

Ecole Pierre Chaisson Addition

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140 Deblois Rd,
Tignish, PE

CIVIL
C100 DEMO PLAN
C101 NEW EXTENSION PLAN

STRUCTURAL
S100 PLANS & NOTES
S101 SECTIONS & DETAILS
S102 SECTIONS & DETAILS

ARCHITECTURAL
A000 COVER PAGE
A001 SCHEDULES, NOTES & SPECIFICATIONS
A100 MAIN FLOOR PLAN, PARTIAL & ELEVATIONS
A300 BUILDING SECTIONS
A350 WALL SECTIONS & DETAILS

MECHANICAL
M001 MECHANICAL SPECIFICATION, LEGEND, AND DETAILS
M100 NEW WORKS PLANS, CONTROL SCHEMATIC, AND EQUIPMENT SCHEDULES

ELECTRICAL
E001 ELECTRICAL SPECIFICATION, LUMINAIRE SCHEDULE & LEGEND
E100 PARTIAL FLOOR PLAN - POWER, COMMUNICATIONS, SYSTEMS, LIGHTING & NOTES

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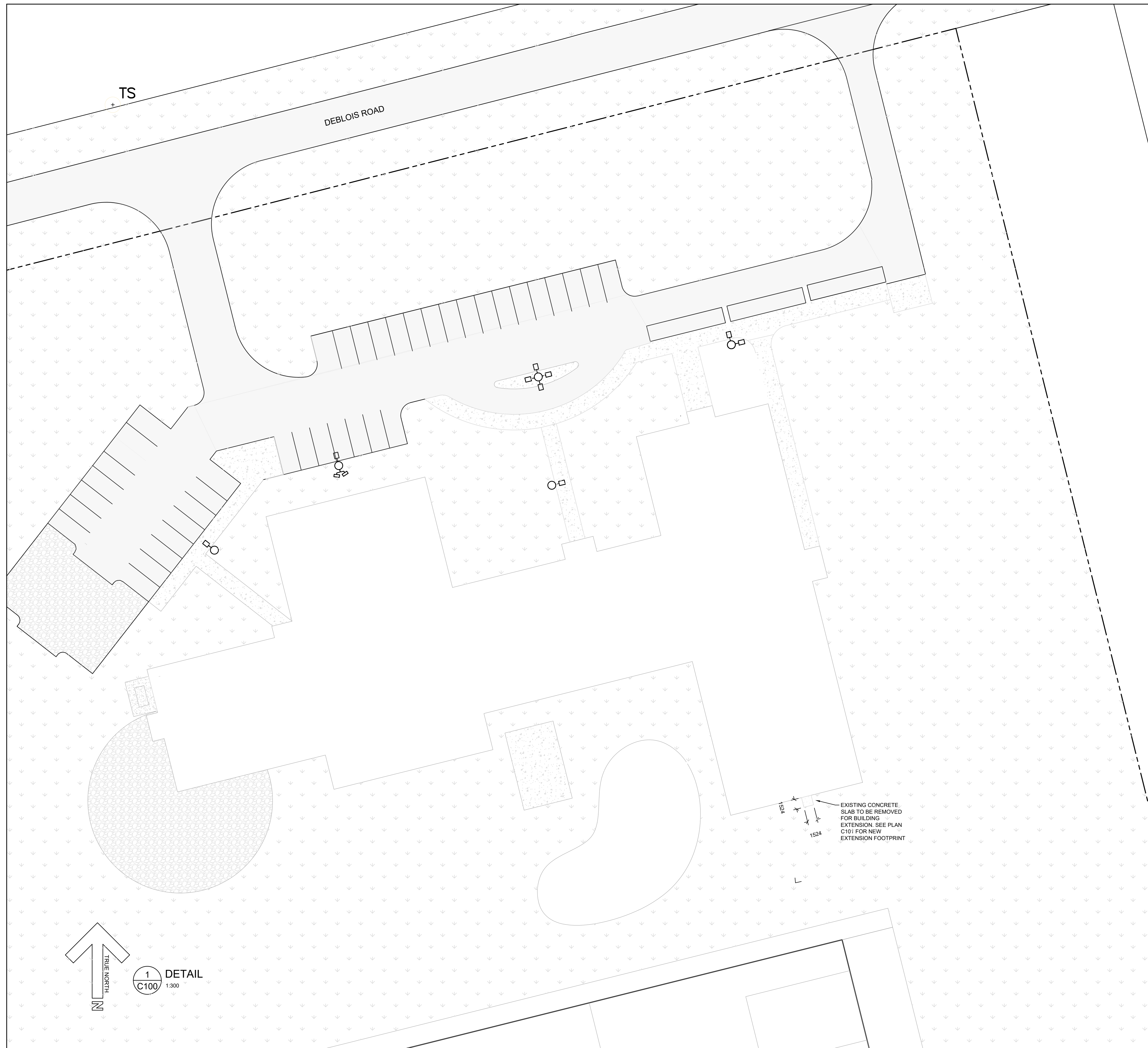


Client
Provincial Government of PEI
Department of Transportation & Infrastructure

Project Title
Ecole Pierre Chaisson Addition
DTI Project #175-23045.

Sheet Title
Cover Page

No.	Description	Date	Date: 2023-10-19	Revision
-	Issued for Tender	2023-10-19	Drn By: AJW	
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LEGEND

- PROPERTY LINE
 - PROPERTY SETBACK LINE
 - EXISTING EDGE OF ASPHALT
 - EXISTING ASPHALT
 - EXISTING BUILDING
 - NEW BUILDING
 - NEW EDGE OF ASPHALT
 - NEW ASPHALT
 - EXISTING DOMESTIC WATER LINE
 - EXISTING DOMESTIC SANITARY LINE
 - EXISTING DOMESTIC STORM WATER LINE
 - NEW DOMESTIC WATER LINE
 - NEW DOMESTIC SANITARY LINE
 - NEW DOMESTIC STORM WATER LINE
 - DRAINAGE SWALE
 - RETAINING WALL
 - EXISTING CONCRETE
 - EXISTING GRASS
- MH EXISTING MANHOLE
 - CB EXISTING CATCH BASIN
 - 15.23 EXISTING ELEVATION
 - 15.23 PROPOSED ELEVATION
 - UP EXISTING POWER POLE
 - ⊗ CS NEW CURB STOP

GENERAL REQUIREMENTS

1. ERODIBLE SOIL SHALL NOT REMAIN EXPOSED FOR LONGER THAN ABSOLUTELY NECESSARY.
2. WORK WILL BE COMPLETED AS SOON AS POSSIBLE, AND WILL BE SUSPENDED DURING AND IMMEDIATELY AFTER INTENSE RAINSTORMS AND DURING PERIOD OF HIGH RUNOFF.
3. WITHIN 48 HRS OF DOING DITCHING WORK, OR AS DIRECTED BY THE ENGINEER, ALL EXPOSED SOILS WILL BE EITHER SEEDED OR RECEIVE STRAWMAY MULCH APPLICATION.
4. DITCHING SHALL NOT BE DONE PRIOR TO MAY 1 OR AFTER SEPTEMBER 30 WITHOUT WRITTEN APPROVAL FROM EMS.
5. EFFORTS TO REDUCE THE TURBIDITY OF WATER PUMPED FROM WORK AREAS WILL BE IMPLEMENTED, PRIOR TO FINAL DISCHARGE, THROUGH THE USE OF FILTRATION THROUGH VEGETATION, EROSION CONTROL DEVICES SUCH AS SEDIMENT COLLECTION PONDS, CHECK DAMS OR OTHER DEVICES.

EROSION & SEDIMENT CONTROL MEASURES

1. DO NOT REMOVE OR DISTURB ANY VEGETATION BEYOND THE LIMITS OF WORK.
2. STABILIZE ACCESS ROADS AS SOON AS POSSIBLE AFTER BEING DISTURBED.
3. EROSION CONTROL MEASURES MUST BE CHECKED AND MAINTAINED ON A REGULAR BASIS (DAILY AND AFTER HEAVY RAINFALL).
4. ALL MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO MINIMIZE THE TRANSPORT OF SEDIMENT FROM THE CONSTRUCTION SITE.
5. ANY MUD OR DEBRIS THAT IS CARRIED OFFSITE AND ONTO THE PUBLIC ROADWAY MUST BE CLEANED OFF AT THE END OF EACH WORKDAY.
6. FAILURE TO COMPLY WITH THE EROSION AND SEDIMENTATION CONTROLS MAY RESULT IN A STOP WORK ORDER UNTIL ADEQUATE MEASURES HAVE BEEN CORRECTED.
7. EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL THE SITE IS STABLE AND VEGETATION IS ESTABLISHED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
8. A SPILL CONTAINMENT KIT SHALL BE ONSITE AT ALL TIMES WHILE HEAVY EQUIPMENT IS ONSITE.
9. ANY CONCERNS OR EMERGENCIES RELATED TO EROSION AND SEDIMENTATION FROM THE SITE SHALL BE DIRECTED TO THE ENGINEER.

STRAW BALE CHECK DAMS

1. PROVIDE STRAW BALE CHECK DAMS FOR DITCHES WITH LESS THAN 2% GRADIENTS.
2. ALL SILT FENCES AND BARRIERS SHOULD BE INSPECTED FOR BREACHES AFTER EACH RAINFALL AND AT LEAST DAILY DURING PERIODS OF PROLONGED RAINFALL.

RIRAP CHECK DAMS

1. PROVIDE RIRAP CHECK DAMS FOR DITCHES WITH STEEP THAN 2% GRADIENTS.
2. CHECK DAMS TO REMAIN IN A FUNCTIONAL CONDITION UNTIL THE GRASS ON SEEDED SLOPES IS SUFFICIENTLY ESTABLISHED TO BE AN EFFECTIVE DETERRENT TO SEDIMENT RUNOFF. SEDIMENT DEPOSITS SHALL BE REMOVED BEFORE THE LEVEL OF SEDIMENTATION REACHES A POINT WITHIN 100mm OF THE CREST OF THE OVERFLOW NOTCH.

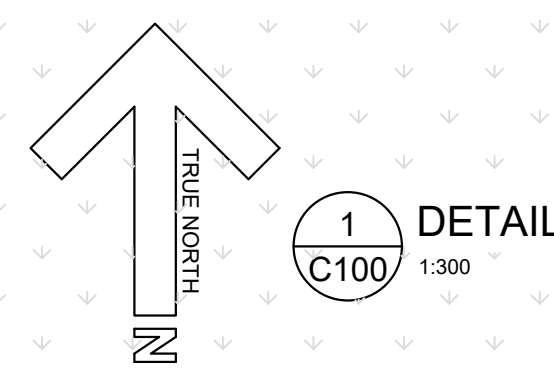
SEDIMENT TRAPS / PONDS

1. SEDIMENT TRAPS AND SEDIMENT COLLECTION PONDS SHALL BE CONSTRUCTED PRIOR TO INITIAL GRUBBING AND EXCAVATION OF A WORK SITE AND SHALL REMAIN IN USE UNTIL THE DISTURBED AREA IS PROTECTED AGAINST EROSION BY PERMANENT STABILIZATION.
2. SEDIMENT TRAPS / PONDS SHALL BE SIZED FOR A MINIMUM STORAGE VOLUME OF 75 CM PER HECTARE OF CONTRIBUTING DISTURBED AREA. THIS MAY RESULT IN MULTIPLE SEDIMENT TRAPS/PONDS THROUGHOUT THE DEVELOPMENT AREA.
3. WHEN A PERMANENT STORMWATER DETENTION POND WILL BE CONSTRUCTED FOR THE SUBDIVISION, 50% OF THE STORAGE VOLUME FROM THE SEDIMENT TRAPS/PONDS SHALL BE LOCATED IMMEDIATELY UPSTREAM OF THE DETENTION POND TO MINIMIZE THE AMOUNT OF SEDIMENT BUILD-UP IN THE DETENTION POND. THE REMAINDER OF THE STORAGE VOLUME OF THE SEDIMENT TRAPS/PONDS MAY BE LOCATED THROUGHOUT THE DEVELOPMENT AREA WITHIN THE DITCHES.
4. SEDIMENT TRAPS AND SEDIMENT COLLECTION PONDS SHALL BE INSPECTED REGULARLY AND AFTER RAINFALLS OF 5mm OR MORE. ANY DAMAGED AREAS SHALL BE REPAIRED.

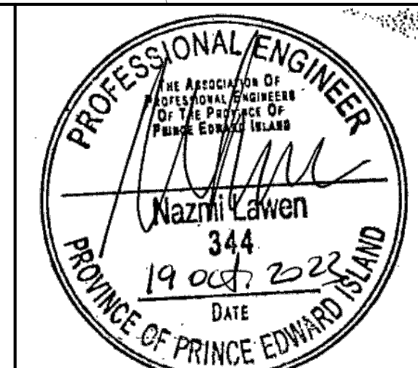
SOIL STABILIZATION

1. TOP AND OUTSIDE OF SLOPES OF THE EARTHEN EMBANKMENTS SHALL BE HYDRO SEEDED AND COVERED WITH JUTE MAT IMMEDIATELY AFTER INSTALLATION.
2. SEEDING SHALL BE CARRIED OUT WITHIN 48 HRS OF COMPLETING SURFACE PREPARATION, OR AS SOON AS POSSIBLE AFTER COMPLETING SURFACE PREPARATION.
3. IN STEEP AREAS, SUCH AS ROAD SIDE SLOPES, THE SEED MUST BE COVERED WITH MULCH OR AN EROSION CONTROL MAT SO THAT THE SEED REMAINS IN PLACE DURING ITS GERMINATION PERIOD.
4. MULCHED AREAS SHALL BE INSPECTED REGULARLY AND AFTER RAIN OF 5mm OR MORE ACCUMULATION, REPAIRED AS REQUIRED UNTIL THE AREA HAS STABILIZED.
5. SOD SHALL BE LAID DURING THE GROWING SEASON. SODDING SHALL NOT OCCUR DURING DRY SUMMER PERIODS, AT FREEZING TEMPERATURES, OR OVER FROZEN SOIL.
6. ALL SODDED AREAS SHALL BE WATERED THROUGHOUT THE GROWING SEASON OF THE YEAR IN WHICH SODDING WAS COMPLETED.

EXISTING CONCRETE SLAB TO BE REMOVED FOR BUILDING EXTENSION. SEE PLAN C101 FOR NEW EXTENSION FOOTPRINT



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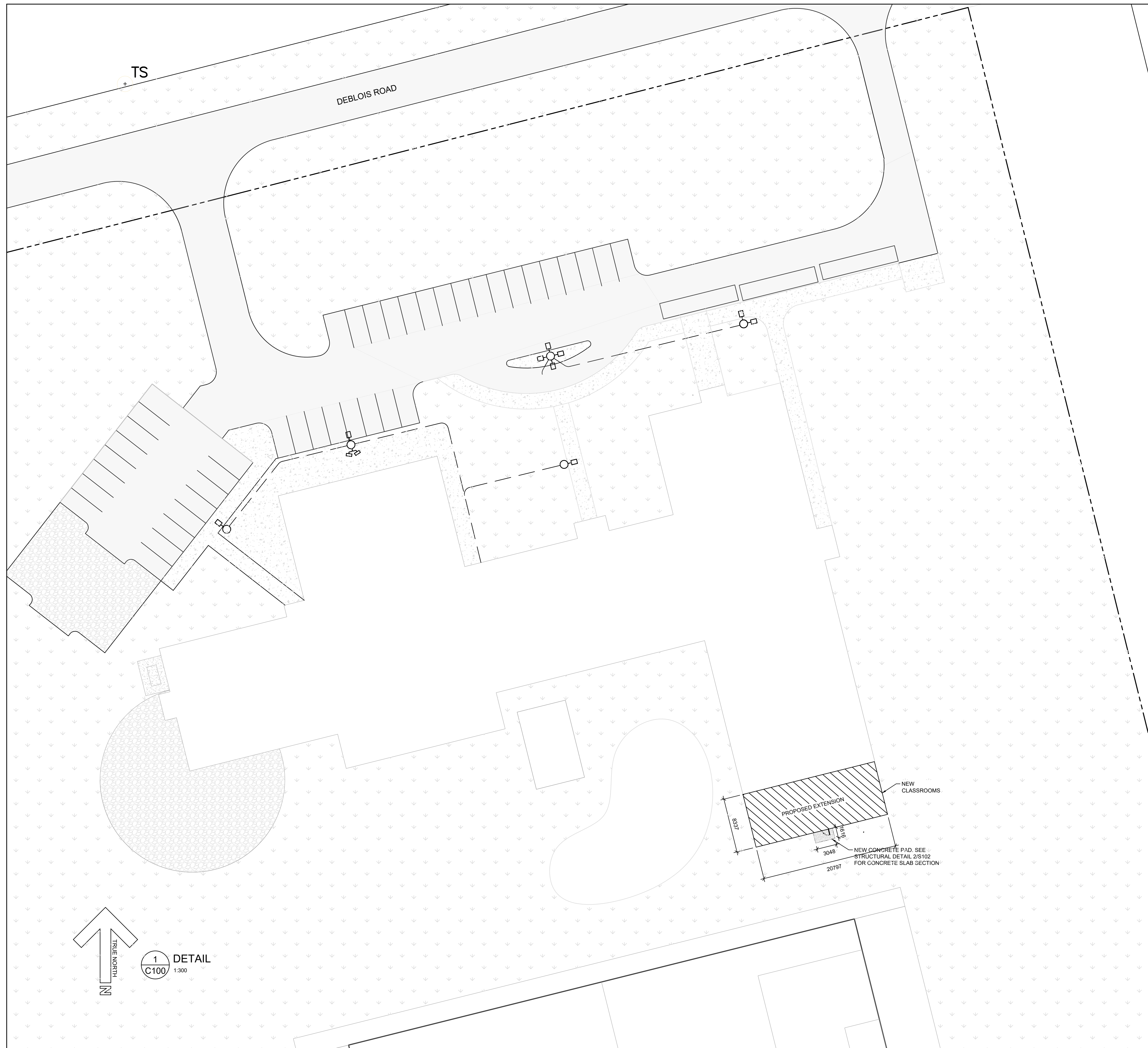


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Project Title
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 DTI Project # 175-23045

Sheet Title
 Civil Demo Plan

No.	Description	Date	Date:	Revision
1	Issued For Tender	2023-10-19	2023-10-19	
			Drn By: PN E.I.T	
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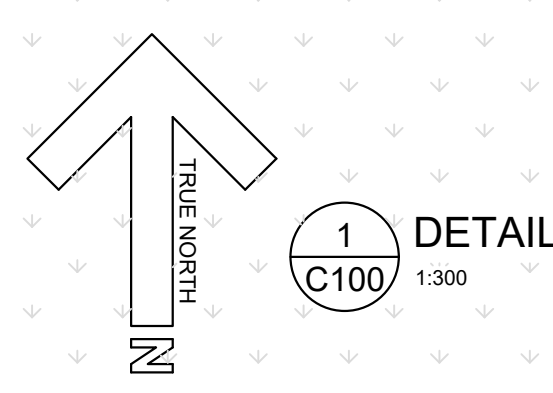


LEGEND

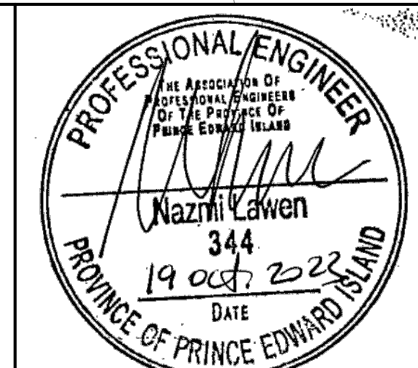
---	PROPERTY LINE	○ MH	EXISTING MANHOLE
- - - -	PROPERTY SETBACK LINE	○ CB	EXISTING CATCH BASIN
▭	EXISTING EDGE OF ASPHALT	15.25	EXISTING ELEVATION
▭	EXISTING ASPHALT	15.23	PROPOSED ELEVATION
▭	EXISTING BUILDING	○ UP	EXISTING POWER POLE
▭	NEW BUILDING	⊗ CS	NEW CURB STOP
▭	NEW EDGE OF ASPHALT		
▭	NEW ASPHALT		
---	EXISTING DOMESTIC WATER LINE		
- - - -	EXISTING DOMESTIC SANITARY LINE		
- - - -	EXISTING DOMESTIC STORM WATER LINE		
---	NEW DOMESTIC WATER LINE		
- - - -	NEW DOMESTIC SANITARY LINE		
- - - -	NEW DOMESTIC STORM WATER LINE		
---	DRAINAGE SWALE		
▭	RETAINING WALL		
▭	EXISTING CONCRETE		
▭	EXISTING GRASS		

GENERAL NOTES:

- CONTRACTOR SHALL COORDINATE THIS WORK AND COOPERATE WITH THE OWNER AND AGENCIES HAVING JURISDICTION.
- CONTRACTOR MUST VISIT THE SITE PRIOR TO CONSTRUCTION AND BE FAMILIAR WITH EXISTING CONDITIONS.
- VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
- ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC UNITS U.N.O.
- PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES AND SERVICES (SHOWN OR NOT SHOWN ON DRAWINGS) IN THE FIELD WITHIN THE CONTRACT LIMIT. INFORMATION SHOWN ON PLANS IS APPROXIMATE ONLY.
- UNDERGROUND WATER, SEWER, TELEPHONE AND POWER SERVICES EXIST BENEATH THE SITE. EXERCISE CAUTION IN EXCAVATION AND PROTECT FACILITIES FROM DAMAGE. CONTRACTOR TO REPAIR DAMAGES AT NO COST TO THE OWNER. WORK SHALL BE CARRIED OUT TO THE SATISFACTION OF THESE AUTHORITIES. CONTACT UTILITIES BEFORE EXCAVATING.
- PRIOR TO CONSTRUCTION, CONTRACTOR MUST REVIEW THE DEPTH OF ALL NEW UNDERGROUND SERVICES AND ADJUST DEPTH OF ALL SERVICES INCLUDING WATER, SANITARY SEWER, STORM SEWER, U/G ELECTRICAL & COMMUNICATION, WHERE INTERFERENCE OCCURS. ADVISE & OBTAIN APPROVAL FROM CONSULTANT BEFORE PROCEEDING WITH ANY CHANGES. COSTS ASSOCIATED WITH THIS TO BE INCLUDED IN TENDER PRICE.
- THE CONTRACTOR TO INCLUDE IN THE CONTRACT PRICE COSTS ASSOCIATED WITH OVER EXCAVATION, BACKFILLING AND REINSTATEMENT DUE TO POSSIBLE MISALIGNED EXISTING UNDERGROUND SERVICES.
- PERFORM WORK AND COMPLY WITH ALL FEDERAL, PROVINCIAL AND MUNICIPAL BY-LAWS AND REGULATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE SUPPLY, INSTALLATION & TESTING FOR ANY ADDITIONAL MATERIALS & EQUIPMENT NOT SPECIFIED OR INDICATED ON THE DRAWINGS TO COMPLETE WORK ENSURING THAT ALL SYSTEMS ARE FULLY OPERATIONAL AND MEETING THE FUNCTIONAL REQUIREMENT OF THIS PROJECT.
- CONTRACTOR IS RESPONSIBLE FOR THE SUPPLY, INSTALLATION AND TESTING OF ALL PIPES AND APPURTENANCES AS PER APPLICABLE STANDARDS & AS REQUIRED BY REGULATIONS FOR A COMPLETE OPERATIONAL SYSTEM.
- REPAIR & REINSTATE DISTURBED ASPHALT, GRAVELED, GRASSED & LANDSCAPED AREAS, ETC., DAMAGED BY WORK OF CONTRACT INCLUDING ALL AREAS IMPACTED BEYOND LIMIT OF CONTRACT.
- ADJUST TOP OF ALL CB & MH COVERS, WATER VALVES, CURB STOPS, AND ANY UTILITIES AFFECTED BY THE WORK OF THIS CONTRACT AND NECESSARY BY THE CONSULTANT/OWNER TO SATISFY SITE CONDITIONS.
- AT ANY LOCATIONS WHERE NEW STORM PIPING OR DITCHING CROSSES EXISTING WATER MAIN, CONTRACTOR IS TO PROVIDE 50mm RIGID INSULATION ABOVE WATER MAIN.



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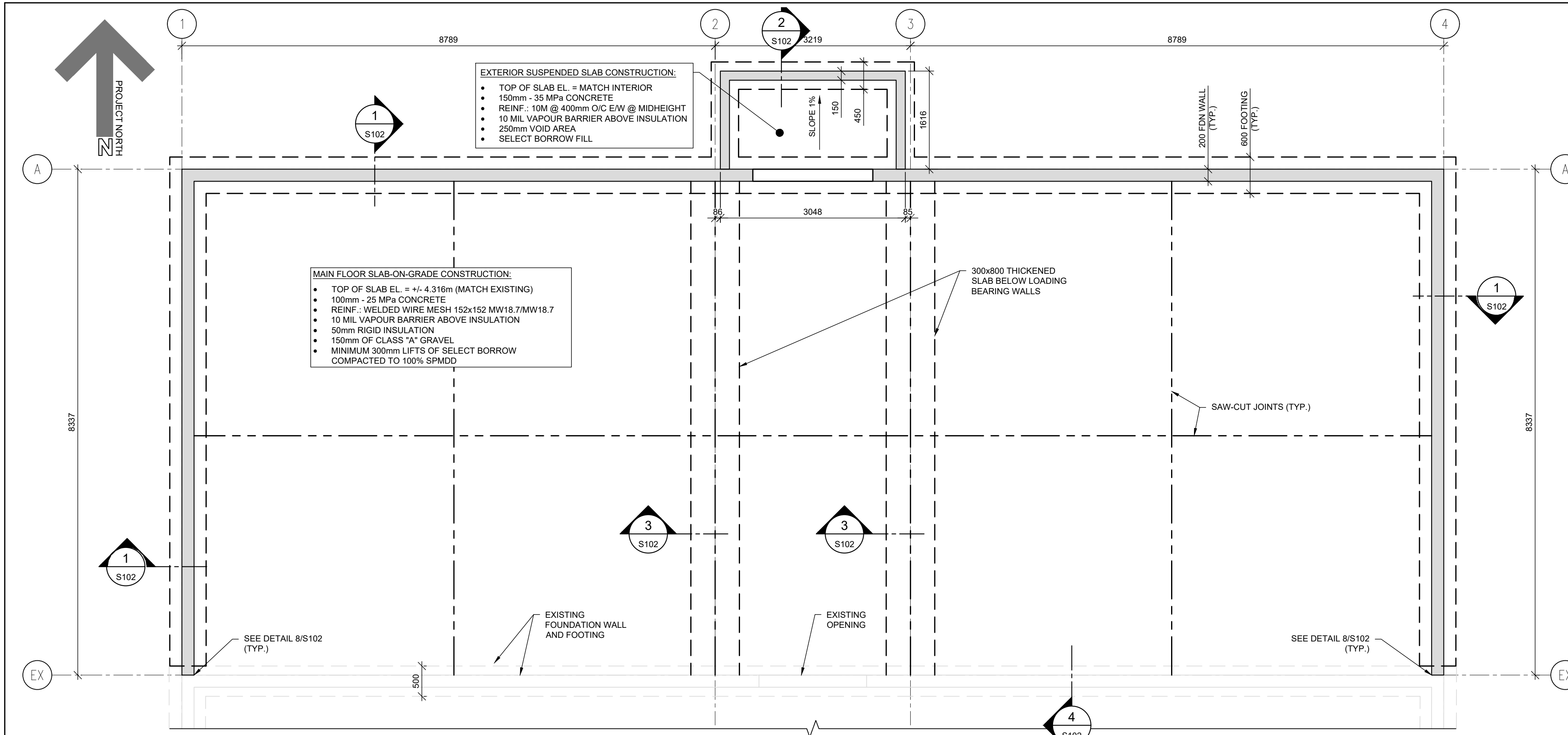


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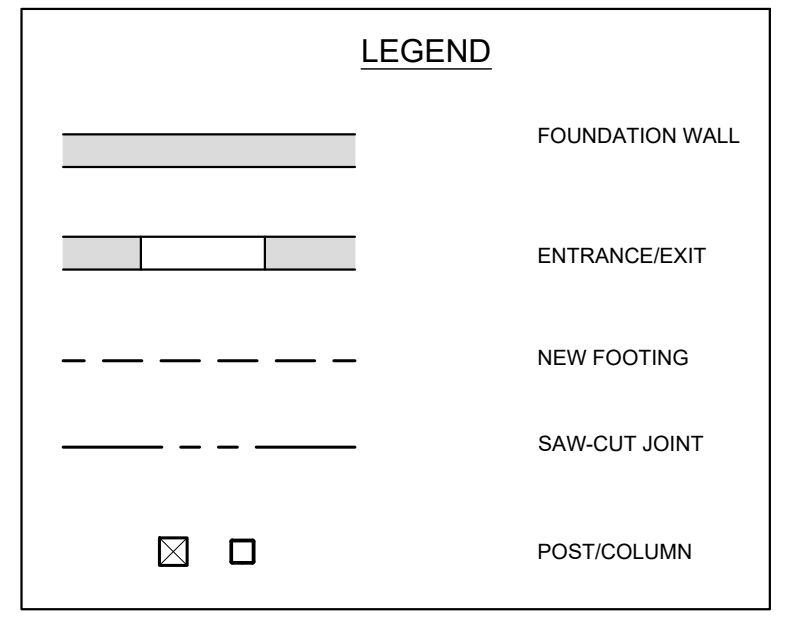
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 Department of Transportation & Infrastructure
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 New Proposed Extension Civil Plan.

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1 PLAN - FOUNDATION & SLAB-ON-GRADE



SLAB ON GRADE

- ENSURE NBC SOIL GAS CONTROL REQUIREMENTS ARE INSTALLED.
- INTERIOR CONCRETE FLOOR SLAB TO HAVE A SMOOTH STEEL TROWELLED FINISH (TO A FLAT TOLERANCE CLASSIFICATION 5mm (3/16") IN 3m (9'-0") AS PER ENGINEERS REQUIREMENT.
- WET CURE SLAB-ON-GRADE FOR A MINIMUM 7 DAYS AFTER PLACEMENT OR APPLY CURING COMPOUND IMMEDIATELY AFTER COMPLETION OF SLAB FINISHING. USE MASTERCRETE OR BY MASTER BUILDERS, STERNSON FLORESAL, OR EQUIVALENT LIQUID MEMBRANE CONCRETE CURING COMPOUND.
- PROVIDE WEATHER PROTECTION TO CONCRETE SLAB AND ALL CONCRETE WORK IN CONFORMANCE WITH REQUIREMENTS OF A23.1

REINFORCING STEEL NOTES:

- ALL REINFORCING STEEL SHALL BE NEW BILLET TO CSA G30.18, WWM REINFORCING TO CSA G30.5.
- MINIMUM REINFORCING STEEL YIELD STRENGTH SHALL BE 400 MPa.
- REINFORCING STEEL SHALL BE DETAILED, CUT, BENT, FABRICATED AND PLACED IN ACCORDANCE WITH REINFORCING MANUAL OF STANDARD PRACTICE (REINFORCING STEEL INSTITUTE OF CANADA), CAN3-A23.3 AND CSA-A23.1.
- THE GENERAL CONTRACTOR SHALL INSPECT ALL THE REINFORCING STEEL BEFORE PLACEMENT OF THE CONCRETE.
- THE POSITION OF ALL REINFORCING STEEL SHALL BE MAINTAINED DURING THE POURING OPERATION BY DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR.
- SUBMIT SHOP DRAWINGS STAMPED BY AN ENGINEER LICENSED TO PRACTICE IN PEI FOR REVIEW PRIOR TO FABRICATING REINFORCING STEEL. CLEARLY INDICATE BAR SIZES, SPACING, LOCATION, QUANTITY, CHAIRS, SPACERS, ETC WITH IDENTIFYING CODE MARKS TO PERMIT PLACEMENT.

CONCRETE NOTES:

- ALL CONCRETE WORK AND MATERIAL SHALL BE CARRIED OUT IN ACCORDANCE WITH LATEST CSA A23.1 AND NBCC 2015.
- MIX DESIGN: TYPE 10 PORTLAND CEMENT.
- FOOTINGS AND FOUNDATION WALLS:
 - COMPRESSIVE STRENGTH (28D): 25MPa (3600psi)
 - CLASS OF EXPOSURE: F-2
 - NOMINAL AGGREGATE SIZE: 20mm (3/4")
 - SLUMP: 80mm (3-1/4") ±20mm (3/4")
 - AIR CONTENT: 4-7%
 - WATER CEMENT RATIO: 0.5 MAX
- INTERIOR SLABS:
 - COMPRESSIVE STRENGTH (28D): 25MPa (3600psi)
 - CLASS OF EXPOSURE: F-2
 - NOMINAL AGGREGATE SIZE: 20mm (3/4")
 - SLUMP: 80mm (3-1/4") ±20mm (3/4")
 - AIR CONTENT: NONE
 - WATER CEMENT RATIO: 0.45 MAX
- EXTERIOR SLABS:
 - COMPRESSIVE STRENGTH (28D): 35MPa (5000psi)
 - CLASS OF EXPOSURE: C-2
 - NOMINAL AGGREGATE SIZE: 20mm (3/4")
 - SLUMP: 80mm (3-1/4") ±20mm (3/4")
 - AIR CONTENT: 4-8%
 - WATER CEMENT RATIO: 0.40 MAX
- USE OF CALCIUM CHLORIDE IS NOT PERMITTED.
- ALL CONCRETE SHALL BE VIBRATED USING HIGH FREQUENCY VIBRATORS. VIBRATION PRACTICES TO BE IN ACCORDANCE WITH ACI 309R.
- COLD WEATHER CONCRETE SHALL BE PLACED AND PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA A23.1 AND TO THE REQUIREMENTS OF ACI-308R. PROVIDE HEATED ENCLOSURES AND/OR INSULATED TARP AS REQUIRED TO MAINTAIN MINIMUM 10°C CONCRETE SURFACE TEMPERATURE FOR A PERIOD OF 5 DAYS FOLLOWING CONCRETE PLACEMENT. PROVIDE CONTROLLED COOL DOWN PERIOD TO PREVENT SURFACE CRACKING AT END OF PROTECTION PERIOD. ENSURE THAT NO CONCRETE IS PLACED ON OR AGAINST FROZEN SUBGRADE, FORMWORK, OR REINFORCING STEEL.
- LEAVE FORMWORK IN PLACE FOR THE FOLLOWING MINIMUM PERIODS OF TIME AFTER PLACING CONCRETE:
 - 72 HR. FOR WALLS
 - 72 HR. FOR FOOTINGS
- APPLY CURING COMPOUND TO WALLS AND PILASTERS IF EXPOSED TO DRYING CONDITIONS PRIOR TO COMPLETION OF FULL 7 DAY MOIST CURING PERIOD. USE LIQUID MEMBRANE CONCRETE CURING COMPOUND.

GENERAL

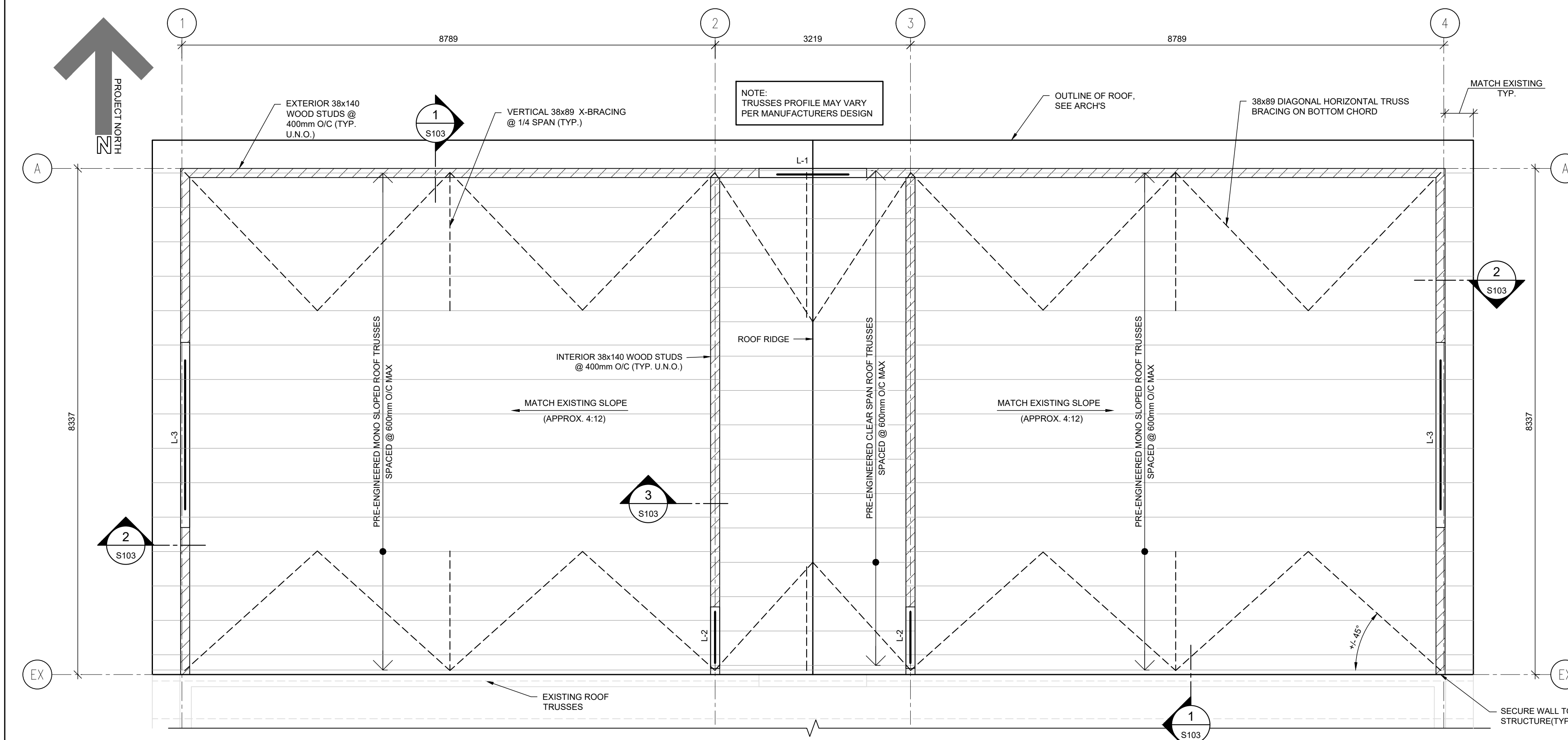
- THE WORK SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA (NBCC), LATEST REVISION, TO THE SATISFACTION OF THE ENGINEER UNLESS NOTES OTHERWISE ON THE DRAWING OR IN THE SPECIFICATIONS.
- COMPLY WITH ALL ENVIRONMENTAL REGULATIONS AND PROVIDE ALL NECESSARY ENVIRONMENTAL PROTECTION INCLUDING SILT FENCES, SEDIMENT TRAPS, CHECK DAMS, DUST CONTROL, ETC. DO NOT DISPOSE OF OR BURN RUBBISH ON SITE.
- COMPLY WITH ALL LOCAL, MUNICIPAL, AND PROVINCIAL BY-LAWS AND REGULATIONS.
- ALL WORK TO BE PERFORMED IN ACCORDANCE WITH PEI OCCUPATIONAL HEALTH & SAFETY ACT, WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM AND APPLICABLE LABOR CODES.
- CONTRACTOR TO EXERCISE EXTREME CAUTION. DESIGN AND PROVIDE ADEQUATE SUPPORT AND CONNECTIONS TO EXISTING STRUCTURES, UTILITIES AND SERVICES. MOVE, ADJUST AND RECONNECT ALL VISIBLE AND CONCEALED ITEMS AFFECTED BY THE SCOPE OF WORK.
- CONTRACTOR MUST VISIT THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS. VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES AND SERVICES WITHIN THE CONTRACT LIMIT.
- CONTRACTOR SHALL COORDINATE WORK AND COOPERATE WITH OWNER AND AGENCIES HAVING JURISDICTION.
- REPORT ANY DOUBTFUL CONDITIONS REQUIRING DECISIONS AND SECURE DIRECTIONS FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- THE GENERAL CONTRACTOR-PROJECT MANAGER SHALL COORDINATE THE CIVIL, STRUCTURAL, ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.
- PREVENT MOVEMENT OR SETTLEMENT. SAFEGUARD AND MAINTAIN INTEGRITY OF EXISTING AND ADJACENT STRUCTURES AND SERVICES.
- VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
- ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC UNITS UNLESS NOTED OTHERWISE.
- REPAIR & REINSTATE DISTURBED ASPHALT PAVEMENT, GRASSES & LANDSCAPED AREAS, SIGNS, RETAINING WALLS, ETC., DAMAGED BY WORK OF CONTRACT INCLUDING ALL AREAS IMPACTED BEYOND LIMIT OF CONTRACT. TOPSOIL, SEED OR SOO ALL GRASSSED SURFACES UNLESS NOTED OTHERWISE.
- PROPERLY DISPOSE AND REMOVE OFFSITE ALL DEBRIS AND MATERIALS TO BE REMOVED.

ROUGH CARPENTRY NOTES:

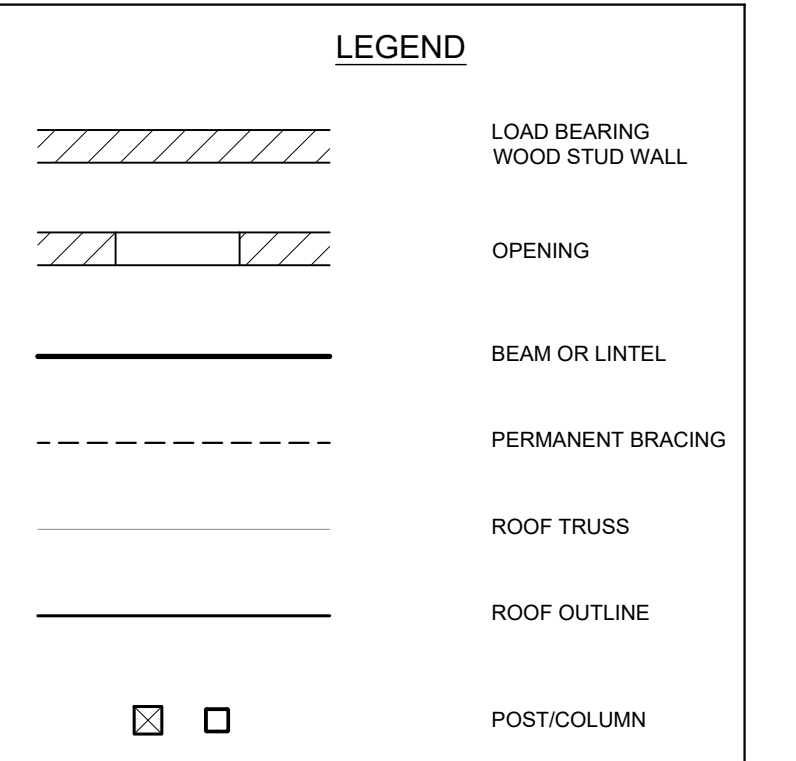
- ALL WOOD STRUCTURAL MEMBERS, ASSEMBLIES AND FASTENERS SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARD O86 (LATEST EDITION).
- ALL LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK IN ACCORDANCE WITH THE MARKING PROVISIONS OF CSA STANDARD O141.
- ALL LUMBER SHALL BE STRUCTURAL GRADE DRY, S-P-F NO. 2 MINIMUM. MOISTURE CONTENT NOT GREATER THAN 19% AT INSTALLATION.
- ALL PLYWOOD SHALL BE EXTERIOR GRADE DOUGLAS FIR PLYWOOD TO CSA O121 AND MANUFACTURED WITH WATERPROOF GLUE.
- PROVIDE FULL WIDTH 38mm (1-1/2") THICK WOOD NAILER PLATE ON FLANGES OF STEEL BEAMS AS REQUIRED. SECURE WITH 12mm (1/2") DIA. BOLTS AT 610mm (24") ON CENTER STAGGERED.
- PROVIDE GALVANIZED METAL JOIST HANGERS WHERE JOISTS NOT SUPPORTED ON WALLS OR BEAMS. SIZE ADEQUATE TO SUPPORT DESIGN LOADS.
- ALL FASTENERS AND METAL IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED OR APPROVED EQUAL.
- ALL BEARING SHALL BE CONTINUOUS TO FOUNDATION UNLESS NOTED OTHERWISE.
- SHEATHING SHALL BE FASTENED AT 150mm (6") ON CENTER AT EDGES AND END SUPPORTS AND AT 300mm (12") CENTERS AT INTERMEDIATE SUPPORTS.
- REQUIRED TRUSS/JOIST ANCHORS, CLIPS, HANGERS, ETC. SHALL BE DESIGNED AND SUPPLIED BY TRUSS/JOIST MANUFACTURER TO ACCOMMODATE ALL LOADS, INCLUDING UPLIFT.
- VENTILATE AND FIRE STOP ALL SPACES TO NBCC REQUIREMENTS.

WOOD TRUSS NOTES:

- ALL TRUSSES SHALL BE DESIGNED FOR SNOW AND WIND LOAD AS PER NBCC AND INCREASED LOADS FOR SNOW DRIFT AT HIGHER OBSTRUCTIONS.
- DESIGN TO SUPPORT THE LOADS INDICATED WITH A MAXIMUM SPAN DEFLECTION UNDER LIVE LOAD OF 1/240 FOR ROOF AND 1/480 FOR FLOOR. TRUSS MANUFACTURER TO SIZE AND PROVIDE REQUIRED LVL BEAMS. INCORPORATE PIGGYBACK TRUSSES AS REQUIRED.
- PROVIDE TEMPORARY ROOF AND WALL BRACING TO SUPPORT LOADS AND KEEP STRUCTURE STABLE DURING INSTALLATION.
- PROVIDE HORIZONTAL BRIDGING AS REQUIRED BY TRUSS DESIGN. REFER TO TRUSS SUPPLIERS SHOP DRAWINGS (U.N.O.).
- MANUFACTURED WOOD TRUSS SYSTEM TO BE DESIGNED BY MANUFACTURER AND SEALED BY AN ENGINEER LICENSED TO PRACTICE IN PEI.
- PROVIDE GABLE END TRUSSES AS REQUIRED ALL LOCATIONS. PROVIDE TYPICAL TRUSS AND GABLE END TRUSSES WHERE STEEL BEAM IS NOT DETAILED AT GABLE END.
- COORDINATE TRUSS DESIGN AND CONFIGURATION WITH ROOF MOUNTED MECHANICAL EQUIPMENT AND MECHANICAL DUCTING AND ADJUST TRUSS WEBBING AS REQUIRED TO SUIT.



2 PLAN - ROOF FRAMING



SPECIFIED ROOF LOADS:

ROOF DEAD LOAD:

- ROOFING MATERIAL AND FINISH = 2 PSF (0.10 kPa)
- ROOF TRUSS FRAMING & BRACING = 10 PSF (0.48 kPa)
- MECH. & ELEC. = 5 PSF (0.24 kPa)
- TRUSS BOTTOM CHORD (FIXTURES, ETC.) = 10 PSF (0.48 kPa)
- TOTAL DEAD LOAD = 27 PSF (1.30 kPa)

ROOF LIVE LOAD

- SNOW LOAD = 1.15[3.1(0.8'1.0"1.1.0)+0.6] = 74 PSF (3.54 kPa)
- TRUSS BOTTOM CHORD LIVE LOAD = 10 PSF (0.48 kPa)
- TOTAL ROOF LOAD = 111 PSF (5.32 kPa)

WIND PRESSURE:

- 1/10 = 0.47 kPa (10 PSF)
- 1/50 = 0.60 kPa (13 PSF)

NOTES:

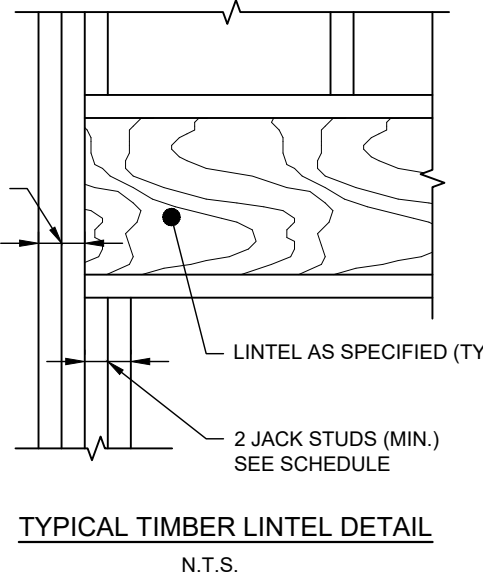
- ROOF TRUSSES TO BE DESIGNED FOR NET UPLIFT 0.96 kPa (20 PSF). DESIGN ROOF TRUSSES FOR SNOW LOAD ACCUMULATION AS PER NBCC REQUIREMENTS.
- IMPORTANCE FACTOR IS CONSIDERED HIGH
- ALL LOADS ARE CONSIDERED UNFACTORED U.N.O.

LINTEL SCHEDULE (EXTERIOR DOOR/WINDOW OPENINGS)

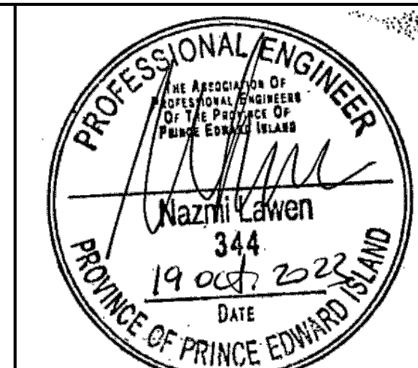
TYPE	SIZE	MIN. BEARING (E/S)
L-1	2-PLY 38 x 184	2 JACK STUDS, 1 KING STUD
L-2	3-PLY 38 x 235	2 JACK STUDS, 1 KING STUD
L-3	2-PLY 45 x 302 LVL	2 JACK STUDS, 1 KING STUD

NOTES:

- LINTELS ARE TO BE SAWN TIMBER S-P-F No. 1 / No. 2 GRADES OR BETTER
- LVL MATERIAL WEST FRASER 3100F, 2-0E LVL OR APPROVED EQUAL.
- COORDINATE OPENING LOCATIONS WITH ARCHITECTURAL (TYP.)



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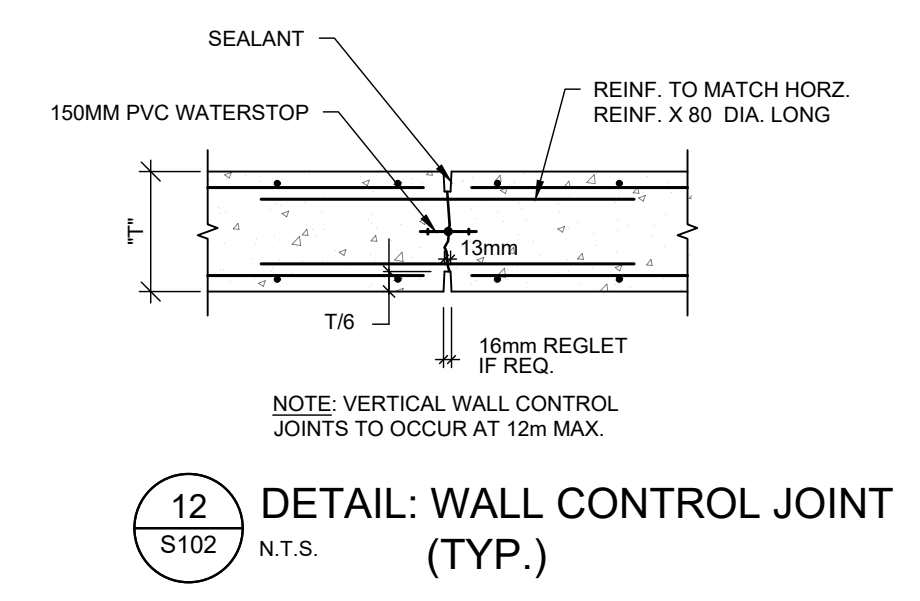
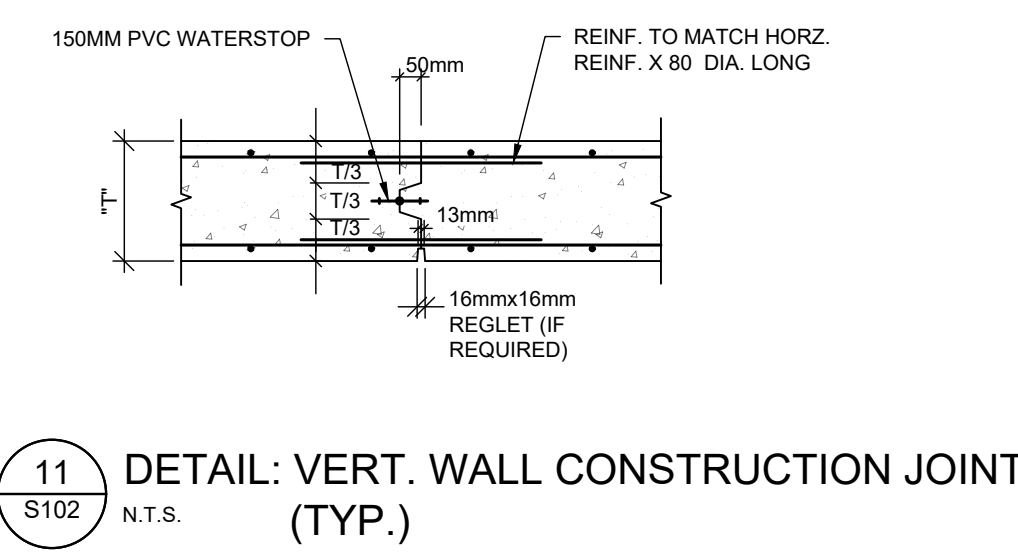
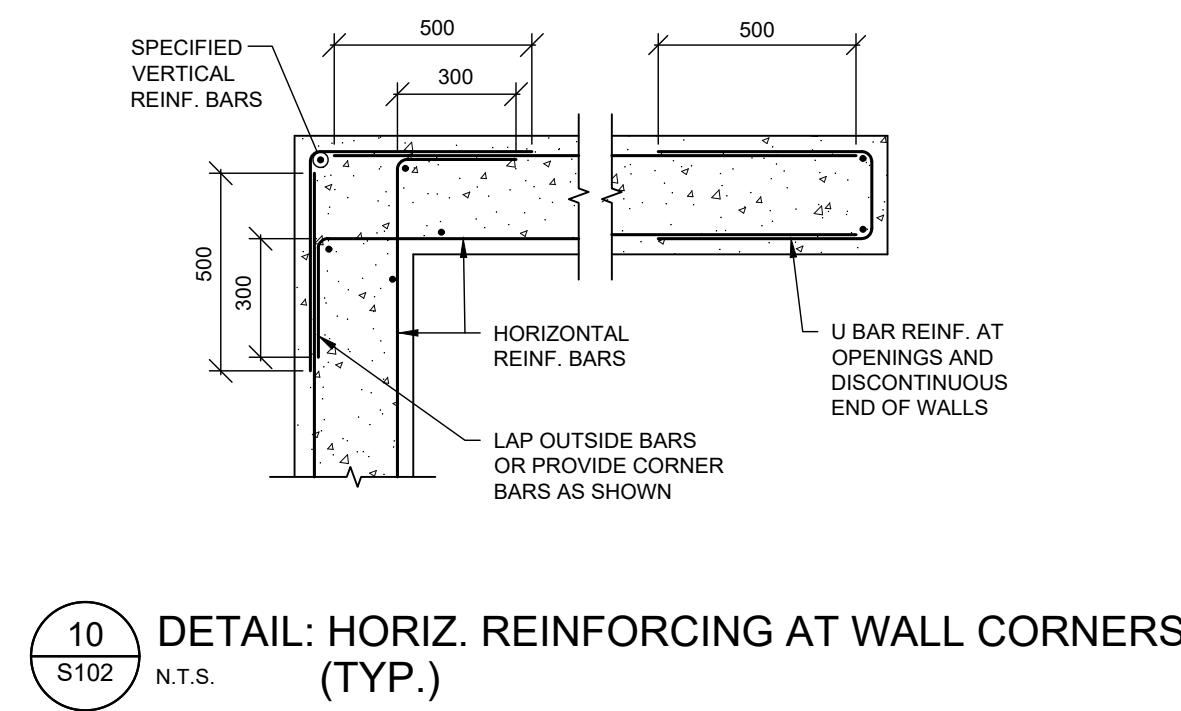
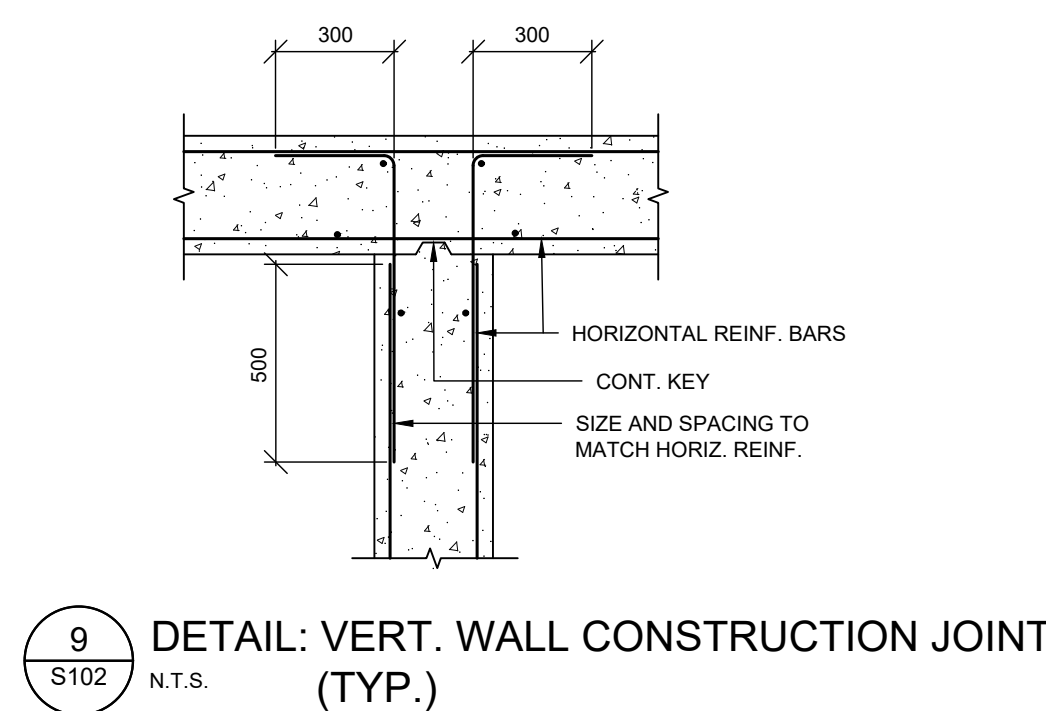
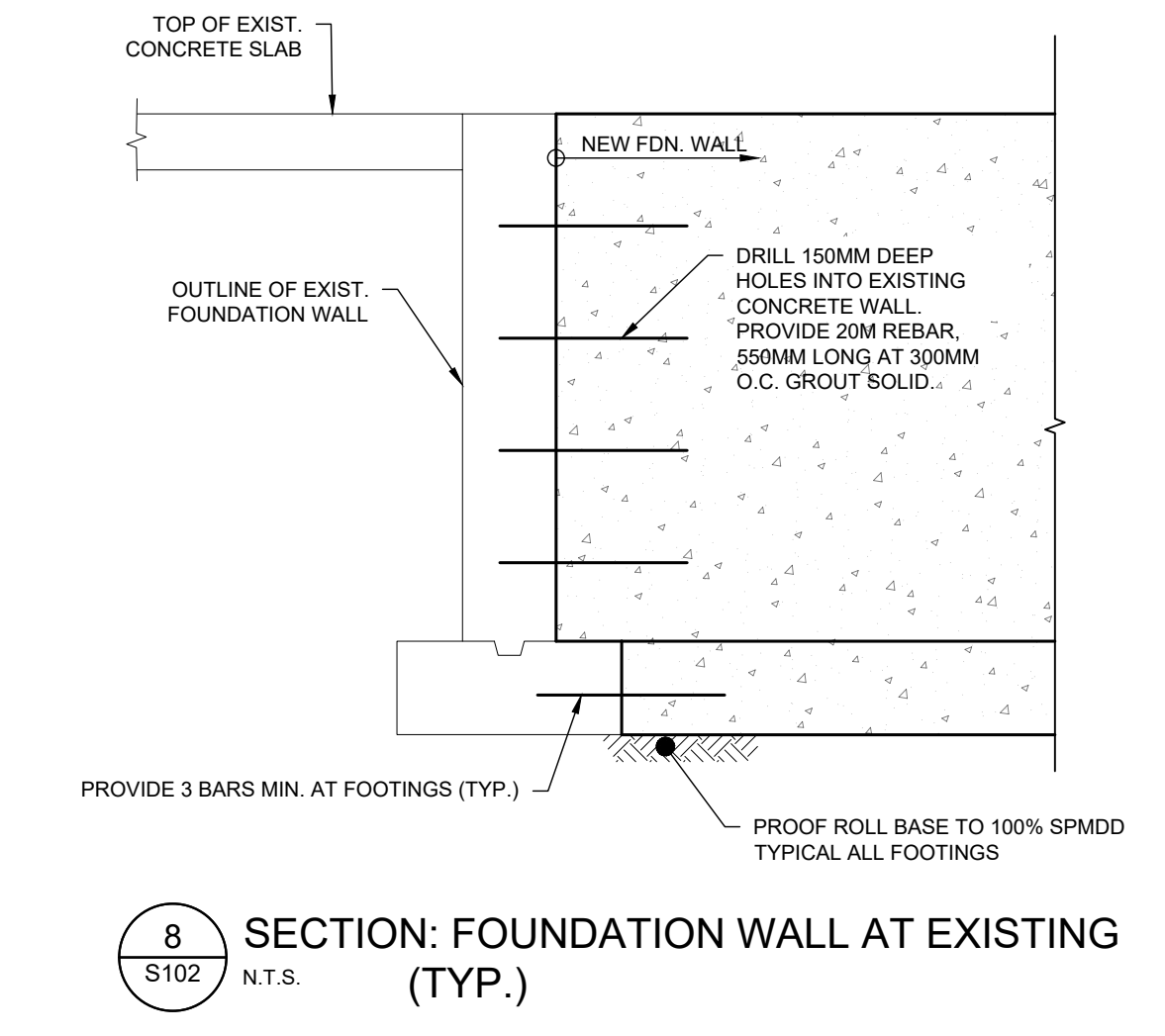
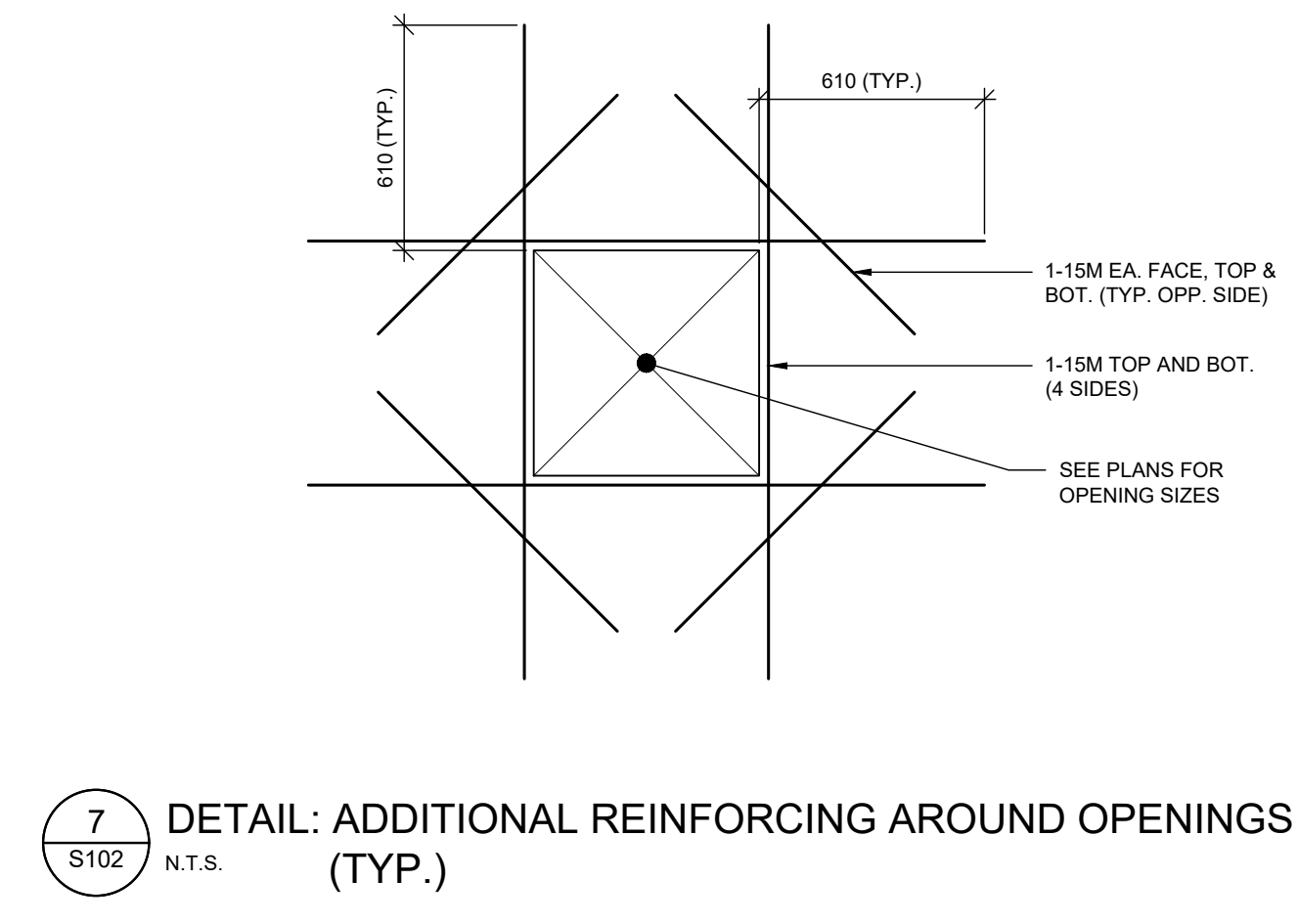
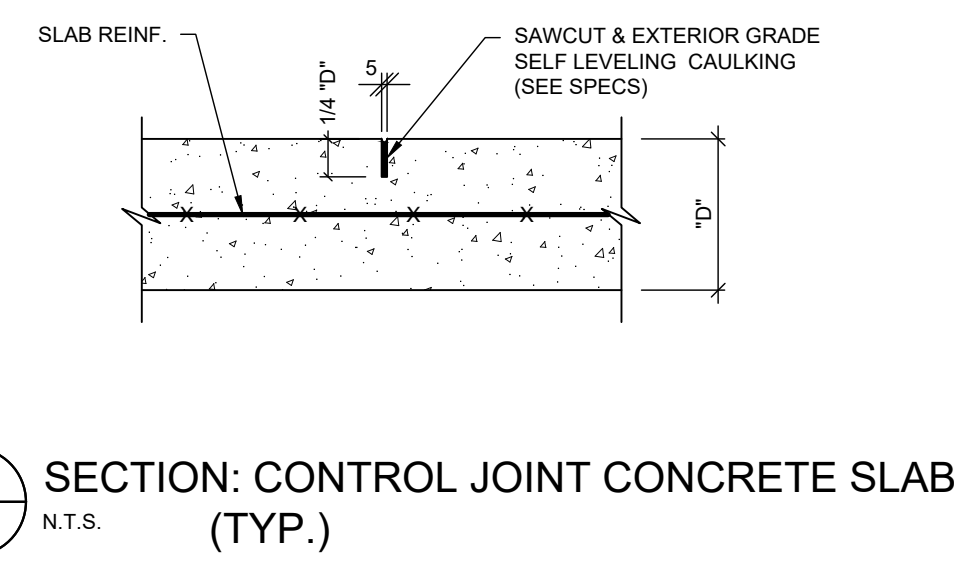
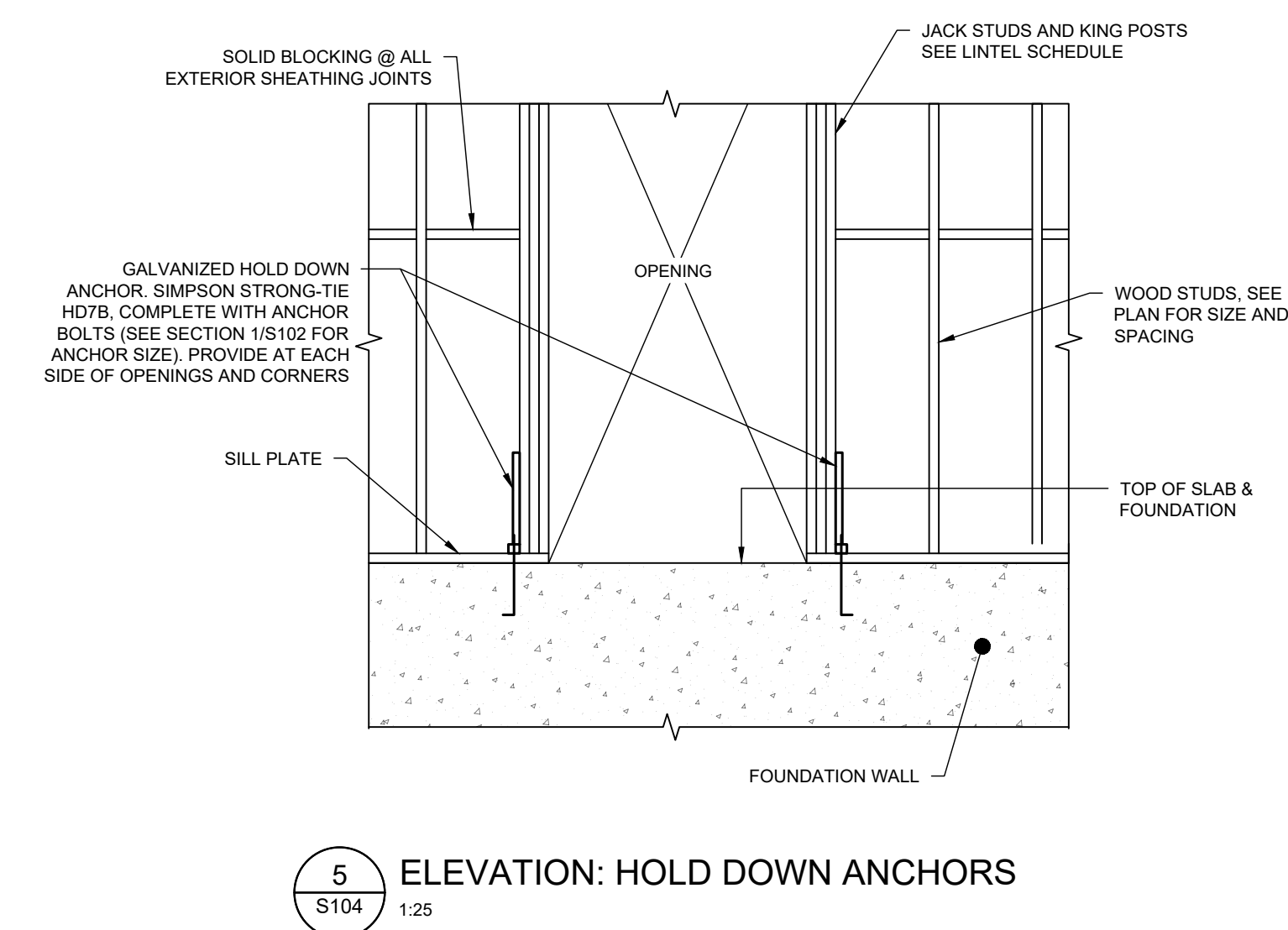
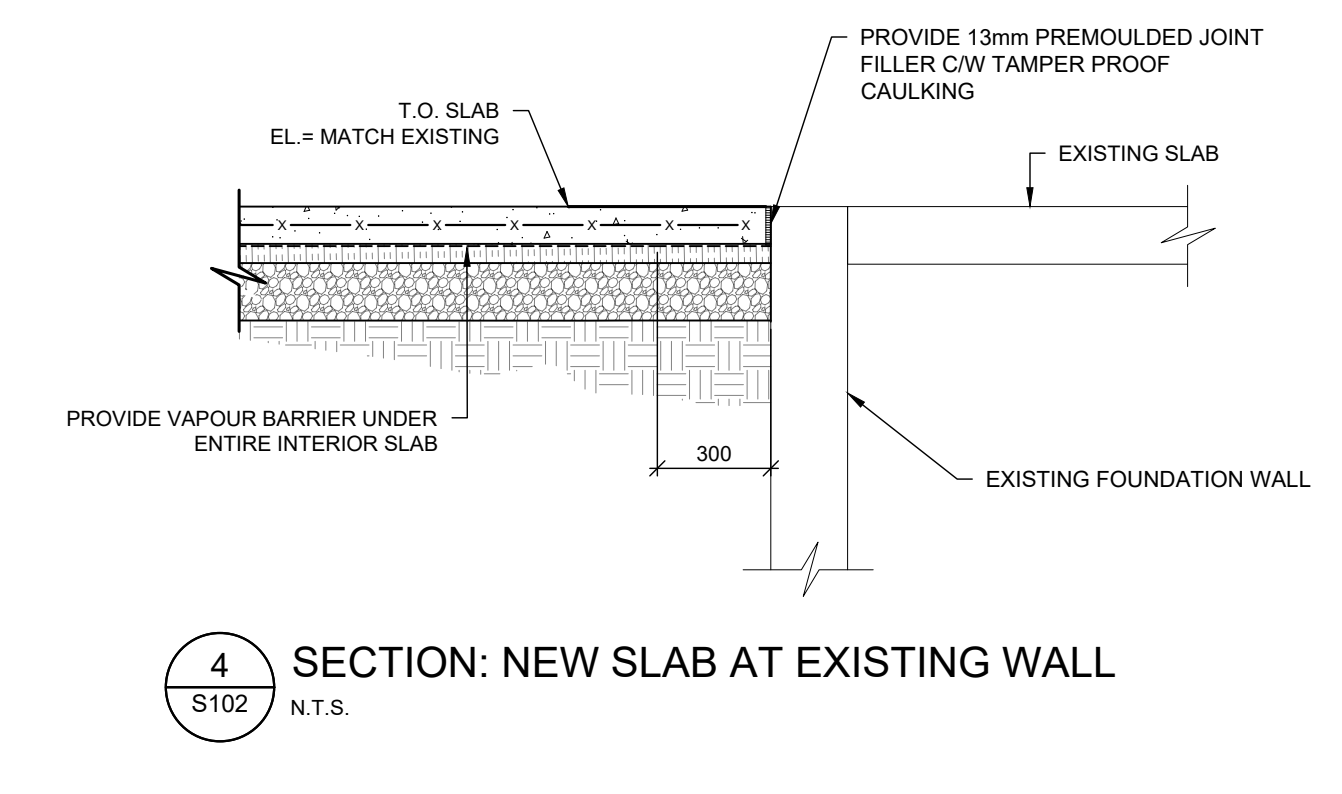
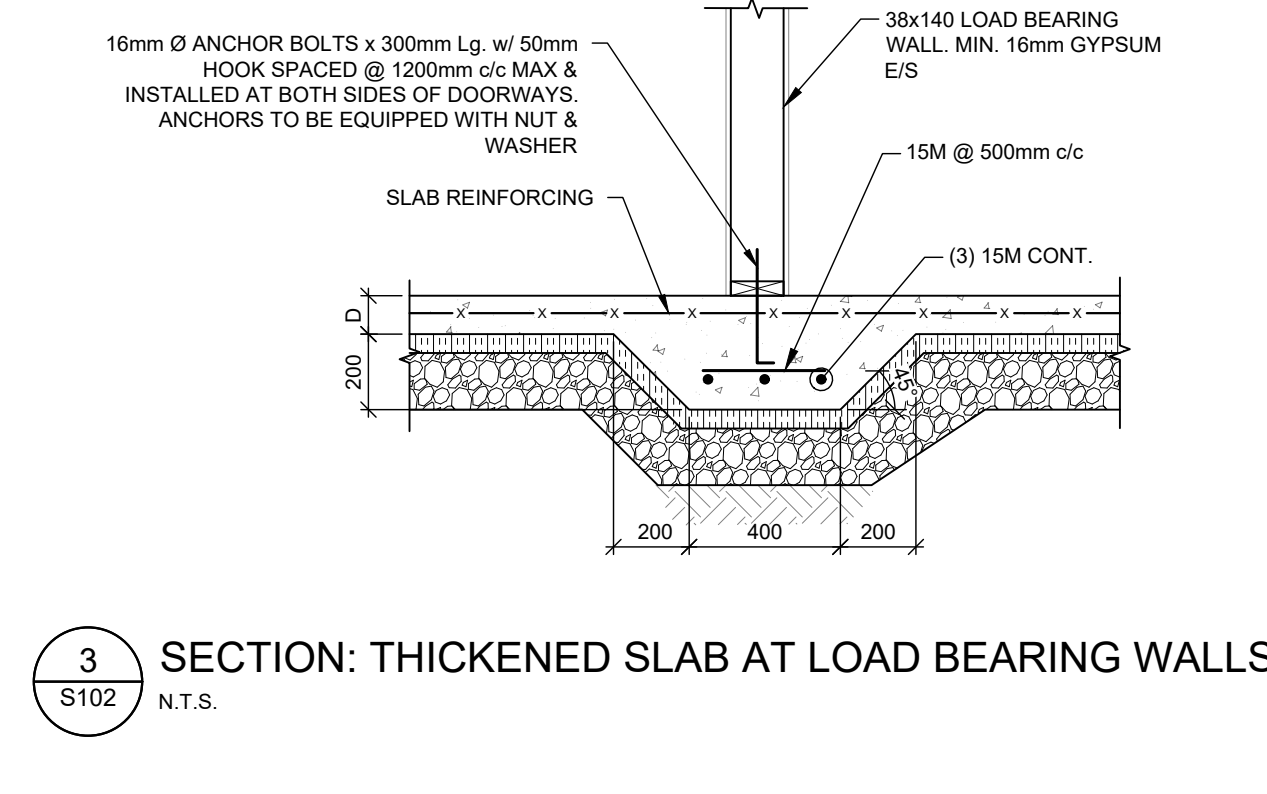
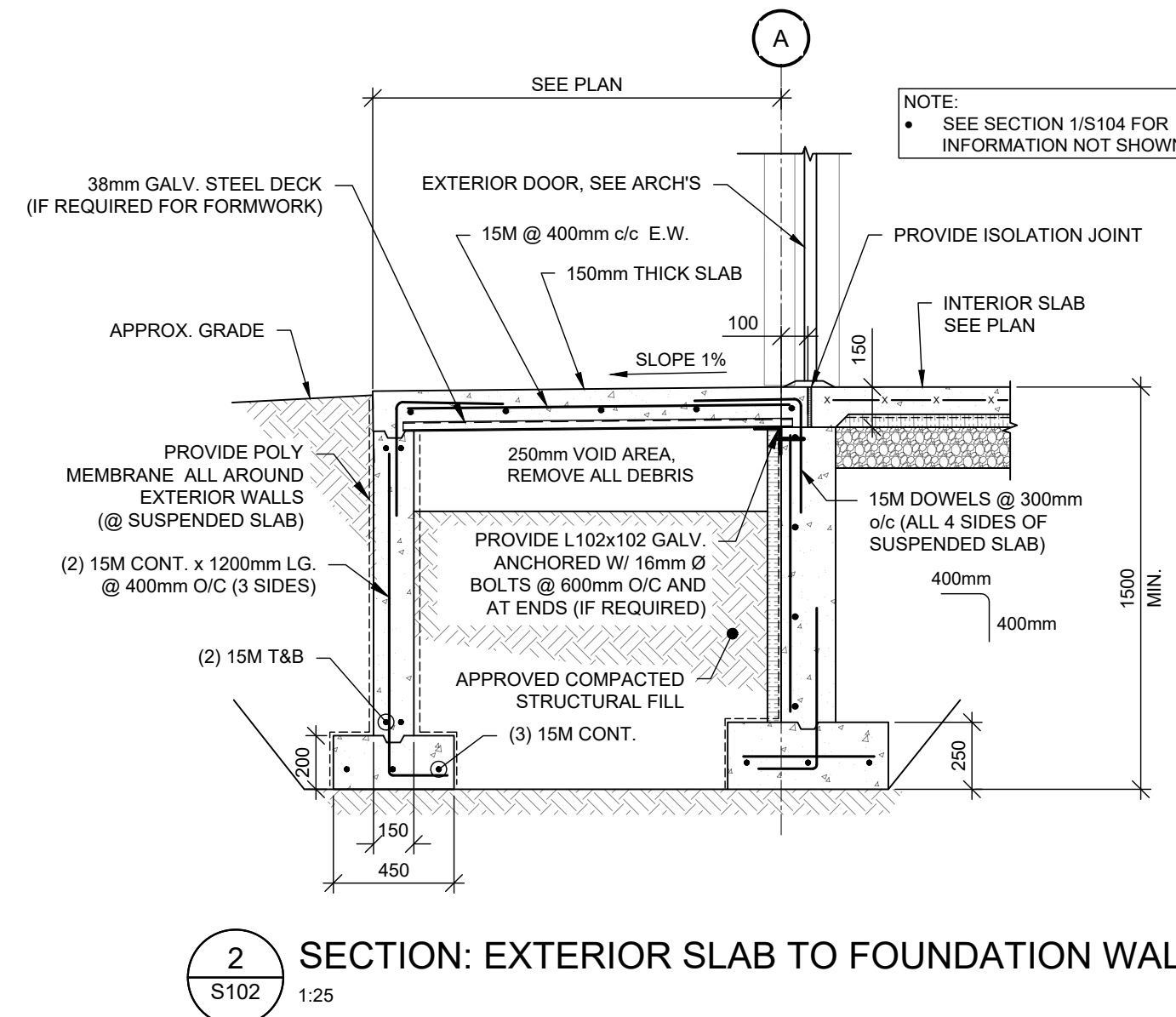
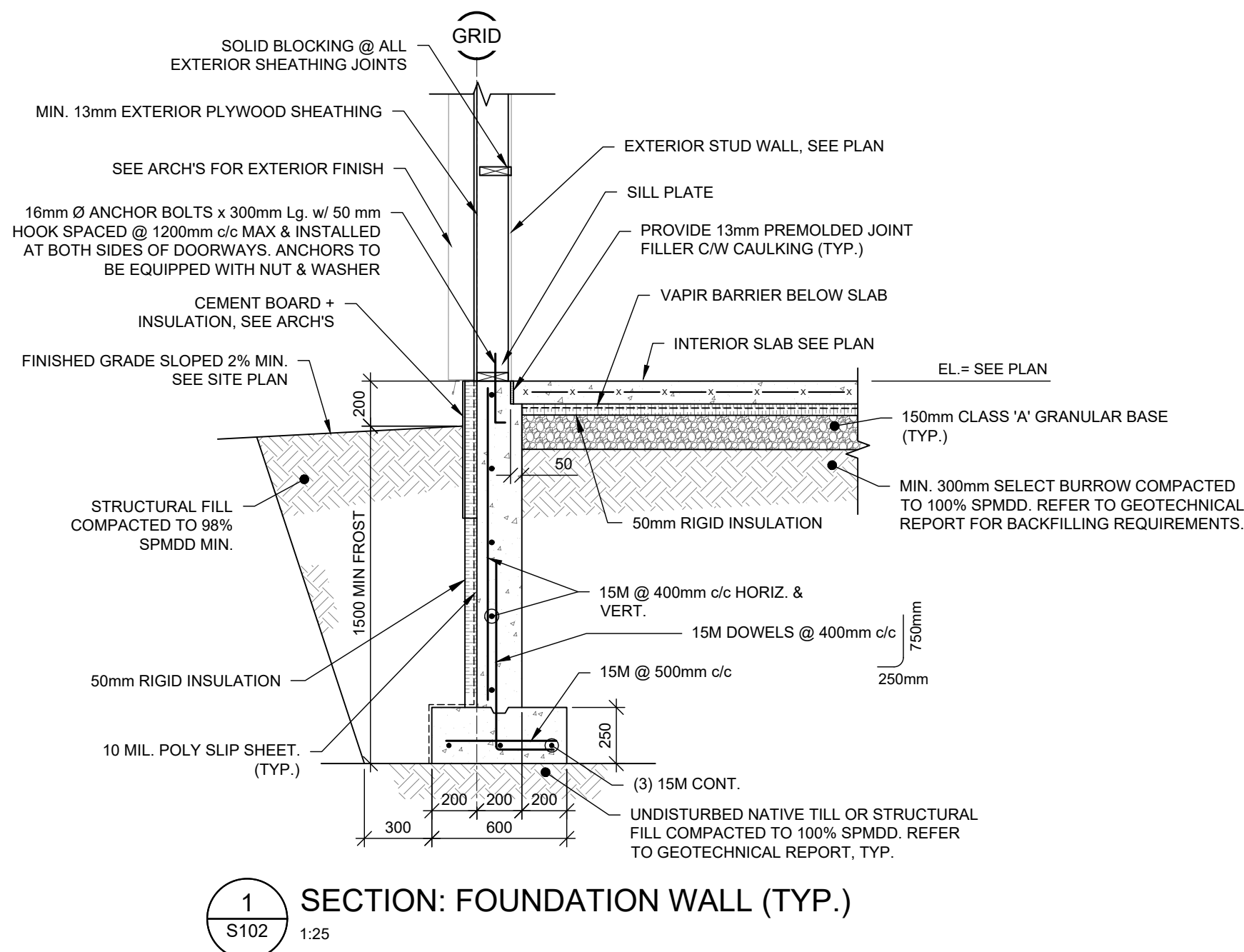


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Project Title
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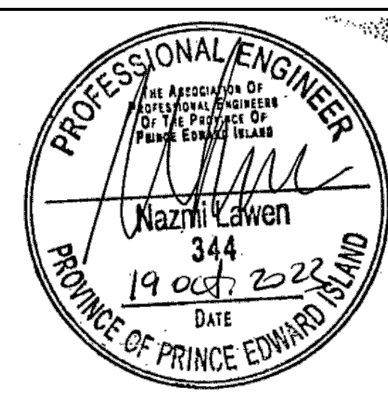
Sheet Title
Plans & Notes

No.	Description	Date	Date:	Revision
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			Drn By: SB	
			Chk By: NL, P.Eng	
			Project Number:	
			231124	
			Drawing Number:	
			S101	



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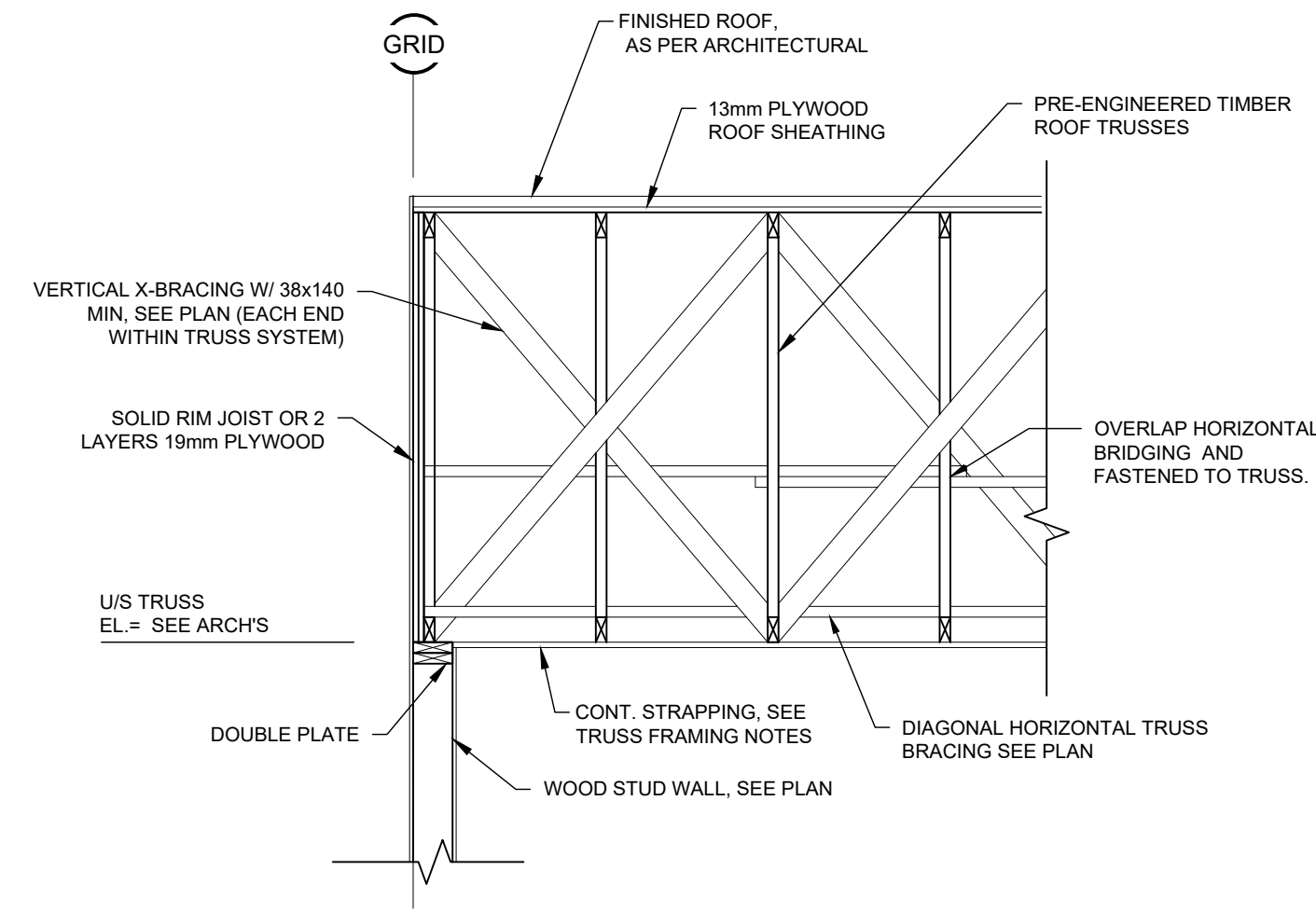


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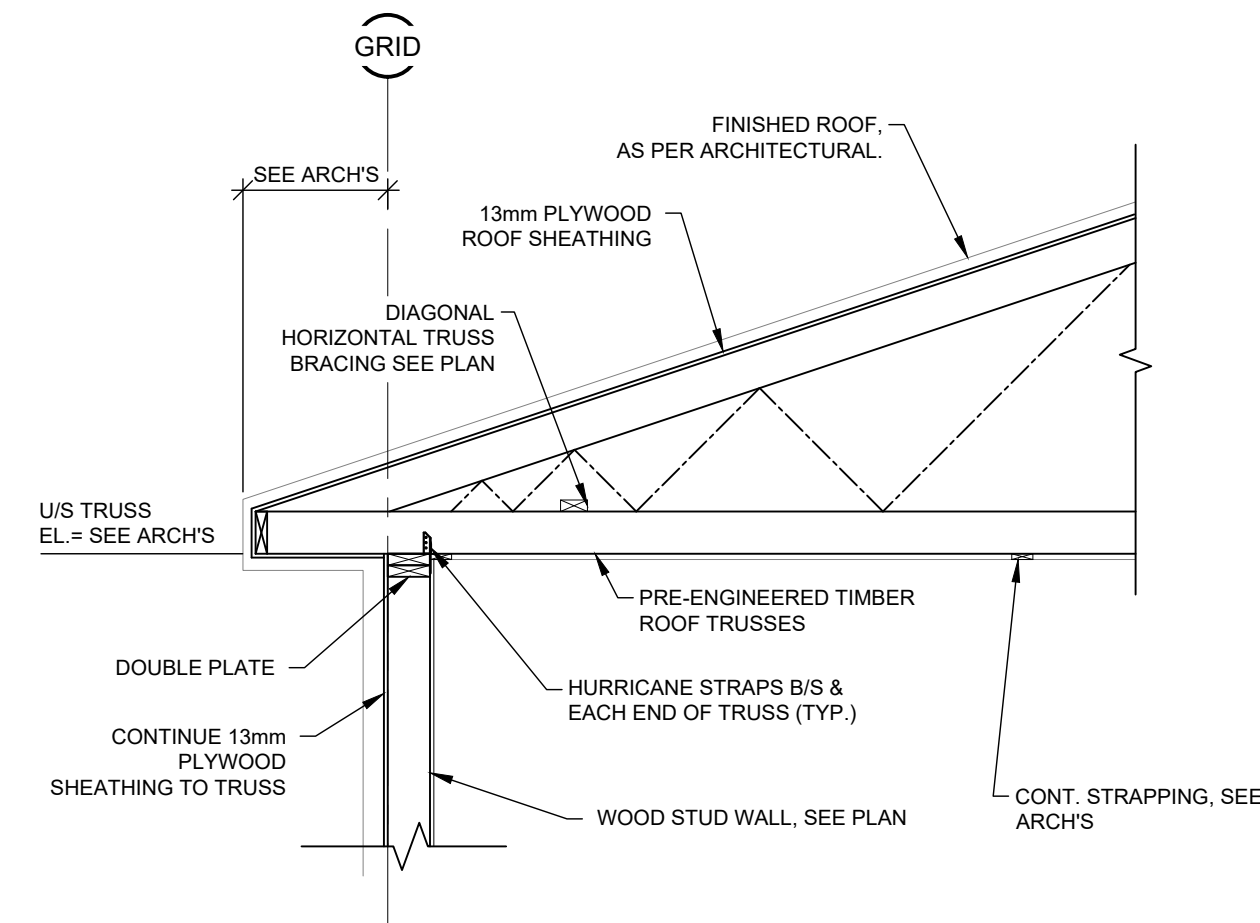
Project Title
Ecole Pierre Chaisson Addition

Sheet Title
Sections & Details

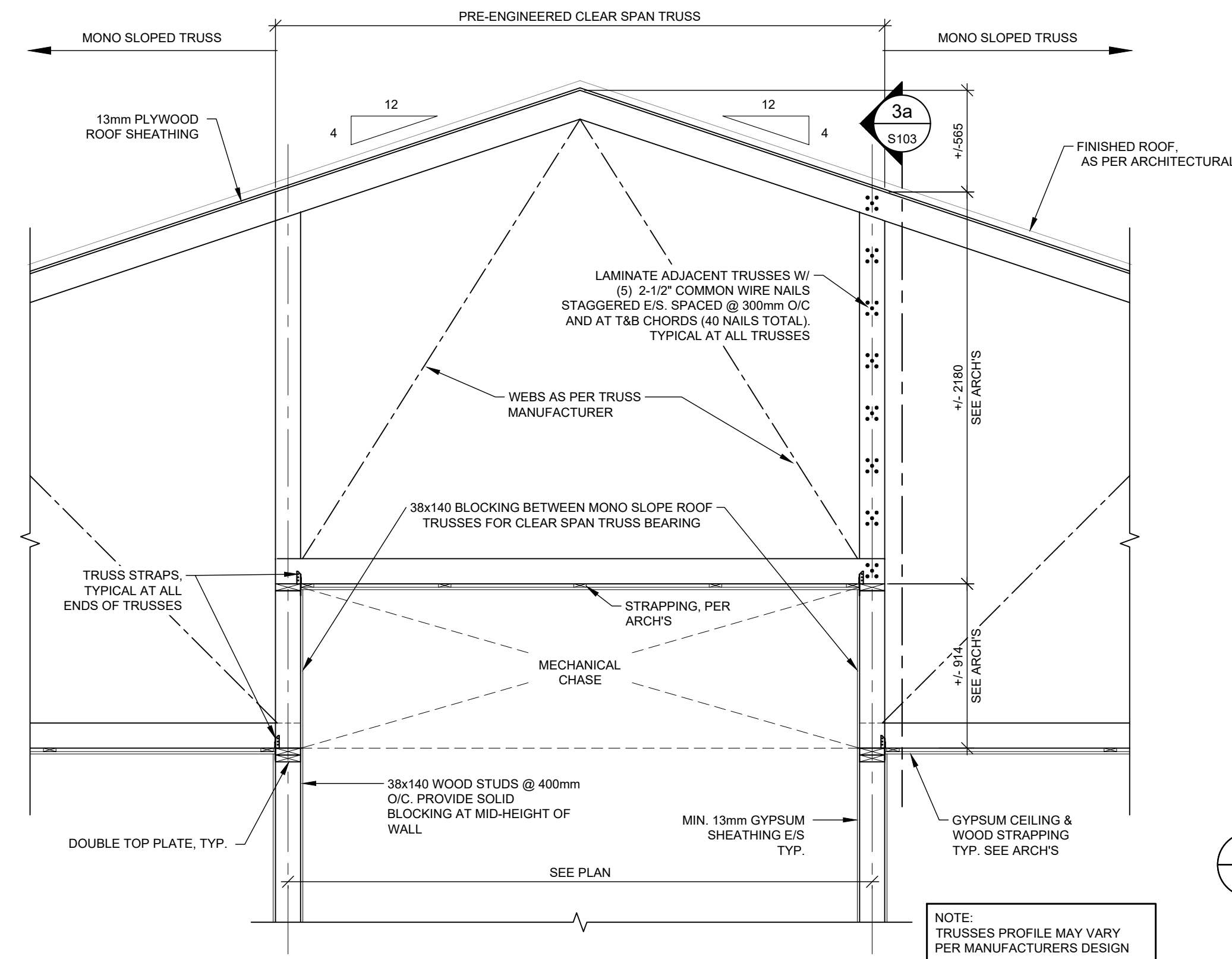
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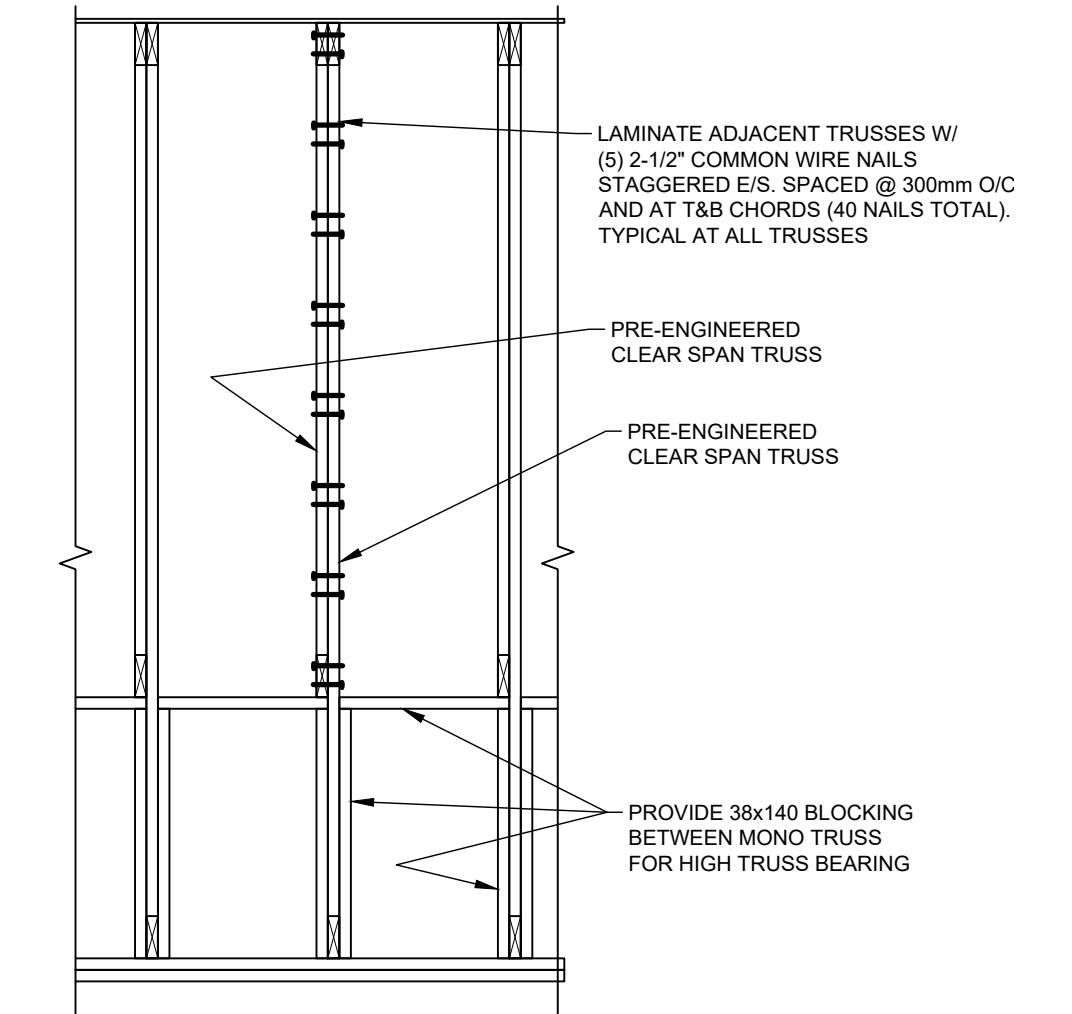
1 SECTION: EXTERIOR TRUSS BRACING
S103 1:25



2 SECTION: EXTERIOR TRUSS BEARING
S103 1:25



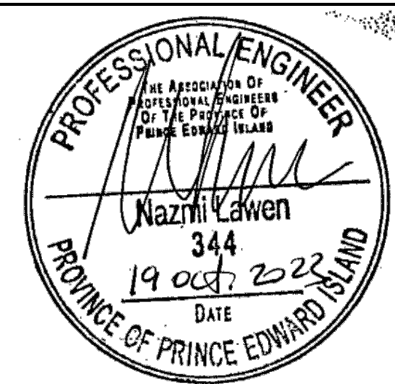
3 SECTION: INTERIOR TRUSS BEARING
S103 1:25



3a SECTION: CLEAR SPAN TRUSS BEARING
S103 1:25



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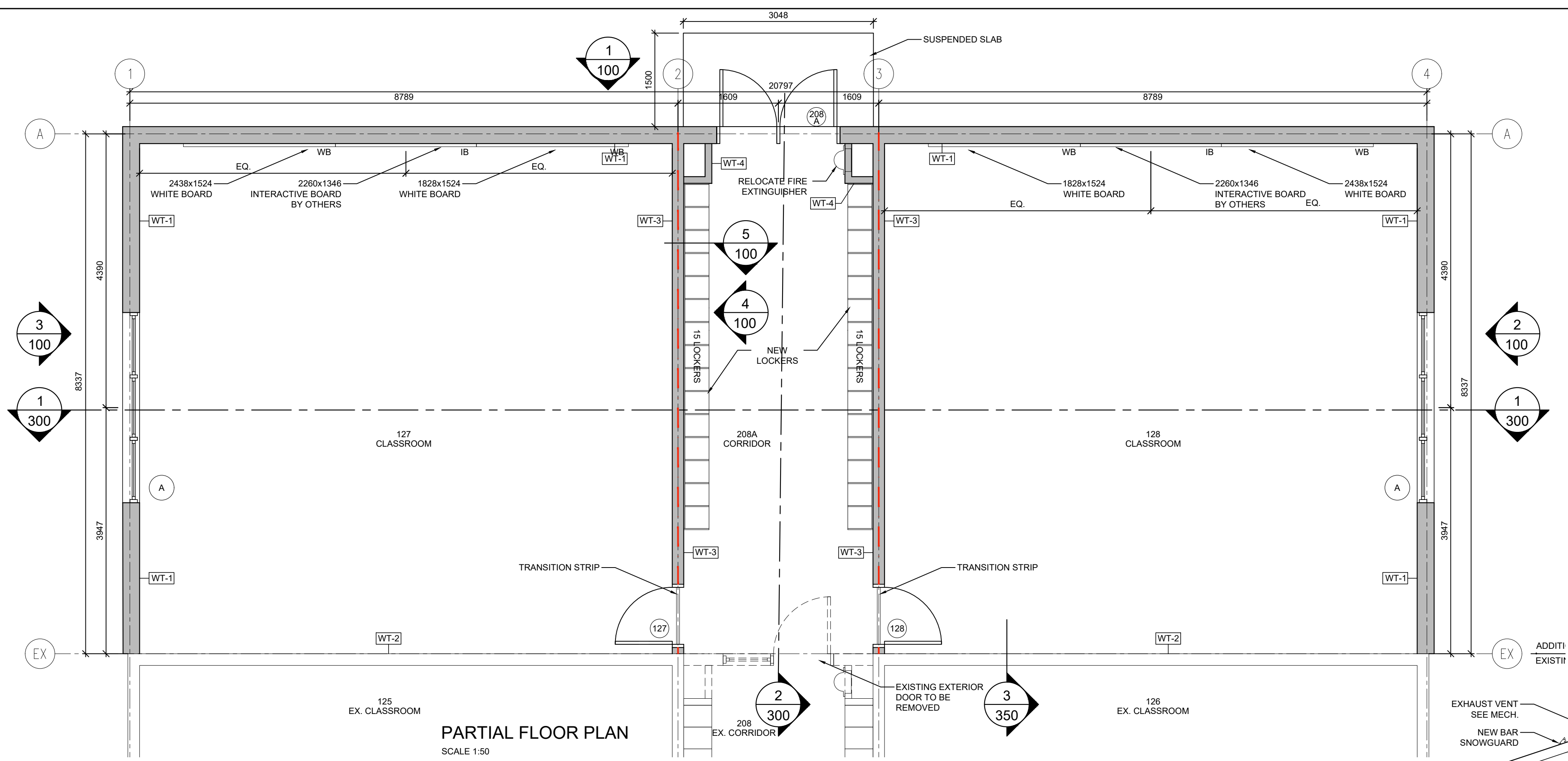


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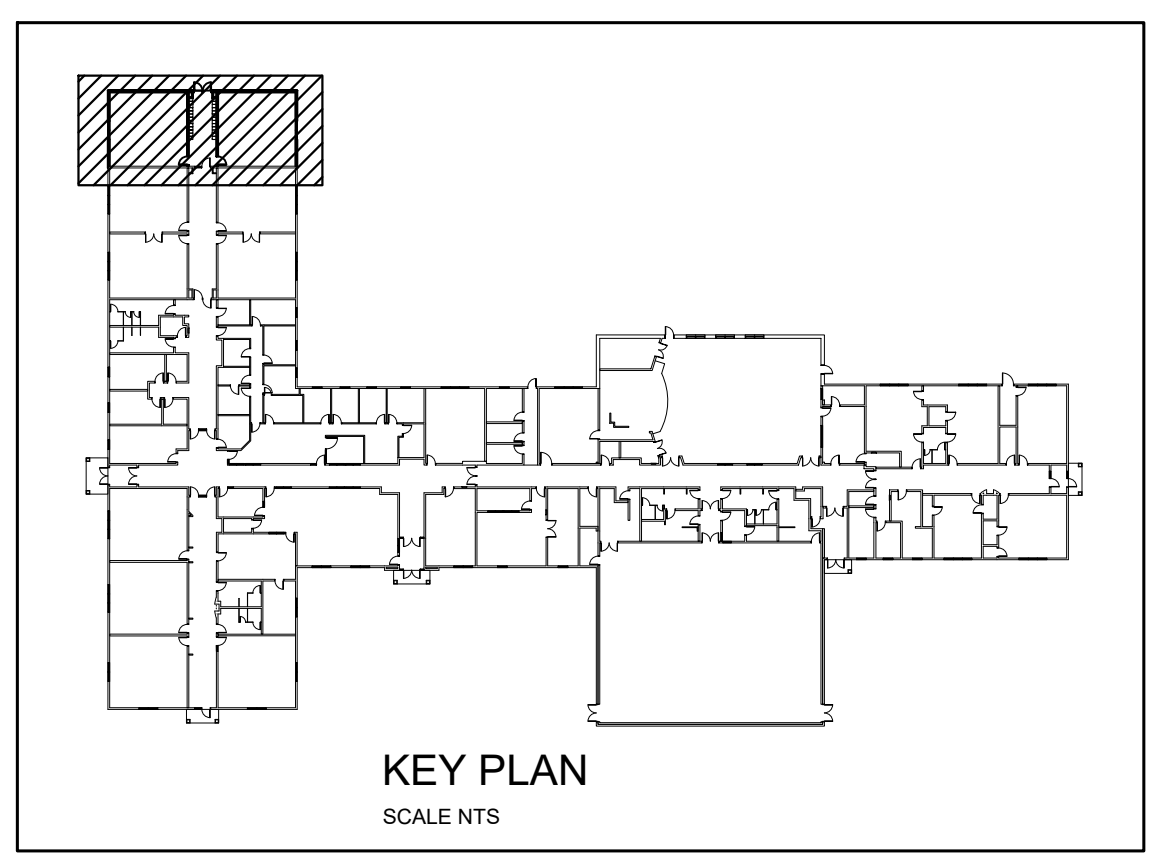
Project Title
Ecole Pierre Chaisson Addition

Sheet Title
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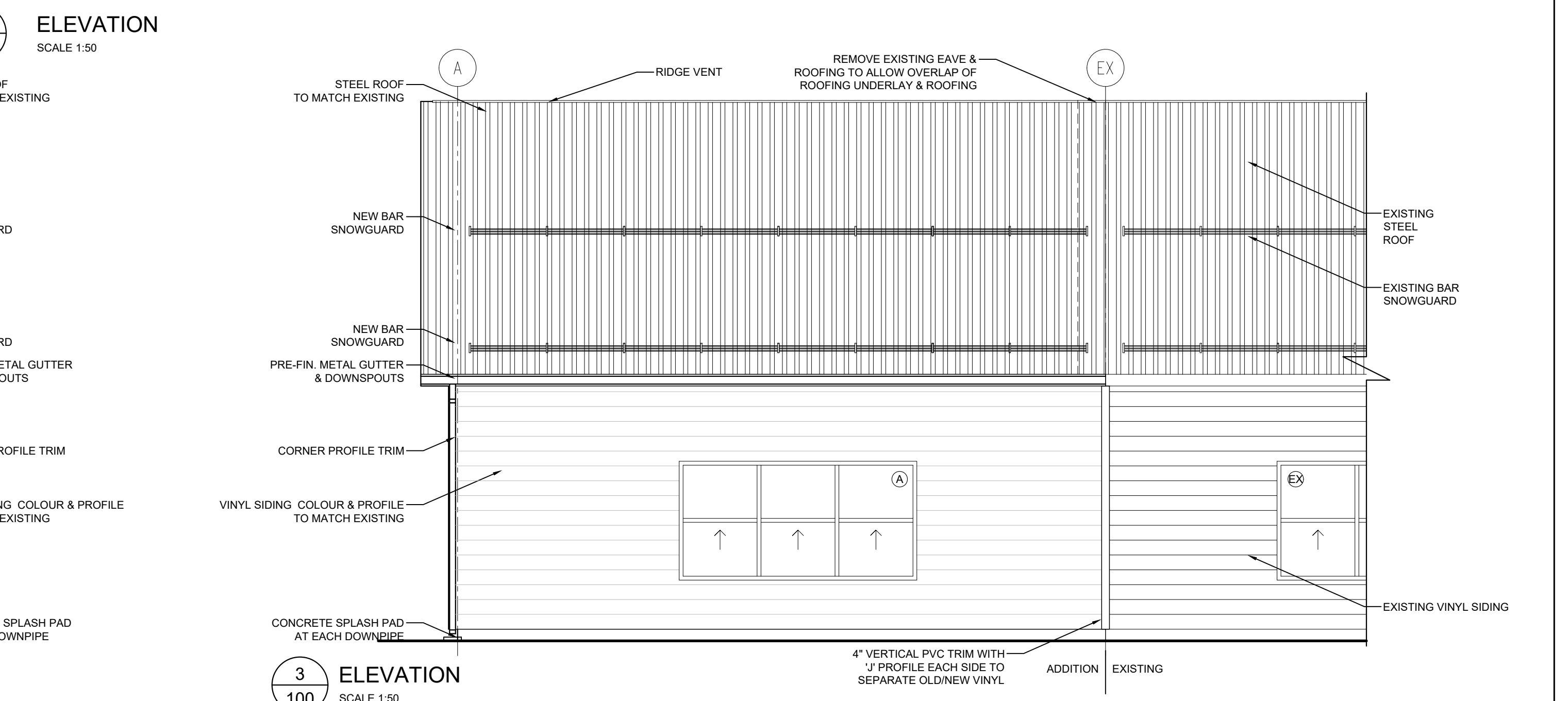
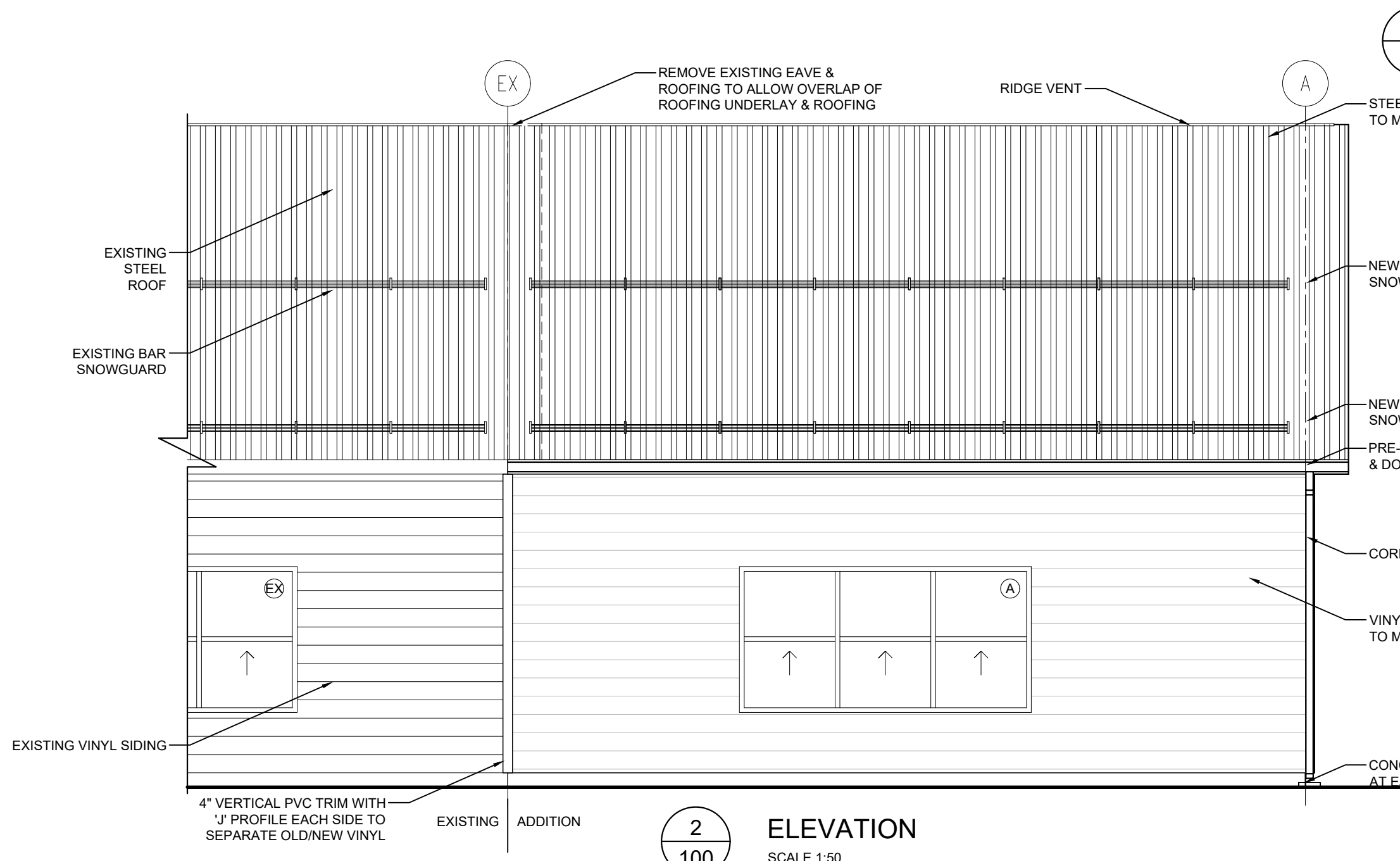
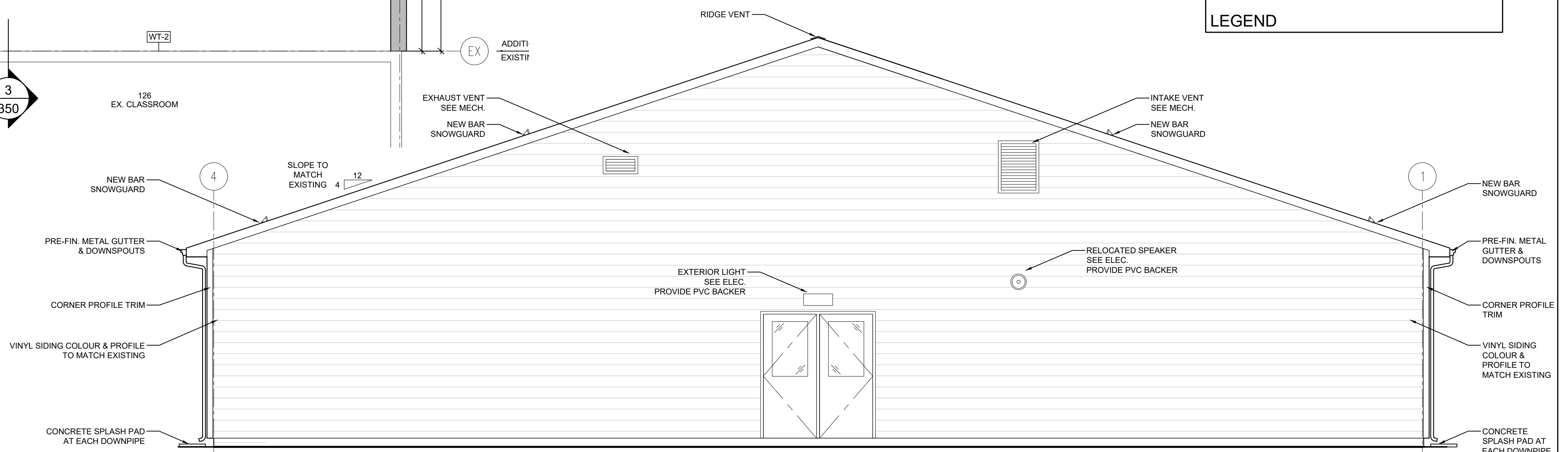
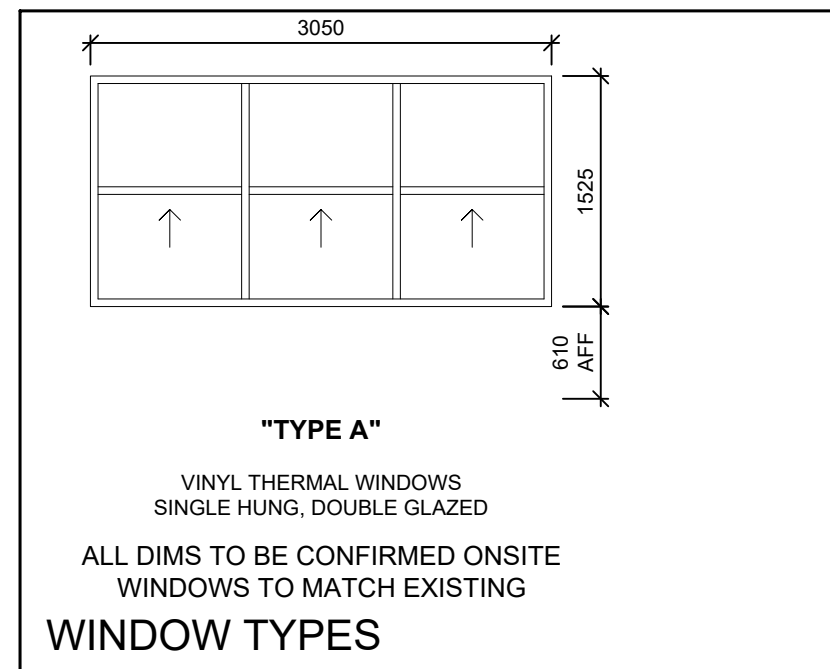
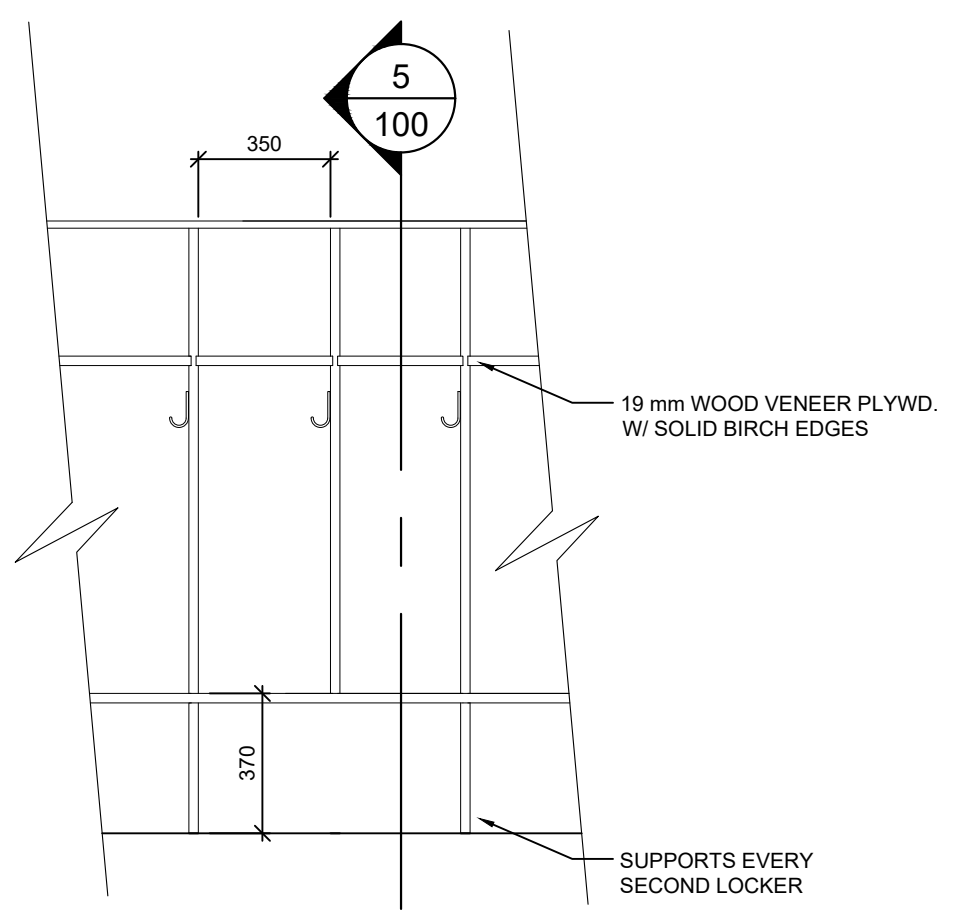
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			Drn By: SB	
			Chk By: NL, P.Eng	
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			Drawing Number:	
			S102	



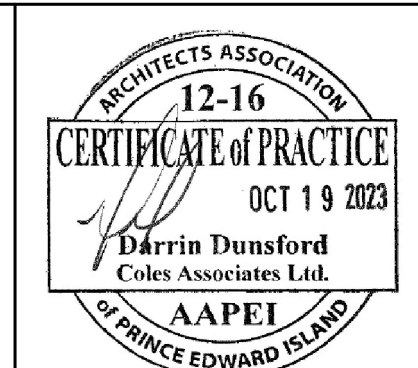
- WALL TYPES**
- WT-1: 15.9mm GYPSUM BOARD, PAINTED
6mm POLY VAPOUR BARRIER
38x140mm WOOD STUD @ 406 OC
140mm BATT INSULATION
15.9mm FIBREBOARD SHEATHING
VAPOUR PERMEABLE AIR BARRIER
50mm EXP RIGID INSULATION
VERT. STRAPPING
VINYL SIDING
 - WT-2: (EXISTING WALL)
SIDING TO BE REMOVED
EXTERIOR SHEATHING & INSULATION TO BE REMOVED
NEW BATT INSULATION
NEW STRAPPING
NEW 15.9MM GYPSUM BOARD
 - WT-3: (45min FIRE RATED)
15.9mm TYPE X GYPSUM BOARD
152mm WOOD STUDS AT 400mm O.C.
152mm BATT INSULATION
15.9mm TYPE X GYPSUM BOARD
 - WT-4: 15.9mm GYPSUM BOARD
89mm WOOD STUDS AT 400mm O.C.
15.9mm GYPSUM BOARD



- LEGEND**
- NEW WALL
 - - - EXISTING TO BE REMOVED
 - WT- WALL TYPE
 - XXX DOOR TAG
 - ### AREA NAME & NO.
 - - - FIRE SEPARATION



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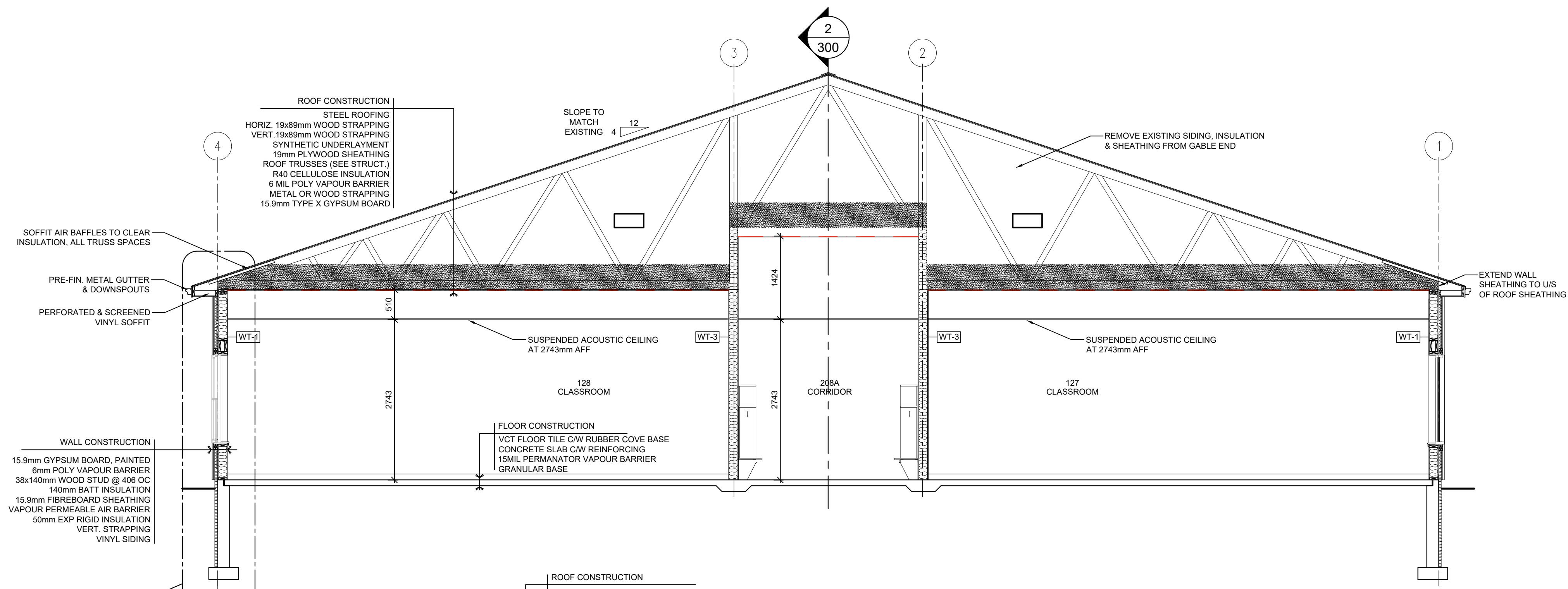


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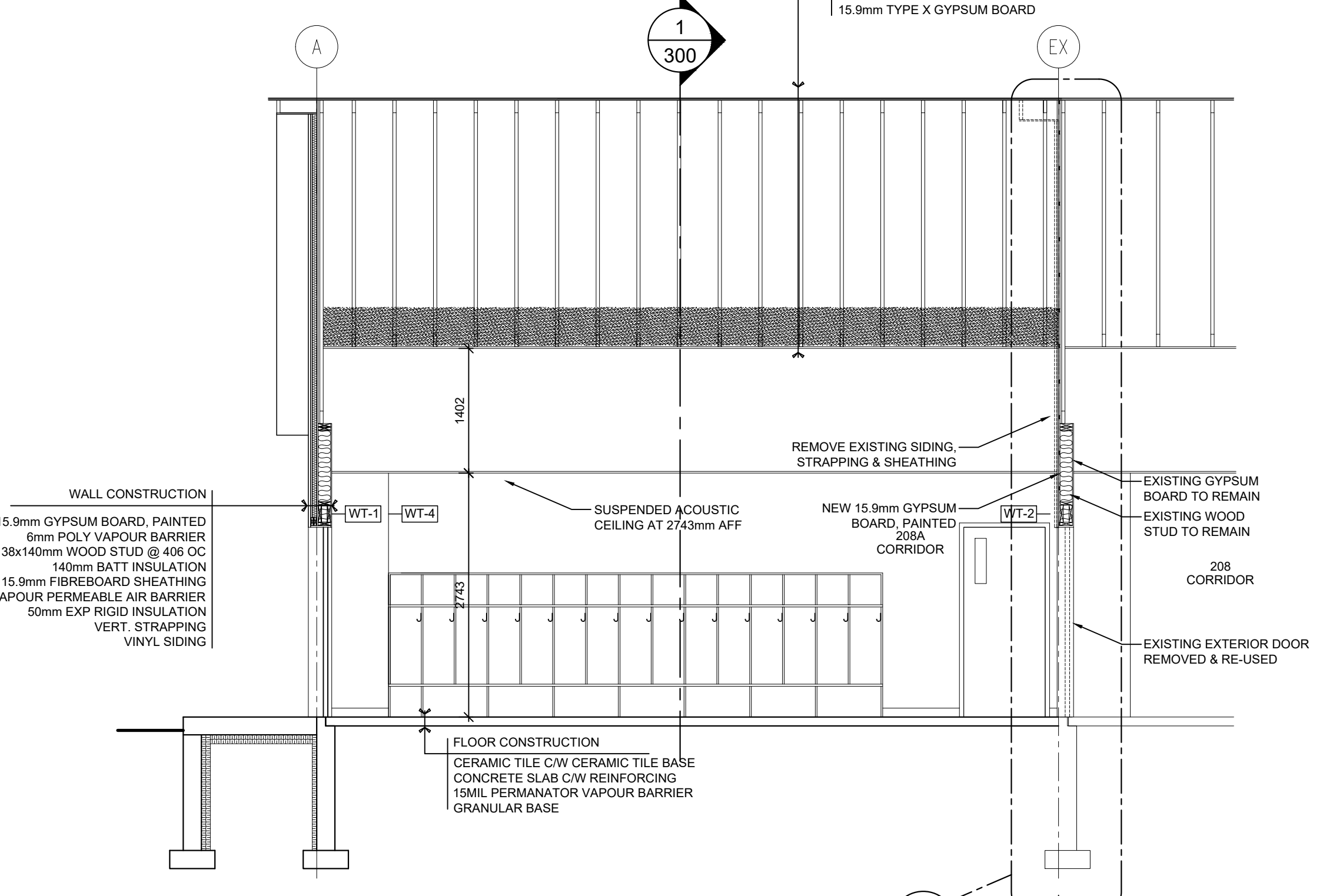
Project Title
Ecole Pierre Chaisson Addition
DTI Project #175-23045.

Sheet Title
Main Floor Plan- Partial
& Elevations

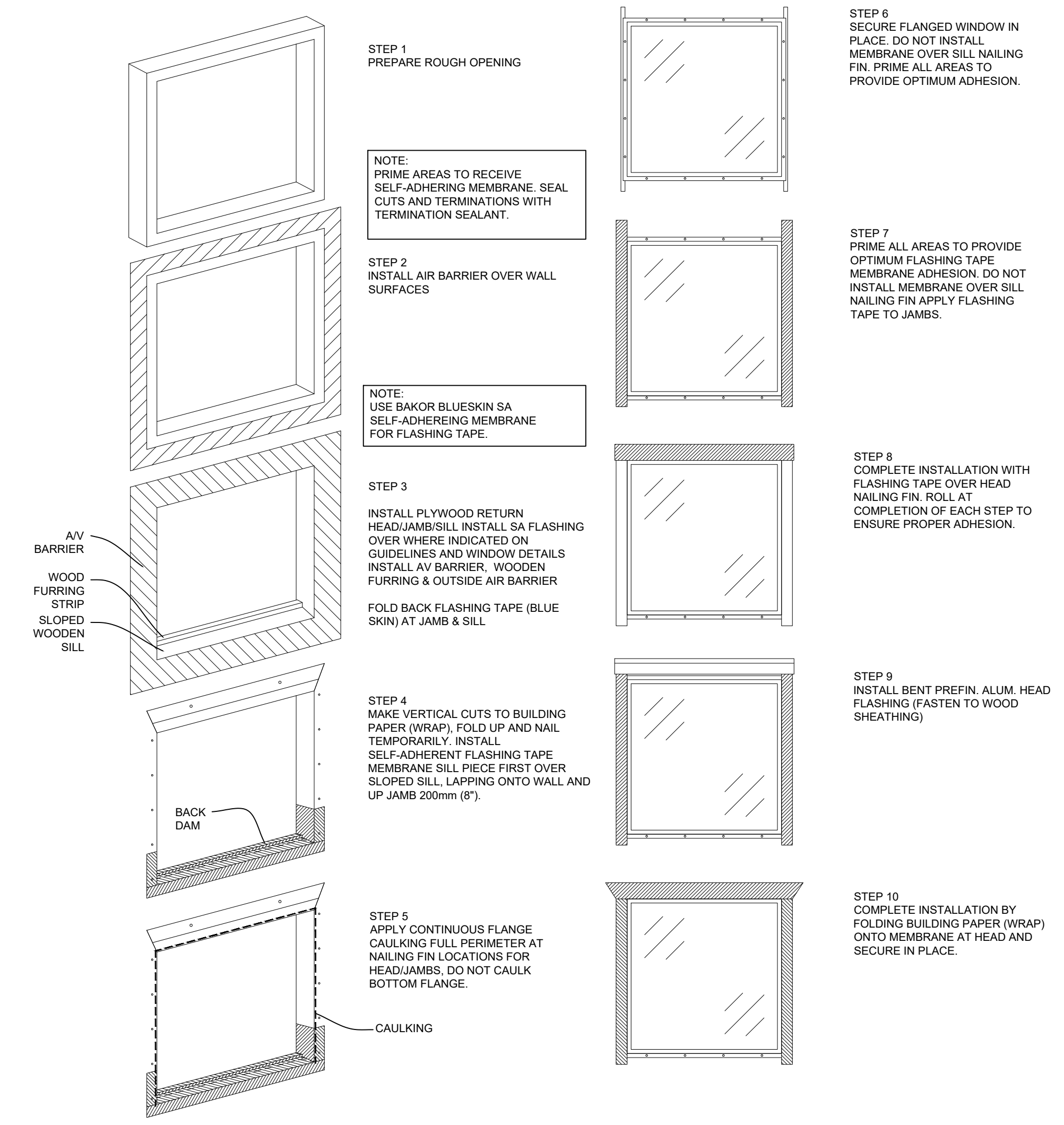
No.	Description	Date	Date:	Revision
-	Issued for Tender	2023-10-19	2023-10-19	△
			Drn By: AJW	
			Chk By: DD	
			Project Number:	
			231124	
			Drawing Number:	
			A100	



SECTION 300 SCALE 1:50



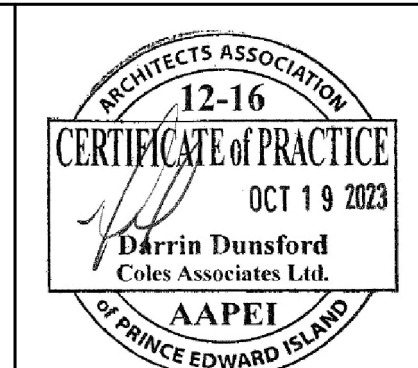
SECTION 300 SCALE 1:50



WINDOW & ROUGH OPENING FLASHING DETAILS SCALE: NTS



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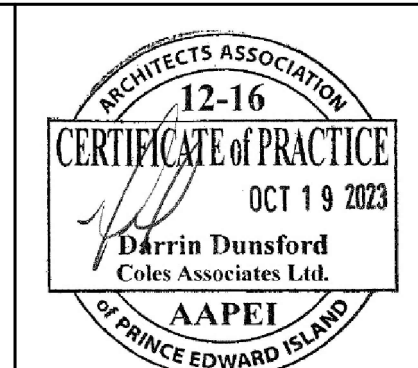
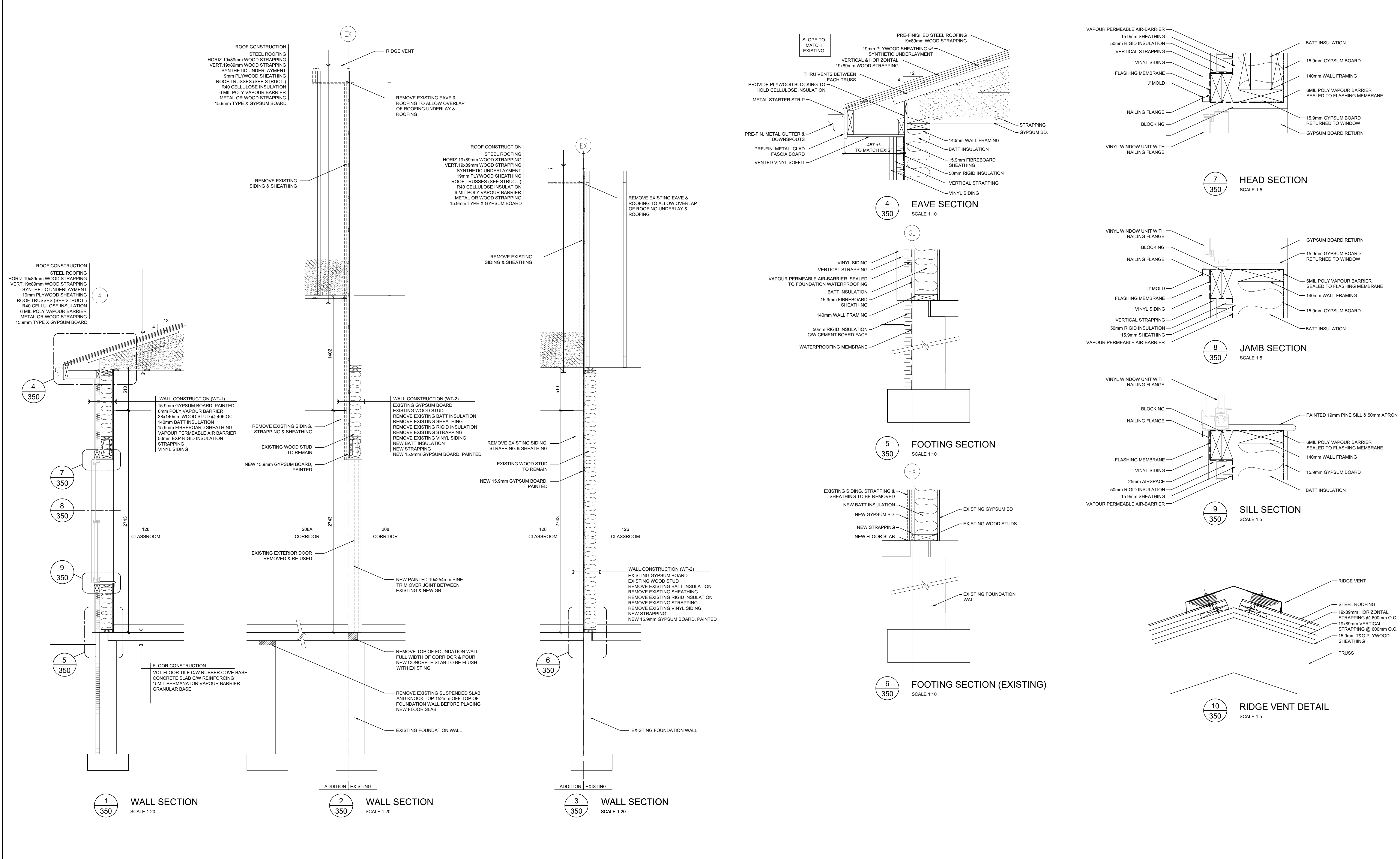


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Project Title
Ecole Pierre Chaisson Addition
DTI Project #175-23045.

Sheet Title
Building Sections

No.	Description	Date	Date:	Revision
-	Issued for Tender	2023-10-19	2023-10-19	
			Drn By: AJW	
			Chk By: DD	
			Project Number:	
			231124	
			Drawing Number:	
			A300	



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Project Title
 Ecole Pierre Chaisson Addition
 DTI Project #175-23045.

Sheet Title
 Wall Sections & Details

No.	Description	Date	Date:	Revision
-	Issued for Tender	2023-10-19	2023-10-19	
			Drn By: AJW	
			Chk By: DD	
			Project Number:	
			231124	
			Drawing Number:	
			A350	

MECHANICAL SPECIFICATION

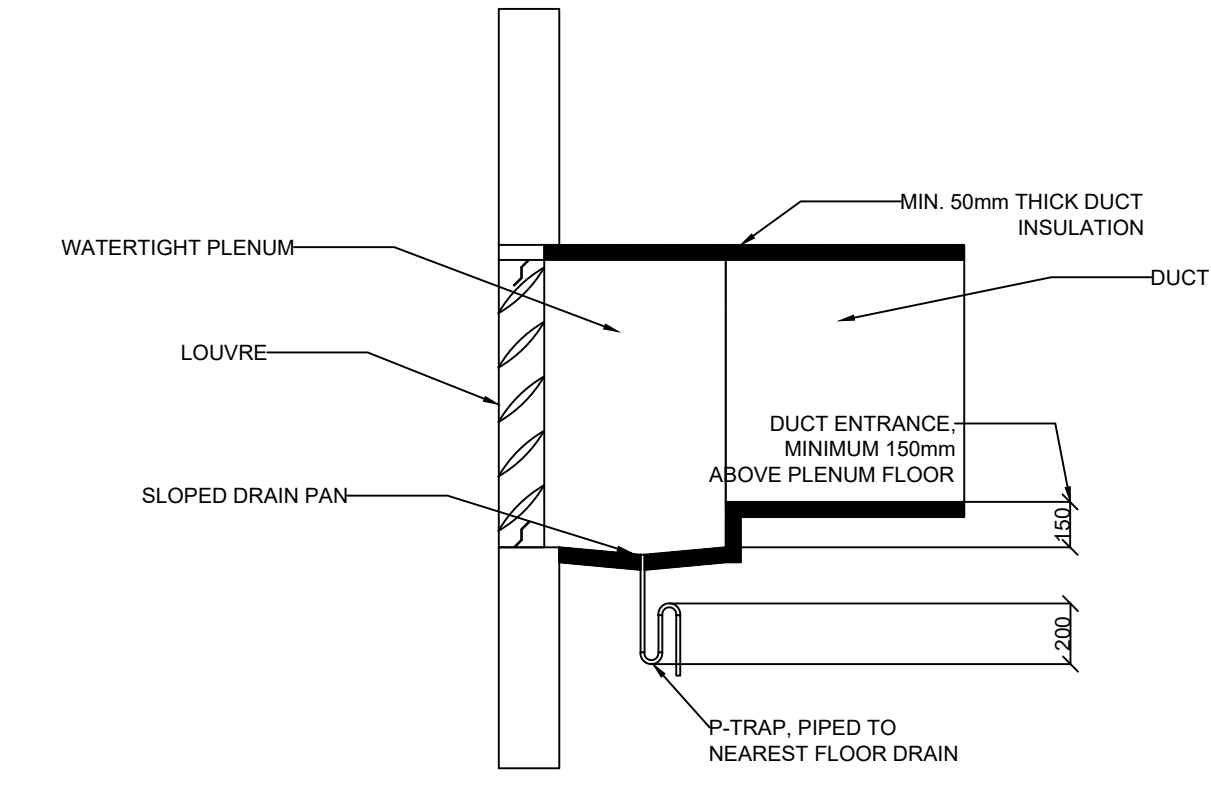
1. GENERAL
- 1.1. GENERAL
- 1.1.1. THE FOLLOWING GENERAL CONDITIONS SHALL BE READ IN CONJUNCTION WITH THE GENERAL CONDITIONS AND SPECIAL CONDITIONS ISSUED BY THE PROJECT MANAGER
- 1.2. SCOPE OF WORK
- 1.2.1. THE WORK SHALL INCLUDE THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, PLANT TOOLS AND SERVICES NECESSARY FOR THE INSTALLATION OF THE MECHANICAL SYSTEMS AS INDICATED. THE WORK SHALL INCLUDE THE FOLLOWING:
- 1.2.1.1. PLUMBING
- 1.2.1.1.1. PROVIDE EXTENSION OF UTILITIES AS INDICATED, AND CONNECTIONS TO EQUIPMENT AS REQUIRED.
- 1.2.1.2. HEATING
- 1.2.1.2.1. PROVIDE EXTENSION OF THE EXISTING HEATING DISTRIBUTION SYSTEM AND REBALANCING AS REQUIRED.
- 1.2.1.2.2. PROVIDE NEW HEATING TERMINALS AS INDICATED.
- 1.2.1.3. VENTILATION
- 1.2.1.3.1. PROVIDE A NEW ENERGY RECOVERY VENTILATOR, HEATING COIL, DUCTWORK, AND ALL APPURTENANCES FOR A COMPLETE INSTALLATION.
- 1.2.1.4. CONTROLS
- 1.2.1.4.1. PROVIDE AN EXPANSION AS NEEDED FROM THE EXISTING BUILDING MANAGEMENT SYSTEM TO ACCOMMODATE POINTS AS NEEDED.
- 1.2.1.4.1.1. CONTROLS VENDOR IS:
- 1.2.1.4.2. PROVIDE THERMOSTATS, CONTROL VALVES, DAMPER ACTUATORS, AND ALL SENSORS AND FIELD DEVICES REQUIRED
- 1.2.1.5. FIRE PROTECTION
- 1.2.1.5.1. PROVIDE TYPICAL 10 LB ABC FIRE EXTINGUISHERS INDICATED BY THE DRAWINGS.
- 1.3. DRAWINGS
- 1.3.1. THE DRAWINGS FOR THE WORK ACCOMPANYING THESE SPECIFICATIONS ARE MADE AS ACCURATELY AS POSSIBLE, BUT ABSOLUTE ACCURACY OF DIMENSIONS CANNOT BE GUARANTEED. THEY ARE INTENDED TO SUPPLEMENT AND SIMPLIFY THE GENERAL CONTRACT DRAWINGS. NO CLAIM FOR EXTRA WORK SHALL BE MADE ON ACCOUNT OF DIFFERENCE OF ACTUAL AND ESTIMATED DIMENSIONS SHALL BE ALLOWED. IN THE CASE OF DISCREPANCY OF FIGURE DIMENSIONS ON THE DRAWINGS, THE MATTER SHALL BE IMMEDIATELY SUBMITTED TO THE ENGINEER FOR THEIR DECISION. WITHOUT THE DECISION, THE DISCREPANCY SHALL NOT BE ADJUSTED BY THE CONTRACTOR. THE CONTRACTOR SHALL BEAR ALL EXTRA EXPENSES INVOLVED IN COMPLICATIONS ARISING FROM MAKING ADJUSTMENTS WITHOUT APPROVAL FROM THE OWNER. INTERPRETATION OF ALL DOCUMENTS SHALL BE BY THE ENGINEER.
- 1.4. EXTRA WORK
- 1.4.1. NO ADDITIONAL MONEY OVER CONTRACT PRICE SHALL BE PAID UNLESS CONTRACTOR RECEIVES A SIGNED APPROVAL IN ACCORDANCE WITH THE GENERAL CONDITIONS. NO ADDITIONAL MONEY SHALL BE PAID FOR USE OF EQUAL PRODUCTS.
- 1.5. QUALIFICATIONS
- 1.5.1. WORK SHALL BE COMPLETED BY A LICENSED CONTRACTOR CERTIFIED FOR THE INSTALLATION OF SYSTEMS AND EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL CODES AND REGULATIONS.
- 1.6. WARRANTY
- 1.6.1. ALL EQUIPMENT, MATERIAL AND LABOUR PROVIDED BY THE CONTRACTOR SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTED SUBSTANTIAL COMPLETION. CONTRACTOR SHALL REPAIR OR REPLACE ANY EQUIPMENT OR MATERIAL WHICH IS DEFECTIVE OR IMPROPERLY INSTALLED. IN ADDITION, THIS CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO THE BUILDING AND ITS CONTENTS OR OTHER EQUIPMENT, CAUSED BY DEFECTS OR IMPROPER INSTALLATION OF EQUIPMENT.
- 1.7. COOPERATION WITH OTHER TRADES
- 1.7.1. CONTRACTOR MUST COORDINATE CLOSELY WITH ALL OTHER TRADES AND WITH EXISTING SERVICES AS CEILING SPACE WILL BE LIMITED IN SOME PLACES. WORK IS TO BE EXECUTED IN A MANNER SO AS TO CAUSE MINIMUM DISRUPTION. ALL SERVICE INTERRUPTIONS SHALL BE SCHEDULED OUTSIDE NORMAL WORKING HOURS. THIS CONTRACTOR SHALL INCLUDE ALL COSTS FOR OVERTIME WORK INVOLVED WITH THE CONSTRUCTION.
- 1.8. EXAMINATION OF SITE
- 1.8.1. BEFORE TENDERING, EXAMINE THE SITE AND THE LOCAL CONDITIONS AFFECTING THE WORK OF THIS CONTRACT. NO ALLOWANCE WILL BE MADE FOR ANY EXPENSE INCURRED THROUGH FAILURE TO MAKE THIS EXAMINATION.
- 1.9. PERMITS, FEES AND CERTIFICATES
- 1.9.1. APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED.
- 1.9.2. ANY ADDITIONAL MATERIALS OR LABOUR REQUIRED TO CONFORM TO ANY OF THE REGULATIONS OR REQUIREMENTS OF AHJ SHALL BE FURNISHED UNDER THE CONTRACT WITH NO ADDITIONAL COST TO THE OWNER.
- 1.10. CLEAN UP AND REMOVALS
- 1.10.1. THE CONTRACTORS SHALL, AT ALL TIMES, KEEP THE SITE NEAT, CLEAN AND FREE FROM ACCUMULATION OF WASTE, MATERIALS AND RUBBISH WHICH ARISE OUT OF THEIR WORK. ALL MATERIAL DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF OFF SITE BY THIS CONTRACTOR.
- 1.11. INSTALLATION AND COMMISSIONING OF EQUIPMENT
- 1.11.1. MANUFACTURERS' INSTRUCTIONS SHALL BE MADE AVAILABLE TO BOTH THE INSTALLING TRADESMEN AND THE ON-SITE INSPECTOR PRIOR TO INSTALLATION OF EQUIPMENT. THESE INSTRUCTIONS ARE TO BE READ, UNDERSTOOD AND CLOSELY FOLLOWED. FAILURE TO ABIDE BY THIS REQUIREMENT WILL PROVIDE JUSTIFICATION FOR THE ENGINEER TO REQUIRE REMOVAL AND RE-INSTALLATION.
- 1.11.2. ENSURE THAT ALL SAFETY DEVICES AND OTHER SIGNIFICANT ACCESSORIES ARE IN PLACE AND OPERABLE BEFORE STARTING MAJOR PIECES OF EQUIPMENT. AS PART OF THE COMMISSIONING PROCESS, ACCESSORIES ARE TO BE CHECKED, CALIBRATED AND ADJUSTED AS NECESSARY TO ENSURE SAFE OPERATION.
- 1.11.3. FOLLOW MANUFACTURERS' INSTRUCTIONS IN DETAIL IN ESTABLISHING COMMISSIONING PROCEDURE.
- 1.12. DEMONSTRATION OF COMPLETE SYSTEMS
- 1.12.1. AT THE CONCLUSION OF THE JOB, THE CONTRACTOR SHALL REVIEW AND DEMONSTRATE TO THE OWNER ALL EQUIPMENT AND THEIR RESPECTIVE FUNCTIONS AND OPERATION. SUCH DEMONSTRATION SHALL BE PROVIDED FOR SUCH REASONABLE PERIODS OF TIME AS THE COMPLEXITY OF THE JOB WARRANTS, AND AS APPROVED BY THE ENGINEER. SUCH REVIEW AND DEMONSTRATION SHALL BE MADE BY AN AUTHORIZED REPRESENTATIVE OF THE CONTRACTOR, FULLY KNOWLEDGEABLE OF THE PROJECT, ITS INSTALLATION AND OPERATION.
- 1.12.2. PROVIDE THE ENGINEER WITH A SCHEDULE OF SYSTEM DEMONSTRATION AT LEAST TWO (2) WEEKS PRIOR TO DEMONSTRATION.
- 1.13. FINAL INSPECTION
- 1.13.1. PRIOR TO SUBSTANTIAL COMPLETION AND FINAL INSPECTION OF THE PROJECT, CONTRACTOR WILL INSPECT THE PROJECT, PROVIDE A MECHANICAL DEFICIENCY LIST, PROVIDE CONFIRMATION THAT ALL ITEMS ON THE LIST HAVE BEEN CORRECTED, PROVIDE THE OPERATION AND MAINTENANCE MANUALS, PROVIDE THE RECORD DRAWINGS, BALANCING REPORTS AND PROVIDE THE DEMONSTRATION OF THE COMPLETED MECHANICAL SYSTEMS.
- 1.13.2. ALL OF THE ABOVE MUST BE COMPLETED PRIOR TO THE FINAL INSPECTION BY THE ENGINEER AND SUBSTANTIAL COMPLETION OF THE MECHANICAL SYSTEMS.
- 1.14. SHOP DRAWINGS
- 1.14.1. CONTRACTOR TO SUBMIT ELECTRONIC SET OF SHOP DRAWINGS FOR REVIEW.
- 1.15. OPERATION AND MAINTENANCE MANUAL
- 1.15.1. CONTRACTOR SHALL INSTRUCT THE OWNER IN OPERATION OF MAINTENANCE OF ALL EQUIPMENT AND SYSTEMS INSTALLED. ALL SAFETY AND CONTROL FEATURES SHALL BE THOROUGHLY EXPLAINED. CONTRACTOR TO PROVIDE MAINTENANCE MANUALS FOR ALL EQUIPMENT INSTALLED. THREE (3) COPIES ORGANIZED IN 8 1/2" x 11" BINDERS TO BE PROVIDED TOGETHER WITH ALL APPROVED SHOP DRAWINGS AND A SPARE PARTS LIST.
- 1.16. RECORD DRAWINGS
- 1.16.1. CONTRACTOR TO PROVIDE AS-BUILT RECORD DRAWINGS.
- 1.17. IDENTIFICATION
- 1.17.1. PROVIDE ON EACH PIECE OF EQUIPMENT A METAL NAMEPLATE, MECHANICALLY FASTENED WITH RAISED OR RECESSED LETTERS.
- 1.18. DUCT IDENTIFICATION
- 1.18.1. USE 2" HIGH BLACK STENCILED LETTERS WITH DIRECTIONAL FLOW ARROW
- 1.18.2. STENCIL OVER FINAL FINISH ONLY
- 1.18.3. PROVIDE LAMINATED PLASTIC PLATES WITH BLACK FACE AND WHITE CENTRE OF MINIMUM SIZE 6"x3"x1/8" NOMINAL THICKNESS, ENGRAVED WITH 1/4" HIGH LETTERING. USE 1" HIGH LETTERING FOR MAJOR EQUIPMENT.
- 1.18.4. IDENTIFY MEDIUM IN PIPING OR STENCILS SHOWING NAME AND SERVICE INCLUDING TEMPERATURE, PRESSURE, AND DIRECTIONAL FLOW ARROWS WHERE RELEVANT.
- 1.19. STANDARDS OF ACCEPTANCE
- 1.19.1. ALL EQUIPMENT MANUFACTURERS LISTED FORM THE STANDARD OF ACCEPTANCE FOR THE EQUIPMENT REQUIRED. ALTERNATE EQUIPMENT MAY BE SUBSTITUTED ONLY AFTER RECEIVING APPROVED EQUAL STATUS FROM ENGINEER DURING TENDER PROCESS ONLY. PROVIDE SHOP DRAWINGS ON ALL MAJOR EQUIPMENT PRIOR TO ORDERING ANY EQUIPMENT. IF ALTERNATE EQUIPMENT IS APPROVED BY ENGINEER ALL COSTS ASSOCIATED WITH ANY REQUIRED MODIFICATIONS, CHANGES, ETC TO USE THE ALTERNATE EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 1.20. CLEANING AND FINAL ADJUSTMENT
- 1.20.1. CLEAN INTERIOR AND EXTERIOR OF ALL SYSTEMS INCLUDING STRAINERS AND AIR HANDLING UNITS.

- 1.20.2. CLEAN AND REFURBISH ALL EQUIPMENT AND LEAVE IN FIRST CLASS OPERATING CONDITION INCLUDING REPLACEMENT OF ALL FILTERS IN ALL AIR AND PIPING SYSTEMS.
- 1.20.3. BALANCE AND ADJUST ALL SYSTEMS AND EACH PIECE OF EQUIPMENT TO OPERATE EFFICIENTLY.
- 1.21. CUTTING AND PATCHING
- 1.21.1. ALL CUTTING AND PATCHING WILL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
- 1.21.2. SLEEVES
- 1.21.2.1. THE CONTRACTOR IS TO SUPPLY AND SET IN PLACE PIPE AND/OR DUCT SLEEVES IN FLOOR, ROOF OR FIRE WALLS BEFORE CONCRETE IS POURED.
- 1.23. EXCAVATION AND BACKFILLING
- 1.23.1. ALL EXCAVATION AND BACKFILLING WILL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
- 1.24. FIRESTOPPING AND SMOKE SEALS
- 1.24.1. ALL FIRESTOPPING AND SMOKE SEALS REQUIRED TO PROPERLY ACCOMMODATE THE WORK OF THIS DIVISION SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
- 1.24.2. WHERE COMBUSTIBLE PIPES PASS THROUGH FIRE RATED WALLS, FLOORS AND PARTITIONS, A RATED FIRE STOP DEVICE SHALL BE USED TO MEET CODE IN ACCORDANCE WITH CAN4-S115.
- 1.24.3. WHERE NON-COMBUSTIBLE PIPES PASS THROUGH FIRE SEPARATIONS, INTUMESCENT CAULKING SHALL BE USED TO FILL VOIDS BETWEEN PIPE AND WALL ON BOTH SIDES.
- 1.24.4. STANDARD OF ACCEPTANCE: HILTI, DOW CORNING, 3M, OR EQUAL.
- 1.25. PROTECTION OF OPENINGS
- 1.25.1. PROTECT EQUIPMENT, SYSTEM OPENINGS INCLUDING ROUGH-IN PLUMBING FROM DIRT, DUST AND OTHER FOREIGN MATERIALS WITH MATERIALS COMPATIBLE TO THE SYSTEM.
- 1.26. ACCESS DOORS
- 1.26.1. THIS CONTRACTOR TO PROVIDE ACCESS DOORS FOR FURRED CEILINGS OR SPACES FOR SERVICING EQUIPMENT AND ACCESSORIES OR FOR INSPECTION OF SAFETY, OPERATING OR FIRE DEVICES FOR INSTALLATION UNDER CONTRACT. ERECTING THE WALLS OR CEILINGS, SUPPLY UL RATED DOORS IN FIRE RATED CONSTRUCTION.
- 1.26.2. ACCESS DOORS SHALL BE FLUSH MOUNTED 2' x 2' FOR BODY ENTRY, 1' x 1' FOR HAND ENTRY, OR AS NOTED ON THE DRAWINGS. DOORS SHALL OPEN 180°, HAVE ROUNDED SAFETY CORNERS, CONCEALED HINGES, CYLINDER KEY LOCKS, AND ANCHOR STRAPS. STEEL SHALL BE PRIME COATED. DOORS SHALL BE OF APPROVED MANUFACTURER WITH PUBLISHED LITERATURE.
- 1.26.3. PROVIDE CAM TYPE LOCKING DEVICE WITH CYLINDER KEY LOCK COMPLETE WITH MASTER KEYS.
- 1.26.4. STANDARD OF ACCEPTANCE: MIFAB #UA, WILLIAMS BROTHERS #WB SERIES, OR APPROVED EQUAL.
- 1.27. SAFETY
- 1.27.1. CONTRACTOR SHALL WORK UNDER THE REQUIREMENTS OF THE GENERAL CONTRACTORS SITE SAFETY PLAN. CONTRACTOR IS TO COMPLY WITH ALL REQUIREMENTS OF THE PROVINCIAL OCCUPATIONAL HEALTH AND SAFETY ACT, REGULATION AND WORKERS' COMPENSATION BOARD. CONTRACTOR SHALL REVIEW ANY SITE SPECIFIC SAFETY REQUIREMENTS WITH OWNER AND ATTEND TRAINING AS REQUIRED PRIOR MOBILIZATION TO SITE.
- 1.27.2. CONTRACTOR SHALL PROVIDE A LOCK-OUT/TAG-OUT PROCEDURE THAT GUARANTEES ISOLATION OF EQUIPMENT PRIOR TO STARTING WORK.
- 1.27.3. CONTRACTOR SHALL HAVE SAFE LIFT PROCEDURES IN PLACE WHEN USING A CRANE TO SET EQUIPMENT IN-PLACE. CONTRACTOR TO PROVIDE BARRICADES AND PEOPLE TO DIRECT TRAFFIC INSIDE THE BUILDING AROUND LIFT AREA EXTERNAL TO THE BUILDING.
2. INSULATION
- 2.1. PIPING
- 2.1.1. PROVIDE 1" INSULATION TO ALL PIPING, VALVES AND FITTINGS FOR ALL HEATING WATER, STORM WATER, DOMESTIC COLD AND HOT WATER.
- 2.1.1.1. ALL CONCEALED PIPE TO BE PROVIDED WITH ALL SERVICE JACKET. ALL EXPOSED PIPING TO BE PROVIDED WITH PVC JACKET.
- 2.1.1.2. PROVIDE HIGH DENSITY INSULATION OR CALCIUM SILICATE INSULATION UNDER ALL PIPE HANGERS.
- 2.1.1.3. STANDARD OF ACCEPTANCE:
- 2.1.1.3.1. RIGID PIPE: MANSON ALLEY K APT, OWENS CORNING, OWENS CORNING VAPORWRICK, MANVILLE MICRO LOCK, KNAUF PEX, TUNDRA SIAL PLUS.
- 2.1.1.3.2. APPLY INSULATION AFTER REQUIRED TESTS HAVE BEEN COMPLETED AND APPROVED BY ENGINEER. INSULATION AND SURFACES SHALL BE CLEAN AND DRY WHEN INSTALLED AND DURING APPLICATION OF ANY FINISH.
- 2.1.3. INSULATION IS NOT REQUIRED FOR:
- 2.1.3.1. CHROME-PLATED PIPING, FLANGES AND VALVE BONNETS ON DOMESTIC HOT AND COLD WATER SERVICES, EXCEPT AS REQUIRED BY CODE.
- 2.1.3.2. SANITARY DRAINAGE PIPING.
- 2.2. DUCTWORK
- 2.2.1. SUPPLY DUCTWORK BEFORE HEATING COIL.
- 2.2.1.1. PROVIDE 1" THICK FIBERGLASS DUCT INSULATION c/w FACTORY APPLIED FOIL SCRIMMART VAPOR JACKET.
- 2.2.2. SUPPLY DUCTWORK AFTER HEATING COIL:
- 2.2.2.1. UNINSULATED.
- 2.2.2.2. RETURN DUCTWORK: UNINSULATED.
- 2.2.4. OUTDOOR AIR INTAKE DUCTWORK & PLENUM:
- 2.2.4.1. PROVIDE 2" THICK FIBERGLASS DUCT INSULATION c/w FACTORY APPLIED FOIL SCRIMMART VAPOR JACKET.
- 2.2.5. EXHAUST DUCTWORK DUCTWORK & PLENUM:
- 2.2.5.1. PROVIDE 2" THICK FIBERGLASS DUCT INSULATION c/w FACTORY APPLIED FOIL SCRIMMART VAPOR JACKET.
- 2.2.6. INSTALL DUCT INSULATION WITH WELD PINS AND CLIPS. SEAL ALL JOINTS AND PENETRATIONS WITH FOIL TAPE. INSULATE AFTER DUCTWORK HAS BEEN SEALED AND INSPECTED. ALL DUCT HANGERS AND ANGLE IRON SUPPORTS SHALL BE LOCATED OUTSIDE OF DUCT INSULATION.
- 2.2.7. PROVIDE FOR ACOUSTIC LINING OF DUCTWORK FOR 10FT AFTER THE DISCHARGE OF THE ERV.
3. PLUMBING
- 3.1. GENERAL
- 3.1.1. ALL WORK TO BE COMPLETED IN ACCORDANCE WITH NBC, CPC, AND AUTHORITIES HAVING JURISDICTION DURING DEMOLITION PHASE, REMOVE, STORE AND HANDLE ALL PLUMBING FIXTURES, CUT AND CAP ALL PIPING AS NECESSARY. RELOCATE ALL FIXTURES AS PER THE NEW ARCHITECTURAL LAYOUTS. CONNECT PIPING AS REQUIRED TO MEET CODE.
- 3.1.2. CONTRACTOR SHALL CONDUCT AND PAY FOR ALL PIPING TESTS. ALL TESTS SHALL BE CARRIED OUT IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE.
- 3.2. PIPING
- 3.2.1. BELOW GRADE SANITARY PIPING TO BE PVC-DWV, ABS-DWV, CAST IRON, SLOPED AT 1/8" TO 1'-0".
- 3.2.2. ABOVE GRADE DRAINAGE AND VENTS - COPPER DWV, CAST IRON, PVC-DWV (IPEX SYSTEM 15 - WHEN CONCEALED), PVC - 25/50 (IPEX XFR - WHERE EXPOSED).
- 3.2.3. WATER ABOVE GRADE - TYPE L COPPER
- 3.2.4. WATER BELOW GRADE - PEX.
- 3.1. HANGERS
- 3.1.1. CLEVIS TYPE WITH THREADED RODS, SPACING 1.8M +40MM, 3M +50MM.
- 3.1.1.1. USE GRINNELL FIG. CT-69 FOR HORIZONTAL HOT AND COLD WATER PIPES
- 3.1.1.2. USE GRINNELL FIG. CT-121C FOR VERTICAL HOT AND COLD WATER PIPES
- 3.1.1.3. USE GRINNELL FIG. 260 FOR HORIZONTAL CAST IRON
- 3.1.1.4. USE GRINNELL FIG. 261 FOR VERTICAL CAST IRON
- 3.1.1.5. PROVIDE INSULATION SHELDOS FOR ALL HANGERS ON INSULATED PIPING.
- 3.1.2. BED SEWER PIPING ON 3" (75MM) LAYER OF SAND.
- 3.2. SPECIALTIES
- 3.2.1. DIELECTRIC UNIONS - WATTS 3001A SERIES, PROVIDE ON ALL CONNECTIONS OF DISSIMILAR METALS.
- 3.2.2. PROVIDE TRAP PRIMING MANIFOLD, PFP INC. #PTS SERIES, OR EQUAL.
- 3.2.2.1. RECESS IN WALL WITH ACCESS HATCH.
- 3.3. VALVES AND GAUGES
- 3.3.1. GATE VALVES - CRANE #1320
- 3.3.2. BALL VALVES - CRANE #9322
- 3.3.3. GLOBE VALVES - CRANE #1312
- 3.3.4. CHECK VALVE - CRANE #1343
- 3.3.5. PRESSURE GAUGE - WEKSLER EA14 0-100 PSI
- 3.3.6. THERMOMETER WITH WELL - WEKSLER EGS9 30-180 DEG F
- 3.4. TESTING
- 3.4.1. DRAINAGE PIPING SHALL BE PLUGGED AND THE ENTIRE PIPING SYSTEM SHALL BE FILLED WITH WATER UP TO THE TOP OF THE HIGHEST OPENING. WATER SHALL STAND AT THE SAME LEVEL FOR NOT LESS THAN 2 HOURS.
- 3.4.2. DOMESTIC WATER PIPING SHALL BE TESTED FOR 24 HOURS AT 125 PSI AND SHOW NO SIGNIFICANT PRESSURE DROP OR APPARENT LEAKS.
- 3.5. HEATING:
- 3.5.1. FINNED TUBE RADIATION: COMMERCIAL CONVECTOR CONSISTING OF FINNED TUBE RADIATION ELEMENT NOMINALLY WITH A 3/8" COPPER PIPE AND 4"x4" ALUMINUM FINS SPACED AT 52 FINS/FT. 16GA COLD ROLLED STEEL CABINET WITH ROUNDED PROFILE EDGES, SLOPED VENTED TOP, AND ENCLOSED VENTED BASE. MULTIPLE ROWS OF FINNED ELEMENT AS INDICATED, COMPLETE WITH ALL TRIMS REQUIRED FOR A COMPLETE INSTALLATION (JOINER, VALVE BOX, END , INSIDE CORNER, OUTSIDE CORNER.)

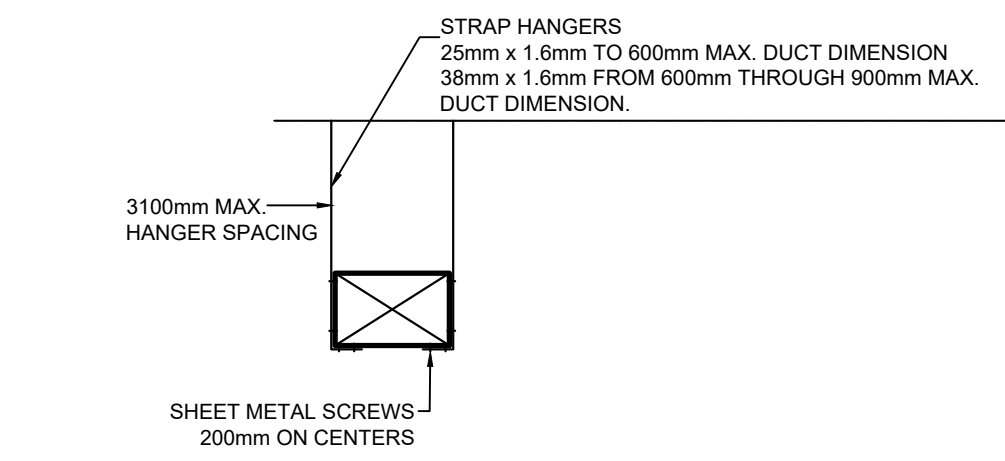
- 3.5.2. ACCEPTABLE MATERIAL: ROSEMEX RVS SERIES.
4. VENTILATION
- 4.1. GENERAL
- 4.1.1. ALL DUCTWORK AND HANGERS SHALL BE CONSTRUCTED FROM LOCK FORMING QUALITY STEEL WITH G90 DESIGNATION ZINC COATING TO ASTM A525 M80 TO SMACNA STANDARDS BASED ON 2" SP. IN DUCTS. DUCTWORK TO BE SEALED TO SMACNA STANDARDS.
- 4.1.2. CONTRACTOR RESPONSIBLE FOR ALL DUCT TRANSITIONS TO/FROM MECHANICAL EQUIPMENT, DIFFUSERS, GRILLES, CROSSOVERS, AROUND OBSTRUCTIONS, ETC., AS REQUIRED. PROVIDE FLEX CONNECTIONS TO ALL AIR HANDLING EQUIPMENT. MAXIMUM OF 6 FT FLEX DUCT ON BRANCHES TO DIFFUSERS.
- 4.1.3. FABRICATE HANGERS AND SUPPORTS IN ACCORDANCE WITH SMACNA CONSTRUCTION STANDARDS. HANGER SPACING SHALL BE AS THE FOLLOWING SCHEDULE:

LONGEST SIDE	TRAPEZE SHELF ANGLE	HANGER RODS	HANGER SPACING
UP TO 750MM (30")	25 X 25 X 3MM	6MM (1/4")	2.5M (8FT)

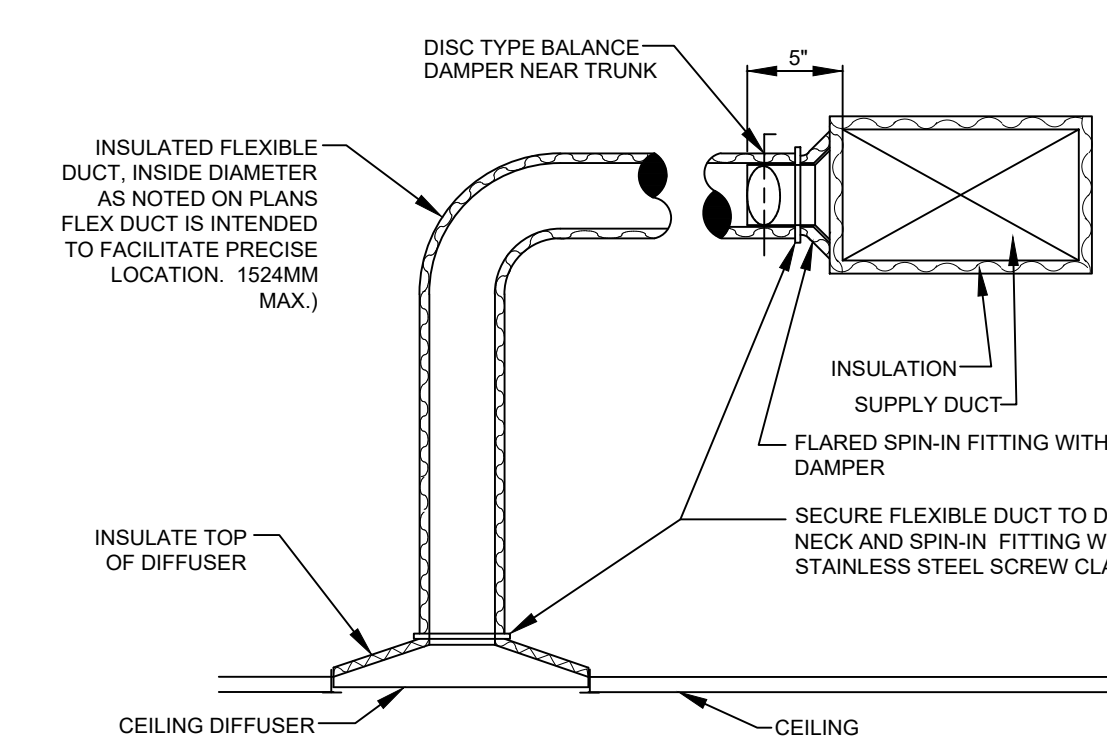
- 4.1.3.1. DUCTS UP TO 20 INCHES MAY BE SUPPORTED WITH GALVANIZED STEEL STRAP HANGERS MANUFACTURED TO SMACNA STANDARDS, SCREWED AT THE TOP AND ON THE BOTTOM OF DUCT. DO NOT BREAK CONTINUITY OF INSULATION VAPOR BARRIER BY HANGERS OR RODS.
- 4.1.4. PROVIDE TURNING VANES AND AIRFLOW BAFFLES IN FITTINGS WHERE INDICATED OR REQUIRED FOLLOWING SMACNA STANDARDS.
- 4.1.5. DIFFUSER LOCATIONS SHOWN ARE APPROXIMATE ONLY. VERIFY EXACT LOCATIONS ON SITE. ALL BRANCH DUCTS TO DIFFUSERS SHALL BE SIZED TO MATCH DIFFUSER SIZE UNLESS OTHERWISE INDICATED.
- 4.1.6. PROVIDE FUSIBLE-LINK TYPE FIRE DAMPERS WITH ACCESS DOORS IN DUCTS WHERE THE WORK OF THIS CONTRACT PASSES THROUGH FIRE SEPARATIONS AS PER CODE.
- 4.1.7. PROVIDE FIRE FLAPS AND BLANKETS AT ALL DIFFUSERS PENETRATING FIRE-RATED CEILINGS.
- 4.2. BALANCING DAMPERS
- 4.2.1. PROVIDE EXTERNAL BALANCING DAMPERS ON ALL DIFFUSERS AS CLOSE TO TRUNK DUCT AS POSSIBLE.
- 4.3. MOTORIZED DAMPERS
- 4.3.1. PROVIDE OUTDOOR AIR DAMPERS EQUAL TO TAMCO SERIES 9000 LOW LEAKAGE, THERMALLY INSULATED DAMPER c/w BELIMO 24VAC SPRING RETURN DAMPER ACTUATOR.
- 4.4. FIRE DAMPERS:
- 4.4.1. STATIC SHUTTER TYPE WITH FUSIBLE LINK, 45MIN RATED.
- 4.4.2. ACCEPTABLE MANUFACTURERS: RUSKIN, PRICE, VENTEX
- 4.7. STARTUP
- 4.7.1. PROVIDE START UP SERVICE FOR ALL AIR CONDITIONING UNITS INSTALLED UNDER THIS CONTRACT. STARTUP SHALL BE PROVIDED BY FACTORY TRAINED PERSONNEL, COMPLETE TO MANUFACTURERS INSTRUCTIONS.
- 4.8. BALANCING
- 4.8.1. AABC CERTIFIED CONTRACTOR SHALL TEST AND BALANCE ALL AIR SUPPLY, RETURN AND EXHAUST SYSTEMS SPECIFIED.
- 4.8.2. EACH OUTLET SHALL BE ADJUSTED BY A FLOW HOODS ANEMOMETER.
- 4.8.3. READINGS TO PROVIDE AIR QUANTITIES SPECIFIED.
- 4.8.4. FROM COMPLETION OF THE BALANCING, SUPPLY THE ENGINEER WITH THREE (3) COMPLETE RECORDS WHICH SHALL INCLUDE AIR QUANTITIES AT EACH OUTLET.
- 4.9. PACKAGED ENERGY RECOVERY VENTILATOR:
- 4.9.1. SEE SCHEDULE FOR CAPACITY.
- 4.9.2. DOUBLE WALL INSULATED CABINET, COMPLETE WITH FACTORY WIRING HARNESS, SINGLE POINT ELECTRICAL CONNECTIONS, FANS MOUNTED IN CABINET WITH MOTORS, ACCESS DOORS, ONBOARD DEFROST CONTROL (TIMED FAN SHUTDOWN), STATIC PLATE ENERGY RECOVERY CORE.
- 4.9.3. ACCEPTABLE MANUFACTURERS: FANTECH ALDES, RENEWAIRE.
- 4.10. DUCTED HEATING COILS:
- 4.10.1. CAPACITY AND SIZES AS INDICATED
- 4.10.2. FINNED TYPE DUCTED RADIATOR WITH COPPER TUBES, AND ALUMINUM FLAT FINS. BRASS COPPER HEADERS WITH SINGLE POINT PUMP CONNECTIONS, COMPLETE WITH MOUNTING FLANGES.
- 4.10.3. ACCEPTABLE MANUFACTURERS: USA COIL AND AIR, DIRECT COIL
- 4.11. GRILLES AND DIFFUSERS:
- 4.11.1. SIZES AND TYPES AS INDICATED IN SCHEDULE.
- 4.11.2. ACCEPTABLE MANUFACTURERS: AIRVECTOR, TITUS, NAILOR, PRICE, HART & COOLEY
- 4.12. LOUVRES
- 4.12.1. ALUMINUM CONSTRUCTION, COMPLETE WITH ANGLED BLADES TO RESTRICT WATER AND SNOW INFILTRATION. SIZE AS INDICATED, SUPPLIED WITH DRAINAGE CHANNELS AS INDICATED.
- 4.12.2. ACCEPTABLE MATERIAL: VENTEX, PRICE, RUSKIN



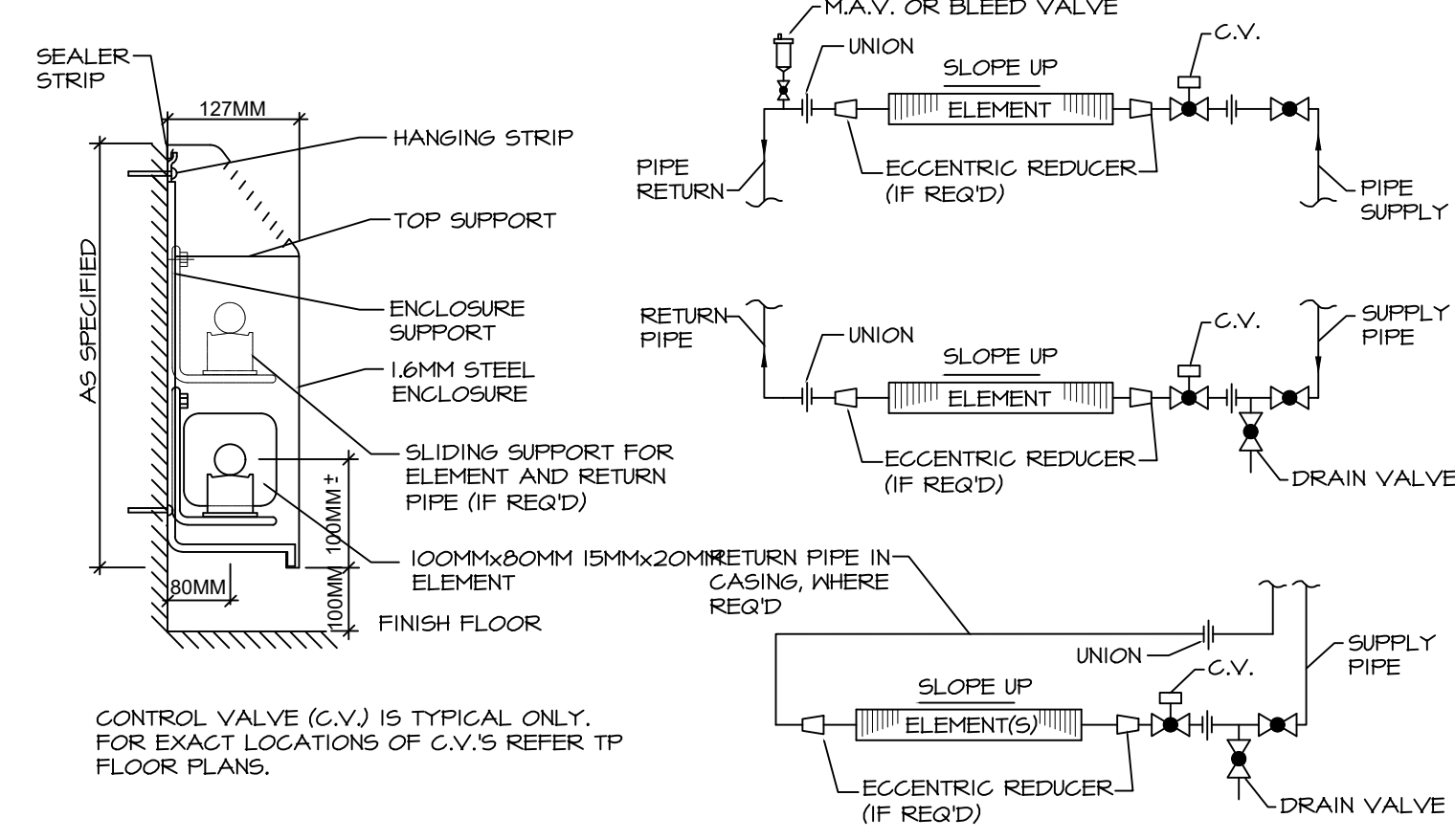
1 LOUVRE CONSTRUCTION DETAILS
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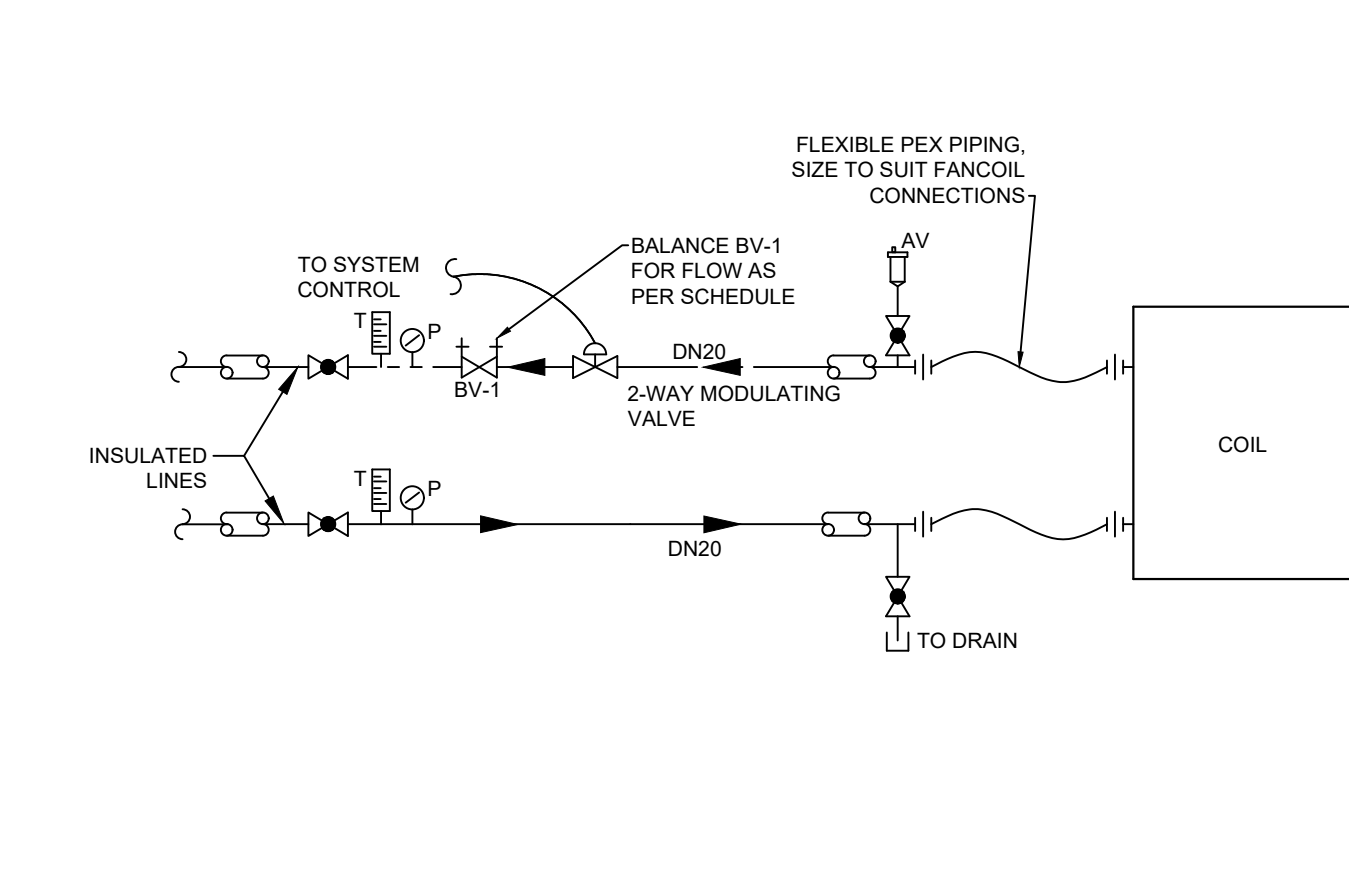
2 DUCT SUPPORT DETAIL
MO01 NTS



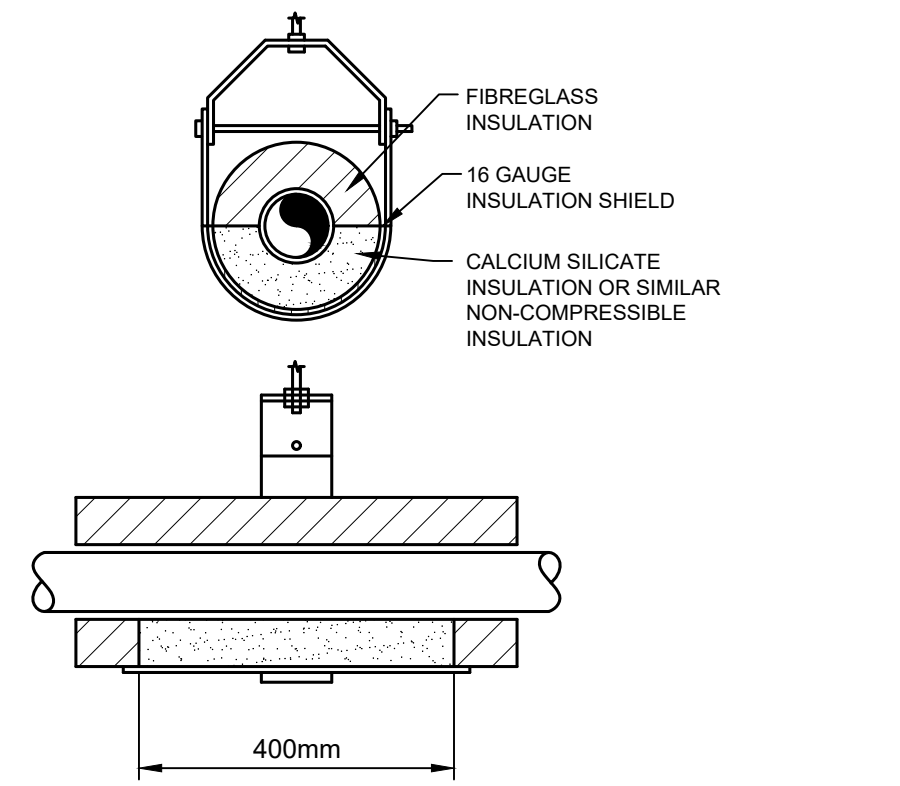
3 TYPICAL BRANCH DUCTING
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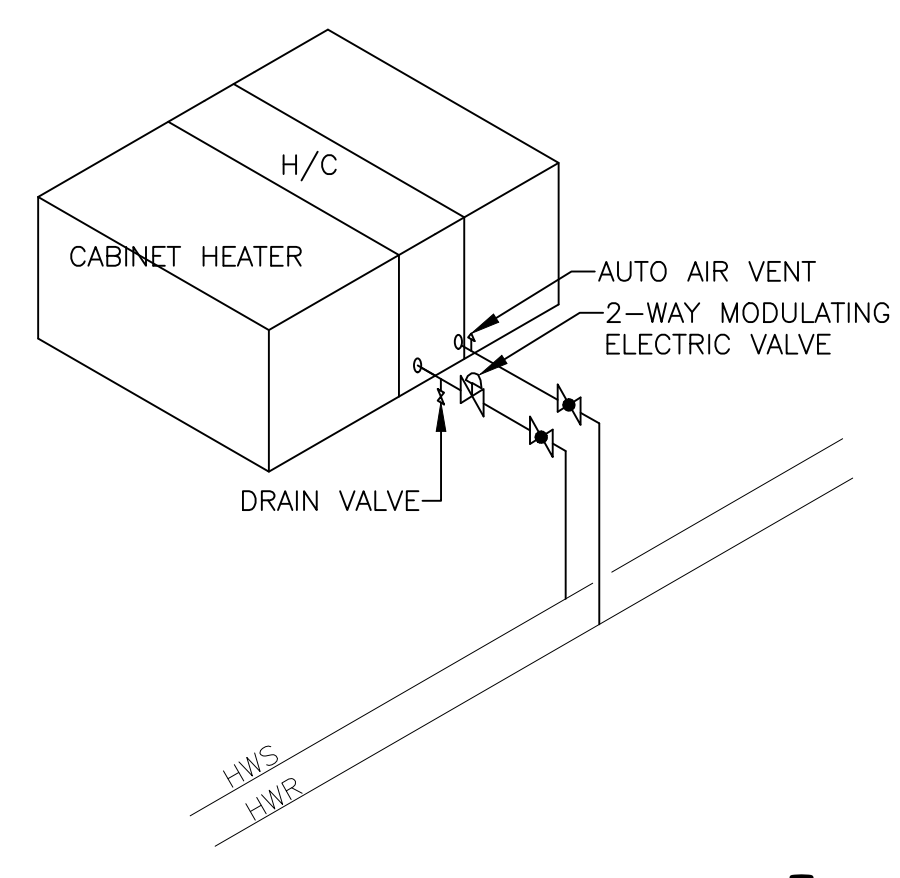
5 TYPICAL CONVECTOR PIPING DETAILS
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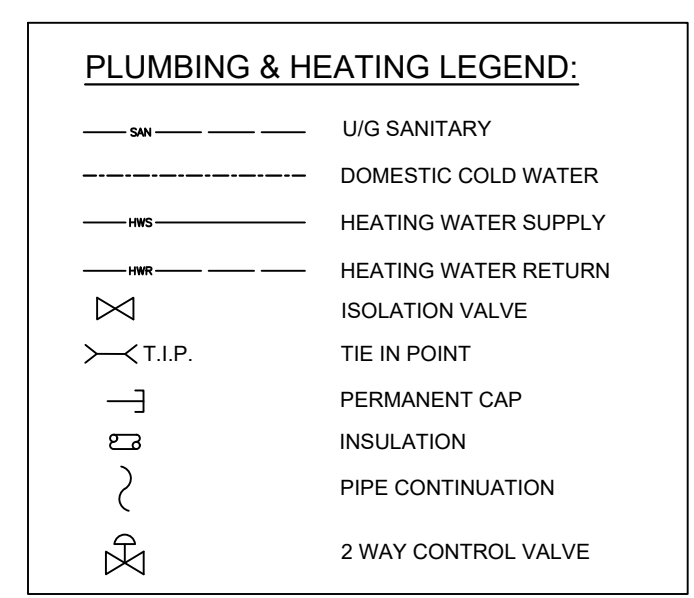
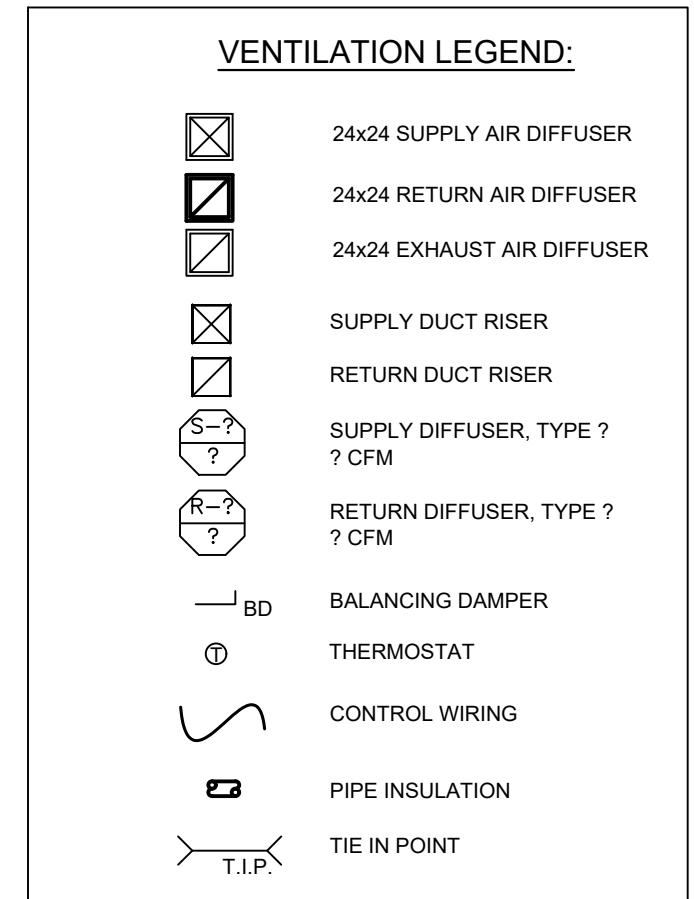
6 HEATING COIL PIPING DETAIL
MO01 NTS



4 INSULATION AT PIPE SUPPORTS
MO01 NTS



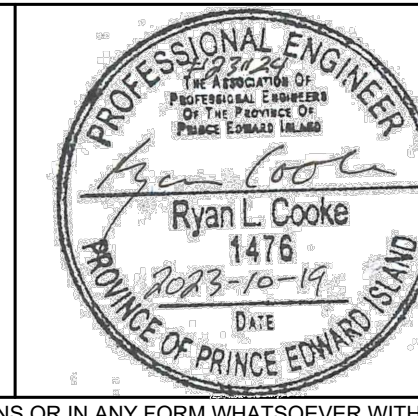
7 CABINET HEATER PIPING DETAIL
MO01 NTS



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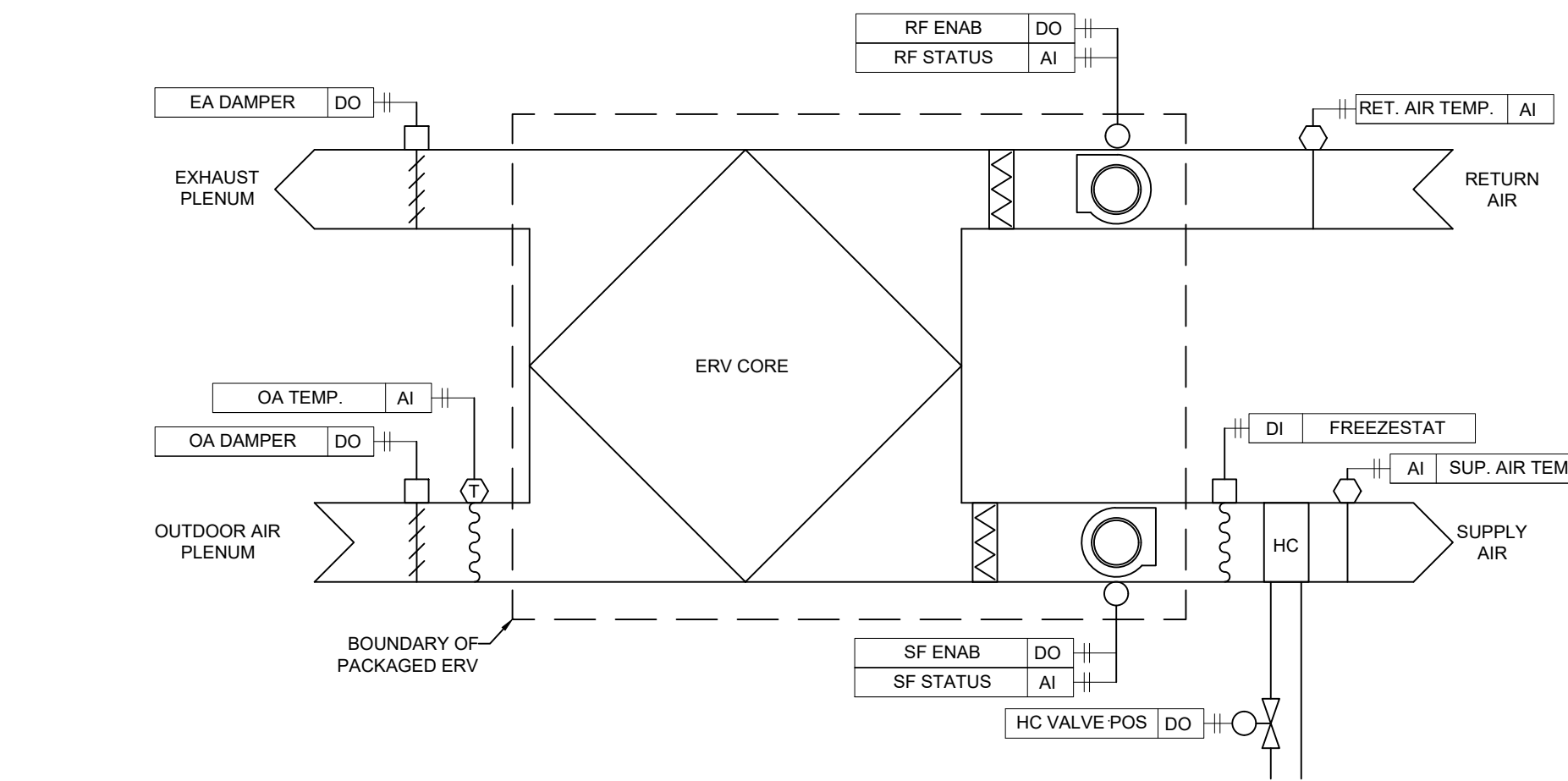
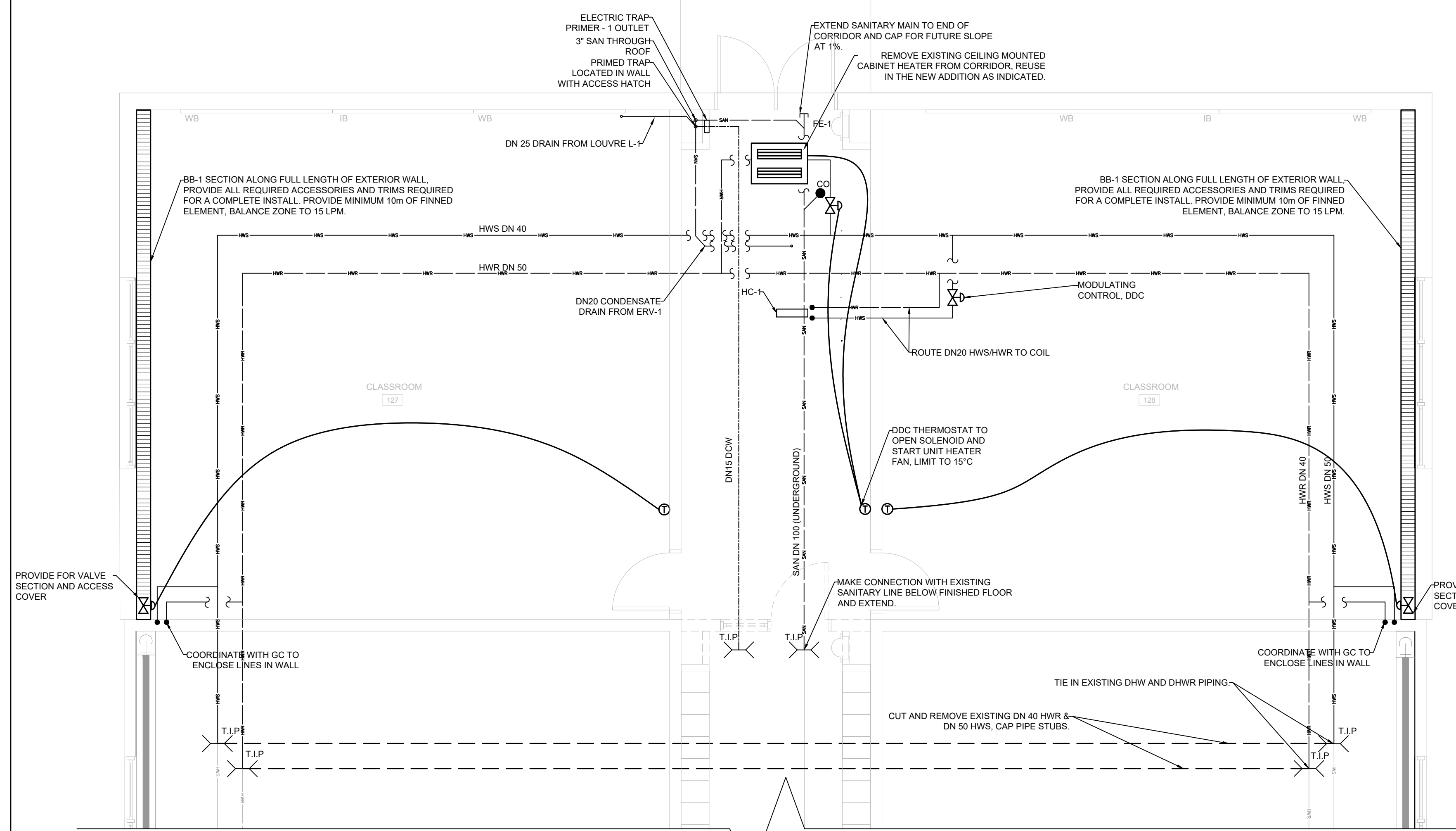
Project Title
École Pierre Chaisson Addition

DTI Project No.: 175-23045

Sheet Title
Mechanical Specification, Legend, and Details

No.	Description	Date	Date:	Revision
0	Issued for Permit	2023-10-19	2023-10-19	

Date: 2023-10-19
Drn By: V.R.Y.
Chk By: R.L.C., P. Eng
Project Number:
231124
Drawing Number:
M001

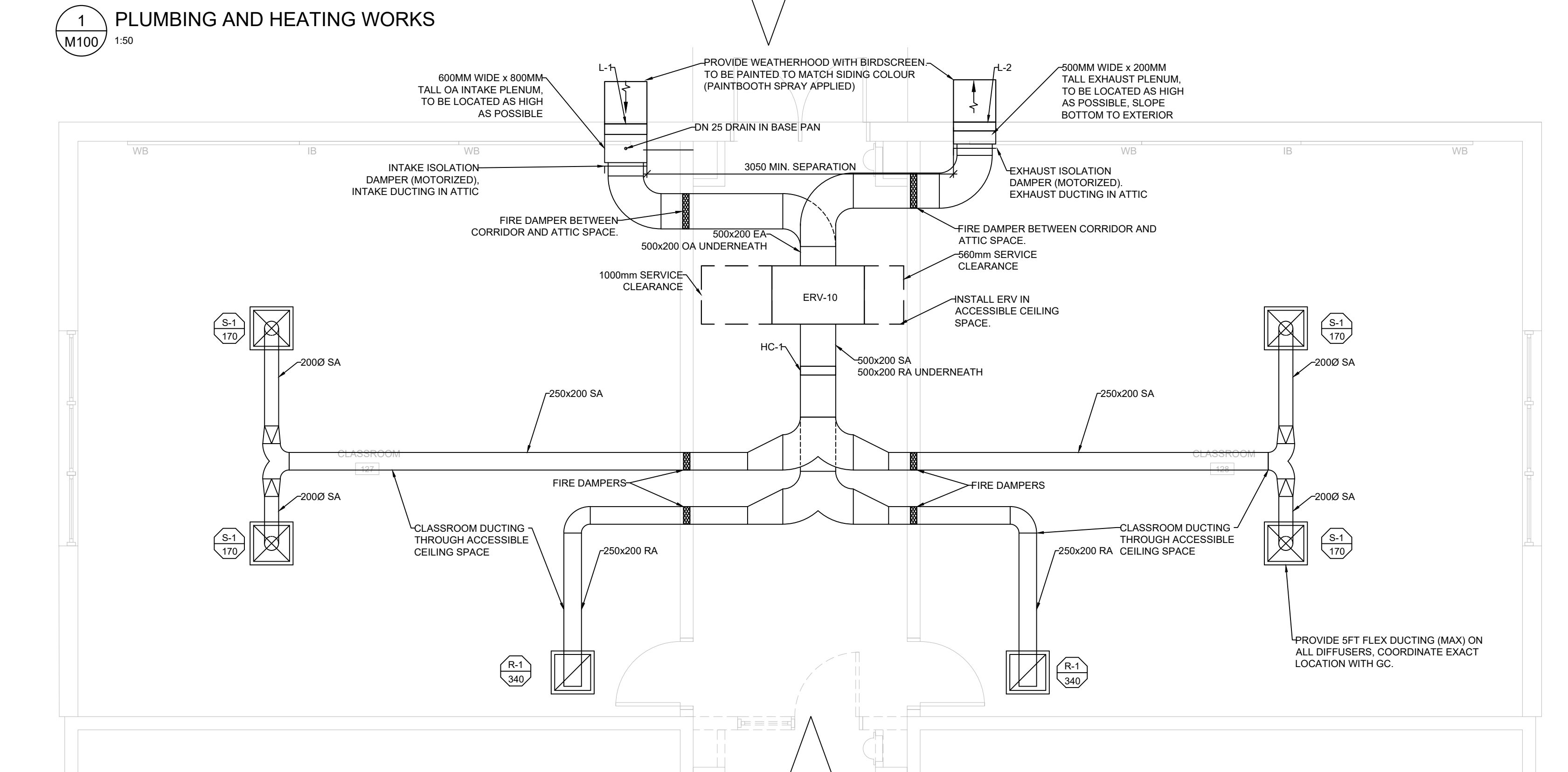
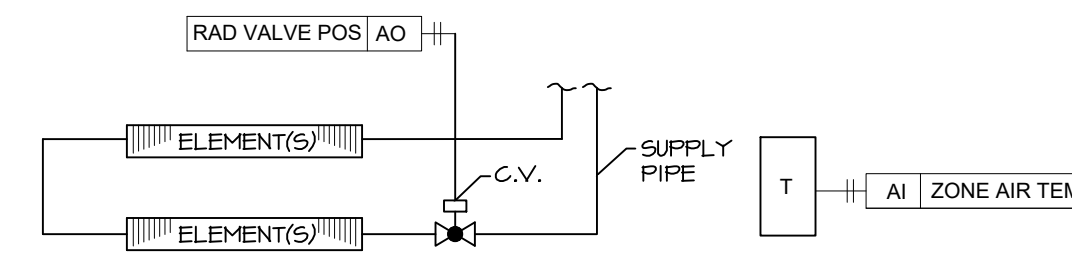


ERV SEQUENCE OF OPERATIONS

- THE UNIT SHALL HAVE A CUSTOM GRAPHIC ON THE BMS. ALL VALUES FOLLOWED BY (ADJ.) ARE TO BE USER ADJUSTABLE.
- THE ERV IS TO OPERATE ON AN ADJUSTABLE SCHEDULE. NOMINALLY OCCUPIED 7AM-5PM, MON-FRI, SEPT 1ST - JUNE 30TH.
- THE ERV SHALL IMMEDIATELY SHUT DOWN IF THERE IS A SAFETY TRIP FROM THE FOLLOWING SIGNAL:
 - FREESTAT TRIP
- SUPPLY AIR TEMPERING AND CONDITIONING - THE BMS IS TO MODULATE THE HEATING COIL VALVE WHEN THE FANS ARE RUNNING TO MAINTAIN SAT_SP:
 - WHEN OAT > 5°C (ADJ.): SAT_SP = 18°C (ADJ.) ± 1°C (ADJ.)
 - WHEN OAT > 12°C: HEATING COIL VALVE IS TO BE CLOSED.
 - WHEN OAT IS BETWEEN 5°C AND 12°C: SAT_SP = 15°C (ADJ.) ± 1°C (ADJ.) DEADBAND.
- NIGHT PURGE OPERATION
 - START THE ERV OVERNIGHT IF:
 - THE DATE IS BETWEEN MAY 15TH AND OCT 1ST.
 - THE TIME IS BETWEEN 7AM (ADJ.) AND 5AM (ADJ.).
 - THE AVERAGE SPACE TEMP IS > 22°C.
 - PREVIOUS DAY OAT REACHED AT MINIMUM 15°C (ADJ.).
 - CURRENT TEMPERATURE IS BETWEEN 7-18°C (ADJ.).
 - SHUT OFF UNIT WHEN ZONE AIR TEMPERATURES DROP TO 20°C (ADJ.) OR LESS FOR 15 MINS (ADJ.). USE OF THE HEATING COIL IS NOT PERMITTED.

MODULATING CONVECTOR SEQUENCE OF OPS

- THE UNIT SHALL HAVE A CUSTOM GRAPHIC ON THE BMS. ALL VALUES FOLLOWED BY (ADJ.) ARE TO BE USER ADJUSTABLE.
- THE ZONE CONTROLS ARE TO BE CONTROLLED ACCORDING TO THE FACILITY MASTER OCCUPANCY SCHEDULE.
- OCCUPIED HEATING IS TO BE DISABLED IN WARM WEATHER. GENERALLY WHEN OUTDOOR AIR TEMP (OAT) IS IN EXCESS OF 15°C.
- UNOCCUPIED HEATING IS TO BE DISABLED WHEN OAT IS IN EXCESS OF 10°C.
- OCCUPANTS ARE TO HAVE A ±2°C ADJUSTMENT RANGE.
- ZONE HEATING SETPOINTS ARE TO BE AS FOLLOWS:
 - WHEN OCCUPIED: 21°C (ADJ.) ± 1°C (ADJ.)
 - WHEN UNOCCUPIED: 15°C (ADJ.) ± 1°C (ADJ.)
- ZONE VALVE MODULATION:
 - WHEN HEATING IS ACTIVATED, THE ZONE VALVE IS TO MODULATE IN RESPONSE TO THE ZONE AIR TEMPERATURE READING. THE ZONE VALVE SHALL INITIALLY OPEN TO NO MORE THAN 33% OPEN WHEN HEATING IS ACTIVATED.
 - THE ZONE VALVE MODULATION RATE SHALL BE LIMITED TO 25% PER MINUTE. THE ZONE VALVE IS TO MODULATE TO MAINTAIN THE HEATING SETPOINT ±0.3°C (ADJ.).
 - THE VALVE SHALL CLOSE WHEN THE VALVE IS AT MINIMUM POSITION FOR 1 MIN (ADJ.), AND THE TEMPERATURE IS APPROACHING THE SETPOINT + DEADBAND.



ENERGY RECOVERY VENTILATOR SCHEDULE																			
TAG	LOCATION	SERVES	SUPPLY		RETURN		ELECTRICAL		HEATING MODE EFFECTIVENESS			DIMENSIONS			BASIS OF DESIGN	NOTES			
			AIRFLOW (CFM)	ESP (IN W.G.)	AIRFLOW (CFM)	ESP (IN W.G.)	UNIT MCA	UNIT MOC	POWER TYPE	OA (°C DB/WB)	RA (°C DB/WB)	FA (°C DB/WB)	% EFF. (TOTAL)	LENGTH (mm)			WIDTH (mm)	HEIGHT (mm)	WEIGHT (kg)
ERV-10	CORRIDOR 208A CEILING	CLASSROOM 127, 128	680	1.4	680	1.4	13.8	15	120/160	-20.7/-21.3	20.0/11.5	1.7/-0.1	55.0	920	1200	600	100	FANTECH SER 1100	STATIC PLATE ENERGY RECOVERY CORE. SINGLE POINT ELECTRICAL CONNECTION. MERV 13 FILTERS. ONBOARD DEFROST. SUPPLIED WITH ISOLATION DAMPERS. LOW-VOLTAGE ACTUATORS TO BE PROVIDED BY CONTROLS SUBCONTRACTOR.

LOUVRE SCHEDULE									
TAG	TYPE	MANUFACTURER	MODEL	AIRFLOW	PRESSURE DROP	AIR DIRECTION	SIZE (mm x mm)	COMMENTS	
L-1	6" STORMPROOF LOUVRE, WITH DRAIN CHANNELS	VENTEX	2620/2625	680 CFM	0.05 IN W.G.	INTAKE	600 x 600	ALUMINUM LOUVRE WITH INTEGRAL DRAINAGE CHANNELS. SIZED FOR MINIMUM 50% FREE AREA. UNCOATED	
L-2	4" STANDARD ALUMINUM LOUVRE	VENTEX	2620/2625	680 CFM	0.05 IN W.G.	EXHAUST	600 x 600	ALUMINUM LOUVRE. SIZED FOR MINIMUM 50% FREE AREA. UNCOATED	

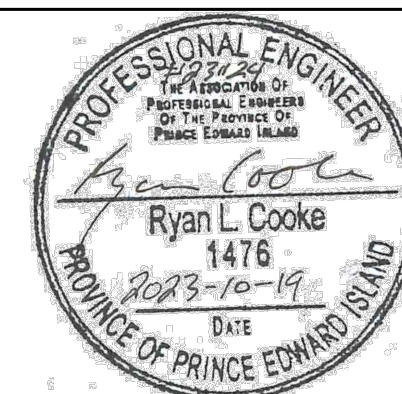
DUCTED HEATING COIL SCHEDULE															
TAG	LOCATION	SERVES	AIR SIDE		HEATING DATA					DIMENSIONS		NOTES			
			AIRFLOW (CFM)	PD (IN W.G.)	INLET AIR TEMP (°C)	OUTLET AIR TEMP (°C)	FLUID	EWT (°C)	LWT (°C)	FLOW (LPM)	LIQ. P.D. (kPa)		LOAD (kW)	LENGTH (mm)	HEIGHT (mm)
HC-1	CORR 208A	ERV-1	680	0.2	2.0	26.7	WATER	82	71	12	40	9.6	500	200	COMPLETE WITH LIFTING LUGS, MOUNTING FLANGES, PRE-DRILLED BOLT HOLES, SAME END CONNECTIONS.

DIFFUSER AND GRILLE SCHEDULE					
TAG	TYPE	MANUFACTURER	MODEL	SIZE (mm x mm)	COMMENTS
S-1	4-WAY CEILING DIFFUSER, 3-CONE	AIRVECTOR	DF3	600 x 600	NECK SIZE TO SUIT AIRFLOW NOTE ON DRAWING. DIFFUSERS TO BE EQUIPPED WITH BALANCE DAMPERS
R-1	PERFORATED FACE DIFFUSER FOR T-BAR MOUNTING	AIRVECTOR	PRM	600 x 600	NECK SIZE TO SUIT AIRFLOW NOTE ON DRAWING. DIFFUSERS TO BE EQUIPPED WITH BALANCE DAMPERS

BASEBOARD & CONVECTOR HEATER SCHEDULE									
TAG	TYPE	OUTPUT (W/m)	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	EAT (°C)	EWT (°C)	CONN.	BASIS OF DESIGN
BB-1	FINNED TUBE RADIATOR IN CABINET	1430 W/m @ 76C A.W.T.	AS INDICATED	127	457	18	82	DN20	ROSEMEX RVS COMMERCIAL CONVECTOR. SLOPED TOP VENTED OUTLET. COMPLETE WITH ALL TRIMS. ARRANGEMENT D. DUAL FINNED ELEMENTS. PROVIDE FOR CONTROL VALVE SECTION. PROVIDE BOTTOM ENCLOSURE PANEL TRIM.



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Project Title
École Pierre Chaisson Addition

DTI Project No.: 175-23045

Sheet Title
New Works Plans, Control Schematic and Equipment Schedules

No.	Description	Date	Date:	Revision
0	Issued for Permit	2023-10-19	2023-10-19	△
			Drn By: V.R.Y.	
			Chk By: R.L.C., P. Eng	
			Project Number:	
			231124	
			Drawing Number:	
			M100	

ELECTRICAL SPECIFICATIONS

1. GENERAL CONDITIONS

- 1.1. TENDER REQUIREMENTS, THE PROJECT CONTRACT, RELATED DOCUMENTATION AND GENERAL REQUIREMENTS GOVERN THE WORK OF THIS CONTRACT/TRADE.
 - 1.2. ALL ELECTRICAL WORK IS TO BE CARRIED OUT BY QUALIFIED, LICENSED ELECTRICIANS OR APPRENTICES FOR THE PROVINCE OF PRINCE EDWARD ISLAND AND THE ELECTRICAL CONTRACTOR MUST HAVE A VALID CONTRACTOR LICENSE ISSUED BY THE PROVINCE OF PRINCE EDWARD ISLAND.
 - 1.3. ELECTRICAL CONTRACTOR TO FURNISH ALL LABOUR, MATERIALS, TOOLS AND EQUIPMENT REQUIRED TO COMPLETE ALL WORK SHOWN ON THE DRAWINGS AND HEREIN SPECIFIED. THE WORK IS TO BE IN ACCORDANCE WITH RULES AND REGULATIONS OF ALL AUTHORITIES HAVING LEGAL JURISDICTION OVER THE WORK. PROVIDE ANY SMALL ITEMS OF WORK NOT SPECIFICALLY CALLED FOR BUT REQUIRED TO COMPLETE THE INTENDED INSTALLATION.
 - 1.4. THE TERM "OWNER" TO HEREIN AFTER REFER TO THE DEPARTMENT OF TRANSPORTATION & INFRASTRUCTURE. THE TERM "ENGINEER" TO HEREIN AFTER REFER TO COLES ASSOCIATES LTD.
 - 1.5. THE ENGINEER RESERVES THE RIGHT TO APPROVE THE QUALITY OF MATERIAL AND WORKMANSHIP, AND TO CALL FOR ANY TESTS WHICH THEY DEEM NECESSARY TO ESTABLISH THE INTEGRITY OF THE INSTALLATION DURING THE PROGRESS OF THE WORK AND A COMPLETE TEST OF EACH SYSTEM AT THE COMPLETION OF THE WORK. THE COST OF SUCH TESTS ARE NOT TO BE CONSIDERED AS EXTRAS.
- 2. DESCRIPTION OF WORK**
- 2.1. THE WORK IS TO CONSIST OF, BUT NOT BE LIMITED TO, THE FOLLOWING:
 - 2.1.1. POWER DISTRIBUTION INCLUDING MODIFICATIONS TO EXISTING SYSTEM
 - 2.1.2. WIRING DEVICES
 - 2.1.3. LIGHTING
 - 2.1.4. EXIT AND EMERGENCY LIGHTING
 - 2.1.5. COMMUNICATIONS SYSTEMS, INCLUDING MODIFICATIONS TO EXISTING COMMUNICATIONS SYSTEM
 - 2.1.6. INTRUSION ALARM, INCLUDING MODIFICATIONS TO EXISTING INTRUSION ALARM SYSTEM.
 - 2.1.7. FIRE ALARM, INCLUDING MODIFICATIONS TO EXISTING FIRE ALARM SYSTEM.
 - 2.1.8. ALL CABLE AND CONDUIT INSTALLATION
 - 2.1.9. ALL NECESSARY CONNECTIONS FOR A COMPLETE SYSTEM

3. CODES, PERMITS AND INSPECTION

- 3.1. ALL WORK IS TO BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE CANADIAN ELECTRICAL CODE (CSA 22-1.21), THE NATIONAL BUILDING CODE (NBC 2015), AND THE NATIONAL FIRE CODE (NFC).
- 3.2. ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR AND IS TO OBTAIN ALL PERMITS, INSPECTIONS, ETC. AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION OVER THIS WORK AND IS TO PAY FOR SAME. THESE COSTS ARE TO BE INCLUDED IN THE TENDER PRICES. ALL PERMITS ARE TO BE DELIVERED TO THE OWNER'S REPRESENTATIVE AS SOON AS THEY BECOME AVAILABLE.

4. EXAMINATION OF SITE AND DRAWINGS

- 4.1. EXAMINE ARCHITECTURAL, MECHANICAL, CIVIL AND ELECTRICAL DRAWINGS, VISIT THE SITE AND BECOME FAMILIAR WITH THE PROJECT. ANY DEVIATION AND/OR CONFLICTS ON THE PLANS OR SITE IS TO BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING TENDER, OTHERWISE IT WILL BE CONSIDERED THAT THEY HAVE BEEN ACCOUNTED FOR IN TOTAL TENDERED PRICE.
- 5. CLEANUP**
- 5.1. REMOVE ALL WASTE PRODUCTS AND DEBRIS AND KEEP THE WORK AREA CLEAN AT ALL TIMES.
 - 5.2. PRIOR TO FINAL REVIEW REMOVE SURPLUS PRODUCTS, TOOLS, AND CONSTRUCTION EQUIPMENT.
- 6. CUTTING AND PATCHING**
- 6.1. BE RESPONSIBLE FOR ANY CUTTING, PATCHING AND OPENINGS NECESSARY FOR WORK. USE APPROPRIATE POWER DRIVEN TOOLS TO MAKE ANY OPENINGS. KEEP OPENINGS TO A MINIMUM, AND MAKE OPENINGS ONLY AS LARGE AS REQUIRED FOR ELECTRICAL SERVICES.
 - 6.2. PATCH, CAULK, AND SEAL AROUND OPENINGS PLACED THROUGH FULL HEIGHT WALLS TO REDUCE NOISE.
- 7. EXISTING STRUCTURES AND SERVICES**
- 7.1. CONTRACTOR TO BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY CUTTING OR DISRUPTING EXISTING STRUCTURES OR SERVICES DESIGNATED TO REMAIN IN USE.

8. REMOVALS AND ALTERATIONS

- 8.1. PRIOR TO DEMOLITION, OWNER WILL IDENTIFY ANY ITEMS OF ELECTRICAL EQUIPMENT WHICH ARE TO BE SET ASIDE AS DIRECTED FOR FUTURE USE BY OWNER.
- 8.2. COORDINATE WORK OF THIS SECTION WITH OTHER TRADES.
- 8.3. ANY EXISTING CONDUIT, WIRING, BOXES OR EQUIPMENT THAT IS TO REMAIN IN SERVICE IS TO BE PROPERLY SUPPORTED AS REQUIRED BY THE CEC. ANY ADDITIONAL HANGERS, STRAPS OR FASTENERS THAT ARE REQUIRED ARE TO BE SUPPLIED AND INSTALLED UNDER THIS CONTRACT.
- 8.4. MAKE ALTERATIONS TO EXISTING ELECTRICAL SERVICES AS REQUIRED AND MAKE GOOD ALL CIRCUITS AFFECTED BY THE RENOVATIONS.
- 8.5. ANY EXISTING ELECTRICAL CIRCUITS AND/OR EQUIPMENT THAT ARE INTERRUPTED DURING CONSTRUCTION TO ACCOMMODATE ALTERATIONS BUT ARE TO REMAIN IN SERVICE ARE TO BE RECONNECTED AND CIRCUITS MADE GOOD.
- 8.6. ANY RELOCATING OF EXISTING EQUIPMENT AND ANY REROUTING OF EXISTING WIRE AND CONDUIT TO COORDINATE WITH NEW WORK IS TO BE INCLUDED IN TOTAL TENDERED PRICE.
- 8.7. THE OWNER INTENDS TO CARRY OUT DAY-TO-DAY BUSINESS AS USUAL THROUGHOUT THE FACILITY DURING THE RENOVATION. ALL POTENTIALLY DISRUPTIVE WORK INCLUDING POWER OUTAGES ARE TO BE COORDINATED AND SCHEDULED WITH THE OWNER IN AN EFFORT TO MINIMIZE DISRUPTION.
- 8.8. EXISTING CONDUCTOR AND CIRCUIT BREAKERS AND ELECTRICAL EQUIPMENT MAY BE REUSED AT THE CONTRACTOR'S DISCRETION IF DEEMED SUITABLE FOR THE INTENDED INSTALLATION AND IN ACCORDANCE WITH CSA 22-1.21; OTHERWISE, PROVIDE NEW.

9. EQUIPMENT AND MATERIAL

- 9.1. ALL EQUIPMENT AND MATERIAL, UNLESS SPECIFICALLY NOTED OTHERWISE, IS TO BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL MATERIAL AND EQUIPMENT ARE TO BE CERTIFIED BY A CERTIFICATION AGENCY WHICH IS ACCREDITED BY THE CANADIAN STANDARDS COUNCIL OF CANADA IN ACCORDANCE WITH THE REQUIREMENTS OF CSA STANDARDS OR OTHER RECOGNIZED DOCUMENTS AND HAVE ALL REQUIRED LABELS PERMANENTLY AFFIXED AND VISIBLE WHEN INSTALLED.

10. TESTING

- 10.1. PERFORM TEST ON EACH SYSTEM TO THE SATISFACTION OF THE ENGINEER AND SUBMIT TEST RESULTS FOR APPROVAL PRIOR TO THE FINAL ACCEPTANCE OF THE WORK.
- 10.2. EXISTING PANELBOARD "E" TO BE BALANCE WITHIN 5% MEASURE PHASE CURRENT TO PANELS WITH NORMAL LOADS OPERATING AT TIME OF ACCEPTANCE. ADJUST BRANCH CIRCUIT CONNECTIONS AS REQUIRED TO OBTAIN BEST BALANCE OF CURRENT BETWEEN PHASES AND RECORD CHANGES. INCLUDE SIGNED AN DATED LOAD BALANCE SHEETS IN MAINTENANCE MANUALS.
- 10.3. TEST ALL SYSTEM GROUNDING CONDUCTORS FOR PHASE TO GROUND LOADS, AMMETER IS TO READ LESS THAN ONE AMPERE. INCLUDE SIGNED AND DATED TEST SHEETS IN MAINTENANCE MANUALS.
- 10.4. MEGGAR ALL CIRCUITS OF PANELBOARD "E" PHASE-TO-PHASE-TO-GROUND. INCLUDE SIGNED AND DATED TEST SHEETS IN MAINTENANCE MANUALS.
- 10.5. ALL ELECTRICAL EQUIPMENT AND SYSTEMS TO BE COMMISSIONED BY ELECTRICAL CONTRACTOR, READY FOR USE BY OWNER.

11. DEMONSTRATION OF THE SYSTEM

- 11.1. DEMONSTRATE THE FUNCTION AND OPERATION OF EACH SYSTEM TO THE ENGINEER AND OWNER.

12. IDENTIFICATION

- 12.1. EACH WIRE TO HAVE SELF-LAMINATING OR HEAT SHRINK STYLE CABLE MARKER INDICATING THE CIRCUIT NUMBER IT IS CONNECTED TO.
 - 12.2. COLOUR CODE CONDUITS, BOXES AND METALLIC SHEATHED CABLES WITH PLASTIC TAPE OR PAINT. CONDUIT AND METALLIC SHEATHED CABLES ARE TO BE PAINTED OR TAPED ON BOTH SIDES OF WALL OR CEILING PENETRATIONS AND AT 15m INTERVALS. COLOUR CODING TO MATCH EXISTING.
 - 12.3. ALL JUNCTION/PULL BOXES ARE TO BE MARKED WITH AN INDELIBLE INK MARKER TO IDENTIFY THE CIRCUIT NUMBER OR ENCLOSED WIRING AND THE PANEL NAME.
- 13. COORDINATION**
- 13.1. BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF EQUIPMENT, CONDUIT AND CABLE WORK, LIGHTING FIXTURES, ETC. WITH OTHER TRADES PRIOR TO THE ACTUAL INSTALLATION.
- 14. ACCESSIBILITY**
- 14.1. ALL WORK IS TO BE INSTALLED SO IT CAN BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIRS.
- 15. RESPONSIBILITY**
- 15.1. BE RESPONSIBLE FOR WORK UNTIL THE COMPLETION AND FINAL ACCEPTANCE, INCLUDING REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.
- 16. WARRANTY**
- 16.1. WARRANT ALL WORK AND MATERIALS INSTALLED UNDER THIS CONTRACT, AGAINST ALL DEFECTS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER ACCEPTANCE OF SAME BY OTHERS.

17. FASTENINGS AND SUPPORTS

- 17.1. PROVIDE FASTENINGS AND SUPPORTS SPECIFICALLY DESIGNED TO SUPPORT THE LOAD FOR ALL ELECTRICAL EQUIPMENT.
- 17.2. SPECIFIC PURPOSE HEAT TREATED, SPRING STEEL FASTENERS TO SUPPORT BOXES, CONDUIT AND CABLE FROM MAIN STRUCTURES, CHANNELS, METAL STUDS AND T-BAR CEILING. ACCEPTABLE MATERIAL: COOPER B-LINE; CADDY.
- 17.3. USE BAR TIE BOX HANGER FASTENED TO T-BAR GRID WITH SPRING STEEL FASTENERS TO SUPPORT FLUSH MOUNTED BOXES. ENSURE THAT T-BARS ARE ADEQUATELY SUPPORTED TO CARRY WEIGHT OF EQUIPMENT. PROVIDE ADDITIONAL EQUIPMENT SUPPORT WHERE REQUIRED.
- 17.4. BOXES INSTALLED IN STUD WALLS ARE TO BE SUPPORTED BETWEEN STUDS USING SPECIFIC PURPOSE BOX SUPPORTS. ACCEPTABLE MATERIAL: COOPER B-LINE, CADDY.
- 17.5. SECURE EQUIPMENT TO HOLLOW MASONRY WALLS WITH TOGGLE BOLTS AND TO POURED CONCRETE WITH EXPANDABLE INSERTS.
- 17.6. PROVIDE METAL BRACKETS, FRAMES, HANGERS, CLAMPS AND RELATED TYPES OF SUPPORT AS REQUIRED TO SUPPORT CONDUIT AND CABLE. DO NOT USE TY-WRAPS OR ZIP TIES.
- 17.7. ENSURE ADEQUATE SUPPORT FOR RACEWAYS AND CABLES DROPPED VERTICALLY. PROVIDE CHANNEL AS REQUIRED.
- 17.8. DO NOT USE SUPPORTS OR EQUIPMENT INSTALLED BY OTHER TRADES FOR CONDUIT OR CABLE SUPPORT UNLESS APPROVAL IS OBTAINED FROM THE ENGINEER.
- 17.9. USE COOPER B-LINE FLEX-RITE SERIES OR APPROVED EQUIV. FASTENERS TO SUPPORT CONDUIT AND CABLE FROM T-BAR HANGER WIRES.
- 17.10. DO NOT INSTALL CABLE, RACEWAYS AND BOXES DIRECTLY TO UNDERSIDE OF ROOF DECKING. SUPPORT CABLES, RACEWAY AND BOXES SO THAT THE NEAREST OUTSIDE SURFACE OF THE CABLE RACEWAY OR BOX IS NOT LESS THAN 40mm FROM BOTTOM OF ROOF DECKING.

18. CONDUIT AND FITTINGS

- 18.1. WHEN SHOWN, CONDUIT SIZES ARE TO BE AS INDICATED ON THE DRAWINGS AND ARE NOT TO BE REDUCED IN SIZE UNLESS APPROVAL IS OBTAINED FROM THE ENGINEER. OTHERWISE, SIZE CONDUIT TO CSA 22-1.21 REQUIREMENTS. CONDUIT INSTALLED IN FINISHED AREAS IS TO BE CONCEALED WHERE POSSIBLE. ALL CONDUIT IS TO BE INSTALLED PARALLEL OR PERPENDICULAR TO BUILDING LINES. CONDUIT IS TO BE INSTALLED TO CONSERVE HEADROOM IN SPACES THROUGH WHICH THEY PASS.
- 18.2. EMT COMPLETE WITH STEEL SET SCREW COUPLINGS AND CONNECTORS TO BE USED FOR ALL BRANCH CIRCUIT WORK UNLESS OTHERWISE INDICATED. INSTALL A SEPARATE BOND WIRE BEING IN ACCORDANCE WITH CEC REQUIREMENTS IN ALL CONDUITS.
 - 18.2.1. AC90 IS AN ACCEPTABLE ALTERNATE TO CONDUIT FOR INTERIOR BRANCH CIRCUITS CONCEALED IN STUD WALL CONSTRUCTION.
- 18.3. WHERE CONDUIT PENETRATES THROUGH FIRE RATED STRUCTURES, FIREPROOFING AND SMOKE SEALING IS TO BE PACKED AROUND CONDUIT TO MAINTAIN FIRE RATING OF STRUCTURE WHICH IT PASSES THROUGH. ACCEPTABLE MATERIAL: 3M BRAND FIRE BARRIER CAULK CP 25 OR 303 PUTTY COMPOUND OR APPROVED EQUIV. PROVIDE FIRE COLLARS IN ADDITION TO FIRE CAULKING WHERE REQUIRED.
- 18.4. MINIMUM CONDUIT SIZE IS TO BE 21mm UNLESS OTHERWISE INDICATED.
- 18.5. ARMoured CABLE TO BE USED FOR DROPS TO LIGHT FIXTURES, MAXIMUM 5' LONG. INSTALL ANTI-SHORTS, STRAPS AND CONNECTORS AS REQUIRED.
- 18.6. FOR EXTERIOR AND WET LOCATIONS USE LIQUID TIGHT FLEX OR TECK CABLE WITH PROPER FITTINGS.
- 18.7. CONDUIT AND ARMoured CABLES ARE TO BE SUPPORTED INDEPENDENTLY OF OTHER EQUIPMENT USING ONE-HOLE STEEL STRAPS FOR UNDER 53mm, TWO-HOLE STEEL STRAPS FOR 53mm AND LARGER, AND BEAM CLAMPS, AND SPRING STEEL FASTENERS IN ACCORDANCE WITH THE CEC.
- 18.8. PROVIDE LOW VOC MASTIC COMPOUND WEATHERPROOF SEAL WHERE CONDUITS PASS THROUGH EXTERIOR WALLS OR STRUCTURES.

19. OUTLET, PULL AND JUNCTION BOXES

- 19.1. BOXES TO BE CODE GAUGE STEEL, SIZED TO MEET CSA 22-1.21 REQUIREMENTS AND SUITABLE FOR FLUSH MOUNTING FOR THE TYPE OF CONSTRUCTION; USE CAST FS OR FD BOXES FOR SURFACE MOUNTED OUTLETS IN SERVICE ROOM.
- 19.2. PROVIDE PULL BOXES ON CONDUIT RUNS AT A MAXIMUM OF 100' INTERVALS.
- 19.3. BOXES TO BE SUPPORTED INDEPENDENT OF CONDUIT RUNS.
- 19.4. EXTERIOR BOXES TO BE WATERTIGHT.

20. INSTALLATION OF ELECTRICAL

- 20.1. PLANS SHOW APPROXIMATE LOCATION OF ELECTRICAL WORK. EXACT LOCATION TO BE COORDINATED ON THE SITE WITH OTHER TRADES, ARCHITECTURAL PLANS, EQUIPMENT, ETC. LOCATIONS MAY VARY BY 10' WITHOUT CREDIT OR EXTRA. INACCURATELY LOCATED ELECTRICAL TO BE RE-ADJUSTED OR RELOCATED AT THE CONTRACTOR'S EXPENSE.
- 20.2. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, LOCATE ELECTRICAL EQUIPMENT AT THE FOLLOWING MOUNTING HEIGHTS TAKEN FROM EQUIPMENT CENTERLINE TO FINISHED FLOOR.
 - 20.2.1. RECEPTACLES, TELEPHONE AND DATA OUTLETS: 450mm IN GENERAL OR 150mm ABOVE RADIANT HEATERS OR 813mm AFF AT TEACHER'S STATION.
 - 20.2.2. LIGHT SWITCHES: 1215mm
 - 20.2.3. FIRE ALARM PULL STATIONS: 1150mm
 - 20.2.4. FIRE ALARM VISUAL AND/OR AUDIBLE SIGNAL DEVICES: 2286mm
 - 20.2.5. WALL MOUNTED EXIT OR EMERGENCY LIGHTS: 2286mm
 - 20.2.6. MOTION DETECTORS: 2438mm
- 20.3. DO NOT INSTALL OUTLETS BACK-TO-BACK IN WALLS. ALLOW 150mm MINIMUM HORIZONTAL CLEARANCE BETWEEN BOXES. WHEN BOXES ARE INSTALLED WITHIN THE SAME STUD CAVITY, INSTALL VAPOUR BARRIER BOXES AND SEAL AROUND BOXES WITH INSULATING EXPANSION FOAM. ACCEPTABLE MATERIAL: MONO CCMC No. 09421-R BY TREMCO.

21. WIRE AND CABLE

- 21.1. ALL WIRES TO BE COPPER RW90, RATED 600V, INSTALLED IN CONDUIT UNLESS OTHERWISE INDICATED. AC90 IS AN ACCEPTABLE ALTERNATE TO CONDUIT FOR INTERIOR BRANCH CIRCUITS CONCEALED IN STUD WALL CONSTRUCTION.
 - 21.2. ALL WIRING TO BE SIZED TO MEET ALL REQUIREMENTS OF THE CSA 22-1.21. MINIMUM SIZE FOR BRANCH CIRCUIT WIRING TO BE #12 AND #14 FOR CONTROL. WIRES UNLESS INDICATED OTHERWISE.
 - 21.3. ALL WIRES TO BE NEW AND DELIVERED TO THE SITE OF THE PROJECT IN THEIR ORIGINAL PACKING. WIRES #8 AND LARGER TO BE STRANDED, #10 AND SMALLER TO BE SOLID. WIRES TO BE FACTORY IDENTIFIED SHOWING SIZE, VOLTAGE RATING AND INSULATION TYPE.
 - 21.4. NEUTRAL CONDUCTOR TO BE WHITE THROUGHOUT, THREE PHASE WIRES TO BE: ONE RED, ONE BLACK AND ONE BLUE.
 - 21.5. WHERE COMMON NEUTRALS ARE USED ENSURE THAT CIRCUITS ARE FROM DIFFERENT PHASES.
 - 21.6. CABLES ARE TO BE INSTALLED WITHOUT SPLICES AND BE RUN CONTINUOUS FROM SOURCE TO LOAD.
 - 21.7. USE GEL FILLED TWIST-ON CONNECTORS IN DAMP OR WET LOCATIONS. ACCEPTABLE MATERIAL: KING INNOVATION DRY CONN.
- 22. CONNECTORS FOR WIRES**
- 22.1. USE TWIST-ON PRESSURE TYPE WIRE CONNECTORS FOR #8 TO #14 SIZED WIRE CONNECTIONS. ACCEPTABLE MATERIAL: MARETTE
 - 22.2. USE CRIMP STYLE ALLOY WIRE CONNECTORS, NYLON INSULATED FOR #16 AND SMALLER WIRES AND FOR CONNECTING SOLID TO STRANDED CONDUCTORS.
 - 22.3. COMPRESSION TYPE CONNECTORS TO BE USED FOR CONNECTING #6 CONDUCTORS AND LARGER.

23. GROUNDING AND BONDING

- 23.1. ENTIRE ELECTRICAL SYSTEM TO BE GROUNDED AND BONDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CEC AND LOCAL AUTHORITIES.
 - 23.2. ALL CONDUITS TO HAVE SEPARATE INSULATED BONDING CONDUCTOR.
 - 23.3. ALL INSULATED GROUNDING AND BONDING WIRES TO HAVE GREEN JACKET.
- 24. POWER DISTRIBUTION SYSTEM**
- 24.1. MANUAL MOTOR SWITCHES
 - 24.1.1. MANUAL MOTOR SWITCHES WITH 1.2 OR 3 POLES AS REQUIRED, MOUNTED IN CSA TYPE 1 ENCLOSURE WITH QUICK-MAKE QUICK-BREAK SHIELDED TOGGLE SWITCH WITH PROVISIONS TO BE PADLOCKED IN ON OR OFF POSITIONS.
 - 24.1.2. RATED FOR 30A AT 250V
 - 24.1.3. ACCEPTABLE MATERIAL: SQUARE D, SIEMENS, EATON.
 - 24.2. CIRCUIT BREAKERS
 - 24.2.1. CIRCUIT BREAKERS TO HAVE THERMAL MAGNETIC TRIP PROTECTION WITH BIMETALLIC ELEMENTS FOR DELAY OVERLOAD PROTECTION. SINGLE POLE BREAKERS TO HAVE INTERNAL COMMON TRIP. BREAKERS ARE TO BE BOLT-IN AND INTERCHANGEABLE. 10 KAIC AT 200V. PROVIDE ALL MOUNTING HARDWARE AS REQUIRED FOR INSTALLING NEW BREAKERS IN EXISTING PANELBOARD 'A'.
 - 24.2.2. CIRCUIT BREAKERS TO BE BY THE SAME MANUFACTURER AS THE PANELBOARD/DISTRIBUTION BOARD IN WHICH THEY ARE BEING INSTALLED. BREAKERS MUST BE NEW, COMPLETE WITH ORIGINAL FACTORY WARRANTY AND SUPPLIED FROM AN AUTHORIZED MANUFACTURER'S DISTRIBUTOR.

25. WIRING DEVICES

- 25.1. DUPLEX RECEPTACLES TO BE WHITE, STANDARD, COMMERCIAL SPECIFICATION GRADE, TAMPER RESISTANT 120V, 15A CSA-5-15R OR 20A CSA-5-20R AS INDICATED ON THE DRAWINGS WITH STAINLESS STEEL FACEPLATE. ACCEPTABLE MATERIAL: (CSA 5-15R) HUBBELL #HBL526ZWR, COOPER, LEVITON, PASS & SEYMOUR, (CSA 5-20R) HUBBELL #HBL536ZWR, COOPER, LEVITON, PASS & SEYMOUR.
 - 25.2. SWITCHES, SINGLE POLE OR 3-WAY AS INDICATED TO BE WHITE, TOGGLE, COMMERCIAL SPECIFICATION GRADE RATED 15A, 120V, CW STAINLESS STEEL FACEPLATE. ACCEPTABLE MATERIAL: COOPER, HUBBELL; LEVITON, PASS AND SEYMOUR.
 - 25.3. DIMMING SWITCHES TO BE CAPABLE OF DIMMING, LINE VOLTAGE CONTROL, DIMMERS TO BE CW 0-10 VDC CONTROL, 120V, 8A LINE VOLTAGE RATING ON/OFF AND ROCKER STYLE OR PUSH BUTTON SWITCH. MANUAL RE-SET SLIDE CONTROL, FOR ADJUSTMENT FOR MAXIMUM INTENSITY TO OFF AND MINIMUM, THRESHOLD ADJUSTMENT TO ELIMINATE LAMP FLICKER. FINISH TO BE WHITE GLOSS; ACCEPTABLE MATERIAL: LUTRON, COOPER, LEVITON, SENSOR SWITCH.
 - 25.4. COVERPLATES IN FINISHED AREAS TO BE STAINLESS STEEL TO MATCH EXISTING. NUMBER OF GANG AS REQUIRED. SURFACE OUTLETS TO BE STAINLESS STEEL SUITABLE FOR CAST BOX MOUNTING.
 - 25.5. PROVIDE CIRCUIT IDENTIFICATION AT ALL WIRING DEVICES USING PRE-PRINTED THERMAL NON-SMEAR LABELS, CLEAR VINYL WITH BLOCK LETTERING, ATTACHED TO COVERPLATE, WHITE VINYL LABELS WILL NOT BE ACCEPTED.
- 26. LUMINAIRES**
- 26.1. PROVIDE LUMINAIRES CW DRIVERS AND LAMPS AS INDICATED IN THE LUMINAIRE SCHEDULE ON DRAWING E001, LUMINAIRES TO BE CW ALL NECESSARY HANGERS, LOUVERS, DIFFUSERS, SUPPORTS, ETC.
 - 26.2. CO-ORDINATE THE MOUNTING AND LOCATION OF LUMINAIRES WITH OTHER TRADES TO AVOID CONFLICTS.
 - 26.3. JUNCTION BOXES IN SUSPENDED CEILING SPACE ARE TO BE ACCESSIBLE THROUGH THE FIXTURES OR BY REMOVABLE PANELS.
 - 26.4. ALIGN LUMINAIRES IN CONTINUOUS ROWS TO FORM STRAIGHT UNINTERRUPTED LINE. ALIGN LUMINAIRES MOUNTED INDIVIDUALLY PARALLEL OR PERPENDICULAR TO BUILDING LINES.
- 27. EXIT SIGNS AND EMERGENCY LIGHTS**
- 27.1. EMERGENCY BATTERY TO BE RATED 36V FOR 30 MIN, 120V INPUT, 12V DC OUTPUT, WITH TWO 4W MR16 LED LAMPS, AUTO-TEST, WHITE HOUSING. ACCEPTABLE MATERIAL: AMLITE BEST1236-2MBA/MLJWH/TAD, LUMACELL #RC123962LDYAT, READY-LITE #LD1236AD2LD7, STANPRO #SLA1236-2W/LJWH/T. BATTERY TO HAVE A TEN YEAR UNCONDITIONAL PARTS AND LABOUR GUARANTEE.
 - 27.2. INSTALL EXIT AND EMERGENCY LIGHTING AS INDICATED AND MAKE NORMAL AND EMERGENCY POWER CONNECTIONS. TEST EMERGENCY POWER FOR 30 MINUTES.
- 28. COMMUNICATIONS SYSTEM**
- 28.1. ALL NEW WORK AND MODIFICATIONS TO THE TELEPHONE AND DATA NETWORK TO BE COMPLETED IN ACCORDANCE WITH THE MOST RECENT ITSS STANDARDS FOR THE PROVINCE OF PEI.
 - 28.2. NEW DATA OUTLETS TO BE FED FROM SPARE DATA PORTS IN EXISTING PATCH PANELS IN EXISTING DATA RACK IN LAN ROOM.
 - 28.3. DATA CABLES TO BE CAT.6 FT.4, PURPLE COLOUR. ACCEPTABLE MATERIAL: BELDEN TO ITSS REQUIREMENTS.
 - 28.4. DATA OUTLETS TO BE CAT.6, MODULAR PURPLE COLOUR. ACCEPTABLE MATERIAL: BELDEN TO ITSS REQUIREMENTS TELEPHONE AND DATA MODULES TO BE MOUNTED IN A COMMON 4"x4" OUTLET BOX WITH PLASTER RING AND FLUSH SINGLE GANG WHITE NYLON FACEPLATE WITH A 21mm EMT CONDUIT UP TO ACCESSIBLE CEILING SPACE.
 - 28.5. TERMINATE CABLES AT PATCH PANELS AND OUTLETS USING TS68a (IBDN) PIN ASSIGNMENT.
 - 28.6. SUPPORT CABLES ABOVE SUSPENDED CEILINGS USING J-HOOKS ATTACHED TO BUILDING STRUCTURE AT 4" OC SPACING. DO NOT USE TY-WRAPS TO SUPPORT CABLES. ACCEPTABLE MATERIAL: CADDY CABLE CAT CLIP.
 - 28.7. DRESS CABLES WITH VELCRO CABLE TIES. DO NOT USE TY-WRAPS TO SUPPORT CABLES. ACCEPTABLE MATERIAL: PANOUT.
 - 28.8. PROVIDE EMT CONDUIT SLEEVES ABOVE INACCESSIBLE CEILINGS, SIZED TO SUIT AT 40% FILL PLUS 50% SPARE CAPACITY.
 - 28.9. DATA PATCH CORDS TO BE CAT 6 WITH RJ-45 PLUGS ON BOTH ENDS, PURPLE COLOUR, 4' LONG. ACCEPTABLE MATERIAL: BELDEN TO ITSS REQUIREMENTS.
 - 28.10. CONTRACTOR TO SUPPLY PATCH CORDS AT BOTH THE MAIN DATA RACK AND IN THE INDIVIDUAL ROOMS. NUMBER OF PATCH CORDS REQUIRED SHALL BE DETERMINED BY THE NUMBER OF DATA OUTLETS SHOWN ON THE DRAWINGS. PATCH CORD LENGTH REQUIRED IN THESE AMOUNTS:
 - 28.10.1. 4 FEET, 30% OF TOTAL COUNT
 - 28.10.2. 7 FEET, 50% OF TOTAL COUNT

28.10.3. 10 FEET, 20% OF TOTAL COUNT

- 28.11. INSTALLATION TO CONFORM TO CAN/CSA-T568 AND BE FULLY CERTIFIED FOR CAT-5E (TELEPHONE) AND CAT.6 (DATA). ALL MATERIAL TO BE SOURCED FROM A CERTIFIED MANUFACTURER TO ASSURE QUALITY CONTROL. THE SYSTEM IS TO HAVE AN "END-TO-END 20 YEAR" WARRANTY AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP. THE CERTIFIED SYSTEM VENDOR WILL REPAIR OR REPLACE ANY FAILED COMPONENT, INCLUDING LABOUR, AT NO COST TO THE OWNER. PROVIDE SYSTEM TEST RESULTS, CERTIFICATES AND WARRANTY IN MAINTENANCE MANUALS.

29. FIRE ALARM SYSTEM

- 29.1. THE FIRE ALARM EQUIPMENT AND DEVICES TO BE INTELLIGENT AND ADDRESSABLE, CSA APPROVED, CONFORM TO CANULC STANDARDS, BE SUPPLIED BY A SINGLE MANUFACTURER, AND WIRED T EXISTING INITIATION AND NOTIFICATION LOOPS OF EXISTING SIEMENS #FS-250C FIRE ALARM CONTROL PANEL LOCATED I VESTIBULE 100.
- 29.2. SPOT TYPE FIRE DETECTORS: MULTIDETECTOR TYPE C/W PHOTO ELECTRIC AND FIXED TYPE HEAT SENSOR.
- 29.3. SIGNALING APPLIANCES TO BE COMPLETE WITH BACK BOX FOR FLUSH MOUNTING, HORN/STROBE COMBINATION TO HAVE 9168 AND 15CD OUTPUT MINIMUM.
- 29.4. REMOTE RELAYS TO INTERFACE WITH ACCESS CONTROL, SYSTEM PANELS FOR AUTOMATIC DOOR RELEASE UPON FIRE ALARM.
- 29.5. INSTALL FIRE ALARM SYSTEM AS INDICATED AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALL WIRING AS PER MANUFACTURER'S RECOMMENDATIONS. ALL WIRING TO BE IN EMT CONDUIT. ADDRESSABLE LOOPS AND NOTIFICATION CIRCUITS TO BE INSTALLED IN SEPARATE CONDUITS. COORDINATE WITH OWNER FOR DEVICE LOCATION DESCRIPTION.
- 29.6. FIRE ALARM SYSTEM TO BE INSTALLED IN ACCORDANCE WITH CANULC-S624. MODIFIED FIRE ALARM SYSTEM TO BE INSPECTED, TESTED AND VERIFIED IN ACCORDANCE WITH CANULC-S536 AND S537.
- 29.7. PROVIDE MANUFACTURER'S VERIFICATION REPORT OF THE MODIFIED FIRE ALARM SYSTEM TO CONSULTANT FOR RECORD.

30. SOUND REINFORCING SYSTEM - CLASSROOM

- 30.1. PROVIDE ALL MATERIAL AND LABOR REQUIRED TO PROVIDE A COMPLETE AND FULLY OPERATIONAL CLASSROOM SOUND SYSTEM IN CLASSROOMS AS INDICATED ON THE DRAWINGS. THIS WORK IS TO INCLUDE, BUT IS NOT LIMITED TO, THE FURNISHING, INSTALLATION, ASSEMBLY, SETUP AND TESTING OF THE SPEECH REINFORCEMENT SYSTEM INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN FOR A FULLY OPERATIONAL SYSTEM.
- 30.2. ALL MATERIALS SPECIFIED HEREIN TO BE NEW AND BE THE MANUFACTURER'S LATEST DESIGN, PERMANENTLY LABELED WITH THE MANUFACTURER'S NAME, MODEL NUMBER AND SERIAL NUMBER. ALL ACTIVE CIRCUITRY TO BE SOLID STATE AND BE RATED FOR CONTINUOUS USE.
- 30.3. ALL AUXILIARY AND INCIDENTAL EQUIPMENT NECESSARY FOR THE OPERATION AND PROTECTION OF THE SYSTEMS SPECIFIED IN THIS SECTION IS TO BE FURNISHED AND INSTALLED AS IF SPECIFIED IN FULL HEREIN.
 - 30.4. CLASSROOM SOUND SYSTEM.
 - 30.4.1. PROVIDE AND INSTALL A SOUND REINFORCING SYSTEM TO SERVE EACH CLASSROOM AS INDICATED ON THE DRAWINGS. A WIRELESS TEACHER MICROPHONE IS TO PROVIDE AMPLIFICATION OF THE TEACHER'S VOICE. A WIRELESS HAND-HELD, STUDENT PASS-AROUND MICROPHONE IS TO PROVIDE AMPLIFICATION OF THE STUDENT'S VOICES.
 - 30.4.2. SOUND FIELD SYSTEM IS TO INCLUDE ALL COMPONENTS AND ACCESSORIES NEEDED TO PROVIDE AMPLIFICATION OF THE TEACHER'S VOICE IN ALL CLASSROOMS.
 - 30.4.3. TYPICAL CLASSROOM IS TO CONTAIN TWO (2) WALL MOUNTED SPEAKERS. SPEAKER QUANTITIES TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED SPEAKER QUANTITY FOR CLASSROOM SHAPE AND SIZE AND SPEAKER LOCATIONS SHALL PROVIDE UNIFORM SOUND DISTRIBUTION REGARDLESS OF ARRANGEMENT OF TEACHER AND STUDENTS.
 - 30.4.4. LOCATE THE SYSTEM RECEIVER AS INDICATED ON THE DRAWINGS.
 - 30.4.4.1. DESCRIPTION:
 - FOR EACH LOCATION INDICATED, THE CONTRACTOR IS TO PROVIDE AND INSTALL A COMPLETE WIRELESS SOUND FIELD SYSTEM. THE SYSTEM IS TO INCLUDE, BUT NOT BE LIMITED TO (PER SYSTEM).
 - 30.4.4.1.2. ONE PENDANT MOUNT TEACHER TRANSMITTER/MICROPHONE.
 - 30.4.4.1.3. ONE 2-CHANNEL INFRA RED RECEIVER/AMPLIFIER.
 - 30.4.4.1.4. ONE 2-CHANNEL HANDHELD INFRA RED TRANSMITTER/MICROPHONE.
 - 30.4.4.1.5. TWO (2) WALL-MOUNTED SPEAKERS OR MORE AS INDICATED ON PLAN.
 - 30.4.4.1.6. AUXILIARY INPUT BOX WITH FOUR INPUTS FOR INTERFACE WITH TV OR PROJECTOR.
 - 30.4.4.1.7. ONE (1) PENDANT AND PASS-AROUND MICROPHONE CHARGER.
 - 30.4.4.2. DEVIATIONS FROM THE DRAWINGS, WITH THE EXCEPTION OF MINOR CHANGES IN ROUTING AND OTHER SUCH INCIDENTAL CHANGES THAT DO NOT AFFECT THE FUNCTIONING OR SERVICEABILITY OF THE SYSTEMS, SHALL NOT BE MADE WITHOUT THE WRITTEN APPROVAL OF THE CONSULTANT.
 - 30.4.4.3. MANUFACTURERS:
 - 30.4.4.3.1. FRONT ROW
 - 30.4.4.3.1.1. IR SPEAKER #IR-820SP
 - 30.4.4.3.1.2. WIRELESS MICROPHONE #IR-300M C/W BATTERY AND CHARGER
 - 30.4.4.3.1.3. WIRELESS MICROPHONE (STUDENT) #IR-200M C/W BATTERY AND CHARGER
 - 30.4.4.9. INSTALL ALL CONDUIT, WIRING, ETC. IN ACCORDANCE WITH MANUFACTURER'S
 - 30.4.4.10. INSTALLATION INSTRUCTIONS FOR A COMPLETE FUNCTIONAL SYSTEM.
 - 30.4.4.11. THE MANUFACTURER'S REPRESENTATIVE IS RESPONSIBLE FOR THE INSTALLATION OF ALL EQUIPMENT SPECIFIED HEREIN FOR A FULLY FUNCTIONAL SYSTEM. MANUFACTURER TO REVIEW WORK INVOLVED IN THE HANDLING, INSTALLATION, PROTECTION AND CLEANING OF ITS PRODUCTS, AND SUBMIT WRITTEN REPORTS, IN ACCEPTABLE FORMAT, TO VERIFY COMPLIANCE OF WORK WITH CONTRACT.
 - 30.4.4.12. PROVIDE FOR MANUFACTURER'S CERTIFIED TECHNICIAN TO VISIT, PROGRAM, COMMISSION AND VERIFY THAT THE SOUND REINFORCING SYSTEM IS INSTALLED AS INDICATED AND OPERATES AS INTENDED AND THAT THERE ARE NO PROBLEMS.

NOTES

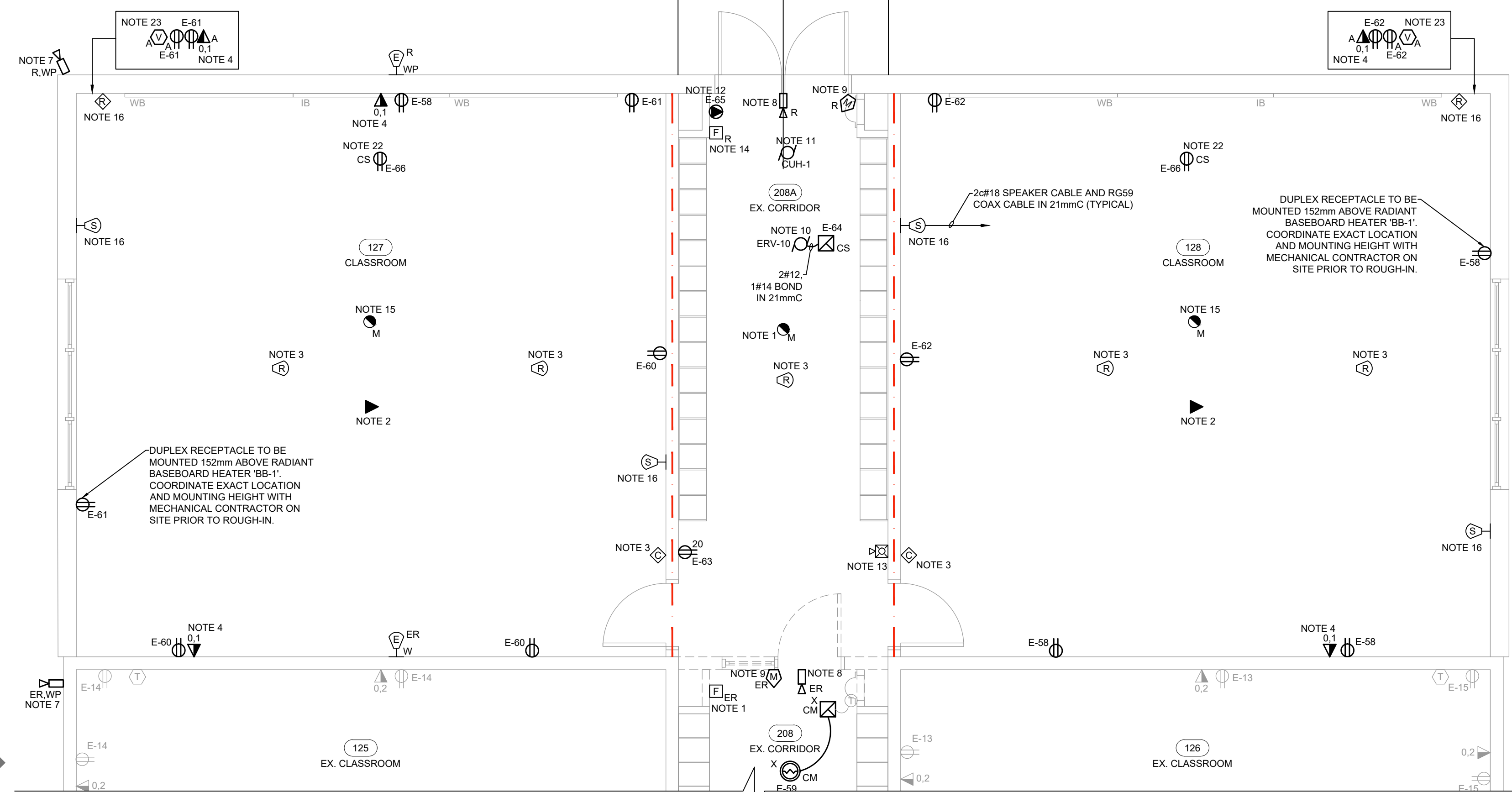
THE PLANS FOR THE WORK ACCOMPANYING THESE SPECIFICATIONS ARE MADE AS ACCURATELY AS POSSIBLE, BUT ABSOLUTE ACCURACY OF DIMENSIONS CANNOT BE GUARANTEED. THEY ARE INTENDED TO SUPPLEMENT AND SIMPLIFY THE GENERAL CONTRACT DRAWINGS. NO CLAIMS FOR EXTRA PAYMENT ON ACCOUNT OF THE DIFFERENCE OF ACTUAL AND ESTIMATED DIMENSIONS WILL BE ALLOWED.

THE PLANS LISTED BELOW FORM AN INTEGRAL PART OF THIS SPECIFICATION:

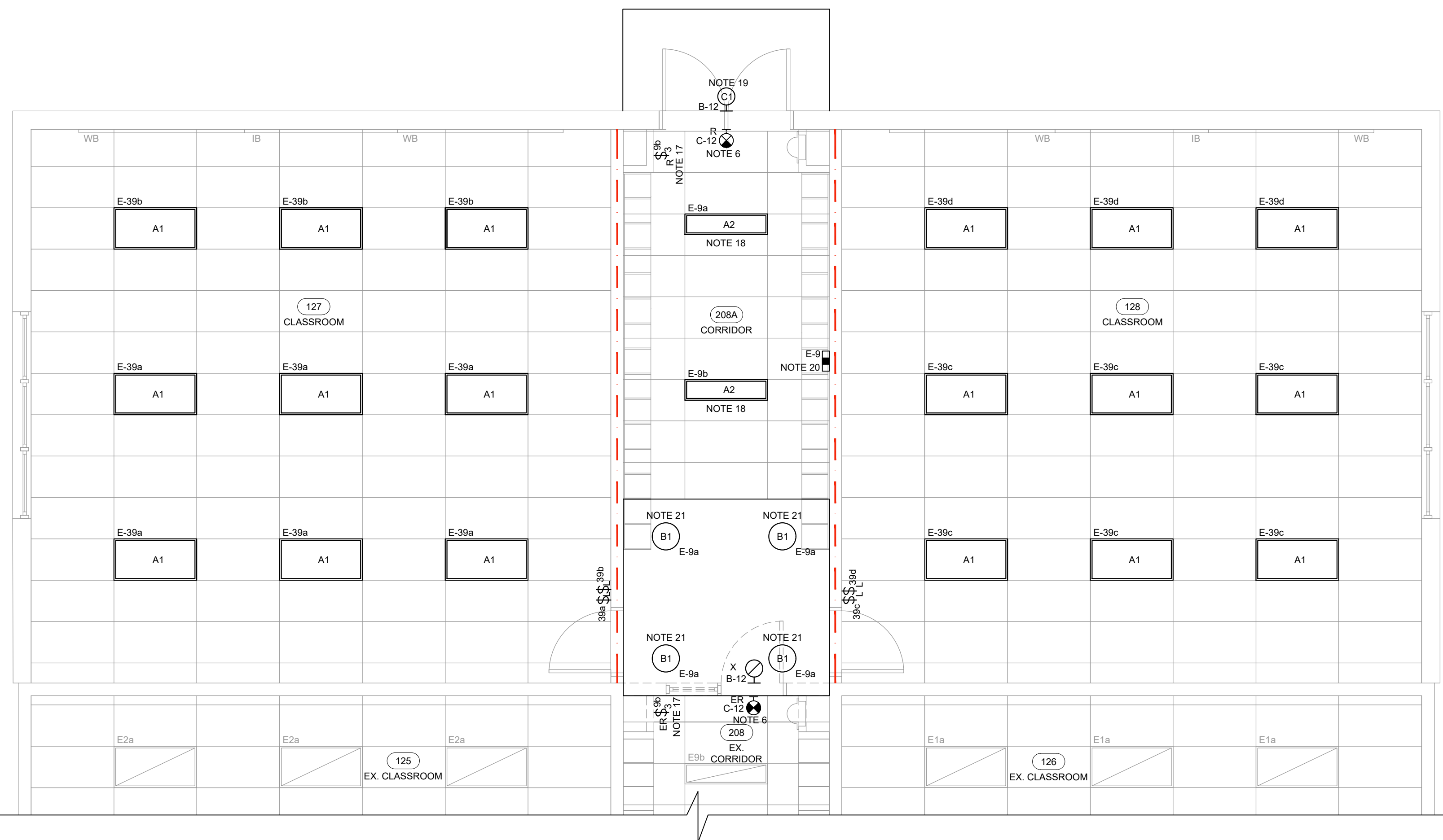
E-001 - ELECTRICAL SPECIFICATION, LUMINAIRE SCHEDULE & LEGEND

E-100 - PARTIAL FLOOR PLAN - POWER, COMMUNICATIONS, SYSTEMS, LIGHTING & NOTES

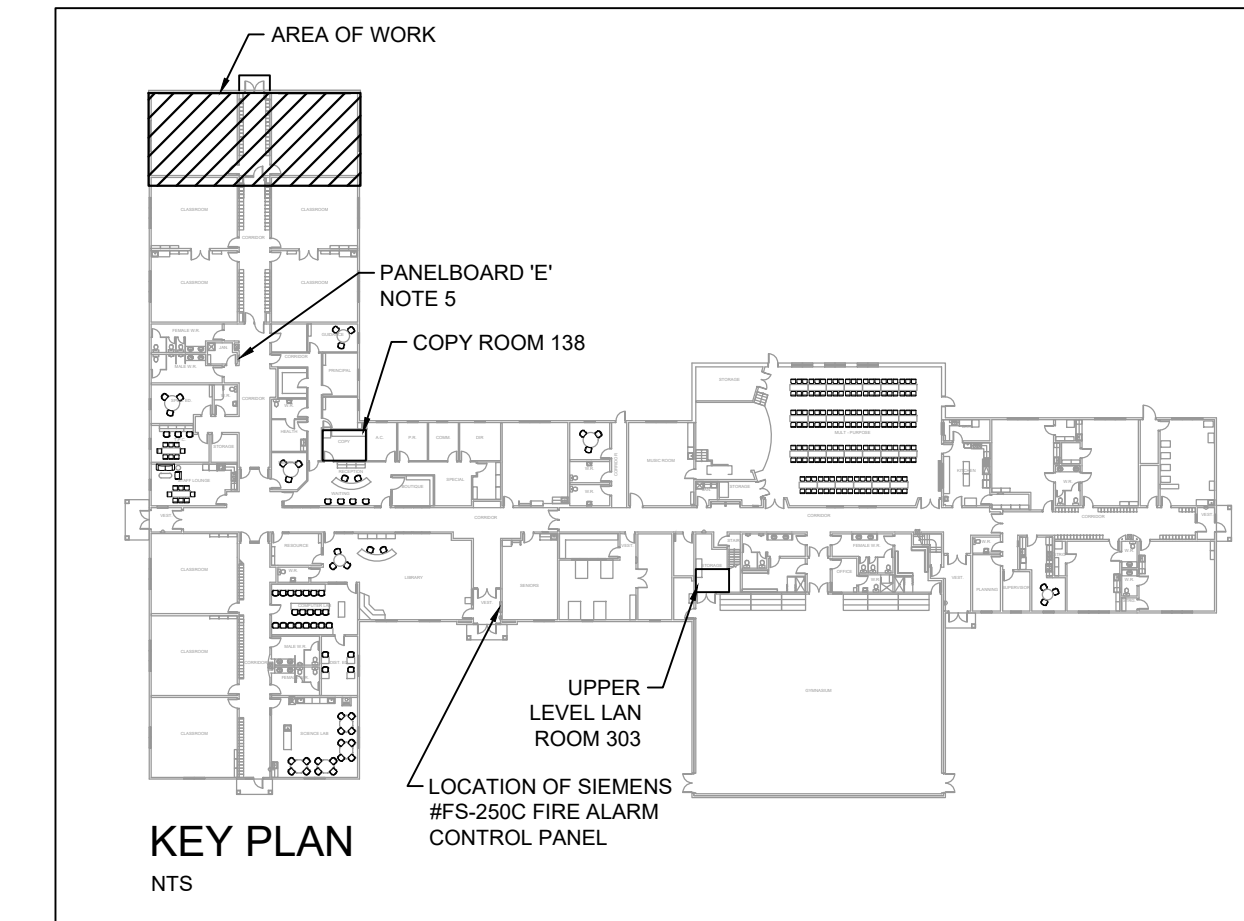
GENERAL LEGEND	
---	INDICATES FIRE RATED WALL. REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFIC LOCATIONS AND CONSTRUCTION INFORMATION
---	LIGHT LINEWEIGHT INDICATES EXISTING TO REMAIN
---	HEAVY LINEWEIGHT INDICATES NEW WORK
E-30a	INDICATES CIRCUIT #39 IN PANEL 'E' a- INDICATES LUMINAIRE SWITCHING FOR LIGHTING CIRCUITS
GENERAL SUB SCRIPTS	
A -	INDICATES 813mm ABOVE FINISHED FLOOR
CS -	MOUNTED IN CEILING SPACE
WP -	RECEPTACLE GFCl C/W WEATHER PROOF WHILE IN-USE COVER
ER -	EXISTING EQUIPMENT TO BE RELOCATED
R -	RELOCATED EQUIPMENT
X -	EQUIPMENT TO BE REMOVED
(●)	DIRECT CONNECTION
(○)	SINGLE PHASE MOTOR
(⊕)	DUPLEX RECEPTACLE
RECEPTACLE SUB SCRIPTS	
20 -	CSA TYPE 5-20R
(E)	EXISTING ELECTRICAL PANEL, SURFACE MOUNTED E' INDICATES PANEL DESIGNATION
(□)	EXISTING LUMINAIRE, CEILING MOUNTED
(#)	LUMINAIRE, CEILING MOUNTED # - INDICATES TYPE IN LUMINAIRE SCHEDULE
(#)	LUMINAIRE, CEILING MOUNTED # - INDICATES TYPE IN LUMINAIRE SCHEDULE
(#)	LUMINAIRE, CEILING MOUNTED # - INDICATES TYPE IN LUMINAIRE SCHEDULE
(#)	LUMINAIRE, WALL MOUNTED # - INDICATES TYPE IN LUMINAIRE SCHEDULE
(H)	EXIT SIGN; WALL MOUNTED SHADING - INDICATES NUMBER AND LOCATION OF FACES ARROW - INDICATES DIRECTION OF EXIT
(D)	DUAL HEAD EMERGENCY LIGHTING UNIT
(\$)	SINGLE POLE SWITCH # - INDICATES SUBSCRIPT
SWITCH SUB SCRIPTS	
3 -	THREE-WAY SWITCH
L -	0-10VDC LINE VOLTAGE DIMMER SWITCH
a -	LUMINAIRE SWITCHING
(F)	FIRE ALARM MANUAL PULL STATION
(●)	FIRE ALARM DETECTOR
DETECTOR SUB SCRIPTS	
M -	MULTISENSOR SMOKE DETECTOR
(H)	FIRE ALARM COMBINATION HORN STROBE
(M)	INTRUSION ALARM MOTION DETECTOR
(D)	PUBLIC ADDRESS SYSTEM COMBINATION CALL-IN SWITCH & SPEAKER
(E)	EXTERIOR SPEAKER, WALL MOUNTED
(R)	PUBLIC ADDRESS SYSTEM RECESS MOUNTED CEILING SPEAKER
(S)	SPEECH REINFORCEMENT SYSTEM SURFACE MOUNTED WALL SPEAKER
(D)	SPEECH REINFORCEMENT RECEIVER
(▶)	DATA OUTLET MOUNTED IN ACCESSIBLE CEILING SPACE ADJACENT TO WIRELESS ROUTER. WIRELESS ROUTER SUPPLIED AND INSTALLED BY OWNER.
1,▶	DATA AND TELEPHONE OUT



1 PARTIAL FLOOR PLAN - POWER, COMMUNICATIONS & SYSTEMS
E100 1:50



2 PARTIAL FLOOR PLAN - LIGHTING
E100 1:50

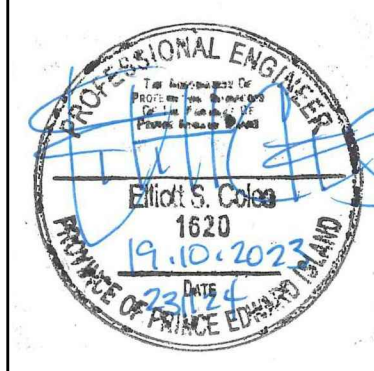


- GENERAL NOTES:**
- CONTRACTOR TO PROVIDE AND COORDINATE FOR ALL CUTTING, PATCHING AND PAINTING AS REQUIRED TO FACILITATE ELECTRICAL RENOVATIONS.
 - ALL NEW CSA 5-15R AND 5-20R RECEPTACLES ARE TO BE TAMPER RESISTANT EXCEPT WHERE THEY ARE IN ACCESSIBLE OR MORE THAN 1830mm AFF IN ACCORDANCE WITH CSA 22.1-21 ARTICLE 26-706.
 - EXISTING ELECTRICAL EQUIPMENT, CONDUCTORS AND CIRCUIT BREAKERS MAY BE REUSED WHENEVER POSSIBLE AT THE CONTRACTOR'S DISCRETION IF DEEMED SUITABLE FOR THE INTENDED INSTALLATION AND IN ACCORDANCE WITH CSA 22.1-21; OTHERWISE PROVIDE NEW.
 - PRIOR TO COMMENCEMENT OF ANY ELECTRICAL WORK ASSOCIATED WITH THE NEW ADDITION, CONTRACTOR TO SCHEDULE AND COORDINATE WITH THE GENERAL CONTRACTOR AND OWNER FOR ANY TEMPORARY SHUTDOWN OR WORK REQUIRED AT THE EXISTING PANELBOARD 'E' TO ENSURE NO DISRUPTIONS TO THE DAILY OPERATION OF THE SCHOOL. CONTRACTOR TO ENSURE ALL PANELBOARDS BEING WORKED ON DURING CONSTRUCTION TO BE LOCKED AT ALL TIMES WHEN UNSUPERVISED.
 - GAUGE OF BRANCH CIRCUIT WIRING TO BE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3% IN ACCORDANCE WITH CSA 22.1-21 SECTION 8.
 - CONDUIT AND CABLING PENETRATING THROUGH FIRE RATED SEPARATIONS TO BE FIRE AND SMOKE SEALED BY GENERAL CONTRACTOR TO MAINTAIN FIRE RATING OF THE STRUCTURE.
 - EXPOSED ELECTRICAL CONDUIT BOXES AND SUPPORTS IN FINISHED AREAS ARE TO BE PAINTED THE COLOUR OF ADJACENT FINISHED SURFACE. COORDINATE EXACT COLOUR AND ASSOCIATED PAINTING WITH GENERAL CONTRACTOR ON SITE.
 - COORDINATE ALL COMMUNICATIONS WORK INCLUDING BUT NOT LIMITED TO LABELING AND TERMINATIONS WITH ITSS ON SITE. ALL COMMUNICATIONS WORK IS TO BE COMPLETED IN ACCORDANCE WITH PEI GOVERNMENT (ITSS) WIRING STANDARDS DATED FEBRUARY 2016.
 - CONTRACTOR TO PROVIDE FIRE ALARM VERIFICATION REPORT TO THE ENGINEER CERTIFYING THAT THE EXISTING MODIFIED FIRE ALARM SYSTEM HAS BEEN TESTED AND RE-VERIFIED IN ACCORDANCE WITH CANULC-S524 AND CANULC-S536.
 - EXISTING ELECTRICAL PANELBOARDS MODIFIED BY THE RENOVATIONS ARE TO BE PROVIDED WITH NEW TYPE WRITTEN CIRCUIT DIRECTORIES WITH UP TO DATE CIRCUIT DESIGNATIONS.

- NOTES:**
- TRACE OUT, DISCONNECT, REMOVE AND SAFELY STORE EXISTING FIRE ALARM MANUAL PULL STATION DURING RENOVATION UNTIL IT IS REINSTALLED. ASSOCIATED FIRE ALARM WIRING TO BE DISCONNECTED AND REMOVED BACK TO CLOSEST FIRE ALARM JUNCTION BOX LOCATED IN THE ACCESSIBLE CEILING SPACE OF CORRIDOR 208. PROVIDE A BLANK STAINLESS STEEL TO COVER EMPTY OUTLET BOX.
 - TWO (2) NEW WIRELESS ACCESS ROUTERS ARE TO BE SUPPLIED AND INSTALLED BY ITSS, AND WIRED BY THIS CONTRACTOR. CONNECT WITH TWO (2) CAT 6 CABLES C/W R45 MODULES ROUTED FREE AIR THROUGH NEW AND EXISTING J-HOOKS IN THE ACCESSIBLE CEILING SPACE AND LAN ROOM CABLE TRAY BACK TO EXISTING FLOOR MOUNTED DATA RACK LOCATED IN LAN ROOM 303. PROVIDE AN EXTRA 2m OF SLACK CABLING AT EACH END, NEATLY COILED. EXACT LOCATION OF WAP TO BE COORDINATED ON SITE WITH ITSS PRIOR TO ROUGH-IN.
 - CONNECT NEW PUBLIC ADDRESS SPEAKERS AND CALL-IN SWITCHES TO EXISTING ADJACENT PUBLIC ADDRESS LOOP WITH NEW WIRING TO MATCH EXISTING PUBLIC ADDRESS INSTALLATION BACK TO THE MAIN PA RACK LOCATED IN COPY ROOM 138. EXACT RECESS MOUNTED PUBLIC ADDRESS SPEAKER MANUFACTURER TO MATCH EXISTING. COORDINATE EXACT TAP-SETTINGS OF 70V SPEAKER ON SITE.
 - WIRE NEW COMMUNICATIONS OUTLET WITH ONE (1) CAT 6 COMMUNICATIONS CABLE IN 21mmC ROUTED FROM RECESS MOUNTED OUTLET BOX UPWARDS THROUGH INTERIOR OF GYPSUM WALL AND THEN STUBBED INTO THE ACCESSIBLE CEILING SPACE. COMMUNICATIONS CABLING TO THEN BE ROUTED FREE AIR ON NEW AND EXISTING COMMUNICATIONS J-HOOKS AND THROUGH EXISTING LAN ROOM CABLE TRAY BACK TO EXISTING SPARE DATA PORTS IN THE EXISTING FLOOR MOUNTED DATA RACK LOCATED IN LAN ROOM 303. PROVIDE AN EXTRA 2m OF SLACK CABLING NEATLY COILED AT EACH END. COORDINATE EXACT LOCATION AND POSITIONING OF CAMERA WITH DEPARTMENTAL REPRESENTATIVE ON SITE PRIOR TO INSTALLATION. SEAL ALL EXTERIOR WALL PENETRATIONS WITH LOW VOC MASTIC COMPOUND.
 - SUPPLY AND INSTALL EIGHT (8) NEW 15A/1P CIRCUIT BREAKERS IN POSITIONS 39, 58, 60, 61, 62, 64 AND 66 AND ONE (1) 20A/1P CIRCUIT BREAKER IN POSITION 63 OF EXISTING 250A MLO, 120/208V, THREE PHASE, FOUR WIRE SIEMENS #P2 SERIES PANELBOARD 'E' LOCATED IN CORRIDOR 208 FOR NEW RECEPTACLES, LIGHTING AND MECHANICAL LOADS IN THE NEW ADDITION.
 - TRACE OUT, DISCONNECT, REMOVE AND SAFELY STORE EXISTING LED "RUNNING MAN" STYLE EXIT SIGN. SPLICE AND EXTEND EXISTING BRANCH CIRCUIT WIRING TO PROVIDE FOR WIRING OF EXISTING EXIT SIGN RELOCATED TO ABOVE THE NEW EXTERIOR DOOR IN NEW CORRIDOR 208A.
 - TRACE OUT, DISCONNECT, REMOVE AND STORE EXISTING EXTERIOR P-E BASED EXTERIOR CCTV CAMERA. ALL ASSOCIATED STRUCTURED CABLING TO BE DISCONNECTED AND REMOVED BACK TO SOURCE. SAFELY STORE CAMERA DURING RENOVATION UNTIL IT IS REINSTALLED. SURFACE MOUNT RELOCATED CCTV CAMERA TO EXTERIOR SOFFIT AND INSTALL ONE (1) NEW YELLOW-JACKETED CAT 6 COMMUNICATIONS CABLE ROUTED IN 21mmC FROM THE CAMERA THROUGH THE ACCESSIBLE CORRIDOR CEILING SPACE TO THE MAIN CCTV RACK LOCATED IN COPY ROOM 138. PROVIDE AN EXTRA 2m OF SLACK CABLING NEATLY COILED AT EACH END. COORDINATE EXACT LOCATION AND POSITION OF CAMERA WITH DEPARTMENTAL REPRESENTATIVE ON SITE PRIOR TO INSTALLATION. SEAL ALL EXTERIOR WALL PENETRATIONS WITH LOW VOC MASTIC COMPOUND.
 - TRACE OUT, DISCONNECT, REMOVE AND STORE EXISTING INTERIOR CCTV CAMERA AND ALL ASSOCIATED STRUCTURED CABLING TO BE DISCONNECTED AND REMOVED BACK TO SOURCE. SAFELY STORE CAMERA DURING RENOVATION UNTIL IT IS REINSTALLED. SURFACE MOUNT RELOCATED CCTV CAMERA TO UNDERSIDE OF T-BAR CEILING AND INSTALL ONE (1) NEW YELLOW-JACKETED CAT 6 CABLE ROUTED IN 21mmC FROM INTERIOR CAMERA THROUGH THE ACCESSIBLE CORRIDOR CEILING SPACE TO THE MAIN CCTV RACK LOCATED IN COPY ROOM 138. PROVIDE AN EXTRA 2m OF SLACK CABLING NEATLY COILED AT EACH END. COORDINATE EXACT LOCATION AND POSITIONING OF CAMERA WITH DEPARTMENTAL REPRESENTATIVE ON SITE PRIOR TO INSTALLATION.
 - TRACE OUT, DISCONNECT, REMOVE AND SAFELY STORE EXISTING INTRUSION ALARM MOTION DETECTOR. RECONNECT RELOCATED MOTION DETECTOR TO EXISTING ADJACENT MOTION DETECTOR SECURITY LOOP WITH NEW WIRING AS NECESSARY TO MATCH EXISTING AND TO PROVIDE FOR THE RELOCATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CONTRACTOR TO PROVIDE A SIGNED REPORT TO THE ENGINEER CERTIFYING THAT THE MODIFIED SECURITY SYSTEM HAS BEEN INSTALLED AND VERIFIED.
 - CONNECT NEW 120V/1Ø, 13.8 MCA 'ERV-1' LOCATED IN THE ACCESSIBLE CEILING SPACE TO THE NEW 15A/1P CIRCUIT BREAKER LOCATED IN POSITION 64 OF PANELBOARD 'E' THROUGH A LOCAL MANUAL MOTOR STARTER WITH #12, 1#14 BOND IN 21mmC. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR ON SITE PRIOR TO ROUGH-IN.
 - TRACE OUT, DISCONNECT, SPLICE AND EXTEND EXISTING BRANCH CIRCUIT WIRING ASSOCIATED WITH EXISTING OBSOLETE CEILING MOUNTED CABINET UNIT HEATER TO LOCATION OF NEW CEILING MOUNTED CABINET UNIT HEATER. DISCONNECT AND REMOVE ALL ELECTRICAL EQUIPMENT ASSOCIATED WITH OBSOLETE CEILING MOUNTED CABINET UNIT HEATER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR ON SITE PRIOR TO ROUGH-IN.
 - CONNECT ELECTRONIC TRAP SEAL PRIMER FROM NEW DEDICATED CONTROLS CIRCUIT WITH #12, 1#14 BOND IN 21mmC. COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH IN.
 - CONNECT THE NEW FIRE ALARM COMBINATION HORN/STROBE TO CLOSEST AVAILABLE FIRE ALARM NOTIFICATION LOOP ROUTED BACK TO EXISTING SIEMENS #FS-250C SERIES FIRE ALARM CONTROL PANEL LOCATED IN THE SCHOOL'S MAIN VESTIBULE 100. EXACT LOCATION OF CLOSEST AVAILABLE FIRE ALARM NOTIFICATION LOOP TO BE DETERMINED ON SITE. ALL WIRING TO BE COMPLETED IN ACCORDANCE WITH THE MANUFACTURERS WIRING INSTRUCTIONS AND FIRE ALARM WORK TO BE COMPLETED TO CANULC-S524.
 - CONNECT THE EXISTING STORED, RELOCATED FIRE ALARM MANUAL PULL STATION TO CLOSEST AVAILABLE FIRE ALARM INITIATION LOOP ROUTED BACK TO EXISTING SIEMENS #FS-250C SERIES FIRE ALARM CONTROL PANEL LOCATED IN THE SCHOOL'S MAIN VESTIBULE 100. EXACT LOCATION OF CLOSEST AVAILABLE FIRE ALARM INITIATION LOOP TO BE DETERMINED ON SITE. ALL WIRING TO BE COMPLETED IN ACCORDANCE WITH THE MANUFACTURERS WIRING INSTRUCTIONS AND FIRE ALARM WORK TO BE COMPLETED TO CANULC-S524.
 - CONNECT THE NEW FIRE ALARM INITIATION DEVICES TO CLOSEST AVAILABLE FIRE ALARM INITIATION LOOP ROUTED BACK TO EXISTING SIEMENS #FS-250C SERIES FIRE ALARM CONTROL PANEL LOCATED IN THE SCHOOL'S MAIN VESTIBULE 100. EXACT LOCATION OF CLOSEST AVAILABLE FIRE ALARM INITIATION LOOP TO BE DETERMINED ON SITE. ALL WIRING TO BE COMPLETED IN ACCORDANCE WITH THE MANUFACTURERS WIRING INSTRUCTIONS AND FIRE ALARM WORK TO BE COMPLETED TO CANULC-S524.
 - NEW SPEECH REINFORCEMENT RECEIVER TO BE SHELF MOUNTED ADJACENT TO TEACHER'S STATION. CONTRACTOR TO RUN 2#18 SPEAKER CABLE AND RG59 COAX CABLE IN 21mmC FROM NEW SPEECH REINFORCEMENT SPEAKERS THROUGH ACCESSIBLE CEILING SPACE AND THEN DOWNWARDS THROUGH INTERIOR OF GYPSUM WALL CAVITY TO SPEECH REINFORCEMENT RECEIVER. SPEECH REINFORCEMENT SPEAKERS AND RECEIVER TO BE INSTALLED AND WIRED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION AND WIRING INSTRUCTIONS SELF TO BE PROVIDED BY OTHERS.
 - TRACE OUT, DISCONNECT, REMOVE AND STORE EXISTING THREE-WAY TOGGLE SWITCH. PROVIDE FOR WIRING OF THE RELOCATED THREE-WAY TOGGLE SWITCH TO EXISTING LIGHTING BRANCH CIRCUIT 'E-9b' AS REQUIRED WITH #12, 1#14 BOND IN 21mmC ROUTED THROUGH THE ACCESSIBLE CEILING SPACE.
 - PROVIDE FOR WIRING OF THE NEW TYPE A2 LIGHTING FIXTURES TO EXISTING LIGHTING BRANCH CIRCUIT WIRING 'E-9b' WITH #12, 1#14 BOND IN 21mmC ROUTED THROUGH THE ACCESSIBLE CEILING SPACE AS REQUIRED.
 - TRACE OUT, DISCONNECT, SPLICE AND EXTEND EXISTING EXTERIOR BRANCH CIRCUIT WIRING 'B-12' THROUGH THE ACCESSIBLE CEILING SPACE TO THE NEW TYPE C1 EXTERIOR WALL PACK.
 - WIRE NEW EMERGENCY LIGHTING BATTERY PACK TO EXISTING LIGHTING BRANCH CIRCUIT 'E-9' WITH #12, 1#14 BOND IN 21mmC ROUTED THROUGH THE ACCESSIBLE CEILING SPACE. COORDINATE EXACT MOUNTING HEIGHT WITH LOCKER LAYOUT AND INSTALLATION ON SITE PRIOR TO ROUGH-IN.
 - PROVIDE FOR WIRING OF THE NEW TYPE B1 LIGHTING FIXTURES TO EXISTING LIGHTING BRANCH CIRCUIT WIRING 'E-9a' WITH #12, 1#14 BOND IN 21mmC ROUTED THROUGH THE ACCESSIBLE CEILING SPACE AS REQUIRED.
 - DUPLEX RECEPTACLE LOCATED IN THE ACCESSIBLE CEILING SPACE DEDICATED FOR PROJECTOR. COORDINATE EXACT LOCATION WITH DEPARTMENTAL REPRESENTATIVE ON SITE PRIOR TO ROUGH-IN. DUPLEX RECEPTACLE TO BE SECURELY FASTENED TO JOIST IN ACCORDANCE WITH CSA 22.1-21 ARTICLE 12-3010.
 - CONTRACTOR TO INSTALL 27mm EC FROM HDMI AV OUTLET BOX UPWARDS THROUGH INTERIOR OF GYPSUM WALL AND STUBBED IN THE ACCESSIBLE CEILING SPACE ADJACENT TO THE PROJECT. COORDINATE EXACT STUB UP LOCATION ON SITE PRIOR TO ROUGH-IN.



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Client
Provincial Government of PEI
Department of Transportation & Infrastructure

Project Title
Ecole Pierre Chaisson Addition

Sheet Title
Partial Floor Plan -
Power, Communications, Systems, Lighting
& Notes

No.	Description	Date	Date:	Revision
1	Issued for Tender	2023-10-19	2023-10-19	
			Drn By: M.E.M., C.E.T.	
			Chk By: E.S.C., P.ENG	
			Project Number:	
			231124	
			Drawing Number:	
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