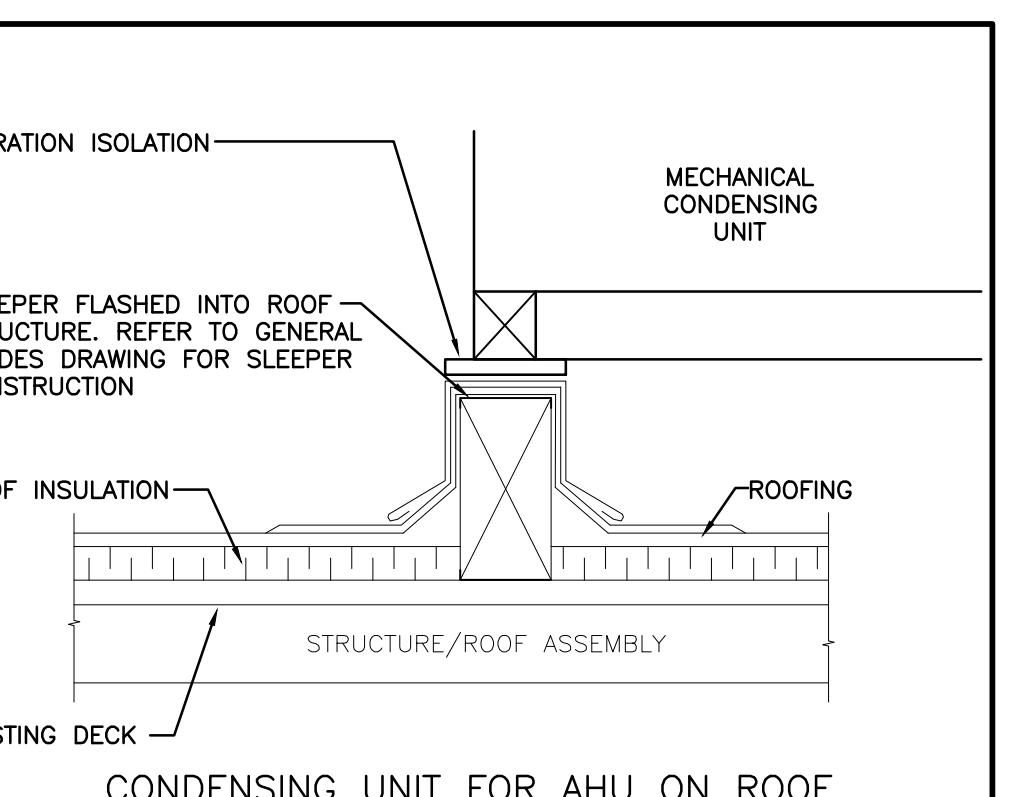
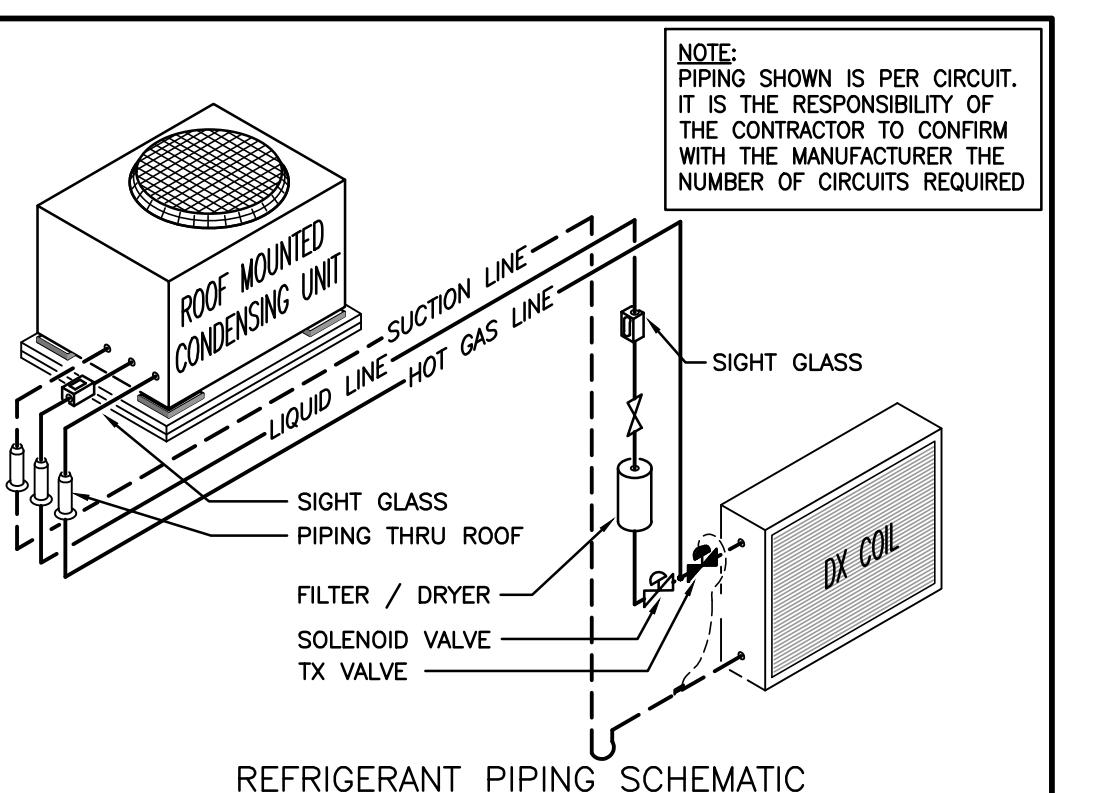
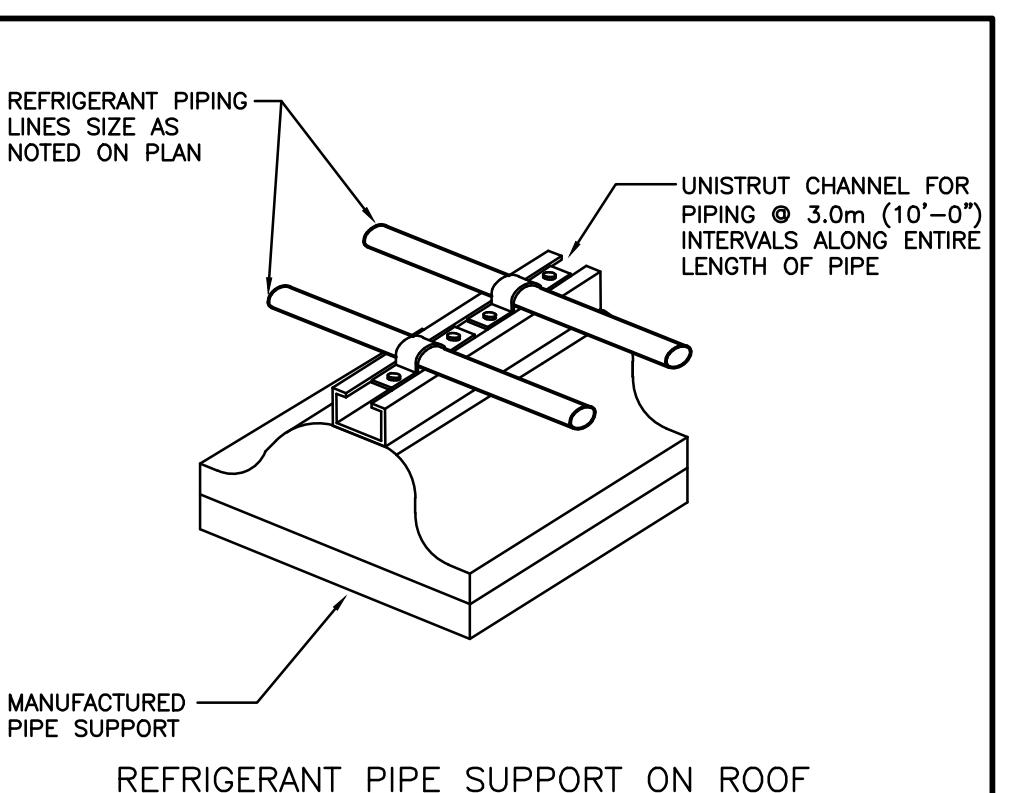
KAWARTHAPINE RIDGE DISTRICT SCHOOL BOARD



RENOVATION TO:  
LYDIA TRULL PUBLIC  
SCHOOL MECHANICAL  
UPGRADES

80 Avondale Dr, Courtice, ON L1E 3C2  
Sheet Title

ROOF PLAN - DEMOLITION & RENOVATION



MECHANICAL | ELECTRICAL | AQUATIC  
55 Northland Road, Waterloo, ON N2V 2Y8  
Phone: 519-725-3555  
Website: deiassociates.ca

Drawn by KB Checked by DB Approved by MW

Scale AS NOTED Project Date SEPT 2024 Print Date SEPT 2024

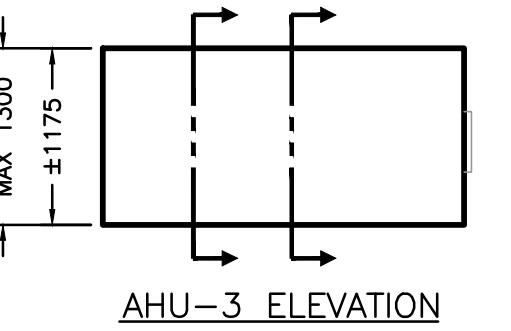
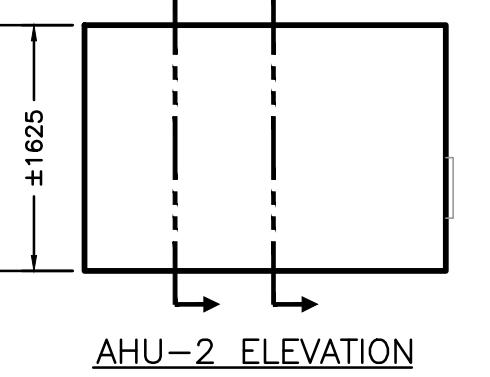
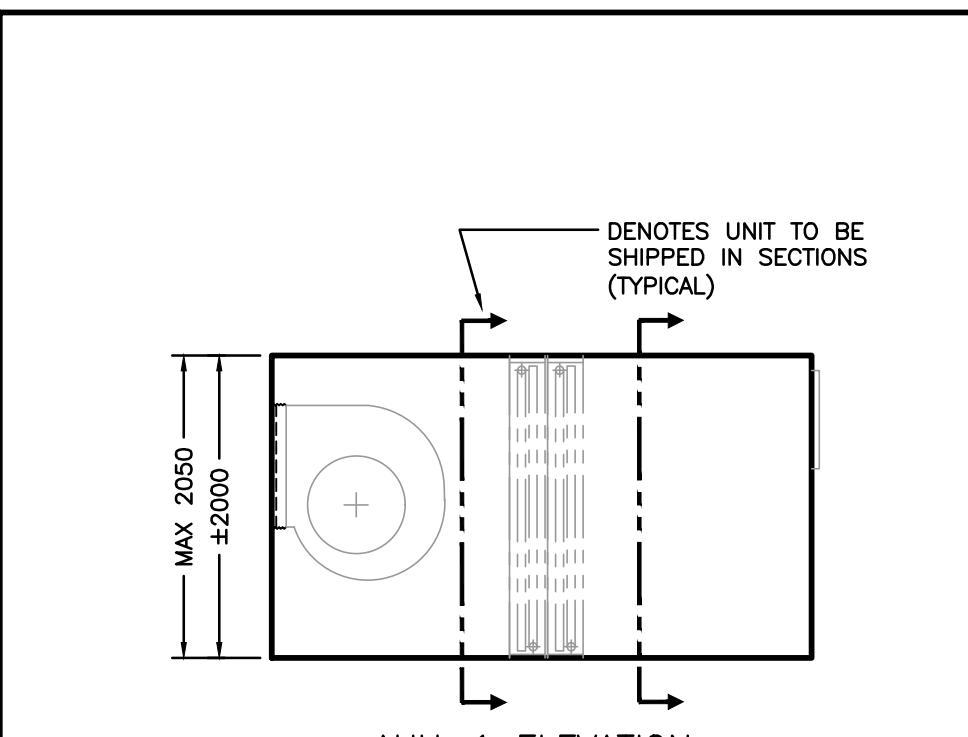
Project No. 24300 Drawing No. M303

M303

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#### ISSUANCES

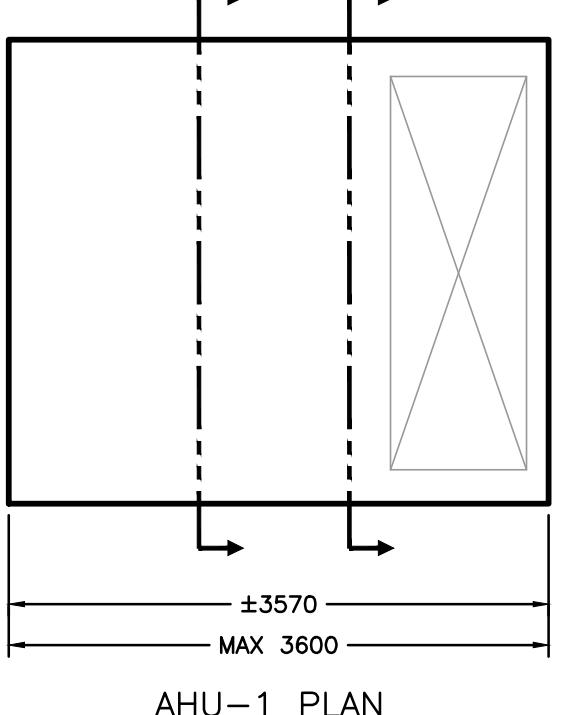
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2	25.03.20	ISSUED FOR TENDER	MW
3	25.11.21	REISSUED FOR TENDER	MW



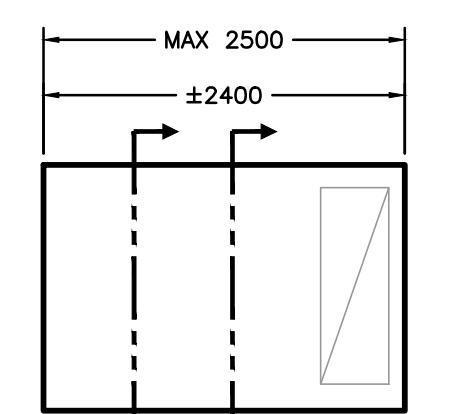
AHU-1 ELEVATION

AHU-2 ELEVATION

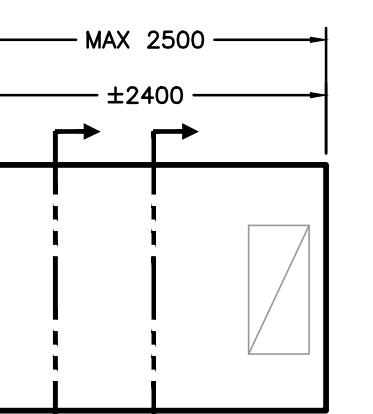
AHU-3 ELEVATION



AHU-1 PLAN



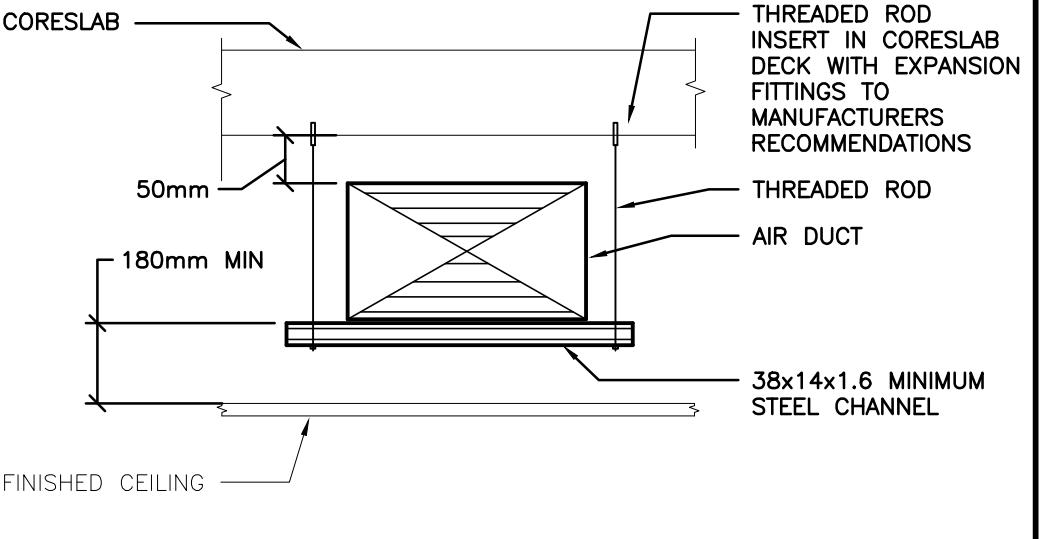
AHU-2 PLAN



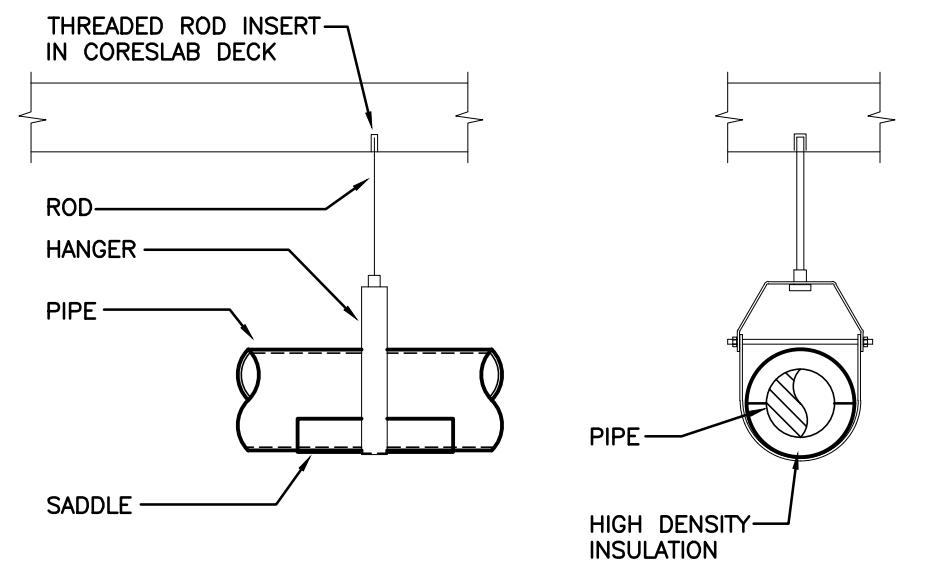
AHU-3 PLAN

#### GENERAL AHU NOTES

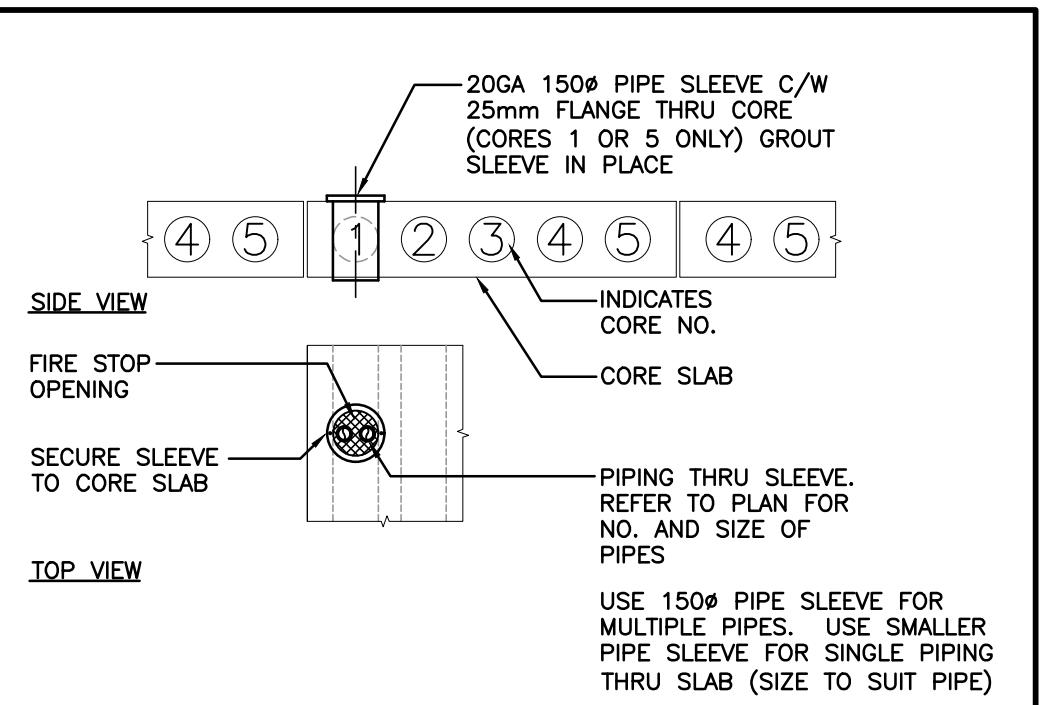
- NOTED 'MAX' DIMENSIONS ARE THE APPROXIMATE LARGEST DIMENSION PERMITTED TO ALLOW FOR SUITABLE CLEARANCE/SERVICE SPACE AROUND THE UNIT. IF AN 'ALTERNATE' UNIT IS SELECTED IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THAT THE UNIT FITS IN THE ALLOCATED SPACE & WORKS WITH THE DESIGN AS SHOWN, THE PROPOSED LAYOUT ABIDES BY THE SPECIFIC SERVICE/REQUIRED CLEARANCES OF THAT ALTERNATE UNIT AND THAT THE ALTERNATE UNIT DOES NOT EXCEED THE NOTED 'MAX' DIMENSION.
- DAMPERS ARE SUPPLIED & INSTALLED BY THE AHU MANUFACTURER. DAMPER OPERATORS ARE SUPPLIED & INSTALLED BY THE BAS CONTRACTOR.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE AIR HANDLING UNIT MANUFACTURER TO DETERMINE WHICH UNITS SHALL BE DELIVERED IN SECTIONS AND ASSEMBLED ON SITE IN PLACE. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO INSTALL THE UNIT IN PLACE TO THE STANDARDS OF THE MANUFACTURER.



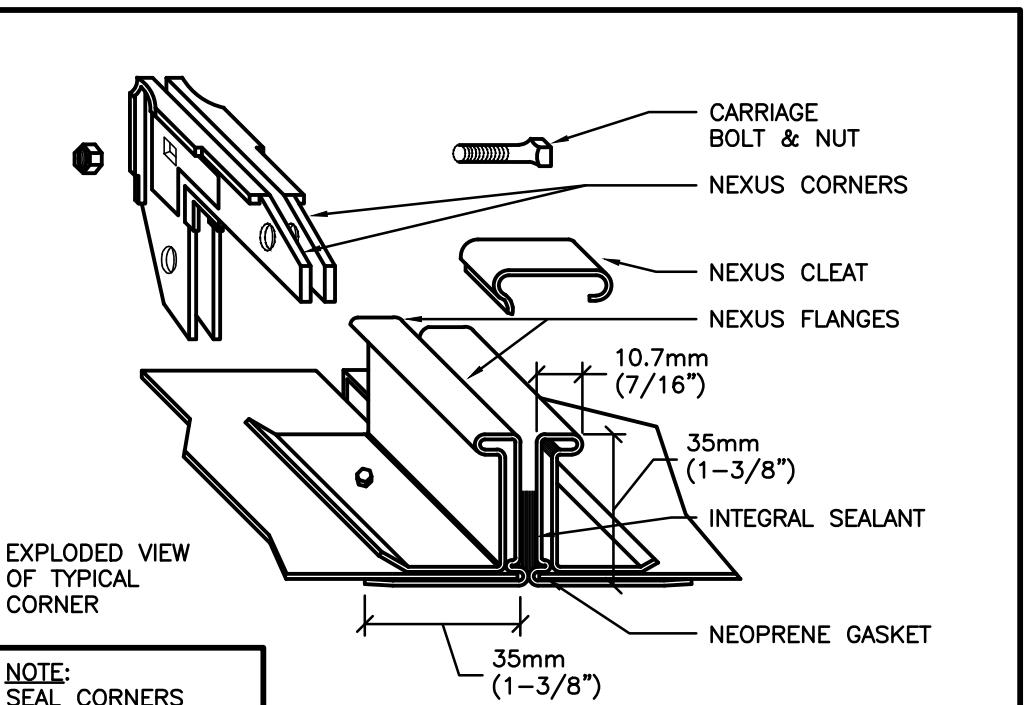
DUCT SUPPORT IN CEILING FROM CORESLAB



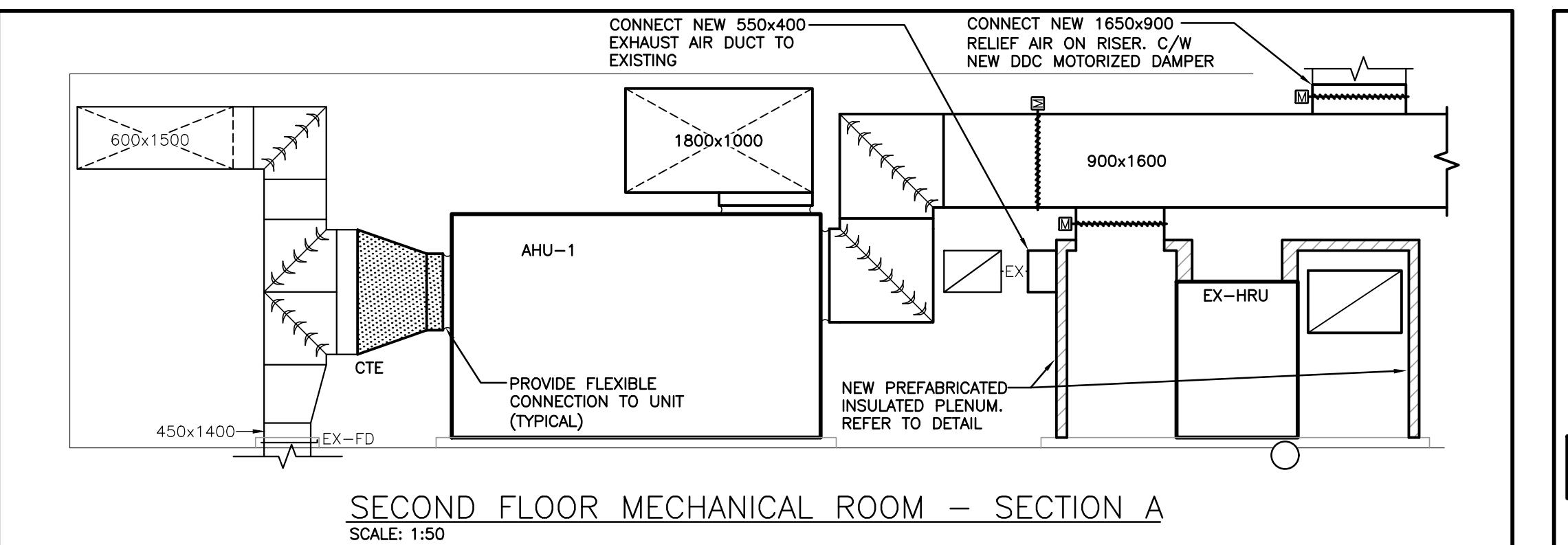
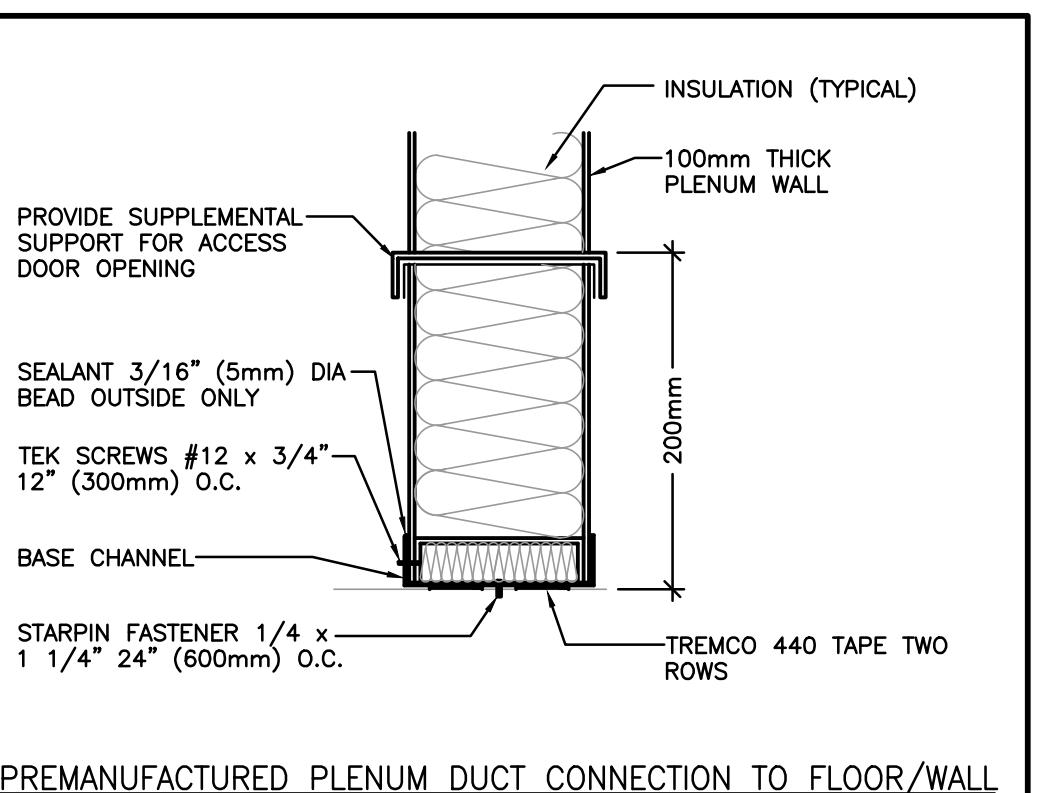
PIPE HANGER (CORESLAB)



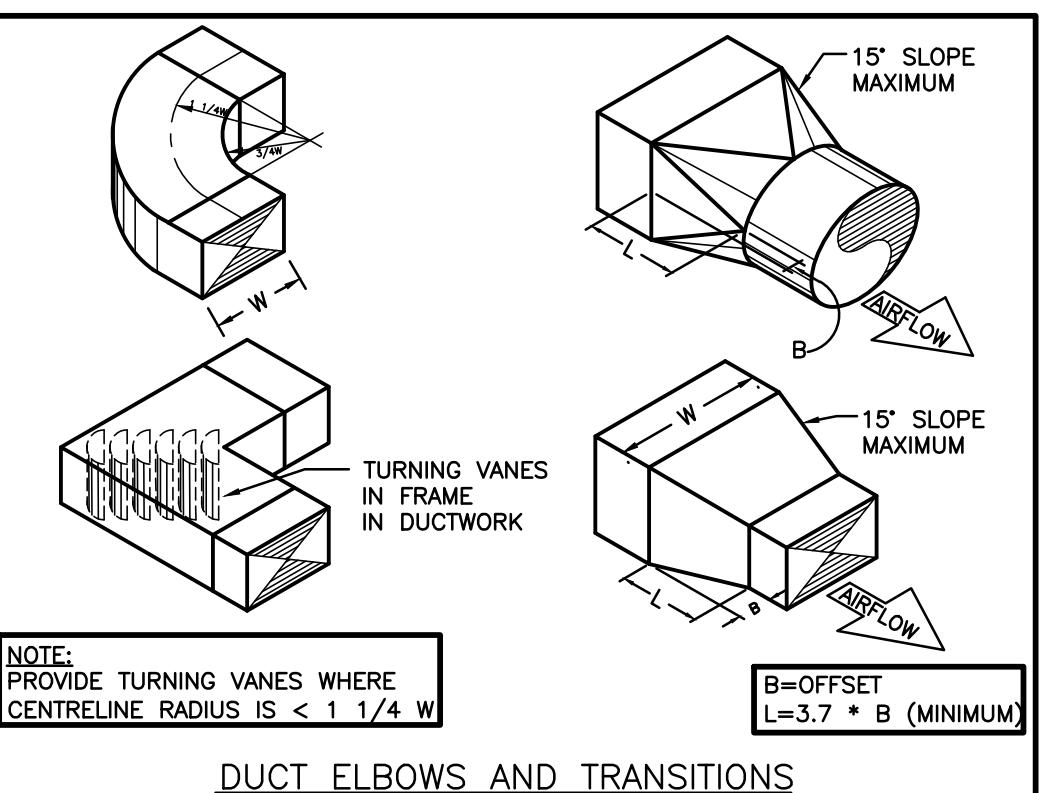
CORESLAB SLEEVE DETAIL



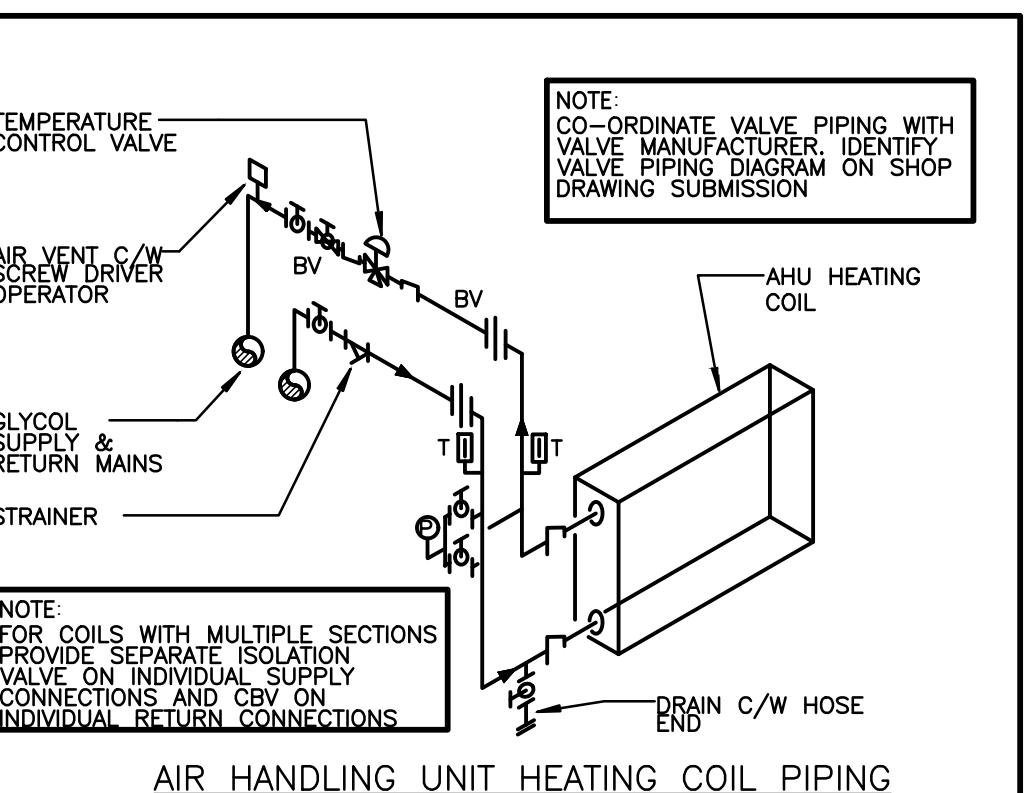
DUCT CONSTRUCTION



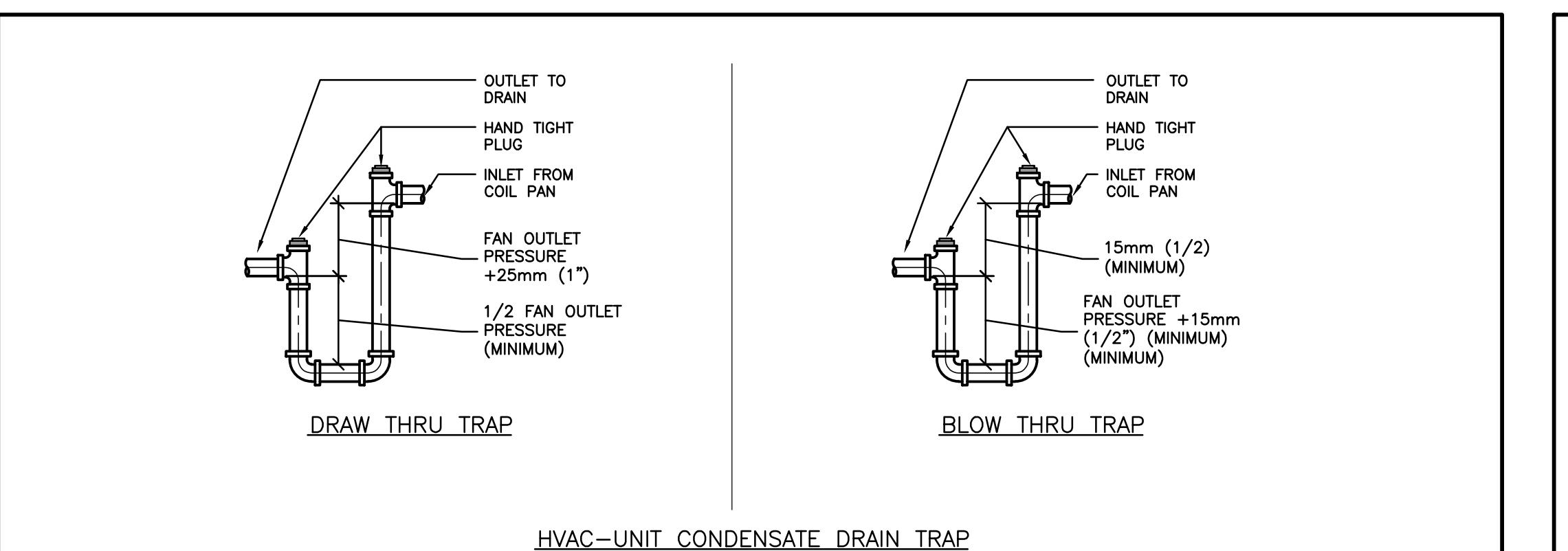
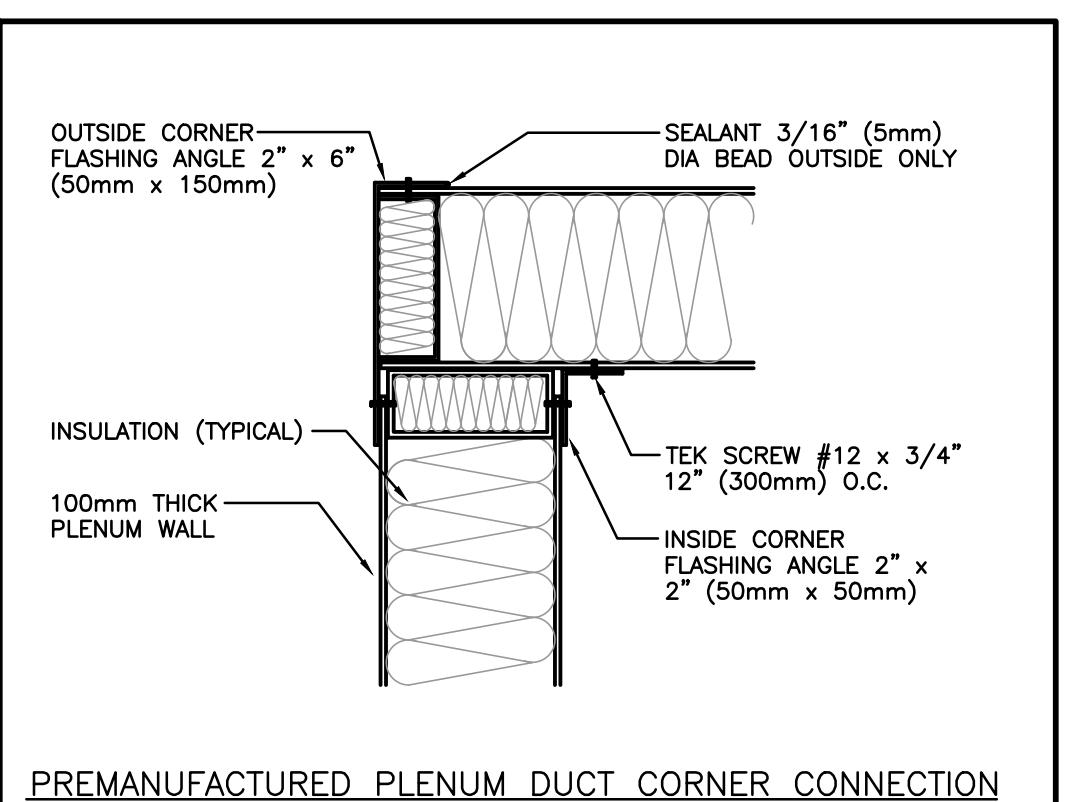
SECOND FLOOR MECHANICAL ROOM - SECTION A



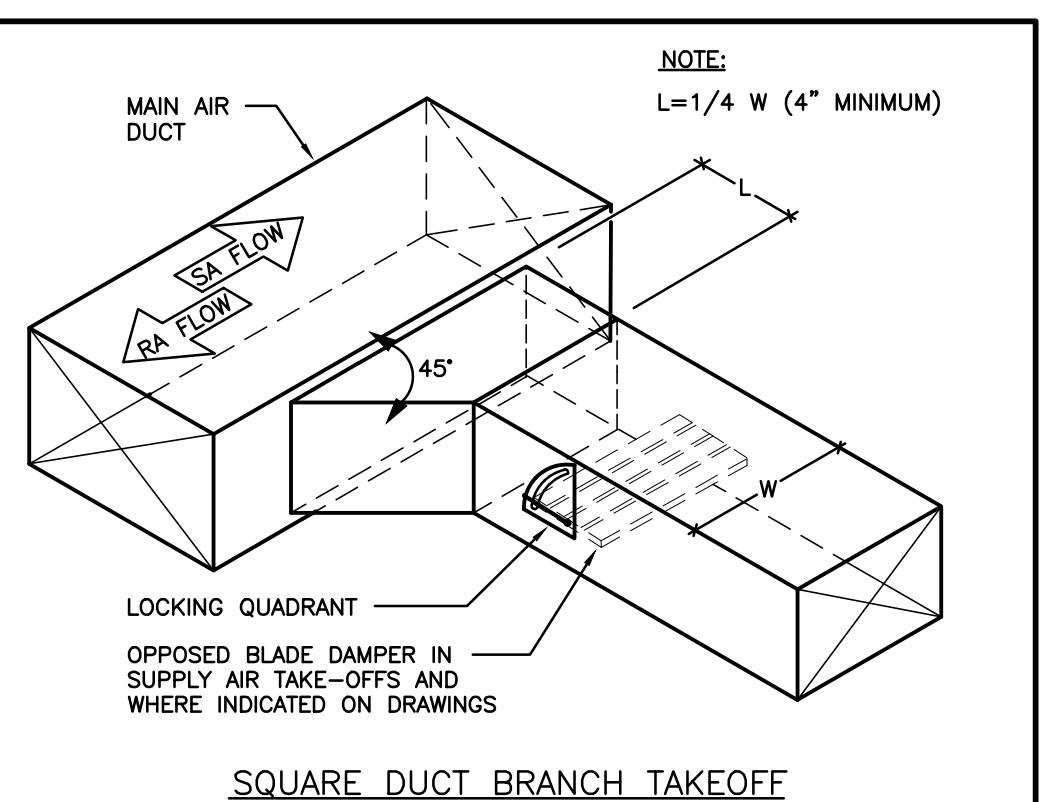
DUCT ELBOWS AND TRANSITIONS



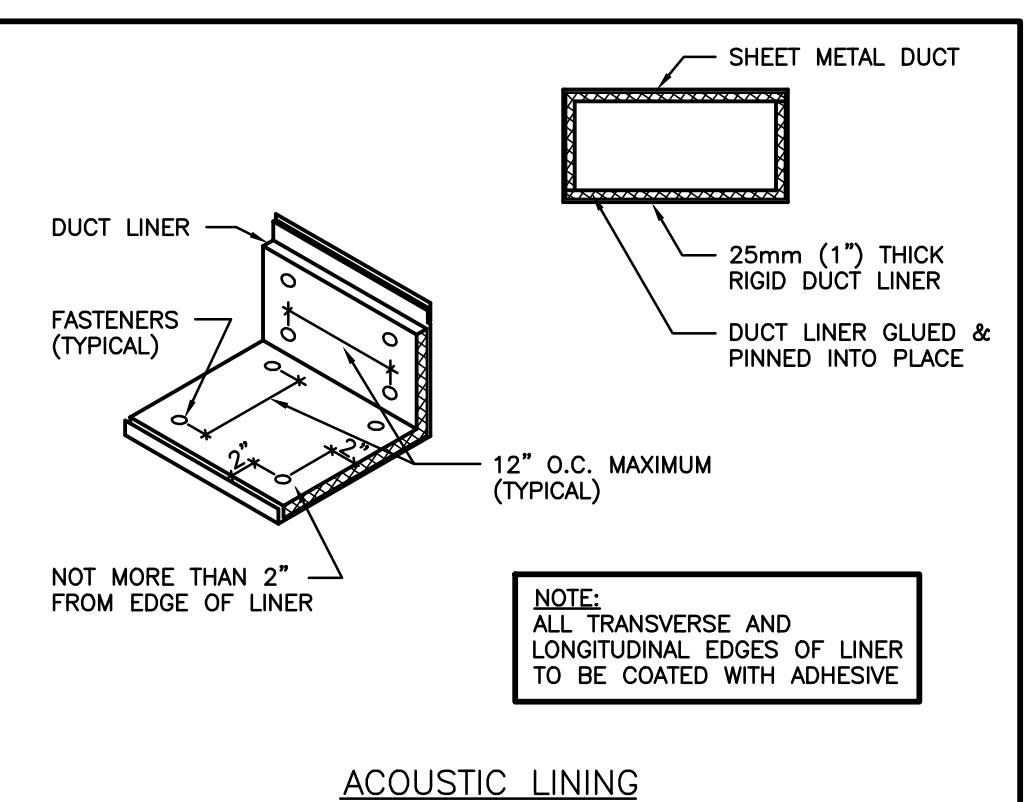
AIR HANDLING UNIT HEATING COIL PIPING



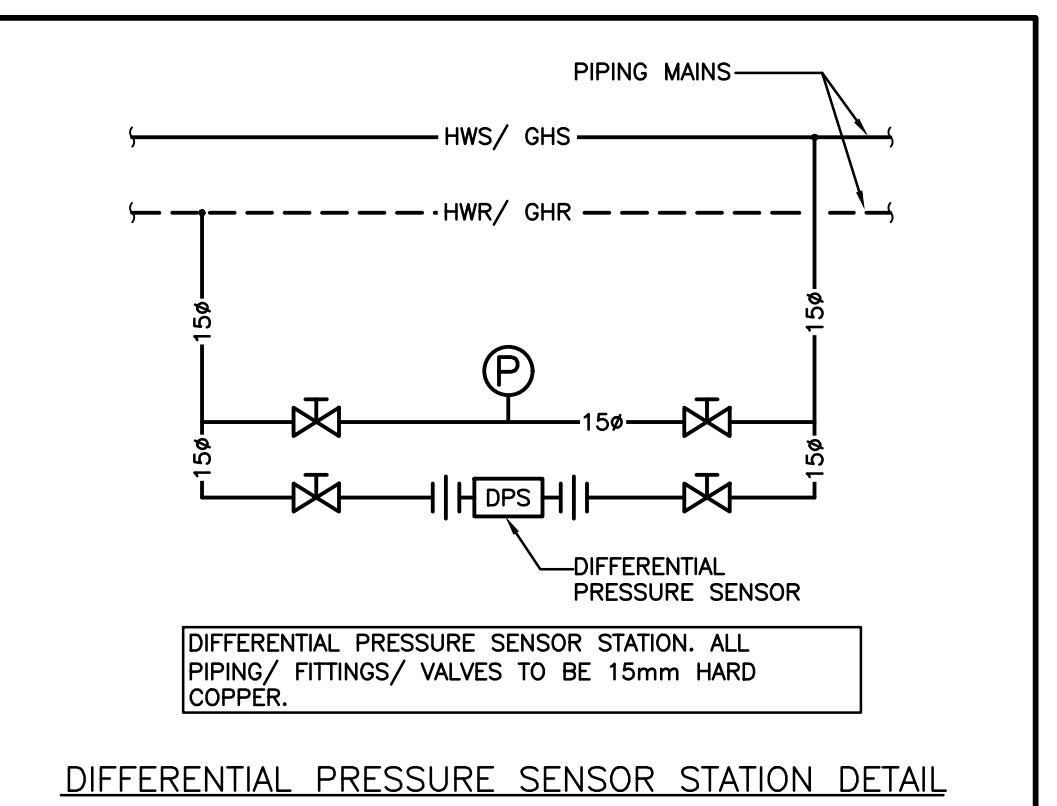
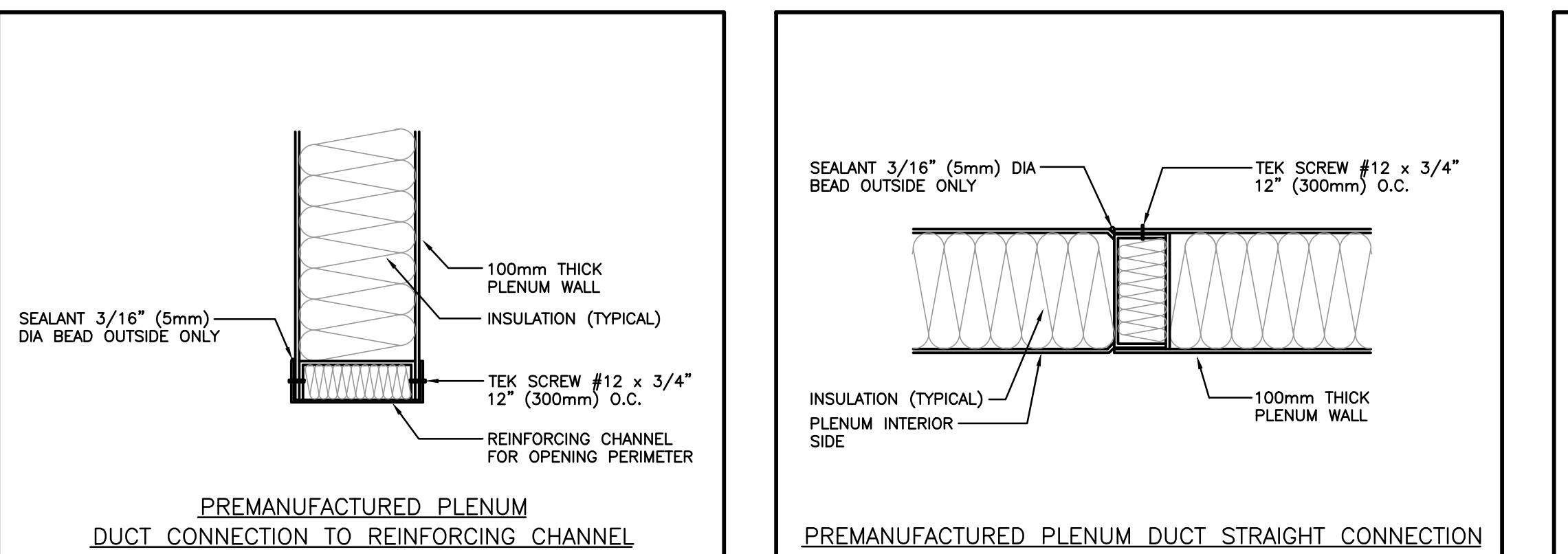
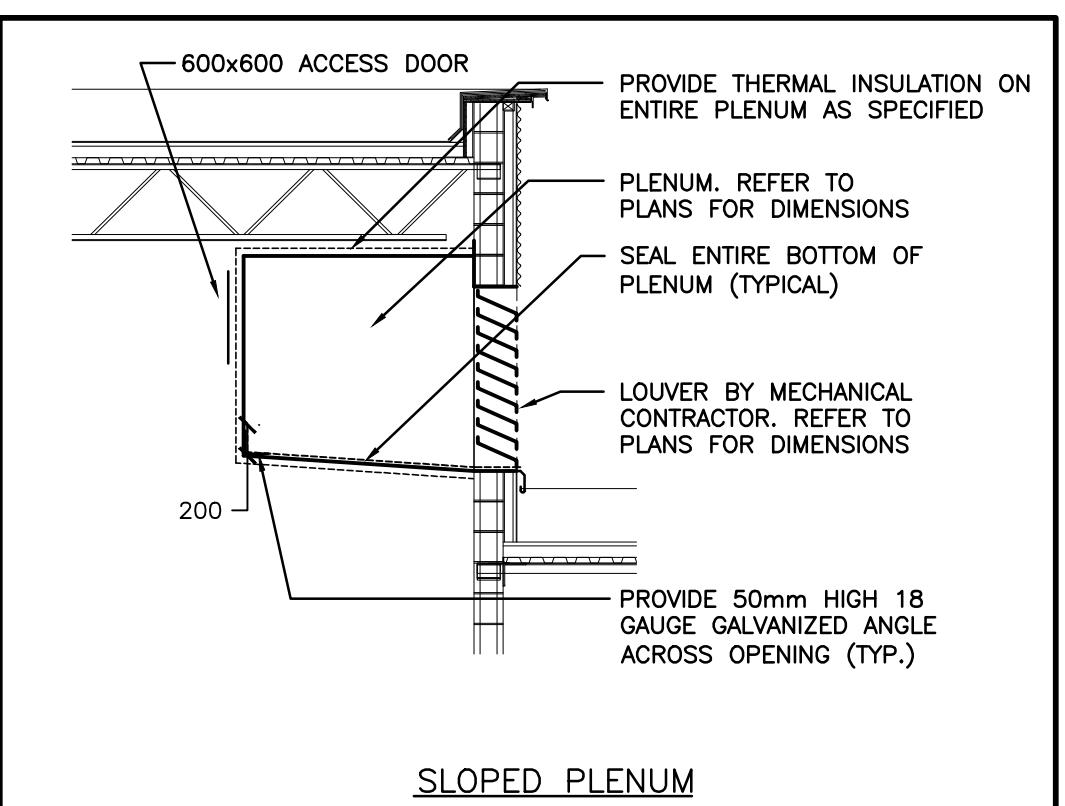
HVAC-UNIT CONDENSATE DRAIN TRAP



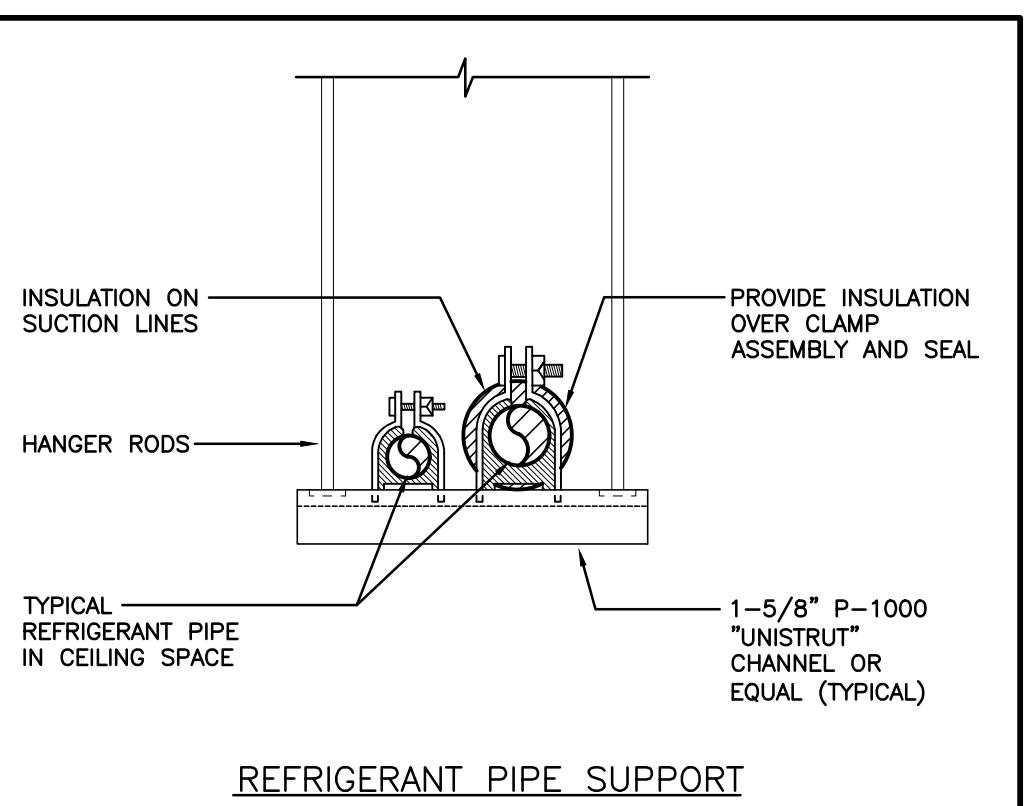
SQUARE DUCT BRANCH TAKEOFF



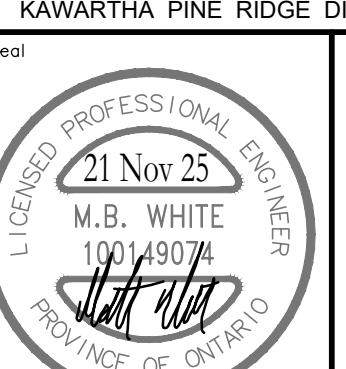
ACOUSTIC LINING



DIFFERENTIAL PRESSURE SENSOR STATION DETAIL



REFRIGERANT PIPE SUPPORT



RENOVATION TO:  
LYDIA TRULL PUBLIC SCHOOL  
COURTICE  
KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

Seal  
North

LYDIA TRULL PUBLIC SCHOOL  
MECHANICAL UPDATES  
80 Avondale Dr, Courtice, ON L1E 3C2  
Sheet Title

SCHEMATICS & DETAILS



Drawn by KB Checked by DB Approved by MW  
Scale AS NOTED Project Date SEPT 2024 Print Date SEPT 2024

Project No. Drawing No.

M401

EQUIPMENT WIRING SCHEDULE																		Remarks				
Mechanical Item	Description	Description			Electrical Data			Starter			Ctrl Device			Isolating Device			Remote Items			Remarks		
		Provided By	Voltage	Size hp/kW/Amps	Phase	MCOP	Magnetic	Manual	Combination	Contactor	VFD	ECM (No Separate Starter Device)	Hand/Off/Auto	On/Off Selector	High/Low/Off	Pilot Light	Disconnect	WP Disconnect	Breaker/Fuse	Starter/Device Wired by		
AHU-1	UPPER & LOWER CLASSROOMS AIR HANDLING UNIT	M	575	25 HP	3			M				E	E	E						CU-1 & RF-01	M	REFER TO NOTES:
AHU-2	GYMNASIUM & STAGE AIR HANDLING UNIT	M	575	7.5 HP	3			M				E	E	E						CU-2 & RF-02	M	
AHU-3	LIBRARY & ADMINISTRATION AIR HANDLING UNIT	M	575	7.5 HP	3			M				E	E	E						CU-3 & RF-03	M	
CU-1	OUTDOOR CONDENSER	M	575	162.7 A	3	175					E	E	E							AHU-1	M	
CU-2	OUTDOOR CONDENSER	M	575	34.3 A	3	45					E	E	E							AHU-2	M	
CU-3	OUTDOOR CONDENSER	M	575	25.1 A	3	30					E	E	E							AHU-3	M	
RF-01	RETURN FAN	M	575	15 HP	3			M				E	E	E						AHU-1	M	
RF-02	RETURN FAN	M	575	3 HP	3			M				E	E	E						AHU-2	M	
RF-03	RETURN FAN	M	575	3 HP	3			M				E	E	E						AHU-3	M	
BAS	BAS PANEL	M	120	FHP	1														M	M		

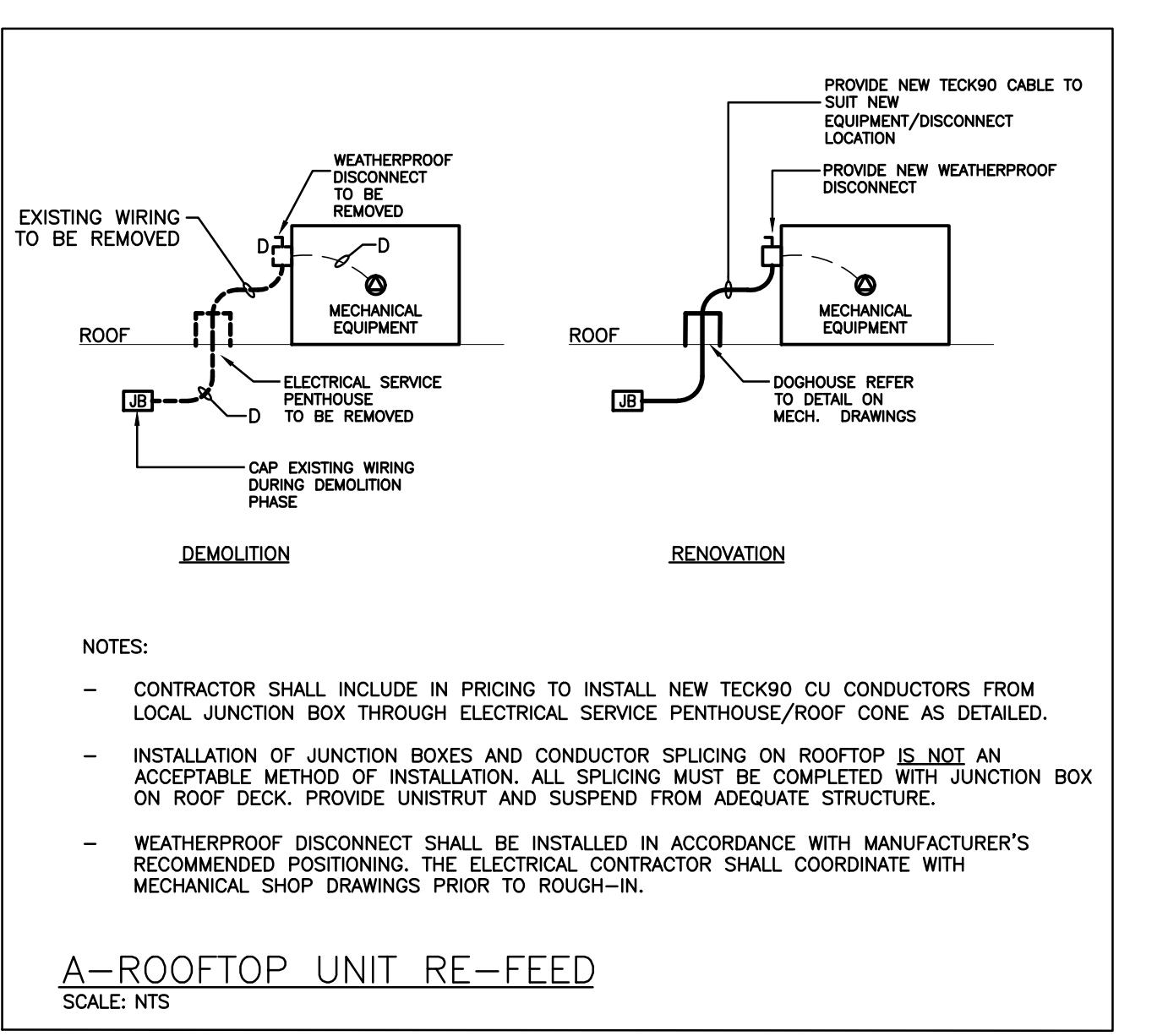
## Notes:

1 PROVIDE MAIN FEED TO UNIT. PROVIDE ADDITIONAL FEED FROM TERMINAL STRIPS WITHIN UNIT TO VARIABLE FREQUENCY DRIVE AND BACK TO UNIT (IN SEPARATE CONDUITS). COORDINATE CONDUCTOR SIZE TO AND FROM VARIABLE FREQUENCY DRIVE WITH MECHANICAL SHOP DRAWINGS.

PROPOSED M.C.C. - 'A' SCHEDULE							* - INDICATES PROVIDE TIME DELAY FUSE	
NUMBER		DESCRIPTION	POWER REQUIREMENTS	DISCONNECT	FUSE	FEEDER SIZE	ITEM	MODIFICATIONS REQUIRED
1	AHU-1	25HP, 600V, 3P		60A	45A*	PROVIDE NEW 3#8 CU IN 21mmC	AHU-1	
2	RETURN FAN F-1	10HP, 600V, 3P		30A	25A*	PROVIDE NEW 3#12 CU IN 21mmC	RF-01	
3	CONDENSING UNIT CU-1	150A, 600V, 3P	200A	175A	PROVIDE NEW 3#2/0 CU IN 53mmC	CU-1		
4	SUPPLY FAN AHU-2	7.5HP, 600V, 3P	30A	15A*	PROVIDE NEW 3#12 CU IN 21mmC	AHU-2	REMOVE INTERNAL STARTER COMPONENTS. EXISTING BUCKET IS TO BE MODIFIED TO FUSIBLE DISCONNECT STYLE TO SUIT VFD.	
5	RETURN FAN F-2	1.5HP, 600V, 3P	30A	15A*	PROVIDE NEW 3#12 CU IN 21mmC	RF-02	REMOVE INTERNAL STARTER COMPONENTS. EXISTING BUCKET IS TO BE MODIFIED TO FUSIBLE DISCONNECT STYLE TO SUIT VFD.	
6	CONDENSING UNIT CU-2	40A, 600V, 3P	60A	45A	PROVIDE NEW 3#8 CU IN 21mmC	CU-2		
7	SUPPLY FAN AHU-3	7.5HP, 600V, 3P	30A	15A*	PROVIDE NEW 3#12 CU IN 21mmC	AHU-3		
8	RETURN FAN F-3	2HP, 600V, 3P	30A	15A*	PROVIDE NEW 3#12 CU IN 21mmC	RF-03		
9	CONDENSING UNIT CU-3	25A, 600V, 3P	30A	30A	PROVIDE NEW 3#10 CU IN 21mmC	CU-3		
10	DUCT FAN EF-02	1.5HP, 600V, 3P			EXISTING TO REMAIN			
11	GLYCOL HEATING P01	3.0HP, 600V, 3P			EXISTING TO REMAIN			
12	GLYCOL HEATING P02	3.0HP, 600V, 3P			EXISTING TO REMAIN			
13	AIR COMPRESSOR	1.5HP, 600V, 3P			EXISTING TO REMAIN			
14	HUMIDIFIER	7.6kW, 600V, 3P			EXISTING TO REMAIN			
15	LIGHTING PANEL	100A, 600V, 3P			EXISTING TO REMAIN			
16	DUST COLLECTOR	10HP, 600V, 3P			EXISTING TO REMAIN			

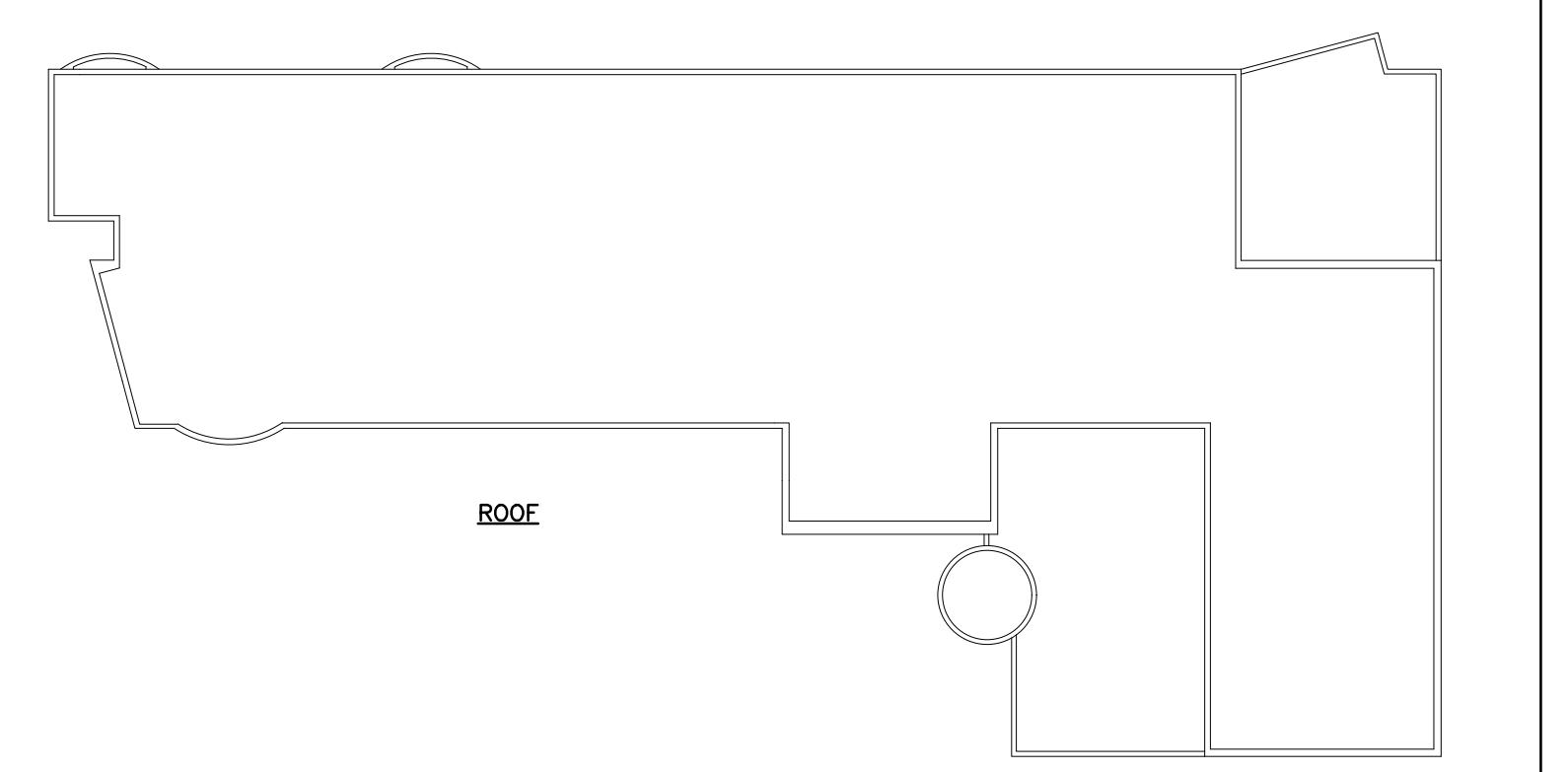
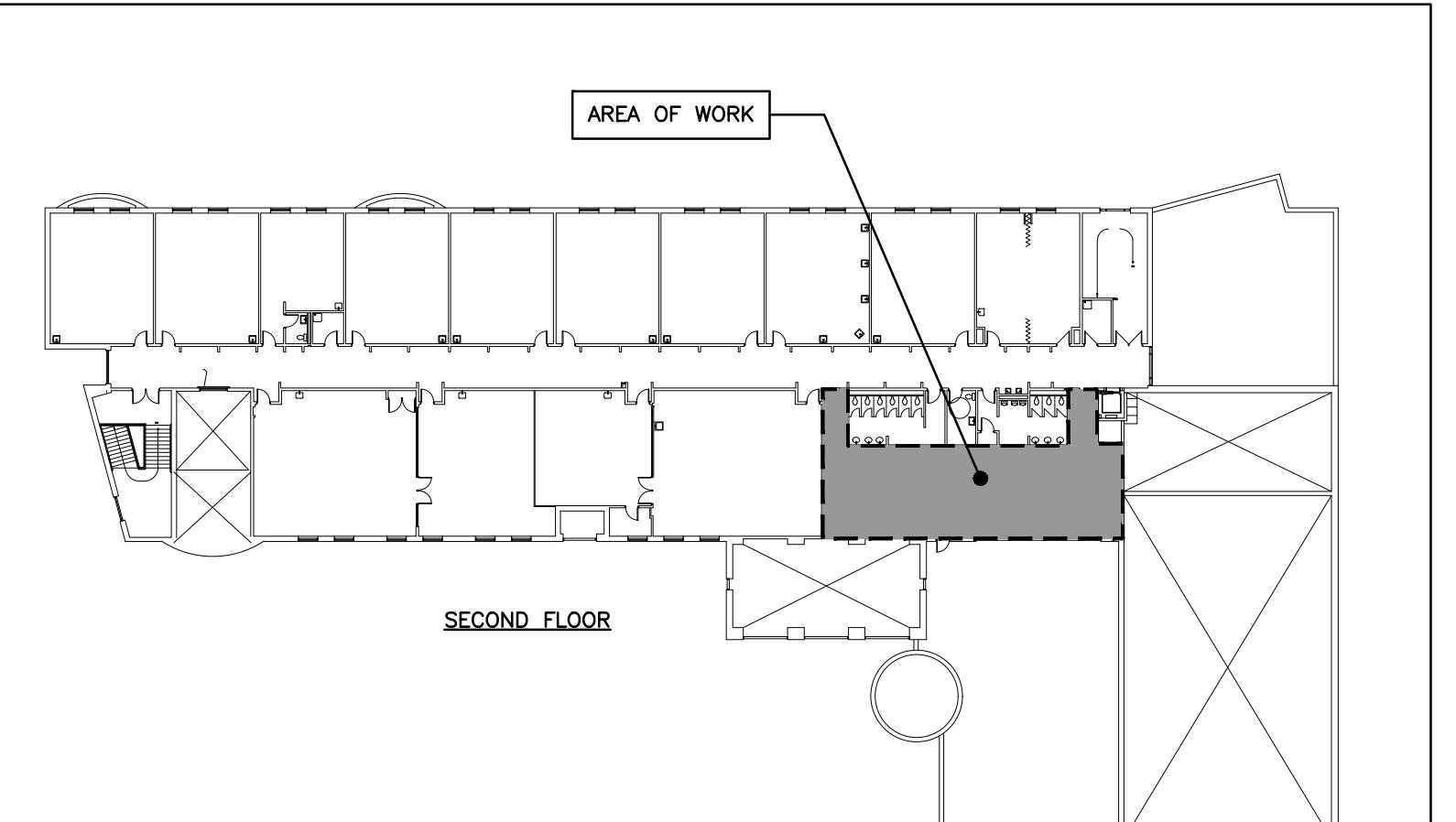
GENERAL NOTES:

- 1) CONTRACTOR SHALL REPLACE ALL FUSES (FOR EQUIPMENT BEING REPLACED TO ENSURE ALL 3 FUSES MATCH) WITH NEW AND SUPPLY 3 SPARE FUSES FOR EACH MECHANICAL EQUIPMENT BEING RE-FED FROM M.C.C.
- 2) PROVIDE NEW CONDUIT AND WIRING FROM M.C.C. TO SUIT NEW EQUIPMENT LOCATIONS. REMOVE ALL EXISTING FEEDS. CONDUIT MAY BE RETAINED AND REWORKED WHERE APPROPRIATE, REDUNDANT CONDUIT MUST BE REMOVED BACK TO SOURCE PANEL.
- 3) PROVIDE NEW HARD LABEL LAMICOID TAGS FOR ALL NEW MECHANICAL EQUIPMENT.



OVERALL PLAN

SCALE: N.T.S.



ELECTRICAL SYMBOLS		NOTE: ALL SYMBOLS MAY NOT BE USED	
FIRE ALARM		POWER	
		WALL MOUNTED RECEPTACLE (15A-120V)	
		WALL MOUNTED T-SLOT RECEPTACLE (20A-120V)	
		T-SLOT RECEPTACLE MTD. ABOVE COUNTER (15A-120V)	
		RECEPTACLE MTD. ABOVE COUNTER S=SPILT (15A-120V)	
		DIRECT CONNECTION	
COMMUNICATIONS			
		JUNCTION BOX	
GENERAL			
ER	INDICATED EXISTING ITEM TO REMAIN	UNFUSED DISCONNECT	
D	INDICATES EXISTING ITEM TO BE DELETED	VARIABLE FREQUENCY DRIVE	
R	INDICATES EXISTING ITEM TO BE RELOCATED/IN RELOCATED POSITION	MANUAL STARTER	
WG	WIREGUARD	MAGNETIC STARTER	
GF	GROUND FAULT	COMBINATION MAGNETIC STARTER	
WP	WEATHERPROOF	TRANSFORMER	
(X)	NOTE INDICATOR	UNISTRUT UPSTAND	
		STANDARD CIRCUIT LABELING	
LIGHTING			
		A-1-1	

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

The drawings show general arrangement of services. Follow closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

These drawings do not show all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.

Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned to the consultant at the end of the project. These documents are not to be duplicated or copied without the consent of the Consultant.

Do not scale this drawing.

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## ISSUANCES

No	DATE	DESCRIPTION	BY
1	25.03.03	ISSUED FOR TENDER REVIEW	RV
2	25.03.20	ISSUED FOR TENDER	RV
3	25.11.21	REISSUED FOR TENDER	RV

LYDIA TRULL PUBLIC SCHOOL  
COURTICE ONTARIO

KAWARTHAS PINE RIDGE DISTRICT SCHOOL BOARD

Seal

Project North

True North

Renovation to:

LYDIA TRULL PUBLIC SCHOOL MECHANICAL UPDATES

80 Avondale Dr, Courtice, ON L1E 3C2

Sheet Title

LEGEND, SCHEDULES, & KEY PLAN

DEI Consulting Engineers MECHANICAL | ELECTRICAL | AQUATIC

55 Northland Road, Waterloo, ON N2V 2Y8  
Phone: 519-725-3555  
Website: deiassociates.ca

Drawn by: CP Checked by: JJ Approved by: JJ

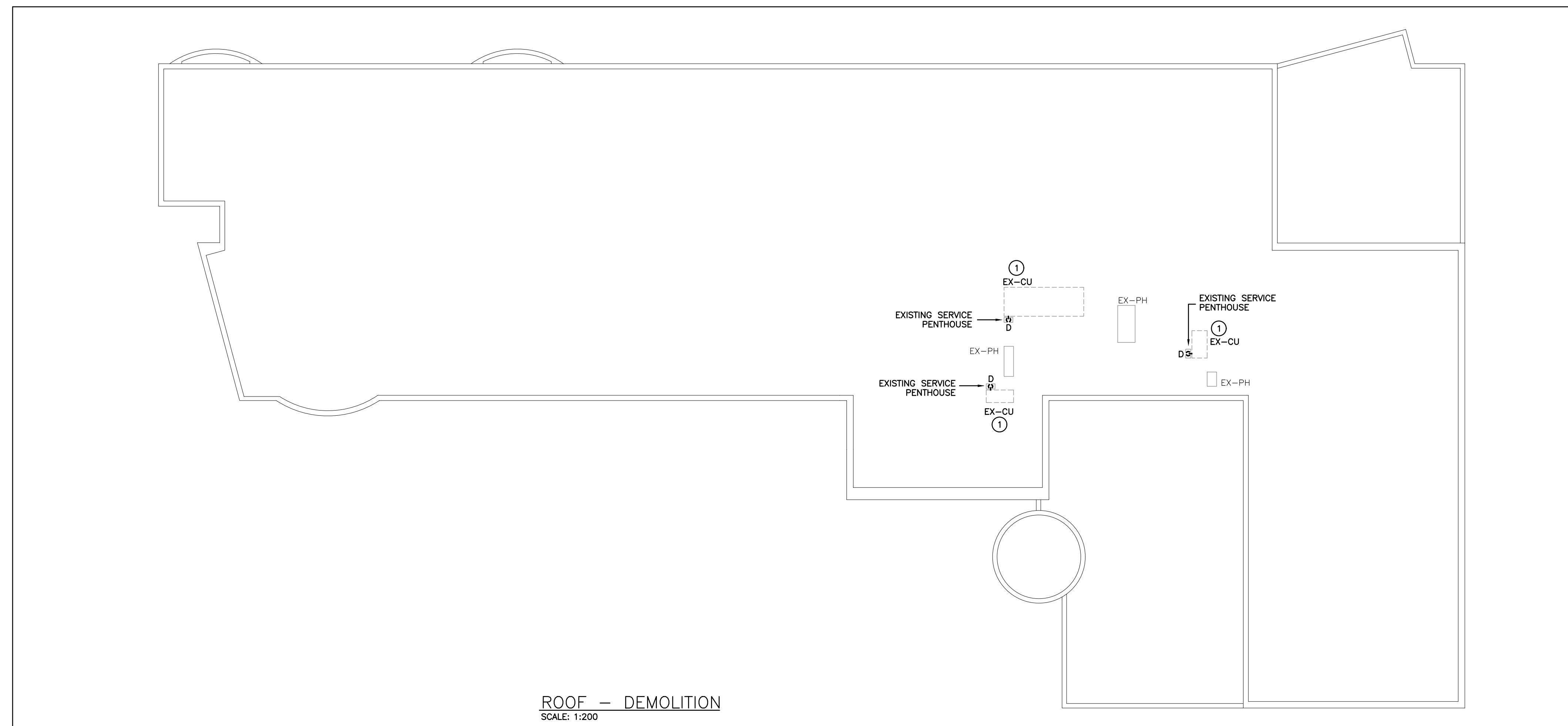
Scale: Project Date Print Date  
AS NOTED SEPT 2024 SEPT 2024

Project No. Drawing No.

24300 E101

PROPOSED PANEL 'LP-2M' SCHEDULE		AT THE COMPLETION OF THE PROJECT, PROVIDE A NEW TYPE WRITTEN PANEL DIRECTORY AND INCLUDE A COPY IN THE MAINTENANCE MANUALS	

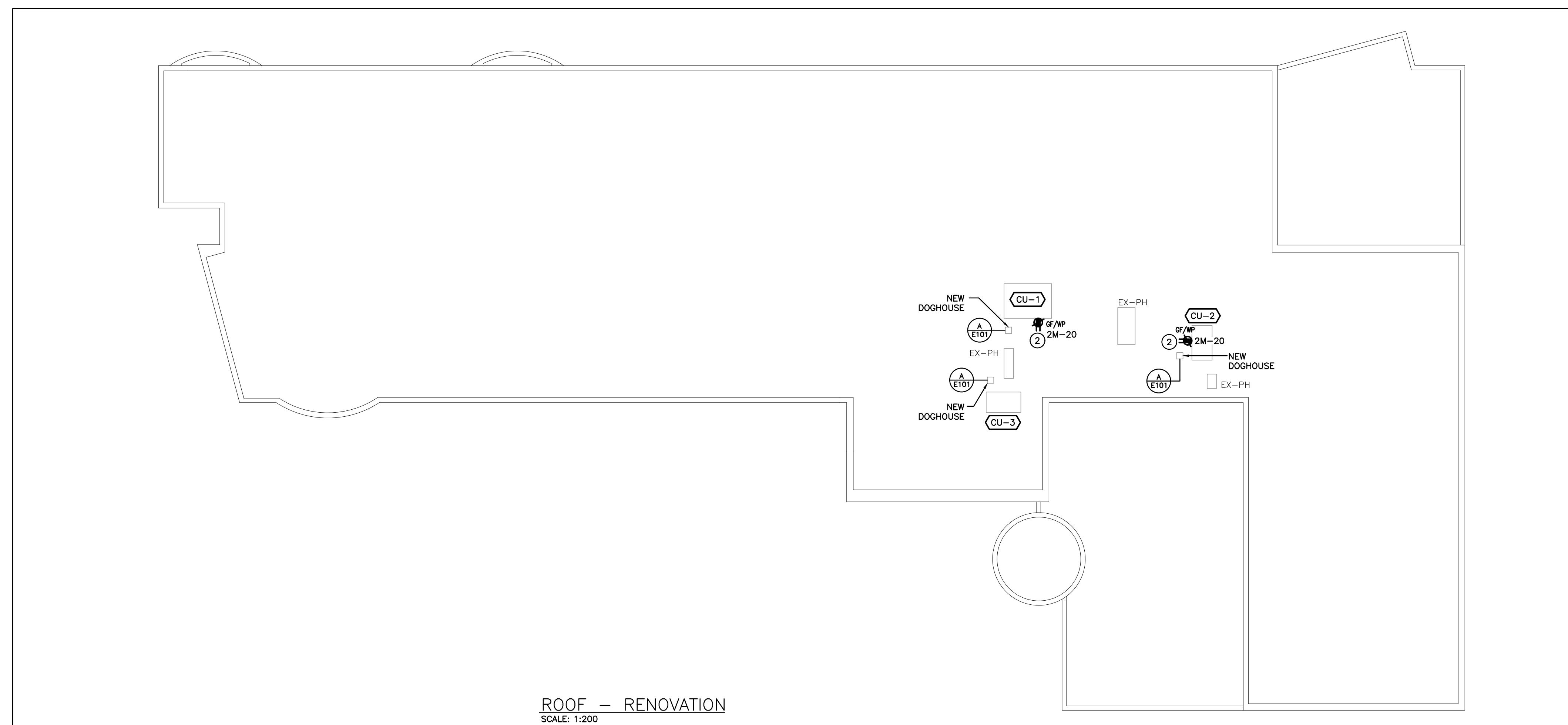




GENERAL NOTES		
- 'ER' DENOTES EXISTING ITEM TO REMAIN.		
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.		
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED, REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT, UNLESS OTHERWISE NOTED.		
- 'D' INDICATES EXISTING ITEM TO BE DEMOLISHED, UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.		
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS OTHERWISE NOTED.		
- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN.		
- REVISE PANEL DIRECTORIES TO SUIT CHANGES (TYPED).		

#### SPECIFIC NOTES

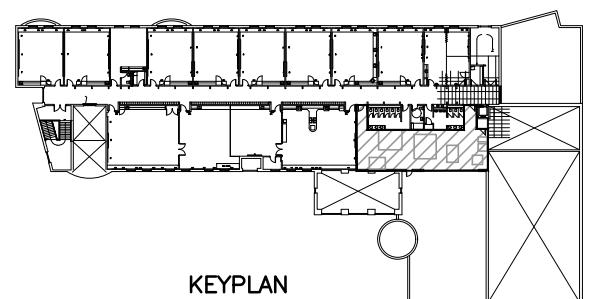
- 1 INDICATES MECHANICAL EQUIPMENT BEING REPLACED WITH NEW BY MECHANICAL TRADE. THIS CONTRACTOR IS TO DISCONNECT AND RE-CONNECT EXISTING FEEDER TO NEW DEVICE. REFER TO RENOVATION PLANS FOR CONTINUATION.
- 2 PROVIDE T-SLOT GROUND FAULT RECEPTACLE COMPLETE WITH "HEAVY DUTY IN-USE" WEATHER-PROOF COVER, COORDINATE PLACEMENT WITH MECHANICAL TRADE. INDICATED DEVICE IS TO BE MOUNTED  $\pm 36"$  (900mm) ABOVE FINISHED ROOF LEVEL.



The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.  
The drawings show general arrangement of services. Follow closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.  
These drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.  
Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned or destroyed at the end of the project. These documents are not to be duplicated or copied without the consent of the Consultant.  
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#### ISSUANCES

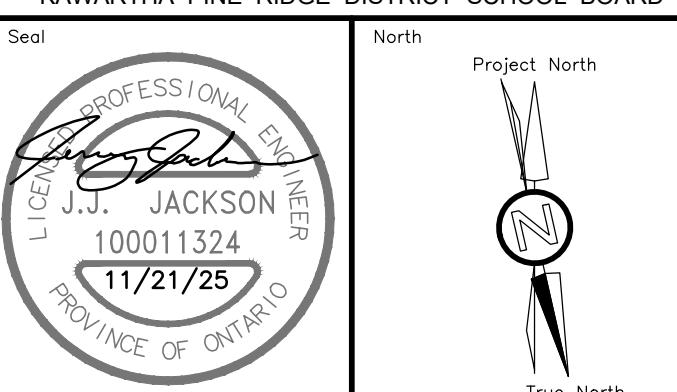
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3	25.11.21	REISSUED FOR TENDER	



#### LYDIA TRULL PUBLIC SCHOOL

COURTICE ONTARIO

KAWARTHAS PINE RIDGE DISTRICT SCHOOL BOARD



RENOVATION TO:  
LYDIA TRULL PUBLIC  
SCHOOL MECHANICAL  
UPGRADES

80 Avondale Dr, Courtice, ON L1E 3C2

Sheet Title  
ROOF PLAN - DEMOLITION  
AND RENOVATION



MECHANICAL | ELECTRICAL | AQUATIC

55 Northland Road, Waterloo, ON N2V 2Y8  
Phone: 519-725-3555  
Website: deiassociates.ca

Drawn by CP	Checked by RV	Approved by JJ
Scale AS NOTED	Project Date SEPT 2024	Print Date SEPT 2024
Project No. 24300	Drawing No. E202	