

2023-T-117 - City of Niagara Falls GO/VIA Station – Interior Alterations and Upgrades

Date Issued: Thursday, February 22nd, 2024

Addendum No. 1

No. of Addenda pages: 1

Attachments:

Appendix D - NF Station Tender Drawings (Revised) (76 pages)

Revisions

Revision 1: Appendix D – NF Station Tender Drawings has been revised.

Delete –

Appendix D – NF Station Tender Drawings

Replace with –

Appendix D – NF Station Tender Drawings (Revised)

Questions and Answers

Question 1:

Can you please provide the Electrical Drawings which were not included within the drawing package?

Answer 1:

Refer to Revision 1 and Appendix D - NF Station Tender Drawings (Revised), attached.

End of Addenda

Appendix D - NF Station Tender Drawings (Revised)



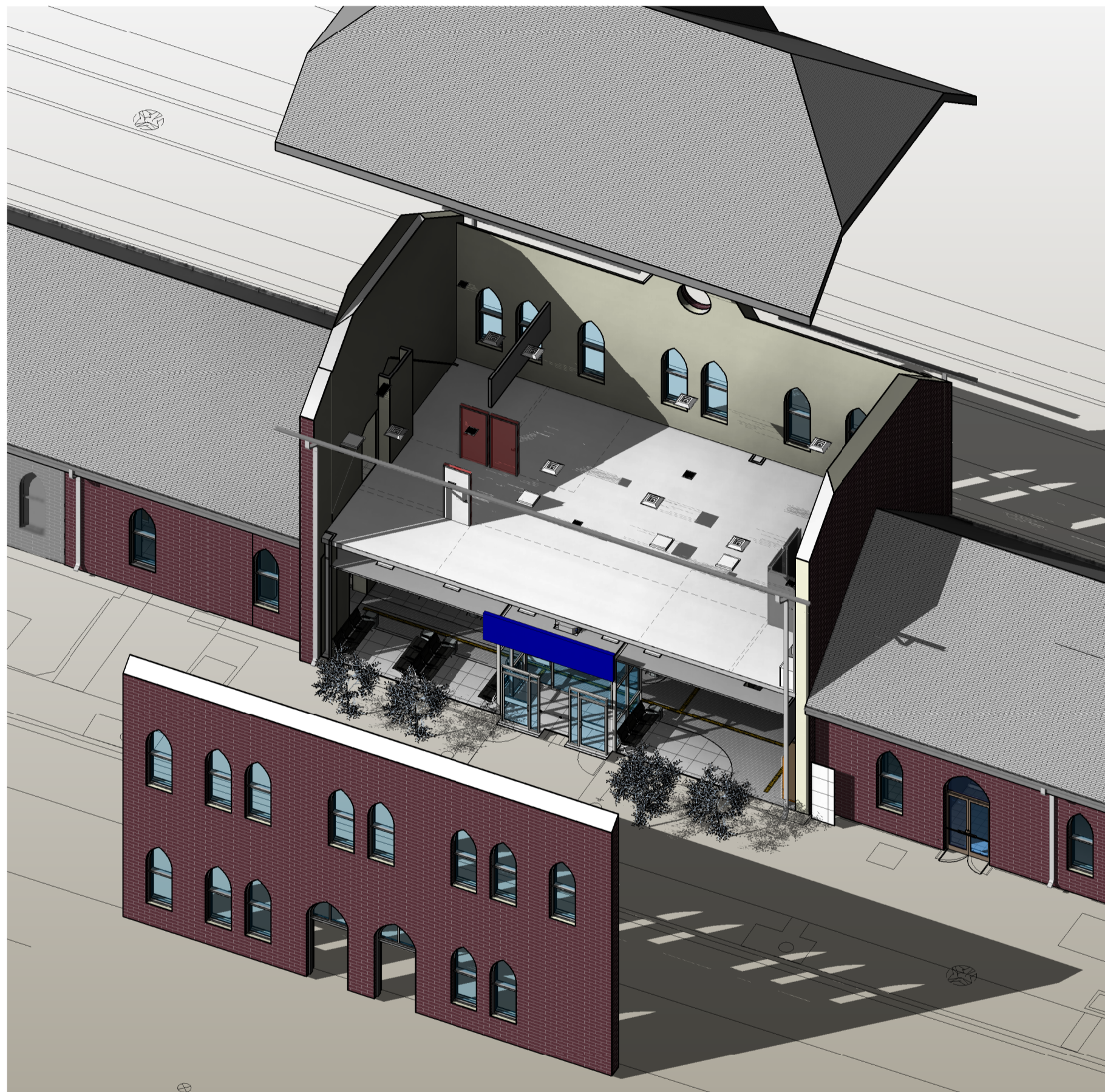
COVER PAGE

Cover Page last updated:

14/09/2023

PL

3D VIEW



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PROJEC INFORMATION

PROJECT NAME: NIAGARA FALLS TRAIN STATION UPGRADES

PROJECT ADDRESS: 4267 Bridge St, Niagara Falls, ON L2E 2R6

PROJECT NUMBER: BE20201016

CURRENT PHASE: ISSUED FOR TENDER

PROVISIONAL PRICING ITEMS:

PROVISIONAL ITEM#1
The removal & installations of new concrete/brick walkways shall be priced as a provisional cost item (Base Bid – existing walkways to remain)

PROVISIONAL ITEM#2
The supply & installation of indicated re-pointing of existing brick shall be priced as a provisional cost item (Base Bid – existing brick to remain in current condition)

PROVISIONAL ITEM#3
The supply & installation of indicated painting/repairs of existing soffits, fascia, lookouts & trims shall be priced as a provisional cost item (Base Bid – existing soffits, fascia, lookouts & trims to remain in current condition)

PROVISIONAL ITEM#4
The supply & installation of conc.sealer & epoxy floor shall be priced as a provisional cost item (Base Bid – existing room conditions to remain current condition)

PROVISIONAL ITEM#5
The supply & installations of the custom millwork charge stations shall be priced as a provisional cost item (Base Bid – show allow for the columns to be finished as per wall type W6 and painted)

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21	ARCHITECTURE 49	PROJECT NO. BE20101016		NIAGARA FALLS TRAIN STATION UPGRADES COVER SHEET			
			CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22				CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A00
	B	2024/02/08	ISSUED FOR TENDER								
	A	2023/04/24	ISSUED FOR BUILDING PERMIT								
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE					

ISSUED FOR TENDER

ASSEMBLIES

WALLS:

- W1** 102 mm DRYWALL PORCELAIN TILE BIG FORMAT WHITE- 2 SIDES
 - 5.6mm PORCELAIN TILE 600mm X 600mm
 - 13mm GYPSUM OR CEMENT BOARD ON WET SIDE
 - 64mm METAL STUD WITH ACOUSTICAL BATT INSULATION
 - 13mm GYPSUM OR CEMENT BOARD ON WET SIDE
 - 5.6mm CERAMIC TILE 600mm X 600mm
- W2** 102 mm DRYWALL PORCELAIN TILE BIG FORMAT WHITE 1 SIDE AND PAINTED
 - 5.6mm PORCELAIN TILE 600mm X 600mm
 - MORTAR ADHESIVE
 - 13mm GYPSUM BOARD
 - 64mm METAL STUD WITH ACOUSTICAL BATT INSULATION
 - 13mm GYPSUM BOARD
 - PAINTED - SEE ROOM FINISH AND PAINTING SPECS
- W3** 82.6 mm 1 FACED STUD DRYWALL W/ PORCELAIN TILE BIG FORMAT WHITE
 - 5.6mm PORCELAIN TILE 600mm X 600mm
 - 13mm EXT GRADE SHEATHING OR CEMENT BOARD ON WET SIDE
 - 64mm METAL STUD
- W4** 15 mm PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
 - 6mm PORCELAIN TILE 600mm X 600mm
 - CEMENT MORTAR
- W5** EXISTING PLASTER PATCH AND PAINT ON EXISTING WALL- SEE NOTE 1
- W5N** NEW PLASTER AND PAINT ON NEW WALL - SEE NOTE 1
- W6** 82.6 mm ONE FACED METAL STUD DRYWALL PAINTED
 - 13mm GYPSUM BOARD (VANDAL RESIST @PUBLIC FACE). PAINTED.
 - 64mm METAL STUD
- W7** 100mm HPL PANEL ASSEMBLY
 - 10mm HPL PANEL
 - 25mm HPL RAIL SYSTEM
 - 64mm METAL STUD
- W8** 35mm HPL PANEL ASSEMBLY
 - 10mm HPL PANEL
 - 25mm HPL RAIL SYSTEM
- W9** 183mm INTERIOR CURTAIN WALL SYSTEM
 - 183mm x 63.5mm CLEAR ANODIZED MULLIONS
 - 25mm GLAZING SYSTEM
 - 6mm CLEAR TEMPERED GLASS
 - 12mm AIRSPACE
 - 6mm CLEAR TEMPERED GLASS
- W10** 100mm INTERIOR CURTAIN WALL SYSTEM AT TICKET OFFICE
 - 100mm x 50mm CLEAR ANODIZED MULLIONS
 - 2mm X 6mm CLEAR TEMPERED GLASS
- W11** 90mm METAL STUD DRYWALL WITH FRP PANEL
 - 13mm GYPSUM BOARD PAINTED TO PUBLIC SPACE
 - 64mm METAL STUD
 - 13mm GYPSUM BOARD
 - FRP INTERIOR PANEL FROM FINISH FLOOR TO 1.5m

W11 IN JAN ROOM 109 - 1 HR FRR . USE 13mm TYPE X GYPSUM BOARD IN BOTH SIDES AND ADD EXTRA LAYER IN THE INTERIOR SIDE AS PER TYPE S2g SB-3, OBC
- W12** 102 mm METAL STUD DRYWALL WITH CERAMIC TILE AND FRP PANEL
 - 5.6mm CERAMIC TILE 600mm X 600mm
 - MORTAR ADHESIVE
 - 13mm GYPSUM BOARD
 - 64mm METAL STUD
 - 13mm GYPSUM BOARD
 - PAINTED - SEE ROOM FINISH AND PAINTING SPECS
 - FRP PANEL FROM FINISH FLOOR TO 1.5m
- W13** FRP PANEL FROM FINISH FLOOR TO 1.5m
- W14**
 - PAINTED - SEE ROOM FINISH AND PAINTING SPECS
 - 16 mm GYPSUM ACOUSTICAL PANEL
 - 92 mm METAL STUD WITH ACOUSTICAL BATT INSULATION
 - 16 mm GYPSUM BOARD
 - PAINTED - SEE ROOM FINISH AND PAINTING SPECS

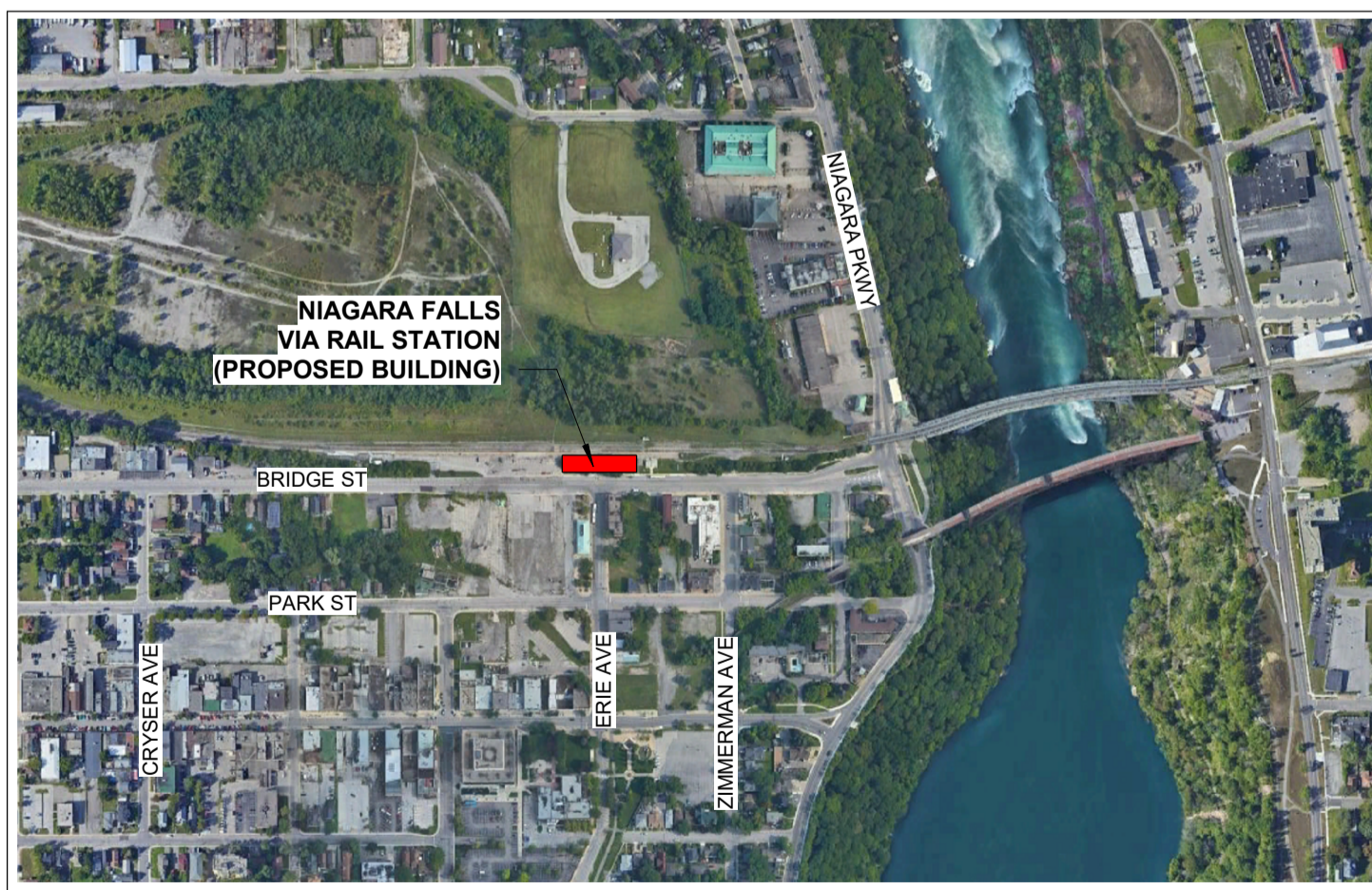
FLOORS:

- F1** PORCELAIN TILE LARGE FORMAT 600mm x 600mm (BEIGE COLOUR)
 - DRYPACK
 - SELF - LEVELING MORTAR
- F2** PORCELAIN TILE LARGE FORMAT 600mm x 600mm (WOOD TEXTURIZED)
 - PLASTIC OR FOAM SHEET
 - DRYPACK
 - SELF - LEVELING MORTAR
- F3** LINEAR TACTILE TILE 600mm x 120mm (BLACK COLOUR)
 - DRYPACK
 - SELF - LEVELING MORTAR
- F4** PORCELAIN TILE LARGE FORMAT 600mm x 600mm (MARFIL COLOUR)
 - DRYPACK
 - SELF - LEVELING MORTAR
- F5** EPOXY PAINT
- F6** VINYL TILES 300mm x 300 mm.
- F7** CARPET TILE (GRAY COLOUR)
 - ADHESIVE
 - SELF - LEVELING MORTAR
- F8** PORCELAIN CERAMIC TILE BIG FORMAT 600mm X 600mm (MARFIL COLOUR)
 - ADHESIVE MORTAR
 - SELF - LEVELING MORTAR
- C1** ACOUSTIC CEILING 24" X 48" (WHITE COLOUR)
- C2** ACOUSTIC CEILING 24" X 48" VINYL COATED (WHITE COLOUR)
- C3** HPL PANELS ON CEILING
- C4** 2 LAYERS OF 16mm TYPE X GB AS PER OBC SB-3 F23a AND F4a ASSEMBLIES
- R1** EXISTING ROOF

ASSEMBLIES NOTES:

- TO REPAIR EXISTING PLASTER AND ADD NEW PLASTER LAYER AS REQUIRED TO CREATE A FINISHED WALL SURFACE CONTINUOUS, FREE OF SURFACE BLEMISHES AND IRREGULARITIES
- NOTE: NEW FLOOR TO BE INSTALLED REPLACING EXISTING. NEW FLOOR THICKNESS SHOULD MATCH EXISTING THICKNESS VARIATIONS IN GROUND FLOOR THICKNESS TO BE ABSORBED IN DOORS SILLS OUTSIDE. MAX. VARIATION 10mm. MAX. SLOPE 1 IN 20 (OR 5%)

LOCATION PLAN



OBC MATRIX

Ontario Building Code Data Matrix				Building Code Reference ¹			
Part 11 – Renovation of Existing Building							
11	Building Code Version:	O. Reg. 332/12	Last Amendment	O. Reg. 451/22			
11.01	Project Type:	<input type="checkbox"/> Addition <input checked="" type="checkbox"/> Renovation <input type="checkbox"/> Addition and renovation <input type="checkbox"/> Change of use Description: Train Station Renovation		[A] 1.1.2.			
11.02	Major Occupancy Classification:	Occupancy Use A.2		3.1.2.1.(1)			
11.03	Superimposed Major Occupancies:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Description: Second Level - D - Offices		3.2.2.7.			
11.04	Building Area (m ²)	Description:	Existing	New	Total		
		Ground Level	667.58	0	0		
		Second Level	491.12	0	0		
		-	0	0	0		
		-	0	0	0		
		Total	1158.7	0	0		
11.05	Building Height	2 Storeys above grade 0 Storeys below grade		15.57 (m) Above grade			
11.06	Number of Streets/Firefighter access	1 street(s)		3.2.2.10. & 3.2.5.			
11.07	Building Size	<input type="checkbox"/> Small <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Large <input type="checkbox"/> > Large Change in Major Occupancy: <input type="checkbox"/> Yes <input type="checkbox"/> Not Applicable (no change of major occupancy) Construction Index: 0 Hazard Index: 0 Importance Category: <input type="checkbox"/> Low <input type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Post-disaster		T.11.2.1.1.B.-N. 11.2.1.1. T.11.2.1.1A T.11.2.1.1B to N 4.2.1.(3), 5.2.2.1.(2)			
11.09	Renovation type:	<input checked="" type="checkbox"/> Basic Renovation <input type="checkbox"/> Extensive Renovation		11.3.3.1. 11.3.3.2			
11.1	Occupant Load	Floor Level/Area	Occupancy Type	Based On	Occupant Load (Persons)		
		GROUND - CBSA	D		2		
		GROUND - ACCESS TO 2nd	A2		140		
		GROUND - STATION	D		2		
		GROUND - O.T.S.	D		1		
SECOND - CBSA	D		27				
SECOND - OFFICE	D		2				
SECOND - ACCESS TO Gr	D		175				
TOTAL							
11.11	Plumbing Fixture Requirements	Ratio: M/F = 1/1 Except as otherwise noted.		3.7.4.			
11.11	Plumbing Fixture Requirements	Floor Level/Area	Occupant Load	OBC Reference	Fixtures Required	Fixtures	
		Ground L.- Station		74 males		2	3
				74 females		3	3
Second L.-Office		9 males		1	1		
		9 females		1	1		
TOTAL							
11.12	Barrier-free Design:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation		11.3.3.2.(2)			
11.13	Reduction in Performance Level:	Structural:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	11.4.2.1.		
		By Increase in occupant load:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	11.4.2.2.		
		By change of major occupancy:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	11.4.2.3.		
		Plumbing:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	11.4.2.4.		
		Sewage-systems:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	11.4.2.5.		
		Extension of combustible construction:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	11.4.2.6.		
11.14	Compensating Construction:	<input type="checkbox"/> No <input type="checkbox"/> Yes (Describe)			11.4.3.1.		
		Structural:	<input type="checkbox"/> No <input type="checkbox"/> Yes (Describe)	<input type="checkbox"/> No <input type="checkbox"/> Yes (Describe)	11.4.3.2.		
		Increase in occupant load:	<input type="checkbox"/> No <input type="checkbox"/> Yes (Describe)	<input type="checkbox"/> No <input type="checkbox"/> Yes (Describe)	11.4.3.3.		
		Change of major occupancy:	<input type="checkbox"/> No <input type="checkbox"/> Yes (Describe)	<input type="checkbox"/> No <input type="checkbox"/> Yes (Describe)	11.4.3.4.		
		Plumbing:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Increase in washroom number	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Increase in washroom number	11.4.3.5.		
		Sewage systems:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Increase in washroom number	<input type="checkbox"/> No <input type="checkbox"/> Yes (Describe)	11.4.3.6.		
11.15	Compliance Alternatives Proposed:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (list numbers and describe)		11.5.1.			
11.16	Notes:	1- OBC 3.8.3.3. requires no less than 860mm clear width in a barrier-free path. Current exist doors do not comply and need to be changed		11.5.1.			

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			P.LAPALIKAR 2023/09/22	G.DANESHGAR 2023/04/21		
			CHECKED BY:	APPROVED BY:		
			S.CHERIAN 2023/09/22	S.CHERIAN 2023/09/22		
			SCALE: AS SHOWN	FULL SIZE ONLY		
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
		B	2024/02/08	ISSUED FOR TENDER		
		A	2023/04/24	ISSUED FOR BUILDING PERMIT		

ONTARIO ASSOCIATION OF ARCHITECTS
SHERRY KOZHIMALA CHERIAN LICENCE 7610

ARCHITECTURE | 49

PROJECT NO. BE20101016

ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES BUILDING INFORMATION

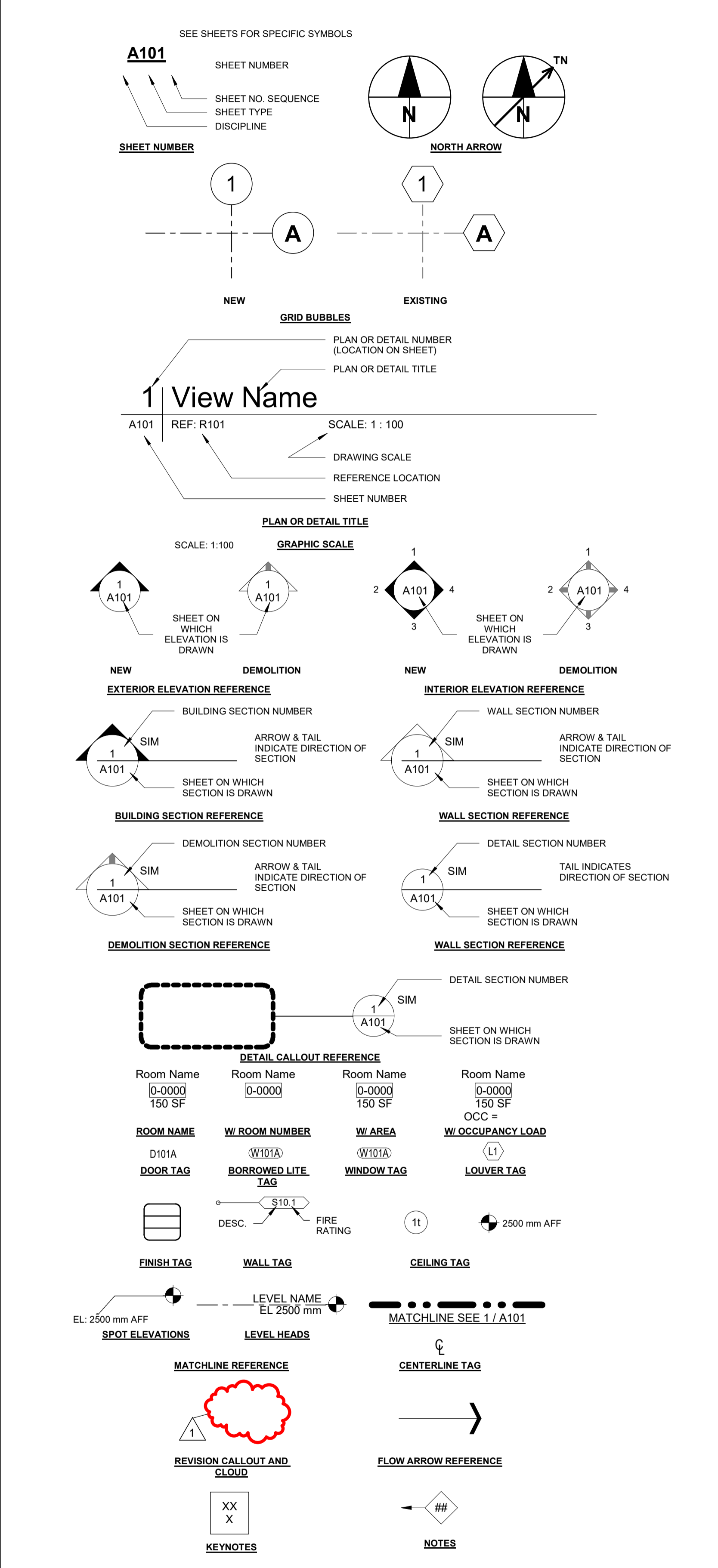
CONTRACT NO.	DWG. NO.	REV.	SHEET
STATION RENOVATION		A	A0050

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ABBREVIATIONS

ACC	ACCUSTICAL	OC	ON CENTER
ACBF	ACOUSTIC SUSPENDED BAFFLES	OCC	OPEN CELL CEILING
ACPL	ACOUSTIC PANELS, FIXED	O/F	OUTSIDE FACE
ACT	ACOUSTIC TILE	O.H.	OVERHEAD
AFF	ABOVE FINISHED FLOOR	O.W.S.J.	OPEN WEB STEEL JOIST
AHU	AIR HANDLING UNIT		
AL, ALUM	ALUMINUM	PL	PLATE
ARC	ARCHITECTURE	PLAM	PLASTIC LAMINATE
ARGB	ABUSE RESISTANT GYPSUM BOARD	PENT	PENTHOUSE
AV SCR.N.	AUDIO VISUAL PROJECTOR SCREEN	PLY	PLYWOOD
		PREFIN	PREFINISHED
B.F.	BARRIER FREE	PS	RESSED STEEL
BH	BULKHEAD	PT	PAINT
BL	BLIND	RB	RUBBER BASE
BLDG	BUILDING	RCB	RESILIENT COVE BASE
BLK	BLOCK	RCP	REFLECTED CEILING PLAN
BOT, BTM	BOTTOM	RD	ROOF DRAIN
B.S.	BOOK SHELF	RFID	RADIO FREQUENCY IDENTIFICATION (SYSTEM)
CB	CONCRETE BLOCK	RM	ROOM
CG	CORNER GUARD	RP	RADIANT CEILING PANEL
CHD	CONCRETE FLOOR HARDENER	RSF	RESILIENT SHEET FLOORING
CJ	CONTROL JOINT	SCW	SOLID CORE WOOD
CL	CENTRE LINE	SD	SOAP DISPENSERS
CLAN	CLEAR ANODIZED	SIM	SIMILAR
CLG	CEILING	SPEC	SPECIFICATION
CLR	CLEAR	S.S.	STEEL STUD
COIL, GRILLE	SIDE COILING GRILLE	ST, STL	STEEL
COL	COLUMN	STLS	STAINLESS STEEL
CONC.	CONCRETE	STN	STONE
CONT.	CONTINUOUS	STOR	STORAGE
CPT	CARPET	STRUC.	STRUCTURAL
CRB	CROSS BRACING	SUPVR. S	SUPERVISOR'S
CS	COUNTER SHUTTER	SUSP	SUSPENDED
CT	CERAMIC TILE		
CTBD	CEMENT BOARD	TO	TOP OF
CVB	COVE BASE	TP1	FIBERGLASS SANDWICH PANEL-w/TRANSLUCENT PANEL
C/W	COMPLETE WITH	TR	TRASH RECEPTACLES
CWGL	CURTAIN WALL GLAZING	TP2	TRANSLUCENT PANEL GLAZING
CWL	CURTAIN WALL	TPTN	TOILET PARTITION
CKB	CHALK BOARD	TPD	TOILET PAPER DISPENSERS
		TYP	TYPICAL
DBL	DOUBLE	U/C	UNDER COUNTER
DET	DETAIL	U/F	UNDER FLOOR
DF	DRINKING FOUNTAIN	UNO	UNLESS NOTED OTHERWISE
DN	DOWN	U/S	UNDERSIDE
DT	DECORATIVE TRIM	US	UTILITY SHELVES
DWG	DRAWING		
EA	EACH	VB	VAPOUR BARRIER
ED	EXISTING DOWNSPOUT	VCT	VINYL COMPOSITION TILE
EG	EXISTING GUTTER	VERT	VERTICAL
ELE, ELEC	ELECTRICAL	VEST	VESTIBULE
ELEV.	ELEVATION		
EOS	EDGE OF SLAB	w/	WITH
EQ	EQUAL	WB	WHITEBOARD
EQPT, EQUIP	EQUIPMENT	WD	WOOD
ESC	EXISTING SNOWGUARDS	WM	WIRE MESH
EXP	EXPOSED	WP	WALL PANEL
EXT	EXTERIOR	WPT	WORK POINT
		WR	WASHROOM
FD	FLOOR DRAIN	WRGB	WASTER RESISTANT GYPSUM BOARD
F/F	DOUBLE SIDE BY SIDE FRIDGE/FREEZER UNIT	W/R	WASTE RECEPTACLE
FIN, FNSH	FINISH		
FLR, FL.	FLOOR		
FRR	FIRE RESISTANCE RATING		
FURN	FURNITURE		
FUS	FOLDING UTILITY SHELF		
FS	FRAME SIZE		
GA	GUAGE		
GALV	GALVANIZED		
GB	GYPSUM BOARD		
GBX	TYPE X GYPSUM BOARD		
GL	GLAZING		
GR	GUARD RAIL		
HGT.	HEIGHT		
HM	HOLLOW METAL (DOOR)		
HORIZ.	HORIZONTAL		
HR	HANDRAIL		
HSS	HOLLOW STEEL SECTION		
HT	HEIGHT		
HTD	HAND TOWEL DISPENSERS		
HP	HIGH POINT		
IAL	INSULATED ALUMINUM		
ID	INSIDE DIAMETER		
I/F	INSIDE FACE		
IFH	IN FLOOR RADIANT HEATING PANEL		
IHM	INSULATED HOLLOW METAL (DOOR)		
INSUL	INSULATED		
INT	INTERIOR		
IP	INSULATED PANEL (DOOR)		
LG	LAMINATED GLASS		
LIN	LINOLEUM		
LNPL	LINER PANEL		
M	MALE		
MATL	MATERIAL		
MAX	MAXIMUM		
MECH.	MECHANICAL		
MESH	WIRE MESH PARTITION		
MIN.	MINIMUM		
MISC.	MISCELLANEOUS		
MLC	METAL PANEL SOFFIT		
MP	MOVABLE PANEL		
NB	NOTICE BOARD (TACK BOARD)		
NTS	NOT TO SCALE		
MIR	MIRROR		

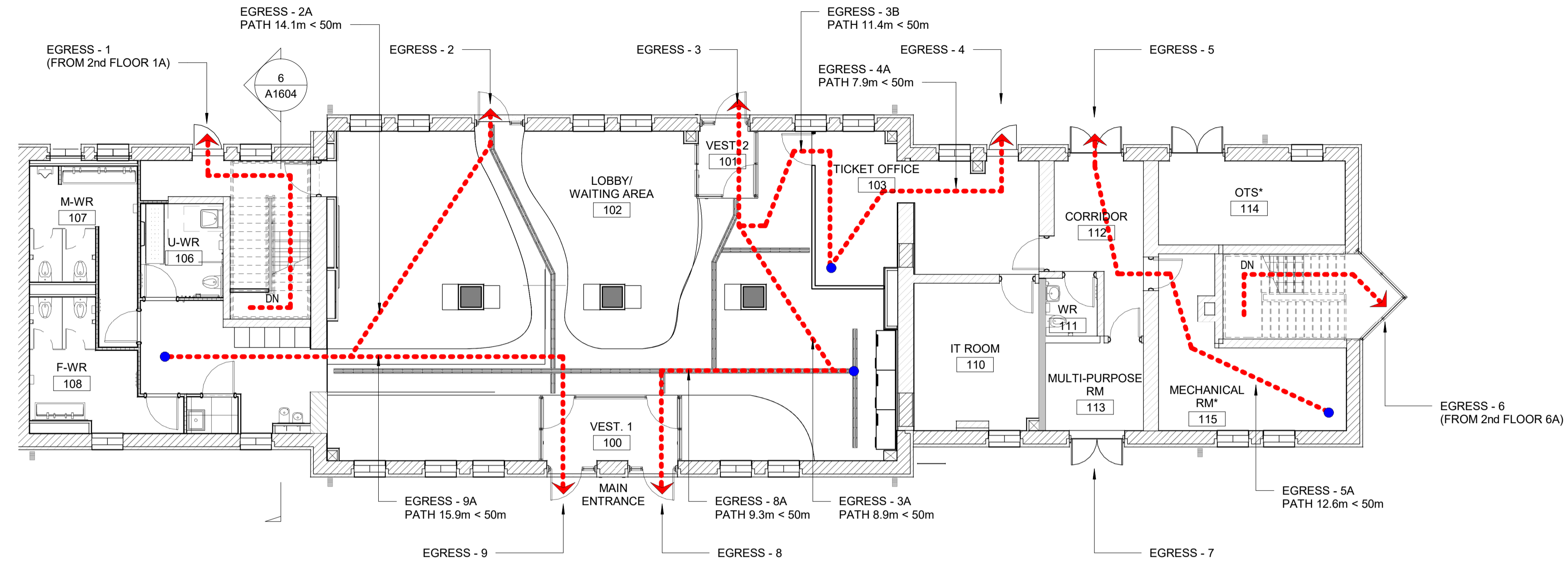
SYMBOLGY LEGEND



REFERENCE DRAWINGS				ISSUE				REVISIONS				DRAWN BY: P.LAPALIKAR 2023/09/22		DESIGNED BY: G.DANESHGAR 2023/04/21		<p>ARCHITECTURE 49</p> <p>PROJECT NO. BE20101016</p> <p>ISSUED FOR TENDER</p>	<p>NIAGARA FALLS TRAIN STATION UPGRADES</p> <p>NOTES ABBREVIATIONS LEGENDS</p>	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE									CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A0100

METRIC

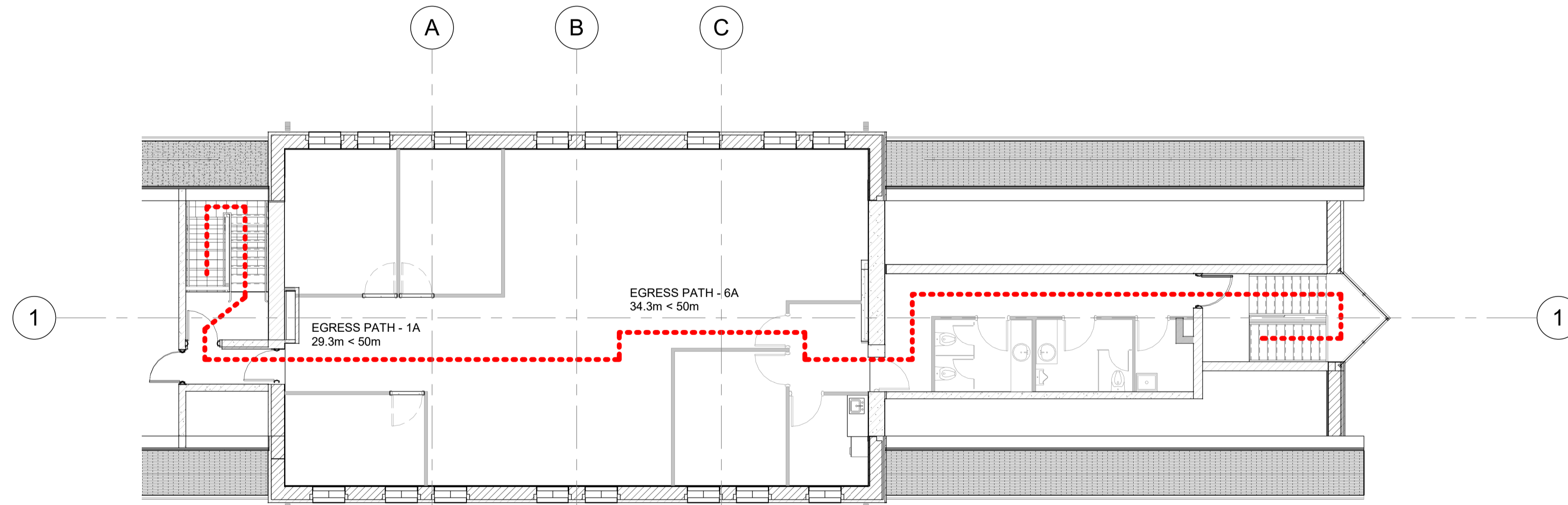
ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 LIFE SAFETY PLAN - GROUND FLOOR

A0200 SCALE: 1 : 100

LIFE SAFETY LEGEND



2 LIFE SAFETY PLAN - SECOND FLOOR

A0200 SCALE: 1 : 100

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			P. LALPALKAR 2023/09/22	G. DANESHGAR 2023/04/21		
			CHECKED BY: S. CHERIAN 2023/09/22	APPROVED BY: S. CHERIAN 2023/09/22		
			SCALE: AS SHOWN	FULL SIZE ONLY		
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ARCHITECTURE | 49
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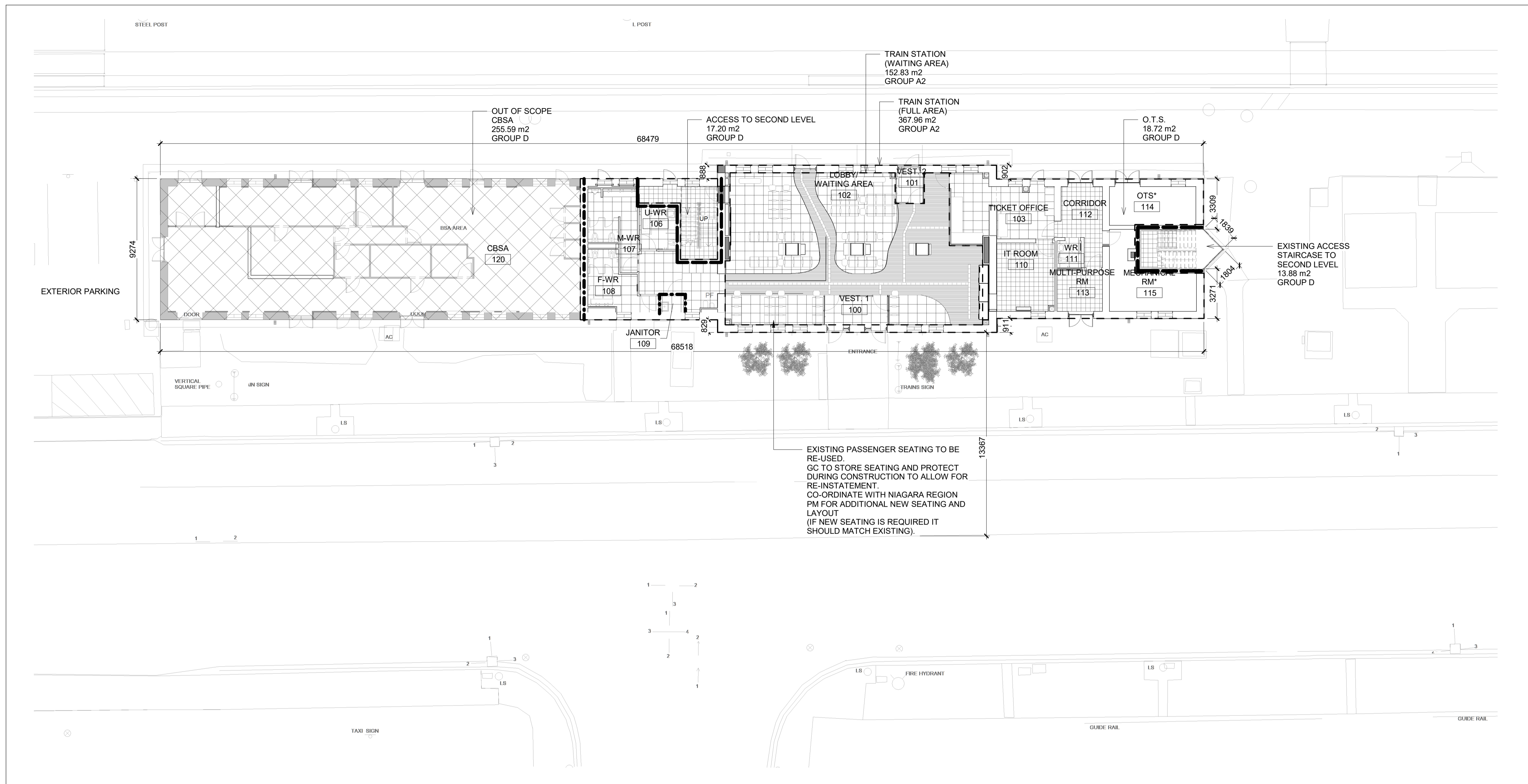


NIAGARA FALLS TRAIN STATION UPGRADES
LIFE SAFETY PLANS

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A0200
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METRIC

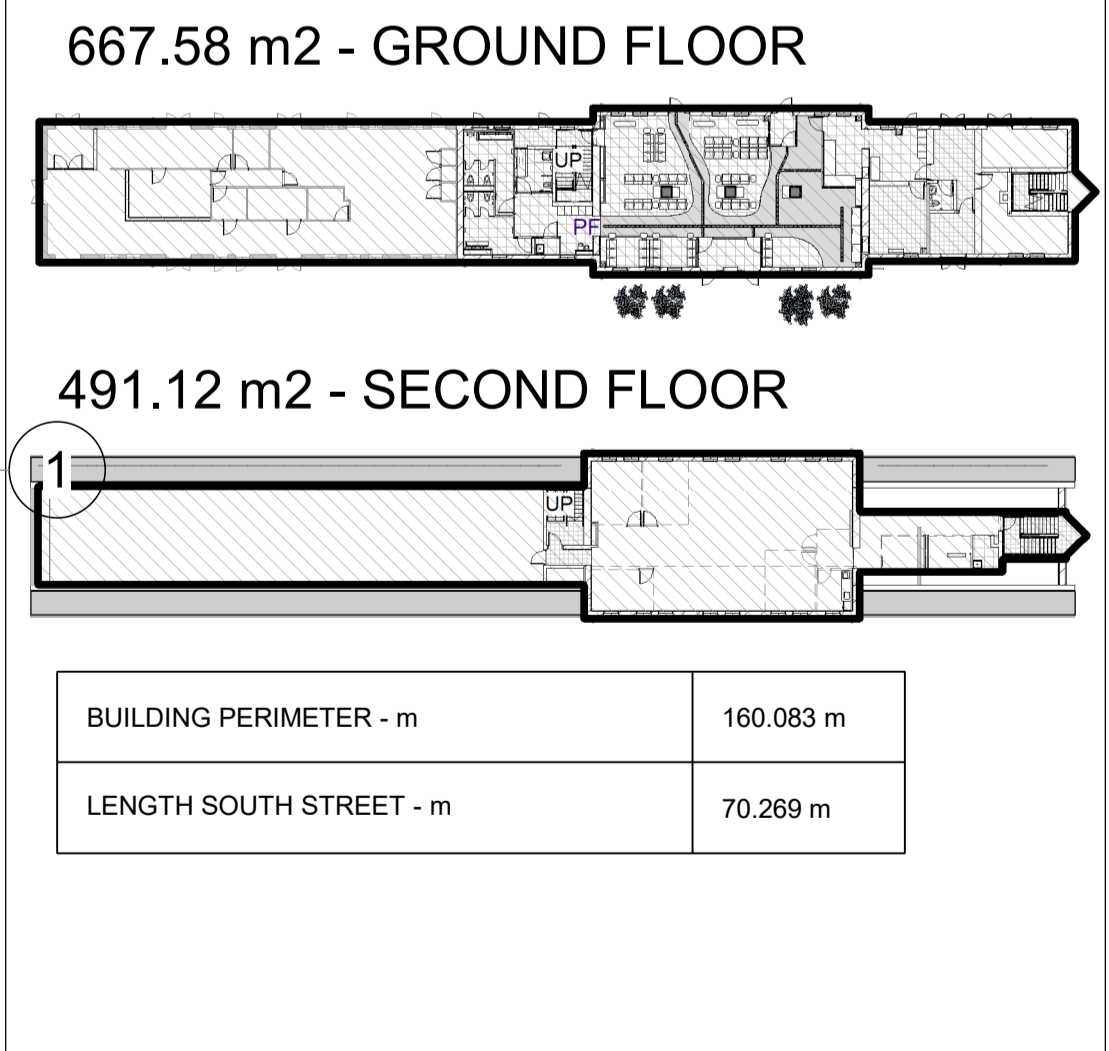
ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | GROUND & SITE CODE

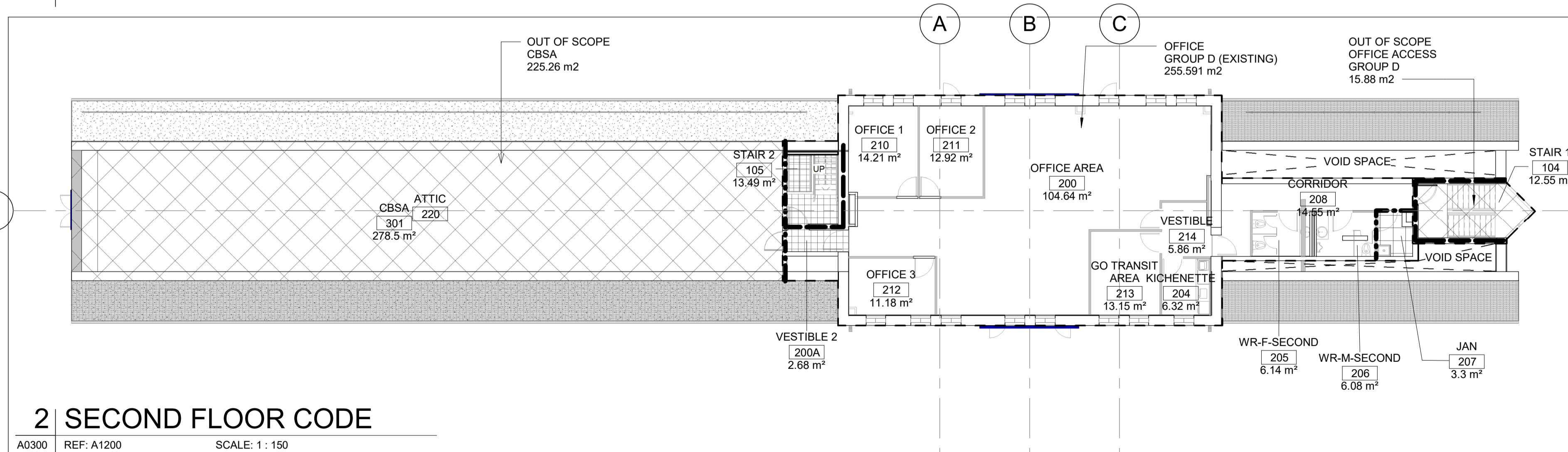
A0300 REF: A1200 SCALE: 1 : 150

AREA PLAN



2 | SECOND FLOOR CODE

A0300 REF: A1200 SCALE: 1 : 150



REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:
			P. LAPALIKAR 2023/09/22	G. DANESHGAR 2023/04/21
			CHECKED BY: S. CHERIAN 2023/09/22	APPROVED BY: S. CHERIAN 2023/09/22
			SCALE: AS SHOWN	FULL SIZE ONLY

ONTARIO ASSOCIATION OF ARCHITECTS
SHERY KOZHIMALA CHERIAN
LICENCE 7610

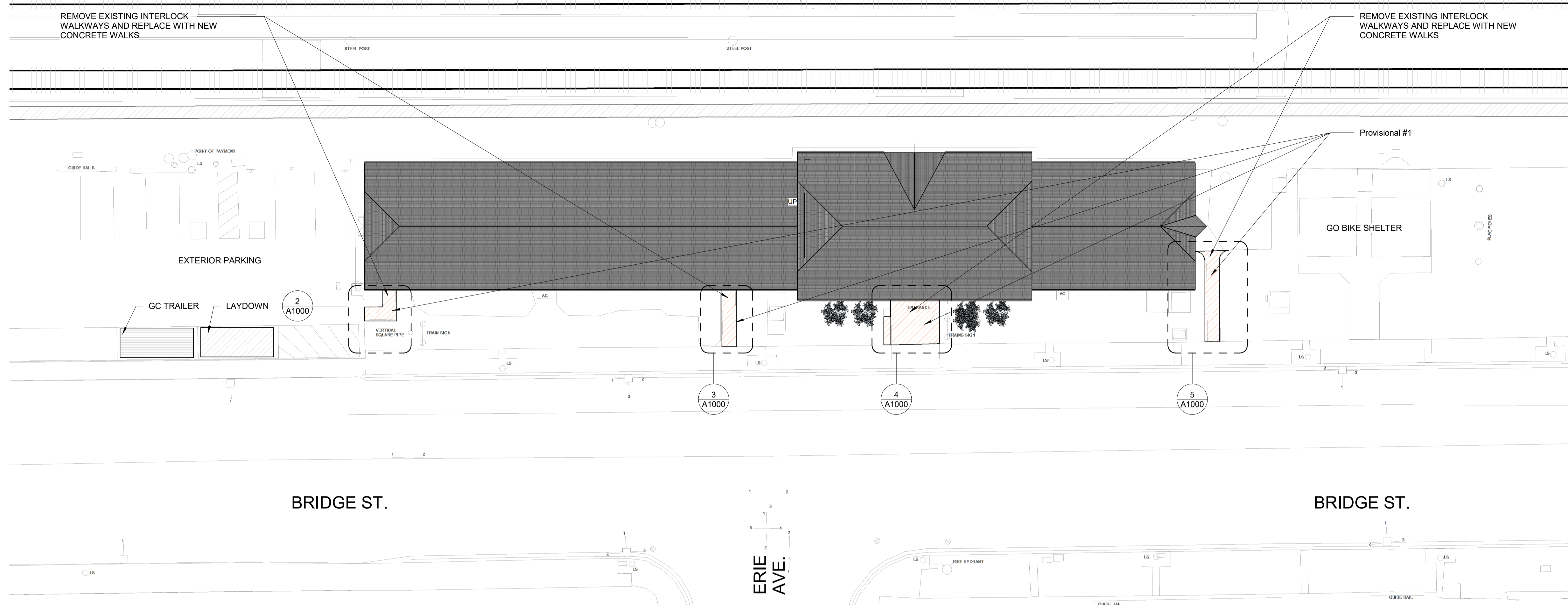
ARCHITECTURE | 49

PROJECT NO. BE20101016

ISSUED FOR TENDER

NIAGARA FALLS TRAIN STATION UPGRADES
BUILDING CODE SEPARATION PLANS

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A0300
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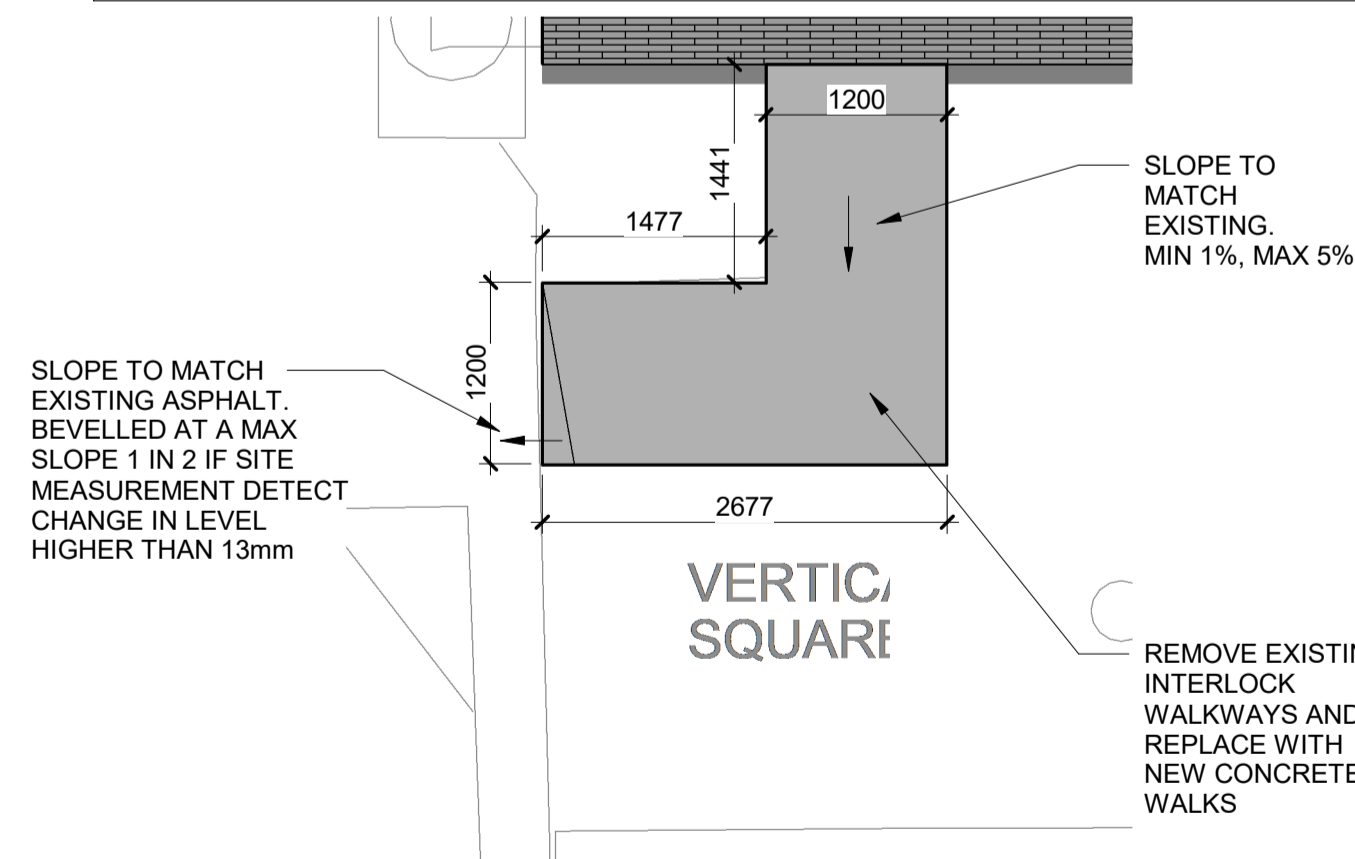


1 | SITE PLAN

A1000 REF: A1200 SCALE: 1:200

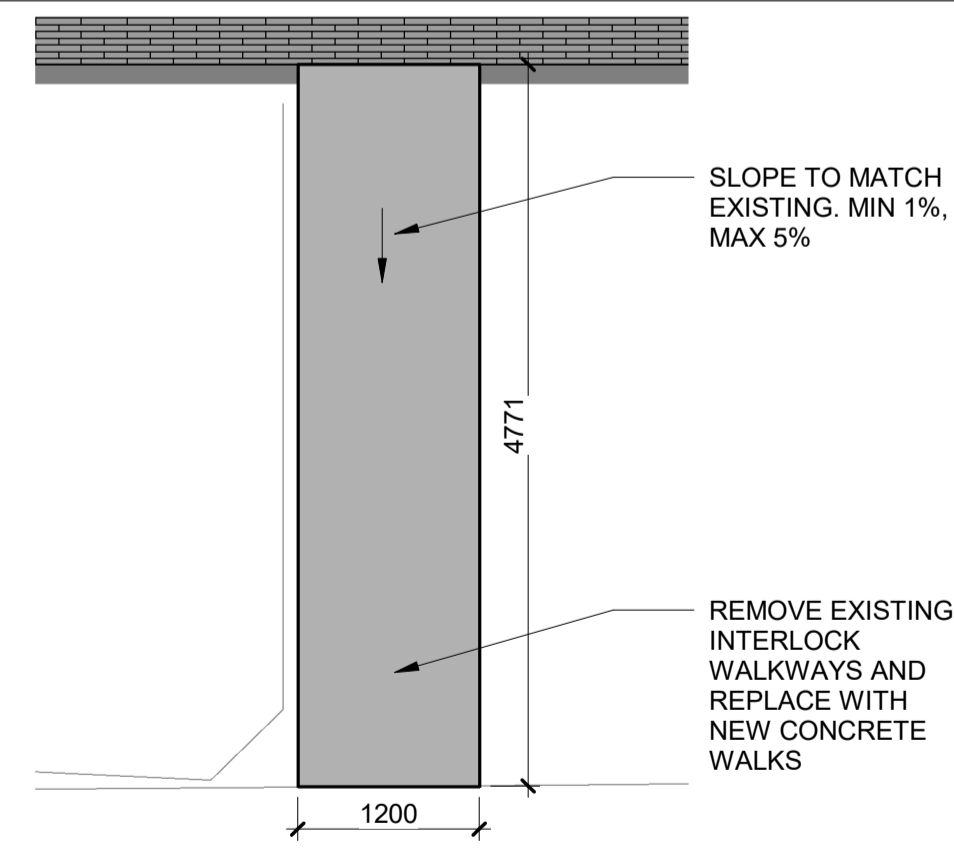
GENERAL CONSTRUCTION NOTES:

- COORDINATE ALL WORK WITH MECHANICAL & ELECTRICAL DRAWINGS.
- DO NOT SCALE DRAWINGS. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR IS TO REVIEW AND VERIFY THAT ALL DIMENSIONS, ELEVATIONS, DATUMS, AND INFORMATION SHOWN ARE CORRECT. VERIFY ALL DIMENSIONS ON SITE.
- PRIOR TO COMMENCEMENT OF WORK, REPORT ANY DISCREPANCIES TO THE PROPERTY REPRESENTATIVE.
- VARIATIONS AND MODIFICATIONS TO WORK SHOWN WILL NOT BE PERMITTED WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY REPRESENTATIVE.
- NO REPRODUCTION OF THE DRAWINGS MAY BE MADE WITHOUT THE WRITTEN CONSENT OF THE PROPERTY REPRESENTATIVE AND ALL REPRODUCTION MUST BEAR THE NAME OF THE PROPERTY REPRESENTATIVE.
- COORDINATE WITH PROPERTY REPRESENTATIVE FOR ANY INTERRUPTIONS OF BUILDING SERVICES FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL NOTIFY THE PROPERTY REPRESENTATIVE OF ANY EQUIPMENT OR ELECTRICAL APPARATUS WHICH MAY VARY FROM THAT INDICATED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PERIODICALLY REMOVING ALL DEBRIS AND TO KEEP THE WORK AREA CLEAN AT ALL TIMES.
- PROVIDE TEMPORARY PROTECTION TO ADJACENT SURFACES NOT AFFECTED BY DEMOLITION OR NEW CONSTRUCTION. ENSURE THAT DEBRIS IS REMOVED FROM EACH SPACE.
- MAINTAIN THE INTEGRITY OF ALL LIFE/SAFETY SYSTEMS AND REQUIRED EXITS AT ALL TIMES THROUGHOUT THE DURATION OF THIS PROJECT.
- PATCH, REPAIR, AND REFINISH DAMAGED SURFACES OR PENETRATIONS AS A RESULT OF NEW CONSTRUCTION, OR IN THE TRANSPORTATION OF MATERIALS AT THE SITE.
- PROVIDE CONTINUOUS ISOLATION PROTECTION AT AND BETWEEN ALL DISSIMILAR METALS/BUILDING COMPONENTS
- GC. TO REPAIR DAMAGES TO EXISTING HARDSCAPE AND SOFTSCAPE DUE TO CONSTRUCTION.



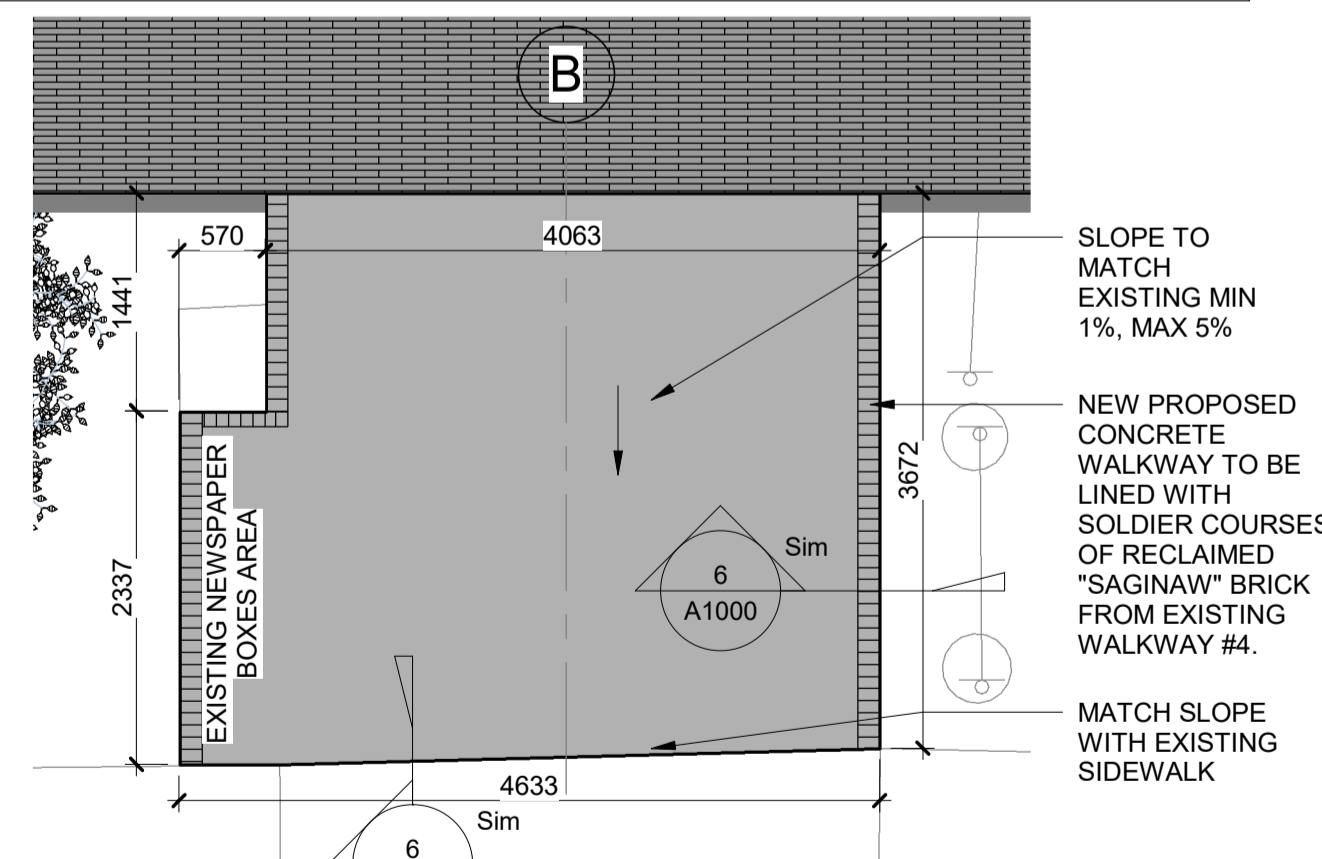
2 | SITE - South West Pathway(P)

A1000 REF: A1000 SCALE: 1:50



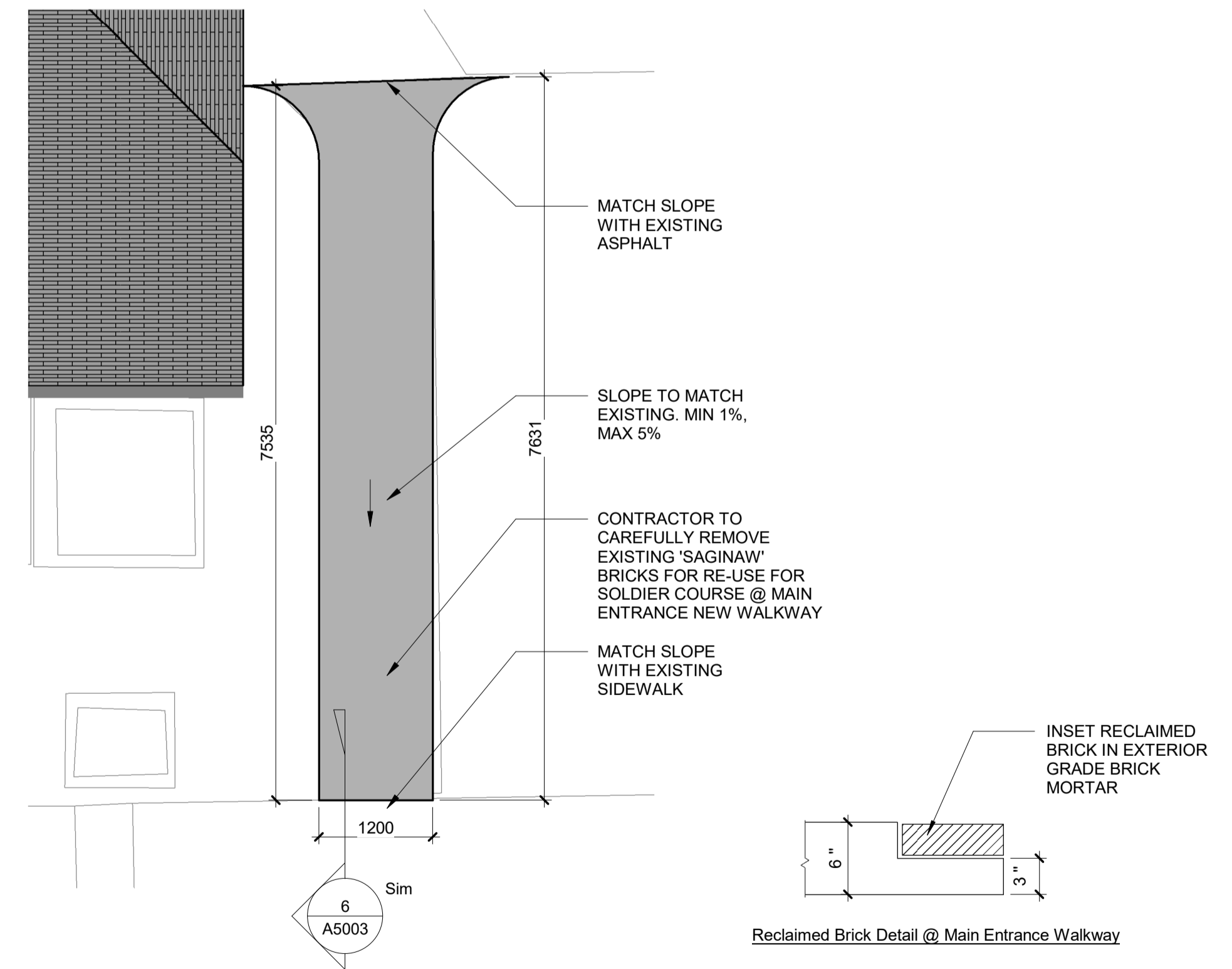
3 | SITE - South West Pathway 2(P)

A1000 REF: A1000 SCALE: 1:50



4 | SITE - South Entrance Pathway(P)

A1000 REF: A1000 SCALE: 1:50



5 | SITE - South East Pathway(P)

A1000 REF: A1000 SCALE: 1:50

6 | Reclaimed Brick Detail(P)

A1000 REF: A1000 SCALE: 1:10

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
		B	2024/02/08	ISSUED FOR TENDER	
		A	2023/04/24	ISSUED FOR BUILDING PERMIT	

DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49

PROJECT NO. BE20101016

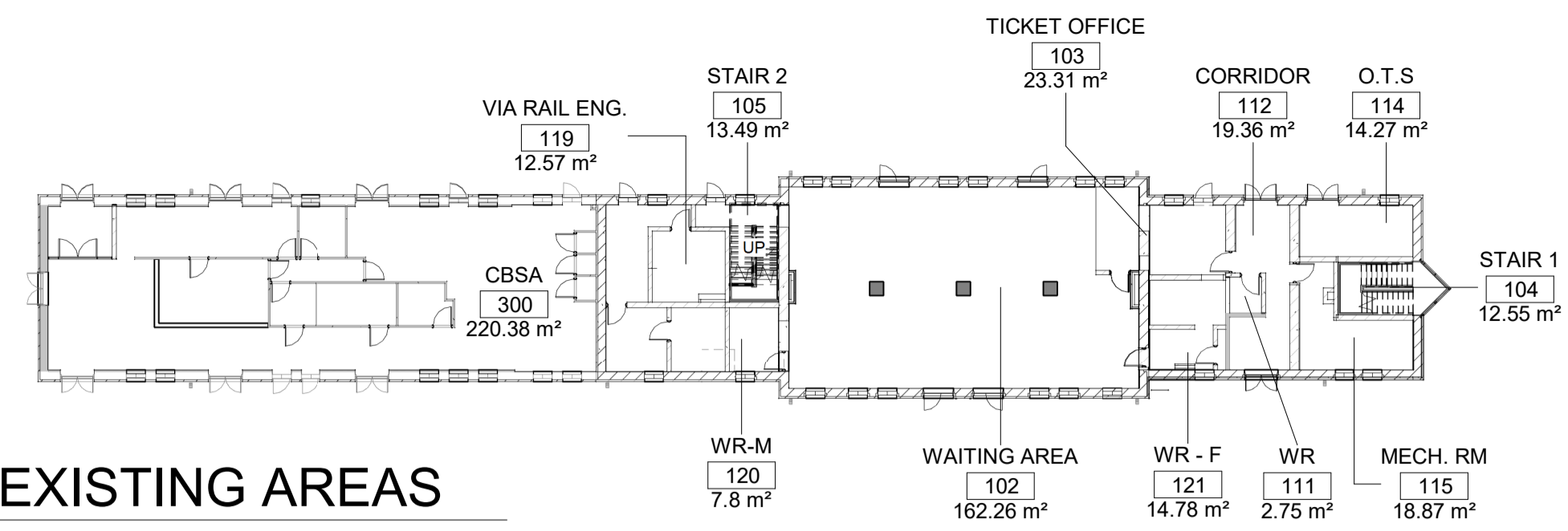
ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES SITE PLAN			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1000

2 | GROUND FLOOR EXISTING AREAS

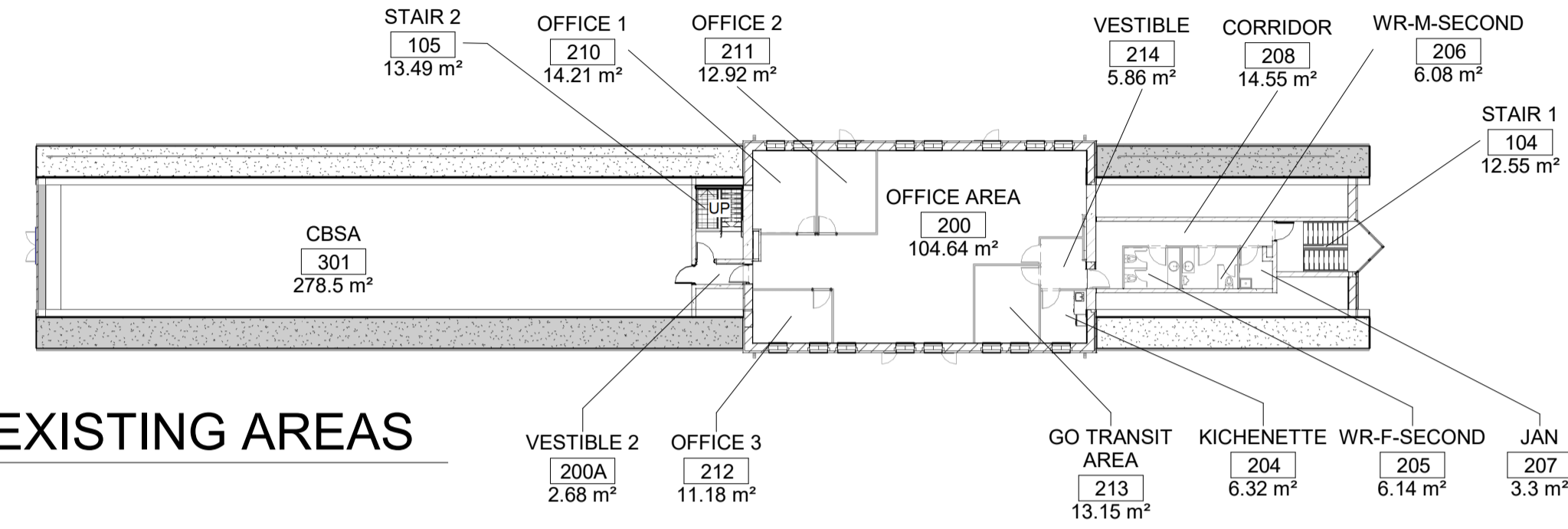
A1100 REF: A1200 SCALE: 1 : 300



No color scheme assigned to view

4 | SECOND FLOOR EXISTING AREAS

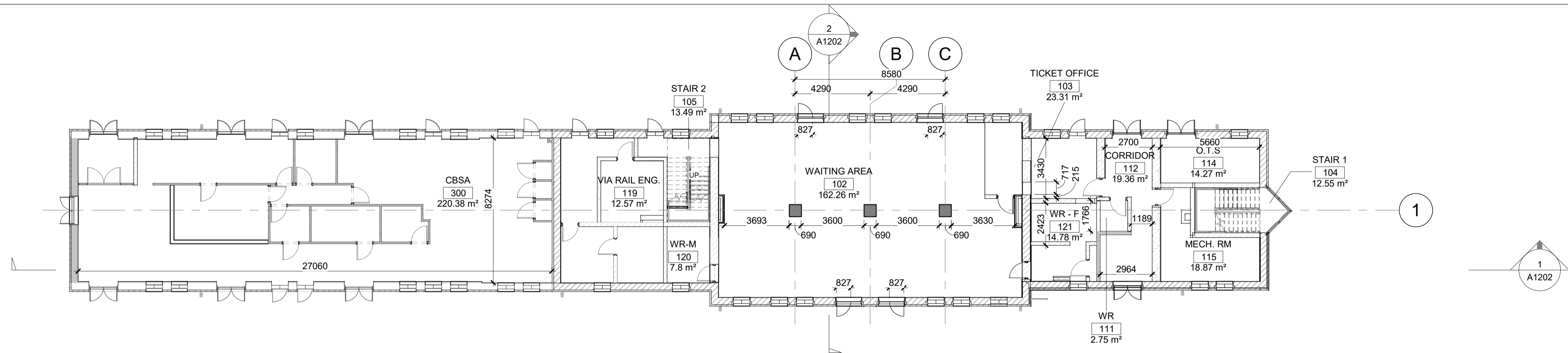
A1100 REF: A1200 SCALE: 1 : 300



No color scheme assigned to view

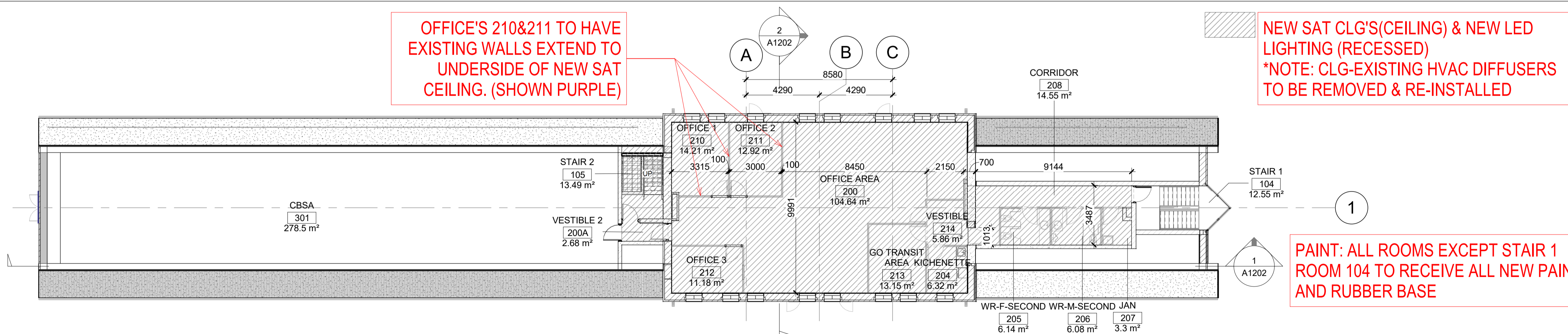
1 | GROUND FLOOR EXISTING

A1100 REF: A1200 SCALE: 1 : 150



3 | SECOND FLOOR EXISTING

A1100 REF: A1200 SCALE: 1 : 150



OFFICE'S 210&211 TO HAVE EXISTING WALLS EXTEND TO UNDERSIDE OF NEW SAT CEILING. (SHOWN PURPLE)

NEW SAT CLG'S(CEILING) & NEW LED LIGHTING (RECESSED)
*NOTE: CLG-EXISTING HVAC DIFFUSERS TO BE REMOVED & RE-INSTALLED

PAINT: ALL ROOMS EXCEPT STAIR 1 ROOM 104 TO RECEIVE ALL NEW PAINT AND RUBBER BASE

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			P.LAPALIKAR 2023/09/22	G.DANESHGAR 2023/04/21		
			CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22		
			SCALE: AS SHOWN	FULL SIZE ONLY		
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
B	2024/02/08	ISSUED FOR TENDER				
A	2023/04/24	ISSUED FOR BUILDING PERMIT				

ONTARIO ASSOCIATION OF ARCHITECTS
SHERY KOZHIMALA CHERIAN
LICENCE 7610

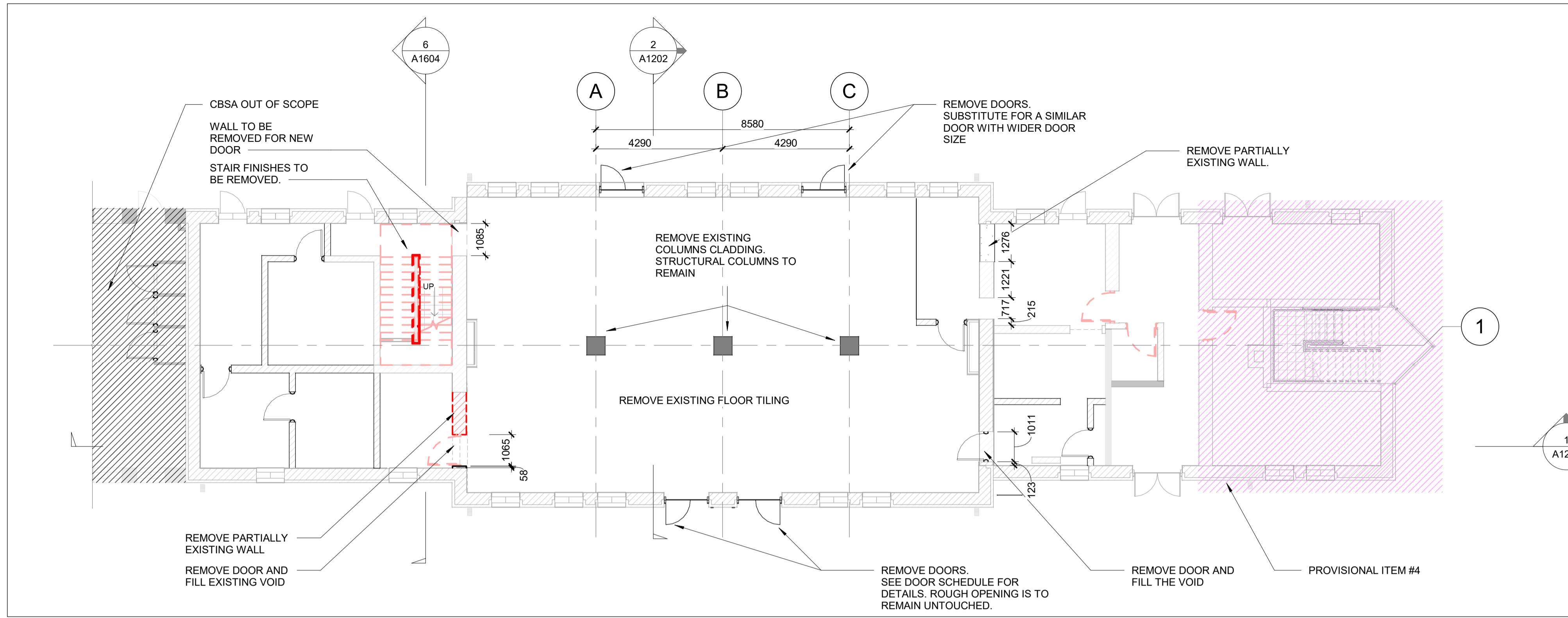
ARCHITECTURE | 49
PROJECT NO. BE20101016
ISSUED FOR TENDER

NIAGARA FALLS TRAIN STATION UPGRADES
EXISTING - FLOOR PLANS

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1100
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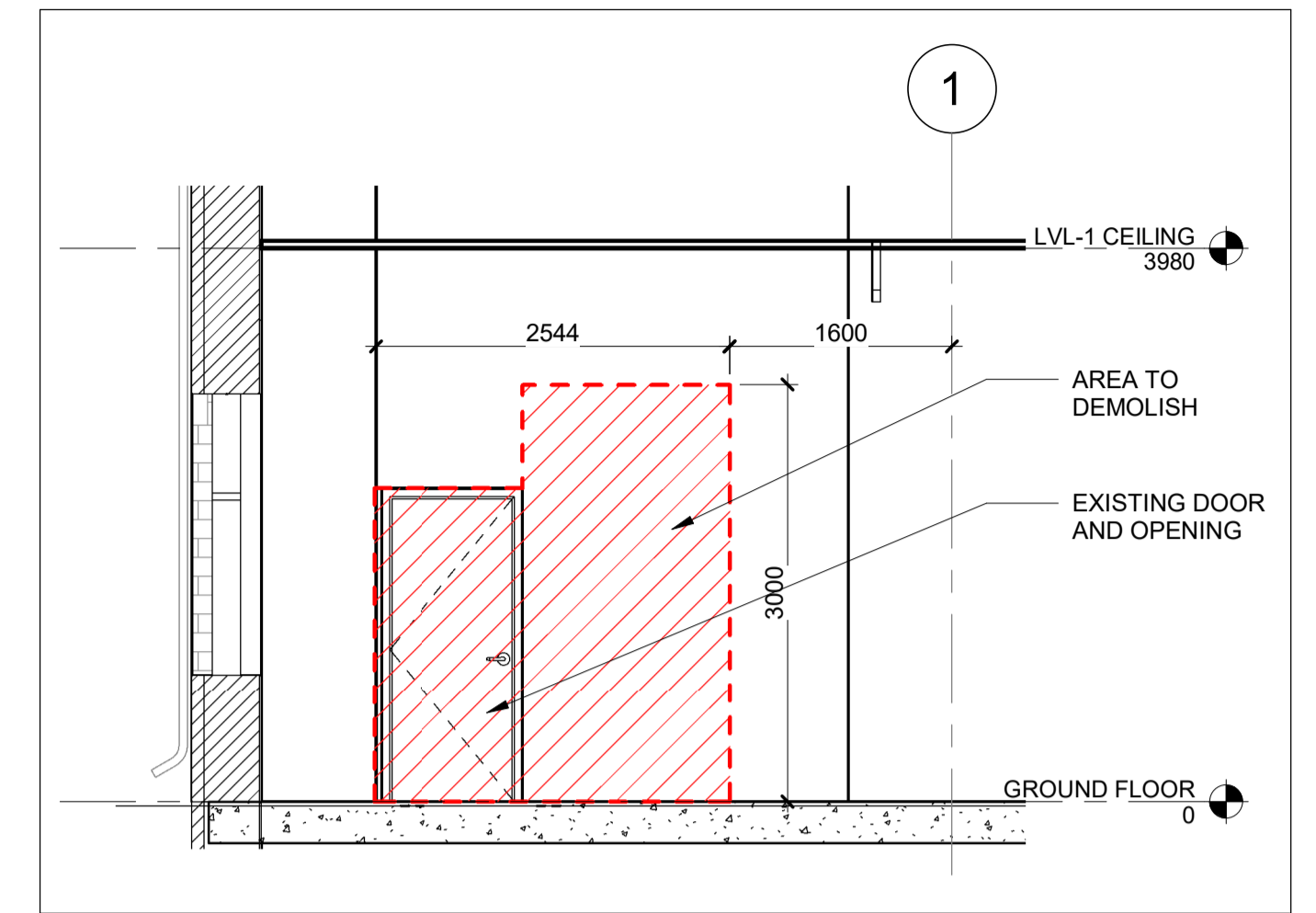
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



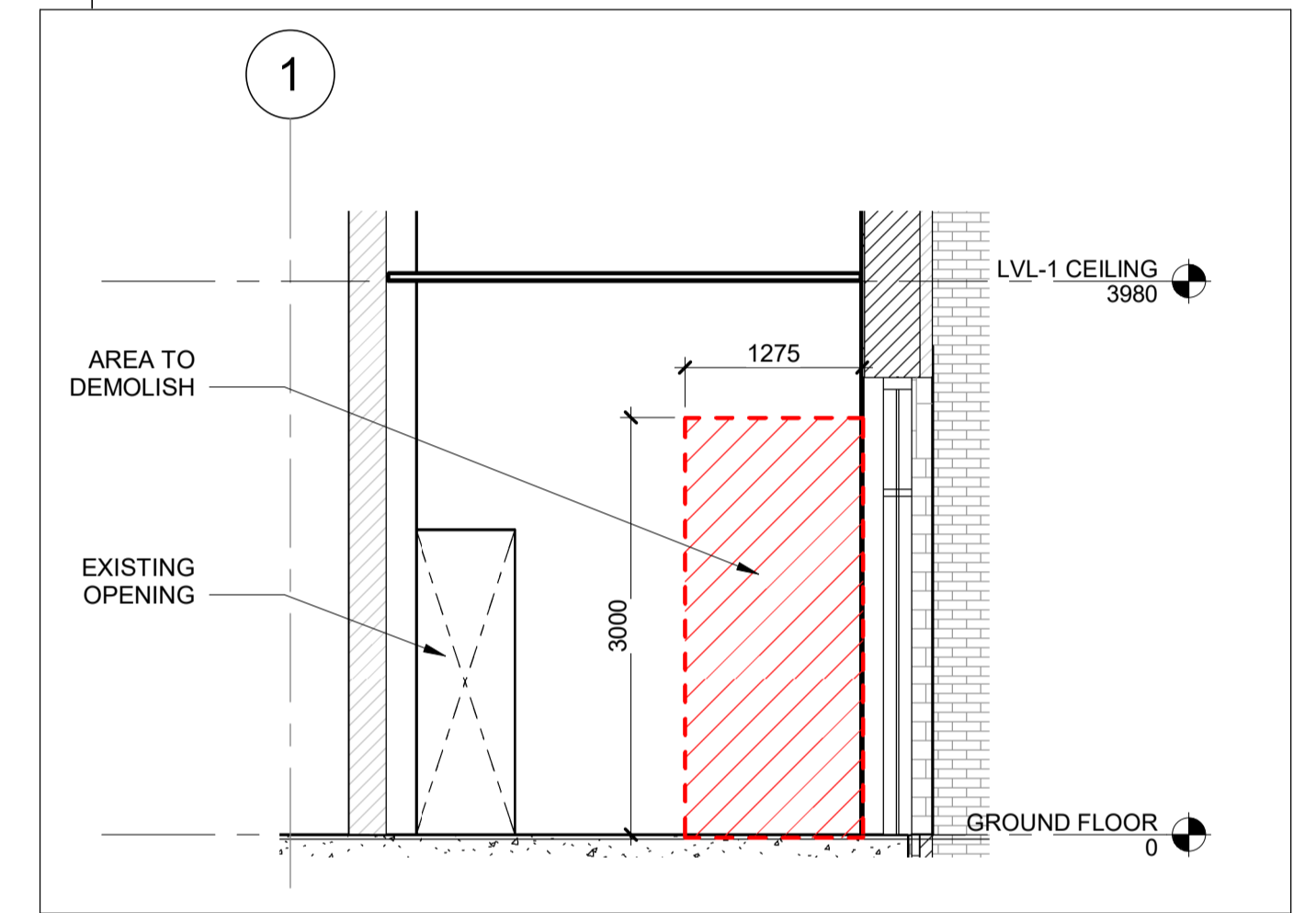
1 GROUND FLOOR DEMOLITION-BASE BID

A1200 REF: A1200 SCALE: 1:100



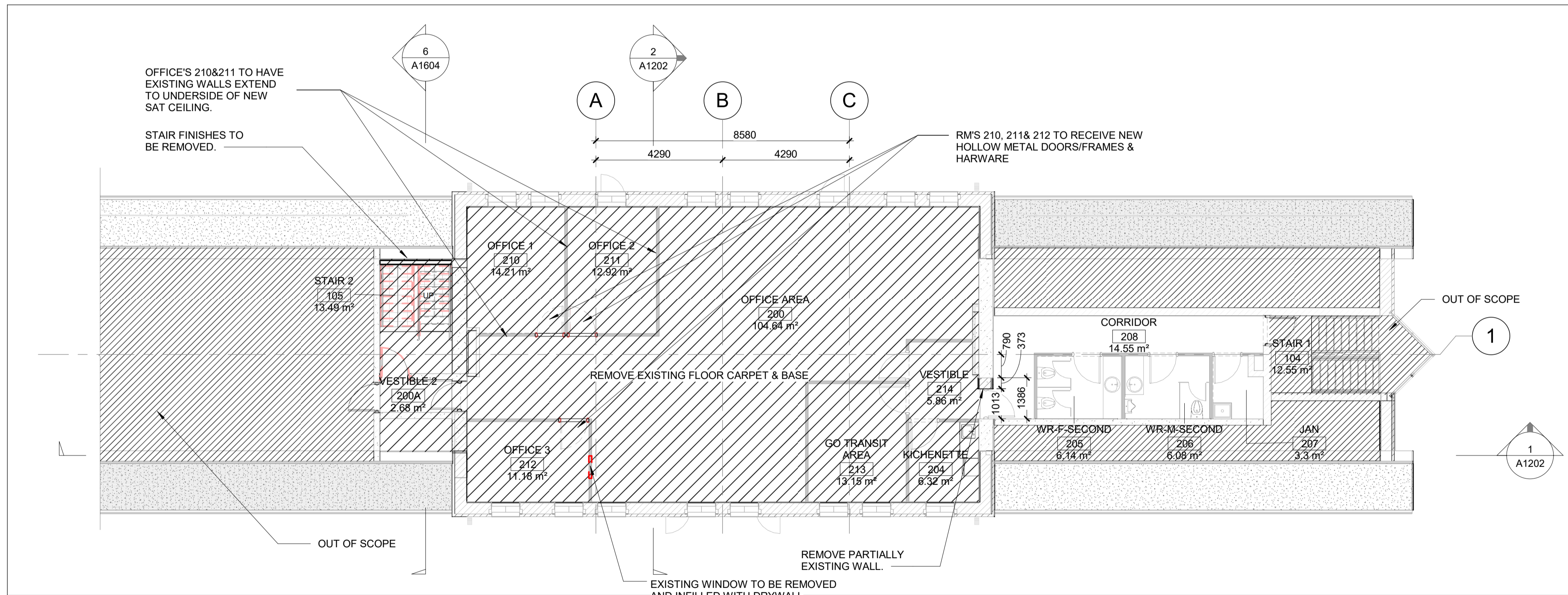
3 ELEVATION - WASHROOM ACCESS-BASE BID

A1200 SCALE: 1:50



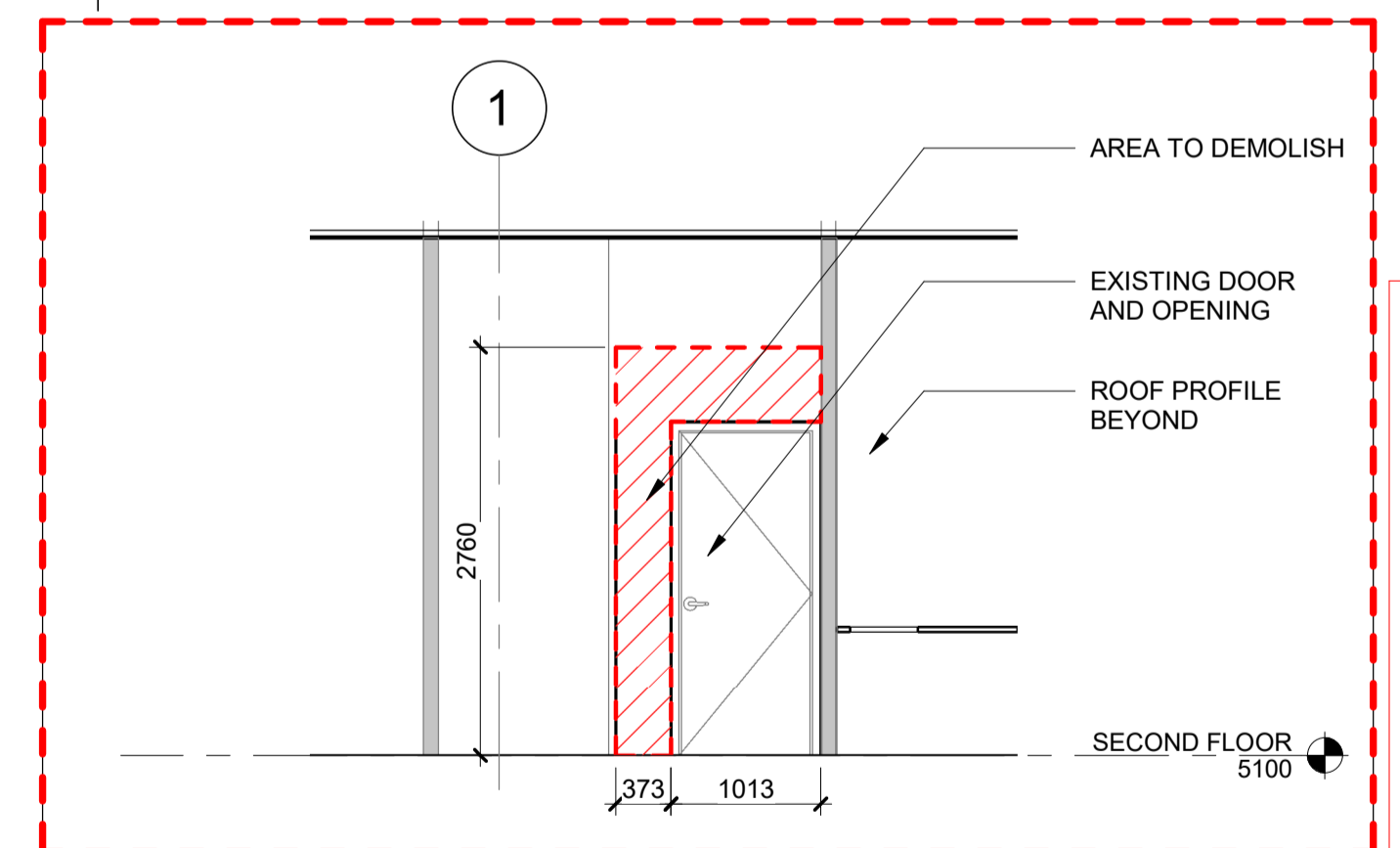
6 ELEVATION - TICKET OFFICE-BASE BID

A1200 REF: A1300 SCALE: 1:50



2 SECOND FLOOR DEMOLITION

A1200 REF: A1200 SCALE: 1:100



5 ELEVATION - SECOND FLOOR WSHR.

A1200 SCALE: 1:50

LEGEND:
 - - - IN RED ELEMENTS TO DEMOLISH
 — IN GREY ELEMENTS TO KEEP

NOTES:
 1. MAKE GOOD ALL EXISTING SURFACES TO ALLOW FOR NEW WORKS.
 2. MECH/ ELEC DEMO PLANS ARE TO BE READ IN JUNCTION WITH THESE PLANS.

CBSA 301 278.5 m²

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			P.LAPALIKAR 2023/09/22	G.DANESHGAR 2023/04/21		
			CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22		
			SCALE: AS SHOWN	FULL SIZE ONLY		
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
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		A	2023/04/24	ISSUED FOR BUILDING PERMIT		

ONTIARIO ASSOCIATION OF ARCHITECTS
 SHERY KOZHIMALA CHERIAN
 LICENCE 7610

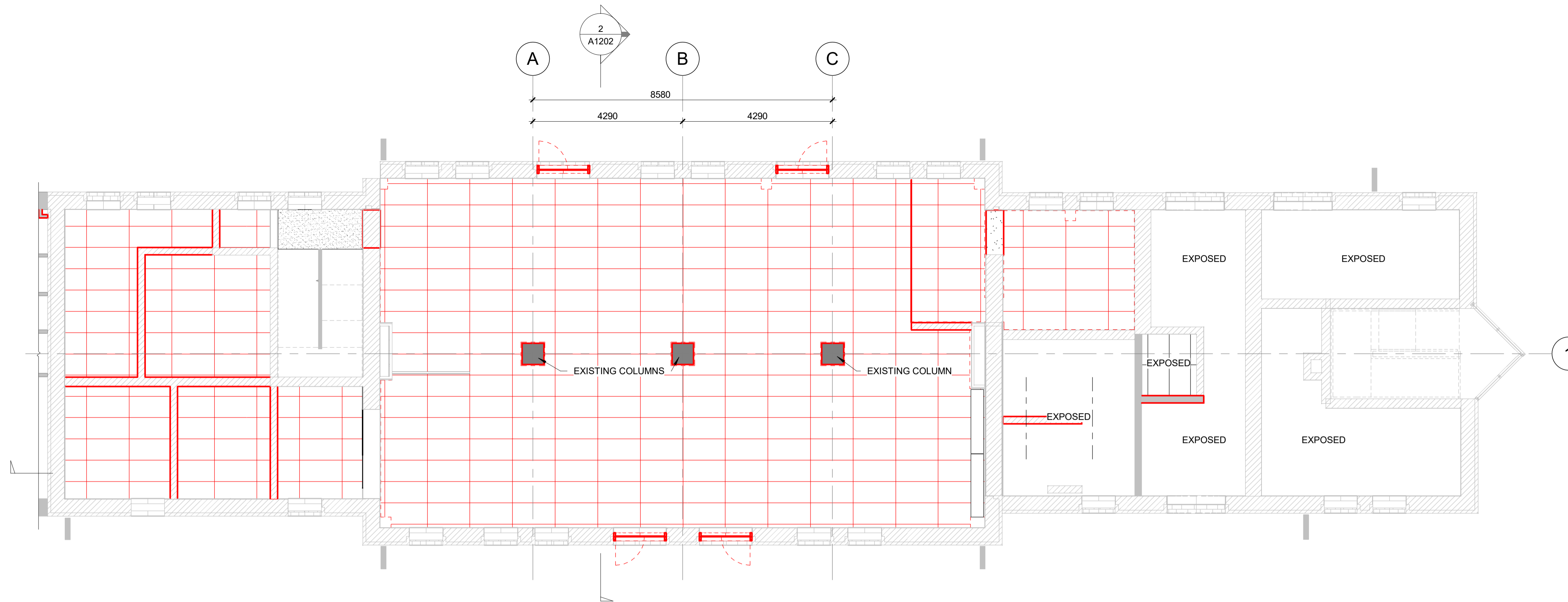
ARCHITECTURE | 49
 PROJECT NO. BE20101016
 ISSUED FOR TENDER

NIAGARA FALLS TRAIN STATION UPGRADES
 DEMOLITION - FLOOR PLANS

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1200
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METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

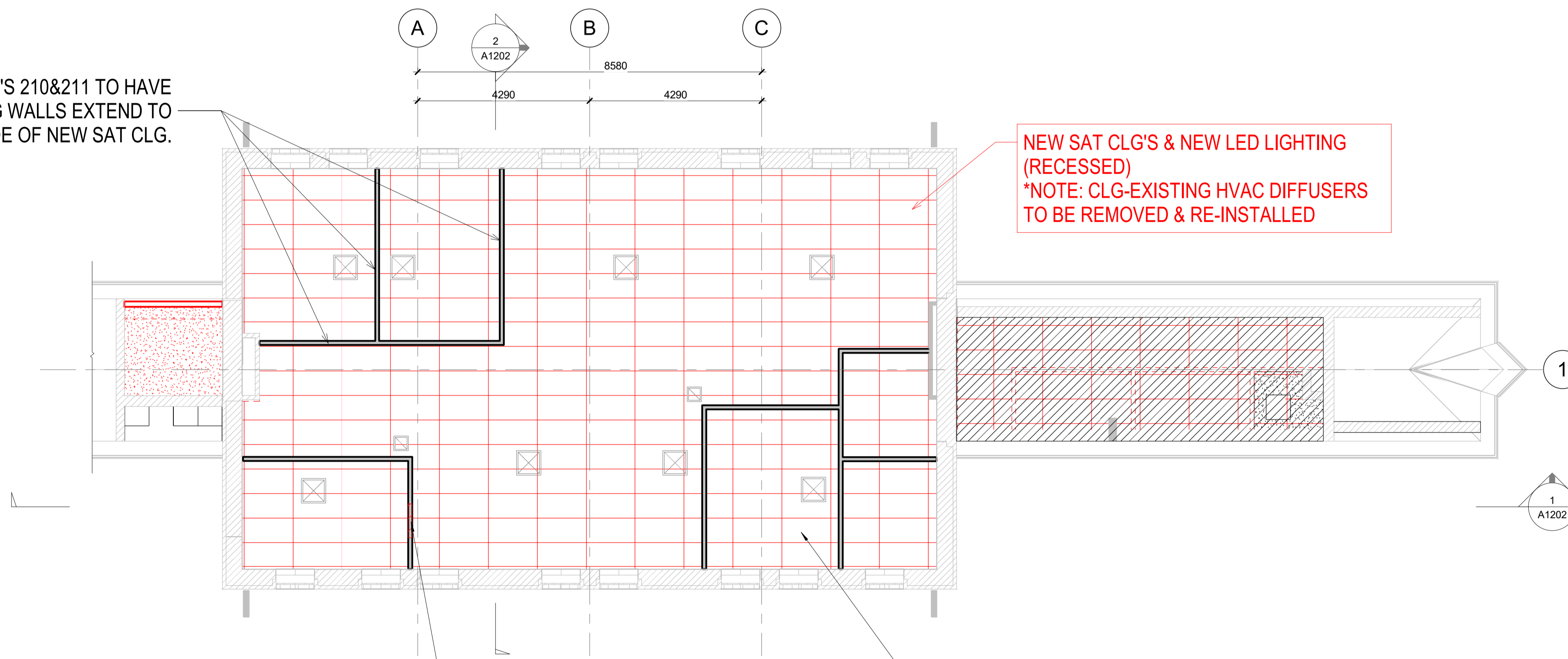


1 RCP GROUND FLOOR DEMOLITION-BASE BID

A1201 REF: A1200 SCALE: 1 : 75

OFFICE'S 210&211 TO HAVE EXISTING WALLS EXTEND TO UNDERSIDE OF NEW SAT CLG.

NEW SAT CLG'S & NEW LED LIGHTING (RECESSED)
*NOTE: CLG-EXISTING HVAC DIFFUSERS TO BE REMOVED & RE-INSTALLED



2 RCP SECOND FLOOR DEMOLITION-BASE BID

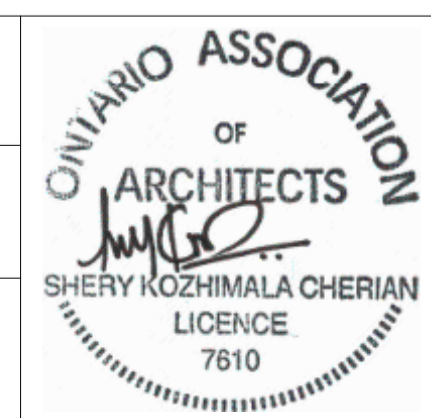
A1201 REF: A1200 SCALE: 1 : 75

LEGEND:
- - - IN RED ELEMENTS TO DEMOLISH
— IN GREY ELEMENTS TO KEEP

NOTES:
1. MAKE GOOD ALL EXISTING SURFACES TO ALLOW FOR NEW WORKS.
2. MECH/ELEC DEMO PLANS ARE TO BE READ IN JUNCTION WITH THESE PLANS.

REFERENCE DRAWINGS	ISSUE	REVISIONS	DATE	ISSUED FOR	REV.	DATE
	B	2024/02/08	ISSUED FOR TENDER			
	A	2023/04/24	ISSUED FOR BUILDING PERMIT			

DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49
PROJECT NO. BE20101016
ISSUED FOR TENDER

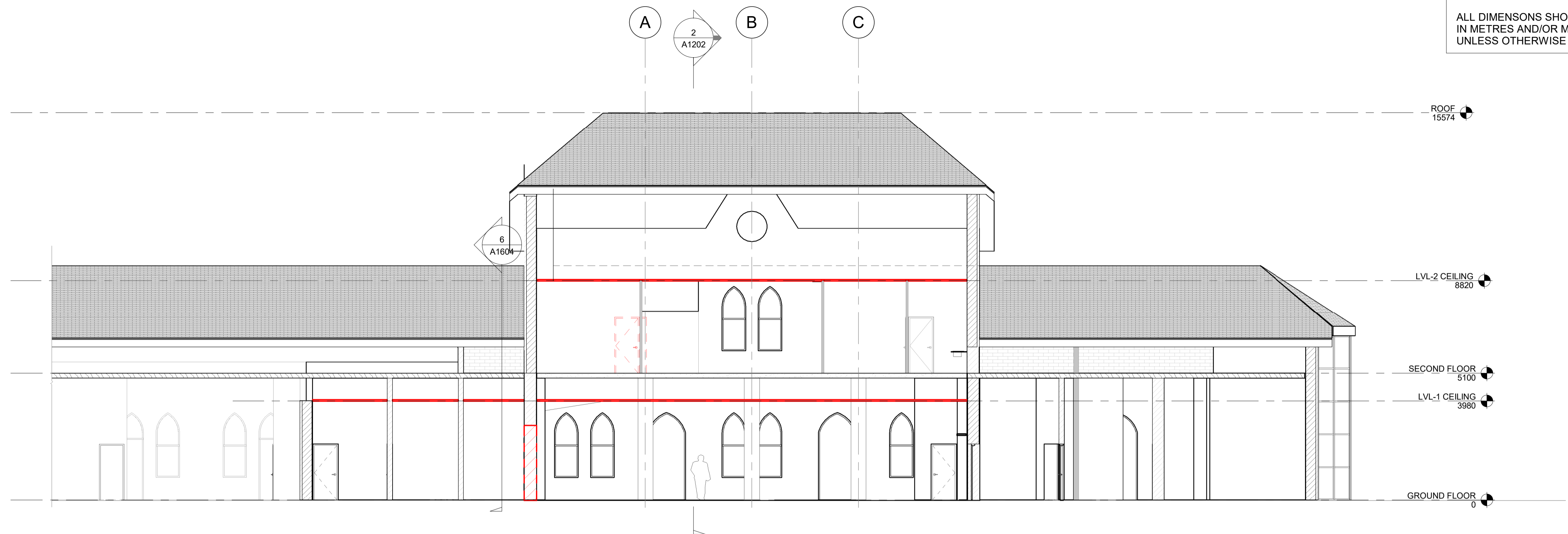


**NIAGARA FALLS TRAIN STATION UPGRADES
DEMOLITION - RCP**

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1201
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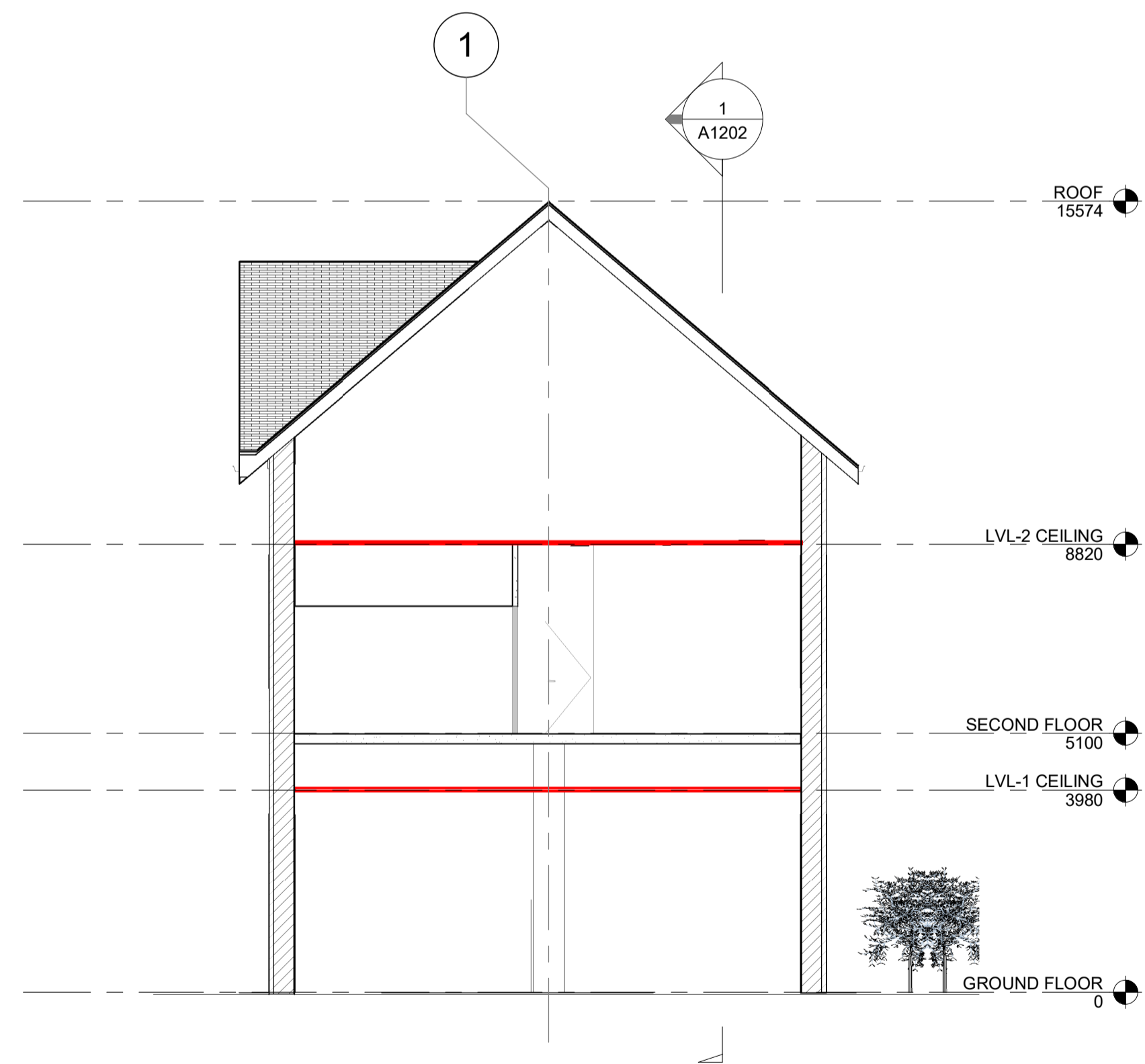
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | DEMOLITION LONGITUDINAL SECTION

A1202 REF: A1100 SCALE: 1 : 100

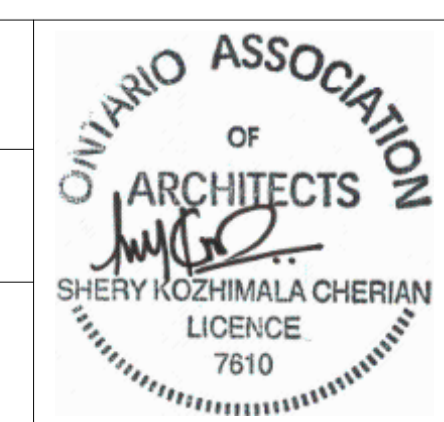


2 | DEMOLITION TRANSVERSAL SECTION

A1202 REF: A1100 SCALE: 1 : 100

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
		B	2024/02/08	ISSUED FOR TENDER	
		A	2023/04/24	ISSUED FOR BUILDING PERMIT	

DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49

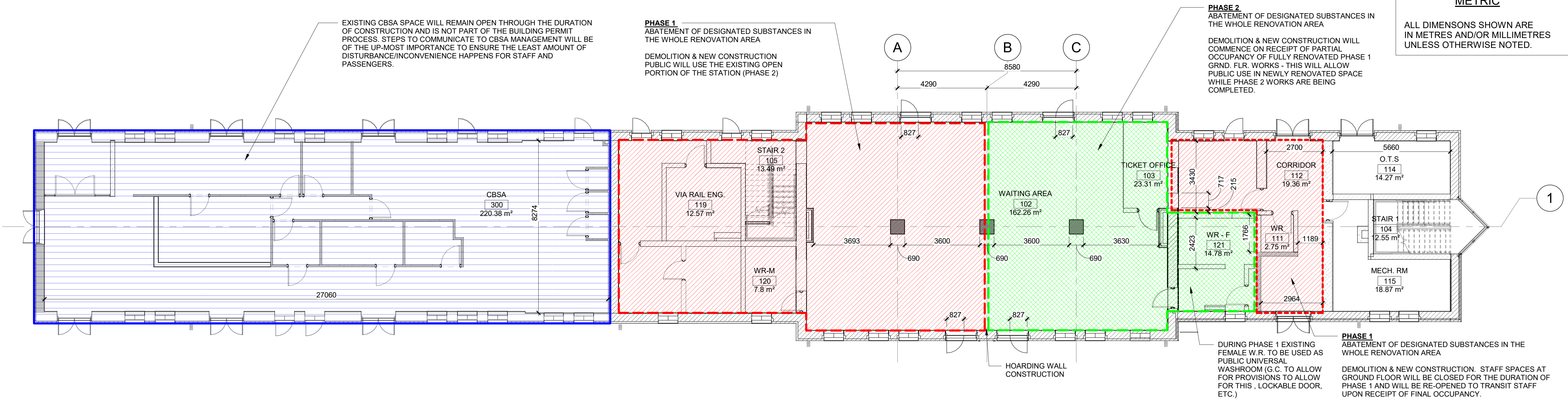
PROJECT NO. BE20101016

ISSUED FOR TENDER



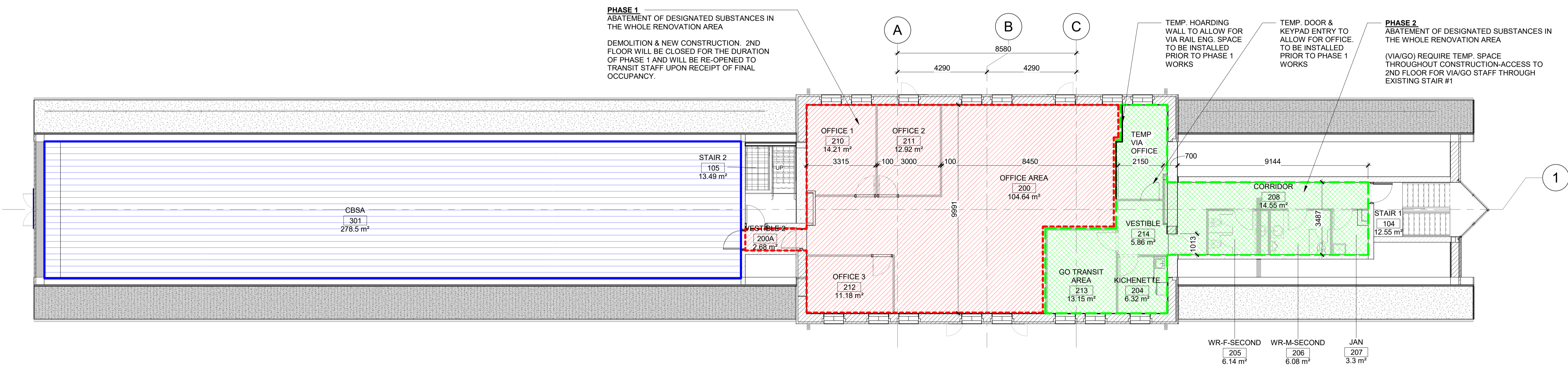
NIAGARA FALLS TRAIN STATION UPGRADES			
DEMOLITION - BUILDING SECTIONS			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1202

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | GROUND FLOOR EXISTING STAGING

A1251 REF: A1200 SCALE: 1 : 100



2 | SECOND FLOOR EXISTING STAGING

A1251 REF: A1200 SCALE: 1 : 100

STAGING NOTES:

- DURING ABATEMENT:** GENERAL CONTRACTOR (GC) MUST REMOVE ALL ASBESTOS CONTAINING MATERIALS (ACM) AS PER HAZARDOUS BUILDING MATERIALS ASSESSMENT PRIOR TO ALTERATION OR MAINTENANCE WORK. HE ALSO MUST:
 - PREPARE AN ASBESTOS MANAGEMENT PROGRAM (AMP)
 - REMOVE AND DISPOSE OF POLYCHLORINATED BIPHENYLS (PCB) BALLASTS AND MERCURY-CONTAINING ITEMS WHEN TAKEN OUT OF SERVICE AS PER DEMOLITION SPECS.
 - FOLLOW APPROPRIATE SAFE WORK PROCEDURES WHEN HANDLING OR DISTURBING ASBESTOS, LEAD, SILICA AND MOULD.
 - REMEDiate THE MATERIALS AFFECTED BY MOULD AS RECOMMENDED IN HAZARDOUS BUILDING MATERIALS ASSESSMENT
- DURING CONSTRUCTION PHASES 1 AND 2** THE PUBLIC WILL CONTINUOUSLY HAVE ACCESS TO WASHROOMS AND REQUIRED PATH OF EXITS.

STAGING LEGEND

- STAGING PHASE 1 - PHASE FOR ABATEMENT DEMOLITION AND CONSTRUCTION
- STAGING PHASE 2 - PHASE FOR ABATEMENT DEMOLITION AND CONSTRUCTION. PHASE 2 CANNOT COMMENCE UNTIL PARTIAL OCCUPANCY REVIEW HAS BEEN GRANTED BY CITY FOR PHASE 1
- CBSA (NIC.)

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			P.LAPALIKAR 2023/09/22	G.DANESHGAR 2023/04/21		
			CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22		
			SCALE: AS SHOWN	FULL SIZE ONLY		
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
		B	2024/02/08	ISSUED FOR TENDER		
		A	2023/04/24	ISSUED FOR BUILDING PERMIT		

ONTARIO ASSOCIATION OF ARCHITECTS
 SHERY KOZHIMALA CHERIAN
 LICENCE 7610

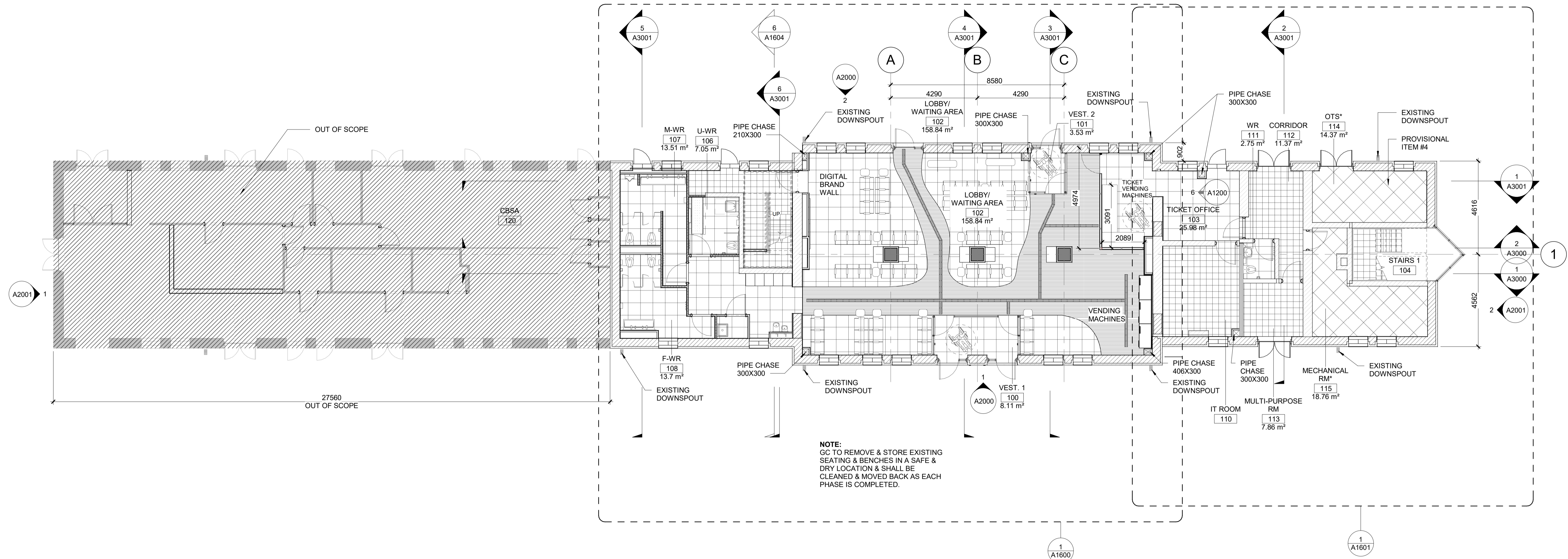
ARCHITECTURE | 49
 PROJECT NO. BE20101016
 ISSUED FOR TENDER

NIAGARA FALLS TRAIN STATION UPGRADES STAGING

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1251
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METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | GROUND FLOOR

A1300 REF: A1200 SCALE: 1 : 100

REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY: P. LAPALIKAR 2023/09/22		DESIGNED BY: G. DANESHGAR 2023/04/21	
		B	2024/02/08	ISSUED FOR TENDER					
		A	2023/04/24	ISSUED FOR BUILDING PERMIT					
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE	SCALE: AS SHOWN	FULL SIZE ONLY	



ARCHITECTURE | 49

PROJECT NO. BE20101016

ISSUED FOR TENDER

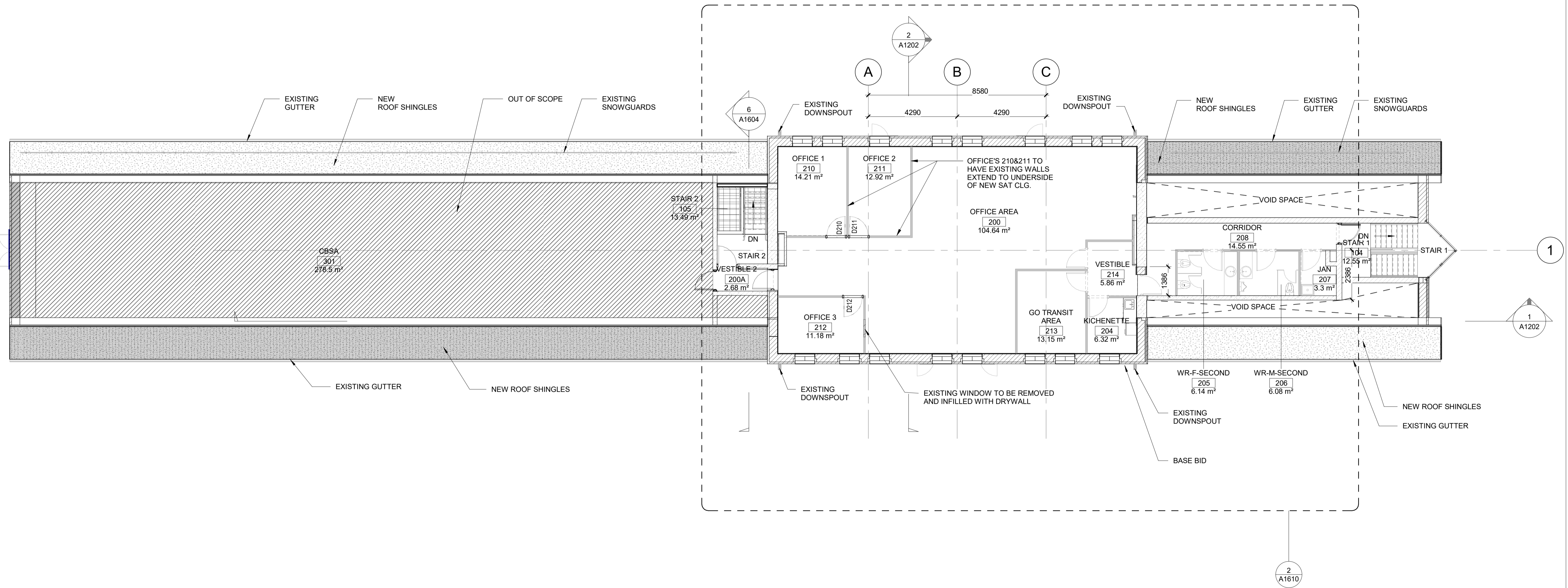


**NIAGARA FALLS TRAIN STATION UPGRADES
GROUND FLOOR PLAN**

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1300
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METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



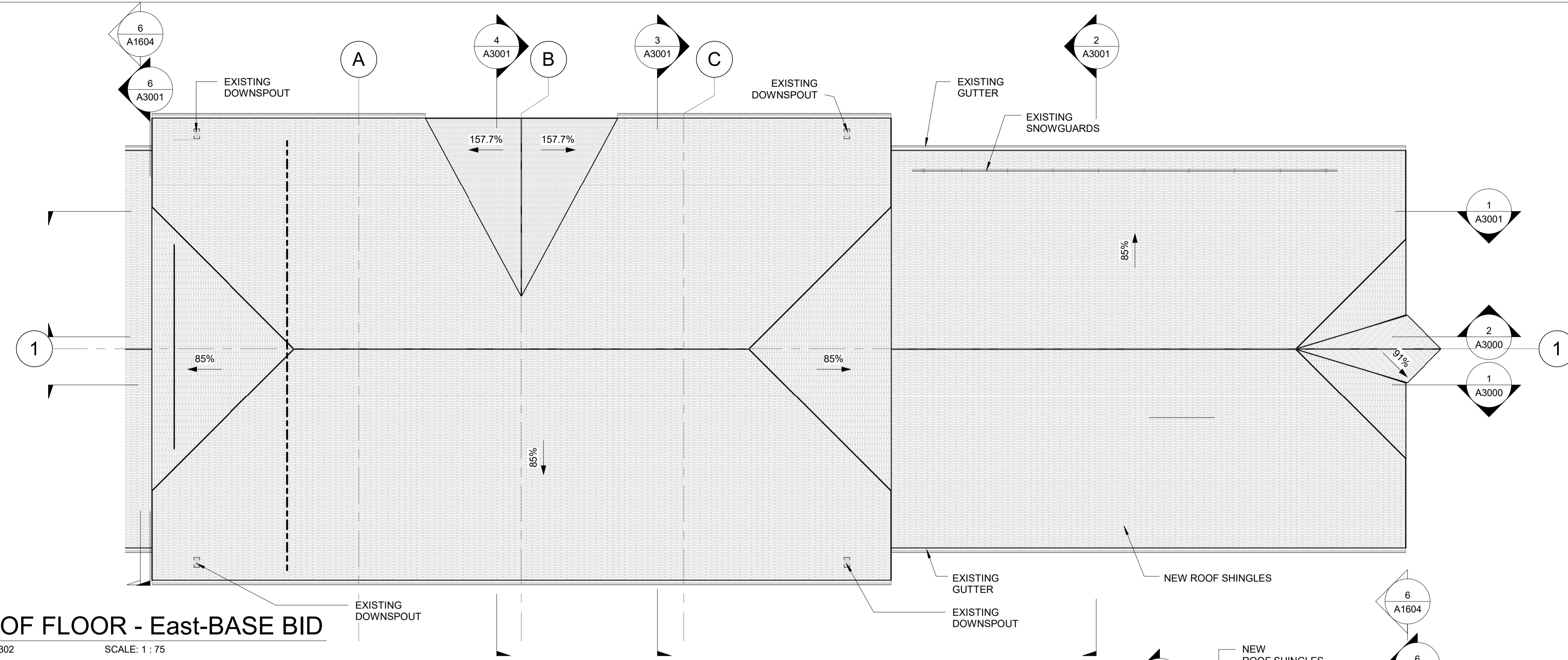
1 | SECOND FLOOR(P)

A1301 REF: A1200 SCALE: 1:100

REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY: P.LAPALIKAR 2023/09/22		DESIGNED BY: G.DANESHGAR 2023/04/21		 ARCHITECTURE 49 PROJECT NO. BE20101016 ISSUED FOR TENDER	 Niagara Region	NIAGARA FALLS TRAIN STATION UPGRADES SECOND FLOOR PLAN			
						CHECKED BY: S.CHERIAN 2023/09/22		APPROVED BY: S.CHERIAN 2023/09/22				CONTRACT NO. STATION RENOVATION			
						SCALE: AS SHOWN		FULL SIZE ONLY				DWG. NO.			
		B	2024/02/08	ISSUED FOR TENDER							REV.	SHEET			
		A	2023/04/24	ISSUED FOR BUILDING PERMIT							A	A1301			
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE									

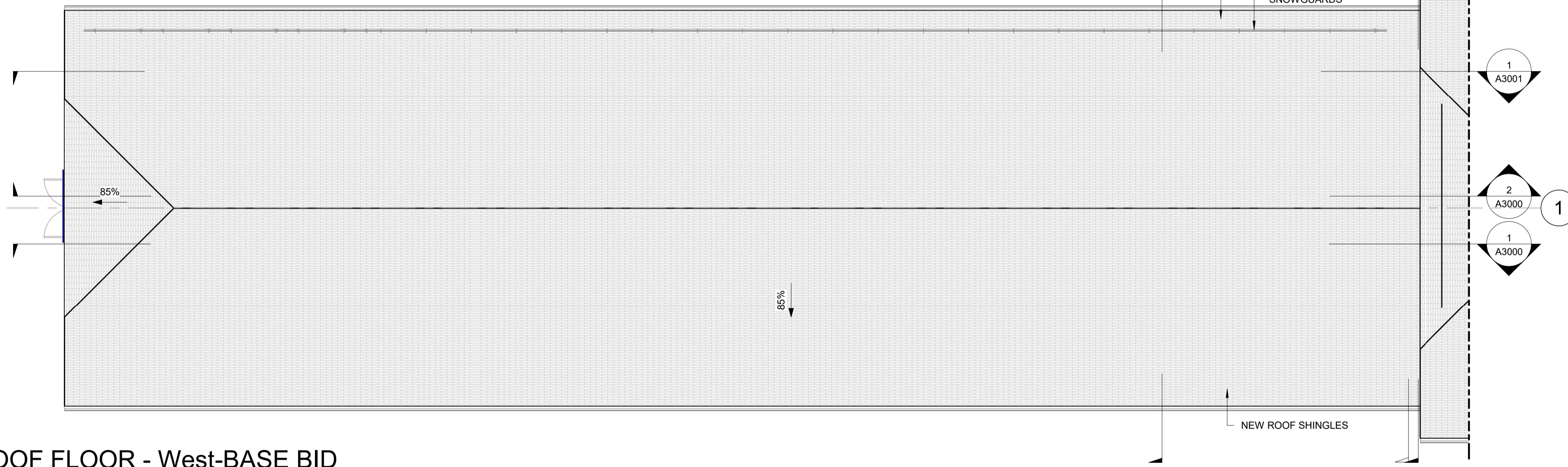
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 ROOF FLOOR - East-BASE BID

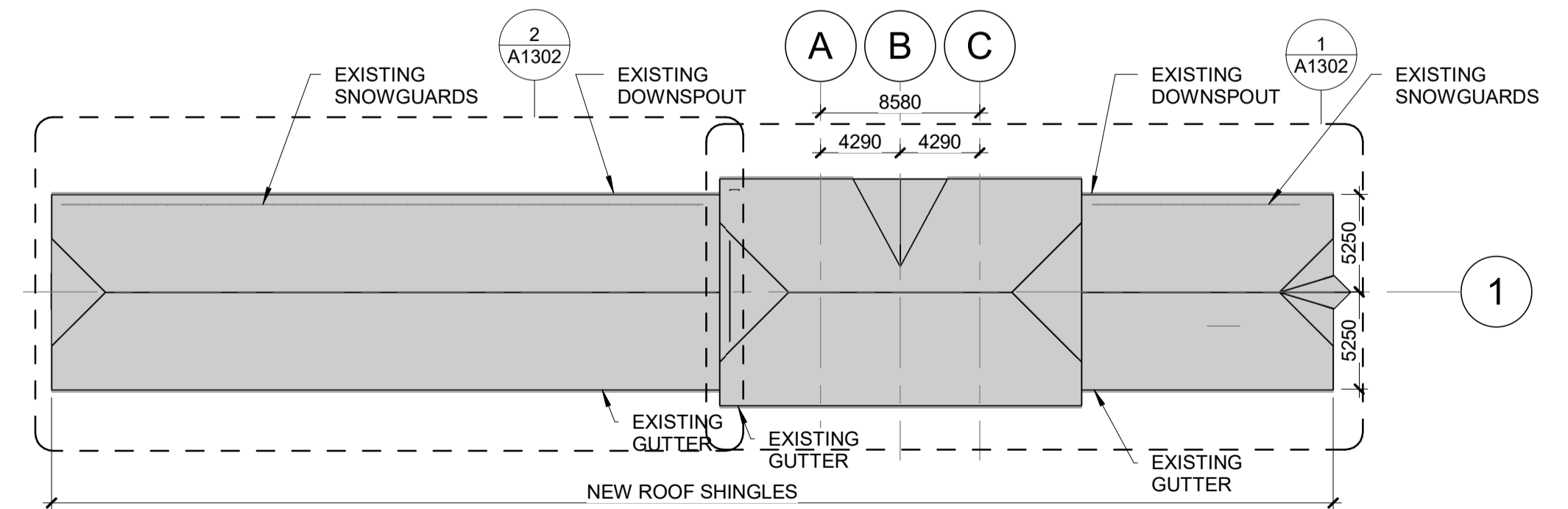
A1302 REF: A1302 SCALE: 1 : 75



2 ROOF FLOOR - West-BASE BID

A1302 REF: A1302 SCALE: 1 : 75

- ROOFING NOTES**
1. NEW SHINGLES FULL ROOF AREA
 2. EXISTING SNOWGUARDS TO BE REPLACED AT THE SAME LOCATIONS AFTER ROOFING WORKS.
 3. GC TO PROVIDE A MIN. OF 3 SAMPLES OF ROOF SHINGLE TO ALLOW FOR CITY HERITAGE APPROVALS



REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			P.LAPALIKAR 2023/09/22	G.DANESHGAR 2023/04/21		
			CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22		
			SCALE: AS SHOWN	FULL SIZE ONLY		
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
		B	2024/02/08	ISSUED FOR TENDER		
		A	2023/04/24	ISSUED FOR BUILDING PERMIT		

ONTARIO ASSOCIATION OF ARCHITECTS
 SHERY KOZHIMALA CHERIAN
 LICENCE 7610

ARCHITECTURE | 49
 PROJECT NO. BE20101016
ISSUED FOR TENDER

NIAGARA FALLS TRAIN STATION UPGRADES ROOF PLAN

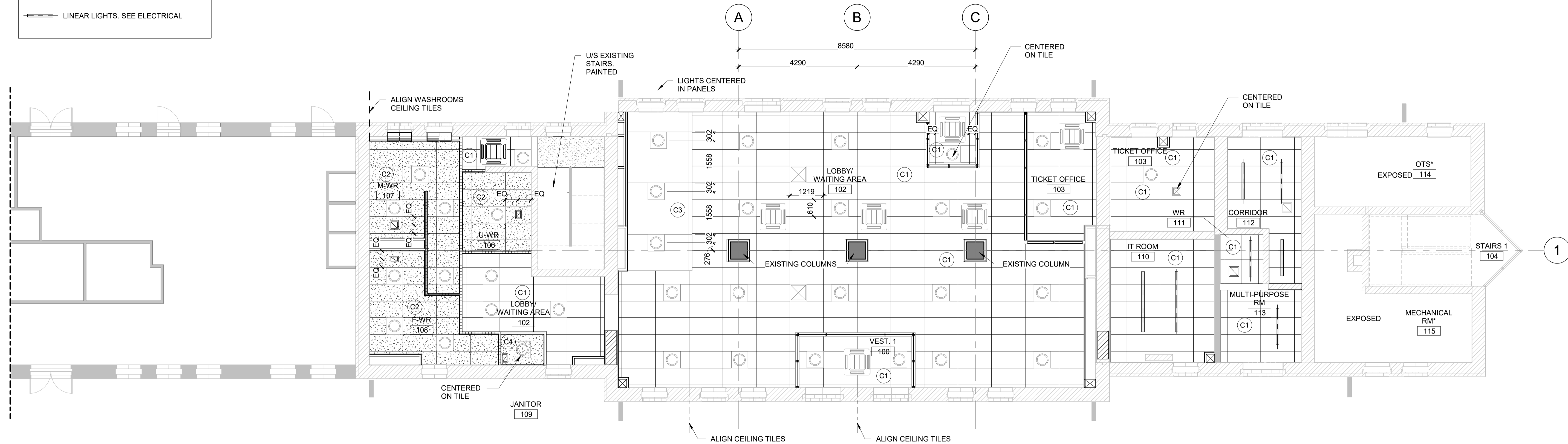
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1302
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METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

LEGEND

- C1 ACOUSTIC CEILING TILE 24" x 48" (WHITE)
- C2 ACOUSTIC CEILING TILE 24" x 48" VINYL COATED (WHITE)
- C3 HPL PANELS ON CEILING
- C4 GWB CEILING
- EGGCRATE. SEE MECHANICAL
- CEILING CASSETTE. SEE MECHANICAL
- CONE DIFFUSER. SEE MECHANICAL
- LIGHT FIXTURES. SEE ELECTRICAL
- LINEAR LIGHTS. SEE ELECTRICAL












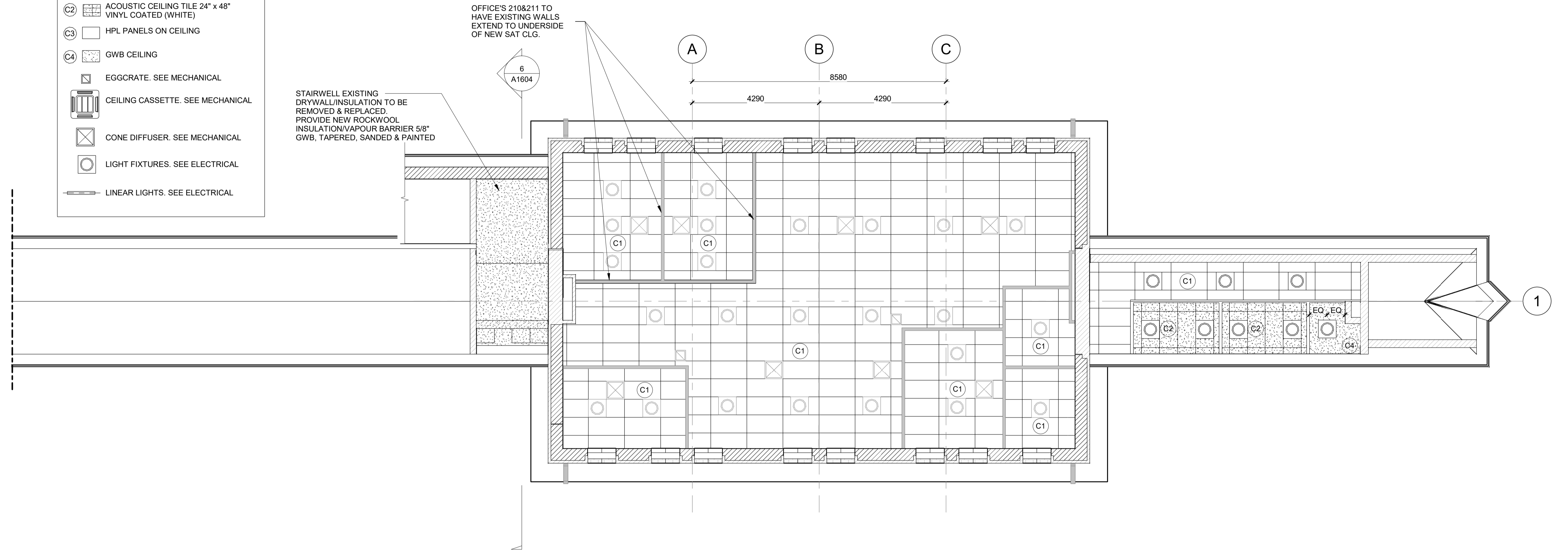
1 | RCP GROUND FLOOR-BASE BID

A1400 REF: A1200 SCALE: 1 : 75

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21	 ARCHITECTS SHERY KOZHIMALA CHERIAN LICENCE 7610	ARCHITECTURE 49	 Niagara Region	NIAGARA FALLS TRAIN STATION UPGRADES RCP GROUND FLOOR PLAN			
			CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22		PROJECT NO. BE20101016		ISSUED FOR TENDER			
			SCALE: AS SHOWN	FULL SIZE ONLY							
	B	2024/02/08	ISSUED FOR TENDER								
	A	2023/04/24	ISSUED FOR BUILDING PERMIT								
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE	CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1400	



LEGEND

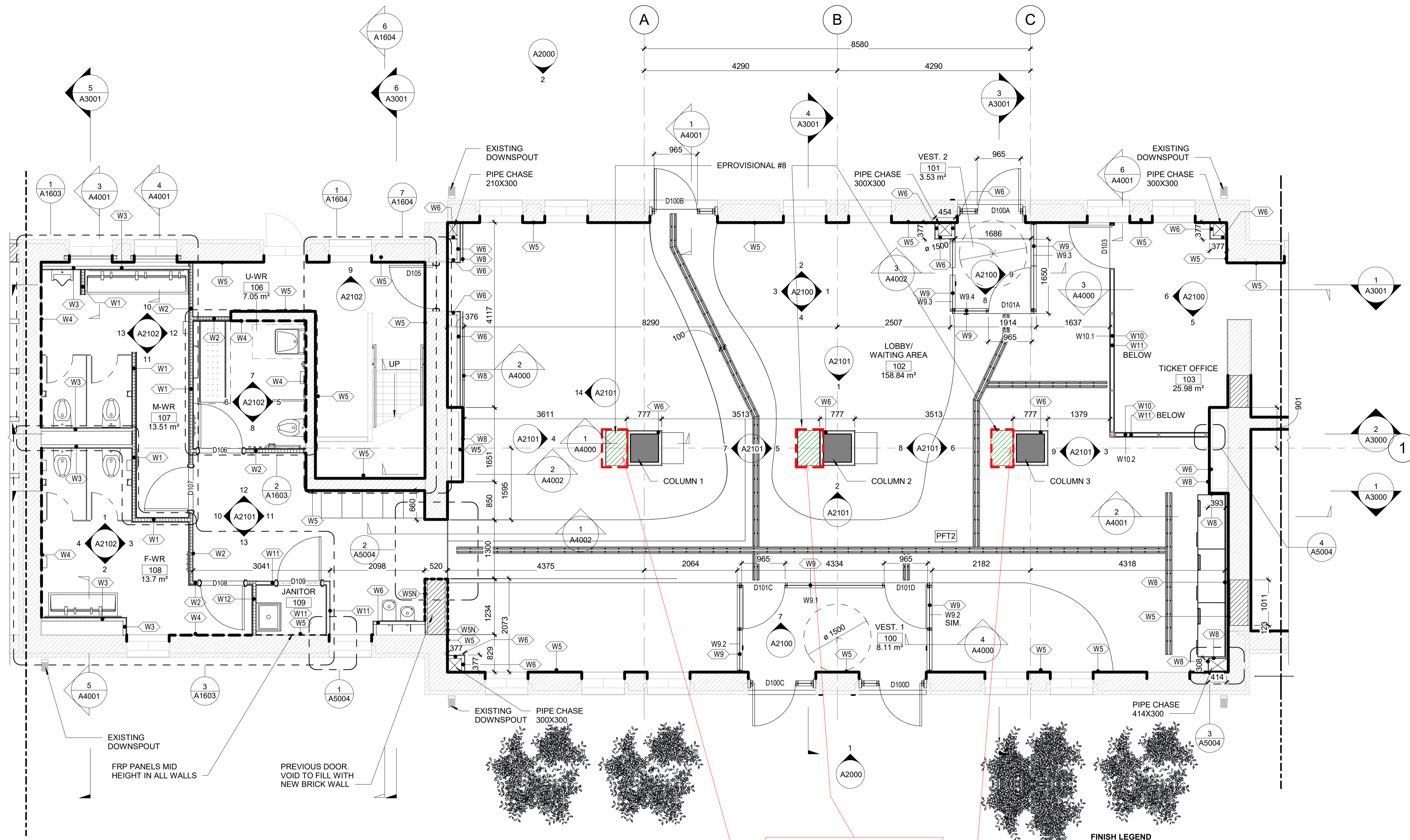
-  ACOUSTIC CEILING TILE 24" x 48" (WHITE)
-  ACOUSTIC CEILING TILE 24" x 48" VINYL COATED (WHITE)
-  HPL PANELS ON CEILING
-  GWB CEILING
-  EGGCRATE. SEE MECHANICAL
-  CEILING CASSETTE. SEE MECHANICAL
-  CONE DIFFUSER. SEE MECHANICAL
-  LIGHT FIXTURES. SEE ELECTRICAL
-  LINEAR LIGHTS. SEE ELECTRICAL



1 | RCP SECOND FLOOR-BASE BID

A1401 | REF: A1200 | SCALE: 1 : 75

REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY: P. LAPALIKAR 2023/09/22		DESIGNED BY: G. DANESHGAR 2023/04/21			
						CHECKED BY: S. CHERIAN 2023/09/22		APPROVED BY: S. CHERIAN 2023/09/22			
						SCALE: AS SHOWN		FULL SIZE ONLY			
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE					
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		A	2023/04/24	ISSUED FOR BUILDING PERMIT							
								ARCHITECTURE 49 PROJECT NO. BE20101016 ISSUED FOR TENDER		NIAGARA FALLS TRAIN STATION UPGRADES RCP SECOND FLOOR PLAN	
								CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1401



PROVISIONAL ITEM #5

FINISH LEGEND

	EXISTING WALL
	EXISTING WALL TO PATCH AND PAINT
	EXISTING WALL TO TILE
	EXISTING WALL WITH RFP CLADDING
	NEW WALL TO PATCH AND PAINT
	PROVISIONAL ITEM #4

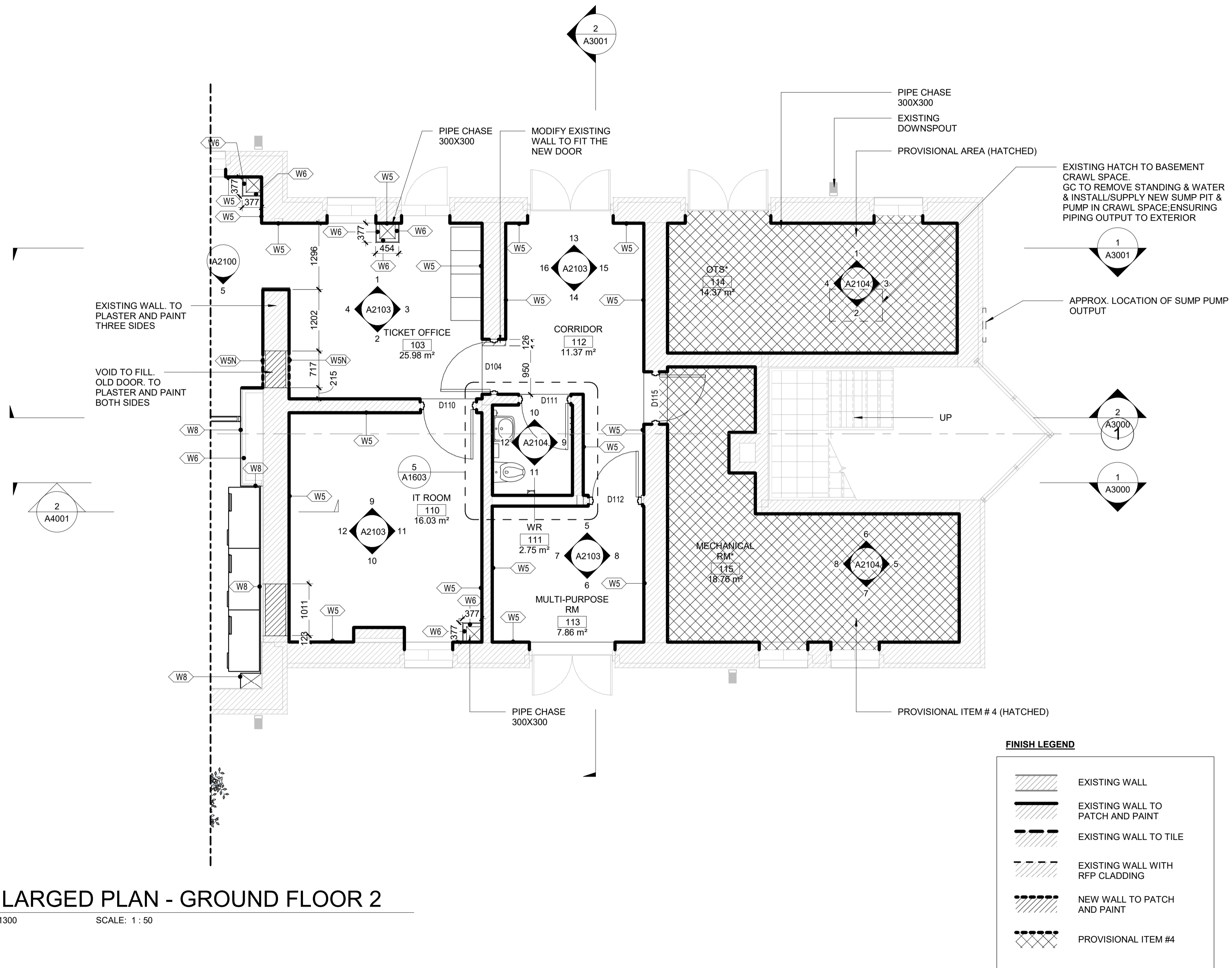
1 ENLARGED PLAN - GROUND FLOOR 1-BASE BID

A1600 REF: A1300 SCALE: 1 : 50

REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY: P. LAPALIKAR 2023/09/22 CHECKED BY: S. CHERIAN 2023/09/22 SCALE: AS SHOWN	DESIGNED BY: G. DANESHGAR 2023/04/21 APPROVED BY: S. CHERIAN 2023/09/22 FULL SIZE ONLY	 ARCHITECTURE 49 PROJECT NO. BE20101016 ISSUED FOR TENDER	 NIAGARA FALLS TRAIN STATION UPGRADES ENLARGED PLAN - GROUND FLOOR	CONTRACT NO.	DWG. NO.	REV.	SHEET
DWG. NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE	STATION RENOVATION			A	A	A1600	

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | ENLARGED PLAN - GROUND FLOOR 2

A1601 REF: A1300 SCALE: 1 : 50

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
		B	2024/02/08	ISSUED FOR TENDER	
		A	2023/04/24	ISSUED FOR BUILDING PERMIT	

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PROJECT NO. BE20101016

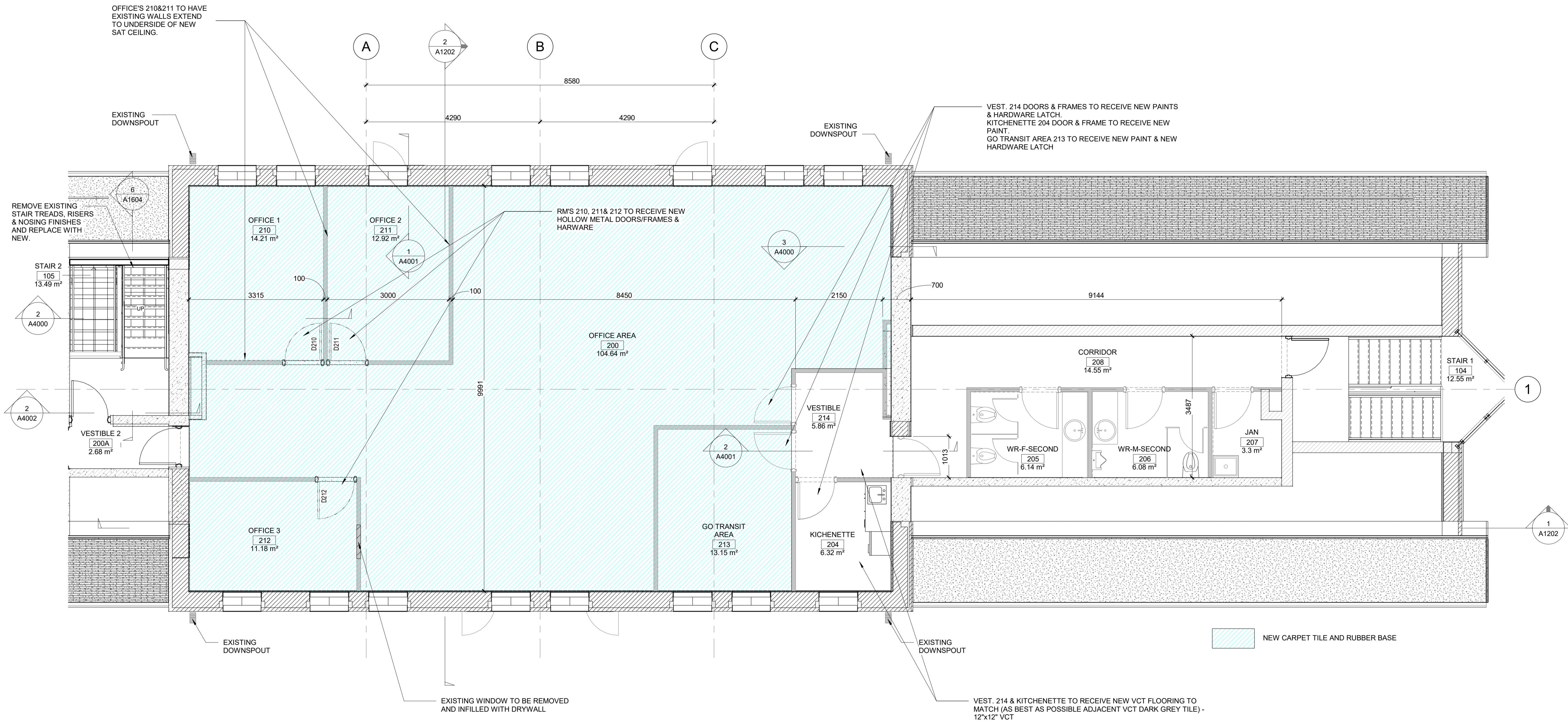
ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES ENLARGED PLAN - GROUND FLOOR 2			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1601

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

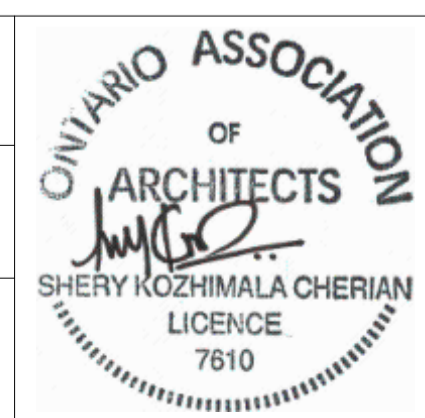


1 | SECOND FLOOR EXISTING-BASE BID

A1602 REF: A1200 SCALE: 1 : 50

REFERENCE DRAWINGS	ISSUE	REVISIONS
DWG NO.	TITLE	NO. DATE ISSUED FOR
		REV. DATE

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SCALE: AS SHOWN	FULL SIZE ONLY



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PROJECT NO. BE20101016

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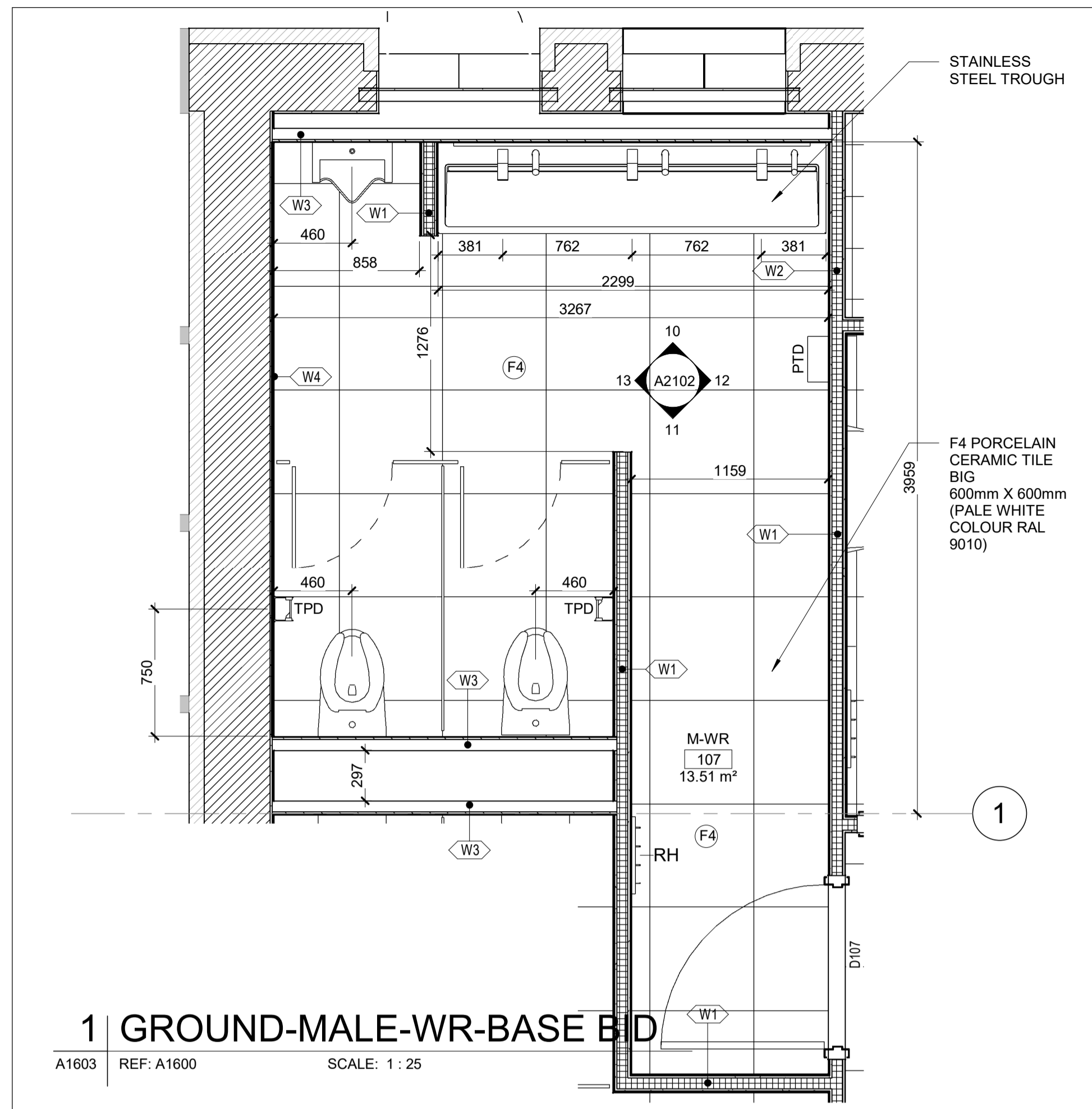
NIAGARA FALLS TRAIN STATION UPGRADES

ENLARGED PLAN - SECOND FLOOR 2

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1602
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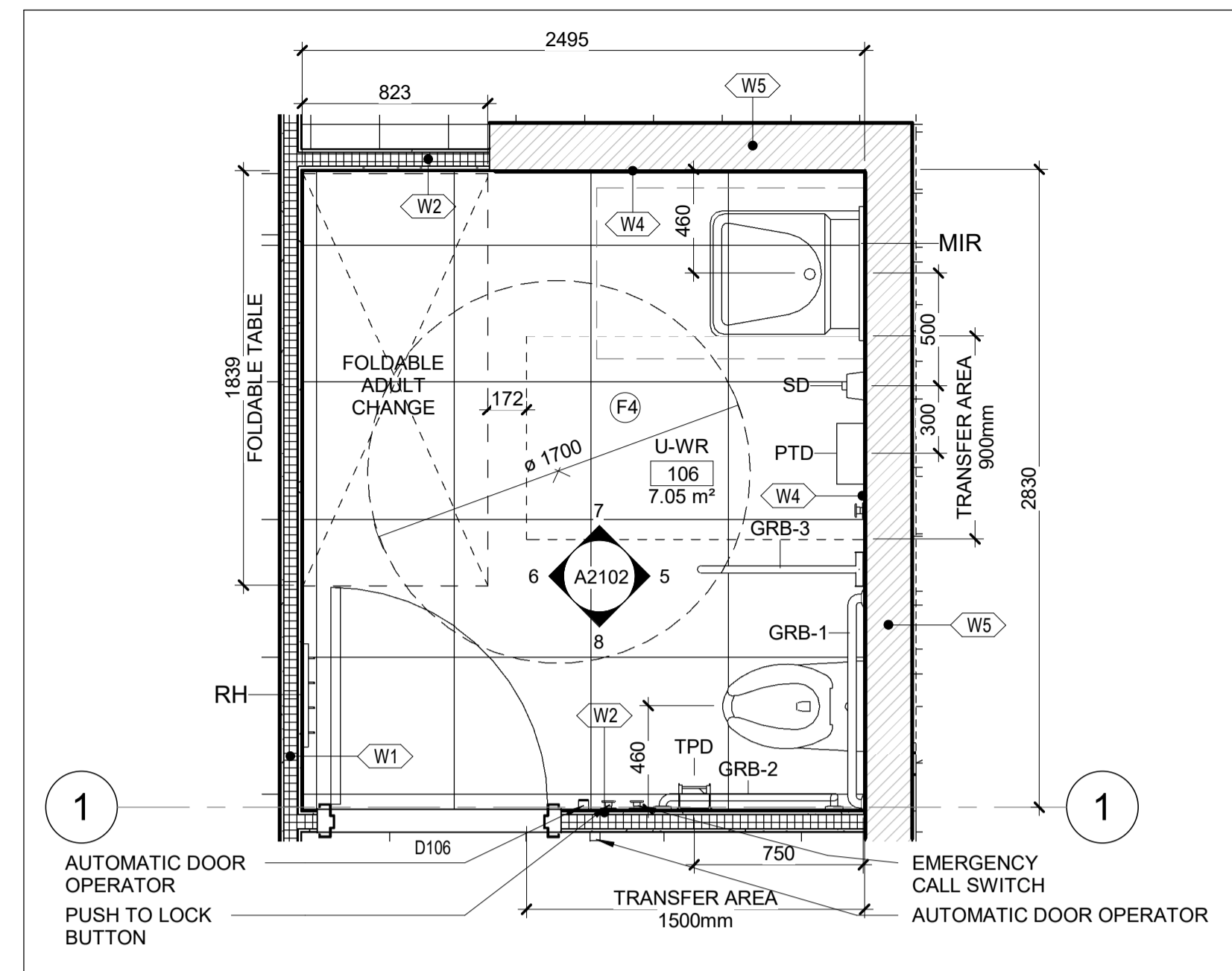
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



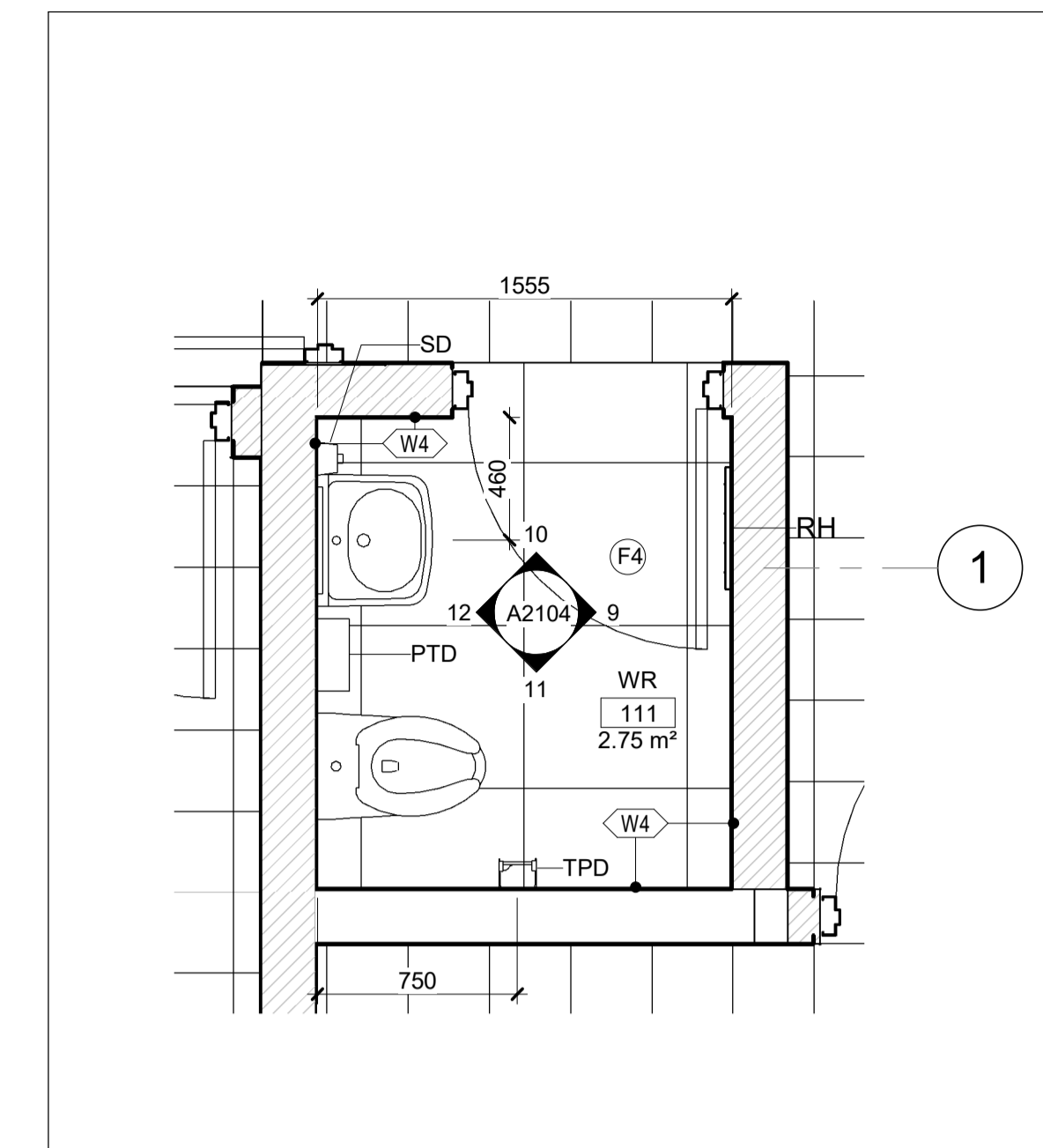
1 | GROUND-MALE-WR-BASE BID

A1603 REF: A1600 SCALE: 1:25



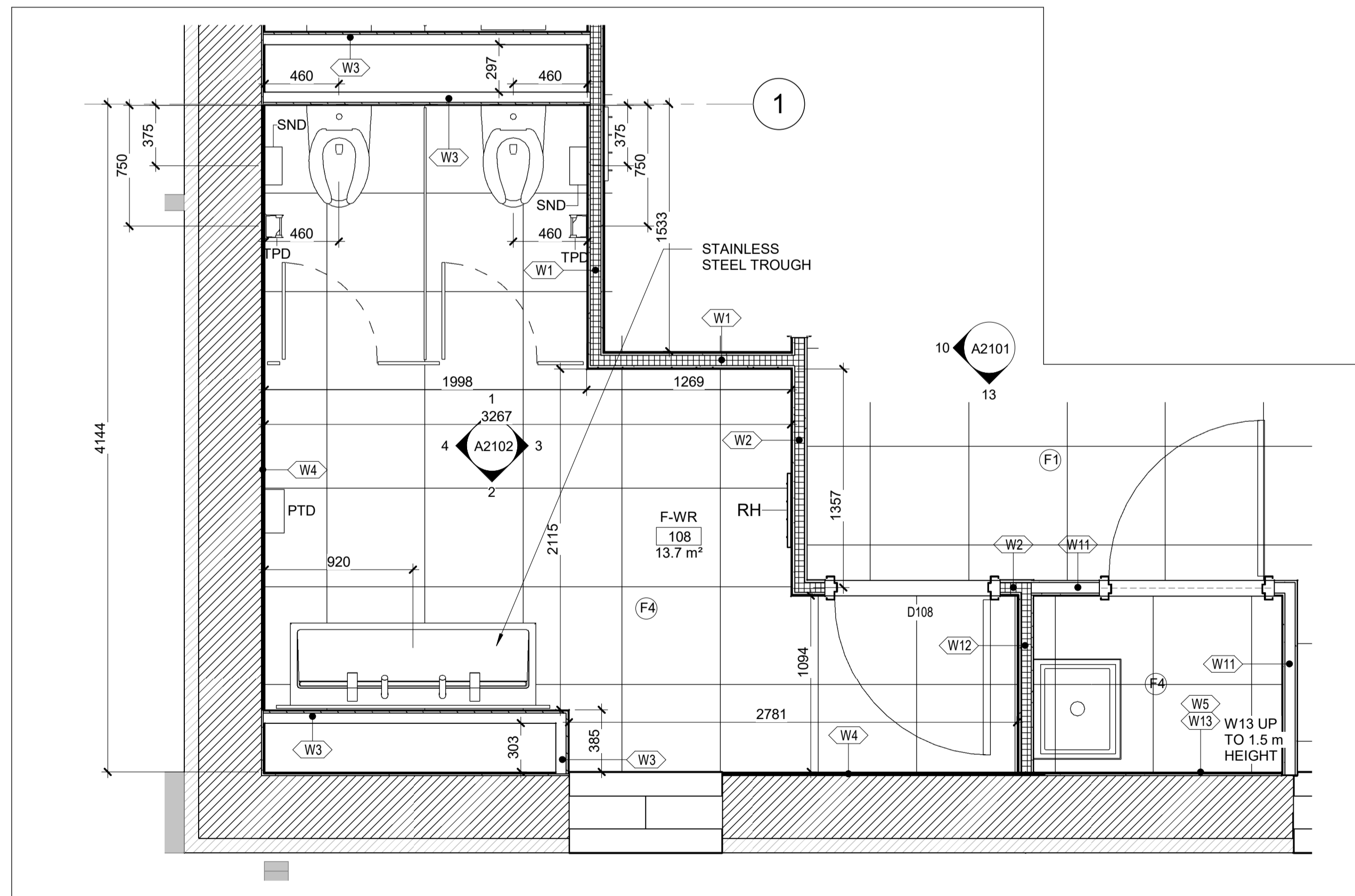
2 | ENL. PLAN - GROUND - UNIVERSAL WR-BASE BID

A1603 REF: A1600 SCALE: 1:25



5 | ENL. PLAN - GROUND - WR 111-BASE BID

A1603 REF: A1601 SCALE: 1:25



3 | ENLARGED PLAN - GROUND - F-WR-BASE BID

A1603 REF: A1600 SCALE: 1:25

WASHROOM SCHEDULE

- MIR - MIRROR
- SD - SOAP DISPENSER
- PTD - PAPER TOWEL DISPENSER
- TPD - TOILET PAPER DISPENSER
- SND - SANITARY NAPKIN DISPOSAL
- GB1 - HORIZONTAL GRAB BAR
- GB2 - L-SHAPED GRAB BAR
- GB3 - SWING-UP GRAB BAR
- RH - ROBE HOOK

FLOOR TILE LEGEND

- (F1) PORCELAIN TILE 600mm X 600mm (CREAM COLOUR RAL 9001)
- (F2) PORCELAIN TILE 300mm X 1200mm WOOD TEXTURIZED
- (F3) DIRECTIONAL TACTILE TILE 600mm X 120mm (BLACK COLOUR)
- (F4) PORCELAIN TILE 600mm X 600mm (PALE WHITE COLOUR RAL 9010)
- (F5) EPOXI PAINT(P)
- (F6) VYNIL TILES 300mm X 300mm
- (F7) CARPET FLOOR (BASE BID)

WALL LEGEND

- (W1) 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- (W2) 600x600mm PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
- (W3) 600x600mm PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
- (W4) PLASTER PATCH AND PAINT ON EXISTING WALL
- (W5) PLASTER AND PAINT ON NEW WALL
- (W5N) DRYWALL PAINTED
- (W6) HPL PANEL
- (W7) INTERIOR CURTAIN WALL
- (W8) INTERIOR CURTAIN WALL AT TICKET OFFICE
- (W9) FRP PANEL UP TO 1.5m & PAINTED
- (W10) FRP PANEL UP TO 1.5m & PORCELAIN TILE
- (W11) FRP PANEL UP TO 1.5m ON EXISTING WALL
- (W12) ACOUSTICAL DRYWALL ASSEMBLY
- (W13)
- (W14)

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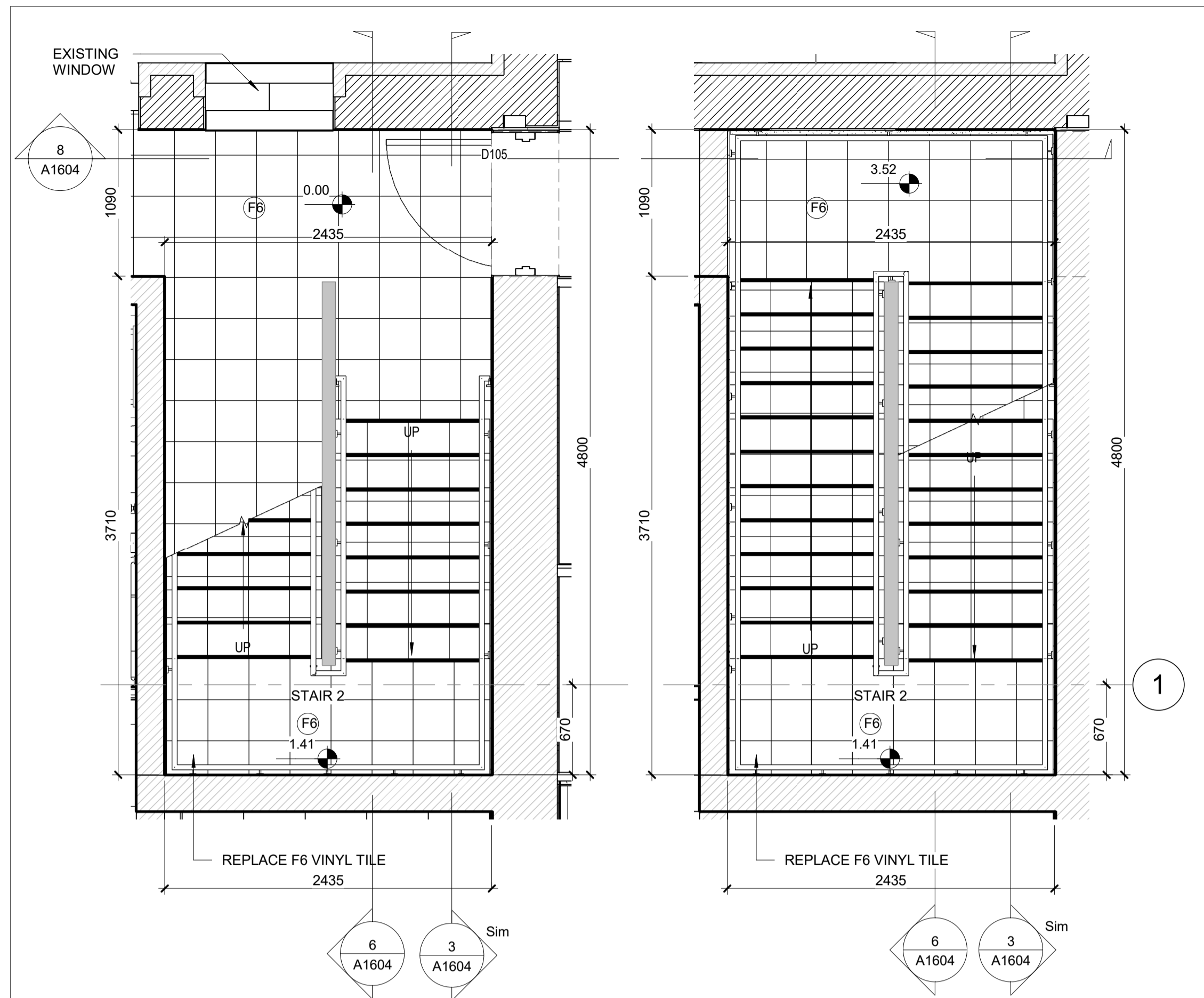
NIAGARA FALLS TRAIN STATION UPGRADES

ENLARGED PLAN - WASHROOMS

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1603
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METRIC

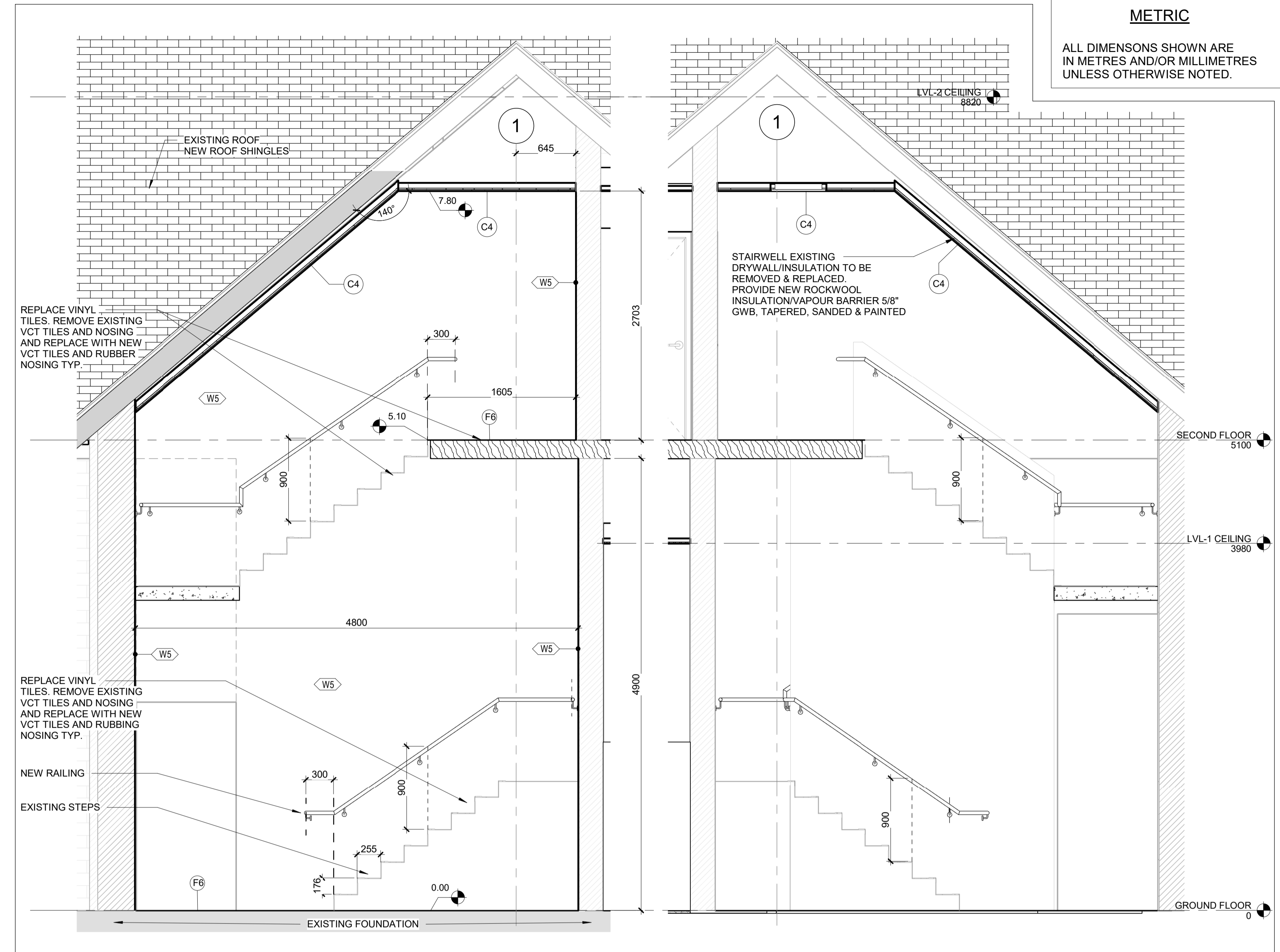
ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 GROUND FLOOR PLAN-BB 7 INTERMEDIATE FLOOR PLAN-BB

A1604 REF: A1600 SCALE: 1:30

A1604 REF: A1600 SCALE: 1:30

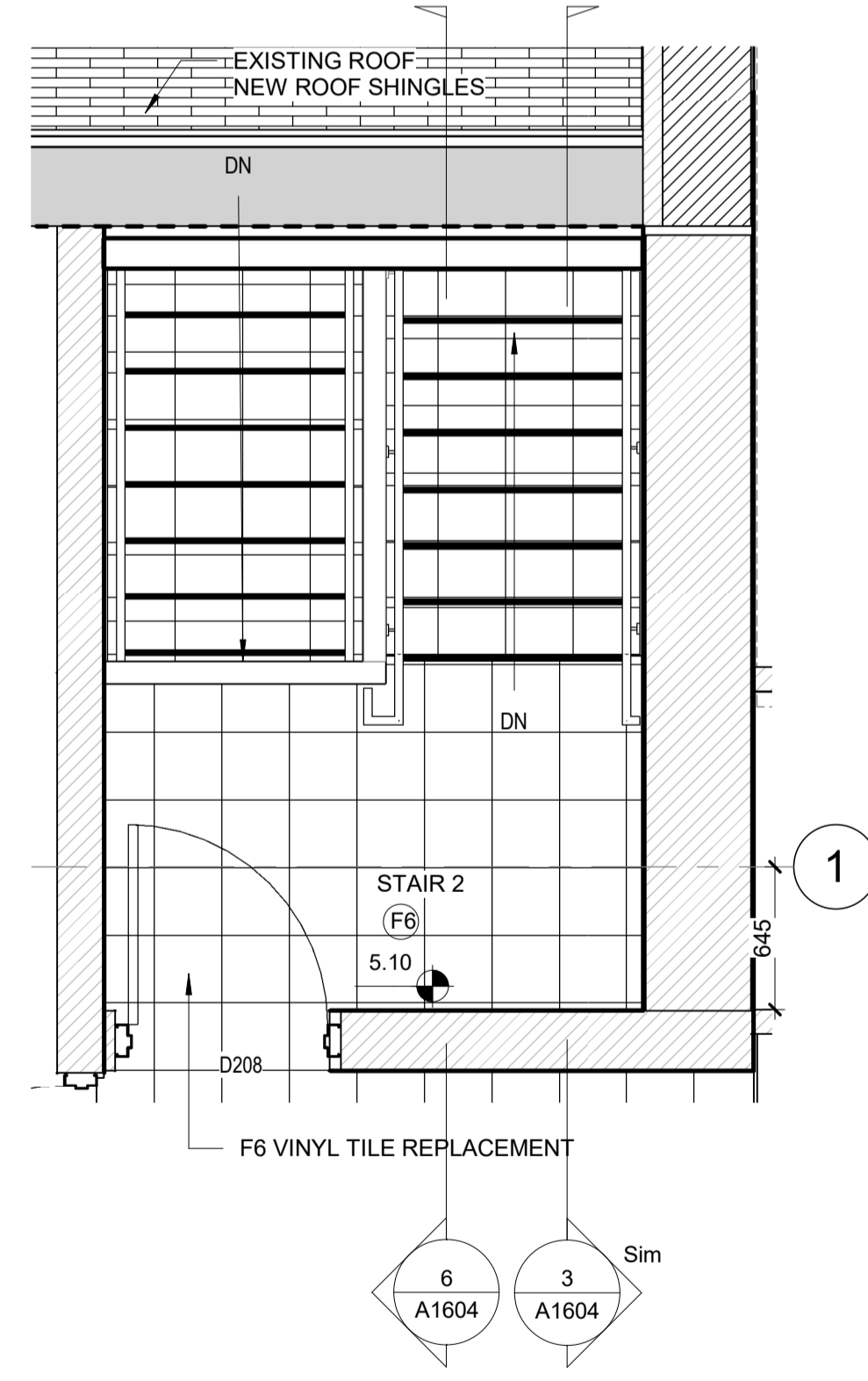


3 ENLARGED SECTION - STAIR 2-BB

A1604 REF: A1604 SCALE: 1:30

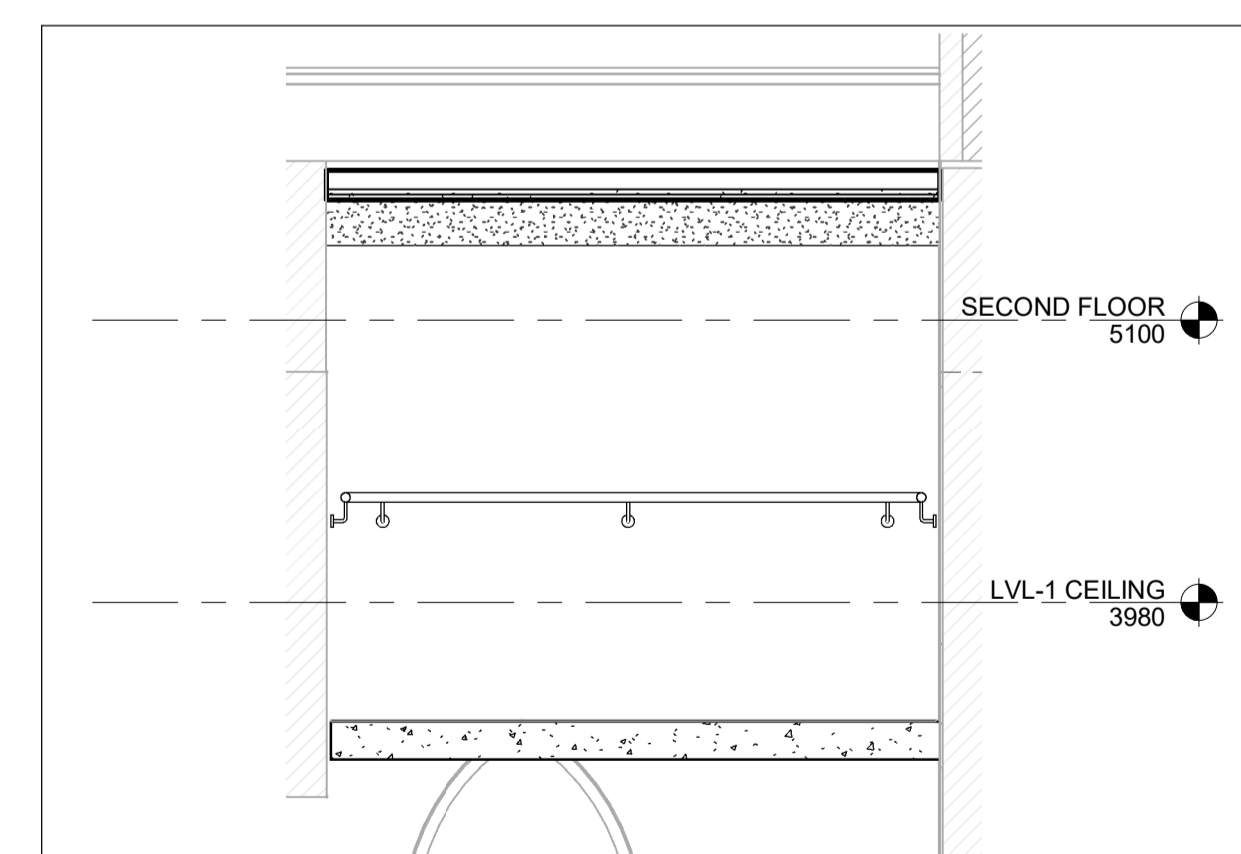
6 ENLARGED SECTION 2 - STAIR 2-BB

A1604 REF: A0200 SCALE: 1:30



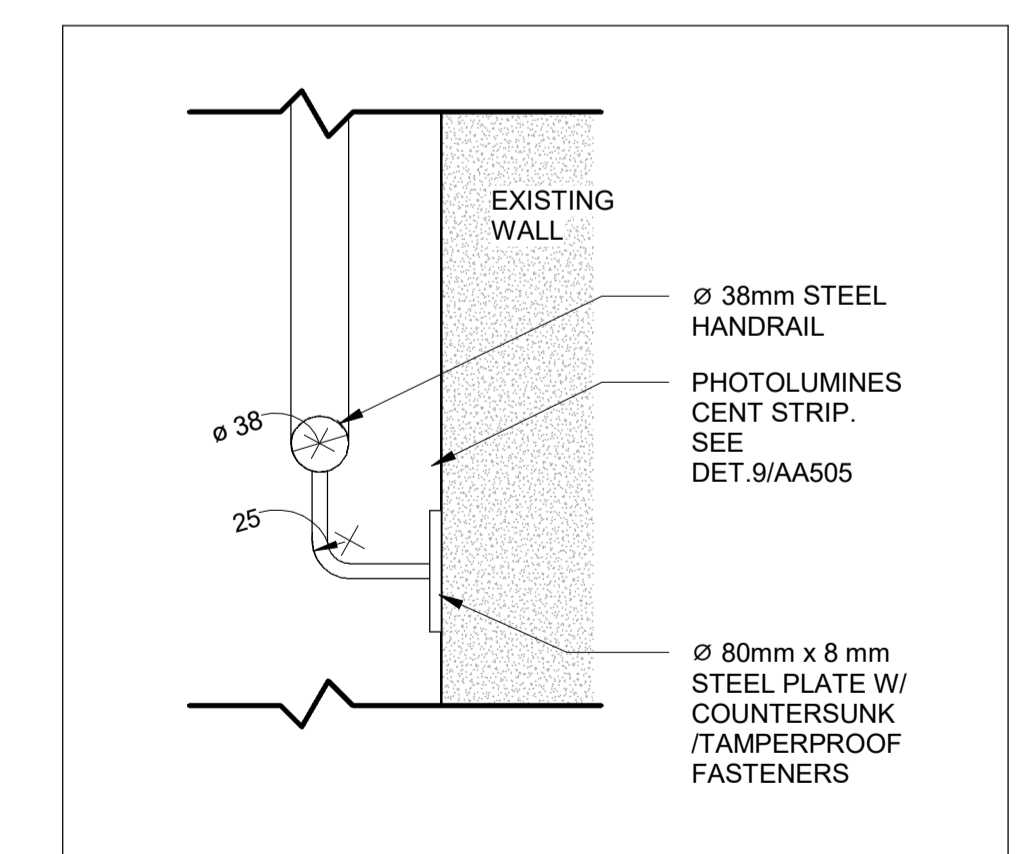
2 2nd FLOOR - STAIR 2-BB

A1604 REF: A1602_obs SCALE: 1:30



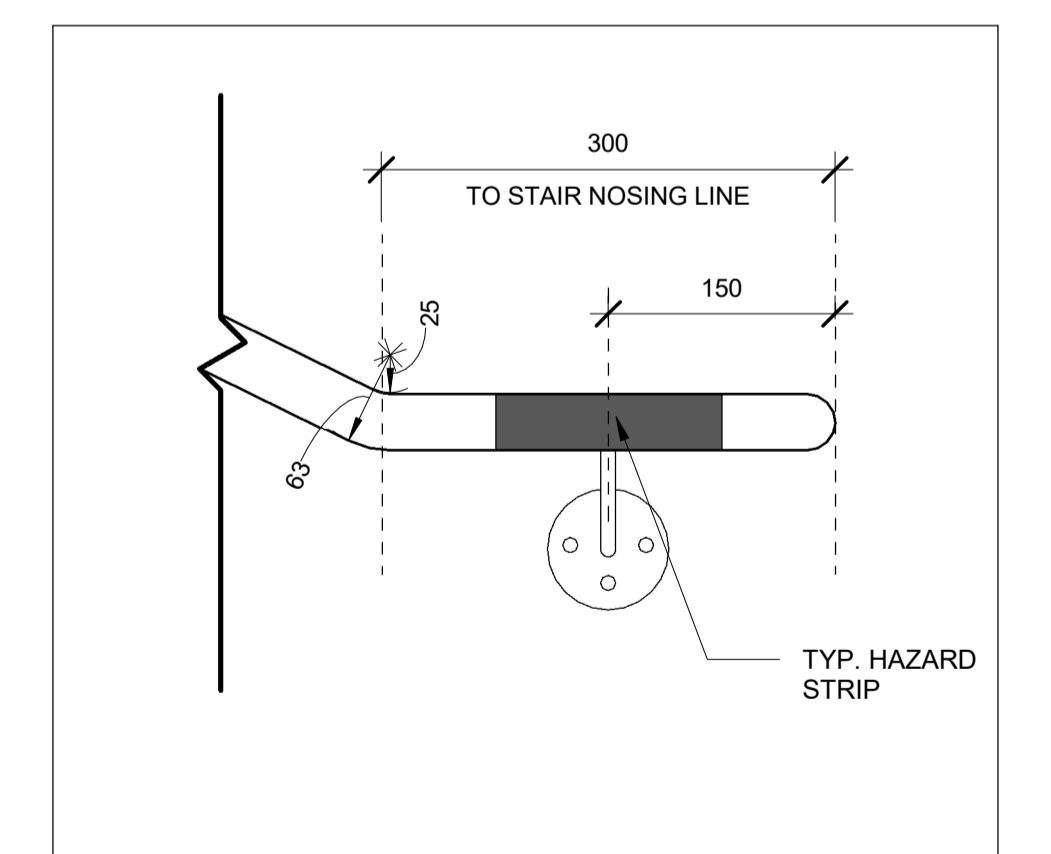
8 ENLARGED SECTION 5 - STAIR 2-BB

A1604 REF: A1604 SCALE: 1:30



4 SECTION HANDRAIL-BB

A1604 REF: A1604 SCALE: 1:5

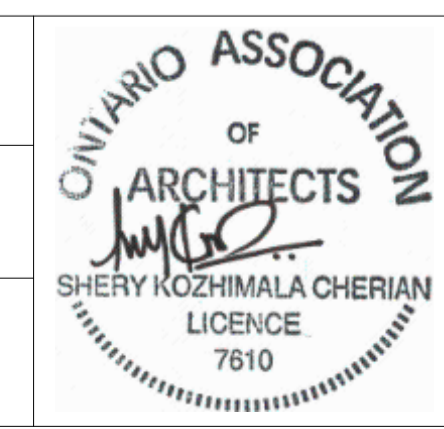


5 HANDRAIL EXTENSION-BB

A1604 REF: A1604 SCALE: 1:5

REFERENCE DRAWINGS		ISSUE		REVISIONS	
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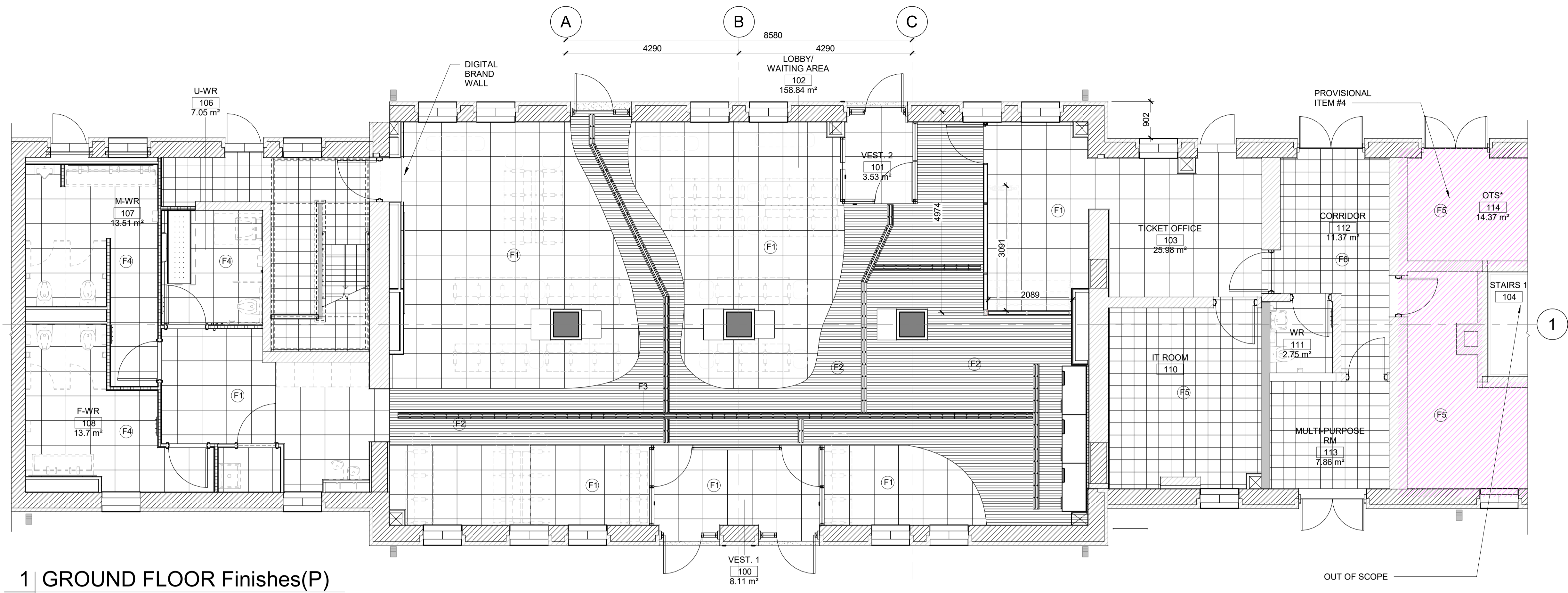
ARCHITECTURE | 49
PROJECT NO. BE20101016
ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES STAIR 2 - PLAN & SECTION 1			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1604

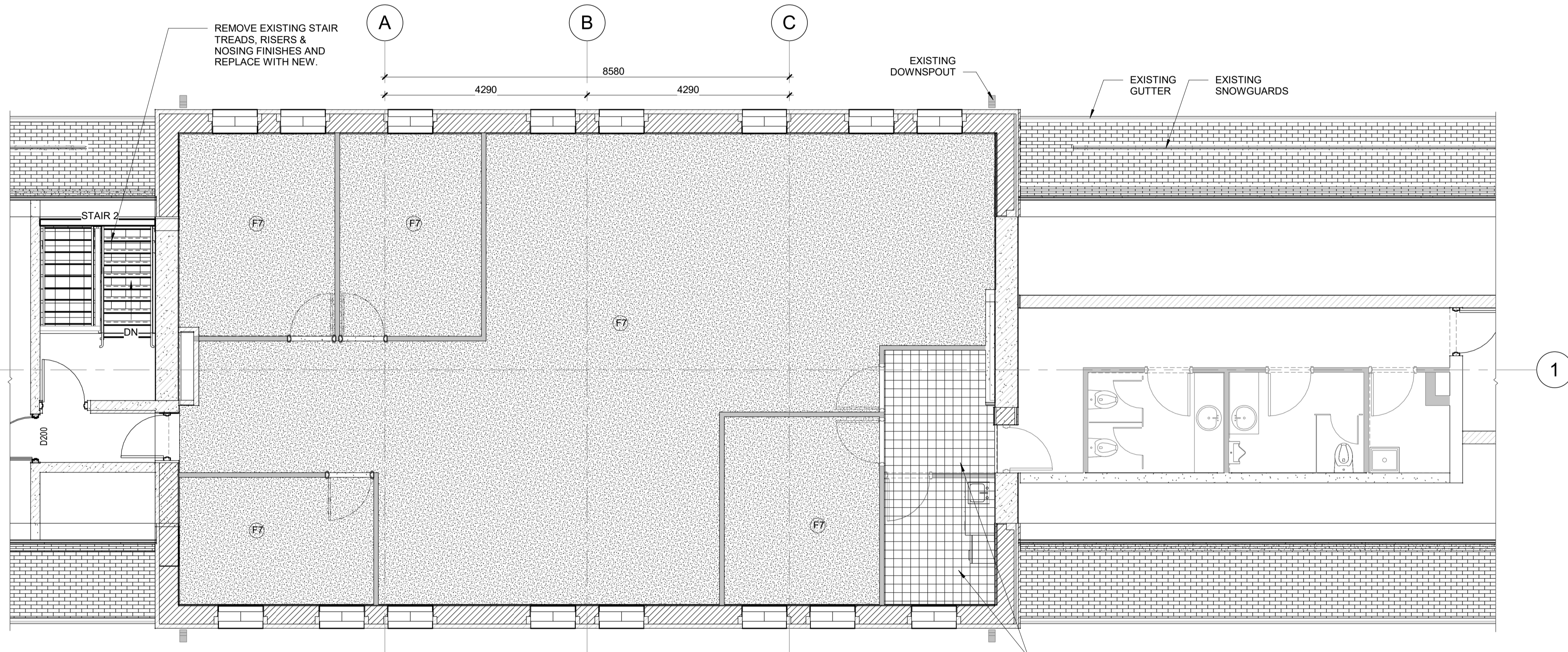
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 GROUND FLOOR Finishes(P)

A1610 REF: A1200 SCALE: 1 : 60



2 SECOND FLOOR FINISHES(P#6)

A1610 REF: A1301 SCALE: 1 : 60

FLOOR TILE LEGEND

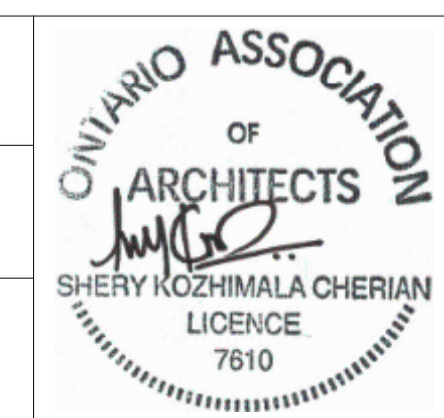
- F1 PORCELAIN TILE 600mm X 600mm (CREAM COLOUR RAL 9001)
- F2 PORCELAIN TILE 300mm X 1200mm WOOD TEXTURIZED
- F3 DIRECTIONAL TACTILE TILE 600mm X 120mm (BLACK COLOUR)
- F4 PORCELAIN TILE 600mm X 600m (PALE WHITE COLOUR RAL 9010)
- F5 EPOXI PAINT(P)
- F6 VYNIL TILES 300mm X 300m
- F7 CARPET FLOOR (BASE BID)

FLOOR TILE LEGEND

SCALE: 1 : 50

REFERENCE DRAWINGS	ISSUE	REVISIONS				
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE

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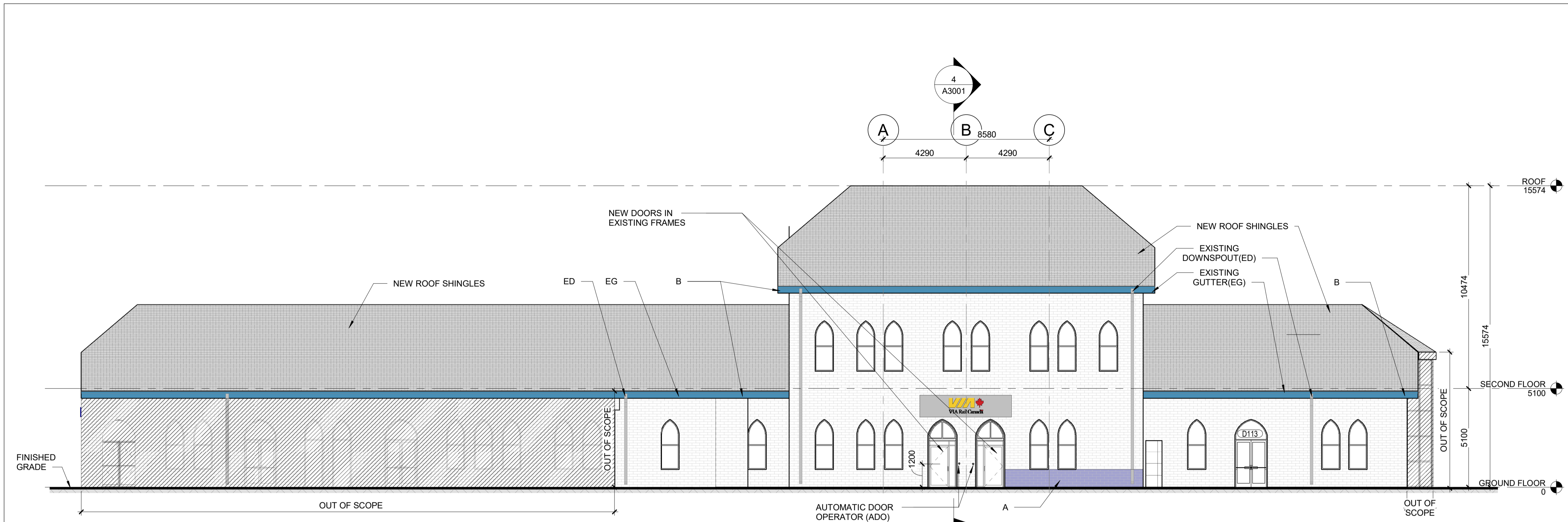
ARCHITECTURE | 49
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NIAGARA FALLS TRAIN STATION UPGRADES FLOOR FINISHES PLANS			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A1610

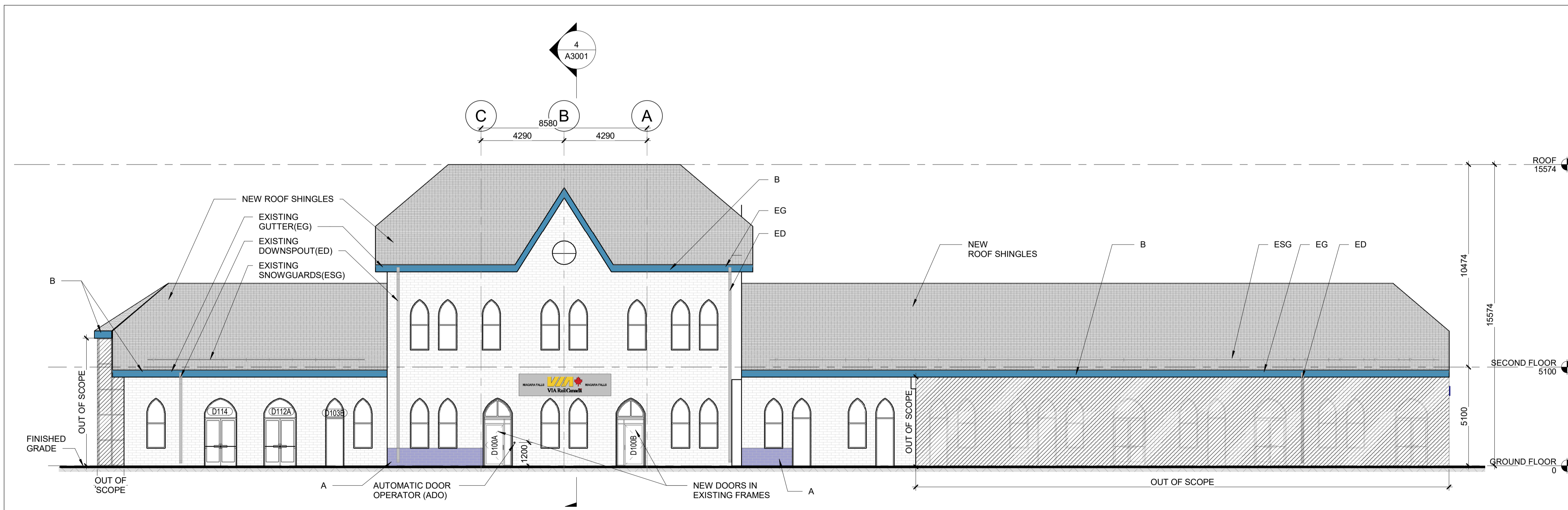
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | SOUTH ELEVATION - EXISTING

A2000 REF: A1300 SCALE: 1 : 125



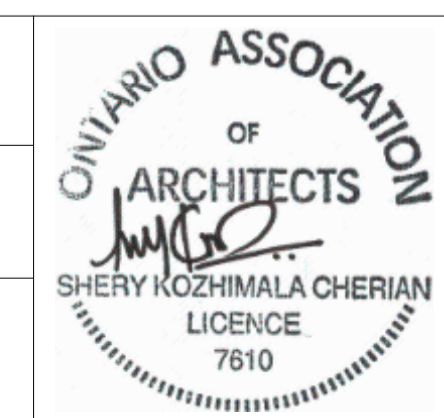
2 | NORTH ELEVATION - EXISTING

A2000 REF: A1300 SCALE: 1 : 125

- A** PROVISIONAL ITEM #2: RE-POINTING OF BOTTOM 7 COURSES OF EXISTING BRICK AS NEEDED ALONG NORTH, SOUTH & WEST ELEVATION
- B** PROVISIONAL ITEM #3: - GC TO REPAINT EXISTING HERITAGE ROOFING TRIMS (FASCIAS, SOFFITS, LOOKOUTS - PAINT COLOUR TO MATCH EXISTING - MISC. WOOD PATCHING AND REPAIRS MIGHT BE NEEDED; LIGHT SANDING AND SCRAPPING OFF OF LOOSE EXISTING PAINT SHALL BE PERFORMED PRIOR TO 2 NEW COATS OF EXTERIOR GRADE SPEC'S; AS PER THE SPECIFICATIONS TYP. GC TO PATCH & REPAIR POOR WOOD SECTIONS & SCRAP PAINT OF EXISTING WOOD TRIMS.

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PROJECT NO. BE20101016

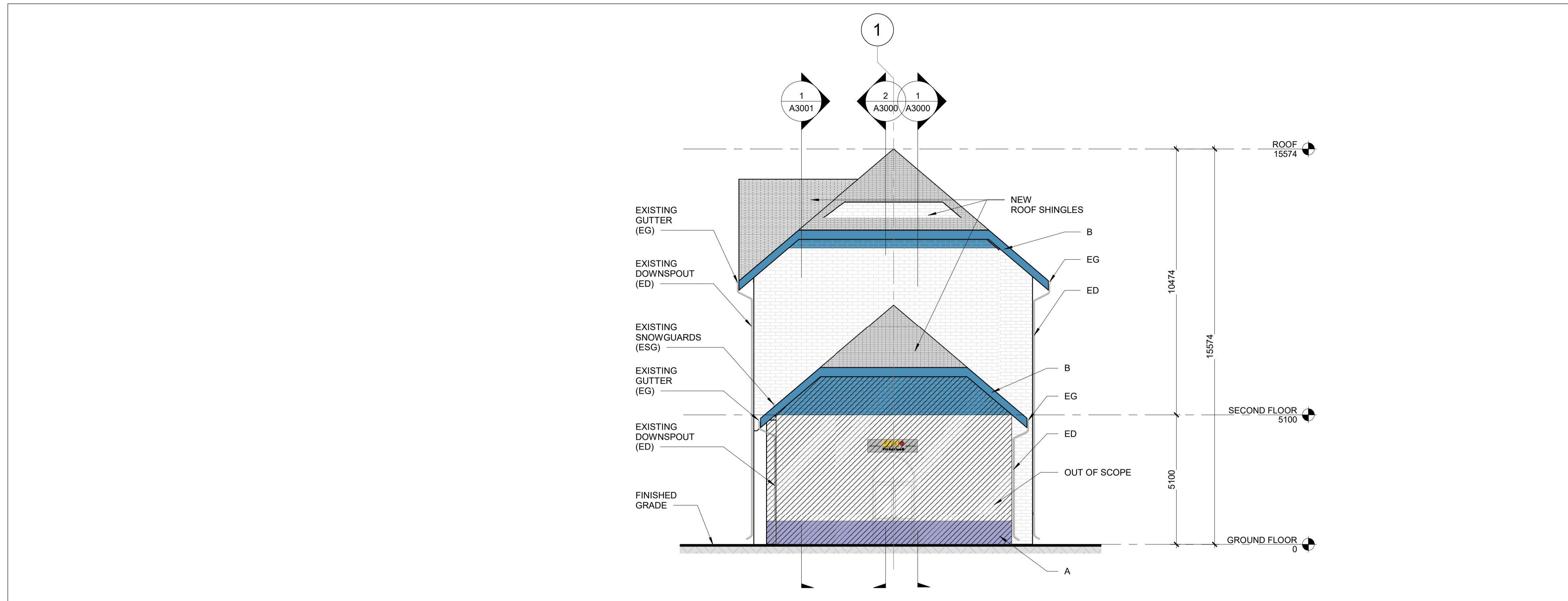
ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES			
ELEVATIONS NORTH SOUTH			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A2000

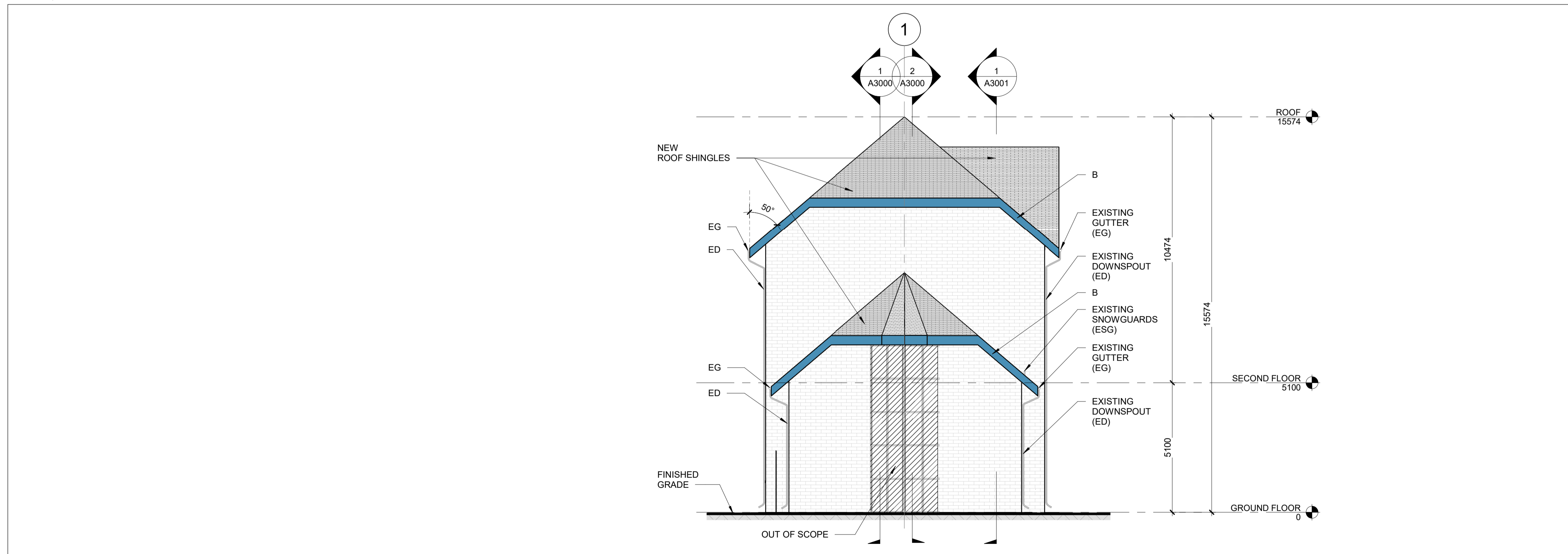
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 WEST ELEVATION - EXISTING

A2001 REF: A1300 SCALE: 1 : 100



2 EAST ELEVATION - EXISTING

A2001 REF: A1300 SCALE: 1 : 100

- A** PROVISIONAL ITEM #2: - RE-POINTING OF BOTTOM 7 COURSES OF EXISTING BRICK AS NEEDED ALONG NORTH, SOUTH & WEST ELEVATION
- B** PROVISIONAL ITEM #3: - GC TO REPAINT EXISTING HERITAGE ROOFING TRIMS (FASCIAS, SOFFITS, LOOKOUTS - PAINT COLOUR TO MATCH EXISTING - MISC. WOOD PATCHING AND REPAIRS MIGHT BE NEEDED; LIGHT SANDING AND SCRAPPING OFF OF LOOSE EXISTING PAINT SHALL BE PERFORMED PRIOR TO 2 NEW COATS OF EXTERIOR GRADE SPEC'S; AS PER THE SPECIFICATIONS TYP. GC TO PATCH & REPAIR POOR WOOD SECTIONS & SCRAP PAINT OF EXISTING WOOD TRIMS.

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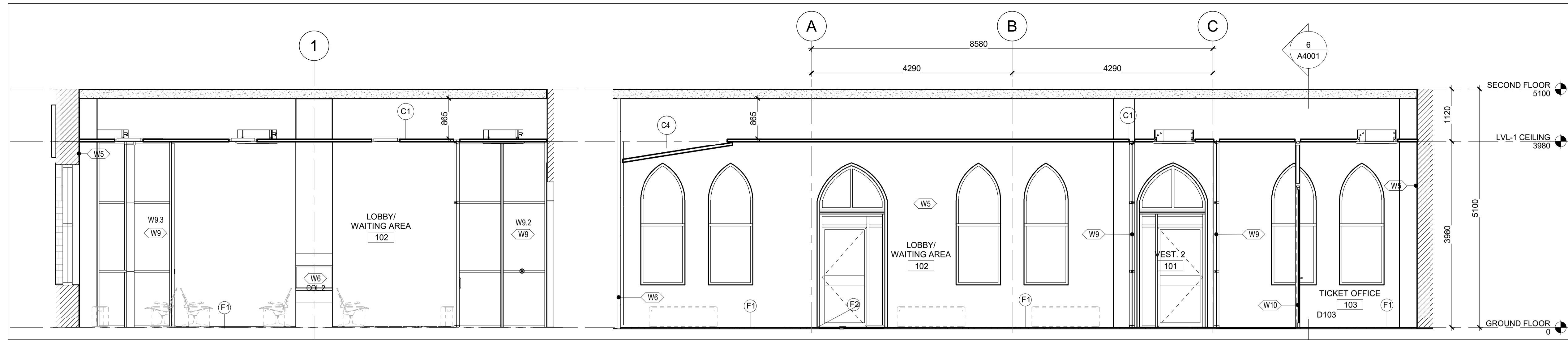


NIAGARA FALLS TRAIN STATION UPGRADES ELEVATIONS EAST WEST

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A2001
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METRIC

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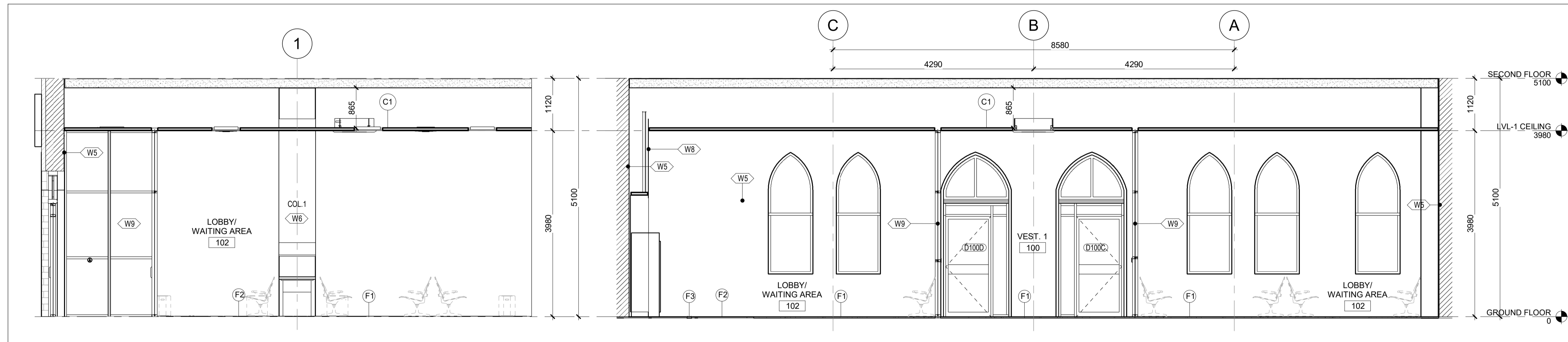


1 LOBBY EAST-BB

A2100 REF: A1600 SCALE: 1 : 50

2 LOBBY NORTH-BB

A2100 REF: A1600 SCALE: 1 : 50



3 LOBBY WEST-BB

A2100 REF: A1600 SCALE: 1 : 50

4 LOBBY SOUTH-BB

A2100 REF: A1600 SCALE: 1 : 50

FINISHES LEGEND

WALLS:

- W1 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W2 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W3 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W4 } PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
- W5 } PLASTER PATCH AND PAINT ON EXISTING WALL
- W5N } PLASTER AND PAINT ON NEW WALL
- W6 } DRYWALL PAINTED
- W7 } HPL PANEL
- W8 } HPL PANEL
- W9 } INTERIOR CURTAIN WALL
- W10 } INTERIOR CURTAIN WALL AT TICKET OFFICE
- W11 } FRP PANEL UP TO 1.5m
- W12 } FRP PANEL UP TO 1.5m
- W13 } FRP PANEL UP TO 1.5m
- W14 } ACOUSTICAL DRYWALL ASSEMBLY

FLOORS:

- F1 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (BEIGE COLOUR)
- F2 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (WOOD TEXTURIZED)
- F3 } LINEAR TACTILE TILE 600mm x 120mm (BLACK COLOUR)
- F4 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (MARFIL COLOUR)
- F5 } EPOXY PAINT
- F6 } VINYL TILES REPLACEMENT
- F7 } CARPET TILE (GRAY COLOUR)

CEILING:

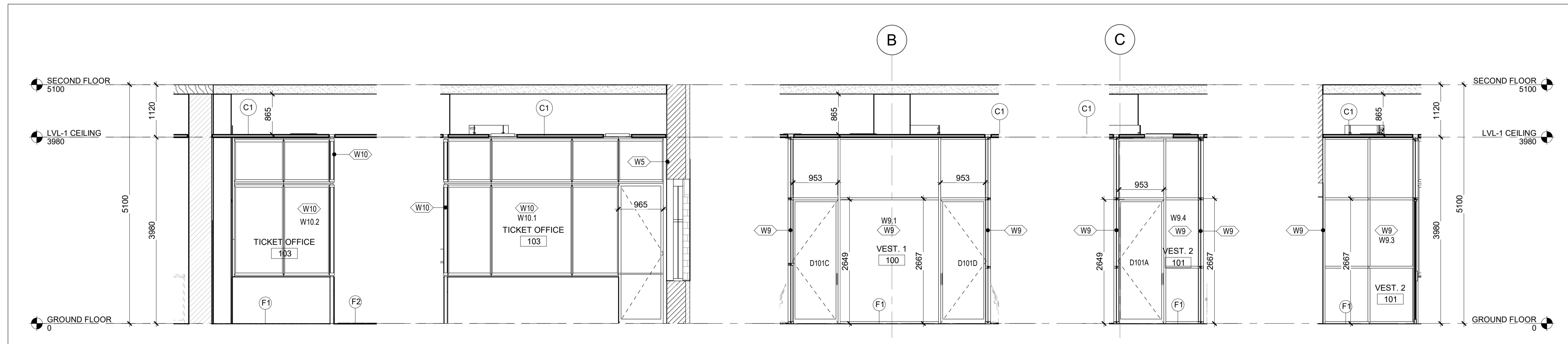
- C1 } ACOUSTIC CEILING 24" X 48" (WHITE COLOUR)
- C2 } ACOUSTIC CEILING 24" X 48" VINYL COATED (WHITE COLOUR)
- C3 } HPL PANELS ON CEILING

ROOF:

- R1 } EXISTING ROOF

INTERIOR ELEVATION NOTES

1. FURNITURE AND LOCKERS NOT INCLUDED. JUST FOR REFERENCE.
2. "BB" STANDS FOR BASE BID
3. P#, STANDS FOR PROVISIONAL ITEM #



5 TICKETS SOUTH-BB

A2100 REF: A1600 SCALE: 1 : 50

6 TICKETS WEST-BB

A2100 REF: A1600 SCALE: 1 : 50

7 VEST.1 NORTH-BB

A2100 REF: A1600 SCALE: 1 : 50

8 VEST.2 SOUTH-BB

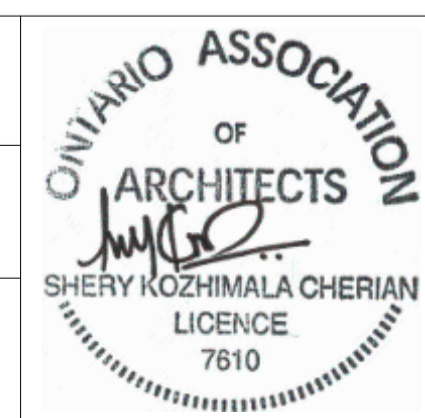
A2100 REF: A1600 SCALE: 1 : 50

9 VEST.2 EAST-BB

A2100 REF: A1600 SCALE: 1 : 50

REFERENCE DRAWINGS	ISSUE	REVISIONS
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SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49

PROJECT NO. BE20101016

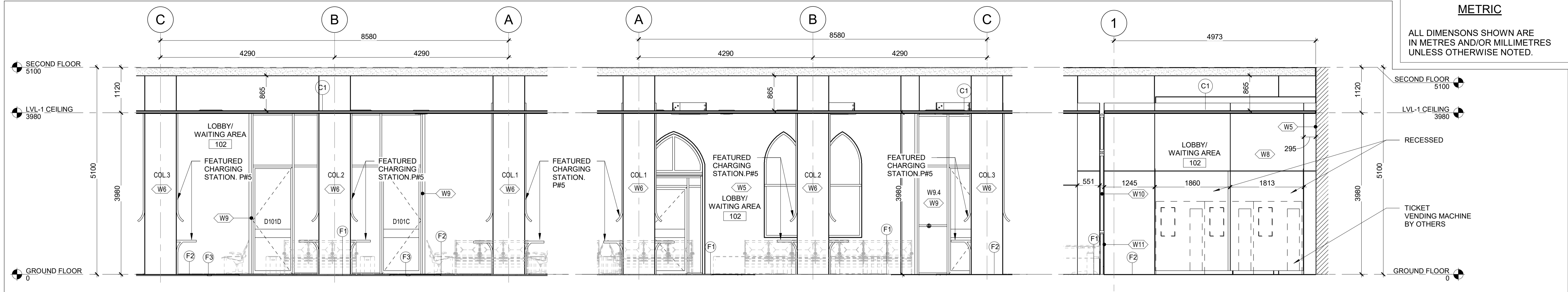
ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES			
INTERIOR ELEVATIONS 1			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A2100

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | INT. ELEV. - COLUMN SOUTH

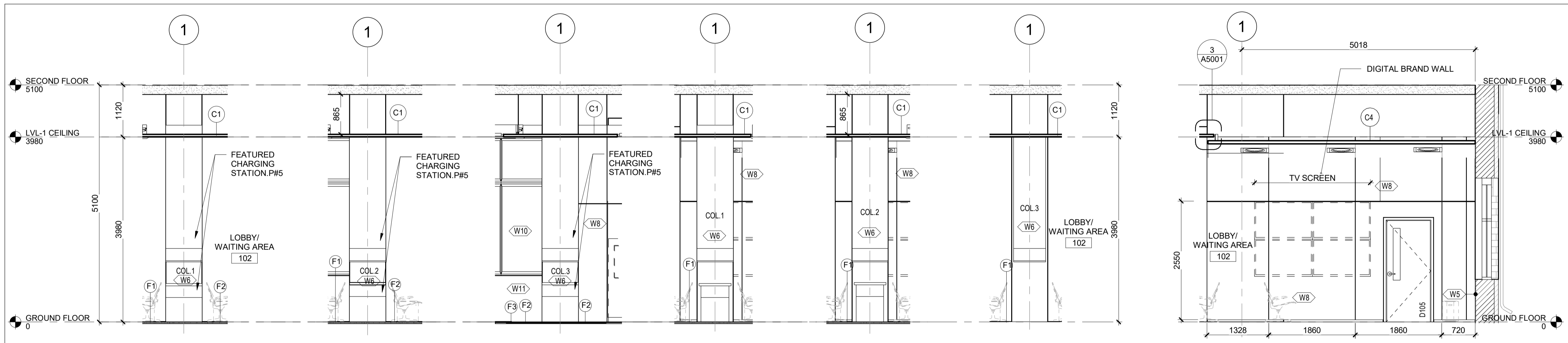
A2101 REF: A1600 SCALE: 1:50

2 | INT. ELEV. - COLUMN NORTH

A2101 REF: A1600 SCALE: 1:50

3 | INT. ELEV. - TICKET VENDING MACHINE EAST-BB

A2101 REF: A1600 SCALE: 1:50



4 | C.1 WEST

A2101 REF: A1600 SCALE: 1:50

5 | C.2 WEST

A2101 REF: A1600 SCALE: 1:50

6 | C.3 WEST

A2101 REF: A1600 SCALE: 1:50

7 | C.1 EAST-BB

A2101 REF: A1600 SCALE: 1:50

8 | C.2 EAST-BB

A2101 REF: A1600 SCALE: 1:50

9 | C.3 EAST-BB

A2101 REF: A1600 SCALE: 1:50

14 | DIGITAL BRAND WALL-BB

A2101 REF: A1600 SCALE: 1:50

FINISHES LEGEND

WALLS:

- W1 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W2 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W3 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
- W4 } PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
- W5 } PLASTER PATCH AND PAINT ON EXISTING WALL
- W5N } PLASTER AND PAINT ON NEW WALL
- W6 } DRYWALL PAINTED
- W7 } HPL PANEL
- W8 } INTERIOR CURTAIN WALL
- W9 } INTERIOR CURTAIN WALL AT TICKET OFFICE
- W10 } INTERIOR CURTAIN WALL AT TICKET OFFICE
- W11 } FRP PANEL UP TO 1.5m
- W12 } FRP PANEL UP TO 1.5m
- W13 } FRP PANEL UP TO 1.5m
- W14 } ACOUSTICAL DRYWALL ASSEMBLY

FLOORS:

- F1 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (BEIGE COLOUR)
- F2 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (WOOD TEXTURIZED)
- F3 } LINEAR TACTILE TILE 600mm x 120mm (BLACK COLOUR)
- F4 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (MARFIL COLOUR)
- F5 } EPOXY PAINT
- F6 } VINYL TILES REPLACEMENT
- F7 } CARPET TILE (GRAY COLOUR)

CEILING:

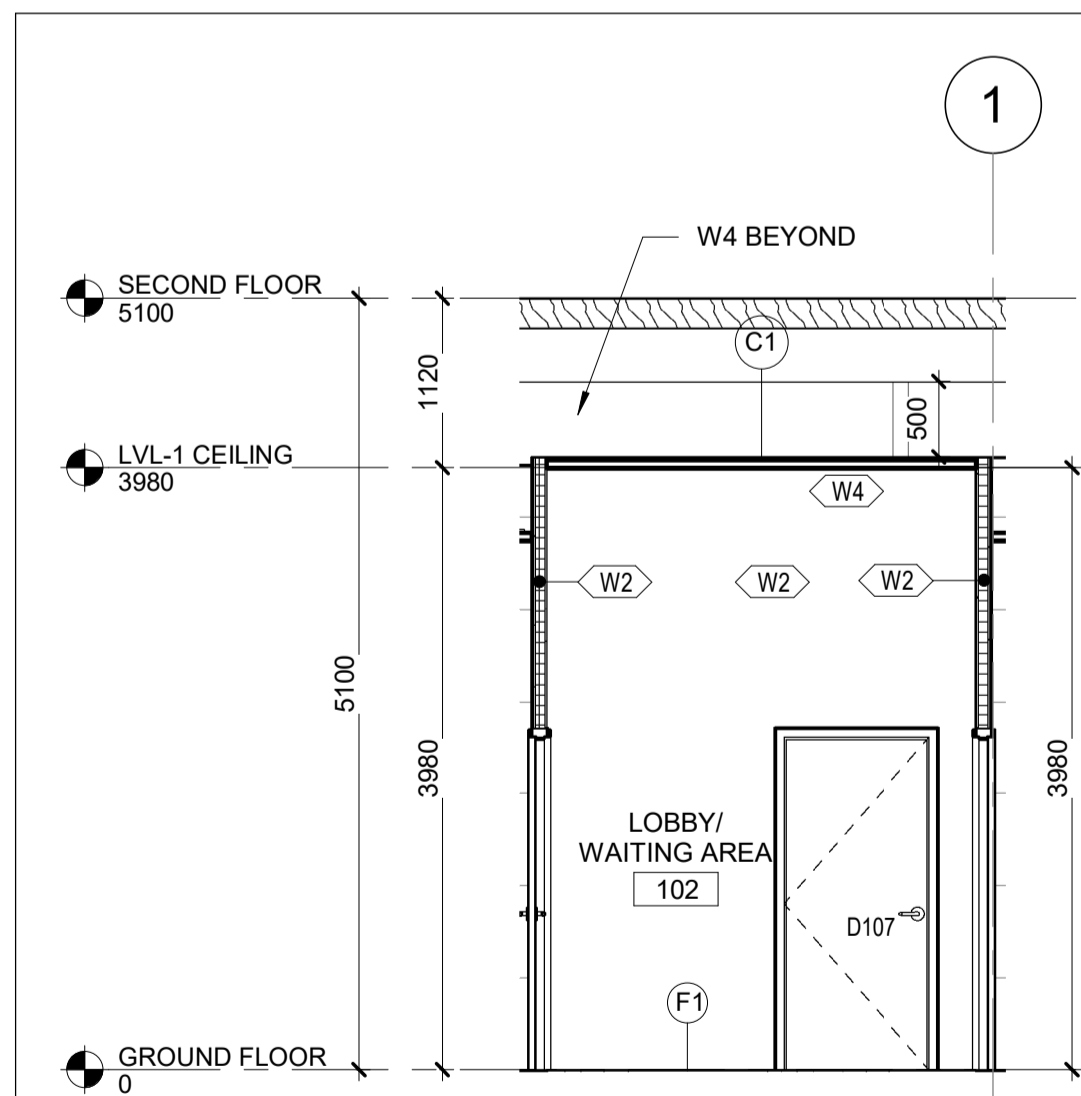
- C1 } ACOUSTIC CEILING 24" X 48" (WHITE COLOUR)
- C2 } ACOUSTIC CEILING 24" X 48" VINYL COATED (WHITE COLOUR)
- C3 } HPL PANELS ON CEILING

ROOF:

- R1 } EXISTING ROOF

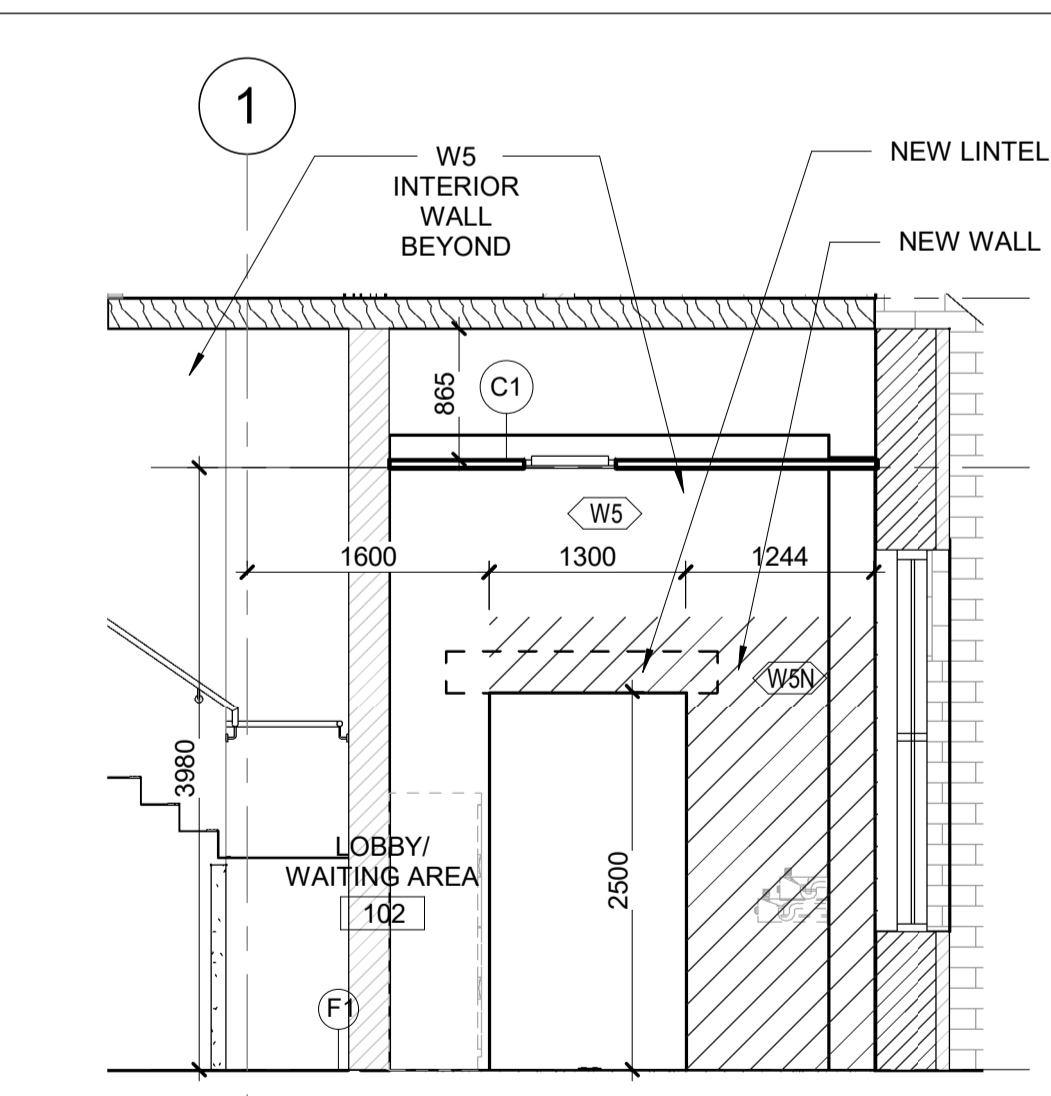
INTERIOR ELEVATION NOTES

1. FURNITURE AND LOCKERS NOT INCLUDED. JUST FOR REFERENCE.
2. "BB" STANDS FOR BASE BID.
3. P#, STANDS FOR PROVISIONAL ITEM #



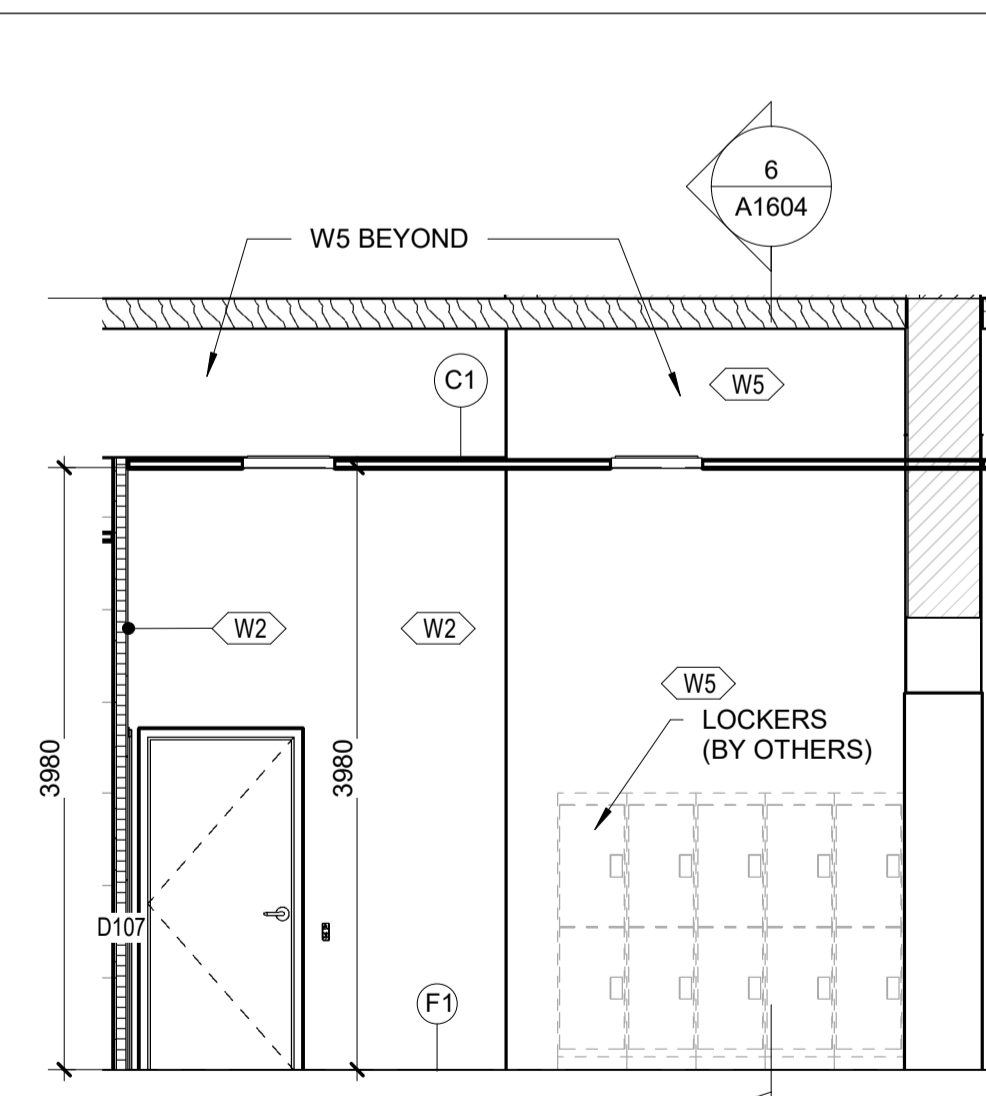
10 | INT. ELEV. - WEST LOBBY W-BB

A2101 REF: A1600 SCALE: 1:50



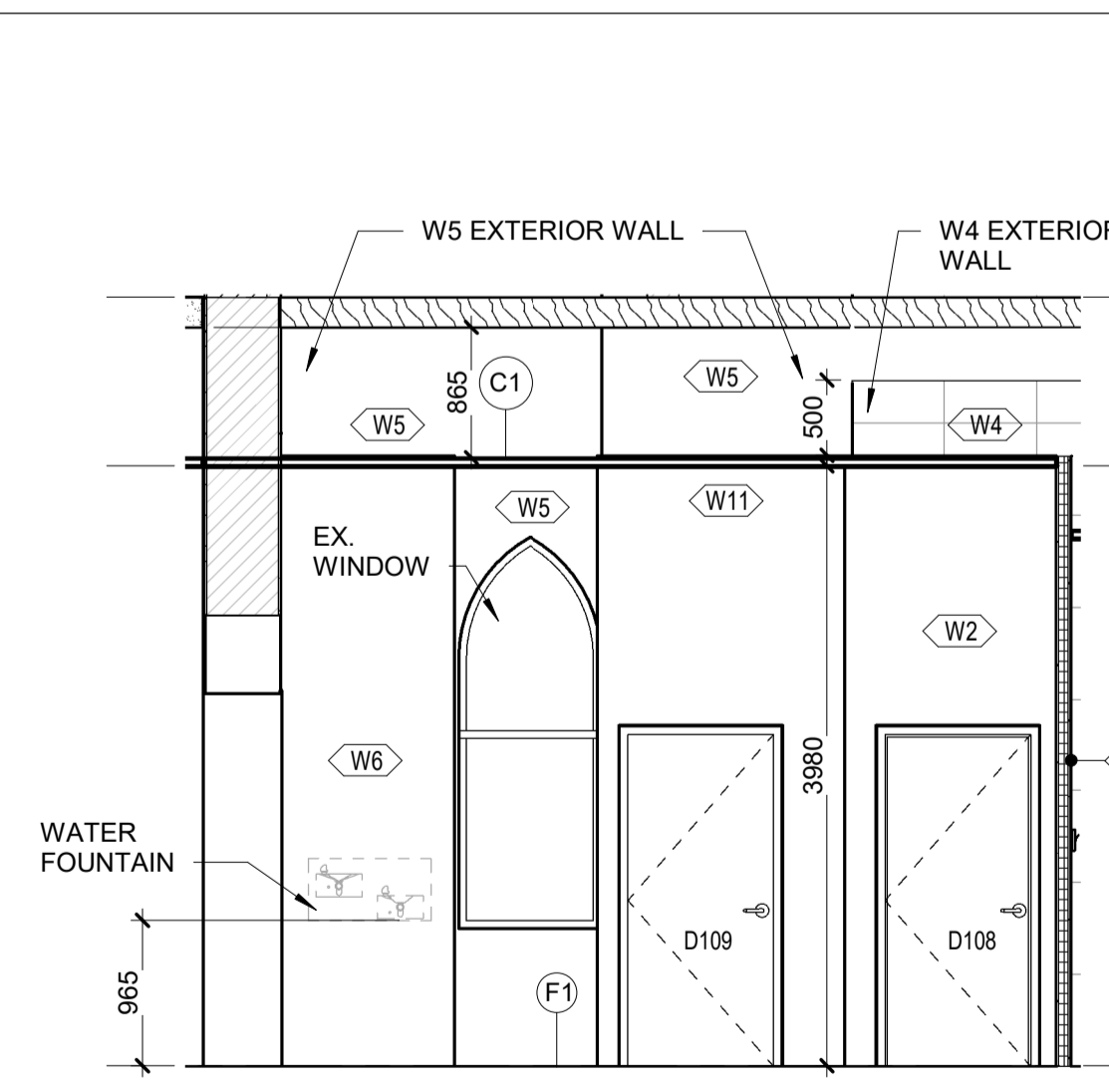
11 | INT. ELEV. - WEST LOBBY E-BB

A2101 REF: A1600 SCALE: 1:50



12 | INT. ELEV. - WEST LOBBY N-BB

A2101 REF: A1600 SCALE: 1:50



13 | INT. ELEV. - WEST LOBBY S-BB

A2101 REF: A1600 SCALE: 1:50

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			P.LAPALIKAR 2023/09/22	G.DANESHGAR 2023/04/21		
			CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22		
			SCALE: AS SHOWN	FULL SIZE ONLY		
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
		B	2024/02/08	ISSUED FOR TENDER		
		A	2023/04/24	ISSUED FOR BUILDING PERMIT		

ONTIARIO ASSOCIATION
OF
ARCHITECTS
SHERY KOZHIMALA CHERIAN
LICENCE
7610

ARCHITECTURE | 49
PROJECT NO. BE20101016
ISSUED FOR TENDER

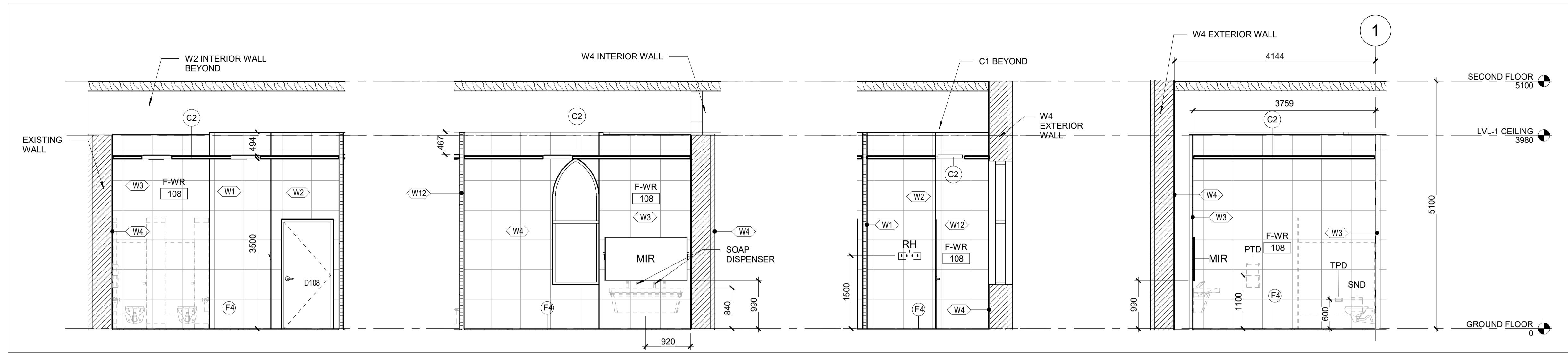


NIAGARA FALLS TRAIN STATION
UPGRADES
INTERIOR ELEVATIONS 2

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A2101
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METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | INT. ELEV. - F - WR NORTH-BB

2 | INT. ELEV. - F - WR SOUTH-BB

3 | INT. ELEV. - F - WR EAST-BB

4 | INT. ELEV. - F - WR WEST-BB

A2102 REF: A1600

SCALE: 1 : 50

A2102 REF: A1600

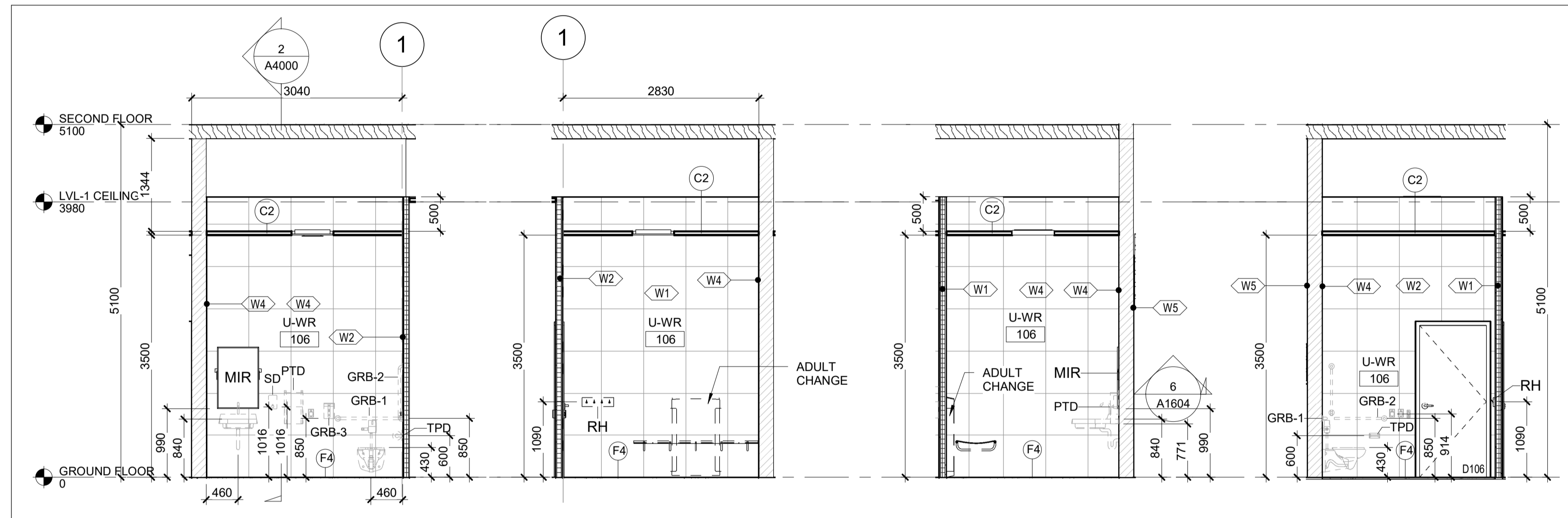
SCALE: 1 : 50

A2102 REF: A1600

SCALE: 1 : 50

A2102 REF: A1600

SCALE: 1 : 50



5 | UNIV. WR EAST-BB

6 | UNIV. WR WEST-BB

7 | UNIV. WR NORTH-BB

8 | UNIV. WR SOUTH-BB

A2102 REF: A1600

SCALE: 1 : 50

A2102 REF: A1600

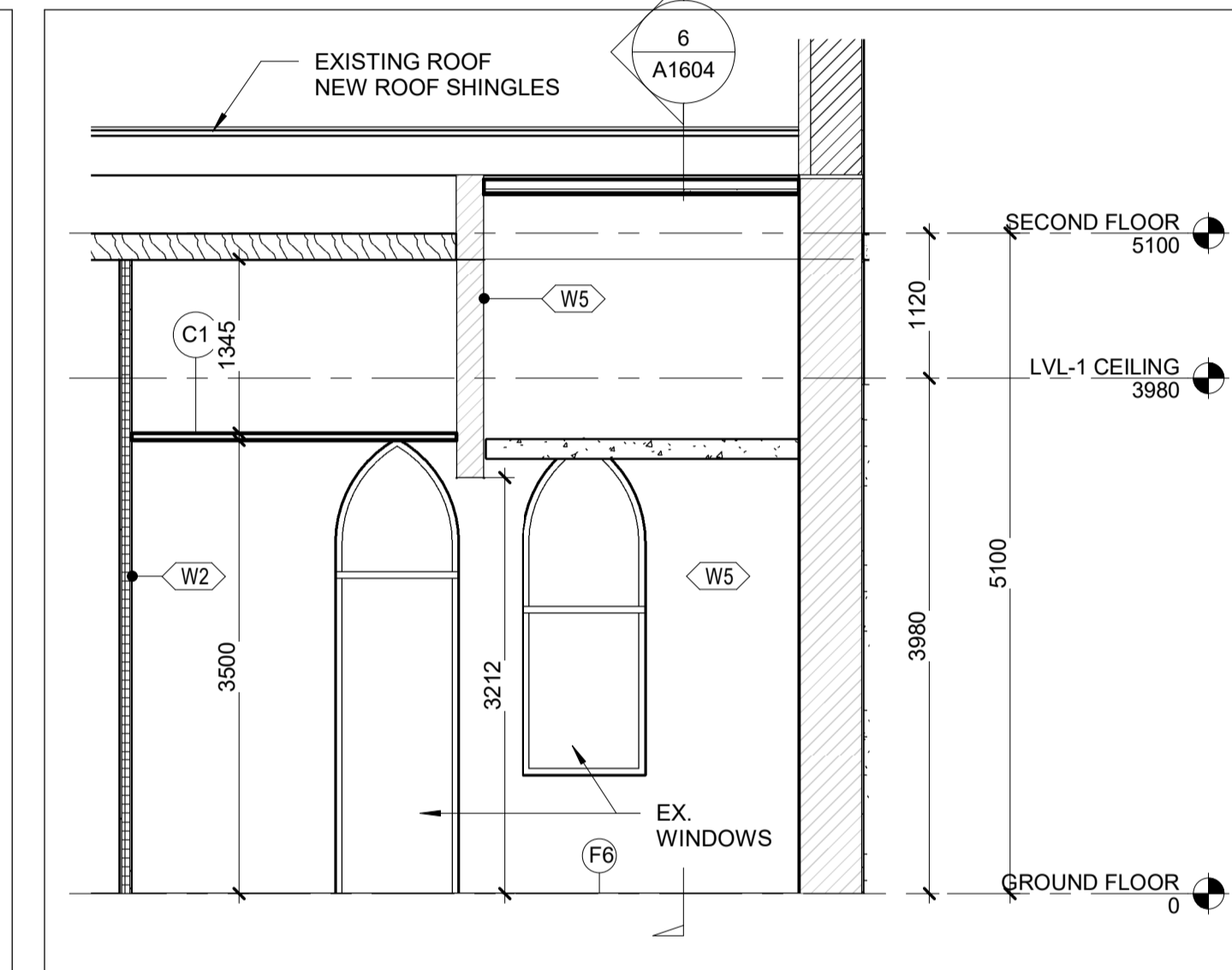
SCALE: 1 : 50

A2102 REF: A1600

SCALE: 1 : 50

A2102 REF: A1600

SCALE: 1 : 50



9 | INT. ELEV. - WEST LOBBY N STAIR 2-BB

A2102 REF: A1600

SCALE: 1 : 50

FINISHES LEGEND

WALLS:

- W1 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W2 } PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
- W3 } PLASTER PATCH AND PAINT ON EXISTING WALL
- W4 } PLASTER AND PAINT ON NEW WALL
- W5N } DRYWALL PAINTED
- W6 } HPL PANEL
- W7 } INTERIOR CURTAIN WALL
- W8 } INTERIOR CURTAIN WALL AT TICKET OFFICE
- W9 } FRP PANEL UP TO 1.5m
- W10 } ACOUSTICAL DRYWALL ASSEMBLY
- W11 }
- W12 }
- W13 }
- W14 }

FLOORS:

- F1 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (BEIGE COLOUR)
- F2 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (WOOD TEXTURIZED)
- F3 } LINEAR TACTILE TILE 600mm x 120mm (BLACK COLOUR)
- F4 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (MARFIL COLOUR)
- F5 } EPOXY PAINT
- F6 } VINYL TILES REPLACEMENT
- F7 } CARPET TILE (GRAY COLOUR)

CEILING:

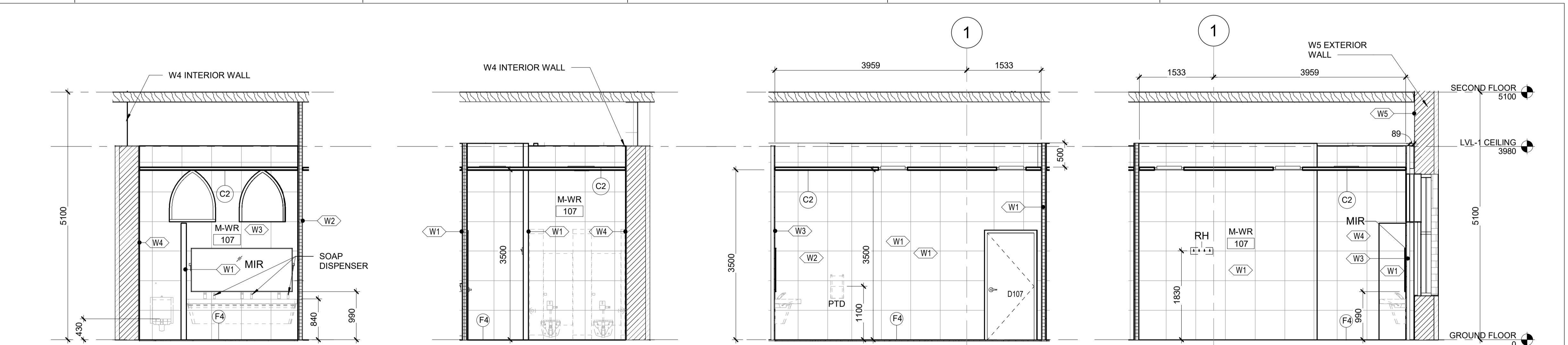
- C1 } ACOUSTIC CEILING 24" x 48" (WHITE COLOUR)
- C2 } ACOUSTIC CEILING 24" x 48" VINYL COATED (WHITE COLOUR)
- C3 } HPL PANELS ON CEILING

ROOF:

- R1 } EXISTING ROOF

INTERIOR ELEVATION NOTES

1. FURNITURE AND LOCKERS NOT INCLUDED. JUST FOR REFERENCE.
2. "BB" STANDS FOR BASE BID
3. P#, STANDS FOR PROVISIONAL ITEM #



10 | INT. ELEV. - M - WR NORTH-BB

11 | INT. ELEV. - M - WR SOUTH-BB

12 | INT. ELEV. - M - WR EAST-BB

13 | INT. ELEV. - M - WR WEST-BB

A2102 REF: A1600

SCALE: 1 : 50

A2102 REF: A1600

SCALE: 1 : 50

A2102 REF: A1600

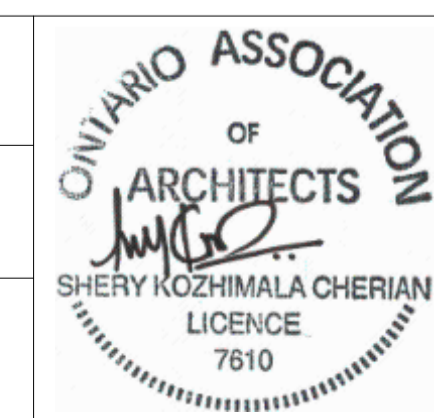
SCALE: 1 : 50

A2102 REF: A1600

SCALE: 1 : 50

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
B	2024/02/08	ISSUED FOR TENDER			
A	2023/04/24	ISSUED FOR BUILDING PERMIT			

DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49

PROJECT NO. BE201016

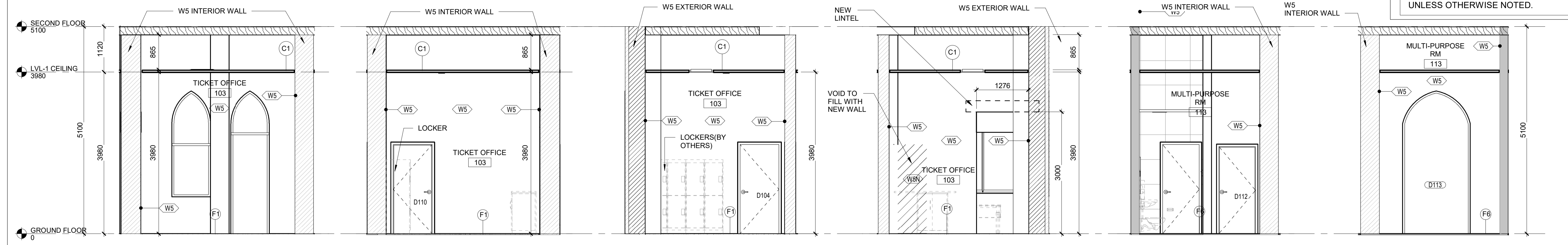
ISSUED FOR TENDER



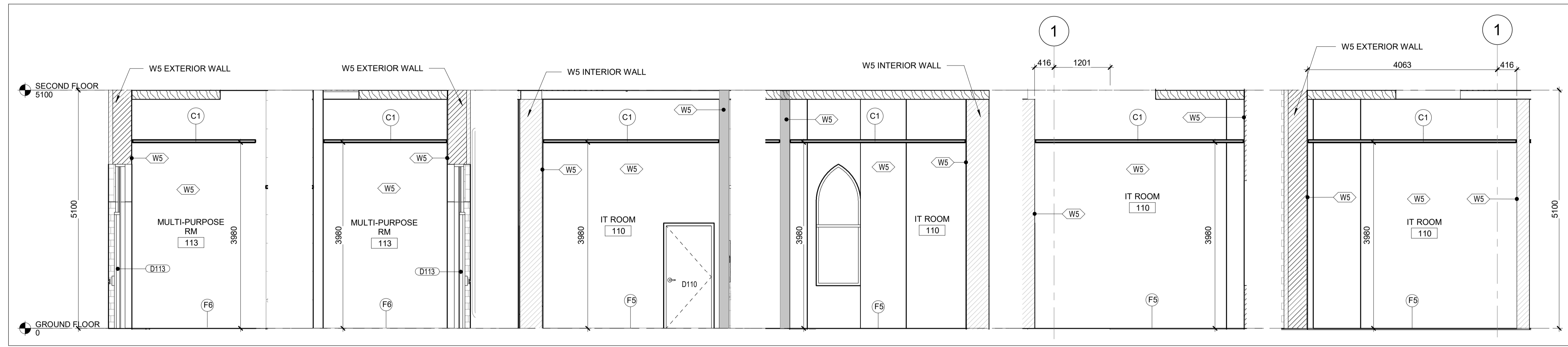
NIAGARA FALLS TRAIN STATION UPGRADES			
INTERIOR ELEVATIONS 3			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A2102

METRIC

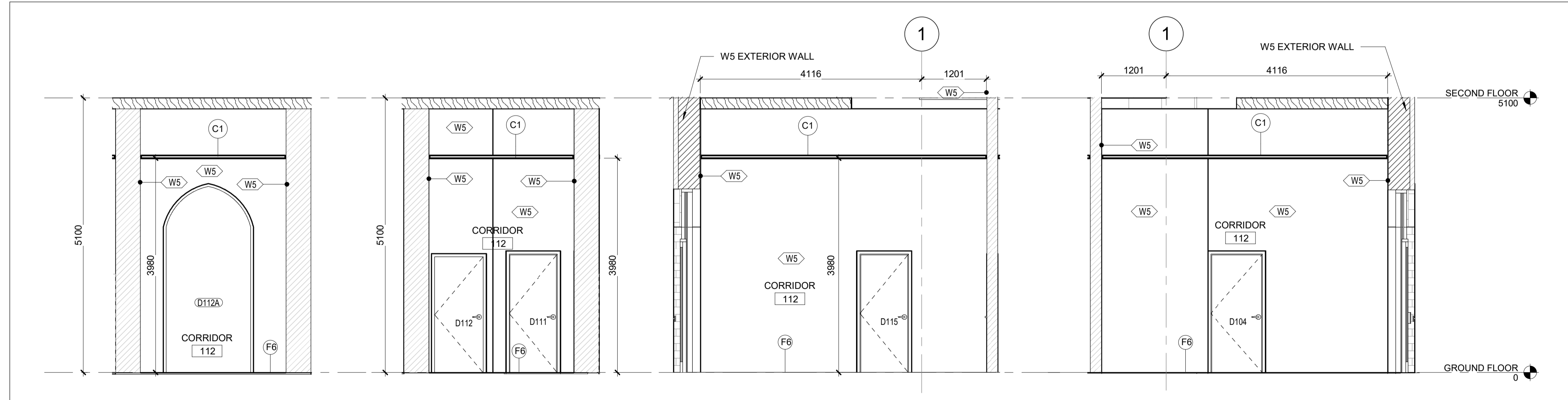
ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | TICKET OFFICE NORTH-BB 2 | TICKET OFFICE SOUTH-BB 3 | TICKET OFFICE EAST-BB 4 | TICKET OFFICE WEST-BB 5 | MULTIP. NORTH-BB 6 | MULTIP. SOUTH-BB



7 | MULTIP. WEST-BB 8 | M.P. RM. EAST-BB 9 | IT RM. NORTH-BB 10 | IT RM SOUTH-BB 11 | IT ROOM EAST-BB 12 | IT ROOM WEST-BB



13 | EAST CORRIDOR N-BB 14 | EAST CORRIDOR S-BB 15 | EAST CORRIDOR E-BB 16 | EAST CORRIDOR W-BB

FINISHES LEGEND

WALLS:

- W1 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W2 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W3 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W4 } PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
- W5 } PLASTER PATCH AND PAINT ON EXISTING WALL
- W5N } PLASTER AND PAINT ON NEW WALL
- W6 } DRYWALL PAINTED
- W7 } HPL PANEL
- W8 } HPL PANEL
- W9 } INTERIOR CURTAIN WALL
- W10 } INTERIOR CURTAIN WALL AT TICKET OFFICE
- W11 } FRP PANEL UP TO 1.5m
- W12 } FRP PANEL UP TO 1.5m
- W13 } FRP PANEL UP TO 1.5m
- W14 } ACOUSTICAL DRYWALL ASSEMBLY

FLOORS:

- F1 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (BEIGE COLOUR)
- F2 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (WOOD TEXTURIZED)
- F3 } LINEAR TACTILE TILE 600mm x 120mm (BLACK COLOUR)
- F4 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (MARFIL COLOUR)
- F5 } EPOXY PAINT
- F6 } VINYL TILES REPLACEMENT
- F7 } CARPET TILE (GRAY COLOUR)

CEILING:

- C1 } ACOUSTIC CEILING 24" x 48" (WHITE COLOUR)
- C2 } ACOUSTIC CEILING 24" x 48" VINYL COATED (WHITE COLOUR)
- C3 } HPL PANELS ON CEILING

ROOF:

- R1 } EXISTING ROOF

INTERIOR ELEVATION NOTES

- FURNITURE AND LOCKERS NOT INCLUDED. JUST FOR REFERENCE.
- "BB" STANDS FOR BASE BID
- P#, STANDS FOR PROVISIONAL ITEM #

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
B	2024/02/08	ISSUED FOR TENDER			
A	2023/04/24	ISSUED FOR BUILDING PERMIT			

DRAWN BY: P. LAPALIKAR 2023/09/22	DESIGNED BY: G. DANESHGAR 2023/04/21
CHECKED BY: S. CHERIAN 2023/09/22	APPROVED BY: S. CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY

ONTARIO ASSOCIATION OF ARCHITECTS
SHERY KOZHIMALA CHERIAN
LICENCE 7610

ARCHITECTURE | 49

PROJECT NO. BE20101016

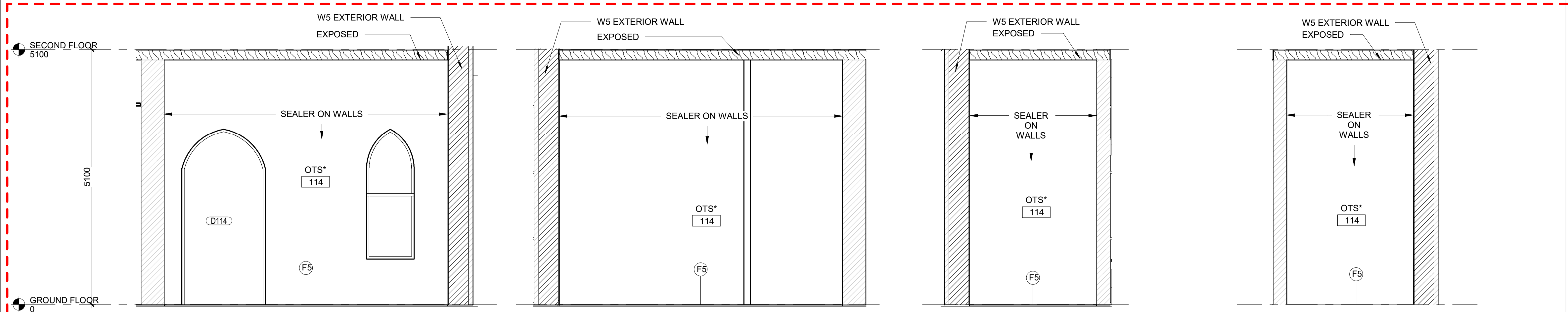
ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES INTERIOR ELEVATIONS 4			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A2103

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



PROVISIONAL ITEM #4

1 | INT. ELEV. - OTS NORTH(P #4)

A2104 REF: A1601 SCALE: 1:50

2 | INT. ELEV. - OTS SOUTH(P #4)

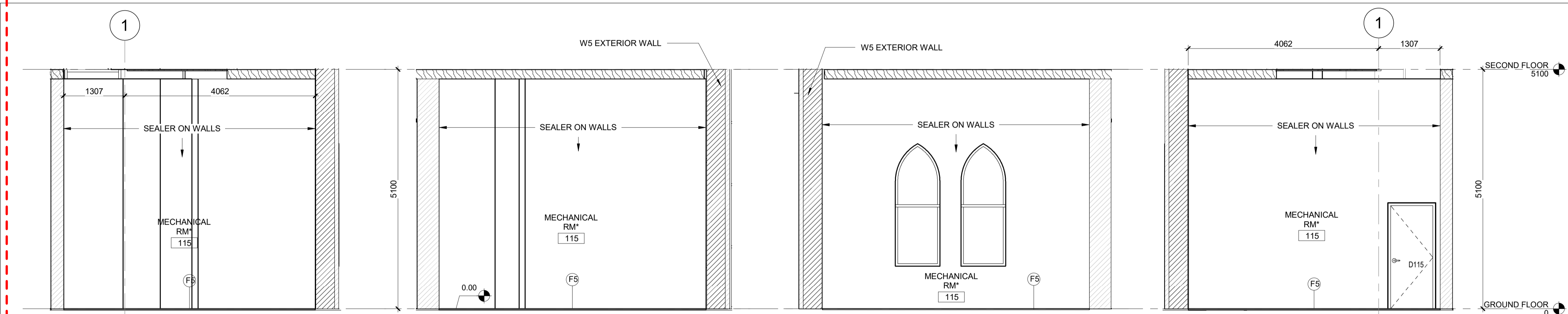
A2104 REF: A1601 SCALE: 1:50

3 | INT. ELEV. - OTS EAST(P #4)

A2104 REF: A1601 SCALE: 1:50

4 | INT. ELEV. - OTS WEST(P #4)

A2104 REF: A1601 SCALE: 1:50



5 | INT. ELEV. - MECH. RM. EAST(P #4)

A2104 REF: A1601 SCALE: 1:50

6 | INT. ELEV. - MECH. RM. NORTH(P #4)

A2104 REF: A1601 SCALE: 1:50

7 | INT. ELEV. - MECH. RM. SOUTH(P #4)

A2104 REF: A1601 SCALE: 1:50

8 | INT. ELEV. - MECH. RM. WEST(P #4)

A2104 REF: A1601 SCALE: 1:50

FINISHES LEGEND

WALLS:

- W1 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W2 PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
- W3 PLASTER PATCH AND PAINT ON EXISTING WALL
- W4 PLASTER AND PAINT ON NEW WALL
- W5 DRYWALL PAINTED
- W6 HPL PANEL
- W7 INTERIOR CURTAIN WALL
- W8 INTERIOR CURTAIN WALL AT TICKET OFFICE
- W9 FRP PANEL UP TO 1.5m
- W10 ACOUSTICAL DRYWALL ASSEMBLY

FLOORS:

- F1 PORCELAIN TILE LARGE FORMAT 600mm x 600mm (BEIGE COLOUR)
- F2 PORCELAIN TILE LARGE FORMAT 600mm x 600mm (WOOD TEXTURIZED)
- F3 LINEAR TACTILE TILE 600mm x 120mm (BLACK COLOUR)
- F4 PORCELAIN TILE LARGE FORMAT 600mm x 600mm (MARFIL COLOUR)
- F5 EPOXY PAINT
- F6 VINYL TILES REPLACEMENT
- F7 CARPET TILE (GRAY COLOUR)

CEILING:

- C1 ACOUSTIC CEILING 24" X 48" (WHITE COLOUR)
- C2 ACOUSTIC CEILING 24" X 48" VINYL COATED (WHITE COLOUR)
- C3 HPL PANELS ON CEILING

ROOF:

- R1 EXISTING ROOF

INTERIOR ELEVATION NOTES

1. FURNITURE AND LOCKERS NOT INCLUDED. JUST FOR REFERENCE.
2. "BB" STANDS FOR BASE BID
3. P#, STANDS FOR PROVISIONAL ITEM #

9 | EAST WR E-BB

A2104 REF: A1601 SCALE: 1:50

10 | EAST WR N-BB

A2104 REF: A1601 SCALE: 1:50


11 | EAST WR S-BB


A2104 REF: A1601 SCALE: 1:50

12 | EAST WR W-BB

A2104 REF: A1601 SCALE: 1:50

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:
			P.LAFALIKAR 2023/09/22	G.DANESHGAR 2023/04/21
			CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
			SCALE: AS SHOWN	FULL SIZE ONLY
DWG NO.	TITLE	NO. DATE	ISSUED FOR	REV. DATE
		B 2024/02/08	ISSUED FOR TENDER	
		A 2023/04/24	ISSUED FOR BUILDING PERMIT	

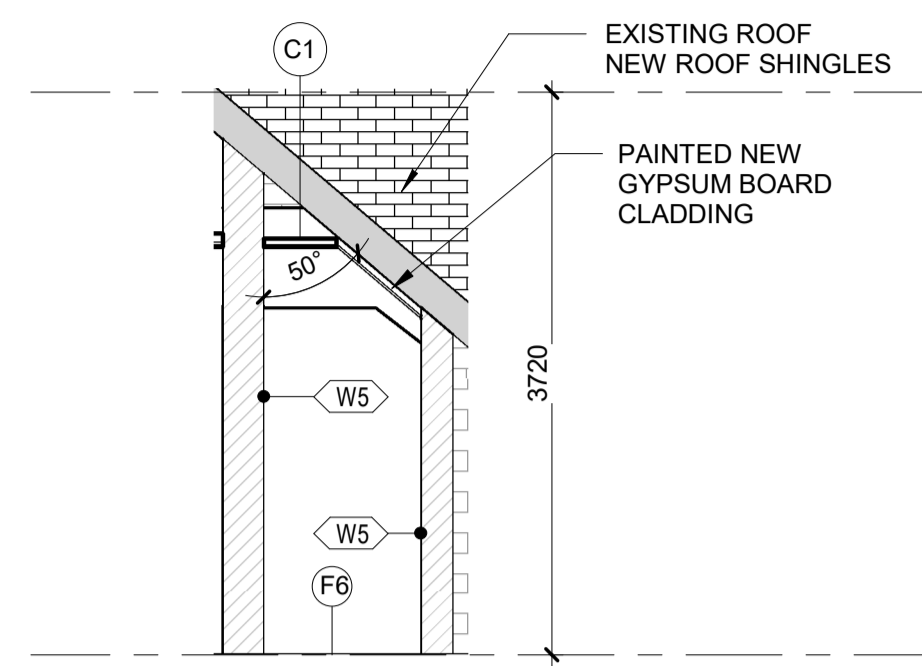
 <p>ONTARIO ASSOCIATION OF ARCHITECTS SHERY KOZHIMALA CHERIAN LICENCE 7610</p>	<p>ARCHITECTURE 49</p> <p>PROJECT NO. BE20101016</p> <p>ISSUED FOR TENDER</p>
---	--

 <p>Niagara Region</p>	<p>NIAGARA FALLS TRAIN STATION UPGRADES</p> <p>INTERIOR ELEVATIONS 5</p>
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CONTRACT NO.	DWG. NO.	REV.	SHEET
STATION RENOVATION		A	A2104

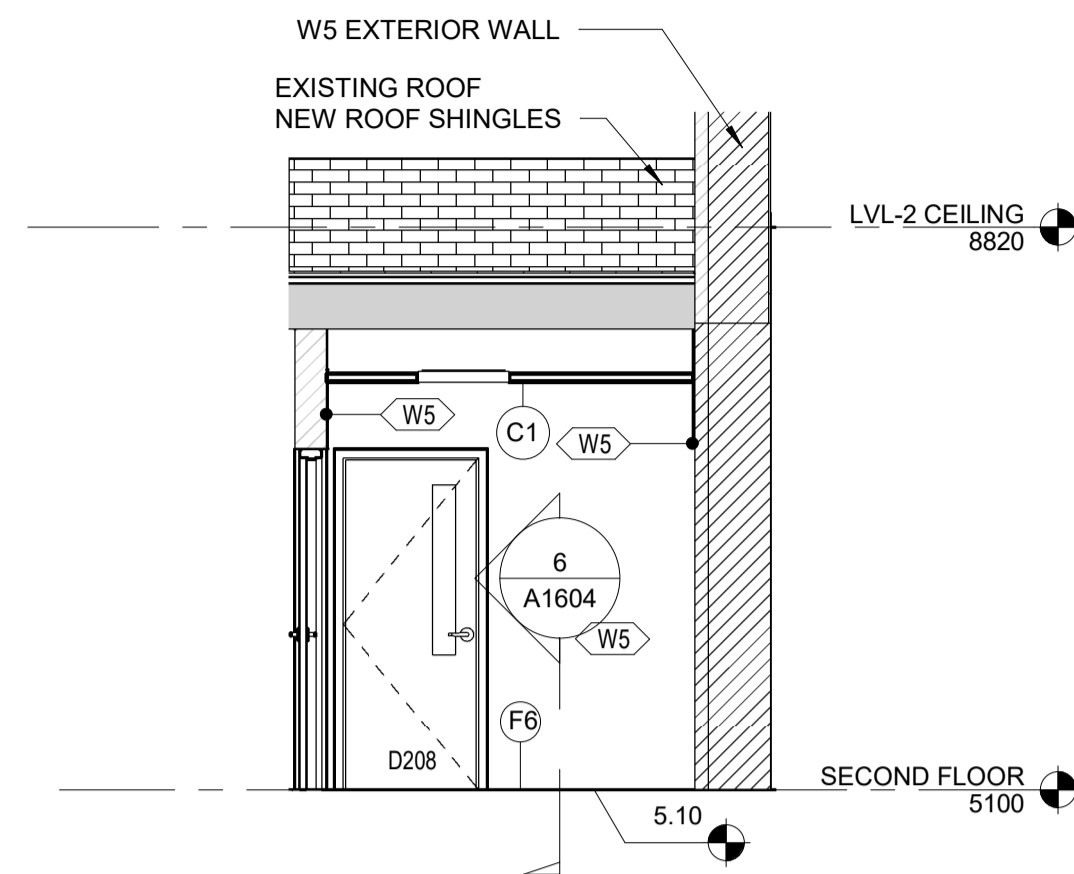
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



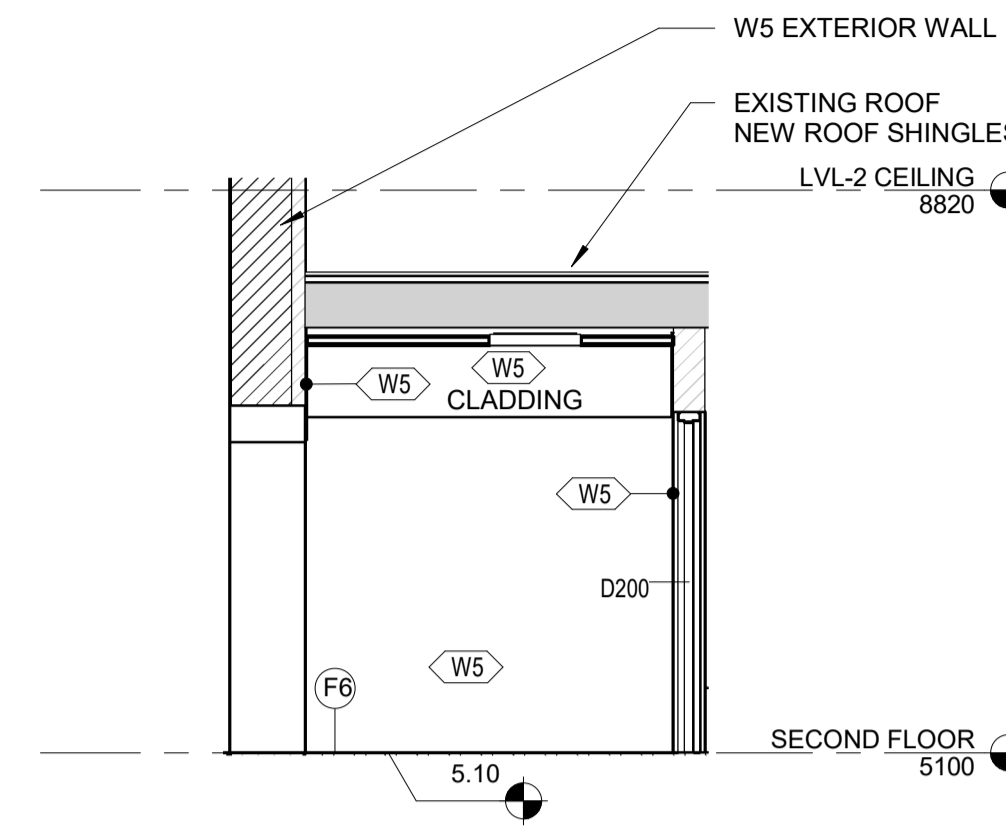
1 | CORRIDOR 2nd EAST-BB

A2105 | REF: D-0002 | SCALE: 1 : 50



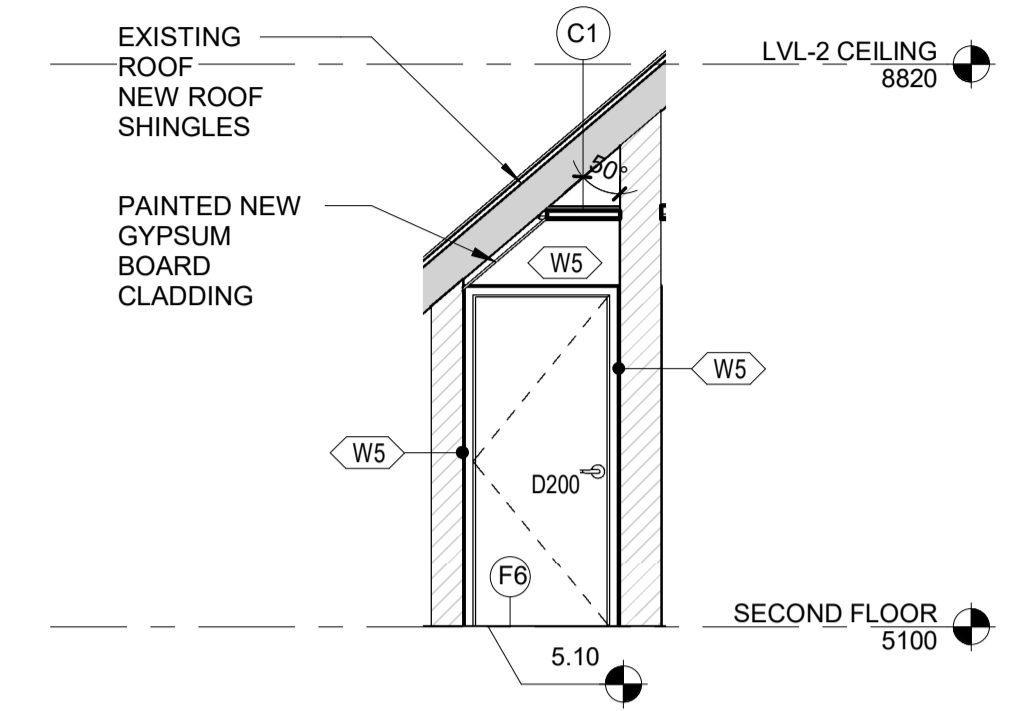
2 | CORRIDOR 2nd NORTH-BB

A2105 | REF: D-0002 | SCALE: 1 : 50



3 | STAIR 2 SOUTH-BB

A2105 | REF: D-0002 | SCALE: 1 : 50



4 | STAIR 2 WEST-BB

A2105 | REF: D-0002 | SCALE: 1 : 50

FINISHES LEGEND

WALLS:

- W1 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W2 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W3 } 600x600mm PORCELAIN TILE BIG FORMAT WHITE
- W4 } PORCELAIN TILE BIG FORMAT WHITE ON EXISTING WALL
- W5 } PLASTER PATCH AND PAINT ON EXISTING WALL
- W5N } PLASTER AND PAINT ON NEW WALL
- W6 } DRYWALL PAINTED
- W7 } HPL PANEL
- W8 } HPL PANEL
- W9 } INTERIOR CURTAIN WALL
- W10 } INTERIOR CURTAIN WALL AT TICKET OFFICE
- W11 } FRP PANEL UP TO 1.5m
- W12 } FRP PANEL UP TO 1.5m
- W13 } FRP PANEL UP TO 1.5m
- W14 } ACOUSTICAL DRYWALL ASSEMBLY

FLOORS:

- F1 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (BEIGE COLOUR)
- F8 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (BEIGE COLOUR)
- F2 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (WOOD TEXTURIZED)
- F3 } LINEAR TACTILE TILE 600mm x 120mm (BLACK COLOUR)
- F4 } PORCELAIN TILE LARGE FORMAT 600mm x 600mm (MARFIL COLOUR)
- F5 } EPOXY PAINT
- F6 } VINYL TILES REPLACEMENT
- F7 } CARPET TILE (GRAY COLOUR)

CEILING:

- C1 } ACOUSTIC CEILING 24" X 48" (WHITE COLOUR)
- C2 } ACOUSTIC CEILING 24" X 48" VINYL COATED (WHITE COLOUR)
- C3 } HPL PANELS ON CEILING

ROOF:

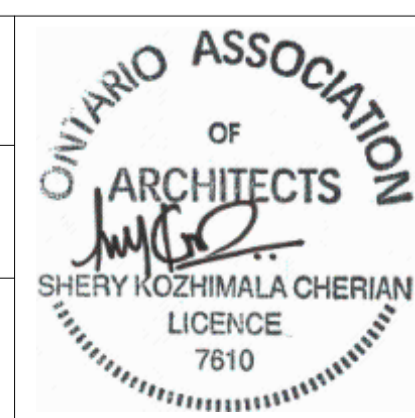
- R1 } EXISTING ROOF

INTERIOR ELEVATION NOTES

1. FURNITURE AND LOCKERS NOT INCLUDED - JUST FOR REFERENCE.
2. "BB" STANDS FOR BASE BID
3. P#, STANDS FOR PROVISIONAL ITEM #

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
		B	2024/02/08	ISSUED FOR TENDER	
		A	2023/04/24	ISSUED FOR BUILDING PERMIT	

DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49

PROJECT NO. BE20101016

ISSUED FOR TENDER



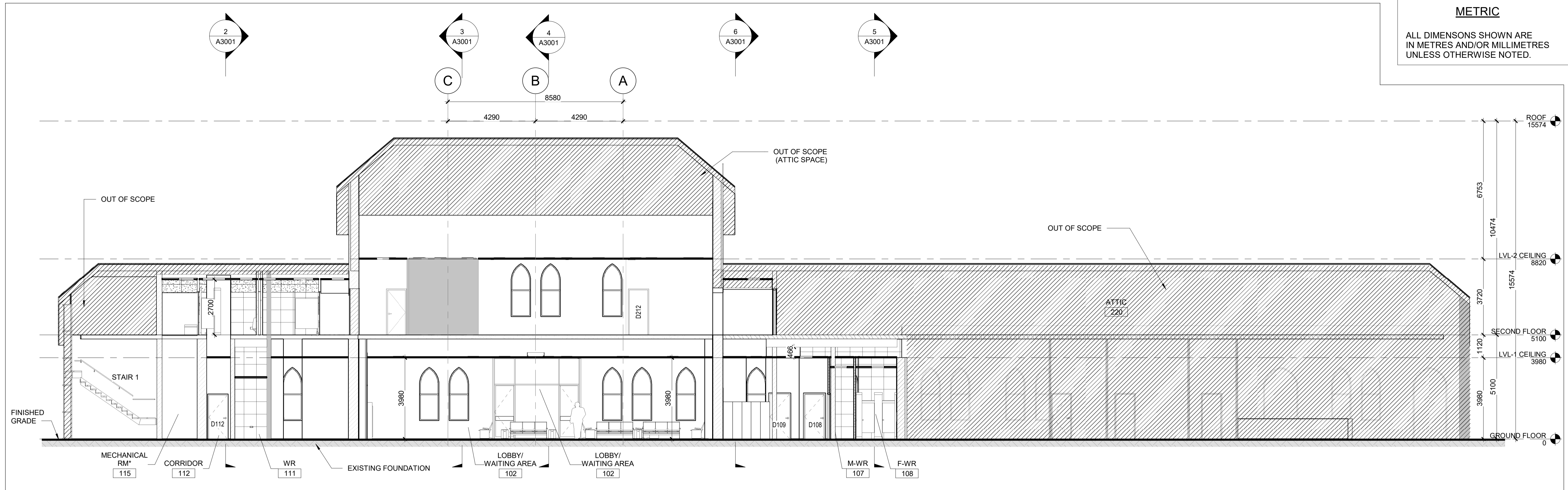
NIAGARA FALLS TRAIN STATION UPGRADES

INTERIOR ELEVATIONS 6

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A2105
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METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 BUILDING SECTION 1

A3000 REF: A1300 SCALE: 1 : 100



2 BUILDING SECTION 2

A3000 REF: A1300 SCALE: 1 : 100

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			P.LAPALIKAR 2023/09/22	G.DANESHGAR 2023/04/21		
			CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22		
			SCALE: AS SHOWN	FULL SIZE ONLY		
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
B	2024/02/08	ISSUED FOR TENDER				
A	2023/04/24	ISSUED FOR BUILDING PERMIT				

DRAWN BY:
P.LAPALIKAR
2023/09/22

DESIGNED BY:
G.DANESHGAR
2023/04/21

CHECKED BY:
S.CHERIAN
2023/09/22

APPROVED BY:
S.CHERIAN
2023/09/22

SCALE: AS SHOWN

FULL SIZE ONLY



ARCHITECTURE | 49

PROJECT NO. BE20101016

ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES
BUILDING SECTIONS 1

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A3000
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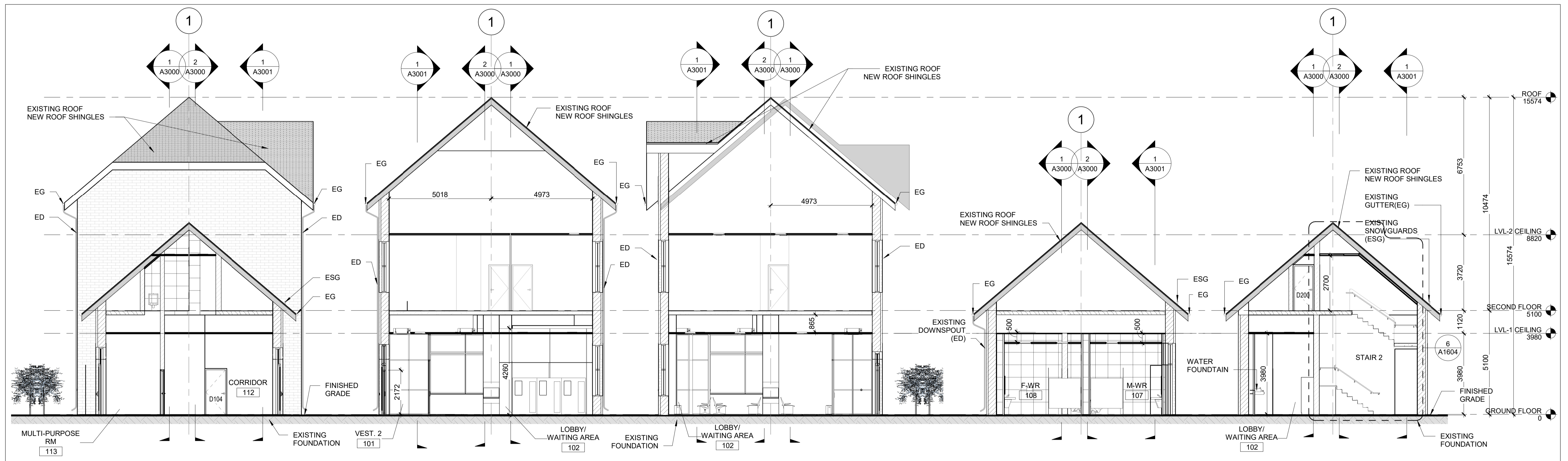
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 BUILDING SECTION 3(P #6)

A3001 REF: A1300 SCALE: 1:100



2 BUILDING SECTION 4-BB

A3001 REF: A1300 SCALE: 1:100

3 BUILDING SECTION 5(P #6)

A3001 REF: A1300 SCALE: 1:100

4 BUILDING SECTION 6(P #6)

A3001 REF: A1300 SCALE: 1:100

5 BUILDING SECTION 7-BB

A3001 REF: A1300 SCALE: 1:100

6 BUILDING SECTION 8-BB

A3001 REF: A1300 SCALE: 1:100

REFERENCE DRAWINGS	ISSUE	REVISIONS				
B	2024/02/08	ISSUED FOR TENDER				
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DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE

DRAWN BY:
P.LAFALIKAR
2023/09/22

DESIGNED BY:
G.DANESHGAR
2023/04/21

CHECKED BY:
S.CHERIAN
2023/09/22

APPROVED BY:
S.CHERIAN
2023/09/22

SCALE: AS SHOWN FULL SIZE ONLY

ARCHITECTURE | 49

PROJECT NO. BE20101016

ISSUED FOR TENDER



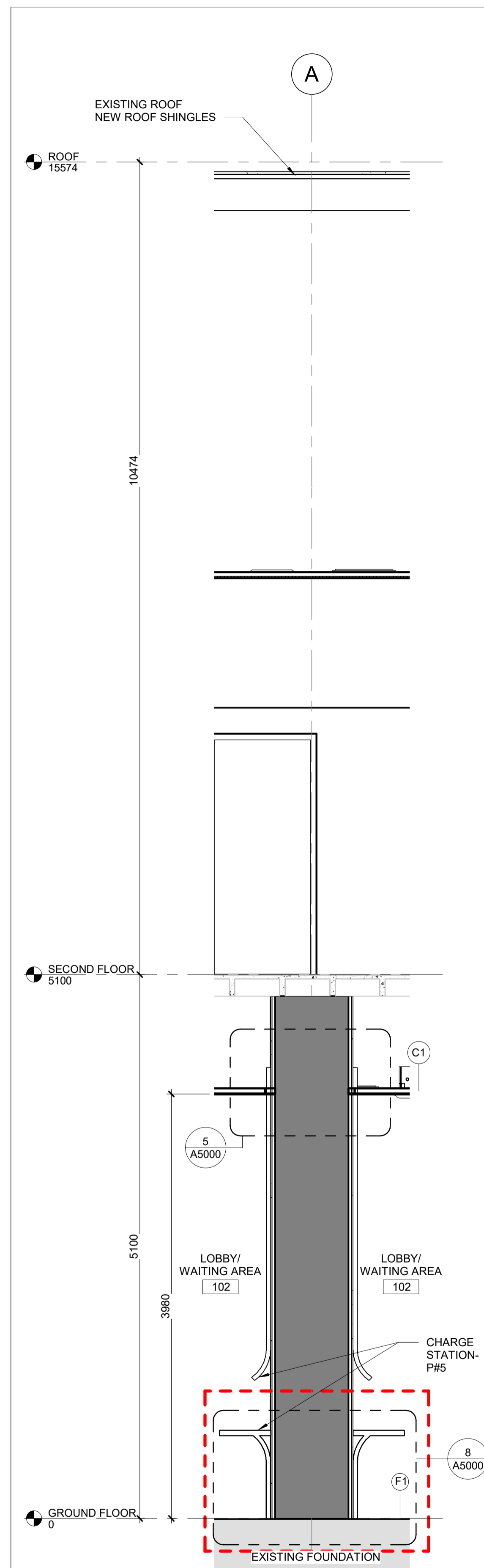
NIAGARA FALLS TRAIN STATION UPGRADES

BUILDING SECTIONS 2

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A3001
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METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

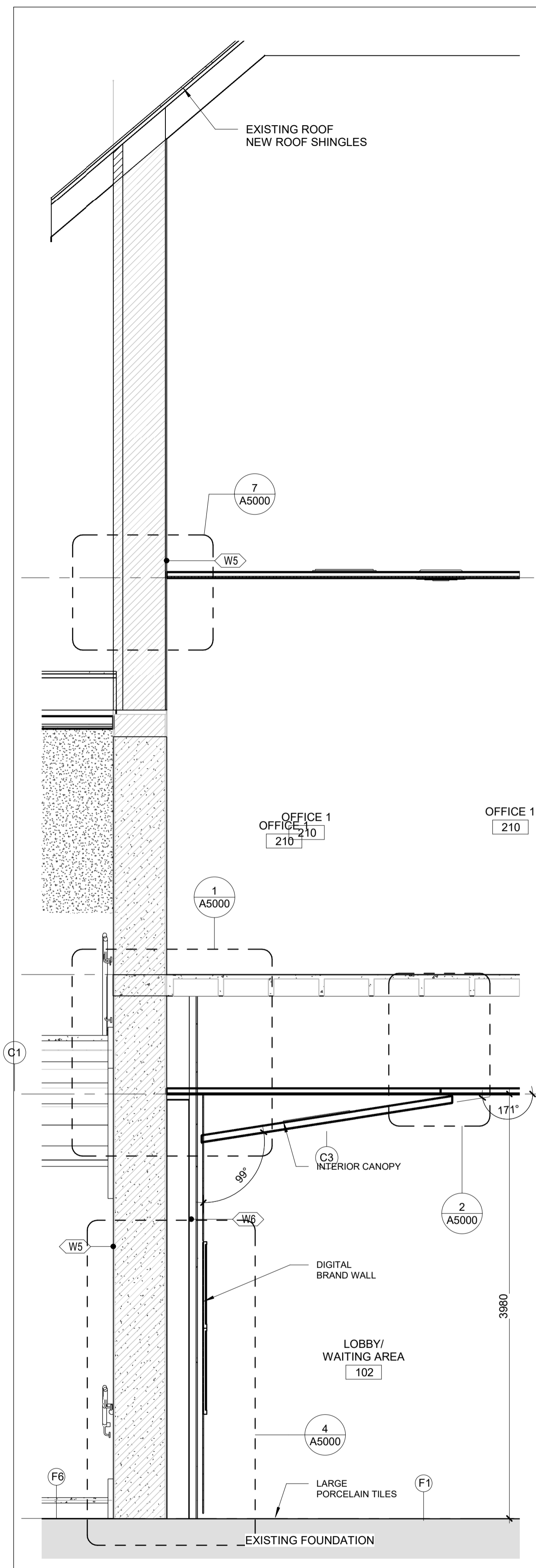


1 WALL SECTION - COLUMN

A4000 REF: A1600

SCALE: 1 : 30

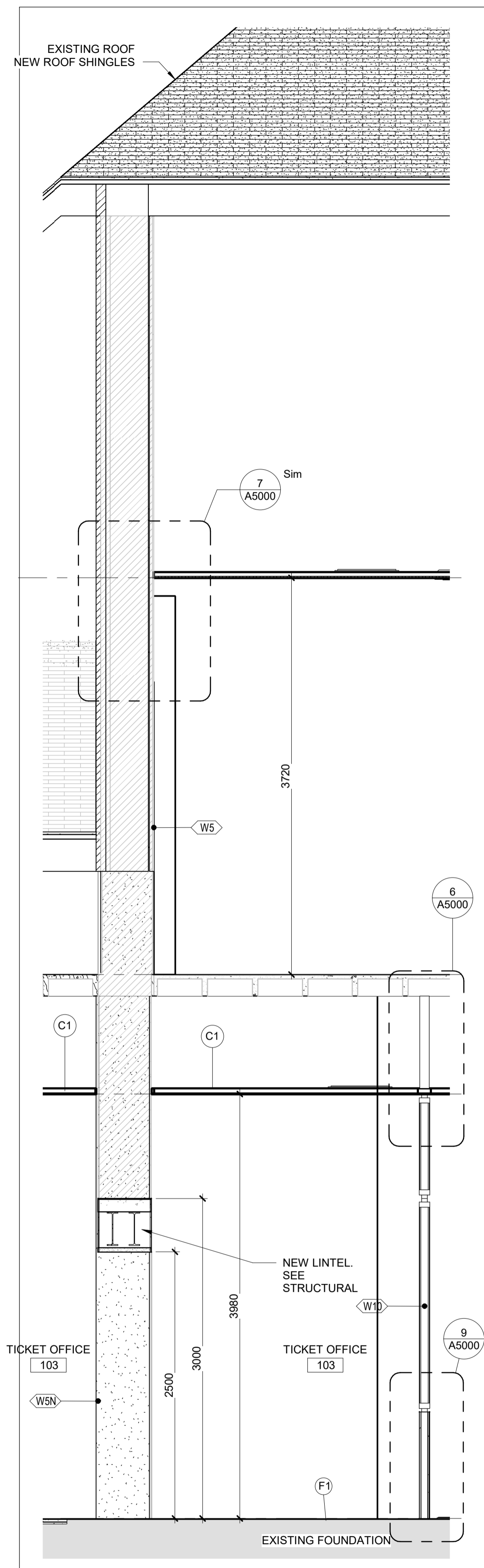
PROVISIONAL ITEM #5



2 WALL SECTION - PANNEL-BB

A4000 REF: A1600

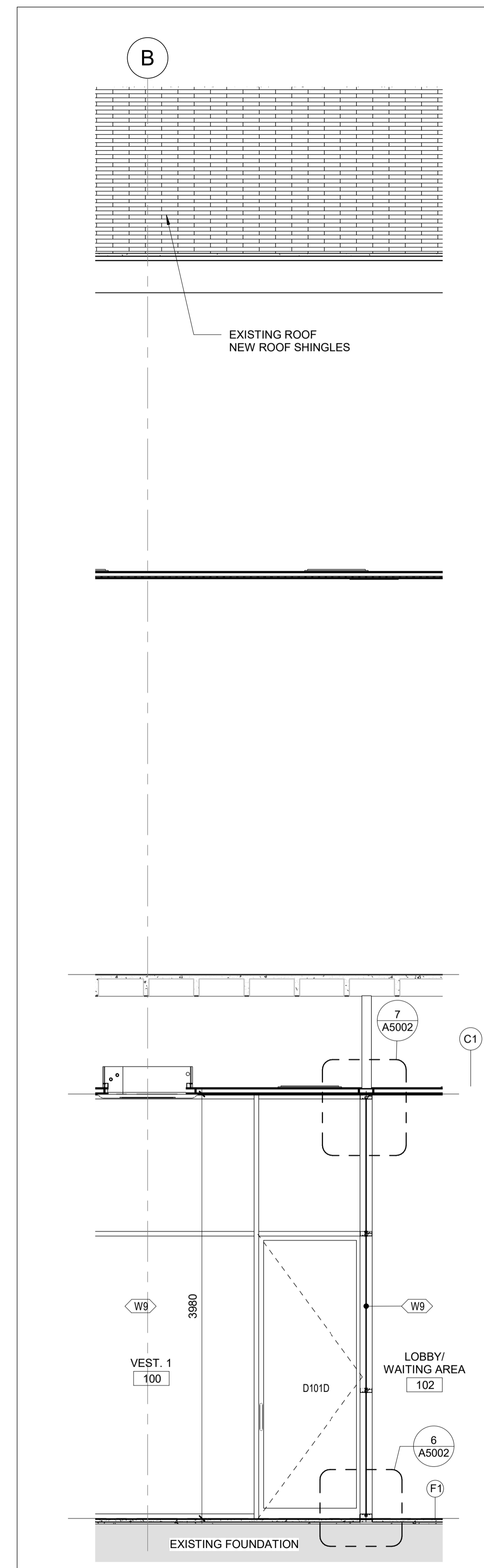
SCALE: 1 : 30



3 WALL SECTION - TICKETS-BB

A4000 REF: A1600

SCALE: 1 : 30



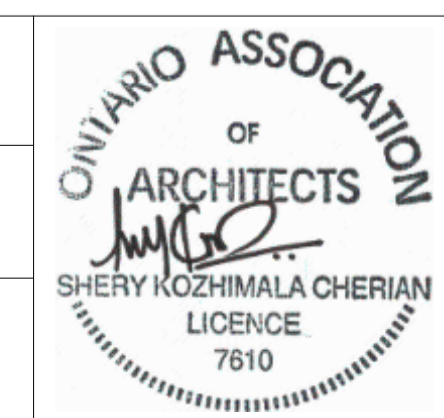
4 WALL SECTION - VESTIBULE 1-BB

A4000 REF: A1600

SCALE: 1 : 30

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
		B	2024/02/08	ISSUED FOR TENDER	
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DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE 49
PROJECT NO. BE20101016
ISSUED FOR TENDER

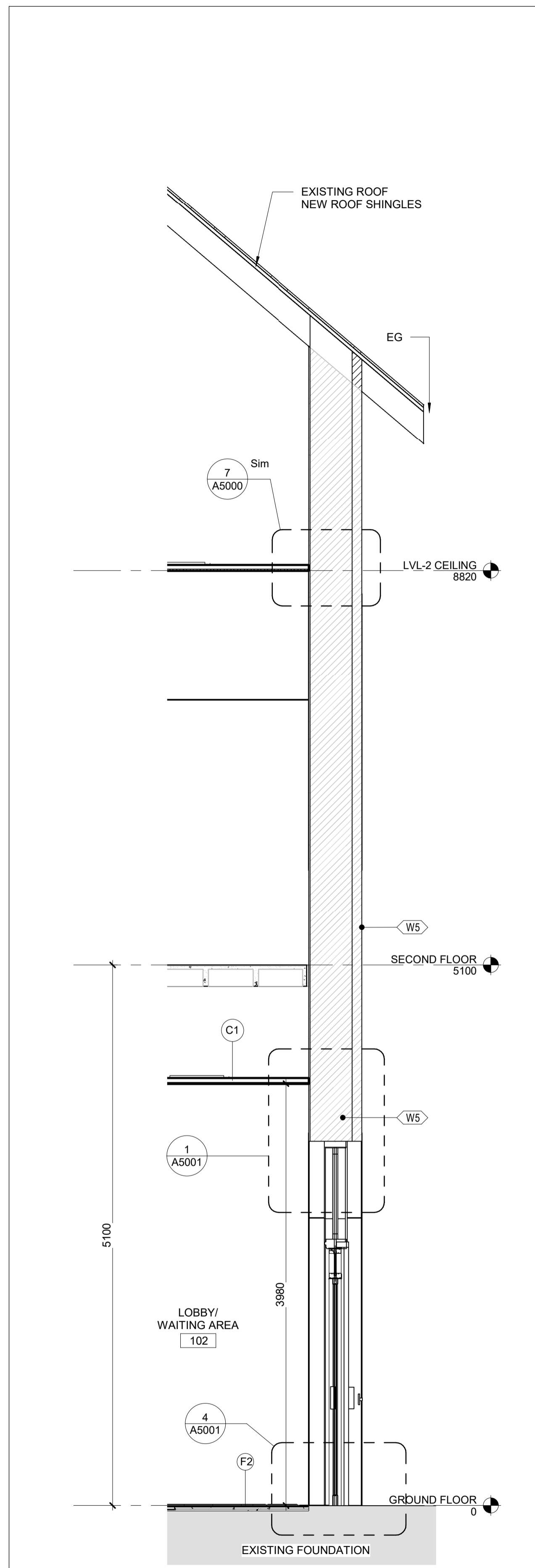


NIAGARA FALLS TRAIN STATION UPGRADES
WALL SECTIONS 1

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A4000
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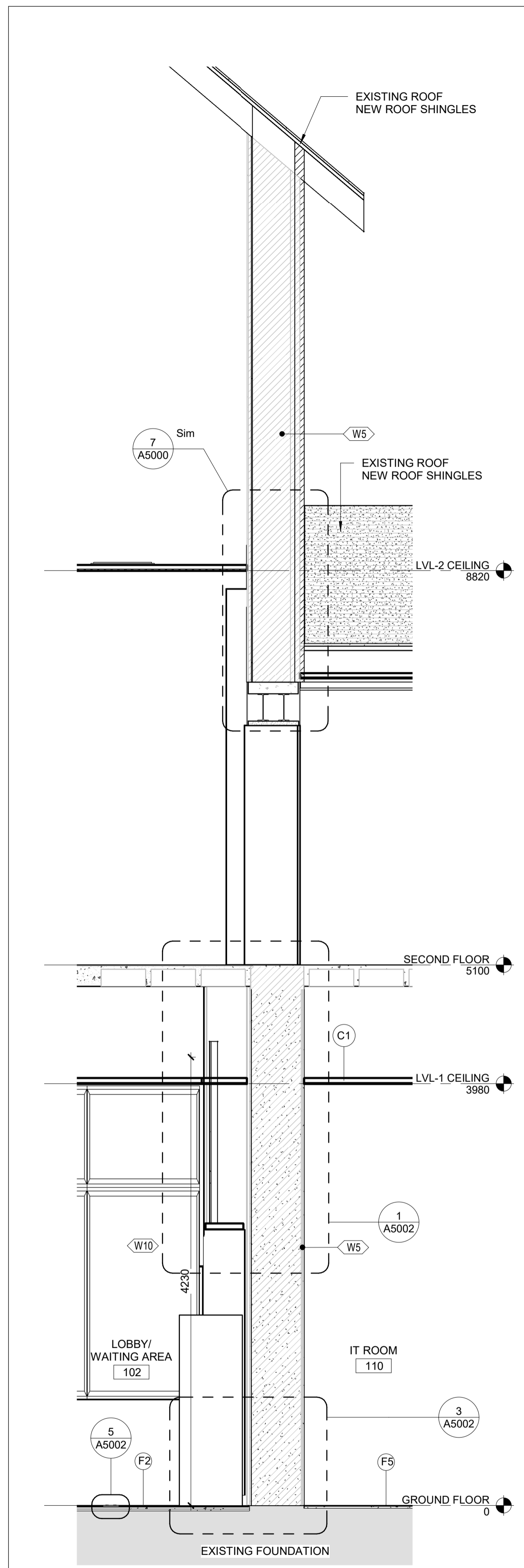
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



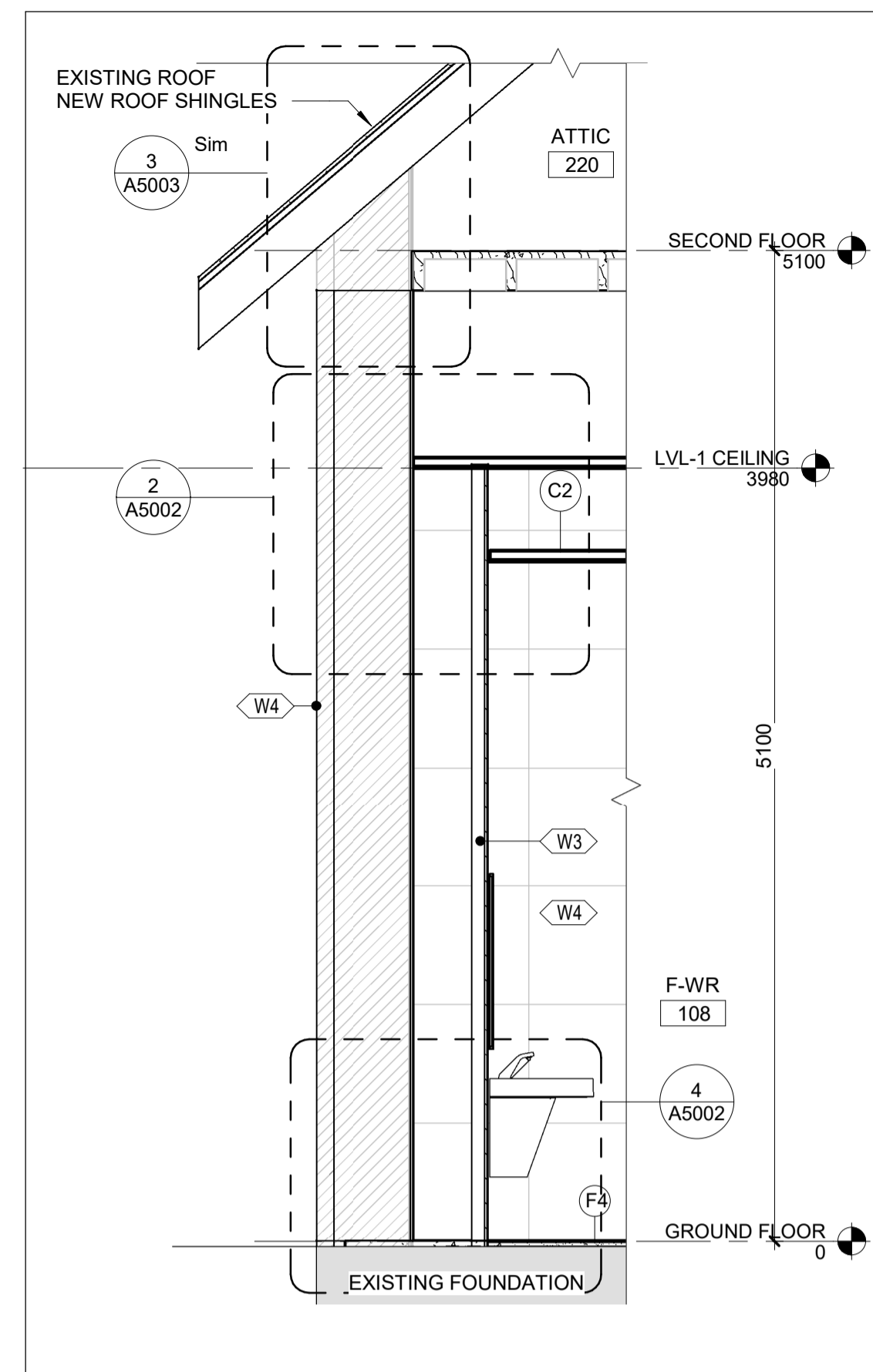
1 | NORTH LOBBY-BB

A4001 REF: A1600 SCALE: 1 : 30



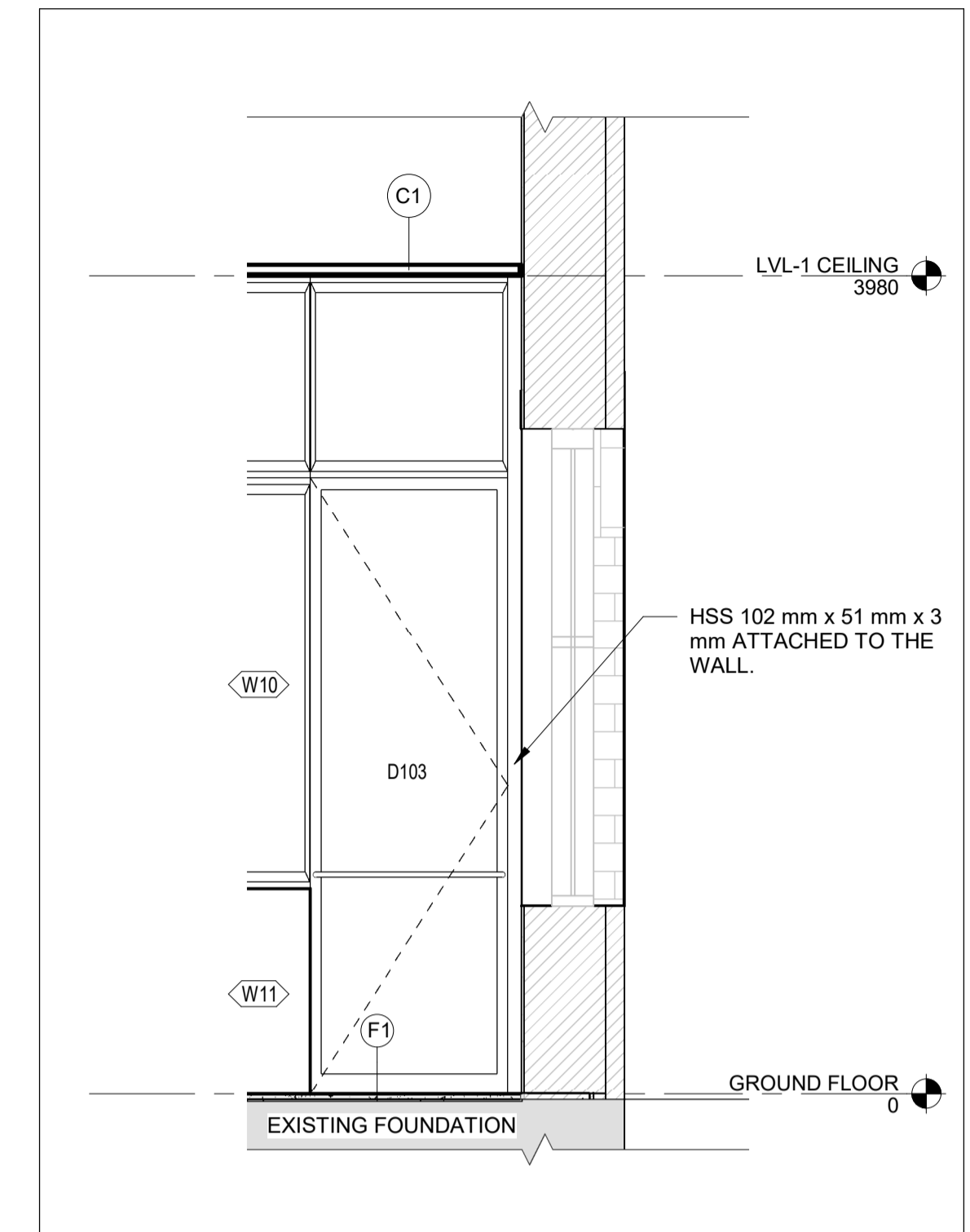
2 | IT ROOM-BB

A4001 REF: A1600 SCALE: 1 : 30



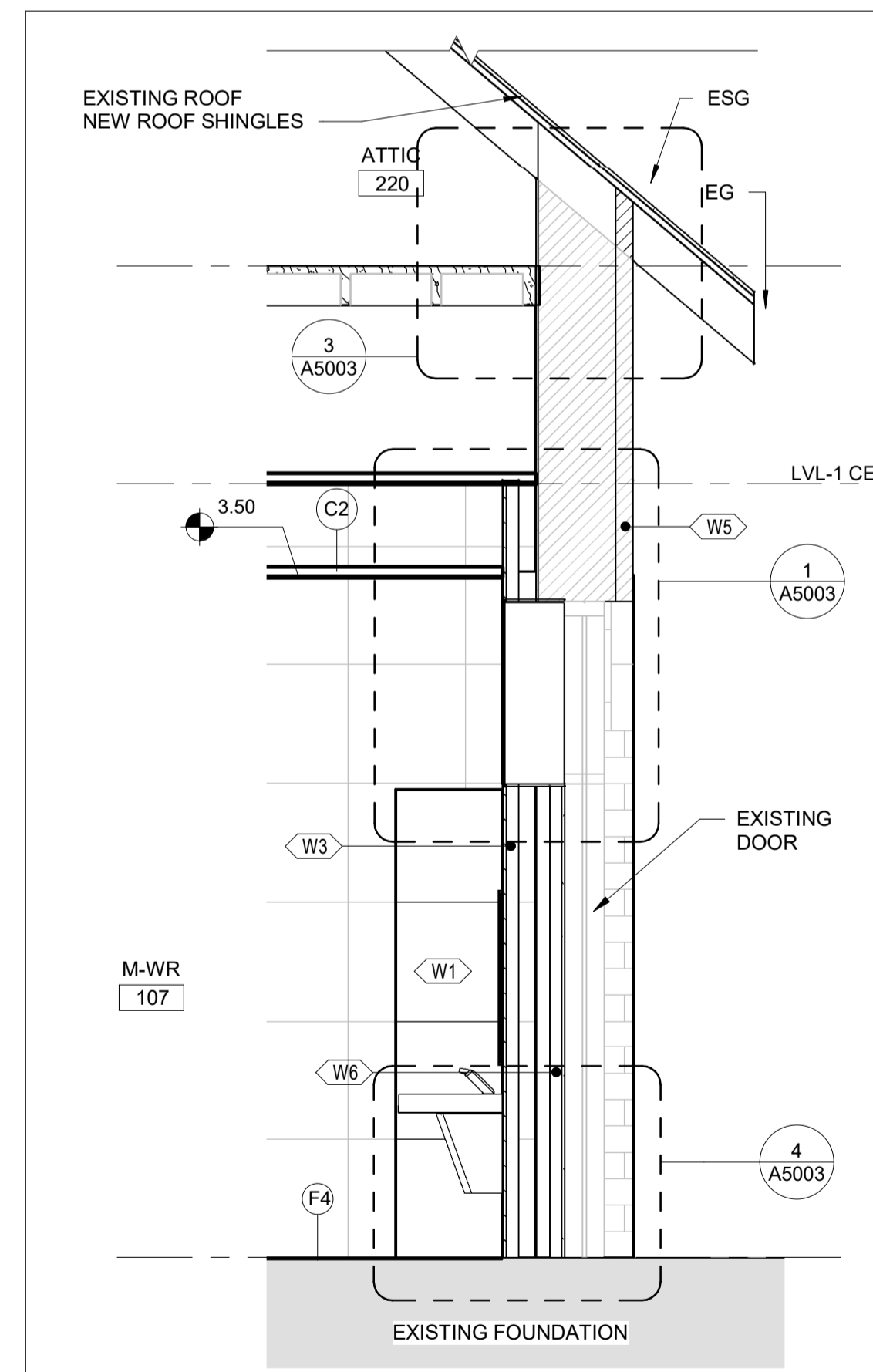
5 | FEMALE-WR-BB

A4001 REF: A1600 SCALE: 1 : 30



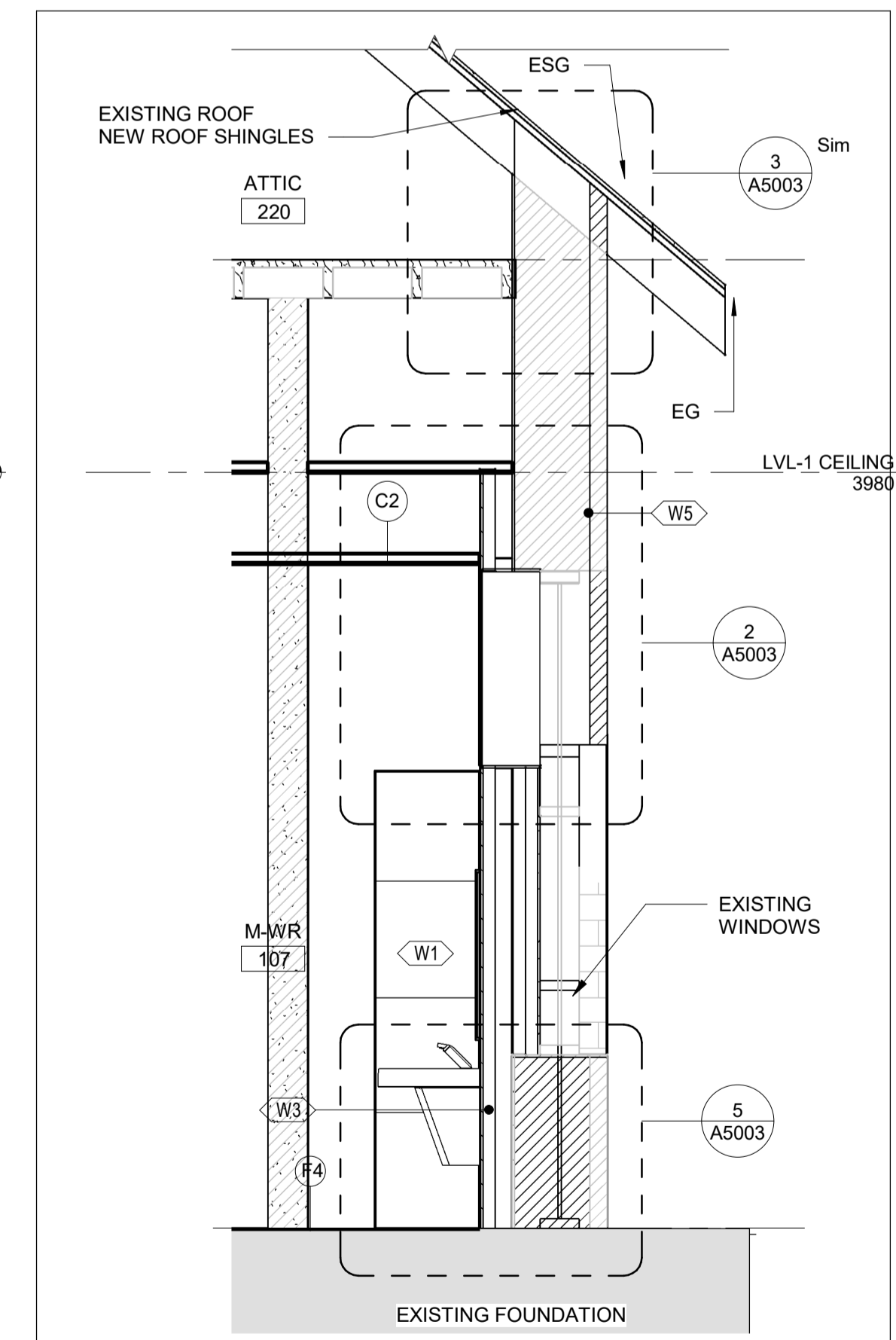
6 | TICKET OFFICE WINDOW-BB

A4001 REF: A1600 SCALE: 1 : 30



3 | MALE-WR 1-BB

A4001 REF: A1600 SCALE: 1 : 30



4 | MALE-WR 2-BB

A4001 REF: A1600 SCALE: 1 : 30

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			P.LAPALIKAR 2023/09/22	G.DANESHGAR 2023/04/21		
			CHECKED BY:	APPROVED BY:		
			S.CHERIAN 2023/09/22	S.CHERIAN 2023/09/22		
			SCALE: AS SHOWN	FULL SIZE ONLY		
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
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DRAWN BY: P.LAPALIKAR
 2023/09/22
 DESIGNED BY: G.DANESHGAR
 2023/04/21
 CHECKED BY: S.CHERIAN
 2023/09/22
 APPROVED BY: S.CHERIAN
 2023/09/22
 SCALE: AS SHOWN
 FULL SIZE ONLY



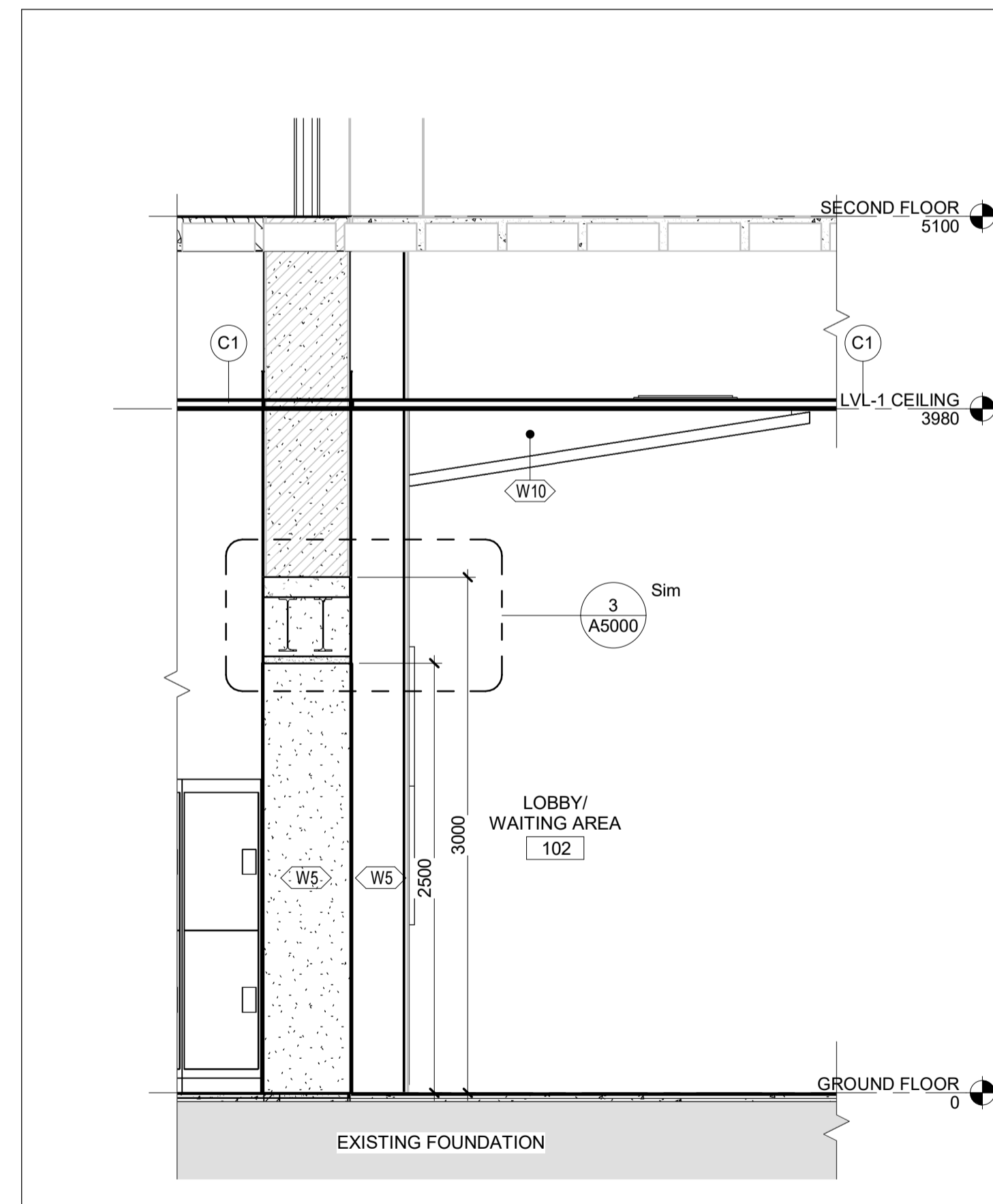
ARCHITECTURE | 49
 PROJECT NO. BE20101016
 ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION
 UPGRADES
 WALL SECTIONS 2
 CONTRACT NO. STATION RENOVATION
 DWG. NO.
 REV. A
 SHEET A4001

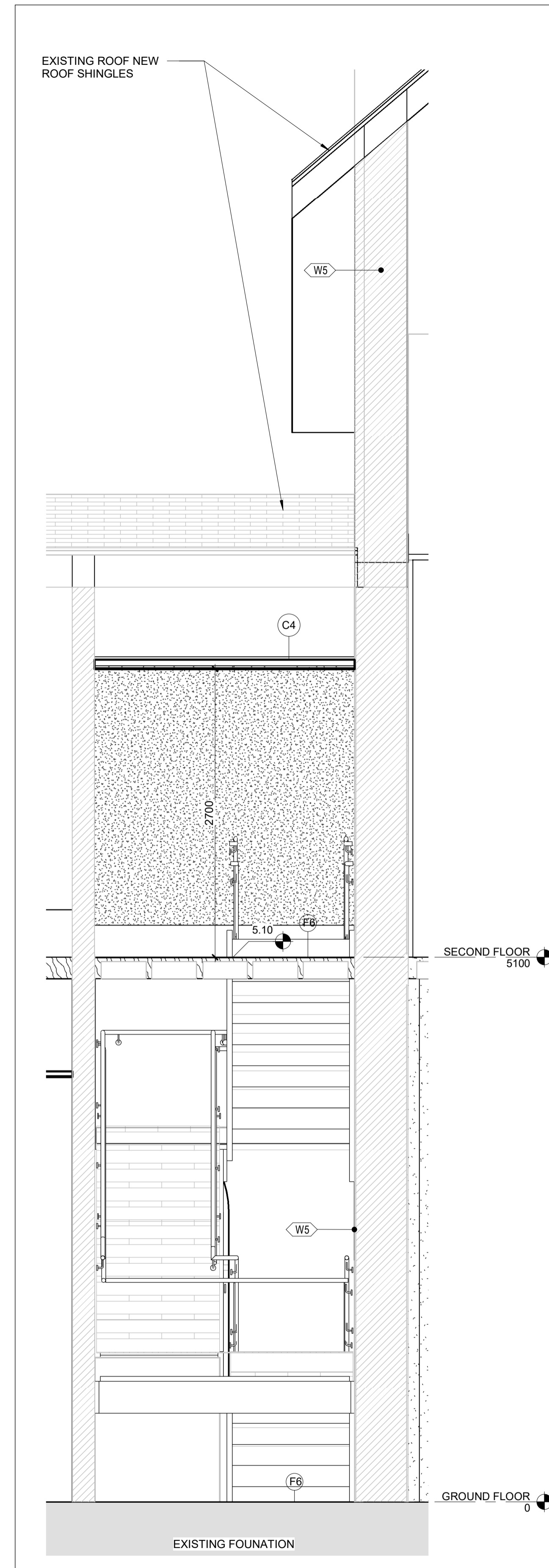
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



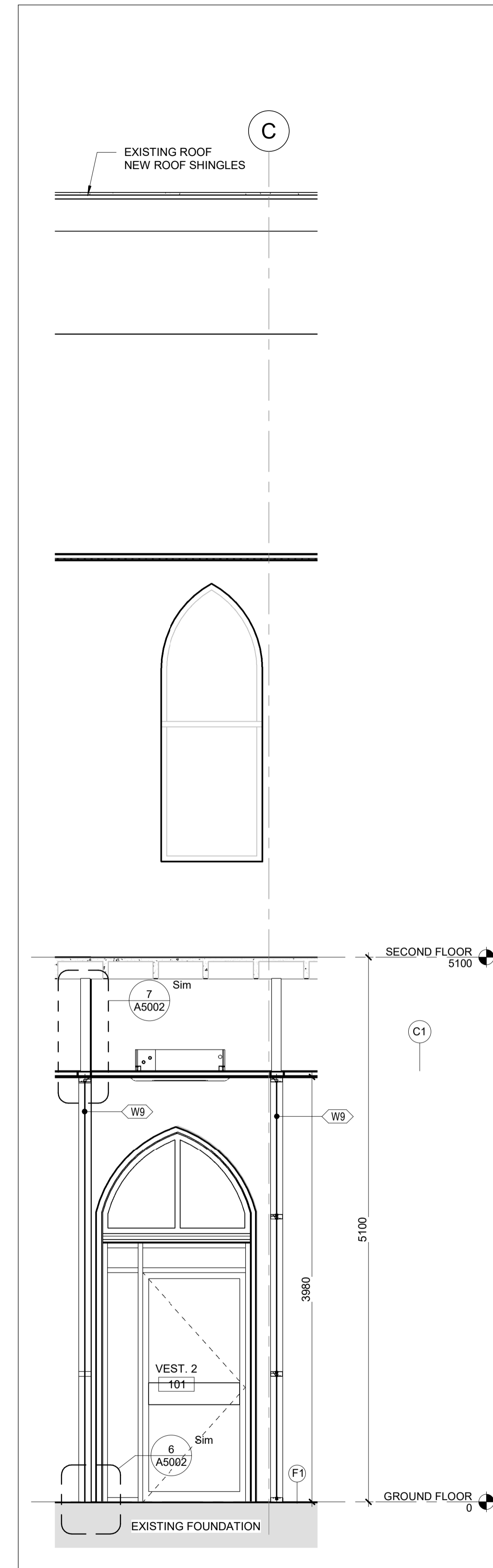
1 | WALL SECTION - OP.EAST-BB

A4002 REF: A1600 SCALE: 1 : 30



2 | STAIR 2-BB

A4002 REF: A1600 SCALE: 1 : 30



3 | VESTIBULE 2-BB

A4002 REF: A1600 SCALE: 1 : 30

REFERENCE DRAWINGS		ISSUE		REVISIONS	
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DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49

PROJECT NO. BE20101016

ISSUED FOR TENDER



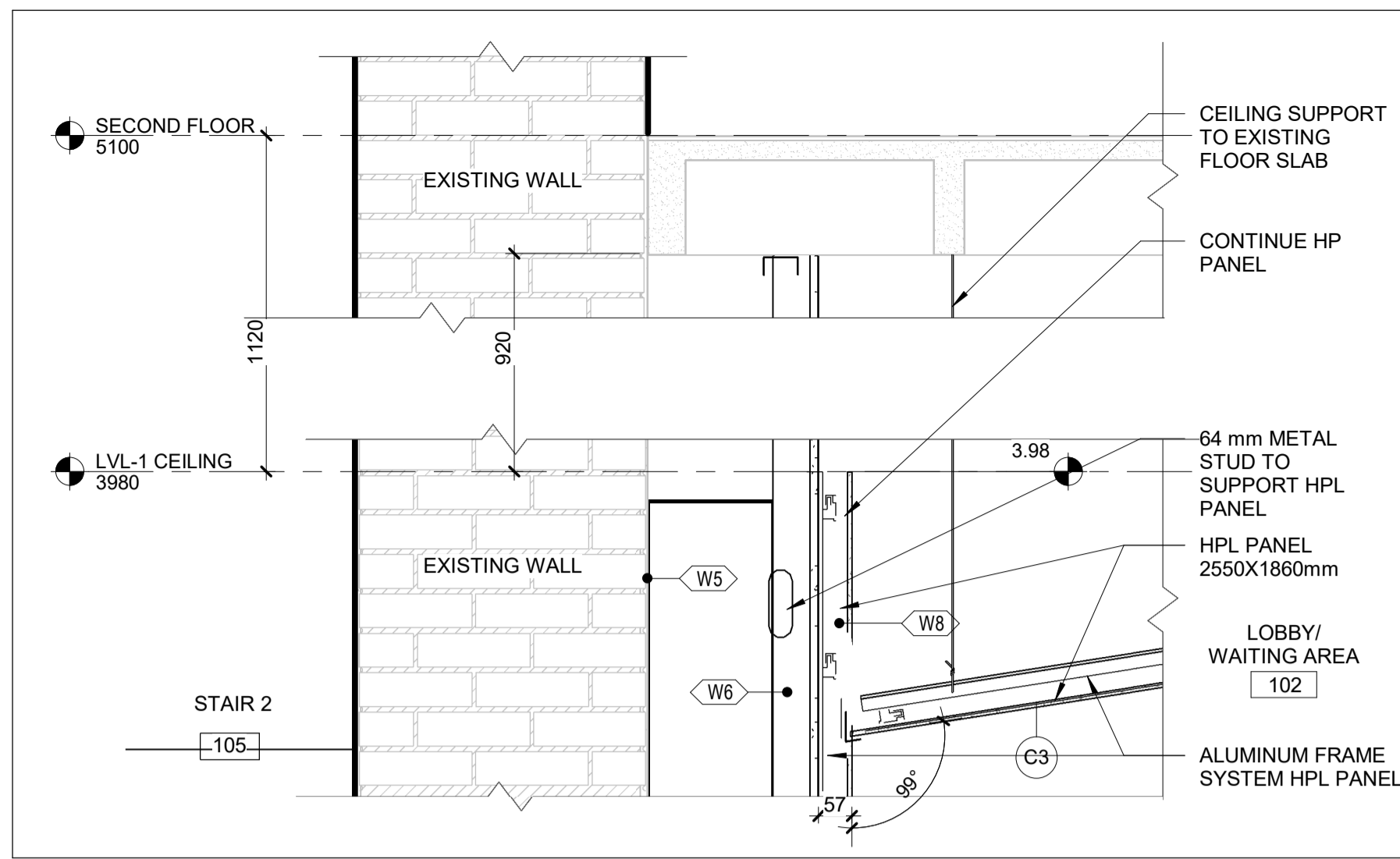
NIAGARA FALLS TRAIN STATION UPGRADES WALL SECTIONS 3			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A4002

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

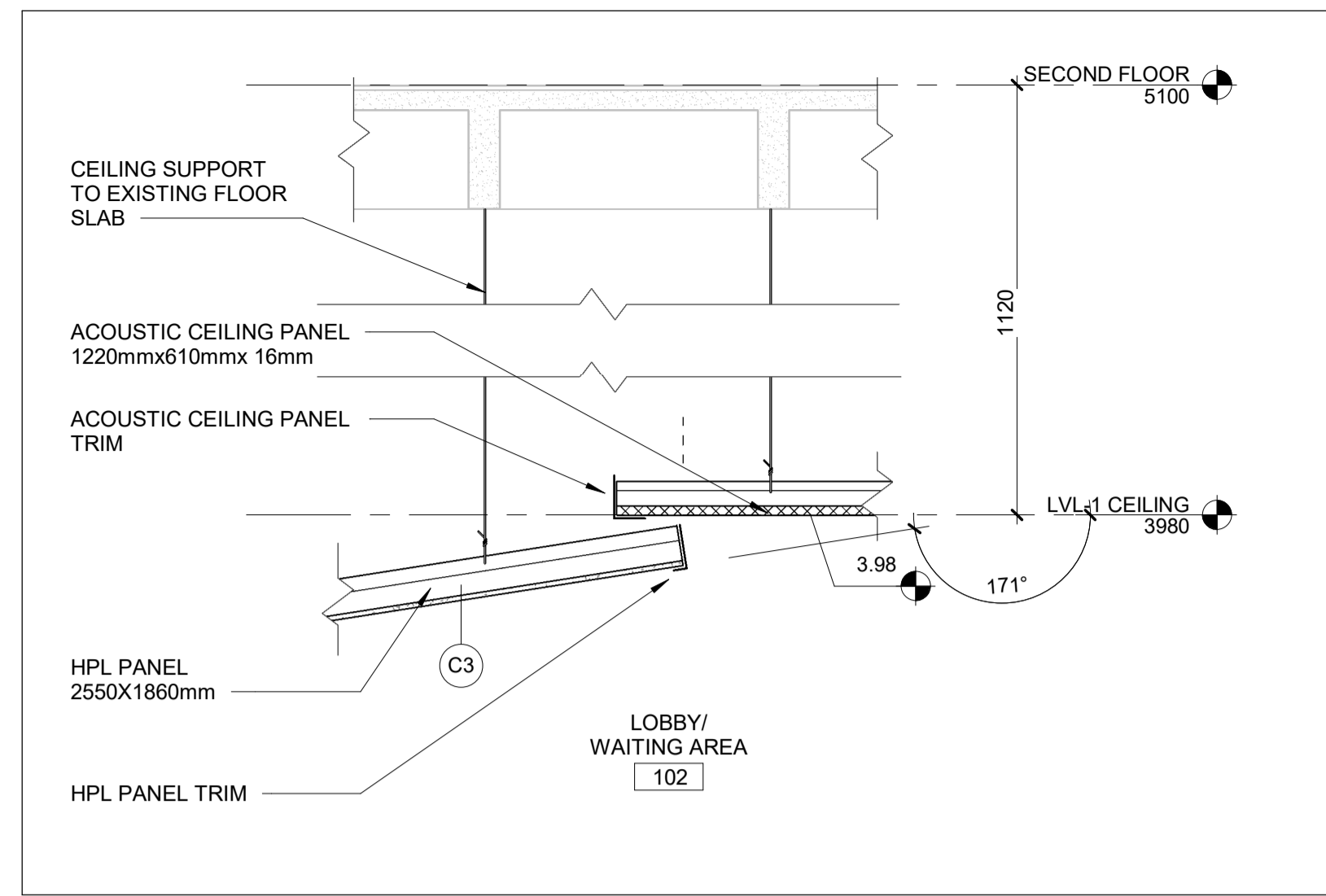
NOTES:

- REFER TO ARCHITECTURAL PLANS, SECTIONS AND ELEVATIONS FOR OPENING LOCATION AND SIZES.
- CONTRACTOR TO FIELD VERIFY EXISTING WALL CONSTRUCTION PRIOR TO LINTEL INSTALLATION. LINTEL DESIGN IS BASED ON THE ASSUMPTION OF AN EXISTING 500mm THICK SOLID OR GROUTED BRICK WALL. IF THIS CONDITION IS NOT SATISFIED, NOTIFY THE ARCHITECT/ENGINEER BEFORE PROCEEDING. THE LINTEL AND BEARING PLATE DETAILS MAY NEED TO BE ADJUSTED TO SUIT.
- IDENTIFY EXISTING MOVEMENT JOINTS. IF LOCATED LESS THAN 900mm (3'-0") FROM FACE OF NEW OPENING NOTIFY THE CONSULTANT AND DO NOT CUT BEFORE RECEIVING FURTHER INSTRUCTIONS.
- CONTRACTOR TO DESIGN AND PROVIDE TEMPORARY SHORING AS REQUIRED TO SAFELY SUPPORT EXISTING LOADS.



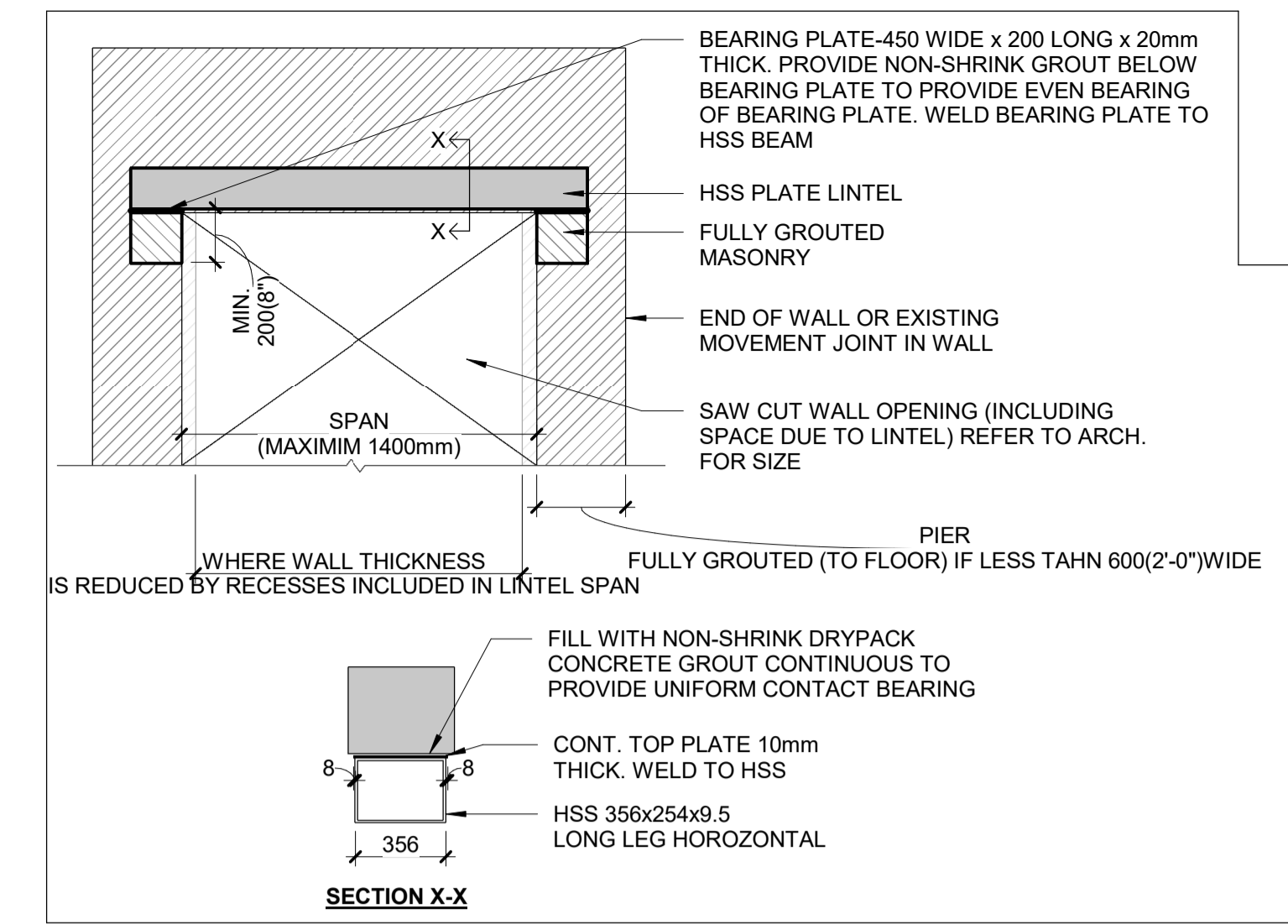
1 SECTION DETAIL - SCREENS WALL TOP-BB

A5000 REF: A4000 SCALE: 1 : 10



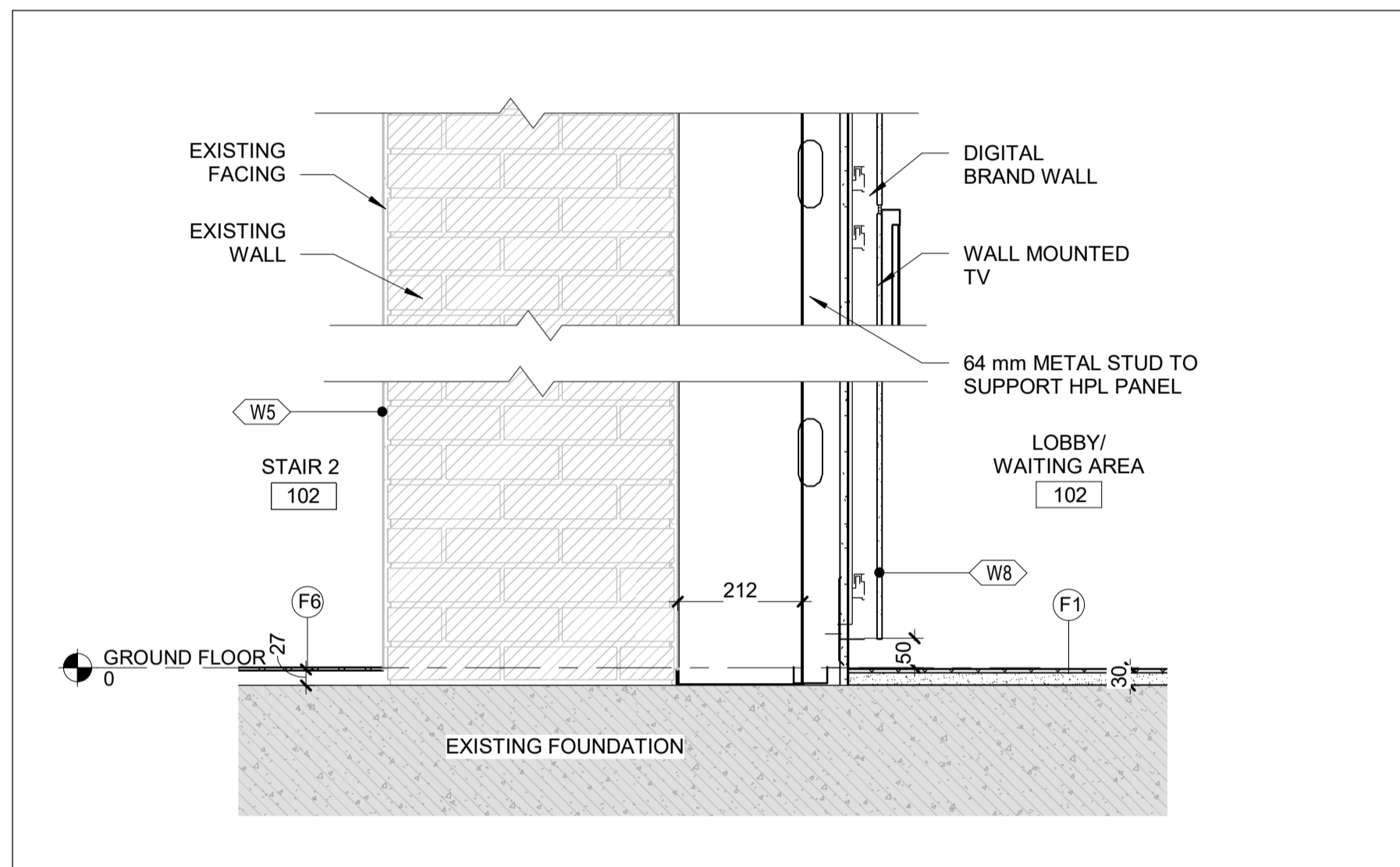
2 SECTION DETAIL - PANNEL AND C1-BB

A5000 REF: A4000 SCALE: 1 : 10



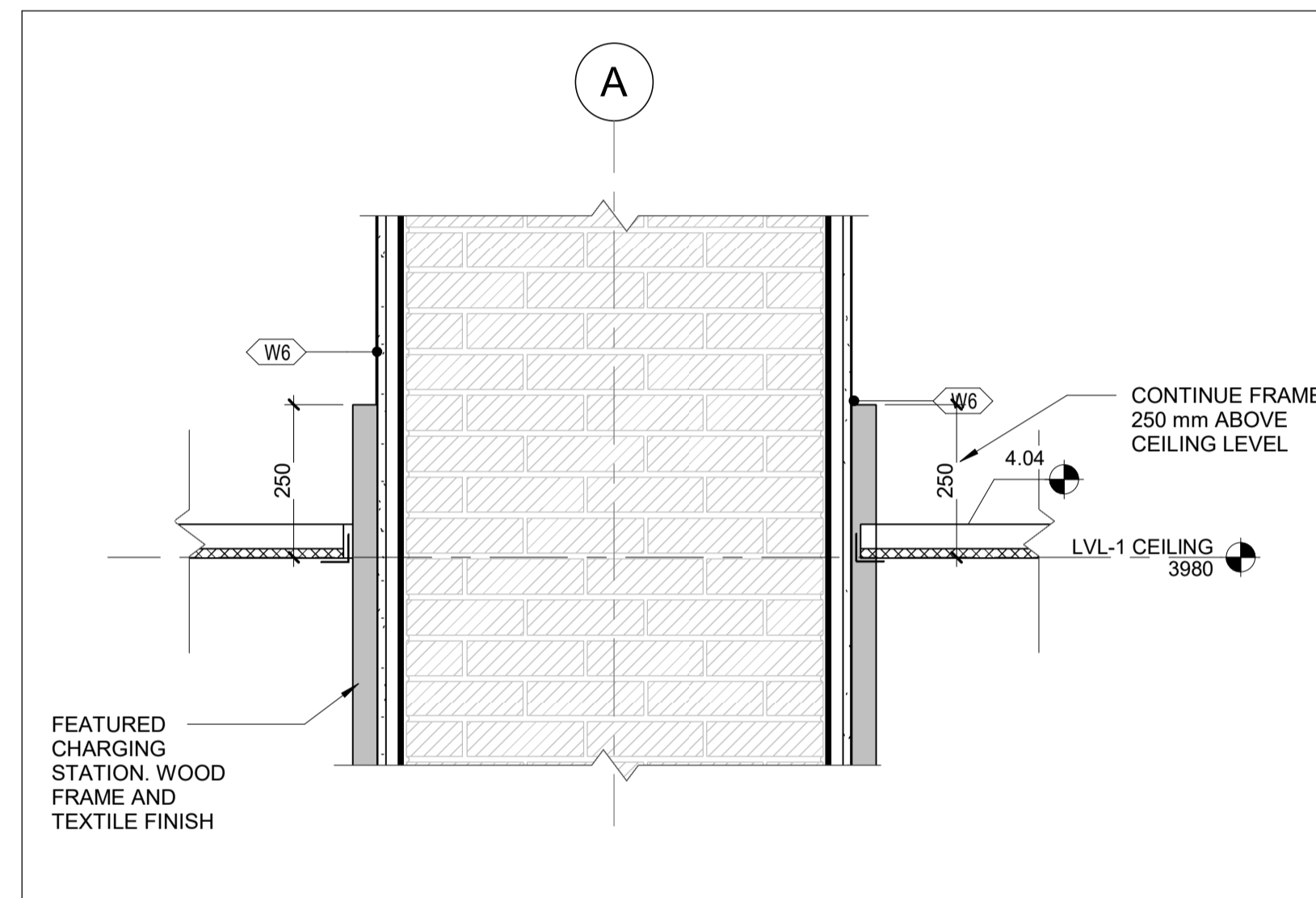
3 TYPICAL STEEL LINTEL DETAIL OVER NEW OPENING IN EX. MASONRY

A5000 REF: A4000 SCALE: 1 : 25



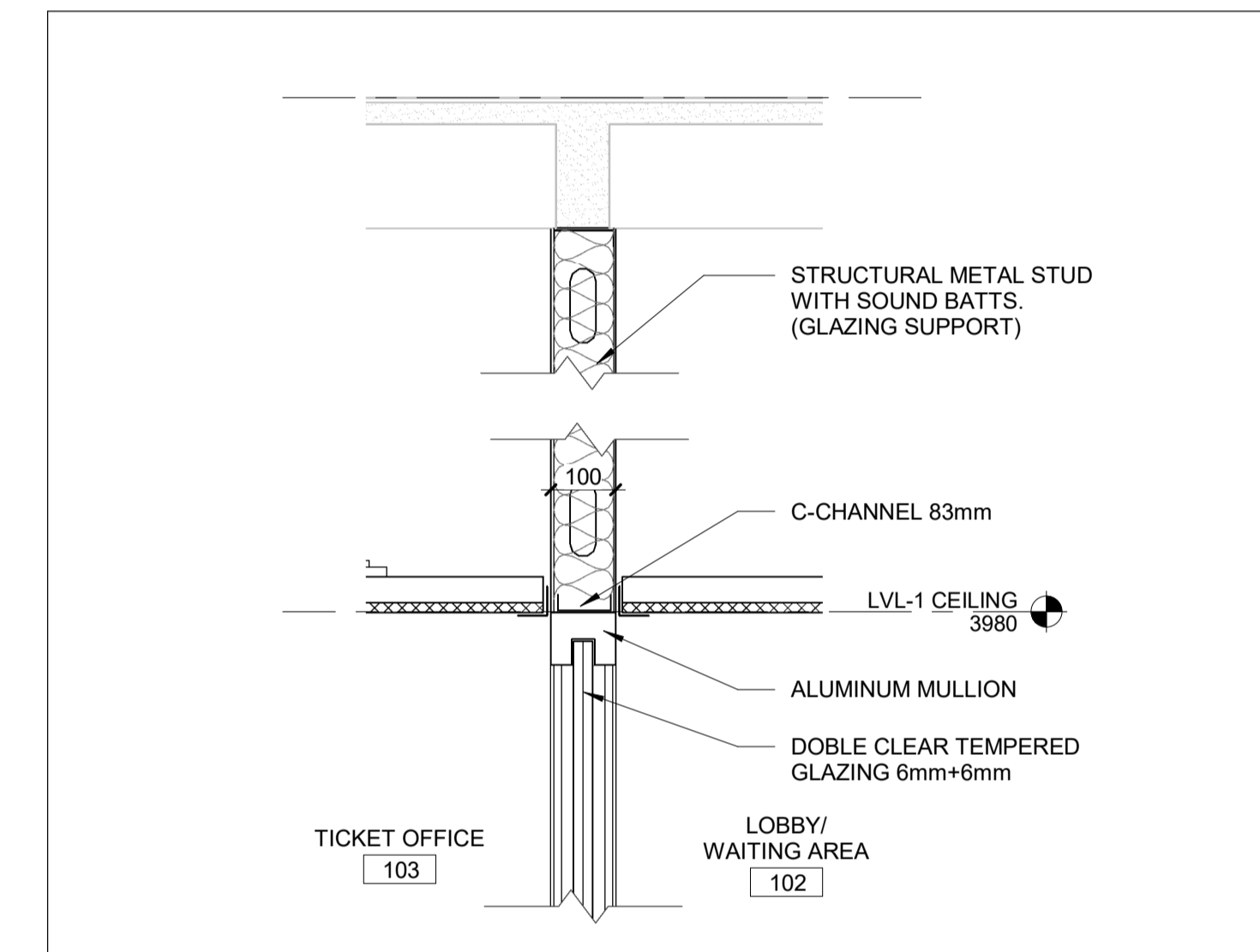
4 SECTION DETAIL - SCREENS WALL BASE-BB

A5000 REF: A4000 SCALE: 1 : 10



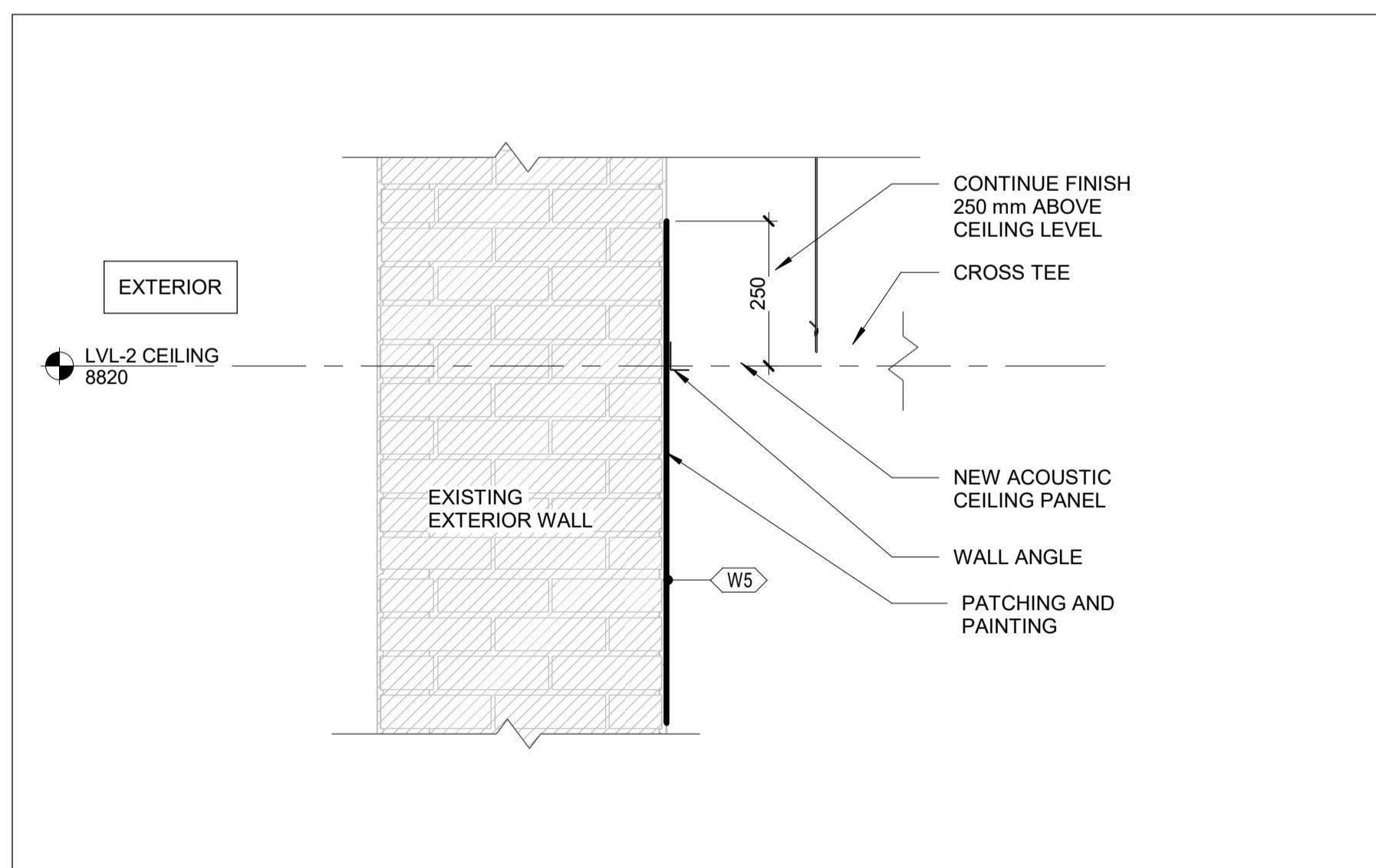
5 SECTION DETAIL - COLUMN AND C1-BB

A5000 REF: A4000 SCALE: 1 : 10



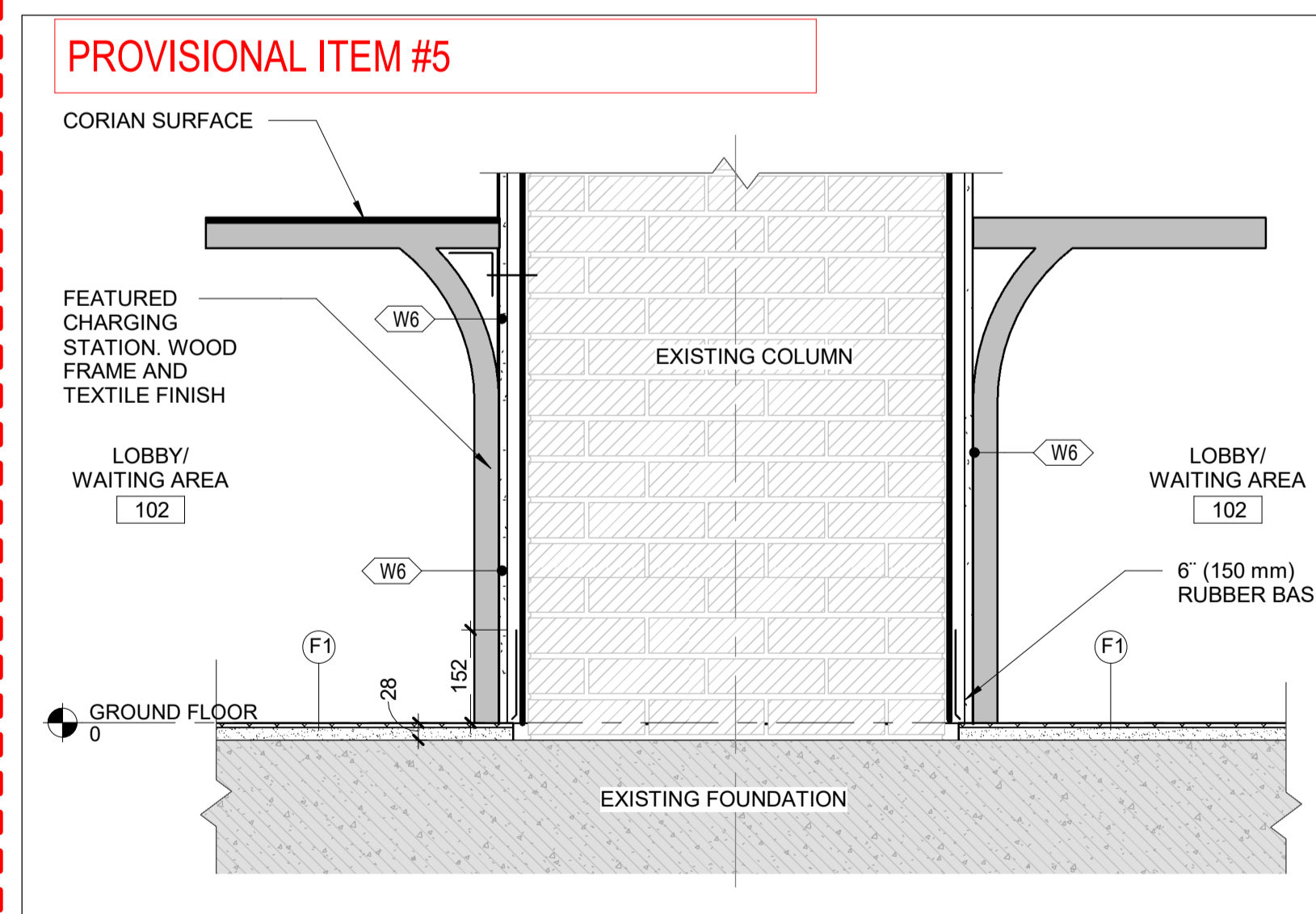
6 WALL SECTION - TICKETS - HEAD-BB

A5000 REF: A4000 SCALE: 1 : 10



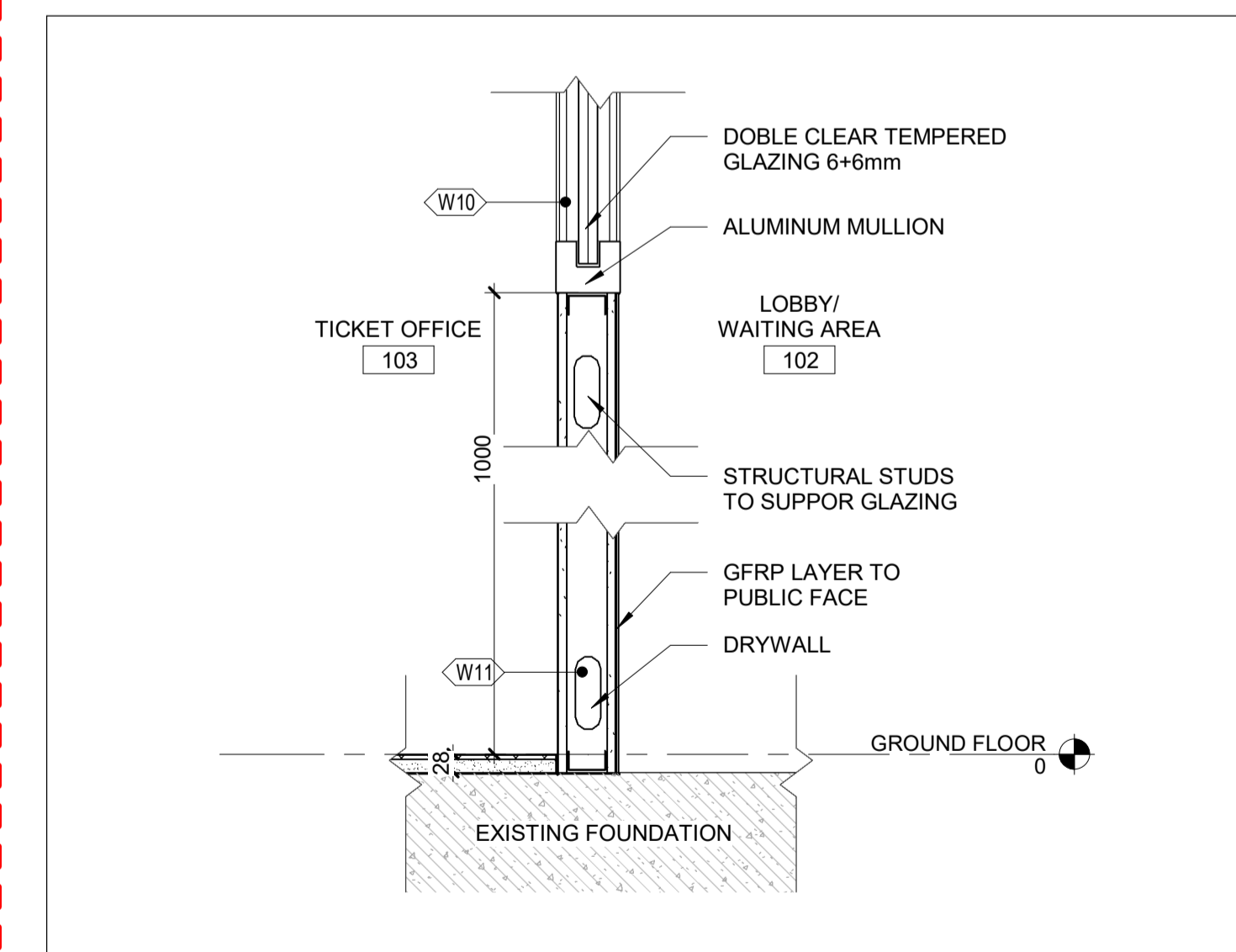
7 SECTION DETAIL - ROOF AND W5-BB

A5000 REF: A4000 SCALE: 1 : 10



8 SECTION DETAIL - COLUMN AND FLOOR

A5000 REF: A4000 SCALE: 1 : 10

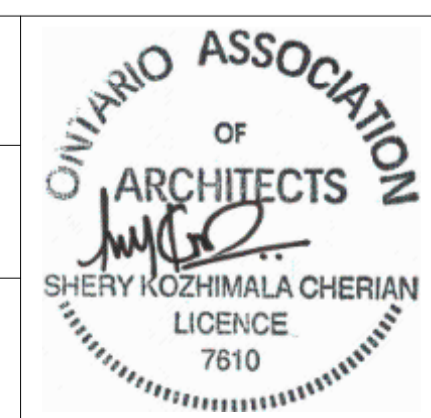


9 SECTION DETAIL - TICKETS PANEL-BB

A5000 REF: A4000 SCALE: 1 : 10

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
		B	2024/02/08	ISSUED FOR TENDER	
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DRAWN BY: P. LALPALKAR 2023/09/22	DESIGNED BY: G. DANESHGAR 2023/04/21
CHECKED BY: S. CHERIAN 2023/09/22	APPROVED BY: S. CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49

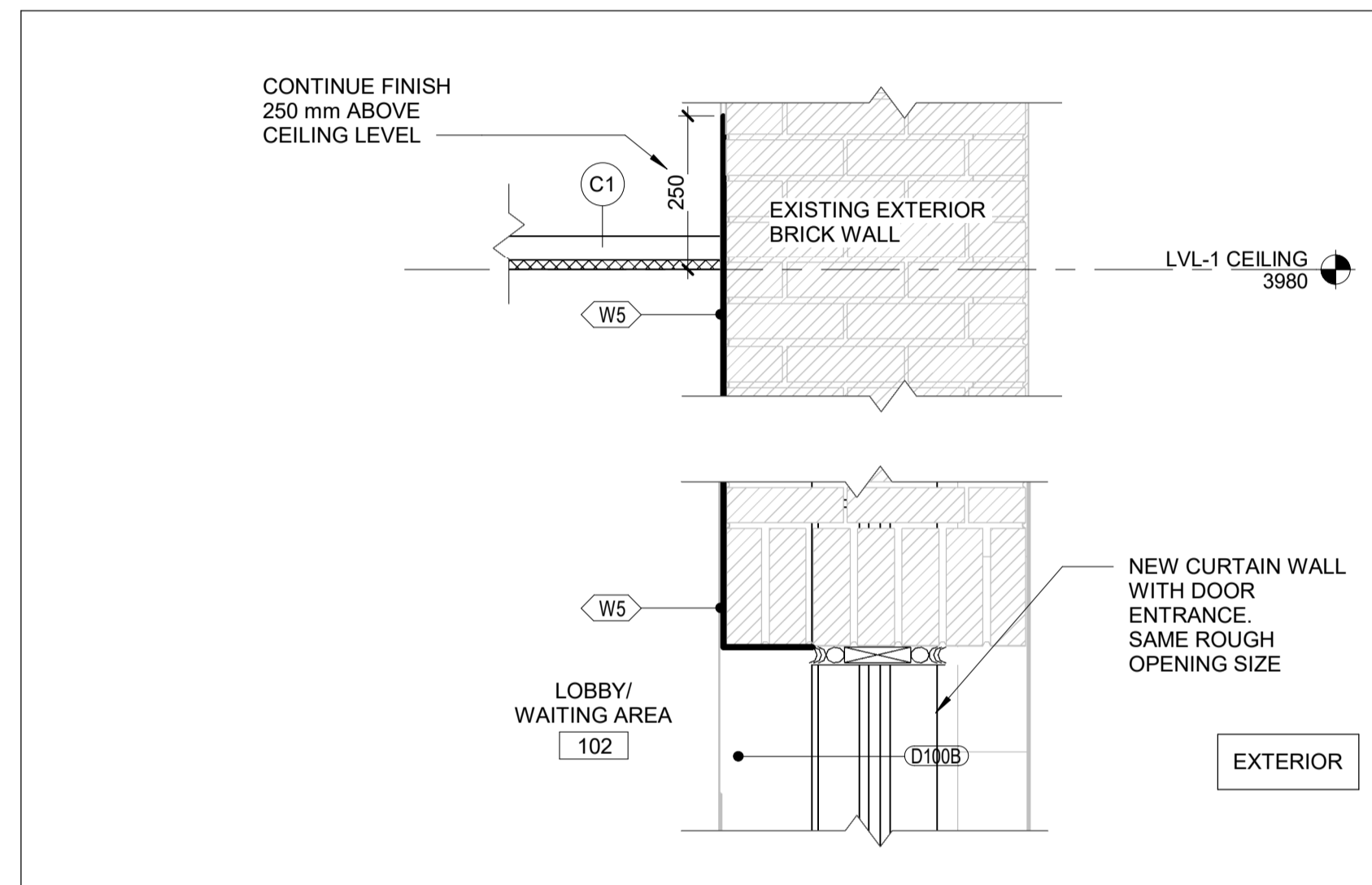
PROJECT NO. BE20101016

ISSUED FOR TENDER



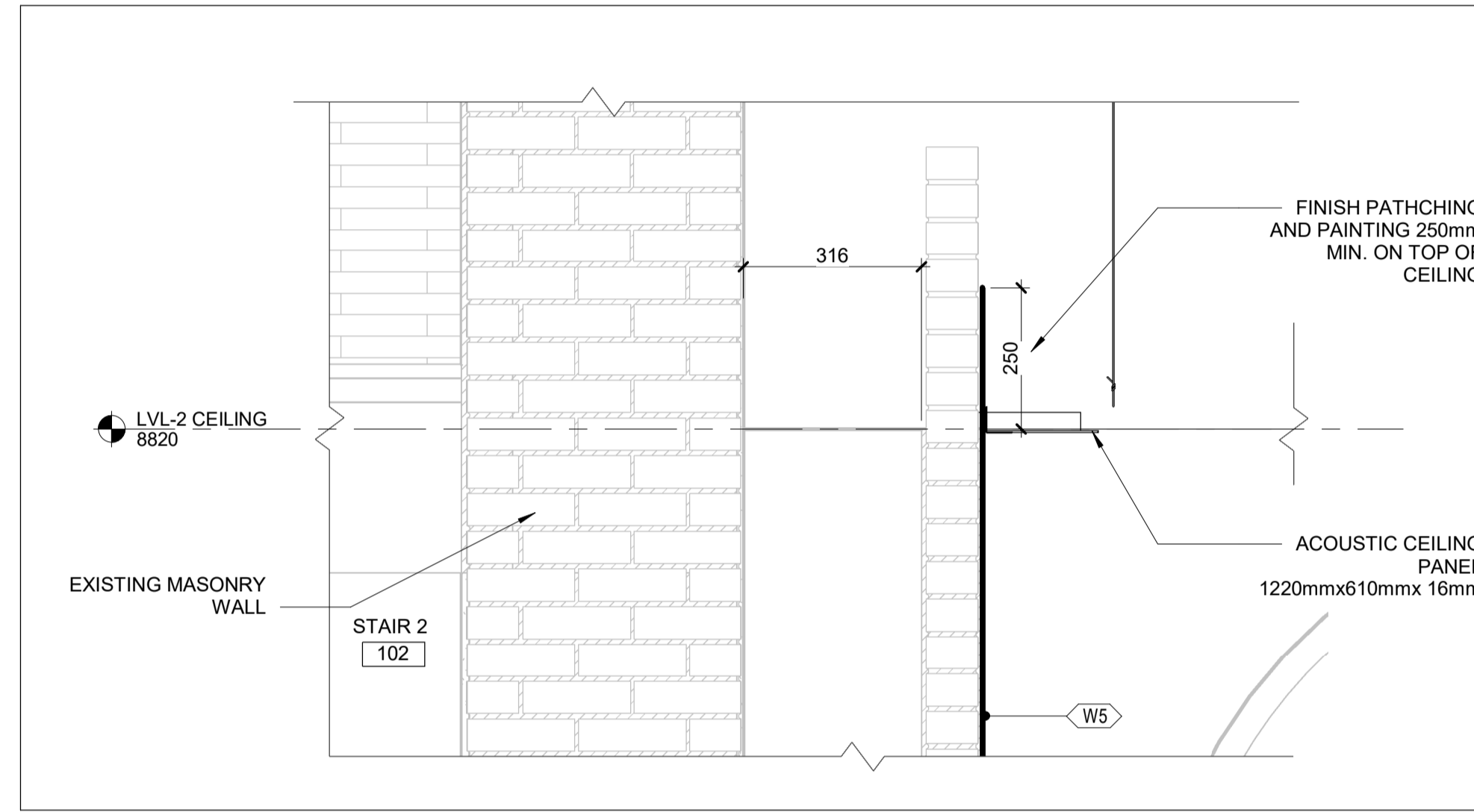
NIAGARA FALLS TRAIN STATION UPGRADES SECTION DETAILS 1

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A5000
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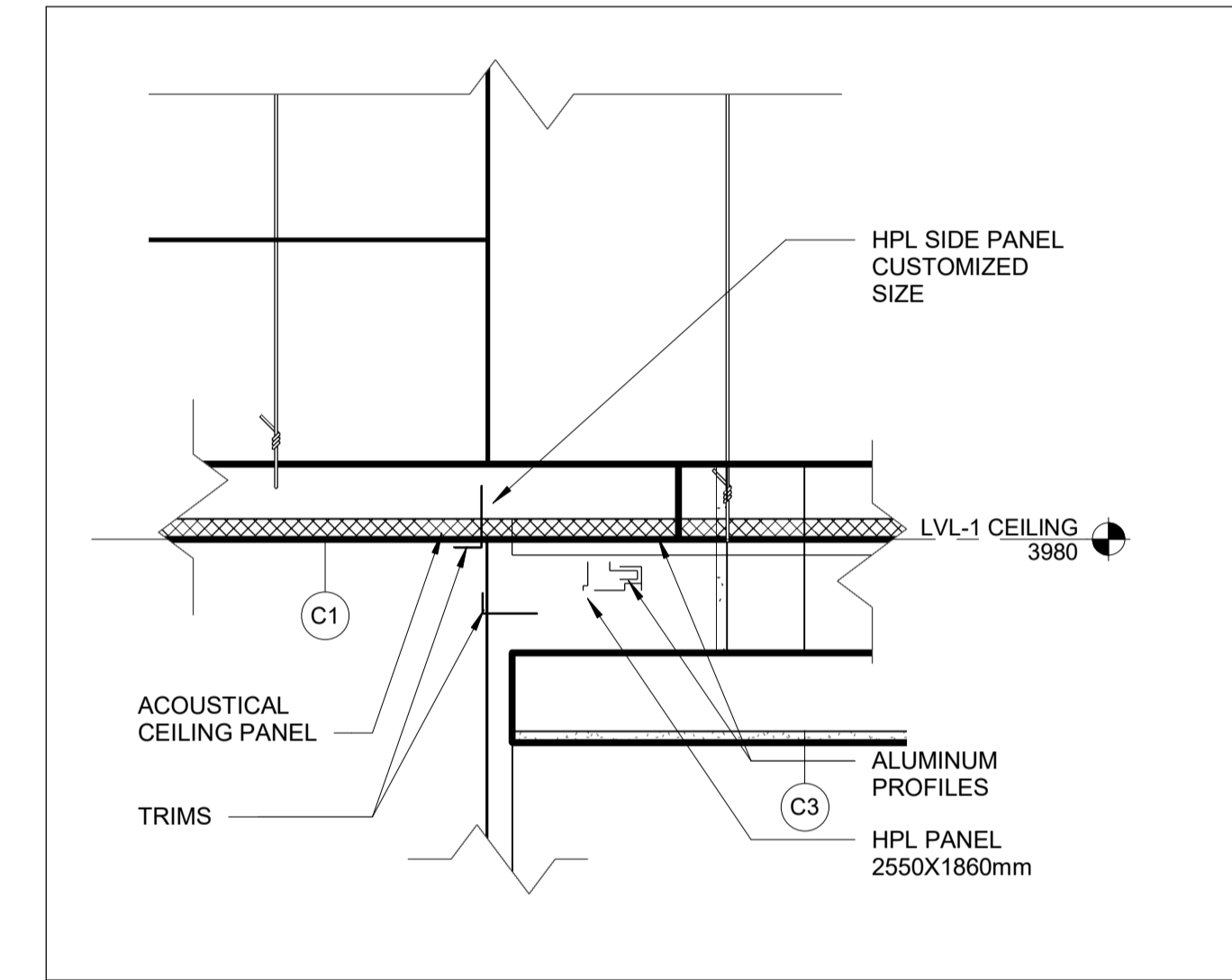
1 | WALL SECTION - NORTH LOBBY -HEAD-BB

A5001 REF: A4001 SCALE: 1 : 10



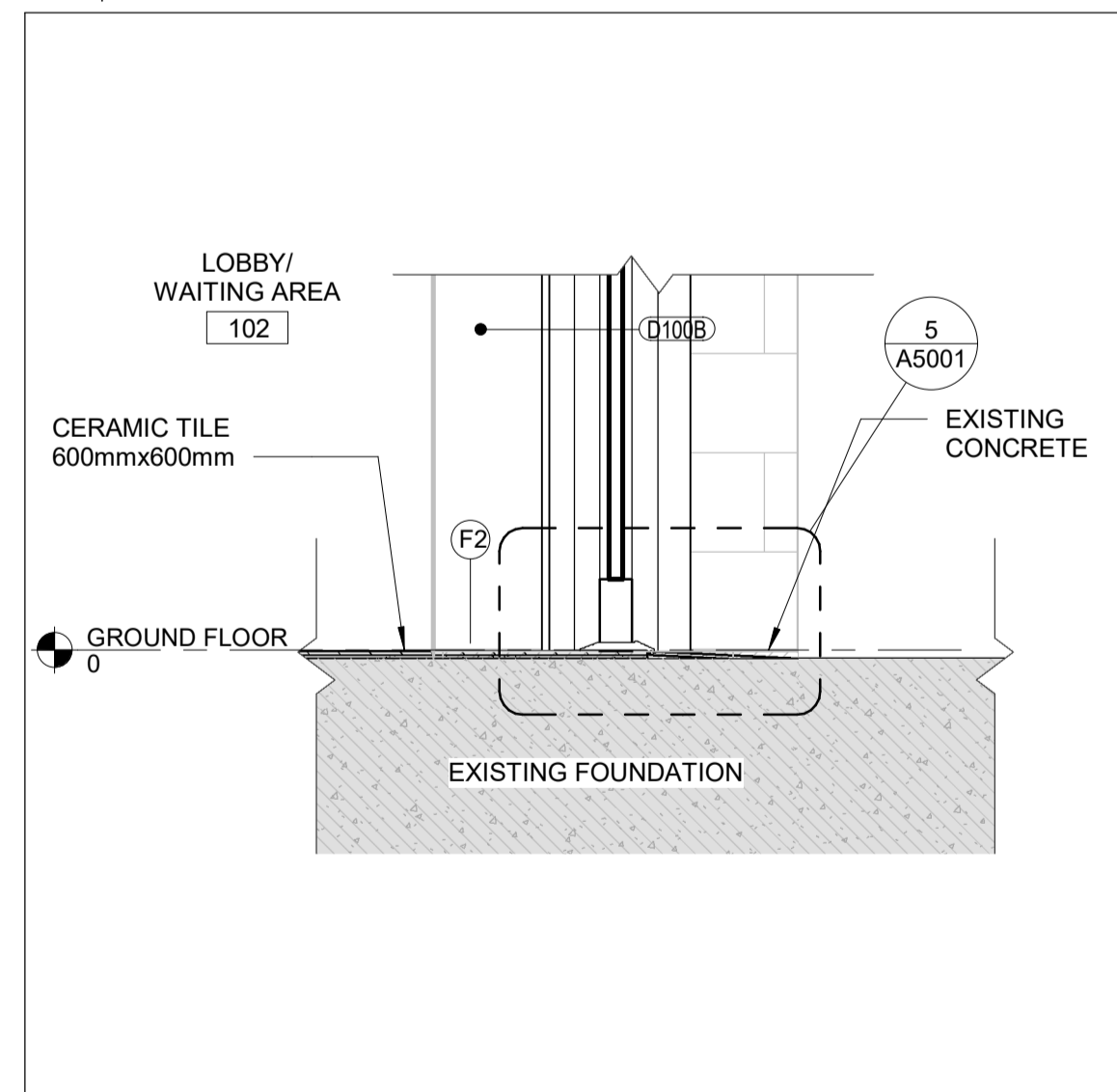
2 | SECTION DETAIL - LUNCH-BB

A5001 SCALE: 1 : 10



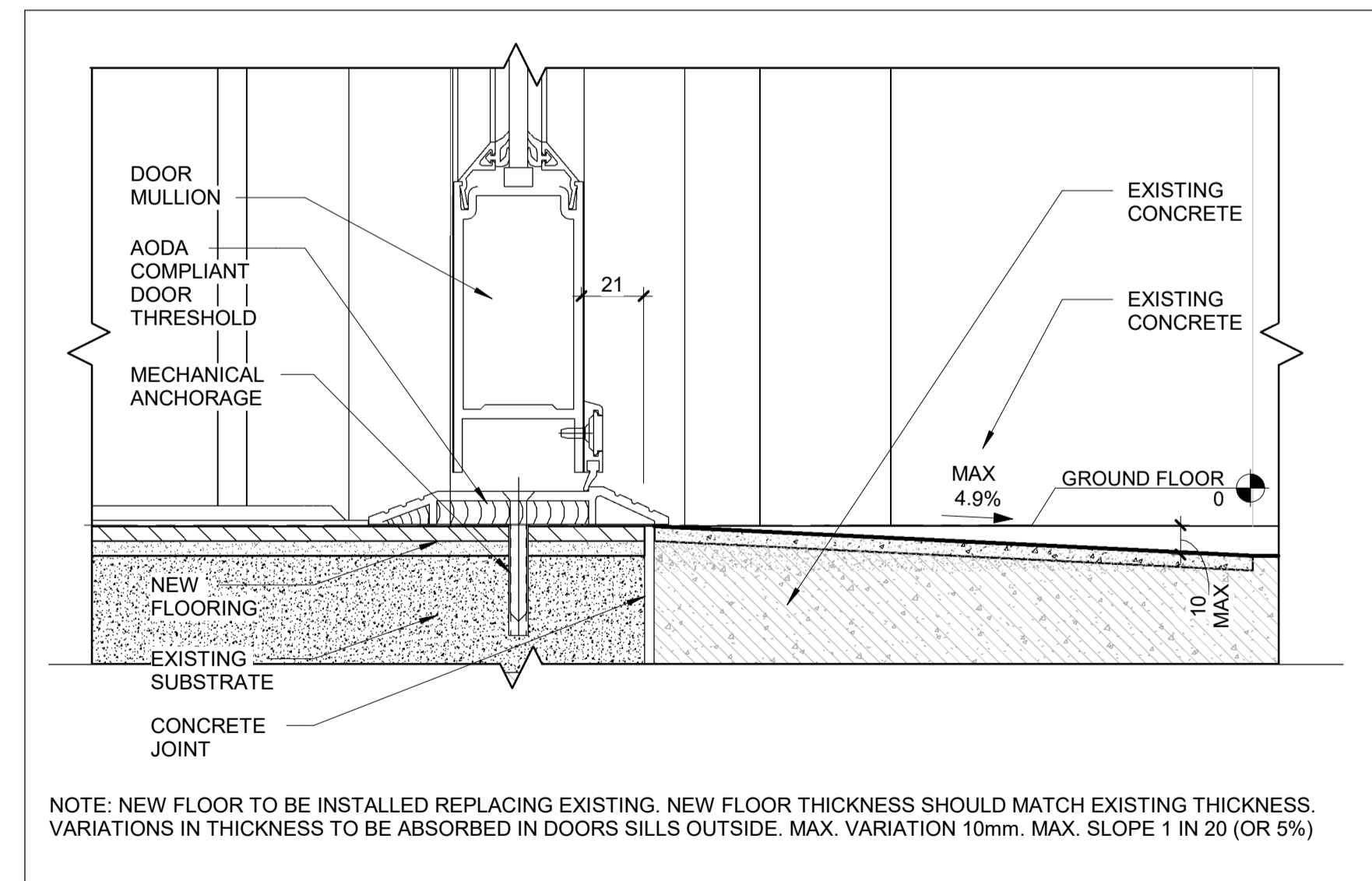
3 | C1-C3 TRANSITION-BB

A5001 REF: A2101 SCALE: 1 : 5



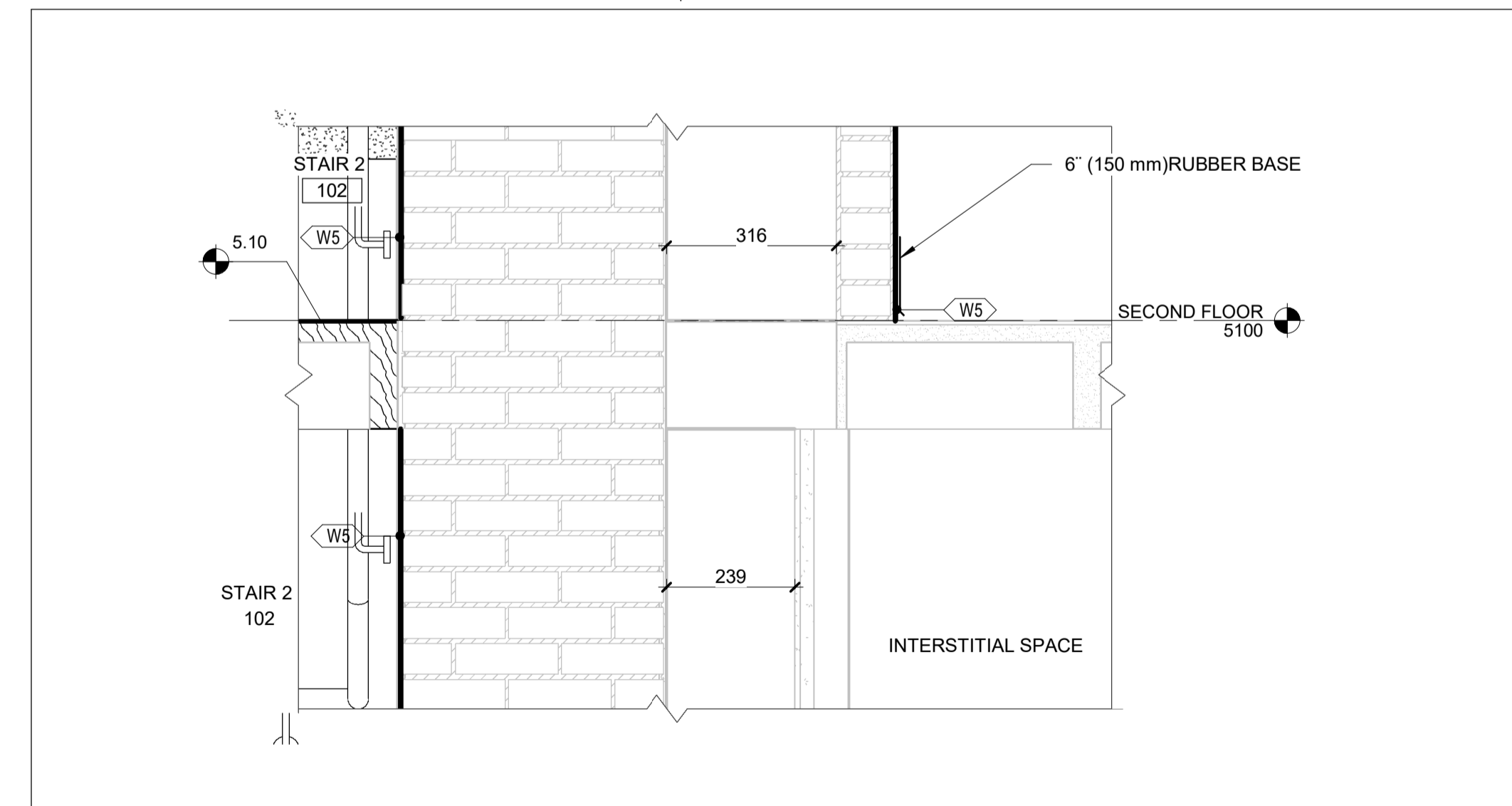
4 | SECTION DETAIL - LOBBY F2-BB

A5001 REF: A4001 SCALE: 1 : 10



5 | SILL DETAIL-BB

A5001 REF: A5001 SCALE: 1 : 2

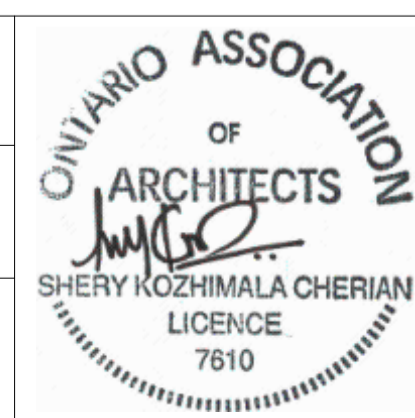


6 | SECTION DETAIL - LOBBY W7-BB

A5001 SCALE: 1 : 10

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
		B	2024/02/08	ISSUED FOR TENDER	
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DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49

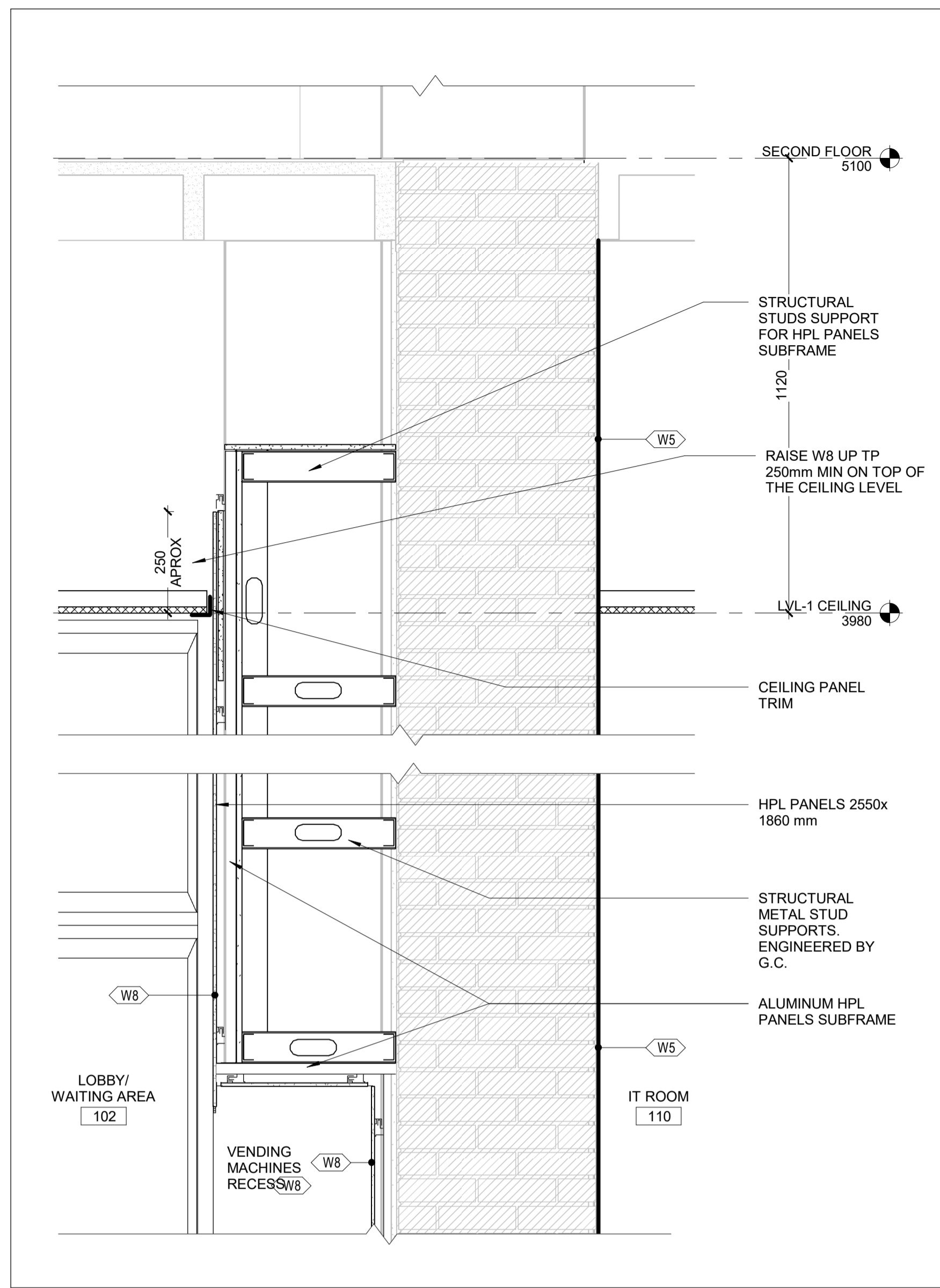
PROJECT NO. BE20101016

ISSUED FOR TENDER



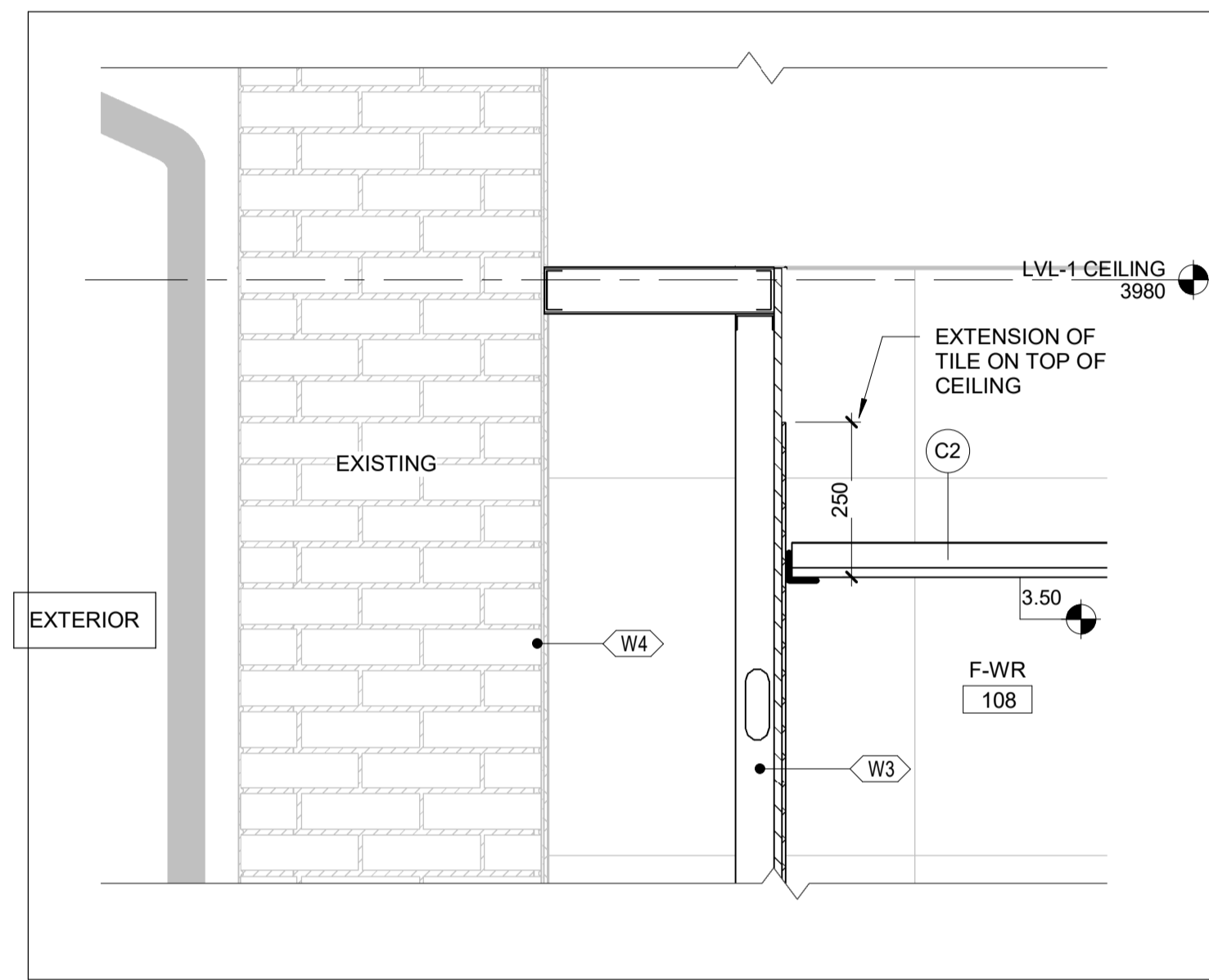
NIAGARA FALLS TRAIN STATION UPGRADES SECTION DETAILS 2

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A5001
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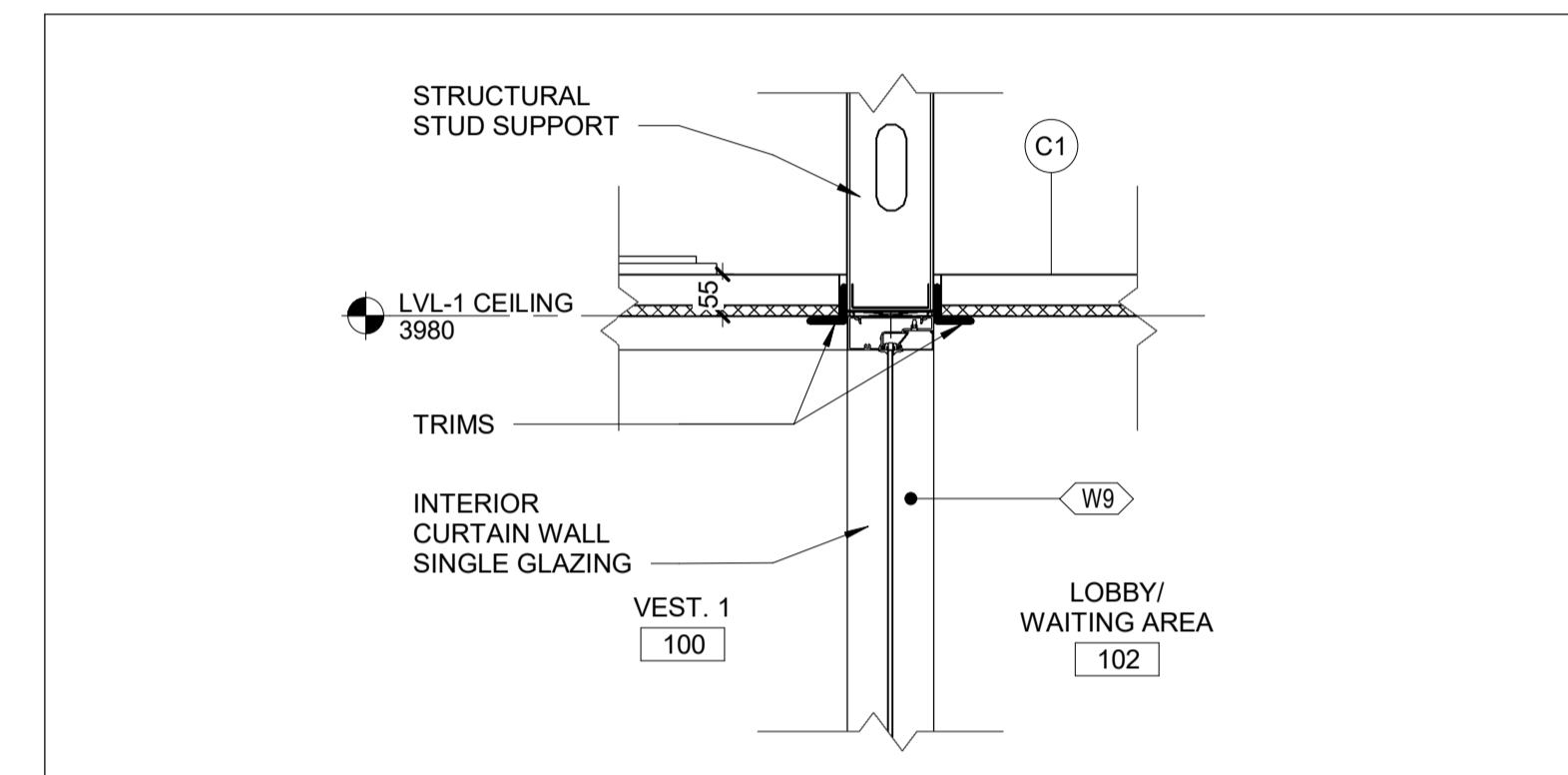
1 WALL SECTION - TICKETS MACHINE-BB

A5002 REF: A4001 SCALE: 1 : 10



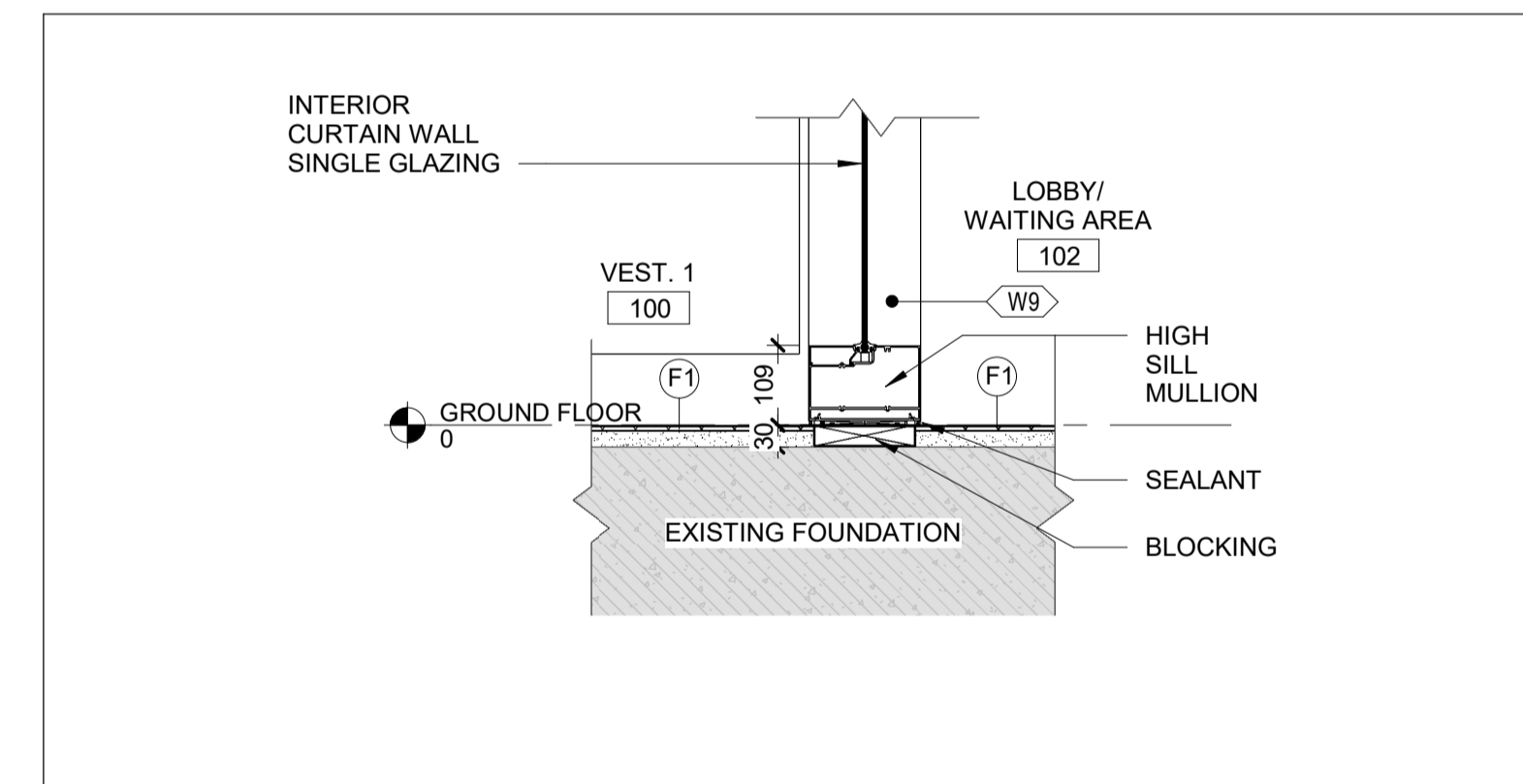
2 SECTION DETAIL- FEMALE WR. HEAD-BB

A5002 REF: A4001 SCALE: 1 : 10



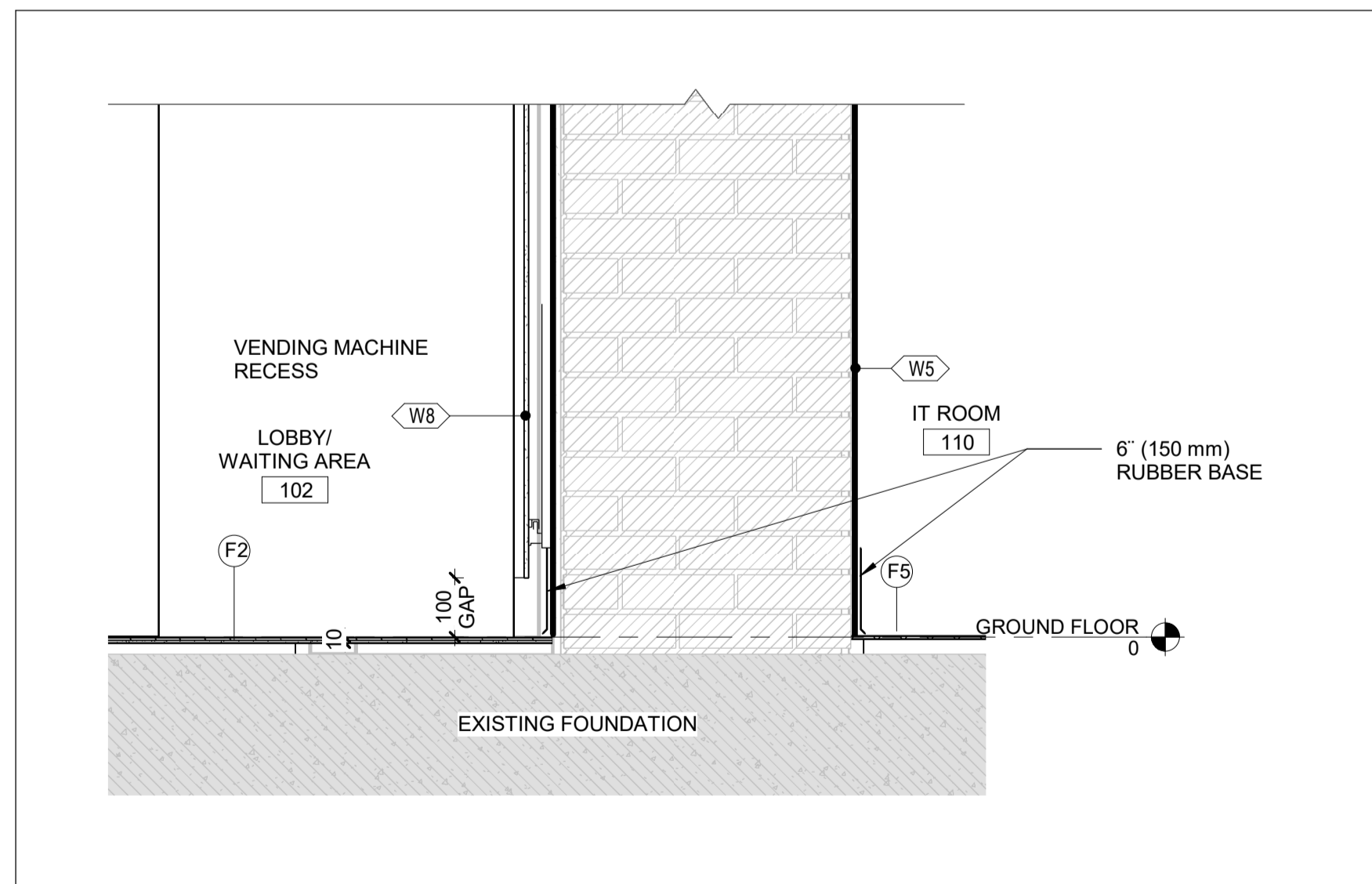
7 SECT. DET. - VEST.1 W9-BB

A5002 REF: A4000 SCALE: 1 : 10



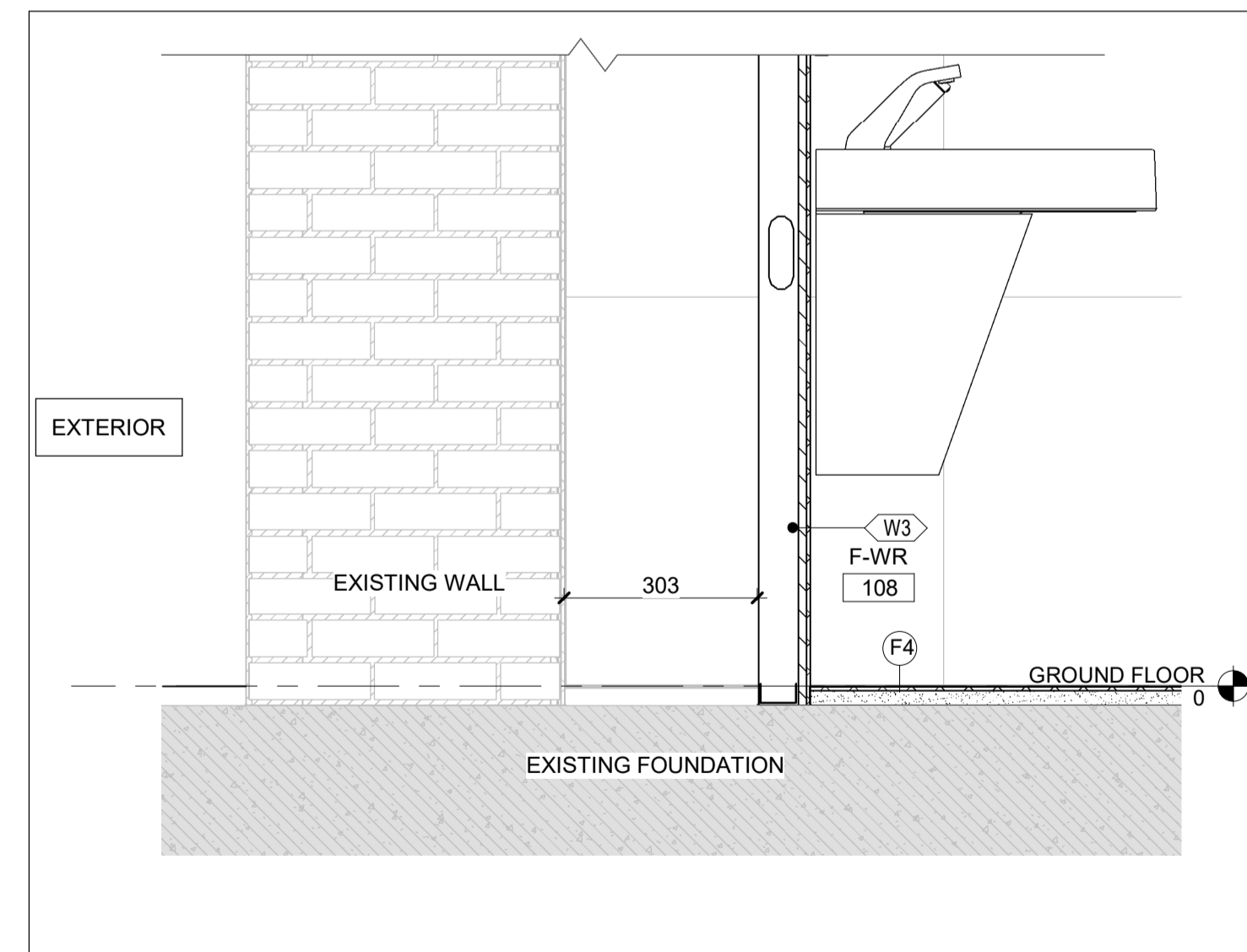
6 SECT. DET. - VEST.1 F1-BB

A5002 REF: A4000 SCALE: 1 : 10



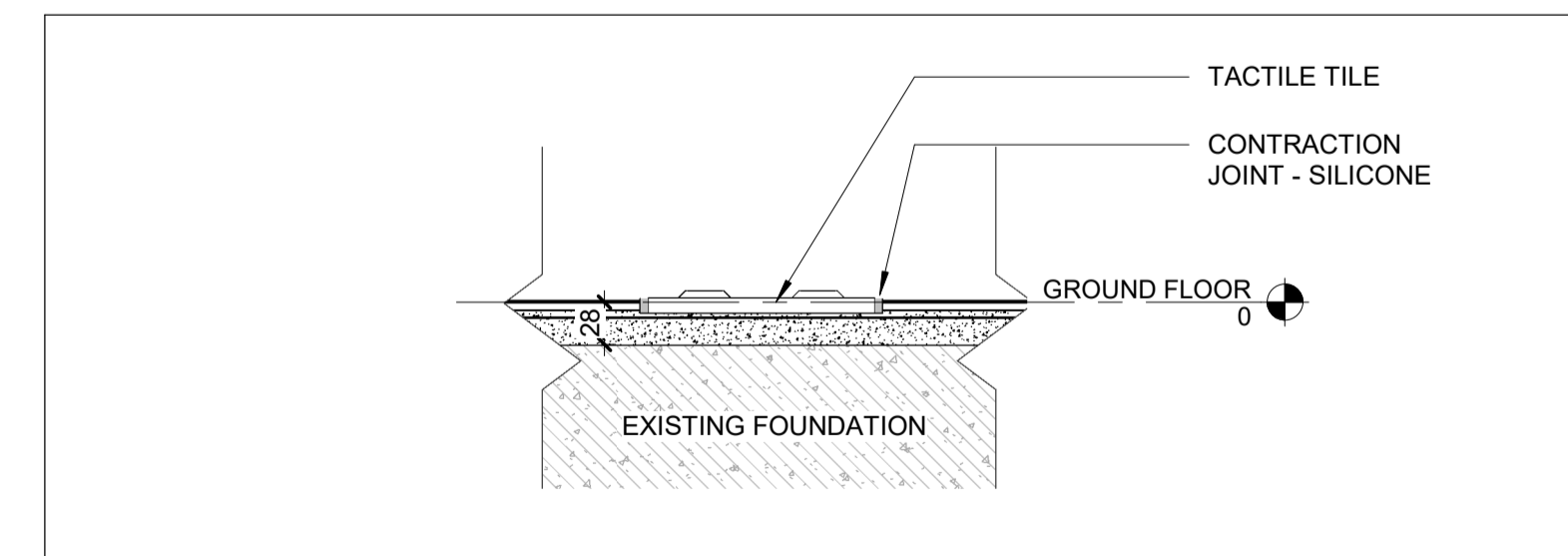
3 SECT. DET. - TICKETS MACHINES - BASE-BB

A5002 REF: A4001 SCALE: 1 : 10



4 SECTION DETAIL - FEMALE WR. VOID BASE-BB

A5002 REF: A4001 SCALE: 1 : 10



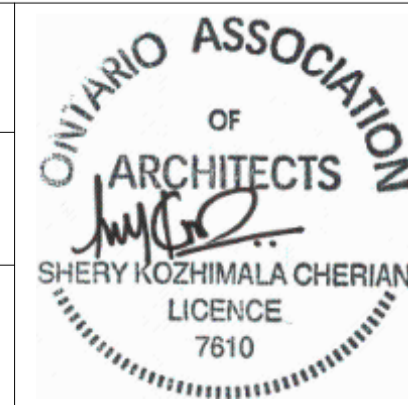
5 SECT. DET. - TACTILE TILE-BB

A5002 REF: A4001 SCALE: 1 : 5

DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
		B	2024/02/08	ISSUED FOR TENDER		
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REFERENCE DRAWINGS	ISSUE	REVISIONS

DRAWN BY: P.LAPALIKAR 2023/09/22
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 SCALE: AS SHOWN FULL SIZE ONLY



ARCHITECTURE | 49
 PROJECT NO. BE20101016
 ISSUED FOR TENDER

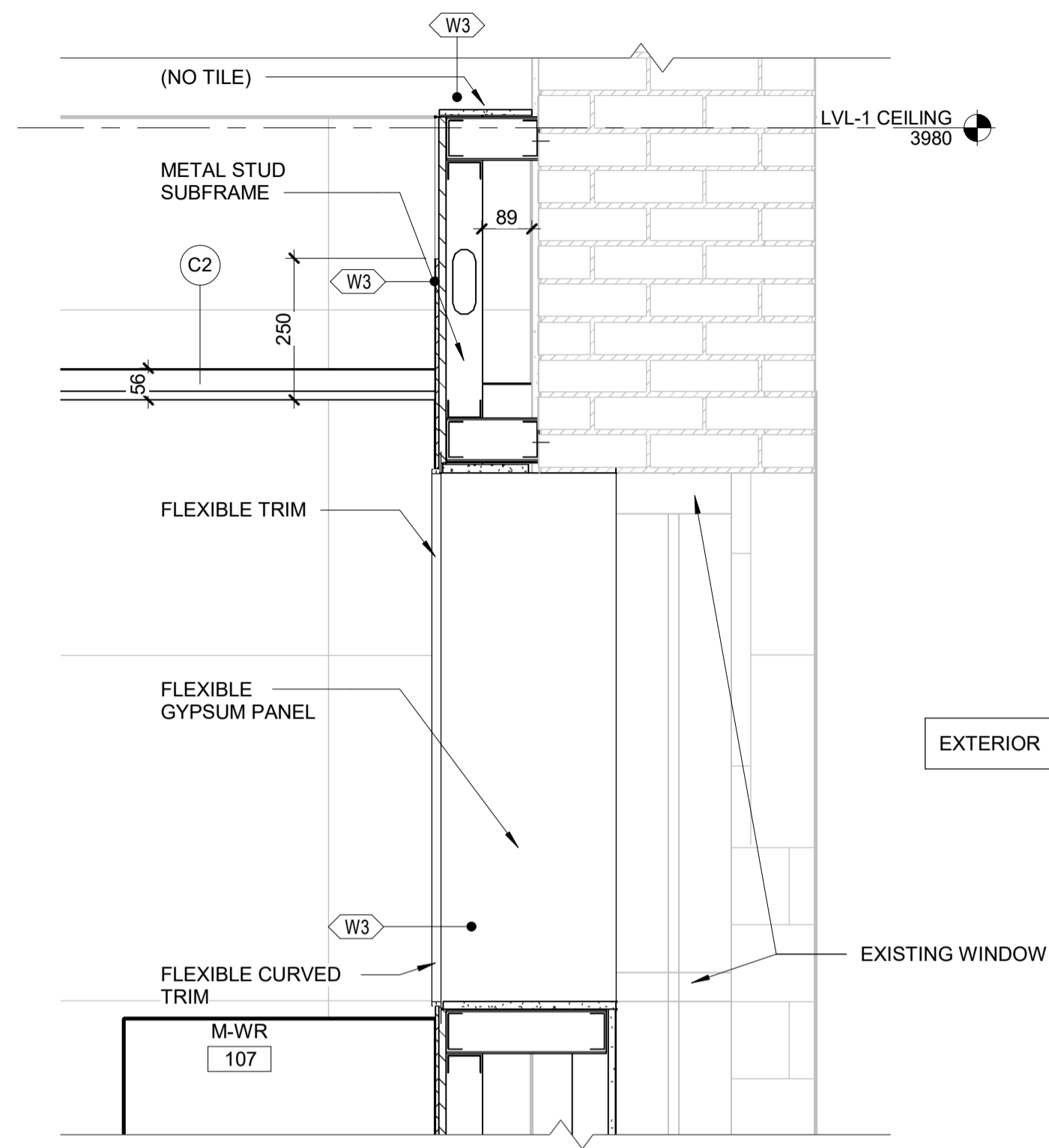


NIAGARA FALLS TRAIN STATION UPGRADES
 SECTION DETAILS 3

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A5002
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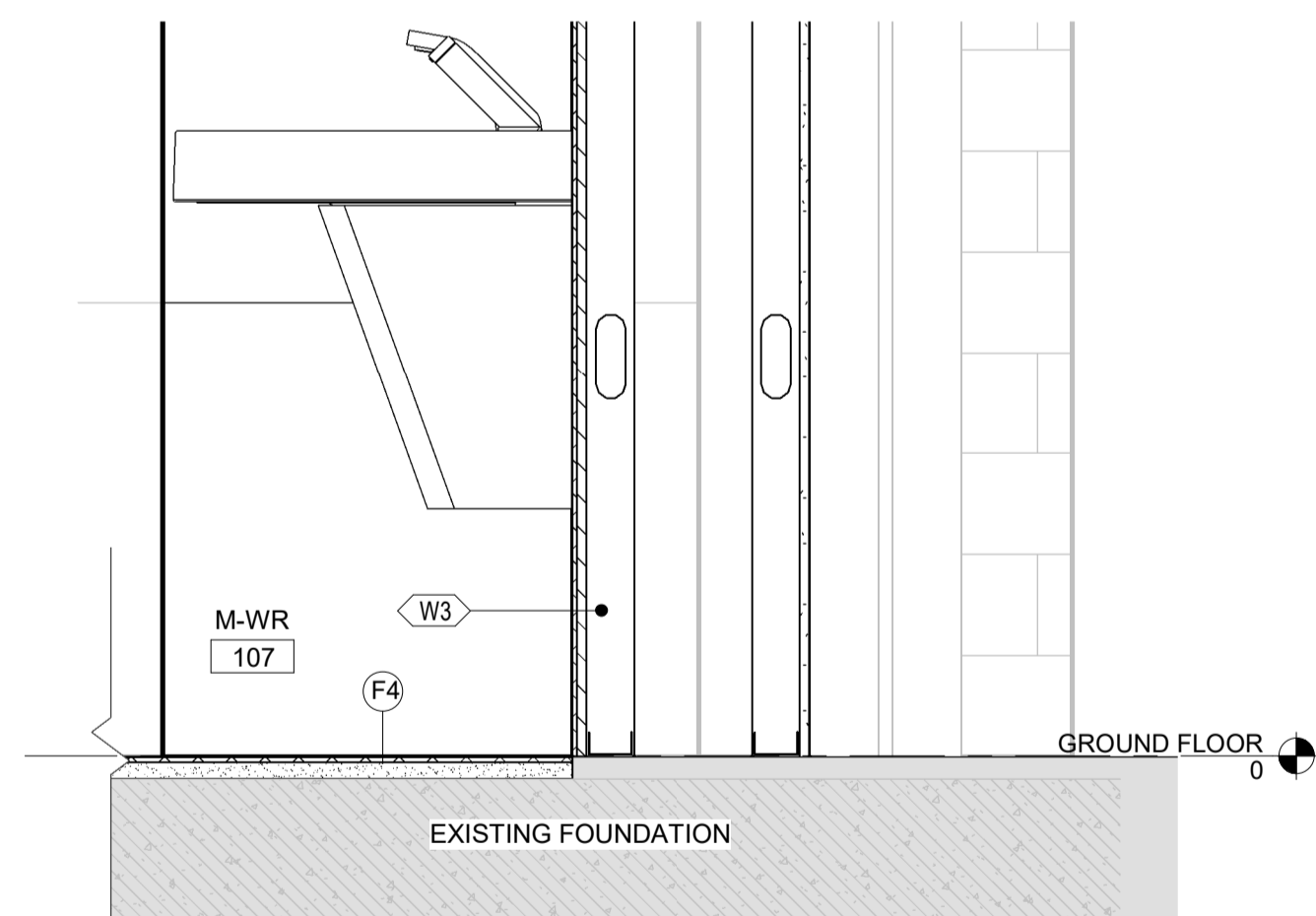
METRIC

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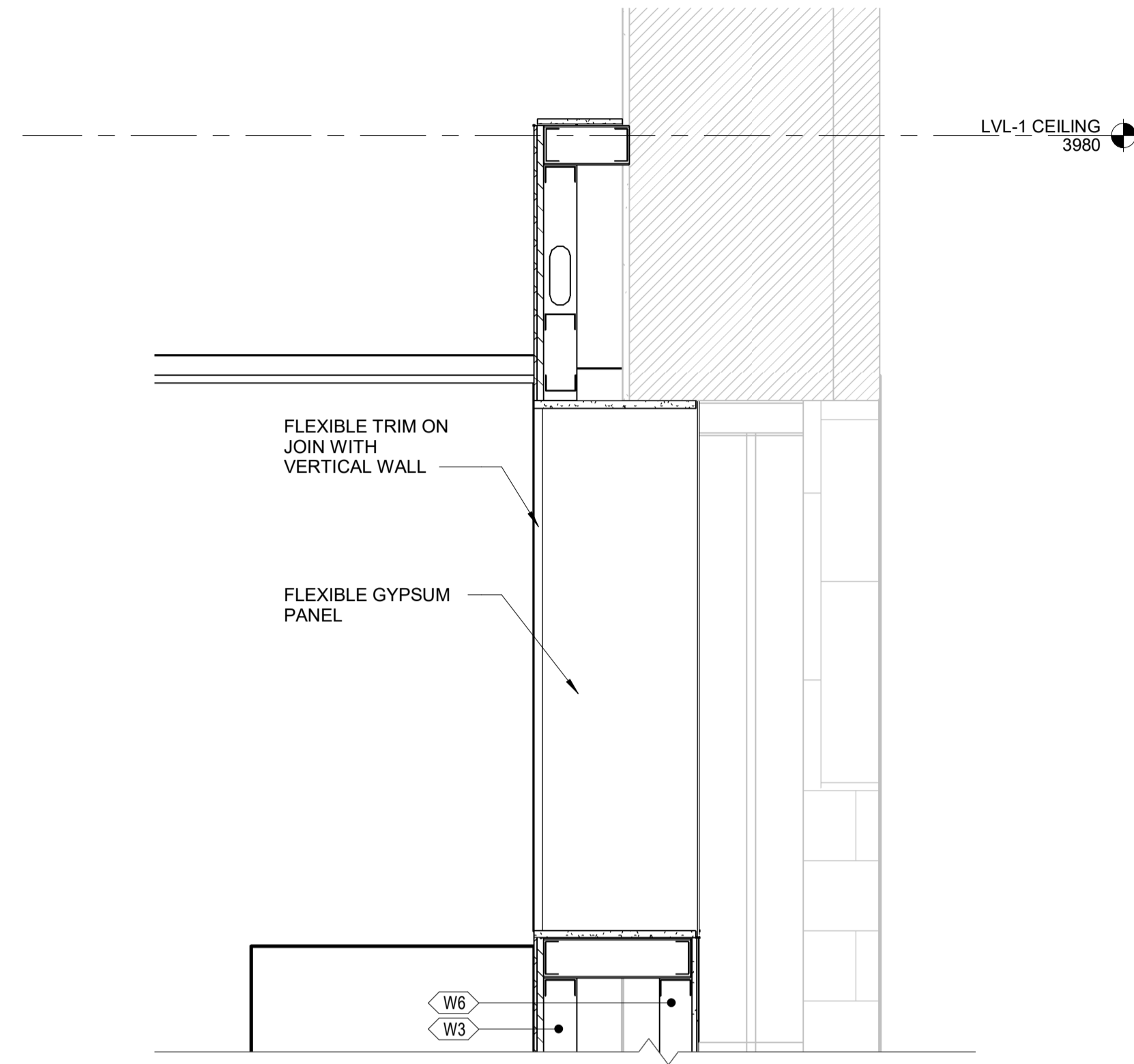
1 SECTION DETAIL - MALE WR. DOOR TOP-BB

A5003 REF: A4001 SCALE: 1 : 10



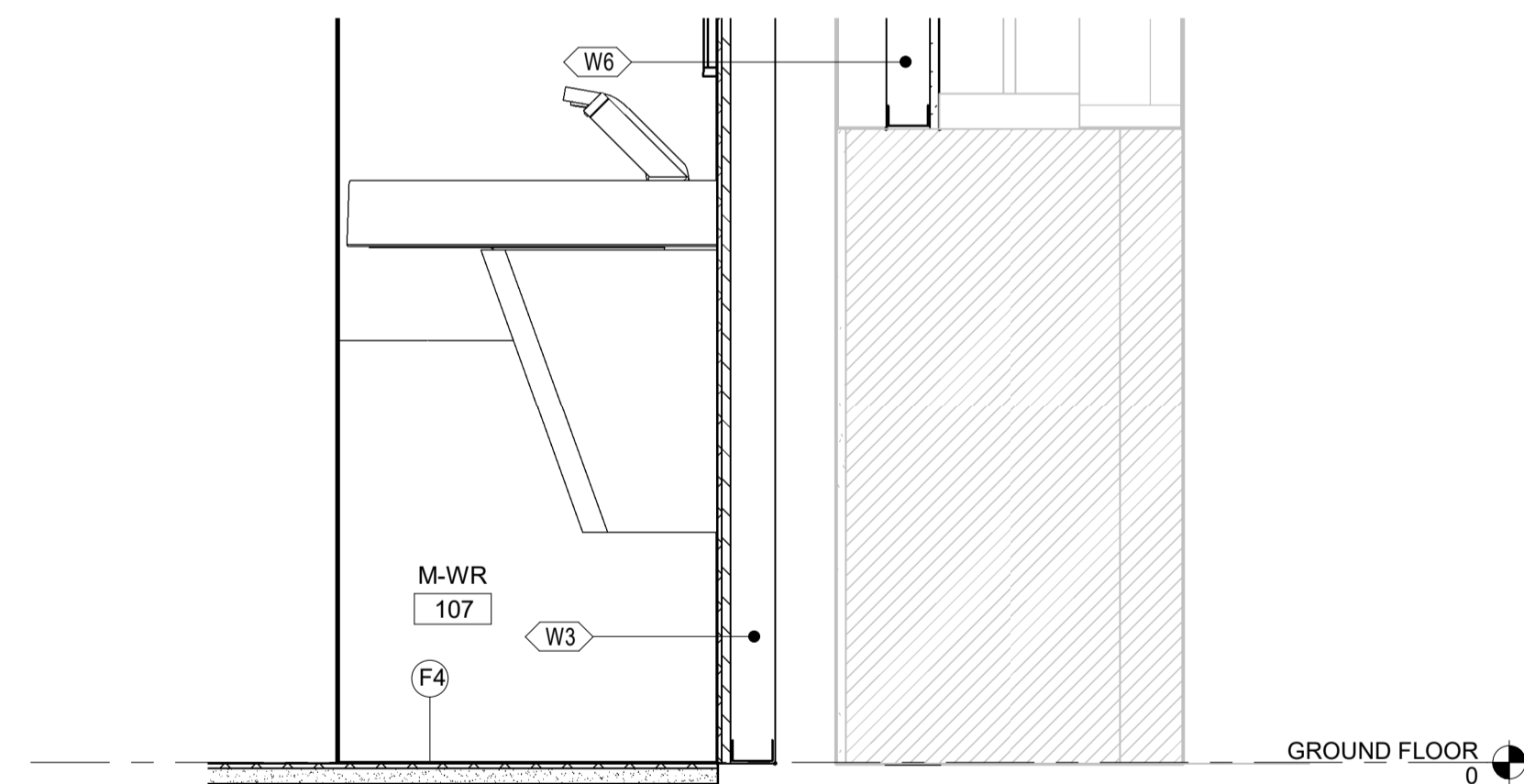
4 SECTION DETAIL - MALE WR. DOOR BASE-BB

A5003 REF: A4001 SCALE: 1 : 10



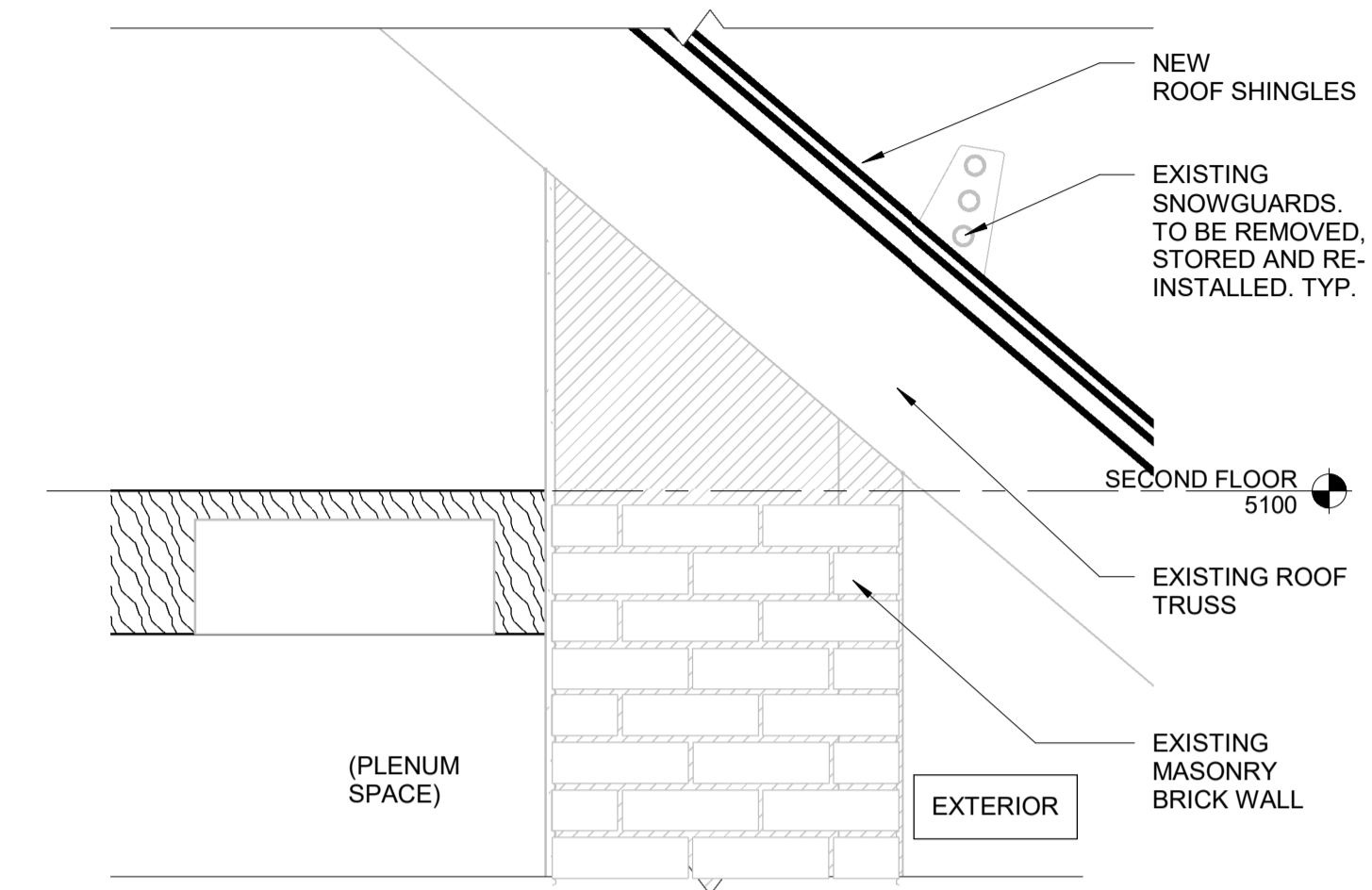
2 SECTION DETAIL - MALE WR. WINDOW TOP-BB

A5003 REF: A4001 SCALE: 1 : 10



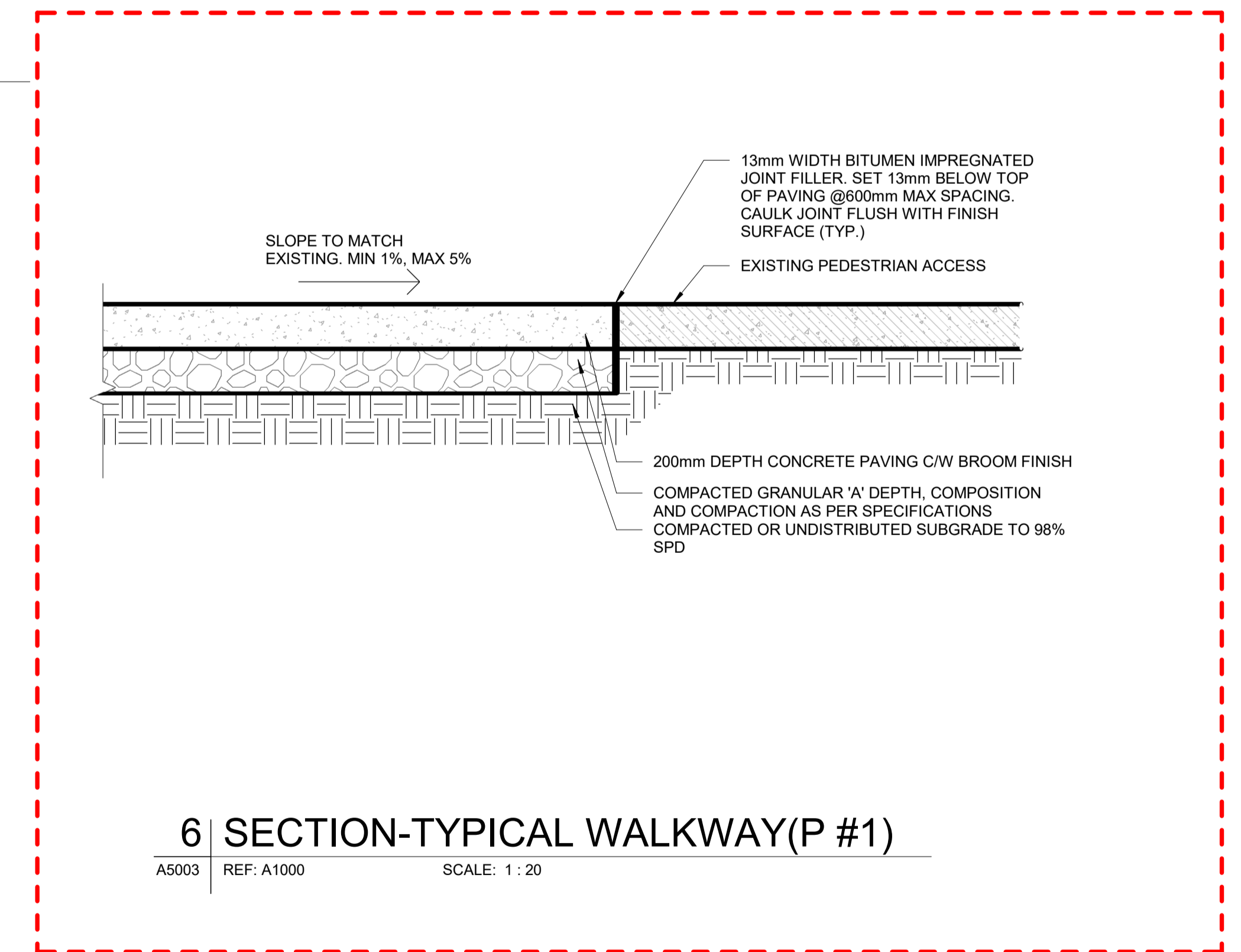
5 SECTION DETAIL - MALE WR. WINDOW BASE-BB

A5003 REF: A4001 SCALE: 1 : 10



3 SECTION DETAIL - M-WR-BB

A5003 REF: A4001 SCALE: 1 : 10



6 SECTION-TYPICAL WALKWAY(P #1)

A5003 REF: A1000 SCALE: 1 : 20

PROVISIONAL ITEM #1

REF. NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
B	2024/02/08	ISSUED FOR TENDER				
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NO.	DATE	ISSUED FOR	REV.	DATE

DRAWN BY: P. LAPALIKAR 2023/09/22
 DESIGNED BY: G. DANESHGAR 2023/04/21
 CHECKED BY: S. CHERIAN 2023/09/22
 APPROVED BY: S. CHERIAN 2023/09/22
 SCALE: AS SHOWN FULL SIZE ONLY



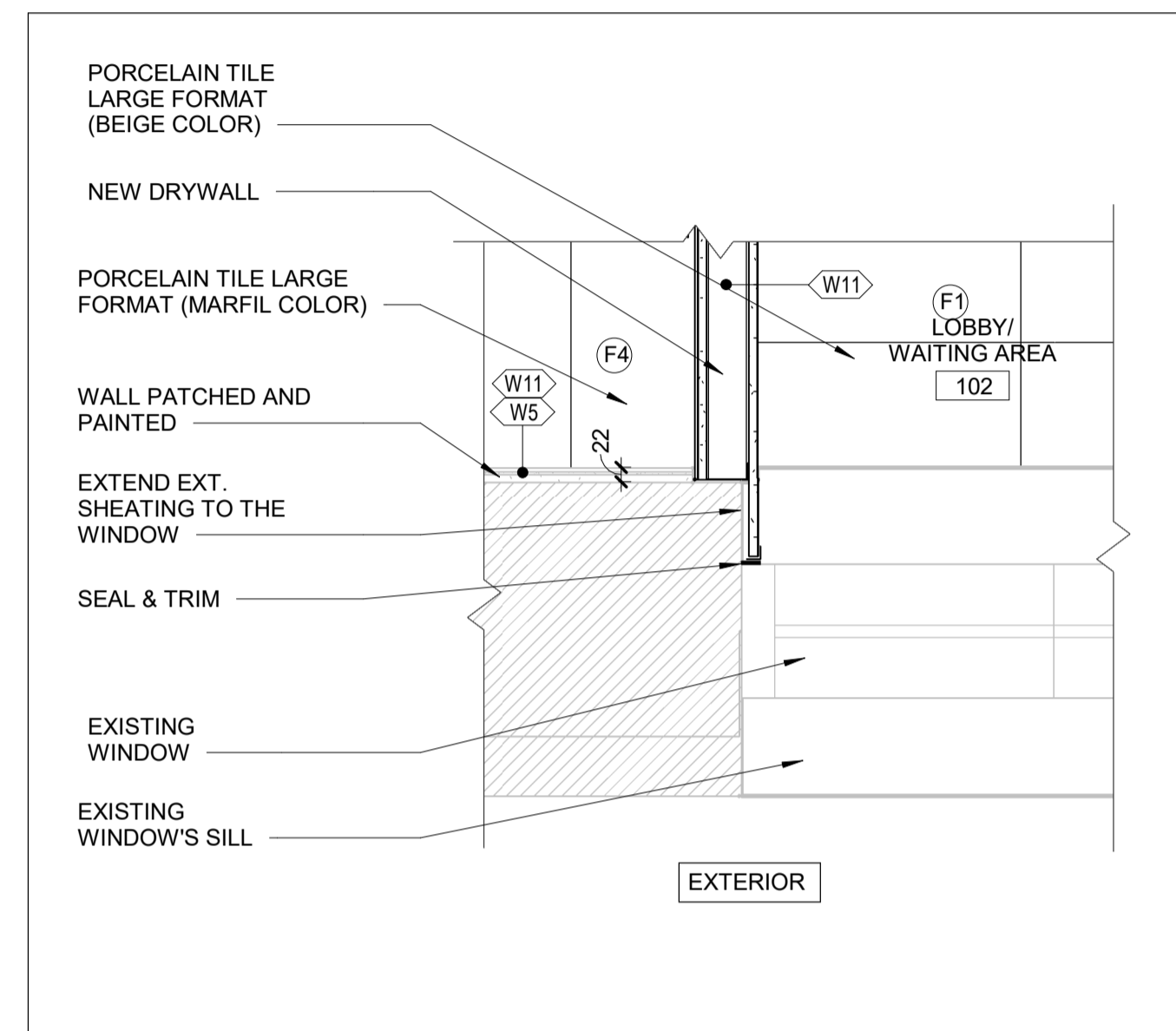
ARCHITECTURE | 49
 PROJECT NO. BE20101016
 ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES
 SECTION DETAILS 4
 CONTRACT NO. STATION RENOVATION
 DWG. NO.
 REV. A
 SHEET A5003

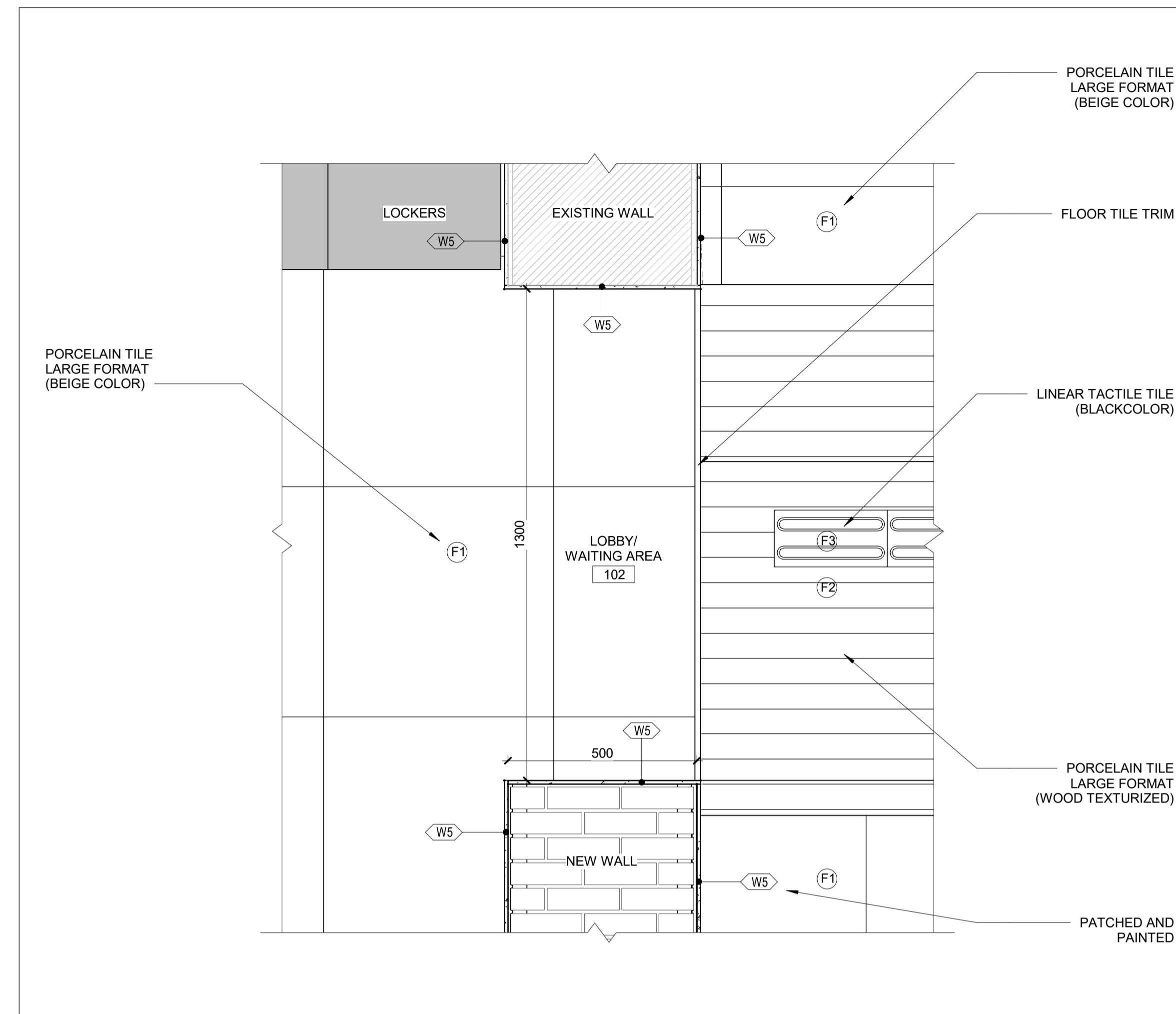
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



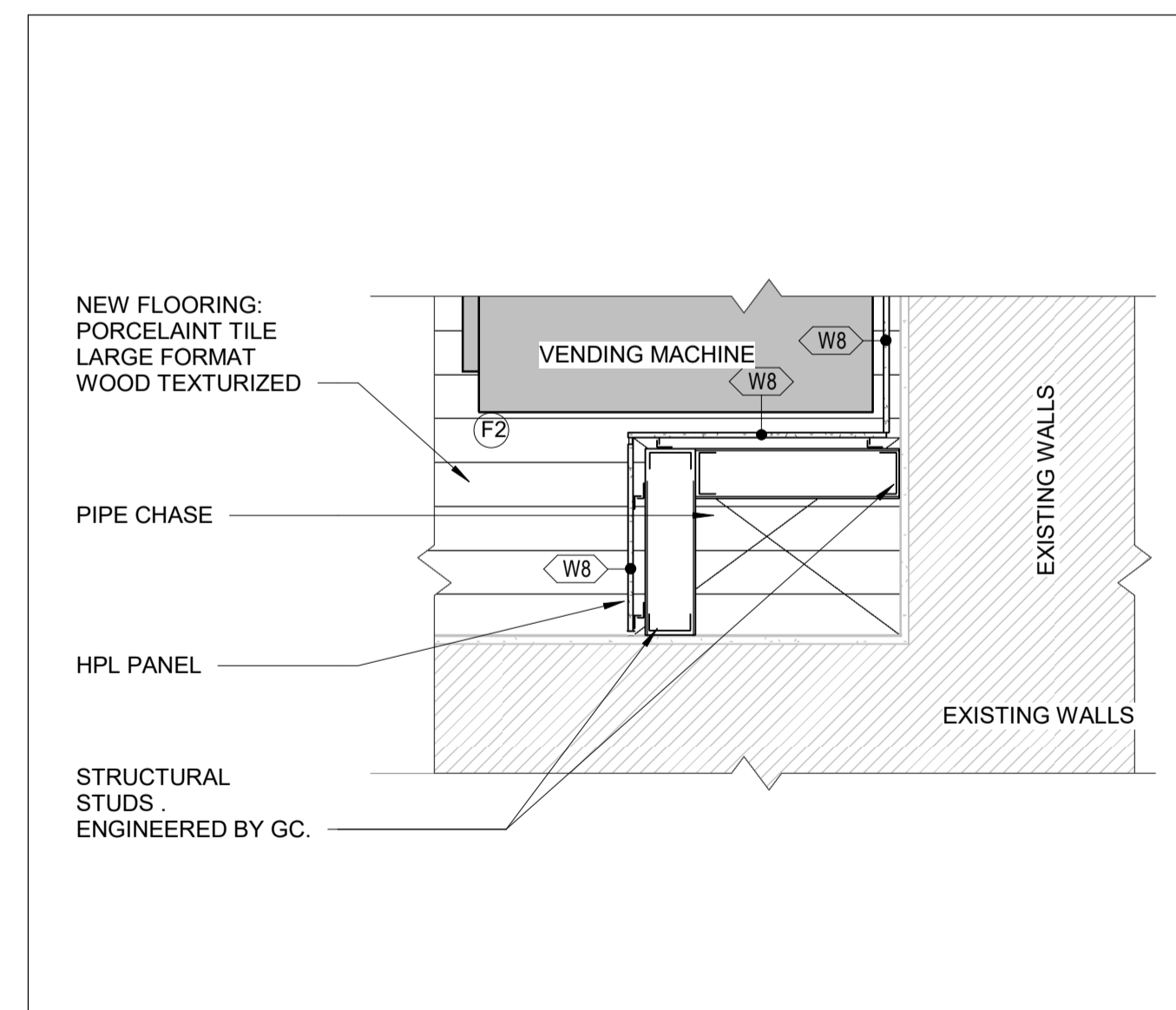
1 PLAN DETAIL - DRYWALL EXISTING-BB

A5004 REF: A1600 SCALE: 1 : 10



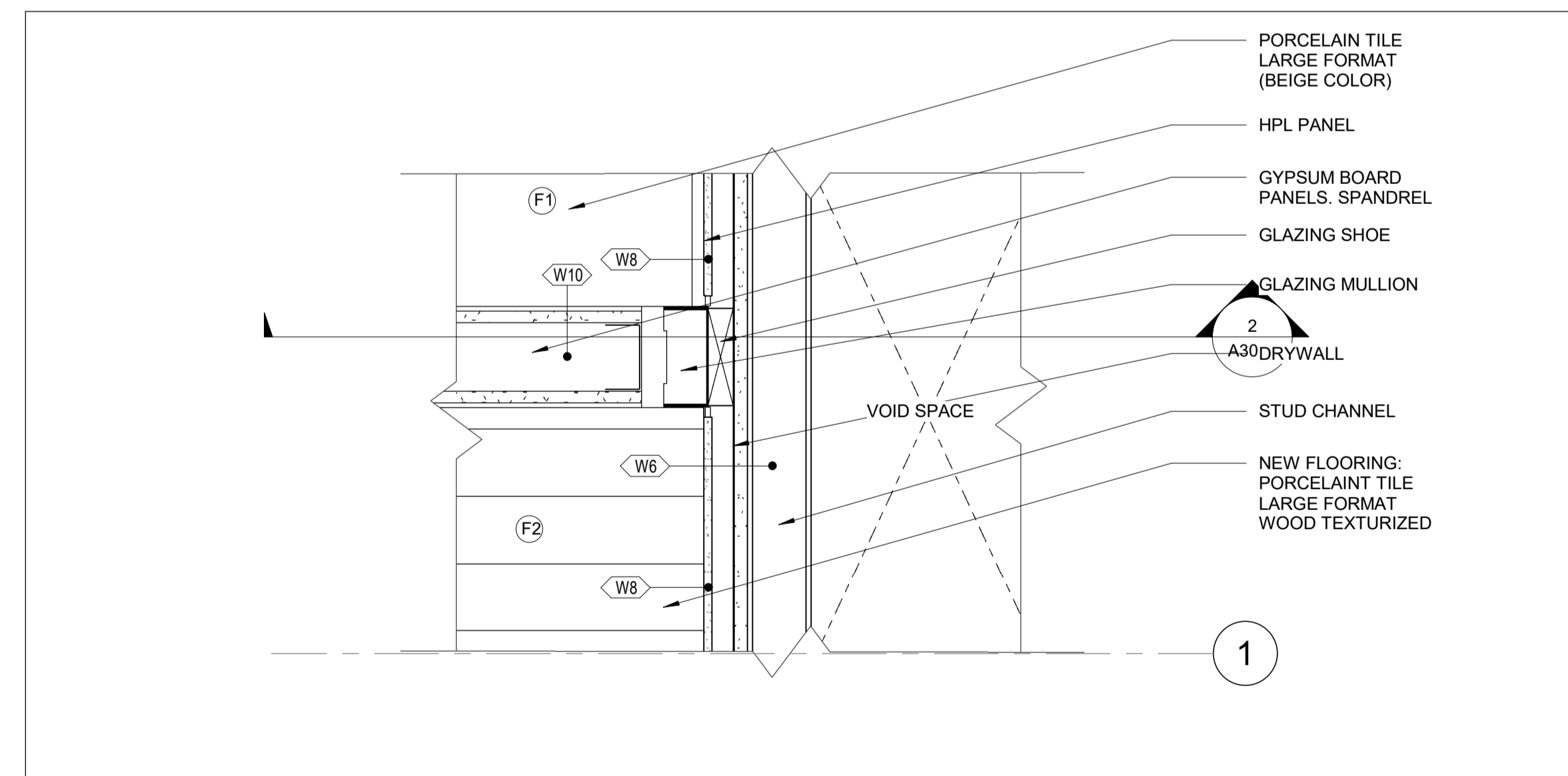
2 PLAN DETAIL- GROUND -NEW OP WEST JAMB-BB

A5004 REF: A1600 SCALE: 1 : 10



3 PD- GR - TICKETS MACH CORNER-BB

A5004 REF: A1600 SCALE: 1 : 10

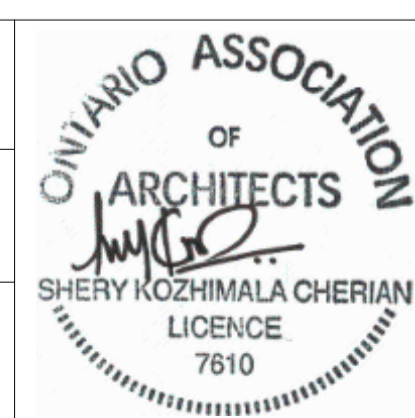


4 PD - GR - TICKETS SHAFT-BB

A5004 REF: A1600 SCALE: 1 : 5

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
		B	2024/02/08	ISSUED FOR TENDER	
		A	2023/04/24	ISSUED FOR BUILDING PERMIT	

DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
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ARCHITECTURE | 49

PROJECT NO. BE20101016

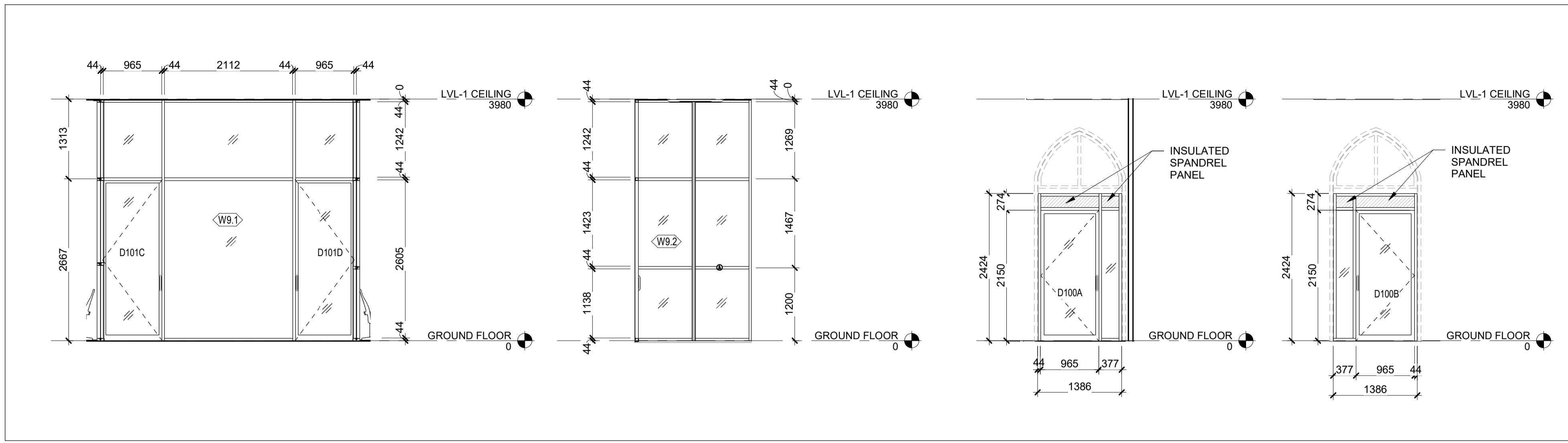
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NIAGARA FALLS TRAIN STATION UPGRADES PLAN DETAILS 1			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A5004

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 GLAZING TYPE W9.1-BB

A6001 REF: D-0002 SCALE: 1:50

2 GLAZING TYPE W9.2-BB

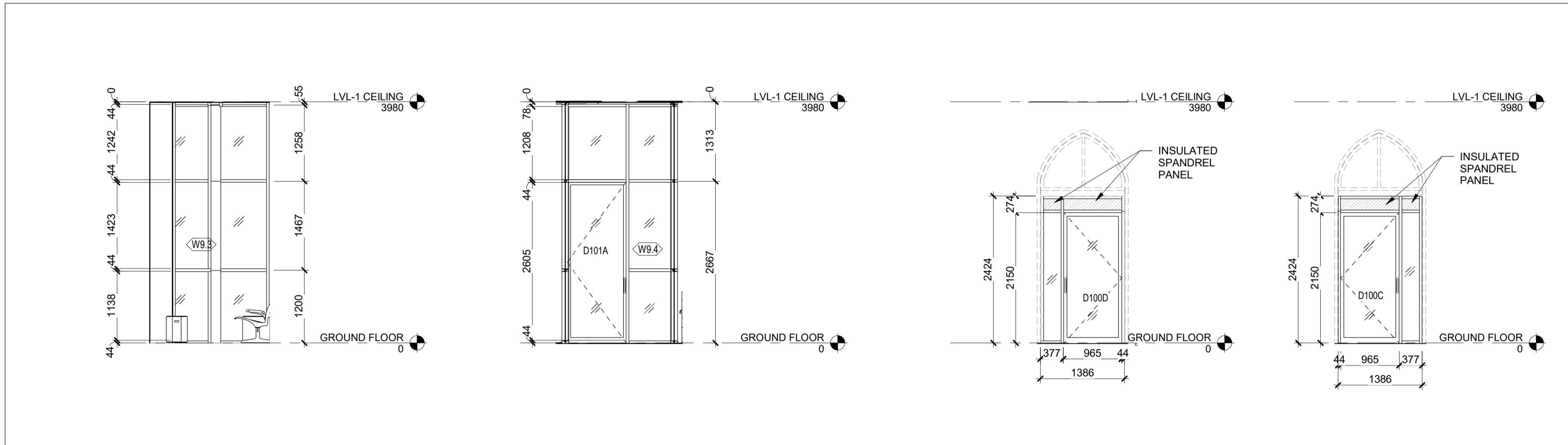
A6001 REF: D-0002 SCALE: 1:50

7 D100A-BB

A6001 REF: D-0002 SCALE: 1:50

8 D100B-BB

A6001 REF: D-0002 SCALE: 1:50



3 GLAZING TYPE W9.3-BB

A6001 REF: D-0002 SCALE: 1:50

4 GLAZING TYPE W9.4-BB

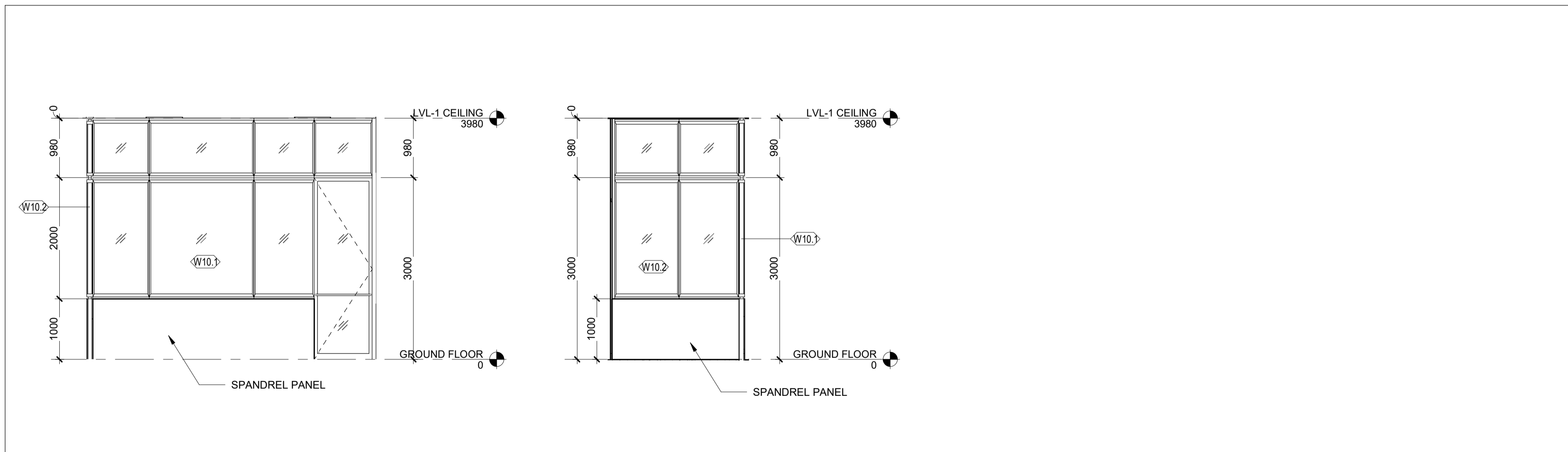
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9 D100D-BB

A6001 REF: D-0002 SCALE: 1:50

10 D100C-BB

A6001 REF: D-0002 SCALE: 1:50



5 GLAZING TYPE W10.1-BB

A6001 REF: D-0002 SCALE: 1:50

6 GLAZING TYPE W10.2-BB

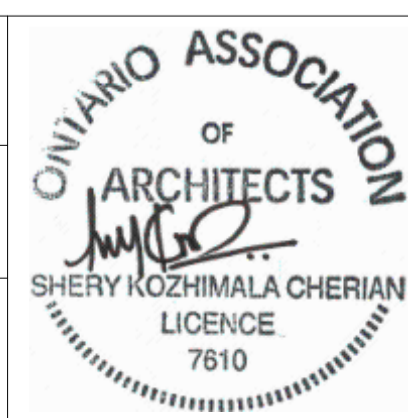
A6001 REF: D-0002 SCALE: 1:50

GLAZING AND WINDOWS NOTES

1. ALL NEW FRAMES & DOORS TO BE INSTALLED IN EXISTING EXTERIOR OR INTERIOR ROUGH-OPENINGS TO BE SITE MEASURED PRIOR TO FABRICATION.

REFERENCE DRAWINGS	ISSUE	REVISIONS	
DWG NO.	TITLE	NO.	DATE

DRAWN BY: P.LAPALIKAR 2023/09/22 CHECKED BY: S.CHERIAN 2023/09/22 SCALE: AS SHOWN	DESIGNED BY: G.DANESHGAR 2023/04/21 APPROVED BY: S.CHERIAN 2023/09/22 FULL SIZE ONLY
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ARCHITECTURE 49
PROJECT NO. BE20101016
ISSUED FOR TENDER

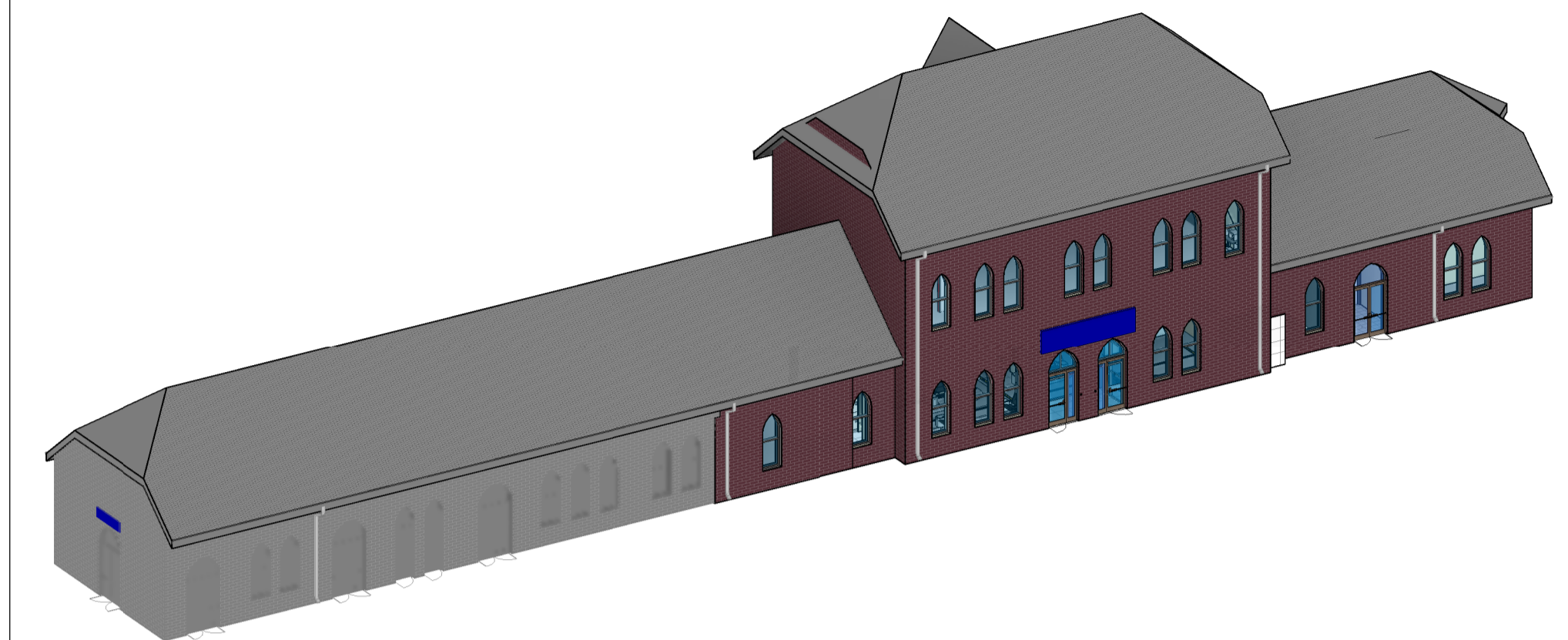


NIAGARA FALLS TRAIN STATION UPGRADES
GLAZING SCHEDULE

CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A6001
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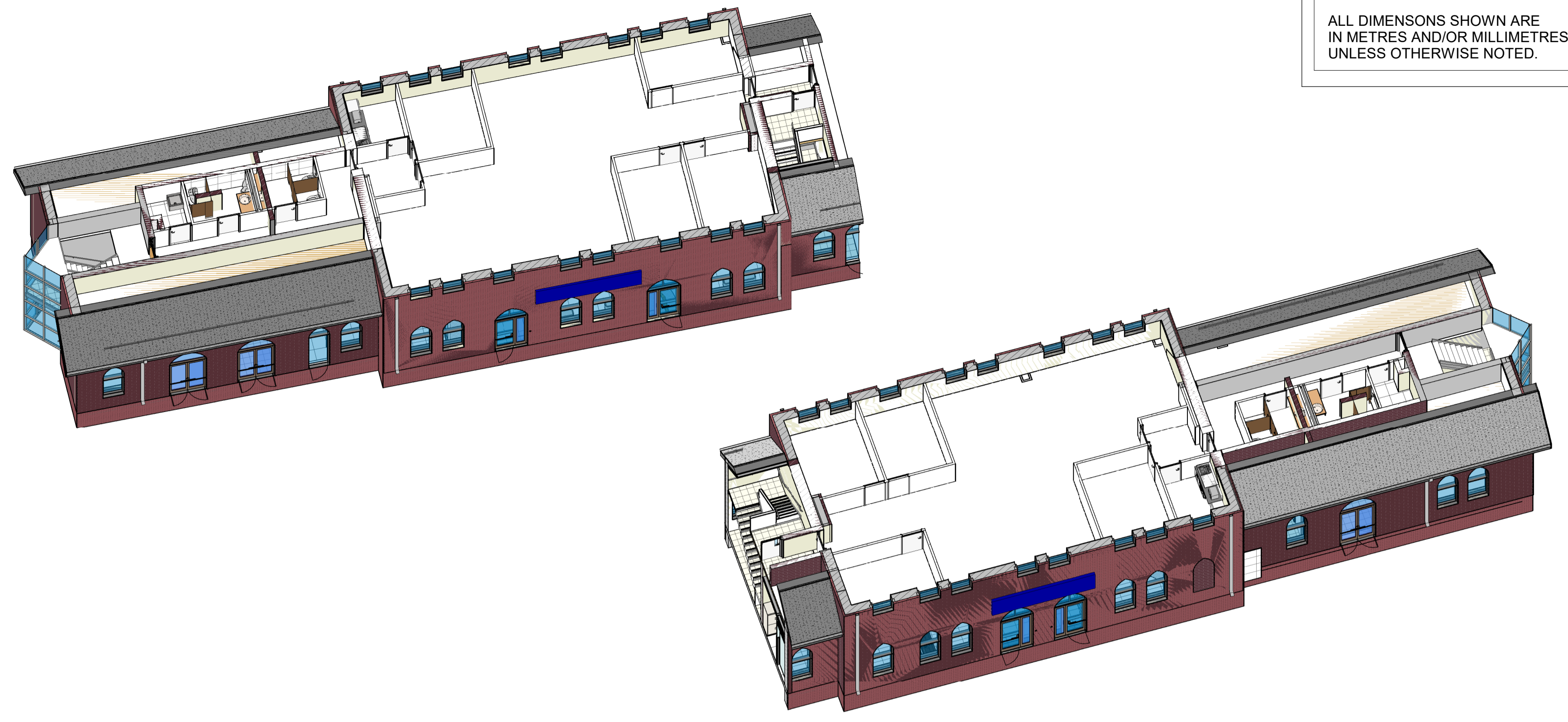
METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 | NIAGARA FALLS VIA RAIL STATION (NORTH VIEW)

A9000 SCALE:

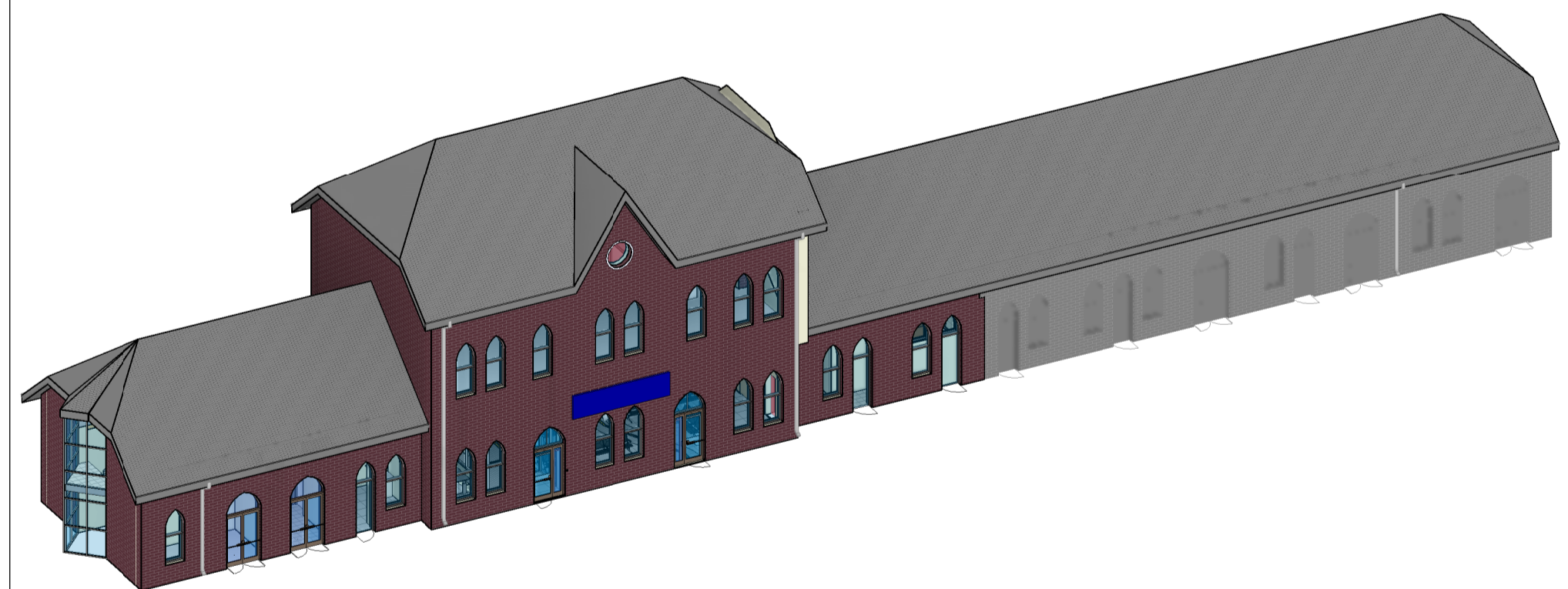


2 | NORTH VIEW_SECOND FLOOR

A9000 SCALE:

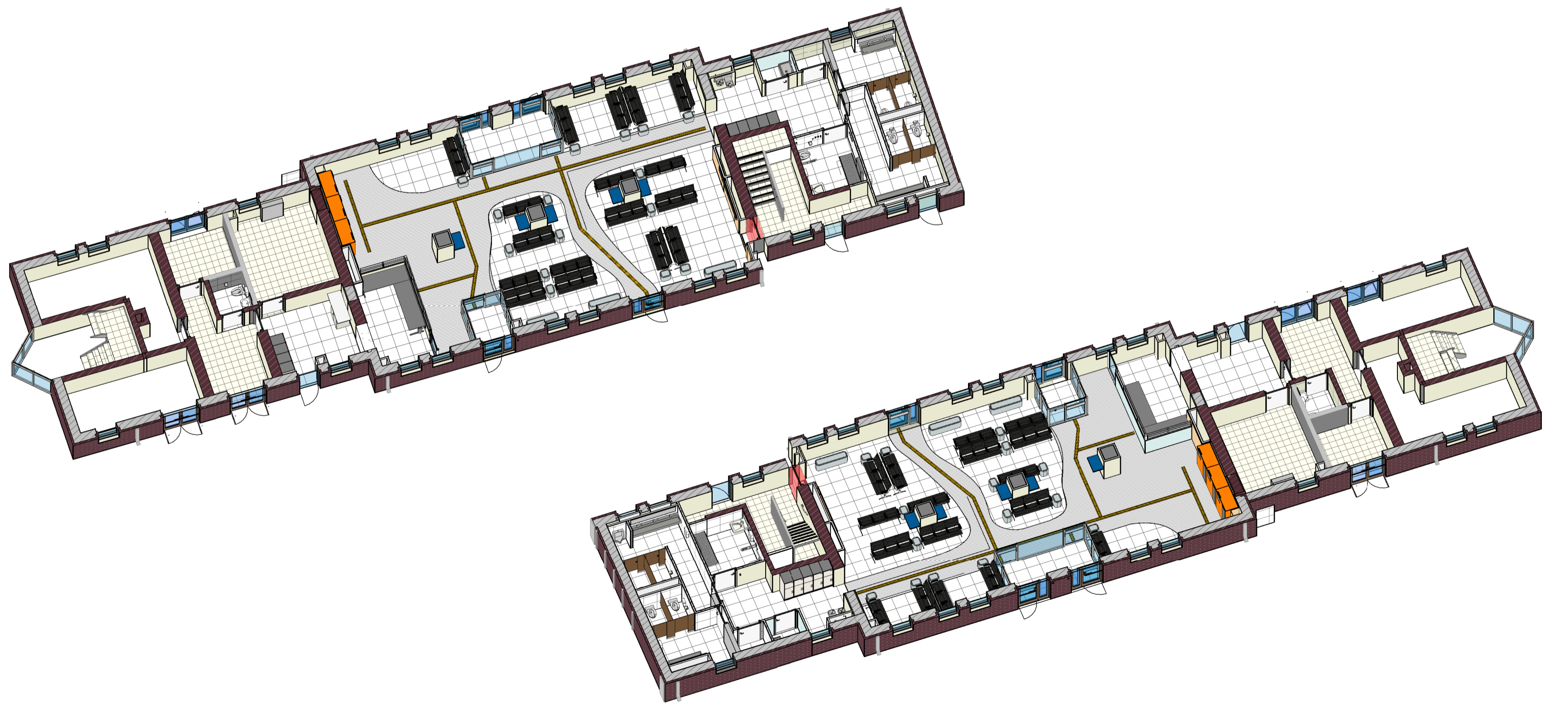
3 | SOUTH VIEW_SECOND FLOOR

A9000 SCALE:



4 | NIAGARA FALLS VIA RAIL STATION (SOUTH VIEW)

A9000 SCALE:



5 | NORTH VIEW_GROUND FLOOR

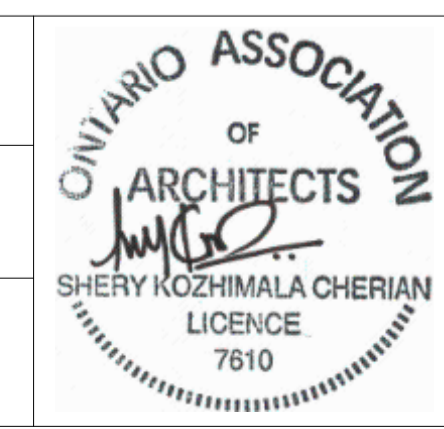
A9000 SCALE:

6 | SOUTH VIEW_GROUND FLOOR

A9000 SCALE:

REFERENCE DRAWINGS		ISSUE		REVISIONS	
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV. DATE
		B	2024/02/08	ISSUED FOR TENDER	
		A	2023/04/24	ISSUED FOR BUILDING PERMIT	

DRAWN BY: P.LAPALIKAR 2023/09/22	DESIGNED BY: G.DANESHGAR 2023/04/21
CHECKED BY: S.CHERIAN 2023/09/22	APPROVED BY: S.CHERIAN 2023/09/22
SCALE: AS SHOWN	FULL SIZE ONLY



ARCHITECTURE | 49
PROJECT NO. BE20101016
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NIAGARA FALLS TRAIN STATION UPGRADES 3D VIEWS			
CONTRACT NO. STATION RENOVATION	DWG. NO.	REV. A	SHEET A9000

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

HEATING, VENTILATION & AIR CONDITIONING	SYMBOL
HEATING WATER SUPPLY	HWS
HEATING WATER RETURN	HWR
EXISTING HEATING WATER SUPPLY	HWS(E)
EXISTING HEATING WATER RETURN	HWR(E)
EXISTING HEATING WATER SUPPLY TO BE REMOVED	HWS(D)
EXISTING HEATING WATER RETURN TO BE REMOVED	HWR(D)
REFRIGERANT PIPING (SUCTION AND LIQUID)	R
REFRIGERANT SUCTION PIPING	RS
REFRIGERANT LIQUID PIPING	RL
FRESH AIR \ SUPPLY AIR	
EXHAUST AIR \ RETURN AIR	
BALANCING DAMPER	BD
FIRE DAMPER	FD
MOTORIZED DAMPER	MD
BACKDRAFT DAMPER	BDD
DOOR GRILLE	DG
TEMPERATURE SENSOR	S
THERMOSTAT ELECTRIC (120 VAC)	TE
THERMOSTAT ELECTRIC (24 VAC, PROGRAMABLE)	T
REVERSE ACTING THERMOSTAT	TR
EXISTING THERMOSTAT ELECTRIC (120 VAC)	TE E
NEW DUCTWORK IN PENTHOUSE	
NEW DUCTWORK ON 7TH FLOOR	
EXISTING DUCTWORK TO BE REMOVED	
DUCTWORK SIZE in mm (WIDTH x HEIGHT)	200 x 100
CEILING DIFFUSER WITH FLEXIBLE DUCT (ACOUSTIC)	
GRILLE (R=RETURN, E=EXHAUST, E (PREFIX)=EXISTING, R (PREFIX)=RELOCATED)	
DIFFUSER (S=SUPPLY, E (PREFIX)=EXISTING, R (PREFIX)=RELOCATED)	

PLUMBING	SYMBOL
EXISTING DOMESTIC COLD WATER	DCW (E)
EXISTING DOMESTIC HOT WATER	DHW (E)
EXISTING DOMESTIC HOT WATER RECIRCULATION	DHWR (E)
DOMESTIC COLD WATER	DCW
DOMESTIC HOT WATER	DHW
EXISTING DOMESTIC HOT WATER RECIRCULATION	DHWR
SANITARY PIPING (UNDERSLAB) (EXISTING TO REMAIN)	SAN (E)
VENT PIPING (EXISTING TO REMAIN)	V (E)
SANITARY PIPING (ABOVE FLOOR)	SAN
SANITARY PIPING (UNDERSLAB)	SAN
VENT PIPING	V
NATURAL GAS PIPING	G
CONDENSATE DRAIN PIPING	COND
TRAP PRIMER PIPING	TP
TRAP PRIMER VALVE	TPV
FLOOR DRAIN	FD
FUNNEL FLOOR DRAIN	FFD
CLEANOUT (WALL MOUNTED)	WCO
CLEANOUT (ABOVE FLOOR)	CO
CLEANOUT (IN FLOOR)	CO
RUNNING TRAP	RT

GENERAL LEGEND	SYMBOL
2-WAY CONTROL VALVE	
AUTOMATIC AIR VENT	
BALANCING/SHUT-OFF VALVE	
BALL VALVE	
FLANGE	
GATE VALVE	
GLOBE VALVE	
PIPE ELBOW - TURNED DOWN	
PIPE ELBOW - TURNED UP	
PIPE TEE - OUTLET DOWN	
PIPE TEE - OUTLET UP	
CONNECT TO EXISTING (TIE IN POINT TO EXISTING SYSTEM)	
TRIPLE DUTY VALVE	
UNION	
ROOM NUMBER	
TRANSFORMER (TRIM INFRARED SENSORS)	

ABBREVIATIONS	SYMBOL
DRINKING FOUNTAIN	DF-#
LAVATORY	L-#
MOP SINK	MPS-#
URINAL	U-#
WATER CLOSET	WC-#
AIR CONDITIONING UNIT	AC-#
BASEBOARD HEATER	BBH-#
CEILING CASSETTE HEAT PUMP	CCHP-#
CONDENSING UNIT	CU-#
ENERGY RECOVERY VENTILATOR	ERV-#
EXHAUST FAN	EF-#
FAN COIL	FC-#
VENTILATION WALL CAP	VWC-#
NOMINAL PIPE SIZE	NPS
NORMALLY OPEN POSITION	N.O.
NORMALLY CLOSED POSITION	N.C.
EXHAUST AIR	E/A
OUTDOOR AIR	O/A
RETURN AIR	R/A
SUPPLY AIR	S/A



REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY:	DESIGNED BY:	 PROJECT NO. BE20101016 ISSUED FOR TENDER	 Niagara Region	NIAGARA FALLS TRAIN STATION UPGRADES MECHANICAL LEGENDS & NOTES					
						E.M.	A.A.								
		D	2023/12/06	ISSUED FOR TENDER		CHECKED BY:	APPROVED BY:								
		C	2023/07/25	REISSUED FOR BUILDING PERMIT		G.W.	S.C.								
		B	2023/04/24	ISSUED FOR BUILDING PERMIT											
		A	2022/11/11	PRELIMINARY DESIGN SUBMISSION		SCALE: AS SHOWN	FULL SIZE ONLY								
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE						CONTRACT NO.	DWG. NO.	REV.	SHEET
												STATION RENOVATION	M-0001	D	M-0001

GENERAL MECHANICAL NOTES:

1. OBTAIN, ARRANGE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
2. THE CONTRACTOR AND ITS SUB-TRADES SHALL ATTEND SITE MEETINGS AS DEFINED IN THE SPECIFICATION.
3. OBTAIN AND REVIEW THE DESIGNATED SUBSTANCE REPORT FROM THE CLIENT AND COORDINATE ANY DESIGNATED SUBSTANCE ISSUES WITH THE CLIENT PRIOR TO ANY WORK BEING DONE.
4. PROVIDE SHOP DRAWINGS ELECTRONICALLY IN PDF FORMAT TO CONSULTANT FOR REVIEW. ALL SHOP DRAWINGS MUST BE REVIEWED, STAMPED AND SIGNED BY THE MECHANICAL CONTRACTOR PRIOR TO SUBMITTING TO THE CONSULTANT. REVIEW SHALL INCLUDE BUT NOT BE LIMITED TO: VERIFYING UNIT VOLTAGE WITH ELECTRICIAN AND/OR SITE, EQUIPMENT PERFORMANCE, DIMENSIONS AND CLEARANCES.
5. THOROUGHLY REVIEW AND COORDINATE WITH SITE CONDITIONS AND COMPLETE DRAWING SET PRIOR TO PRICING AND INSTALLATION.
6. INSTALL ALL WORK IN CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
7. DO NOT USE ANY NEW PERMANENT EQUIPMENT FOR TEMPORARY USE DURING CONSTRUCTION WITHOUT WRITTEN APPROVAL. WHERE SYSTEMS ARE USED AND ARE CONTAMINATED BY DUST OR DIRT, THE CONTRACTOR SHALL CLEAN IN A MANNER ACCEPTABLE TO THE CONSULTANT.
8. MAINTAIN RECORD DRAWINGS ON AN ON-GOING BASIS. DRAWINGS SHALL BE AVAILABLE FOR PERIODIC REVIEW BY THE CONSULTANT DURING CONSTRUCTION.
9. ALL WORK SHALL COMPLY WITH APPLICABLE CODES.
10. REMOVE ALL REDUNDANT EQUIPMENT, MATERIALS AND GARBAGE FROM SITE AND DISPOSE OF IN AN APPROVED MANNER. REDUNDANT EQUIPMENT AND MATERIALS SHALL NOT BE ABANDONED IN PLACE.
11. ALL CUTTING AND CORING SHALL BE BY THIS CONTRACTOR. COORDINATE PATCHING WITH GENERAL CONTRACTOR. ALL SAW CUTTING AND RESTORATION OF CONCRETE FLOOR BY GENERAL CONTRACTOR. COORDINATE WITH SAME.
12. COORDINATE ROOFING FOR DUCT AND PIPE ROOF PENETRATIONS WITH GENERAL CONTRACTOR AS REQUIRED.
13. MAINTAIN REQUIRED ACCESS AND CLEARANCE TO ALL EQUIPMENT AND SYSTEMS AS REQUIRED BY CODE AND AS PER MANUFACTURER'S REQUIREMENTS.
14. TAG ALL EQUIPMENT WITH LAMACOID NAMEPLATES. TAG ALL VALVES WITH LAMACOID NAMEPLATES OR BRASS TAGS ON CHAINS.
15. LABEL ALL EXISTING AND NEW PIPING IN AREA OF WORK WITH SERVICE AND FLOW ARROWS EVERY 10'(3m) AND ON EITHER SIDE OF WALLS.
16. THE CONTRACTOR SHALL ARRANGE FOR INSPECTIONS BY THE ENGINEER PRIOR TO CEILING AND WALLS BEING CLOSED IN. WHERE THIS HAS NOT BEEN ARRANGED IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE CEILING TILES OR ACCESS DOORS FOR INSPECTION AT THE DIRECTION OF THE CONSULTANT.
17. PERFORM TESTING AND START UP OF ALL SYSTEMS AS REQUIRED BY CODE, THE CONSULTANT, MANUFACTURER'S REQUIREMENTS, AND AUTHORITIES HAVING JURISDICTION. SUBMIT REPORTS TO THE CONSULTANT.
18. INSTRUCT AND TRAIN THE OWNER ON PROPER OPERATION OF THE SYSTEM. RECORD AND SUBMIT A TRAINING LOG DATED AND SIGNED BY ALL ATTENDEES INCLUDING THE TRAINERS.
19. UPON COMPLETION OF THE PROJECT THE CONSULTANT WILL DO A FINAL REVIEW. UPON RECEIVING THE FINAL INSPECTION REPORT, THE CONTRACTOR MUST CORRECT AND SIGN BACK THE INSPECTION REPORT INDICATING ALL DEFICIENCIES ARE COMPLETED. A RE-INSPECTION WILL ONLY BE DONE ONCE THE CONSULTANT RECEIVES THIS IN WRITING. WHERE THE CONSULTANT PERFORMS THE RE-INSPECTION AND THE WORK IS NOT COMPLETE, THE CONTRACTOR IS RESPONSIBLE FOR REIMBURSING THE CONSULTANT FOR THE FIELD REVIEW. THE FEE FOR ADDITIONAL REVIEWS WILL BE AT THE CONSULTANT'S HOURLY RATES PLUS MILEAGE AND APPLICABLE TAXES TO BE PAID DIRECTLY TO THE CONSULTANT PRIOR TO PERFORMING THE NEXT FIELD REVIEW.
20. PROVIDE ONE (1) YEAR WARRANTY ON ALL MATERIAL AND LABOUR FROM THE DATE OF SUBSTANTIAL COMPLETION.
21. PAYMENT AMOUNTS FOR MANUAL AND AS-BUILT DRAWINGS TO BE IN ACCORDANCE WITH PAYMENT TERMS GOVERNED BY THE GENERAL CONTRACT. TOTAL AMOUNT SHALL REMAIN UNBILLED UNTIL MANUALS AND AS-BUILT DRAWINGS HAVE BEEN SUBMITTED AND APPROVED.
22. PROVIDE OF ONE (1) ELECTRONIC COPY MAINTENANCE MANUALS ON USB. MANUAL SHALL INCLUDE TABLE OF CONTENTS, CONTRACTOR INFORMATION, WARRANTY LETTER, SHOP DRAWINGS, O&Ms, INSPECTION & TEST REPORTS, AND AS-BUILT DRAWINGS. AS-BUILT DRAWINGS SHALL INCLUDE COMPLETE MECHANICAL DRAWING SET WITH ANY CHANGES MARKED CLEARLY AND NEATLY IN COLOUR. AS-BUILTS SHALL BE STAMPED ACCORDINGLY BY THE CONTRACTOR (ALL DRAWINGS). DRAWINGS SHALL BE SUBMITTED HARD COPY IN FULL SIZE. SUBSTANTIAL COMPLETION WILL NOT BE AWARDED UNTIL THE MANUALS AND AS-BUILTS HAVE BEEN SUBMITTED TO THE CONSULTANT AND THE CONSULTANT HAS APPROVED.

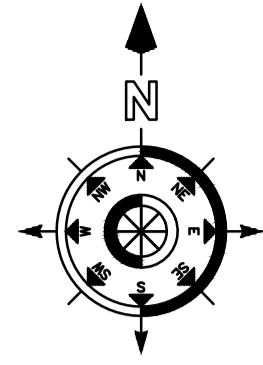
HVAC NOTES:

1. CONCEAL ALL SERVICES IN CEILING SPACES AND FURRED CONSTRUCTION UNLESS INSTALLED IN UNFINISHED OR EXPOSED AREAS OR IF SPECIFICALLY NOTED TO BE EXPOSED.
2. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
3. REFER TO REFLECTED CEILING PLAN TO CONFIRM EXACT LOCATION OF GRILLES AND DIFFUSERS AND COORDINATE WITH LIGHTING PLAN FOR EXACT LOCATIONS. LIGHTING TAKES PRECEDENCE.
4. PROVIDE A CONTINUOUS ANTI-VIBRATION RUBBER GASKET BETWEEN ROOF CURBS AND EQUIPMENT UNIT RAILS.
5. PROVIDE 100mm (4") FLEXIBLE CONNECTIONS AT ALL DUCT CONNECTIONS TO AIR HANDLING EQUIPMENT.
6. PROVIDE ACOUSTIC INSULATION IN FIRST 1.5m (5') OF SUPPLY AND RETURN DUCTS OFF AIR HANDLING UNITS, ALL TRANSFER DUCTS AND AS INDICATED ON DRAWINGS. SEAL ALL EXPOSED ENDS OF INSULATION.
7. SEAL ALL JOINTS ON ALL SUPPLY & RETURN AIR DUCTS WITH DURODYNE DUCT SEALER IN CONFORMANCE TO CLASS 'C' ASHRAE 90.1 AND SMACNA STANDARDS.
8. BRANCH DUCTWORK TO DIFFUSERS TO BE SAME SIZE AS DIFFUSER NECK.
9. PROVIDE TURNING VANES IN ALL SQUARE ELBOWS AND SHORT RADIUS ELBOWS FOR SUPPLY AIR DUCTS.
10. TEMPORARILY SEAL ALL OPEN DUCTS THROUGHOUT CONSTRUCTION TO PROTECT FROM DUST AND DIRT ENTERING THE SYSTEM. WHERE THE CONTRACTOR DOES NOT CONFORM THEY ARE RESPONSIBLE FOR CLEANING OF THE SYSTEMS IN A MANNER APPROVED BY THE CONSULTANT.
11. PROVIDE AIR BALANCING DAMPERS ON ALL BRANCH DUCTS CLOSE TO MAIN TAKE-OFF. REVIEW WITH BALANCING CONTRACTOR TO CONFIRM LOCATIONS OF ALL BALANCE DAMPERS PRIOR TO CONSTRUCTION.
12. PROVIDE FIRE DAMPERS AT ALL FIRE SEPARATIONS. FIRE DAMPERS SHALL BE c/w LINKAGE OUT OF THE AIR STREAM. FIRE DAMPER RATING TO MATCH THE RATING OF THE SEPARATION CROSSED. INSTALLATION MUST CONFORM TO LATEST NFPA/CUA 90A SPECIFICATIONS. ONLY USE ULC APPROVED EQUIPMENT. PROVIDE DUCT ACCESS DOORS AND BREAK AWAY FLANGES FOR ALL FIRE DAMPERS IN CONFORMANCE WITH CODE AND INSTALLATION INSTRUCTIONS. ACCESS DOORS SHALL BE TWIST LOCK TYPE - SCREWED PANELS ARE NOT ACCEPTABLE.
13. INCLUDE FOR THE SUPPLY AND INSTALLATION OF TWO(2) EXTRA BALANCE DAMPERS, PENDING BALANCING RESULTS AND COMMENTS.
14. FLEXIBLE DUCT SHALL ONLY BE USED IN SUPPLY AIR APPLICATIONS FOR CONNECTIONS TO DIFFUSERS IN DROPPED CEILING. FLEXIBLE DUCT SHALL BE MAXIMUM 1.8m (6') IN LENGTH AND SHALL BE SECURELY FASTENED TO DUCTS AND DIFFUSERS. PROVIDE HANGERS AND FLEXIBLE DUCTWORK WITHOUT SHARP 90°s. SAGGING, OR CRUSHING OF DUCT. FLEXIBLE DUCT IS NOT ACCEPTABLE IN ANY OTHER APPLICATION.
15. PROVIDE EXTERNAL INSULATION ON ALL SUPPLY AIR DUCTS, ALL OUTSIDE AIR DUCTS AND ON ALL EXHAUST DUCTS WITHIN 2.4m (8') OF OUTSIDE WALL/ROOF INCLUDING RIGID AND FLEXIBLE DUCT.
16. CONFIRM EXACT LOCATIONS OF THERMOSTATS/SENSORS WITH ENGINEER AND OWNER. MOUNT THERMOSTATS/SENSORS AT 1200mm (47") AFF. ENSURE THAT THERMOSTAT/SENSOR LOCATIONS WILL NOT BE AFFECTED BY DIRECT SUNLIGHT, COLD WALLS OR MILLWORK.
17. ALL INDOOR CONTROL WIRING SHALL BE RUN IN EMT CONDUIT OR FT6 (EMT SHALL BE USED IN EXPOSED AREAS). LAST 900mm (3') SHALL BE BX WHEN USING CONDUIT. ALL OUTDOOR CONTROL WIRING SHALL BE RUN IN LIQUID TIGHT. ALL CONTROL WIRING SHALL RUN PARALLEL TO BUILDING LINES AND TIGHT TO ROOF DECK OR WALLS. ALL CONTROL WIRING PASSING THROUGH WALLS SHALL BE RUN IN EMT CONDUIT C/W BUSHINGS AT EACH END.
18. PROVIDE SLEEVES FOR PIPES THROUGH ALL NEW BLOCK WALLS. FILL VOIDS AROUND PIPES. ENSURE NO CONTACT BETWEEN DISSIMILAR METALS.
19. SUPPLY DRYWALL ACCESS DOORS FOR CONCEALED FIRE AND BALANCE DAMPERS AND ANY OTHER CONCEALED DEVICES AND TURN OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION. DOORS ARE TO MATCH WALL AND CEILING SURFACE AND COLOUR EXCEPT USE STAINLESS STEEL IN WASHROOMS. DOORS SHALL BE RATED WHERE INSTALLED IN FIRE SEPARATIONS.
20. DRAIN HEATING SYSTEMS AS REQUIRED FOR NEW WORK. FILL, FLUSH, TEST AND TREAT (CHEMICAL TREATMENT) AFTER WORK IS COMPLETE. PROVIDE ALL PORTS, VALVES AND GAUGES AS REQUIRED. SUBMIT CHEMICAL TREATMENT REPORT TO ENGINEER. FREEZING OF PIPING TO ALLOW ISOLATION OF WORK AREA IS ACCEPTABLE IN LIEU OF DRAINING.
21. ALL CIRCUIT BALANCING VALVES SHALL BE MOUNTED WITH PORTS IN HORIZONTAL (90°) POSITION.
22. PROVIDE EXTERNAL INSULATION ON ANY NEW HEATING PIPING.
23. PROVIDE FIRE STOPPING AROUND ALL EXISTING AND NEW PIPING THROUGH FIRE SEPARATIONS.
24. LABEL ALL EXISTING AND NEW HEATING PIPING IN AREAS OF WORK COMPLETE WITH FLOW ARROWS. LABELS SHALL BE MAX 3m(10') SPACING AND ON EITHER SIDE OF WALLS. LABELING MUST BE COMPLETE PRIOR TO NEW CEILING BEING INSTALLED OTHERWISE IT IS THE CONTRACTORS RESPONSIBILITY TO REMOVE CEILING TILES FOR INSPECTION AT THE DIRECTION OF THE CONSULTANT.
25. LABEL CEILING TILE WITH PERMANENT ADHESIVE LABELS OR LAMACOID NAMEPLATES FOR ACCESS TO MECHANICAL ITEMS.
26. PROVIDE CONDENSATE DRAINS c/w TRAPS FOR NEW INDOOR AIR HANDLING EQUIPMENT AND RUN TO CLOSEST PLUMBING DRAIN WITH INDIRECT DRAIN CONNECTION IN A VISIBLE AND ACCESSIBLE LOCATION (CEILING SPACE NOT ACCEPTABLE). PROVIDE CONDENSATE PUMP WHERE GRAVITY DRAINAGE IS NOT POSSIBLE.
27. OBTAIN THE SERVICES OF A 3rd PARTY ACCREDITED BALANCING COMPANY TO BALANCE THE COMPLETE HVAC SYSTEM. PROVIDE REPORT TO ENGINEER FOR REVIEW. REFER TO SPECIFICATIONS FOR APPROVED AGENTS.
28. PROVIDE TESTING AND STARTUP OF ALL NEW EQUIPMENT AND PROVIDE REPORTS TO THE ENGINEER FOR REVIEW.
29. HYDRONIC SYSTEM BALANCING: BALANCE THE WHOLE HYDRONIC HEATING SYSTEM AS PART OF THE NEW SYSTEM TAB PROCEDURE IS REQUIRED AND SHALL BE EXECUTED WHEN THE NEW SYSTEM IS COMPLETE IN ORDER THE SECTIONS OF THE EXISTING SYSTEM NOT LOSE ITS CURRENT PERFORMANCE. IN GENERAL, THE NEW HEATING SYSTEM WOULD BE REPLACEMENT OF OLD HEATING ELEMENTS IN THE EXISTING SYSTEM WITH NEW ONES OF EQUIVALENT CAPACITY.
30. THE PROPOSED ALTERATION TO THE EXISTING HYDRONIC SYSTEM WILL NOT AFFECT THE PERFORMANCE OF OTHER SECTIONS OF THE EXISTING HYDRONIC SYSTEM THAT ARE NOT IN THE SCOPE OF THIS PERMIT APPLICATION.

REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY: E.M.	DESIGNED BY: A.A.	 PROJECT NO. BE20101016 ISSUED FOR TENDER	 Niagara Region	NIAGARA FALLS TRAIN STATION UPGRADES GENERAL MECHANICAL & HVAC NOTES			
						CHECKED BY: G.W.	APPROVED BY: S.C.			CONTRACT NO. STATION RENOVATION	DWG. NO. M-0002	REV. D	SHEET M-0002
	D	2023/12/06	ISSUED FOR TENDER										
	C	2023/07/25	REISSUED FOR BUILDING PERMIT										
	B	2023/04/24	ISSUED FOR BUILDING PERMIT										
	A	2022/11/11	PRELIMINARY DESIGN SUBMISSION										
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE	SCALE: AS SHOWN	FULL SIZE ONLY	NIAGARA REGION PROJECT NO. xxxxxxx				

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

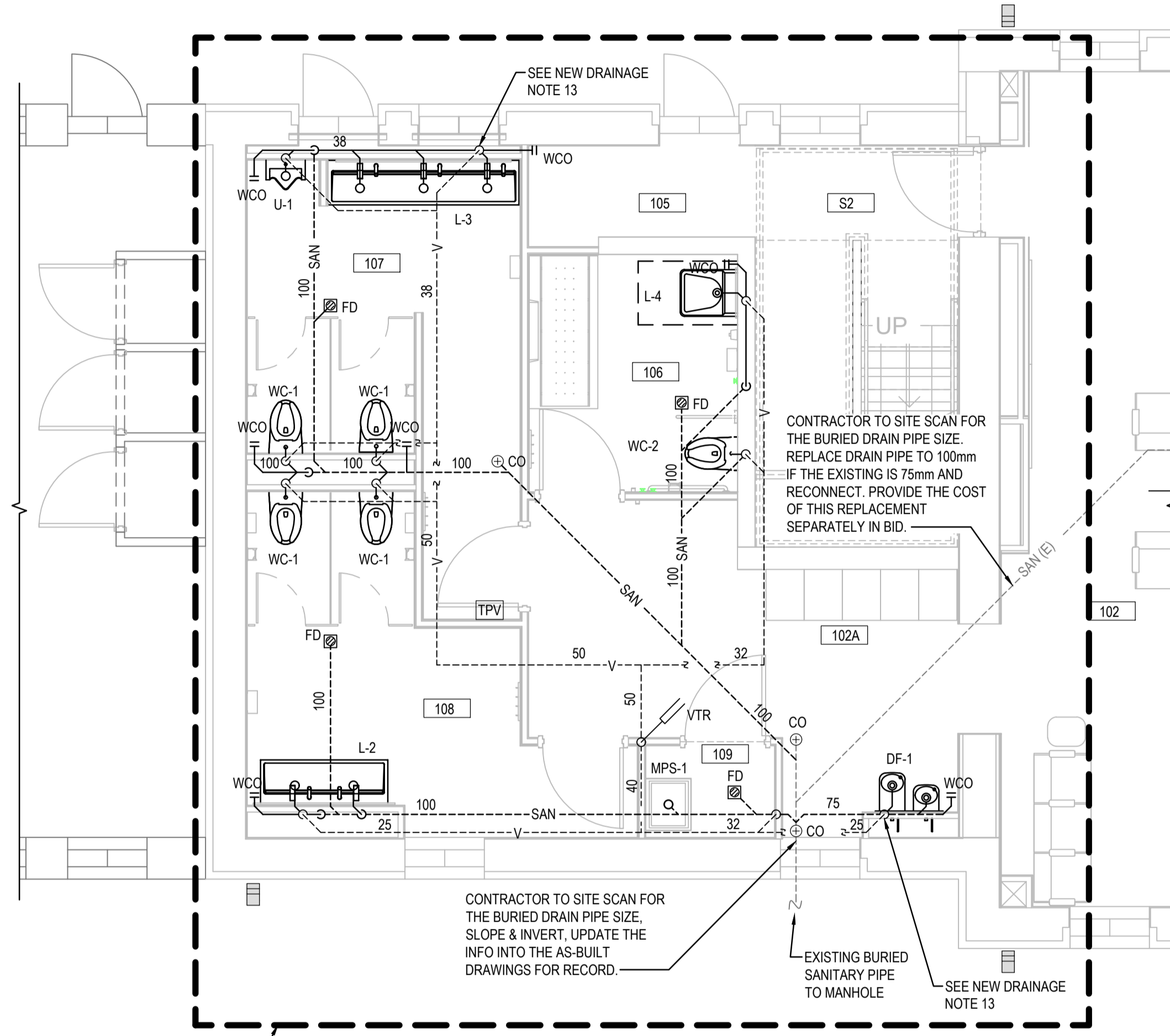


NEW DRAINAGE CONSTRUCTION NOTES:

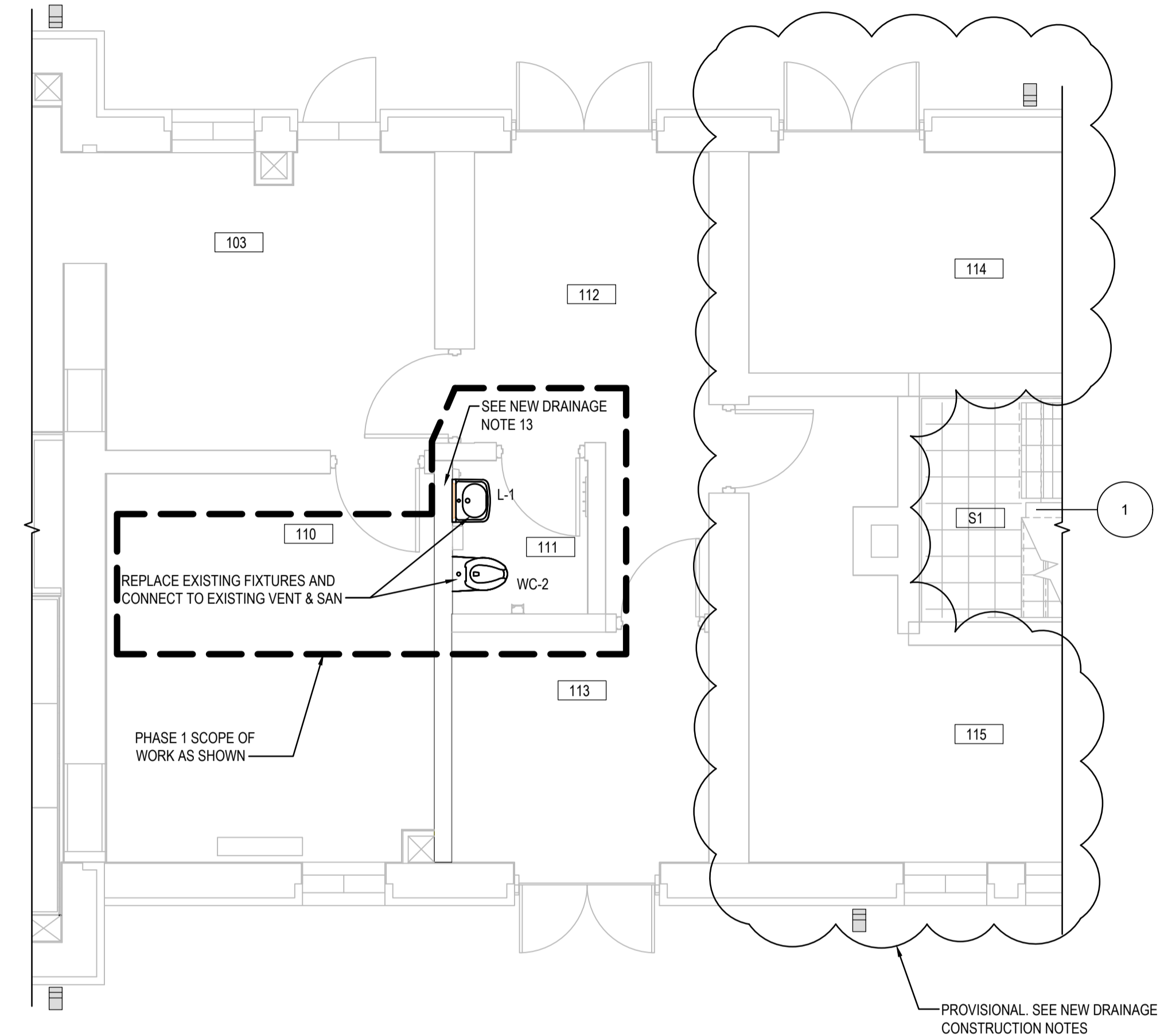
- AS PER CLIENT'S SOW AND BUDGET PLAN, THE ROOM 114 IS NOT PART OF THIS CONTRACT AND IS SUBJECT FOR CONSTRUCTION IN THE PROJECT'S NEXT STAGE. ROOM 115 (MECHANICAL ROOM) IS NOT PART OF THIS PROJECT AND ITS SOW.

NEW DRAINAGE NOTES:

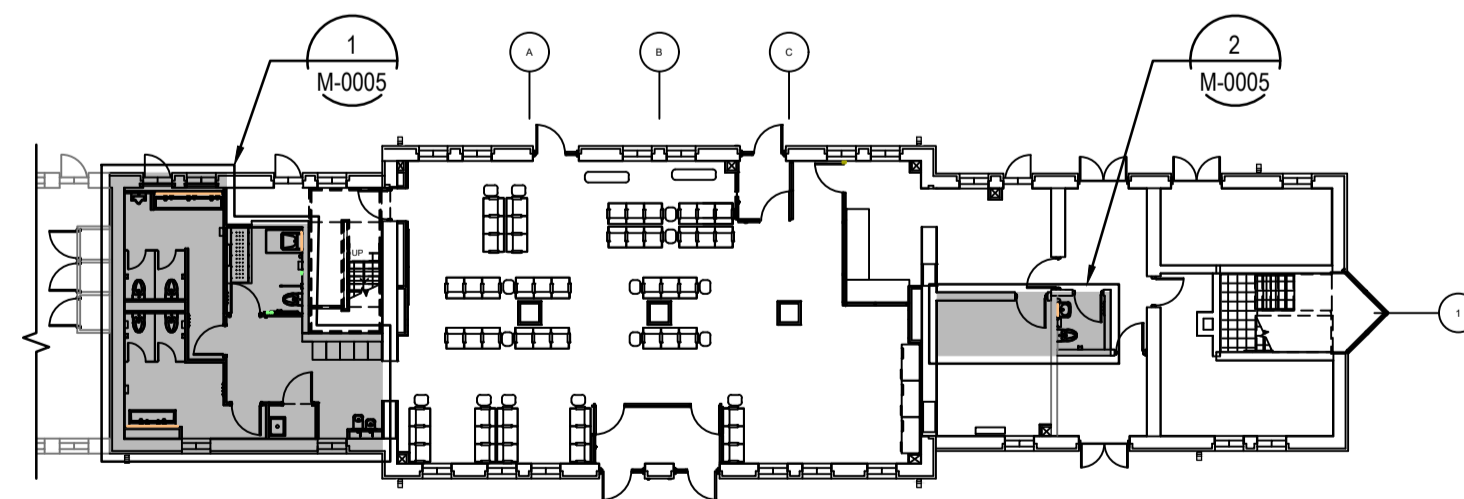
- THE CONTRACTOR SHALL INVESTIGATE AND VERIFY SERVICES ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO CONSULTANT. ALL NEW SANITARY DRAIN AND DRAIN VENT ON 2ND FLOOR SHALL RUN CONCEALED WITHIN CEILING SPACE OF GROUND FLOOR.
- SCOPE/CAMERA EXISTING UNDERGROUND SANITARY AND STORM PIPING THROUGH WORK AREA TO CONFIRM CONDITION OF PIPE, ROUTING AND INVERTS. SUBMIT REPORT AND VIDEO ON USB.
- SCAN FLOOR PRIOR TO FLOOR CUTS AND UNDERGROUND PIPING INSTALLATION.
- REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS TO ENSURE ALL SERVICES ARE CONCEALED WITHIN AVAILABLE CEILING SPACE.
- PREPARE INTERFERENCE DRAWINGS AND COORDINATE ALL SERVICES WITH ALL TRADES PRIOR TO INSTALLATION.
- 100mm SANITARY DRAIN PIPE TO HAVE 1% SLOPE.
- ALL PIPE SIZES ARE SHOWN IN MILLIMETERS (mm).
- INSULATE AND LABEL ALL NEW AND EXISTING PIPING WITHIN CEILING SPACE INCLUDING WATER AND STORM.
- PROVIDE NEW PLUMBING VENTS THROUGH ROOF AS REQUIRED OR TIE INTO EXISTING WHERE POSSIBLE. SUPPLY AND INSTALL ROOF VENTS AS PER SPECIFICATIONS. ALL ROOFING WORK INCLUDING CUTTING, FLASHING AND MODIFICATIONS TO ROOF MEMBRANE SHALL BE BY GENERAL CONTRACTOR. COORDINATE WITH SAME.
- FIRE STOP ALL EXISTING AND NEW PIPING THROUGH RATED WALLS (REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATINGS).
- LABEL CEILING GRID AT ACCESS TO EQUIPMENT AND VALVES.
- THE CONTRACTOR SHALL FLUSH, SCOPE, AND PROVIDE VIDEO INSPECTION OF THE SANITARY SYSTEM AFTER COMPLETION OF WORK AND PRIOR TO SUBSTANTIAL COMPLETION. FLUSHING, SCOPING AND VIDEO SHALL INCLUDE AREA OF WORK TO WHERE IT TIES INTO THE MAIN. SUBMIT REPORT AND VIDEO ON USB.
- EACH CONDENSATE DRAIN PIPE FROM FAN COILS, ERVs, AND CEILING CASSETTES SHALL RUN INDEPENDENTLY TO POINT OF THE INDIRECTLY CONNECTION w/ BUILDING SANITARY SYSTEM. REFER SCHEDULES ON DRAWINGS M-0014 & M-0015 FOR DRAINAGE AND CONDENSATE PUMP REQUIREMENTS.



1 ENLARGED WASHROOM GROUP PLAN
M-0005 SCALE: 1:50



2 ENLARGED ROOM 111 PLAN
M-0005 SCALE: 1:50



DRAINAGE FIRST FLOOR KEY PLAN
SCALE: 1:250

ROOM #	ROOM NAME
100	VESTIBULE 1
101	VESTIBULE 2
102	LOBBY / WAITING AREA
102A	CORRIDOR
103	TICKETING ROOM
S1 (104)	STAIR 1
S2 (105)	STAIR 2
106	UNIVERSAL WASHROOM
107	MALE WASHROOM
108	FEMALE WASHROOM
109	JANITOR
110	IT ROOM
111	WASHROOM
112	CORRIDOR
113	MULTI-PURPOSE ROOM
114	O.T.S.
115	MECHANICAL ROOM

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
E	2023/12/06	ISSUED FOR TENDER	E.M.	A.A.		
D	2023/08/10	REISSUED FOR BUILDING PERMIT	CHECKED BY:	APPROVED BY:		
C	2023/07/25	REISSUED FOR BUILDING PERMIT	G.W.	S.C.		
B	2023/04/24	ISSUED FOR BUILDING PERMIT	SCALE: AS SHOWN	FULL SIZE ONLY		
A	2022/11/11	PRELIMINARY DESIGN SUBMISSION				
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE



PROJECT NO. BE20101016

ISSUED FOR TENDER



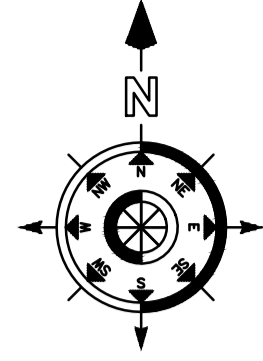
NIAGARA REGION PROJECT NO. xxxxxxx

NIAGARA FALLS TRAIN STATION UPGRADES DRAINAGE PLANS

CONTRACT NO. STATION RENOVATION	DWG. NO. M-0005	REV. E	SHEET M-0005
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METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

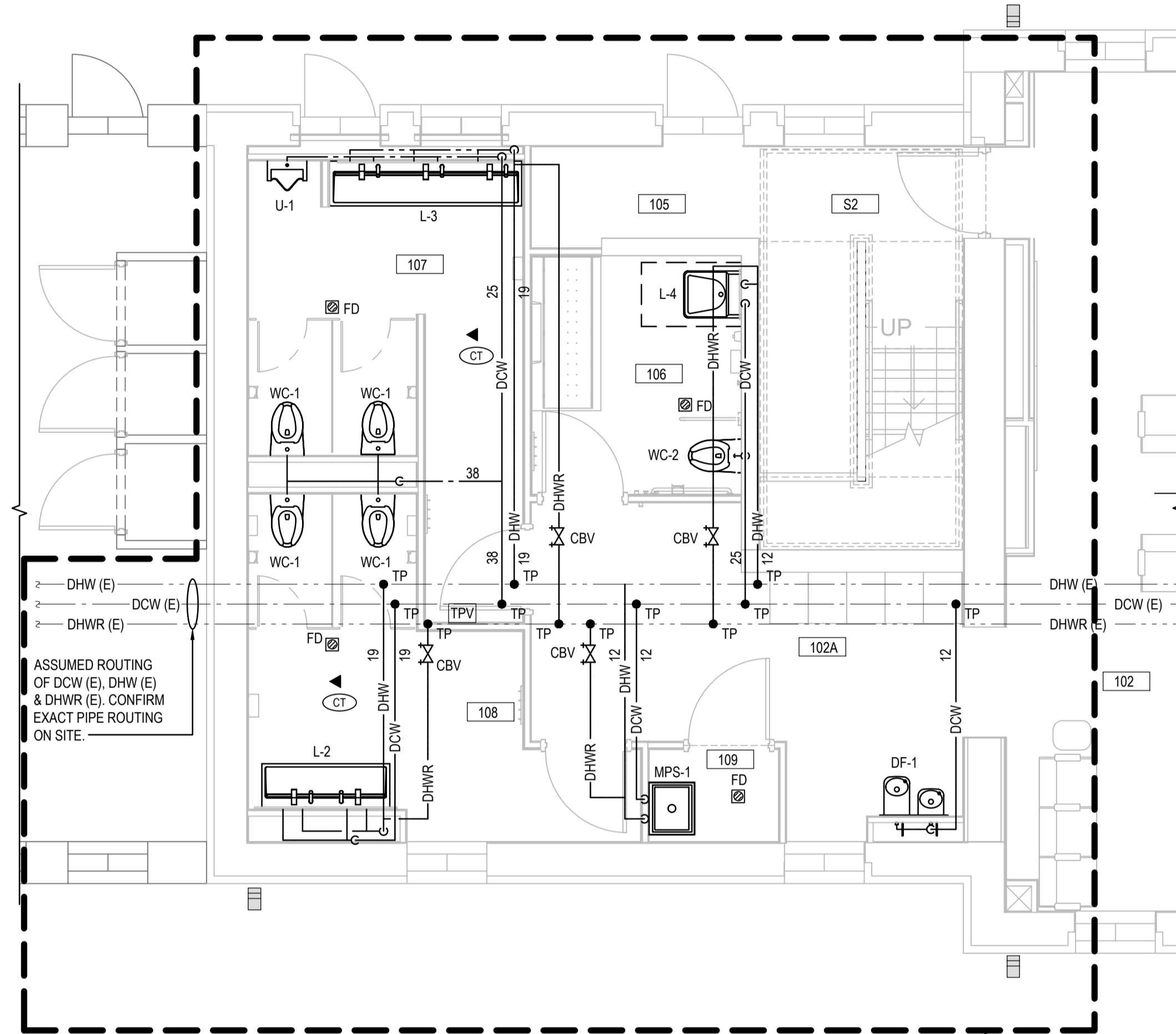


NEW PLUMBING CONSTRUCTION NOTES:

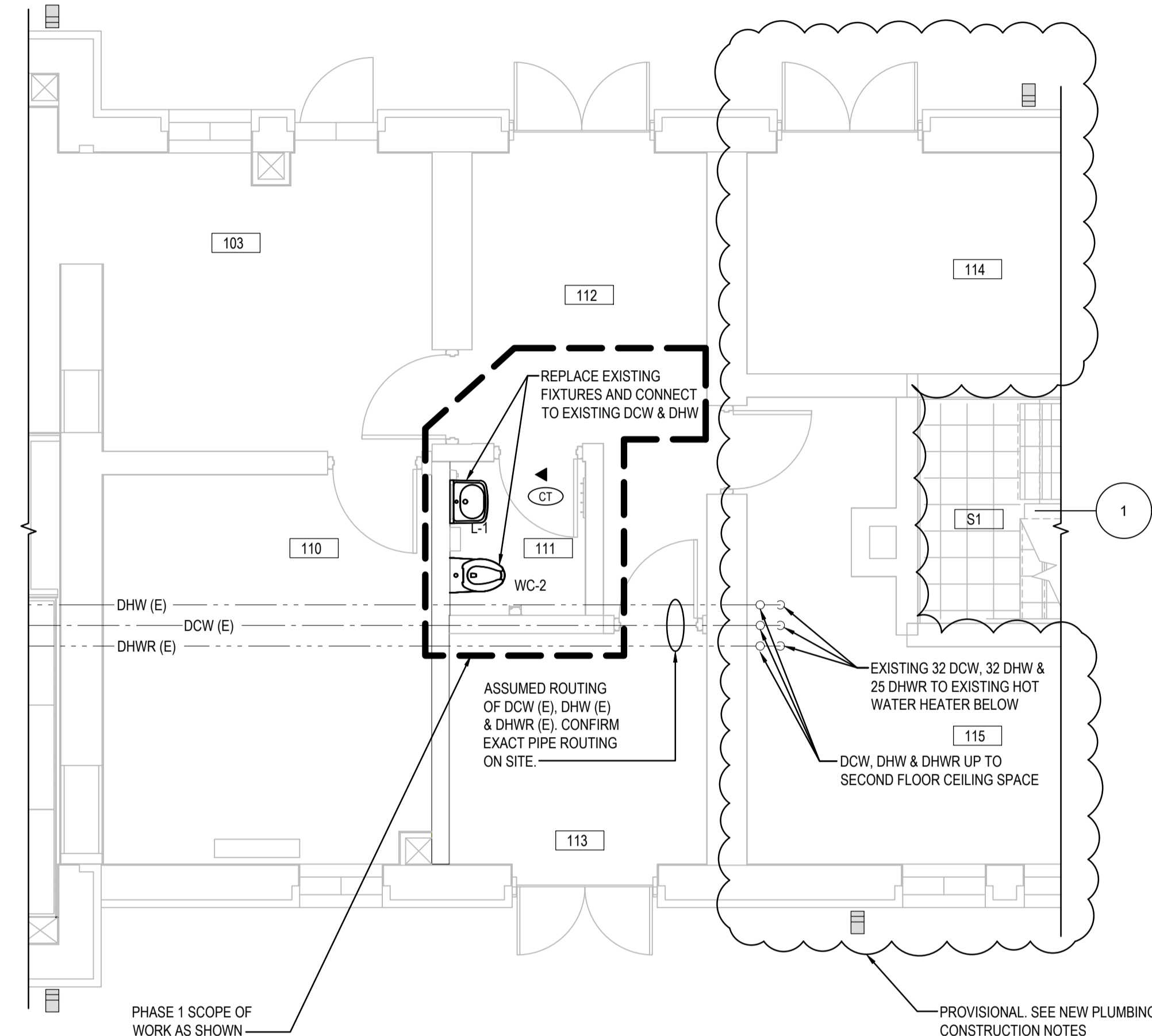
- DCW, DHW and DHWR pipelines modifications and tie-in point locations within the mechanical room as required to be verified and confirmed on site.
- As per client's SOW and budget plan, the RM.114 is not part of this contract and is subject for construction in the project's next stage. Room 115 (mechanical room) is not part of this project and its SOW, except the pipeline tie-ins and pipeline modifications to DCW, DHW and DHWR mains as required.

NEW PLUMBING NOTES:

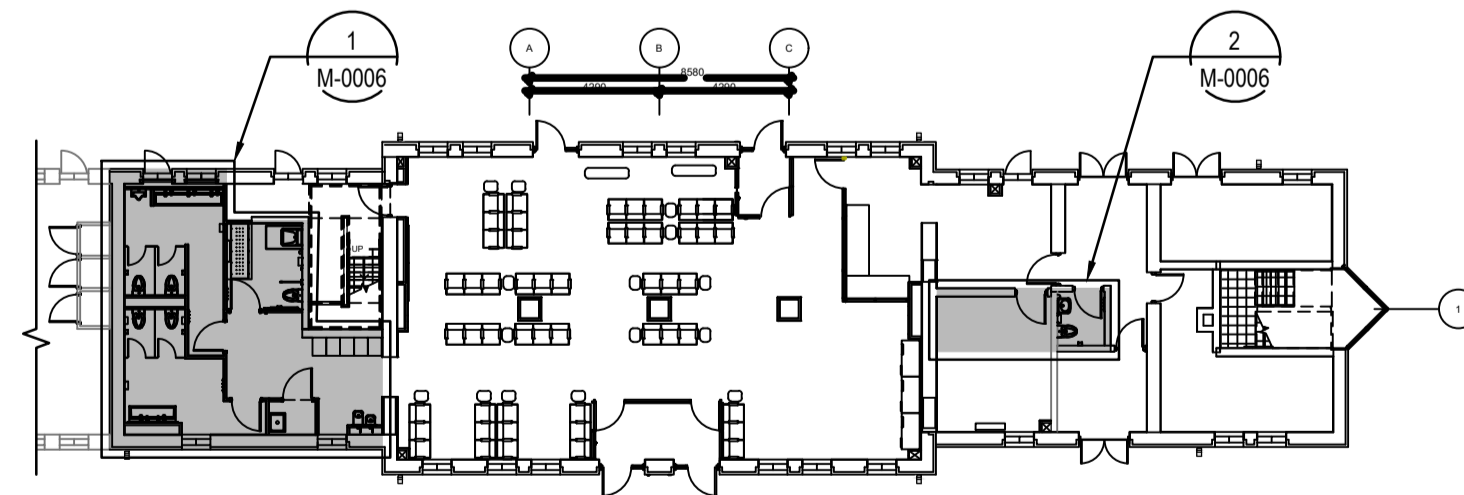
- The contractor shall investigate and confirm services on site prior to construction and report any discrepancies to consultant. All new services shall run concealed within ceiling space.
- Scan floor prior to floor cuts and underground piping installation.
- Refer to architectural drawings for ceiling heights to ensure all services are concealed within available ceiling space.
- Prepare interference drawings and coordinate all services with all trades prior to installation.
- Provide cleanouts as required by code. Size of cleanouts to be same size as sanitary lines.
- Provide all trenching, excavating and backfill for underground plumbing. All saw cutting and restoration of concrete floor is by general contractor. Coordinate with same.
- Insulate all new domestic hot, cold and recirculated water piping with 25mm (1") insulation. Provide PVC jacket over insulation in exposed areas.
- Provide balancing valves at start of each branch of all hot or tempered water recirculation loops.
- Provide sleeves for pipes through all new block walls. Fill voids around pipes. Ensure no contact between dissimilar metals.
- Coordinate exact location of new floor drains with general contractor to suit floor slope.
- Provide trap seal primer for all floor drains using primer specified in plumbing fixture schedule. Primers shall be concealed. Mount in ceiling space and run line concealed down wall and under floor to drain.
- Label all existing and new piping complete with service and flow arrows. Labels shall be max 3m(10') spacing and on either side of walls.
- Supply access doors where required and turn over to general contractor for installation. Refer to plumbing fixture schedule.
- Provide escutcheons around water and sanitary piping through wall, floor or millwork at all fixtures.
- All pipe sizes are shown in millimeters (mm).
- Insulate and label all new and existing piping within ceiling space including water and storm.
- Fire stop all existing and new piping through rated walls (refer to architectural drawings for fire ratings).
- Label ceiling grid at access to equipment and valves.
- Provide isolation valves at all fixtures.
- Provide new lead free circuit balancing valves on domestic hot water recirculation pipes as indicated. Balance to 5.7 l/min.



1 ENLARGED WASHROOM GROUP PLAN
M-0006 SCALE: 1:50



2 ENLARGED ROOM 111 PLAN
M-0006 SCALE: 1:50



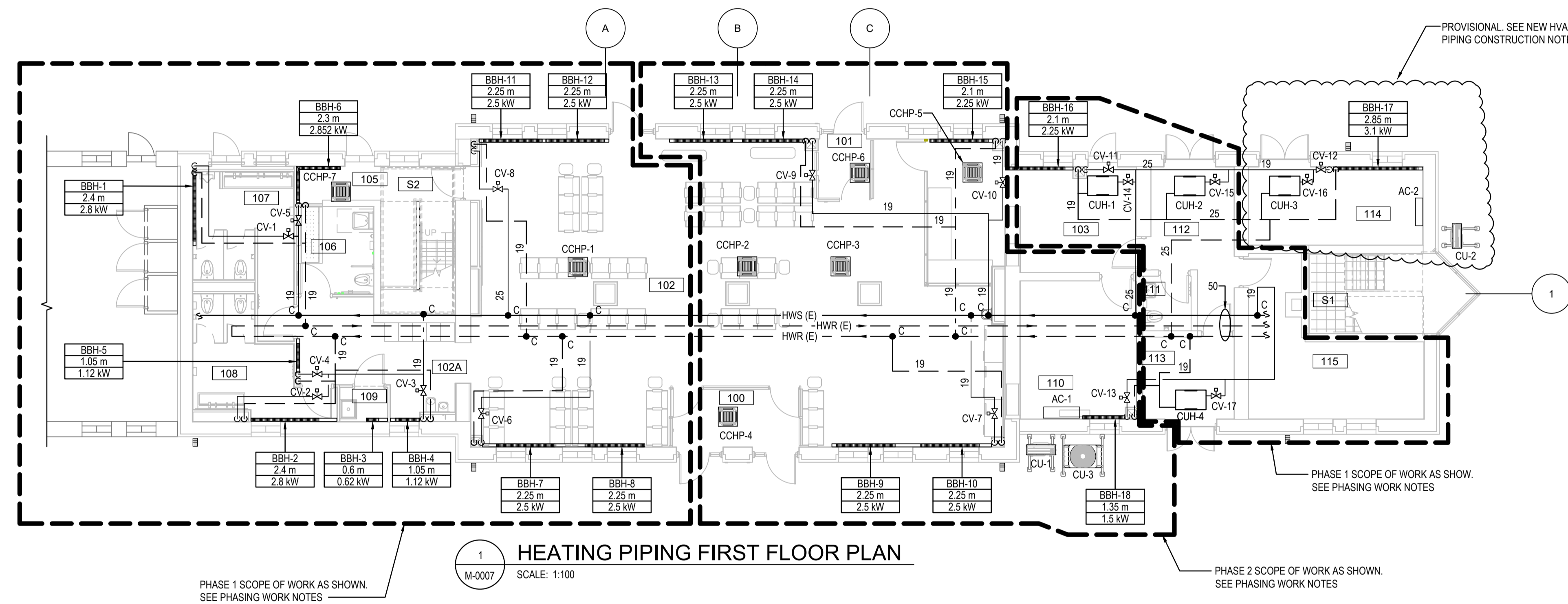
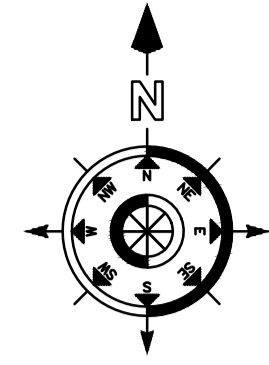
PLUMBING FIRST FLOOR KEY PLAN
SCALE: 1:250

ROOM #	ROOM NAME
100	VESTIBULE 1
101	VESTIBULE 2
102	LOBBY / WAITING AREA
102A	CORRIDOR
103	TICKETING ROOM
S1 (104)	STAIR 1
S2 (105)	STAIR 2
106	UNIVERSAL WASHROOM
107	MALE WASHROOM
108	FEMALE WASHROOM
109	JANITOR
110	IT ROOM
111	WASHROOM
112	CORRIDOR
113	MULTI-PURPOSE ROOM
114	O.T.S.
115	MECHANICAL ROOM

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY: E.M.	DESIGNED BY: A.A.	 PROJECT NO. BE20101016 ISSUED FOR TENDER	 NIAGARA FALLS TRAIN STATION UPGRADES PLUMBING PLANS	CONTRACT NO. STATION RENOVATION	DWG. NO. M-0006	REV. D	SHEET M-0006
	D 2023/12/06	ISSUED FOR TENDER	CHECKED BY: D.R.	APPROVED BY: S.C.						
	C 2023/07/25	REISSUED FOR BUILDING PERMIT	SCALE: AS SHOWN FULL SIZE ONLY							
	B 2023/04/24	ISSUED FOR BUILDING PERMIT			 NIAGARA REGION PROJECT NO. xxxxxxxx					
	A 2022/11/11	PRELIMINARY DESIGN SUBMISSION								
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE				

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



1 HEATING PIPING FIRST FLOOR PLAN
M-0007 SCALE: 1:100

PHASING WORK NOTES:

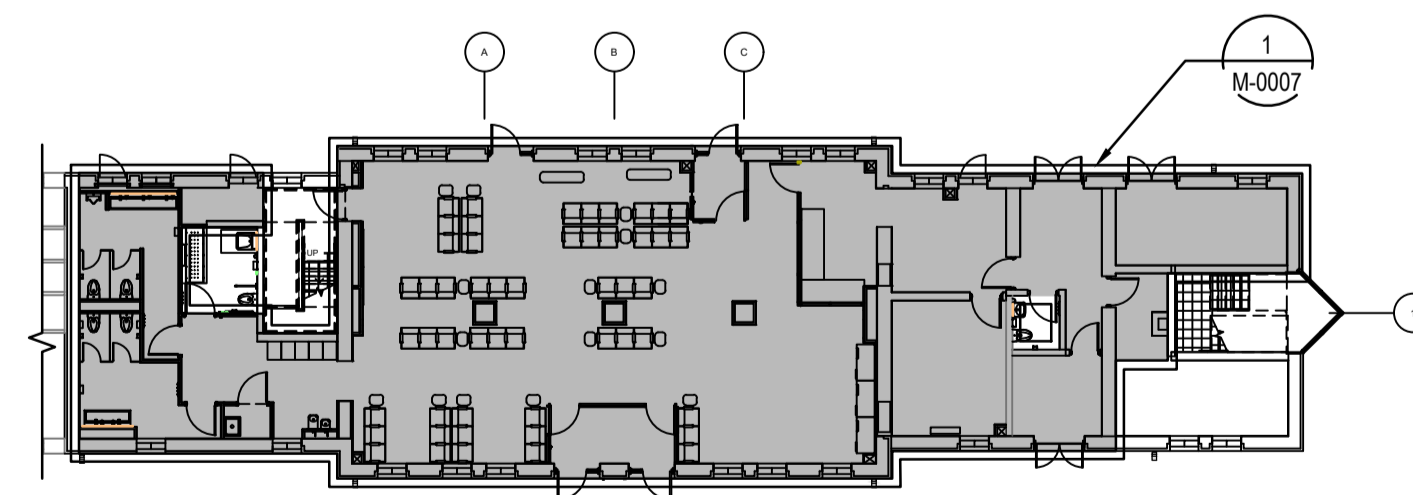
PHASE 1 & 2 SCOPES OF WORK INCLUDE INSTALLATION AND HEATING WATER FLOW BALANCING AND CONTROL VALVE COMMISSIONING

NEW HEATING PIPING CONSTRUCTION NOTES:

- HWS AND HWR PIPELINES MODIFICATIONS AND TIE-IN POINT LOCATIONS WITHIN THE MECHANICAL ROOM AS REQUIRED TO BE VERIFIED AND CONFIRMED ON SITE.
- AS PER CLIENT'S SOW AND BUDGET PLAN, ROOM 114 IS NOT PART OF THIS CONTRACT AND IS SUBJECT FOR CONSTRUCTION IN THE PROJECT'S NEXT STAGE. ROOM 115 (MECHANICAL ROOM) IS NOT PART OF THIS PROJECT AND ITS SOW, EXCEPT THE PIPELINE TIE-INS AND MODIFICATIONS TO HWS AND HWR MAINS AS REQUIRED.



NEW HEATING PIPING NOTES:

- REFER TO DRAWING M-0002 FOR HVAC NOTES.
- REFER TO DRAWING M-0008 FOR HVAC PIPING PLANS.
- ALL NEW HEATING PIPE IS 19mm (NPS 3/4) UNO.



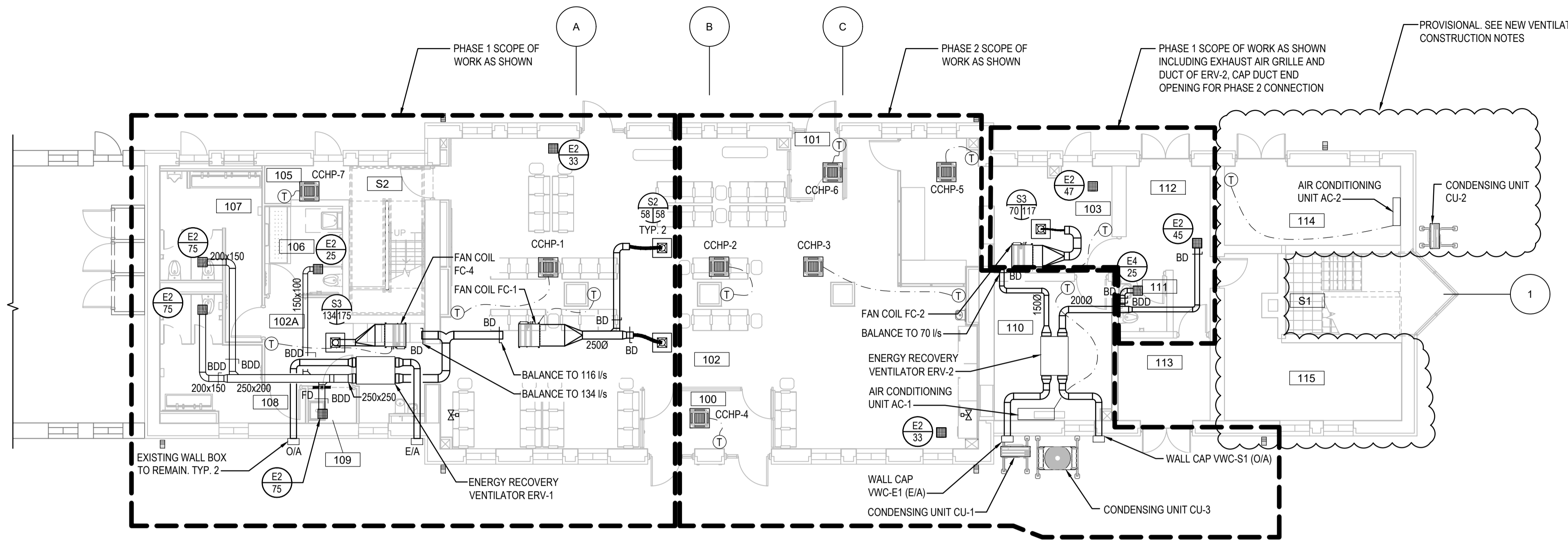
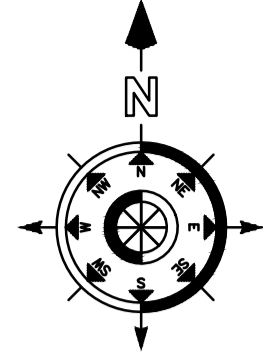
HEATING PIPING FIRST FLOOR KEY PLAN
SCALE: 1:250

ROOM #	ROOM NAME
100	VESTIBULE 1
101	VESTIBULE 2
102	LOBBY / WAITING AREA
102A	CORRIDOR
103	TICKETING ROOM
S1 (104)	STAIR 1
S2 (105)	STAIR 2
106	UNIVERSAL WASHROOM
107	MALE WASHROOM
108	FEMALE WASHROOM
109	JANITOR
110	IT ROOM
111	WASHROOM
112	CORRIDOR
113	MULTI-PURPOSE ROOM
114	O.T.S.
115	MECHANICAL ROOM

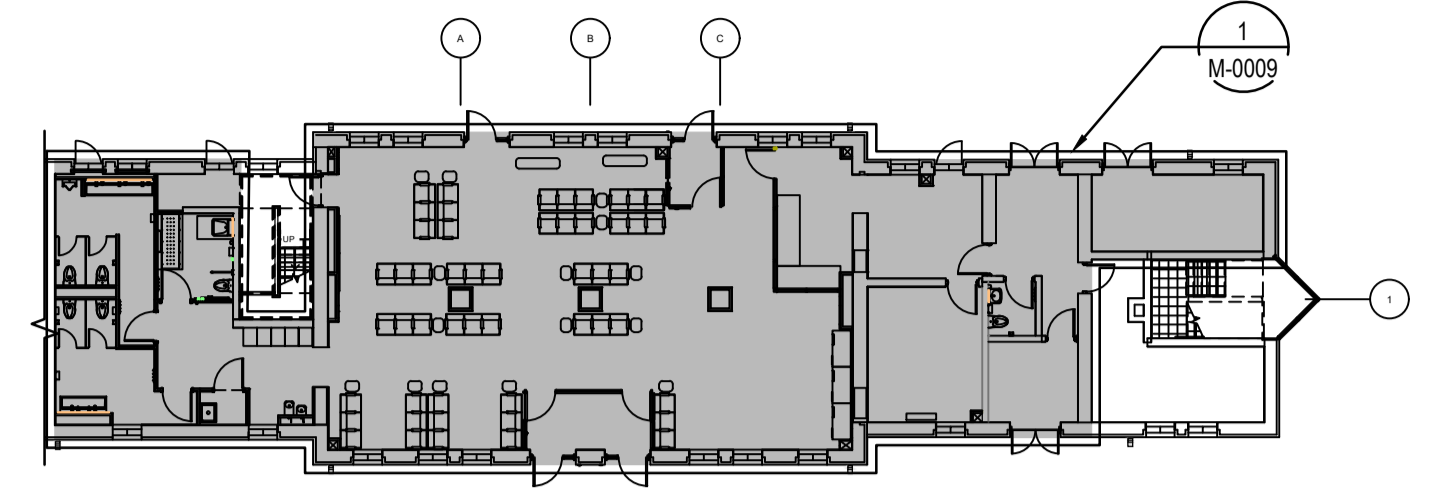
REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY: E.M.	DESIGNED BY: A.A.	 PROJECT NO. BE20101016 ISSUED FOR TENDER	 Niagara Region	NIAGARA FALLS TRAIN STATION UPGRADES HEATING PIPING PLANS			
			CHECKED BY: G.W.	APPROVED BY: S.C.			CONTRACT NO. STATION RENOVATION	DWG. NO. M-0007	REV. C	SHEET M-0007
DWG NO.	TITLE	NO.	DATE	ISSUED FOR			REV.	DATE		
		C	2023/12/06	ISSUED FOR TENDER						
		B	2023/04/24	ISSUED FOR BUILDING PERMIT						
		A	2022/11/11	PRELIMINARY DESIGN SUBMISSION						

METRIC

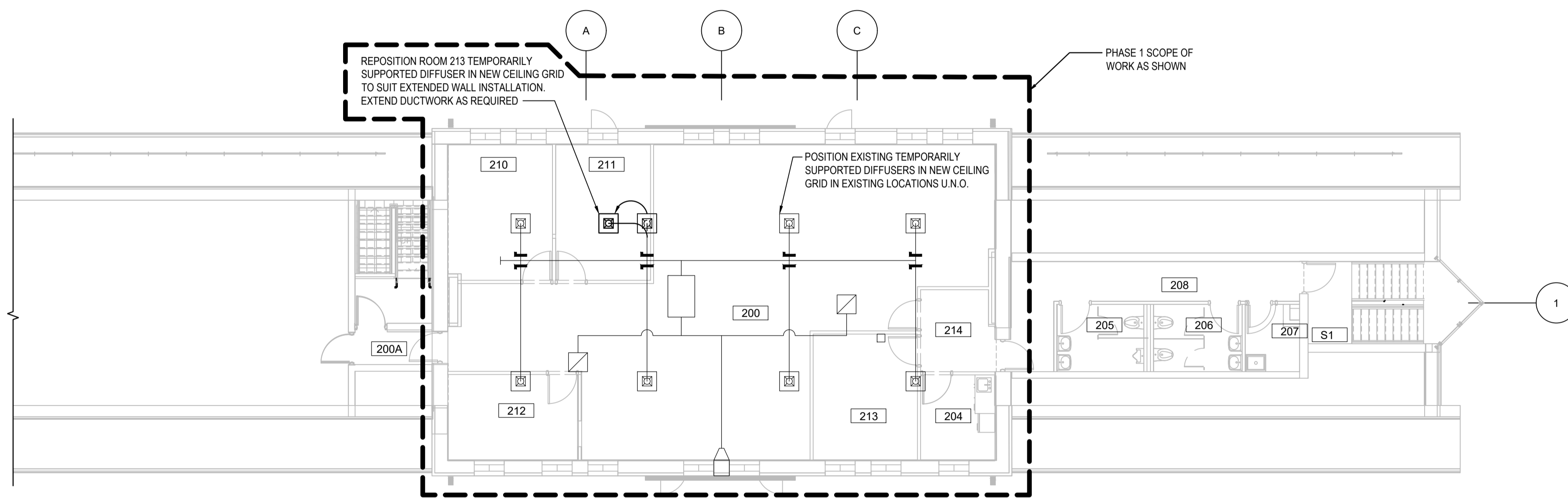
ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



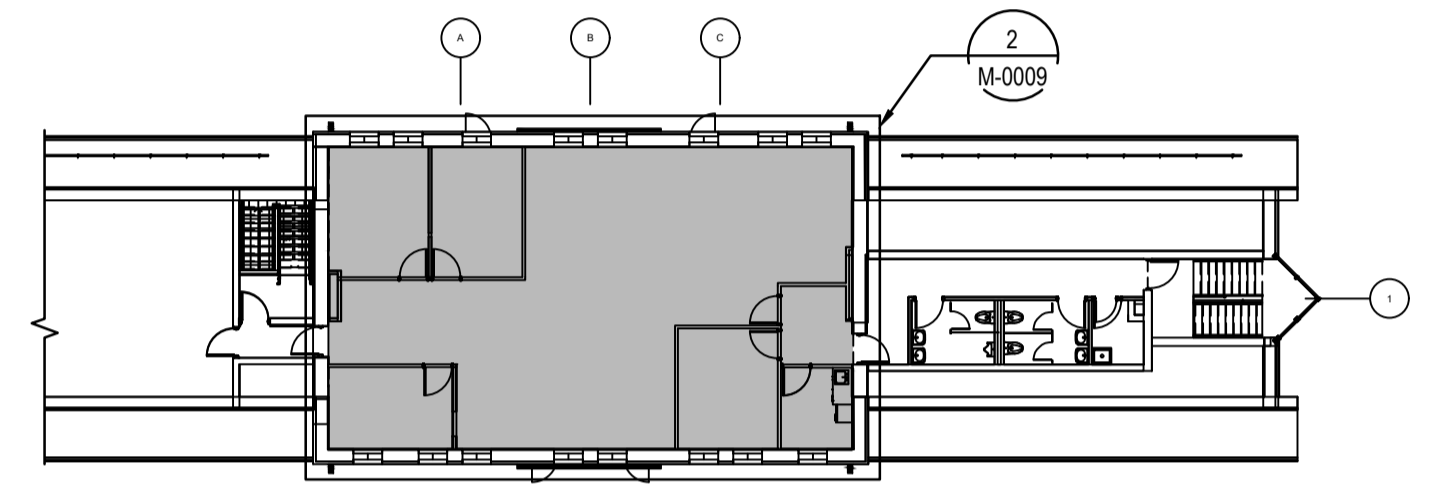
1 VENTILATION FIRST FLOOR PLAN
M-0009 SCALE: 1:100



VENTILATION FIRST FLOOR KEY PLAN
SCALE: 1:250



2 VENTILATION SECOND FLOOR PLAN
M-0009 SCALE: 1:100



VENTILATION SECOND FLOOR KEY PLAN
SCALE: 1:250

ROOM #	ROOM NAME
100	VESTIBULE 1
101	VESTIBULE 2
102	LOBBY / WAITING AREA
102A	CORRIDOR
103	TICKETING ROOM
S1 (104)	STAIR 1
S2 (105)	STAIR 2
106	UNIVERSAL WASHROOM
107	MALE WASHROOM
108	FEMALE WASHROOM
109	JANITOR
110	IT ROOM
111	WASHROOM
112	CORRIDOR
113	MULTI-PURPOSE ROOM
114	O.T.S.
115	MECHANICAL ROOM
200	OFFICE AREA
200A	VESTIBULE 2
204	KITCHETTE
205	WASHROOM - MALE
206	WASHROOM - FEMALE
207	JANITOR
208	CORRIDOR
210	OFFICE 1
211	OFFICE 2
212	OFFICE 3
213	GO TRANSIT AREA
214	VESTIBULE
S1 (104)	STAIR 1
S2 (105)	STAIR 2

NEW VENTILATION CONSTRUCTION NOTES:

- AS PER CLIENT'S SOW AND BUDGET PLAN, ROOM 114 IS NOT PART OF THIS CONTRACT AND IS SUBJECT FOR CONSTRUCTION IN THE PROJECT'S NEXT STAGE. ROOM 115 (MECHANICAL ROOM) IS NOT PART OF THIS PROJECT AND ITS SOW, EXCEPT THE PIPELINE TIE-INS AND MODIFICATIONS TO HWS AND HWR MAINS AS REQUIRED.

NEW VENTILATION NOTES:

- REFER TO DRAWING M-0002 FOR HVAC NOTES.

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			E.M.	A.A.		
			CHECKED BY:	APPROVED BY:		
			G.W.	S.C.		
			SCALE: AS SHOWN	FULL SIZE ONLY		
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
		C	2023/12/06	ISSUED FOR TENDER		
		B	2023/07/25	REISSUED FOR BUILDING PERMIT		
		A	2023/04/24	ISSUED FOR BUILDING PERMIT		

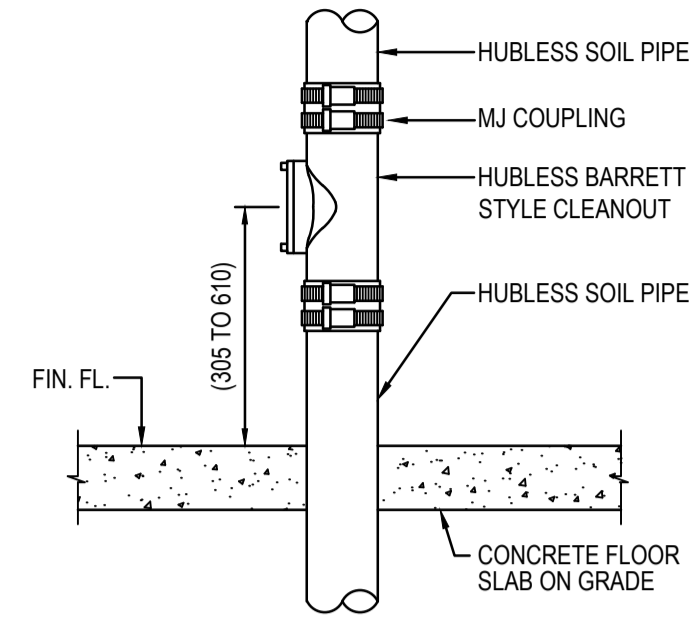
WSP
PROJECT NO. BE20101016

ISSUED FOR TENDER

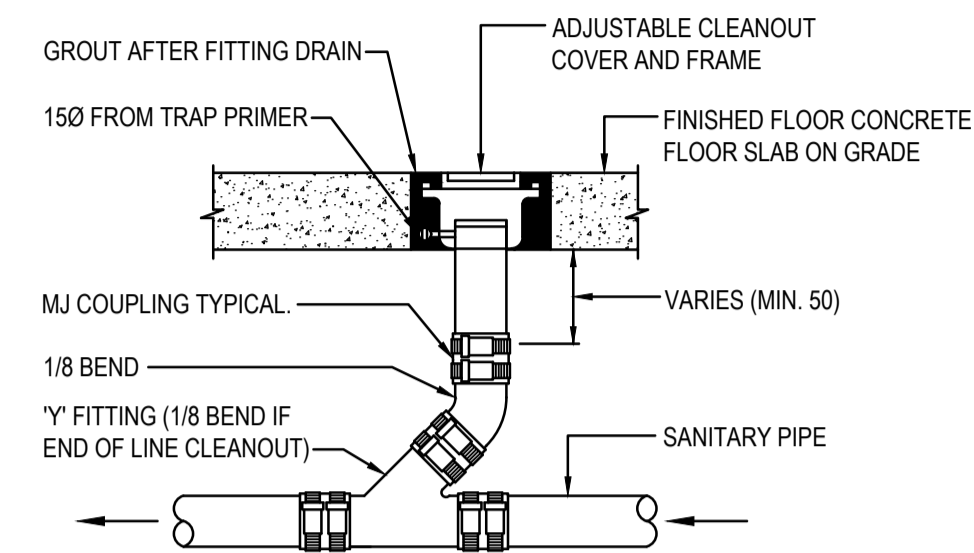


NIAGARA FALLS TRAIN STATION UPGRADES VENTILATION PLANS

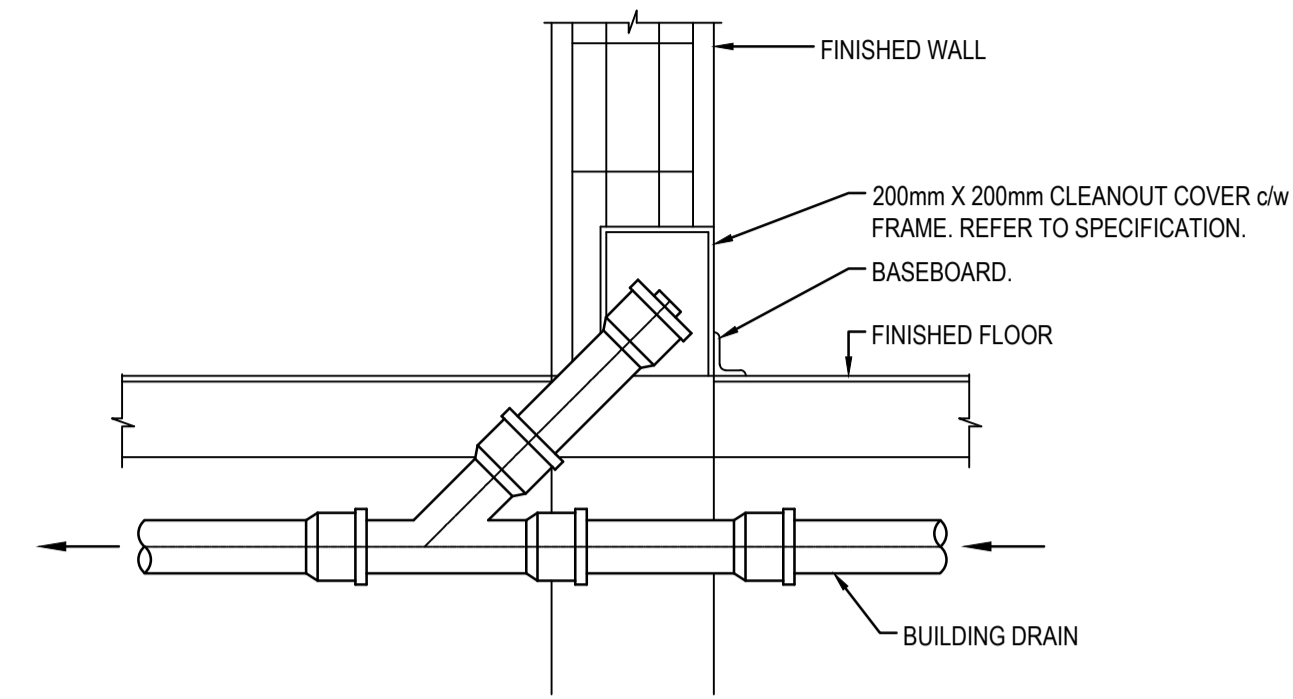
CONTRACT NO.	DWG. NO.	REV.	SHEET
STATION RENOVATION	M-0009	C	M-0009



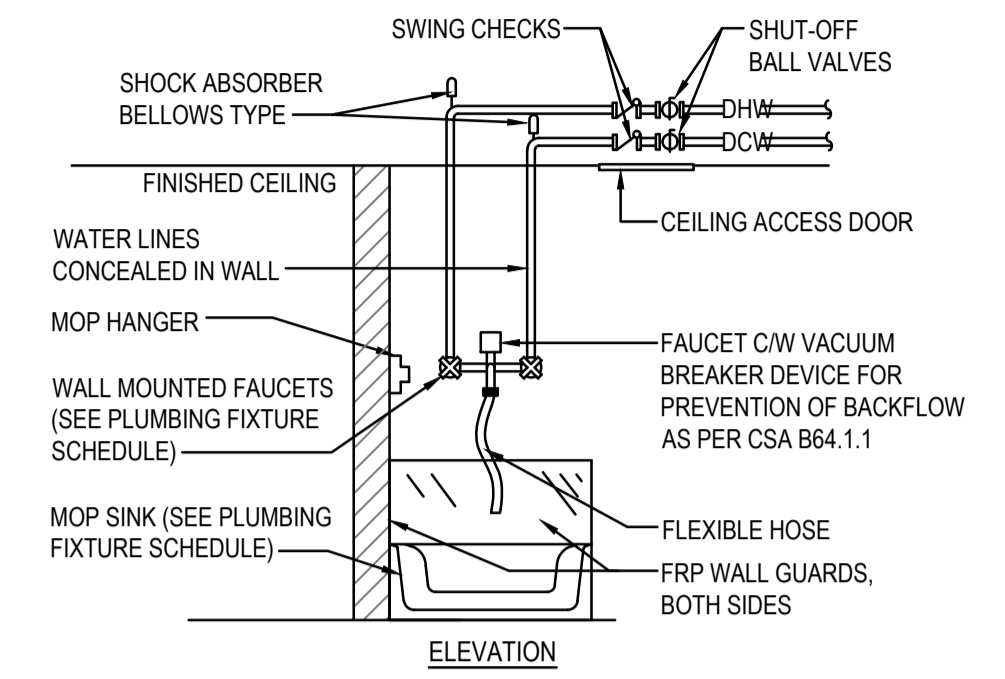
1 TYPICAL EXPOSED CLEANOUT
SCALE: NTS



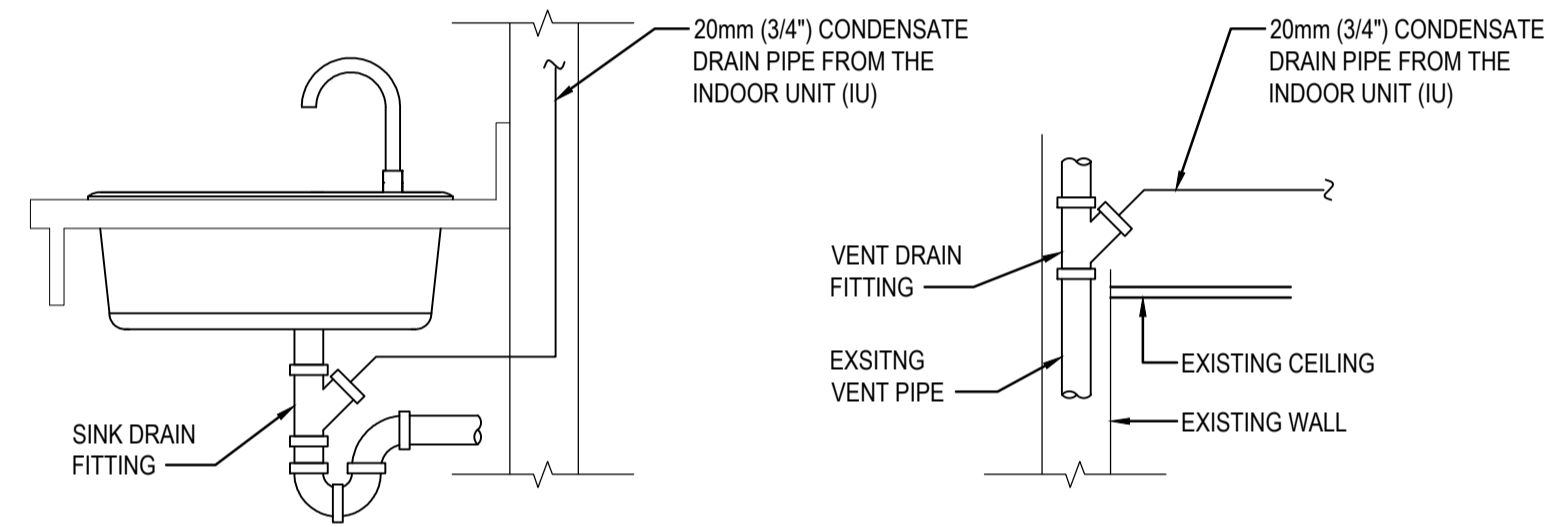
2 TYPICAL FLOOR CLEANOUT
SCALE: NTS



3 TYPICAL CLEANOUT WALL COVER
SCALE: NTS

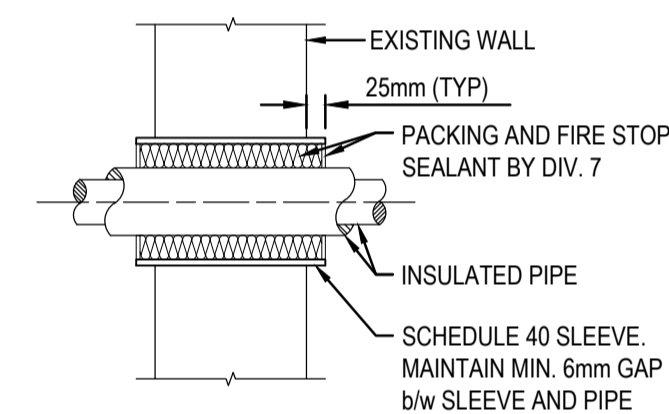


4 JANITOR SERVICE SINK (JS-1) HOOK-UP
SCALE: NTS



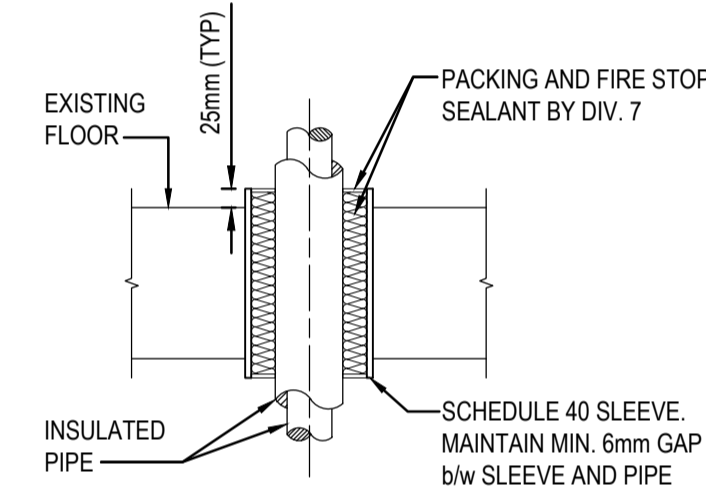
CONDENSATE TO SINK CONDENSATE TO VENT

5 TYPICAL CONDENSATE DRAIN DETAIL
SCALE: NTS



PIPING THROUGH WALL

6 PIPE PENETRATION DETAIL
SCALE: NTS



PIPING THROUGH FLOOR

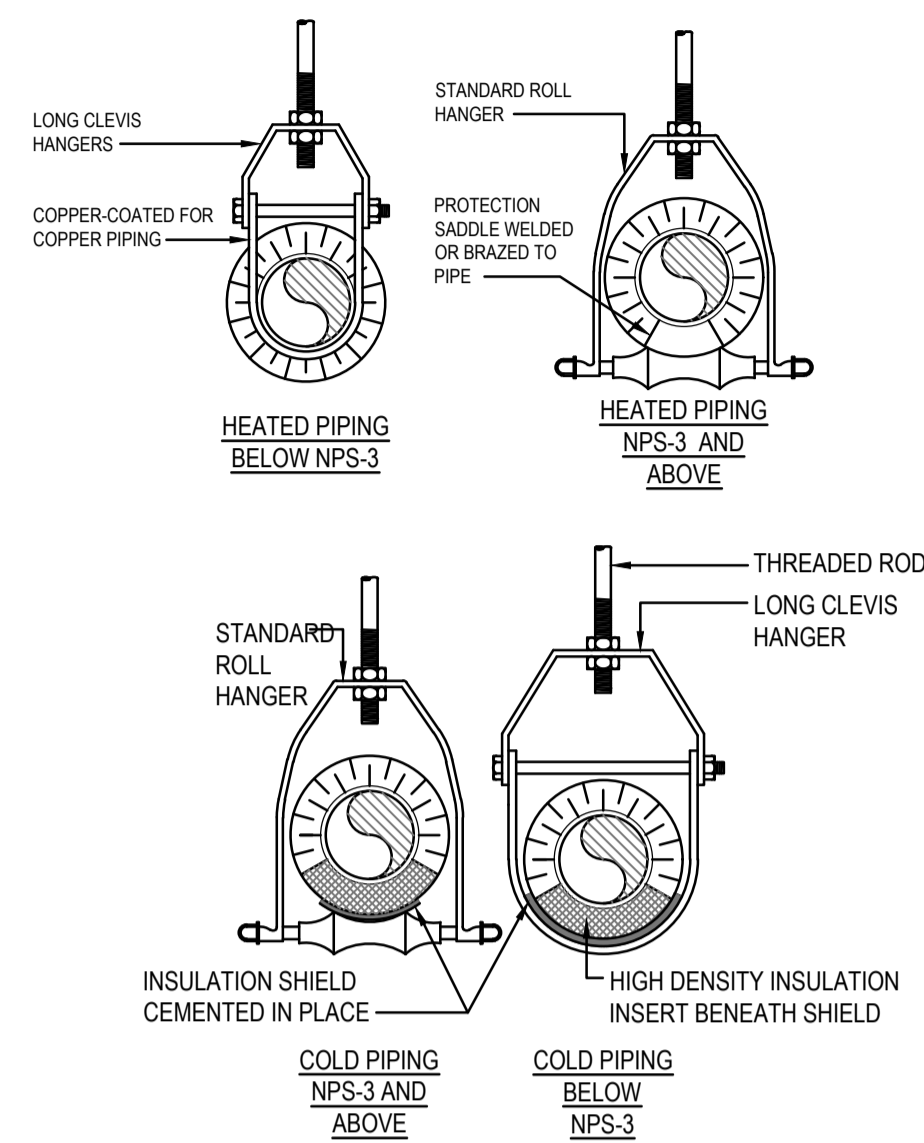
REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:
			E.M.	A.A.
			CHECKED BY:	APPROVED BY:
			D.R.	S.C.
			SCALE: AS SHOWN	FULL SIZE ONLY
DWG NO.	TITLE	NO. DATE	ISSUED FOR	REV. DATE

ISSUED FOR TENDER

wsp
PROJECT NO. BE20101016
ISSUED FOR TENDER

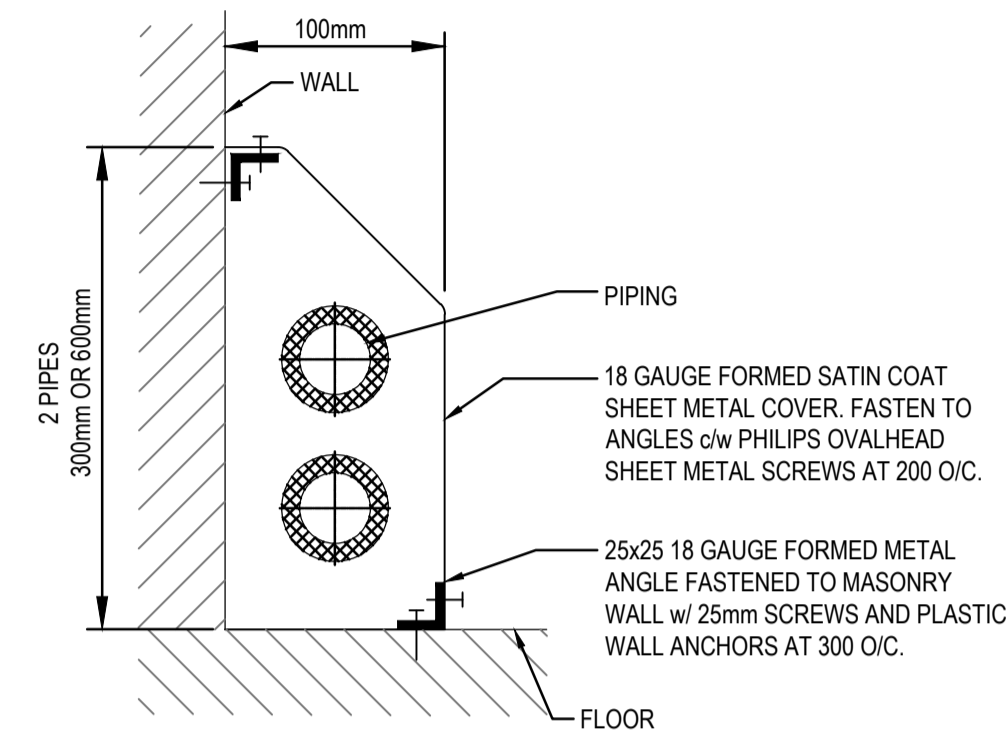
Niagara Region
NIAGARA REGION PROJECT NO. xxxxxxx

NIAGARA FALLS TRAIN STATION UPGRADES			
MECHANICAL DETAILS			
1 OF 3			
CONTRACT NO.	DWG. NO.	REV.	SHEET
STATION RENOVATION	M-0010	B	M-0010



PIPE SUPPORT HANGER TYPES

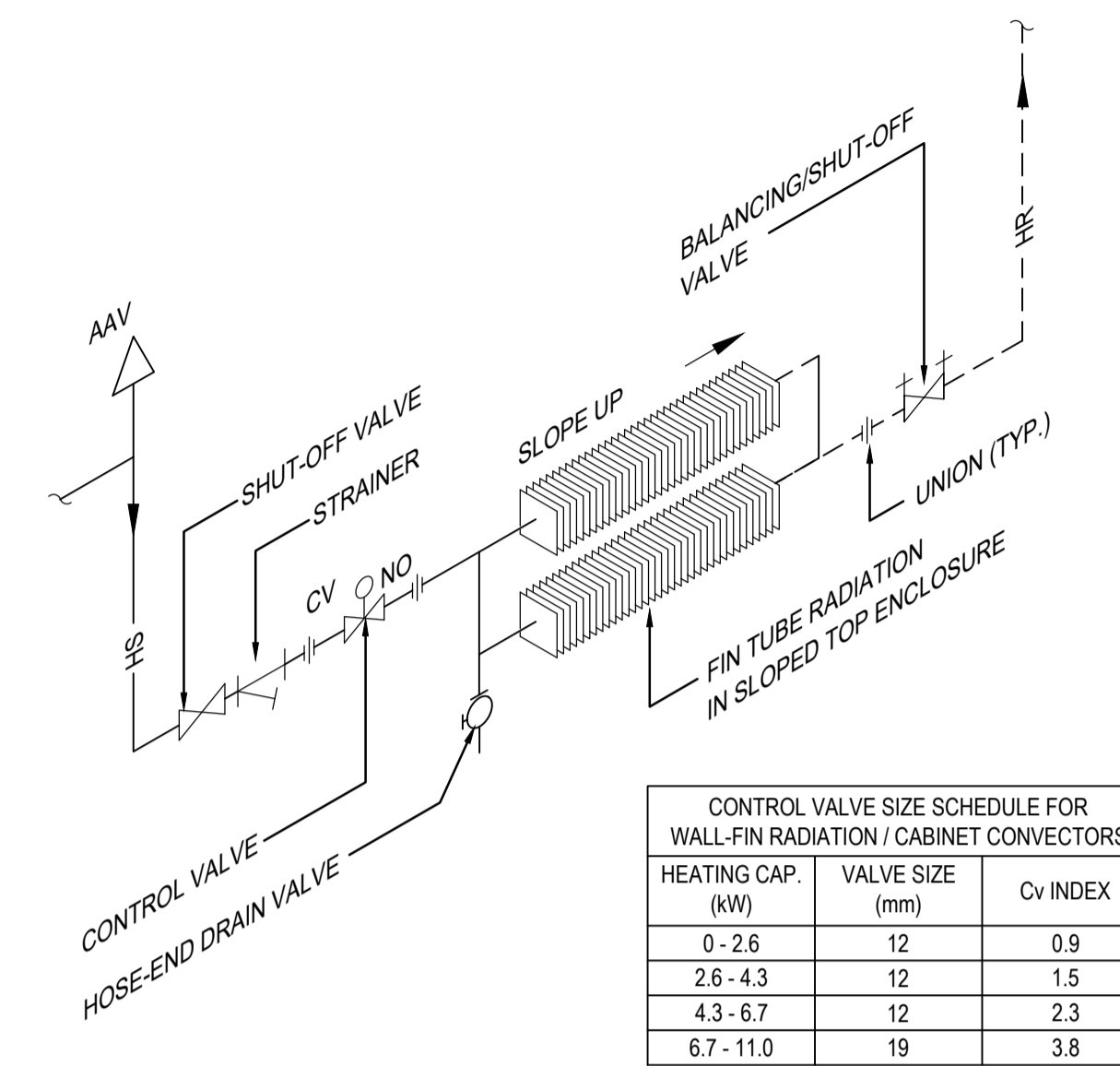
SCALE: NTS



NOTE:
1. MECHANICAL CONTRACTOR TO SUPPLY AND INSTALL PIPE CHASE COVER.

PIPE ENCLOSURE DETAIL

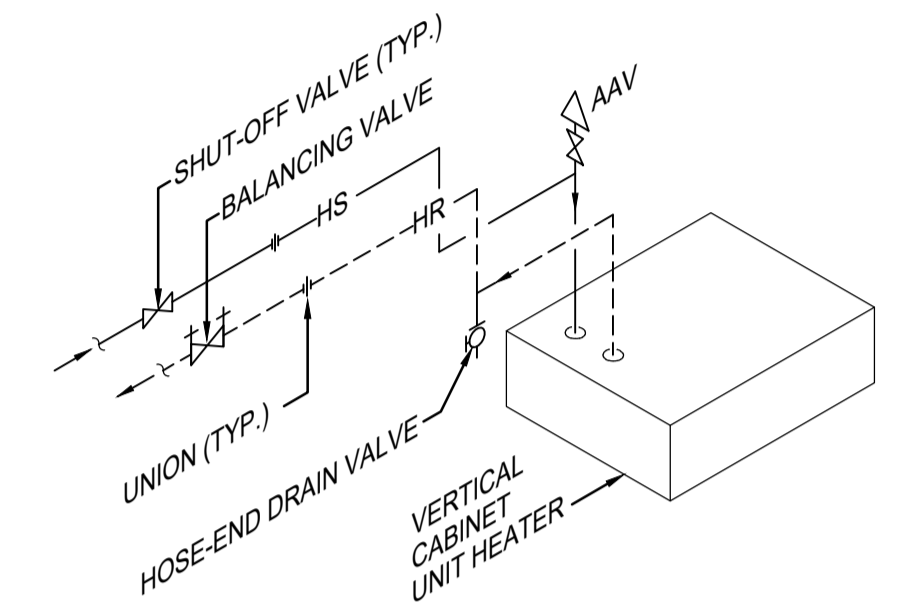
SCALE: NTS



HEATING CAP. (kW)	VALVE SIZE (mm)	Cv INDEX
0 - 2.6	12	0.9
2.6 - 4.3	12	1.5
4.3 - 6.7	12	2.3
6.7 - 11.0	19	3.8

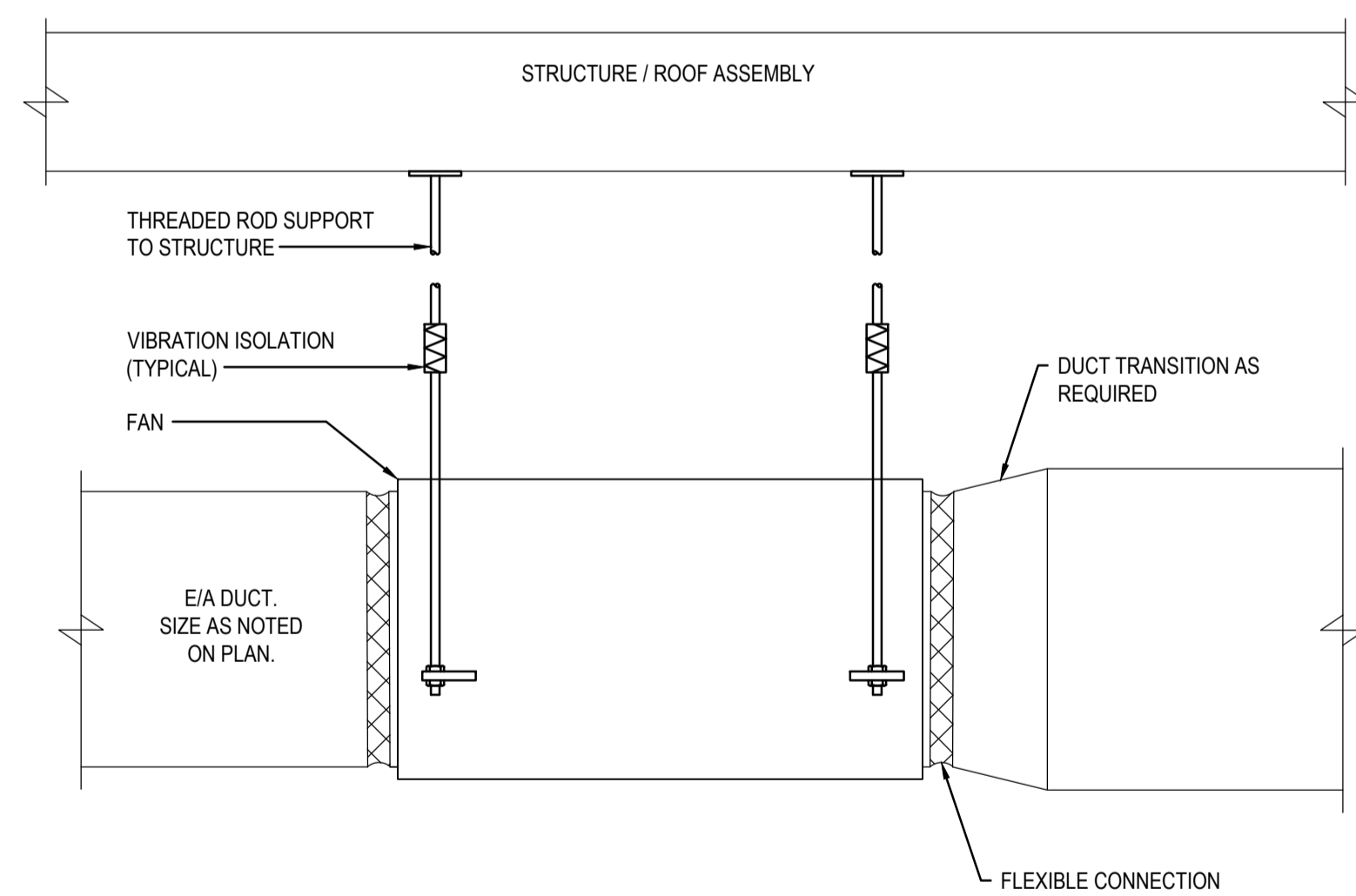
WALL FIN BASEBOARD RADIATOR PIPING SCHEMATIC

SCALE: NTS



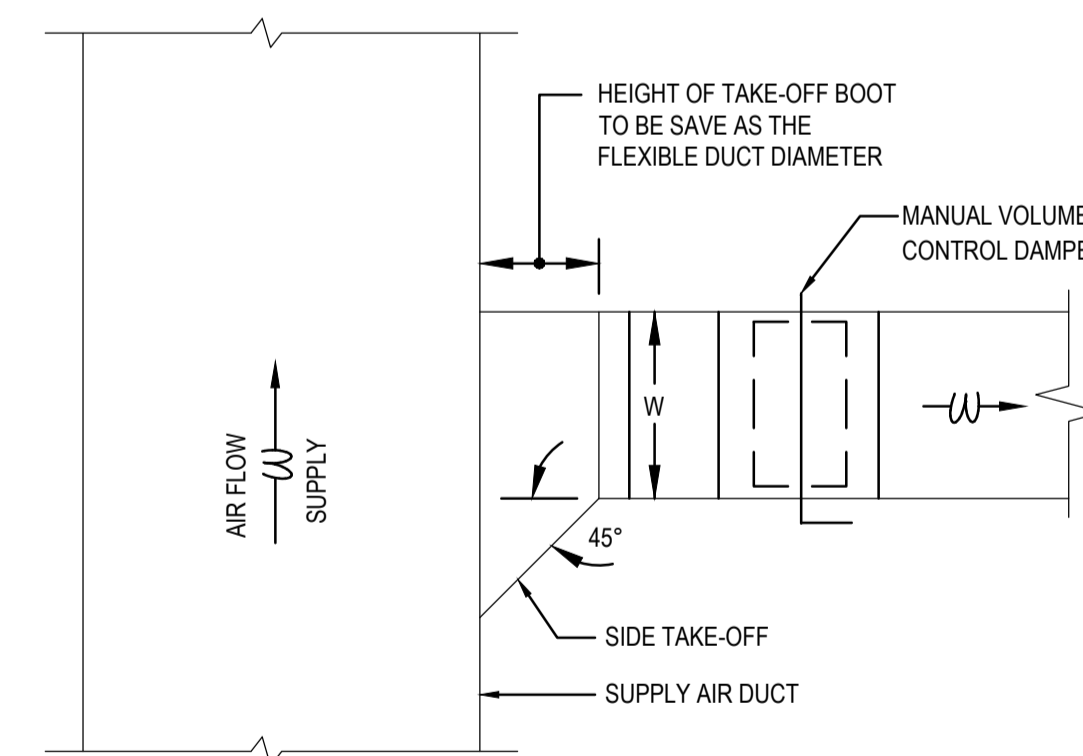
TYPICAL CABINET HEATER PIPING

SCALE: NTS



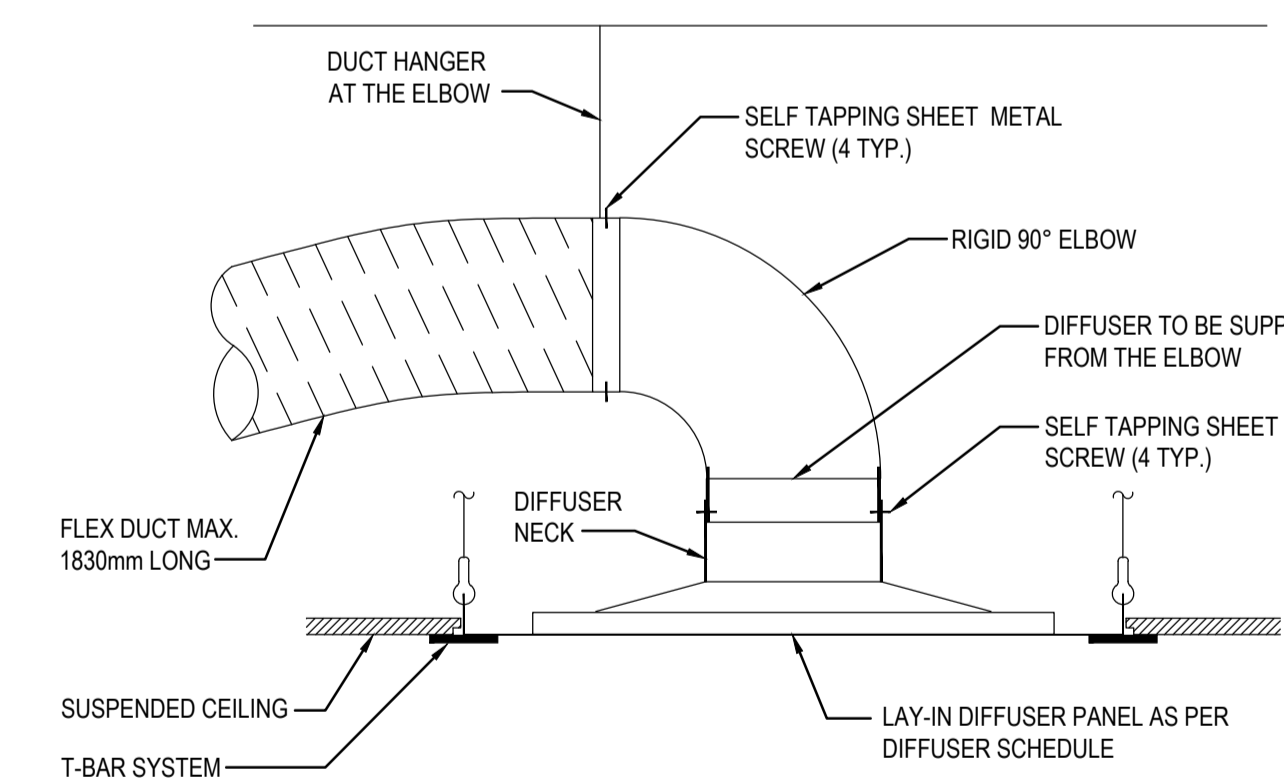
SUSPENDED INLINE EXHAUST FAN DETAIL

SCALE: NTS





BRANCH TAKE-OFF DETAIL

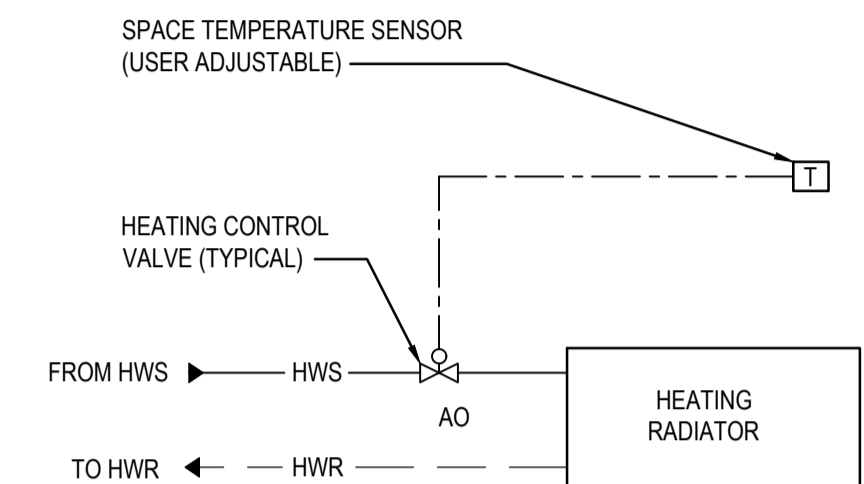
SCALE: NTS



CEILING DIFFUSER DETAIL

SCALE: NTS

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY: E.M.	DESIGNED BY: A.A.	 PROJECT NO. BE20101016 ISSUED FOR TENDER	 NIAGARA FALLS TRAIN STATION UPGRADES MECHANICAL DETAILS 2 OF 3	CONTRACT NO.	DWG. NO.	REV.	SHEET	
			CHECKED BY: G.W.	APPROVED BY: S.C.			NIAGARA REGION PROJECT NO. xxxxxxx	STATION RENOVATION	M-0011	C	M-0011
	C 2023/12/06	ISSUED FOR TENDER									
	B 2023/04/24	ISSUED FOR BUILDING PERMIT									
	A 2022/11/11	PRELIMINARY DESIGN SUBMISSION									
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE					

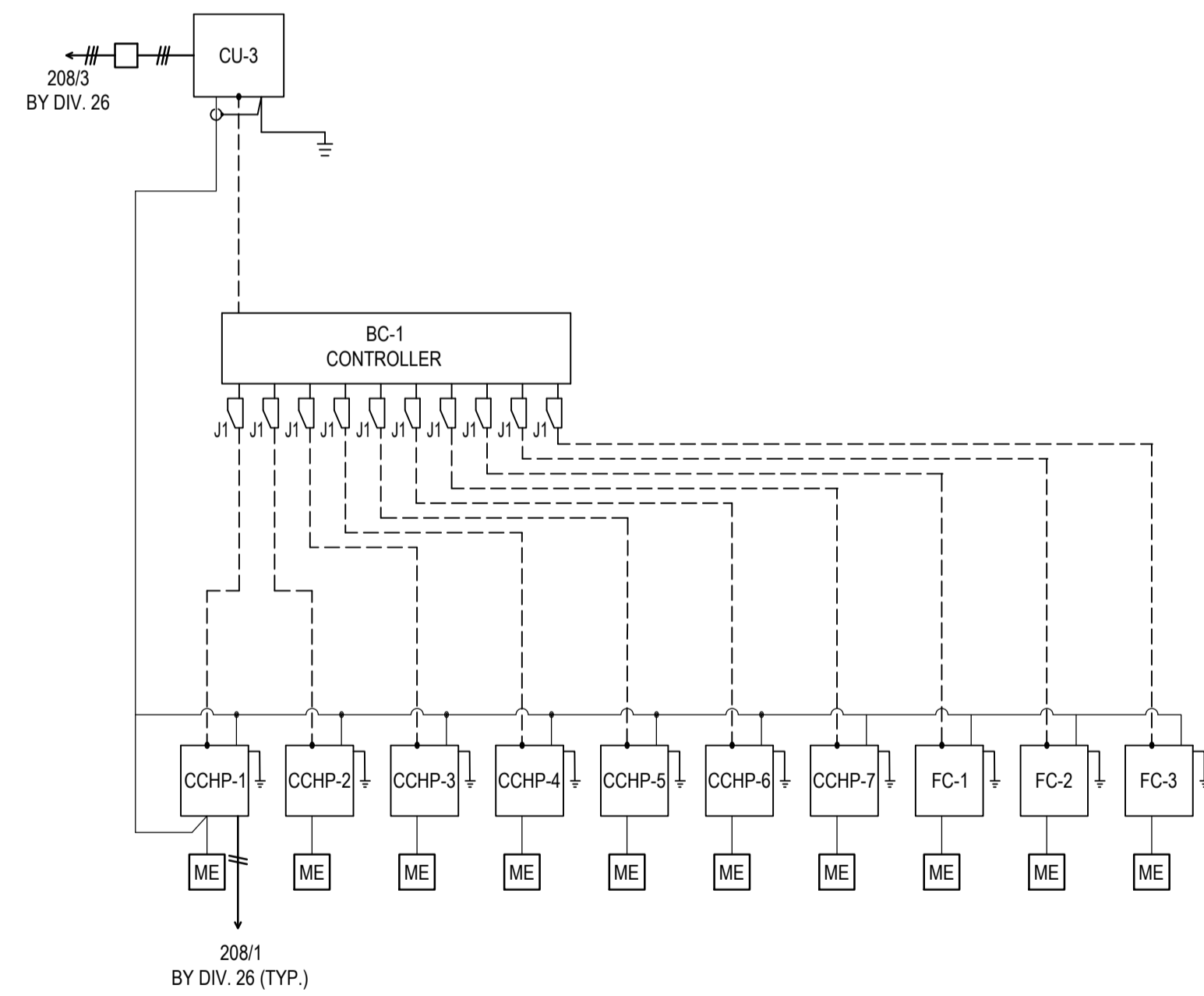


SEQUENCE OF OPERATIONS

- CONTROL VALVE WILL MODULATE TO MAINTAIN ROOM TEMPERATURE SETPOINT OF 21 DEGC (70 DEGF) (ADJUSTABLE) IN HEATING.
- ROOM TEMPERATURE SENSOR WILL BE THE HEAT PUMP/CEILING CASSETTE/FAN COIL UNIT'S PROGRAMMABLE THERMOSTAT. PROVIDE ROOM TEMPERATURE SENSOR IF PROGRAMMABLE THERMOSTAT IS NOT AVAILABLE IN THE ROOM.

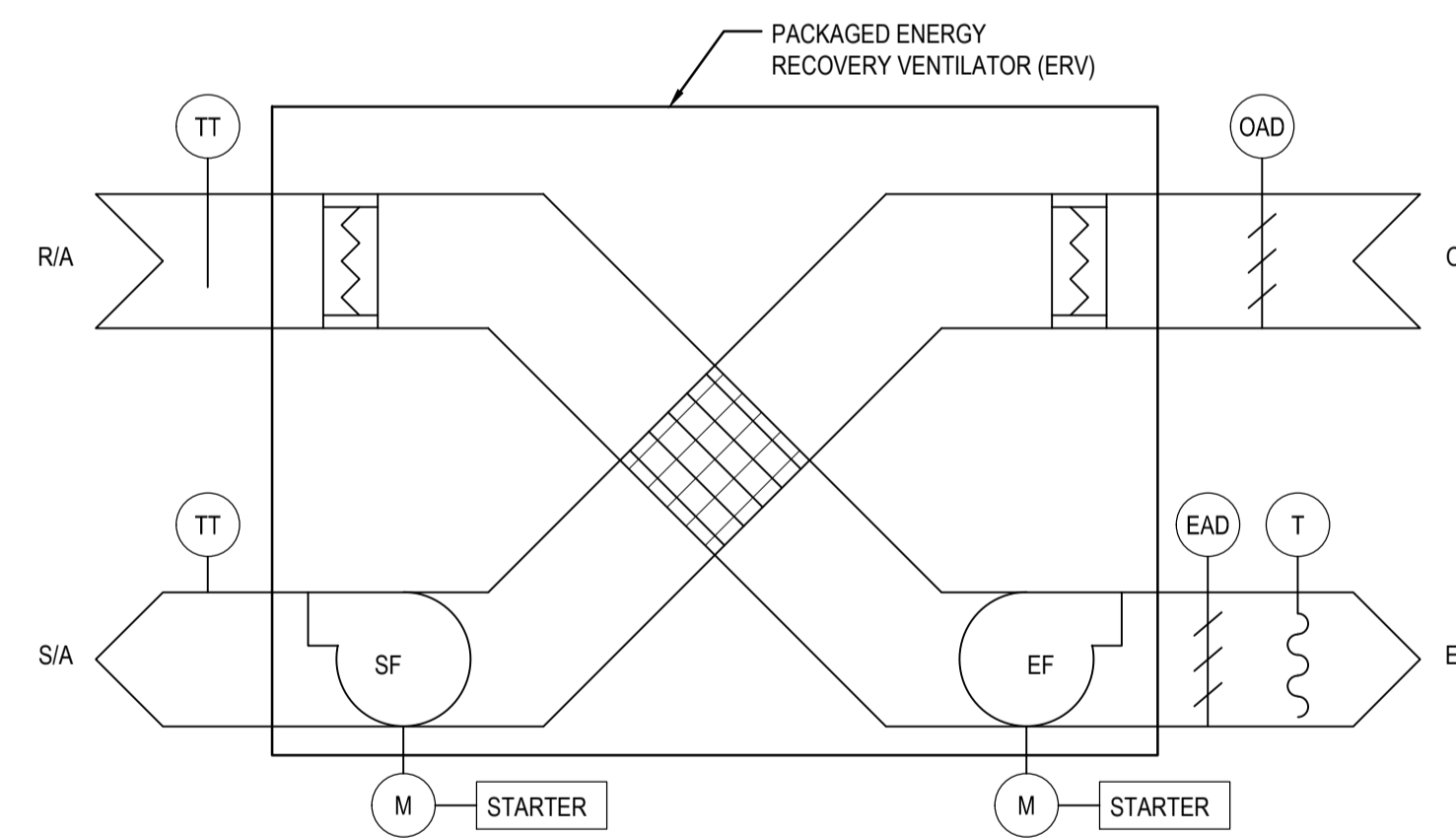
WALL FIN BASEBOARD HEATER CONTROLS

SCALE: NTS



MITSUBISHI A/C UNITS & FAN COIL UNITS CONTROL WIRING DIAGRAM

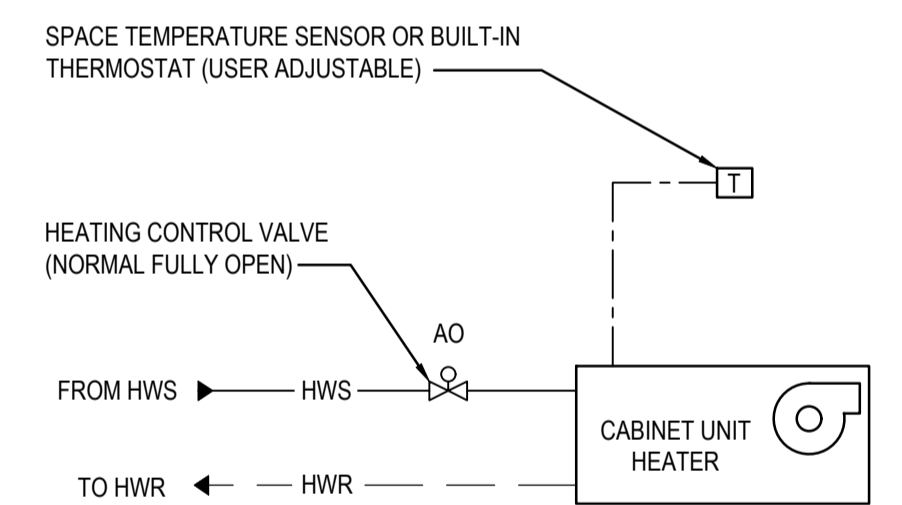
SCALE: NTS



- NOTE:
- FOR CONTROL OF EACH ERV UNIT, PROVIDE AND INSTALL A TC7D SERIES DIGITAL TIME CLOCK (OR APPROVAL EQUIVALENT).
 - ALL ERVS SHOULD OPERATE CONTINUOUSLY DURING REVENUE HOURS DEFINED BY OWNER.

ENERGY RECOVERY VENTILATOR CONTROLS

SCALE: NTS





SEQUENCE OF OPERATIONS

- CONTROL VALVE WILL REMAIN FULLY OPEN IN HEATING.
- CABINET UNIT HEATER BUILT-IN BLOWER START TO RUN WHEN THE ROOM TEMP DROP BELOW THE SET POINT 21°C (ADJUSTABLE).
- CABINET UNIT HEATER BUILT-IN BLOWER WILL REMAIN ON (OR OFF) STATUS AT LEAST 15 MINUTES AFTER IT TURNS ON (OR OFF).
- ROOM TEMPERATURE SENSOR WILL BE THE HEAT PUMP/CEILING CASSETTE/FAN COIL UNIT'S PROGRAMMABLE THERMOSTAT. PROVIDE ROOM TEMPERATURE SENSOR IF PROGRAMMABLE THERMOSTAT IS NOT AVAILABLE IN THE ROOM.

CABINET HEATER CONTROLS

SCALE: NTS

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY: E.M.	DESIGNED BY: G.W.	 PROJECT NO. BE20101016 ISSUED FOR TENDER	 Niagara Region	NIAGARA FALLS TRAIN STATION UPGRADES MECHANICAL DETAILS 3 OF 3			
			CHECKED BY: D.R.	APPROVED BY: S.C.			CONTRACT NO. STATION RENOVATION	DWG. NO. M-0012	REV. C	SHEET M-0012
	C 2023/12/06	ISSUED FOR TENDER								
	B 2023/04/24	ISSUED FOR BUILDING PERMIT								
	A 2022/11/11	PRELIMINARY DESIGN SUBMISSION								
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE				

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

FIXTURE SCHEDULE					
ITEM	PIPE CONNECTION (QTY)				DESCRIPTION
	DCW	DHW	SANITARY	VENT	
WC-1	25	-	75	38	WATER CLOSET - WALL HUNG, FLUSH VALVE, BARRIER FREE
WC-2	25	-	75	38	WATER CLOSET - FLOOR MOUNTED, FLUSH TANK, BARRIER FREE
U-1	12	-	50	38	URINAL - WALL HUNG
L-1	12	12	32	32	LAVATORY - WALL HUNG
L-2	12 (2)	12 (2)	32	32	LAVATORY - WALL HUNG, 2 - FAUCET, 1500mm LONG
L-3	12 (3)	12 (3)	32	32	LAVATORY - WALL HUNG, 3 - FAUCET, 2290mm LONG
L-4	12	12	32	32	LAVATORY - WALL HUNG, BARRIER FREE
MPS-1	12	12	75	38	MOP SINK, FLOOR MOUNTED, 600x500mm
DF-1	12 (2)	-	50	38	DRINKING FOUNTAIN, WALL HUNG, 2 STATIONS
FD-1	-	-	75	-	FLOOR DRAIN

CONTROL VALVE SCHEDULE									
No.	LOCATION (ROOM #)	SERVICE	PIPE SIZE (NPS)	SIZE (NPS)	FLOW (L/S)	PRESSURE DROP (KPA)	Cv	REMARKS	
CV-1	107	BBH-1	3/4	1/2	0.28		4.2	TWO WAY VALVE	
CV-2	108	BBH-2	3/4	1/2	0.23		4.2	TWO WAY VALVE	
CV-3	102A	BBH-3 & BBH-4	3/4	1/2	0.02		4.2	TWO WAY VALVE	
CV-4	102A	BBH-5	3/4	1/2	0.01		4.2	TWO WAY VALVE	
CV-5	105	BBH-6	3/4	1/2	0.01		4.2	TWO WAY VALVE	
CV-6	102	BBH-7 & BBH-8	3/4	1/2	0.05		4.2	TWO WAY VALVE	
CV-7	102	BBH-9 & BBH-10	3/4	1/2	0.21	4.3	4.2	TWO WAY VALVE	
CV-8	102	BBH-11 & BBH-12	3/4	1/2	0.02		4.2	TWO WAY VALVE	
CV-9	102	BBH-13 & BBH-14	3/4	1/2	0.02		4.2	TWO WAY VALVE	
CV-10	103	BBH-15	3/4	1/2	0.04		4.2	TWO WAY VALVE	
CV-11	103	BBH-16	3/4	1/2	0.11		4.2	TWO WAY VALVE	
CV-12	114	BBH-17	3/4	1/2	0.11		4.2	TWO WAY VALVE	
CV-13	110	BBH-18	3/4	1/2	0.10	0.8	4.2	TWO WAY VALVE	
CV-14	103	CUH-1	3/4	1/2	0.02		4.2	TWO WAY VALVE	
CV-15	112	CUH-2	3/4	1/2	0.02		4.2	TWO WAY VALVE	
CV-16	114	CUH-3	3/4	1/2	0.02		4.2	TWO WAY VALVE	
CV-17	113	CUH-4	3/4	1/2	0.02		4.2	TWO WAY VALVE	



UNIT HEATER AND CABINET HEATER SCHEDULE														
UNIT TAG	LOCATION	MAKE / MODEL	MOUNTING HEIGHT (m)	RATING (kW)	AIR FLOW (l/s)	E.A.T. °C	E.W.T. °C	L.W.T. °C	FLOW (lps)	P.D. (kPa)	MOTOR AMPS	MOTOR CAPACITY (W)	ELECTRICAL V/PH	REMARKS
CUH-1	ROOM 103	MODINE CW - SIZE 002	2.7	2.9	118	18	82	71	0.03	3.05	0.7	22.7	115/160	HORIZONTAL, CEILING RECESSED
CUH-2	ROOM 112	MODINE CW - SIZE 002	2.7	2.9	118	18	82	71	0.03	3.05	0.7	22.7	115/160	HORIZONTAL, CEILING RECESSED
CUH-3	ROOM 114	MODINE CW - SIZE 002	2.7	2.9	118	18	82	71	0.03	3.05	0.7	22.7	115/160	HORIZONTAL, CEILING RECESSED
CUH-4	ROOM 113	MODINE CW - SIZE 002	2.7	2.9	118	18	82	71	0.03	3.05	0.7	22.7	115/160	HORIZONTAL, CEILING RECESSED

NOTE: ALTERNATE MANUFACTURERS THAT MEET THE SPECIFICATION SHALL BE ACCEPTED.

BASEBOARD RADIATION SCHEDULE											
No.	ROOM (LOCATION)	FIN TUBE LENGTH (mm)	CABINET HEIGHT (mm)	CABINET WIDTH (mm)	ROWS/PASSES	CAP. (W/m)	CAPACITY (kW)	WATER TEMP. °C		TUBE SIZE (mm)	REMARKS
								ENTERING	LEAVING		
BBH-1	107	2400	355	100	2	1140	2.8	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-2	108	2400	355	100	2	1140	2.8	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-3	109	600	355	100	2	1140	0.62	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-4	102A (SOUTH)	1050	355	100	2	1140	1.12	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-5	102A (WEST)	1050	355	100	2	1140	1.12	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-6	105	1050/1350 L-SHAPED	355	100	2	1140	2.85	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-7	102 (SOUTH)	2250	355	100	2	1140	2.5	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-8	102 (SOUTH)	2250	355	100	2	1140	2.5	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-9	102 (SOUTH)	2250	355	100	2	1140	2.5	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-10	102 (SOUTH)	2250	355	100	2	1140	2.5	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-11	102 (NORTH)	2250	355	100	2	1140	2.5	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-12	102 (NORTH)	2250	355	100	2	1140	2.5	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-13	102 (NORTH)	2250	355	100	2	1140	2.5	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-14	102 (NORTH)	2250	355	100	2	1140	2.5	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-15	103	2100	355	100	2	1140	2.3	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-16	103	2100	355	100	2	1140	2.3	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-17	114	2850	355	100	2	1140	3.1	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).
BBH-18	110	1350	355	100	2	1140	1.5	82	71	25	SLOPED TOP, 82x82 ALUMINUM FIN (164 FINS/m) c/w ENDCAPS. TRANE HYDRONIC WALL FIN (TYPE S).

NOTE: ALTERNATE MANUFACTURERS THAT MEET THE SPECIFICATION SHALL BE ACCEPTED.

PROVISIONAL. SEE DRAWING M-0007 NEW HEATING PIPING CONSTRUCTION NOTES

REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY: E.M.	DESIGNED BY: A.A.	 PROJECT NO. BE20101016	 NIAGARA REGION PROJECT NO. xxxxxxx	NIAGARA FALLS TRAIN STATION UPGRADES MECHANICAL SCHEDULES 1 OF 3				
						CHECKED BY: G.W.	APPROVED BY: S.C.			ISSUED FOR TENDER	CONTRACT NO.	DWG. NO.	REV.	SHEET
DWG. NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE					STATION RENOVATION	M-0013	C	M-0013

METRIC

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



LOUVRE & VENTILATION WALL CAP SCHEDULE							
UNIT TAG	LOCATION / SERVICES	TYPE	OPENING SIZE WIDTH x HEIGHT / LENGTH (mm)	OVERALL SIZE WIDTH x HEIGHT x DEPTH (mm)	AIRFLOW (l/s)	VELOCITY (m/s)	REMARKS
VWC-S1	ERV-2	INTAKE	2000	380 x 370 x 205	50	0.5	c/w INSECT SCREEN & BACKDRAFT DAMPER
VWC-E1	ERV-2	EXHAUST	2000	380 x 370 x 205	100	0.5	c/w BIRD SCREEN

GRILLE, DIFFUSER AND REGISTER SCHEDULE					
UNIT TAG	DESCRIPTION	NECK DIA. (mm)	FACE SIZE (mmxmm)	MAX. FLOW RATE (l/s)	REMARKS
S1	SQUARE CONE DIFFUSER	1500	300x300	50	c/w DAMPER, T-BAR MOUNTED
S2	SQUARE CONE DIFFUSER	2000	610x610	100	c/w DAMPER, T-BAR MOUNTED
S3	SQUARE CONE DIFFUSER	2500	610x610	182	c/w DAMPER, T-BAR MOUNTED
E1	EGG CRATE FACE RETURN		610x250	300	c/w DAMPER, T-BAR MOUNTED
E2	EGG CRATE FACE RETURN		300x300	150	c/w DAMPER, T-BAR MOUNTED
E3	EGG CRATE FACE RETURN		300x300	150	c/w DAMPER, DUCT MOUNTED

ENERGY RECOVERY VENTILATOR SCHEDULE																								
UNIT TAG	LOCATION	MANUFACTURER / MODEL	TYPE	INSTALLATION	MOUNTING	AIR FLOW RATE (l/s)	AIR CONDITIONS SUMMER				AIR CONDITIONS WINTER				SUPPLY AIR ESP (Pa)	EXHAUST AIR ESP (Pa)	MOTOR (HP)	ELECTRICAL				DIMENSION WxDxH (mm)	WEIGHT (kg)	REMARKS
							O/A (°C)	R/A (°C)	S/A (°C)	TOTAL EFFECTIVENESS (%)	O/A (°C)	R/A (°C)	S/A (°C)	TOTAL EFFECTIVENESS (%)				FLA (A)	MCA (A)	MOC (A)	VOLTAGE			
ERV-1	Rm. 102A - CORRIDOR	RenewAire / HE-1X	STATIC PLATE	HORIZONTAL	SUSPENDED AND SUPPORTED IN THE CEILING CAVITY	250	31.4	24.0	25.8	58.7	-20.0	21.0	10.8	74.8	366	356	2 x 0.75	1.7 - 2.3	5.2	15	208/3/60	886x1248x553	125	INDOOR UNIT, MOTORIZED DAMPERS BOTH STREAMS, MERV 13 FILTERS ON OUTSIDE AIR AND RETURN AIR, & CONDENSATE PUMP (RUN CONCEALED PIPE TO DF-1 SAN (RM 102A))
ERV-2	Rm. 110 - IT	RenewAire / EV Premium M	STATIC PLATE	HORIZONTAL	SUSPENDED AND SUPPORTED IN THE CEILING CAVITY	70	31.4	24.0	26.2	47.7	-20.0	21.0	8.4	65.5	101	101	2 x 0.11	1.22	10.0	10	120/1/60	648x572x340	16.3	INDOOR UNIT, VARIABLE SPEED EC MOTORIZED IMPELLERS, MERV 13 FILTERS ON OUTSIDE AIR AND RETURN AIR, & CONDENSATE PUMP (RUN CONCEALED PIPE TO L-1 SAN PIPE (RM 111))

NOTE:
 1. ALTERNATIVE MANUFACTURER AND MODEL ARE ACCEPTED AFTER REVIEW AND APPROVAL.
 2. INSTALL EACH ERV UNIT WITH ADEQUATE CLEARANCE FOR SERVICE AND MAINTENANCE REQUIRED BY UNIT MANUFACTURER.
 3. PLACE EACH ERV UNIT IN THE CEILING SPACE TO AVOID UNIT SUPPLY AIR DIRECTLY BLOW ON ANY DOMESTIC COLD WATER PIPE.
 4. PROVIDE TC7D SERIES DIGITAL TIME CLOCK (OR APPROVAL EQUIVALENT) FOR UNIT CONTROL AND ALL ERV SHOULD KEEP ON RUNNING DURING REVENUE HOURS DEFINED BY OWNER.

NOTE: ALTERNATE MANUFACTURERS THAT MEET THE SPECIFICATION SHALL BE ACCEPTED.

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY: E.M.	DESIGNED BY: A.A.	 PROJECT NO. BE20101016 ISSUED FOR TENDER	 Niagara Region	NIAGARA FALLS TRAIN STATION UPGRADES MECHANICAL SCHEDULES 2 OF 3						
			CHECKED BY: G.W.	APPROVED BY: S.C.			CONTRACT NO.	DWG. NO.	REV.	SHEET			
							SCALE: AS SHOWN	FULL SIZE ONLY	NIAGARA REGION PROJECT NO. xxxxxxx	STATION RENOVATION	M-0014	C	M-0014
DWG NO.	TITLE	NO. DATE	ISSUED FOR	REV.			DATE						

ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

FAN COIL SCHEDULE																				
UNIT TAG	LOCATION	MANUFACTURER / MODEL	TYPE	AIR FLOW RATE L - M - H (ls)	COOLING CAPACITY (kW)	HEATING CAPACITY (kW)	ESP RANGE (Pa)	FAN MOTOR OUTPUT (W)	ELECTRICAL REQUIREMENTS			DIMENSION WxDxH (mm)	WEIGHT (kg)	FIELD DRAIN PIPE (mm)	SEER	SERVED BY CU	REFRIG.	LIQUID LINE (O.D.) (mm) (NPS)	SUCTION LINE (O.D.) (mm) (NPS)	REMARKS
									MCA	MOCP	ELEC.									
FC-1	Rm. 102 - LOBBY WAITING AREA- INDOORS	MITSUBISHI / PEFY-P06NMSU-E	CEILING MOUNTED DUCTED	83-100-117	1.8	2.0	5-50	96	0.5	15	208/1/60	790x700x200	19	32	-		R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, 2 - SIROCCO FANS WITH DC BRUSHLESS MOTORS, BUILT-IN CONDENSATE PUMP (RUN CONCEALED PIPE TO DF-1 SAN (RM 102A))
FC-2	Rm. 103 - TICKETING ROOM	MITSUBISHI / PEFY-P06NMSU-E	CEILING MOUNTED DUCTED	83-100-117	1.8	2.0	5-50	96	0.5	15	208/1/60	790x700x200	19	32	-	CU-3	R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, 2 x SIROCCO FANS w/ DC BRUSHLESS MOTORS, AIR FILTER, BUILT-IN CONDENSATE PUMP (RUN CONCEALED PIPE TO L-1 SAN PIPE (RM 111))
FC-3	Rm. 102A - CORRIDOR	MITSUBISHI / PEFY-P12NFMU-E	DUCTED CEILING SUSPENDED AND SUPPORTED IN THE CEILING CAVITY	100-133-175	3.5	4.0	5-50	96	0.68	15	208/1/60	790x700x200	20	32	-		R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, 2 x SIROCCO FANS WITH DC MOTORS, AIR FILTER, BUILT IN CONDENSATE PUMP (RUN CONCEALED PIPE TO DF-1 SAN (RM 102A))

NOTE
 1. ALTERNATIVE MANUFACTURER AND MODEL ARE ACCEPTED AFTER REVIEW AND APPROVAL.
 2. PROGRAMMABLE THERMOSTAT TO KEEP ALL FAN COIL UNITS' FAN CONTINUE TO RUN THROUGH OUT REVENUE HOURS EVEN AFTER HEATING OR COOLING IS NOT DEMANDED ON FAN COIL UNITS.
 3. INSTALL EACH FAN COIL UNIT WITH ADEQUATE CLEARANCE FOR SERVICE AND MAINTENANCE REQUIRED BY UNIT MANUFACTURER.
 4. REFRIGERANT PIPE SIZES SHOWING IN THE SCHEDULE ARE FOR PRICING PURPOSE. CONTRACTOR TO DOUBLE CHECK AND RE-SIZE THE REFRIGERANT LIQUID AND GAS PIPE ACCORDING TO THE FINAL LAYOUT OF THE INDOOR AND OUTDOOR UNITS AS WELL AS PIPE ROUTING ON SITE. CONTRACTOR TO VERIFY THE FINAL PIPE SIZE WITH UNIT SUPPLIER.
 5. ALL FAN COIL UNITS SHALL BE OPERATED IN SUCH WAY: ALL FAN COIL UNITS' FAN SHALL OPERATE ALL THE TIME DURING REVENUE HOURS DEFINED BY END USER EVEN WHEN THE UNITS ARE NOT IN HEATING OR COOLING MODE.

CONDENSING UNIT SCHEDULE																	
UNIT TAG	LOCATION	MANUFACTURER / MODEL	TYPE	AIR FLOW RATE (ls)	COOLING CAPACITY (kW)	HEATING CAPACITY (kW)	FAN MOTOR OUTPUT (W)	ELECTRICAL REQUIREMENTS			DIMENSION WxDxH (mm)	WEIGHT (kg)	SEER	REFRIG.	LIQUID LINE (O.D.) (mm) (NPS)	SUCTION LINE (O.D.) (mm) (NPS)	REMARKS
								MCA	MOCP	ELEC.							
CU-1	EXTERIOR - SOUTH SIDE OF BUILDING	MITSUBISHI / PUY-A24NKA7	MOUNTED ON GROUND SUPPORT	916	7.0	7.6	75	19	26	208/1/60	800x330x600	75	17	R410A	- (-)	- (-)	SERVES AC-1 c/w REVERSE CYCLE DEFROST, LINEAR EXPANSION VALVE REFRIGERANT CONTROL
CU-2	EXTERIOR - EAST SIDE OF BUILDING	MITSUBISHI / PUY-A12NKA7	MOUNTED ON GROUND SUPPORT	1590	3.5	-	46	11	28	208/1/60	871x300x630	41	21	R410A	- (-)	- (-)	SERVES AC-2
CU-3	EXTERIOR - SOUTH SIDE OF BUILDING	MITSUBISHI / PURY-P96TNU-A	MOUNTED ON GROUND SUPPORT	3,917	28.1	30.2	920	44	70	208/3/60	1250x745x1818	300	-	R410A	19.05 (3/4)	22.2 (7/8)	SERVES CSHP-1 THRU CCHP-7, FC-1, FC-2 & FC-4 c/w BC CONTROLLER (CMB-P1012NU-JA1), INVERTER DRIVEN SCROLL COMPRESSOR, 1 x PROPELLER FANS w/ INVERTER-CONTROL BRUSHLESS DC MOTOR

NOTE
 1. ALTERNATIVE MANUFACTURER AND MODEL ARE ACCEPTED AFTER REVIEW AND APPROVAL.
 2. PROVIDE CONCRETE PATIO FOR OUTDOOR UNITS INSTALLATION, SECURE GALVANIZED UNI-STRUST SUPPORTING RACK ON CONCRETE PATIO FOR OUTDOOR UNITS SUPPORT, KEEP THE OUTDOOR UNIT AT MIN 450 MM ABOVE GROUND, MAINTAIN THE SERVICE AND MAINTENANCE CLEARANCE AROUND THE OUTDOOR UNIT AS PER RECOMMENDATION BY UNIT SUPPLIER.
 3. REFRIGERANT PIPE SIZES SHOWING IN THE SCHEDULE ARE FOR PRICING PURPOSE. CONTRACTOR TO DOUBLE CHECK AND RE-SIZE THE REFRIGERANT LIQUID AND GAS PIPE ACCORDING TO THE FINAL LAYOUT OF THE INDOOR AND OUTDOOR UNITS AS WELL AS PIPE ROUTING ON SITE. CONTRACTOR TO VERIFY THE FINAL PIPE SIZE WITH UNIT SUPPLIER.

PROVISIONAL. SEE DRAWING M-0008 NEW HVAC PIPING CONSTRUCTION NOTES

AIR CONDITIONER AND CEILING CASSETTE SCHEDULE																			
UNIT TAG	LOCATION	MANUFACTURER / MODEL	TYPE	AIR FLOW RATE L - M - H (ls)	COOLING CAPACITY (kW)	HEATING CAPACITY (kW)	MOISTURE REMOVAL (l/hr)	FAN MOTOR OUTPUT (W)	ELECTRICAL REQUIREMENTS			DIMENSION WxDxH (mm)	WEIGHT (kg)	FIELD DRAIN PIPE (mm)	SERVED BY CU	REFRIG.	LIQUID LINE (O.D.) (mm) (NPS)	SUCTION LINE (O.D.) (mm) (NPS)	REMARKS
									MCA	MOCP	ELEC.								
AC-1	Rm. 110 - IT	MITSUBISHI / PKA-A24KA4	WALL MOUNT	300-333-366	7.0	7.6	2.37	56	1	15	208/1/60	1170x295x365	21	16	CU-1	R410A	9.52 (3/8)	15.8 (5/8)	c/w PROGRAMMABLE THERMOSTAT
AC-2	Rm. 114 - O.T.S. (INDOORS)	MITSUBISHI / PKA-A12LA-TH	WALL MOUNT	125-153-182	3.5	N/A	1.28	30	1	15	208/1/60	898x237x299	12.7	16	CU-2	R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT
CCHP-1	Rm. 102 - LOBBY WAITING AREA (WEST)	MITSUBISHI / PLY-P15NFMU-E	CEILING MOUNTED CASSETTE	125-149-184	4.4	5.0	-	50	0.35	15	208/1/60	570x570x208	14.2 + 2.4	32		R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, 1 x TURBO FAN DIRECT DRIVEN, AIR FILTER, BUILT IN CONDENSATE PUMP (RUN CONCEALED PIPE TO DF-1 SAN (RM 102A))
CCHP-2	Rm. 102 - LOBBY WAITING AREA (MIDDLE)	MITSUBISHI / PLY-P15NFMU-E	CEILING MOUNTED CASSETTE	125-149-184	4.4	5.0	-	50	0.35	15	208/1/60	570x570x208	14.2 + 2.4	32		R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, 1 x TURBO FAN DIRECT DRIVEN, AIR FILTER, BUILT IN CONDENSATE PUMP (RUN CONCEALED PIPE TO DF-1 SAN (RM 102A))
CCHP-3	Rm. 102 - LOBBY WAITING AREA (EAST)	MITSUBISHI / PLY-P15NFMU-E	CEILING MOUNTED CASSETTE	125-149-184	4.4	5.0	-	50	0.35	15	208/1/60	570x570x208	14.2 + 2.4	32		R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, 1 x TURBO FAN DIRECT DRIVEN, AIR FILTER, BUILT IN CONDENSATE PUMP PIPED (RUN CONCEALED PIPE TO L-1 SAN PIPE (RM 111))
CCHP-4	Rm. 100 - VESTIBULE 1	MITSUBISHI / PLY-P12NFMU-E	CEILING MOUNTED CASSETTE	116-132-158	3.5	4.0	-	50	0.29	15	208/1/60	570x570x208	14.2 + 2.4	32	CU-3	R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, BUILT IN CONDENSATE PUMP (RUN CONCEALED PIPE TO DF-1 SAN (RM 102A))
CCHP-5	Rm. 103 - TICKETING ROOM	MITSUBISHI / PLY-P12NFMU-E	CEILING MOUNTED CASSETTE	116-132-158	3.5	4.0	-	50	0.29	15	208/1/60	570x570x208	14.2 + 2.4	32		R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, 1 x TURBO FAN DIRECT DRIVEN, AIR FILTER, BUILT IN CONDENSATE PUMP (RUN CONCEALED PIPE TO L-1 SAN PIPE (RM 111))
CCHP-6	Rm. 101 - VESTIBULE 2	MITSUBISHI / PLY-P05NFMU-E	CEILING MOUNTED CASSETTE	109-125-133	1.5	1.6	-	50	0.24	15	208/1/60	570x570x208	13 + 2.4	32		R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, 1 x TURBO FAN DIRECT DRIVEN, AIR FILTER, BUILT IN CONDENSATE PUMP (RUN CONCEALED PIPE TO L-1 SAN PIPE (RM 111))
CCHP-7	Rm. S1 (105) - STAIR 1	MITSUBISHI / PLY-P05NFMU-E	CEILING MOUNTED CASSETTE	109-125-133	1.5	1.6	-	50	0.24	15	208/1/60	570x570x208	13 + 2.4	32		R410A	6.53 (1/4)	12.7 (1/2)	c/w PROGRAMMABLE THERMOSTAT, 1 x TURBO FAN DIRECT DRIVEN, AIR FILTER, BUILT IN CONDENSATE PUMP (RUN CONCEALED PIPE TO L-3 SAN PIPE (RM 107))

NOTE
 1. ALTERNATIVE MANUFACTURER AND MODEL ARE ACCEPTED AFTER REVIEW AND APPROVAL.
 2. INSTALL EACH HEAT PUMP UNIT WITH ADEQUATE CLEARANCE FOR SERVICE AND MAINTENANCE REQUIRED BY UNIT MANUFACTURER.
 3. REFRIGERANT PIPE SIZES SHOWING IN THE SCHEDULE ARE FOR PRICING PURPOSE. CONTRACTOR TO DOUBLE CHECK AND RE-SIZE THE REFRIGERANT LIQUID AND GAS PIPE ACCORDING TO THE FINAL LAYOUT OF THE INDOOR AND OUTDOOR UNITS AS WELL AS PIPE ROUTING ON SITE. CONTRACTOR TO VERIFY THE FINAL PIPE SIZE WITH UNIT SUPPLIER.

PROVISIONAL. SEE DRAWING M-0008 NEW HVAC PIPING CONSTRUCTION NOTES

REFERENCE DRAWINGS			ISSUE			REVISIONS			DRAWN BY: E.M.	DESIGNED BY: A.A.	wsp PROJECT NO. BE20101016		Niagara Region		NIAGARA FALLS TRAIN STATION UPGRADES MECHANICAL SCHEDULES 3 OF 3				
			C	2023/12/06	ISSUED FOR TENDER														
			B	2023/07/25	REISSUED FOR BUILDING PERMIT														
			A	2023/04/24	ISSUED FOR BUILDING PERMIT														
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE													

CONTRACT NO. STATION RENOVATION DWG. NO. M-0015 REV. C SHEET M-0015

NIAGARA FALLS TRAIN STATION UPGRADE




4267 BRIDGE ST.
NIAGARA FALLS, ON
L2E 2R6

PROJECT No. BE20201016


SHEET No.	DRAWING No.	DRAWING LIST
E-0001	E-0001	ELECTRICAL LEGENDS & GENERAL NOTES
E-0002	E-0002	ELECTRICAL DEMOLITION PLANS
E-0003	E-0003	LIGHTING DEMOLITION PLANS
E-0004	E-0004	LIGHTING FIRST FLOOR PLAN - NEW
E-0005	E-0005	LIGHTING SECOND FLOOR PLAN - NEW
E-0006	E-0006	FIRE ALARM PLANS - NEW
E-0007	E-0007	POWER & DATA FIRST FLOOR PLAN - NEW
E-0008	E-0008	POWER & DATA SECOND FLOOR PLAN - NEW
E-0009	E-0009	SINGLE LINE DIAGRAM - NEW
E-0010	E-0010	UNIVERSAL WASHROOM DETAILS
E-0011	E-0011	PANEL SCHEDULES - NEW

REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY: SELLON, GORDON		DESIGNED BY: SELLON, GORDON	
		D	2024/01/18	RE-ISSUED FOR TENDER					
		C	2023/11/28	ISSUED FOR TENDER					
		B	2023/04/24	ISSUED FOR BUILDING PERMIT					
		A	2022/11/11	PRELIMINARY DESIGN SUBMISSION					
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE	SCALE: AS SHOWN FULL SIZE ONLY ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.		



PROJECT NO. BE20101016

RE-ISSUED FOR TENDER



**NIAGARA FALLS TRAIN STATION
UPGRADES**

ELECTRICAL DRAWING INDEX

CONTRACT NO. STATION RENOVATION	DWG. NO. E-0000	REV. D	SHEET E-0000
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POWER SYMBOLS	
TYPE	DESCRIPTION
	15A, 125V DUPLEX RECEPTACLE, CSA TYPE 5-15R
	20A, 125V DUPLEX RECEPTACLE, CSA TYPE 5-20R
	15A, 125V DUPLEX RECEPTACLE, CSA TYPE 5-15R, C/W 3.6A, 5VDC, 2.0 TYPE A USB CHARGERS, M.H. = 950mm AFF.
	15A, 125V DUPLEX RECEPTACLE WITH INTEGRAL GROUND FAULT PROTECTION, MOUNTED ABOVE COUNTER SPLASH BOARD, CSA TYPE 5-15R UNLESS OTHERWISE NOTED
	15A, 125V DUPLEX RECEPTACLE WITH INTEGRAL GROUND FAULT PROTECTION
	DIRECT EQUIPMENT CONNECTION
	DISCONNECT SWITCH SIZED APPROPRIATELY FOR THE APPLICATION
	120/208V LIGHTING OR POWER PANEL
	EX DENOTES EXISTING TO REMAIN
	WP DENOTES WEATHERPROOF DEVICE

COMMUNICATIONS SYMBOLS	
TYPE	DESCRIPTION
	TELECOMMUNICATIONS OUTLET, WALL MOUNTED, 1 VOICE & 1 DATA PER OUTLET UNLESS OTHERWISE NOTED, PROVIDE 3/4" C TO TELECOM RACK IN ROOM 110, C/W PULL STRING.
	SECURITY CAMERA TO BE RELOCATED, PROVIDE WIRE AND CONDUIT AS NEEDED TO EXTEND EXISTING FEED.

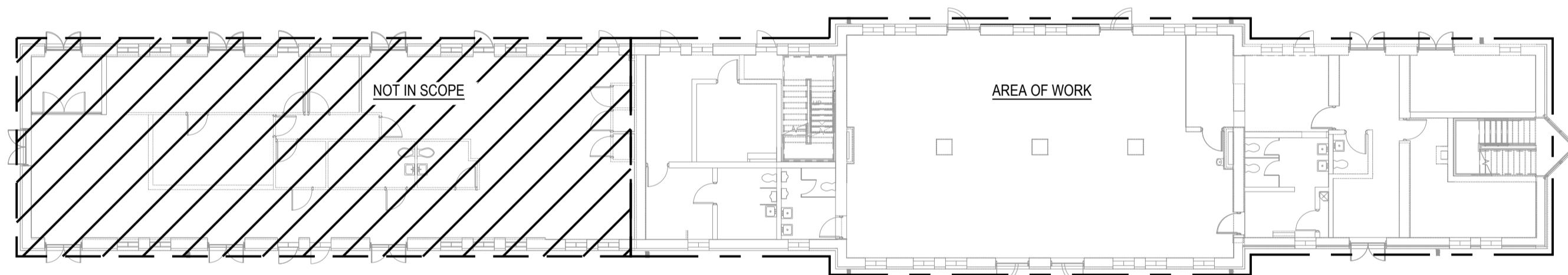
FIRE ALARM SYMBOLS	
TYPE	DESCRIPTION
	ADDRESSABLE SMOKE DETECTOR
	FIRE ALARM CONTROL PANEL
	FIRE ALARM PULL STATION
	FIRE ALARM STROBE, WALL MOUNTED, '30' INDICATES CANDELA OUTPUT SETTING
	FIRE ALARM BELL

LIGHTING SYMBOLS	
TYPE	DESCRIPTION
	SINGLE POLE LIGHT SWITCH
	WALL SWITCH/OCCUPANCY SENSOR, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY, PROVIDE AS ACUITY NLIGHT #NWSXA-PDT-LV-XX
	WALL POD SWITCH, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY, PROVIDE AS ACUITY NLIGHT #NPODMA-XX
	OCCUPANCY SENSOR, CEILING MOUNTED, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY, SMALL MOTION, PROVIDE AS ACUITY NLIGHT #NCM-PDT-9-RJB
	OCCUPANCY SENSOR, CEILING MOUNTED, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY, LARGE MOTION, PROVIDE AS ACUITY NLIGHT #NCM-PDT-10-RJB
	6" RECESSED LED POTLIGHT, SEE LIGHTING SCHEDULE ON DWGS E-0004, E-0005
	4" LED WRAPAROUND LIGHT (SURFACE MOUNT), SEE LIGHTING SCHEDULE ON DWGS E-0004, E-0005
	2x2' EDGE-LIT LED FLAT PANEL LIGHT, SEE LIGHTING SCHEDULE ON DWGS E-0004, E-0005
	EXIT LIGHT FIXTURE, WALL MOUNTED, BATTERY POWERED
	EMERGENCY LIGHT FIXTURE DOUBLE WALL MOUNTED
	EMERGENCY LIGHT FIXTURE DOUBLE WALL MOUNTED c/w BATTERY PACK

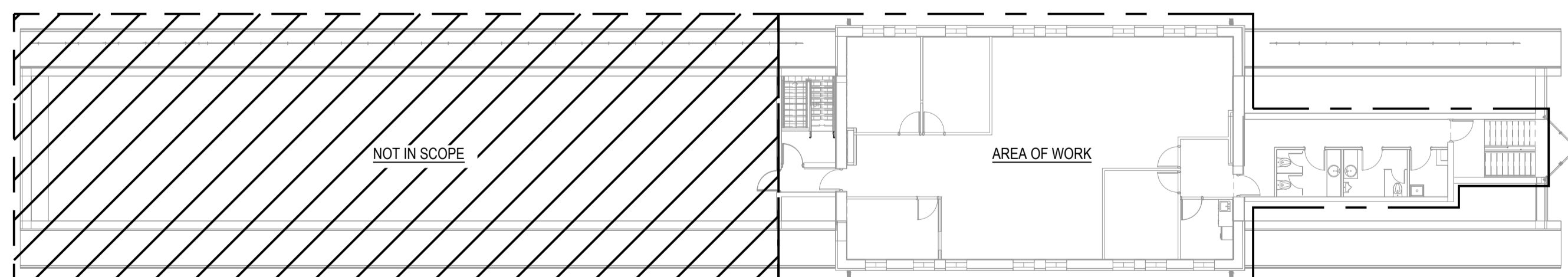
SINGLE LINE DIAGRAM SYMBOLS	
TYPE	DESCRIPTION
	POWER METER
	FUSED DISCONNECT SWITCH
	POWER PANEL
	MOTOR LOAD
	DISCONNECT SWITCH SIZED APPROPRIATELY FOR THE APPLICATION

ELECTRICAL DEMOLITION – GENERAL NOTES	
1.	CONTRACTOR SHALL VERIFY ALL EXISTING CIRCUIT BEFORE DEMOLITION WITHOUT AFFECTING NORMAL OPERATION IN NON-RENOVATION AREA. AFFECTED PARTY SHALL BE NOTICED IN ADVANCE.
2.	ELECTRICAL DRAWINGS ARE BASED ON DRAWINGS PROVIDED BY THE CUSTOMER. CONTRACTOR SHALL VERIFY ON SITE FOR ANY DISCREPANCIES.
3.	ALL ELECTRICAL EQUIPMENT, POWER AND LIGHTING AND THEIR ASSOCIATED EQUIPMENT SUCH AS JUNCTION BOXES, CONDUITS, WIRING AND SO ON TO BE DECOMMISSIONED AND FREE THE BRANCH FROM ALLOCATED POWER PANEL.
4.	DISCONNECT, REMOVE, AND DISPOSE OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT IN AFFECTED AREAS. REMOVE ALL WIRING AND CONDUITS AND TERMINATE BACK TO PANEL. CONTRACTOR TO MARK UNUSED BREAKERS AS "SPARE".
5.	ALL PUBLIC ADDRESS & PAGING SPEAKERS SHALL BE DISCONNECTED, SAVED AND REINSTALLED IN THE NEW CEILING SPACES. PROVIDE ADDITION WIRE & CONDUIT AS NEEDED FOR REINSTALLATION.
6.	THE POWER RECEPTACLES LOCATED IN DEMOLITION ZONE WHERE ONLY THE CEILING IS REQUIRED TO BE REPLACED WILL NOT REQUIRE TO BE DEMOLISHED.
7.	WHILE DECOMMISSIONING, THE CONTRACTOR TO MAKE SURE THE FLOOR IS RESTORED AND IN INTACT CONDITION.
8.	CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE THAT CAN OCCUR DURING DECOMMISSIONING AND INSTALLING PHASE.
9.	CONTRACTOR SHALL PERFORM SPACE CLEANING TO RELEASE DEBRIS AND UNUSED ITEMS AFTER DECOMMISSIONING PHASE IS FINISHED.
10.	AT COMPLETION, CLEAN ALL FIXTURES AND EQUIPMENT, POLISH ALL PLATED SURFACES. REMOVE ALL TEMPORARY PROTECTION COVERS.
11.	VACUUM CLEAN THE INSIDE OF PANEL BOARDS, CONTROLLER, AND FIRE ALARM CONTROL PANEL AND ANNUNCIATORS. ENSURE THAT THEY ARE FREE FROM DEBRIS AND DUST. CHANGE ALL LAMPS. ALL LAMPS TO BE NEW AT TIME OF SYSTEM ACCEPTANCE.
12.	CONTRACTOR IS RESPONSIBLE FOR DECOMMISSIONING, WRAPPING AND MAKING THE EQUIPMENT READY FOR SHIPPING FOR ASSET DISPOSAL.
13.	FOR PHASING REVISIONS, CONTRACTOR SHALL READ IN CONJUNCTION WITH ARC A-1251 TO COORDINATES FOR CONSTRUCTION.

ELECTRICAL – GENERAL NOTES	
1.	CONTRACTOR TO EXAMINE SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
2.	FOR PHASING REVISIONS, CONTRACTOR SHALL READ IN CONJUNCTION WITH ARC A-1251 TO COORDINATES FOR CONSTRUCTION.
3.	ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS AND/OR EXISTING CONDITIONS ARE TO BE REFERRED TO CONSULTANT FOR INSTRUCTIONS BEFORE ANY WORK IS BEGUN.
4.	COORDINATE ALL EQUIPMENT/SERVICE SHUTDOWN WITH FACILITY MANAGEMENT.
5.	MAKE GOOD ALL SURFACES AFTER COMPLETION OF WORK. SEAL ANY ABANDONED ELECTRICAL SERVICE OPENINGS.
6.	REMOVE ALL DEBRIS AND RUBBISH FROM THE SITE DAILY.
7.	DISPOSE OF ALL DEBRIS AS PER AUTHORITY HAVING JURISDICTION.
8.	COORDINATE DELIVERY OF MATERIALS AND SITE ACCESS WITH FACILITY MANAGEMENT.
9.	PROVIDE CAULKING AND FIRESTOPPING FOR ALL ELECTRICAL SERVICES PASSING THROUGH FIRE SEPARATIONS AS INDICATED ON THE ARCHITECTURAL LAYOUT.
10.	PROVIDE NEW EQUIPMENT AND ALL ASSOCIATED ACCESSORIES AS REQUIRED TO COMPLETE A FULLY OPERATIONAL AND MAINTAINABLE SYSTEM.
11.	AS PER PROJECT SCOPE, ROOM 114 IS NOT PART OF THIS CONTRACT AND IS SUBJECT FOR CONSTRUCTION IN THE PROJECT'S NEXT STAGE. ROOM 115 (MECHANICAL ROOM) IS NOT PART OF THIS PROJECT AND ITS SOW.
12.	CONTRACTOR SHALL FOLLOW LOCAL UTILITY METERING REQUIREMENT BEFORE PURCHASING NEW METERING BASE.
13.	ALL CONDUCTOR SHALL BE STRANDED COPPER. MINIMUM SIZE OF CONDUCTOR ALLOWED 12 AWG.
14.	INDOOR AND DRY LOCATIONS TO BE RIGID GALVANIZED STEEL WITH ALL THREADED CONNECTIONS. IN WET LOCATIONS EXPOSED TO ENVIRONMENTAL ELEMENTS TO BE EPOXY OR PVC COATED RIGID GALVANIZED STEEL CONDUIT AND MATCHING THREADED FITTINGS.
15.	CONNECTIONS TO VIBRATING EQUIPMENT WILL BE INSTALLED USING FLEXIBLE CONDUIT.
16.	ALL BRANCH CIRCUIT BREAKERS SHALL BE UL489 TYPE
17.	ALL CIRCUITS TO HAVE SEPARATE NEUTRAL CONDUCTORS UNLESS OTHERWISE NOTED. SHARED NEUTRALS ARE NOT PERMITTED.
18.	MINIMUM SIZE OF CONDUIT TO BE 21mm (3/4"). ALL CONDUITS TO BE PROVIDED WITH PULL STRINGS.
19.	THE SMOKE DETECTORS AND BELL/STROBE COMBO TO BE CONNECTED TO THE EXISTING FIRE ALARM.
20.	ALL POWER RECEPTACLES SHALL BE 15 AMP 5-15R IS RATED 125V 120 VOLT DUPLEX NON-LOCKING GROUNDING TYPE (CSA CONFIGURATION 5-15R) IN SERVICE AND PUBLIC AREAS.
21.	ALL THE POWER RECEPTACLES THAT ARE CLOSER THAN 1.5M FROM WATER SOURCE SHALL BE GFI PROTECTED.
22.	DIRECT CONNECTION IS PREFERABLE FOR EMERGENCY LIGHT. OUTLET POWER CONNECTION CAN BE USED, BUT NOT SHOWN IN THIS DRAWING.
23.	THE LETTER AND NUMBER FROM ELECTRICAL SYMBOL SHOWS THE PANEL IDENTIFICATION AND CCT POSITION.
24.	CONTRACTOR TO VERIFY ALL CIRCUITS AND UPDATE PANEL SCHEDULES UPON COMPLETION.
25.	ALL MATERIALS, EQUIPMENT SHALL BE CSA, NEMA APPROVED AS REQUIRED.



1 SITE PLAN - FIRST FLOOR
E-0001 SCALE: 1:200

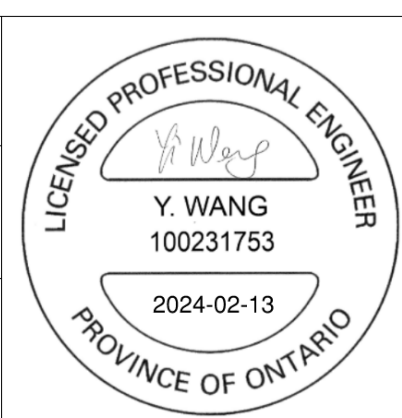


2 SITE PLAN - SECOND FLOOR
E-0001 SCALE: 1:200

ROOM #	NEW ROOM NAME
100	VESTIBULE 1
101	VESTIBULE 2
102	LOBBY / WAITING AREA
102A	CORRIDOR
103	TICKETING ROOM
S1 (104)	STAIR 1
S2 (105)	STAIR 2
106	UNIVERSAL WASHROOM
107	MALE WASHROOM
108	FEMALE WASHROOM
109	JANITOR
110	IT ROOM
111	WASHROOM
112	CORRIDOR
113	MULTI-PURPOSE ROOM
114	O.T.S.
115	MECHANICAL ROOM
200	OFFICE AREA
200A	VESTIBULE 2
204	KITCHETTE
205	WASHROOM - MALE
206	WASHROOM - FEMALE
207	JANITOR
208	CORRIDOR
210	OFFICE 1
211	OFFICE 2
212	OFFICE 3
213	GO TRANSIT AREA
214	VESTIBULE

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY:	DESIGNED BY:		
			SELLON, GORDON	SELLON, GORDON		
			CHECKED BY:	APPROVED BY:		
			ABUOSBA, MUSTAFA	WANG, YI		
			SCALE: AS SHOWN FULL SIZE ONLY ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.			
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
		D	2024/01/18	RE-ISSUED FOR TENDER		
		C	2023/11/28	ISSUED FOR TENDER		
		B	2023/04/24	ISSUED FOR BUILDING PERMIT		
		A	2022/11/11	PRELIMINARY DESIGN SUBMISSION		

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		A	2022/11/11	PRELIMINARY DESIGN SUBMISSION		

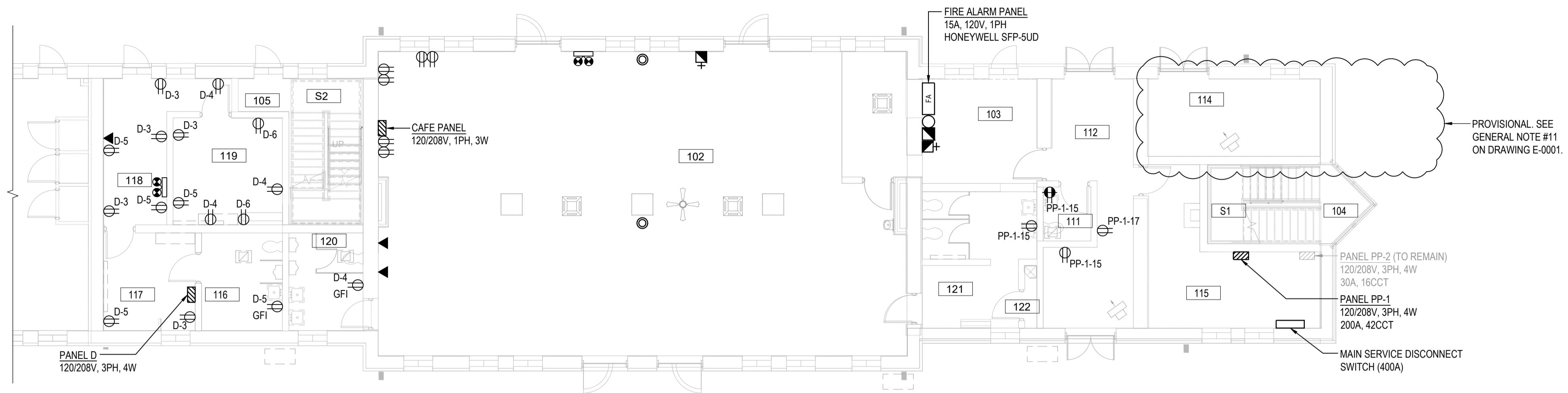
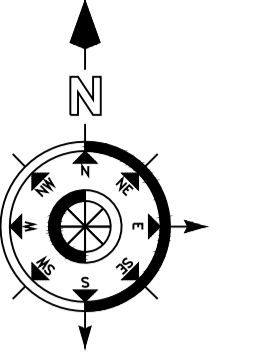


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PROJECT NO. BE20101016
RE-ISSUED FOR TENDER

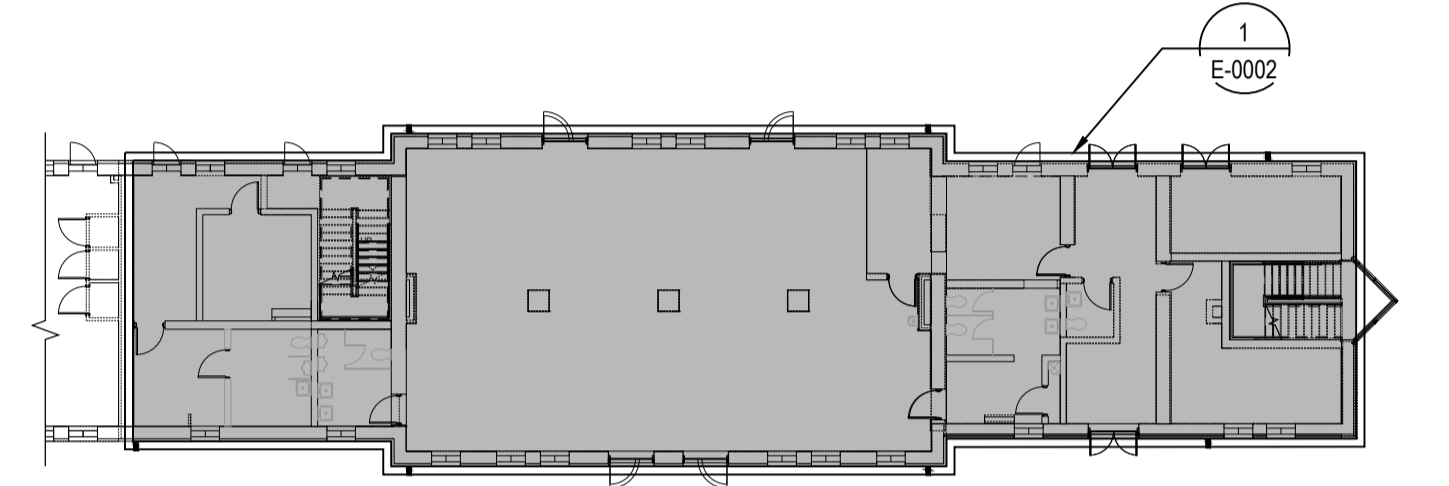
Niagara Region
NIAGARA REGION PROJECT NO. BE20201016

NIAGARA FALLS TRAIN STATION UPGRADES
ELECTRICAL LEGENDS & NOTES

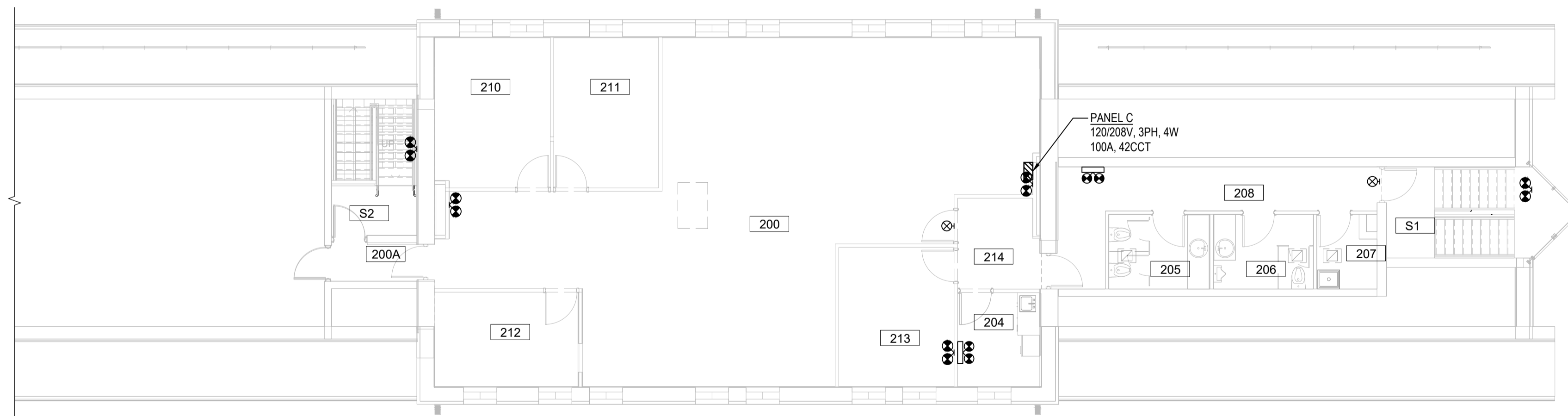
CONTRACT NO. STATION RENOVATION	DWG. NO. E-0001	REV. D	SHEET E-0001
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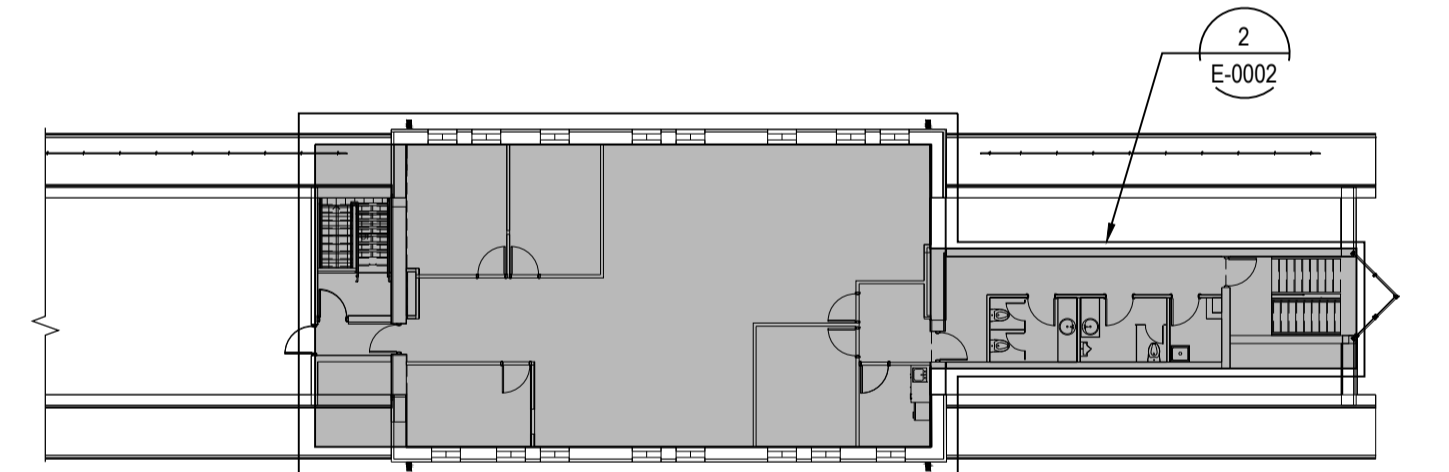
1 ELECTRICAL DEMOLITION FIRST FLOOR PLAN
 SCALE: 1:100



ELECTRICAL DEMOLITION FIRST FLOOR KEY PLAN
 SCALE: 1:250



2 ELECTRICAL DEMOLITION SECOND FLOOR PLAN
 SCALE: 1:100



ELECTRICAL DEMOLITION SECOND FLOOR KEY PLAN
 SCALE: 1:250

DRAWING NOTES

- HVAC, HEATING, AND FAN COIL EQUIPMENT THAT ARE REQUIRED TO BE REMOVED SHALL BE READ IN CONJUNCTION WITH M-0003 & M-0004. ALL WIRING, CONDUIT, AND JUNCTION BOXES SHALL BE REMOVED. BREAKERS SHALL BE MARKED AS SPARE FOR FUTURE REUSE.
- ARCHITECTURE REMOVAL PLAN SHALL BE READ IN CONJUNCTION WITH A-1200 FOR DETAILS. ANY ELECTRICAL DEVICE ON REMOVING STRUCTURE SHALL BE REMOVED. ALL WIRING, CONDUIT, AND JUNCTION BOXES SHALL BE REMOVED.
- REMOVED ELECTRICAL PANELS SHALL BE PROPERLY STORED AND RETURNED TO CLIENT UPON COMPLETION OF THE CONSTRUCTION.
- AS PER CLIENT'S SOW AND BUDGET PLAN, SECOND FLOOR LAYOUT SHALL REMAIN AS IT IS. THEREFORE, ALL ELECTRICAL RECEPTACLES REMAIN IN THE EXISTING ROOM. REFER TO E-0005, E-0006, AND E-0008 FOR NEW LIGHTING PLAN, FIRE ALARM FLOOR PLAN, AND POWER FLOOR PLAN RESPECTIVELY.

NO.	DATE	ISSUED FOR	REV.	DATE
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A	2022/11/11	PRELIMINARY DESIGN SUBMISSION		

REFERENCE DRAWINGS	ISSUE	REVISIONS

DRAWN BY:
SELLON, GORDON

DESIGNED BY:
SELLON, GORDON

CHECKED BY:
ABUOSBA, MUSTAFA

APPROVED BY:
WANG, YI

SCALE: AS SHOWN FULL SIZE ONLY
ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.

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PROJECT NO. BE20101016

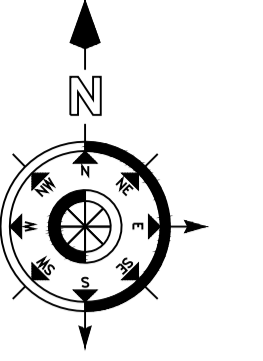
RE-ISSUED FOR TENDER

NIAGARA REGION PROJECT NO. BE20201016

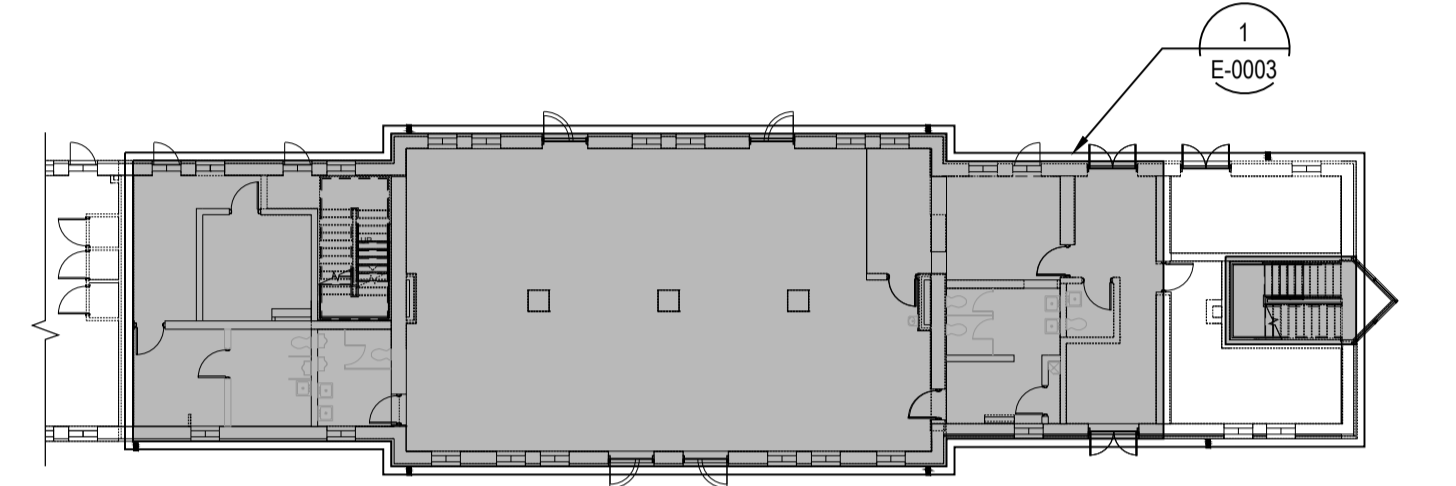
NIAGARA FALLS TRAIN STATION UPGRADES

ELECTRICAL DEMOLITION PLANS

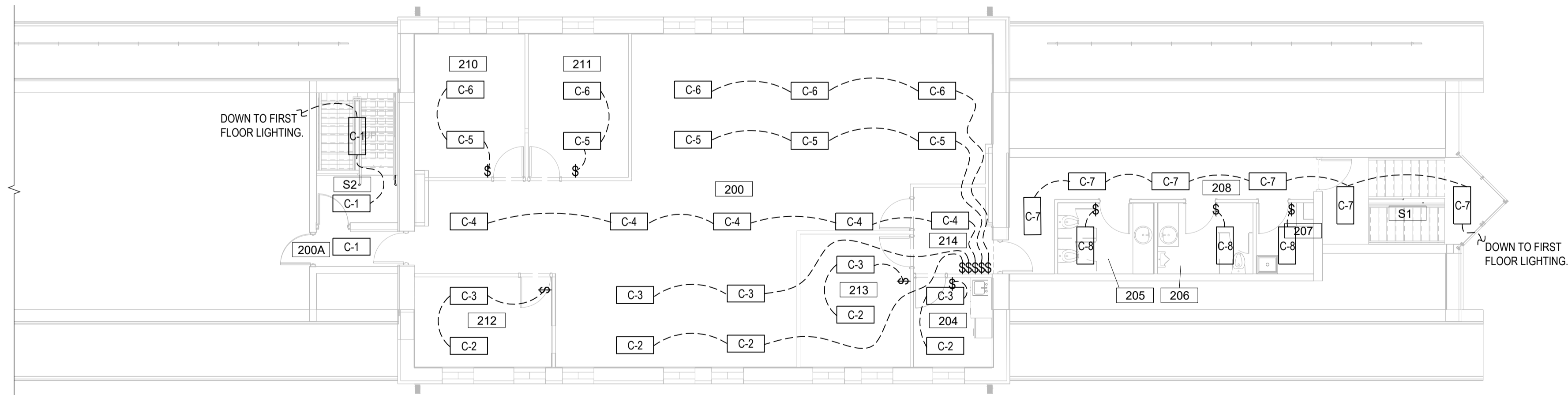
CONTRACT NO. STATION RENOVATION	DWG. NO. E-0002	REV. D	SHEET E-0002
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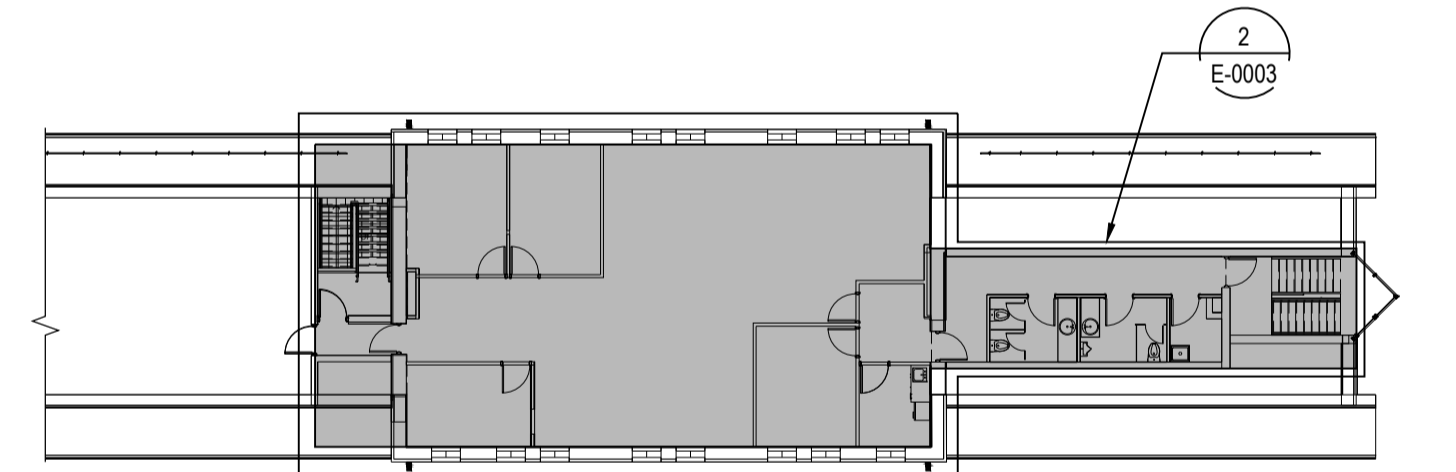
1 LIGHTING DEMOLITION FIRST FLOOR PLAN
E-0002 SCALE: 1:100



LIGHTING DEMOLITION FIRST FLOOR KEY PLAN
SCALE: 1:250



2 LIGHTING DEMOLITION SECOND FLOOR PLAN
E-0003 SCALE: 1:100

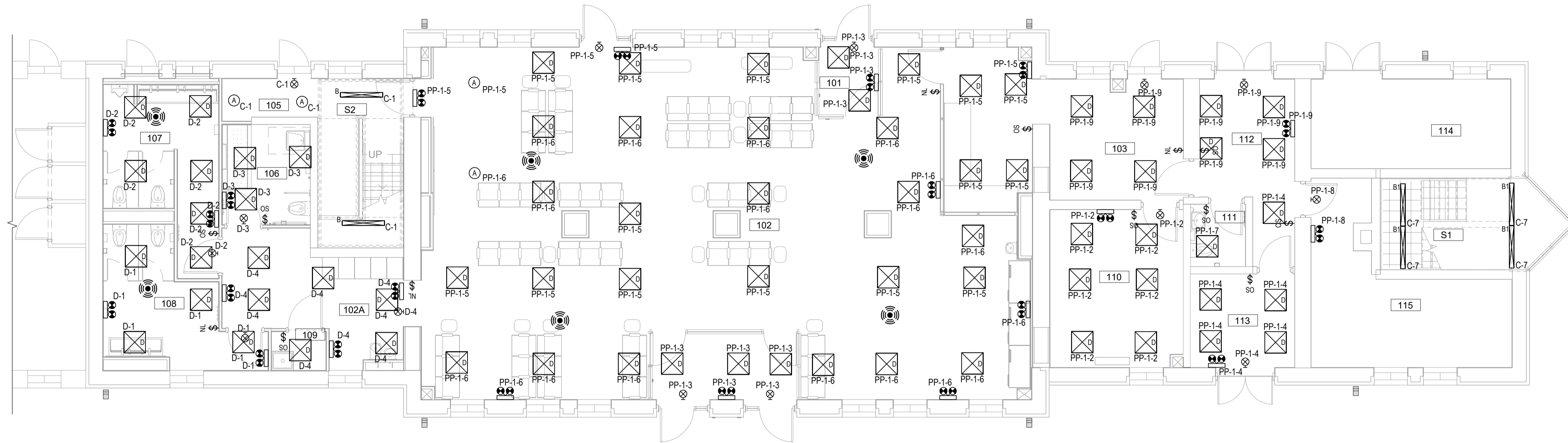
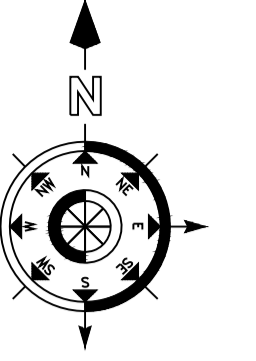


LIGHTING DEMOLITION SECOND FLOOR KEY PLAN
SCALE: 1:250

DRAWING NOTES

- DISCONNECT, REMOVE, AND DISPOSE ALL ELECTRICAL EQUIPMENT. REMOVE ALL WIRING AND CONDUITS AND TERMINATE BACK TO PANEL. CONTRACTOR TO MARK UNUSED BREAKERS AS "SPARE".

REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY: SELLON, GORDON		DESIGNED BY: SELLON, GORDON			
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		D	2024/01/18	RE-ISSUED FOR TENDER			CHECKED BY: ABUOSBA, MUSTAFA	APPROVED BY: WANG, YI			
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SCALE: AS SHOWN FULL SIZE ONLY ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.							 PROJECT NO. BE20101016 RE-ISSUED FOR TENDER		 NIAGARA REGION PROJECT NO. BE20201016	NIAGARA FALLS TRAIN STATION UPGRADES LIGHTING DEMOLITION PLANS	
		CONTRACT NO. STATION RENOVATION		DWG. NO. E-0003		REV. D		SHEET E-0003			



1 LIGHTING FIRST FLOOR PLAN - NEW
E-0004 SCALE: 1:75

LIGHTING SCHEDULE						
LABEL	MANUFACTURER	CATALOGUE	DESCRIPTION	LAMP OUTPUT	LLF	INPUT POWER
A	GOTHAM ARCHITECTURAL LIGHTING	EVO6 35/50 AR MWD LSS	EVO 6" ROUND, 3500K, 5000LM, MEDIUM WIDE DIST, SEMI-SPECULAR FINISH	5006	0.9	48.66
B	LITHONIA LIGHTING	BLWP4 85L ADP LP835	BLWP 4' 8500 NOMINAL LUMENS, CURVED LINEAR PRISMATIC LENSE, 3500K CCT, 80CRI	8253	0.9	67.98
B1	LITHONIA LIGHTING	BLWP4 60L ADP LP835	BLWP 4' 6000 NOMINAL LUMENS, CURVED LINEAR PRISMATIC LENSE, 3500K CCT, 80CRI	6273	0.9	49.31
D	LITHONIA LIGHTING	CPANL 2x2 24/33/44LM 35K-44LM	CPANL SWITCHABLE LUMEN LED FLAT PANEL, 2x2, 24/33/44LM, 3500 K CCT, - 44LM	4357	0.9	38.96
⊗	LITHONIA LIGHTING	EARM W 1	LED RUNNING MAN SIGN, BATTERY POWERED			
⊕	LITHONIA LIGHTING	ELM2L UVOLT LTP	CONTEMPORARY COMMERCIAL LED EMERGENCY LIGHT, AIMABLE OPTICS, LITHIUM IRON PHOSPHATE BATTERY			



LIGHTING FIRST FLOOR KEY PLAN
SCALE: 1:250

REFERENCE DRAWINGS	ISSUE	REVISIONS				
	D 2024/01/18	RE-ISSUED FOR TENDER				
	C 2023/11/28	ISSUED FOR TENDER				
	B 2023/04/24	ISSUED FOR BUILDING PERMIT				
	A 2022/11/11	PRELIMINARY DESIGN SUBMISSION				
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE

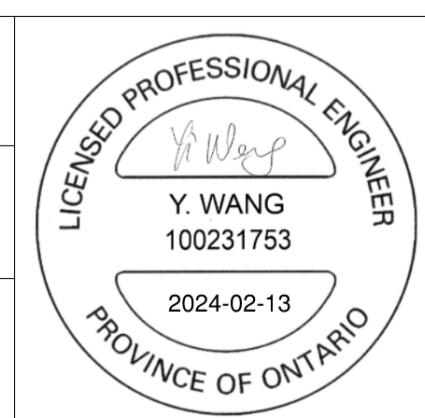
DRAWN BY:
SELLON, GORDON

DESIGNED BY:
SELLON, GORDON

CHECKED BY:
ABUOSBA, MUSTAFA

APPROVED BY:
WANG, YI

SCALE: AS SHOWN FULL SIZE ONLY
ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.



wsp

PROJECT NO. BE20101016

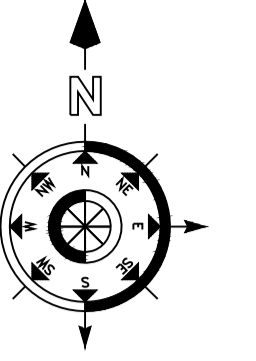
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NIAGARA FALLS TRAIN STATION UPGRADES

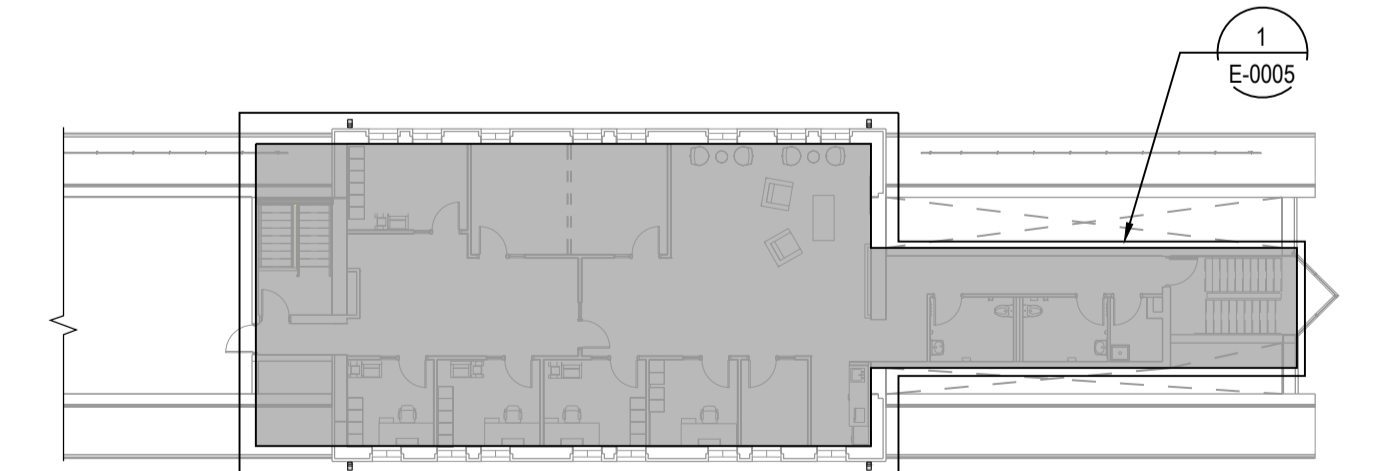
LIGHTING FIRST FLOOR PLAN - NEW

CONTRACT NO. STATION RENOVATION	DWG. NO. E-0004	REV. D	SHEET E-0004
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1 LIGHTING SECOND FLOOR PLAN - NEW
E-0005 SCALE: 1:75

LIGHTING SCHEDULE						
LABEL	MANUFACTURER	CATALOGUE	DESCRIPTION	LAMP OUTPUT	LLF	INPUT POWER
A1	GOTHAM ARCHITECTURAL LIGHTING	EVO6 35/35 AR MWD LSS	EVO 6" ROUND, 80 CRI, 3500K, 3500LM, MEDIUM WIDE DIST, CLEAR, SEMI-SPECULAR FINISH	3364	0.9	33.8
A2	GOTHAM ARCHITECTURAL LIGHTING	EVO6 35/25 AR MWD LSS	EVO 6" ROUND, 80 CRI, 3500K, 2500LM, MEDIUM WIDE DIST, CLEAR, SEMI-SPECULAR FINISH	2410	0.9	24.7
B	LITHONIA LIGHTING	BLWP4 85L ADP LP835	BLWP 4" 8500 NOMINAL LUMENS, CURVED LINEAR PRISMATIC LENSE, 3500K CCT, 80CRI	8253	0.9	67.98
C	LITHONIA LIGHTING	CPANL 2x2 24/33/44LM 35K-44LM	CPANL SWITCHABLE LUMEN LED FLAT PANEL, 2x2, 24/33/44LM, 3500 K CCT, - 44LM	4357	0.9	38.96
⊗	LITHONIA LIGHTING	EARM W 1	LED RUNNING MAN SIGN, BATTERY POWERED			
⊕	LITHONIA LIGHTING	ELM2L UVOLT LTP	CONTEMPORARY COMMERCIAL LED EMERGENCY LIGHT, AIMABLE OPTICS, LITHIUM IRON PHOSPHATE BATTERY			



LIGHTING SECOND FLOOR KEY PLAN
SCALE: 1:250

REFERENCE DRAWINGS	ISSUE	REVISIONS				
	D 2024/01/18	RE-ISSUED FOR TENDER				
	C 2023/11/28	ISSUED FOR TENDER				
	B 2023/04/24	ISSUED FOR BUILDING PERMIT				
	A 2022/11/11	PRELIMINARY DESIGN SUBMISSION				
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE

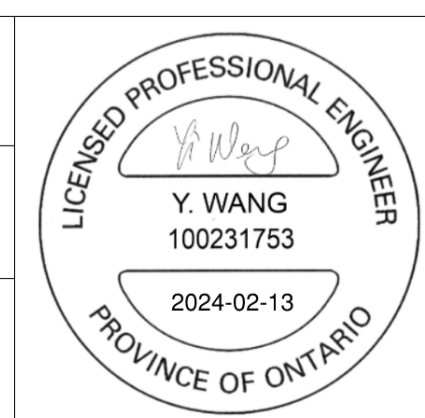
DRAWN BY:
SELLON, GORDON

DESIGNED BY:
SELLON, GORDON

CHECKED BY:
ABUOSBA, MUSTAFA

APPROVED BY:
WANG, YI

SCALE: AS SHOWN FULL SIZE ONLY
ALL DIMENSIONS SHOWN ARE IN
METRES AND/OR MILLIMETRES
UNLESS OTHERWISE NOTED.



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PROJECT NO. BE20101016

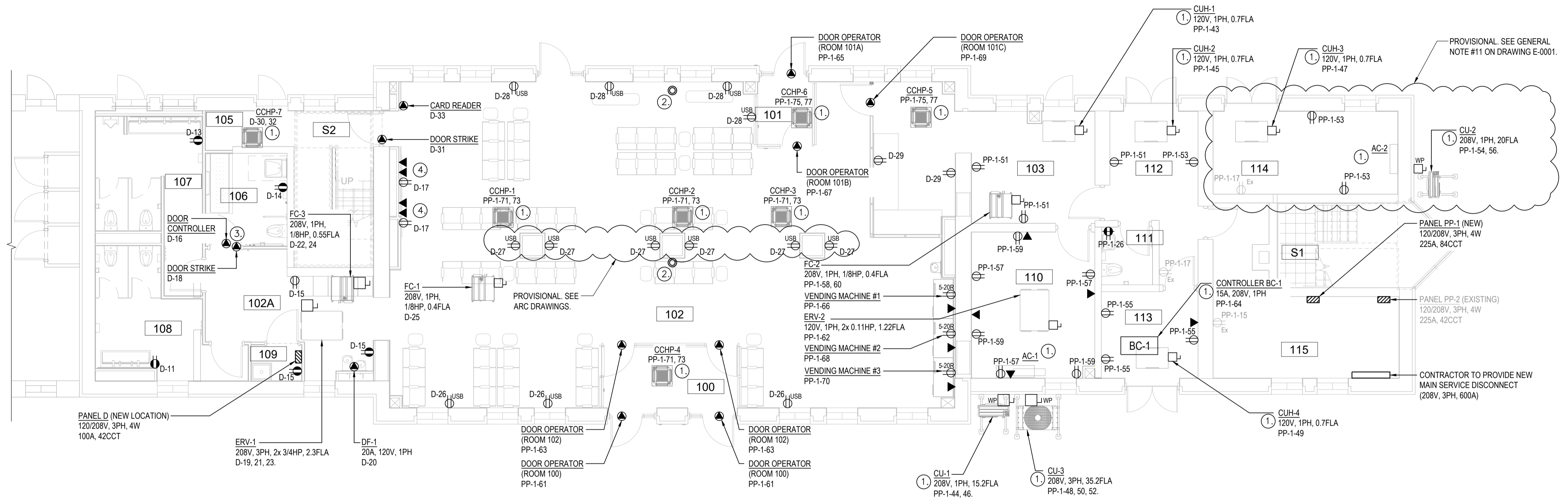
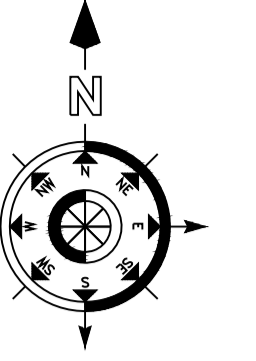
RE-ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES

LIGHTING SECOND FLOOR PLAN - NEW

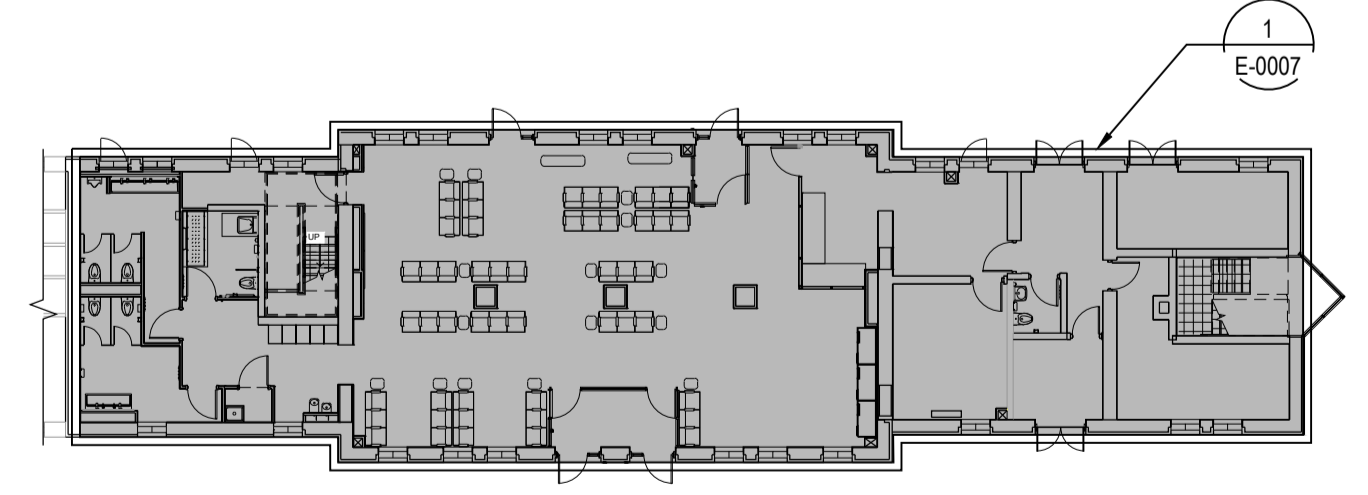
CONTRACT NO. STATION RENOVATION	DWG. NO. E-0005	REV. D	SHEET E-0005
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1 POWER & DATA FIRST FLOOR PLAN - NEW
E-0007 SCALE: 1:75

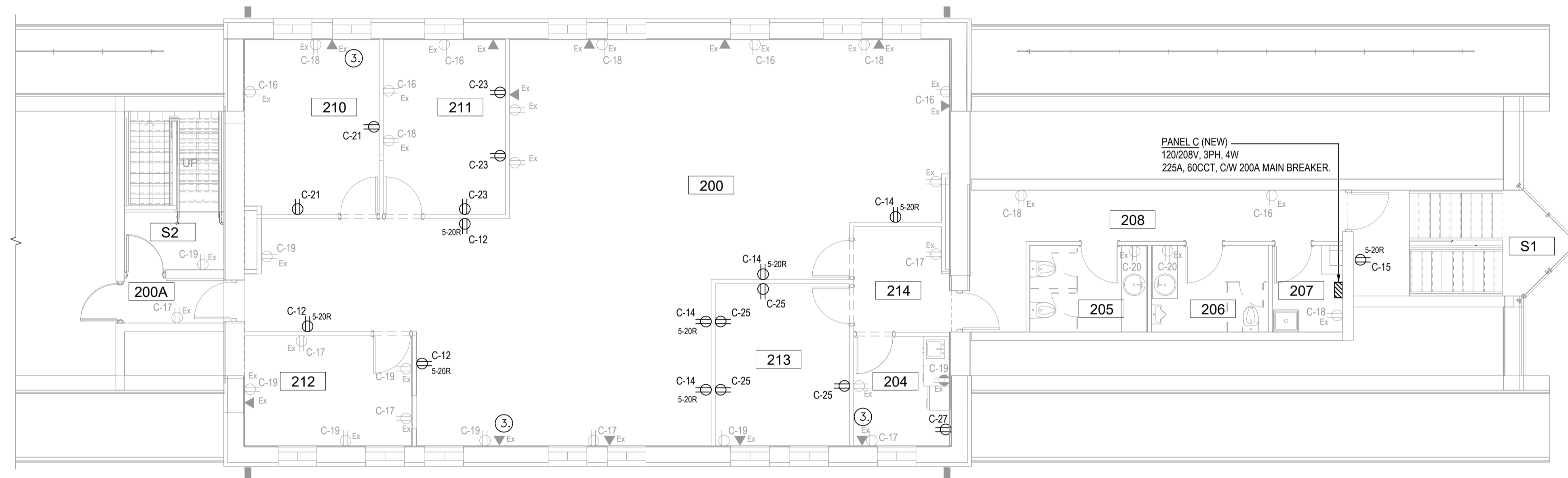
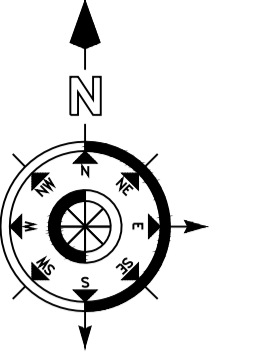
HVAC SCHEDULE ①	
OUTDOOR	INDOOR
CU-1	AC-1
CU-2	AC-2
CU-3	CCHP-1 TO 7

- KEY NOTES**
- CONTRACTOR SHALL READ IN CONJUNCTION WITH M-0012, M-0013, M-0014, AND M-0015 MECHANICAL SCHEDULES FOR FAN COIL, CONDENSING UNIT, AND AC UNIT CONNECTIONS.
 - SECURITY CAMERA TO BE RELOCATED. PROVIDE WIRE AND CONDUIT AS NEEDED TO EXTEND EXISTING FEED.
 - ROOM 106, BARRIER FREE WASHROOM WIRING SCHEMATIC TO REFER TO DETAIL ON DWG E-0010.
 - COORDINATE DEVICE HEIGHT WITH HEIGHT OF MONITOR SCREENS.



POWER FIRST FLOOR KEY PLAN
SCALE: 1:250

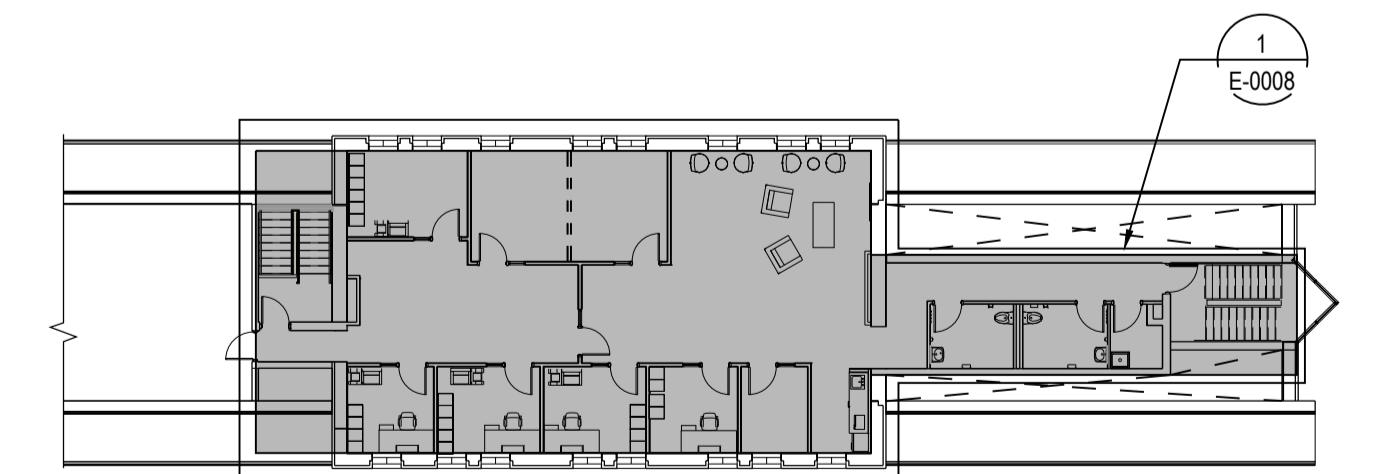
REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY: SELLON, GORDON	DESIGNED BY: SELLON, GORDON		 PROJECT NO. BE20101016 RE-ISSUED FOR TENDER	 NIAGARA REGION PROJECT NO. BE20201016	NIAGARA FALLS TRAIN STATION UPGRADES POWER & DATA FIRST FLOOR PLAN - NEW			
			CHECKED BY: ABUOSBA, MUSTAFA	APPROVED BY: WANG, YI				CONTRACT NO.	DWG. NO.	REV.	SHEET
								STATION RENOVATION	E-0007	D	E-0007
DWG. NO.	TITLE	NO.	DATE	ISSUED FOR				REV.	DATE		
		D	2024/01/18	RE-ISSUED FOR TENDER							
		C	2023/11/28	ISSUED FOR TENDER							
		B	2023/04/24	ISSUED FOR BUILDING PERMIT							
		A	2022/11/11	PRELIMINARY DESIGN SUBMISSION							



1 POWER & DATA SECOND FLOOR PLAN - NEW
E-0008 SCALE: 1:75

HVAC SCHEDULE ①	
OUTDOOR	INDOOR
CU-1	AC-1
CU-2	AC-2
CU-3	CCHP-1 TO 7

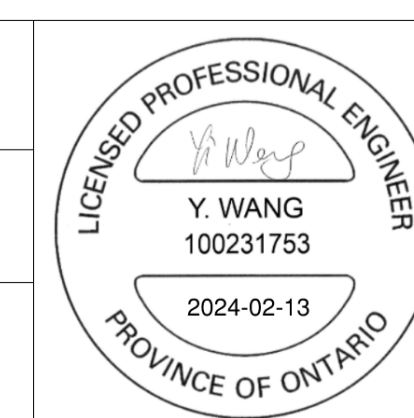
- KEY NOTES**
- CONTRACTOR SHALL READ IN CONJUNCTION WITH M-0012, M-0013, M-0014, AND M-0015 MECHANICAL SCHEDULES FOR FAN COIL, CONDENSING UNIT, AND AC UNIT CONNECTIONS.
 - CONTRACTOR TO VERIFY ON-SITE AND REUSE EXISTING CIRCUIT AND CONDUIT TO FEED NEW EQUIPMENT.
 - CONTRACTOR TO REWORK AND FINISH EXISTING DATA OUTLET, IF NEEDED.



POWER SECOND FLOOR KEY PLAN
SCALE: 1:250

REFERENCE DRAWINGS	ISSUE	REVISIONS	DRAWN BY: SELLON, GORDON	DESIGNED BY: SELLON, GORDON		
			CHECKED BY: ABUOSBA, MUSTAFA	APPROVED BY: WANG, YI		
	D 2024/01/18	RE-ISSUED FOR TENDER				
	C 2023/11/28	ISSUED FOR TENDER				
	B 2023/04/24	ISSUED FOR BUILDING PERMIT				
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DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE

SCALE: AS SHOWN FULL SIZE ONLY
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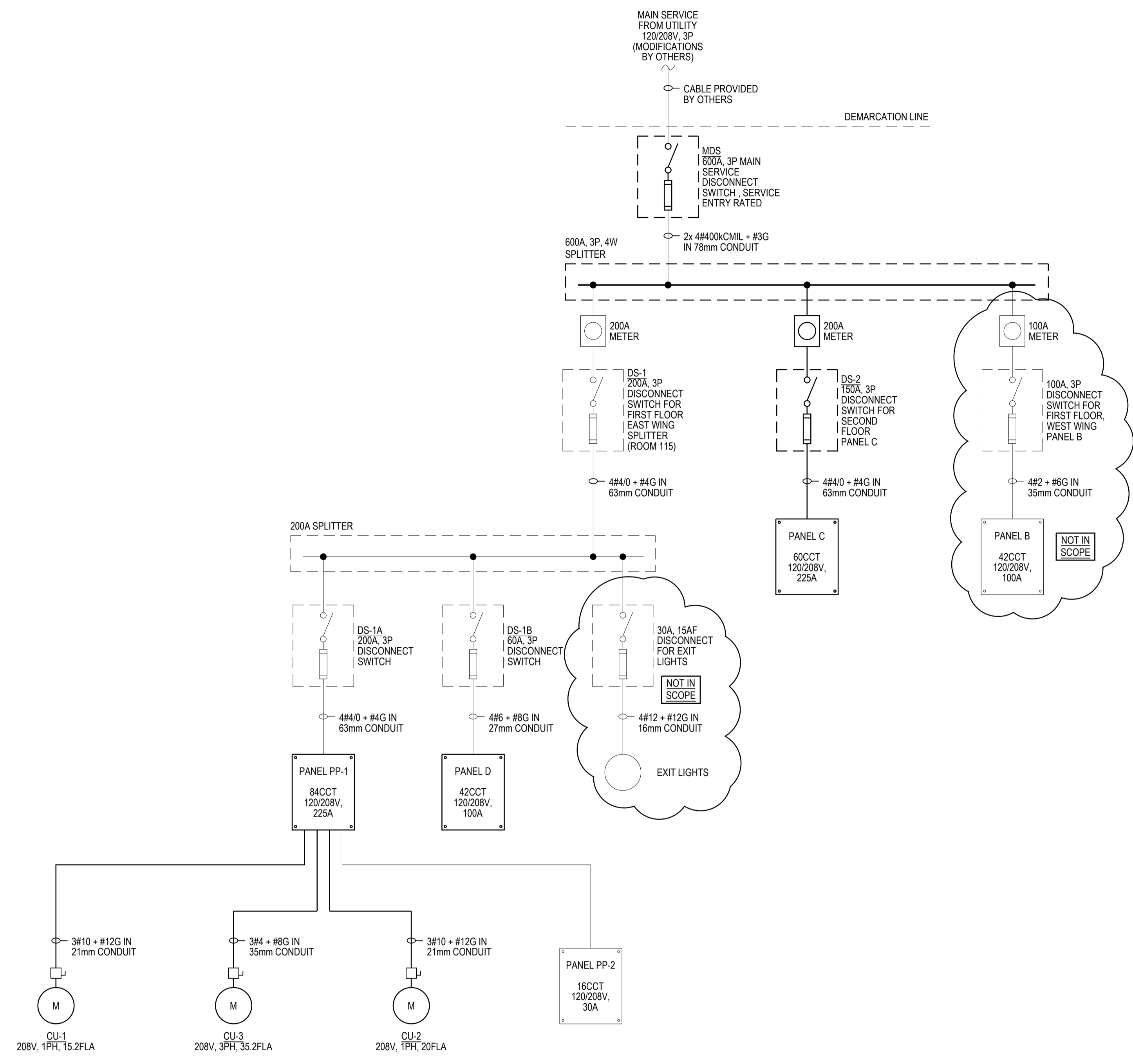
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PROJECT NO. BE20101016
RE-ISSUED FOR TENDER



NIAGARA FALLS TRAIN STATION UPGRADES
POWER & DATA SECOND FLOOR PLAN - NEW

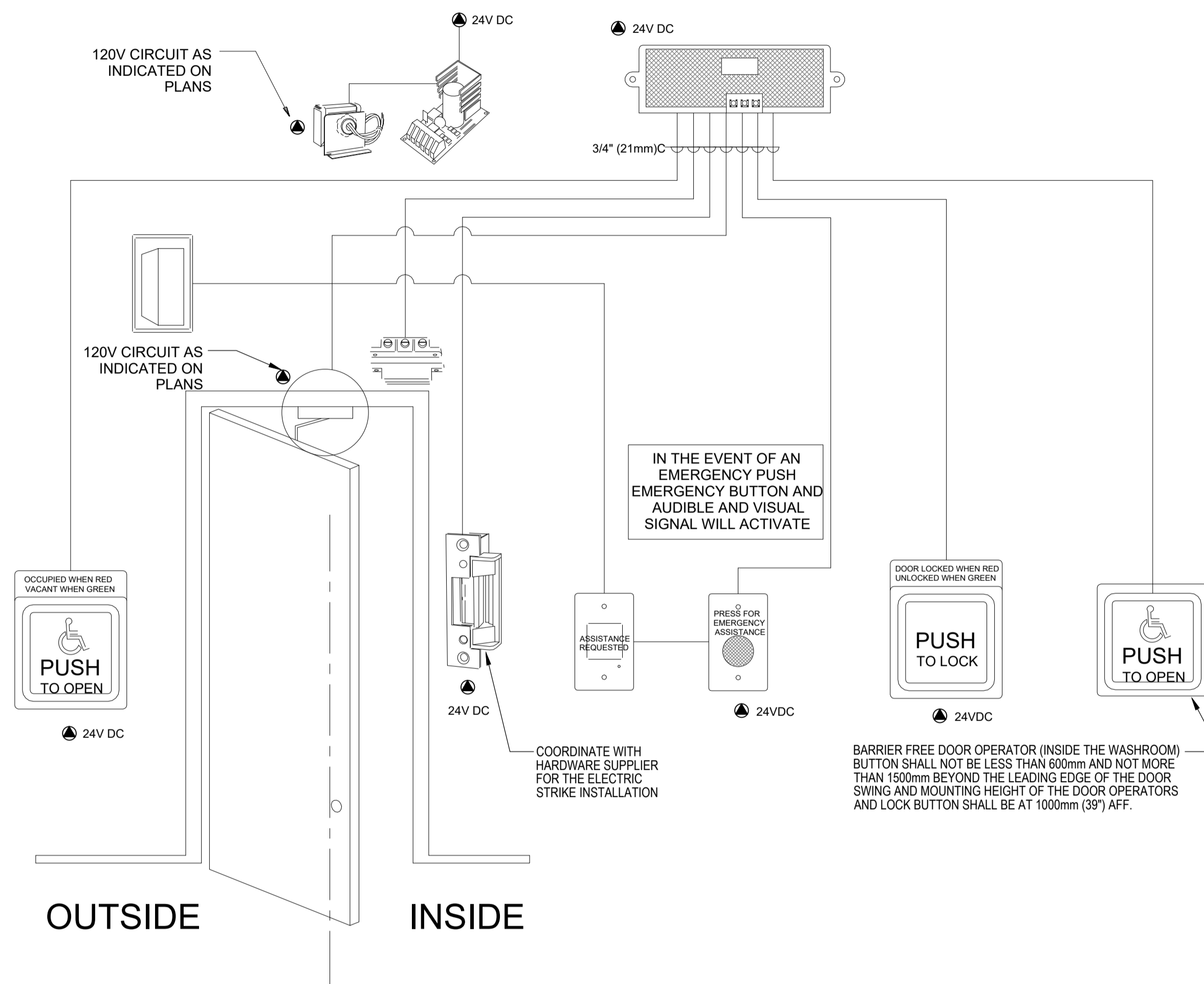
CONTRACT NO. STATION RENOVATION	DWG. NO. E-0008	REV. D	SHEET E-0008
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NIAGARA REGION PROJECT NO. BE20201016



1 SINGLE LINE DIAGRAM - NEW
E-0009 SCALE: NTS

REFERENCE DRAWINGS		ISSUE		REVISIONS		DRAWN BY:	DESIGNED BY:				NIAGARA FALLS TRAIN STATION UPGRADES			
				ABUOSBA, MUSTAFA	WANG, YI	SINGLE LINE DIAGRAM - NEW								
				SCALE: AS SHOWN FULL SIZE ONLY ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.		RE-ISSUED FOR TENDER								
		D	2024/01/18	RE-ISSUED FOR TENDER							CONTRACT NO.	DWG. NO.	REV.	SHEET
		C	2023/11/28	ISSUED FOR TENDER							STATION RENOVATION	E-0009	D	E-0009
		B	2023/04/24	ISSUED FOR BUILDING PERMIT							NIAGARA REGION PROJECT NO. BE20101016			
		A	2022/11/11	PRELIMINARY DESIGN SUBMISSION										
DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE								



1 UNIVERSAL WASHROOM DEVICE ROUGH-INS (TYP.)
E-0010 SCALE: NTS

DWG NO.	TITLE	NO.	DATE	ISSUED FOR	REV.	DATE
		D	2024/01/18	RE-ISSUED FOR TENDER		
		C	2023/11/28	ISSUED FOR TENDER		
		B	2023/04/24	ISSUED FOR BUILDING PERMIT		
		A	2022/11/11	PRELIMINARY DESIGN SUBMISSION		

REFERENCE DRAWINGS	ISSUE	REVISIONS

DRAWN BY: SELLON, GORDON	DESIGNED BY: SELLON, GORDON
CHECKED BY: ABUOSBA, MUSTAFA	APPROVED BY: WANG, YI
SCALE: AS SHOWN FULL SIZE ONLY ALL DIMENSIONS SHOWN ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED.	

LICENSED PROFESSIONAL ENGINEER

Y. WANG
100231753


2024-02-13

PROVINCE OF ONTARIO

wsp

PROJECT NO. BE20101016

RE-ISSUED FOR TENDER



Niagara Region

NIAGARA FALLS TRAIN STATION UPGRADES		UNIVERSAL WASHROOM DETAILS	
CONTRACT NO. STATION RENOVATION	DWG. NO. E-0010	REV. D	SHEET E-0010

NIAGARA REGION PROJECT NO. BE20201016



Acuity Controls Drawing Package

LC0.1	SYSTEM NOTES
LC0.2	DETAILS & WIRING DIAGRAMS
LC1.0 SERIES	LAYOUTS

Drawing Title: ACUITY CONTROLS DRAWING PACKAGE COVER SHEET		Prepared For: WSP /MM/ MARKHAM	
Revision	A	Date	11/9/2023
Date:	11/7/2023	Scale:	NOT TO SCALE
Drawn By:	M.R.	Project #:	23-24860
DWG Ref:		Sheet:	LC0.0

Revision	Date
A	11/9/2023
Date:	11/7/2023
Scale:	NOT TO SCALE
Drawn By:	M.R
Project #:	23-24860
DWG Ref:	
Sheet:	LC0.1

Load Types

LINE VOLTAGE INCANDESCENT - NON-PHASE DEPENDENT FOR DIMMING.

MAGNETIC LOW VOLTAGE INCANDESCENT - ALLOWABLE IN FORWARD PHASE CONTROL MODE ONLY. TRANSFORMER MUST BE RATED FOR DIMMING BY ITS MANUFACTURER. ADD 25% TO LAMP WATTAGE TO ALLOW FOR TRANSFORMER LOSS AND TO CALCULATE TOTAL LOAD.

FLUORESCENT - ALLOWABLE WITH 2-WIRE BALLAST. 0-10VDC BALLASTS, SOME 3-WIRE AND SWITCHED DEPENDING ON SYSTEM COMPATIBILITY. VERIFY CONTROL TYPES WITH YOUR REGIONAL SUPPORT TEAM.

LED - DIMMING ALLOWED PER LED DRIVER MANUFACTURER SPECIFICATIONS. VERIFY CONTROL TYPES WITH YOUR REGIONAL SUPPORT TEAM.

NEON and COLD CATHODE - ALLOWABLE IN FORWARD PHASE CONTROL MODE ONLY. BALLAST MUST BE RATED FOR DIMMING BY ITS MANUFACTURER AND BE NORMAL (LOW) POWER FACTOR. CONNECTED LOAD MUST NOT EXCEED 50% OF THE DIMMER'S NOMINAL RATING.

MOTORS - NO DIMMING ALLOWED. SWITCHED CONTROL SOURCE ONLY.

ELECTRONIC LOW VOLTAGE INCANDESCENT - ALLOWABLE, NORMALLY IN REVERSE PHASE CONTROL MODE ONLY. ELV TRANSFORMER MUST BE RATED FOR DIMMING BY ITS MANUFACTURER.

HID - DIMMING NOT ALLOWED UNLESS WITH DIMMABLE HID DRIVER. OTHERWISE, MUST BE ON SWITCHED CONTROL SOURCE.

EMERGENCY - PLEASE CONTACT YOUR REGIONAL SUPPORT TEAM TO VERIFY EMERGENCY CONTROLS NECESSARY BASED ON SYSTEM REQUIREMENTS.

SSI Notes

ONE POWER PACK IS NEEDED PER CIRCUIT/ZONE TO BE CONTROLLED BY A MAXIMUM OF 14 LOW VOLTAGE SENSORS. POWER PACK PLACEMENT ON DRAWINGS IS FOR COUNTING ONLY. FINAL PLACEMENT OF POWER PACK IS UP TO CONTRACTOR/ENGINEER. PLEASE RECHECK COUNTS TO VERIFY THE NUMBER OF POWER PACKS NEEDED TO MAKE A COMPLETE SYSTEM. THE MAXIMUM NUMBER OF POWER PACKS THAT CAN BE CONTROLLED BY A GROUP OF SENSORS IS 5. IF YOU HAVE MORE THEN 5 CIRCUITS CONTROLLING A SPACE YOU WILL EITHER HAVE TO BREAK UP THE SPACE INTO ZONES OR USE ONE POWER PACK PER LIGHTING CONTACTOR TO PULL IN THE CIRCUITS.

SENSOR PLACEMENT AND TYPES WERE PLACED WITH CURRENT PROJECT INFORMATION. ADDITIONAL SENSORS AND TYPES OF SENSORS MAY BE REQUIRED TO PROVIDE COMPLETE COVERAGE DEPENDING ON DRAWING CHANGES, EMS/BMS, FINAL PARTITION HEIGHT/PLACEMENT, FURNITURE PLACEMENT, EQUIPMENT HEIGHT/PLACEMENT AND SHELVING HEIGHT/PLACEMENT.

FOR MAXIMUM DISTANCE USING CEILING MOUNTED 360° SENSORS ROTATE THE SENSOR CLOCKWISE SO THAT THE SCREW AXIS IS POSITIONED 7.5' OFF THE ENTRANCE AXIS. WHEN WALKING ACROSS A SENSOR'S BEAM, DETECTION WILL OCCUR AT APPROXIMATELY LONGEST DISTANCE. (REFER TO SPECIFICATION SHEET FOR PICTORIAL OF ALIGNMENT)

SENSOR MASKING KITS MAY BE REQUIRED TO LIMIT COVERAGE DEPENDING ON YOUR REQUIREMENTS.

MAXIMUM CABLE LENGTH FROM START DEVICE TO END DEVICE IS 1800'. MANUFACTURER IS NOT RESPONSIBLE FOR SYSTEMS EXCEEDING CABLING PARAMETERS.

nLight System Notes

EVERY NLIGHT ENABLED DEVICE (INCLUDING NLIGHT EANABLED FIXTURES) IS FURNISHED WITH (1) PERMANENTLY ADHERED ID TAG AND (1) MATCHING, PARTIALLY ADHERED ID TAG TO BE PLACED ON THE RISER DIAGRAM SHEET OR THE LIGHTING CONTROL LAYOUT SHEET, PROVIDED AS PART OF AN NLIGHT SUBMITTAL. THIS SHALL BE DONE DURING INSTALLATION AND PRIOR TO FACTORY STARTUP. FAILURE TO COMPLY MAY RESULT IN STARTUP DELAYS AND ADDITIONAL COSTS AT THE CONTRACTOR'S EXPENSE. DO NOT PLACE DEVICE ID STICKERS ON FLOOR PLAN UNLESS REQUIRED TO EXECUTE N FLOORPLAN OR ENVISION SERVICES, REFERENCE N FLOORPLAN SERVICE NOTES OR ENVISION SERVICE NOTES ON THIS SHEET FOR SPECIFIC REQUIREMENTS.

ONE RELAY PACK OR NLIGHT ENABLED FIXTURE IS NEEDED PER CIRCUIT/ZONE TO BE CONTROLLED AND CAN RESIDE WITHIN SENSORS, WALLPODS, OR RELAY PACKS. POWER PACK PLACEMENT ON DRAWINGS IS FOR COUNTING ONLY. FINAL PLACEMENT IS UP TO DISCRETION OF CONTRACTOR/ENGINEER. PLEASE RECHECK COUNTS TO VERIFY THE NUMBER OF RELAYS NEEDED TO SWITCH ALL DESIRED LOADS. RELAY PACKS AND POWER SUPPLIES REQUIRE A CONSTANT HOT. AN UNSWITCHED HOT BEING SUPPLIED TO RELAY PACKS MAY RESULT IN COMMUNICATION LOSS WHEN POWER IS NOT AVAILABLE.

BRIDGES, RELAYS, POWER PACKS, WALLPODS, AND SENSORS ON DRAWINGS WERE PLACED WITH INFORMATION PROVIDED AT TIME OF DESIGN. ADDITIONAL BRIDGES AND/OR SENSORS MAY BE REQUIRED DEPENDING ON BUILDING CHANGES. FINAL PARTITION HEIGHT/PLACEMENT, FURNITURE PLACEMENT, EQUIPMENT HEIGHT/PLACEMENT AND SHELVING HEIGHT/PLACEMENT.

THE LAYOUT OF THE NETWORK BACKBONE (BRIDGES AND GATEWAYS) HAS BEEN PLACED IN A SEPARATE TREE DIAGRAM AND NOT ON THE ACTUAL LAYOUT. FINAL PLACEMENT OF THE BRIDGE(S) AND GATEWAY(S) DEVICES SHALL BE AT THE CONTRACTOR/ENGINEER DISCRETION.

ALL DEVICES HAVE RJ45 FEMALE PORTS. MAKING NETWORK CONTROL CABLES IS REQUIRED. T568B TERMINATIONS ARE RECOMMENDED. IT IS IMPERATIVE THAT ALL NETWORK CONTROL CABLES BE TESTED WITH A LAN CABLE TESTER TO VERIFY PROPER TERMINATIONS.

DAISY-CHAINED DEVICES SHOULD BE POWERED UP AND WORKING ON DEFAULT PROGRAMMING PRIOR TO CONNECTION TO BRIDGE OR GATEWAYS.

LOW VOLTAGE NETWORK CONTROL CABLE (CAT5/E6) RUNS FOR LOCAL ZONES. HOMERUNS AND BACKBONE SHOULD BE WHITE WITH CABLES LABELED.

CONTRACTOR TO VERIFY BLINK/DIAGNOSTIC CODES (VISIT [HTTP://NLIGHTCONTROLS.COM/WP-CONTENT/UPLOADS/NLIGHT_POCK_ET_GUIDE.PDF](http://nlightcontrols.com/wp-content/uploads/nlight_pock_et_guide.pdf)) WHEN CONNECTING GATEWAYS/BRIDGES TO ZONES.

MAXIMUM CABLE LENGTH FROM START DEVICE TO END DEVICE IS 1500' INCLUDING HOMERUN TO BRIDGE DEVICE. IF PRESENT. MANUFACTURER IS NOT RESPONSIBLE FOR SYSTEMS EXCEEDING CABLING PARAMETERS.

Disclaimer

THIS CONTROLS SYSTEM LAYOUT DIAGRAM IS NOT A PROFESSIONAL ENGINEERING DRAWING, AND IS PROVIDED ONLY FOR INFORMATIONAL PURPOSES AND TO HELP THE CUSTOMER OR END-USER (AS APPLICABLE) UNDERSTAND HOW VARIOUS CONTROLS DEVICES ARE ARRANGED AND CONNECT TO EACH OTHER. THIS CONTROLS SYSTEM LAYOUT DIAGRAM IS STRICTLY BASED ON THE INFORMATION PROVIDED TO ACUITY BRANDS, AND IS PROVIDED WITHOUT WARRANTY AS TO ACCURACY, COMPLETENESS, RELIABILITY OR OTHERWISE. IF THE INFORMATION (INCLUDING BUT NOT LIMITED TO FLOOR PLANS, REFLECTED CEILING PLANS, ELECTRICAL PLANS AND SPECIFICATIONS) PROVIDED TO ACUITY BRANDS IS INCOMPLETE OR NOT CURRENT (I.E., NEWER VERSIONS EXIST), THE ACCURACY OF THE LAYOUT DIAGRAM MAY BE ADVERSELY AFFECTED. ONCE THIS CONTROLS SYSTEM LAYOUT DIAGRAM IS RECEIVED BY THE CUSTOMER OR END-USER (AS APPLICABLE), IT IS THE OBLIGATION OF THE CUSTOMER OR END-USER (AS APPLICABLE) TO CONSULT WITH A PROFESSIONAL ENGINEERING ADVISOR TO DETERMINE WHETHER THE PROPOSED DESIGN MEETS THE APPLICABLE PROJECT REQUIREMENTS FOR THE CONTROLS SYSTEMS PERFORMANCE, CODE COMPLIANCE, SAFETY, SUITABILITY AND EFFECTIVENESS FOR USE IN A PARTICULAR APPLICATION. IN NO EVENT WILL ACUITY BRANDS BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF THIS CONTROLS SYSTEM LAYOUT DIAGRAM.

General System Notes

ON DIGITAL SYSTEMS, ALL DEVICES TO BE CONNECTED IN A DAISY CHAIN PATTERN SO THAT THE FIRST AND LAST DEVICE IN THE CHAIN HAS AN OPEN PORT.

ON DIGITAL SYSTEMS, CONTRACTOR SHALL NOTE AND LABEL ADDRESS AND LOCATION OF EACH DEVICE ON THE SYSTEM ONE-LINE DIAGRAMS OR SYSTEM LAYOUT DRAWINGS AT TIME OF INSTALLATION.

ONE-LINE DIAGRAMS INDICATE THE REQUIRED GROUPING OF WIRES, NOT THE NUMBER OR SIZE OF CONDUITS.

WIRING SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE (NEC) AND APPLICABLE LOCAL CODES, INCLUDING PROVISION OF EQUIPMENT GROUNDING AS REQUIRED BY THE NEC.

POWER CONDUCTORS SHALL BE SIZED PER THE NEC AMPACITY TABLES (ARTICLE 310), INCLUDING ADJUSTMENT FACTOR AND NEUTRAL CONDUCTOR REQUIREMENTS (FEED AND BRANCH NEUTRAL CONDUCTORS MUST BE COUNTED AS CURRENT CARRYING CONDUCTORS). RUN SEPARATE NEUTRAL CONDUCTORS FOR EACH DIMMED CIRCUIT.

FOR 0-10VDC DIMMING SYSTEMS, VIOLET AND GRAY CONDUCTORS ARE FOR 0-10VDC LOW VOLTAGE TERMINATIONS ONLY. NEVER TERMINATE LINE VOLTAGE (120/230/277VAC) TO VIOLET AND GRAY.

CONTRACTOR IS RESPONSIBLE FOR ALL CONTROL TERMINATIONS. NO SPLICES ARE PERMITTED IN CONTROL WIRING.

POWER AND CONTROL CONDUCTORS MUST NOT SHARE THE SAME RACEWAY OR CONDUIT.

LIGHTING CONTROL EQUIPMENT MUST BE INSTALLED, MAINTAINED, AND OPERATED IN AN "OFFICE CLEAN" DRY ENVIRONMENT, INDOOR DRY LOCATIONS ONLY. 10% - 90% RELATIVE HUMIDITY; AMBIENT TEMPERATURE 0° - 40°C (32° - 104°F) - 0° - 35°C (32° - 95°F) RECOMMENDED.

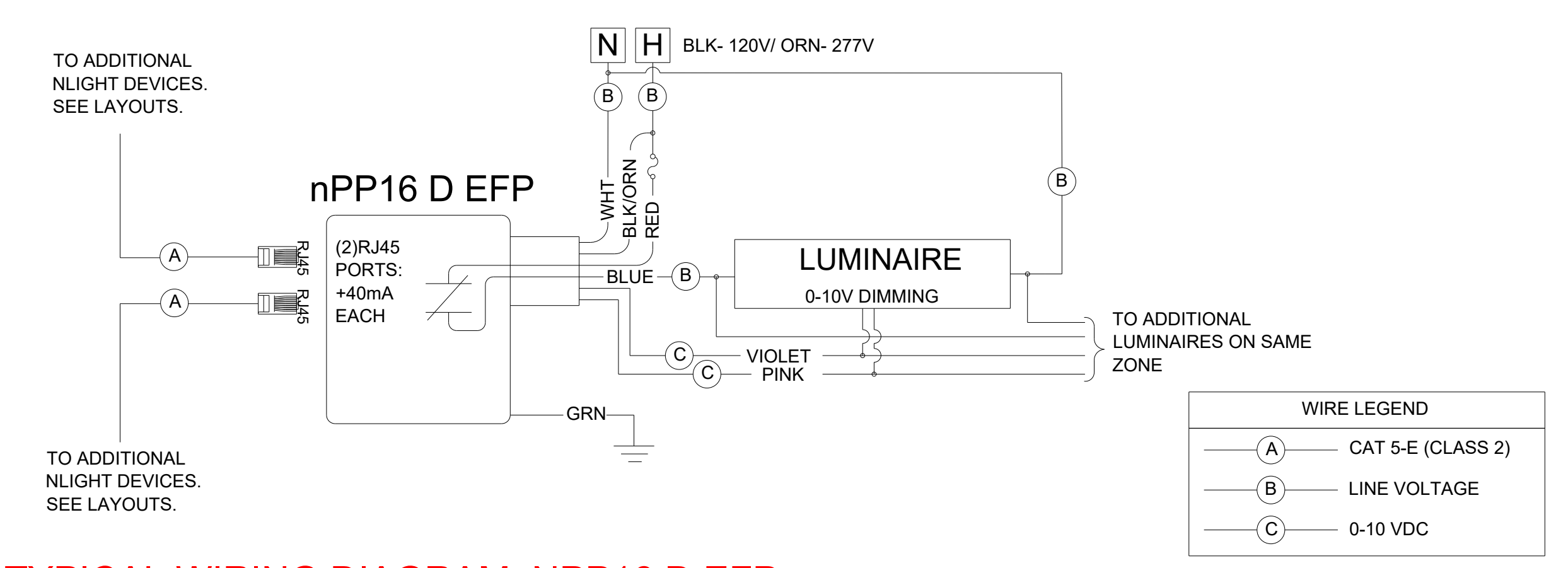
SENSORS IN ELECTRICAL/MECHANICAL LOCATIONS NEED TO BE VERIFIED WITH AUTHORITY HAVING JURISDICTION. REFER TO NEC 110.26.D.

RELAY AND DIMMER PANEL SCHEDULES SHOULD CONTAIN BREAKER PANEL INPUTS AS WELL AS ZONES/AREAS CONTROLLED.

VERIFY MAXIMUM CABLE LENGTHS BASED ON CONTROL SYSTEM. MANUFACTURER IS NOT RESPONSIBLE FOR SYSTEMS EXCEEDING CABLING PARAMETERS.

LOW VOLTAGE CABLE MUST BE INSTALLED AT LEAST 12 INCHES FROM ALL LINE VOLTAGE CONDUCTORS EXCEPT TO CROSS OR MAKE TERMINATIONS. CAT. 5 CABLE MUST BE KEPT AWAY FROM ALL EMF DEVICES SUCH AS BALLASTS OR TRANSFORMERS.

FOR ADDITIONAL TECH SUPPORT AND INSTALLATION INFORMATION PLEASE CALL 1.800.535.2465

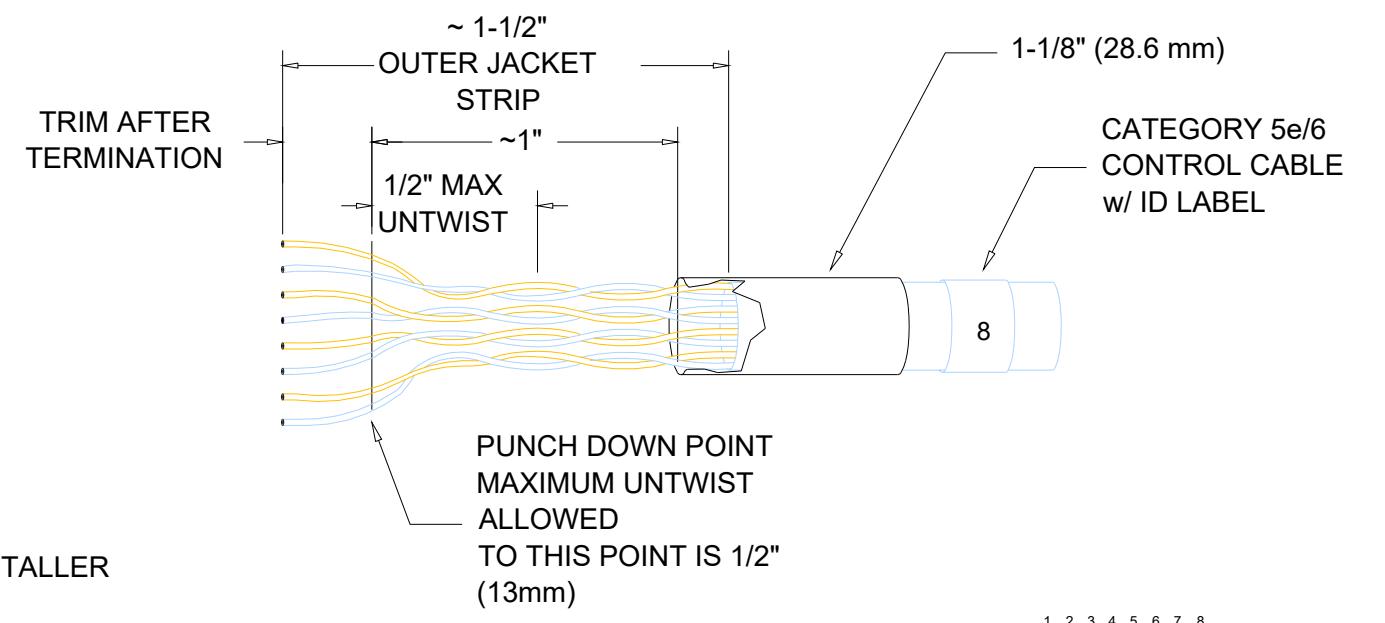


TYPICAL WIRING DIAGRAM: NPP16 D EFP

N.T.S.

TIA / EIA-568-B CABLING STANDARD TERMINATION

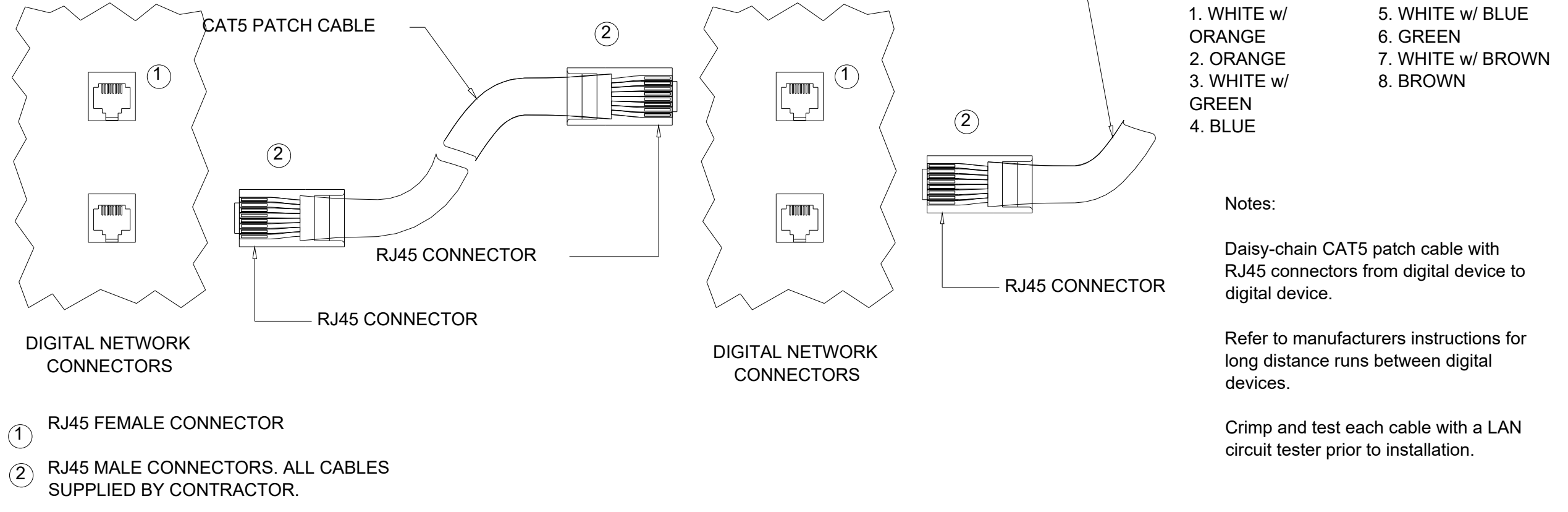
Function	PAIR #	PIN OUT (T568B)	Wire Color
(T1)	1	5	WHITE w/ BLUE
(R1)	1	4	BLUE
Tx + (T2)	2	1	WHITE w/ ORANGE
Tx - (R2)	2	2	ORANGE
Rx + (T3)	3	3	WHITE w/ GREEN
Rx - (R3)	3	6	GREEN
(T4)	4	7	WHITE w/ BROWN
(R4)	4	8	BROWN



TERMINATION & TESTING OF CAT5 CABLES MUST BE DONE BY A QUALIFIED NETWORK INSTALLER

- Cable termination requirements :
- Strip off outer jacket - approximately 1-1/2" (37.6 mm)
 - Terminate approximately 1/2" (12.2 mm) from end of conductors on type 110 punch down block or connector per schedule (568b) - maximum untwist of conductors to terminations is 1/2" (12.2 mm) - trim excess leads.

SEE SYSTEM SPECIFIC NOTES ON SHEET LC0.1 FOR MAXIMUM CABLE LENGTHS.



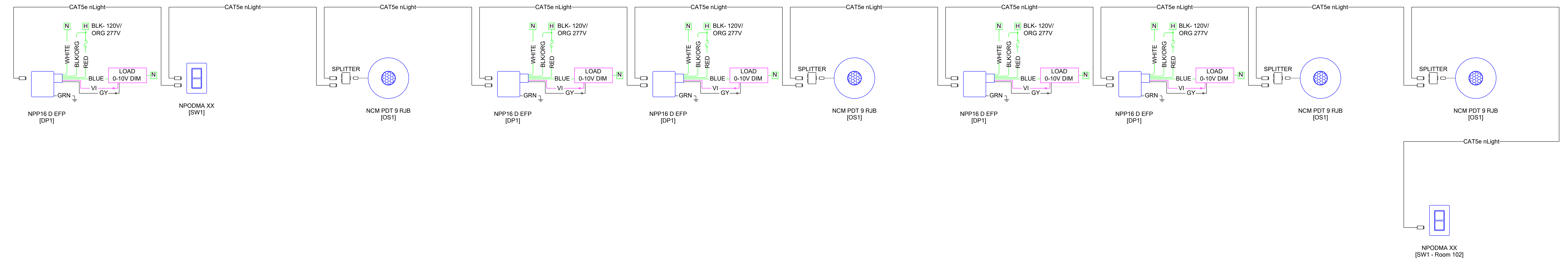
1. WHITE w/ ORANGE
2. ORANGE
3. WHITE w/ GREEN
4. BLUE
5. WHITE w/ BLUE
6. GREEN
7. WHITE w/ BROWN
8. BROWN

Notes:
 Daisy-chain CAT5 patch cable with RJ45 connectors from digital device to digital device.
 Refer to manufacturers instructions for long distance runs between digital devices.
 Crimp and test each cable with a LAN circuit tester prior to installation.

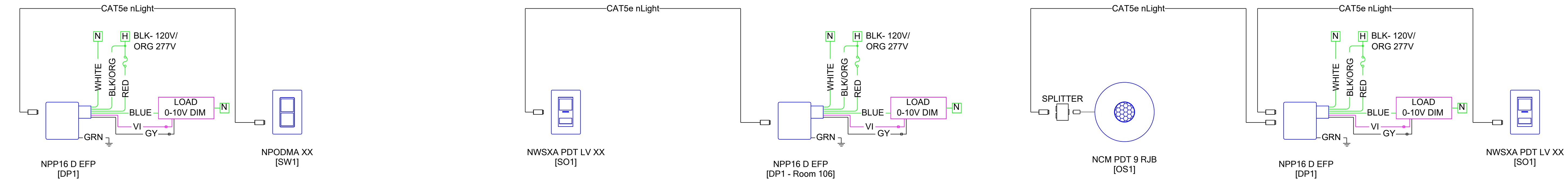
CAT5E/6 CABLE TERMINATION

N.T.S.

Revision	Date
A	11/9/2023
Date:	11/7/2023
Scale:	NOT TO SCALE
Drawn By:	M.R
Project #:	23-24860
DWG Ref:	
Sheet:	Details 1



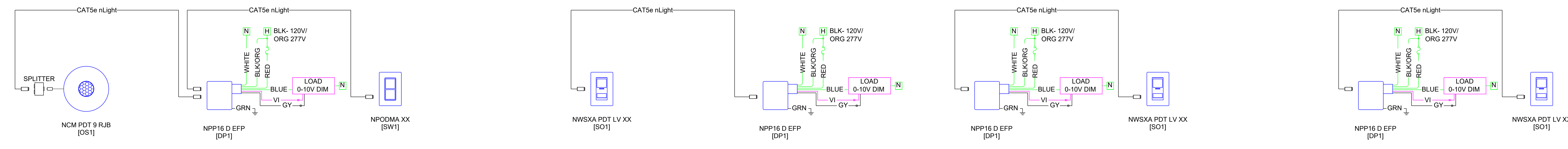
2 nLight - Room 102
E-0005



3 nLight - Room 103
E-0005

4 nLight - Room 106
E-0005

5 nLight - Room 107
E-0005

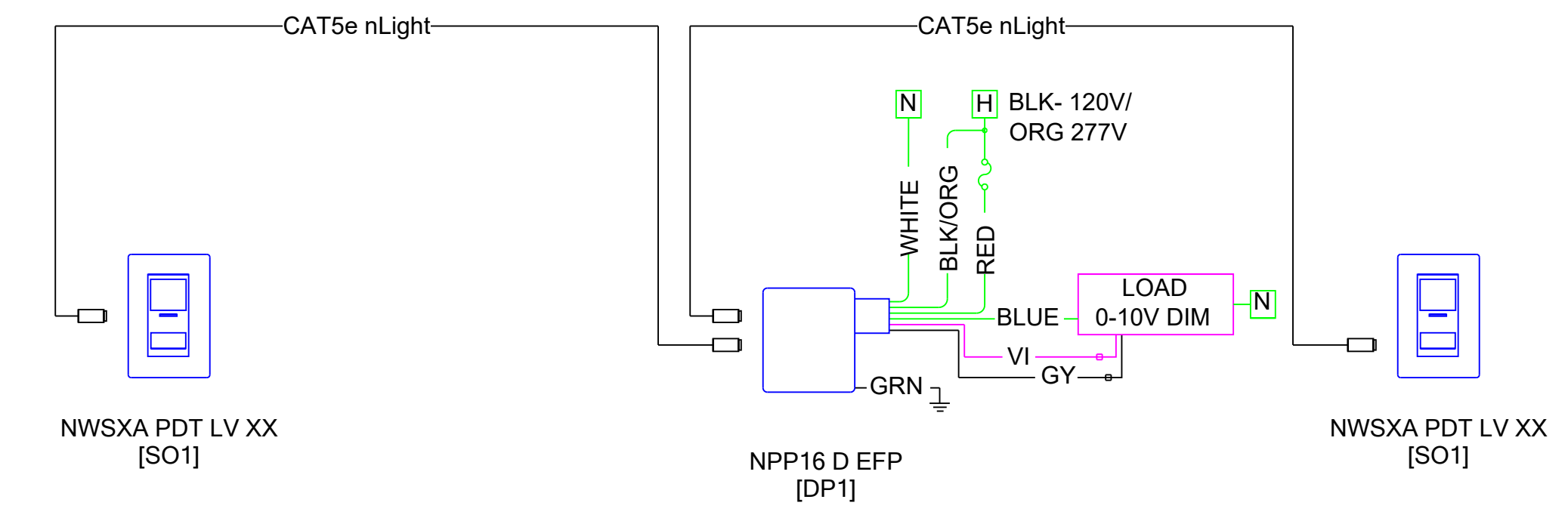


6 nLight - Room 108
E-0005

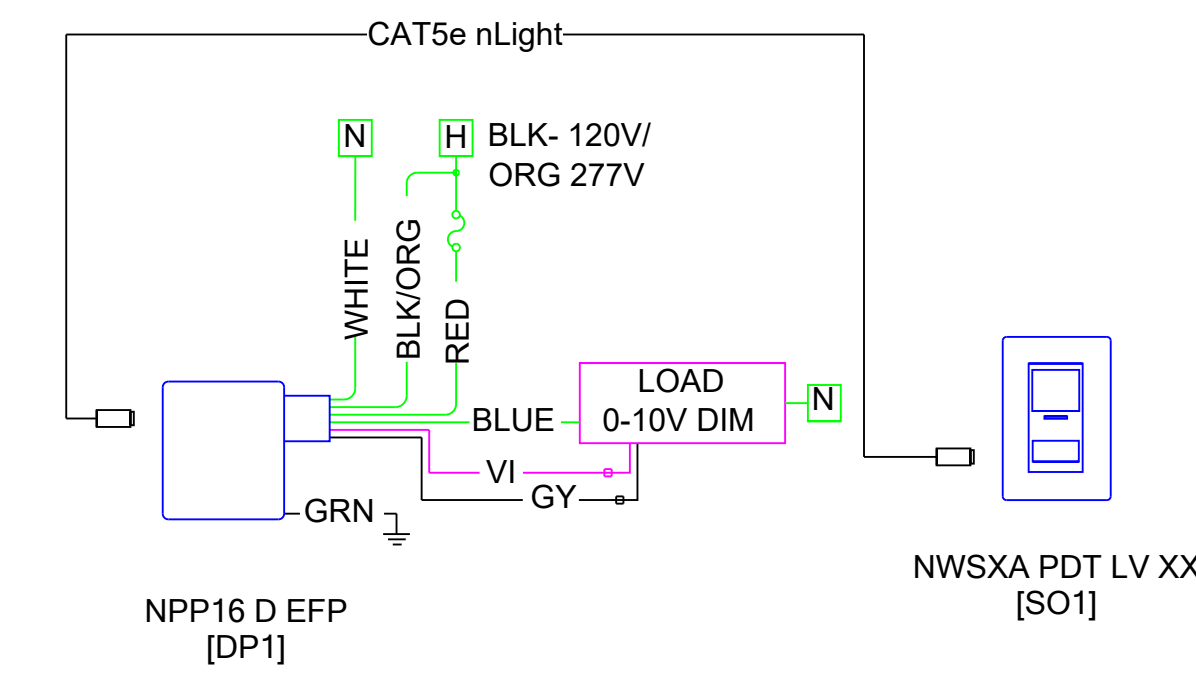
7 nLight - Room 109
E-0005

8 nLight - Room 110
E-0005

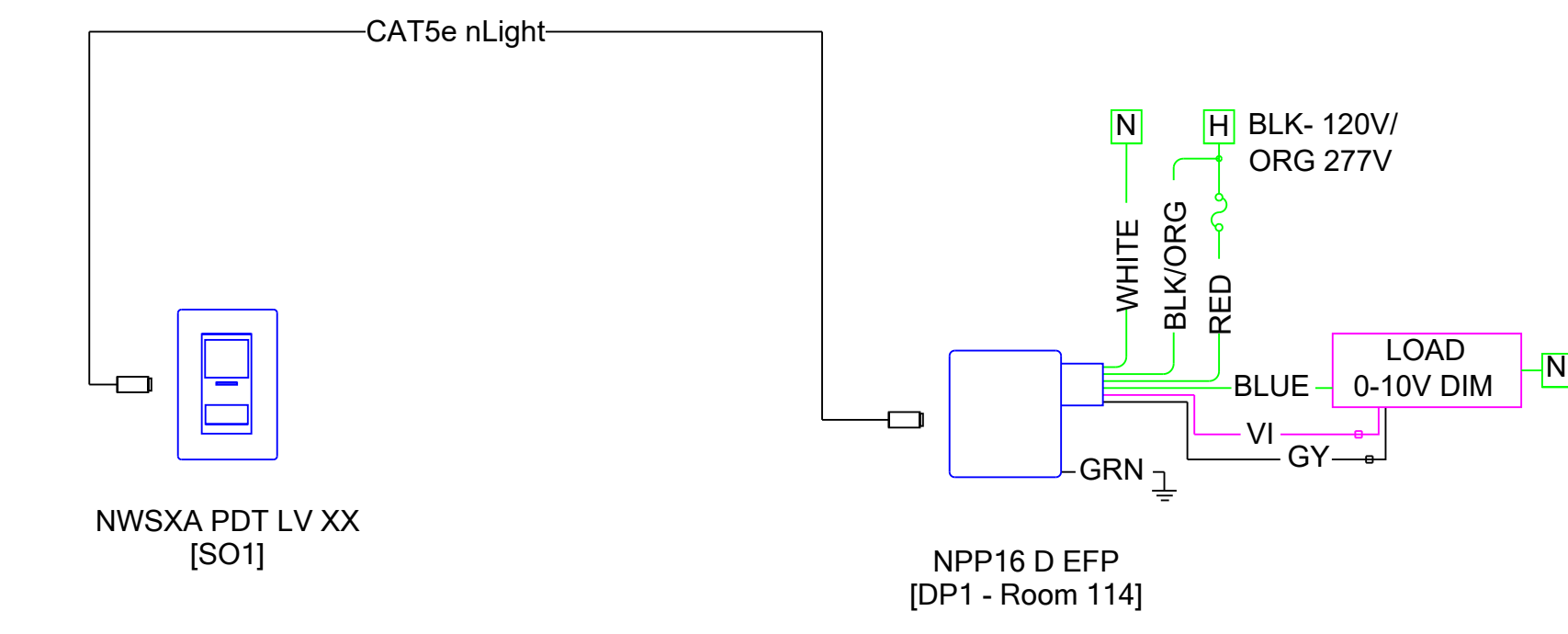
9 nLight - Room 111
E-0005



10 nLight - Room 112
E-0005



11 nLight - Room 113
E-0005



12 nLight - Room 114
E-0005

Drawing Type: Riser	Prepared For: WSP /MM/ MARKHAM
Revision A	Date 11/9/2023
Date: 11/7/2023	Scale: NOT TO SCALE
Drawn By: M.R	Project #: 23-24860
DWG Ref:	
Sheet:	