



Halton District School Board

Addendum No. 2

RFT 24-061 Gymnasium Addition - Glenview Public School

The following, issued by the Halton District School Board (HDSB) May 22, 2024, shall be incorporated in the specifications and shall form part of the proposal document for the above.

ATTACHED:

Bidders are to reference the attached addendum as drafted by Snyder Architects (57 pages) dated 2024 05 17 which includes the Abatement Report and Specifications.

RECEIPT OF ADDENDA MUST BE ACKNOWLEDGED ON THE FORM OF QUOTATION.

**PAGE 1 OF 58
END OF ADDENDUM 2**

ADDENDUM #1

Project	Glenview PS Gym Addition	Project No.	2314
Location	143 Townsend Ave., Burlington, ON	Date of Issue	2024 05 17
Owner	Halton District School Board	File	2314/7.1.3

This Addendum forms part of the Contract Documents and amends the original Drawings and Specifications, dated 2024 05 03, as noted below.

Ensure all parties submitting bids are aware of all items included in this Addendum. Read, interpret and coordinate the items contained herein with the Contract Documents and include all related costs as part of the Bid Price. Acknowledge receipt of this Addendum by inserting its number on the Bid Form. Failure to do so may subject the bidder to disqualification.

This Addendum consists of 2 pages plus noted attachments, including 11 full size drawings.

A1-1 04 21 00 CLAY UNIT MASONRY

- .1 2.2.1 Clay Brick: Revise Riverdale Matt to Varsity Rugg Metric Norman by Canada Brick.

A1-2 DRAWING A103 PARTIAL SITE PLAN - DEMOLITION

- .1 Replace Drawing with the attached Revision No. 3.
- .2 Drawing reissued to include existing foundations and footings for demo Note 2. And to confirm depth of existing footings to be assumed as 1200mm below grade.

A1-3 DRAWING A201 PARTIAL FLOOR & ROOF PLAN - DEMOLITION

- .1 Replace Drawing with the attached Revision No. 3.
- .2 Drawing reissued to read room names clearly for 1/A201 and 3/A201.

A1-4 DRAWING A202 PARTIAL FLOOR & ROOF PLAN – NEW & RENO

- .1 Replace Drawing with the attached Revision No. 4.
- .2 Drawing reissued to revise roof type legend to match specifications.

A1-5 DRAWING A402 BUILDING & WALL SECTIONS

- .1 Replace Drawing with the attached Revision No. 3.
- .2 Drawing reissued to revise detail callout tags at 3/A402, 4/A402, 5/A402 and 6/A402 to correspond with details on drawing A602.

A1-6 DRAWING A601 PLAN & SECTION DETAILS

- .1 New drawing added.

A1-7 DRAWING A602 SECTION DETAILS - ROOF

- .1 New drawing added.

A1-8 DRAWING A701 ENLARGED PLANS & INT. ELEVATIONS – WRs, CHANGE RMs, SERV.

- .1 Replace Drawing with the attached Revision No. 3.
- .2 Drawing reissued to show exhaust duct enclosed in panels at 13/A701.

A1-9 DRAWING A702 ENLARGED PLANS & INTERIOR ELEVATIONS - GYM

- .1 New drawing added.

A1-10 DRAWING A801 MILLWORK DETAILS

- .1 Replace Drawing with the attached Revision No. 2.
- .2 Drawing reissued to update 6/A701, 7/A801 and 8/A801.
- .3 6/A801 revised to have enclosure panels wide enough to enclose exhaust hood.
- .4 7/A801 revised to confirm the hook elevation as 1300mm AFF.
- .5 8/A801 revised to show angle frame brackets in lieu of the continuous steel angles.

A1-11 DRAWING A901 DOOR SCHEDULE & DETAILS, WINDOW & CW ELEVATIONS

- .1 Replace Drawing with the attached Revision No. 3.
- .2 Drawing reissued to update Door Schedule and Door Types.

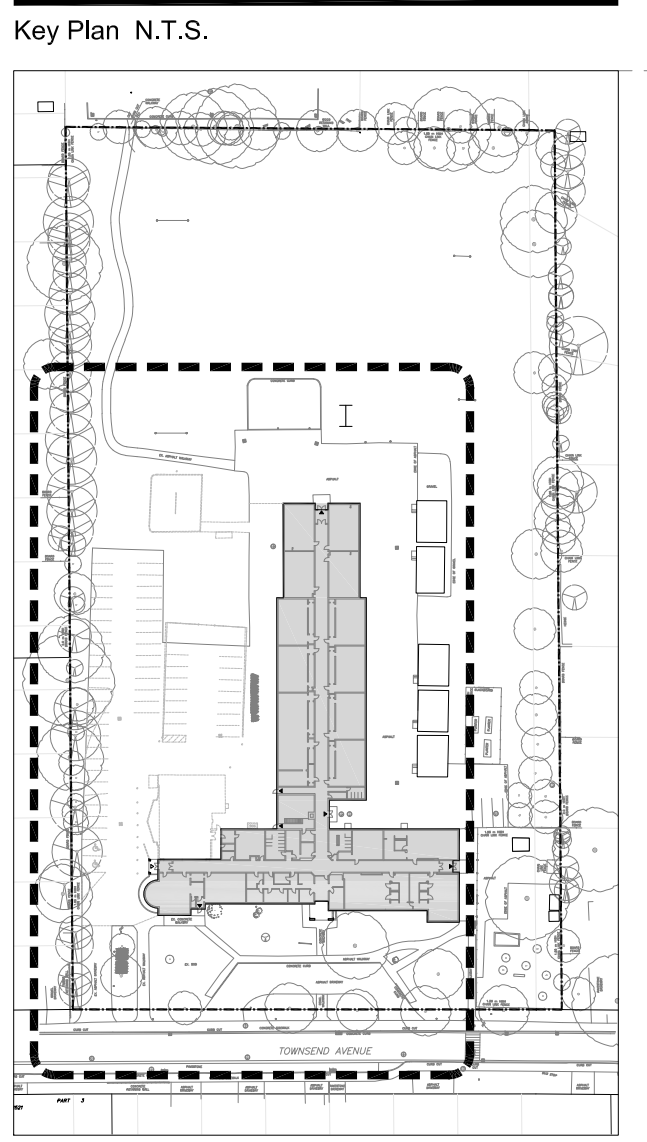
A1-12 STRUCTURAL

- .1 Refer to the attached revised structural drawings S1.2 Roof Framing Plan to note the steel deck as *38 Acoustic Steel Roof Deck*.

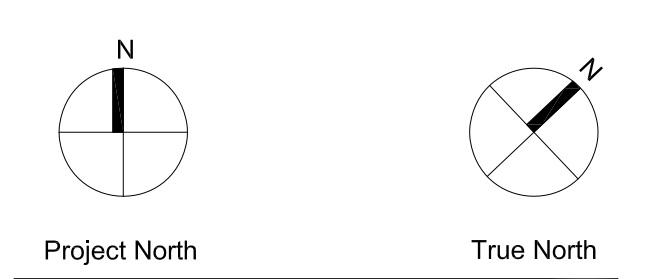
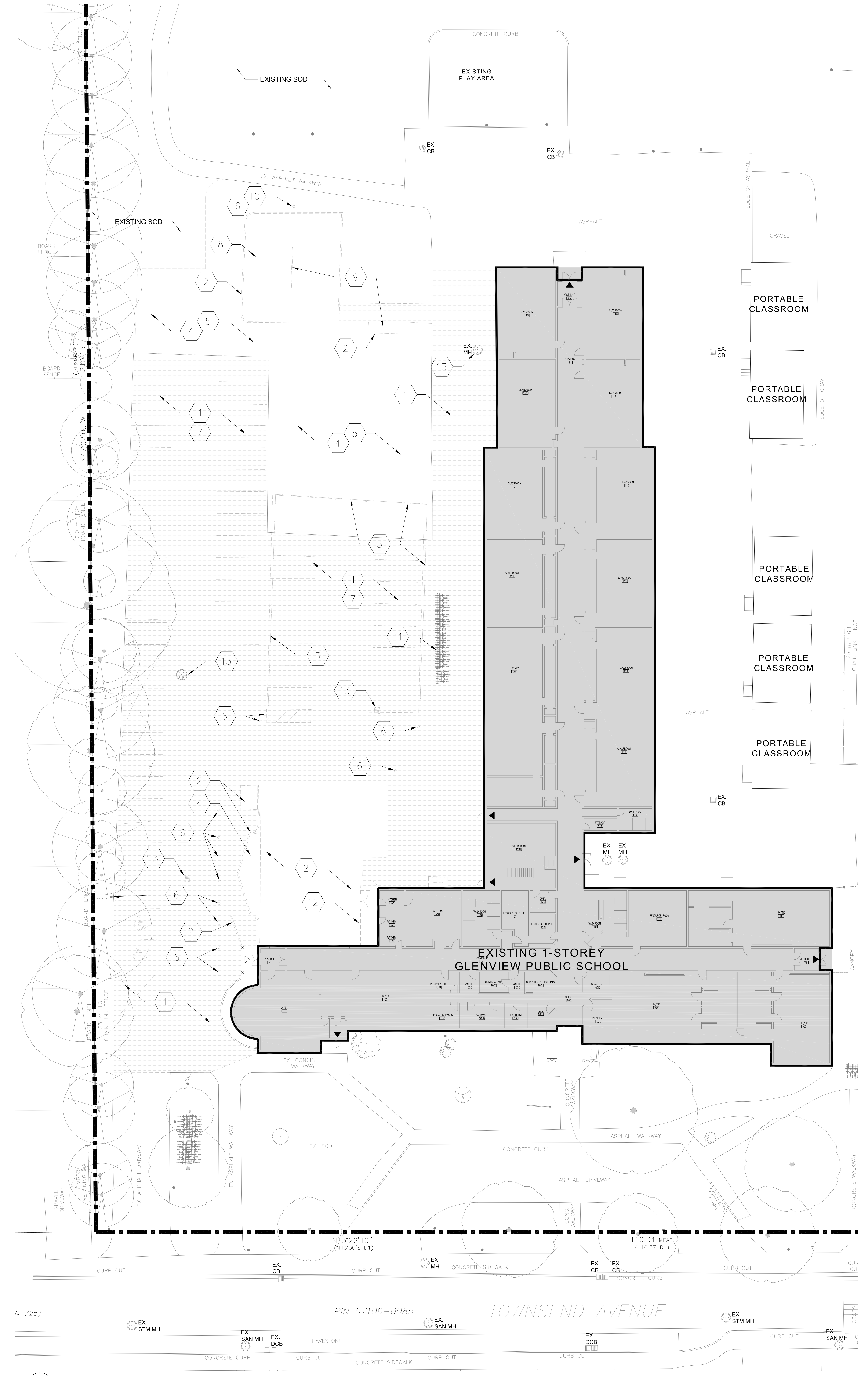
A1-13 AVAILABLE PROJECT INFORMATION

- .1 Added: Abatement Report titled 'Pre-Renovation Designated Substances and Hazardous Materials Survey' dated May 17, 2024, as prepared by Arcadis Canada Inc.
- .2 Added: Asbestos Abatement Specifications Glenview Public School dated May 2024, Arcadis Project No. 30226491, including Time and Material Unit Rates sheet.
- .3 Added: Existing S-1 Foundation Plan dated May 7, 1951.

END OF ADDENDUM #1



- SITE DEMOLITION NOTES**
- 1 REMOVE AND DISPOSE EXISTING ASPHALT PAVING INCLUDING BASE AND SUB-BASE AND PREPARE SUBSTRATE FOR NEW SURFACING.
 - 2 REMOVE AND DISPOSE EXISTING CONCRETE SLAB, FROST SLABS, CURBS, FOUNDATION WALLS AND FOOTINGS C/W ASSOCIATED SUB-BASE. PREPARE AFFECTED AREA TO RECEIVE NEW WORK. DEPTH OF EXISTING FOOTINGS TO BE ASSURED AS 1200mm (4') BELOW GRADE.
 - 3 REMOVE AND DISCARD EXISTING FENCE & GATES (CHAINLINK OR WOOD), POSTS AND ASSOCIATED HARDWARE. REMOVE CONCRETE POST FOOTINGS AND BACKFILL TO GRADE.
 - 4 REMOVE TREES & SHRUBS WITHIN WORK BOUNDARY, EXCEPT WHERE NOTED OTHERWISE. BACKFILL TO EXISTING GRADE. REFER TO TREE PROTECTION PLAN AND LANDSCAPE DRAWINGS FOR TREES REQUIRING REMOVAL PERMITS.
 - 5 REMOVE AND DISPOSE EXISTING SOD INCLUDING SUB-BASE AND REGRADE FOR NEW SURFACING.
 - 6 REMOVE AND DISPOSE EXISTING BOLLARDS / SIGN POSTS AND ASSOCIATED FOOTINGS. BACKFILL TO GRADE.
 - 7 REMOVE AND DISPOSE EXISTING PORTABLE CONCRETE CURBS C/W ANCHORS WITHIN WORK BOUNDARY.
 - 8 REMOVE AND DISPOSE EXISTING MULCH. BACKFILL TO GRADE.
 - 9 REMOVE AND RELOCATE EXISTING PLAY EQUIPMENT AND SEATING INCLUDING ASSOCIATED COMPONENTS.
 - 10 REMOVE AND STORE EXISTING SIGN TO BE RELOCATED.
 - 11 REMOVE AND RELOCATE EXISTING BIKE RACKS.
 - 12 DEMOLISH PORTION OF EXISTING BUILDING - REFER TO DWG. 1A201 FOR DEMOLITION FLOOR PLAN LAYOUTS; ALSO REFER TO STRUC / M/E DWGS. FOR MORE INFORMATION.
 - 13 REFER TO DWG. SS-1 FOR DEMOLITION AND REQUIRED CONNECTIONS.



No.	Revisions	Date
3.	Issued for Addendum 01	2024 05 17
2.	Issued for Tender	2024 05 03
1.	Issued for Building Permit	2024 05 02
No.	Revision	Date

Scale: 1:100 Unless Indicated Otherwise
General Contractor shall check and verify all dimensions and report all errors and omissions to the Architect. Do not scale the drawings. Drawings shall not be used for construction purposes until issued by the Architect for construction.



Drawing Title:

PARTIAL SITE PLAN - DEMOLITION

Scale: AS NOTED Date: 2024 04 19
Drawn by: AP Checked by: AG
Job No. Drawing No.

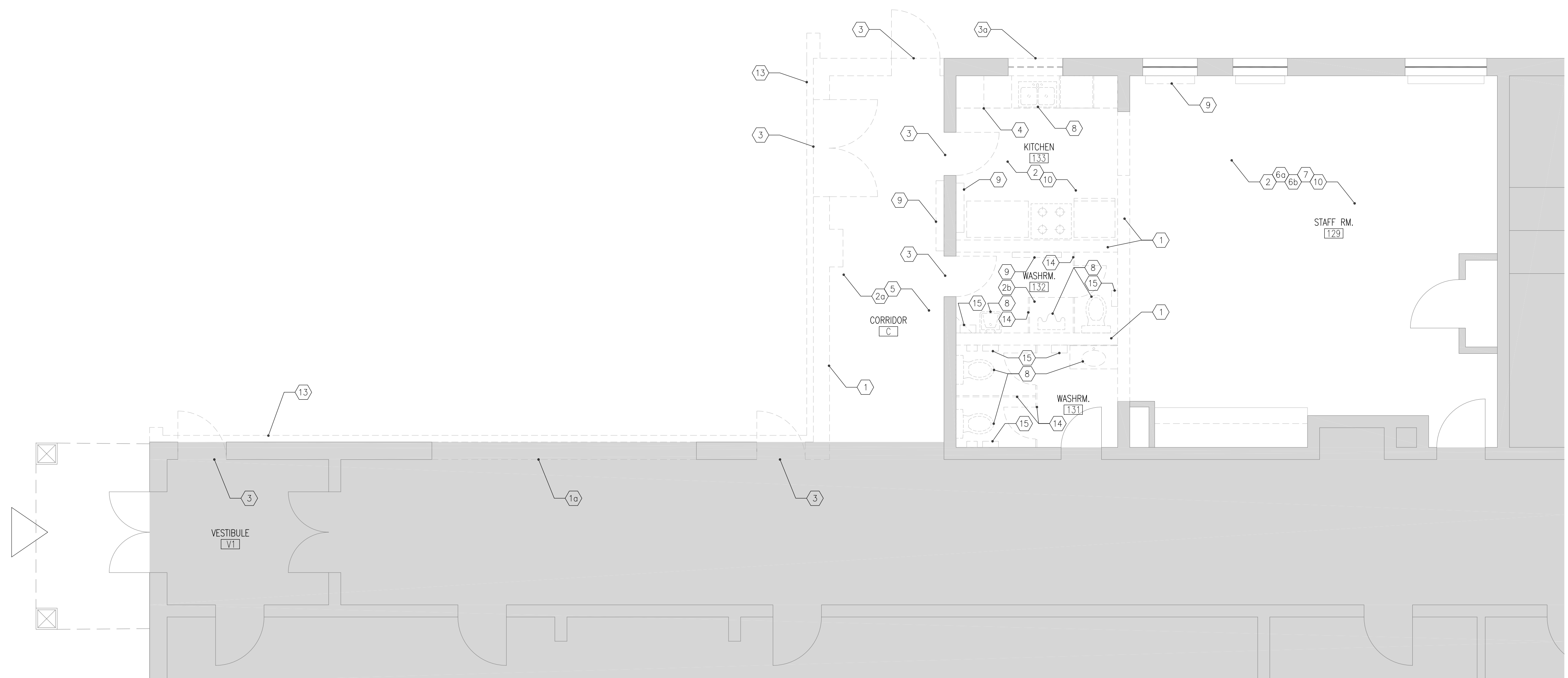
2314 A103

GENERAL DEMOLITION NOTES

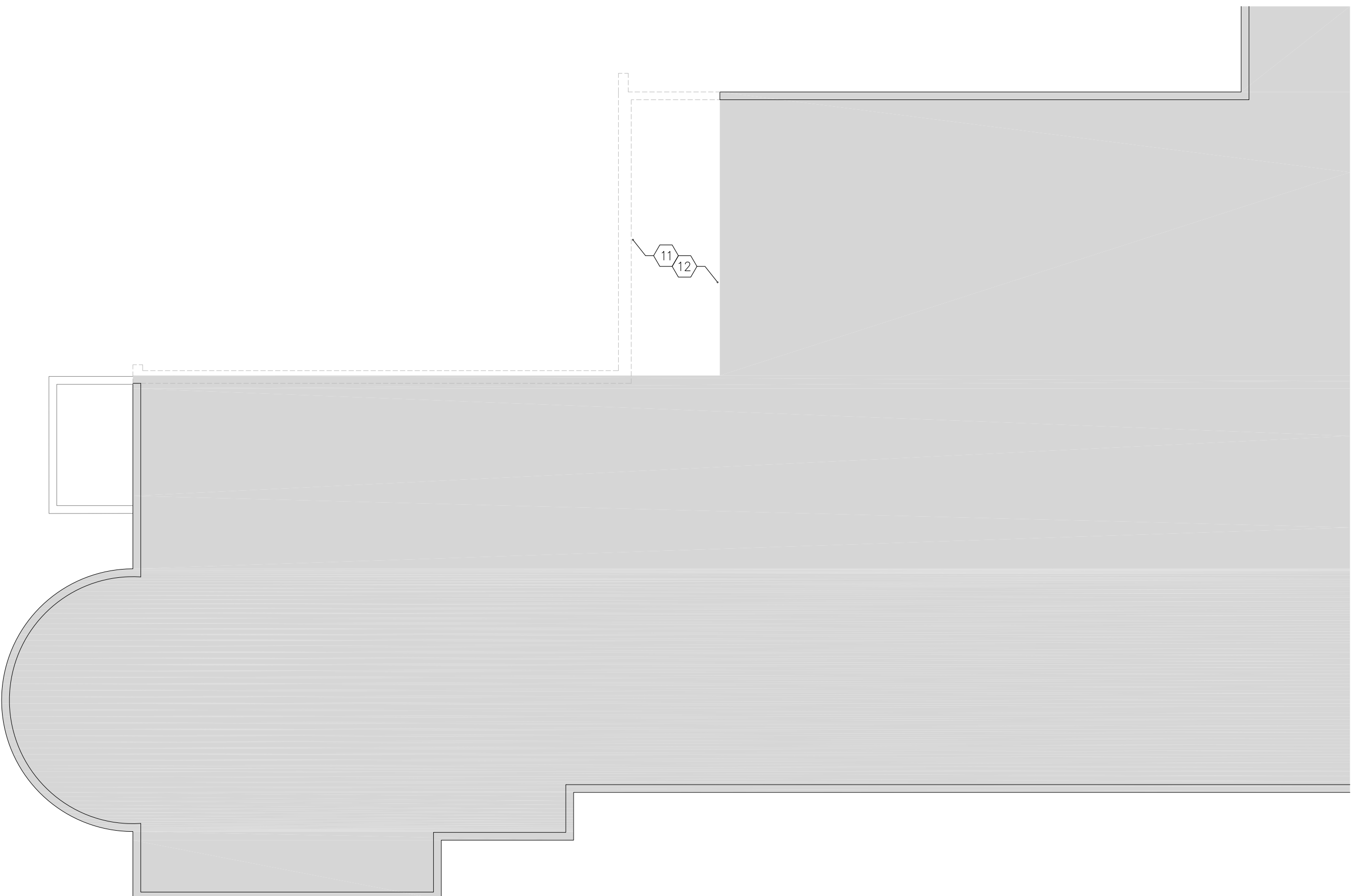
1. DEMOLITION WORK MUST BE COORDINATED WITH ABATEMENT SPECIFICATION SECTIONS IN THE PROJECT MANUAL. COMPLETE WITH ASSOCIATED COMPONENTS. FILL IN CONCRETE BLOCK HOLES AND/OR MASONRY ROUGH SURFACES WITH CEMENTITIOUS MATERIAL TO MAKE SMOOTH FOR RECEIVING NEW FINISH MATERIAL.
2. PROTECT AND PROPERLY STORE ANY DOORS TEMPORARILY REMOVED BY CONTRACTOR TO FACILITATE CONSTRUCTION ACTIVITIES. REINSTATE AFTER CONSTRUCTION IS COMPLETED.
3. ARCHITECTURAL DEMOLITION DRAWINGS MUST BE READ IN CONJUNCTION WITH STRUCTURAL, MECH. AND ELEC. DEMOLITION DRAWINGS. REFER TO STRUCTURAL, MECH. & ELEC. DEMOLITION DRAWINGS FOR COORDINATION.
4. CONTRACTOR TO PATCH, REPAIR, AND MAKE GOOD ALL HOLES OR DAMAGE DUE TO GENERAL DEMOLITION ON EXISTING MASONRY SURFACES TO REMAIN.
5. CONTRACTOR TO FILL IN AND FINISH HOLES LEFT ON THE FLOORS OR WALLS AFTER DEMOLITION TO MATCH WITH EXISTING SURROUNDING MATERIALS.
6. CONTRACTOR TO ENSURE THAT THE PORTION OF THE BUILDING REMAINS RETAINED IS HANDED BACK TO THE OWNER (ON COMPLETION OF CONSTRUCTION) IN A CONDITION SIMILAR TO ITS EXISTING CONDITION OR BETTER. THIS REQUIREMENT INCLUDES PROVISION OF ALL NECESSARY PROTECTIVE MEASURES FOR LIFE SAFETY, PROTECTION FROM THE ELEMENTS AND WEATHER, HEATING, DEHUMIDIFICATION AS NECESSARY, ETC.

DEMOLITION NOTES

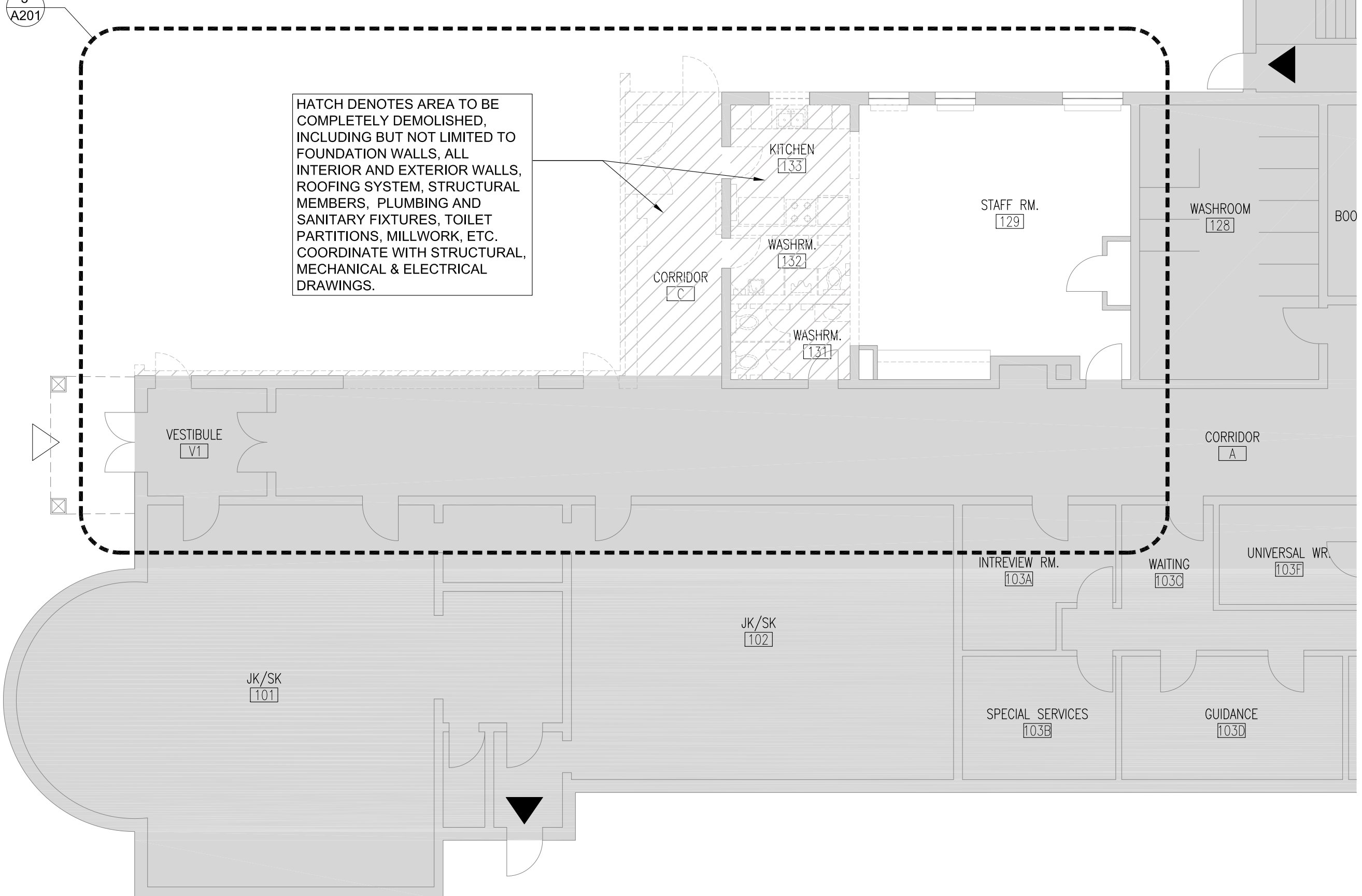
- 1 DEMOLISH AND DISPOSE OF EXISTING MASONRY WALL ASSEMBLY (FULL HEIGHT). COMPLETE WITH ASSOCIATED COMPONENTS. FILL IN CONCRETE BLOCK HOLES AND/OR MASONRY ROUGH SURFACES WITH CEMENTITIOUS MATERIAL TO MAKE SMOOTH FOR RECEIVING NEW FINISH MATERIAL.
- 10 DEMOLISH AND DISPOSE OF EXISTING MASONRY WALL ASSEMBLY (UP TO NEW LEVEL). REMOVE EDGE BLOCKS AND SAW TOOTH IN NEW SOLID CMU TO FORM NEW EDGE. COORDINATE WITH STRUC. / MECH. / ELEC. DWGS FOR ADDITIONAL DEMOLITION SCOPE OF WORK. REFER TO DETAIL (A/A801). MAKE GOOD AFFECTED SURFACES.
- 2 REMOVE AND DISPOSE OF EXISTING VCT FLOORING & WALL BASE. MECHANICALLY REMOVE ADHESIVES TO A SMOOTH HAVE A SMOOTH SURFACE READY TO RECEIVE SKIM COAT. SUBSEQUENTLY APPLY SKIM COAT OF CEMENTITIOUS TOPPING TO ENCAPSULATE REMAINING ADHESIVE AND FURTHER MAKE SMOOTH FOR APPLICATION OF SPECIFIED FLOOR FINISH.
- 20 REMOVE AND DISPOSE OF EXISTING TERRAZO FLOORING & BASE. MAKE GOOD FLOOR AND EDGE OF RETAINED SLAB TO RECEIVE NEW FLOOR FINISH. COORDINATE WITH MECH. DWGS FOR ADDITIONAL DEMO AS REQUIRED FOR MECH CONNECTIONS.
- 20 REMOVE AND DISPOSE OF EXISTING RAISED FLOORING & BASE COMPLETE WITH GRINDING FLOOR SMOOTH TO RECEIVE A SKIM COAT AND SUBSEQUENTLY RECEIVE NEW FLOOR FINISH.
- 3 REMOVE AND DISPOSE OF EXISTING DOOR & FRAME WITH ASSOCIATED COMPONENTS. AND MAKE GOOD AFFECTED SURFACES TO RECEIVE NEW WORK.
- 3 REMOVE AND DISPOSE OF EXISTING WINDOW & FRAME WITH ASSOCIATED COMPONENTS. INCL. ROLLER SHADES AND MAKE GOOD AFFECTED SURFACES TO RECEIVE NEW WORK.
- 4 REMOVE AND DISPOSE OF EXISTING MILLWORK ASSEMBLIES COMPLETE WITH ASSOCIATED APPLIANCES, PLUMBING AND ELECTRICAL. COORDINATE WITH MECH. DWGS AND MAKE GOOD AFFECTED SURFACES.
- 5 REMOVE AND DISPOSE OF EXISTING ACT CEILING WITH ELECTRICAL FIXTURES AND OTHER DEVICES. MAKE GOOD AFFECTED SURFACES. PATCH & MAKE GOOD EXISTING PLASTER GYPSUM BOARD SURFACE ABOVE. ENSURE EXISTING FIRE RATED SUBSTRATE IS MAINTAINED. COORDINATE WITH STRUC. MECH. ELEC. DWGS FOR ADDITIONAL DEMOLITION SCOPE FOR WORK.
- 60 REMOVE AND STORE EXISTING ACT TILES FOR REUSE. AS REQUIRED TO ACCOMMODATE NEW WORK SUPPORT T-BAR WHERE NECESSARY. RETAIN EXISTING LIGHT FIXTURES, MECH DIFFUSERS, AND GRILLS. REFER TO MECH., ELEC. & SPRINKLER DRAWING FOR ADDITIONAL SCOPE AND REQUIREMENTS. REINSTATE ALL ACT TILES AFTER COMPLETION OF MECH. SERVICES- RENOVATION WORK. UNDAMAGED GLG COMPONENTS ARE ACCEPTABLE FOR REUSE.
- 60 RETAIN EXISTING ACT CEILING. SUPPORT T-BAR AS NECESSARY DURING DEMOLITION OF EXISTING WALL.
- 7 COVER AND PROTECT EXISTING LIGHT FIXTURES. COORDINATE WITH ELEC. DRAWINGS.
- 8 REMOVE AND DISPOSE OF EXISTING FIXTURES AND ALL ASSOCIATED PLUMBING. PROVIDE CAPPING FOR SERVICES FLUSH WITH SLAB WHERE INDICATED AND RECONNECT THE REMAINING TO NEW SERVICES. REFER MECH DWG FOR DETAILS. MAKE GOOD AFFECTED SURFACES TO RECEIVE NEW WORK.
- 9 REMOVE AND DISPOSE OF EXISTING RADS WITH ASSOCIATED COMPONENTS. REFER MECH DWG FOR DETAILS. MAKE GOOD AFFECTED SURFACES TO RECEIVE NEW WORK.
- 10 CUT AND DISPOSE OF EXISTING SLAB/FLOOR TO CREATE NEW TRENCH. REFER TO MECH., ELEC. DWGS FOR ADDITIONAL REQUIREMENTS/ UNDER SLAB CONNECTIONS. MAKE GOOD (ALL TRADES). ALL SURFACES READY TO RECEIVE PROPOSED WORK.
- 11 REMOVE AND DISPOSE OF EXISTING ROOFING SYSTEM COMPLETE WITH OTHER COMPONENTS, SUCH AS (BUT NOT LIMITED TO) METAL FLASHING, ROUGH CARPENTRY, TRAPEZOIDAL ASSEMBLY (WHERE REQUIRED). CLEAN ROOF DECK SURFACE WITH PROPER TREATMENT MATERIALS TO RECEIVE NEW MEMBRANE. REFER TO MECH. & ELEC. DRAWINGS FOR ADDITIONAL DEMOLITION SCOPE IN THE ROOF AREA.
- 12 CUT, REMOVE AND DISPOSE OF EXISTING ROOF DECK COMPLETE WITH ASSOCIATED COMPONENTS. REFER TO STRUC., MECH. & ELEC. FOR DEMOLITION COORDINATION.
- 13 REMOVE AND DISPOSE OF EXISTING EXTERIOR METAL PARTITIONS COMPLETE WITH ASSOCIATED COMPONENTS.
- 14 REMOVE AND DISPOSE OF EXISTING TOILET PARTITIONS COMPLETE WITH ASSOCIATED COMPONENTS.
- 15 REMOVE AND DISPOSE OF EXISTING TOILET ACCESSORIES AND MILLWORK COMPLETE WITH ASSOCIATED COMPONENTS.



3 PARTIAL FLOOR PLAN - DEMO
A201 1:50



2 PARTIAL ROOF PLAN - DEMO
A201 1:500

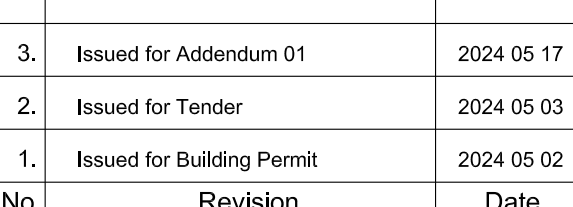


1 PARTIAL FLOOR PLAN - DEMO
A201 1:500



Project North	True North
No.	Revisions
	Date

No.	Revision	Date
3.	Issued for Addendum 01	2024 05 17
2.	Issued for Tender	2024 05 03
1.	Issued for Building Permit	2024 05 02



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Drawing Title:

PARTIAL FLOOR & ROOF PLAN - DEMOLITION

Scale: AS NOTED Date: 2024 02 13
Drawn by: AP Checked by: AG
Job No. Drawing No.

2314 A201

This drawing is sized for 36"x48" sheet size. Plot the drawing and improve the drawing accordingly.

ABBREVIATIONS

- ACL - ACTIVE LEAF
- ACT - ACOUSTIC CEILING TILE
- AF - ABOVE FINISH FLOOR
- CBT - CERAMIC TILE
- CJ - CONTROL JOINT
- CMB - CEMENT BOARD
- CMU - CONCRETE MASONRY UNIT
- CONT - CONTINUOUS
- CP - CONTROL PANEL, REF. MECH/ELEC
- CS - SEALED CONCRETE
- CMJ - SEMI RECESSED UNIT HEATER
- CWP - CONCRETE WALL PAINTED
- CAW - COMPLETE WITH
- E.J. - EXPANSION JOINT
- EEW - EMERGENCY EYE WASH STATION.
- SEE MECH DWGS
- EXVST. - EXISTING
- EXP - EXPOSED
- FD - FLOOR DRAIN, SEE MECH DWGS
- FE - WALL MOUNTED FIRE EXTINGUISHER, SEE MECH. DWGS
- FEC - FIRE EXTINGUISHER CABINET.
- FR - FULLY RECESSED
- FRR - FIRE RESISTANT RATING
- FS - FROST SLAB
- GB - GYPSUM BOARD
- GBAR - ABUSE RESISTANT GYPSUM BOARD
- GL - GLAZING
- GWB - GYPSUM WALL BOARD
- HM - HOLLOW METAL
- HP - HARDWOOD PLYWOOD
- HP-MR - HARDWOOD PLYWOOD - MOISTURE RESISTANT
- MB - MARKER BOARD
- MIR - MIRROR
- MRR - MIRROR
- MS - METAL SHELVING
- NIC - NOT IN CONTRACT
- NTS - NOT TO SCALE
- PB - PUSH BUTTON MOUNTED IN MASONRY
- PFT - PORCELAIN FLOOR TILE
- PTLY - PRESSURE TREATED PLYWOOD
- PTD - PAPER TOWEL DISPENSER
- RD - ROOF DRAIN
- SD - SOAP DISPENSER
- SM - SIMILAR
- SS/ST, STL - STAINLESS STEEL
- TB - TACK BOARD
- TPD - TOILET PAPER DISPENSER
- TGL - TEMPERED GLASS
- UNO - UNLESS OTHERWISE NOTED
- US - UNDERSIDE
- VCT - VINYL COMPOSITE TILE
- W - WITH
- WT - WEEPER TILE DRAINAGE SYSTEM (COORD. W/ MECH. FOR CONNECTION TO STORM SYSTEM)

FLOOR PLAN NOTES

1. ALL INTERIOR PARTITION WALLS TO BE EXTENDED UP TO UNDERSIDE OF ROOF DECK ABOVE UNLESS NOTED OTHERWISE. NON-LOAD BEARING WALLS TO STOP 25mm BELOW THE UNDERSIDE OF UNDERSIDE OF ROOF DECK. PROVIDE CONTINUOUS SOUND SEALS AT TOP. (A.C.) LISTED FIRE STOP & SMOKE SEAL @ US OF ROOF DECK AND PENETRATIONS PERIMETER REQUIRED AT ALL RATED WALLS.
2. PROVIDE BULLNOSE CMU WHERE OUTSIDE CORNERS ARE EXPOSED - TYPICAL FIRST COURSE ABOVE FINISHED FLOOR NOT TO HAVE BULLNOSE. TO ALLOW CLEAN INSTALLATION OF BASE MATERIAL, CMU COURSE AT CEILING NOT TO HAVE BULLNOSE EDGE. THIS IS TO PROVIDE CLEAN CONNECTION WITH CEILING MATERIALS.
3. ALL DIMENSIONS ON FLOOR PLANS ARE SHOWN AS MASONRY OPENINGS. (ROUGH OPENINGS)
4. ALL STEEL LINTELS/ BEAMS IN EXTERIOR WALLS TO BE GALVANIZED-SEE SPECIFICATIONS.
5. WALLS ABOVE OPENINGS TO BE MASONRY U.N.O. (LINTELS REFER TO STRUCTURAL DRAWINGS)
6. PROVIDE 100mm SOLID CMU CHASE AROUND ALL PIPES AND DUCT DROPS AS REQUIRED. CO-ORDINATE WITH MECH. DWGS.
9. MASONRY CONTROL JOINTS:
 - a) EXTERIOR VENEER - REFER TO BUILDING ELEVATIONS.
 - b) EXTERIOR CORE - REFER TO STRUCTURAL DWGS.
 - c) INTERIOR LOAD-BEARING WALLS - PROVIDE CONTROL JOINTS ON BOTH SIDES OF OPENINGS TYP. REFER TO STRUCTURAL FOR ADDITIONAL JOINTS.
 - d) INTERIOR NON-LOAD-BEARING WALLS - PROVIDE CONTROL JOINTS ON BOTH SIDES OF OPENINGS TYP. SPACING NOT TO EXCEED 5m.
10. PROVIDE NEW MANUAL WINDOW SHADES:
 - a) AT WINDOWS WIND IN GYM 130.
 - b) PROVIDE WOOD BLOCKING @ WINDOW HEADS FOR SHADE INSTALLATION.
 12. CONTRACTOR TO VERIFY EXISTING BUILDING DIMENSIONS AND MODIFY NEW CONSTRUCTION TO SUIT
 13. GRIND DOWN OR RAISE EXISTING FLOOR SUBSTRATE TO PROVIDE POSITIVE DRAINAGE TO NEW OR EXISTING FLOOR DRAIN.
 14. USE SELF LEVELING COMPOUND IF REQUIRED UPON REMOVAL OF EXISTING FLOORING TO SUITE NEW FLOOR INSTALLATION.
 15. APPLIANCES NOTED AS NIC TO BE SUPPLIED BY CLIENT AND INSTALLED BY THE CONTRACTOR.

EXTERIOR WALL TYPES

- (EW1) 50mm BRICK (TYPE 1)
25mm SF DRAIN
75mm GYPSUM ON INSULATION (INS-PR-1)
ABOVEFOUR BARBER (ONLY AS SHOWN ON DETAILS)
100mm CONCRETE BLOCK (CMU)
- (EW2) 50mm BRICK (TYPE 1)
25mm SF DRAIN
75mm GYPSUM ON INSULATION (INS-PR-1)
ABOVEFOUR BARBER (ONLY AS SHOWN ON DETAILS)
100mm CONCRETE BLOCK (CMU)
- (EW3) 22mm MVB-1 HORIZONTAL
25mm Z-CURT
75mm THERMAL SPACERS
@ 75mm SPACER FACING PR.1
240 CONCRETE BLOCK (CMU)

INTERIOR PARTITION WALL TYPES

- (PW1) 100mm CONCRETE BLOCK
- (PW2) 100mm CONCRETE BLOCK-2HR RATED (FIREWALL SEPARATION)
- (PW3) 200mm CONCRETE BLOCK
- (PW4) 200mm CONCRETE BLOCK-2HR RATED (FIREWALL)
- (PW5) 100mm CONCRETE BLOCK
- (PW6) 150mm METAL STUDS @ 400 C.C.
80mm ACOUSTICAL INSULATION
150mm GYPSUM BOARD (GB-AR)
RESIST OF WALL - 1510 200MM ABOVE CEILING
- (PW7) 150mm GYPSUM BOARD (GB-AR)
40mm FURRING CHANNEL @ 400 C.C.
EXISTING BLOCK WALL

ROOF TYPES & LEGEND

- (R1) BAL-TUP BITUMINOUS ROOFING SECTION 07 81 00
GRAVEL SURFACE FINISH (HOT APPLIED FLOOD COAT),
4.5 TYP. 6 FLETS WITH 1.6L COMPOSITE FELT WITH
HOT APPLIED INTER-PLY ADHESIVE
120mm COVER BOARD
TAPERED INSULATION (INS-PR-3) WHERE REQUIRED
100mm FLAYERS MFL-ROOF INSULATION (INS-PR-3)
VAPOUR RETARDER
120mm UNDERLAY BOARD
METAL DECK
STEEL ROOF STRUCTURE - SLOPE ACCORDING TO ROOF PLAN

WINDOW / SHADES LEGEND

- (W1) PROVIDE WINDOW COVERING FOR ALL EXTERIOR GLAZING. PROVIDE 100mm PLYWOOD AT US OF BEARING WINDOW COVERING INSTALLATION WHERE NECESSARY. PROVIDE NOTED/SHADES AT EXTERIOR WINDOW IN ROOM 133. REFER TO CASH ALLOWANCE.

FIRE RATING LEGEND

- (FR) REFER TO DWG. A102 FOR INDICATION OF FIRE SEPARATIONS ON FLOOR PLANS

FIRE PROTECTION LEGEND

- (F1) INDICATES ROOF ELEVATION US OF THE STEEL DECK OR TOP OF PRECAST ROOF SLAB
- (TP) (XXXX) - TOP OF MASONRY PARAPET
- (SLOPED STRUCTURE) - ROOF DECK AND STRUCTURE TO SLOPE TOWARDS DRAIN
- (SCUPPER) - SCUPPER TO BE THROUGH WALL AS NOTICED ON DETAIL. THE UNDERSIDE OF THE SCUPPER PIPE TO BE MAX. 150mm ABOVE ROOF DRAIN
- (RD) ROOF DRAIN - REF MECH. DWGS
- (VTR) VENT THROUGH ROOF
- (SLOPED INSULATION - MIN. 1%)
- (D) INDICATES DIRECTION OF SLOPE
- (LFP) INDICATES ROOF LOW POINT
- (HFP) INDICATES ROOF HIGH POINT

RENOVATION NOTES

1. NEW FLOOR FINISH AND BASE. TERMINATE FLOORING UNDER CENTERLINE OF DIVIDING DOORS UNLESS OTHERWISE NOTED OR SHOWN.
2. NEW CEILING. REFER TO A201 FOR TYPE AND DETAILS OF CEILING. PATCH AND MAKE GOOD EXISTING PLASTER/ GYPSUM BOARD SUBSTRATE ABOVE & ENSURE EXISTING FIRE RATINGS IS MAINTAINED.
3. INFILL WITH NEW CMU BLOCK WITH THICKNESS TO MATCH EXISTING ADJACENT.
4. PAINT ALL WALLS COMPLETE. PATCH AND MAKE GOOD ALL BLOCK AS REQ'D PRIOR TO PAINTING. REMOVED CEILING TRACK, MILLWORK ETC.
5. PATCH AND MAKE GOOD CONC. SLAB TO RECEIVE NEW FLOOR FINISH AFTER MECH. CONNECTIONS COMPLETED. REFER TO MECH. DWGS FOR EXTENT OF WORK AFFECTING EX. CONC. SLAB (TYP).
6. PATCH AND MAKE GOOD ALL WALLS, CORRIDOR FLOORS, CEILING AND WALL BASE DISTURBED BY DEMOLITION AND CONSTRUCTION THROUGHOUT (TYP). REFER TO MASONRY BLOCK EDGE DETAIL A.M.01.
7. INSTALL OWNER'S APPLIANCES IN COMPLIANCE W/ MANUFACTURER'S INSTRUCTIONS. REFER TO MECH. & ELEC.

STEEL COLUMNS SCHEDULE : TYPE OF COATING & FIRE PROTECTION

PROTECTION / COATING	STEEL COLUMN LOCATIONS
1 INTUMESCENT COATING*	AS INDICATED ON DRAWINGS
2 1 HR FRR CMU ENCLOSURE AROUND COLUMN (80MM CMU WHERE USED TO BE FILLED SOLID - TYP)	ALL STEEL COLUMNS EXCEPT: 1. COLUMNS IDENTIFIED IN ROW 1 IN THIS TABLE 2. COLUMNS IDENTIFIED AS HAVING GB-FR ENCLOSURE W/ 1 HR FRR

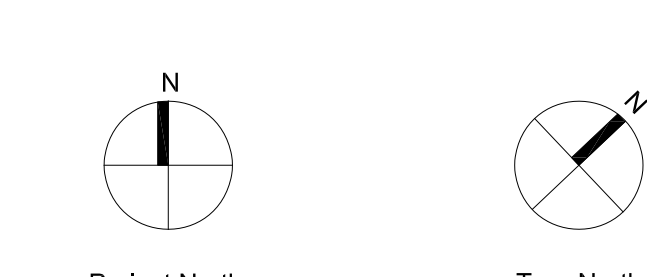
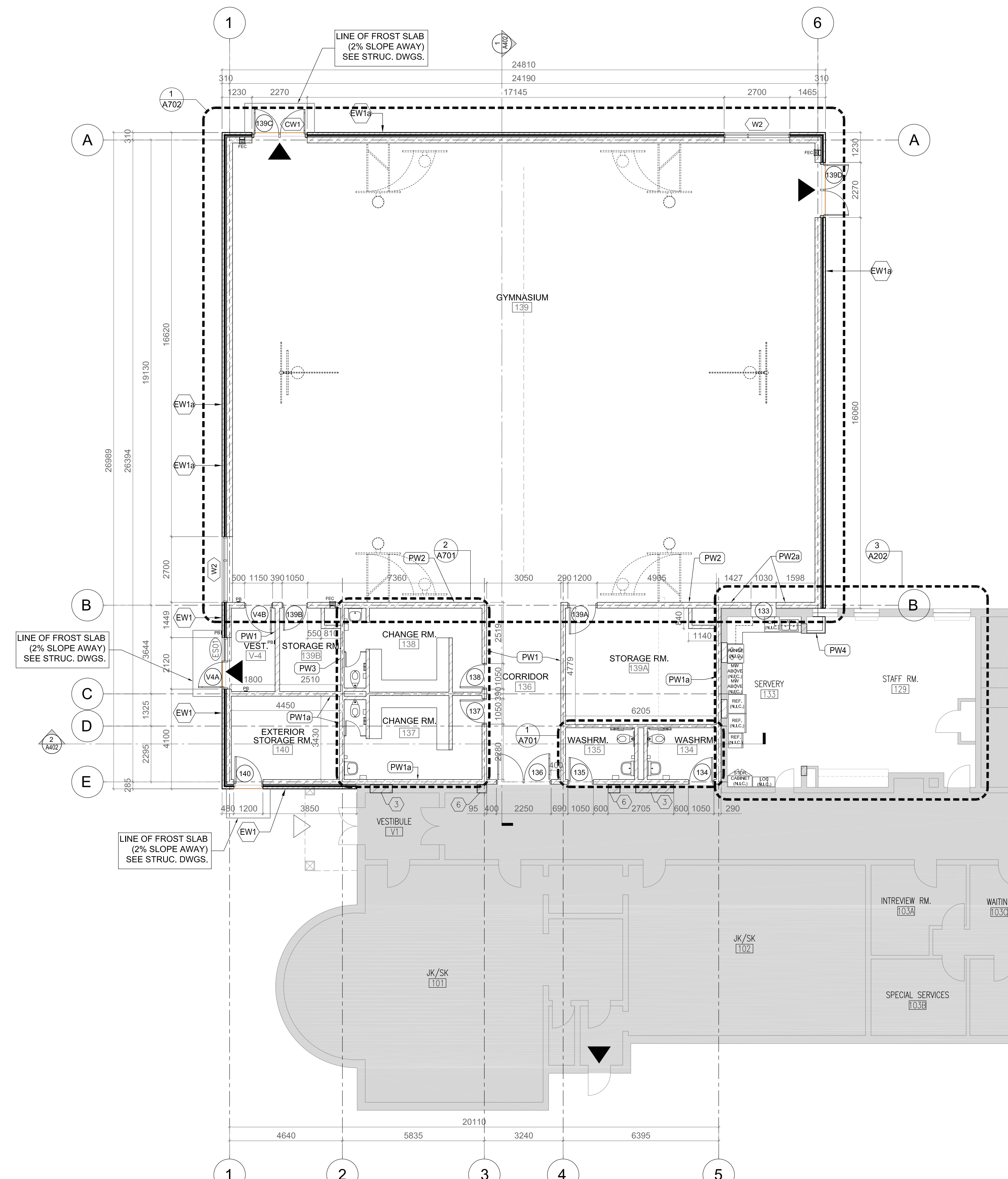
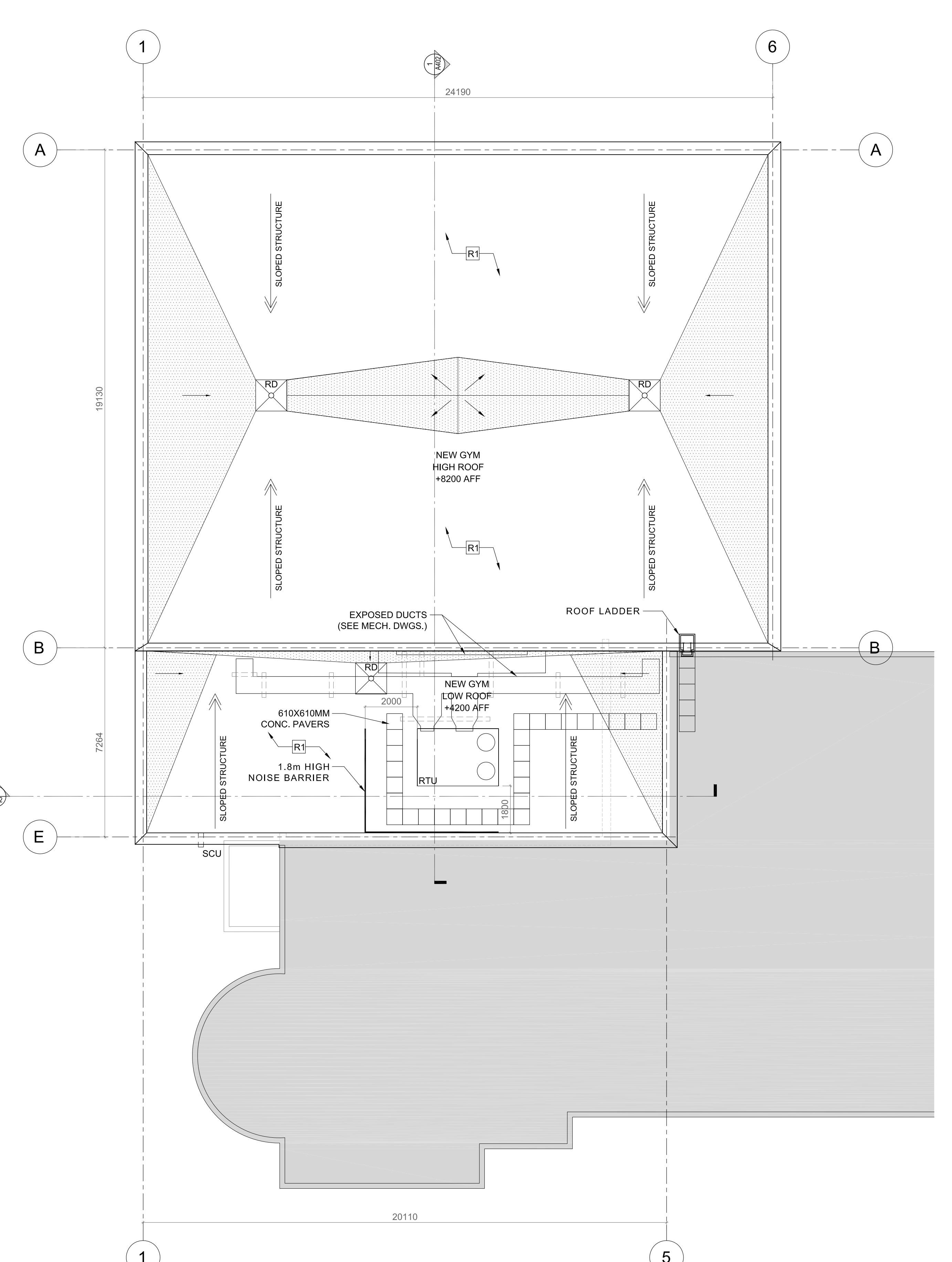
STEEL BEAM SCHEDULE : TYPE OF COATING & FIRE PROTECTION

1. OTHERWISE NOTED. ALL STEEL BEAMS SUPPORTING SECOND FLOOR STRUCTURE IN FIRE RATED WALL TO BE SPRAYED WITH FIRE RESISTIVE MATERIAL (CAFCO DCP) FOR A 1 HR FRR AND COMPLY WITH ULC DESIGN UL1707 (UNRESTRAINED). SPRAY FIREPROOFING TO EXTEND 300mm ALONG US OF PRECAST CONC. SLAB BEYOND EDGE OF FLANGE OF BEAM (BOTH SIDES) - TYP. REF SPEC SECTION 07 81 00.

* INTUMESCENT COATING SYSTEM TO YIELD A 1 HR FRR AND COMPLY WITH ULC BULV. X630 AND CD027 R1193. PROVIDE PRIMER CARBOGAURD 888 (MIN 5 MIL.); SECOND COAT NULIFIRE 3605 (MIN 127 MIL.); FINISH COAT CARBOGAURD 1340 (MIN 2 MIL.). REF SPEC SECTION 09067
NOTE: FIRE STOP & SMOKE SEAL @ ROOF DECK AND PENETRATIONS AT ALL FIRE RATED WALLS

FLOOR TYPES

- (F1) FLOOR FINISH AS PER ROOM FINISH SCHEDULE
- (F2) CONCRETE SLAB THICKNESS AS PER STRUCTURAL BELOW-SLAB VAPOUR RETARDER AGGREGATE BASE COURSE



No.	Revisions	Date
4.	Issued for Addendum 01	2024 05 17
3.	Issued for Tender	2024 05 03
2.	Issued for Building Permit	2024 05 02
1.	Issued for SPA Submission	2024 02 27

Scale: 1:100 Unless Indicated Otherwise
General Contractor shall check and verify all dimensions and report all errors and omissions to the Architect. Do not make the drawings. Drawings shall not be used for construction purposes until issued by the Architect for construction.



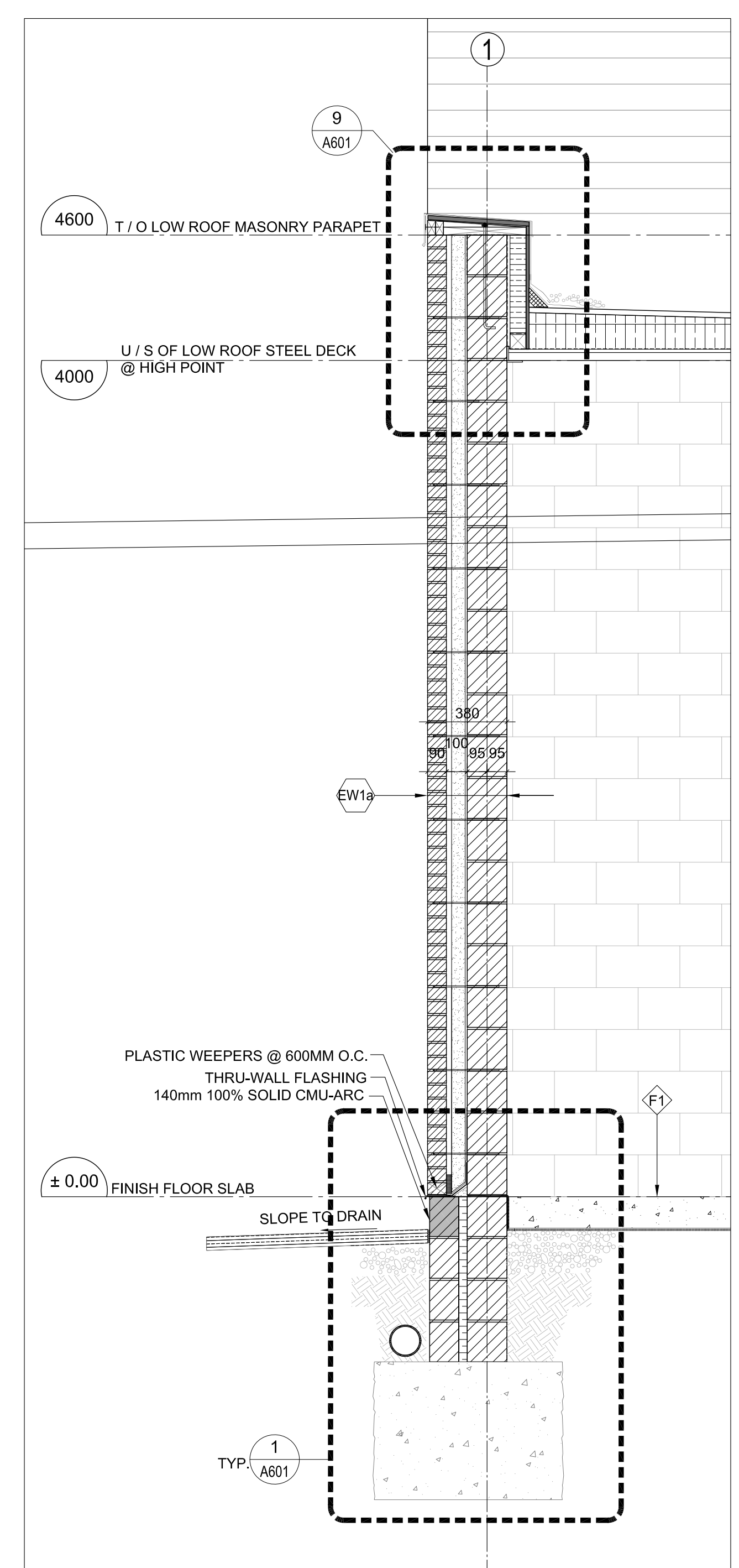
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PARTIAL FLOOR & ROOF PLAN - NEW & RENO

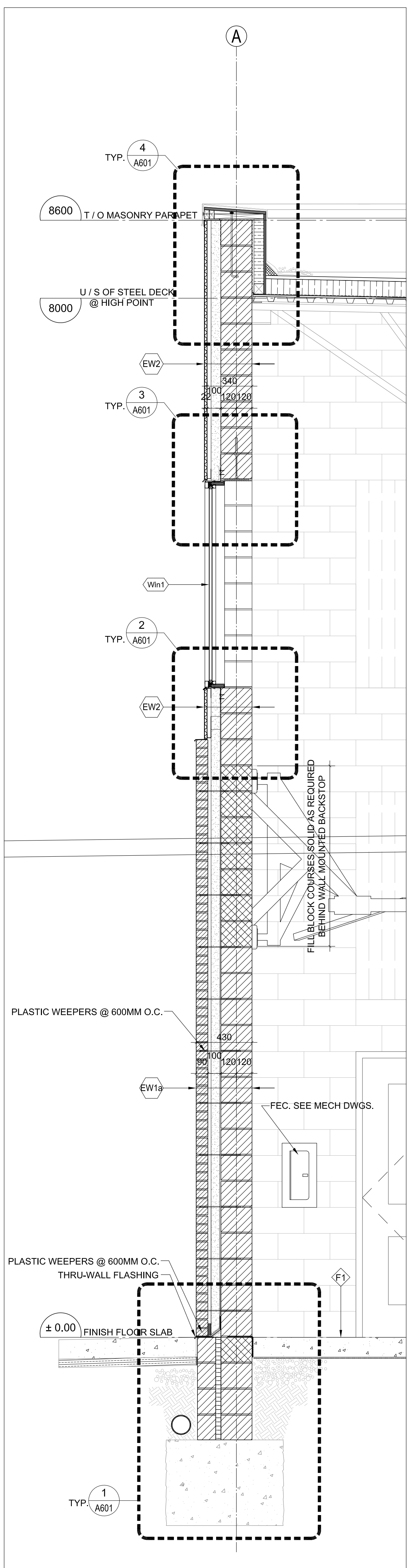
Scale: AS NOTED Date: 2024 02 27
Drawn by: AP Checked by: AG
Job No. Drawing No.

2314 A202

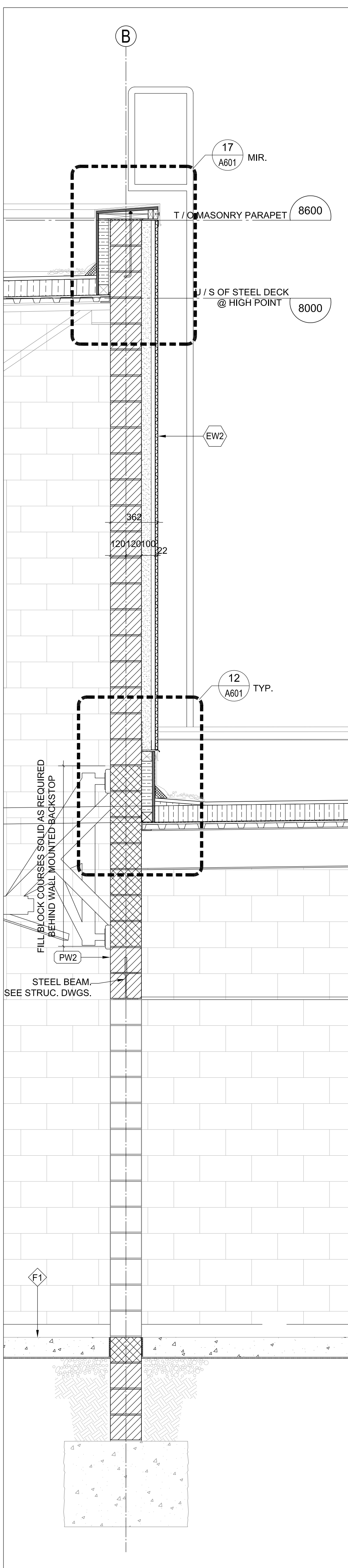
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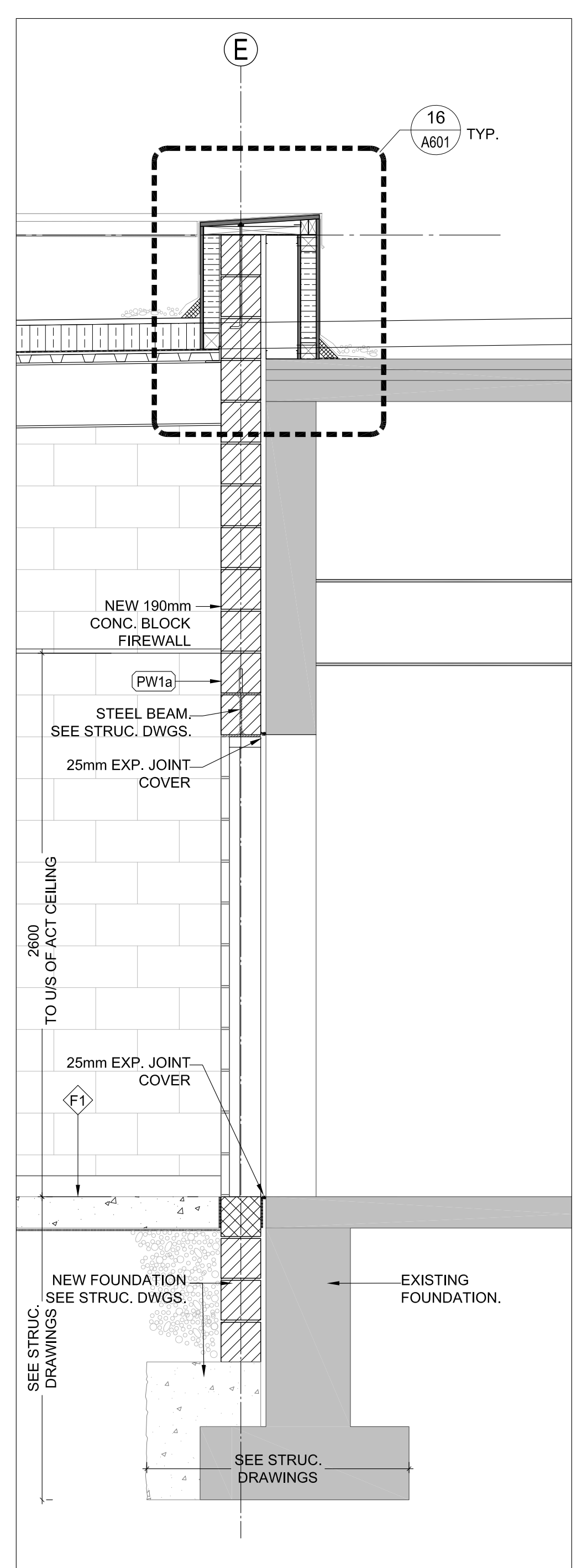
6 WALL SECTION
A402 1:20



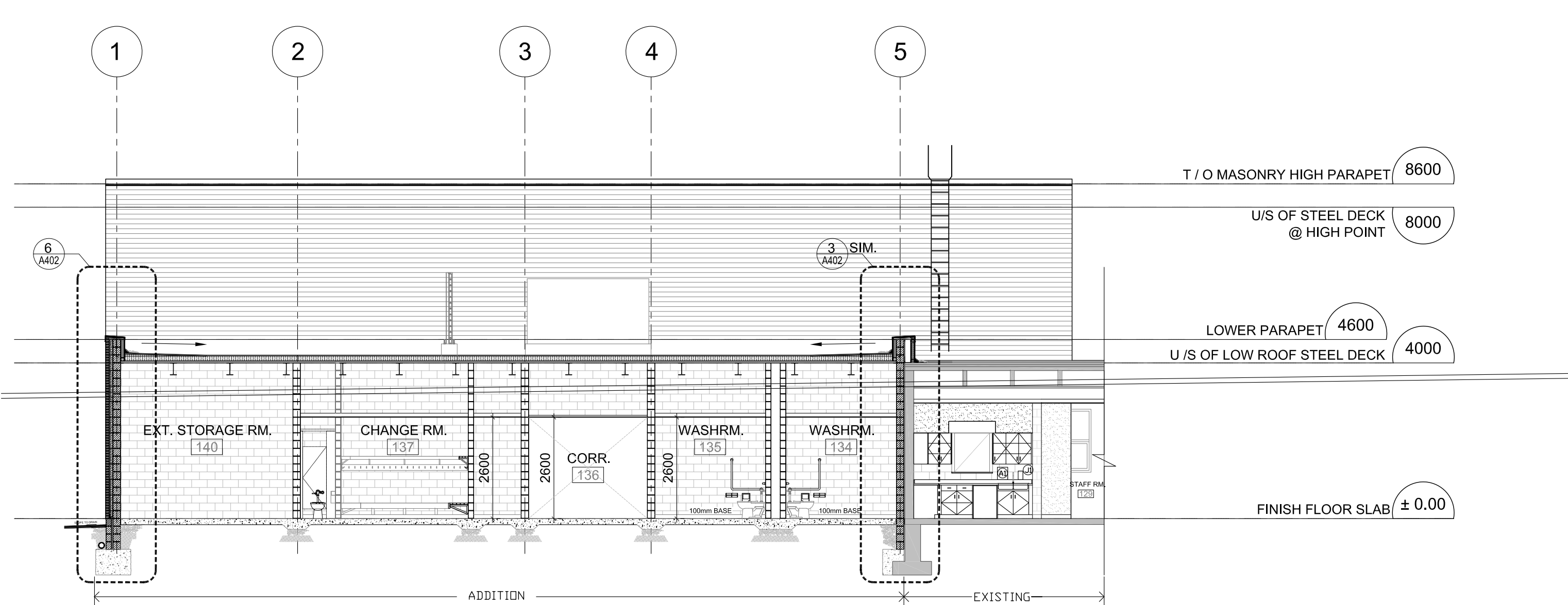
5 WALL SECTION
A402 1:20



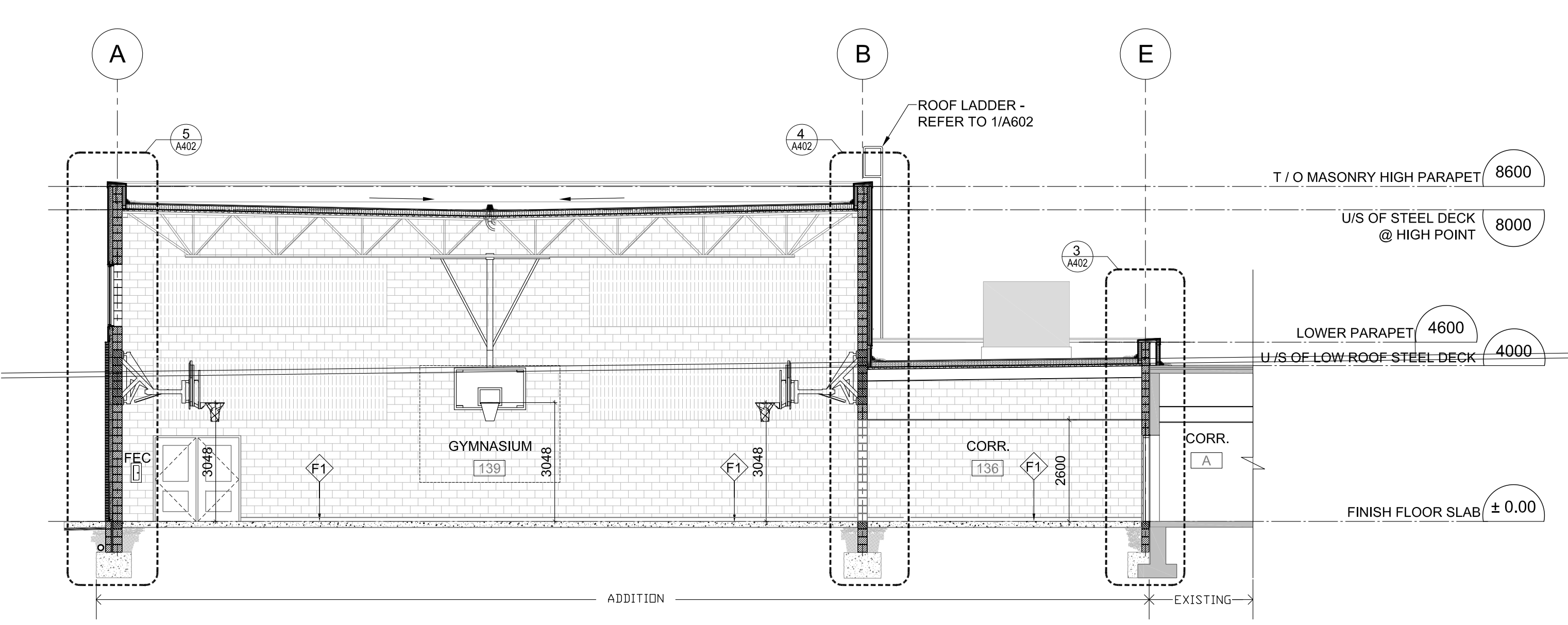
4 WALL SECTION
A402 1:20



3 WALL SECTION
A402 1:20



2 BUILDING SECTION
A402 1:100



1 BUILDING SECTION
A402 1:100

Project North		True North	
No.	Revisions	Date	
3.	Issued for Addendum 01	2024 05 17	
2.	Issued for Tender	2024 05 03	
1.	Issued for Building Permit	2024 05 02	
No.	Revision	Date	

Scale 1:100 Unless Indicated Otherwise
General Contractor shall check and verify all dimensions and report all errors and omissions to the Architect. Do not make the drawings. Drawings shall not be used for construction purposes until issued by the Architect for construction.



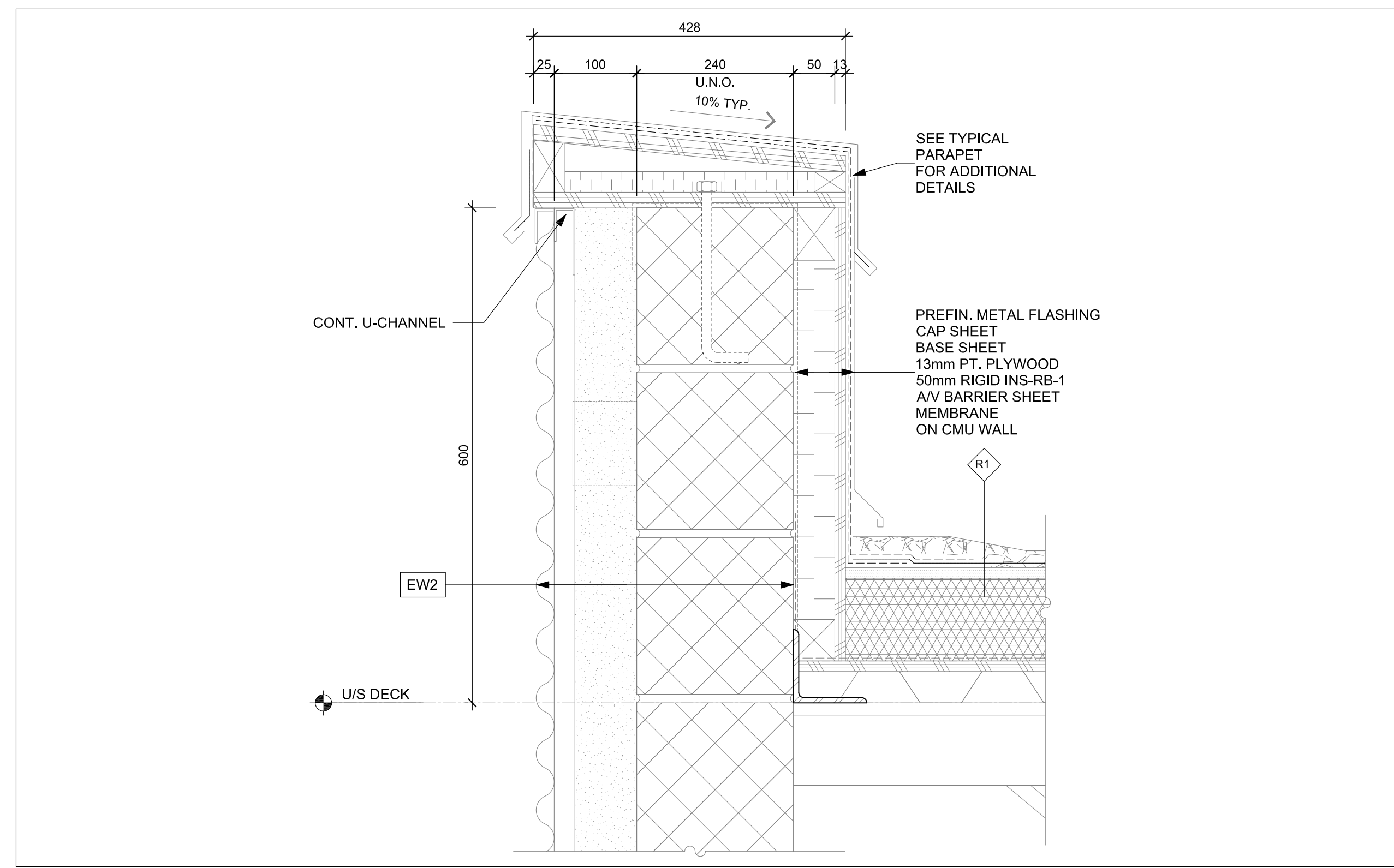
Drawing Title:

BUILDING & WALL SECTIONS

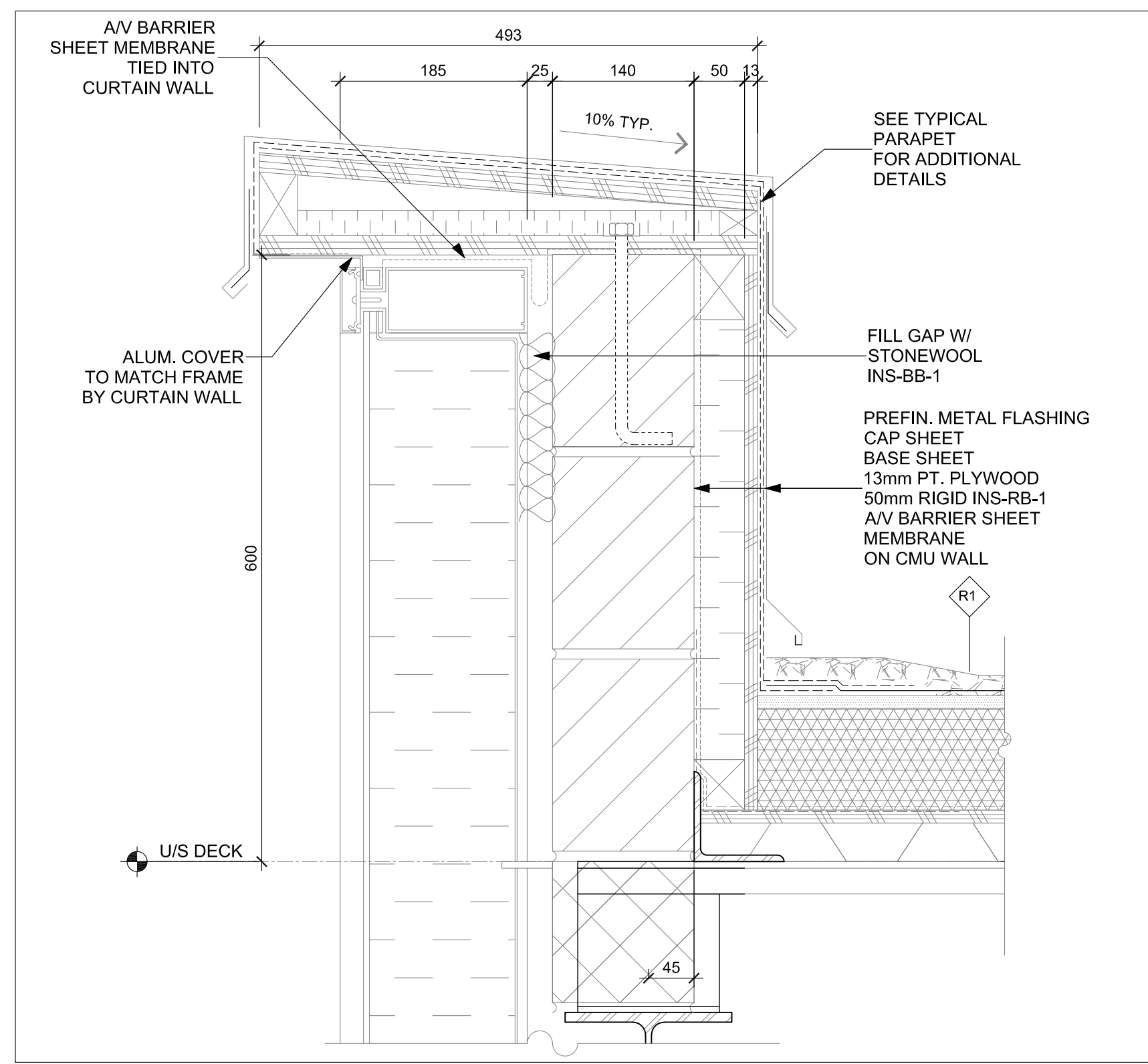
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Drawn by: AP Checked by: AG
Job No. Drawing No.

2314 A402

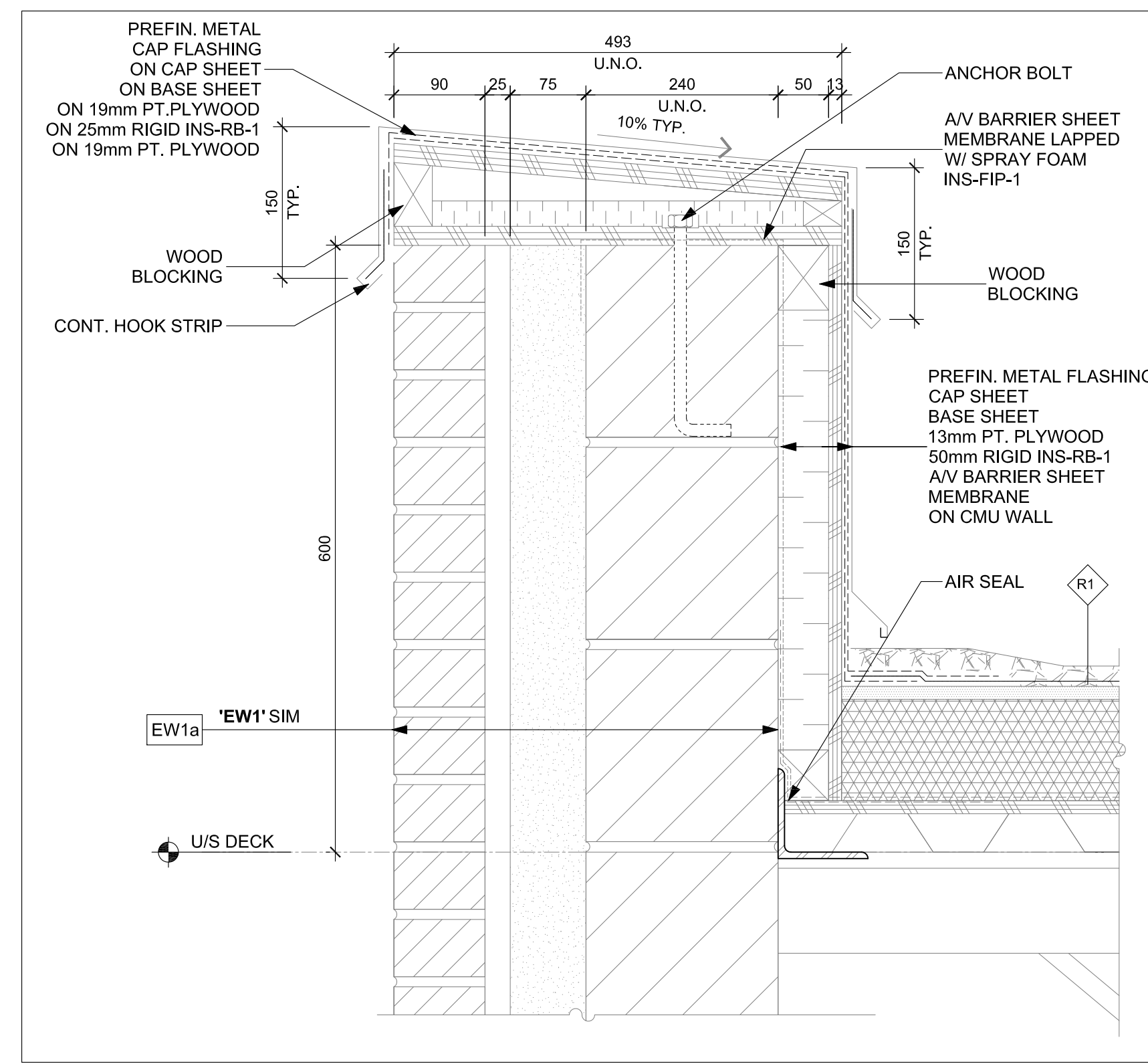
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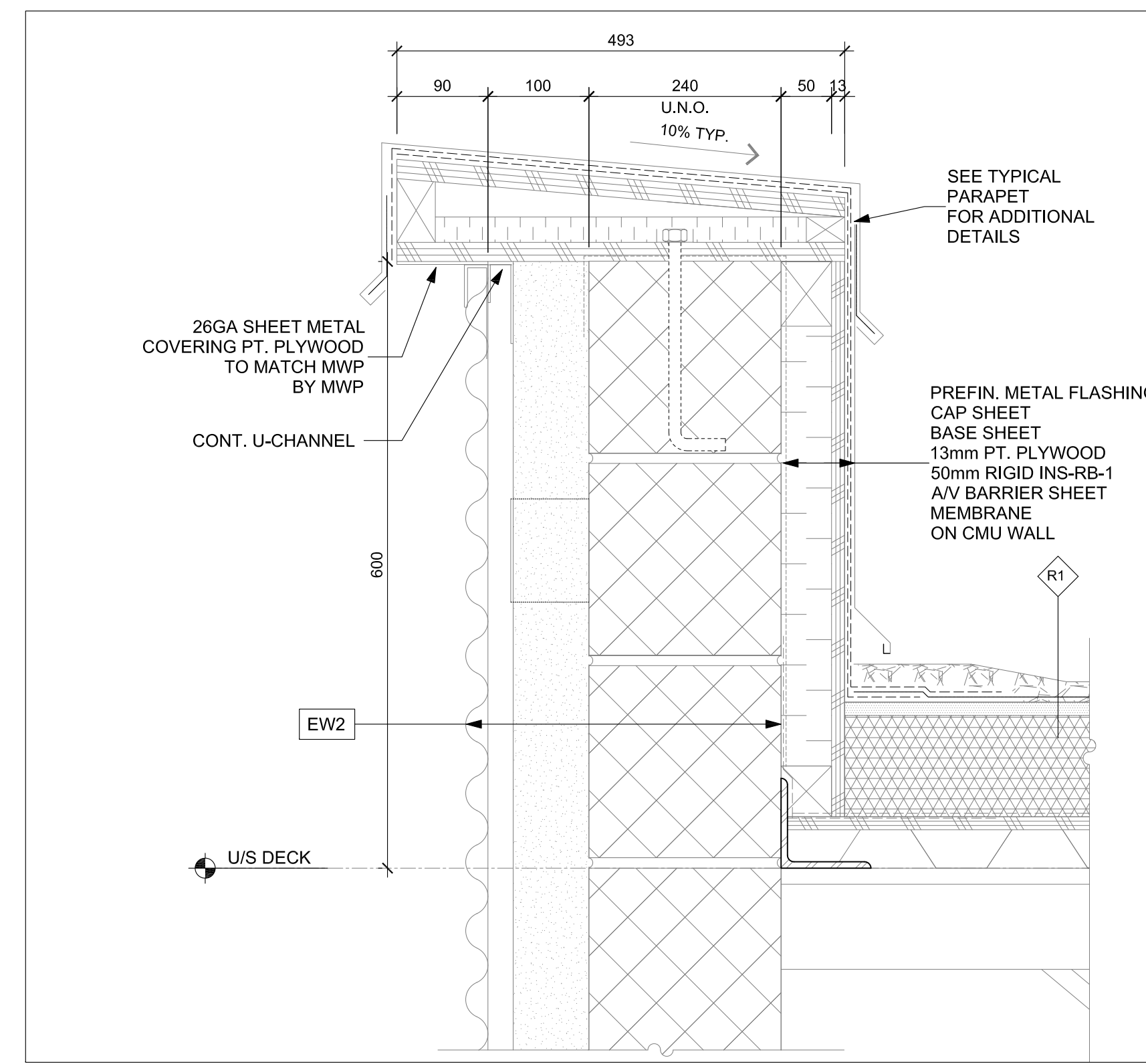
17 SECTION DETAIL - PARAPET @ MWP
A601 1:5



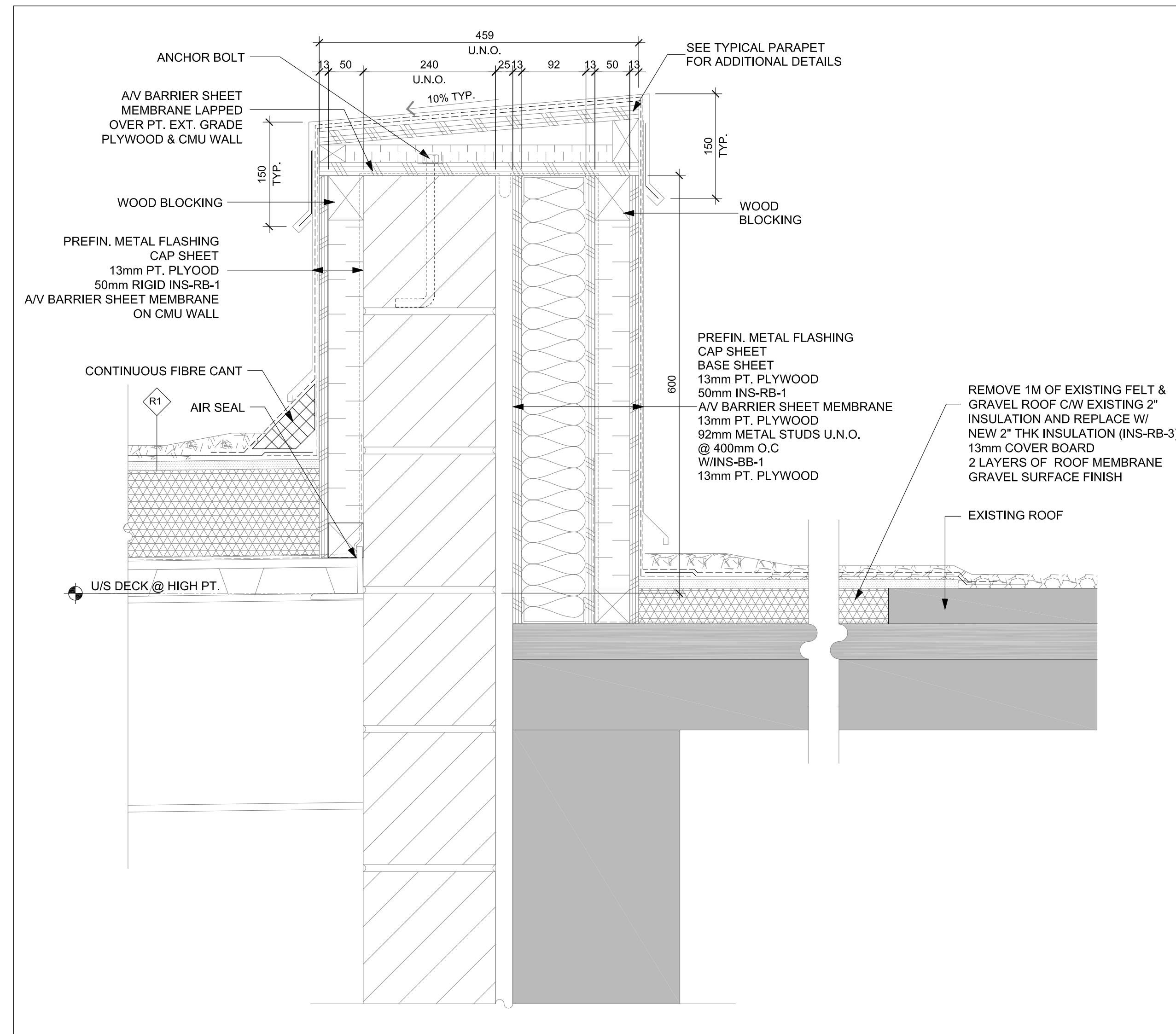
13 SECTION DETAIL - PARAPET @ CW
A601 1:5



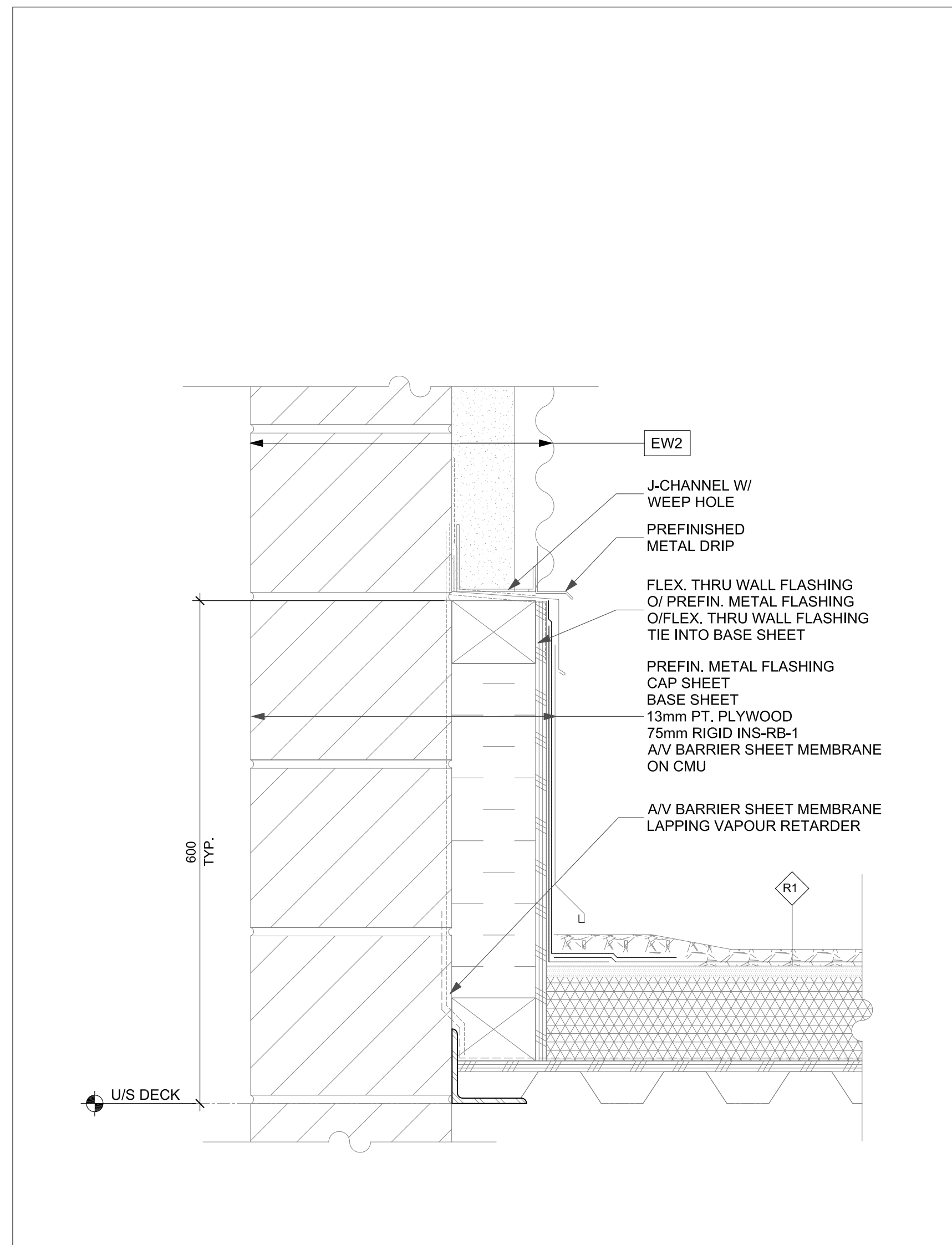
9 SECTION DETAIL - TYPICAL PARAPET
A601 1:5



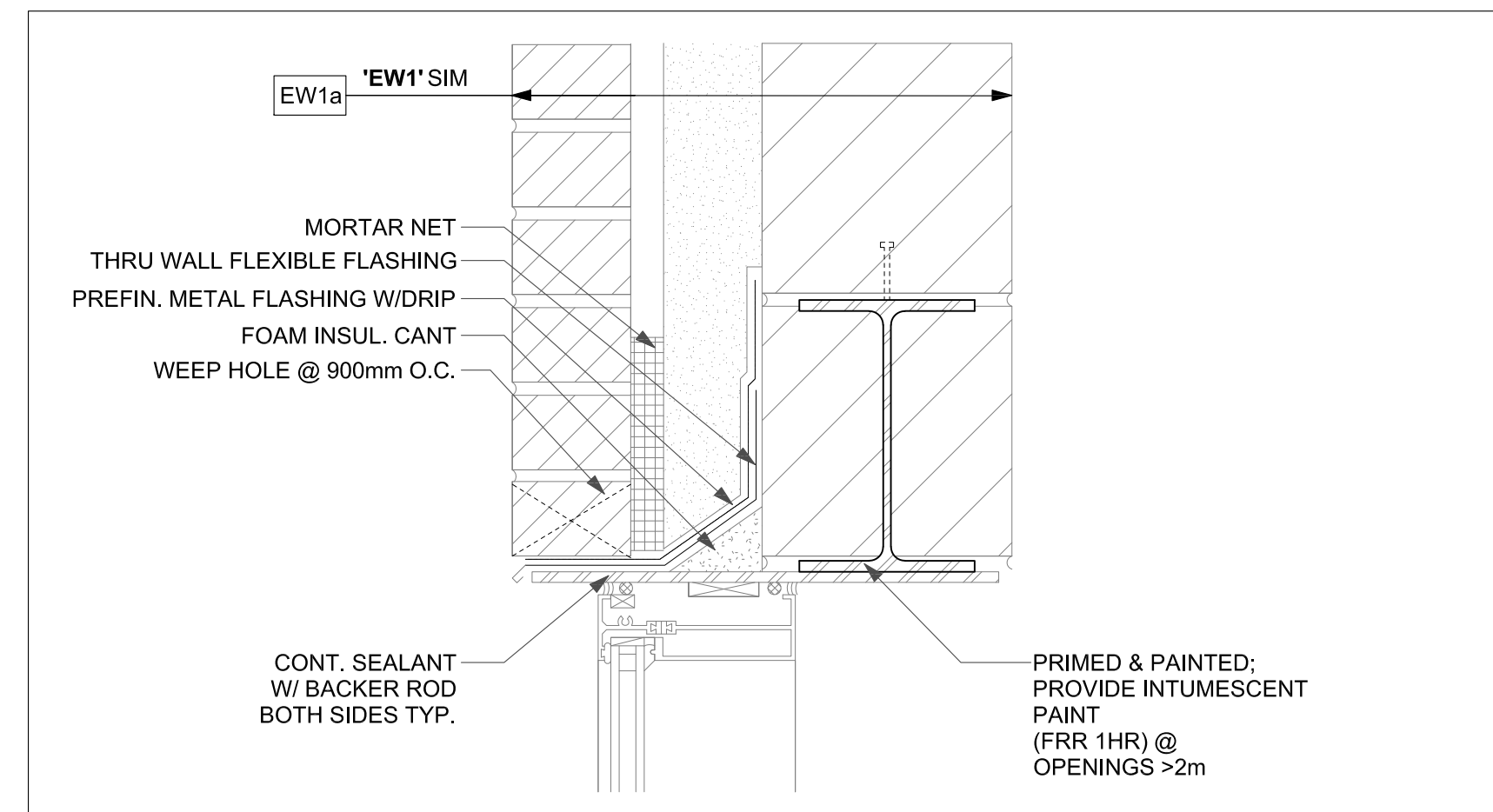
4 SECTION DETAIL - PARAPET @ MWP (TYP.)
A601 1:5



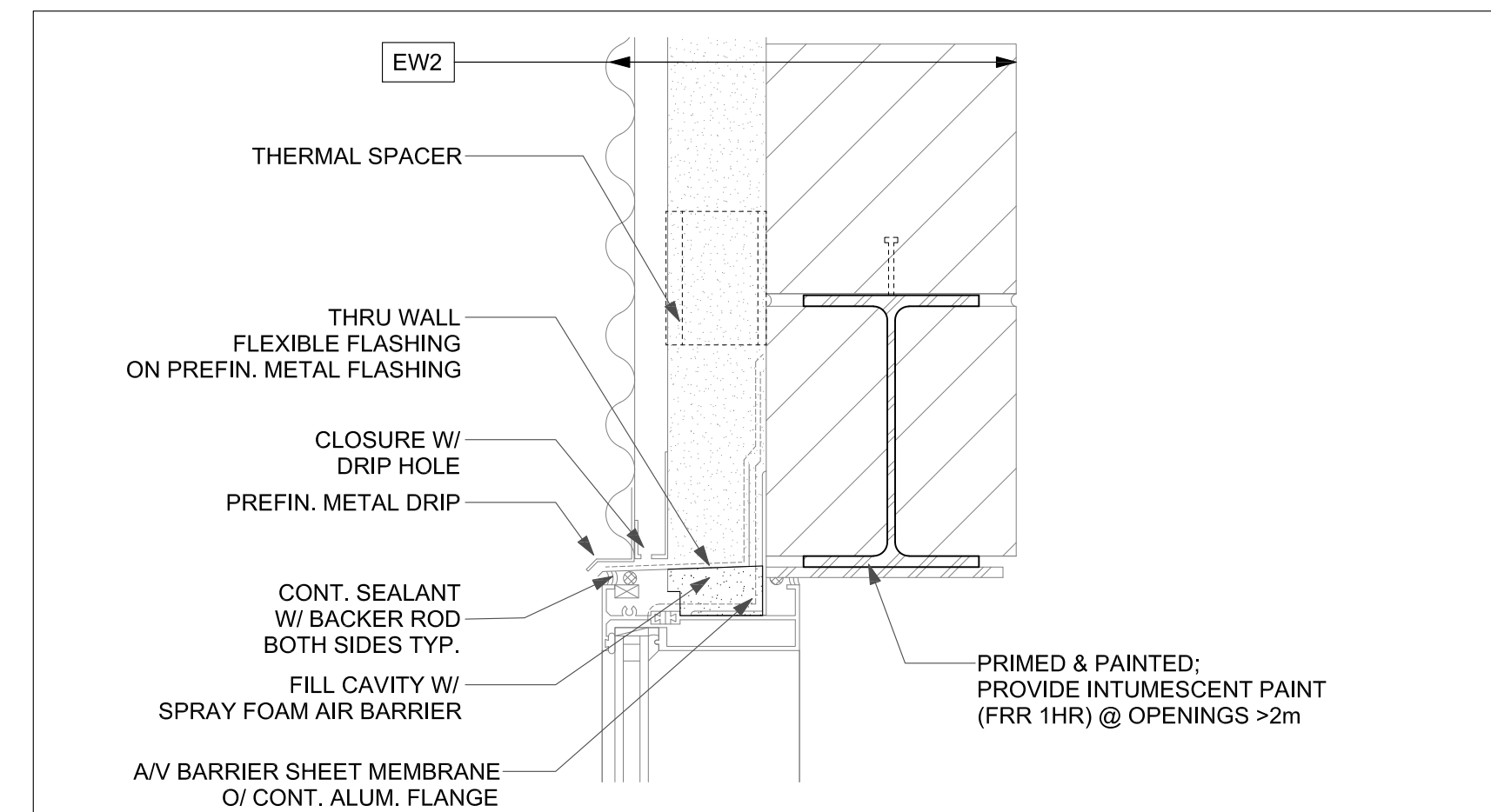
16 SECTION DETAIL - PARAPET @ NEW & EXISTING ROOF (TYP.)
A601 1:5



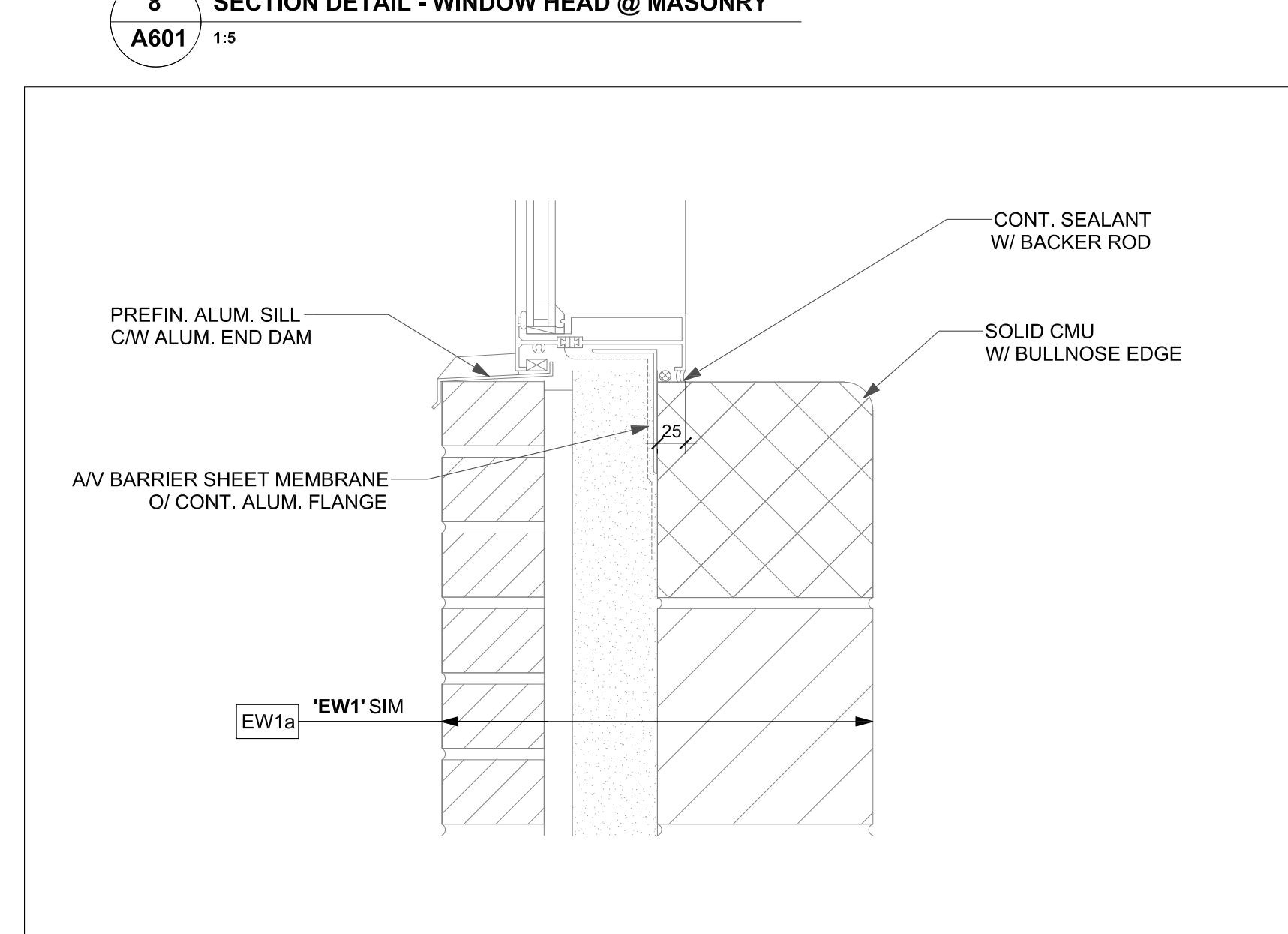
12 SECTION DETAIL - MWP @ ROOF
A601 1:5



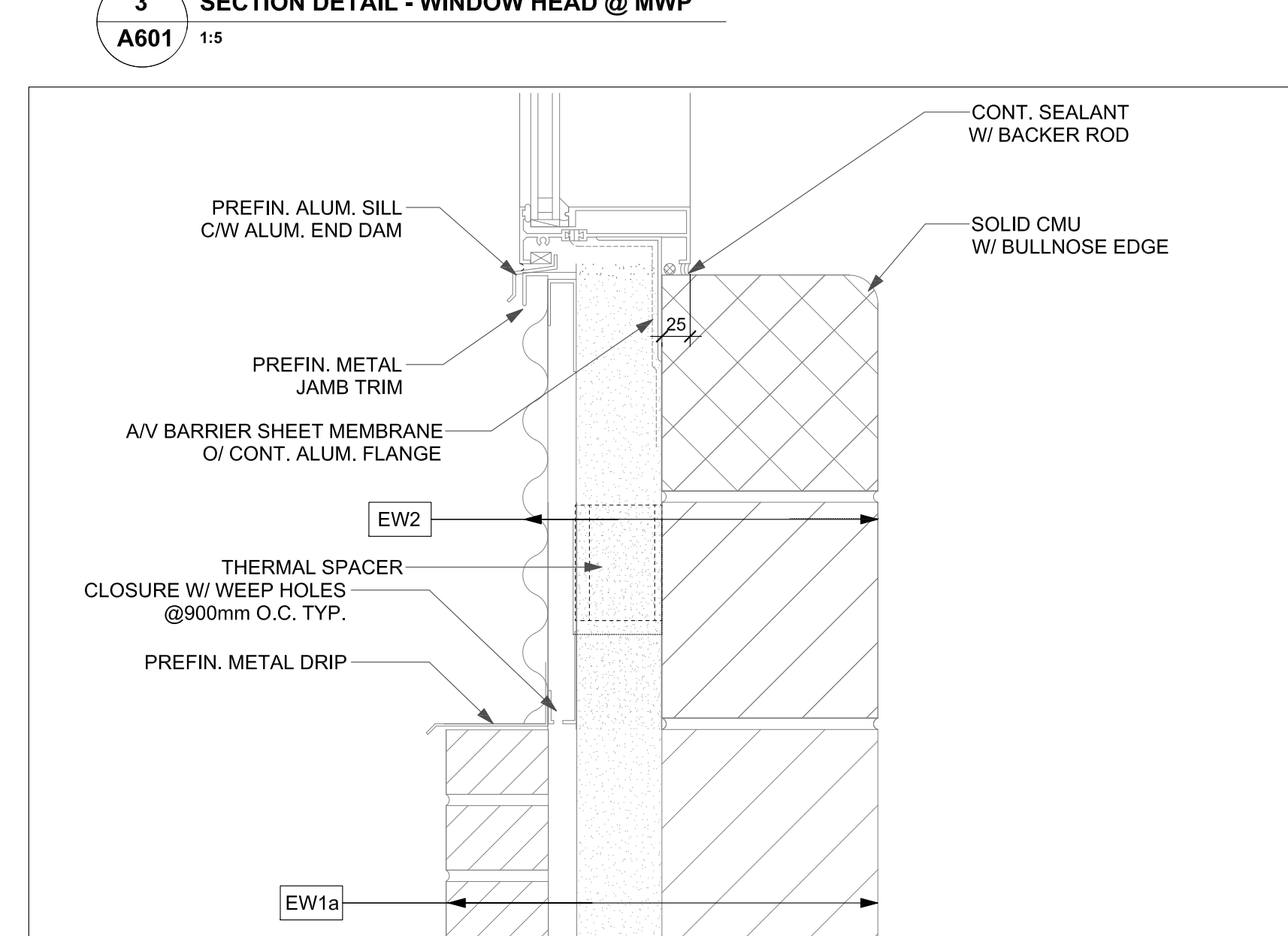
8 SECTION DETAIL - WINDOW HEAD @ MASONRY
A601 1:5



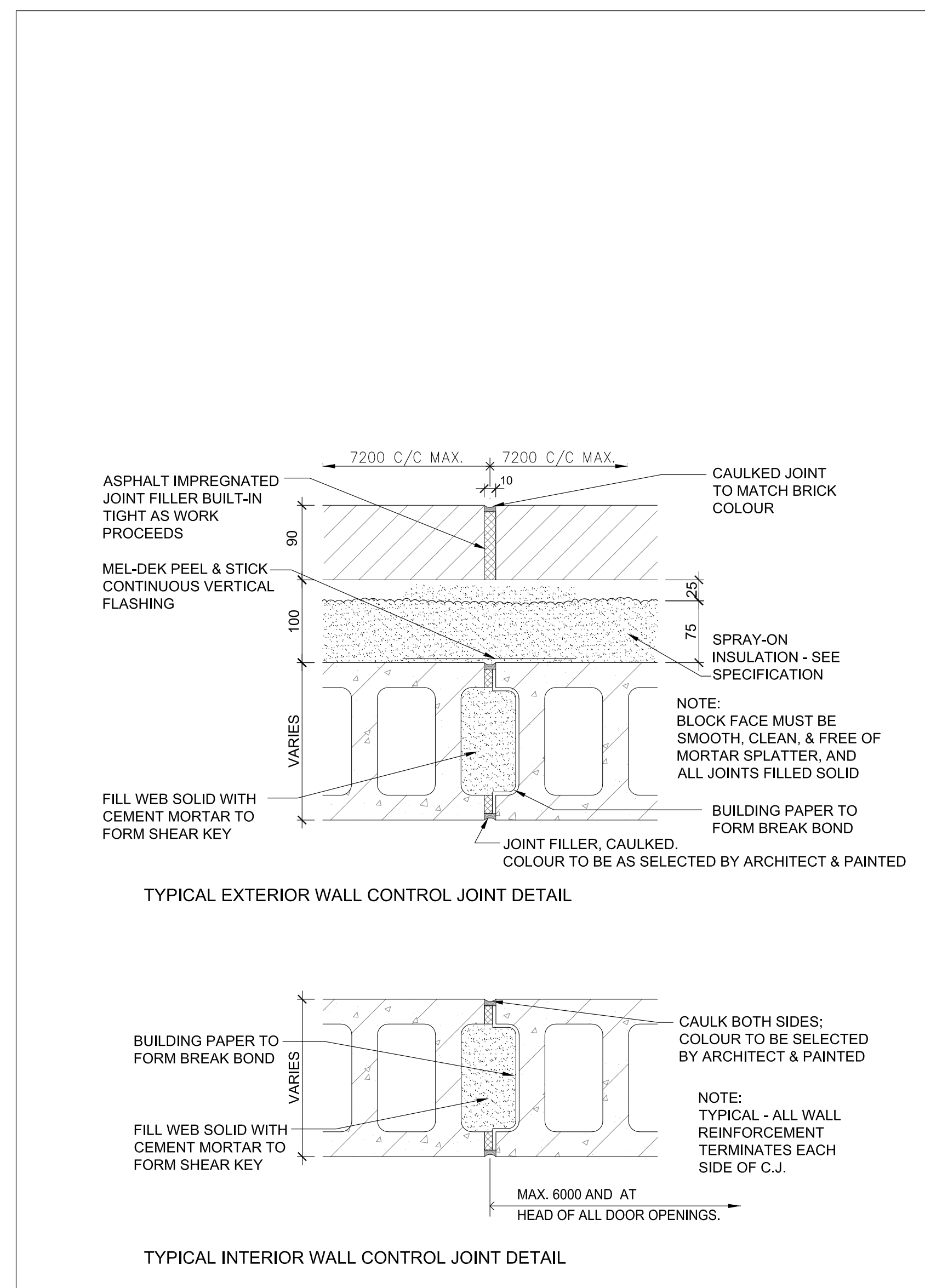
3 SECTION DETAIL - WINDOW HEAD @ MWP
A601 1:5



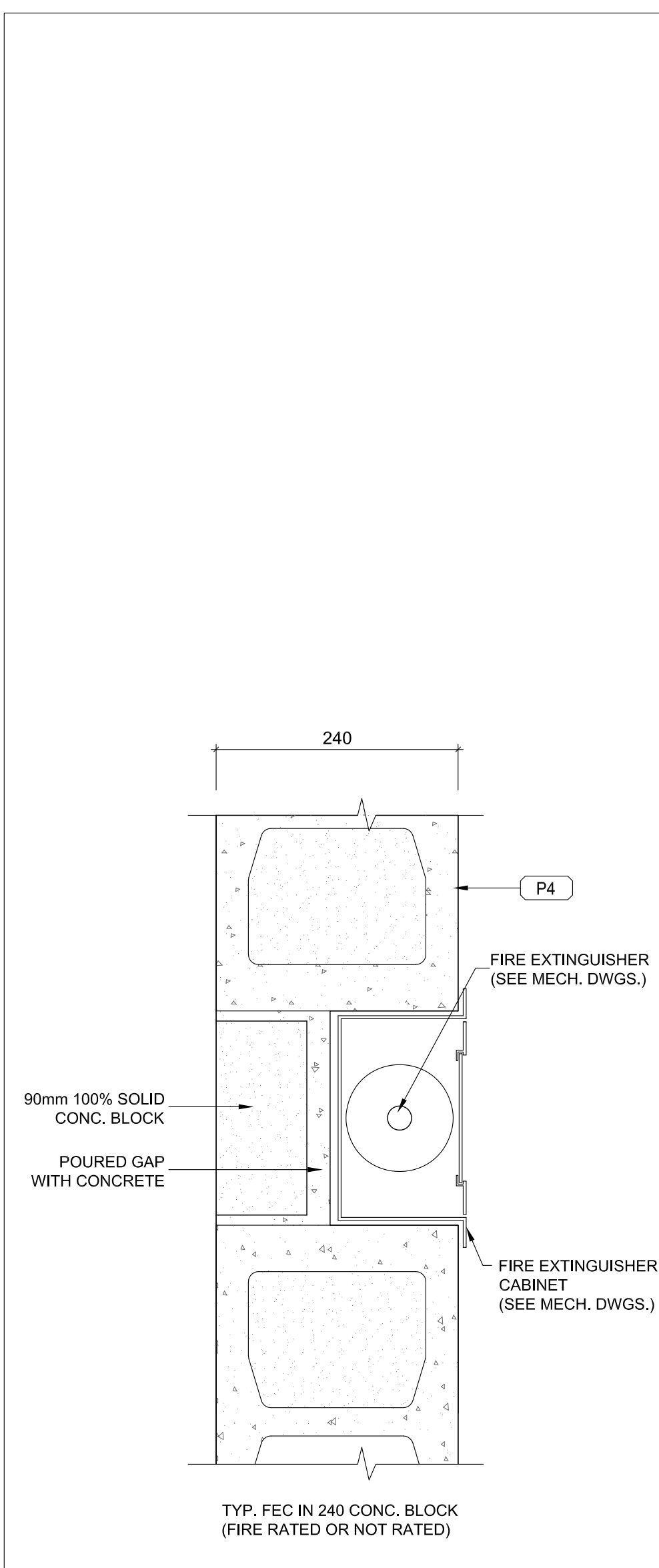
7 SECTION DETAIL - WINDOW SILL @ MASONRY
A601 1:5



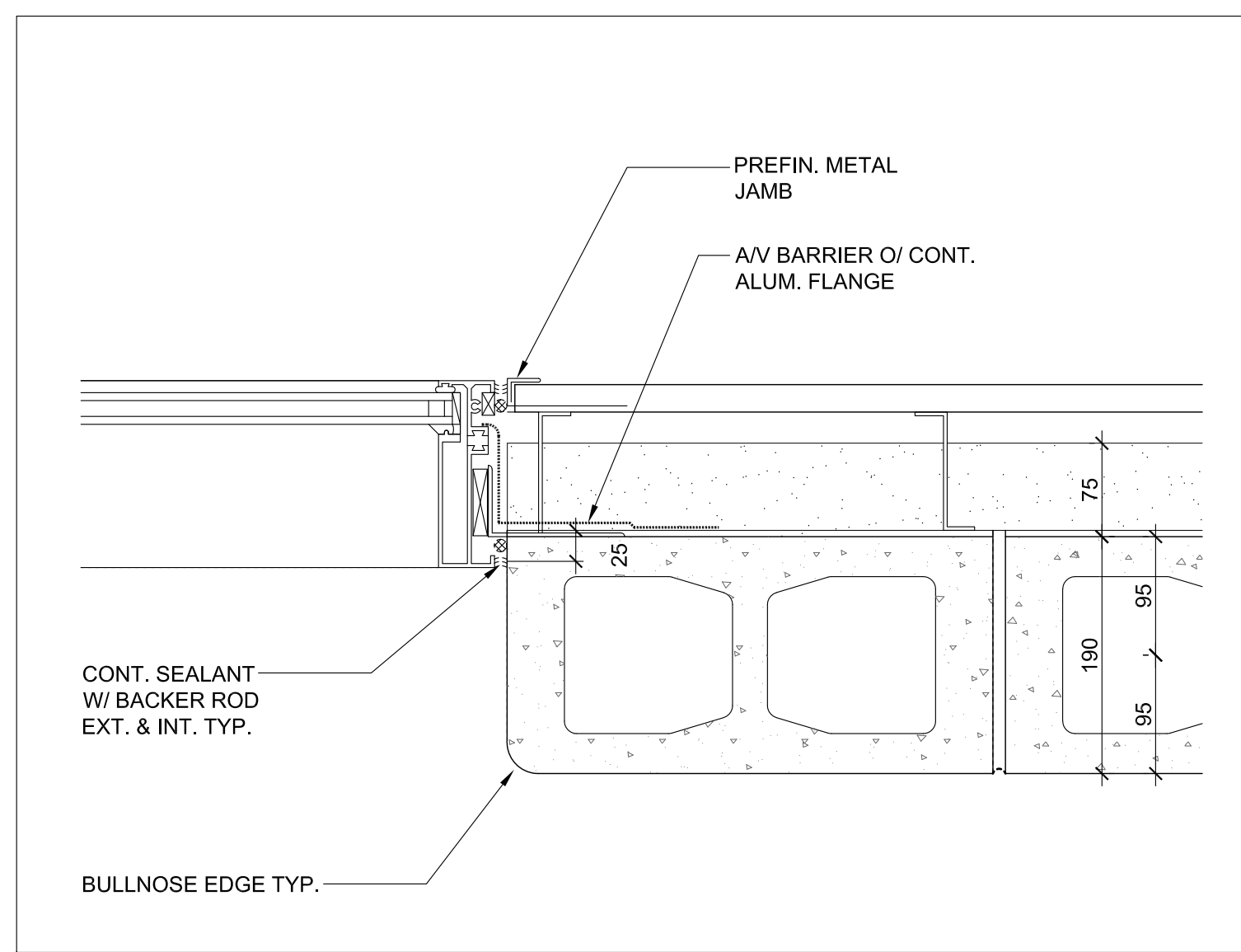
2 SECTION DETAIL - WINDOW SILL @ MWP & MWP SILL @ MASONRY
A601 1:5



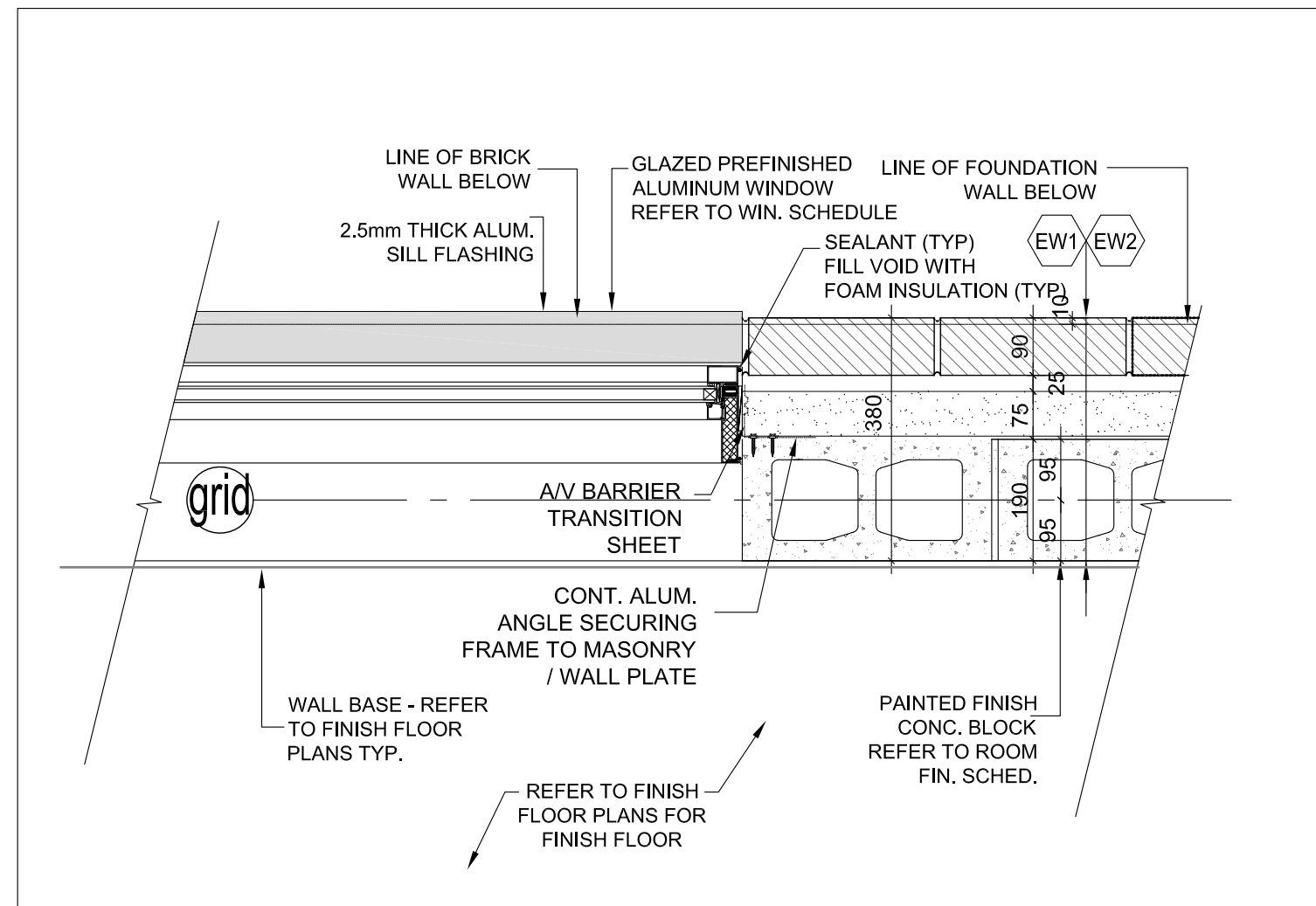
15 TYPICAL INT. & EXT. CONTROL JOINT DETAILS
A601 1:5



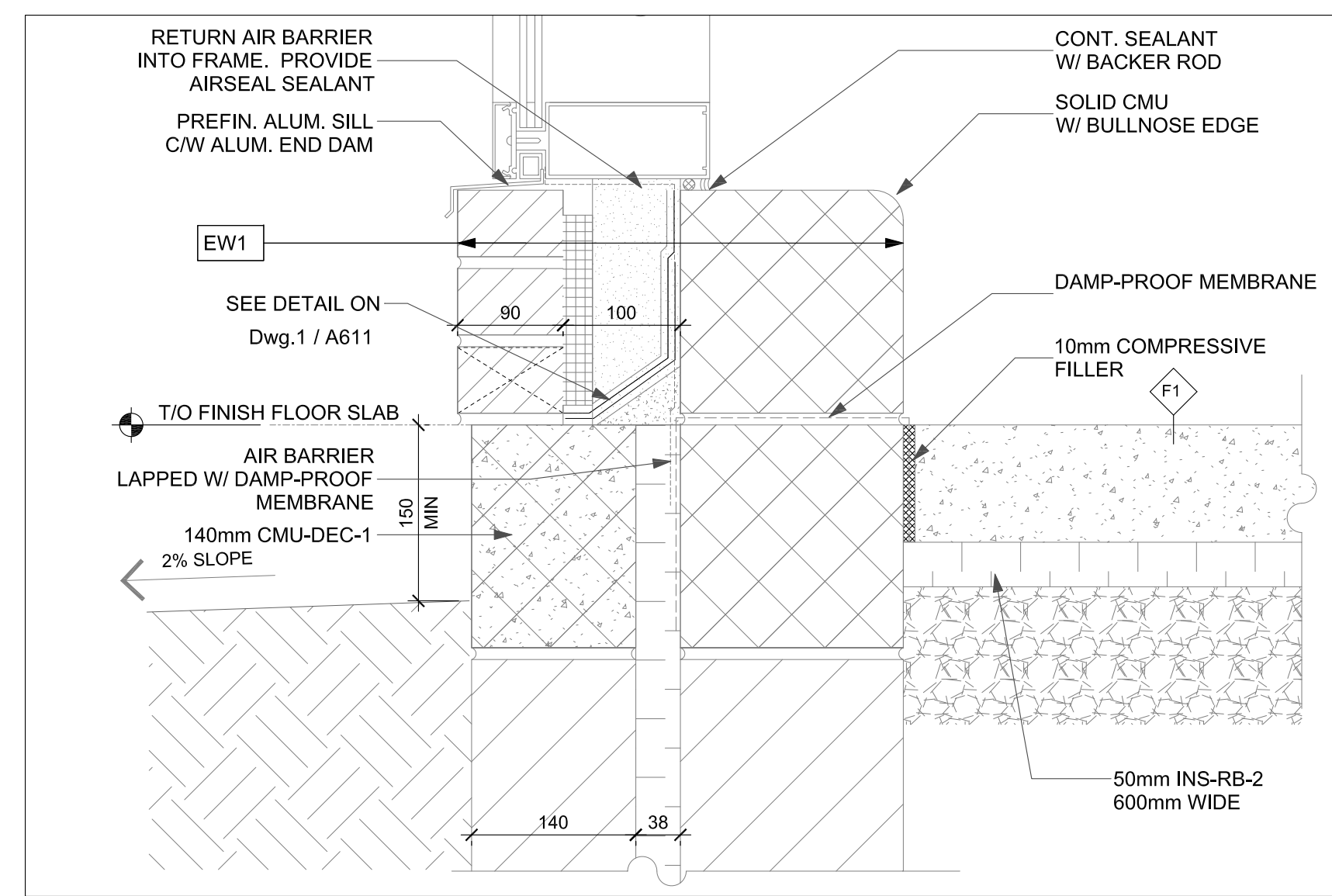
14 TYPICAL FEC PLAN DETAIL
A601 1:5



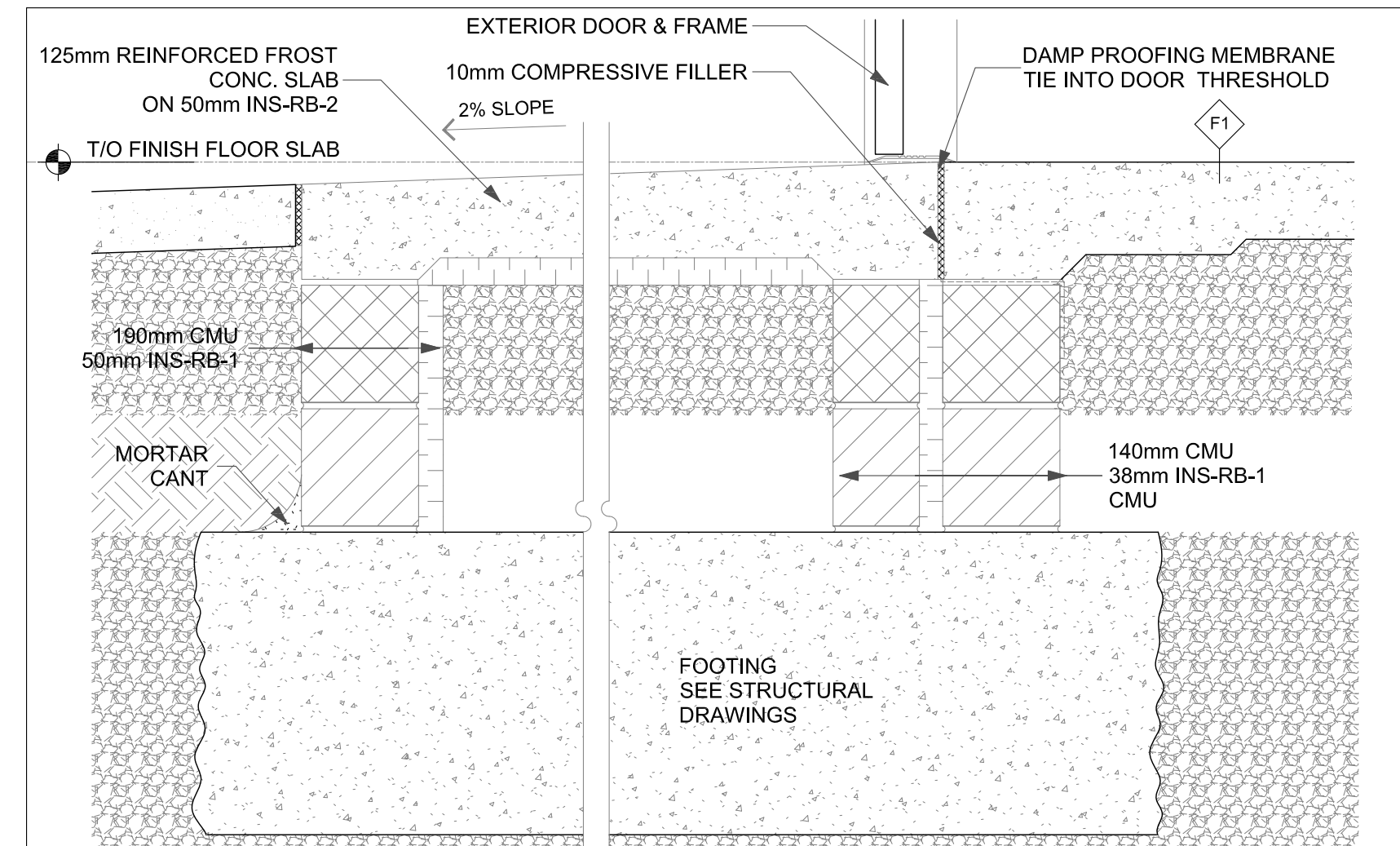
11 TYPICAL WINDOW JAMB DETAIL @ MWP
A601 1:5



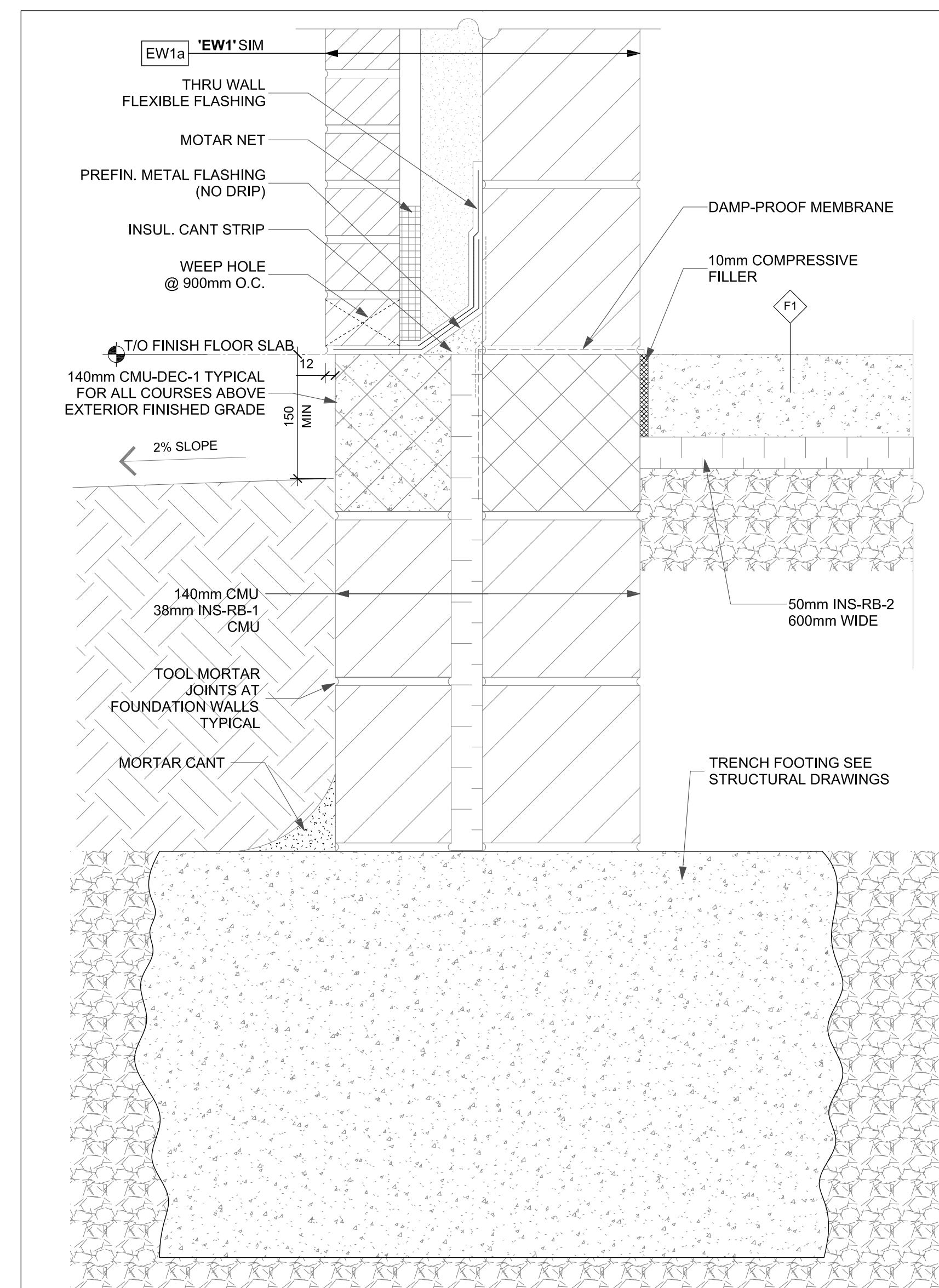
10 TYPICAL WINDOW JAMB DETAIL
A601 1:10



6 SECTION DETAIL - ES01 @ FOUNDATION
A601 1:5



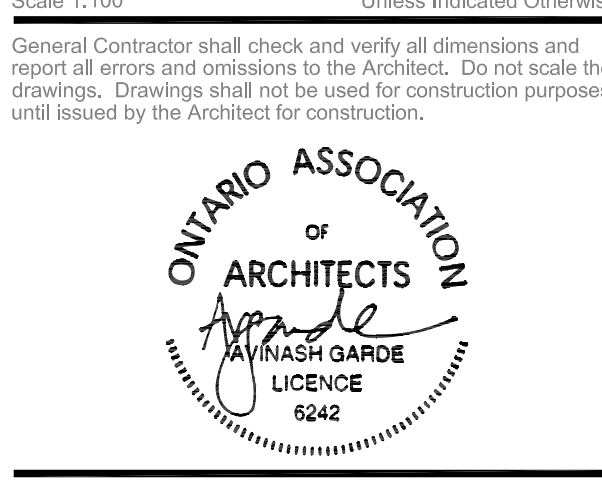
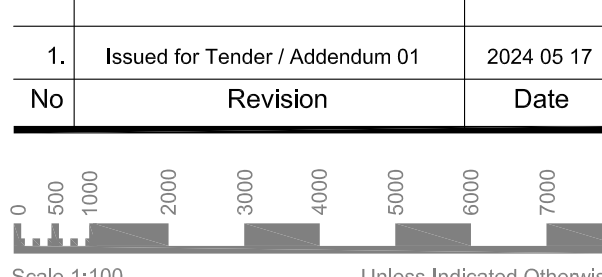
5 SECTION DETAIL - FROST SLAB
A601 1:10



1 SECTION DETAIL - FOUNDATION & SLAB ON GRADE
A601 1:5

Project North	True North
No. 1	Revisions
	Date

No.	Revision	Date
1.	Issued for Tender / Addendum 01	2024 05 17
No.	Revision	Date



Project Title:
PLAN & SECTION DETAILS

Scale: AS NOTED Date: 2024 04 29
Drawn by: AP Checked by: AG
Job No. Drawing No.

2314 A601

This drawing is sized for 30"x42" sheet size. Plot the sheet size, improve the drawing accordingly.

TYPICAL MILLWORK CONSTRUCTION

COUNTERTOP-1
PLM ON 19mm PARTICLE BOARD, POSTFORMED EDGE W/100mm HEIGHT COVERED INTEGRAL BACKSLASH. PROVIDE WATERPROOF DOUGLAS FIR AT WET AREAS (EXAMPLE AROUND SINKS).

TOP/ BOTTOM/ SIDE/ DIVIDER/ PANEL/ RAIL
19mm MCP FINISHED BOTH SIDE W/3mm PVC EDGE U.N.O.

SHELF-1
ADJUSTABLE SHELVING TO BE 25mm MCP FINISHED BOTH FACES W/3mm PVC EDGE U.N.O.

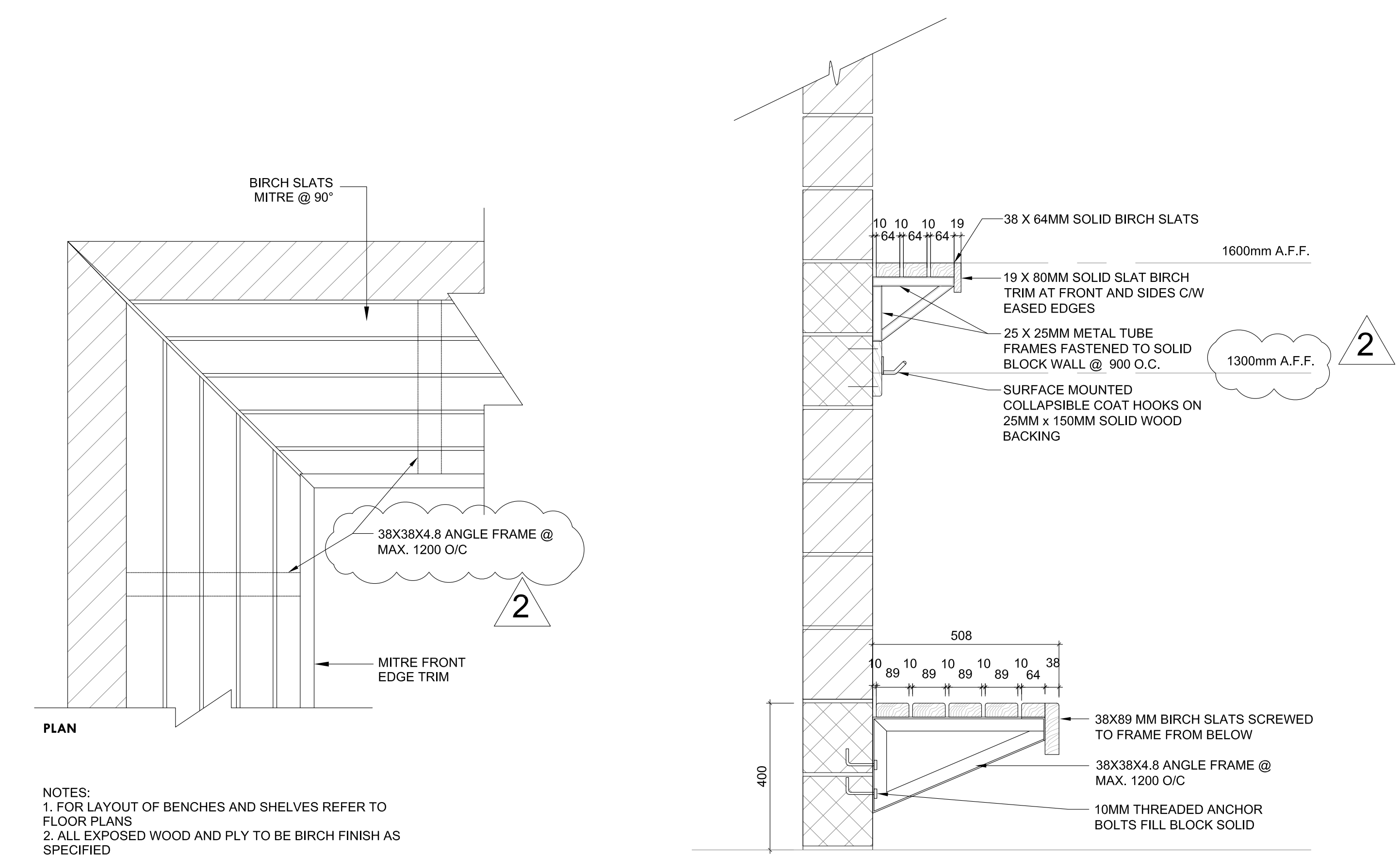
BACK
13mm MCP

DOOR-1
19mm MCP W/3mm PVC EDGE U.N.O. PROVIDE TYPICAL DOOR PULL.

DRAWER
BLUM METABOX DRAWER BODY & SIDE, 19mm MCP FRONT W/ 3mm PVC EDGE. PROVIDE TYPICAL DOOR PULL.

MILLWORK NOTES:

1. SEAL ALL MILLWORK @ WALL / FLOOR INTERSECTIONS. UNITS TO BE PROVIDED WITH FILLER PANELS, SIZED AS REQUIRED, TO ENCLOSE ENDS AT ADJACENT UNITS OR WALLS.



Project North True North

No. | Revisions | Date

1. | Issued for Addendum 01 | 2024 05 17

2. | Issued for Tender | 2024 05 03

No. | Revision | Date

1. | 1000 | 2000 | 3000 | 4000 | 5000

Scale: 1:100 Unless Indicated Otherwise

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

ONARIO ASSOCIATION OF ARCHITECTS

Professional Seal and Stamp

Professional Seal and Stamp

Professional Seal and Stamp

Professional Seal and Stamp

Professional Seal and Stamp

Professional Seal and Stamp

Professional Seal and Stamp

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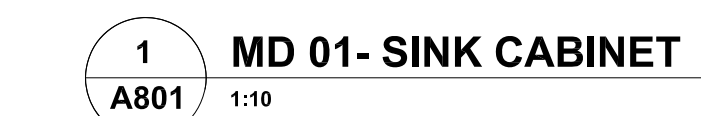
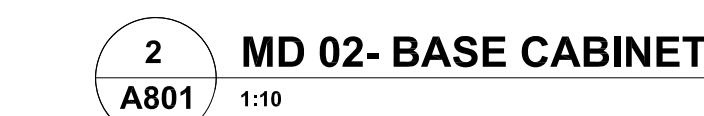
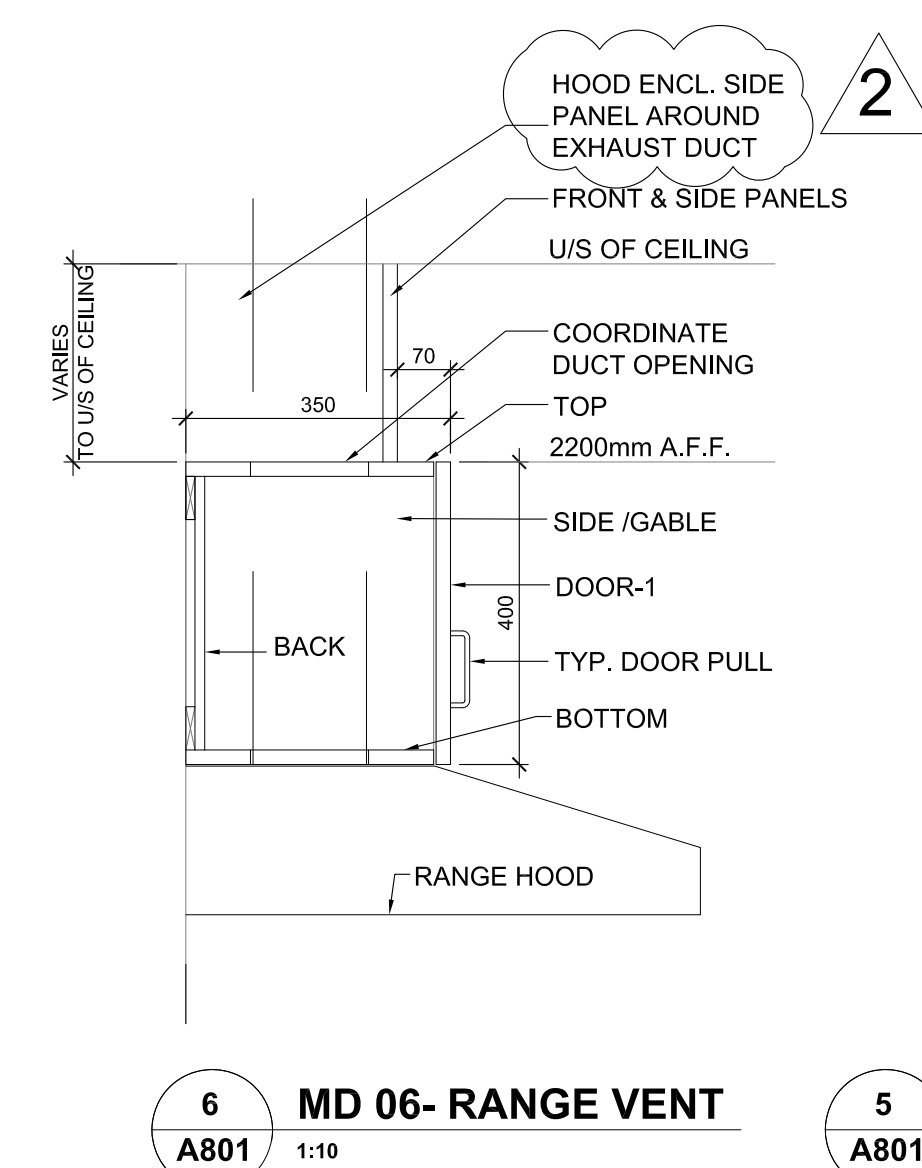
Professional Seal and Stamp

Professional Seal and Stamp

Professional Seal and Stamp

Professional Seal and Stamp

Professional Seal and Stamp



Drawing Title:
MILLWORK DETAILS

Scale: 1:10 Date: 2024 04 29

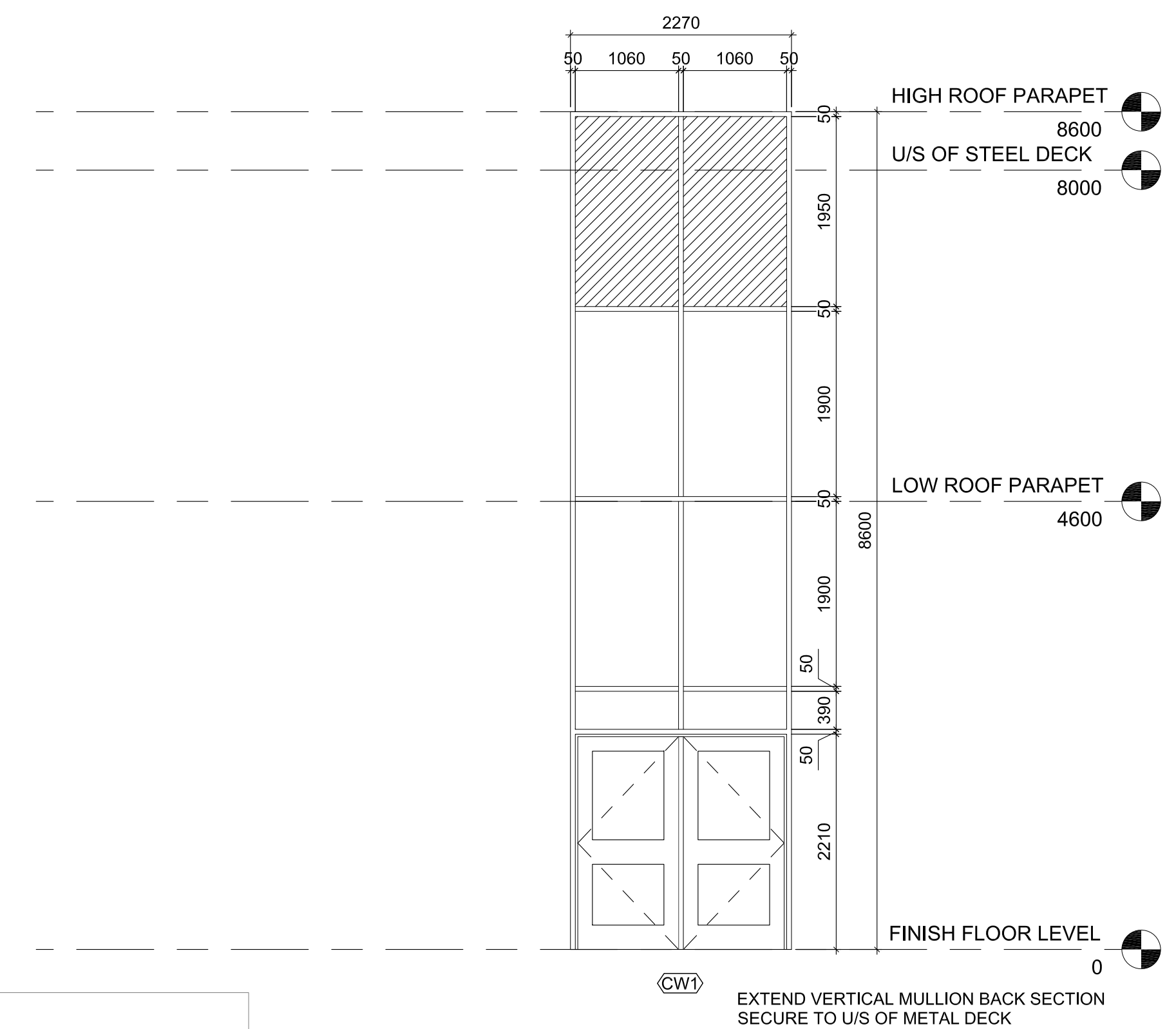
Drawn by: Checked by:

Job No. Drawing No.

2314 A801

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Plot the sheet size, increase the drawing accordingly.



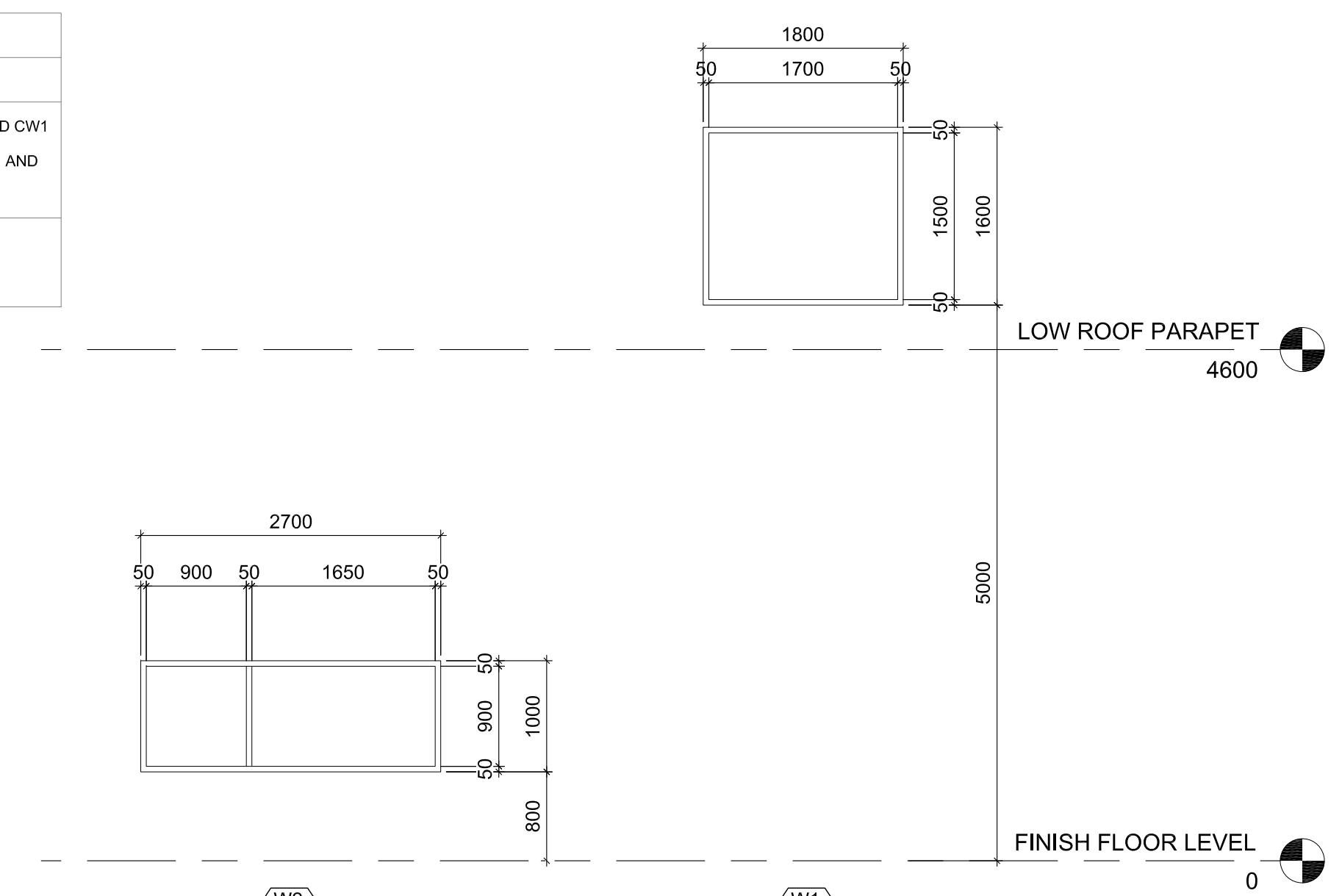
EXTERIOR CURTAIN WALL ELEVATIONS

1 : 50

- EXTERIOR CURTAIN WALL NOTES:**
- FRAMES TO BE PREFINISHED WITH METALLIC PAINT COATING.
 - CLEAR GLAZING TO BE SIG-CLR-1 U.N.O.
 - SGP-CLR-1 ALUMINUM CLOSURE PAN TO BE PREFINISHED WITH METALLIC PAINT COATING. COLOUR TO BE SAME AS FRAMES.
 - MULLION DEPTH TO BE DESIGNED BY SUPPLIER. TOTAL DEPTH SHALL NOT EXCEED 210mm. PROVIDE STEEL CHANNEL IN MULLION WHERE REQUIRED. INTERMEDIATE HORIZONTAL STRUCTURAL SUPPORT PROVIDED AS SHOWN ON DRAWING ONLY. PROVIDE STAMPED ENGINEERED SHOP DRAWING.

SYM	OPENESS	LOCATION	COMMENT:
WY1	3%	CW1, W1, W2	MANUAL ROLLER SHADES (RWS-2) @ W2 AND CW1 (FROM 2250AFF UP TO 8600AFF). MOTORIZED ROLLER SHADES (RWS-1) @ W1 AND CW1 (FROM 4600AFF UP TO 8600AFF).

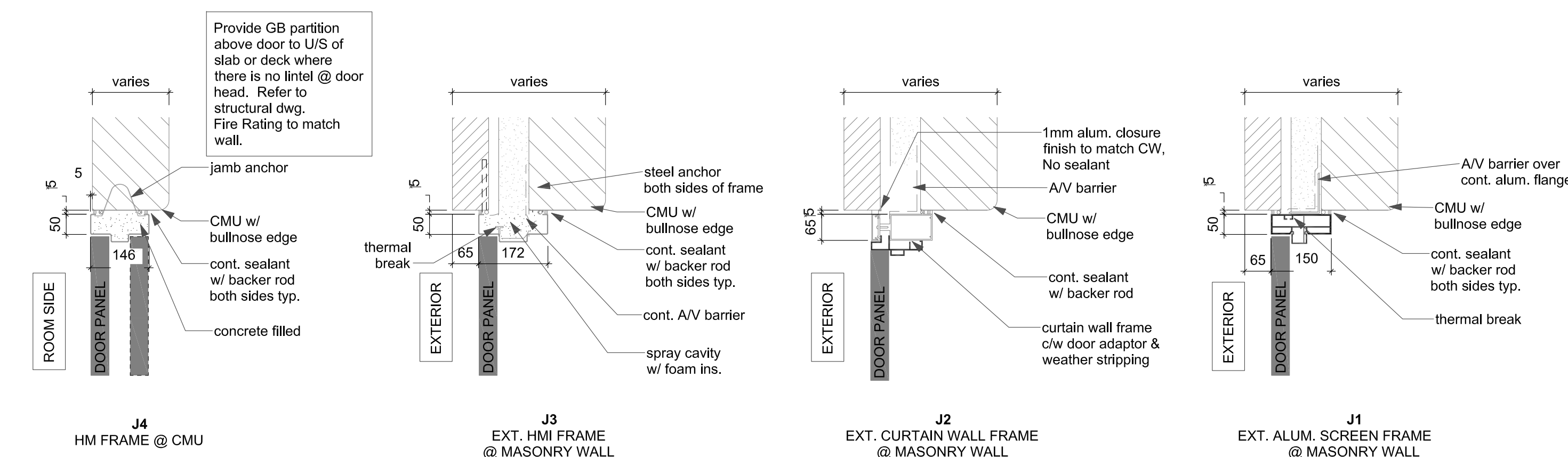
NOTES:
1) GC TO PROVIDE 15mm PL/WOOD AT U/S OF BEAM/INTEL FOR WINDOW COVERING INSTALLATION WHERE NECESSARY.



EXTERIOR WINDOW SCHEDULE

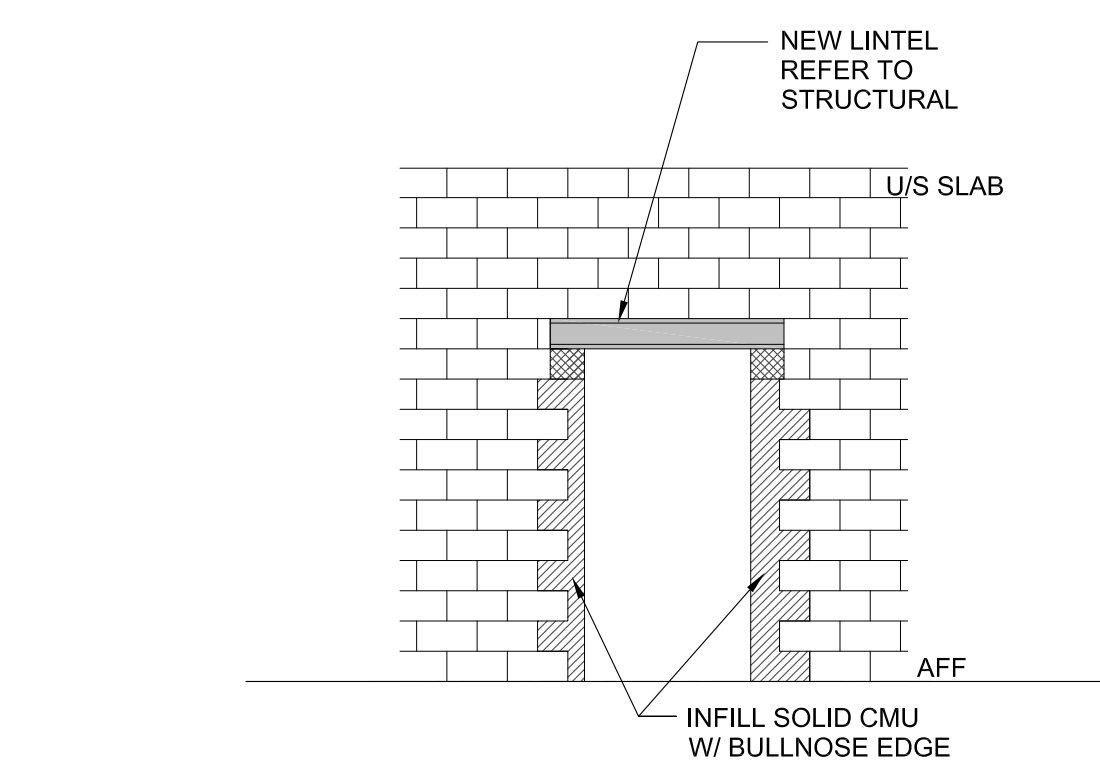
1 : 50

- EXTERIOR WINDOW NOTES:**
- FRAME TO BE FINISHED WITH METALLIC PAINT COATING. GLAZING TO BE SIG-CLR-1 U.N.O. SPANDREL TO BE SGP-CLR-1 U.N.O.



DOOR JAMB DETAILS

1 : 10



OPENING IN EXISTING WALL (TYP.)

1 : 50

DOOR LOCATION		DOOR				FRAME				Glazing	Door Opener	Fire Rating	Comments		
Door Mark	Room #	Room Name	Door Type	No of Leafs	Panel Width	Panel Ht	Door Mat	Door Finish	Frame Type					Frame Mat	Frame Finish
133	133	SERVICERY	CS	1	1050	1910	GS	PC	CS	GS	PC	-	-	120	FIRE SHUTTER
134	134	WASHROOM	A1	1	950	2150	WD	PL-FR	F1a	HM	PT	-	-	90	DOOR CLOSER
135	135	WASHROOM	A1	1	950	2150	WD	PL-FR	F1a	HM	PT	-	-	90	DOOR CLOSER
136	136	CORRIDOR	B1	2	1050	2150	HM	PT	F2a	HM	PT	GL-6	-	90	DOOR CLOSER
137	137	CHANGE RM.	A1	1	950	2150	WD	PL	F1	HM	PT	-	-	-	-
138	138	CHANGE RM.	A1	1	950	2150	WD	PL	F1	HM	PT	-	-	-	-
139A	139A	STOR. RM.	A1	1	1100	2150	HM	PT	F1	HM	PT	-	-	-	-
139B	139B	STOR. RM.	A1	1	950	2150	HM	PT	F1	HM	PT	-	-	-	-
139C	139	GYMNASIUM	C1	2	1050	2150	AL	MPC	CW1	AL	MPC	SIG-CLR-1	-	-	PANIC, DOOR CLOSER
139D	139	GYMNASIUM	C1	2	1075	2150	AL	MPC	F3	AL	MPC	SIG-CLR-1	-	-	REMOVABLE MULLION, PANIC, DOOR CLOSER
140	140	EXT. STOR. RM.	A1	1	1100	2150	HM	PT	F1	HM	PT	-	-	-	-
V4A	V-4	VEST.	C1	1	1050	2150	AL	MPC	ES01	AL	MPC	SIG-CLR-1	-	-	PANIC, DOOR CLOSER
V4B	V-4	VEST.	B2	1	1050	2150	HM	PT	F1	HM	PT	GL-3	-	-	PANIC, DOOR CLOSER

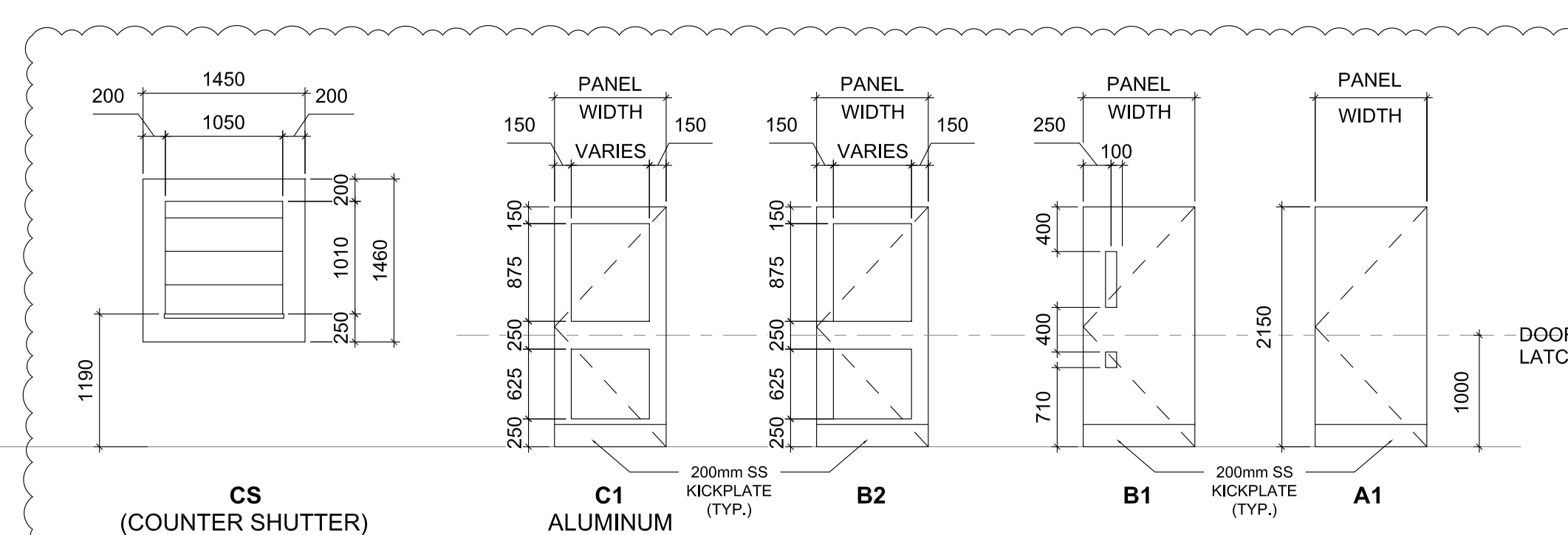
LEGEND:

- AL ALUMINUM
- CS COUNTER SHUTTER
- CR CARD READER
- GL-3 TEMPERED GLASS
- GL-6 FIRE-RATED GLASS
- GS GALVANIZED STEEL
- HM HOLLOW METAL
- HI INSULATED HOLLOW METAL

- MPC METALLIC PAINT COATING
- PC POWDER COATED
- PL HIGH PRESSURE DECORATIVE LAMINATE
- PL-FR HIGH PRESSURE DECORATIVE LAMINATE - FLAME-RETARDANT
- PT PAINTED/STAINED
- SIG-CLR-1 SEALED INSULATING GLASS UNIT TYPE 1
- WD WOOD

DOOR NOTES:

- PROVIDE STAINLESS STEEL THRESHOLD COVER @ ALL EXTERIOR DOORS.
- PROVIDE APPROPRIATE THRESHOLD AND TRANSITION STRIPS @ INTERIOR DOORS.
- ALL THRESHOLDS AND TRANSITION STRIP TO MEET OBC BARRIER FREE REQUIREMENT.
- COORDINATE DOOR UNDERCUT WITH MECHANICAL DRAWINGS.
- STAIN WOOD DOOR EDGE TO MATCH PLAM COLOUR.
- STAIN WOOD JAMB TO MATCH DOOR COLOUR.
- DOOR CLOSER MUST BE PROVIDED AT ALL DOOR LOCATIONS WITHIN FIRE SEPARATION AND FIREWALL.

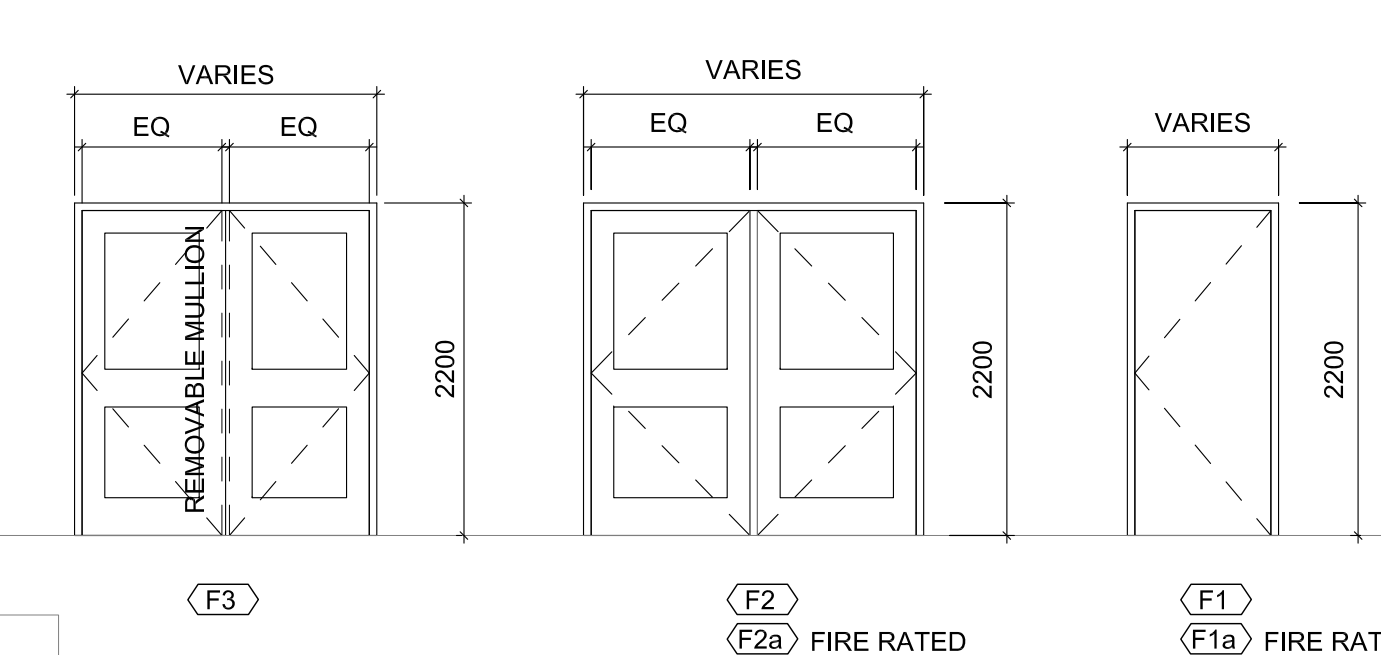


DOOR TYPES

1 : 50

HM DOOR FRAME TYPE NOTES:

- REFER TO SCHEDULE FOR FIRE RESISTANCE RATING.
- REFER TO SCHEDULE FOR THERMALLY BROKEN FRAME.
- PROVIDE TEMPERED GLASS (GL-3) IN INTERIOR DOORS & SCREENS UNO.
- PROVIDE FIRE-RATED GLASS (GL-6) IN FIRE RATED FRAME TYP.



HOLLOW METAL DOOR FRAME TYPE

1 : 50

GLAZING HATCH LEGEND:

- SPANDREL GLASS (SGP-CLR-1)
- WI/INT. ALUM. CLOSURE PAN
- CLEAR GLAZING

Project North True North

No.	Revisions	Date
3.	Issued for Addendum 01	2024 05 17
2.	Issued for Tender	2024 05 03
1.	Issued for Building Permit	2024 05 02
No.	Revision	Date

Scale: 1:100 Unless Indicated Otherwise

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



Drawing Title:
DOOR SCHEDULE & DETAILS, WINDOW & CW ELEVATIONS

Scale: AS NOTED Date: 2024 04 29

Drawn by: Checked by:
Job No. Drawing No.

2314 A901

This drawing is sized for 30"x42" sheet size. Plot the above data, improve the drawing accordingly.

Halton District School Board

Pre-Renovation Designated Substances and Hazardous Materials Survey

Glenview Public School

143 Townsend Avenue, Burlington, Ontario

May 17, 2024

Pre-Renovation Designated Substances and Hazardous Materials Survey
Glenview Public School

Pre-Renovation Designated Substances and Hazardous Materials Survey

Glenview Public School
143 Townsend Avenue, Burlington, Ontario

May 17, 2024

Prepared By:

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Prepared For:

Halton District School Board
J.W. Singleton Education Center
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Attention:

Jamie Leach
Specialist - Capital Projec

Our Ref:

Project No. 30226491

Prepared by:



Paul Smith, B.Sc., IHT
Senior Industrial Hygienist



Jean Daigle
Senior Technical Specialist

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Tables

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Appendices

Appendix A	Floor Plans
Appendix B	Laboratory Reports
Appendix C	Summary of Asbestos, Lead and Silica Work Classifications

1 Introduction

Arcadis Canada Inc. (Arcadis) was retained by the Halton District School Board (HDSB) to conduct a pre-renovation designated substances and hazardous materials survey in designated areas of Glenview Public School located at 143 Townsend Avenue, Burlington, Ontario.

The information in this report is to be provided to all bidders on a project in accordance with the requirements of the *Occupational Health and Safety Act*.

The building is a one-story masonry structure constructed in 1951 with two additions constructed in 1952 and 1958.

The designated study areas were limited to areas affected by the proposed renovation project and are based on information provided by the HDSB.

The designated study areas and construction eras are shown on the floor plans provided in Appendix A.

The survey was undertaken to report on the presence or suspected presence of readily observable designated substances and hazardous materials.

1.1 Scope of Work

The scope of work for our investigation included:

- review of existing information;
- investigation of readily-accessible areas in the designated study areas for the presence of designated substances and hazardous materials used in building construction materials;
- obtaining representative bulk samples of materials suspected of containing asbestos;
- laboratory analyses of bulk samples for asbestos content; and
- preparation of a report outlining the findings of the investigation.

Mr. Paul Smith of Arcadis visited the site on May 14, 2024, to conduct the designated substances and hazardous materials survey at Glenview Public School.

2 Regulatory Discussion and Methodology

Ontario Occupational Health and Safety Act (OHSA)

The Ontario *Occupational Health and Safety Act* (OHSA) sets out, in very general terms, the duties of employers and others to protect workers from health and safety hazards on the job. These duties include, but are not limited to:

- taking all reasonable precautions to protect the health and safety of workers [clause 25(2)(h)];
- ensuring that equipment, materials and protective equipment are maintained in good condition [clause 25(1)(b)];
- providing information, instruction and supervision to protect worker health and safety [clause 25(2)(a)]; and
- acquainting a worker or a person in authority over a worker with any hazard in the work and in the handling, storage, use, disposal and transport of any article, device, equipment or a biological, chemical or physical agent [clause 25(2)(d)].

In addition, Section 30 of the OHSA deals with the presence of designated substances on construction projects. Compliance with the OHSA and its regulations requires action to be taken where there is a designated substance hazard on a construction project.

Section 30 of the OHSA requires the owner of a project to determine if designated substances are present on a project and, if so, to inform all potential contractors as part of the bidding process. Contractors who receive this information are to pass it onto other contractors and subcontractors who are bidding for work on the project.

Regulation for Construction Projects, O.Reg. 213/91

The *Regulation for Construction Projects*, O.Reg. 213/91, applies to all construction projects. The following sections of the regulation would apply to situations where there is the potential for workers to be exposed to designated substances:

- Section 14 (5) A competent person shall perform tests and observations necessary for the detection of hazardous conditions on a project.
- Section 21 (1) A worker shall wear such protective clothing and use such personal protective equipment or devices as are necessary to protect the worker against the hazards to which the worker may be exposed.
- (2) A worker's employer shall require the worker to comply with subsection (1).
- (3) A worker required to wear personal protective clothing or use personal protective equipment or devices shall be adequately instructed and trained in the care and use of the clothing, equipment or device before wearing or using it.

Section 30 Workers who handle or use substances likely to endanger their health shall be provided with washing facilities with clean water, soap and individual towels.

Section 46 (1) A project shall be adequately ventilated by natural or mechanical means,
(a) if a worker may be injured by inhaling a noxious dust or fume;
(2) If it is not practicable to provide natural or mechanical ventilation in the circumstances described in clause (1)(a), respiratory protective equipment suitable for the hazard shall be provided and be used by the workers.

Section 59 If the dissemination of dust is a hazard to a worker, the dust shall be adequately controlled or each worker who may be exposed to the hazard shall be provided with adequate personal protective equipment.

Regulation for Designated Substances (O.Reg. 490/09)

The *Designated Substance Regulation* (O.Reg. 490/09) specifies occupational exposure limits (OELs) for designated substances and requires an assessment and a control program to ensure compliance with these OELs.

Although, O.Reg. 490/09 and the OELs do not apply to an employer on a construction project, or to their workers at the project, employers still have a responsibility to protect the health of their workers and to comply with the OHSA and other applicable regulations. Section 25(2)(h) of the OHSA requires that employers take "every precaution reasonable in the circumstances for the protection of a worker".

Other regulatory requirements (and guidelines) which apply to control of exposure to designated substances and hazardous materials are referenced in the sections below.

2.1 Asbestos

Asbestos has been widely used in buildings, both in friable applications (materials which can be crumbled, pulverized or powdered by hand pressure, when dry) such as pipe and tank insulation, sprayed-on fireproofing and acoustic texture material and in non-friable manufactured products such as floor tile, gaskets, cement board and so on. The use of asbestos in friable applications was curtailed around the mid-1970s and, as such, most buildings constructed prior to about 1975 contain some form of friable construction material with an asbestos content. The use of asbestos in certain non-friable materials continued beyond the mid-1970s.

Control of exposure to asbestos is governed in Ontario by Regulation 278/05 – *Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*. Disposal of asbestos waste (friable and non-friable materials) is governed by Ontario Regulation 278/05 and by Ontario Regulation 347, *Waste Management – General*. O.Reg. 278/05 classifies asbestos work operations into three types (Type 1, 2 and 3), as shown in Table C-1 in Appendix C, and specifies procedures to be followed in conducting asbestos abatement work.

2.2 Lead

Lead is a heavy metal that can be found in construction materials such as paints, coatings, mortar, concrete, pipes, solder, packings, sheet metal, caulking, glazed ceramic products and cable splices. Lead has been used historically in exterior and interior paints.

The *Surface Coating Materials Regulations* (SOR/2016-193) made pursuant to the *Canada Consumer Product Safety Act* states that a surface coating material must not contain more than 90 mg/kg total lead. Health Canada defines a lead-containing surface coating as a paint or similar material that dries to a solid film that contains over 90 mg/kg dry weight of lead.

Information from the United States Occupational Health and Safety Administration (OSHA) suggests that the improper removal of lead paint containing 600 mg/kg lead results in airborne lead concentrations that exceed half of the permissible exposure limit. Lead concentrations as low as 90 mg/kg may present a risk to pregnant women and children⁽¹⁾.

The *National Plumbing Code* allowed lead as an acceptable material for pipes until 1975 and in solder until 1986.

The Ministry of Labour *Guideline, Lead on Construction Projects*, dated April 2011, provides guidance in the measures and procedures that should be followed when handling lead containing materials during construction projects. In the guideline, lead-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of lead, as shown in Appendix C, Table C-2. Any operation that may expose a worker to lead that is not a Type 1, Type 2, or Type 3b operation, is classified as a Type 3a operation.

2.3 Mercury

Mercury has been used in electrical equipment such as alkaline batteries, fluorescent light bulbs (lamps), high intensity discharge (HID) lights (mercury vapour, high pressure sodium and metal halide), “silent switches” and in instruments such as thermometers, manometers and barometers, pressure gauges, float and level switches and flow meters. Mercury-containing lamps, the bulk of which are 1.22 m (four foot) fluorescent lamps contain between 7 and 40 mg of mercury each. Mercury compounds have also been used historically as additives in latex paint to protect the paint from mildew and bacteria during production and storage.

The intentional addition of mercury to Canadian-produced consumer paints for interior use was prohibited in 1991. Mercury may have remained in paints after 1991, however, as a result of impurities in the paint ingredients or cross-contamination due to other manufacturing processes. The *Surface Coating Materials Regulations* made under the *Hazardous Products Act* set a maximum total mercury concentration of 10 mg/kg (0.001 percent) for surface coating materials (including paint). This criterion level applies to the sale and importation of new surface coating materials.

⁽¹⁾ *Lead-Containing Paints and Coatings: Preventing Exposure in the Construction Industry*. WorkSafe BC, 2011.

Mercury-containing thermostats and silent light switches are mercury tilt switches which are small tubes with electrical contacts at one end of the tube. A mercury tilt switch is usually present when no switch is visible. Mercury switches often have the word "TOP" stamped on the upper end of the switch, which is visible after removing the cover plate. If mercury switches are to be removed, the entire switch should be removed and placed into a suitable container for storage and disposal.

Waste light tubes generated during renovations or building demolition and waste mercury from equipment must either be recycled or disposed of in accordance with the requirements of Ont. Reg. 347 - *Waste Management, General*.

Waste mercury in amounts less than 5 kg (per month) are exempt from the generator registration requirements prescribed by O.Reg. 347 – *Waste Management – General*. Waste mercury from mercury switches or gauges should, however, be properly collected and shipped to a recycling facility or disposed of as a hazardous waste. Removal of mercury-containing equipment (e.g., switches, gauges, controls, etc.) should be carried out in a manner which prevents spillage and exposure to workers.

2.4 Silica

Silica exists in several forms of which crystalline silica is of most concern with respect to potential worker exposures. Quartz is the most abundant type of crystalline silica. Some commonly used construction materials containing silica include brick, refractory brick, concrete, concrete block, cement, mortar, rock and stone, sand, fill dirt, topsoil and asphalt containing rock or stone.

The Ministry of Labour *Guideline, Silica on Construction Projects*, dated April 2011, provides guidance in controlling exposure to silica dust during construction activities. In the guideline, silica-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of respirable crystalline silica in the form of cristobalite, tridymite, quartz and tripoli as shown in Appendix C, Table C-3.

2.5 Vinyl Chloride

Vinyl chloride vapours may be released from polyvinyl chloride (PVC) products in the event of heating or as a result of decomposition during fire. PVC is used in numerous materials that may be found in building construction, including, for example, piping, conduits, siding, window and door frames, plastics, garden hoses, flooring and wire and cable protection.

2.6 Acrylonitrile

Acrylonitrile is used to produce nitrile-butadiene rubber, acrylonitrile-butadiene-styrene (ABS) polymers and styrene-acrylonitrile (SAN) polymers. Products made with ABS resins which may be found in buildings include telephones, bottles, packaging, refrigerator door liners, plastic pipe, building panels and shower stalls. Acrylonitrile can be released into the air by combustion of products containing ABS.

2.7 Other Designated Substances

Isocyanates are a class of chemicals used in the manufacture of certain types of plastics, foams, coatings and other products. Isocyanate-based building construction materials may include rigid foam products such as foam-core panels and spray-on insulation and paints, coatings, sealants and adhesives. Isocyanates may be inhaled if they are present in the air in the form of a vapour, a mist or a dust.

Benzene is a clear, highly flammable liquid used mainly in the manufacture of other chemicals. The commercial use of benzene as a solvent has practically been eliminated, however it continues to be used as a solvent and reactant in laboratories.

Arsenic is a heavy metal used historically in pesticides and herbicides. The primary use in building construction materials was its use in the wood preservative chromated copper arsenate (CCA). CCA was used to pressure treat lumber since the 1940's. Pressure-treated wood containing CCA is no longer being produced for use in most residential settings.

Ethylene oxide is a colourless gas at room temperature. It has been used primarily for the manufacture of other chemicals, as a fumigant and fungicide and for sterilization of hospital equipment.

Coke oven emissions are airborne contaminants emitted from coke ovens and are not a potential hazard associated with building construction materials.

2.8 Polychlorinated Biphenyls (PCBs)

The management of equipment classified as waste and containing Polychlorinated Biphenyls (PCBs) at concentrations of 50 parts per million (mg/kg) or greater is regulated by Ontario Regulation 362, *Waste Management – PCBs*. Under this regulation, PCB waste is defined as any waste material containing PCBs in concentrations of 50 mg/kg or greater. Any equipment containing PCBs at or greater than this level, such as transformers, switchgear, light ballasts and capacitors, which is removed from service due to age, failure or as a result of decommissioning, is considered to constitute a PCB waste. Although current federal legislation (effective 1 July 1980) has prohibited the manufacture and sale of new equipment containing PCBs since that time, continued operation of equipment supplied prior to this date and containing PCBs is still permitted. Handling, storage and disposition of such equipment is, however, tightly regulated and must be managed in accordance with provincial and federal government requirements as soon as it is taken out of service or becomes unserviceable.

In most institutional, commercial facilities and in smaller industrial facilities, the primary source of equipment potentially containing PCBs is fluorescent and H.I.D. light ballasts. Small transformers may also be present. In larger industrial facilities, larger transformers and switch gear containing, or potentially containing, PCBs may also be present.

PCBs were also commonly added to industrial paints from the 1940s to the late 1970s. PCBs were added directly to the paint mixture to act as a fungicide, to increase durability and flexibility, to improve resistance to fires and to increase moisture resistance. The use of PCBs in new products was banned in Canada in the 1970s. PCB amended paints were used in speciality industrial/institutional applications prior to the 1970s including government buildings

and equipment such as industrial plants, radar sites, ships as well as non-government rail cars, ships, grain bins, automobiles and appliances.

Removal of in-service equipment containing PCBs, such as fluorescent light ballasts, capacitors and transformers, is subject to the requirements of the federal *PCB Regulations* (discussed below).

The *PCB Regulations*, which came into force on 5 September 2008, were made under the *Canadian Environmental Protection Act, 1999* (CEPA 1999) with the objective of addressing the risks posed by the use, storage and release to the environment of PCBs, and to accelerate their destruction. The *PCB Regulations* set different end-of-use deadlines for equipment containing PCBs at various concentration levels.

The Regulations Amending the PCB Regulations and Repealing the Federal Mobile PCB Treatment and Destruction Regulations were published on 23 April 2014, in the *Canada Gazette, Part II*, and came into force on 1 January 2015. The most notable part of the amendments is the addition of an end-of-use deadline date of 31 December 2025 for specific electrical equipment located at electrical generation, transmission and distribution facilities.

When the PCB materials are classified as waste, jurisdiction falls under the Ontario Ministry of the Environment and Climate Change (MOECC) and O.Reg. 362. All remedial and PCB management work must be carried out under the terms of a Director's Instruction issued by an MOECC District Office (for quantities of PCB fluid greater than 50 litres). The PCB waste stream, regardless of quantity, must be registered with the MOECC, in accordance with O.Reg. 347, *General - Waste Management*. O.Reg. 362 applies to any equipment containing greater than 1 kg of PCBs.

2.9 Ozone-Depleting Substances (ODS) and Other Halocarbons

Ontario Regulation 463/10 – *Ozone Depleting Substances and Other Halocarbons*, applies to the use, handling and disposal of Class 1 ozone-depleting substances, including various chlorofluorocarbons (CFCs), halons and other halocarbons, Class 2 ozone-depleting substances, including various hydrochlorofluorocarbons (HCFCs) and halocarbons, and other halocarbons, including fluorocarbons (FCs) and hydrofluorocarbons (CFCs). The most significant requirements for handling of ozone-depleting substances (ODS) and other Halocarbons, which include, for example, refrigerants used in refrigeration equipment and chillers, include the following:

- certification is required for all persons testing, repairing, filling or emptying equipment containing ODS and other halocarbons;
- the discharge of a Class 1 ODS or anything that contains a Class 1 ODS to the natural environment or within a building is prohibited;
- the making, use of, selling of or transferring of a Class 1 ODS is restricted to certain conditions;
- the discharge of a solvent or sterilant that contains a Class 2 ODS is prohibited;
- the making, use of, selling of or transferring of a solvent or sterilant that contains a Class 2 ODS is restricted to certain conditions;

- fire extinguishing equipment that contains a halon may be discharged to fight fires, except fires for firefighting training purposes;
- portable fire extinguishing equipment that contains a halon may be used or stored if the extinguisher was sold for use for the first time before 1 January 1996;
- records of the servicing and repair of equipment containing ODS and other halocarbons must be prepared and maintained by the owner of the equipment; and
- equipment no longer containing ODS and other halocarbons must be posted with a notice completed by a certified person.

Ontario Regulation 347, *General – Waste Management*, has also been amended to provide for more strict control of CFCs. The requirements under the amended regulation apply primarily to the keeping of records for the receipt or recycling of CFC waste.

2.10 Mould

Moulds are forms of fungi that are found everywhere both indoors and outdoors all year round. Outdoors, moulds live in the soil, on plants and on dead and decaying matter. More than 1000 different kinds of indoor moulds have been found in buildings. Moulds spread and reproduce by making spores, which are all small and light-weight, able to travel through air, capable of resisting dry, adverse environmental conditions, and hence capable of surviving a long time. Moulds need moisture and nutrients to grow and their growth is stimulated by warm, damp and humid conditions.

Control of exposure to mould is required under Section 25(2)(h) of the Ontario *Occupational Health and Safety Act*, which states that employers shall take every precaution reasonable in the circumstances for the protection of workers. Recommended work practices are outlined in the following documents:

- *Mould Guidelines for the Canadian Construction Industry*. Standard Construction Document CCA 82 2004. Canadian Construction Association.
- *Mould Abatement Guidelines*. Environmental Abatement Council of Ontario. Edition 3. 2015.

3 Results and Discussion

3.1 Asbestos

Arcadis reviewed reports prepared by Arcadis for the HDSB titled “Pre-Renovation Designated Substances and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington Ontario” dated January 8, 2024, and “Updated Survey of Asbestos Containing Materials, Glenview Public School, 143 Townsend Avenue, Burlington Ontario” dated April 18, 2017. Information and bulk sample analysis results obtained from these existing reports was utilized by Arcadis during the course of our investigation and in the preparation of this report.

During the course of our site investigation, additional representative bulk samples of material were collected by Arcadis staff. The samples were forwarded to EMSL Canada Inc. for asbestos analyses. Results of bulk sample analysis for asbestos content are provided in Table 3.1. Table 3.1 also include sample results obtained from existing report and include results that are outside of the designated study areas, which are provided for references purposes only. Laboratory reports from the 2024 investigation are provided in Appendix B. Locations of accessible asbestos-containing materials and roof plans are shown on the floor plan provided in Appendix A.

Table 3-1 Summary of Results of Analyses of Bulk Samples for Asbestos Content

Glenview Public School

Sample No.	Location	Description	
1-A	Room 132	Grout and mortar bed material in 1" x 1" white ceramic floor tile at urinal	None Detected
1-B	Room 132	Grout and mortar bed material in 1" x 1" white ceramic floor tile at urinal	None Detected
1-C	Room 132	Grout and mortar bed material in 1" x 1" white ceramic floor tile at urinal	None Detected
1-A	129	Plaster – skim coat (walls)	None Detected ⁽¹⁾
1-A	129	Plaster – rough coat (walls)	None Detected ⁽¹⁾
1-B	129	Plaster – skim coat (walls)	None Detected ⁽¹⁾
1-B	129	Plaster – rough coat (walls)	None Detected ⁽¹⁾
1-C	133	Plaster – skim coat (walls)	None Detected ⁽¹⁾
1-C	133	Plaster – rough coat (walls)	None Detected ⁽¹⁾
2-A	129	Plaster on ceiling	None Detected ⁽¹⁾⁽³⁾
2-B	129	Plaster on ceiling	None Detected ⁽¹⁾⁽³⁾
2-C	129	Plaster on ceiling	None Detected ⁽¹⁾⁽³⁾
3-A	133	12" vinyl floor tiles – beige with tan flecks	None Detected (TEM) ⁽¹⁾
3-A	133	12" vinyl floor tiles – beige with tan flecks - mastic	None Detected (TEM) ⁽¹⁾
3-B	133	12" vinyl floor tiles – beige with tan flecks	None Detected ⁽¹⁾
3-B	133	12" vinyl floor tiles – beige with tan flecks - mastic	None Detected ⁽¹⁾
3-C	133	12" vinyl floor tiles – beige with tan flecks	None Detected ⁽¹⁾
3-C	133	12" vinyl floor tiles – beige with tan flecks - mastic	None Detected ⁽¹⁾
4-A	129	Grey window caulking	None Detected (TEM) ⁽¹⁾

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 Glenview Public School

Sample No.	Location	Description	
4-B	129	Grey window caulking	None Detected ⁽¹⁾
4-C	129	Grey window caulking	None Detected ⁽¹⁾
5-A	129	12" vinyl floor tiles – tan with black streaks	None Detected (TEM) ⁽¹⁾
5-A	129	12" vinyl floor tiles – tan with black streaks -mastic	None Detected (TEM) ⁽¹⁾
5-B	129	12" vinyl floor tiles – tan with black streaks	None Detected ⁽¹⁾
5-B	129	12" vinyl floor tiles – tan with black streaks - mastic	<1% Chrysotile (PLM) <0.25% Chrysotile (PLM Grav.) ^(1,6)
5-C	129	12" vinyl floor tiles – tan with black streaks	None Detected ⁽¹⁾
5-C	129	12" vinyl floor tiles – tan with black streaks - mastic	None Detected ⁽¹⁾
CR-01a-Skim Coat	Room 130	Cement roof	None Detected ⁽²⁾⁽³⁾
CR-01a-Rough Coat	Room 130	Cement roof	None Detected ⁽²⁾⁽³⁾
CR-01b	Room 130	Cement roof	None Detected ⁽²⁾⁽³⁾
CR-01C	Room 130	Cement roof	None Detected ⁽²⁾⁽³⁾
RM-02a-Shingle	Room 130	Roof material	None Detected (PLM) ⁽²⁾⁽³⁾ None Detected (TEM) ⁽²⁾⁽³⁾
RM-02a-Tar Felt	Room 130	Roof material	None Detected ⁽²⁾⁽³⁾
RM-02b	Room 130	Roof material	None Detected ⁽²⁾⁽³⁾
RM-02c-Shingle	Room 130	Roof material	None Detected ⁽²⁾⁽³⁾
RM-02c-Tar Felt	Room 130	Roof material	None Detected ⁽²⁾⁽³⁾
DJC-03a	Room 130	Drywall joint compound	None Detected ⁽²⁾⁽³⁾
DJC-03b	Room 130	Drywall joint compound	None Detected ⁽²⁾⁽³⁾
DJC-03c	Room 130	Drywall joint compound	None Detected ⁽²⁾⁽³⁾
BM-04a	Exterior Room 130	Exterior brick mortar	None Detected ⁽²⁾⁽³⁾
BM-04b	Exterior Room 130	Exterior brick mortar	None Detected ⁽²⁾⁽³⁾
BM-04c	Exterior Room 130	Exterior brick mortar	None Detected ⁽²⁾⁽³⁾
BM-05a-Mortar	Room 130	Concrete block mortar	None Detected ⁽²⁾⁽³⁾
BM-05b-Mortar	Room 130	Concrete block mortar	None Detected ⁽²⁾⁽³⁾
BM-05c-Mortar	Room 130	Concrete block mortar	None Detected ⁽²⁾⁽³⁾
BM-06a-Block fill	Room 130	Concrete block-filler paint	3% Chrysotile ⁽²⁾
1A	Room 124B	White paint on concrete	None detected ⁽⁴⁾
1B	Room 124B	White paint on concrete	None detected ⁽⁴⁾
1C	Room 124B	White paint on concrete	None detected ⁽⁴⁾
2A	Room 124B	Black tar on ceiling near hatch	None detected (TEM) ⁽⁴⁾
2B	Room 124B	Black tar on ceiling near hatch	None detected ⁽⁴⁾
2C	Room 124B	Black tar on ceiling near hatch	None detected ⁽⁴⁾

Pre-Renovation Designated Substances and Hazardous Materials Survey
Glenview Public School

Sample No.	Location	Description	
1A	Room 102	Interior window caulking - white (era 1951)	None detected (TEM) ⁽⁵⁾
1B	Room 103B	Interior window caulking - white (era 1951)	None detected ⁽⁵⁾
1C	Room 129	Interior window caulking - white (era 1951)	None detected ⁽⁵⁾
2A	Room 106	Interior window caulking – clear (era 1951)	None detected (TEM) ⁽⁵⁾
2B	Room 107	Interior window caulking – clear (era 1951)	None detected ⁽⁵⁾
2C	Room 108	Interior window caulking – clear (era 1951)	None detected ⁽⁵⁾
3A	Room 114	Interior window caulking - white (era 1952)	None detected (TEM) ⁽⁵⁾
3B	Room 121	Interior window caulking - white (era 1952)	None detected ⁽⁵⁾
3C	Room 123	Interior window caulking - white (era 1952)	None detected ⁽⁵⁾
4A	Room 118	Interior window caulking - white (era 1958)	None detected (TEM) ⁽⁵⁾
4B	Room 119	Interior window caulking - white (era 1958)	None detected ⁽⁵⁾
4C	Room 120	Interior window caulking - white (era 1958)	None detected ⁽⁵⁾
5A	Room 117	Paint on concrete block (era 1958)	None detected (TEM) ⁽⁵⁾
5B	Room 118	Paint on concrete block (era 1958)	None detected ⁽⁵⁾
5C	Room 119	Paint on concrete block (era 1958)	None detected ⁽⁵⁾
6A	Outside Room 102	Exterior window caulking – tan (era 1951)	None detected (TEM) ⁽⁵⁾
6B	Outside Room 107	Exterior window caulking – tan (era 1951)	None detected ⁽⁵⁾
6C	Outside Room 109	Exterior window caulking – tan (era 1951)	None detected ⁽⁵⁾
7A	Outside Room 115	Exterior window caulking – tan (era 1952)	None detected (TEM) ⁽⁵⁾
7B	Outside Room 116	Exterior window caulking – tan (era 1952)	None detected ⁽⁵⁾
7C	Outside Room 121	Exterior window caulking – tan (era 1952)	None detected ⁽⁵⁾
8A	Outside Room 117	Exterior window caulking – tan (era 1958)	None detected (TEM) ⁽⁵⁾
8B	Outside Room 119	Exterior window caulking – tan (era 1958)	None detected ⁽⁵⁾
8C	Outside Room 120	Exterior window caulking – tan (era 1958)	None detected ⁽⁵⁾
9A	Outside Room 102	Exterior brick mortar (era 1951)	None detected ⁽⁵⁾
9B	Outside Room 107	Exterior brick mortar (era 1951)	None detected ⁽⁵⁾
9C	Outside Room 109	Exterior brick mortar (era 1951)	None detected ⁽⁵⁾
10A	Outside Room 115	Exterior brick mortar (era 1952)	None detected ⁽⁵⁾
10B	Outside Room 116	Exterior brick mortar (era 1952)	None detected ⁽⁵⁾

Pre-Renovation Designated Substances and Hazardous Materials Survey
 Glenview Public School

Sample No.	Location	Description	
10C	Outside Room 121	Exterior brick mortar (era 1952)	None detected ⁽⁵⁾
11A	Outside Room 117	Exterior brick mortar (era 1958)	None detected ⁽⁵⁾
11B	Outside Room 119	Exterior brick mortar (era 1958)	None detected ⁽⁵⁾
11C	Outside Room 120	Exterior brick mortar (era 1958)	None detected ⁽⁵⁾
12A	Room 102	2'x4' ceiling tile – pinhole small fissure	None detected ⁽⁵⁾
12B	Room 113	2'x4' ceiling tile – pinhole small fissure	None detected ⁽⁵⁾
12C	Room 117	2'x4' ceiling tile – pinhole small fissure	None detected ⁽⁵⁾
13A	Room 116	Textured wall plaster (era 1952)	None detected ⁽⁵⁾
13B	Room 123	Textured wall plaster (era 1952)	None detected ⁽⁵⁾
1-A	Room 110	Ceramic tile base set	1.4% chrysotile ^(5,3)
2-A	Room 110	Ceramic tile grout	1.0% chrysotile ^(5,3)
3-A	Room 118	Mortar	None detected ⁽⁵⁾
3-B	Room 119	Mortar	None detected ⁽⁵⁾
3-C	Room 120	Mortar	None detected ⁽⁵⁾
1A	Room 129	12" x 12" vinyl floor tile – dark beige in colour with brown streaks	None detected (TEM) ⁽⁵⁾
1B	Room 129	12" x 12" vinyl floor tile – dark beige in colour with brown streaks	None detected (TEM) ⁽⁵⁾
2A	Room 103	12" x 12" vinyl floor tile – pink with white flecks	None detected (TEM) ⁽⁵⁾
2B	Room 103	12" x 12" vinyl floor tile – pink with white flecks	None detected (TEM) ⁽⁵⁾
3A	Room 130	12" x 12" vinyl floor tile – beige with white flecks	None detected (TEM) ⁽⁵⁾
3B	Room 130	12" x 12" vinyl floor tile – beige with white flecks	None detected (TEM) ⁽⁵⁾
4A	Room 101A	12" x 12" vinyl floor tile – white with brown waves	None detected (TEM) ⁽⁵⁾
4B	Room 101A	12" x 12" vinyl floor tile – white with brown waves	None detected (TEM) ⁽⁵⁾
5A	Room 102	12" x 12" vinyl floor tile – white with grey specks	None detected (TEM) ⁽⁵⁾
5B	Room 102	12" x 12" vinyl floor tile – white with grey specks	None detected (TEM) ⁽⁵⁾
6A	Room 101	12" x 12" vinyl floor tile – beige with black streaks	None detected (TEM) ⁽⁵⁾
6B	Room 101	12" x 12" vinyl floor tile – beige with black streaks	None detected (TEM) ⁽⁵⁾
101-1	Room 101	12" x 12" vinyl floor tile – beige with black streaks	None detected (TEM) ⁽⁵⁾
101A-1	Room 101A	12" x 12" vinyl floor tile – white with brown waves	None detected (TEM) ⁽⁵⁾
102-1	Room 102	12" x 12" vinyl floor tile – white with grey specks	None detected (TEM) ⁽⁵⁾
102-2	Room 102	Drywall joint compound	None detected ⁽⁵⁾
103-1	Room 103	Smooth wall plaster	None detected ⁽⁵⁾
103-2	Room 103	Plaster ceiling above T-bar	None detected ⁽⁵⁾
103-3	Room 103	12" x 12" vinyl floor tile – pink with white flecks	None detected (TEM) ⁽⁵⁾
103-4	Room 103	Drywall joint compound	None detected ⁽⁵⁾
103-5	Room 103	2' x 4' ceiling tile – pinhole with texture	None detected ⁽⁵⁾
104A-1	Room 104A	Drywall joint compound	None detected ⁽⁵⁾

Pre-Renovation Designated Substances and Hazardous Materials Survey
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Sample No.	Location	Description	
104C-1	Room 104C	2' x 4' ceiling tile – pinhole with texture	None detected ⁽⁵⁾
104D-1	Room 104D	2' x 4' ceiling tile – pinhole with texture	None detected ⁽⁵⁾
104E-1	Room 104E	Smooth wall plaster	None detected ⁽⁵⁾
104E-2	Room 104E	Textured wall plaster	None detected ⁽⁵⁾
107-1	Room 107	12" x 12" vinyl floor tile – beige with brown streaks	None detected (TEM) ⁽⁵⁾
108-1	Room 108	9" x 9" vinyl floor tile - grey	6.10% chrysotile (TEM) ^(5,3)
108-2	Room 108	Textured ceiling plaster	6.10% chrysotile (TEM) ^(5,3)
109-1	Room 109	Textured wall plaster	None detected ⁽⁵⁾
111A-1	Corridor B (outside Room 111)	Plaster ceiling above T-bar	None detected ⁽⁵⁾
113-1	Room 113	Smooth ceiling plaster	None detected ⁽⁵⁾
114-1	Room 114	Smooth wall plaster	None detected ⁽⁵⁾
114-2	Room 114	Textured wall plaster	None detected ⁽⁵⁾
114-3	Room 114	Textured coat ceiling plaster	4.50% chrysotile ^(5,3)
115-1	Room 115	9" x 9" vinyl floor tile – blue	24.4% chrysotile (TEM) ^(5,3)
117-1	Corridor B (outside Room 117)	Plaster ceiling above T-bar	None detected ⁽⁵⁾
119-1	Room 119	9" x 9" vinyl floor tile – medium grey with white and black flecks	15.3% chrysotile (TEM) ^(5,3)
119-2	Room 119	Texture coat ceiling plaster	4.20% chrysotile ^(5,3)
124-1	Room 124	Texture coat ceiling plaster	None detected ⁽⁵⁾
124B-1	Room 124B	Pipe straight insulation	30.0% chrysotile ⁽⁵⁾
124C-1	Room 124C	Ceiling cork material	None detected ⁽⁵⁾
124C-2	Room 124C	Ceiling cork material	None detected ⁽⁵⁾
124C-3	Room 124C	Ceiling cork material	None detected ⁽⁵⁾
125-1	Room 125	Smooth ceiling plaster	None detected ⁽⁵⁾
127-1	Room 127	9" x 9" vinyl floor tile – dark grey with white flecks	13.0% chrysotile (TEM) ⁽⁵⁾
129-1	Room 129	12" x 12" vinyl floor tile – beige with brown streaks	None detected ⁽⁵⁾
130A-1	Room 130A	9" x 9" vinyl floor tile – white	7.7% chrysotile (TEM) ^(5,3)
130A-2	Room 130A	Cement ceiling board	5.10% chrysotile ^(5,3)
109-TXPL-1A	Room 109	Textured plaster on masonry on lower half of wall	None detected ⁽⁵⁾
109A-TXPL-1B	Room 109A	Textured plaster on masonry on lower half of wall	None detected ⁽⁵⁾
107B-TXPL-1C	Room 107B	Textured plaster on masonry on lower half of wall	None detected ⁽⁵⁾
109-PL-2A	Room 109	Smooth plaster on masonry on upper half of wall	None detected ⁽⁵⁾
109A-PL-2B	Room 109A	Smooth plaster on masonry on upper half of wall	None detected ⁽⁵⁾
107A-PL-2C	Room 107A	Smooth plaster on masonry wall	None detected ⁽⁵⁾
107B-PL-3A	Room 107B	Smooth plaster on gypsum board lath on ceiling	None detected ⁽⁵⁾
106B-PL-3B	Room 106B	Smooth plaster on gypsum board lath on ceiling	None detected ⁽⁵⁾
105B-PL-3C	Room 105B	Smooth plaster on gypsum board lath on ceiling	None detected ⁽⁵⁾

Pre-Renovation Designated Substances and Hazardous Materials Survey
Glenview Public School

Sample No.	Location	Description	
109-M-1A	Room 109	Mastic on 9" vinyl floor tile – black colour	None detected (TEM) ⁽⁵⁾
109A-M-1B	Room 109A	Mastic on 9" vinyl floor tile – black colour	None detected ⁽⁵⁾
107-M-1C	Room 107	Mastic on 9" vinyl floor tile – black colour	None detected ⁽⁵⁾
109-M-2A	Room 109	Mastic on vinyl baseboard – white colour	None detected (TEM) ⁽⁵⁾
109-M-2B	Room 109	Mastic on vinyl baseboard – white colour	None detected ⁽⁵⁾
109-M-2C	Room 109	Mastic on vinyl baseboard – white colour	None detected ⁽⁵⁾
109-CLK-3A	Room 109	Caulking on interior window frame – white colour	None detected (TEM) ⁽⁵⁾
107-CLK-3B	Room 107	Caulking on interior window frame – white colour	None detected ⁽⁵⁾
106-CLK-3C	Room 106	Caulking on interior window frame – white colour	None detected ⁽⁵⁾
109-CLK-4A	Room 109	Caulking on exterior window frame – white colour	<0.25% chrysotile (TEM) ^(5,6)
109A-CLK-4B	Room 109A	Caulking on exterior window frame – white colour	4.0% chrysotile ⁽⁵⁾
107-TH-5	Room 107	Thermal insulation on pipe fitting inside tunnel	40% chrysotile ⁽⁵⁾
107-M-6A	Room 107	Mastic on vinyl baseboard – brown colour	None detected (TEM) ⁽⁵⁾
107-M-6B	Room 107	Mastic on vinyl baseboard – brown colour	None detected ⁽⁵⁾
105-M-6C	Room 105	Mastic on vinyl baseboard – brown colour	None detected ⁽⁵⁾
109-BB-1A	Room 109	Vinyl baseboard – black colour	None detected (TEM) ⁽⁵⁾
107-BB-1B	Room 107	Vinyl baseboard – black colour	None detected ⁽⁵⁾
106-BB-1C	Room 106	Vinyl baseboard – black colour	None detected ⁽⁵⁾
109A-DW-1	Room 109A	Drywall joint compound on drywall wall	None detected ⁽⁵⁾

NOTES:

- (1) Sample results taken from a report prepared by Arcadis for the HDSB titled "Pre-Renovation Designated Substances and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington, Ontario" dated January 8, 2024.
- (2) Sample results taken from a report prepared by Arcadis for the HDSB titled "Pre-Demolition Designated Substances and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington, Ontario" dated July 7, 2023.
- (3) Material sampled has been removed from sample location. Sample results provided for references purposes.
- (4) Sample results taken from a report prepared by Arcadis for the HDSB titled "Pre-Renovation Designated Substances and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington, Ontario" dated June 24, 2020.
- (5) Sample results taken from a report prepared by Arcadis for the HDSB titled "Updated Survey of Asbestos-containing Materials, Glenview Public School, 143 Townsend Avenue, Burlington, Ontario" dated April 18, 2017.
- (6) "Asbestos-containing material" is defined as material that contains 0.5% or more asbestos by dry weight

Bulk samples were analyzed by Polarized Light Microscopy (PLM) analysis, except where "TEM" is noted, in which case Transmission Electron Microscopy analysis was also performed.

< = less than.

Chrysotile = Chrysotile asbestos.

Determination of the locations of asbestos-containing material was made based on the review of existing information, results of bulk sample analysis, visual observations and physical characteristics of the applications as well as our knowledge of the uses of asbestos in building materials.

Based on visual observations and results of laboratory analyses of samples collected by Arcadis Canada Inc., the following asbestos-containing materials were found to be present in the designated study areas:

Pre-Renovation Designated Substances and Hazardous Materials Survey
Glenview Public School

- Block filler paint applied to the exterior side of concrete block walls (enclosed in metal siding) adjacent to Corridors A and C. These concrete block walls were the original interior concrete block walls associated with Gymnasium 130 that was demolished in 2023; and
- Thermal insulation is assumed to be present on piping inside tunnel systems located below floor slabs in the designated study areas.

Please Note: Information provided to Arcadis by the HDSB, associated with roofing in the designated study areas that may be affected by the proposed renovation work, document that roofing material on roofs over the designated study areas were installed in 2011 and 2017 as outlined on the roof plan provided in Appendix A. Roofs B and E were installed in 2017 and Roof C installed in 2011. Roofing materials on Roofs A and F (which were associated with the Gymnasium that was demolished in 2023) were typical to the 2017 roofing materials on Roofs B and E. Roofing materials on former Roofs A and F were tested for asbestos content by Arcadis in 2023 and all roofing materials tested were found to not contain asbestos. Due to the installation date of 2011 for Roof C, roofing materials of this vintage should not contain asbestos.

During the course of the previous site investigations, Arcadis staff accessed cavities in exterior concrete block walls in several different locations in the facility including locations in the same construction era as the designated study areas. Materials suspected of containing asbestos (e.g. vermiculite block-fill insulation) was not observed in all block wall cavities accessed.

Block filler paints were typically used as a primer coat of paint applied to bare concrete block walls to limit the absorption of finish coats of paint into the concrete block. The exposed layer of paint present on concrete block walls in the designated study areas should not contain asbestos.

Glass fibre insulation is readily visually distinguishable (typically yellow in colour) from asbestos-containing insulation materials and was, therefore, not tested for asbestos content.

Block filler paint is a non-friable material. The removal, alteration and/or disturbance of non-friable asbestos-containing materials can be performed as a Type 1 operation as specified in O. Reg. 278/05 if the material is wetted and the work is done only using non-powered, hand-held tools (see Table C-1 in Appendix C). If the removal, alteration and/or disturbance work is done using power tools that are attached to dust-collecting devices equipped with HEPA filters, then the work is classified as Type 2. If the power tools do not have HEPA filtered dust collecting devices, then the work is Type 3.

Thermal insulation is a friable material. The removal, alteration and/or disturbance of less than 1 m² of friable asbestos-containing materials is classified as a Type 2 enclosure operation as specified in O.Reg. 278/05. The removal, alteration and/or disturbance of more than 1 m² of friable asbestos-containing materials is classified as a Type 3 operation.

Asbestos may also be present in materials which were not sampled during the course of the asbestos survey carried out by Arcadis, including, but not limited to, areas outside the designated study areas, which include components of electrical equipment (e.g. electric wiring insulation, non-metallic sheathed cable, electrical panel partitions, arc chutes, high-grade electrical paper, etc.), threaded pipe sealants, mortar, concrete, asphaltic pavement. Confirmatory testing of any such materials could be undertaken as the need arises (i.e., at the time of renovations,

modifications or demolition) or the materials can be assumed to contain asbestos based on findings in adjacent areas.

If any materials which may contain asbestos and which were not tested during the course of the designated substances and hazardous materials survey are discovered during any construction activities, the work shall not proceed until such time as the required notifications have been made and an appropriate course of action is determined.

3.2 Lead

Arcadis reviewed reports prepared by Arcadis for the HDSB titled “Pre-Renovation Designated Substance and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington Ontario” dated July 7, 2023, “Pre-Renovation Designated Substance and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington Ontario” dated June 24, 2020, “Pre-Renovation Designated Substance and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington Ontario” dated April 24, 2019 and “Revised Pre-Renovation Designated Substance and Hazardous Materials Survey, Glenview Public School” dated May 6, 2016. Information and paint sample analysis results obtained from these previous reports was utilized by Arcadis during the course of our investigation and in the preparation of this report.

Results of bulk sample analysis of paint samples for lead content taken from the above-referenced reports are provided in Table 3-2.

Table 3-2 Summary of Results of Analyses of Bulk Samples for Lead Content

Glenview Public School

Sample No.	Sample Location	Sample Description	Lead Content (mg/kg)
LS-01	Room 130/Gym	White paint on concrete block	<87 mg/kg ⁽¹⁾
P01	Room 124B	White paint on concrete wall	2,000 mg/kg ⁽²⁾
P02	Room 124B	Brown patch on hatch	<80 mg/kg ⁽²⁾
P-1	Room 118	Concrete block paint	<2.0 mg/kg ⁽³⁾
P-1	Room 129	Beige paint on plaster	8,900 mg/kg ⁽³⁾
109-P-1	Room 109	Paint on plaster walls – turquoise colour	<50 mg/kg ⁽⁴⁾
107-P-2	Room 107	Paint on metal radiator cabinet – yellow colour	1,500 mg/kg ⁽⁴⁾

NOTE:

- (1) Sample results taken from a report prepared by Arcadis for the HDSB titled “Pre-Renovation Designated Substance and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington Ontario” dated July 7, 2023.
- (2) Sample results taken from a report prepared by Arcadis for the HDSB titled “Pre-Renovation Designated Substance and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington Ontario” dated June 24, 2020.
- (3) Sample results taken from a report prepared by Arcadis for the HDSB titled “Pre-Renovation Designated Substance and Hazardous Materials Survey, Glenview Public School, 143 Townsend Avenue, Burlington Ontario” dated April 24, 2019.
- (4) “Revised Pre-Renovation Designated Substance and Hazardous Materials Survey, Glenview Public School” dated May 6, 2016.

< = less than.

mg/Kg = milligrams lead per kilogram paint.
1 mg/Kg - 1 part per million (ppm).

Lead was detected at a level above the *Surface Coating Materials Regulations* concentration of 90 mg/kg in three of the seven paint samples tested. Lead was detected at a level below the 90 mg/kg criteria value in the remaining four paint samples.

Lead may also be present in lead pipe, mortar, glazing on ceramic tiles, in the solder on the seals of bell joints of any cast iron drainpipe and in the solder on the sweated-on joints between copper pipe and fittings.

The Ministry of Labour *Guideline – Lead on Construction Projects*, dated April 2011, provides guidance in the measures and procedures that should be followed when handling lead containing materials during construction projects. In the guideline, lead-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of lead, as shown in Appendix C, Table C-2. Any operation that may expose a worker to lead that is not a Type 1, Type 2, or Type 3b operation, is classified as a Type 3a operation.

In addition, the *EACO Lead Abatement Guidelines, 2014 — Edition 1*, Environmental Abatement Council of Ontario, also provides guidance and recommended work practices.

3.3 Mercury

During the course of our site investigation, fluorescent lights were observed in the designated study areas. Mercury should be assumed to be present as a gas in all fluorescent light tubes and in all paint applications, albeit at low levels. The fluorescent light tubes should be recycled for mercury, if the lights are removed.

Proper procedures for removing and handling mercury-containing fluorescent light tubes typically involve:

- ensuring that electrical power to light fixtures has been disconnected and locked out;
- taking all necessary precautions to ensure that fluorescent lamp tubes are removed in a manner that prevents breakage; and
- transporting fluorescent lamp tubes to a licensed processing location for separation and recovery of mercury.

The measures and procedures outlined in the MOL *Guideline, Lead on Construction Projects* for control of potential exposure to lead in paint during construction activities will also serve to control potential exposure to any mercury in paint.

3.4 Silica

Materials observed in the designated study areas which should be considered to contain silica included plaster, gypsum board and associated joint compounds, concrete block, terrazzo, and mortar.

Silica can also be assumed to be present in any gravel ballast on roofs and will also be found in asphalt roofing materials if rock or stone are present in the asphalt.

The Ministry of Labour *Guideline, Silica on Construction Projects*, April 2011, provides guidance in controlling exposure to silica dust during construction activities. In the guideline, silica-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of silica, as shown in Appendix C, Table C-3.

Additional precautionary measures should also be implemented for certain types of materials (e.g., plaster and texture coat materials, including non-asbestos applications, concrete block, etc.). For minor disturbances such as drilling, a HEPA-filtered attachment should be used. For removal of more than a minor amount of material, enclosures should be constructed for dust control and separation of the work area from adjacent areas.

3.5 Vinyl Chloride

As mentioned in Section 2.5 above, vinyl chloride would only be a potential exposure concern in the event of combustion of PVC products.

3.6 Acrylonitrile

As mentioned in Section 2.6 above, acrylonitrile would only be a potential exposure concern in the event of combustion of ABS products.

3.7 Other Designated Substances

No other designated substances (benzene, isocyanates, arsenic, ethylene oxide and coke oven emissions) were observed to be present in the designated study areas, and none would be expected to be encountered in any building materials in a form that would represent an exposure concern. Arsenic may be present at low levels in paint applications. The measures and procedures outlined in the MOL *Guideline, Lead on Construction Projects* for control of potential exposure to lead in paint during construction activities will also serve to control potential exposure to any arsenic (or mercury) in paint.

3.8 Polychlorinated Biphenyls (PCBs)

Fluorescent lights were observed in the designated study areas during the course of our site investigations. Light ballasts, such as those associated with the type of fluorescent lights (T8s) observed in the designated study areas, are usually an electronic type which do not contain PCBs, however, this would be confirmed by an electrician at the time of dismantling of the lights.

3.9 Ozone-Depleting Substances (ODS) and Other Halocarbons

During the course of the site investigation, the following equipment that may contain refrigerants that are ODS was observed in the designated study areas:

- Two (2) domestic refrigerators and one (1) water cooler in Room 129; and
- One (1) domestic refrigerator and one (1) domestic freezer in Room 133.

If any ODS-containing equipment is to be removed, then they must be handled in the following manner:

- any equipment designated for disposal as scrap must be drained of its contents by a licensed technician and equipped with a label indicating that the equipment no longer contains any refrigerant. The specific requirements for information on the label, as specified in the regulation, must be adhered to;
- equipment designated for relocation to another facility owned by the Halton District School Board must be drained and labelled, as above; and
- any equipment that is drained to facilitate relocation to another facility owned by the Halton District School Board must be tested for leaks prior to re-filling. The equipment must be re-filled within six months of the leak test.

3.10 Mould

The investigation for mould included a visual inspection of readily-accessible surfaces throughout the designated study areas to determine if any mould was evident. The inspection of mould did not include intrusive inspections of wall cavities. Readily evident suspect mould was not observed in the designated study areas during the course of the site investigation. During renovations or interior demolition work, any mould-impacted materials uncovered/discovered should be remediated following the measures and procedures outlined in the *Canadian Construction Association Standard Construction Document CCA-82 2004 - Mould Guidelines for the Canadian Construction Industry*.

4 Limitations and Service Constraints

The opinions, conclusions and recommendations presented in this report are limited to the information obtained during the performance of the specific scope of service identified in the report. To the extent that Arcadis relied upon any information prepared by other parties not under direct contract to Arcadis, no representation as to the accuracy or completeness of such information is made. This report is an instrument of professional service and the services described in the report were performed in accordance with generally accepted standards and level of skill and care ordinarily exercised by members of the profession working under similar conditions including comparable budgetary and schedule constraints. No warranty, guarantee or certification express or implied, is intended or given with respect to Arcadis' services, opinions, conclusions or recommendations.

Arcadis' observations, the results of any testing and Arcadis' opinions, conclusions and recommendations apply solely to conditions existing at the specific times when and specific locations where Arcadis' investigative work was performed. Arcadis affirms that data gathered and presented in this report was collected in an appropriate manner in accordance with generally accepted methods and practices. Arcadis cannot be responsible for decisions made by our client solely on the basis of economic factors. Observation and testing activities such as those conducted by Arcadis are inherently limited and do not represent a conclusive or complete characterization. Arcadis analyzed only the substances, conditions and locations described in the report at the time indicated. Conditions in other parts of the project site, building or area may vary from conditions at the specific locations where observations were made and where testing was performed by Arcadis. Additionally, other building material hazards which were not identified by Arcadis, may also be present un-accessed areas and in walls, ceilings, cavities, and floors.

This report is expressly for the sole and exclusive use of the Client for whom this report was originally prepared and for the particular purpose outlined in the report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk. This report must be presented in its entirety.

The survey did not include for identification of asbestos in process materials, equipment (including electrical equipment and wiring), furniture (e.g., chairs, tabletops, chalkboards, etc.), nor material outside of the building (e.g., asphaltic pavement).

This report is not intended to be used as a scope of work or technical specification for remediation of designated substances or hazardous materials.

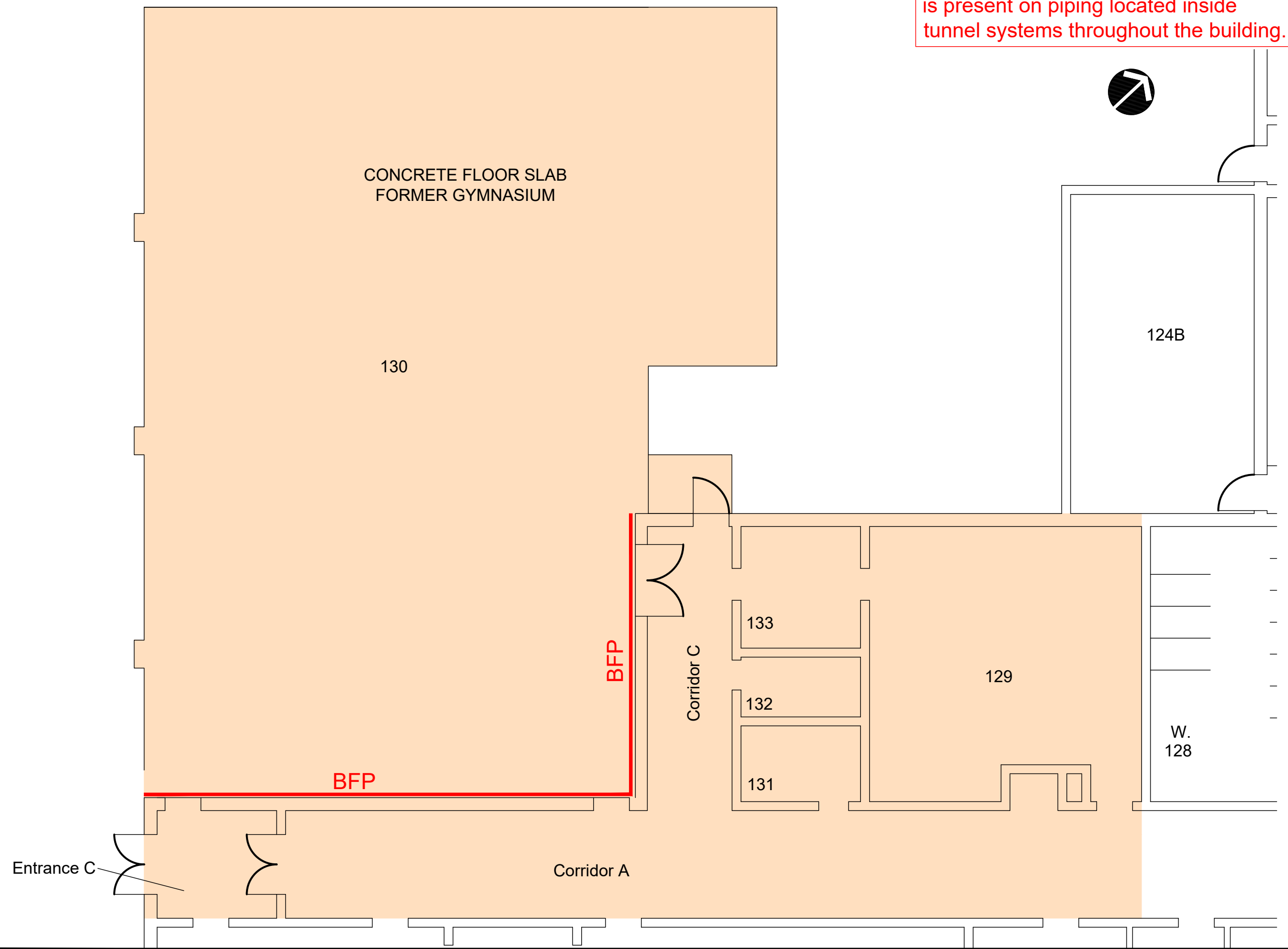
Appendix A

Floor Plans

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Note:
Asbestos-containing thermal insulation is present on piping located inside tunnel systems throughout the building.

- LEGEND:**
- 129 FUNCTIONAL SPACE
 - THROUGHOUT FUNCTIONAL SPACE
 - BFP ASBESTOS CONCRETE BLOCK FILLER PAINT
 - STUDY AREA



NOTES:



HALTON DISTRICT SCHOOL BOARD

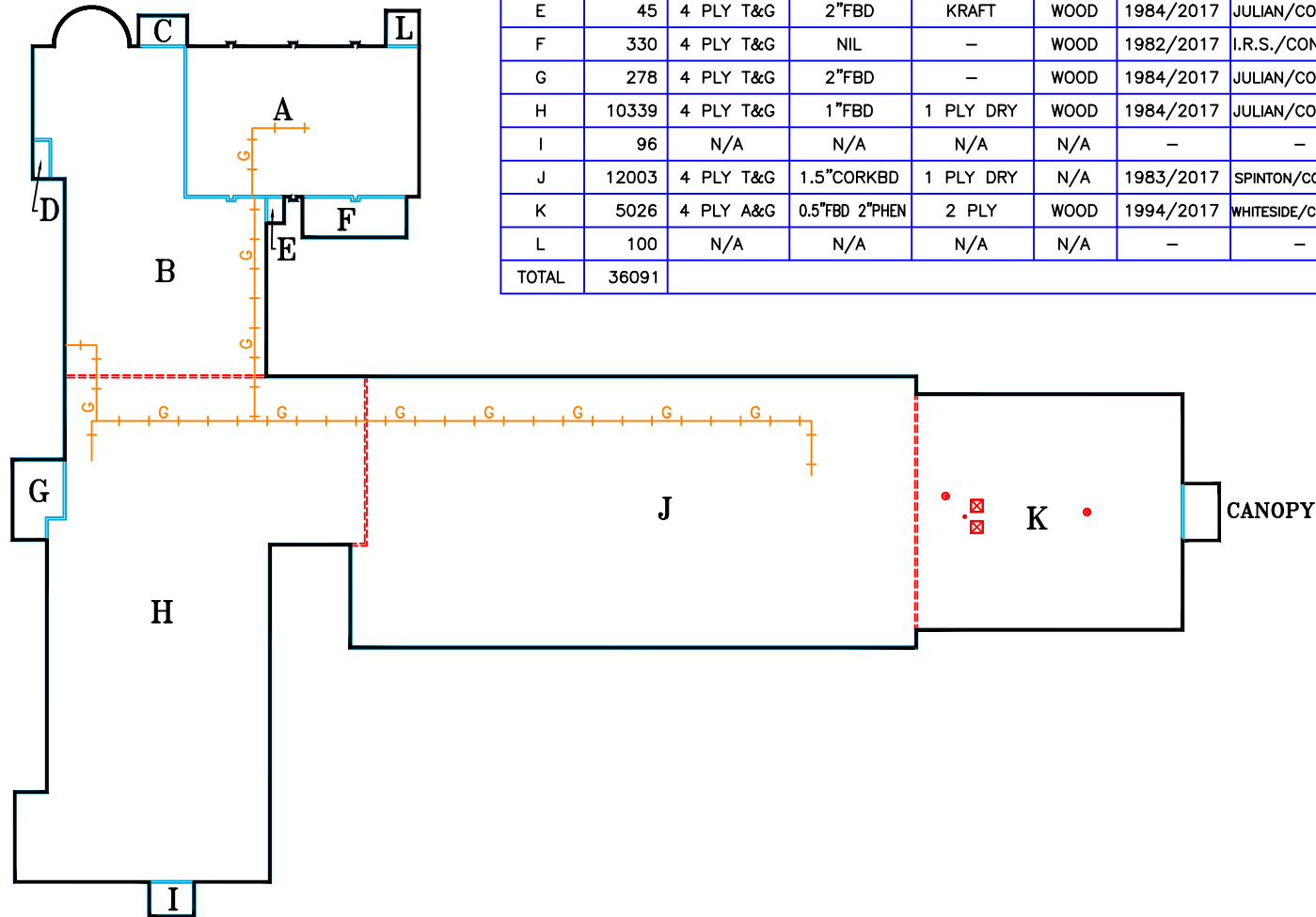
PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

LOCATIONS OF ASBESTOS-CONTAINING MATERIALS AND STUDY AREAS

GLENVIEW PUBLIC SCHOOL
143 TOWNSEND AVENUE
BURLINGTON, ONTARIO

FIRST FLOOR PLAN

Drawn By: BR	Approved By: JD	Project No: 30226491
Date: MAY 2024	Scale: N.T.S	Drawing No: 30226491-1

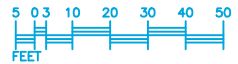
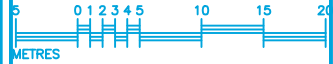


SECTION	AREA (ft ²)	ROOF TYPE	INSULATION	VAPOUR BARRIER	DECK	YEAR REPLACED	CONTRACTOR
A	2826	4 PLY A&G	0.5" FBD 2.25" FG	2 PLY	WOOD	1985/2017	I.R.S./CONSILIUM
B	4889	4 PLY T&G	2" FBD	KRAFT	WOOD	1984/2017	JULIAN/CONSILIUM
C	104	4 PLY T&G	2" FBD	KRAFT	WOOD	2011	CMW
D	55	-	-	-	-	1984/2017	JULIAN/CONSILIUM
E	45	4 PLY T&G	2" FBD	KRAFT	WOOD	1984/2017	JULIAN/CONSILIUM
F	330	4 PLY T&G	NIL	-	WOOD	1982/2017	I.R.S./CONSILIUM
G	278	4 PLY T&G	2" FBD	-	WOOD	1984/2017	JULIAN/CONSILIUM
H	10339	4 PLY T&G	1" FBD	1 PLY DRY	WOOD	1984/2017	JULIAN/CONSILIUM
I	96	N/A	N/A	N/A	N/A	-	-
J	12003	4 PLY T&G	1.5" CORKBD	1 PLY DRY	N/A	1983/2017	SPINTON/CONSILIUM
K	5026	4 PLY A&G	0.5" FBD 2" PHEN	2 PLY	WOOD	1994/2017	WHITESIDE/CONSILIUM
L	100	N/A	N/A	N/A	N/A	-	-
TOTAL	36091						



GENERAL NOTES

Scale



SYMBOLS

⊙	ROOF DRAIN	┌─┐	LADDER
⊙	PLUMBING STACK	┌─┐	FITCH PAN
⊙	SLEEVE & COLLAR	┌─┐	DOWNSPOUT
⊗	EQUIPMENT CURB	┌─┐	SCUPPER
⊗	SQUARE TO ROUND	→	SLOPE
⊗	ROOF HATCH	---	EXPANSION JOINT
⊗	SKYLIGHT	---	CONTROL JOINT
⊗	CHIMNEY	⊗	CUT TEST
U	UNUSED EQUIPMENT	⊗	CAMERA LOCATION

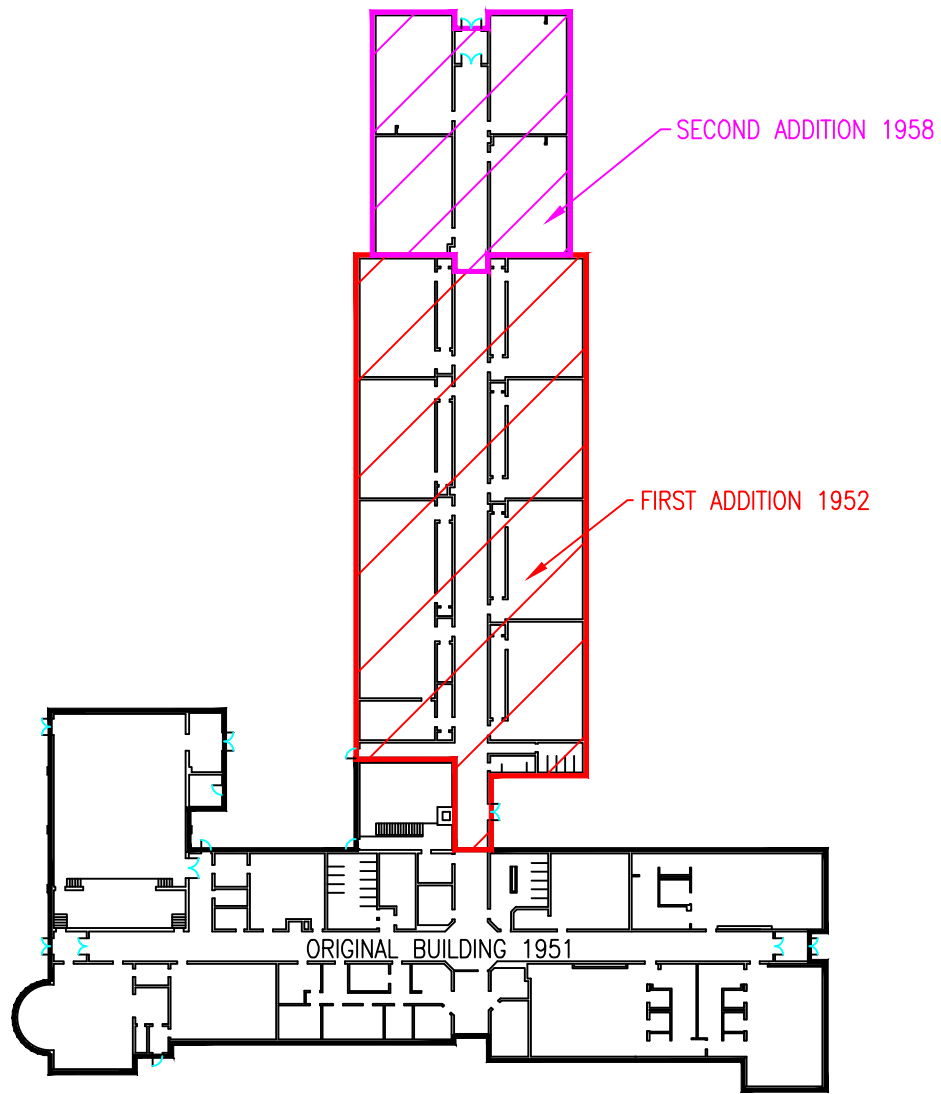
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		MAY 19 2015

fishburn

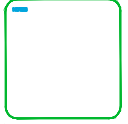
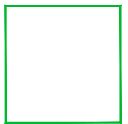
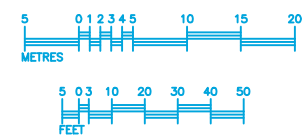
FISHBURN SCIENCE ENGINEERS LTD.
15381 STEELES AVE.
HORNBY, ONTARIO L0P 1E0
(905) 878-1282 office (905) 878-2147 fax
fishburn@fishburn-sci.com

HALTON DISTRICT SCHOOL BOARD
GLENVIEW P.S.
BURLINGTON, ONTARIO

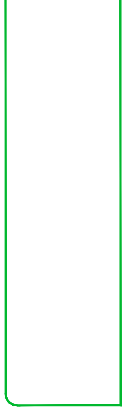
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NO.	DATE	DESCRIPTION



**Glenview
Public
School**


145 TELFORD AVENUE
BURLINGTON, ONTARIO

DATE	24 JULY 2012
ISSUED FOR	22 SEP 2004
PROJECT	JK-8
SCALE	1"=60'-0"
DATE	REV
DATE	30 OCT 2011
ISSUED FOR	K-5
AREA NO. PL.	33807 (3140m ²)
AREA PROJECT	GLVPS

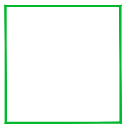
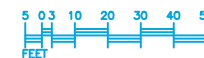
FIRST FLOOR PLAN

AREA	
B	2

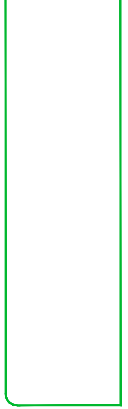
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Scale



NO.	DATE	DESCRIPTION




Glenview Public School

142 TOWNSEND AVENUE
BURLINGTON, ONTARIO

DATE	24 JULY 2012
ISSUED BY	22 SEP 2004
PROJECT	JK-8
SCALE	1"=60'-0"
PROJECT	ROSE
ISSUED BY	20 OCT 2011
ISSUED BY	K-5
AREA NO. PL.	33807 (3140m ²)
ISSUED BY	GLVPS

BASEMENT FLOOR PLAN	
AREA	
B	3

Appendix B

Laboratory Reports



EMSL Canada Inc.

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Phone/Fax: (289) 997-4602 / (289) 997-4607
<http://www.EMSL.com> / torontolab@emsl.com

EMSL Canada Order 552407467
Customer ID: 55DCSL97
Customer PO: 30226491
Project ID:

Attn: Jean Daigle
ARCADIS Canada Inc.
8133 Warden Avenue, Unit 300
Markham, ON L6G 1B3
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Collected:
Received: 5/14/2024
Analyzed: 5/15/2024
Proj: Glenview PS

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Client Sample ID: 1-A **Lab Sample ID:** 552407467-0001

Sample Description: Room 132- Ceramic floor tile mortar/ grout

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/15/2024	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 1-B **Lab Sample ID:** 552407467-0002

Sample Description: Room 132- Ceramic floor tile mortar/ grout

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/15/2024	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 1-C **Lab Sample ID:** 552407467-0003

Sample Description: Room 132- Ceramic floor tile mortar/ grout

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/15/2024	Gray	0.0%	100.0%	None Detected	

Analyst(s): _____

Diana Costantino PLM (2)
Nickesh Mistry PLM (1)

Reviewed and approved by:

Matthew Davis or other approved signatory
or Other Approved Signatory

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This is a summary report; official reports are available on LabConnect or upon request and relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0

Initial report from: 05/15/2024 17:20:21

Appendix C

Summary of Asbestos, Lead and Silica Work Classifications

TABLE C-1
SUMMARY OF CLASSIFICATION OF
TYPE 1, 2 AND 3 OPERATIONS
(Ont. Reg. 278/05)

TYPE 1 OPERATIONS

- removing less than 7.5 m² asbestos-containing ceiling tiles;
- removing non-friable asbestos-containing material other than ceiling tiles, if the material is removed without being broken, cut, drilled, abraded, ground, sanded or vibrated;
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the material is wetted and the work is done only using non-powered, hand-held tools; and
- removing less than 1 m² of drywall in which asbestos-containing joint compounds have been used.

TYPE 2 OPERATIONS

- removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling;
- removal of one square metre or less of friable asbestos-containing material;
- enclosing friable asbestos-containing material;
- applying tape or a sealant or other covering to asbestos-containing pipe or boiler insulation;
- removing 7.5 m² or more asbestos-containing ceiling tiles (if removed without being broken, cut, drilled, abraded, ground, sanded or vibrated);
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the material is not wetted and the work is done only using non-powered, hand-held tools;
- removal of one square metre or more of drywall in which asbestos-containing joint compounds have been used;
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the work is done using power tools that are attached to dust-collecting devices equipped with HEPA filters;
- cleaning or removing filters used in air-handling equipment in a building that has asbestos-containing sprayed fireproofing.

TABLE C-1 (Continued)
SUMMARY OF CLASSIFICATION OF
TYPE 1, 2 AND 3 OPERATIONS
(Ont. Reg. 278/05)

TYPE 3 OPERATIONS

- removal of more than one square metre of friable asbestos-containing material;
- spray application of a sealant to friable asbestos-containing material;
- cleaning or removing air-handling equipment, including rigid ducting but not including filters, in a building that has sprayed asbestos-containing fireproofing;
- repairing or demolishing a kiln, metallurgical furnace or similar structure that is made in part of asbestos-containing refractory materials;
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing materials, if the work is done using power tools that are not attached to dust-collecting devices equipped with HEPA filters.

TABLE C-2
SUMMARY OF CLASSIFICATION OF
LEAD-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE – LEAD ON CONSTRUCTION PROJECTS, APRIL 2011

Type 1 Operations	Type 2 Operations		Type 3 Operations	
	Type 2a	Type 2b	Type 3a	Type 3b
<0.05 mg/m ³	>0.05 to 0.50 mg/m ³	>0.50 to 1.25 mg/m ³	>1.25 to 2.50 mg/m ³	>2.50 mg/m ³

Note: The classification of Type 1, 2 and 3 operations is based on presumed airborne concentrations of lead, as shown above.

TYPE 1 OPERATIONS

- application of lead-containing coatings with a brush or roller;
- removal of lead-containing coatings with a chemical gel or paste and fibrous laminated cloth wrap;
- removal of lead-containing coatings or materials using a power tool that has an effective dust collection system equipped with a HEPA filter;
- installation or removal of lead-containing sheet metal;
- installation or removal of lead-containing packing, babbitt or similar material;
- removal of lead-containing coatings or materials using non-powered hand tools, other than manual scraping or sanding;
- soldering.

TYPE 2 OPERATIONS

Type 2a Operations

- welding or high temperature cutting of lead-containing coatings or materials outdoors. This operation is considered a Type 2a operation only if it is short-term, not repeated, and if the material has been stripped prior to welding or high temperature cutting. Otherwise it will be considered a Type 3a operation;
- removal of lead-containing coatings or materials by scraping or sanding using non-powered hand tools;
- manual demolition of lead-painted plaster walls or building components by striking a wall with a sledgehammer or similar tool.

Type 2b Operations

- spray application of lead-containing coatings.

TABLE C-2 (Continued)
SUMMARY OF CLASSIFICATION OF
LEAD-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE – LEAD ON CONSTRUCTION PROJECTS, APRIL 2011

TYPE 3 OPERATIONS

Type 3a Operations

- welding or high temperature cutting of lead-containing coatings or materials indoors or in a confined space;
- burning of a surface containing lead;
- dry removal of lead-containing mortar using an electric or pneumatic cutting device;
- removal of lead-containing coatings or materials using power tools without an effective dust collection system equipped with a HEPA filter;
- removal or repair of a ventilation system used for controlling lead exposure;
- demolition or cleanup of a facility where lead-containing products were manufactured;
- an operation that may expose a worker to lead dust, fume or mist that is not a Type 1, Type 2, or Type 3b operation

Type 3b Operations

- abrasive blasting of lead-containing coatings or materials;
- removal of lead-containing dust using an air mist extraction system.

TABLE C-3
SUMMARY OF CLASSIFICATION OF SILICA-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE, SILICA ON CONSTRUCTION PROJECTS, APRIL 2011

	Type 1 Operations	Type 2 Operations	Type 3 Operations
Cristobalite and Tridymite	>0.05 to 0.50 mg/m ³	>0.50 to 2.50 mg/m ³	>2.5 mg/m ³
Quartz and Tripoli	>0.10 to 1.0 mg/m ³	>1.0 to 5.0 mg/m ³	>5.0 mg/m ³

Note: The classification of silica-containing construction tasks is based on presumed concentrations of respirable crystalline silica, as shown above.

TYPE 1 OPERATIONS

- The drilling of holes in concrete or rock that is not part of a tunnelling operation or road construction.
- Milling of asphalt from concrete highway pavement.
- Charging mixers and hoppers with silica sand (sand consisting of at least 95 per cent silica) or silica flour (finely ground sand consisting of at least 95 per cent silica).
- Any other operation at a project that requires the handling of silica-containing material in a way that may result in a worker being exposed to airborne silica.
- Entry into a dry mortar removal or abrasive blasting area while airborne dust is visible for less than 15 minutes for inspection and/or sampling.
- Working within 25 metres of an area where compressed air is being used to remove silica-containing dust outdoors.

TYPE 2 OPERATIONS

- Removal of silica containing refractory materials with a jackhammer.
- The drilling of holes in concrete or rock that is part of a tunnelling or road construction.
- The use of a power tool to cut, grind, or polish concrete, masonry, terrazzo or refractory materials.
- The use of a power tool to remove silica containing materials.
- Tunnelling (operation of the tunnel boring machine, tunnel drilling, tunnel mesh installation).
- Tuckpoint and surface grinding.
- Dry mortar removal with an electric or pneumatic cutting device.
- Dry method dust cleanup from abrasive blasting operations.
- The use of compressed air outdoors for removing silica dust.
- Entry into area where abrasive blasting is being carried out for more than 15 minutes.

TABLE C-3 (Continued)
SUMMARY OF CLASSIFICATION OF SILICA-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE, SILICA ON CONSTRUCTION PROJECTS, APRIL 2011

TYPE 3 OPERATIONS

- Abrasive blasting with an abrasive that contains ≥ 1 per cent silica.
- Abrasive blasting of a material that contains ≥ 1 per cent silica.

**TIME AND MATERIAL AND UNIT RATES
ASBESTOS ABATEMENT SPECIFICATIONS**

GLENVIEW PUBLIC SCHOOL, 143 TOWNSEND AVENUE, BURLINGTON, ONTARIO

The following chargeout rates for supervision, labour, equipment, consumables, materials and services form part of this submission and may be used to establish costs for additional work approved by the Owner. The rates provided include delivery to the site, administrative costs, burden, overhead and profit.

Labour

Resource	Units	\$ Regular	\$ 1 st Overtime	2 nd Overtime
Supervision	Per hr	\$	\$	\$
Abatement Worker	Per hr	\$	\$	\$
	Per hr	\$	\$	\$
	Per hr	\$	\$	\$
	Per hr	\$	\$	\$

Regular rates will be applied at all times other than that defined below:

Labour rates include for all costs associated with placing labour on the work site as well as an allowance for small tools and miscellaneous consumables not specifically identified below.

Equipment

Equipment	Units	\$
HEPA Vacuum c/w Bags	day	\$
Negative Air Machine c/w Filters	day	\$
Airless Paint Sprayer c/w Hoses, Nozzles, etc.	day	\$
Pressure Washer c/w Hoses, Nozzles, etc.	day	\$
Portable Shower c/w Hoses, Fittings, Filter, Sump Pump, etc.	day	\$
GFI Panel c/w Extension Cords	day	\$
PAPR Respirators c/w Battery Pack, Charger, etc.	day	\$
Ladder, 6, 8 and 10 foot	day	\$

**TIME AND MATERIAL AND UNIT RATES
ASBESTOS ABATEMENT SPECIFICATIONS**

GLENVIEW PUBLIC SCHOOL, 143 TOWNSEND AVENUE, BURLINGTON, ONTARIO

Equipment	Units	\$
Baker Scaffold c/w Braces, Casters, Rails, Planks	day	\$
Standard Scaffold c/w Braces, Casters, Rails, Planks	day	\$
Lift Equipment – Scissor Lift	day	\$
Lift Equipment – Zoom Boom	day	\$

Discount to be applied for Weekly Rate _____%

 Monthly Rate _____%

Note that small tools not listed above are to be supplied, as required, without additional costs.

Materials

Removal of asbestos-containing thermal insulation on piping systems - Inclusive of removal and disposal and all other applicable costs in accordance with Type 2/Glovebag abatement procedures specified in the Asbestos Abatement Specifications.

PIPE INSULATION OUTSIDE DIAMETER	*FITTING (EACH)	**STRAIGHTS (PER METRE)
25 mm to 100 mm	\$	\$
100 mm to 150 mm	\$	\$
150 mm to 250 mm	\$	\$
250 mm to 350 mm	\$	\$
350 mm to 450 mm	\$	\$

* Fitting: Includes elbows, tees or other individual applications of asbestos-containing insulating cement.

** Straights: Includes all in-line applications of asbestos-containing thermal insulation other than elbows, tees, valves and flanges which are to be charged as fittings (i.e., hangers, couplings, bevels, etc., are not subject to a separate charge as fittings).

**TIME AND MATERIAL AND UNIT RATES
ASBESTOS ABATEMENT SPECIFICATIONS**

GLENVIEW PUBLIC SCHOOL, 143 TOWNSEND AVENUE, BURLINGTON, ONTARIO

Removal of asbestos-containing cement piping - Inclusive of removal and disposal and all other applicable costs using Type 1 asbestos abatement procedures.

PIPE OUTSIDE DIAMETER	(PER LINEAR METRE)
25 mm to 100 mm	\$
100 mm to 150 mm	\$
150 mm to 250 mm	\$
250 mm to 350 mm	\$
350 mm to 450 mm	\$

Other Asbestos Removal Work - Inclusive of removal and disposal and all other applicable costs in accordance with Outdoor Type 3 asbestos abatement procedures specified in the Asbestos Abatement Specifications.

MATERIAL / ABATEMENT TYPE	Units	\$
Asbestos block filler paint on concrete block.	m ²	\$

CONSUMABLES	Units	\$
Rip-proof Polyethylene	90 m ²	\$
6 mil Polyethylene	90 m ²	\$
10 mil Polyethylene	90 m ²	\$
2" Duct Tape	50 m	\$
Disposable Suit (Tyvek)	each	\$
PAPR Filters	pair	\$
HEPA Filters for Half-face	pair	\$

**TIME AND MATERIAL AND UNIT RATES
 ASBESTOS ABATEMENT SPECIFICATIONS**

GLENVIEW PUBLIC SCHOOL, 143 TOWNSEND AVENUE, BURLINGTON, ONTARIO

CONSUMABLES	Units	\$
Disposal Bags	each	\$
6" Safe-T-Strip Glovebag c/w Straps, Tools	each	\$

Note that miscellaneous materials and consumables not listed above are to be supplied, as required, without additional costs.

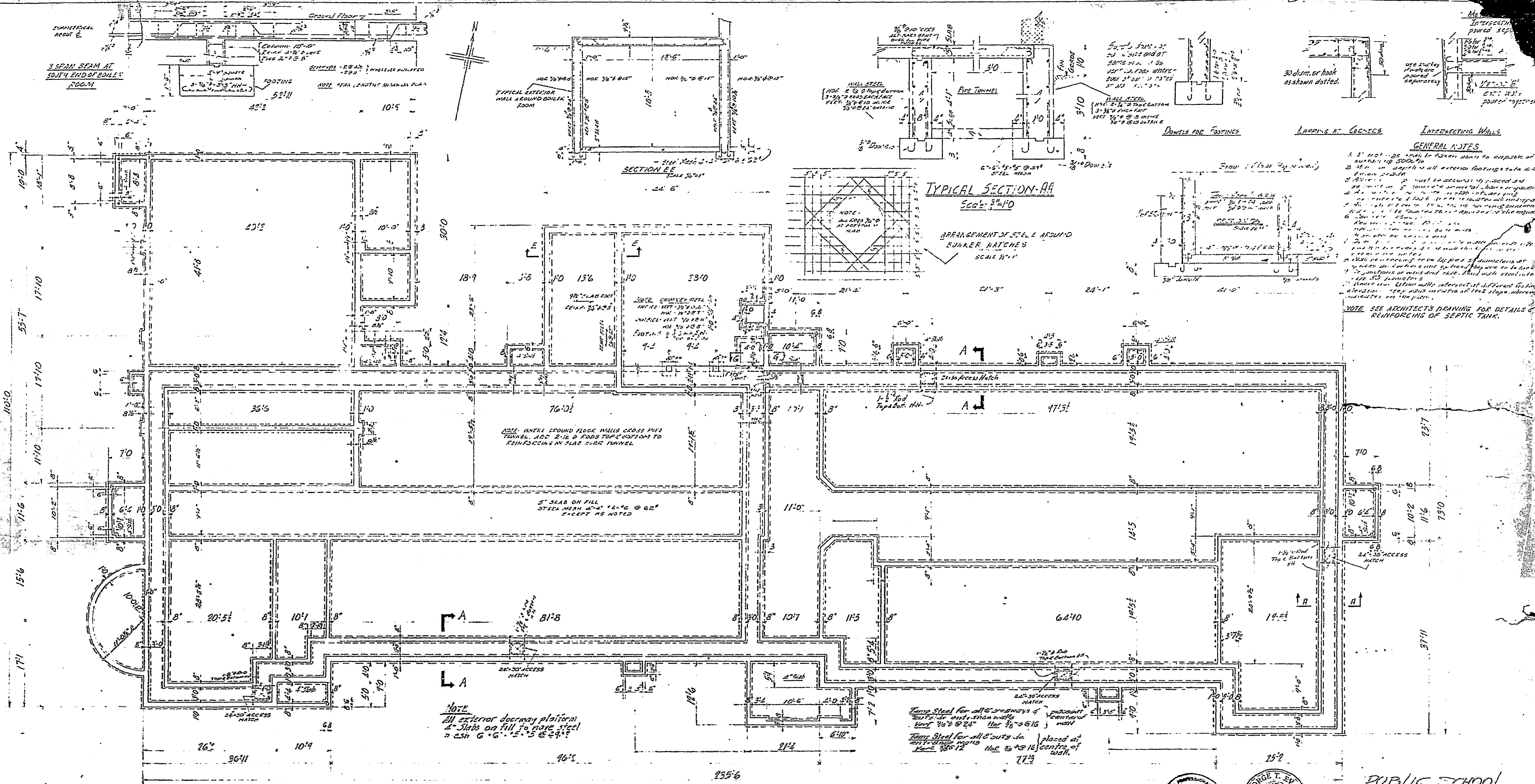
Services

Services provided by third parties, as approved by the Owner, including disposal, scaffold erection, electrical and other trades, etc., will be charged at cost plus _____ percent (___%) which includes administration, overhead and profit.

Disposal

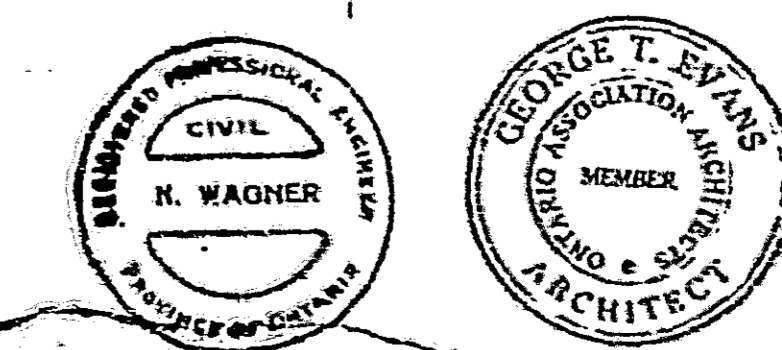
Transport and disposal of small quantities of asbestos waste generated during work in addition to the main scope per 25 kg bag \$_____ each.

Arcadis Canada Inc.
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Phone: 905 764 9380
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FOUNDATION PLAN
Scale: 1/8" = 1'-0"

PUBLIC SCHOOL
FOR
EAST FLAMBORO TWP.
SCHOOL AREA NO. 1
ALDENHOT ONE
MAY 7, 1926



- GENERAL NOTES**
1. 1/2" not less than 1/4" taken down to outside of building.
 2. 1/2" in depth with exterior footings to be 2-0' below grade.
 3. 1/2" must be observed in placed and set out in 2' concrete concrete shall be prepared.
 4. All walls to be finished with 1/2" plaster and 1/2" paper.
 5. All walls to be finished with 1/2" plaster and 1/2" paper.
 6. All walls to be finished with 1/2" plaster and 1/2" paper.
 7. All walls to be finished with 1/2" plaster and 1/2" paper.
 8. All walls to be finished with 1/2" plaster and 1/2" paper.
 9. All walls to be finished with 1/2" plaster and 1/2" paper.
 10. All walls to be finished with 1/2" plaster and 1/2" paper.
- NOTE: SEE ARCHITECT'S DRAWING FOR DETAILS OF REINFORCING OF SEPTIC TANK.

Temp steel for all openings & placed at center of wall
Temp steel for all outside walls placed at center of wall

NOTE: All exterior doorway platform slabs on fill to have steel mesh 6" x 6" @ 2'-0"

NOTE: WHERE GROUND FLOOR WALLS CROSS PIPE TUNNEL, ADD 2-1/2" x 4" RODS TOP OF FOOTING TO REINFORCING IN SLAB OVER TUNNEL

5" SLAB ON FILL STEEL MESH 4" x 4" @ 6" EXCEPT AS NOTED

3 SPAN BEAM AT SOUTH END OF BOILER ROOM

FOOTING

TYPICAL EXTERIOR WALL AROUND BOILER ROOM

TYPICAL SECTION-AA
Scale: 3/4" = 1'-0"

SECTION EE
Scale: 1/2" = 1'-0"

ARRANGEMENT OF STEEL AROUND BUNKER HATCHES
SCALE 1/2" = 1'-0"

DOWELS FOR FOOTINGS

LAPPING AT CORNERS

INTERSECTING WALLS

GENERAL NOTES