Halton District School Board **Addendum No. 3**

RFT 21-134 Renovations – Burlington Central HS

The following, issued by the Halton District School Board May 11, 2021, shall be incorporated in the specifications and shall form part of the proposal document for the above.

ATTACHED:

- Architectural Addendum #2 dated May 6, 2021 provided Snyder Architects Inc. - 4 pages and attachments as noted.
- REVISED Form of Tender.

ADDED:

Additional Pre-Renovation Designated Substance and Hazardous Materials Survey, provided by Arcadis - 53 Pages.

QUESTIONS AND ANSWERS:

Question 1:

Please advise Who is the base building controls contractor on this job?

Response 1:

HTS will be the controls provider on this project for requirements under Specification Section 15 0 10.

Question 2:

Can you please provide the specification for Wood Doors? It is not under the spec section.

Response 2:

Refer to Architectural Addendum #2 attached.

Question 3:

Can you please confirm If the doors 130A and 130C are double Doors? According to the Door Schedule, the dimensions specified are for a single door, but if you refer to the Screens and the Hardware Schedule it manifest that these are double doors. Please let me know if the assumptions are correct.

Response 3:

Refer to Architectural Addendum #2 attached.

Question 4:

Going through the drawing & specs, we see the door schedule says WD - Type B but there are no specs for wood doors and the drawing for Type B door is labeled Hollow Metal, see 3/A800. Please confirm the material for new interior doors 101-118.

Response 4:

Refer to Architectural Addendum #2 attached

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

PAGE 2 OF 93

END OF ADDENDUM 3

Halton District School Board

REVISED FORM OF TENDER

Project: **Renovations – Burlington Central HS**

Project Reference #: **RFT # 21-134**

From(Bidder):_____
Company Name

_____
Street Address

_____
City, Province and postal code

_____
Phone Number Email Address

To (Owner): Halton District School Board
2050 Guelph Line
Burlington, Ontario L7P 5A8

We, the undersigned, having examined the Tender Documents for the above-named Project, including Addendum, hereby offer to perform the Work in accordance with the Tender Documents, for the Stipulated Price of:

Base Bid Amount	$
Supply and Installation of isolation Valves, and installation of Valves supplied by Controls Contractor (See Section 15 010)	$
Cash Allowance (See Specification Section 01 21 00 for Listed Items)	$689,000
Contingency Allowance	$100,000
Total Bid (Excluding HST)	

REVISED Form of Tender Continued
RFT 21-134 Renovations - Burlington Central High School
Page 2 of 3

Unit Pricing:

Installation of Control Valve & Supply and Installation of Isolation Valves	**Cost / Credit per instance**
½" 2 way Control Valve, include isolation valves	
¾" 2 way Control Valve, include isolation valves	
1" 2 way Control Valve, include isolation valves	
1 ½" 2 way Control Valve, include isolation valves	
2" 2 way Control Valve, include isolation valves	
3" 2 way Control Valve, include isolation valves	
1" 3 way Control Valve	
1 ½" 3 way Control Valve	
2" 3 way Control Valve	
3" 3 way Control Valve	
4" 3 way Control Valve	
6" 3 way Control Valve	

Proposed Sub-Contractors:

Electrical Contractor _____

Mechanical Contractor _____

Roofing Contractor _____

We, the undersigned, declare that:

a. We agree to perform the Work within the required completion time specified in the Tender Documents,
b. We have arrived at the Tender without collusion with any competitor,
c. This Tender is open to acceptance by the Owner for a period of 90 days from the date of Tender Closing,
d. All Form of Tender supplements called for by the Tender Documents from an integral part of this Tender.

Signature: _____ _____
LEGAL NAME OF BIDDER DATE

_____ _____ _____
AUTHORIZED SIGNATURE OF BIDDER & TITLE PRINTED NAME
I have the authority to bind the Bidder

SEAL

ARCHITECTURAL ADDENDUM No.2

Project	**Burlington Central HS Renovations**	**Date of Issue**	May 6, 2021
Project No.	2005	**File**	7.1.03Addenda
Owner	Halton District School Board	**Contract(s)**	All contracts

This Addendum forms part of the Contract Documents and amends the original Drawings and Specifications and Addenda issued to date, 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 bidder to disqualification.

This Addendum consists of 4 pages + noted attachments

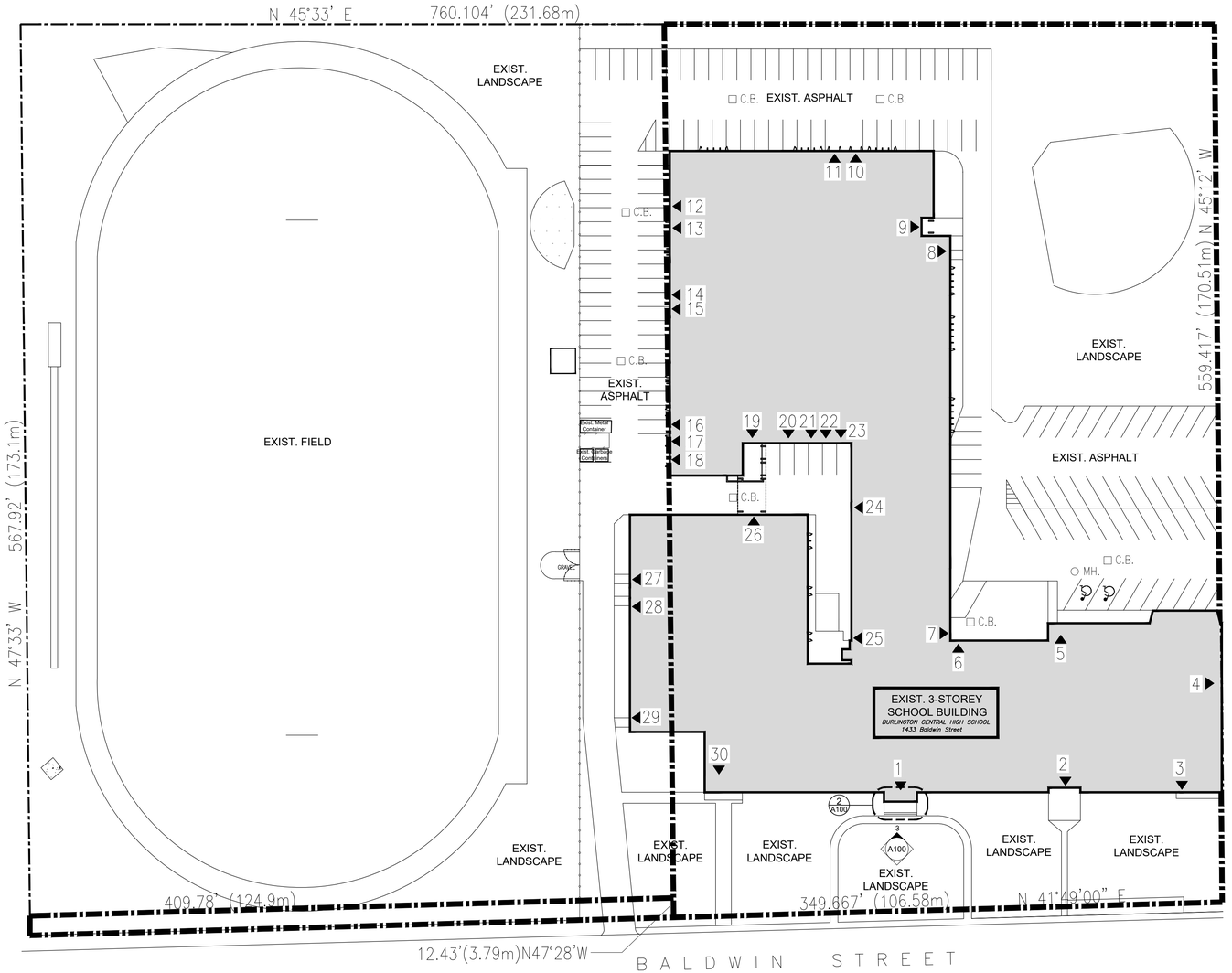
	Project Manual
1.	01 21 00 – Allowances 1.1.4: Revise cash allowance to 689,000 Cash allowance has been increased to include abatement cost related to controls-related work 08 14 00 – Wood Doors - New section added. 09 30 00 – Tiling 2.3.3 CWT-1: Replace tile selection 'Yer & Duvar' to 'Rainbow' series, size 100mm x 400mm as distributed by Centura
2.	General requirements: 1. Provide 2 layers of fire rated Type-X gypsum board on metal furring on existing masonry wall (to rectify existing damaged wall fire rating) in locations to be determined by Consultant on site. Assume aggregate area of 10 m2. 2. Provide fire stopping of aggregate area 5m x 150mm to rectify existing wall fire rating – locations to be determined by Consultant on site. Fire stopping to comply with Tremco – Design TL/PV 120-02. 3. Where new concrete slab is to be provided (at trenches to install new buried sanitary connections), assume 125mm slab thickness. Provide 200mm clear stone below slab, on top of re-used compacted backfill. New slab to be dowelled into existing slab (15M dowels @300 x 750 long; drill and grout into extg slab) 4. After removal of existing VCT flooring at existing Cafeteria (refer note D5, dwg 1/A200-D), provide cementitious skim coat to level flooring to receive new floor finish. This product has been specified in section 09 65 13, 2.2 - Underlayment 5. Clarification: Concrete topping is required to be provided to level floor mat depression at Gym Entrance Vestibule (refer note D4, A203). Concrete topping is also required at Universal WR 118 to level the floor after removal of existing terrazzo flooring. 6. Provide 10x 12"x12" access panels in drywall at locations determined by Consultant on site.
	Architectural Drawings
3.a	Drawing A100 . - Note 3 and 4 revised
3.b	Drawing A200-D

	- Demolition Notes: notes 1D, D8B, D11A added 1/A220-D: - New demolition items and notes added - Wall demolition and note 1A at existing storage doors removed 2/A200-D: - Approx. dimension added - Extent of work arrows added - Note and new relocation item added 3/A200-D: - Two notes revised
3.c	Drawing A200 1/A200: - Wall claddings along existing east, south, north, and west walls revised - New chases added in rooms 101, 112, and 114 - Kitchenette area added in corridor 110, and print/copy room 108 layout revised - Outline of new trench in the above mentioned area and note added - New millwork added in general office 101at meeting room 102 entrance - New details references added at general office 101 entrance - Floor patching graphics added in existing hall at exist. bench removal location - New wall section reference symbols added at existing north wall location - New note regarding wall finish with salvaged wood panels from general office entrance added 3/A200: - Approximate dimension added to terrazzo replacement at existing corridor - Reference numbers revised 5/A200: - Note about finishing both sides of existing exterior stairs added 6/A200 – new detail added
3.d	Drawing 1/A201 - New notes added
3.e	Drawing A201-D - detail 2/A201-D added
3.f	Drawing A202 - Window note revised
3.g	Drawing A203 - Symbol added to RCP Legend - Note 6 added to Demolition Notes 1D/A203: - Notes added 2/A203: - Note added 3-D/A203 & 3/A203: - Extent of terrazzo floor removal and replacement extended 4/A203: - Bulkhesd finish note revised 6/A203 & 7/A203: - Finish note revised
3.h	Drawing A300 - RCP legend note revised 1/A300: - Note revised 2/A300: - Light fixture type revised in room 118 - Room numbers symbols revised - Gypsum board bulkhead note added

	3/A300: - Notes added
3.i	Drawing A500 - New details 5/A500, 6/A500, 7/A500 added 2/A500: - Notes added - Extent of new terrazzo finish added
3.j	Drawing A501 - New note added 1/A501: - Drawing details revised and updated 2/A501: - Reference numbers revised
3.k	Drawing A601: Notes regarding substrate revised to plywood
3.l	Drawing A602 added
3.m	Drawing A700 1/A700: - Millwork added on elevation 2 - Elevation 3 updated - New kitchenette area added on elevation 4
3.n	Drawing A701 - New elevation 9/A701 added 3/A701: - Elevations of print/copy room 108 revised 7/A701: - Elevation 1 revised
3.o	Drawing A800 - Door Schedule: Door & frame 116 revised - Door Schedule: Door 118 to Univ WR revised from WD to HM - Room Finish Schedule: Univ WR -118 floor finish revised; Legend – PCT revised to PFT-1 - 'ASP' shown on interior aluminum frame Type S06 (ref dwg 3/A800) to be similar to Insulated Metal Infill Panel described in section 08 51 13, 2.6.3.
3.p	Drawing A801 - New note for all windows added - Drawing reference number revised 2/A801: - Sill width notes revised 3/A801: - New window vents added
4	Structural Addendum Either drypack or non-shrink grout if acceptable for levelling lintels Refer to attached revised dwg S-1: - 3/S-1 added - General Notes added - 1-S-1: notes revised / added
5	Mechanical / Electrical Refer to attached Mechanical & Electrical Addendum 1 from CK Engineering, dated May 5, 2021 Provide 2 additional power outlets at the millwork at Breakfast Club - 117. Exact location to be determined by consultant when contractor submits millwork shop dwgs.
	Bidder queries:
6	Q: Can you please provide the specification for Wood Doors? A: spec is attached with this Addendum

7	Q: Can you please confirm If the doors 130A and 130C are double Doors? According to the Door Schedule, the dimensions specified are for a single door, but if you refer to the Screens and the Hardware Schedule it manifest that these are double doors. Please let me know if the assumptions are correct. A: Doors 130A and 130C are double doors with a mullion, as shown on plans and elevations. The Door Schedule lists this door correctly – refer to the column 'No. of Leafs' where it lists '2'

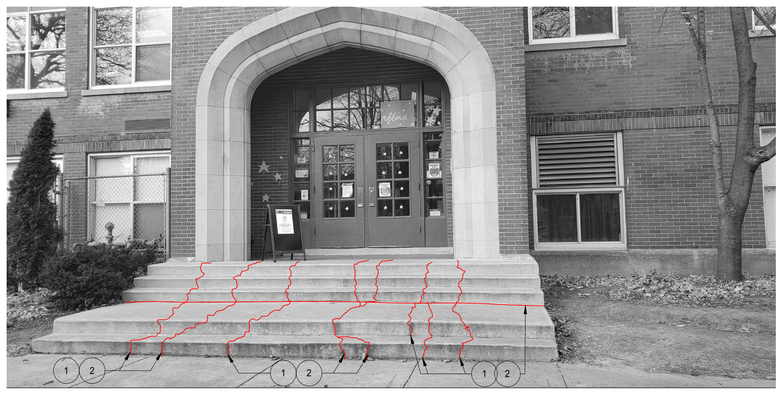
END OF ADDENDUM 02



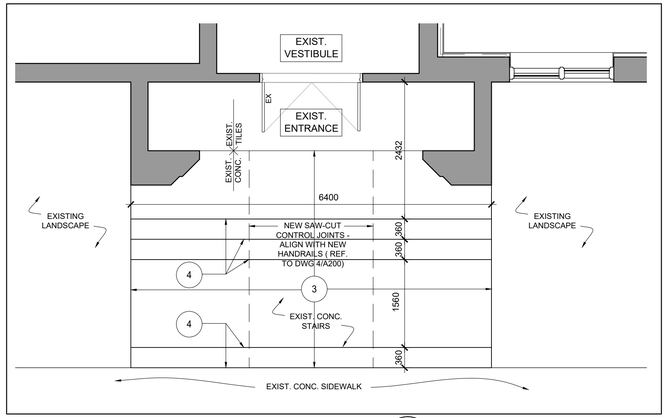
LEGAL DESCRIPTION:
PLAN 99 PT LOT 60, City of Burlington

Scale
10 0 5 10 20 30 40
METRES
10 05 20 40 60 80 100
FEET

1 / A100 OVERALL SITE PLAN 1:500



3 / A100 MAIN ENTRANCE EXIST. STAIRS ELEVATION - CRACKS REPAIR LOCATIONS NTS



2 / A100 MAIN ENTRANCE EXIST. STAIRS - PLAN 1:50

NOTES:

REPAIR CONCRETE CRACKS AND PROVIDE CONCRETE SLAB COATING AS DESCRIBED:

1. CLEAN CONCRETE CRACKS OF LOOSE MATERIAL; SAW-CUT TO ACHIEVE THE MINIMUM WIDTH AND DEPTH RECOMMENDED BY THE MANUFACTURER FOR APPLICATION OF CRACK SEALANT (DYMONIC 100 BY TREMCO). SAW CUT NEW CONTROL JOINT AS INDICATED ON DWG 2/A100.
2. PROVIDE CONCRETE CRACK SEALANT AS RECOMMENDED BY SEALANT MANUFACTURER.
3. CLEAN CONCRETE SLAB/STEPS OF LOOSE MATERIAL, DUST, LAITANCE, SURFACE FILM AND OTHER CONTAMINANTS. PREPARE SURFACE PER MANUFACTURER'S RECOMMENDATION TO RECEIVE STONWALK HD, AND STONSEAL PAT (ALL BY STONHARD). INCLUDE THE FINISH ON BOTH SIDES OF THE STAIRS.
4. AT STAIR NOSINGS, PROVIDE ECOGLO F4 STAIR NOSING (COLOUR F4170) BY KINESIK ENGINEERED PRODUCTS, FASTENED TO THE CONCRETE PER MANUFACTURER'S RECOMMENDATIONS. PRIOR TO INSTALLATION OF ECOGLO, PREPARE RISERS, EVEN THE SURFACE & PLUMB.

Client
Halton District School Board
2050 Guelph Line
Burlington, Ontario

BURLINGTON CENTRAL H.S. RENOVATIONS

1433 Baldwin Street
Burlington, ON

Architect
sn/der
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260 King St. E. Unit A101, Toronto, ON M5A 4L5
tel. 416.966.5444 fax. 416.966.4443
www.snyderarchitects.ca

Consultants

Structural Consultants
Moon Matz Ltd.
2902 South Sheridan Way
Oakville, Ontario, L6J 7L6
Tel: 905-274-7556

Mechanical and Electrical Consultants
CK Engineering Inc.
3390 South Service Rd, Suite 302
Burlington, Ontario, L7N 3J5
Tel: 905-631-1115

Key Plan N.T.S.

Project North | True North

No.	Revisions	Date
3	ISSUED FOR ADDENDUM 2	2021/05/05
2	ISSUED FOR TENDER	2021/04/19
1	ISSUED FOR BUILDING PERMIT	2021/01/25
No.	Issue	Date

ONTARIO ASSOCIATION OF ARCHITECTS
ALI WASH GARDE
LICENCE
6242

Drawing Title:
SITE PLAN

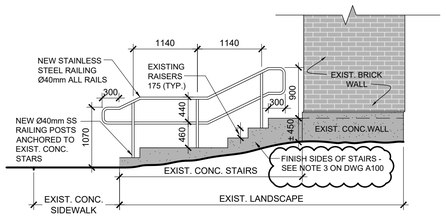
Scale:	AS NOTED	Date:	05 05 2021
Drawn by:		Checked by:	
Job No.	2005	Drawing No.	A100

NEW INTERIOR WALL AND PARTITION TYPES:

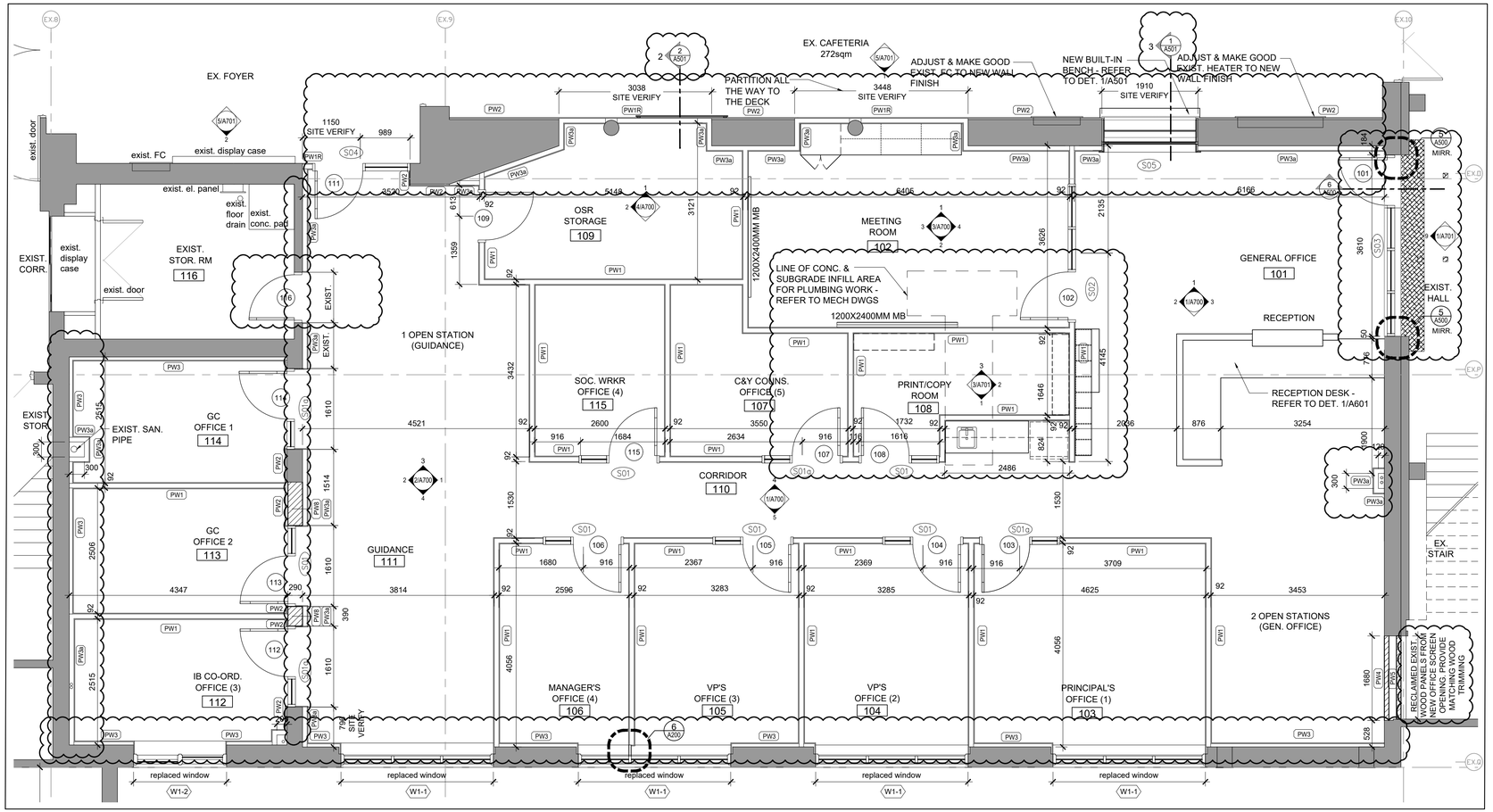
PW1	15.9mm GYPSUM BOARD (GB-AR) ON BOTH SIDES OF 92 METAL STUDS 400mm O.C. FILLED WITH 89mm THICK MINERAL BATT INSULATION
PW1R	1 LAYER OF15.9mm SHEETROCK FIRECODE CORE GYPSUM PANELS ON BOTH SIDES OF 92mm STEEL STUDS 610mm O.C. - ALL THE WAY UP TO THE STRUCTURE, ALL JOINTS FINISHED - ULC Des W453
PW2	15.9mm GYPSUM BOARD (GB-AR) ON 22mm METAL FURRING 400mm O.C.
PW3	15.9mm GYPSUM BOARD (GB-AR) ON 64mm METAL STUDS 400mm O.C.
PW3a	15.9mm GYPSUM BOARD (GB-AR) ON 92mm METAL STUDS 400mm O.C.
PW4	90mm FILL-IN BRICK WALL
PW5	90mm CONCRETE MASONRY UNIT WALL
PW6	140mm CONCRETE MASONRY UNIT WALL
PW7	190mm CONCRETE MASONRY UNIT WALL
PW8	290mm CONCRETE MASONRY UNIT WALL

LEGEND

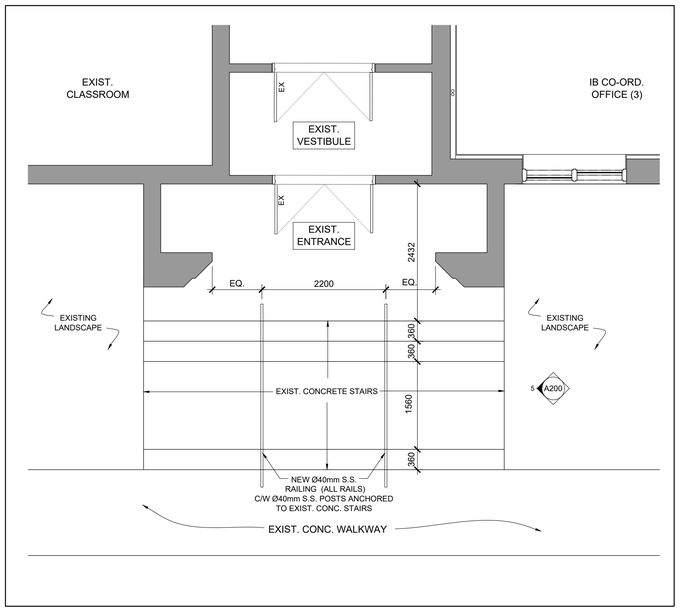
- EXISTING WALLS TO REMAIN
- NEW MASONRY WALL
- NEW STUD PARTITION
- AREA OF TERRAZZO FLOOR FILL-IN & REPAIR
- EX — EXISTING DOOR TO REMAIN
- 123 — NEW DOOR AND FRAME - REFER TO THE DOOR SCHEDULE
- S03 — NEW SCREEN
- W1 — NEW WINDOW
- FD — EXIST. FLOOR DRAIN TO REMAIN
- FD — NEW FLOOR DRAIN - REFER TO MECH. DWGS
- MB — NEW MARKER BOARD
- TB — NEW TACK BOARD
- S.S. — STAINLESS STEEL
- EX — EXISTING



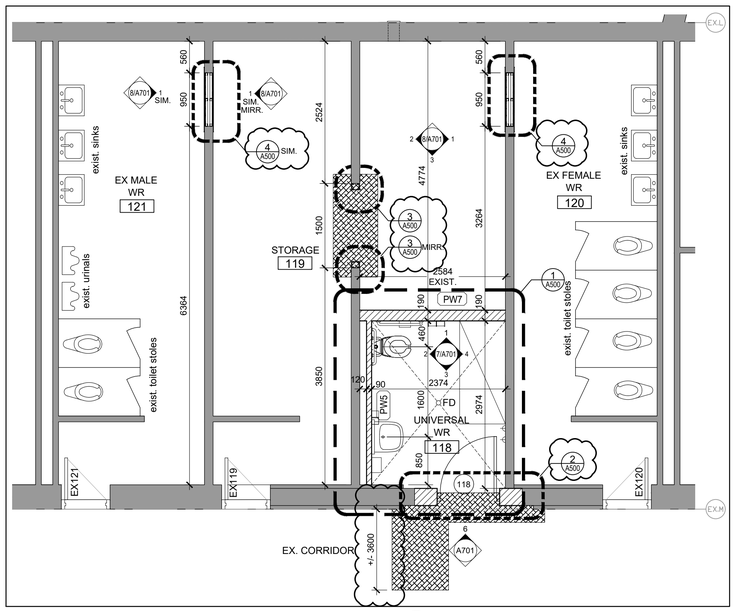
5 A200 MAIN ENTRANCE - NEW RAILING SIDE ELEVATION 1:50



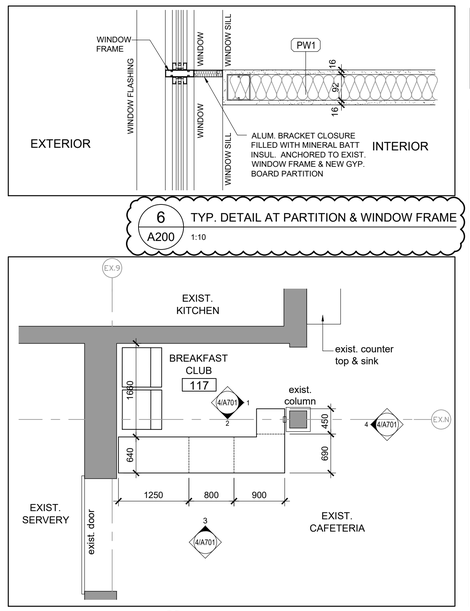
1 A200 GROUND FLOOR - NEW OFFICE AREA LAYOUT 1:50



4 A200 EXISTING STAIRS @ MAIN ENTRANCE - NEW RAILING - PLAN 1:50



3 A200 GROUND FLOOR - NEW UNIVERSAL WASHROOM 1:50



6 A200 TYP. DETAIL AT PARTITION & WINDOW FRAME 1:10

2 A200 GROUND FLOOR - BREAKFAST CLUB AREA 1:50

NOTE:
ALL DIMENSIONS TO BE SITE VERIFIED.

FIRE PROOFING NOTES:

1. FIRE STOP AT ALL CORRIDOR PENETRATIONS NEW AND EXISTING. MAINTAIN EXISTING FIRE SEPARATIONS. ASSUME EXISTING CORRIDORS ARE 1HOUR RATED. PROVIDE FLANGES ON DUCT PENETRATIONS AND FIRE DUMPERS AT CORRIDOR WALL FOR NEW DUCTS.
2. PROVIDE FIRESTOP & SEAL AT ALL FIRE SEPARATIONS THAT TERMINATE AT EXTERIOR WALLS.
3. ENSURE REQUIRED RATING WITH CMU; GROUT SOLID WHERE NECESSARY.
4. SEAL TOP OF FIRE SEPARATION WITH FIRE STOPPING, OR ULC RATED ASSEMBLY OF SAME RATING AS THE FIRE SEPARATION.
5. SPRAY ALL NEW BEAMS, COLUMNS SUPPORTING FLOOR ASSEMBLY W/ 1 HOUR FRR SPRAY FIREPROOFING EXCEPT WHERE INTUMESCENT PAINT IS SPECIFIED (ALL EXPOSED STRUCTURAL STEEL ELEMENTS).
6. PRIME ALL LINTELS.
7. PROVIDE FIRE PROOFING PRODUCTS AS LISTED IN THE ULC/ cUL NOTED, OR APPROVED EQUIVALENT.

GENERAL FLOOR FINISH NOTES:

1. TRANSITION STRIP IN EVERY CHANGE OF MATERIAL.
2. ALL TRANSITIONS BETWEEN DIFFERING MATERIALS TO BE FLUSH.
3.
4. ALL FLOOR FINISH TRANSITIONS TO MEET UNDER DOOR (WHERE DOOR OCCURS).
5.
6. ALL TERRAZZO IN-FILLS TO EXTEND TO NEXT METAL STRIP.
7. CONTROL JOINT IN TILING SYSTEM EVERY 10 METERS.
8. ALL EXISTING BASE TO BE REMOVED PRIOR TO NEW BASE INSTALLATION.
9. REFER TO DRAWING A800 FOR ROOM FINISH SCHEDULE.

Client
Halton District School Board
2050 Guelph Line
Burlington, Ontario

BURLINGTON CENTRAL H.S. RENOVATIONS

1433 Baldwin Street
Burlington, ON

Architect
sn/der
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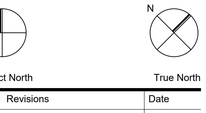
Tel: 905-631-1115

Key Plan N.T.S.



Project North True North

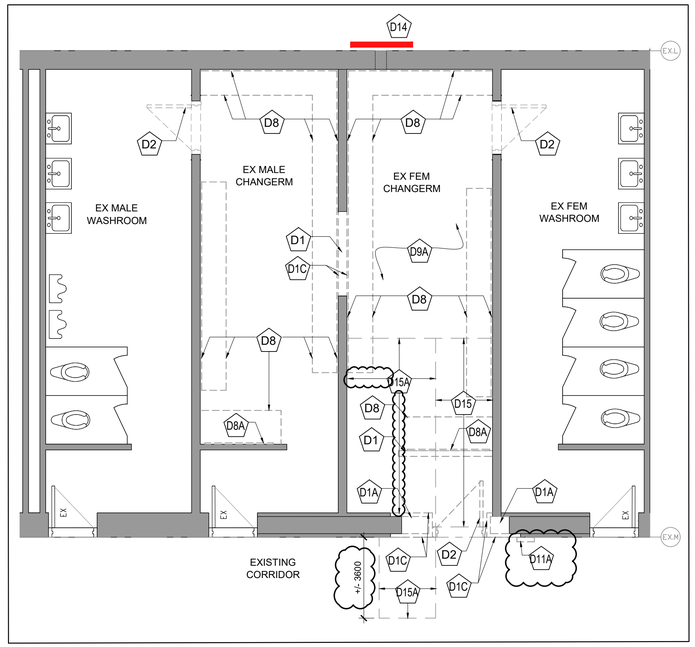
No.	Revisions	Date
3	ISSUED FOR ADDENDUM 3	2021/05/05
2	ISSUED FOR TENDER	2021/04/19
1	ISSUED FOR BUILDING PERMIT	2021/01/25
No.	Issue	Date

ONTARIO ASSOCIATION OF ARCHITECTS AVINASH GARDE LICENCE 6242

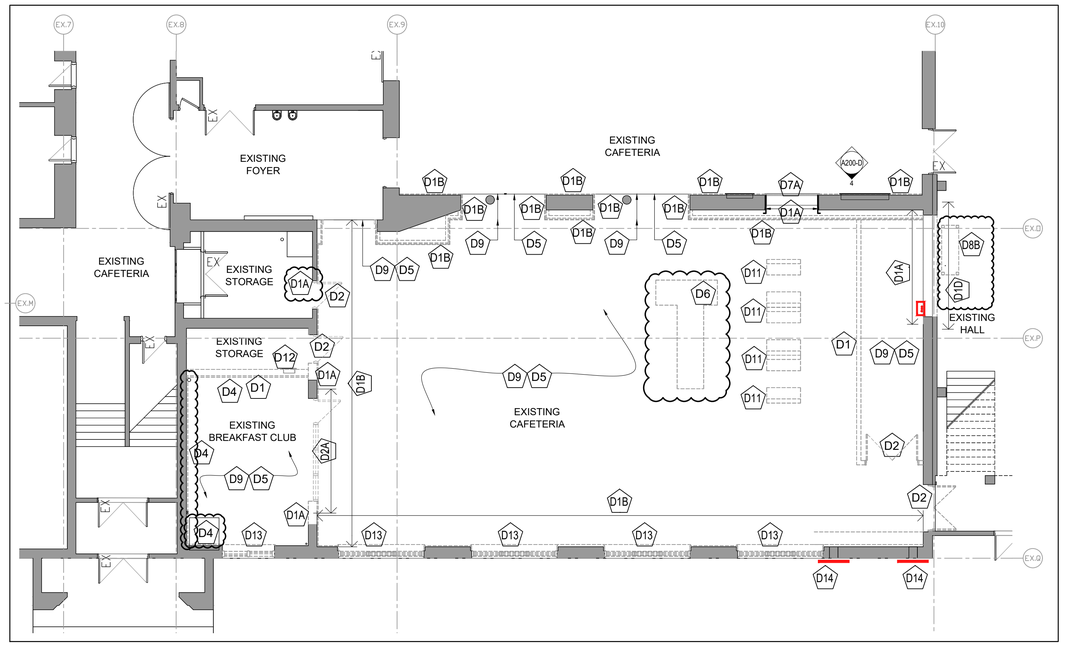
Drawing Title:

FIRST FLOOR NEW LAYOUTS

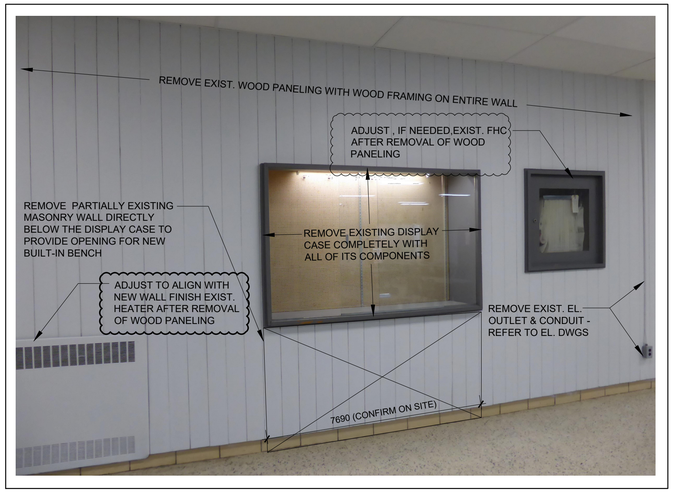
Scale:	AS NOTED	Date:	05 05 2021
Drawn by:		Checked by:	
Job No.	2005	Drawing No.	A200



2 A200-D GROUND FLOOR - WASHROOMS AREA DEMOLITION PLAN 1:50



1 A200-D GROUND FLOOR - NEW OFFICE AREA DEMOLITION PLAN 1:100



3 A200-D GROUND FLOOR - CAFETERIA WALL ELEVATION NTS

DEMOLITION NOTES:

D1 REMOVE AND DISPOSE EXISTING MASONRY WALL, PARTITION WALL AND/OR CHASE WALL (FULL HEIGHT) C/W ALL ASSOCIATED AND/OR ATTACHED COMPONENTS. CAP TERMINATED SERVICES, OR PREPARE FOR RELOCATION - REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILS. REPAIR AND MAKE GOOD ALL SURFACES. MAKE READY TO RECEIVE PROPOSED WORK.

D1A REMOVE AND DISPOSE EXISTING MASONRY WALL FOR NEW DOOR AND/OR SCREEN OPENING. REMOVE ASSOCIATED AND/OR ATTACHED COMPONENTS. CAP TERMINATED SERVICES, OR PREPARE FOR RELOCATION - REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILS. MAKE GOOD ALL SURFACES & READY TO RECEIVE NEW WORK. FOR NEW DOOR OPENING TOOTH SAW CUT DETAIL REFER TO DWG S1A800

D1B REMOVE AND DISPOSE EXISTING WALL WOOD PANELING WITH WOOD STRAPPING, AND ALL ASSOCIATED OR ATTACHED COMPONENTS. MAKE GOOD ALL SURFACES & READY TO RECEIVE NEW WORK. TEMP. REMOVE ACT CEILING AS REQ.'D FOR THE DEMO/RENO WORK AND REINSTALL AFTER COMPLETION.

D1C SAW-CUT BACK 600mm OF GLAZED BLOCK CLADDING. MAKE GOOD ALL SURFACES, EDGES & READY TO RECEIVE NEW WORK.

D1D CAREFULLY REMOVE EXISTING WOOD PANELING WITH WOOD STRAPPING , AND ALL ASSOCIATED OR ATTACHED COMPONENTS. STORE WOOD PANELS FOR REUSE. MAKE GOOD ALL SURFACES & READY TO RECEIVE NEW WORK. RE-INSTALL WOOD PANELS AS SHOWN IN INTERIOR ELEVATION AFTER INSTALLATION OF NEW DOOR & SCREEN.

D2 REMOVE AND DISPOSE EXISTING DOOR AND FRAME/SCREEN C/W ALL ASSOCIATED COMPONENTS AND/OR ATTACHED COMPONENTS. MAKE GOOD AND READY TO RECEIVE PROPOSED WORK.

D2A REMOVE AND DISPOSE EXISTING DOOR AND FRAME/SCREEN C/W ALL ASSOCIATED COMPONENTS AND/OR ATTACHED COMPONENTS. REMOVE ADDITIONAL WOOD PANELING AND CANOPY ABOVE THE SCREEN. MAKE GOOD AND READY TO RECEIVE PROPOSED WORK.

D3 REMOVE AND DISPOSE, OR REMOVE AND RELOCATE (REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE DETAILS) ALL EXISTING FIXTURES AND FITTINGS IN THIS AREA. CAP ABANDONED SERVICES AND MAKE GOOD. PATCH MASONRY, LEAVE SURFACE CLEAR AND READY TO RECEIVE PROPOSED WORK.

D4 REMOVE EXISTING CHALKBOARD, MARKER BOARD, OR TACK BOARD INCLUDING ADHESIVE. MAKE GOOD (INCLUDE FILLING IN DAMAGED BLOCK & PATCHING) & READY TO RECEIVE NEW WORK.

D5 REMOVE EXISTING VCT FLOORING INCLUDING ADHESIVE. PREPARE SURFACE TO RECEIVE NEW FLOOR FINISH - REFER TO FLOOR FINISH & ROOM FINISH SCHEDULE DRAWINGS.

D6 REMOVE EXISTING FLOORING, CUT AND REMOVE EXISTING CONC. SLAB WITH ITS SUB-BASE FOR THE PURPOSE OF REMOVING EXISTING, OR PLACING NEW SERVICES. REFER TO MECH. DWGS FOR MORE INFO.

D7 REMOVE AND DISPOSE EXISTING DISPLAY CASE. MAKE GOOD WALL & FLOOR (INCLUDE FILLING IN DAMAGED AREAS & MASONRY PATCHING) AND READY TO RECEIVE NEW WORK.

D7A REMOVE AND DISPOSE EXISTING BUILT-IN DISPLAY CASE WITH GLAZING & ALL ASSOCIATED COMPONENTS (REFER TO EL. & MECH. DWGS. FOR MORE INFO). REMOVE PARTIALLY EXISTING WALL DIRECTLY BELOW THE EXISTING DISPLAY CASE TO THE FLOOR TO PROVIDE SPACE FOR NEW BUILT-IN BENCH. MAKE GOOD & READY TO RECEIVE NEW WORK. INCLUDE FOR FILLING & PATCHING DAMAGED MASONRY .

D8 REMOVE EXISTING MILLWORK WITH SUPPORTING FRAMING, AND ALL ASSOCIATED COMPONENTS. MAKE GOOD AND PREPARE TO RECEIVE NEW FINISHES. ALLOW FOR FILL IN OF DAMAGED MASONRY WALL.

D8A REMOVE EXISTING MIRROR WITH SUPPORTING BACKING, AND ALL ASSOCIATED COMPONENTS. MAKE GOOD AND PREPARE TO RECEIVE NEW PAINT. ALLOW FOR FILL IN OF DAMAGED MASONRY WALL.

D8B REMOVE EXISTING BENCH AND FASTENING BOLTS. FILL-IN, PATCH & REPAIR TERRAZZO FLOOR TO MATCH EXISTING. MAKE GOOD.

D9 REMOVE EXISTING TWO CEILING LAYERS: (CEILING TILES & GRID) WITH BULKHEADS AND ALL ASSOCIATED COMPONENTS (REFER TO MECH. & EL. DWGS), AND WOOD PANELS - SECOND CEILING ABOVE. MAKE GOOD & PREPARE THE AREA FOR NEW WORK.

D9A REMOVE EXISTING TWO CEILING LAYERS: (CEILING TILES & GRID) WITH BULKHEADS AND ALL ASSOCIATED COMPONENTS (REFER TO MECH. & EL. DWGS), AND GLUED ON BOARD CEILING TILES - SECOND CEILING ABOVE. MAKE GOOD & PREPARE THE AREA FOR NEW WORK.

D11 REMOVE EXISTING ANCHORED BENCHES AND MAKE GOOD.

D11A RELOCATE EXISTING WALL MOUNTED DISPOSAL CONTAINER.

D12 REMOVE @ RELOCATE EXISTING ELECTRICAL PANEL - REFER TO ELECTR. DWGS

D13 REMOVE EXIST. EXISTING WINDOW AND WINDOW SILL. MAKE GOOD AND READY FOR INSTALLATION OD NEW WINDOW AND WINDOW SILL.

D14 CUT OPENING IN EXISTING EXTERIOR WALL TO PROVIDE MECHANICAL DUCT PENETRATION AND GRILLE. REFER TO MECH. AND STRUCTURAL DWGS.

D15 REMOVE EXISTING TERRAZZO FLOORING AND PREPARE THE SURFACE TO RECEIVE NEW CONC. TOPPING. INCLUDE FOR EXCAVATION FOR SANITARY LINE CONNECTIONS - REFER TO MECH. DWGS.

D15A REMOVE EXISTING TERRAZZO FLOORING, SLAB & SUB-GRADE FOR NEW SANITARY CONNECTIONS - REFER TO MECH. DWGS. RE-INSTATE THE SLAB AFTER COMPLETION OF WORK & PREPARE THE SURFACE TO RECEIVE NEW FLOOR FINISH.

GENERAL DEMOLITION NOTES:

1. REFER TO SPECS & ABATEMENT REPORT REGARDING DESIGNATED SUBSTANCES REMOVAL.

ALTERATION TO EXISTING AREA LEGEND:

EXISTING WALL, DOOR, SCREEN OR OTHER COMPONENT (MILLWORK, PLUMBING FIXTURE, MECHANICAL & ELECTRICAL EQUIPMENT) TO BE REMOVED/DEMOLISHED

EXISTING CEILING TILES W/GRID & BULKHEADS, LIGHTS AND OTHER COMPONENTS TO BE REMOVED. REFER TO MECH. & EL. DWGS FOR MORE INFO.

EXISTING WALLS TO REMAIN

EXISTING SCREEN TO REMAIN

EXISTING DOOR TO REMAIN

EXISTING GRIDLINE

NEW PENETRATION IN THE EXISTING WALL - REFER TO MECH. DWGS

PIPING AND CONDUITS PENETRATIONS FROM THE ROOF

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Key Plan N.T.S.

Project North / True North

No.	Revisions	Date
2	ISSUED FOR ADDENDUM 3	2021/05/05
2	ISSUED FOR TENDER	2021/04/19
1	ISSUED FOR BUILDING PERMIT	2021/01/25
No.	Issue	Date

ONTARIO ASSOCIATION OF ARCHITECTS
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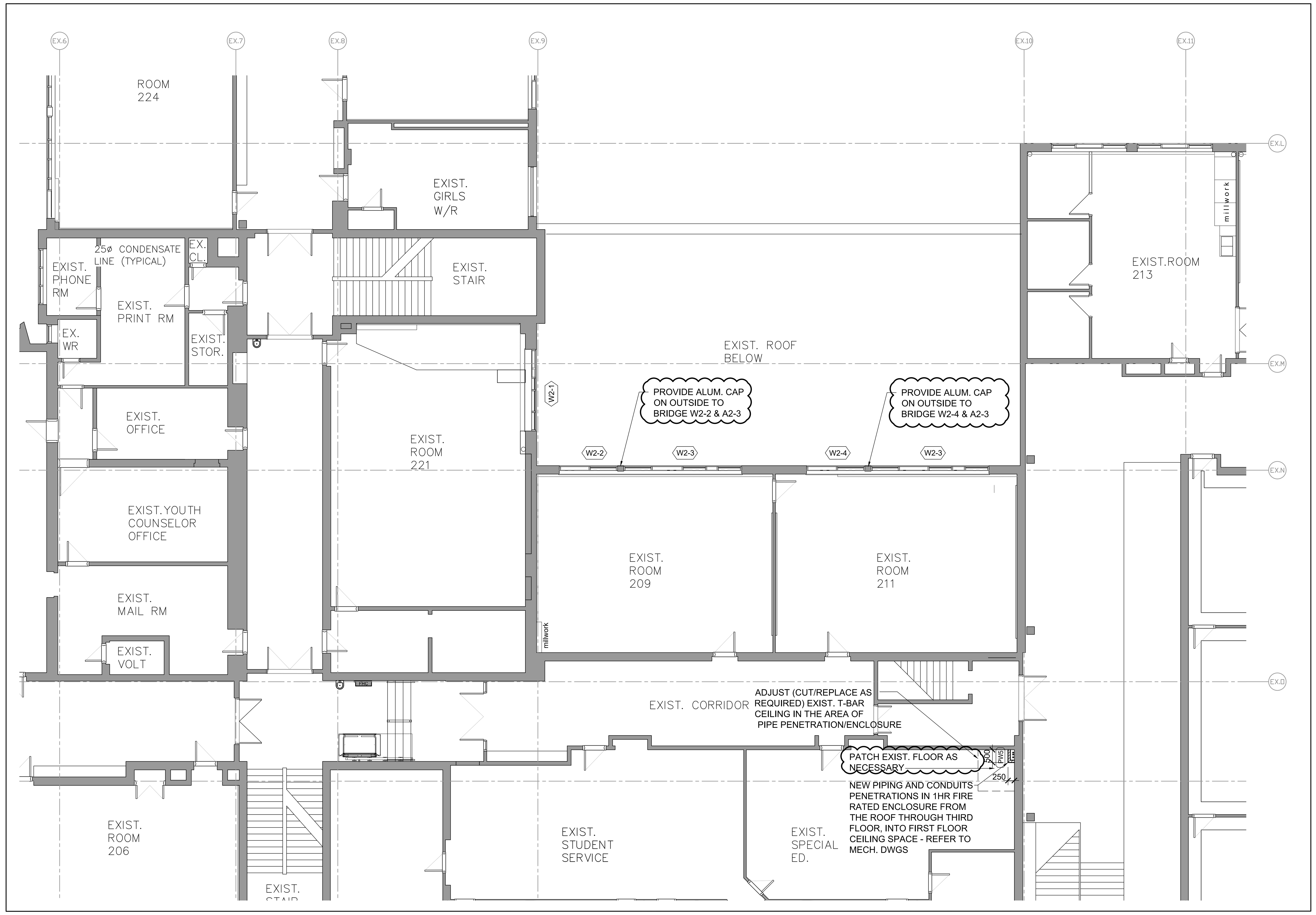
LICENCE
6242

Drawing Title:

FIRST FLOOR DEMOLITION PLANS

Scale: AS NOTED	Date: 05 05 2021
Drawn by:	Checked by:
Job No. 2005	Drawing No. A200-D



1 / A201 PART OF SECOND FLOOR PLAN - SOUTH WING - NORTH/EAST PART

1:100

NOTE:

REFER TO DWG 2/A-200-D FOR LOCATION OF ADDITIONAL WOOD FRAMING AT EXISTING CHALKBOARD AND WOOD PANELING.

FIRE PROOFING NOTES:

1. FIRE STOP AT ALL SLAB PENETRATIONS. MAINTAIN EXISTING FIRE SEPARATIONS.
2. GROUT SOLID WHERE NECESSARY.
3. PRIME & PAINT ALL LINTELS.
4. PROVIDE FIRE PROOFING PRODUCTS AS LISTED IN THE ULC/ cUL .

FLOOR PLAN LEGEND

EXISTING WALLS TO REMAIN

EXISTING DOOR TO REMAIN

EXISTING WINDOW

W2-0 NEW WINDOW

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Key Plan N.T.S.

N — Project North

N — True North

No.	Revisions	Date

No.	Issue	Date
3	ISSUED FOR ADDENDUM 2	2021/05/05
2	ISSUED FOR TENDER	2021/04/19
1	ISSUED FOR BUILDING PERMIT	2021/01/25

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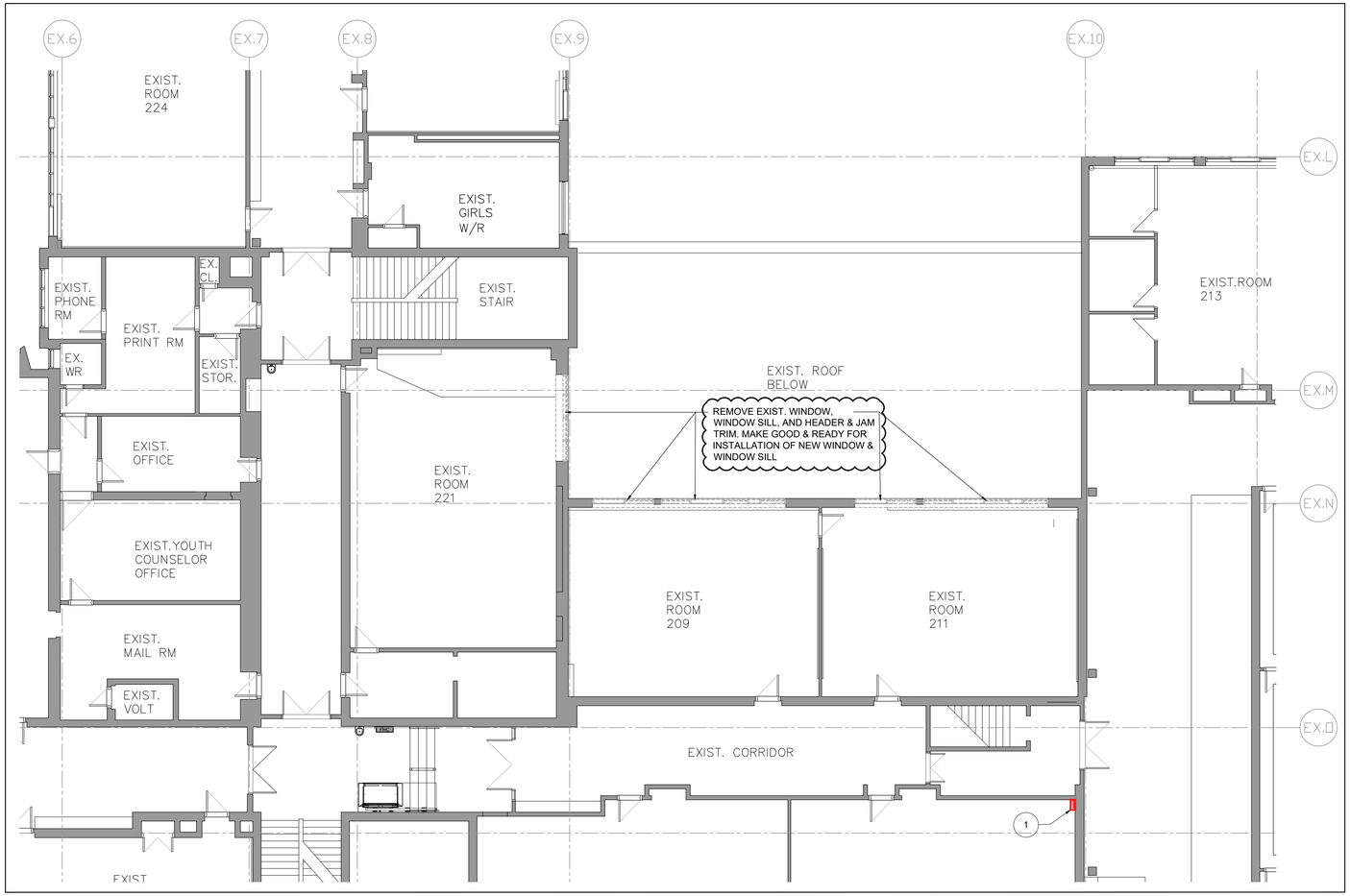
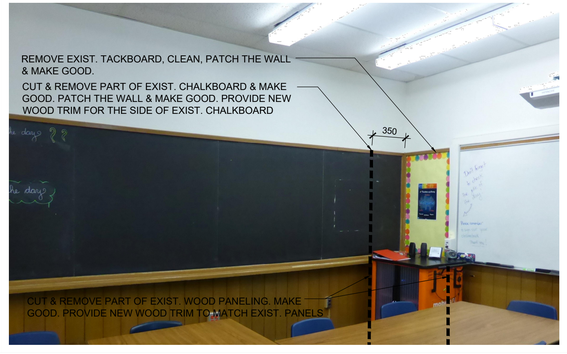
Drawing Title:

SECOND FLOOR PLAN

Scale: AS NOTED	Date: 05 05 2021
Drawn by:	Checked by:
Job No. 2005	Drawing No. A201



1 A201-D PART OF SECOND FLOOR DEMOLITION PLAN - SOUTH WING - NORTH/EAST PART
1:100



2 A201-D EXISTING SPECIAL ED ROOM
N/A

DEMOLITION LEGEND:

- EXISTING WALLS TO REMAIN
- EXISTING DOOR TO REMAIN
- EXISTING WINDOW AND WINDOW SILL TO BE REMOVED/DEMOLISHED
- 1 — PIPING AND CONDUITS PENETRATIONS FROM THE ROOF , THROUGH THIRD FLOOR SLAB, SECOND FLOOR SLAB INTO FIRST FLOOR CEILING SPACE. PREPARE THE AREA FOR NEW CHASE WALL ENCLOSURE. SEE DET. 2/A201-D.

DEMOLITION NOTE:

1. REFER TO SPECS & ABATEMENT REPORT REGARDING DESIGNATED SUBSTANCES REMOVAL.

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1	ISSUED FOR BUILDING PERMIT	2021/01/25
No.	Issue	Date

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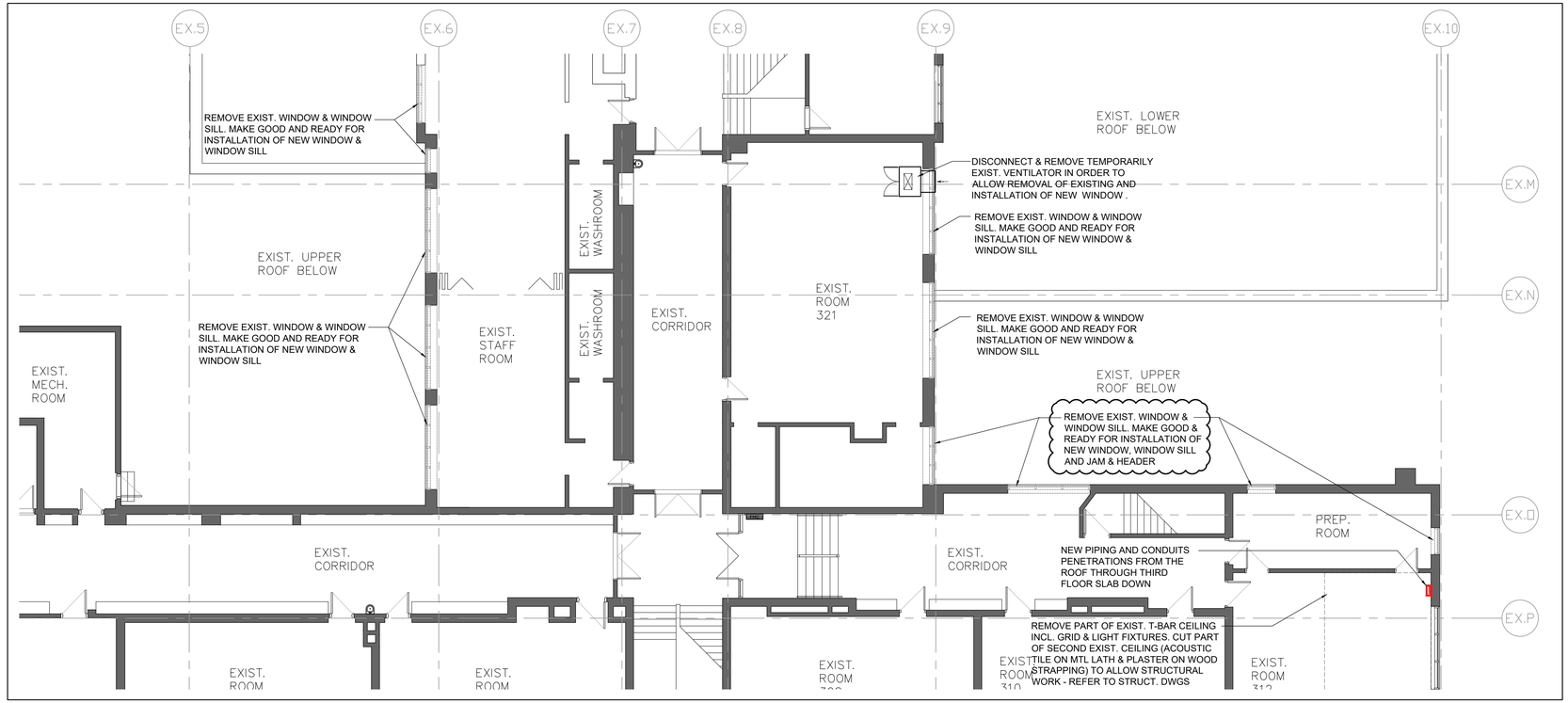
Drawing Title:

SECOND FLOOR DEMOLITION PLAN

Scale: 1:100	Date: 05 05 2021
Drawn by:	Checked by:
Job No. 2005	Drawing No. A201-D

LEGEND:

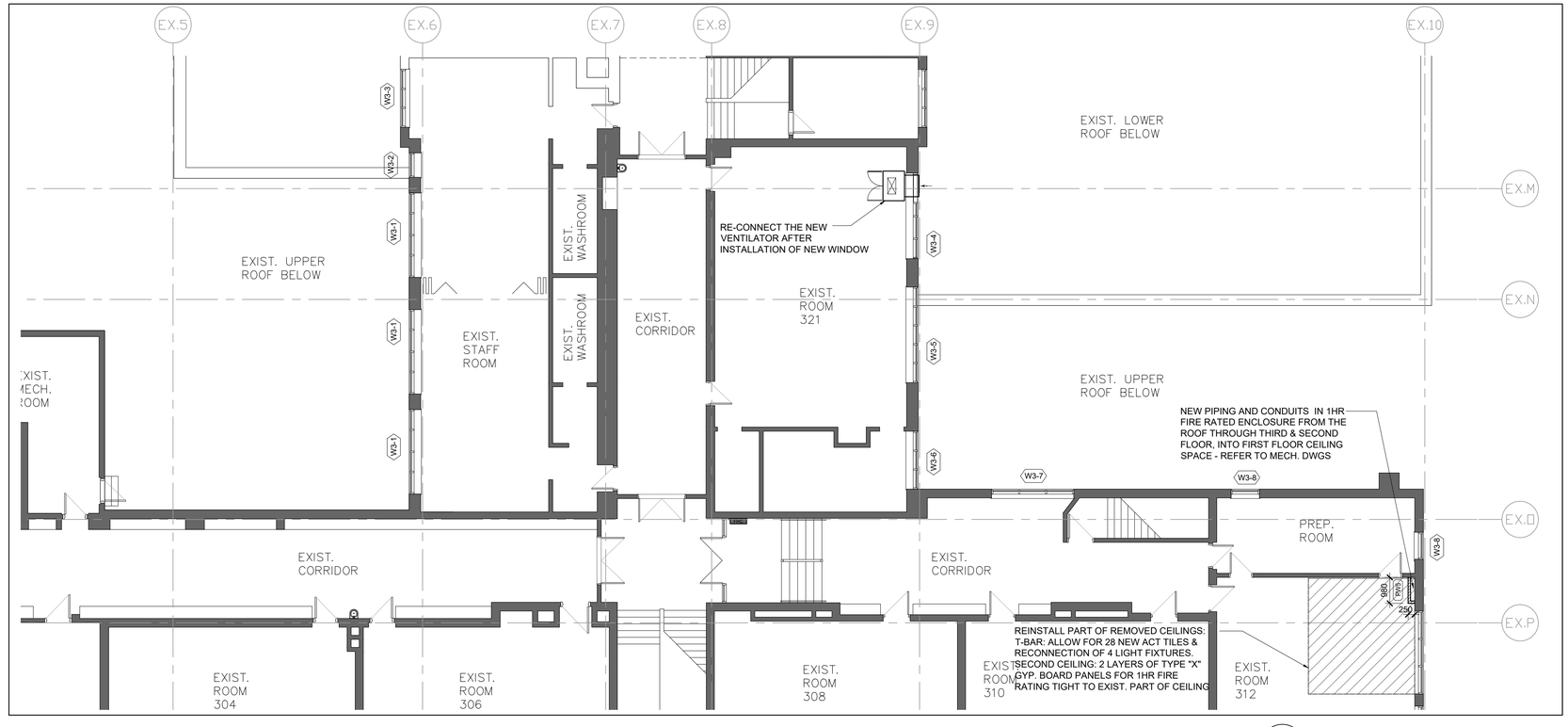
- EXISTING WALLS TO REMAIN
- EXISTING DOOR TO REMAIN
- EXISTING WINDOW TO REMAIN
- EXISTING WINDOW AND WINDOW SILL TO BE REMOVED/DEMOLISHED
- NEW PIPING & CONDUIT PENETRATIONS IN A SLAB ABOVE AND BELOW
- NEW 90MM SOLID CONCRETE BLOCK WALL ALL THE WAY UP TO THE STRUCTURE (PW5)



1-D / A202 PART OF THIRD FLOOR PLAN - WINDOWS DEMOLITION PLAN 1:100

FIRE PROOFING NOTES:

1. FIRE STOP AT ALL FLOOR PENETRATIONS. MAINTAIN EXISTING FIRE SEPARATIONS.
2. ENSURE REQUIRED RATING WITH CMU; GROUT SOLID WHERE NECESSARY.
3. PRIME & PAINT ALL LINTELS.
4. PROVIDE FIRE PROOFING PRODUCTS AS LISTED IN THE ULC/ cUL



1 / A202 PART OF THIRD FLOOR PLAN - NEW WINDOWS 1:100

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Key Plan N.T.S.

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Project North True North

No.	Revisions	Date
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2	ISSUED FOR TENDER	2021/04/19
1	ISSUED FOR BUILDING PERMIT	2021/01/25
No.	Issue	Date

ONTARIO ASSOCIATION OF ARCHITECTS
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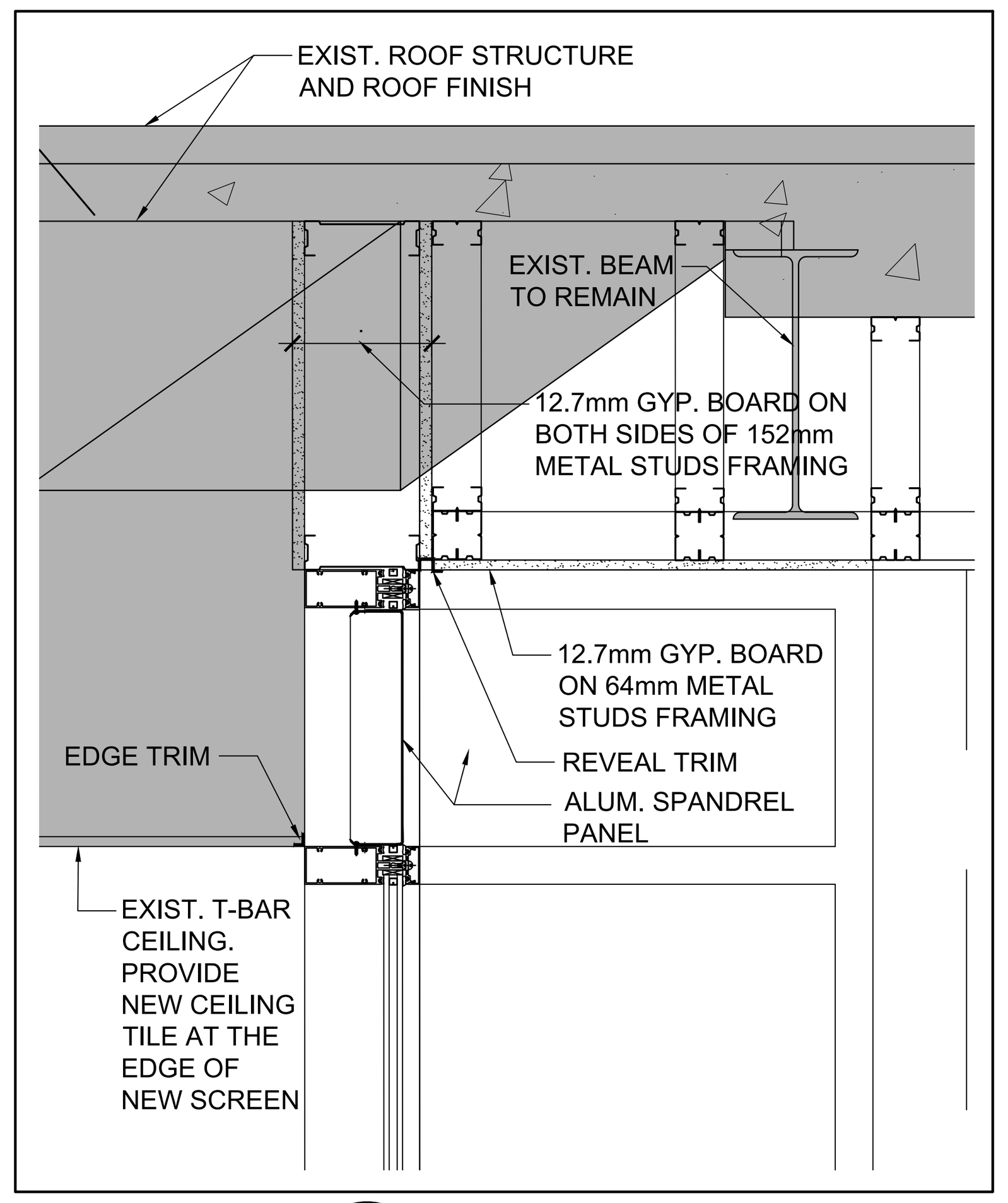
Drawing Title:
PARTIAL THIRD FLOOR - DEMOLITION & NEW FLOOR PLAN

Scale: 1:100	Date: 05 05 2021
Drawn by:	Checked by:
Job No. 2005	Drawing No. A202



5 / A203 **GYM ENTRANCE - SECTION DETAIL** 1:10

DEMOLITION NOTES:

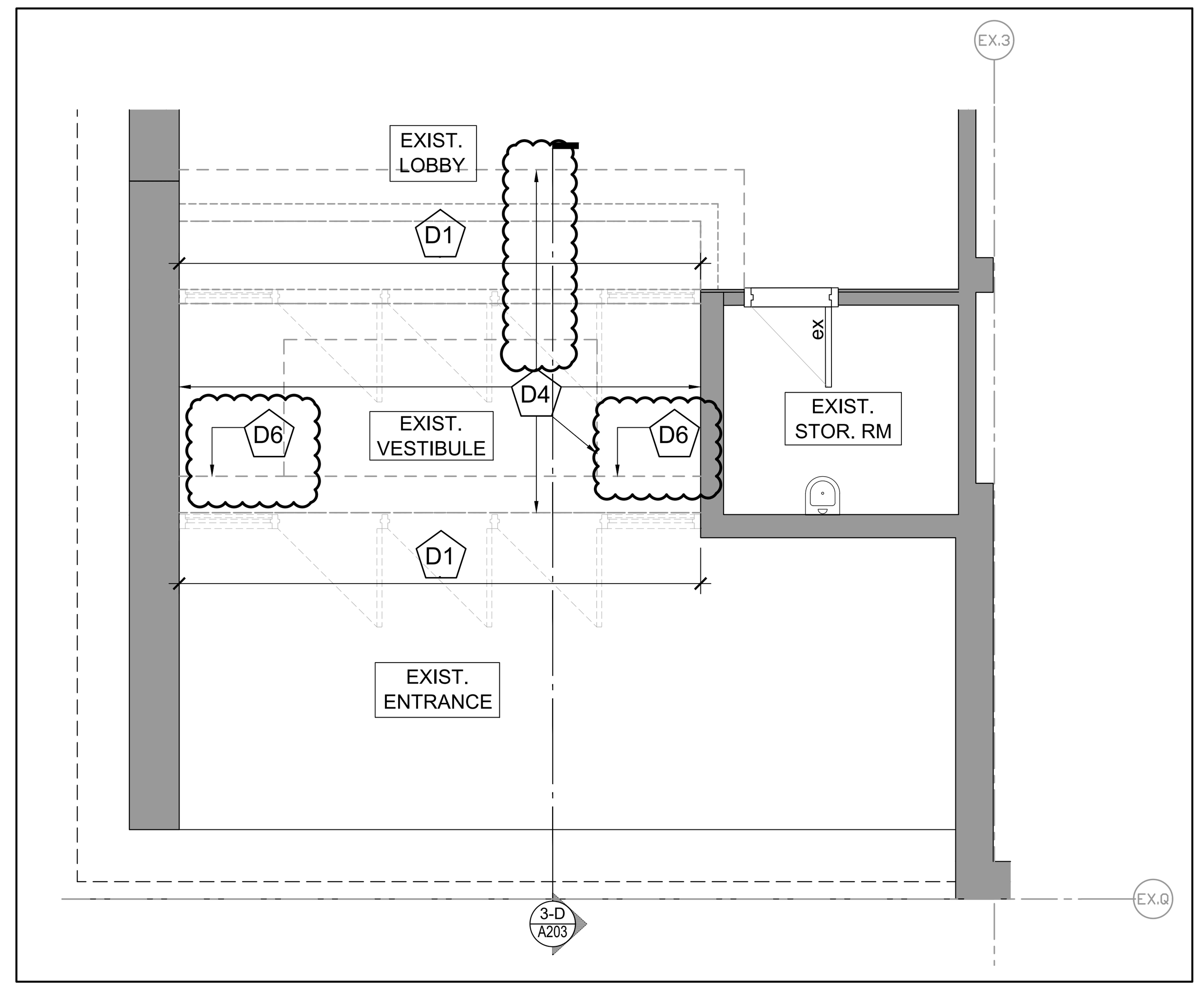
- D1 REMOVE AND DISPOSE EXISTING DOOR AND FRAME/SCREEN C/W ALL ASSOCIATED COMPONENTS AND/OR ATTACHED COMPONENTS. MAKE GOOD AND READY TO RECEIVE PROPOSED WORK.
- D2 REMOVE EXISTING CEILING TILES AND BULKHEAD. CUT THE GRID TO FIT NEW ALUMINUM SCREEN FRAMING.
- D3 REMOVE EXISTING GYPSUM BOARD CEILING & LIGHT FIXTURE. PREPARE SURFACE TO RECEIVE NEW GYPSUM BOARD CEILING & LIGHT FIXTURE (REFER TO EL. DWGS).
- D4 REMOVE EXISTING TERRAZZO FLOORING INCLUDING STEEL FRAME OF FLOOR MAT. PREPARE SURFACE OF CONCRETE SLAB TO RECEIVE NEW TERRAZZO FINISH.
- D5 REMOVE , IF NECESSARY, EXISTING LIGHT FIXTURE FOR THE TIME OF NEW SCREEN AND CEILING CONSTRUCTION. RE-INSTALL IT IN ITS ORIGINAL LOCATION.
- D6 GRIND DOWN EXISTING CONCRETE TO RECEIVE NEW TERRAZZO.

GENERAL DEMOLITION NOTES:

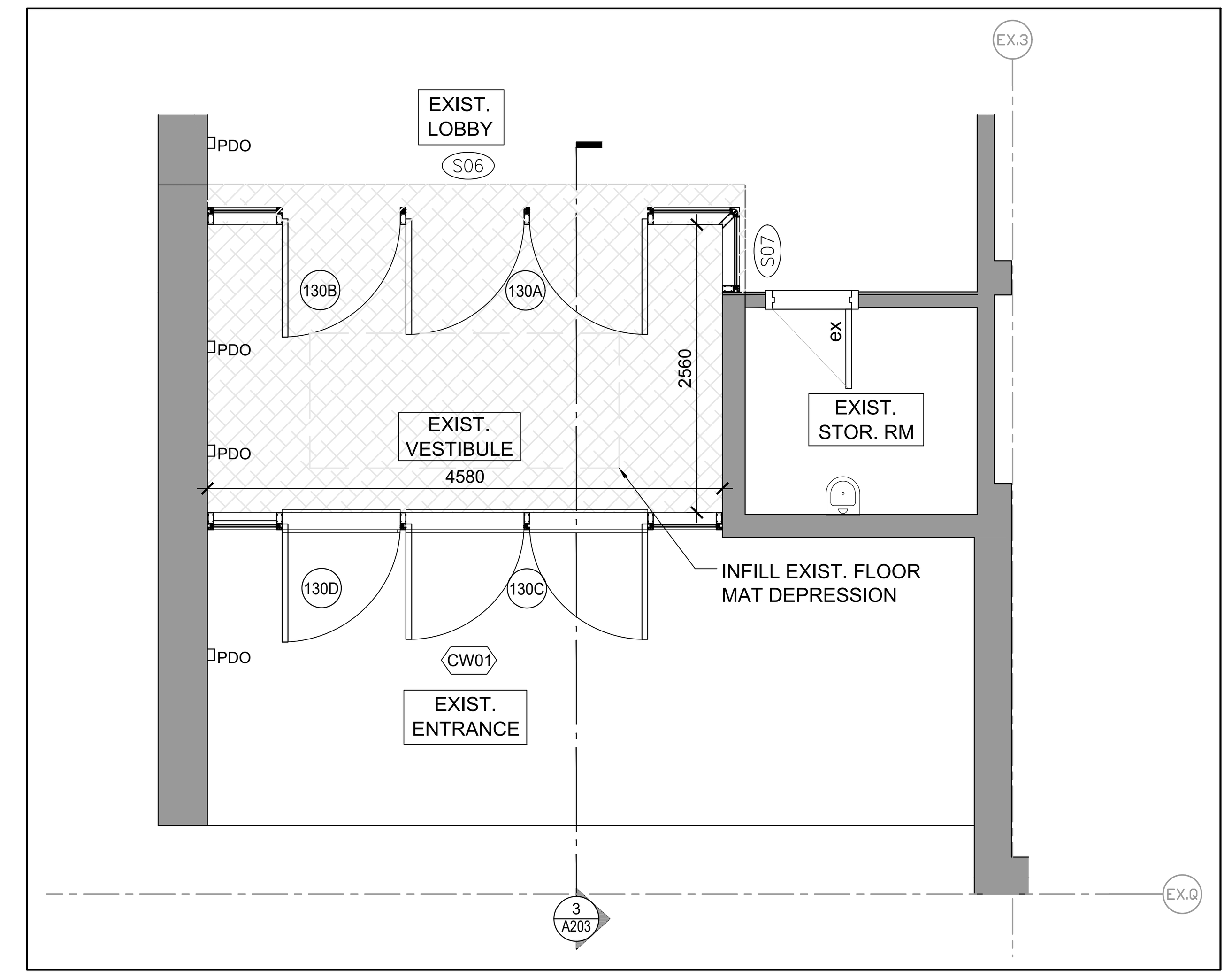
1. REFER TO SPECS & ABATEMENT REPORT REGARDING DESIGNATED SUBSTANCES REMOVAL.

DEMOLIOTION LEGEND:

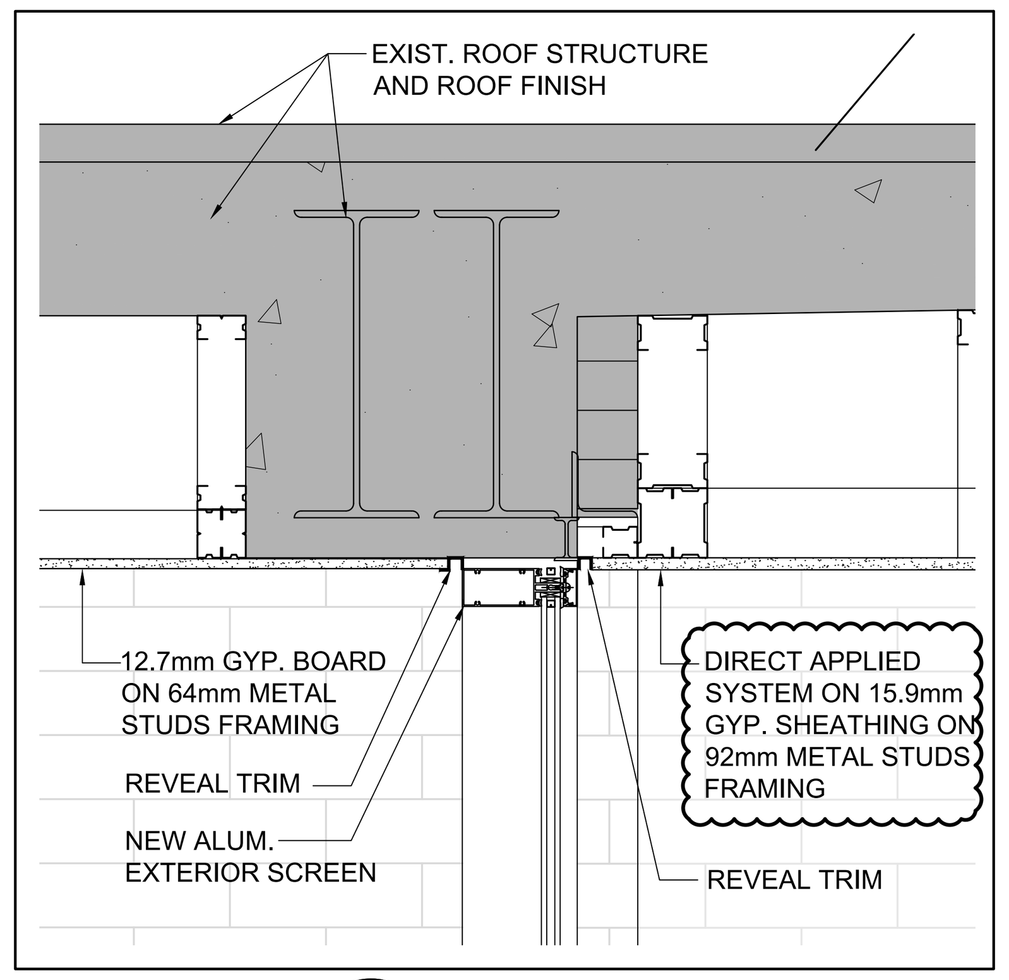
- EXISTING WALL, DOOR, SCREEN OR OTHER COMPONENT (MILLWORK, PLUMBING FIXTURE, MECHANICAL & ELECTRICAL EQUIPMENT) TO BE REMOVED/DEMOLISHED
- EXISTING WALLS TO REMAIN
- EXISTING DOOR TO REMAIN



1-D / A203 **GYM ENTRANCE - DEMOLITION PLAN** 1:50



1 / A203 **GYM ENTRANCE - FLOOR PLAN** 1:50



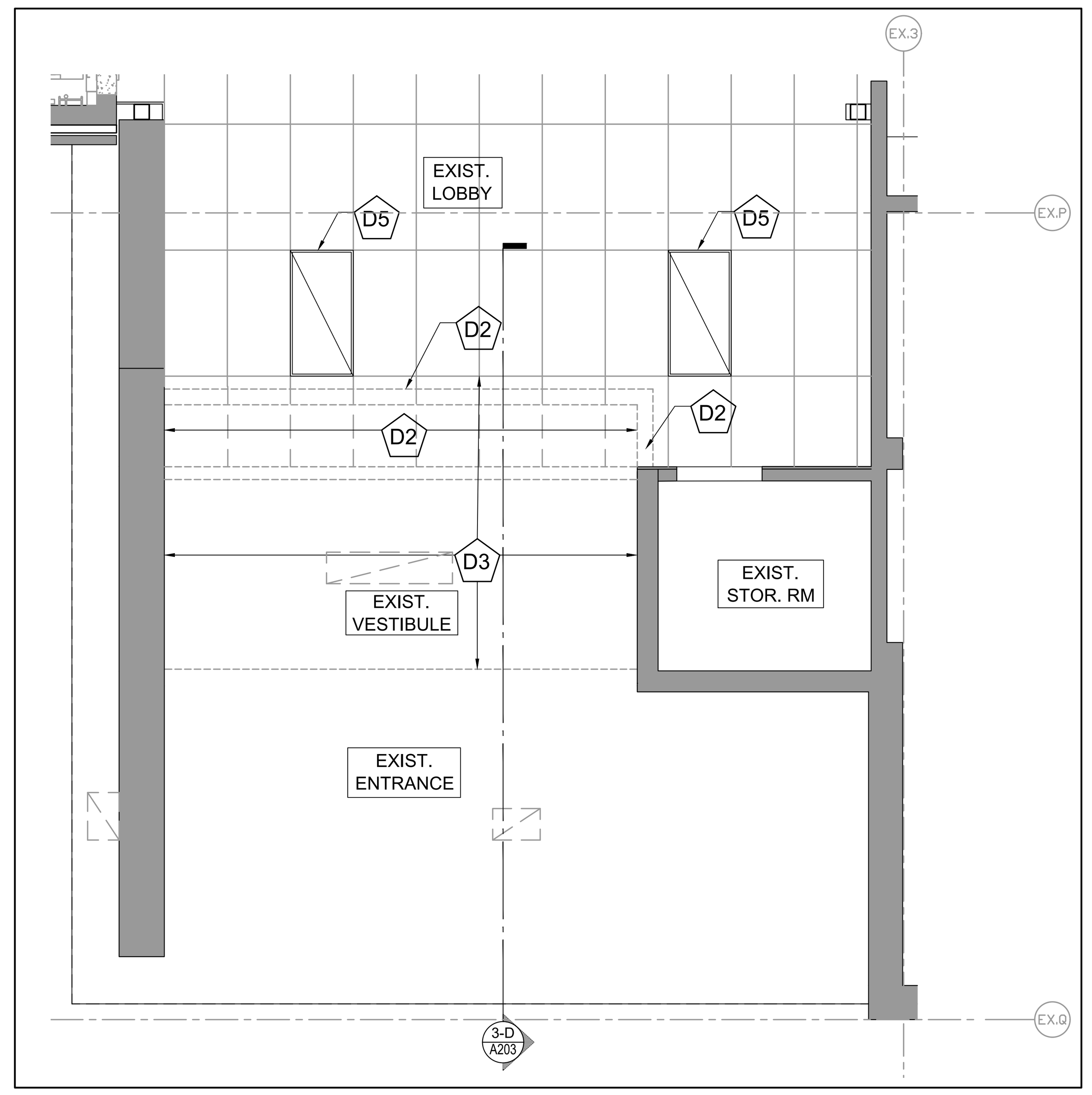
6 / A203 **GYM ENTRANCE - SECTION DETAIL** 1:10

REFLECTED CEILING PLAN LEGEND:

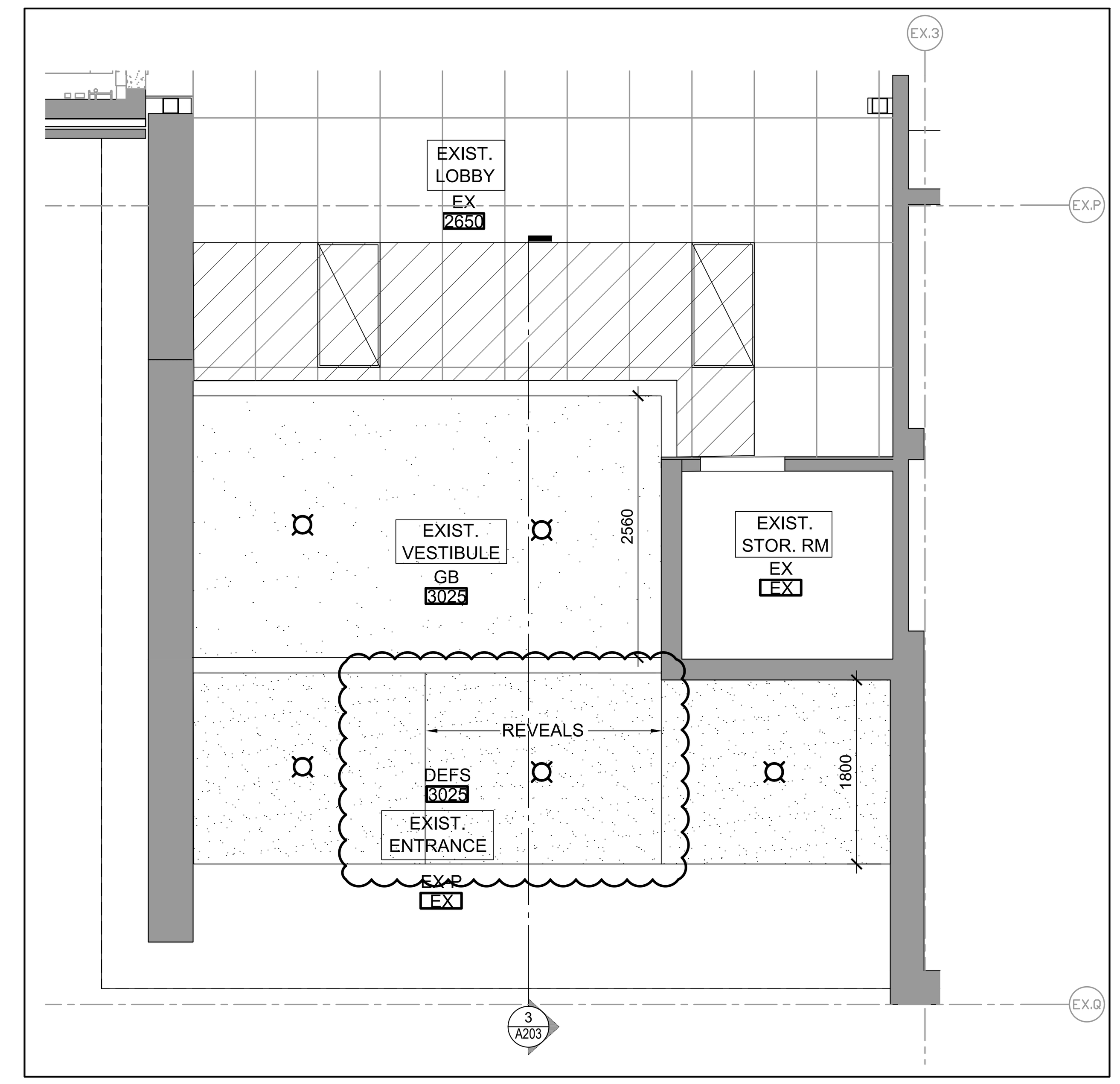
- EXIST. ACT CEILING TO BE REMOVED
- EXIST. ACT CEILING TO BE ADJUSTED
- EXIST. ACOUSTIC CEILING TILES TO REMAIN
- GB — NEW GYP. BOARD CEILING
- DEFS — DIRECT APPLIED FINISH SYSTEM
- EXISTING WALLS TO REMAIN
- EXISTING LIGHT FIXTURES
- EXIST. LIGHT FIXTURE TO BE REMOVED
- NEW LIGHT FIXTURE

FLOOR PLAN LEGEND

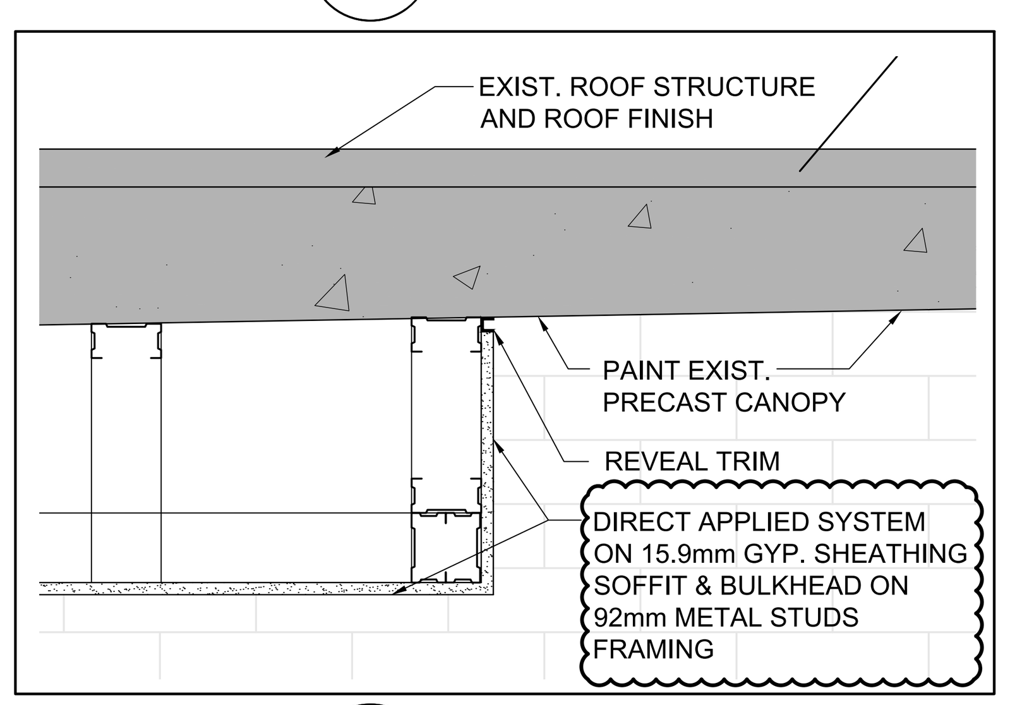
- EXISTING WALLS AND STRUCTURE TO REMAIN
- EXISTING DOOR TO REMAIN
- 123 — NEW DOOR AND FRAME - REFER TO THE DOOR SCHEDULE
- NEW TERRAZZO FLOOR & AREA OF TERRAZZO FLOOR REPAIR
- S03 — NEW INTERIOR SCREEN
- CW01 — NEW EXTERIOR SCREEN
- PDO — POWER DOOR OPERATOR
- MTL — METAL
- EX — EXISTING
- P — PAINT



2-D / A203 **GYM ENTRANCE - REFLECTED CEILING DEMOLITION PLAN** 1:50



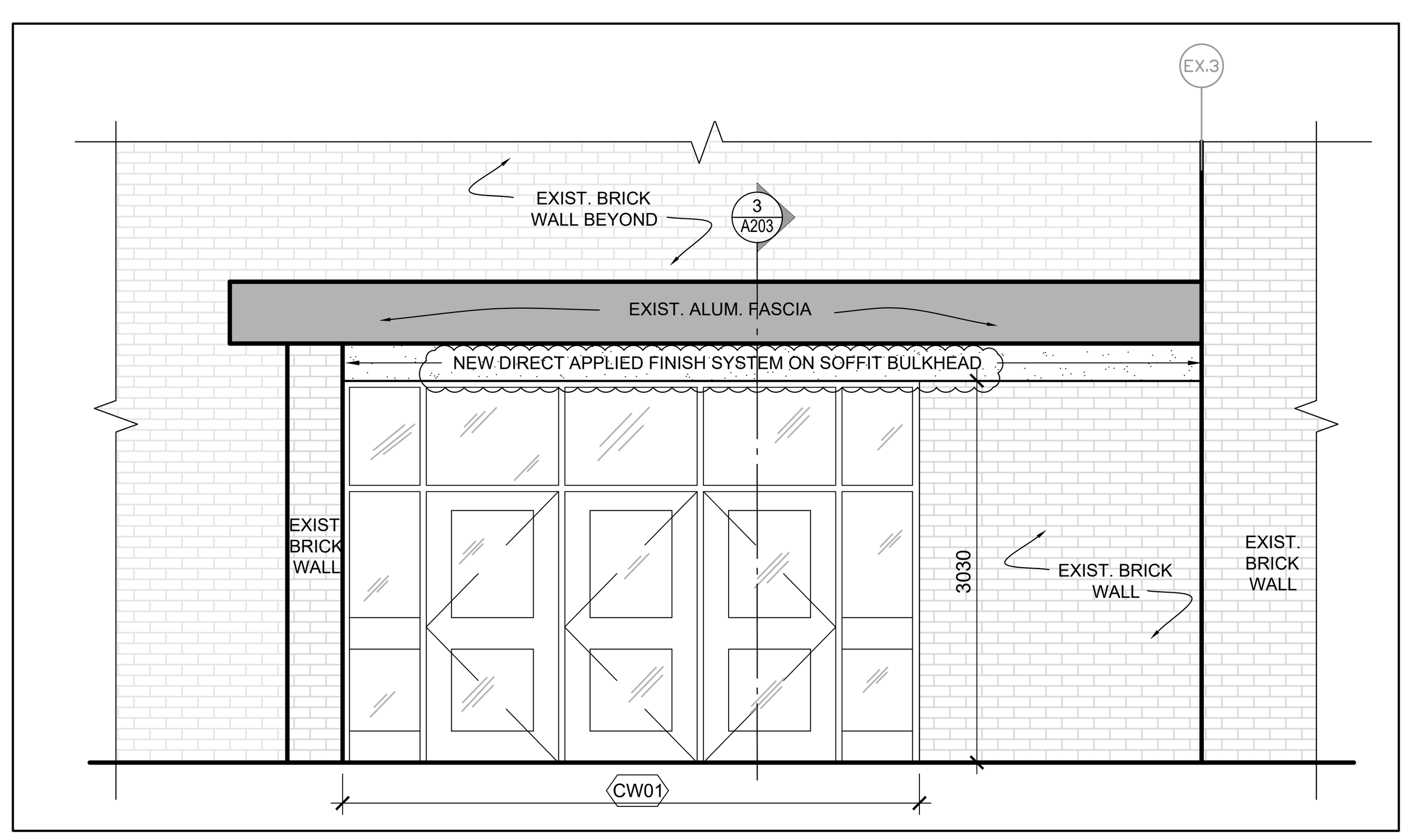
2 / A203 **GYM ENTRANCE - REFLECTED CEILING PLAN** 1:50



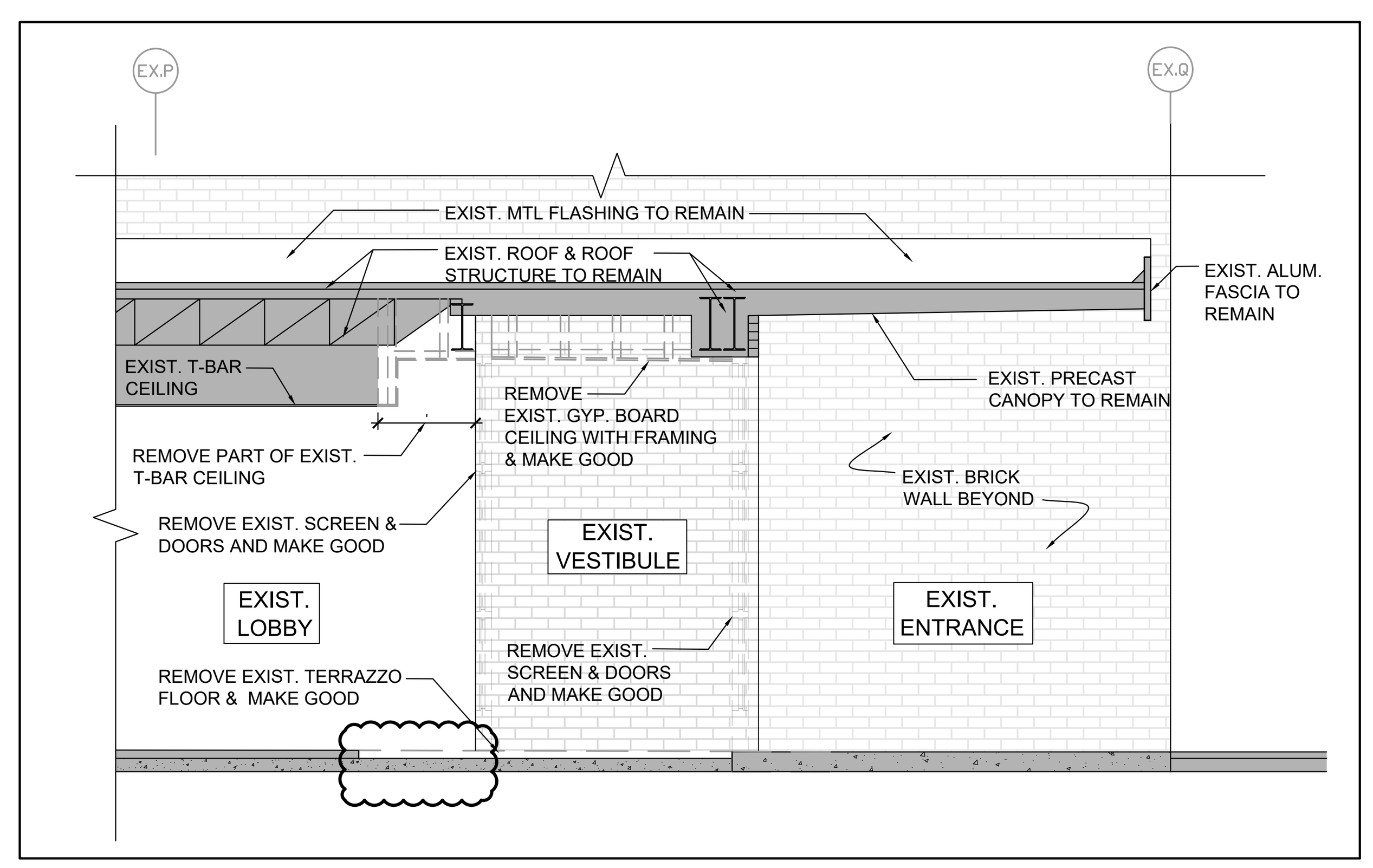
7 / A203 **GYM ENTRANCE - SECTION DETAIL** 1:10

GENERAL FLOOR FINISH NOTES:

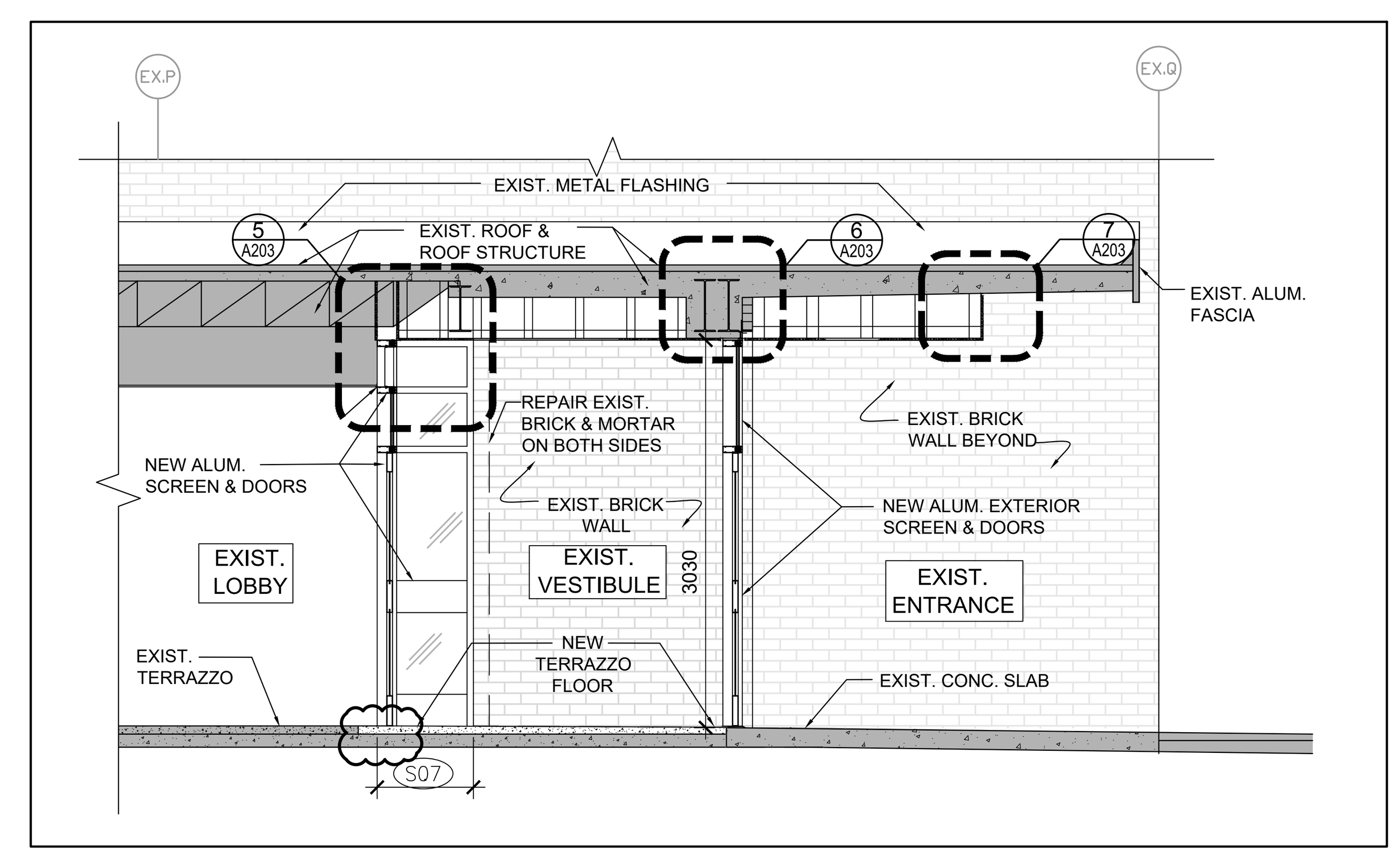
1. TRANSITION STRIP IN EVERY CHANGE OF MATERIAL.
2. ALL TRANSITIONS BETWEEN DIFFERING MATERIALS TO BE FLUSH.
3. ALL FLOOR FINISH TRANSITIONS TO MEET UNDER DOOR (WHERE DOOR OCCURS).
4. ALL TERRAZZO IN-FILLS TO EXTEND TO NEXT METAL STRIP.
5. CONTROL JOINT IN TILING SYSTEM EVERY 10 METERS.
6. ALL EXISTING BASE TO BE REMOVED PRIOR TO NEW BASE INSTALLATION.
7. REFER TO DRAWING A800 FOR ROOM FINISH SCHEDULE.



4 / A203 **GYM ENTRANCE - ELEVATION** 1:50



3-D / A203 **GYM ENTRANCE SECTION - DEMOLITION** 1:50



3 / A203 **GYM ENTRANCE SECTION** 1:50

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Key Plan N.T.S.

Project North — True North

No.	Revisions	Date

No.	Issue	Date
3	ISSUED FOR ADDENDUM 2	2021/05/05
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1	ISSUED FOR BUILDING PERMIT	2021/01/25

ONTARIO ASSOCIATION OF ARCHITECTS
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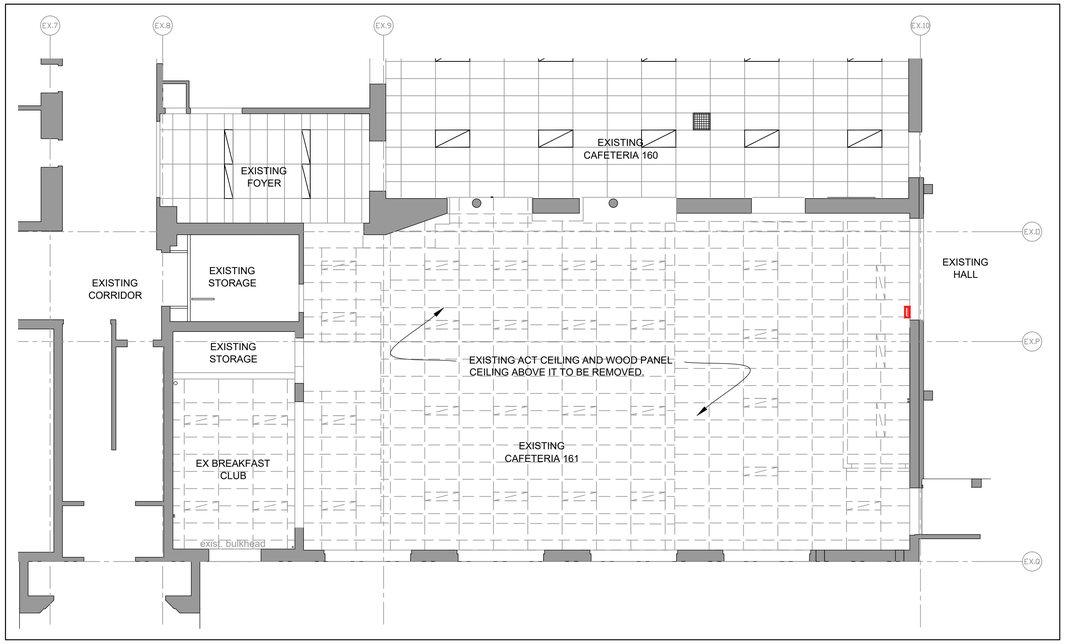
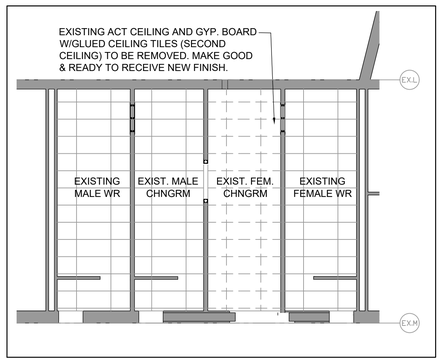
Drawing Title:
GYM ENTRANCE
- PLANS, SECTIONS
AND DETAILS

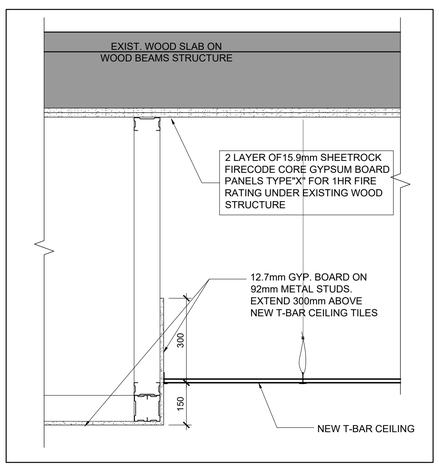
Scale: AS NOTED	Date: 05 05 2021
Drawn by:	Checked by:
Job No. 2005	Drawing No. A203



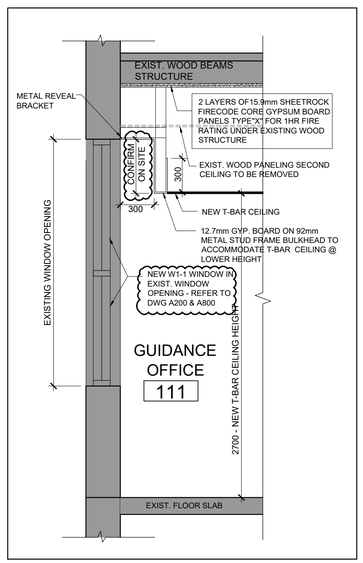
1D / A300 EXISTING CAFETERIA RCP DEMOLITION PLAN 1:100



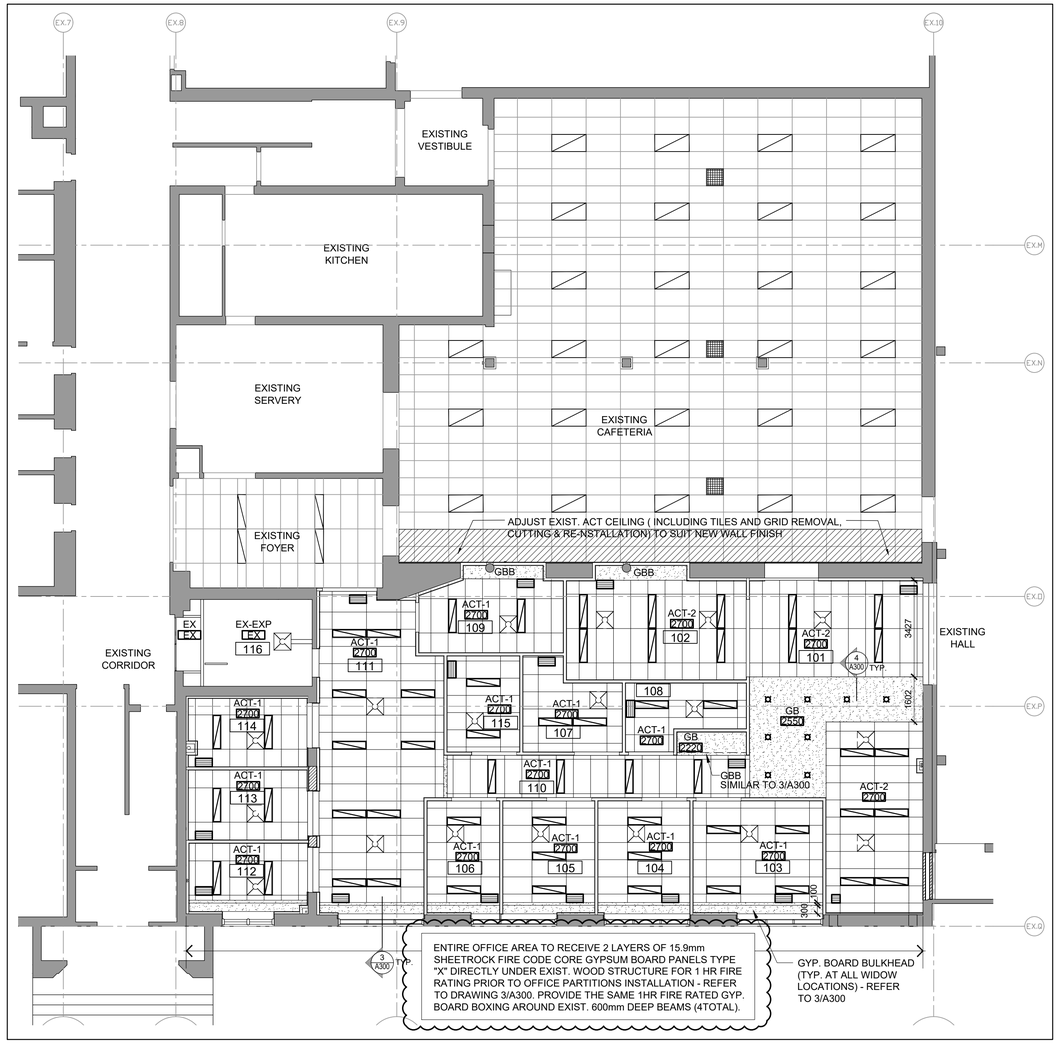
2-D / A300 FIRST FLOOR - EXIST. WASHROOMS AREA - DEMOLITION 1:100



4 / A300 SECTION DETAIL AT RECEPTION BULKHEAD 1:10



3 / A300 SECTION THROUGH BULKHEAD AT WINDOW 1:25



1 / A300 FIRST FLOOR - NEW OFFICE AREA RCP 1:100

GENERAL NOTES:

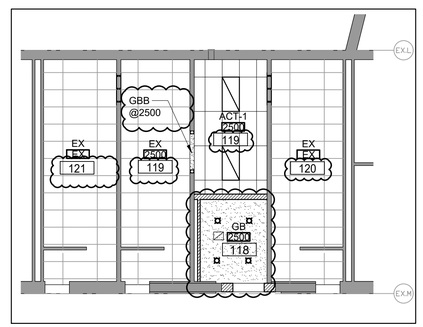
1. IN AREAS WITH EXPOSED STRUCTURE, DUCTS / PIPES AND CONDUITS SHALL BE MOUNTED TIGHT TO LUS OF SLAB OR DECK, ROUTED PARALLEL AND PERPENDICULAR TO WALLS.
2. PAINT ALL GYPSUM BOARD SURFACES.
3. PAINT ALL EXPOSED STRUCTURE, DUCTS, PIPES & CONDUITS, UNO.
4. PROVIDE GYPSUM BOARD BULKHEAD AT CEILING HEIGHT CHANGES, COMPLETE WITH SHADOW MOLDING TYP. UNO.
5. FOR CEILING @ WINDOW MULLION. PROVIDE METAL REVEAL TYP.
6. FOR LOCATIONS OF DIFFUSERS, AIR GRILLES, SPRINKLER HEADS, SPEAKERS & EXIT LIGHTS, REFER TO MECHANICAL & ELEC. DWGS.
7. ALLOW 50 ADDITIONAL ACOUSTIC CEILING TILES FOR REPLACEMENT OF EXISTING DAMAGE TILES.

GENERAL DEMOLITION NOTES:

1. REFER TO SPECS & ABATEMENT REPORT REGARDING DESIGNATED SUBSTANCES REMOVAL.

REFLECTED CEILING PLAN LEGEND:

- EXIST. T-BAR CEILING AND ONE ABOVE TO BE REMOVED
- EXIST. T-BAR CEILING TO BE ADJUSTED
- EXIST. T-BAR CEILING TO REMAIN
- ACT — NEW T-BAR CEILING
- GB — NEW GYP. BOARD CEILING
- GBB — GYP. BOARD BULKHEAD
- EXISTING WALLS TO REMAIN
- NEW WALLS & PARTITIONS
- NEW LIGHT FIXTURE
- NEW AND EXIST. MECH. DIFFUSERS, GRILLS & FANS - REFER TO MECH. DWGS)
- PIPING AND CONDUITS PENETRATIONS FROM THE ROOF , THROUGH THIRD & SECOND FLOOR SLABS, INTO FIRST FLOOR CEILING SPACE



2 / A300 FIRST FLOOR - NEW UNIVERSAL WR RCP 1:100

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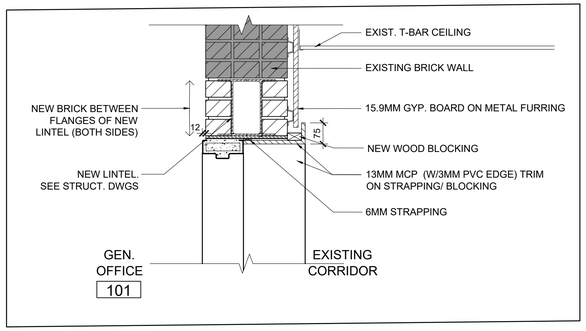
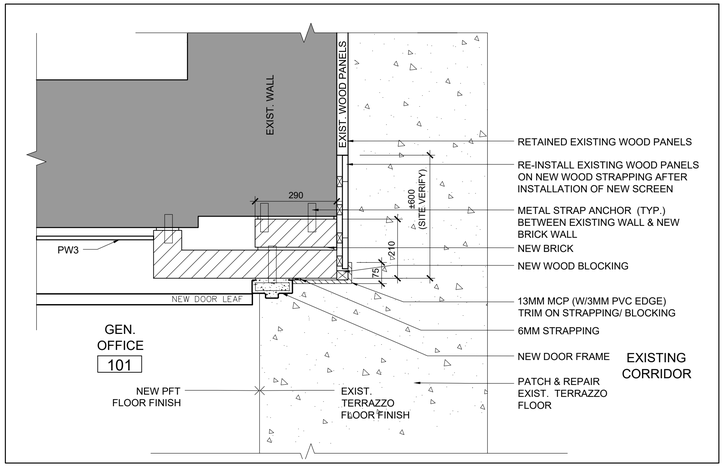
Drawing Title:
PARTIAL FIRST FLOOR REFLECTED CEILING PLANS - DEMO & NEW

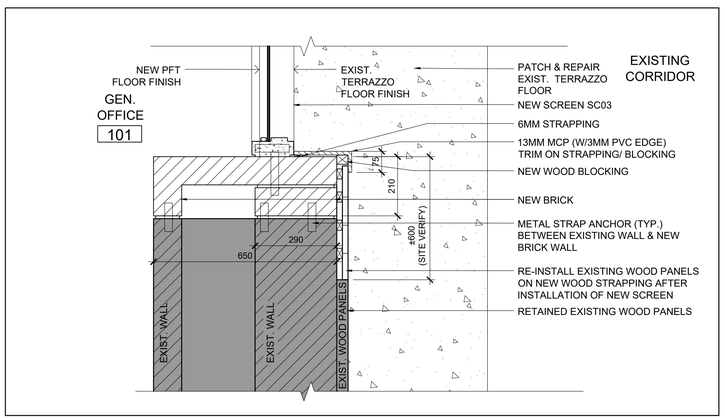
Scale:	AS NOTED	Date:	05 05 2021
Drawn by:		Checked by:	
Job No.	2005	Drawing No.	A300



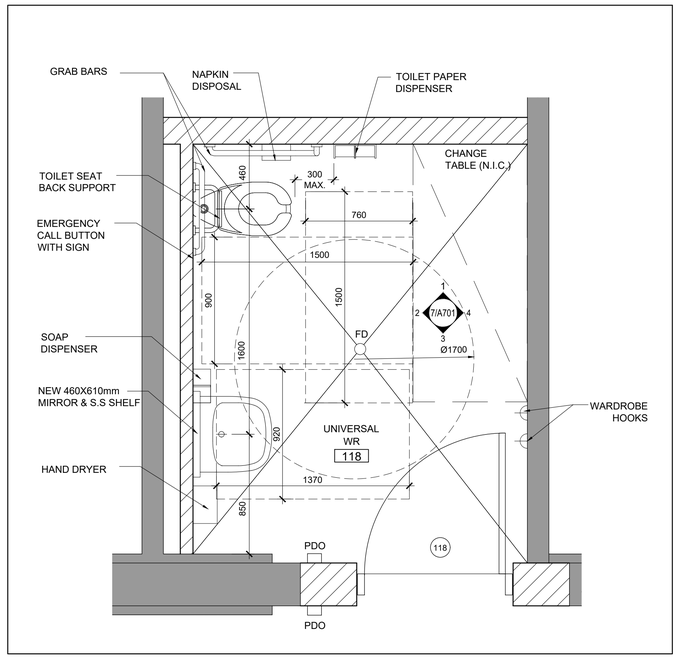
7 / A500 **LINTEL SECTION DETAIL AT GEN. OFFICE (RM101) DOOR** 1:10



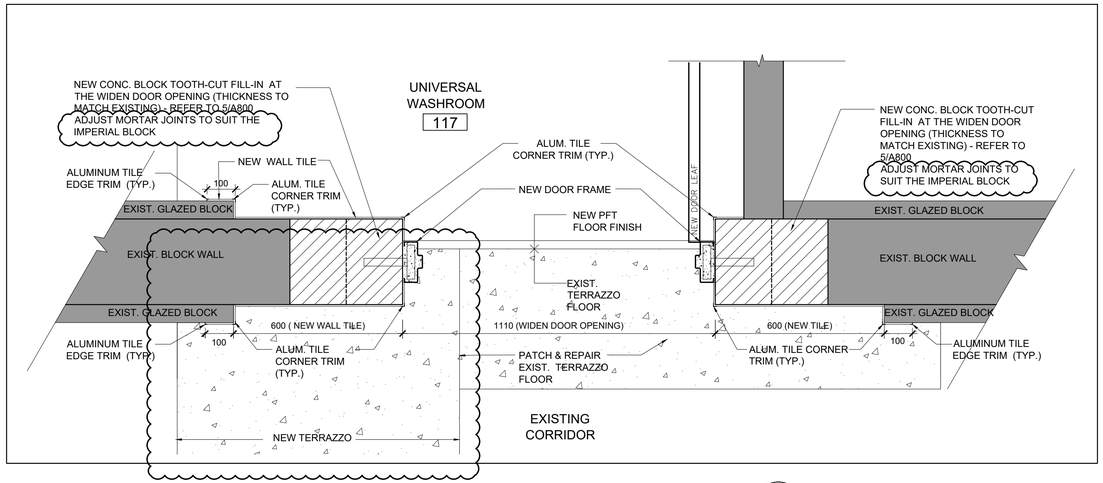
5 / A500 **PLAN DETAIL AT GEN. OFFICE (RM101) DOOR** 1:10



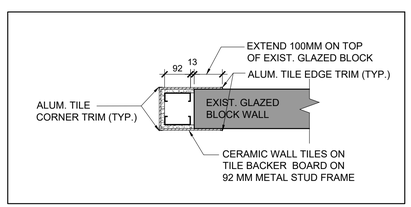
6 / A500 **PLAN DETAIL AT GEN. OFFICE (RM101) SCREEN** 1:10



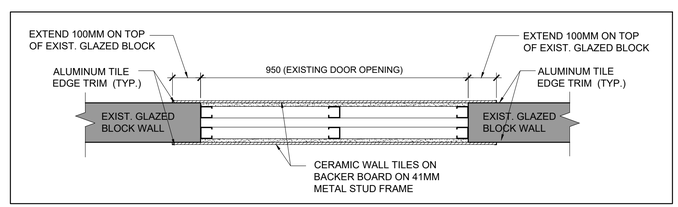
1 / A500 **UNIVERSAL WASHROOM (RM118) FLOOR PLAN ENLARGEMENT** 1:20



2 / A500 **PLAN DETAIL AT UNIVERSAL WR (RM118) DOOR** 1:10



3 / A500 **PLAN DETAIL AT STORAGE RM 119 NEW WALL OPENING** 1:10



4 / A500 **PLAN DETAIL AT EXIST. CHANGEROOM DOOR OPENING FILL-IN** 1:10

Client
Halton District School Board
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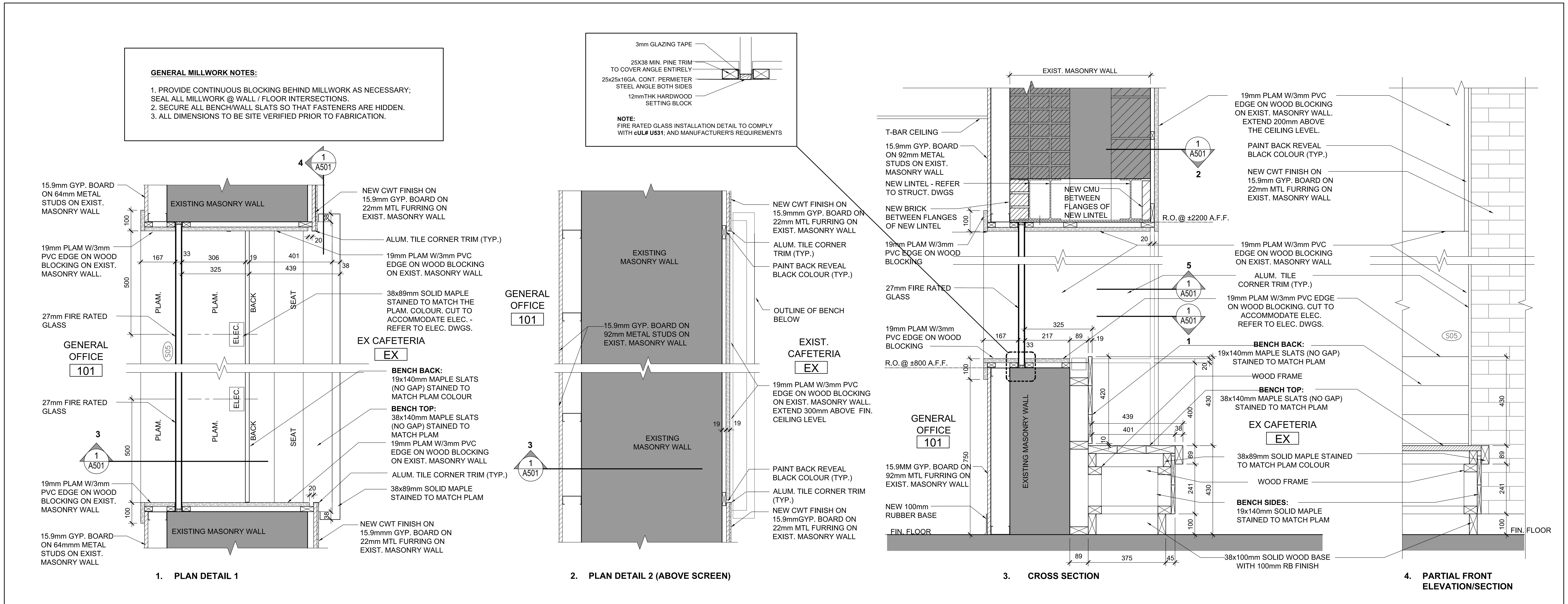
Key Plan N.T.S.

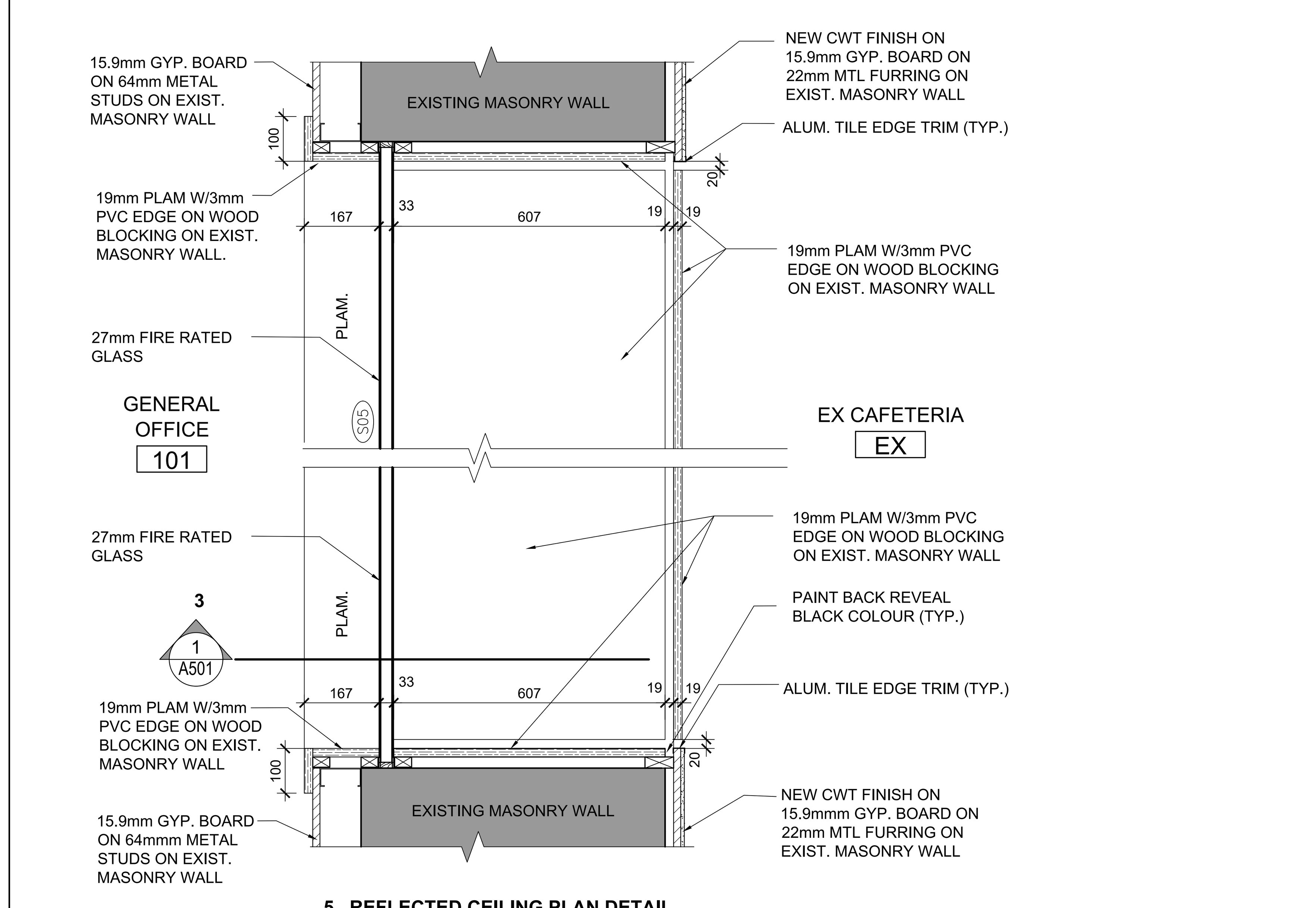
No.	Revisions	Date
3	ISSUED FOR ADDENDUM 2	2021/05/05
2	ISSUED FOR TENDER	2021/04/19
1	ISSUED FOR BUILDING PERMIT	2021/01/25
No.	Issue	Date

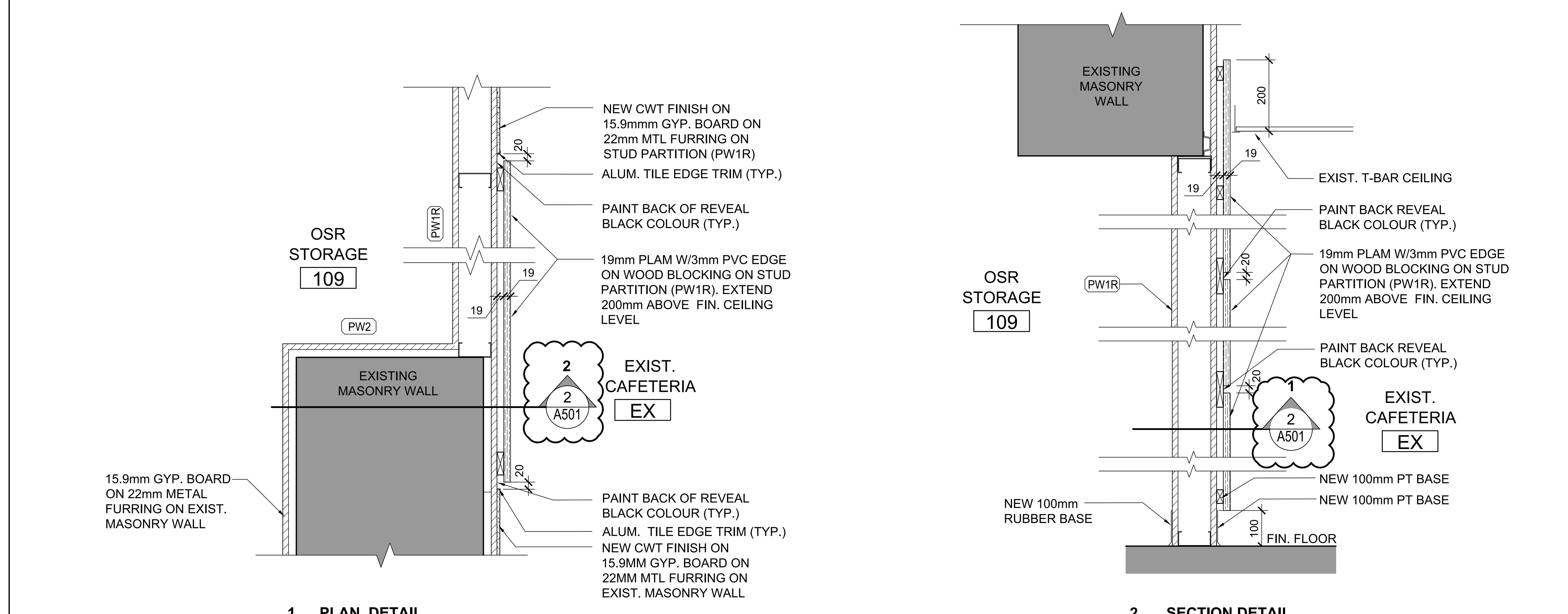
Drawing Title:

ENLARGEMENT PLAN AND DETAILS

Scale:	AS NOTED	Date:	05 05 2021
Drawn by:		Checked by:	
Job No.	2005	Drawing No.	A500







1 A501 — NEW SCREEN & BENCH DETAILS AT EXIST. CAFETERIA 1:10

2 A501 — NEW PLAM. PANEL AT EXIST. CAFETERIA DETAIL 1:10

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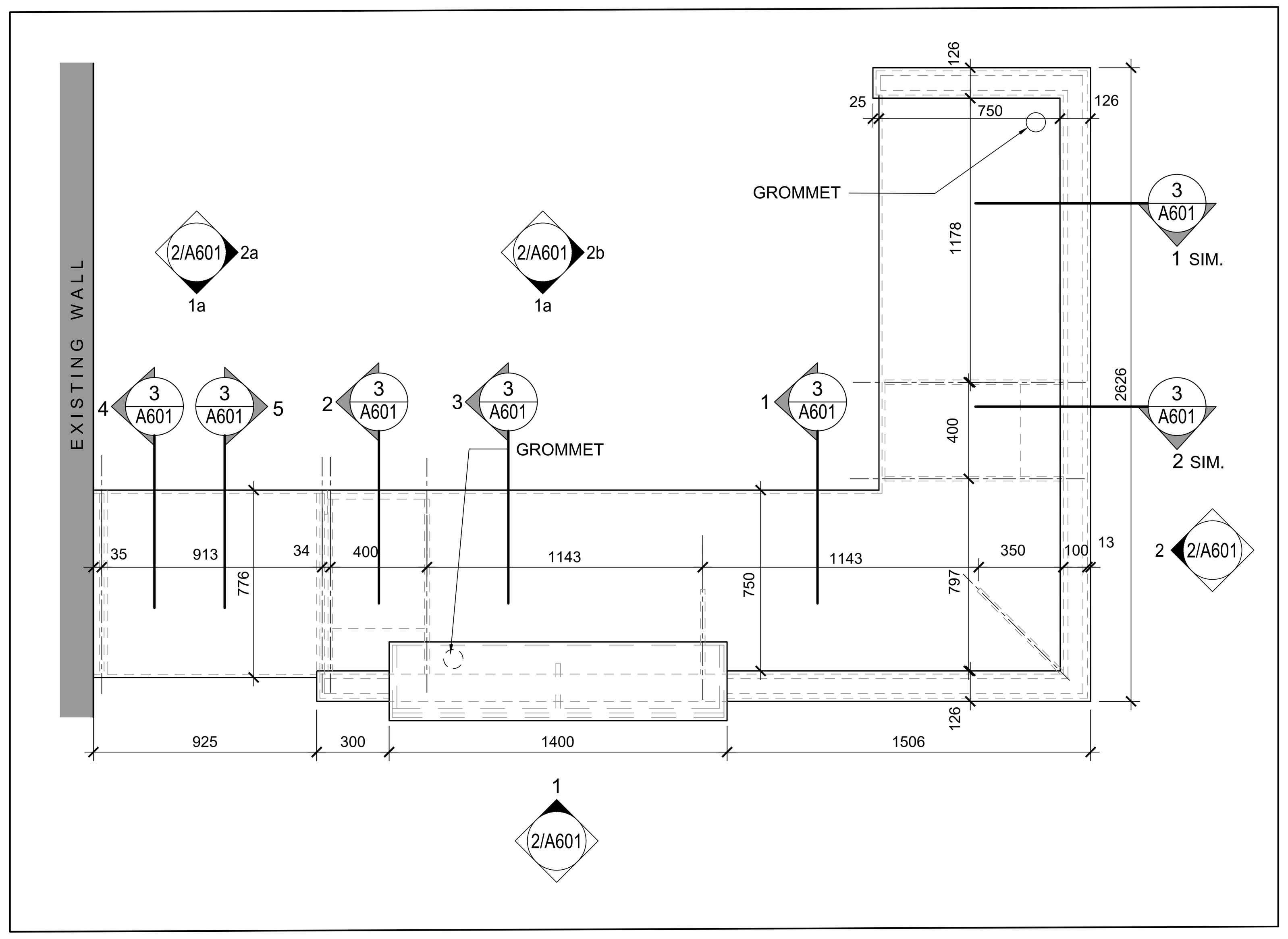
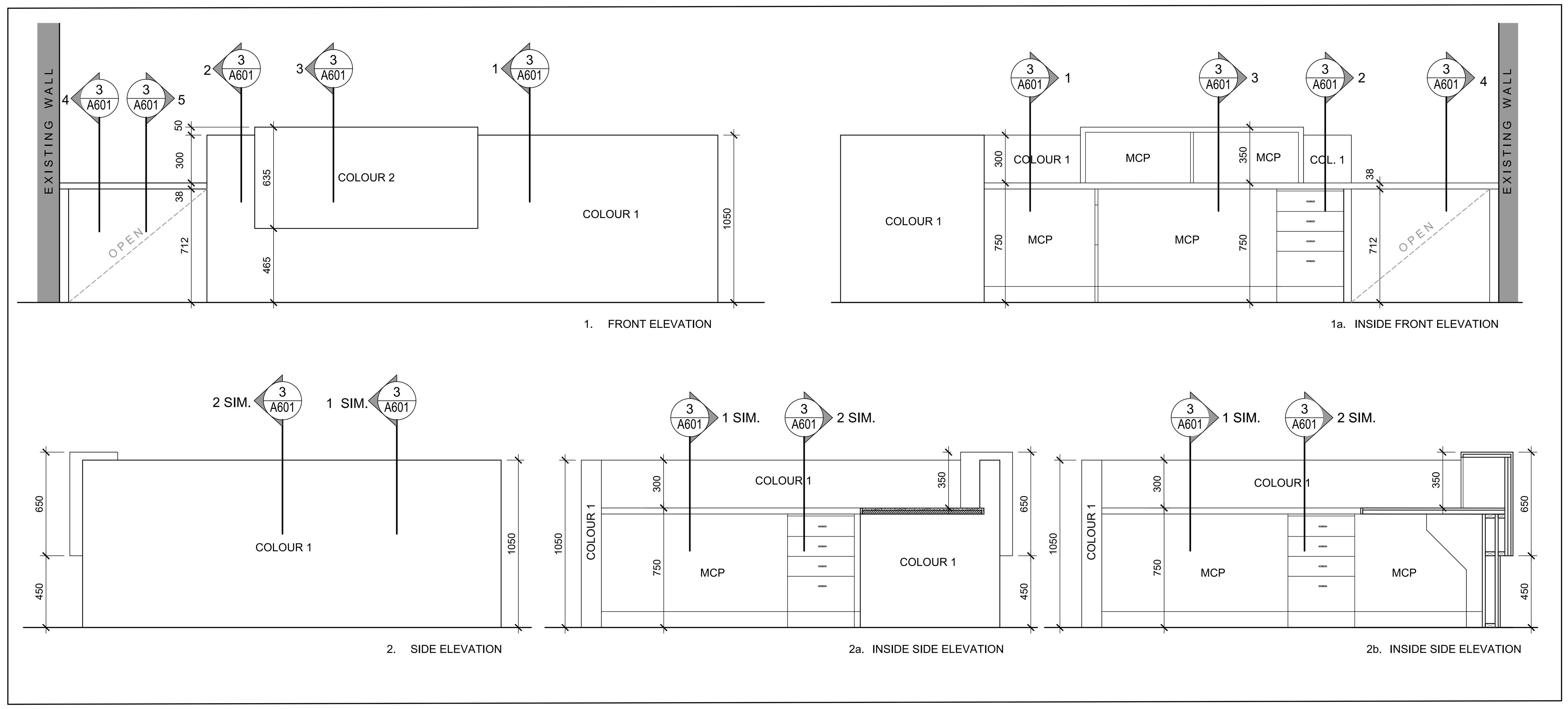
ONTARIO ASSOCIATION OF ARCHITECTS — AVINASH GARDE — LICENCE 6242

Drawing Title:
BENCH IN CAFETERIA PLAN & SECTION DETAILS

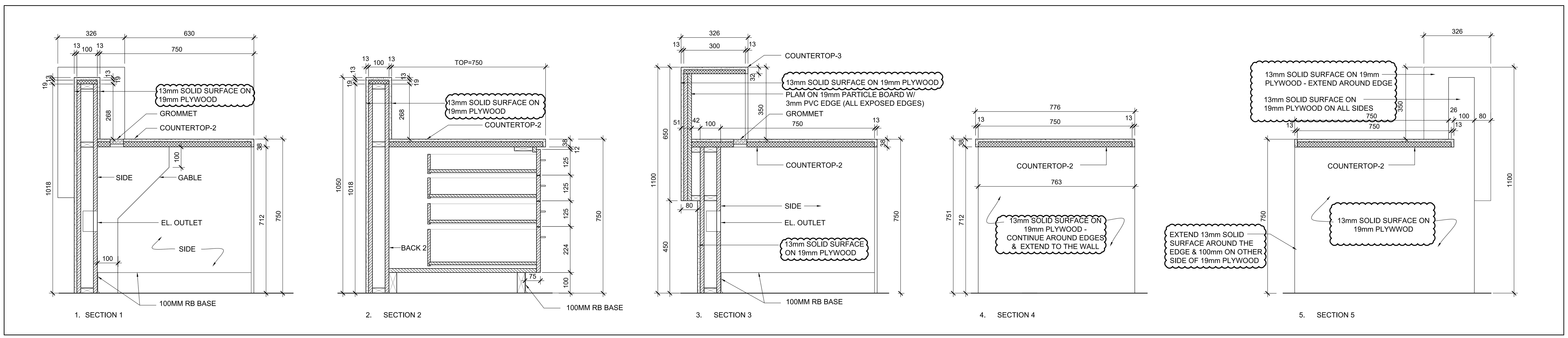
Scale: AS NOTED	Date: 05 05 2021
Drawn by:	Checked by:
Job No. 2005	Drawing No. A501



1 A601 **RECEPTION DESK - PLAN** 1:20



2 A601 **RECEPTION DESK - ELEVATIONS** 1:20



3 A601 **RECEPTION DESK - SECTIONS** 1:10

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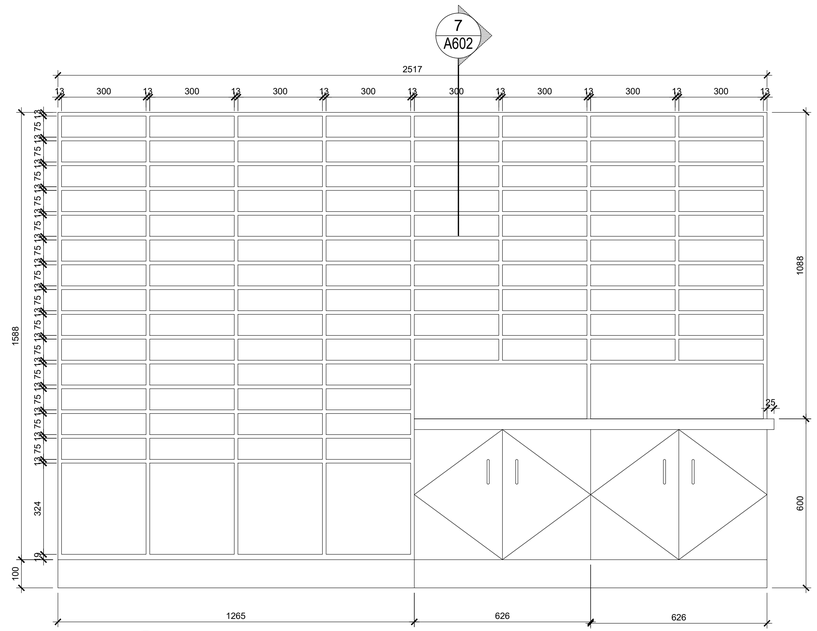
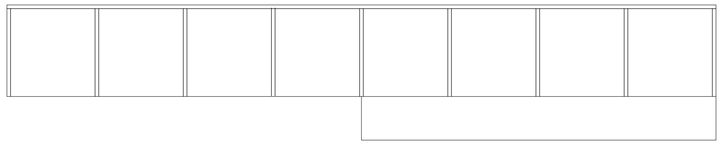
Drawing Title:

RECEPTION DESK
DETAILS

Scale:	AS NOTED	Date:	05 05 2021
Drawn by:		Checked by:	
Job No.	2005	Drawing No.	A601

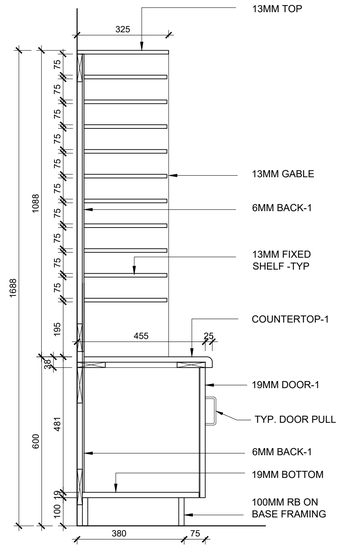


6 A602 **ELEVATION OF MD12** 1:10



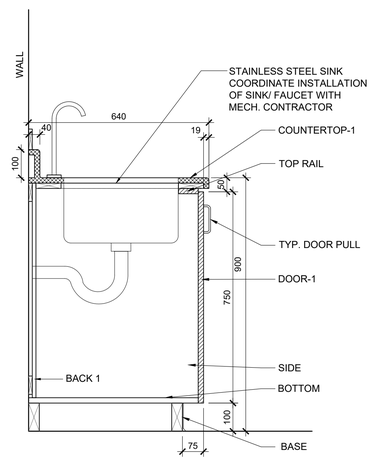
MD12

5 A602 **PLAN OF MD12** 1:10



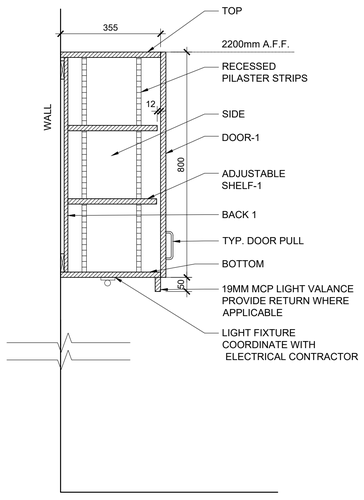
MD12 A602 **BASE CABINET W/MAIL SLOTS**

7 A602 **SECTION OF MD12** 1:10



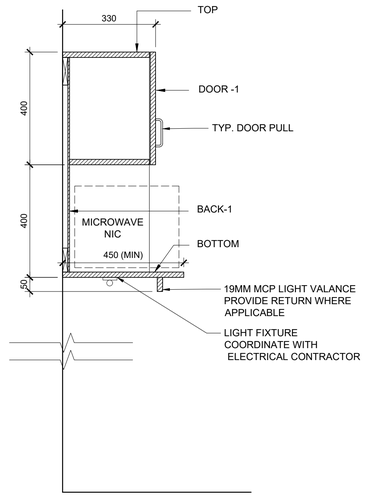
MD08

1 A602 **SECTION OF MD08** 1:10



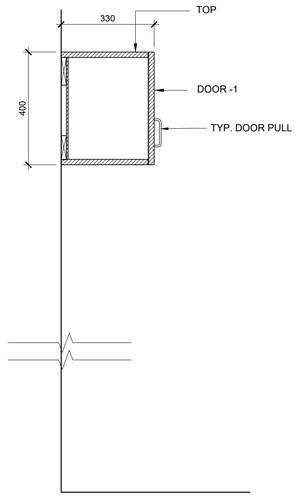
MD09

2 A602 **SECTION OF MD09** 1:10



MD10

3 A602 **SECTION OF MD10** 1:10



MD11

4 A602 **SECTION OF MD11** 1:10

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Key Plan N.T.S.

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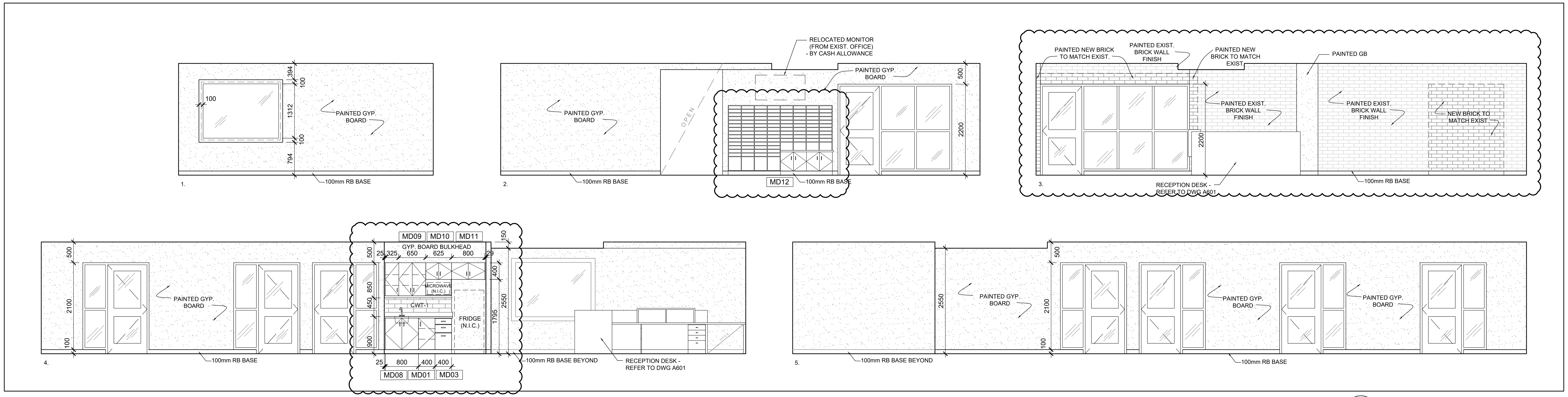
No.	Issue	Date

ONTARIO ASSOCIATION OF ARCHITECTS
ANNASH GARDE
LICENCE
6242

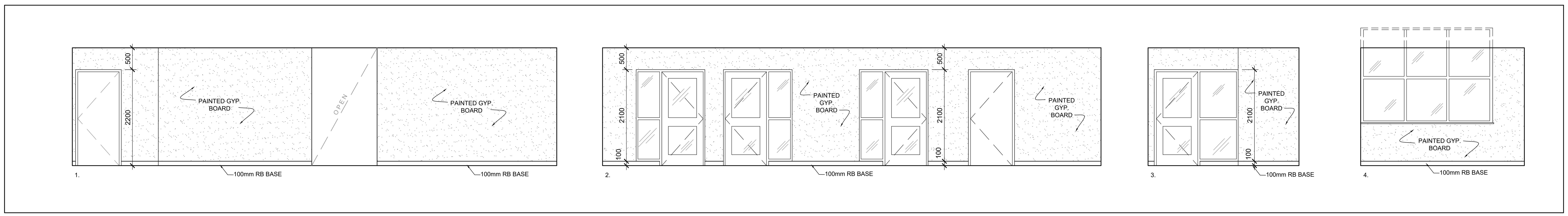
Drawing Title:

MILLWORK DETAILS

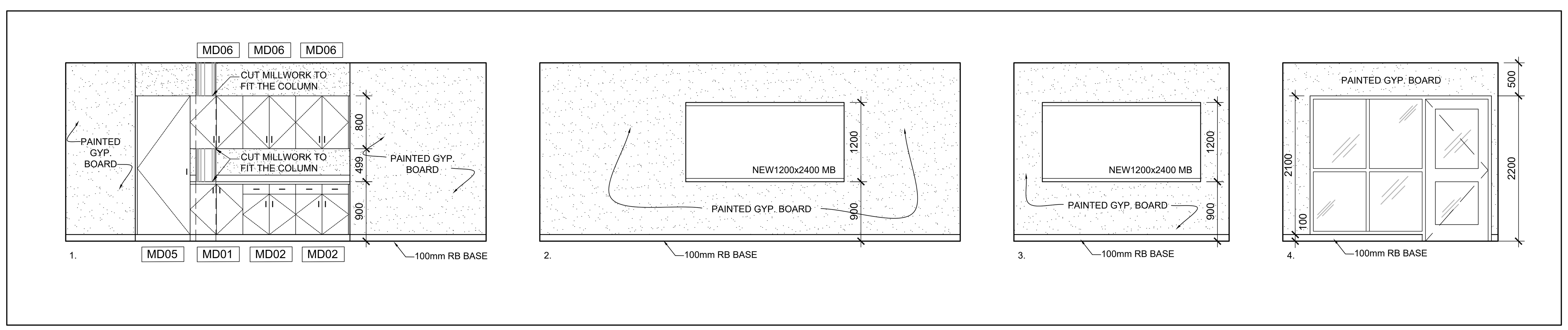
Scale:	AS NOTED	Date:	05 05 2021
Drawn by:		Checked by:	
Job No.	2005	Drawing No.	A602



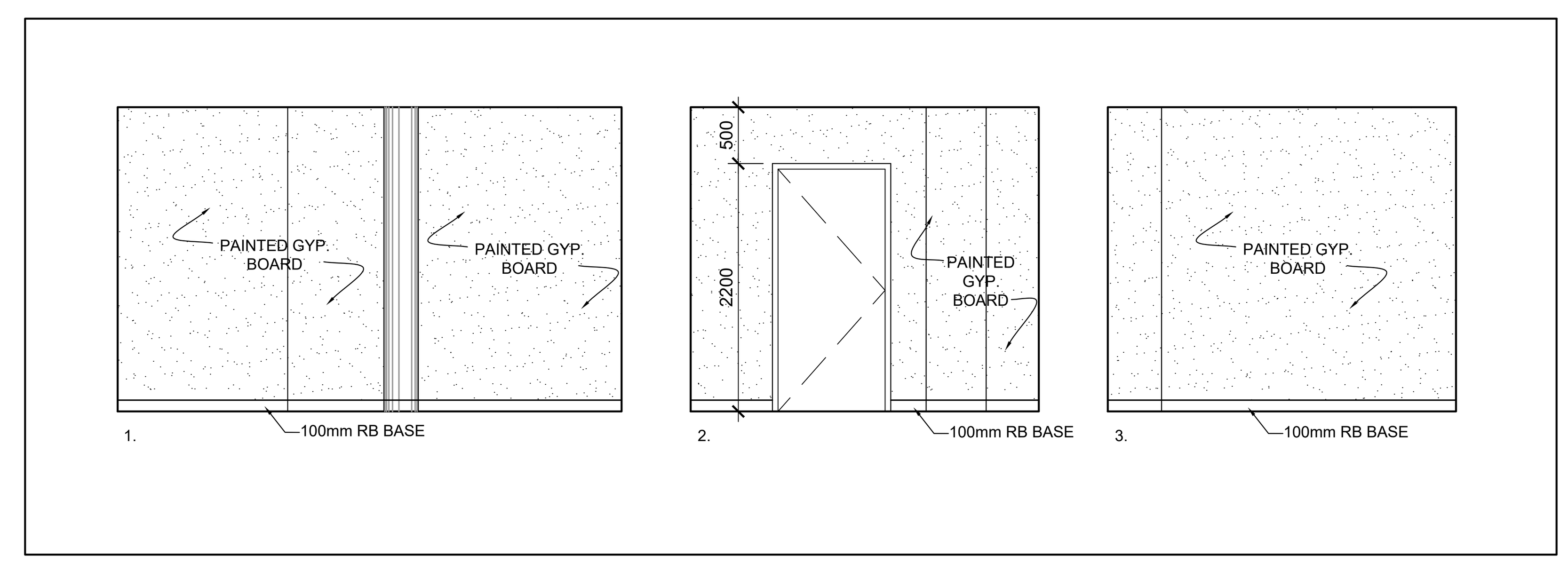
1 A700 INTERIOR ELEVATIONS - GENERAL OFFICE 1:50



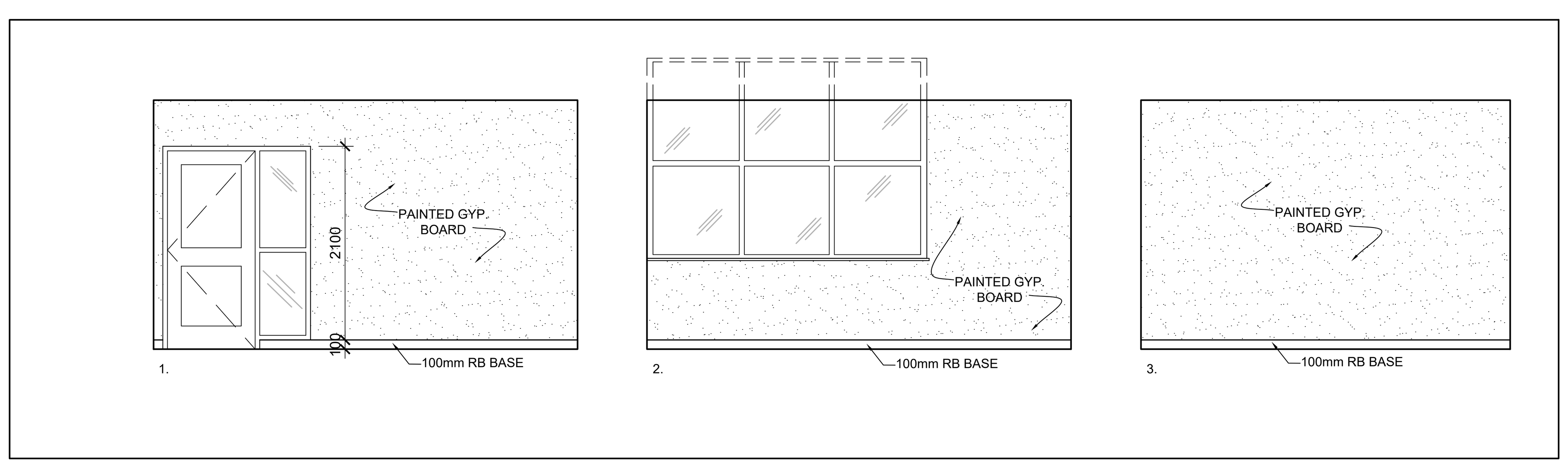
2 A700 INTERIOR ELEVATIONS - GUIDANCE OFFICE 1:50



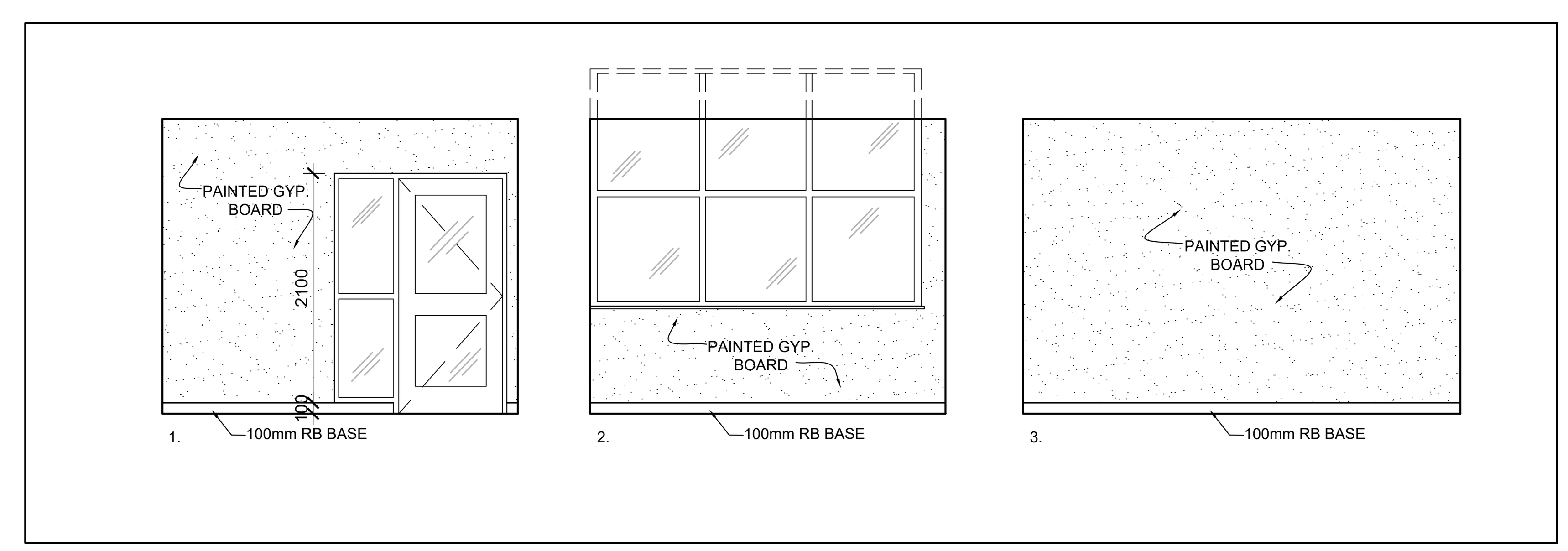
3 A700 INTERIOR ELEVATIONS - MEETING ROOM 1:50



4 A700 INTERIOR ELEVATIONS - OSR STORAGE 1:50



5 A700 INTERIOR ELEVATIONS - PRINCIPAL'S OFFICE 1:50



6 A700 INTERIOR ELEVATIONS - V-P'S OFFICE 1

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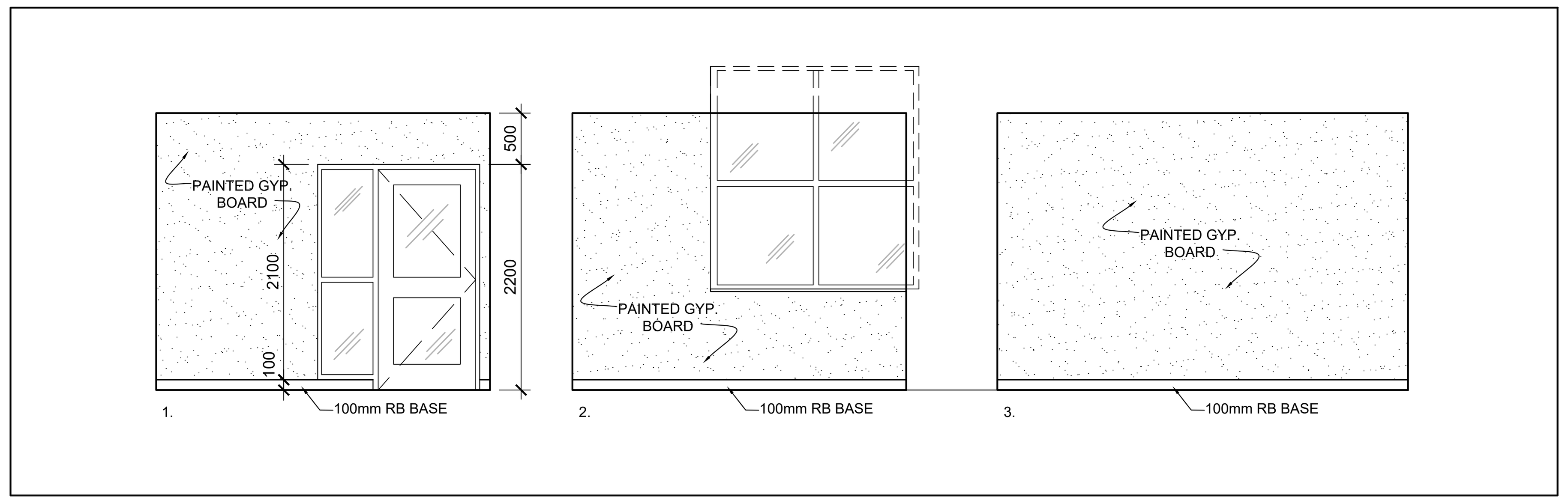
ONTARIO ASSOCIATION OF ARCHITECTS
AVINASH GARDE
LICENCE
6242

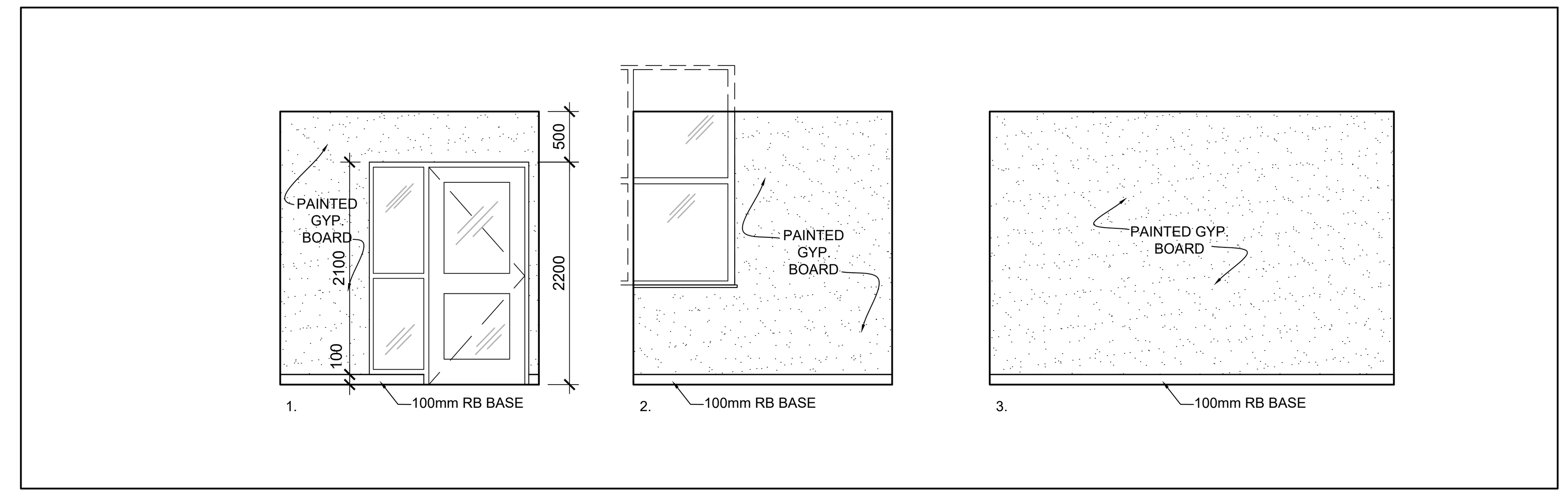
Drawing Title:

INTERIOR ELEVATIONS

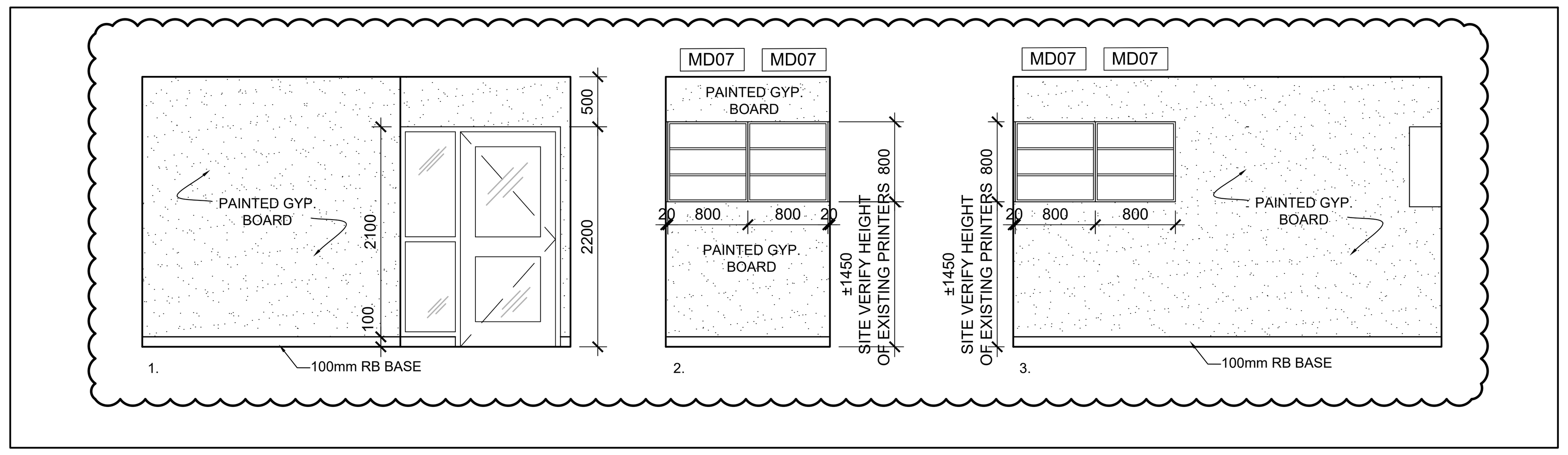
Scale: 1:50	Date: 05 05 2021
Drawn by:	Checked by:
Job No. 2005	Drawing No. A700



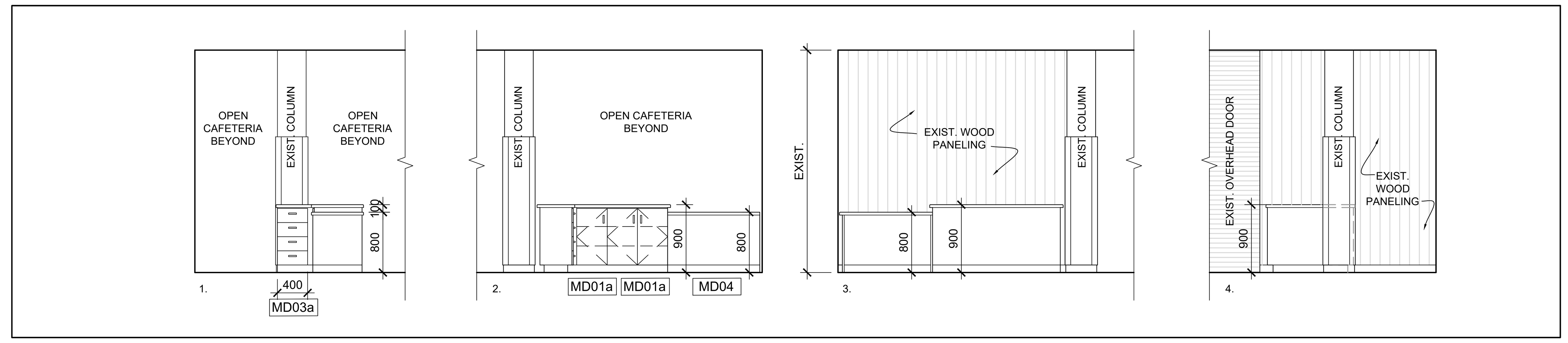
1 A701 INTERIOR ELEVATIONS - V-P'S FFICE 2
1:50



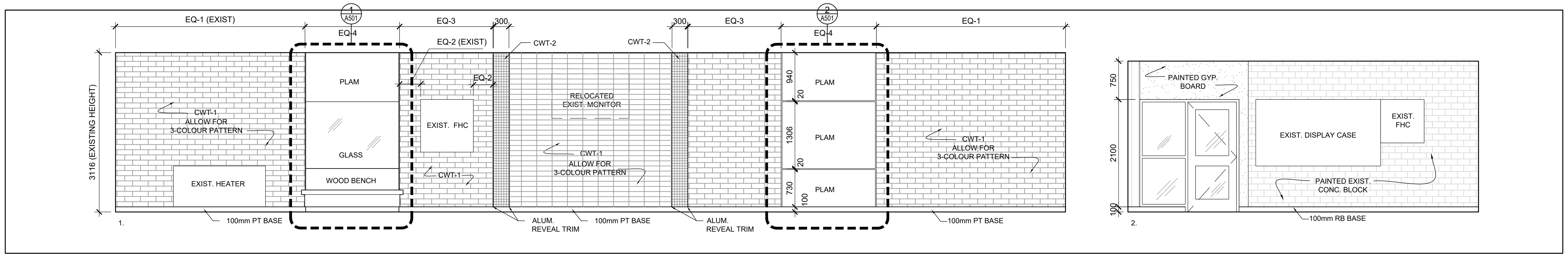
2 A701 INTERIOR ELEVATIONS - MANAGER'S OFFICE
1:50



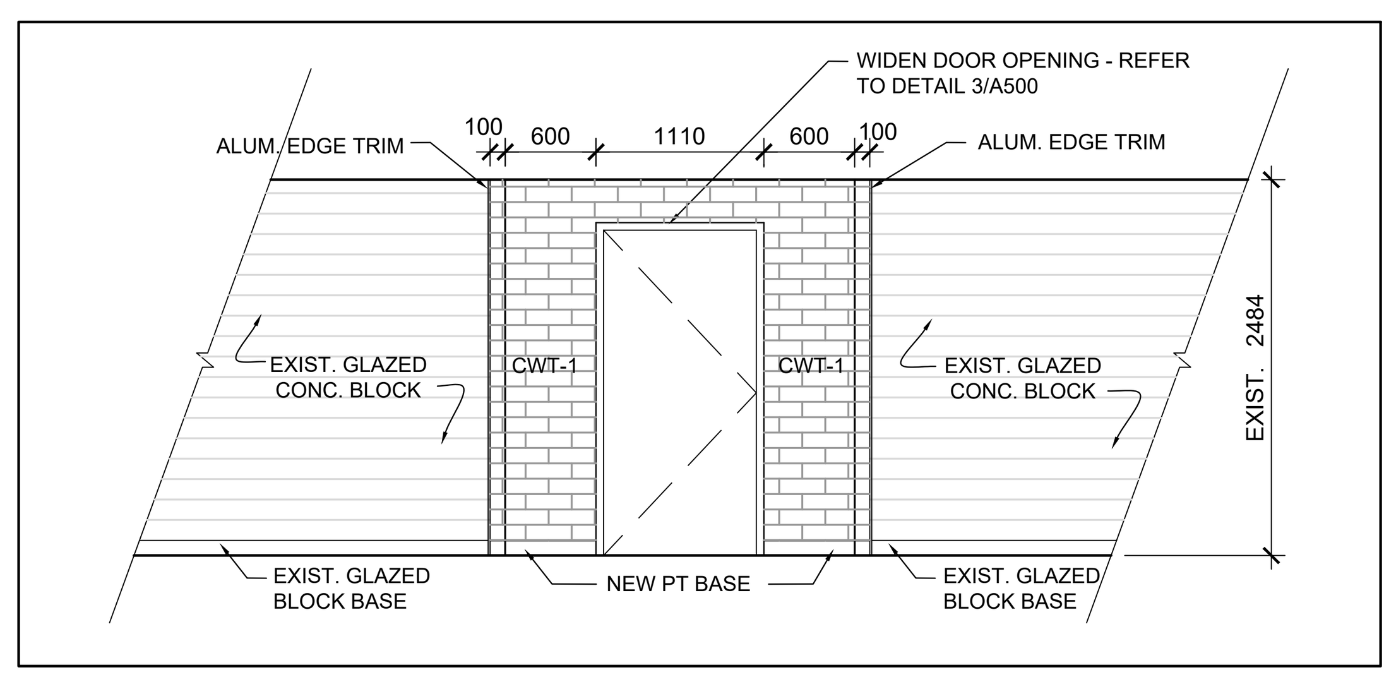
3 A701 INTERIOR ELEVATIONS - PRINT ROOM
1:50



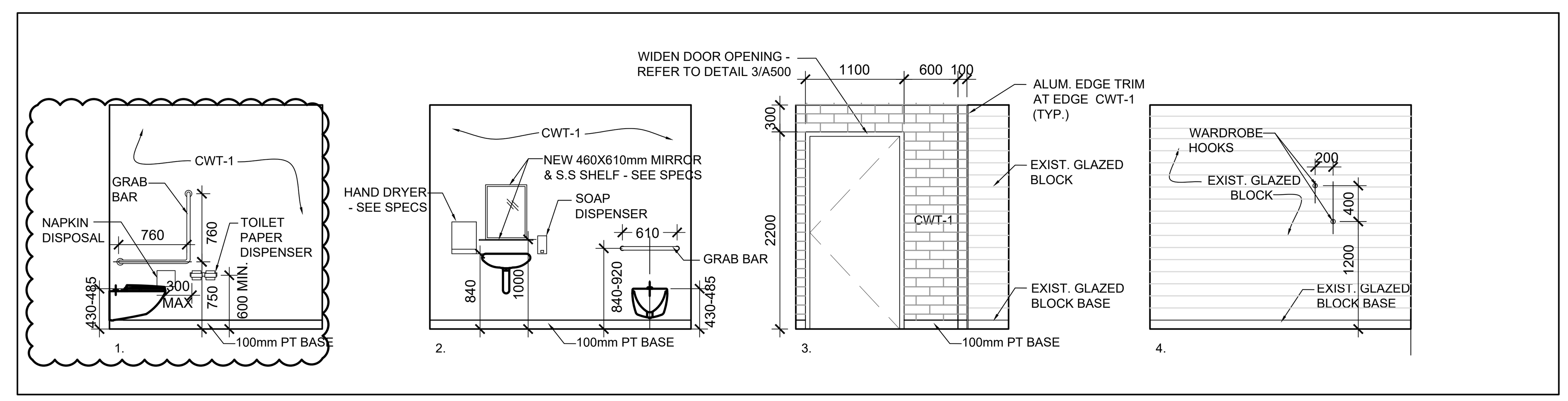
4 A701 INTERIOR ELEVATIONS - BREAKFAST CLUB
1:50



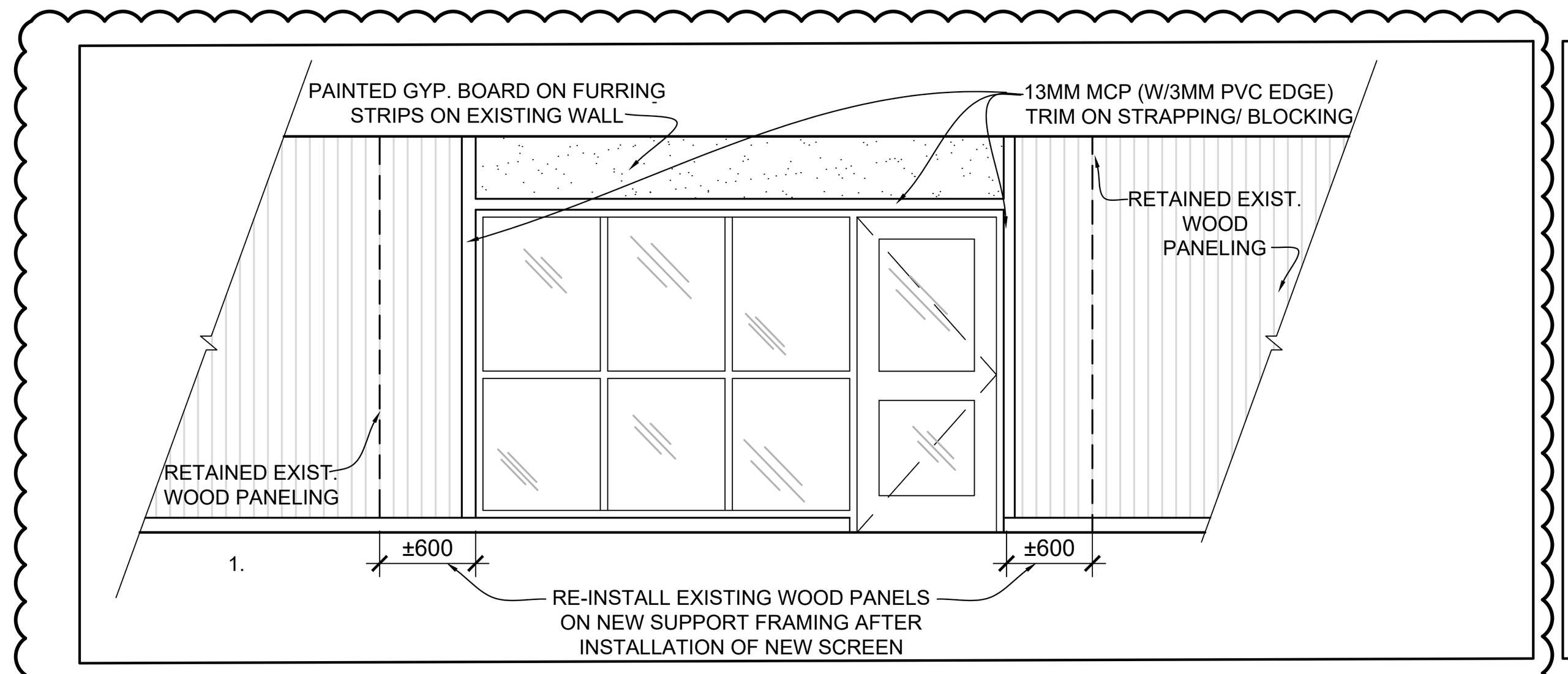
5 A701 INTERIOR ELEVATIONS - EXISTING CAFETERIA
1:50



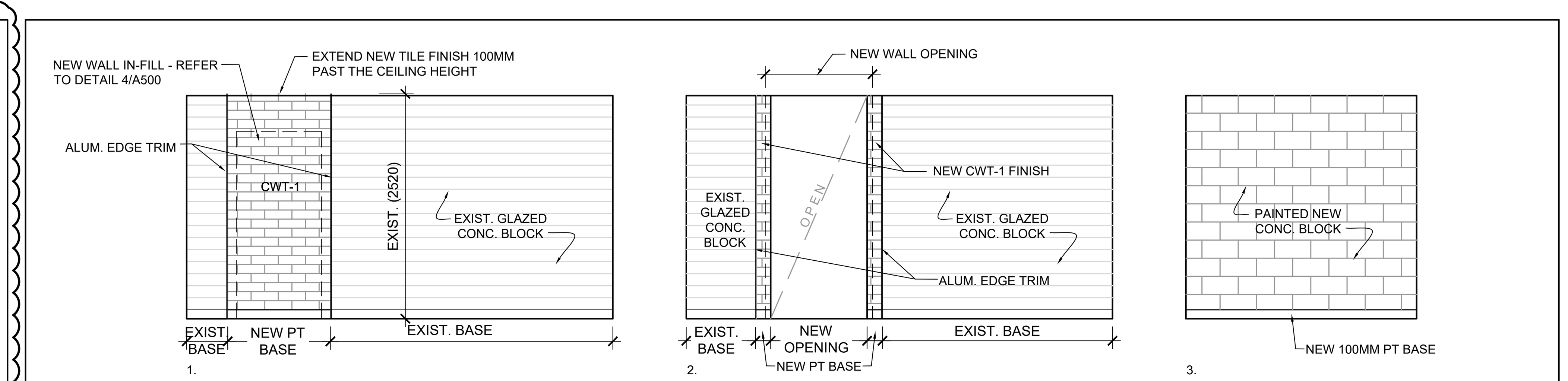
6 A701 INTERIOR ELEVATIONS - EXISTING CORRIDOR AT UNIVARSAL WR
1:50



7 A701 INTERIOR ELEVATIONS - UNIVERSAL WASHROOM RM 118
1:50



9 A701 INTERIOR ELEVATION - EXISTING HALL
1:50



8 A701 INTERIOR ELEVATIONS - STORAGE RM 119
1:50

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ONTARIO ASSOCIATION OF ARCHITECTS
AVINASH GARDE
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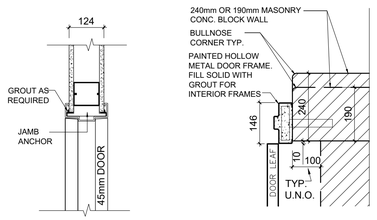
6242

Drawing Title:
INTERIOR ELEVATIONS

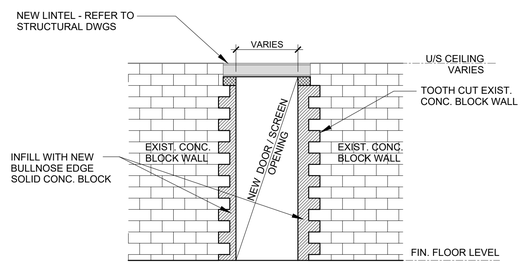
Scale: 1:50	Date: 05 05 2021
Drawn by:	Checked by:
Job No. 2005	Drawing No. A701



TYPICAL INTERIOR DOOR FRAME HEAD IN 124mm DRYWALL PARTITION

TYPICAL INTERIOR DOOR FRAME JAMB IN NEW BLOCK WALL PLAN DETAIL

4 / A800 — DOOR JAMB DETAILS IN NEW WALL/PARTITION 1:10



5 / A800 — NEW DOOR OPENING IN EXIST. CONC. BLOCK WALL DETAIL 1:50

DOOR SCHEDULE (NEW & EXISTING DOORS)

MARK	ROOM NAME	INTERIOR DOOR										INTERIOR FRAME					
		FIRE RATING	TYPE	LEAF WIDTH	LEAF HEIGHT	NO. OF LEAFS	THICKNESS	MATERIAL	FINISH	GLAZING	COMMENTS	SCREEN / FRAME TYPE	SCREEN GLAZING	FRAME /SCREEN MATERIAL	FRAME/SCREEN FINISH	MULLION	COMMENTS
101	GENERAL OFFICE	45 min. FRR	B	950	2150	1	45	HM	P	GL-4	PROVIDE MANUAL SHADES	SC03	GL-4	HM	P	-	PROVIDE MANUAL SHADES
102	MEETING ROOM	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC02	GL-3	HM	P	-	PROVIDE MANUAL SHADES
103	PRINCIPAL'S OFFICE	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC01a	GL-3	HM	P	-	PROVIDE MANUAL SHADES
104	VP'S OFFICE	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC01	GL-3	HM	P	-	PROVIDE MANUAL SHADES
105	VP'S OFFICE	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC01	GL-3	HM	P	-	PROVIDE MANUAL SHADES
106	MANAGER'S OFFICE	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC01	GL-3	HM	P	-	PROVIDE MANUAL SHADES
107	C&Y COUNSELOR'S OFFICE	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC01a	GL-3	HM	P	-	PROVIDE MANUAL SHADES
108	PRINT/COPY ROOM	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC01	GL-3	HM	P	-	PROVIDE MANUAL SHADES
109	OSR STORAGE	-	A	950	2150	1	45	WD	P	-		F1	-	HM	P	-	
111	GUIDANCE	45 min. FRR	B	950	2150	1	45	HM	P	GL-4	PROVIDE MANUAL SHADES	SC04	GL-4	HM	P	-	PROVIDE MANUAL SHADES
112	IB CO-ORDINATOR'S OFFICE	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC01a	GL-3	HM	P	-	PROVIDE MANUAL SHADES
113	GUIDANCE COUNSELOR'S OFFICE	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC01	GL-3	HM	P	-	PROVIDE MANUAL SHADES
114	GUIDANCE COUNSELOR'S OFFICE	-	B	950	2150	1	45	WD	P	GL-3	PROVIDE MANUAL SHADES	SC01a	GL-3	HM	P	-	PROVIDE MANUAL SHADES
115	SOCIAL WORKER'S OFFICE	-	B	950	2150	1	45	WD	P		PROVIDE MANUAL SHADES	SC01		HM	P	-	PROVIDE MANUAL SHADES
116	EXISTING STORAGE ROOM	45 min. FRR	A (SIM.)	915	2070	1	45	HM	P	-		F1 (SIM.)	-	HM	P	-	CUSTOM SIZE DOOR & FRAME
118	UNIVERSAL WASHROOM	45 min. FRR	A	1000	2150	1	45	HM	P	-		F1	-	HM	P	-	
EX119	STORAGE	EX	EX	EX	EX	EX	EX	EX	P	-		EX	-	EX	P	-	
EX120	EXIST. FEMALE WASHROOM	EX	EX	EX	EX	EX	EX	EX	P	-		EX	-	EX	P	-	
EX121	EXIST. MALE WASHROOM	EX	EX	EX	EX	EX	EX	EX	P	-		EX	-	EX	P	-	
130A	EXISTING VESTIBULE	-	C	1050	2150	2	45	AL	PF	GL-3	PROVIDE MANUAL SHADES	SC06	GL-3	AL	PF	FIXED	
130B	EXISTING VESTIBULE	-	C	1050	2150	1	45	AL	PF	GL-3	PROVIDE POWER DOOR OPERATOR	SC06	GL-3	AL	PF		
		EXTERIOR DOOR										EXTERIOR FRAME					
130C	EXISTING VESTIBULE	-	D	1050	2150	2	45	AL	PF	SIG-CLR-1		CW01	SIG-CLR-1	AL	PF	FIXED	
130D	EXISTING VESTIBULE	-	D	1050	2150	1	45	AL	PF	SIG-CLR-1	PROVIDE POWER DOOR OPERATOR	CW01	SIG-CLR-1	AL	PF		

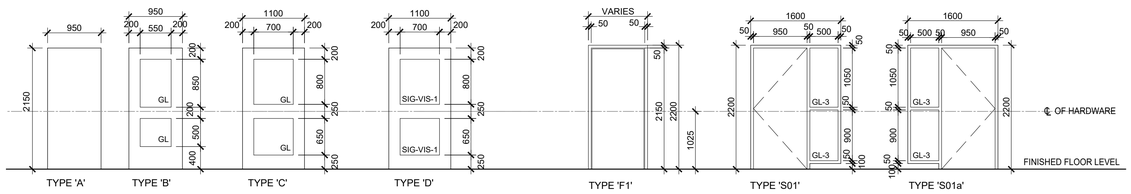
LEGEND:

HM	HOLLOW METAL	GL-3	TEMPERED SAFETY GLASS	SIG	SEALED INSULATING GLASS UNITS
AL	ALUMINUM	GL-4	FIRE-RATED GLASS	P	PAINT
WD	WOOD	GL-5	FIRE-RATED LAMINATED GLASS	PF	PRE FINISHED
FRR	FIRE RESISTANT RATING	ASP	ALUMINUM SPANDREL PANEL	EX	EXISTING

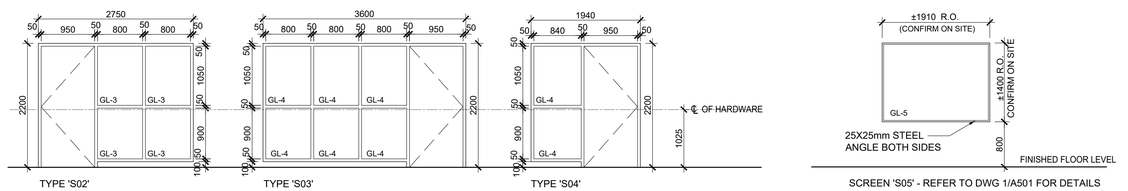
DOOR & FRAME NOTES:

1. ALL DOORS AND FRAMES MUST HAVE APPROPRIATE REINFORCING.
2. ALL FRAMES TO BE CONCRETE FILLED.
3. FOR HARDWARE, REFER TO HARDWARE SCHEDULE.
4. ALL INTERIOR DOORS AND SCREENS TO BE HM & GLAZING TO BE TEMPERED SAFETY GLASS 'GL-1', UNLESS NOTED OTHERWISE.
5. GLAZING IN FIRE RATED SEPARATIONS TO BE GL-4 FIRE-RATED GLASS. REFER TO DOOR SCHEDULE
6. ALL FRAME IN FIRE SEPARATION AREAS TO BE FIRE RATED (FRR)

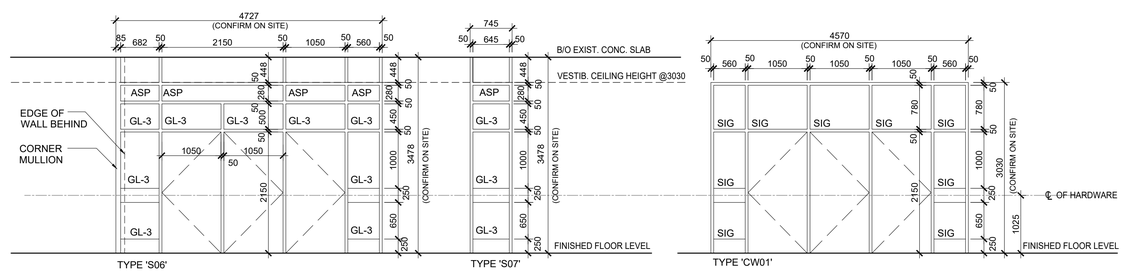
1 / A800 — DOOR SCHEDULE N/A



HOLLOW METAL INTERIOR DOORS | **ALUMINUM INTERIOR DOORS** | **THERMALLY BROKEN ALUMINUM EXTERIOR DOORS** | **HOLLOW METAL INTERIOR FRAMES**



INTERIOR HOLLOW METAL FRAMES | **FIRE RATED LAMINATED GLASS SCREEN**



INTERIOR ALUMINUM FRAMES | **THERMALLY BROKEN ALUMINUM EXTERIOR FRAME**

3 / A800 — DOOR, FRAME & SCREEN TYPES 1:50

ROOM FINISH SCHEDULE

ROOM #	ROOM NAME	FINISHES				
		FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH	COMMENTS
GROUND FLOOR						
101	GENERAL OFFICE	LVT	RB	EX/CB/GB- P	ACT/GB - P	
102	MEETING ROOM	LVT	RB	GB - P	ACT	
103	PRINCIPAL'S OFFICE	LVT	RB	GB - P	ACT	
104	VP'S OFFICE	LVT	RB	GB - P	ACT	
105	VP'S OFFICE	LVT	RB	GB - P	ACT	
106	MANAGER'S OFFICE	LVT	RB	GB - P	ACT	
107	CHILD & YOUTH COUNSELOR'S OFFICE	LVT	RB	GB - P	ACT	
108	PRINT/COPY ROOM	LVT	RB	GB - P	ACT	
109	OSR STORAGE	LVT	RB	GB - P	ACT	
110	CORRIDOR	LVT	RB	GB - P	ACT	
111	GUIDANCE	LVT	RB	GB - P	ACT	
112	IB CO-ORDINATOR'S OFFICE	LVT	RB	GB - P	ACT	
113	GUIDANCE COUNSELOR'S OFFICE	LVT	RB	GB - P	ACT	
114	GUIDANCE COUNSELOR'S OFFICE	LVT	RB	GB - P	ACT	
115	SOCIAL WORKER'S OFFICE	LVT	RB	GB - P	ACT	
116	EXISTING STORAGE ROOM	EX	EX	EX/P	EX/P	
117	BREAKFAST CLUB	EX	EX/RB	EX	EX	
118	UNIVERSAL WASHROOM	PFT-1	PFT-1	EX/CWT	GB - P	
119	STORAGE	EX/TERR	EX/PFT-1	EX/CWT/P	ACT	
120	EXISTING FEMALE WASHROOM	EX/TERR	EX/PFT-1	EX/CWT/P	EX/ACT	
121	EXISTING MALE WASHROOM	EX/TERR	EX/PFT-1	EX/CWT/P	EX/ACT	

LEGEND:					
EXP	EXPOSED CEILING	CWT	CERAMIC WALL TILES		
EX	EXISTING FINISH	PFT-1	PORCELAIN FLOOR TILES		
GB	GYPSUM BOARD	LVT	LUXURY VINYL TILE		
CB	CONCRETE BLOCK	RB	RESILIENT BASE		
P	PAINT	ACT	ACOUSTIC CEILING TILE		

ROOM FINISH SCHEDULE NOTES:

1. PROVIDE STAINLESS STEEL TRANSITION STRIP FOR ALL DOOR THRESHOLDS WHERE FLOOR FINISH CHANGES.
2. AT TRANSITIONS WHEN ADJACENT FLOOR FINISHES ARE OF DIFFERENT THICKNESS, SLOPE THE FLOOR SO AS TO SET A SEAMLESS FLUSH TRANSITION.
3. ALL NEW WALLS AND GB CEILINGS TO BE PAINTED.
4. FOR INTERIOR ELEVATIONS AND MORE INFORMATION REFER TO DRAWING A700.

2 / A800 — ROOM SCHEDULE N/A

Client
Halton District School Board
2050 Guelph Line
Burlington, Ontario

BURLINGTON CENTRAL H.S. RENOVATIONS

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Tel: 905-631-1115

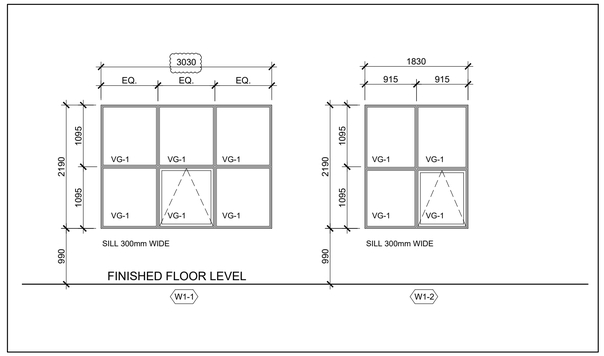
Key Plan N.T.S.

No.	Revisions	Date
3	ISSUED FOR ADDENDUM 2	2021/05/05
2	ISSUED FOR TENDER	2021/04/19
1	ISSUED FOR BUILDING PERMIT	2021/01/25
No.	Issue	Date

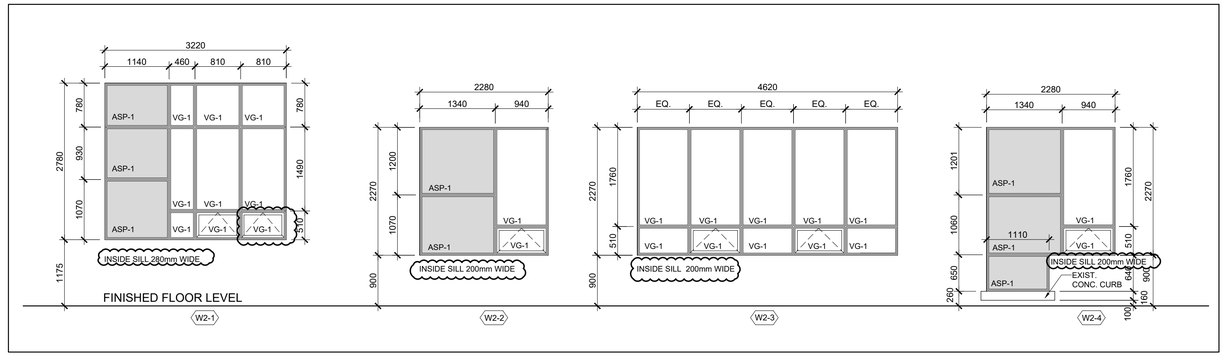
ONTARIO ASSOCIATION OF ARCHITECTS — ASHNASH GARDE LICENCE 6242

Drawing Title:
DOOR SCHEDULE & ROOM FINISH SCHEDULE

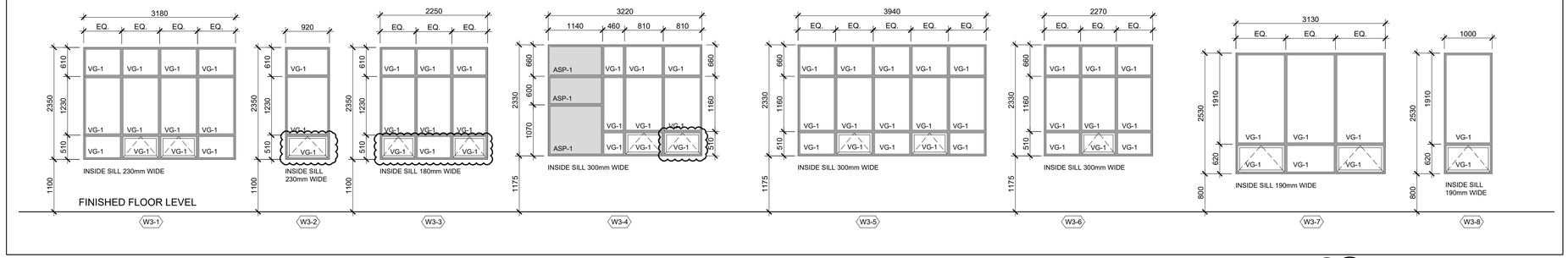
Scale:	AS NOTED	Date:	05 05 2021
Drawn by:		Checked by:	
Job No.	2005	Drawing No.	A800



1 A801 **WINDOWS ELEVATIONS - FIRST FLOOR** 1:50



2 A801 **WINDOWS ELEVATIONS - SECOND FLOOR** 1:50



3 A801 **WINDOWS ELEVATIONS - THIRD FLOOR** 1:50

LEGEND:

VG-1 VISION GLASS - SEALED INSULATING GLASS UNITS (SIG-CLR-1)
ASP-1 INSULATED ALUMINUM SPANDREL PANEL (FINISHED BOTH SIDES)

ALL WINDOW FRAMES - EXTRUDED ALUMINUM WITH ANODIZED FINISH

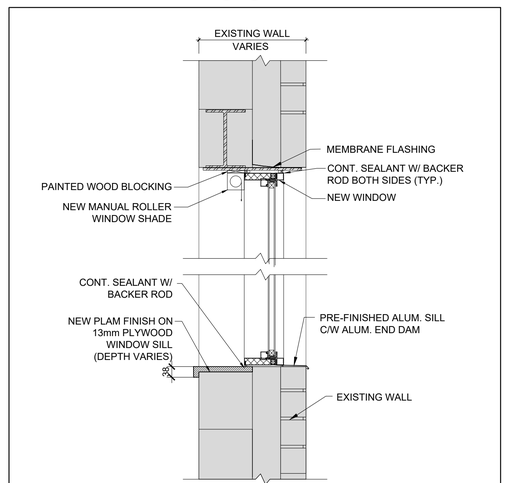
NOTE FOR ALL WINDOWS:

ALL HEADERS AND JAMS TO RECEIVE ALUMINUM TRIM WITH RETURN.

ALL WINDOW SIZES TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

WINDOW SCHEDULE

WINDOW SYMBOL	FLOOR & ROOM NUMBER	QUANTITY
W1-1	FIRST FLOOR/ RM 103, 104, 105, 106, 111	4
W1-2	FIRST FLOOR/ RM 112	1
W2-1	SECOND FLOOR/ RM 221	1
W2-2	SECOND FLOOR/ RM 222	1
W2-3	SECOND FLOOR/ RM 209, 211	2
W2-4	SECOND FLOOR/ RM 209, 211	1
W3-1	THIRD FLOOR/ STAFF RM	3
W3-2	THIRD FLOOR/ STAFF RM	1
W3-3	THIRD FLOOR/ STAFF RM	1
W3-4	THIRD FLOOR/ RM 321	1
W3-5	THIRD FLOOR/ RM 321	1
W3-6	THIRD FLOOR/ RM 321	1
W3-7	THIRD FLOOR/ CORRIDOR	1
W3-8	THIRD FLOOR/ PREP. RM	2



3 A801 **REPLACED WINDOW - TYPICAL SECTION DETAIL** 1:10

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2050 Guelph Line
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Key Plan N.T.S.

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No.	Issue	Date

ONTARIO ASSOCIATION OF ARCHITECTS
ANNUSH GARDE
LICENCE
6242

Drawing Title:
WINDOW SCHEDULE

Scale:	AS NOTED	Date:	05 05 2021
Drawn by:		Checked by:	
Job No.	2005	Drawing No.	A801

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www.ckengs.com | info@ckengs.net | 905.631.1115

ADDENDUM No. 1

PROJECT:	Burlington Central Renovations 1433F Baldwin St, Burlington, Ontario	**DATE:**	5 May 2021
PROJECT #:	20009	**FROM:**	Dinesh Herath / Pavle Ijacic
TO:	Snyder Architects Inc.	**ATTENTION:**	Avinash Garde

1. Mechanical

1.1. Refer to Mechanical Drawing M1.4 Rev.4
- Refer to revised plumbing schedule with new sink.

1.2. Refer to Mechanical Drawing M2.1 Rev.4
- Refer to revised plumbing plan.

1.3. Refer to Mechanical Drawing M3.2 Rev.4
- Refer to revised HVAC plan to accommodate new electrical shaft addition.

2. Electrical

2.1. Refer to Electrical Drawing E1.3 Rev. C
- Updated Power and Systems Legend to include wiremold symbol.

2.2. Refer to Electrical Drawing E1.4 Rev. C
- Updated General Lighting Schedule to include new undercabinet fixture.
- Updated Control Device Schedule to include existing low voltage switch.
- Updated Power and Systems Schedule to include new wiremold.

2.3. Refer to Electrical Drawing E3.1 Rev. C
- Revised Panel 1N Schedule to include new branch circuits for kitchenette.

2.4. Refer to Electrical Drawing E4.1 Rev. C
- Added existing junction boxes to be demolished in existing breakfast club.
- Added existing switch and receptacle to be relocated in corridor.

2.5. Refer to Electrical Drawing E5.2 Rev. C
- Added new undercabinet fixture in kitchenette.
- Added relocated switch in corridor.
- Relocated double emergency lighting head in corridor.
- Relocated emergency light battery unit in existing storage room.

2.6. Refer to Electrical Drawing E5.3 Rev. C
- Added new wiremold and device boxes for door pushbuttons inside the gym entrance.
- Relocated receptacles and data outlets in print/copy room 108 as per change in floor plans.
- Relocated a receptacle in corridor.

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- Added new receptacles for kitchenette.
- Relocated receptacles and data drops at reception.
- Added wiremold in general office.
- Added relocated receptacle in corridor.
- Added drawing keynote 8, 9, and 10.

END OF ADDENDUM No. 1

PLUMBING FIXTURE SCHEDULE

TAG	TYPE	SPECIFICATION	ACCESSORIES	CW	HW	WASTE	VENT	POWER	REMARKS
WC–1 (BF)	TOILET	AMERICAN STANDARD #3461.001.020, 'MADERA FLOWISE RIGHT HEIGHT ELONGATED', 419 MM HIGH TOILET, VITREOUS CHINA, FLOOR MOUNTED, OPERATES IN THE RANGE OF 4.2 L TO 6 L (1.1 US GAL TO 1.6 US GAL) PER FLUSH, ELONGATED BOWL, SIPHON JET FLUSH ACTION, CONDENSATE CHANNEL.	CENTOCO #820STS.001, EXTRA HEAVY DUTY TOILET SEAT, SOLID PLASTIC, OPEN FRONT WITH COVER. CHECK HINGES AND CHROMATED STEEL POSTS, WASHERS AND NUTS.INSTALLATION: TO MEET CODE REQUIREMENTS FOR BARRIER FREE ACCESS. SLOAN #REGAL SLOAN 111–1.28YG "REGAL" FACTORY SET, OR TECK #81T201–5, EXTERNAL ADJ. EXPOSED MANUAL FLUSHOMETER FOR TOP SPUD TOILET, 4.8 L (1.28 US GAL) FACTORY SET FLOW. QUIET ACTION DIAPHRAGM TYPE WITH VACUUM BREAKER. CENTRE SEAT BUMPER ON VALVE, PRESSURE LOSS CHECK AND NON–HOLD OPEN FEATURE.PROVIDE FLOOR FLANGE, (SAME MATERIAL AS THE CONNECTING PIPE DRAIN), WITH ALL BRASS BOLTS AND WITH RUBBER GASKET.	1"	–	3"	1 1/2"	NO	
LAV–1 (BF)	BASIN	LAVATORY – WALL HUNG BARRIER FREE: AMERICAN STANDARD "MURRO", VITREOUS CHINA WALL HUNG LAVATORY, DRILLED TO ACCOMMODATE CONCEALED ARM SUPPORTS, AND WITH #0059.0200 SEMI–CHINA PEDESTAL.	SLOAN ETF–600–A–VPB–MIX60–A "OPTIMA" ELECTRONIC HARDWIRED "NO–TOUCH" FAUCET WITH SS BOX, MIXING VALVE, MCGUIRE #155A CP 32 MM (1.¼") CAST PLUG WITH OPEN GRID STRAINER TRAP, MCGUIRE #8872C CP 32MM (1.¼") CAST "P" TRAP WITH CLEANOUT. SUPPLIES: MCGUIRE H165LKN3RB CP SHORT RIGID ANGLE BASIN SUPPLY WITH OFFSET BRAIDED FLEX, RISER LOCKSHIELD STOP, ESCUTCHEON. CARRIER: ZURN ZX–1231 CONCEALED FIXTURE CARRIER WITH ARMS.NOTE: INSTALLATION SHALL MEET THE O.B.C. REQUIREMENTS FOR BARRIER FREE ACCESS. INSULATE SUPPLIES AND DRAIN AS REQUIRED BY CODE.	1/2"	1/2"	1 1/4"	1 1/4"	YES	
S–1	SINK	FRANKE SINGLE COMPARTMENT STAINLESS STEEL SINK WITH BACK LEDGE, MODEL No. LBS4607–1 c/w 3 HOLES, 8" CENTER	AMERICAN STANDARD COLONY PRO SINGLE CONTROL KITCHEN FAUCET 7074.000.002 (1.5 GPM) c/w CAST BRASS TRAP, CLEANOUT, UNION ESCUTCHEON, ANGLE STOPS, CPVC RISERS, STAINLESS STEEL CRUMB CUP STRAINER	1/2"	1/2"	1 1/2"	1 1/4"		4
HD	HUB DRAIN	ZURN ZN–211–S–P CAST IRON HUB DRAIN AND 1/2" TRAP PRIMER CONNECTION OR EQUIVALENT EQUAL.							
FD	FLOOR DRAIN	ZURN ZN–211–B–P, CAST IRON FLOOR DRAIN WITH 5" ROUND NICKEL BRONZE STRAINER, MIFAB MI–GARD, AND 1/2" TRAP PRIMER CONNECTION OR EQUIVALENT EQUAL.		–	–	3"	1 1/2"		
CO	CLEANOUT	· ZURN Z–1400–HD (FOR UNFINISHED FLOORS) · ZURN ZN–1400–HD (FOR FINISHED FLOORS) · ZURN ZN–1400–X (FOR LINOLEUM OR ASPHALT TILE FLOORS)	· ZURN ZN–1400–Z (FOR TERRAZZO FLOORS) · ZURN ZN–1400–T (FOR CERAMIC TILE FLOORS) · ZURN ZN–1400–CM (FOR CARPETED FLOORS)	–	–	–	–		

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

FAN SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL No.	AIR QUANTITY (CFM)	STATIC PRESS. (in.wg.)	MOTOR RPM	ELECTRICAL			STARTER	MOUNTING ARRANGEMENT	WEIGHT (LBS)	REMARKS
							POWER (HP)	V/PH/HZ	FLA (A)				
EF–1	UNIVERSAL WASHROOM 117	GREENHECK	CSP–A125	100	0.25	980	–	120/1/60	0.18	OCCUPANCY SENSOR	CEILING MTD	12	SEE NOTES 3,4,5, STANDARD WHITE POLYSTYRENE GRILLE

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

LOUVRE SCHEDULE

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

NOTES:
1. ACCEPTABLE EQUIVALENT: EH PRICE

INDOOR ERV UNIT SCHEDULE

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

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

GRILLE AND DIFFUSER SCHEDULE

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

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

DUCT HEATER SCHEDULE

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

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

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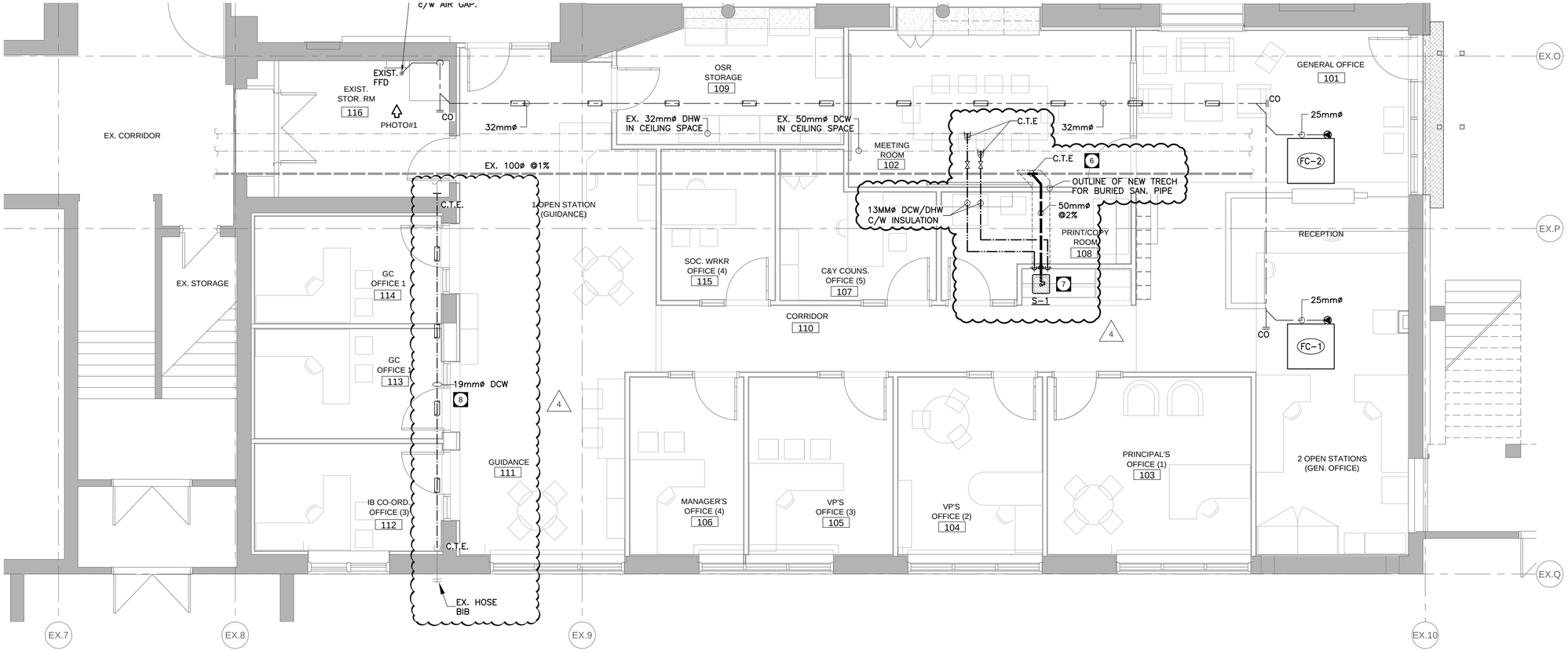
Key Plan N.T.S.

Project North True North

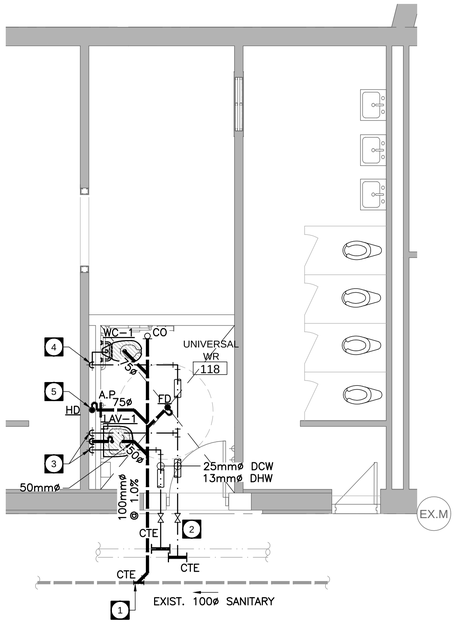
No.	Revisions	Date
4	ISSUED FOR ADDENDUM No.1	2021-05-05
3	ISSUED FOR TENDER	2021-04-19
2	ISSUED FOR PERMIT	2021-01-21
1	ISSUED FOR COORDINATION	2020-08-25
No.	Issue	Date

Drawing Title:
MECHANICAL EQUIPMENT SCHEDULES

Scale:	N.T.S.	Date:	APR 2020
Drawn by:	DH	Checked by:	CK
Job No.	20009	Drawing No.	M1.4



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



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

GENERAL NOTES:

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

EXISTING FUNNEL FLOOR DRAIN TO REMAIN

SITE REFERENCE –PHOTO #1
N.T.S.

DRAWING NOTES:

1. APPROXIMATE LOCATION OF EXISTING 100mmø SANITARY DRAIN LINE, CONNECT NEW DRAIN LINE TO EXISTING. EXACT POINT OF CONNECTION, LOCATION, SIZE, INVERT AND DIRECTION OF FLOW TO BE DETERMINED ON SITE BEFORE ANY PLUMBING IS STARTED.
2. APPROXIMATE LOCATION OF EXISTING DOMESTIC HOT & COLD WATER LINE(S) IN CEILING SPACE, CONNECT NEW LINE(S) TO EXISTING c/w NEW ISOLATION VALVES AND MAKE GOOD. INSULATE PIPING AS PER MECHANICAL SPECIFICATIONS. ALLOW FOR FREEZING OF PIPES. EXACT LOCATION OF EXISTING LINE(S) TO BE DETERMINED ON SITE PRIOR TO COMMENCING WITH THE WORK.
3. 13mmø HOT AND COLD WATER LINES DOWN TO SERVE LAVATORY
4. 25mmø COLD WATER LINES DOWN TO SERVE WATER CLOSET.
5. HUB DRAIN INSIDE CHASE c/w WALL ACCESS PANEL FOR CONDENSATE DRAIN FROM FUTURE UNIT VENTILATOR(S) ABOVE. (4)
6. APPROXIMATE LOCATION OF EXISTING SANITARY PIPE; CONTRACTOR SHALL X–RAY AND SITE VERIFY THE EXACT LOCATION PRIOR TO ANY CHANGES TO EXISTING SLAB. CONTRACTOR MUST CARRY ALLOWANCE FOR ADDITIONAL PIPING (MIN. 10FT.) MATERIAL TO MAKE CONNECTIONS AS REQUIRED.
7. SUPPLY AND INSTALL NEW SINK c/w FAUCET AT LOCATION SHOWN, EXTEND 13mmø DCW/DHW PIPING FROM NEAREST EXISTING AS SHOWN c/w NEW ISOLATION VALVES. CONTRACTOR TO ALLOW FOR FREEZING OF PIPING AND ALLOW ADDITIONAL (10FT) OF PIPING FOR EACH DCW/DHW.
8. APPROXIMATE LOCATION OF EXISTING 19mmø DCW LINE ABOVE EXISTING CEILING SPACE. CONTRACTOR TO DEMOLISH EXISTING HORIZONTAL PIPING AT HIGH LEVEL, RUN NEW 19mmø PIPING ABOVE NEW CEILING AND CONNECT TO EXISTING PIPING.

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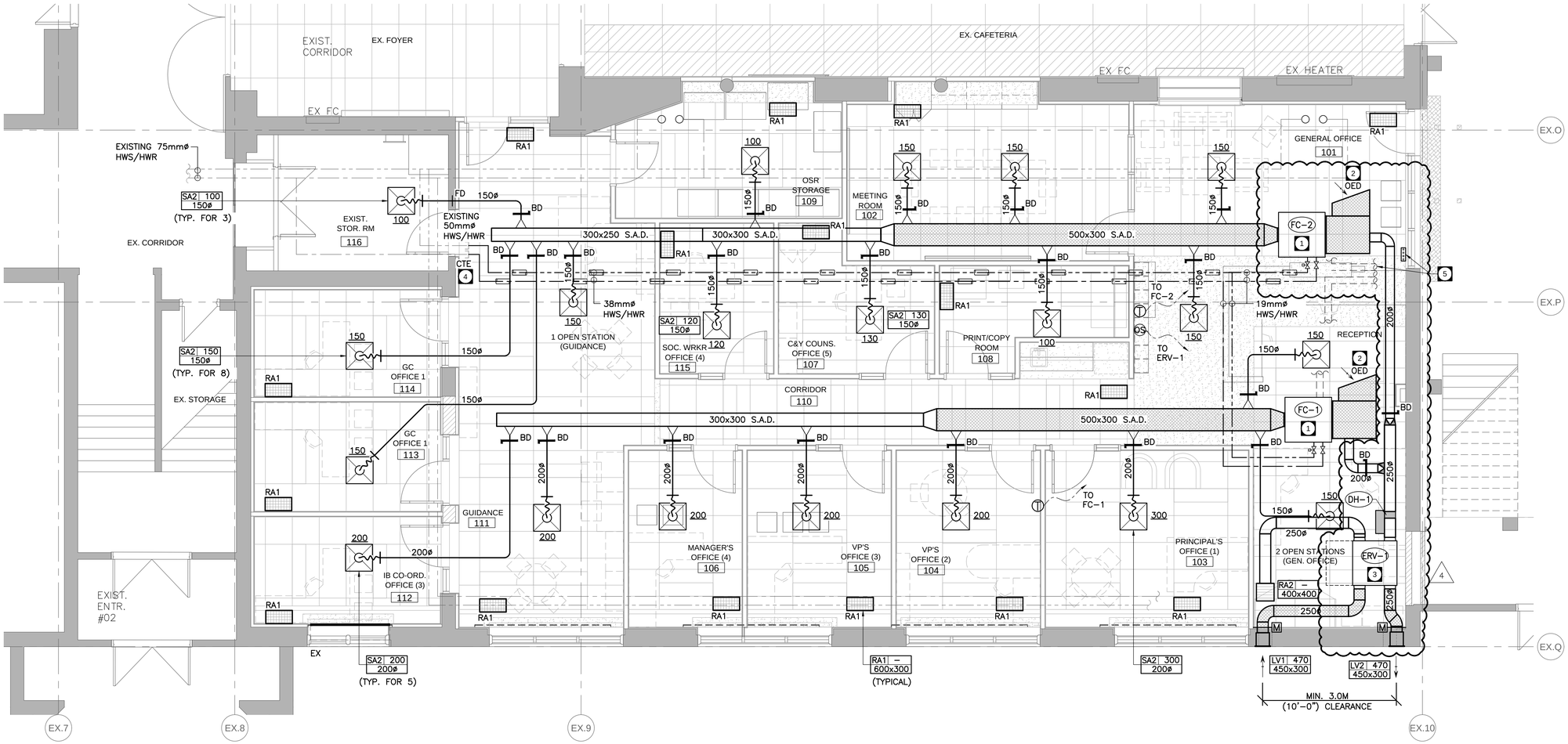
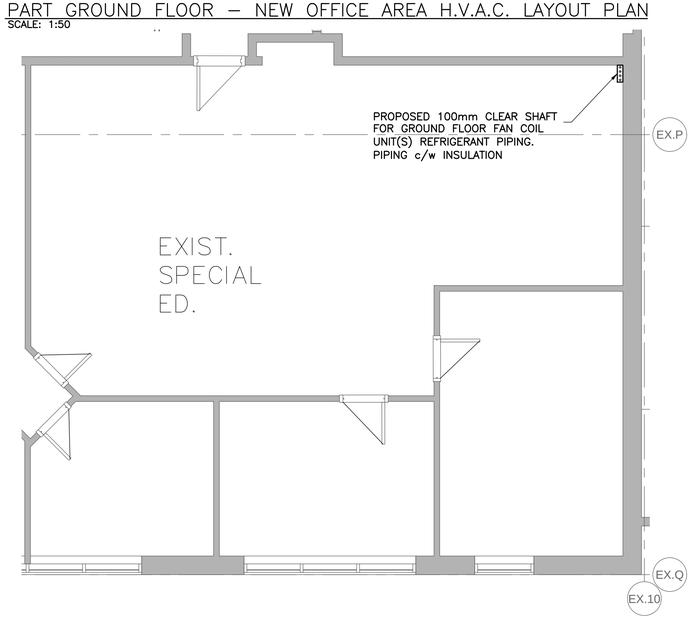
4	ISSUED FOR ADDENDUM No.1	2021-05-05
3	ISSUED FOR TENDER	2021-04-19
2	ISSUED FOR PERMIT	2021-01-21
1	ISSUED FOR COORDINATION	2020-08-25
No.	Issue	Date

Drawing Title:
PART GROUND FLOOR PLAN - PLUMBING LAYOUT

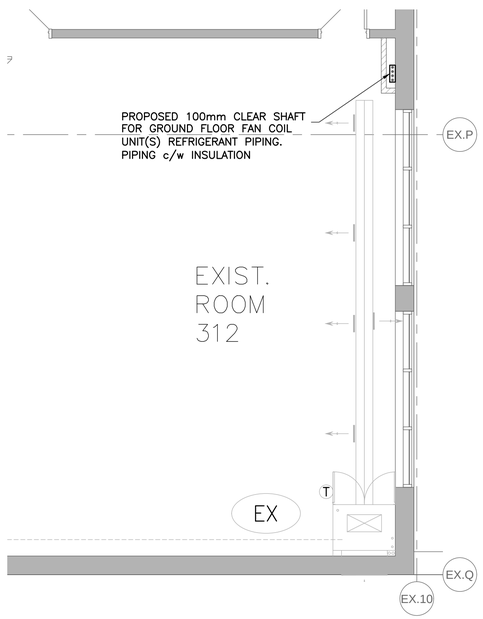
Scale:	AS SHOWN	Date:	APR 2020
Drawn by:	DH	Checked by:	CK
Job No.	20009	Drawing No.	M2.1



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



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



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

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

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

GENERAL NOTES:

A. THIS DRAWING DOES NOT SHOW ALL CONCEALED PIPING, DUCT AND EQUIPMENT. CONTRACTOR TO COORDINATE WITH LIGHTING FIXTURES AND OTHER ELECTRICAL EQUIPMENT.

B. INSULATE ALL SUPPLY, RETURN AND EXHAUST AIR DUCTWORK.

C. COORDINATE TEMPERATURE SENSOR LOCATION WITH THE OWNER.

D. ALL LOW VOLTAGE WIRING TO BE WITHIN EMT CONDUIT PROVIDED BY THIS DIVISION.

E. CONTRACTOR TO COORDINATE WITH CONTROLS CONTRACTOR FOR COMPONENTS WIRED TO BAS SYSTEM.

F. INSULATE ALL NEW CHILLED WATER SUPPLY & RETURN LINES WITH MINIMUM 25mm THICK INSULATION COMPLETE WITH VAPOUR BARRIER JACKET.

G. TEMPORARILY REMOVE AND/OR RELOCATE ALL EXISTING BUILDING SERVICES THAT ARE IN THE WAY OF MECHANICAL WORK BEING PERFORMED AND REINSTATE EXISTING SERVICES ONCE MECHANICAL WORK HAS BEEN COMPLETED.

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No.	Revisions	Date
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3	ISSUED FOR TENDER	2021-04-19
2	ISSUED FOR PERMIT	2021-01-21
1	ISSUED FOR COORDINATION	2020-08-25
No.	Issue	Date

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

Scale:	AS SHOWN	Date:	APR 2020
Drawn by:	DH	Checked by:	CK
Job No.	20009	Drawing No.	M3.2

GENERAL LIGHTING

SYMBOL	DESCRIPTION
LX	2'X4' (610mmX1220mm) LIGHT FIXTURE. 'X' DENOTES TYPE
LX	1'X4' (305mmX1220mm) LIGHT FIXTURE. 'X' DENOTES TYPE
LX	CEILING MOUNTED STRIP LIGHT FIXTURE. 'X' DENOTES TYPE
LX	WALL MOUNTED STRIP LIGHT FIXTURE. 'X' DENOTES TYPE

GENERAL NOTE: 1. REFER TO GENERAL LIGHTING SCHEDULE FOR DETAILED SPECIFICATIONS.

EMERGENCY LIGHTING

SYMBOL	DESCRIPTION
CUX	EMERGENCY BATTERY UNIT AND RUNNING MAN OR EXIT SIGN COMBO WITH TWO DC HEADS. 'X' DENOTES TYPE
BUX	EMERGENCY BATTERY UNIT WITH TWO DC HEADS. 'X' DENOTES TYPE
RX YUX.C	WALL MOUNTED EMERGENCY LIGHTING SINGLE REMOTE DC HEAD. 'X' DENOTES TYPE
RX YUX.C	CEILING MOUNTED EMERGENCY LIGHTING SINGLE REMOTE DC HEAD. 'X' DENOTES TYPE
RX YUX.C	WALL MOUNTED EMERGENCY LIGHTING DOUBLE REMOTE DC HEADS. 'X' DENOTES TYPE
RX YUX.C	CEILING MOUNTED EMERGENCY LIGHTING DOUBLE REMOTE DC HEADS. 'X' DENOTES TYPE
EMX YUX.C	EMERGENCY CEILING MOUNTED RUNNING MAN OR EXIT SIGN. ARROW DENOTES DIRECTION OF EXIT. HATCHED AREA DENOTES ILLUMINATED FACE(ES). 'X' DENOTES TYPE
EMX YUX.C	EMERGENCY WALL MOUNTED RUNNING MAN OR EXIT SIGN. ARROW DENOTES DIRECTION OF EXIT. HATCHED AREA DENOTES ILLUMINATED FACE(ES). 'X' DENOTES TYPE
YUX.C	'Y' INDICATES BATTERY OR COMBO UNIT. 'X' INDICATES TYPE OF BATTERY OR COMBO UNIT. '.C' INDICATES DEDICATED BRANCH WIRING CIRCUIT FROM BATTERY OR COMBO UNIT. WIRE TO BE SIZED TO ENSURE NO MORE THAN 5% VOLTAGE DROP PER BRANCH

GENERAL NOTE: 1. REFER TO EMERGENCY LIGHTING SCHEDULE FOR DETAILED SPECIFICATION.

CONTROL DEVICE

SYMBOL	DESCRIPTION
$X	120V OR 347V SINGLE GANG, SINGLE POLE SWITCH, UNLESS NOTED WITH CONTROL DEVICE TYPE DESIGNATION LETTER. 'X' DENOTES CONTROL DEVICE TYPE
X$X	120V OR 347V DOUBLE GANG, TWO SINGLE SWITCHES, UNLESS NOTED WITH CONTROL DEVICE TYPE DESIGNATION LETTER. 'X' DENOTES CONTROL DEVICE TYPE
(MX)	CEILING MOUNTED VACANCY/OCCUPANCY SENSOR. 'X' DENOTES CONTROL DEVICE TYPE
PPX	POWER PACK. 'X' DENOTES CONTROL DEVICE TYPE
T	LINE VOLTAGE THERMOSTAT
	POWER DOOR OPERATOR PUSH TO OPEN BUTTON
L	POWER DOOR OPERATOR PUSH TO LOCK BUTTON

GENERAL NOTE: 1. REFER TO CONTROL DEVICE SCHEDULE FOR DETAILED SPECIFICATION.

BARRIER FREE EMERGENCY CALL SYSTEM

SYMBOL	DESCRIPTION
E	EMERGENCY CALL PUSH BUTTON
A	LOCAL LED ANNUNCIATOR AND SIREN COMBO
S	LOCAL DOME LIGHT AND SIREN STROBE COMBO

GENERAL NOTE: 1. REFER TO "UNIVERSAL POWER DOOR OPERATOR/EMERGENCY CALL SYSTEM" IN ELECTRICAL SPECIFICATION FOR MORE DETAILS.

POWER AND SYSTEMS

SYMBOL	DESCRIPTION
	120VAC, 15 AMP DUPLEX RECEPTACLE
	120VAC, 15 AMP DUPLEX GROUND FAULT CIRCUIT INTERRUPT RECEPTACLE
	120VAC, 20 AMP T-SLOT DUPLEX RECEPTACLE
	120VAC, 20 AMP T-SLOT DUPLEX GROUND FAULT CIRCUIT INTERRUPT RECEPTACLE
	240VAC, 30 AMP 14-30R DRYER RECEPTACLE
	HARD WIRED POWER CONNECTION RATED PER EQUIPMENT SPECIFICATION
S	HARD WIRED POWER CONNECTION FOR HARDWIRED TOUCHLESS FAUCET
	SURFACE MOUNTED ELECTRICAL PANEL BOARD
	RECESSED ELECTRICAL PANEL BOARD
	FAN OR MOTOR
	THREE BLADE CEILING FAN
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MAGNETIC MOTOR STARTER. 'X' DENOTES TYPE
P	WALL MOUNTED PROGRAM BELL
VFD	VARIABLE FREQUENCY DRIVE
JB	JUNCTION BOX
PB	PULL BOX
X	ELECTRICAL POWER OR SYSTEMS DEVICE OR BOX. 'X' DENOTES TYPE
	HDMI OUTLET
XD	DATA OUTLET. 'X' DENOTES NUMBER OF DATA OUTLET(S)
XV	TELEPHONE OUTLET. 'X' DENOTES NUMBER OF TELEPHONE CABLE(S)
XD,XV	DATA/TELEPHONE OUTLET. 'XD' DENOTES NUMBER OF DATA CABLE(S). 'XV' DENOTES NUMBER OF TELEPHONE CABLE(S)
XD	CEILING RECESSED DATA OUTLET. 'X' DENOTES NUMBER OF DATA CABLE(S)
WA	WIRELESS ACCESS POINT
P	CEILING MOUNTED PUBLIC ADDRESS SPEAKER
P	WALL MOUNTED PUBLIC ADDRESS SPEAKER
WMX	WIREMOLD. EXACT LENGTH TO BE VERIFIED AND FIELD CUT ON SITE AS REQUIRED. 'X' DENOTES TYPE

GENERAL NOTE: 1. REFER TO POWER AND SYSTEMS SCHEDULE FOR DETAILED SPECIFICATION.

C

FIRE ALARM AND CARBON MONOXIDE SYSTEMS

SYMBOL	DESCRIPTION
	FIRE ALARM PHOTOELECTRIC SMOKE DETECTOR
	FIRE ALARM FIXED HEAT DETECTOR
F	FIRE ALARM PULL STATION
F	WALL MOUNTED FIRE ALARM BELL
F	WALL MOUNTED FIRE ALARM STROBE
FACP	SURFACE MOUNTED FIRE ALARM CONTROL PANEL

GENERAL NOTE: 1. REFER TO "FIRE ALARM SYSTEM RENOVATIONS" IN ELECTRICAL SPECIFICATIONS FOR MORE DETAILS.

CCTV SYSTEMS

SYMBOL	DESCRIPTION
CX	CEILING MOUNTED CAMERA. 'X' DENOTES TYPE

GENERAL NOTE: 1. REFER TO SECURITY SYSTEMS SCHEDULE FOR DETAILED SPECIFICATION.

SECURITY SYSTEMS

SYMBOL	DESCRIPTION
MS	CEILING MOUNTED SECURITY MOTION SENSOR
S1	CEILING MOUNTED EMERGENCY STROBE LIGHT

GENERAL NOTE: 1. REFER TO SECURITY SYSTEMS SCHEDULE FOR DETAILED SPECIFICATION.

ABBREVIATIONS

AFF	DENOTES ABOVE FINISHED FLOOR
AFG	DENOTES ABOVE FINISHED GRADE
CH	DENOTES COUNTER HEIGHT
c/w	DENOTES COMPLETE WITH
DS	DENOTES DISCONNECT SWITCH
ED	DENOTES EXISTING DEVICE TO BE DEMOLISHED INCLUDING WIRING/CONDUIT(S) STRIPPED BACK TO SOURCE
ER	DENOTES EXISTING DEVICE TO BE RELOCATED
EX	DENOTES EXISTING DEVICE TO REMAIN
GFCI	DENOTES GROUND FAULT CIRCUIT INTERRUPTER
HL	DENOTES DEVICE MOUNTED AT HIGH LEVEL NEAR CEILING
H/O /A	DENOTES HAND/OFF/AUTO
MF	DENOTES DEVICE MOUNTED AT THE FACE OF MILLWORK
NTS	DENOTES NOT TO SCALE
REL	DENOTES EXISTING DEVICE AT RELOCATED LOCATION
TR	DENOTES TAMPER RESISTANT
TYP	DENOTES TYPICAL
WP	DENOTES WEATHERPROOF

LINE TYPES

LINE TYPE	DESCRIPTION
----------	DENOTES LINE VOLTAGE WIRE
—·—·—·—	DENOTES 0-10V DIMMING WIRE
— – — – —	DENOTES LOW VOLTAGE WIRE
—·—·—·—	DENOTES LINE VOLTAGE AND 0-10V DIMMING WIRE
----------	DENOTES DEVICE TO BE DEMOLISHED OR RELOCATED
————	DENOTES NEW OR RELOCATED DEVICE
————	DENOTES EXISTING DEVICE TO REMAIN

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No.	Revisions	Date
C	Issued For Addendum No.1	May 5,2021
B	Issued For Tender	Apr 19,2021
A	Issued For Permit	Jan 21,2021
No.	Issue	Date

Drawing Title:
SYMBOLS, LINE TYPES AND ABBREVIATIONS

Scale:	NTS	Date:	MAY 2020
Drawn by:	PJ	Checked by:	JS
Job No.	20009	Drawing No.	E1.3

GENERAL LIGHTING SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE (V)	WATTS (W)	LUMENS	0-10V DIMMING	COLOUR TEMP(K)	CRI	MOUNTING	COMMENTS
L1			9"x4' (229mm x 1220mm) WRAP AROUND LED LIGHT FIXTURE	120						SURFACE	EXISTING FIXTURE
L2			4' (1220mm) LONG LIGHT FIXTURE c/w TWO (2) T8 FLUORESCENT LAMPS	120						SUSPENDED	EXISTING FIXTURE
L3			4' (1220mm) LONG LIGHT FIXTURE c/w ONE (1) T8 FLUORESCENT LAMP	120						SURFACE	EXISTING FIXTURE
L4			1'x4' (305mm X 1220mm) FIXTURE c/w LENS AND TWO (2) T8 FLUORESCENT LAMPS	120						RECESSED	EXISTING FIXTURE
L5			1'x4' (305mm x 1220mm) WRAP AROUND FIXTURE c/w TWO (2) T8 FLUORESCENT LAMPS	120						SURFACE	EXISTING FIXTURE
L6			4' (1220mm) LONG LIGHT FIXTURE c/w LENS AND ONE (1) T8 FLUORESCENT LAMP	120						SURFACE	EXISTING FIXTURE
L7	SIGNIFY	1FGG30L840-4-DS-UNV-DIM	1'x4' (305mm x 1220mm) LED TROFFER	120	25	3000	YES	4000	80	RECESSED	
L8	SIGNIFY	1FGG41B840-4-DS-UNV-DIM	1'x4' (305mm x 1220mm) LED TROFFER	120	34	4100	YES	4000	80	RECESSED	
L9	LITELINE	SLMPRO6-40K-C-WH	6" DIAMETER, ROUND, LOW PROFILE, LED DOWNLIGHT WITH WHITE TRIM FINISH	120	16	1400	YES	4000	80	RECESSED	
L10	SIGNIFY	2FGG43L840-4-D-UNV-DIM	2'x4' (610mm x 1220mm) LED TROFFER	120	36	4300	YES	4000	80	RECESSED	
L11			2'x4' (610mm x 1220mm) LIGHT FIXTURE	120						RECESSED	EXISTING FIXTURE
L12			EXTERIOR WALL SCONE c/w HPS LAMP	120						WALL	EXISTING FIXTURE
L13			EXTERIOR CANOPY LIGHT c/w HPS LAMP	120						SURFACE	EXISTING FIXTURE
L14	SIGNIFY	101L16L530NW-G14UNVBK	EXTERIOR LED WALL SCONE	120	28	2747	NO	4000	70	WALL	
L15	STANPRO	UCS/24IN/120V/12W/SEL/FR/WH/STD	2' UNDERCABINET LED LIGHT	120	12	800	NO	4000	90	SURFACE	

C

EMERGENCY LIGHTING SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE AC (VAC)	VOLTAGE DC (VDC)	LAMP BASE	LAMP TYPE	LAMP WATTS	COMMENTS
BU1			BATTERY UNIT c/w TWO DC HALOGEN HEADS	120					EXISTING BATTERY UNIT
BU2	LUMACELL	RG24S7202LD14	720W BATTERY UNIT c/w TWO LED HEADS	120	24	LED	MR16	2x6W	EXISTING BATTERY UNIT
BU3	LUMACELL	RGDIV20NLD2-VR	BATTERY UNIT WITH TWO DC HEADS, THERMOPLASTIC COVER, AND VANDAL RESISTANT SCREWS	120	6	LED	MR16	2x5W	
BU4	LUMACELL	RG12C442LD10-ZD	BATTERY UNIT WITH TWO DC HEADS	120	12	LED	MR16	2x6W	
CU1			BATTERY UNIT COMBO c/w TWO DC HEADS AND SINGLE ILLUMINATED EXIT SIGN	120					EXISTING COMBO UNIT
CU2	LUMACELL	LSC282LD2	BATTERY UNIT COMBO c/w TWO LED DC HEADS AND SINGLE ILLUMINATED RUNNING MAN SIGN	120	6	LED	MR16	2x5W	
EM1			REMOTE SINGLE FACE ILLUMINATED RUNNING MAN SIGN	120					EXISTING RUNNING MAN SIGN
EM2	LUMACELL	LS1W	REMOTE SINGLE FACE ILLUMINATED RUNNING MAN SIGN	120	24	LED			REFER TO PLAN DRAWING FOR PICTOGRAM REQUIREMENT
EM3	LUMACELL	LS2W	REMOTE DOUBLE FACES ILLUMINATED RUNNING MAN SIGN	120	24	LED			REFER TO PLAN DRAWING FOR PICTOGRAM REQUIREMENT
R1	LUMACELL	DR2130WHMR16LD14	REMOTE DOUBLE LED DC HEADS		24	LED	MR16	2x6W	EXISTING REMOTE DC HEADS
R2	LUMACELL	DR2130WHMR16LD14	REMOTE DOUBLE LED DC HEADS		24	LED	MR16	2x6W	

CONTROL DEVICE SCHEDULE

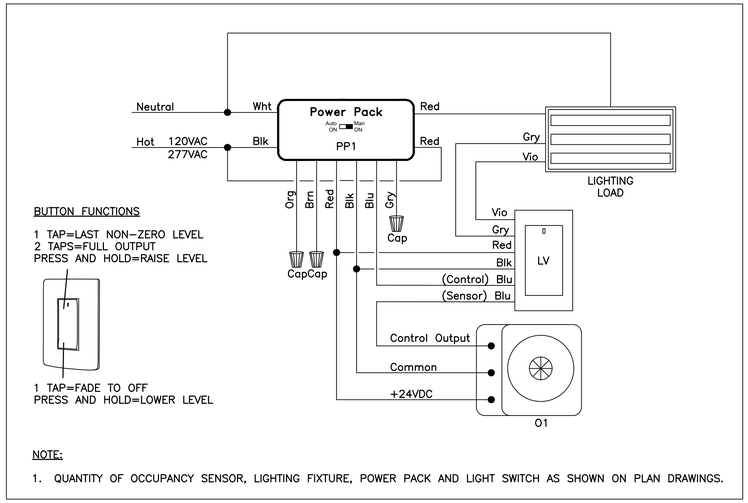
TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE AC (V)	VOLTAGE DC (VDC)	NO. OF RELAYS	MOUNTING	COMMENTS
K			TAMPER RESISTANT SWITCH	120				EXISTING SWITCH
PC			PRIVACY CALL SWITCH FOR PA SPEAKER					EXISTING SWITCH
LV			LOW VOLTAGE SWITCH					EXISTING LOW VOLTAGE SWITCH
LV	LEGRAND	DCLV2	LOW VOLTAGE ON/OFF/0-10 DIMMING SWITCH		24	1	WALL	ALL LIGHT FIXTURES TO BE WIRED TO 0-10V CONNECTED TO THIS SWITCH
VD	LEGRAND	PW-311	PASSIVE INFRARED ON/OFF/0-10V DIMMING WALL SWITCH OCCUPANCY SENSOR	120		1	WALL	ALL LIGHT FIXTURES TO BE WIRED TO 0-10V CONNECTED TO THIS SENSOR
O1	LEGRAND	CI-305-1	LOW VOLTAGE PASSIVE INFRARED CEILING SENSOR WITH HIGH DENSITY LENS		24	1	CEILING	
O2	LEGRAND	PW-301	PASSIVE INFRARED MANUAL ON/AUTO OFF WALL SWITCH OCCUPANCY SENSOR	120		1	WALL	
O3	LEGRAND	PW-302	PASSIVE INFRARED MANUAL ON/AUTO OFF DUAL RELAYS WALL SWITCH OCCUPANCY SENSOR	120		2	WALL	ONE BUTTON FOR LIGHTING AND ONE BUTTON FOR EXHAUST FAN
PP1	LEGRAND	BZ-250	AUTO ON/MANUAL ON POWER PACK	120	24	1		

C

POWER AND SYSTEMS SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE (V)	AMPS (A)	WATTS (W)	PHASE	COMMENTS
WM1	LEGRAND	5400 SERIES RACEWAY AND FITTINGS	DUAL CHANNEL RACEWAY FOR NETWORK SYSTEMS AND POWER					COMPLETE WITH ALL REQUIRED ACCESSORIES FOR INSTALLATION
WM2	LEGRAND	V700WH c/w V5748-2WH	SMALL SINGLE RACEWAY FOR PUSHBUTTON WIRING					COMPLETE WITH DOUBLE GANG DEVICE BOX FOR PUSHBUTTONS
HD1	WORLD DRYER	SMARTdri K-973A2	SURFACE MOUNTED AUTOMATIC BRUSHED STAINLESS STEEL HAND DRYER	120		1200	1	

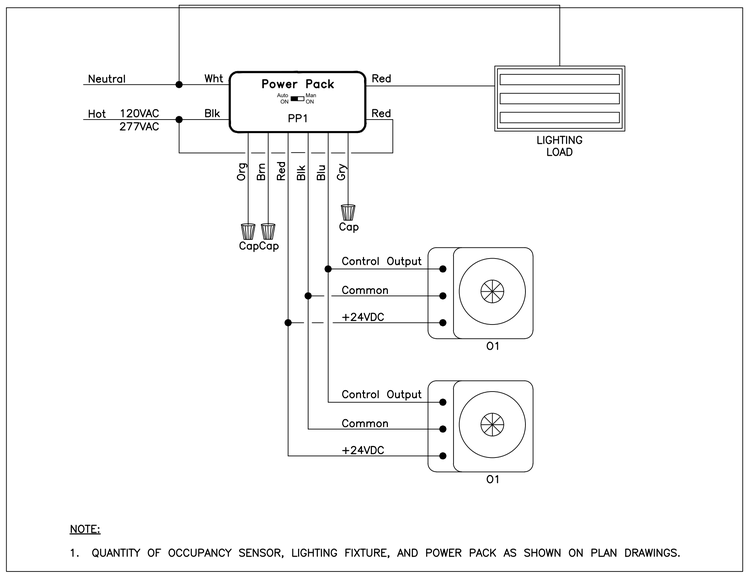
C



NOTE:

1. QUANTITY OF OCCUPANCY SENSOR, LIGHTING FIXTURE, POWER PACK AND LIGHT SWITCH AS SHOWN ON PLAN DRAWINGS.

TYPICAL WIRING DIAGRAM FOR LOW VOLTAGE ON/OFF SWITCHING WITH 0-10V DIMMING



NOTE:

1. QUANTITY OF OCCUPANCY SENSOR, LIGHTING FIXTURE, AND POWER PACK AS SHOWN ON PLAN DRAWINGS.

TYPICAL WIRING DIAGRAM FOR AUTO ON WITH NO LOCAL SWITCHING

OCCUPANCY SENSOR TIME SETTING

ROOM DESCRIPTION	TIME SETTING (MINUTES)	SWITCHING CONTROL
OFFICES	10	MANUAL ON/AUTO OFF
CORRIDOR / OPEN OFFICES	20	AUTO ON/AUTO OFF
ELECTRICAL ROOM	5	MANUAL ON/AUTO OFF
WASHROOM	10	MANUAL ON/AUTO OFF

CCTV SYSTEMS SCHEDULE

TYPE	DESCRIPTION	COMMENTS
C1	CEILING MOUNTED 360 DEGREE DOME CAMERA	EXISTING DEVICE

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Key Plan N.T.S.

Project North True North

No.	Revisions	Date
C	Issued For Addendum No.1	May 5,2021
B	Issued For Tender	Apr 19,2021
A	Issued For Permit	Jan 21,2021
No.	Issue	Date

Drawing Title:
SCHEDULES AND WIRING DIAGRAMS

Scale:	NTS	Date:	MAY 2020
Drawn by:	PI	Checked by:	JS
Job No.	20009	Drawing No.	E1.4

EXISTING SIEMENS PANEL CAT. NO. EQL32200D

PANEL ID: LP-CS — MOUNTING: SURFACE — PANEL MAINS: 200A
VOLTAGE: 120/240V — LOCATION: EXISTING EL/MECH/STORAGE ROOM 114
PHASE/WIRE: 1PH/3W — FED FROM: DISTRIBUTION PANEL 'DP1' — KAIC RATING: 10 KAIC

DESCRIPTION	BRK SIZE	BRK TYPE	WIRE SIZE	LOAD	CCT	BUS	CCT	LOAD	WIRE SIZE	BRK TYPE	BRK SIZE	DESCRIPTION
SPACE					1	A	2					SPACE
CAFE RECP	15A-1P				3A	B	4A				15A-1P	BREAKFAST RM RECP
POP MACHINE	15A-1P				3B		4B				15A-1P	TV PLUG STAIRS
	15A-1P				5A	A	6A				15A-1P	STORAGE LIGHTS
FRIDGE	15A-1P				5B		6B				15A-1P	BREAKFAST RM LIGHTS
	15A-1P				7A	B	8					
FRIDGE	15A-1P				7B						15A-2P	SPLIT RECP
	15A-1P				9A	A	10					
COPIER STAFF ROOM	15A-1P				9B							
CAFE LIGHTS EAST	15A-1P				11A	B	12					
	15A-1P				11B						15A-2P	SPLIT RECP
	15A-1P				13A	A	14					
	15A-1P				13B							
CAFE LIGHTS MIDDLE	15A-1P				15A	B	16					
	15A-1P				15B						15A-2P	
CAFE LIGHTS WEST	15A-1P				17A	A	18					
PANEL RECP	15A-1P				17B							
BIG STORAGE LIGHTS	15A-1P				19A	B	20					
SHOW CAFE PLUG	15A-1P				19B						15A-2P	FRIDGES
TV RECP	15A-1P				21A	A	22					
	15A-1P				21B							
SPLIT RECP	15A-2P				23	B	24				15A-2P	SPLIT RECP
					25	A	26					
	30A-2P				27	B	28				15A-2P	SPLIT STAFF MICROWAVE
					29	A	30					
					31	B	32					

BRK TYPE: * GFCI BREAKER
** COMBINATION AFCI
*** LOCK ON BREAKER

LOAD PHASE A (W):
LOAD PHASE B (W):
TOTAL LOAD (W):
TOTAL AMPS (A):

PANEL ID: 1N — MOUNTING: SURFACE — PANEL MAINS: 125 A
VOLTAGE: 120/208V — LOCATION: EXISTING STORAGE ROOM 116 — MAIN BREAKER: 125 A
PHASE/WIRE: 3PH/4W — FED FROM: 125A-3P BREAKER FROM 'TECH WING' PANEL — KAIC RATING: 10 KAIC

DESCRIPTION	BRK SIZE	BRK TYPE	WIRE SIZE	LOAD	CCT	BUS	CCT	LOAD	WIRE SIZE	BRK TYPE	BRK SIZE	DESCRIPTION
EMERG LITE/RUNNING MAN SIGNS	15A-1P		2#12	100	1	A	2	400	2#12		15A-1P	REC-OFFICES 113 & 114
LITE-OFFICES/ROOMS	15A-1P		2#12	786	3	B	4	400	2#12		15A-1P	REC-OFFICES 106 & 112
LITE-OFFICES/OPEN AREAS	15A-1P		2#12	892	5	C	6	400	2#12		15A-1P	REC-OFFICES 105 & 106
UNIV.WR.-LITE/EF-1/EMERG	15A-1P		2#12	250	7	A	8	200	2#12		15A-1P	REC-PRINCIPAL OFFICE 103
UNIV.WR.-REC CHANGE TABLE	15A-1P		2#12	100	9	B	10	200	2#12		15A-1P	REC-GUIDANCE FRONT/STOR
UNIV.WR.-DOOR OP	15A-1P		2#12	500	11	C	12	600	2#12		15A-1P	REC-GUIDANCE BACK/CORR
UNIV.WR.-HAND DRYER	15A-1P		2#12	1200	13	A	14	400	2#12		15A-1P	REC-OFFICES 107 & 115
UNIV.WR.-TOUCHLESS FAUCET	15A-1P		2#12	50	15	B	16	400	2#12		15A-1P	REC-MEETING 102
SPARE	15A-1P				17	C	18	400	2#12		15A-1P	REC-COPY ROOM 108
REC-FRIDGE BREAKFAST AREA	15A-1P		2#12	700	19	A	20	800	2#12		20A-1P	REC-LARGE PRINTER ROOM 108
REC-FRIDGE BREAKFAST AREA	15A-1P		2#12	700	21	B	22	150	2#12		15A-1P	REC-SHREDDER 108
COUNTER REC-BREAKFAST AREA	15A-1P		2#12	200	23	C	24	500	2#12		20A-1P	REC-SMALL PRINTER 108
MOTORIZED DAMPERS	15A-1P		2#12	50	25	A	26	400	2#12		15A-1P	REC-GENERAL OFFICE/RECEPTION
REC-GENERAL OFFICE	15A-1P		2#12	100	27	B	28	200	2#12		15A-1P	REC-RECEPTION
REC-CCTV MONITOR RECEPTION	15A-1P		2#12	500	29	C	30	300	2#12		15A-1P	REC-PA SYSTEM
REC-KITCHENETTE FRIDGE	15A-1P		2#12	800	31	A	32	400	2#12		15A-1P	REC-OPEN STATIONS
REC-KITCHENETTE MW	15A-1P		2#12	800	33	B	34	100	2#12		20A-1P	20A CONVENIENCE REC-ROOF
SPARE	15A-1P				35	C	36	600	2#12		20A-1P	REC-GFCI KITCHENETTE
SPARE	15A-1P				37	A	38				20A-1P	SPARE
SPARE	15A-1P				39	B	40					SPACE
SPARE	15A-1P				41	C	42					SPACE
SPARE	15A-1P				43	A	44					SPACE
SPARE	15A-1P				45	B	46					SPACE
SPARE	15A-1P				47	C	48					SPACE
SPARE	15A-3P				49	A	50					
					51	B	52				30A-3P	SPARE
					53	C	54					
CU-3	30A-3P		3#8 TECK90	2595	55	A	56	2595	3#8 TECK90			
				2595	57	B	58	2595			30A-3P	CU-4
				2595	59	C	60	2595				
DUCT HEATER DH-1	35A-2P		2#8	2500	61	A	62	553				
				2500	63	B	64	553	3#10		15A-3P	FAN COIL FC-1
SPACE					65	C	66	553				
SPACE					67	A	68	553				
ERV-1	15A-2P		2#12	260	69	B	70	553	3#10		15A-3P	FAN COIL FC-2
				260	71	C	72	553				

BRK TYPE: * GFCI BREAKER
** COMBINATION AFCI
*** LOCK ON BREAKER

LOAD PHASE A (W): 14496
LOAD PHASE B (W): 13042
LOAD PHASE C (W): 11448
TOTAL LOAD (W): 38986
TOTAL AMPS (A): 108.217

EQUIPMENT SCHEDULE

TAG	DESCRIPTION	LOCATION	VOLTAGE (V)	PHASE	HORSEPOWER (HP)	WATTS (W)	MCA (A)	LOAD FLA (A)	MOCP (A)	STARTER (SUPPLIED BY/INSTALLED BY): PACKAGED STARTER	STARTER: MANUAL STARTER	STARTER: COMB. FVNR	STARTER: VFD	ACCESSORIES (SUPPLIED BY/INSTALLED BY): LINE VOLTAGE THERMOSTAT	ACCESSORIES: LOW VOLTAGE THERMOSTAT	ACCESSORIES: LOCAL DISCONNECT SWITCH	FIRE ALARM: FIRE ALARM SHUTDOWN	COMMENTS
ERV-1	INDOOR ERV UNIT		208	1			3.1		15							E/E		
DH-1	ELECTRIC DUCT HEATER	ERV-1 DUCT	208	1		5000			35							E/E		
FC-1	FAN COIL	GENERAL OFFICE	208	3			5.75		15							M/E		
CU-3	CONDENSING UNIT	ROOF	208	3			18		30							E/E		
FC-2	FAN COIL	GENERAL OFFICE	208	3			5.75		15							M/E		
CU-4	CONDENSING UNIT	ROOF	208	3			18		30							E/E		
EF-1	EXHAUST FAN	UNIV. WR 117	120	1				0.17	15		E/E							EF-1 CONTROLLED THROUGH OCCUPANCY SENSOR

LEGEND: 'M' DENOTES MECHANICAL CONTRACTOR
'E' DENOTES ELECTRICAL CONTRACTOR
'G' DENOTES GENERAL CONTRACTOR

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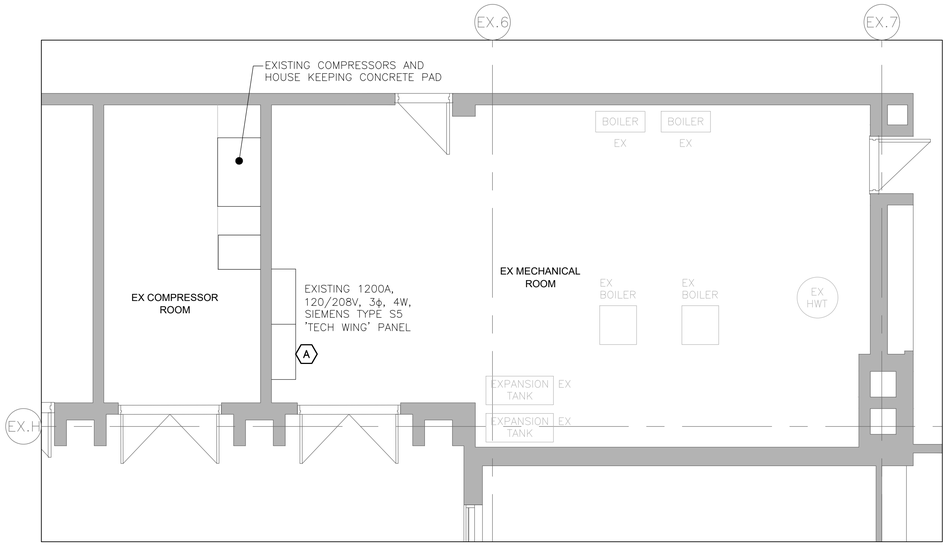
Project North — True North

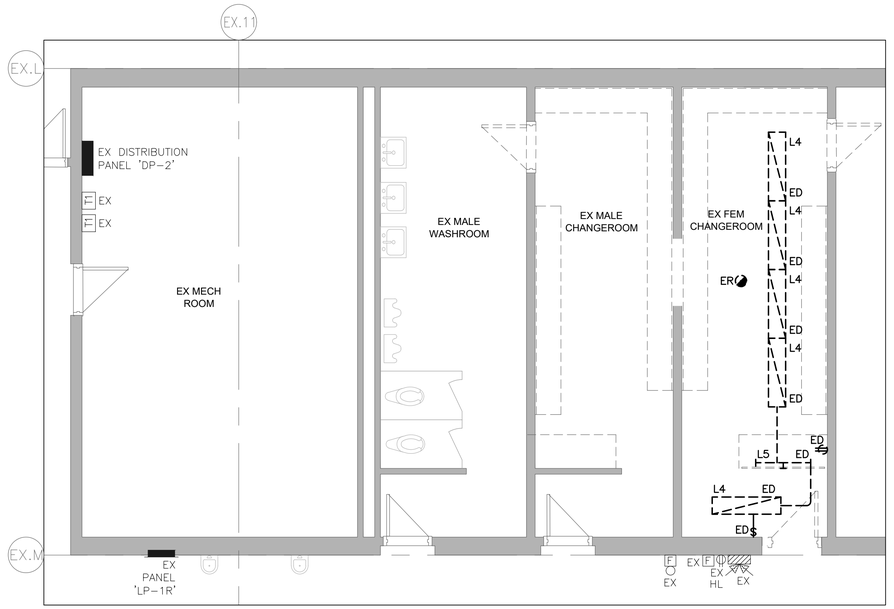
No.	Revisions	Date
C	Issued For Addendum No.1	May 5,2021
B	Issued For Tender	Apr 19,2021
A	Issued For Permit	Jan 21,2021
No.	Issue	Date

Drawing Title:
PANEL SCHEDULE AND MECHANICAL EQUIPMENT SCHEDULE NEW

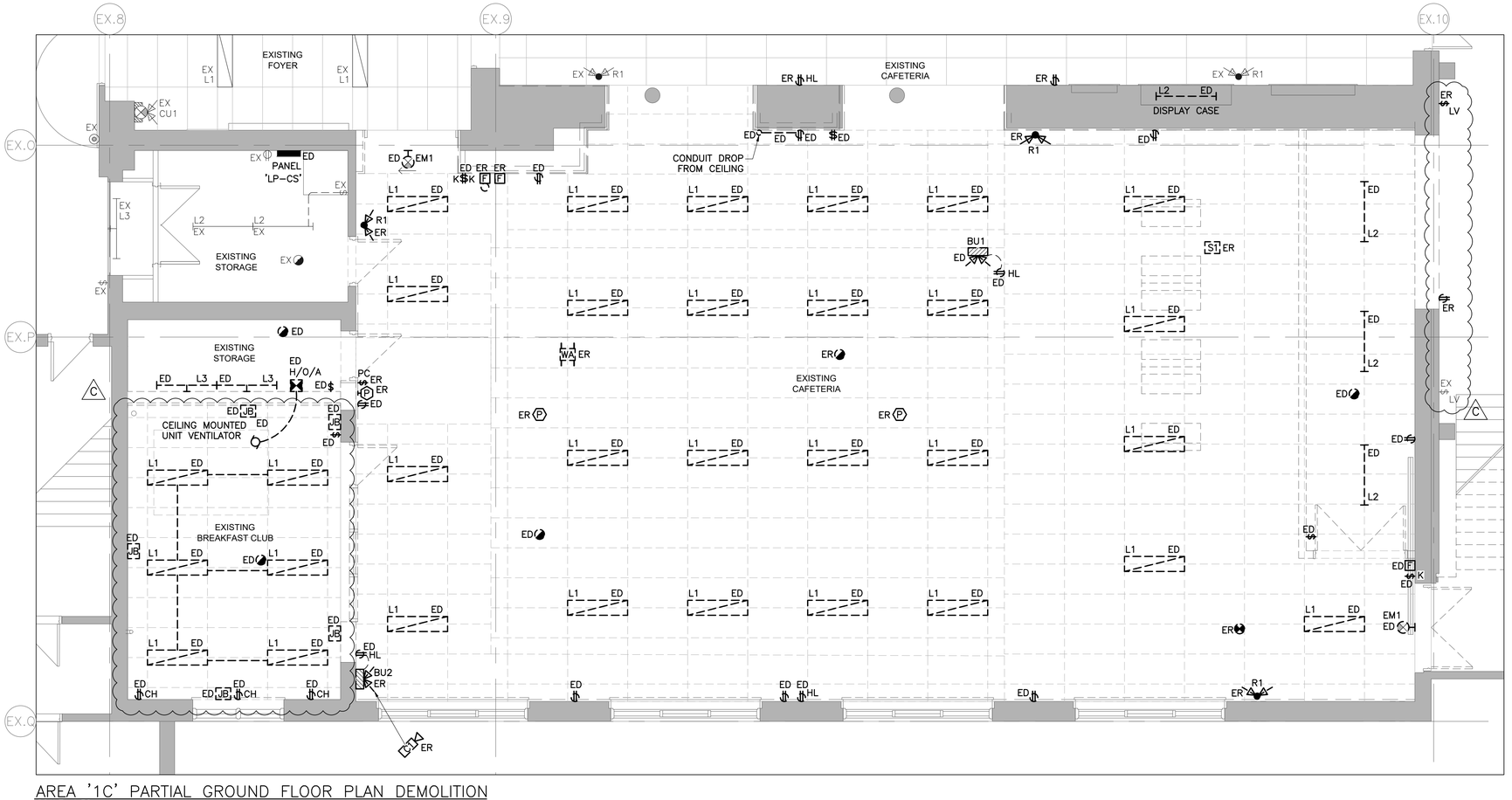
Scale: NTS — Date: MAY 2020
Drawn by: PI — Checked by: JS
Job No. 20009 — Drawing No. E3.1



AREA '1A' PARTIAL GROUND FLOOR PLAN DEMOLITION
SCALE: 1:50



AREA '1B' PARTIAL GROUND FLOOR PLAN DEMOLITION
SCALE: 1:50



AREA '1C' PARTIAL GROUND FLOOR PLAN DEMOLITION
SCALE: 1:50

GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING ALL ELECTRICAL ITEMS ON SITE PRIOR TO COMMENCING WORK. IF THERE ARE ERRORS OR OMISSIONS ON THE DRAWINGS, THE CONTRACTOR WILL MODIFY THE DRAWINGS AND NOTIFY THE CONSULTANT OF ANY MAJOR DISCREPANCIES BETWEEN THE DRAWINGS AND SITE CONDITIONS.
2. THE ELECTRICAL CONTRACTOR IS FULLY RESPONSIBLE FOR REMOVING/RELOCATING ALL ELECTRICAL DEVICES/CABLES/CONDUITS ETC. IN AREAS BEING DEMOLISHED AS SHOWN ON ARCHITECTURAL AND ELECTRICAL DRAWINGS. NO ATTEMPT HAS BEEN MADE TO IDENTIFY EVERY SINGLE EXISTING ELECTRICAL DEVICE ON EXISTING DRAWINGS. THE CONTRACTOR IS TO VISIT THE SITE PRIOR TO SUBMITTING TENDER PRICE TO REVIEW WHAT IS REQUIRED WITH RESPECT TO DEMOLITION. NO EXTRAS WILL BE ALLOWED FOR NOT THOROUGHLY REVIEWING THE EXISTING SITE.
3. FOR INDICATED DEVICES SHOWN TO BE DEMOLISHED, ELECTRICAL CONTRACTOR TO REWORK EXISTING WIRING OR PROVIDE NEW WIRING AND CONDUITS TO SUIT NEW DEVICES AS SHOWN ON DRAWINGS.
4. FOR INDICATED DEVICES ARE TO BE RELOCATED, ELECTRICAL CONTRACTOR TO REWORK EXISTING WIRING AND REINSTALL EXISTING DEVICES AS SHOWN IN RENOVATION PLAN.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY WITH THE OWNER ALL DEVICES TO BE SALVAGED, MOVED & STORED PRIOR TO DEMOLITION.

DEMOLITION KEYNOTES:

(A) EXISTING 70A-3P CIRCUIT BREAKER IN EXISTING 1200A, 120/208V SIEMENS PANEL TO BE REPLACED WITH NEW. REFER TO NEW DRAWING E5.1 FOR DETAILS.

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C	Issued For Addendum No.1	May 5,2021
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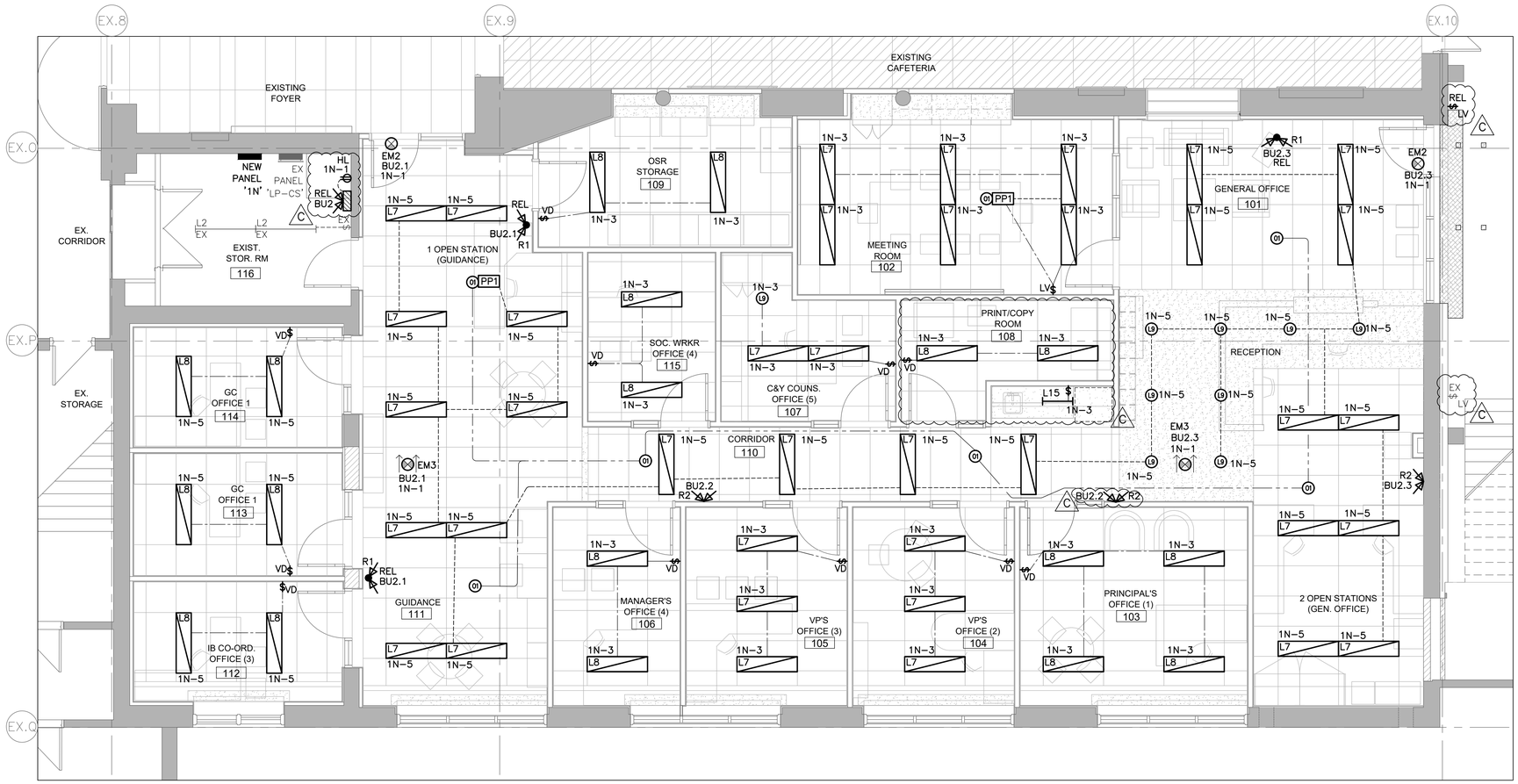
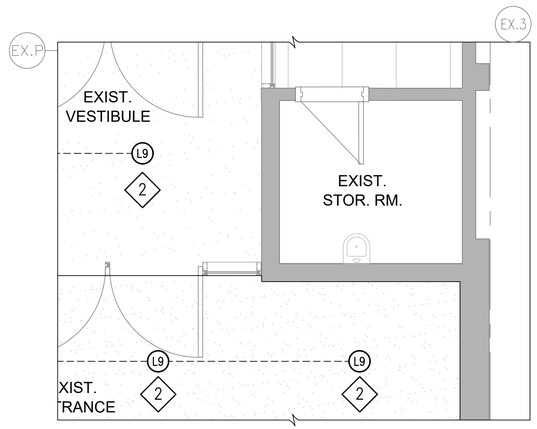
No.	Issue	Date

Drawing Title:
AREAS '1A', '1B' & '1C' PARTIAL GROUND FLOOR DEMOLITION

Scale:	AS SHOWN	Date:	MAY 2020
Drawn by:	PI	Checked by:	JS
Job No.	20009	Drawing No.	E4.1



AREA '1C' LIGHTING PARTIAL GROUND FLOOR PLAN NEW
SCALE: 1:50



AREA '1E' LIGHTING PARTIAL GROUND FLOOR PLAN NEW
SCALE: 1:50

DRAWING KEYNOTES:

1. REINSTALL AND RECONNECT EXISTING LIGHT FIXTURE AFTER INSTALLATION OF NEW CEILING CONSTRUCTION.
2. REUSE EXISTING LIGHTING BRANCH CIRCUIT, PROVIDE NEW WIRING/CONDUITS/BOX AS REQUIRED FOR NEW LIGHT FIXTURE AS SPECIFIED.

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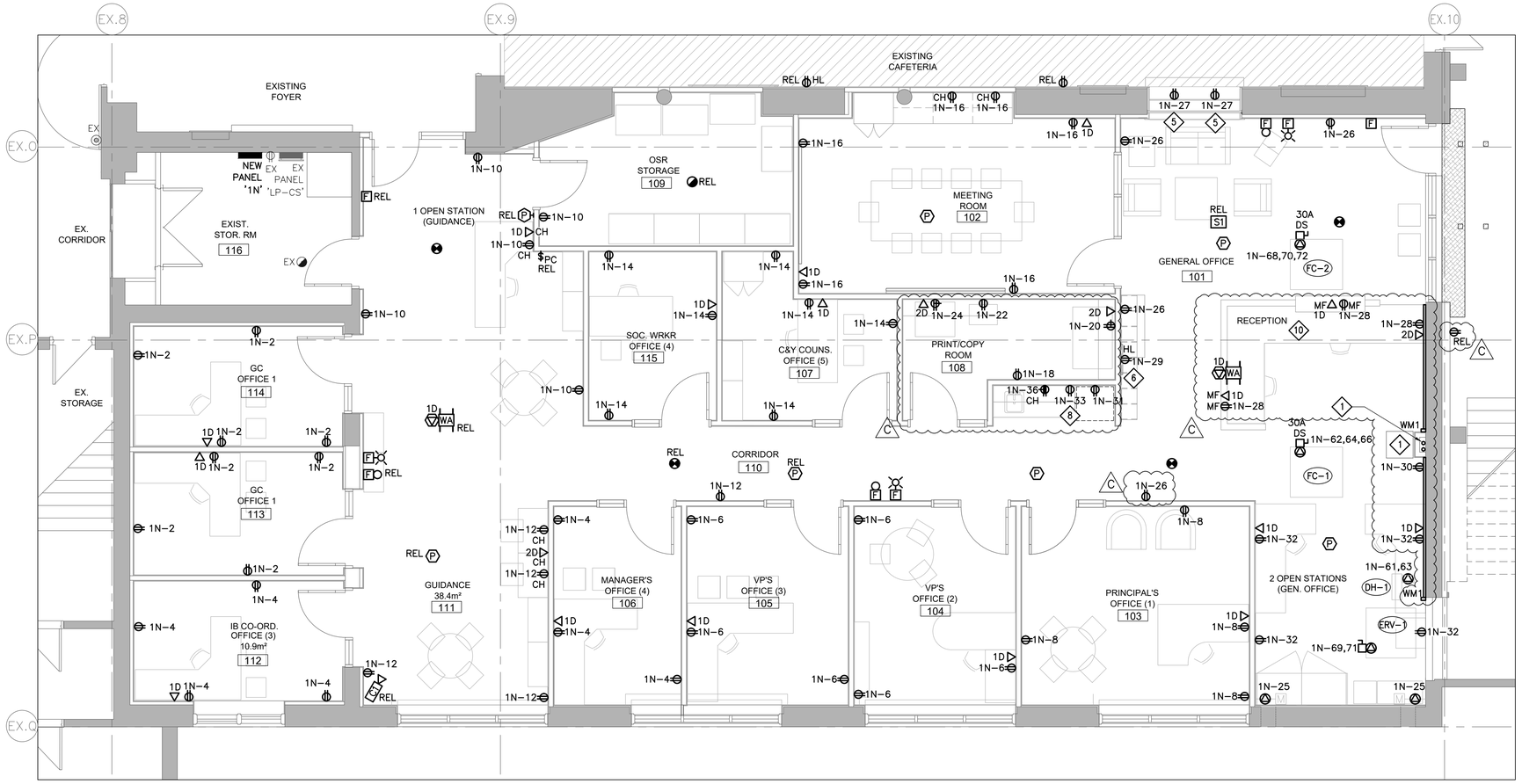
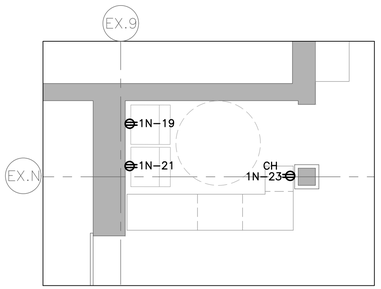
Drawing Title:
LIGHTING AREA '1C' PARTIAL GROUND FLOOR NEW

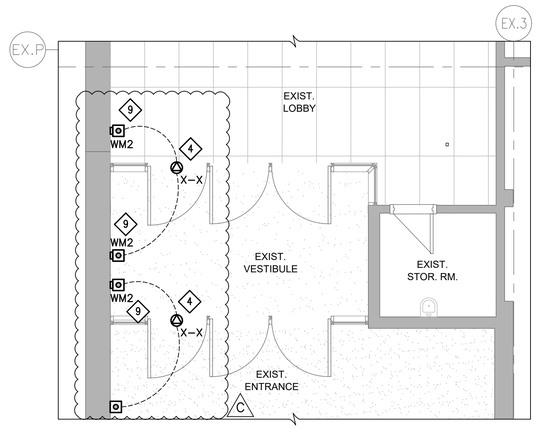
Scale:	AS SHOWN	Date:	MAY 2020
Drawn by:	PI	Checked by:	JS
Job No.	20009	Drawing No.	E5.2



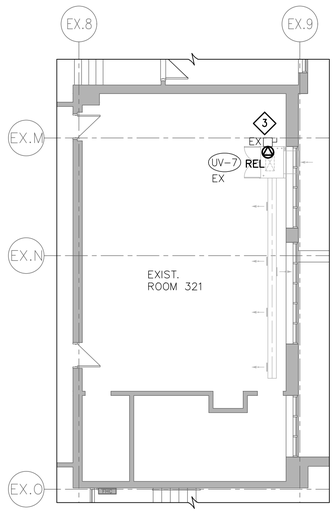
AREA '1C' POWER & SYSTEMS PARTIAL GROUND FLOOR PLAN NEW
SCALE: 1:50



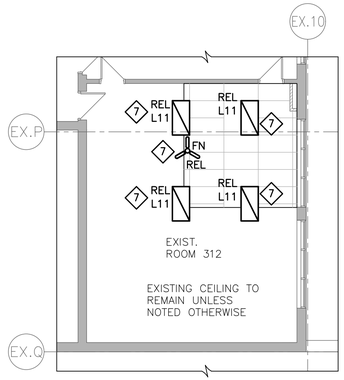
AREA '1D' POWER PARTIAL GROUND FLOOR PLAN NEW
SCALE: 1:50



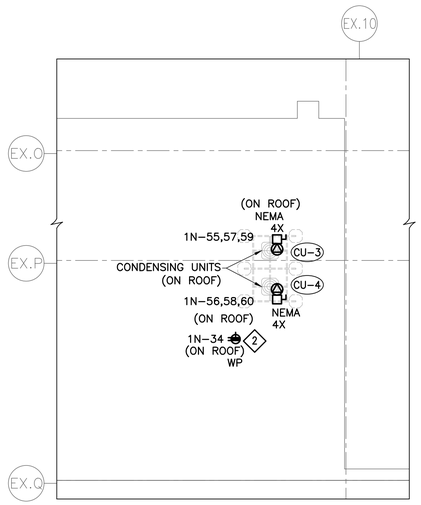
AREA '1E' POWER PARTIAL GROUND FLOOR PLAN NEW
SCALE: 1:50



AREA '3A' POWER PARTIAL THIRD FLOOR PLAN NEW
SCALE: 1:100



AREA '3B' LIGHTING AND POWER PARTIAL THIRD FLOOR PLAN NEW
SCALE: 1:100



AREA 'RA' POWER PARTIAL ROOF PLAN NEW
SCALE: 1:100

GENERAL NOTE:

1. ALL EXPOSED EMT CONDUIT TO BE PAINTED TO MATCH EXISTING WALL/CEILING COLOUR.

DRAWING KEYNOTES:

1. EXISTING MAIN PA SYSTEM INCLUDING ALL EQUIPMENT AND ACCESSORIES TO BE RELOCATED AS SHOWN. NEW TWO (2) MINIMUM OF 53mm EMPTY RACEWAY c/w PULL ROPES PROVIDED BY ELECTRICAL CONTRACTOR TO BE TERMINATE AT THIS LOCATION. ELECTRICAL CONTRACTOR TO FIELD DETERMINE THE BEST SUITABLE ROUTING OF THE NEW RACEWAY. THE PA SYSTEM CONTRACTOR SHALL PROVIDE ALL NEW REQUIRED MATERIALS, LABOUR AND REWIRE ALL EXISTING PA DEVICES TO MAIN PA SYSTEM.
2. PROVIDE NEW WEATHERPROOF 20A GFCI RECEPTACLE FOR MAINTENANCE OF MECHANICAL EQUIPMENT ON ROOF AS PER ESA STANDARDS SECTION '26-710'. NEW RECEPTACLE TO BE MOUNTED ON STAINLESS STEEL PEDESTAL AT MINIMUM OF 750mm ABOVE FINISHED ROOF LEVEL.
3. RECONNECT EXISTING POWER CONNECTION FOR EXISTING UNIT VENTILATOR AFTER INSTALLATION OF NEW WINDOW.
4. ELECTRICAL CONTRACTOR TO FIELD VERIFY TO REUSE EXISTING SPARE BREAKER OR PROVIDE NEW DEDICATED 15A-1P CIRCUIT BREAKER IN EXISTING PANEL. PROVIDE NEW BOX, CONDUITS AND BRANCH WIRING AS REQUIRED AND WIRE FROM THE NEAREST PANEL TO NEW POWER DOOR OPERATOR (SUPPLIED BY GENERAL CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR) AS REQUIRED.
5. REFER TO ARCHITECTURAL DRAWING A501 FOR EXACT LOCATION AND FURTHER INFORMATION.
6. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL NEW RECEPTACLE AS REQUIRED FOR RELOCATED EXISTING CCTV MONITOR. COORDINATE WITH CCTV CONTRACTOR FOR EXACT MONITOR LOCATION PRIOR TO DEVICE ROUGH-IN. CCTV MONITOR TO BE INSTALLED AT 610mm (2ft) BELOW CEILING.
7. REINSTALL AND RECONNECT EXISTING CEILING DEVICES INCLUDING LIGHT FIXTURES AND CEILING FAN AFTER REINSTALLATION OF CEILING TILES/GRID.
8. REFER TO ARCHITECTURAL ELEVATION DRAWINGS FOR EXACT LOCATION OF KITCHENETTE MW RECEPTACLE. C
9. PROVIDE SURFACE MOUNTED RACEWAY TO CEILING SPACE FROM PUSHBUTTON BOX. PUSHBUTTON TO BE MOUNTED ON SURFACE MOUNTED WIREMOLD DEVICE BOX C
10. FOR MOUNTING LOCATION OF RECEPTACLES AND DATA OUTLETS IN RECEPTION DESK REFER TO ARCHITECTURAL DRAWING A601 C

Client
Halton District School Board
2050 Guelph Line
Burlington, Ontario

BURLINGTON CENTRAL H.S. RENOVATIONS

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Key Plan N.T.S.

Project North / True North

No.	Revisions	Date
C	Issued For Addendum No.1	May 5,2021
B	Issued For Tender	Apr 19,2021
A	Issued For Permit	Jan 21,2021
No.	Issue	Date

Drawing Title:
POWER & SYSTEMS AREAS '1C', '1D', '3A' & 'RA' GROUND, THIRD FLOORS AND ROOF NEW

Scale:	AS SHOWN	Date:	MAY 2020
Drawn by:	PI	Checked by:	JS
Job No.	20009	Drawing No.	E5.3

1 General

1.1 RELATED SECTIONS

.1 Section 06 20 00 - Finish Carpentry.

.2 Section 06 24 00 - High Pressure Decorative Laminate.

.3 Section 08 12 13 - Hollow Metal Frames.

.4 Section 08 71 00 - Door Hardware.

.5 Section 08 80 00 - Glazing.

.6 Section 09 90 00 - Painting and Coating.

1.2 REFERENCES

.1 ANSI A208.1-2009: Particleboard.

.2 AWMAC NAAWS 4.0-2021: North American Architectural Woodwork Standards.

.3 CSA O141-05 (R2009): Softwood Lumber.

.4 ANSI/DHI A115.IG-1994: Installation Guide for Doors and Hardware.

.5 ANSI/NEMA LD 3-2005: High Pressure Decorative Laminates.

.6 NFPA 80-2007: Fire Doors and Other Opening Protectives.

.7 CAN/ULC-S104-15 (R2020): Standard Method for Fire Tests of Door Assemblies.

.8 ULC List of Equipment and Materials.

.9 ANSI/WDMA I.S. 1A-13: Industry Standard for Interior Architectural Wood Flush Doors.

1.3 SHOP DRAWINGS

.1 Submit Shop Drawings as specified in Section 01 33 00.

.2 Shop Drawings: Project-specific drawings, illustrating door elevations, stile and rail reinforcement, cutouts, and internal blocking for hardware attachment.

1.4 DELIVERY, STORAGE AND HANDLING

.1 Refer to Section 01 60 00.

.2 Pile Products flat on level supports to prevent warping.

.3 Protect face of first unit by placing plywood or cardboard between supports and unit face. Cover the top unit in a similar manner.

.4 Store Products in a dry, well-ventilated area.

.5 Seal top and bottom edges of Products stored for an extensive period of time.

1.5 WARRANTY

.1 Submit extended warranty in accordance with General Conditions of the Contract.

.2 Extended Warranty: For a period of 3 years, covering against warping beyond installation tolerances, and delamination or degradation of faces.

2 Products

2.1 MANUFACTURERS

.1 Manufacturers having Product considered acceptable for use:
- .1 Baillargeon.
- .2 Door-Lam.
- .3 Jeld-Wen, Inc.
- .4 Lambton Door.
- .5 Marshfield Door Systems.
- .6 Masonite.

.2 Substitution Procedures: Refer to Section 01 25 00.

2.2 REGULATORY REQUIREMENTS

.1 Fire Rated Doors: Permanently labelled to NFPA standards for fire rated class indicated, as tested to CAN/ULC-S104.

2.3 MATERIALS

.1 Lumber: To CSA O141; SPF species, kiln dried to maximum 7 percent moisture content.

.2 Particleboard: To ANSI A208.1; 448 kg/m^3 solid particleboard.

.3 Decorative Laminate: To ANSI/NEMA LD3; colours, textures, and patterns as selected by Consultant; and as follows:
- .1 Non-Rated Applications: High pressure decorative laminate, Vertical Surface type, Grade VGS; 0.7 mm thick.
- .2 Rated Applications: Flame-retardant high pressure decorative laminate, Vertical Surface type, Grade VGF; 0.7 mm thick.

2.4 MANUFACTURED UNITS

.1 Solid Core Flush Wood Doors - Fire Rated: To ANSI/WDMA I.S. 1A, Extra Heavy Duty, 44 mm thick; 45-minute rating; 3-ply construction, as follows:
- .1 Perimeter Construction: Solid lumber lock blocks, vertical stiles and top and bottom rails, bonded to core material.
- .2 Core: Homogeneous incombustible mineral core; ULC labelled.
- .3 Face Assembly Adhesive: Type I - Waterproof.
- .4 Core Assembly Adhesive: Type II - Water-resistant.
- .5 Edges: To AWMAC NAAWS 4.0, Type D - Solid Wood.
- .6 Door Faces: Decorative laminate.

.2 Solid Core Flush Wood Doors - Non-Rated: To ANSI/WDMA I.S. 1A, Extra Heavy Duty, 44 mm thick; 3-ply construction, as follows:
- .1 Perimeter Construction: Solid lumber lock blocks, vertical stiles and top and bottom rails, bonded to core material.
- .2 Core: Particleboard.
- .3 Face Assembly Adhesive: Type I - Waterproof.
- .4 Core Assembly Adhesive: Type II - Water-resistant.
- .5 Glass Stop: Matching wood, flat bead type.
- .6 Edges: To AWMAC NAAWS 4.0, Type D - Solid Wood.
- .7 Door Faces: Decorative laminate.

2.5 FABRICATION

.1 Fabricate Products to AWMAC NAAWS 4.0, Custom Grade.

.2 Provide and prepare sufficient amount of blocking in edges to accommodate installation of scheduled hardware.

.3 Fabricate fire-rated Products with sufficient wood blocking to fasten scheduled hardware.

.4 Fabricate paired doors with pair match veneers.

.5 Fabricate paired doors with no bevel meeting edges.

.6 Machine cut relief for hinges and closures, and core doors for handsets and cylinders.

.7 Prepare doors for hardware as listed in preliminary hardware schedule. Refer to Section 08 71 00.

.8 Provide and prepare openings for glazing.

.9 Apply decorative laminate to AWMAC NAAWS 4.0, and as specified in Section 06 24 00.

3 Execution

3.1 PREPARATION

.1 Arrange with Section 09 90 00 to finish glass stops, top rails, bottom rails and stile edges to match decorative laminate door faces prior to door, glazing and hardware installation.

3.2 INSTALLATION

.1 Install Products to ANSI/DHI A115.IG.

.2 Do not trim rated wood doors.

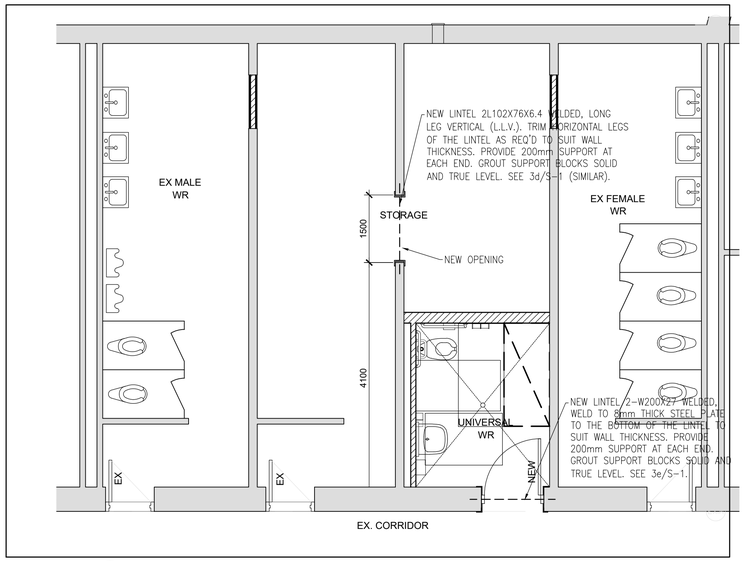
.3 Trim non-rated doors only as necessary, and as follows:
- .1 Door Width: Up to maximum 5 mm.
- .2 Door Height: Trimmed equally on top and bottom edges, to a combined maximum of 10 mm.

.4 Prepare doors to receive door hardware to AWMAC NAAWS 4.0.

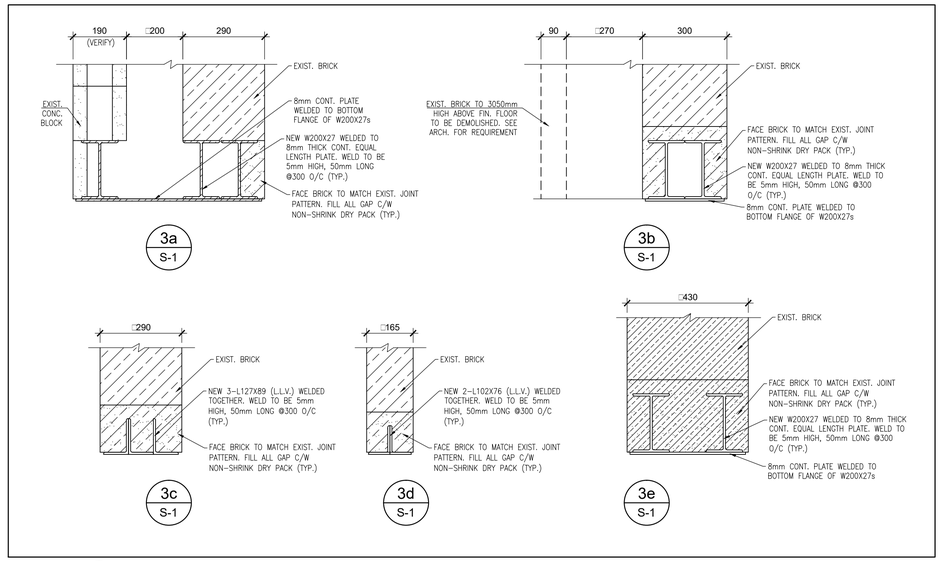
3.3 TOLERANCES

.1 Maximum Diagonal Distortion: 1.5 mm measured with straight edge, corner to corner.

END OF SECTION



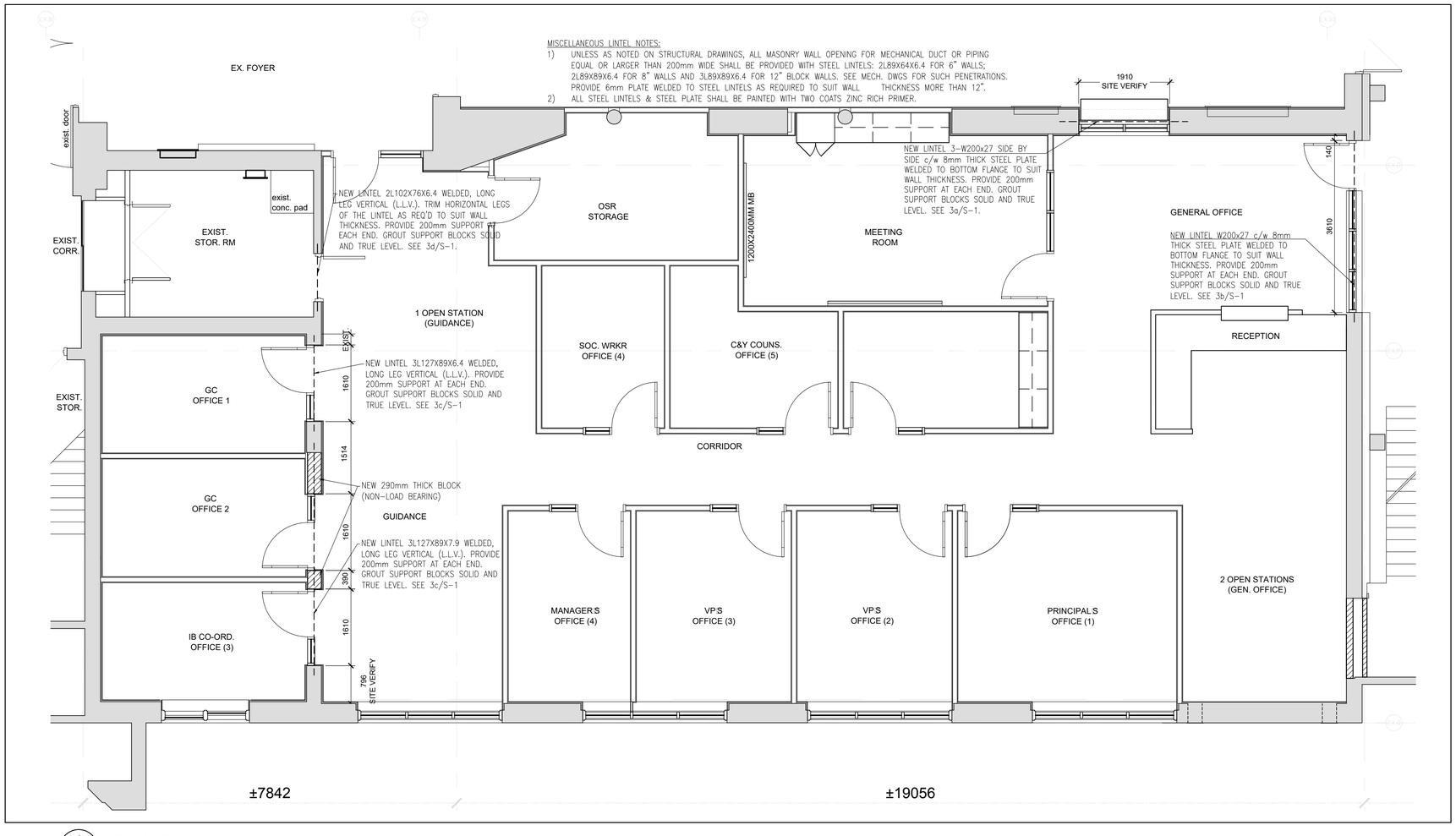
2 S-1 GROUND FLOOR - NEW UNIVERSAL WASHROOM
1:50



3 S-1 GROUND FLOOR - LINTEL SECTION DETAILS
1:10

GENERAL NOTES:

1. CONTRACTOR TO COMPLY WITH DIVISION 1 OF THE SPECIFICATION AND THE FOLLOWING. IN THE EVENT OF CONTRADICTION IN TERMS AND CONDITIONS, THE MORE ONEROUS TERMS AND CONDITIONS SHALL APPLY.
2. DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR TO REFERENCE DIMENSIONS GIVEN ON THE CONTRACT DRAWINGS & VERIFY/MEASURE ACCURATE DIMENSIONS ON SITE FOR THE PURPOSE OF MATERIAL AND SHOP DRAWING PREPARATIONS.
3. THE DESIGN DOCUMENTS HAVE BEEN PREPARED ON THE BASIS OF INFORMATION OBTAINED FROM THE GENERAL REVIEW ON SITE AND FROM THE EXISTING DOCUMENTS PROVIDED BY THE CLIENT. THE CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING, THE SITE AND THE SURROUNDING AREAS AND BE FULLY INFORMED AS TO THE CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK HAS TO BE EXECUTED.
4. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS, LOCATION ARRANGEMENTS, SIZES & SITE CONDITIONS, COMPARE WITH THOSE INDICATED ON THE DRAWINGS & ADVISE THE CONSULTANT OF ANY DISCREPANCIES.
5. CONTRACTOR SHALL PROVIDE ENGINEERED TEMPORARY SHORING (NOT LIMITED TO NEEDLE SHORING), BRACING AND SUPPORTS WHERE REQUIRED. THE TEMPORARY SHORING, BRACING AND SUPPORTS SHOULD BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED WITH PEO.
6. PROVIDE PROPER SHOP DRAWINGS OF ALL SPECIFIED PRODUCTS STAMPED BY A PROFESSIONAL ENGINEER LICENSED WITH PEO AND SUBMIT FOR APPROVAL TO THE CONSULTANT PRIOR TO CONSTRUCTION.
7. ALL REPAIR WORK REQUIRED BY THE CONTRACTOR DUE TO THE WORK PERFORMED SHALL MATCH THE ORIGINAL CONDITION, ADJACENT MATERIALS/FINISHES OR BETTER.
8. CONSULTANT MAY REVIEW SITE DURING DEMOLITION TO VERIFY EXISTING CONDITIONS. CONTRACTOR TO PROVIDE 48 HOURS NOTICE FOR INSPECTION.



1 S-1 GROUND FLOOR - NEW OFFICE AREA LAYOUT
1:50

Client
Halton District School Board
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Burlington, Ontario

BURLINGTON CENTRAL H.S. RENOVATIONS

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Key Plan N.T.S.

Project North True North

No.	Revisions	Date
4	REVISED FOR TENDER	2021/05/04
3	ISSUED FOR TENDER	2021/04/16
2	ISSUED FOR BUILDING PERMIT	2021/01/21
1	ISSUED FOR REVIEW	2020/11/13
No.	Issue	Date

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Drawing Title:
GROUND FLOOR PLAN
NEW LINTELS

Scale: AS NOTED	Date: 11 13 2020
Drawn by:	Checked by:
Job No. MML 6068	Drawing No. S-1

ARCADIS Design & Consultancy for natural and built assets

HALTON DISTRICT SCHOOL BOARD

PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

BURLINGTON CENTRAL HIGH SCHOOL

1433 BALDWIN STREET, BURLINGTON, ONTARIO

April 26, 2021

30084757

Paul Smith, B.Sc., IHT

Senior Industrial Hygienist

Ada Nguyen, B.Sc., CIH

Project Manager, Industrial Hygienist

PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

Burlington Central High School
1433 Baldwin Street, Burlington, Ontario

Prepared for:

Halton District School Board

J.W. Singleton Education Center

2050 Guelph Line

Burlington, ON L7P 5A8

Attention: Wayne Hartwell

Prepared by:

Arcadis Canada Inc.

121 Granton Drive, Suite 12

Richmond Hill, Ontario L4B 3N4

Tel 905 764 9380

Our Ref.:
30084757

Date:
April 26, 2021

CONTENTS

TABLES

APPENDICES

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 at Burlington Central High School located at 1433 Baldwin Street, Burlington, Ontario.

The building is a three-storey masonry structure originally constructed in 1922 with additions constructed in 1949, 1954, 1959, 1961, 1965 and 1968.

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*.

It is our understanding that Mechanical Room 328A is being renovated, and control valves for radiators and unit ventilators are being replaced at various areas in the building. The survey was limited to the designated study areas and building materials that are anticipated to be affected by the proposed building upgrade project. The locations of the designated study areas were based on information provided to Arcadis by the HDSB.

The designated study areas and eras of construction 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 and paint chip samples;
- laboratory analyses of bulk samples for asbestos content;
- laboratory analyses of paint chip samples for lead content; and
- preparation of a report outlining the findings of the investigation.

Mr. Paul Smith of Arcadis visited the site on April 7, 8 and 9, 2021 to conduct the designated substances and hazardous materials survey at Burlington Central High 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

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

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.

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 specialty 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 a report prepared by Arcadis for the Halton District School Board entitled *Pre-Renovation Designated Substances and Hazardous Materials Survey, Burlington Central High School, 1433 Baldwin Street, Burlington, Ontario* dated March 22, 2021 and *Updated Survey of Asbestos-Containing Materials, Burlington Central High School, Burlington, Ontario* dated September 10, 2014. Information and/or bulk sample analysis results obtained from these existing reports were utilized by Arcadis during the course of our investigation and in the preparation of this report.

During the course of our site investigation, representative bulk samples of material were collected by Arcadis staff. The samples were forwarded to EMSL Canada Inc. (EMSL) for asbestos analyses. Results of bulk sample analysis for asbestos content are provided in Table 3.1. Table 3.1 also include sample results that are outside of the designated study areas. This information is provided for references purposes only. Laboratory reports are provided in Appendix B. Locations of accessible asbestos-containing materials are outlined on the floor plan provided in Appendix A.

Table 3.1. Summary of Results of Analyses of Bulk Samples for Asbestos Content

Sample No.	Sample Location	Sample Description	Asbestos Content
1-A	Room 328A	vinyl baseboard	None detected (PLM) None detected (TEM)
1-A	Room 328A	vinyl baseboard-mastic	None detected
1-B	Room 328A	vinyl baseboard	None detected
1-B	Room 328A	vinyl baseboard-mastic	None detected
1-C	Room 328A	vinyl baseboard	None detected
1-C	Room 328A	vinyl baseboard-mastic	None detected
2-A	Room 328A	(12” x 12”) vinyl floor tile mastic	**1% chrysotile**
3-A	Room 215	(9” x 9”) grey vinyl floor tile	None detected (PLM) None detected (TEM)
3-A	Room 215	(9” x 9”) grey vinyl floor tile-mastic	None detected
3-B	Room 215	(9” x 9”) grey vinyl floor tile	None detected
3-B	Room 215	(9” x 9”) grey vinyl floor tile-mastic	None detected
3-C	Room 215	(9” x 9”) grey vinyl floor tile	None detected
3-C	Room 215	(9” x 9”) grey vinyl floor tile-mastic	None detected
4-A	Room 201	shiny yellow wall paint on concrete block wall (1949)	None detected
4-B	Room 412	shiny yellow wall paint on concrete block wall (1949)	None detected
4-C	Room 412	shiny yellow wall paint on concrete block wall (1949)	None detected

Sample No.	Sample Location	Sample Description	Asbestos Content
5-A	Room 127	shiny yellow wall paint on concrete block wall (1954)	None detected
5-B	Room 127	shiny yellow wall paint on concrete block wall (1954)	None detected
5-C	Room 228	shiny yellow wall paint on concrete block wall (1954)	None detected
6-A	Stairwell 409	shiny yellow wall paint on concrete block wall (1959)	None detected
6-B	Stairwell 409	shiny yellow wall paint on concrete block wall (1959)	None detected
6-C	Stairwell 409	shiny yellow wall paint on concrete block wall (1959)	None detected
7-A	Room 124	masonry mortar in concrete block (1949)	None detected
7-B	Room 124C	masonry mortar in concrete block (1949)	None detected
7-C	Room 124C	masonry mortar in concrete block (1949)	None detected
8-A	Room 128A	masonry mortar in concrete block (1954)	None detected
8-B	Room 228A	masonry mortar in concrete block (1954)	None detected
8-C	Room 228A	masonry mortar in concrete block (1954)	None detected
1A	Room 178	2'x4' ceiling tile – textured pinhole	None detected [2]
1B	Room 178	2'x4' ceiling tile – textured pinhole	None detected [2]
1C	Room 178	2'x4' ceiling tile – textured pinhole	None detected [2]
2A	Room 181	Ceiling tile adhesive	None detected [2]
2B	Room 181	Ceiling tile adhesive	None detected [2]
2C	Room 181	Ceiling tile adhesive	None detected [2]
3A	Room 172	Black mastic under 12" vinyl floor tile	None detected [2]
3B	Room 172	Black mastic under 12" vinyl floor tile	None detected [2]
3C	Room 172	Black mastic under 12" vinyl floor tile	None detected [2]
4A	Room 173	12" vinyl floor tile – beige with tan fleck	None detected (PLM) [2] None detected (TEM) [2]
4B	Room 173	12" vinyl floor tile – beige with tan fleck	None detected [2]
4C	Room 173	12" vinyl floor tile – beige with tan fleck	None detected [2]
5A	Room 173	Black mastic under 12" vinyl floor tile	**2% chrysotile** [2]
6A	Room 173	Beige vinyl baseboard	None detected (PLM) [2] None detected (TEM) [2]
6B	Room 173	Beige vinyl baseboard	None detected [2]
6C	Room 173	Beige vinyl baseboard	None detected [2]
7A	Room 173	Tan baseboard mastic	None detected [2]
7B	Room 173	Tan baseboard mastic	None detected [2]
7C	Room 173	Tan baseboard mastic	None detected [2]
8A	Corridor 402	Black baseboard	None detected (PLM) [2] None detected (TEM) [2]

Sample No.	Sample Location	Sample Description	Asbestos Content
8B	Corridor 402	Black baseboard	None detected (2)
8C	Corridor 402	Black baseboard	None detected (2)
9A	Corridor 402	Brown baseboard mastic	None detected (2)
9B	Corridor 402	Brown baseboard mastic	None detected (2)
9C	Corridor 402	Brown baseboard mastic	None detected (2)
10A	Room 172	Interior grey window caulking	**3% chrysotile** (2)
11A	Room 178	Fireproofing	None detected (2)
11B	Room 178	Fireproofing	None detected (2)
11C	Room 178	Fireproofing	None detected (2)
12A	Room 171	Interior brick mortar (1922)	<0.25% chrysotile (1,2)
12B	Room 172	Interior brick mortar (1922)	<0.25% chrysotile (1,2)
12C	Room 179	Interior brick mortar (1922)	<0.25% chrysotile (1,2)
13A	Room 164	Interior concrete block mortar (1965)	None detected (2)
13B	Corridor 402	Interior concrete block mortar (1965)	None detected (2)
13C	Corridor 402	Interior concrete block mortar (1965)	None detected (2)
14A	Room 181	Interior ceramic block mortar (1961)	None detected (2)
14B	Room 182	Interior ceramic block mortar (1961)	None detected (2)
14C	Room 182A	Interior ceramic block mortar (1961)	None detected (2)
15A	Corridor 402	Block-filler paint on concrete block wall (1965)	**1% chrysotile** (2)
16A	Room 172	Exterior window caulking	None detected (2)
16B	Room 173	Exterior window caulking	None detected (2)
16C	Room 173	Exterior window caulking	None detected (2)
17A	Room 173	Exterior brick mortar (1922)	None detected (2)
17B	Room 182A	Exterior brick mortar (1961)	None detected (2)
17C	Room 172	Exterior brick mortar (1922)	None detected (2)
18A	Room 209	Interior grey window caulking	None detected (2)
18B	Room 312A	Interior grey window caulking	**3% chrysotile** (2)
1A	Room 413	Brown caulking under grey caulking on exterior door frame	**2% chrysotile** (2)
2A	Room 412	Brown caulking on interior door frame	**2% chrysotile** (2)
123-1	Rm. 123	Ceiling plaster.	<0.025% chrysotile (1,3)
410-1	Rm.410	Ceiling plaster.	None detected (3)
204-1	Rm. 204	Ceiling plaster.	None detected (3)
164-2	Rm. 164	Ceiling plaster.	None detected (3)
247-2	Rm. 247	Ceiling plaster.	None detected (3)
323-2	Rm. 323	Ceiling plaster.	None detected (3)
168-3	Rm. 168	Ceiling plaster.	None detected (3)
103-3	Rm. 103	Ceiling plaster.	None detected (3)
210-3	Rm. 210	Ceiling plaster.	<0.025% chrysotile (1,3)

Sample No.	Sample Location	Sample Description	Asbestos Content
224A-4	Rm. 224A	Ceiling plaster.	None detected [3]
224A	Rm. 224	Ceiling plaster.	None detected [3]
224B	Rm. 224	Ceiling plaster.	None detected [3]
125-5	Rm. 125	2’ x 4’ ceiling tile 1954.	None detected [3]
123-6	Rm. 123	2’ x 4’ ceiling tile 1954.	None detected [3]
227-6	Rm. 227	2’ x 4’ ceiling tile 1954.	None detected [3]
217-6	Rm. 217	2’ x 4’ ceiling tile 1954.	None detected [3]
157A-7	Rm. 157A	2’ x 4’ ceiling tile dot & dent.	None detected [3]
213A-7	Rm. 213A	2’ x 4’ ceiling tile dot & dent.	None detected [3]
226-7	Rm. 226	2’ x 4’ ceiling tile dot & dent.	None detected [3]
169-8	Rm. 169	2’ x 4’ ceiling tile - fissured width - dents.	None detected [3]
166A	Rm. 166	2’ x 4’ ceiling tile - fissured width - dents.	None detected [3]
166B	Rm. 166	2’ x 4’ ceiling tile - fissured width - dents.	None detected [3]
204-8	Rm. 204	2’ x 4’ ceiling tile - fissured width - dents.	None detected [3]
308-8	Rm. 308	2’ x 4’ ceiling tile - fissured width - dents.	None detected [3]
166-9	Rm. 169	2’ x 4’ ceiling tile - small fissure dots.	None detected [3]
321R-9	Rm. 321A	2’ x 4’ ceiling tile - small fissure dots.	None detected [3]
124A-10	Rm. 124A	12” x 12” ceiling tile.	**1.5% amosite [3]**
126A-11	Rm. 126A	12” x 12” ceiling tile.	None detected [3]
128-11	Rm. 128	12” x 12” ceiling tile.	None detected [3]
128A	Rm. 128A	12” x 12” ceiling tile.	None detected [3]
128	Rm. 128	12” x 12” ceiling tile.	None detected [3]
180-12	Rm. 180	12” x 12” ceiling tile.	**1.8% amosite [3]**
178-13	Rm. 178	12” x 12” ceiling tile.	None detected [3]
178A	Rm. 178A	12” x 12” ceiling tile.	None detected [3]
178B	Rm. 178B	12” x 12” ceiling tile.	None detected [3]
334-14	Rm. 334	12” x 12” wall tile - green.	None detected [3]
334A	Rm. 334A	12” x 12” wall tile - green.	None detected [3]
334B	Rm. 334B	12” x 12” wall tile - green.	None detected [3]
169-14	Rm. 169	Drywall compound ceiling Layer #1.	**1.00% chrysotile [3]**
169-14	Rm. 169	Drywall paper Layer #2.	None detected [3]
123-15	Rm. 123	Drywall compound.	None detected [3]
123-A	Rm. 123	Drywall compound.	None detected [3]
106-15	Rm. 106	Drywall compound.	None detected [3]
127-16	Rm. 127	Drywall compound.	None detected [3]
127-A	Rm. 127	Drywall compound.	None detected [3]
127-B	Rm. 127	Drywall compound.	None detected [3]
127-C	Rm. 127	Drywall compound.	None detected [3]
132-17	Rm. 132	Drywall compound.	**1% chrysotile [3]**

Sample No.	Sample Location	Sample Description	Asbestos Content
132-17	Rm. 132	Drywall paper.	None detected (3)
239-18	Rm. 239	Drywall compound.	None detected (3)
239-A	Rm. 239	Drywall compound.	None detected (3)
239-B	Rm. 239	Drywall compound.	None detected (3)
127A-19	Rm. 127A	Anti-sweat.	None detected (3)
128A-19	Rm. 128A	Anti-sweat.	None detected (3)
128A-20	Rm. 128A	Parging on anti-sweat.	**25% chrysotile (3)**
168-21	Rm. 168	Anti-sweat.	None detected (3)
167-21	Rm. 167	Anti-sweat.	None detected (3)
123-22	Rm. 123	12” floor tiles - beige.	None detected (3)
127-22	Rm. 127	12” floor tiles - beige.	None detected (3)
226-22	Rm. 226	12” floor tiles - beige.	None detected (3)
127-A	Rm. 127	12” floor tiles - beige orange streaks.	None detected (3)
125-23	Rm. 125	12” floor tiles - beige orange streaks.	None detected (3)
324-23	Rm. 324	12” floor tiles - beige orange streaks.	None detected (3)
223-24	Rm. 223	12” floor tiles - beige brown streaks.	None detected (3)
224-24	Rm. 224	12” floor tiles - beige brown streaks.	None detected (3)
204-24	Rm. 204	12” floor tiles - beige brown streaks.	**8.3% chrysotile (3)**
166A-25	Rm. 166A	12” floor tiles - beige.	**10.3% chrysotile (3)**
228-26	Rm. 228	12” floor tiles - beige with pink.	None detected (3)
126-26	Rm. 126	12” floor tiles - beige with pink.	None detected (3)
221-26	Rm. 221	12” floor tiles - beige with pink.	None detected (3)
173-27	Rm. 173	12” floor tiles - beige green yellow.	None detected (3)
173-A	Rm. 173	12” floor tiles - beige green yellow.	None detected (3)
173-B	Rm. 173	12” floor tiles - beige green yellow.	None detected (3)
306A-28	Rm. 306A	12” floor tiles - orange white streaks.	**3.8% chrysotile (3)**
328A-29	Rm. 328A	12” floor tiles - orange white streaks.	**9.9% chrysotile (3)**
217-30A	Rm. 217	12” floor tile - black/gray streaks.	None detected (3)
217-30B	Rm. 217	12” floor tile - black/gray streaks.	None detected (3)
217-A	Rm. 217	12” floor tile - black/gray streaks.	None detected (3)
323-31	Rm. 323	12” floor tile - gray/gray streaks.	**3.1% chrysotile (3)**
202-32	Rm. 202	Vinyl sheet floor - green/dark light splatter.	None detected (3)
302-32	Rm. 302	Vinyl sheet floor - green/dark light splatter.	None detected (3)
225-32	Rm. 225	Vinyl sheet floor - green/dark light splatter.	None detected (3)
225A-33	Rm. 225A	Vinyl sheet floor - rust colour.	None detected (3)
225A	Rm. 225A	Vinyl sheet floor - rust colour.	None detected (3)
225B	Rm. 225A	Vinyl sheet floor - rust colour.	<0.05% chrysotile (1,3)
227-34	Rm. 227	Vinyl sheet floor - magenta/white.	None detected (3)
227A	Rm. 227	Vinyl sheet floor - magenta/white.	None detected (3)

Sample No.	Sample Location	Sample Description	Asbestos Content
227B	Rm. 227	Vinyl sheet floor - magenta/white.	None detected [3]
323B-35	Rm. 323B	Vinyl sheet floor - orange/white specks.	**2% chrysotile [3]**
322-36	Rm. 622	Vinyl sheet floor -dark brown.	None detected [3]
322-A	Rm. 322	Vinyl sheet floor -dark brown.	None detected [3]
322-B	Rm. 322	Vinyl sheet floor -dark brown.	None detected [3]
228-37	Rm. 228	Vinyl sheet floor -heather colour.	None detected [3]
228-A	Rm. 228	Vinyl sheet floor -heather colour.	None detected [3]
228-B	Rm. 228	Vinyl sheet floor -heather colour.	None detected [3]
210-38	Rm. 210	Thick gray plaster.	None detected [3]
103-38	Rm. 103	Thick gray plaster.	None detected [3]
167-38	Rm. 167	Thick gray plaster.	None detected [3]
158-39	Rm. 158	Light gray plaster.	None detected [3]
158A	Rm. 158	Light gray plaster.	None detected [3]
158B	Rm. 158	Light gray plaster.	None detected [3]
403-40	Rm. 403	Gray wall plaster.	None detected [3]
127-40	Rm. 127	Gray wall plaster.	None detected [3]
127A	Rm. 127	Gray wall plaster.	None detected [3]
410-41	Rm. 410	Gray wall plaster.	None detected [3]
102A-41	Rm. 102A	Gray wall plaster.	None detected [3]
224-41	Rm. 224	Gray wall plaster.	None detected [3]
119-42	Rm. 119	Thin parging - blue black paint.	None detected [3]
239-42	Rm. 239	Thin parging - blue black paint.	None detected [3]
239B-A	Rm. 239B	Thin parging - blue black paint.	None detected [3]
307-43	Rm. 307	Brown plaster / light parging.	None detected [3]
307-A	Rm. 307	Brown plaster / light parging.	None detected [3]
307-B	Rm. 307	Brown plaster.	None detected [3]
1965-A	Rm. 400	Exterior plaster (texture coat).	None detected [3]
1965-B	Rm. 400	Exterior plaster (texture coat).	None detected [3]
1965-C	Rm. 400	Exterior plaster (texture coat).	None detected [3]
16744	Rm. 167	Fire stop.	None detected [3]
167-A	Rm. 167	Fire stop.	None detected [3]
167-B	Rm. 167	Fire stop.	None detected [3]
331-47	Rm. 131	Cement table top.	**4.8% chrysotile [3]**
224-48	Rm. 224	12” wall tiles.	None detected [3]
224-A	Rm. 224	12” wall tiles.	None detected [3]
224-B	Rm. 224	12” wall tiles.	None detected [3]
1	Rm. 402	2’ x 4’ ceiling tile, fissure 4’ - red back.	**1.8% amosite [3]**
2	Rm. 403	2’ x 4’ ceiling tile, chicken ft - natural back arrows.	None detected [3]
3	Rm. 403A	2’ x 4’ ceiling tile fissure 4’ - white back.	**6.8% chrysotile [3]**

Sample No.	Sample Location	Sample Description	Asbestos Content
4	Rm. 416	12” x 12” ceiling tile, large small hole, pock face.	**1.3% amosite** [3]
5	Rm. 239	2’ x 4’ ceiling tile control for sample #2.	None detected [3]
6	Rm. 218	2’ x 4’ ceiling tile “chicken feet” cross hatch.	None detected [3]
7	Rm. 207B	2’ x 4’ ceiling tile control for sample #1.	**1.5% amosite** [3]
8	Rm. 207B	2’ x 4’ ceiling tile control for sample #1.	**1.3% amosite** [3]
9	Lower Foyer 201A	12” x 12” ceiling tile - uniform hole.	None detected [3]
10	Foyer 201A	12” x 12” ceiling tile - large small hole.	None detected [3]
11	Rm. 214	2’ x 4’ ceiling tile - “chicken feet” - control sample #6.	None detected [3]
12	Rm. 212	2’ x 4’ ceiling tile - control sample #2.	None detected [3]
13	Rm. 224A	2’ x 4’ ceiling tile - random fissure - natural back.	None detected [3]
14	Rm. 224	2’ x 4’ ceiling tile - control sample #1.	**2.3% amosite** [3]
15	Rm. 216	2’ x 4’ ceiling tile - “chicken feet” - wavy back.	None detected [3]
16	Rm. 306A	2’ x 4’ ceiling tile - control sample #2.	None detected [3]
17	Rm. 321C	12” x 12” ceiling tile cellulose.	None detected [3]
18	Rm. 323B	12” x 12” ceiling tile -large small hole gray.	**2% amosite** [3]
19	Rm. 323B	12” x 12” ceiling tile - pin hole cellulose.	None detected [3]
20	Rm. 329A	2’ x 4’ ceiling tile - control sample #2.	**1.5% amosite** [3]
236A	Rm. 236	Plaster moulding.	None detected [3]
236B	Rm. 236	Plaster moulding.	None detected [3]
236C	Rm. 236	Plaster moulding.	None detected [3]
239A	Rm. 239	Texture coat ceiling.	None detected [3]
239B	Rm. 239	Texture coat ceiling.	None detected [3]
239C	Rm. 239	Texture coat ceiling.	None detected [3]
321A	Rm. 321	Rough plaster ceiling.	None detected [3]
321B	Rm. 321	Rough plaster ceiling.	None detected [3]
321C	Rm. 321	Rough plaster ceiling.	None detected [3]
308A	Rm. 3089	2’ x 4’ ceiling tile - fissure on 2’ white back.	None detected [3]
308B	Rm. 308	2’ x 4’ ceiling tile - fissure on 2’ white back.	None detected [3]
308C	Rm. 308	2’ x 4’ ceiling tile - fissure on 2’ white back.	None detected [3]
327	Rm. 327	2’ x 4’ ceiling tile - “chicken feet”	None detected [3]
328	Rm. 328	2’ x 4’ ceiling tile - “chicken feet”	None detected [3]
323	Rm. 323	2’ x 4’ ceiling tile - “chicken feet”	None detected [3]
140C-1	Rm. 140C	Drywall joint compound.	None detected [3]
140C-2	Rm. 140C	Drywall joint compound.	None detected [3]
140C-3	Rm. 140C	Drywall joint compound.	None detected [3]
239B-1	Rm. 239B	Drywall joint compound.	None detected [3]
239B-2	Rm. 239B	Drywall joint compound.	None detected [3]
239A-3	Rm. 239A	Drywall joint compound.	None detected [3]

Sample No.	Sample Location	Sample Description	Asbestos Content
403A	Rm. 403	Texture coat plaster.	None detected [3]
403B	Rm. 403	Texture coat plaster.	None detected [3]
403C	Rm. 403	Texture coat plaster.	None detected [3]
124A	Rm. 124	Thermal insulation Holding Tank.	**0.75% chrysotile [3]**
1	Area 154	Asbestos cement board	**8.3% chrysotile [3]** **25% crocidolite [3]**
2	Area 164	Boiler Breeching insulation	**80% chrysotile [3]**
3	Area 152	Hot water heating pipe fitting insulation	**50% chrysotile [3]**
4	Area 402	Hot water heating pipe fitting insulation	**40% chrysotile [3]**
5	Area 164	Boiler insulation	**2.5% chrysotile [3]**
6	Area 403	Texture coat	None detected [3]
7	Area 403	Hot water heating pipe straight insulation	**36% chrysotile [3]**
8	Area 403	Pipe straight insulation (anti-sweat)	None detected [3]
9	Area 402	2’ x 4’ ceiling tile	**1.8% amosite [3,4]**
10	Area 157D	2’ x 4’ ceiling tile	None detected [3]
11	Area 158	2’ x 4’ ceiling tile	**2% chrysotile [3]**
12	Area 302	Plaster coat	None detected [3]
13	Area 302B	12” x 12” ceiling tile	None detected [3]
14	Area 225A	Pipe straight insulation	None detected [3]
15	Area 301	Hot water heating pipe fitting insulation	**67% chrysotile [3]**
16	Area 301	Pipe straight insulation	None detected [3]
17	Area 311	12” x 12” ceiling tile	None detected [3]
18	Area 307	12” x 12” ceiling tile	None detected [3]
19	Area 321A	12” x 12” ceiling tile	**2.4% amosite [3]**
20	Area 302B	Plaster coat	None detected [3]
BCHS#1	Area 124	2’ x 4’ ceiling tile	None detected [3]
BCHS#2	Area 124	12” x 12” ceiling tile	**2.4% amosite [3]**
BCHS#4	Area 123	2’ x 4’ ceiling tile	None detected [3]
BCHS#5	Area 127A	Hot water pipe straight insulation	**57% chrysotile [3]**
BCHS#6	Area 127A	Hot water pipe straight insulation (A/S)	None detected [3]
BCHS#7	Area 127A	Hot water pipe fitting insulation	**36% chrysotile [3]**
BCHS#8	Area 127A	Pipe straight insulation (A/S)	**21% chrysotile [3]**
BCHS#9	Area 129	2’ x 4’ ceiling tile	**3.6% amosite [3]**
BCHS#10	Area 129	Pipe fitting insulation	**36% chrysotile [3]**
BCHS#11	Area 129	Pipe fitting insulation	**16% chrysotile [3]**
BCHS#12	Area 403	Texture coat	None detected [3]
BCHS#13	Area 102A	Cold water meter insulation	None detected [3]
BCHS#14	Area 102A	Domestic water pipe fitting insulation	None detected [3]
BCHS#15	Area 234	2’ x 4’ ceiling tile	**2.1% amosite [3]**

NOTES:

(1) Asbestos-containing material" is defined as material that contains 0.5% or more asbestos by dry weight.

(2) Sample results obtained from a report prepared by Arcadis for the HDSB entitled *Pre-Renovation Designated Substances and Hazardous Materials Survey, Burlington Central High School, 1433 Baldwin Street, Burlington, Ontario* dated March 22, 2021.

(3) Sample results obtained from a report prepared by Arcadis for the HDSB entitled *Updated Survey of Asbestos-Containing Materials, Burlington Central High School, Burlington, Ontario* dated September 10, 2014.

(4) Asbestos-containing materials collected in this area have since been removed. Results provided here are for references purposes only.

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.

Amosite = Amosite asbestos.

Crocidolite = Crocidolite 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:

- thermal insulation applied to pipe fittings and pipe straights (anti-sweat) above and below ceilings in various locations throughout the building;
- thermal insulation applied to pipe fittings in Room 328A;
- vinyl floor tiles (12" x 12") and underlying mastic in Room 328A;
- vinyl floor tiles (9" x 9") and (12" x 12") in various locations throughout the building;
- underlying mastic applied to vinyl floor tiles (12" x 12") in various locations throughout the building;
- joint compound applied to ceilings and walls in various locations throughout the building;
- joint compound applied to ceiling and wall in Room 328A;
- block-filler paint on concrete block walls in the 1965 era of construction;
- ceiling tiles (12" x 12") and (2' x 4') in various locations throughout the building;
- cement countertops in Rooms 125, 127, 129, 229, 231 and 231A; and
- cement pipe (assumed asbestos) above the ceiling in Room 127A.

Asbestos-containing thermal insulation applied to pipe fittings is a white/grey-coloured cementitious material. Asbestos-containing thermal insulation applied to pipe straights is "Anti-sweat" insulation. "Anti-sweat" insulation is a layered paper-like material, typically brown in colour that may contain intermittent

layers of black tar-like paper and/or intermittent layers of a white paper-like material, usually found on domestic cold water lines and sanitary and rain water piping.

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

Thermal insulation is a friable material. The removal, alteration and/or disturbance of less than 1 m^2 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 m^2 of friable asbestos-containing materials is classified as a Type 3 operation.

Vinyl floor tiles, mastics, paint, cement countertops and cement piping are non-friable materials. The removal, alteration and/or disturbance of these 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.

The removal, alteration and/or disturbance e of less than 7.5 m^2 of asbestos-containing tiles is a Type 1 operation (if the tiles are removed without being broken, cut, etc.). The removal, alteration and/or disturbance of 7.5 m^2 or more asbestos-containing ceiling tiles is a Type 2 operation (if the tiles are removed without being broken, cut, etc.).

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, roofing materials, asphaltic pavement, etc., and/or in locations that are presently inaccessible (e.g., in pipe chases and behind walls). 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

During the course of our site investigation, samples of the predominant colours of paint observed in Room 328A were collected and submitted to Bureau Veritas Inc, a laboratory in Mississauga, Ontario, for analyses of lead. Results of bulk sample analyses for lead content are provided in Table 3.2. The laboratory report is provided in Appendix B.

Additional paint samples may be required to confirm lead content. Representative samples of paint were collected at the time of the survey based on, in part, the visual appearances of the paints (i.e., colours). Paints of similar colours may have been applied at different times and have varying amounts of lead.

Table 3.2. Summary of Results of Analyses of Bulk Samples for Lead

Sample No.	Sample Location	Sample Description	Lead Content (mg/kg)
P-1	Room 328A	white ceiling paint	**210**
P-2	Room 328A	yellow wall paint	70

NOTE:

mg/kg = milligrams lead per kilogram paint.

1 mg/kg = 1 part per million (ppm).

Based on the results of the laboratory analyses, lead was found to be present at a level above the 90 mg/kg criterion value (Surface Coating Materials Regulations) in the sample of white ceiling paint collected in Room 328A. Lead was found to be present at a level below the 90 mg/kg criterion value (Surface Coating Materials Regulations) in the sample of yellow wall paint collected in Room 328A.

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 terrazzo, cementitious pipe fitting insulation, plaster, gypsum board, joint compound, concrete, cement block walls, concrete mortar and brick.

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 (T8 and T12 types) were observed in the designated study areas during the course of our site investigation. Light ballasts, such as those associated with some of 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.

Light ballasts, such as those associated with the other type of fluorescent lights (T12s) identified on site, are typically a magnetic type which may contain PCBs. This would also be confirmed by an electrician at the time of dismantling of the lights.

Inspection of product codes and date codes on the ballasts can be used to determine the likely presence or absence of PCBs.

3.9 Ozone-Depleting Substances (ODS) and Other Halocarbons

Equipment potentially containing ozone-depleting substances observed during the course of the site investigation was limited to refrigerators. Refrigerators are not anticipated to be affected by the proposed project.

3.10 Mould

Readily evident mould was not observed during the course of the site investigation. The inspection of mould was limited to visual observations of readily-accessible surfaces and did not include intrusive inspections of wall cavities. 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 USE AND LIMITATIONS OF THIS PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY REPORT

This report, prepared for the Halton District School Board, does not provide certification or warranty, expressed or implied, that the investigation conducted by Arcadis Canada Inc. identified all designated substances (as defined in the Ontario *Occupational Health and Safety Act*) in the designated study areas at the subject facility. The work undertaken by Arcadis Canada Inc. was directed to provide information on the presence of designated substances in building construction materials based on review of existing information, visual investigation of readily accessible areas in the designated study areas of the building and on the results of laboratory analysis of a limited number of bulk samples of material for asbestos content and laboratory analysis of a limited number of paint samples for lead content. The survey did not include for identification of asbestos in process materials, equipment (including electrical equipment and wiring), furniture (e.g., chairs, table tops, etc.), nor material outside of the building (e.g., asphaltic pavement).

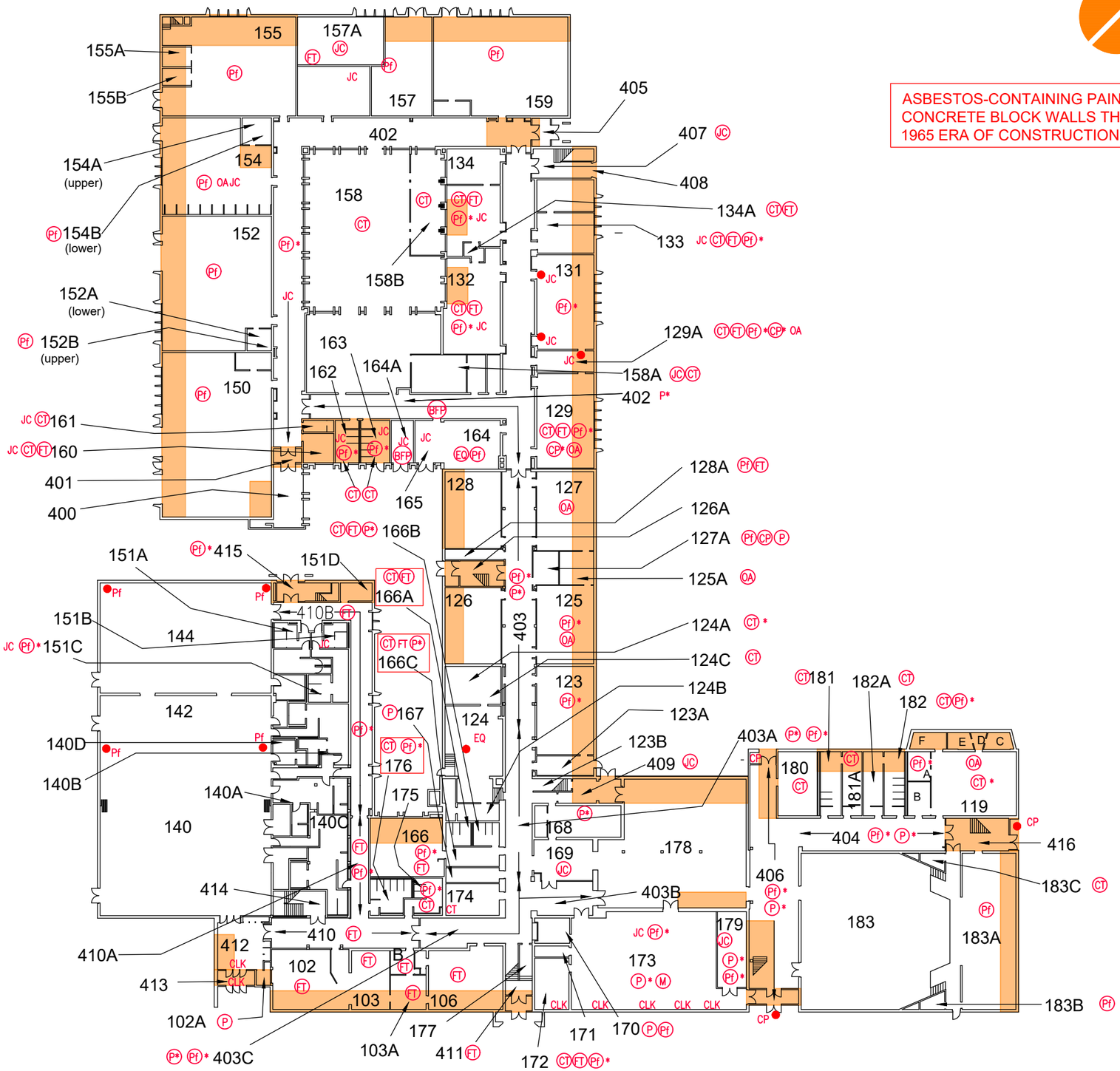
The material in this report reflects Arcadis Canada Inc.'s best judgment in light of the information available at the time of the investigation, which was performed on April 7, 8 and 9, 2021.

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

This report was prepared by Arcadis Canada Inc. for the Halton District School Board. Any use which any other party makes of the report, or reliance on, or decisions to be based on it, is the responsibility of such parties.

APPENDIX A

Floor Plans



ASBESTOS-CONTAINING PAINT IS PRESENT ON CONCRETE BLOCK WALLS THROUGHOUT THE 1965 ERA OF CONSTRUCTION.

LEGEND

1	FUNCTIONAL SPACE
◯	THROUGHOUT FUNCTIONAL SPACE
*	ABOVE CEILING ASSEMBLY
P	ASBESTOS ON PIPING (FRIABLE)
CP	ASBESTOS CEMENT PRODUCT (NON-FRIABLE)
JC	ASBESTOS DRY WALL JOINT COMPOUND (NON-FRIABLE)
Pf	ASBESTOS ON PIPE FITTINGS ONLY (FRIABLE)
EQ	ASBESTOS ON MECHANICAL EQUIPMENT (FRIABLE)
CT	ASBESTOS CEILING TILE
FT	ASBESTOS FLOOR TILE (NON-FRIABLE)
OA	OTHER ASBESTOS MATERIALS (NON-FRIABLE)
M	ASBESTOS FLOOR TILE MASTIC
CLK	ASBESTOS CAULKING
BFP	ASBESTOS BLOCK-FILLER PAINT
	STUDY AREA

NOTE:

INTERIORS OF ALL FIRE DOORS ARE ASSUMED TO CONTAIN ASBESTOS.

ARCADIS

HALTON DISTRICT SCHOOL BOARD

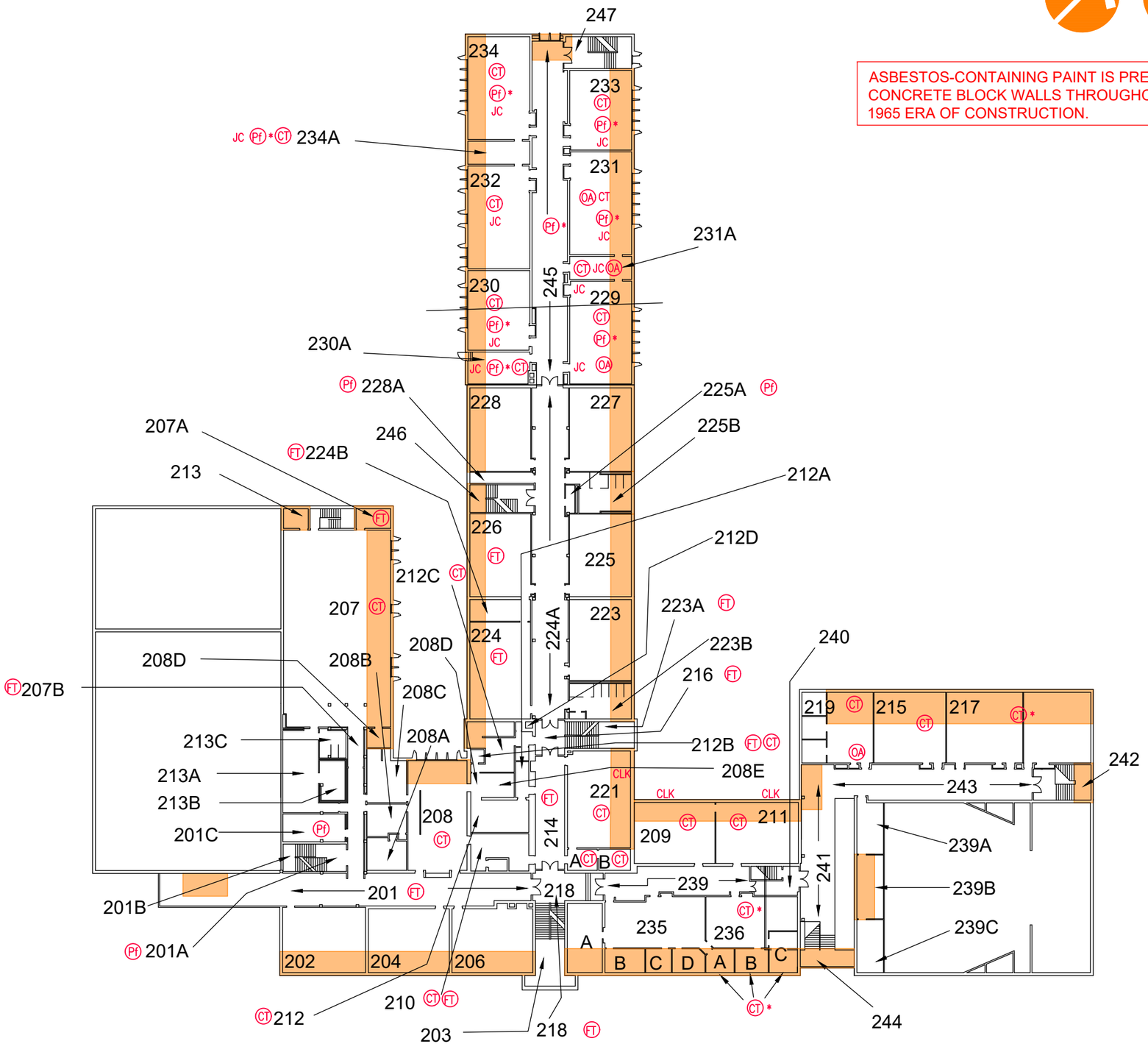
PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

LOCATIONS OF STUDY AREAS AND ASBESTOS-CONTAINING MATERIALS

BURLINGTON CENTRAL HIGH SCHOOL
433 BALDWIN STREET, BURLINGTON, ONTARIO

FIRST FLOOR

Drawn By: G.E.C.	Approved By: A.N	Project No: 30084757	
Date: APR. 2021	Scale: N.T.S	Drawing No: 30084757-1	



ASBESTOS-CONTAINING PAINT IS PRESENT ON CONCRETE BLOCK WALLS THROUGHOUT THE 1965 ERA OF CONSTRUCTION.

LEGEND

1	FUNCTIONAL SPACE
◯	THROUGHOUT FUNCTIONAL SPACE
*	ABOVE CEILING ASSEMBLY
P	ASBESTOS ON PIPING (FRIABLE)
CP	ASBESTOS CEMENT PRODUCT (NON-FRIABLE)
JC	ASBESTOS DRY WALL JOINT COMPOUND (NON-FRIABLE)
Pf	ASBESTOS ON PIPE FITTINGS ONLY (FRIABLE)
EQ	ASBESTOS ON MECHANICAL EQUIPMENT (FRIABLE)
CT	ASBESTOS CEILING TILE (NON-FRIABLE)
FT	ASBESTOS FLOOR TILE (NON-FRIABLE)
OA	OTHER ASBESTOS MATERIALS (NON-FRIABLE)
CLK	ASBESTOS CAULKING
	STUDY AREA

NOTE:

INTERIORS OF ALL FIRE DOORS ARE ASSUMED TO CONTAIN ASBESTOS.

ARCADIS

HALTON DISTRICT SCHOOL BOARD

PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

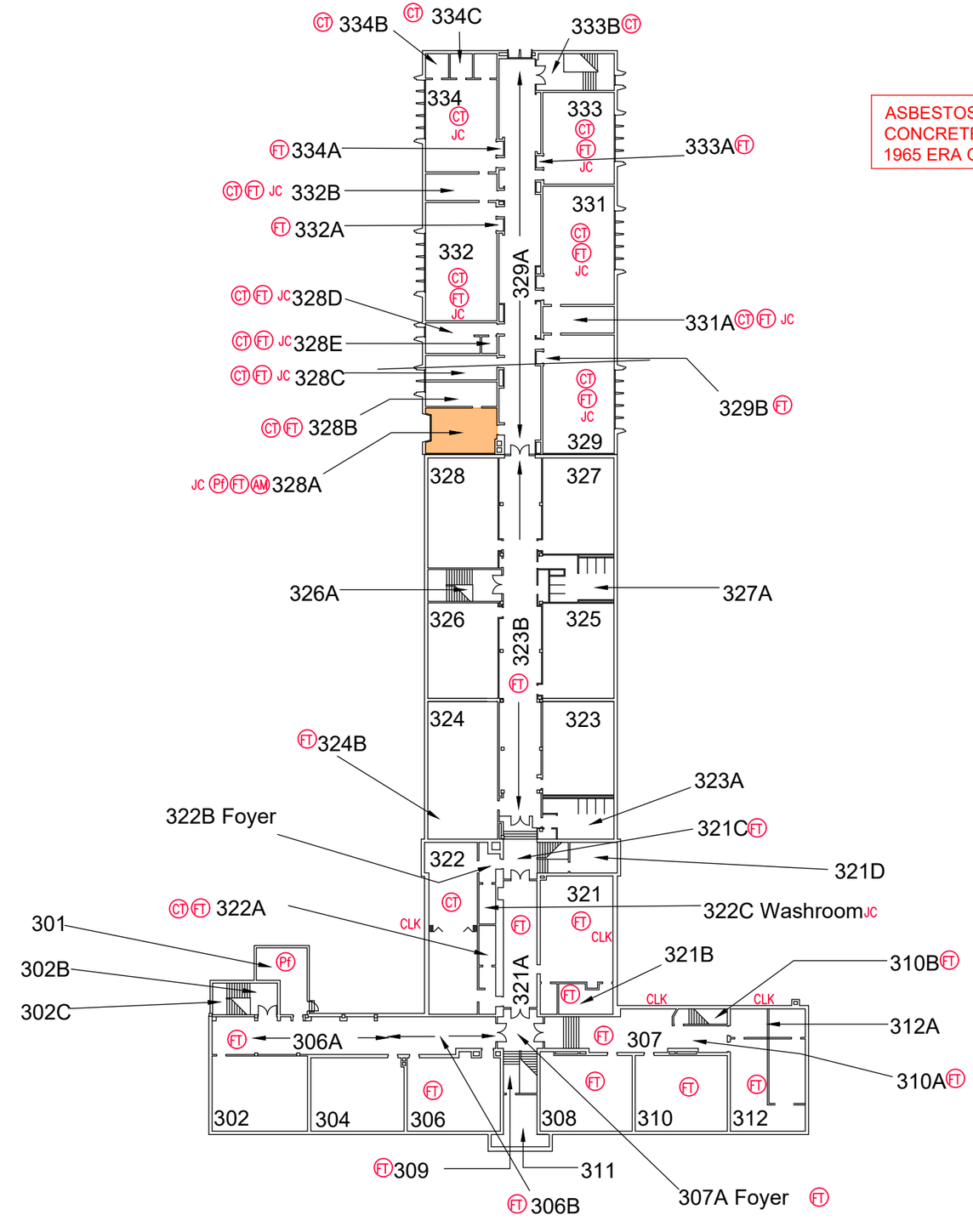
LOCATIONS OF STUDY AREAS AND ASBESTOS-CONTAINING MATERIALS

BURLINGTON CENTRAL HIGH SCHOOL
433 BALDWIN STREET, BURLINGTON, ONTARIO

SECOND FLOOR

Drawn By: G.E.C.	Approved By: A.N	Project No: 30084757	
Date: APR. 2021	Scale: N.T.S	Drawing No: 30084757-2	

C:\Users\ms0285\BIM 360\Arcadis\ANA-Halton District School Board\Project Files\Burlington Central DSHM\2021\01-DWG\30084757 Burlington Central Pre Renovation.dwg LAYOUT: SECOND FLOOR SAVED: 4/26/2021 11:15 AM PLOTTED: 4/26/2021 11:40 AM BY: M. SARAVANAPRIYA



ASBESTOS-CONTAINING PAINT IS PRESENT ON CONCRETE BLOCK WALLS THROUGHOUT THE 1965 ERA OF CONSTRUCTION.

LEGEND

1	FUNCTIONAL SPACE
◯	THROUGHOUT FUNCTIONAL SPACE
*	ABOVE CEILING ASSEMBLY
P	ASBESTOS ON PIPING (FRIABLE)
CP	ASBESTOS CEMENT PRODUCT (NON-FRIABLE)
JC	ASBESTOS DRY WALL JOINT COMPOUND (NON-FRIABLE)
Pf	ASBESTOS ON PIPE FITTINGS ONLY (FRIABLE)
EQ	ASBESTOS ON MECHANICAL EQUIPMENT (FRIABLE)
CT	ASBESTOS CEILING TILE (NON-FRIABLE)
FT	ASBESTOS FLOOR TILE (NON-FRIABLE)
OA	OTHER ASBESTOS MATERIALS (NON-FRIABLE)
CLK	ASBESTOS CAULKING
AM	ASBESTOS FLOOR TILE MASTIC (NO-FRIABLE)
	STUDY AREA

NOTE:

INTERIORS OF ALL FIRE DOORS ARE ASSUMED TO CONTAIN ASBESTOS.

ARCADIS

HALTON DISTRICT SCHOOL BOARD

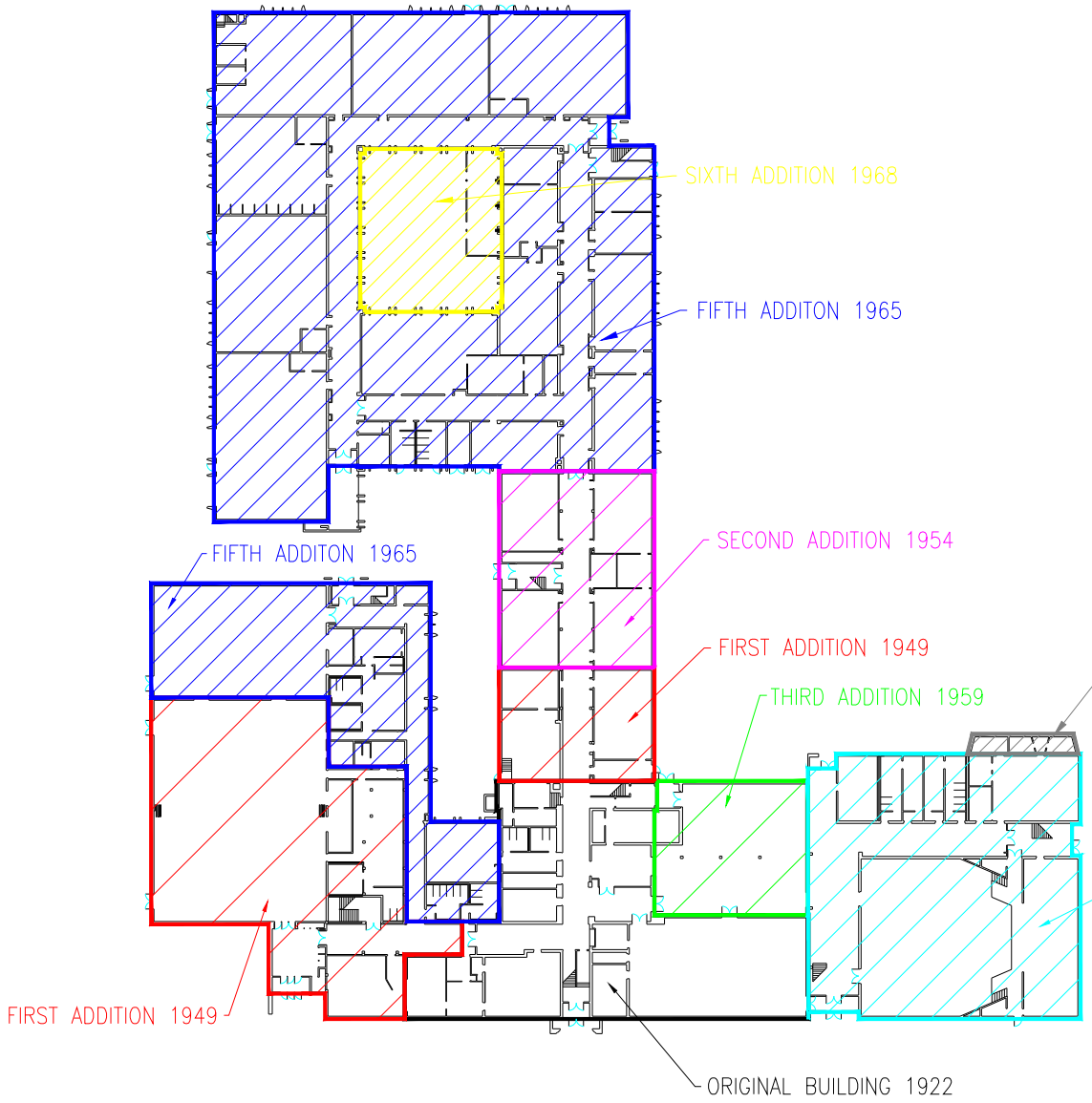
PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

LOCATIONS OF STUDY AREAS AND ASBESTOS-CONTAINING MATERIALS

BURLINGTON CENTRAL HIGH SCHOOL
433 BALDWIN STREET, BURLINGTON, ONTARIO

THIRD FLOOR

Drawn By: G.E.C.	Approved By: A.N	Project No: 30084757
Date: APR. 2021	Scale: N.T.S	Drawing No: 30084757-1



Scale

5 0 1 2 3 4 5 10 15 20
METRES

5 0 3 10 20 30 40 50
FEET

NOTES

REVISIONS

No	DATE

TRUE NORTH | PROJECT NORTH

SCHOOL

Burlington Central High School

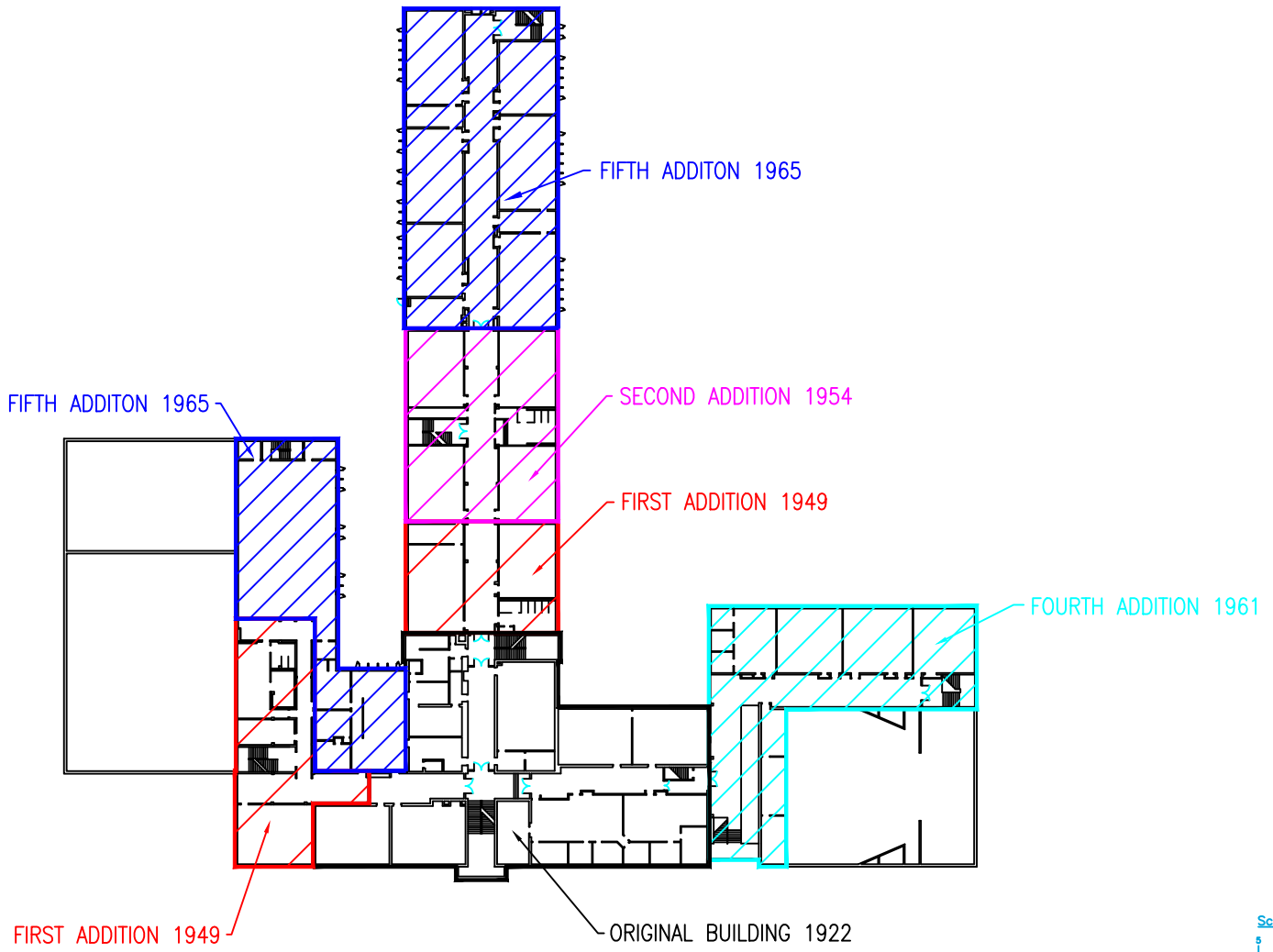
LOCATION:
1433 BALDWIN STREET
BURLINGTON, ONTARIO

LAST UPDATED	24 FEBRUARY 2014
PREVIOUS UPDATE	21 FEB 2014
GRADES	9-12
SCALE	(TO FIT) 1"=80'-0"
DRAWN	RDZ
PROJECT LAST UPDATED	17 OCT 2011
YEAR BUILT	1960
AREA SQ. FT.	157392 (14622m²)
CAD FILE NAME	BCHS

SHEET TITLE
FIRST FLOOR PLAN

PROJECT NAME
AREA

DIVISION B | NUMBER 2



Scale

5 0 1 2 3 4 5 10 15 20

METRES

5 0 3 10 20 30 40 50

FEET

Burlington Central High School

1433 BALDWIN STREET
BURLINGTON, ONTARIO

23 OCTOBER 2019

19 SEP 2018

9–12

1"=80'-0"

RDZ

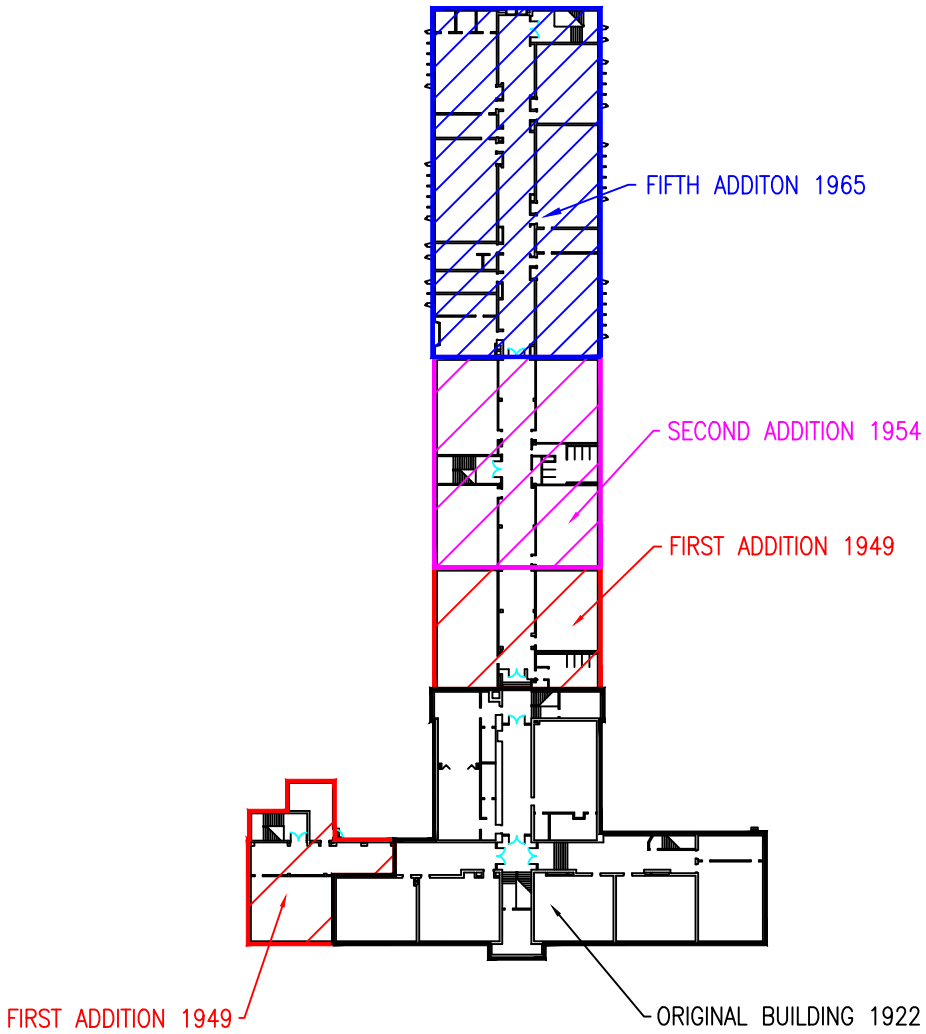
17 OCT 2011

1960

157392 (14622m²)

Burlington Central

AREA



Scale

5 0 1 2 3 4 5 10 15 20

METRES

5 0 3 10 20 30 40 50

FEET

Burlington Central High School

1433 BALDWIN STREET
BURLINGTON, ONTARIO

23 OCTOBER 2019

19 SEP 2018

9–12

1"=80'-0"

RDZ

17 OCT 2011

1960

157392 (14622m²)

Burlington Central

AREA

APPENDIX B

Laboratory Reports

EMSL Canada Inc.

2756 Slough Street Mississauga, ON L4T 1G3
Phone/Fax: (289) 997-4602 / (289) 997-4607
http://www.EMSL.com / torontolab@emsl.com

EMSL Canada Order 552106052
Customer ID: 55DCSL97
Customer PO: 30084757
Project ID:

Attn: Paul Smith
ARCADIS Canada Inc.
121 Granton Drive
Unit 12
Richmond Hill, ON L4B 3N4

Proj: Burlington Central High School

Phone: (905) 882-5984
Fax: (905) 882-8962
Collected:
Received: 4/15/2021
Analyzed: 4/20/2021

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 1-A-Cove Base ***Lab Sample ID:*** **552106052-0001**
Sample Description: vinyl baseboard and mastic/Room 328A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	4/20/2021	Black	0.0%	100%	None Detected	
TEM Grav. Reduction	4/20/2021	Black	0.0%	100.0%	None Detected	

Client Sample ID: 1-A-Mastic ***Lab Sample ID:*** **552106052-0001A**
Sample Description: vinyl baseboard and mastic/Room 328A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 1-B-Cove Base ***Lab Sample ID:*** **552106052-0002**
Sample Description: vinyl baseboard and mastic/Room 328A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Black	0.0%	100.0%	None Detected	

Client Sample ID: 1-B-Mastic ***Lab Sample ID:*** **552106052-0002A**
Sample Description: vinyl baseboard and mastic/Room 328A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 1-C-Cove Base ***Lab Sample ID:*** **552106052-0003**
Sample Description: vinyl baseboard and mastic/Room 328A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Black	0.0%	100.0%	None Detected	

Client Sample ID: 1-C-Mastic ***Lab Sample ID:*** **552106052-0003A**
Sample Description: vinyl baseboard and mastic/Room 328A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 2-A ***Lab Sample ID:*** **552106052-0004**
Sample Description: (12" x 12") vinyl floor tile mastic/Room 328A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021				Not Submitted	

EMSL Canada Inc.

2756 Slough Street Mississauga, ON L4T 1G3
Phone/Fax: (289) 997-4602 / (289) 997-4607
http://www.EMSL.com / torontolab@emsl.com

EMSL Canada Order 552106052
Customer ID: 55DCSL97
Customer PO: 30084757
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 2-B **Lab Sample ID:** **552106052-0005**
Sample Description: (12" x 12") vinyl floor tile mastic/Room 328A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Black	0.0%	99.0%	**1% Chrysotile**	

Client Sample ID: 2-C **Lab Sample ID:** **552106052-0006**
Sample Description: (12" x 12") vinyl floor tile mastic/Room 328A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021				Positive Stop (Not Analyzed)	Sample bag is empty

Client Sample ID: 3-A **Lab Sample ID:** **552106052-0007**
Sample Description: (9" x 9") grey vinyl floor tile/Room 215

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	4/20/2021	Beige	0.0%	100%	None Detected	
TEM Grav. Reduction	4/20/2021	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 3-B **Lab Sample ID:** **552106052-0008**
Sample Description: (9" x 9") grey vinyl floor tile/Room 215

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 3-C **Lab Sample ID:** **552106052-0009**
Sample Description: (9" x 9") grey vinyl floor tile/Room 215

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 4-A **Lab Sample ID:** **552106052-0010**
Sample Description: shiny yellow wall paint/Room 201 (1949)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray/White/Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 4-B **Lab Sample ID:** **552106052-0011**
Sample Description: shiny yellow wall paint/Room 412 (1949)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray/White	0.0%	100.0%	None Detected	

Client Sample ID: 4-C **Lab Sample ID:** **552106052-0012**
Sample Description: shiny yellow wall paint/Room 412 (1949)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	White	0.0%	100.0%	None Detected	

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 552106052
Customer ID: 55DCSL97
Customer PO: 30084757
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 5-A **Lab Sample ID:** **552106052-0013**
Sample Description: shiny yellow wall paint/Room 127 (1954)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 5-B **Lab Sample ID:** **552106052-0014**
Sample Description: shiny yellow wall paint/Room 127 (1954)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 5-C **Lab Sample ID:** **552106052-0015**
Sample Description: shiny yellow wall paint/Room 228 (1954)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Green	0.0%	100.0%	None Detected	

Client Sample ID: 6-A **Lab Sample ID:** **552106052-0016**
Sample Description: shiny yellow wall paint/Stairwell 409 (1959)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	White/Beige	0.0%	100.0%	None Detected	

Client Sample ID: 6-B **Lab Sample ID:** **552106052-0017**
Sample Description: shiny yellow wall paint/Stairwell 409 (1959)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	White/Beige	0.0%	100.0%	None Detected	

Client Sample ID: 6-C **Lab Sample ID:** **552106052-0018**
Sample Description: shiny yellow wall paint/Stairwell 409 (1959)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 7-A **Lab Sample ID:** **552106052-0019**
Sample Description: masonry mortar/Room 124 (1949)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 7-B **Lab Sample ID:** **552106052-0020**
Sample Description: masonry mortar/Room 124C (1949)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray	0.0%	100.0%	None Detected	

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EMSL Canada Order 552106052
Customer ID: 55DCSL97
Customer PO: 30084757
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 7-C ***Lab Sample ID:*** **552106052-0021**

Sample Description: masonry mortar/Room 124C (1949)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 8-A ***Lab Sample ID:*** **552106052-0022**

Sample Description: masonry mortar/Room 128A (1954)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 8-B ***Lab Sample ID:*** **552106052-0023**

Sample Description: masonry mortar/Room 228A (1954)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 8-C ***Lab Sample ID:*** **552106052-0024**

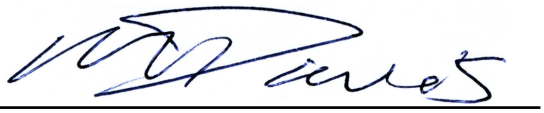
Sample Description: masonry mortar/Room 228A (1954)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	4/20/2021	Gray	0.0%	100.0%	None Detected	

Analyst(s):

Caroline Allen	TEM Grav. Reduction (2)
Natalie D'Amico	PLM (5)
Tiffany Pilon	PLM (18) PLM Grav. Reduction (2)

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. This report 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency or the U.S. Government

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

Report amended: 04/20/202112:37:16 Replaces initial report from: 04/20/202112:33:42 Reason Code: Data Entry-Change to Location

Your Project #: 30084757
Site Location: BURLINGTON CENTRAL HIGH SCHOOL
Your C.O.C. #: na

Attention: Paul Smith

ARCADIS Canada Inc
121 Granton Dr
Unit 12
Richmond Hill, ON
CANADA L4B 3N4

Report Date: 2021/04/19
Report #: R6600437
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C199215
Received: 2021/04/15, 09:57

Sample Matrix: Paint
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Metals in Paint	2	2021/04/15	2021/04/16	CAM SOP-00408	EPA 6010D m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA. Where applicable, the analytical testing herein was performed in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Bureau Veritas is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: 30084757
Site Location: BURLINGTON CENTRAL HIGH SCHOOL
Your C.O.C. #: na

Attention: Paul Smith

ARCADIS Canada Inc
121 Granton Dr
Unit 12
Richmond Hill, ON
CANADA L4B 3N4

Report Date: 2021/04/19
Report #: R6600437
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C199215
Received: 2021/04/15, 09:57

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marijane Cruz, Senior Project Manager
Email: Marijane.Cruz@bureauveritas.com
Phone# (905)817-5756
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C199215
Report Date: 2021/04/19

ARCADIS Canada Inc
Client Project #: 30084757
Site Location: BURLINGTON CENTRAL HIGH SCHOOL
Sampler Initials: P.S

ELEMENTS BY ATOMIC SPECTROSCOPY (PAINT)

BV Labs ID		PIA603		PIA604		
Sampling Date		2021/04/06		2021/04/06		
COC Number		na		na		
	UNITS	ROOM 328A-WHITE CEILING PAINT	RDL	ROOM 328A-YELLOW WALL PAINT	RDL	QC Batch
Metals						
Lead (Pb)	mg/kg	210	2.2	70	1.8	7301351

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

BV Labs Job #: C199215
Report Date: 2021/04/19

ARCADIS Canada Inc
Client Project #: 30084757
Site Location: BURLINGTON CENTRAL HIGH SCHOOL
Sampler Initials: P.S

TEST SUMMARY

BV Labs ID: PIA603
Sample ID: ROOM 328A-WHITE CEILING PAINT
Matrix: Paint

Collected: 2021/04/06
Shipped:
Received: 2021/04/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	7301351	2021/04/15	2021/04/16	Jolly John

BV Labs ID: PIA604
Sample ID: ROOM 328A-YELLOW WALL PAINT
Matrix: Paint

Collected: 2021/04/06
Shipped:
Received: 2021/04/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	7301351	2021/04/15	2021/04/16	Jolly John

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BV Labs Job #: C199215
Report Date: 2021/04/19

ARCADIS Canada Inc
Client Project #: 30084757
Site Location: BURLINGTON CENTRAL HIGH SCHOOL
Sampler Initials: P.S

GENERAL COMMENTS

Sample PIA603 [ROOM 328A-WHITE CEILING PAINT] : Metals: Due to limited amount of sample available for analysis, a smaller than usual portion of the sample was used. Detection limits were adjusted accordingly.

Sample PIA604 [ROOM 328A-YELLOW WALL PAINT] : Metals: Due to limited amount of sample available for analysis, a smaller than usual portion of the sample was used. Detection limits were adjusted accordingly.

Results relate only to the items tested.

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BV Labs Job #: C199215
Report Date: 2021/04/19

QUALITY ASSURANCE REPORT

ARCADIS Canada Inc
Client Project #: 30084757
Site Location: BURLINGTON CENTRAL HIGH SCHOOL
Sampler Initials: P.S

			Matrix Spike		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7301351	Lead (Pb)	2021/04/16	87	75 - 125	<1.0	mg/kg	15 (1)	35	105	75 - 125

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

(1) Duplicate Parent ID

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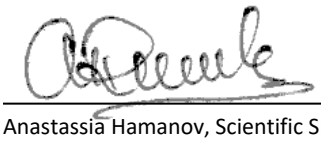
BV Labs Job #: C199215
Report Date: 2021/04/19

ARCADIS Canada Inc
Client Project #: 30084757
Site Location: BURLINGTON CENTRAL HIGH SCHOOL
Sampler Initials: P.S

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anastassia Hamanov, Scientific Specialist

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For Service Group specific validation please refer to the Validation Signature Page.

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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 m^2 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 m^2 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 m^2 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, babbit 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.

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