



HOUSING DESIGN CATALOGUE

AB ROWHOUSE 01

CMHC HOUSING DESIGN CATALOGUE

AB ROWHOUSE 01

ARCHITECTURAL DRAWINGS



BUILDING DATA	
BUILDING FOOTPRINT	147.75m ² (1590.37ft ²)
BUILDING HEIGHT	7.93m (26'-0")
STOREYS	2 STOREY
NUMBER OF UNITS	4

UNIT SUMMARY	
UNIT 1	2 BEDROOM, 1 BATHROOM
UNIT 2	2 BEDROOM, 1 BATHROOM
UNIT 3	2 BEDROOM, 1 BATHROOM
UNIT 4	2 BEDROOM, 1 BATHROOM

ARCHITECTURAL SHEET LIST	
A000	TITLE SHEET
A000	COVER SHEET
A003	ASSEMBLIES SCHEDULE
A004	OPENINGS SCHEDULE
A005	FIRE RATING DETAILS
A006	TYP. DETAILS
A007	TYP. DETAILS
A008	TYP. DETAILS
A009	TYP. DETAILS
A010	SITE PLAN & CODE MATRIX
A101	MAIN FLOOR PLAN
A102	SECOND FLOOR PLAN
A104	ROOF PLAN
A200	ELEVATIONS
A300	SECTIONS

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ABBREVIATIONS	
ABBREVIATIONS MAY OR MAY NOT INCLUDE PERIOD PUNCTUATION. ABBREVIATIONS APPLY TO ARCHITECTURAL DOCUMENTS ONLY.	
ARCH	ARCHITECTURAL
BF	BARRIER FREE
C/C	CENTRE TO CENTRE
CL	CENTER LINE
CIV	CIVIL
DIA	DIAMETER
DIM	DIMENSION
DWG	DRAWING
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
GEOTECH	GEOTECHNICAL
GWb	GYPSUM WALL BOARD
FFE	FINISH FLOOR ELEVATION
FRR	FIRE RESISTANCE RATING
FD	FLOOR DRAIN
HR	HOUR
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
NBC (AE)	NATIONAL BUILDING CODE (ALBERTA EDITION)
N/A	NOT APPLICABLE
NTS	NOT TO SCALE
O/C	ON CENTRE
RM	ROOM
R/O	ROUGH OPENING
RWL	RAIN WATER LEADER
SCH	SCHEDULE
SF	SQUARE FEET
SIM	SIMILAR
SM	SQUARE METER
SPEC	SPECIFICATION
STC	SOUND TRANSMISSION CLASS
STRUC	STRUCTURAL
TBD	TO BE DETERMINED
T/O	TOP OF
T&G	TONGUE & GROOVE
TYP	TYPICAL
U/S	UNDERSIDE
W/C	WASHROOM

ANNOTATION LEGEND	
ASSEMBLY TAGS	
	EXTERIOR WALL TAG
	INTERIOR PARTITION TAG
	ROOF TAG
	FLOOR TAG
(REFER TO ASSEMBLIES SCHEDULES)	
TAGS	
	DOOR TAG REFER TO DOOR SCHEDULE
	WINDOW TAG REFER TO WINDOW SCHEDULE
XYZ#	MATERIAL TAG
#	KEYNOTES REFER TO SHEET SPECIFIC KEYNOTE SCHEDULE
DRAWING TAGS	
	DETAIL NUMBER DRAWING SHEET NUMBER
	BUILDING SECTION NUMBER DRAWING SHEET NUMBER
	EXTERIOR ELEVATION NUMBER DRAWING SHEET NUMBER
0	GRID BUBBLE
	SPOT ELEVATION (ABOVE FINISH FLOOR)
ROOM	ROOM TAG
—	CENTRELINE

1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

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SHEET TITLE:
COVER SHEET

AB Rowhouse 01

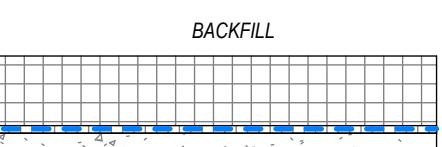
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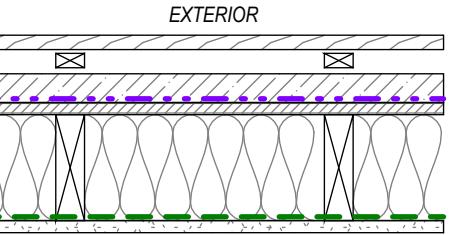
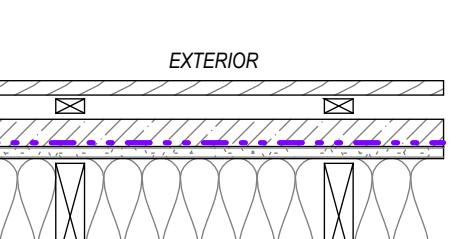
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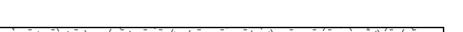
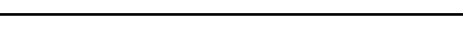
N - FOUNDATION WALL ASSEMBLIES

TYPE	DIAGRAM	DESCRIPTION	PERFORMANCE	
N1	<p>BACKFILL</p>  <p>ENGINEERED FILL / INORGANIC NATIVE SOIL</p>	<p>FOUNDATION</p> <p>/AR 4" (51mm) 3/8" (10mm) /AR 3" (200mm)</p> <p>PARGING CEMENT COATING BELOW GRADE RIGID INSULATION DRAINAGE AND PROTECTION BOARD FOUNDATION DAMP PROOFING GRADE BEAM (REFER TO STRUCTURAL)</p>	R-VALUE	MIN. R 18.32 / MIN RSI 3.22

W - EXTERIOR WALL ASSEMBLIES

TYPE	DIAGRAM	DESCRIPTION	PERFORMANCE
W1	 <p>EXTERIOR</p> <p>INTERIOR</p>	<p>EXTERIOR ENVELOPE WALL</p> <p>19mm (3/4") LIGHT-WEIGHT CLADDING PLACE HOLDER 19mm (3/4") WOOD STRAPPING @ 400mm O/C (38mm WIDE MINIMUM) 25mm (1") RIGID INSULATION VAR 16mm (5/8") 140mm (5 1/2") 140mm (5 1/2") STUD CAVITY IN-FILL INSULATION VAR 16mm (5/8") GYPSUM BOARD</p>	<p>R-VALUE</p> <p>MIN. R 34.64 / MIN RSI 6.1</p> <p>INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36</p> <p>STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE</p>
W2	 <p>EXTERIOR</p> <p>INTERIOR</p>	<p>EXTERIOR ENVELOPE WALL - NON-COMBUSTIBLE</p> <p>3/4" (19mm) NON-COMBUSTIBLE LIGHT-WEIGHT CLADDING PLACE HOLDER 1/2" (13mm) VENTED CAVITY W/ METAL Z-GIRTS @ 400mm O/C 1" (25mm) RIGID INSULATION VAR 5/8" (16mm) 5 1/2" (140mm) 5 1/2" (140mm) STUD CAVITY IN-FILL INSULATION VAR 5/8" (16mm) GYPSUM BOARD, TYPE X</p>	<p>R-VALUE</p> <p>MIN. R 34.64 / MIN RSI 6.1</p> <p>FRR</p> <p>1HR</p> <p>FRR BASED ON EW2a AS PER NBC (AE) 9.10.3.1-A</p> <p>INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36</p> <p>STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE</p>

P - INTERIOR PARTITION ASSEMBLIES

TYPE	DIAGRAM	DESCRIPTION	PERFORMANCE	
P1		2x4 INTERIOR PARTITION 5/8" (16mm) GYPSUM BOARD 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C 5/8" (16mm) GYPSUM BOARD	FRR	N/A
			STC	N/A
P1a		2x4 INTERIOR PARTITION W/ BATTs 5/8" (16mm) GYPSUM BOARD 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C C/W 3 1/2" (89mm) ACOUSTIC BATT IN-FILL INSULATION 5/8" (16mm) GYPSUM BOARD	FRR	N/A
			STC	34
P2		2x6 INTERIOR PARTITION - BETWEEN UNIT & STAIRS, RATED 5/8" (16mm) GYPSUM BOARD, TYPE X 1/2" (13mm) RESILIENT FURRING CHANNELS @ 406mm O/C 5 1/2" (140mm) WOOD STUD FRAMING @ 61/4"/10mm O/C C/W 5 1/2" (140mm) ACOUSTIC BATT IN-FILL INSULATION 5/8" (16mm) GYPSUM BOARD, TYPE X 5/8" (16mm) GYPSUM BOARD, TYPE X	FRR	1HR
			STC	51
			FRR BASED ON W1a AS PER NBC (AE) 9.10.3.1.-A	
P3		2x4 DEMISING WALL - NON-LOAD BEARING, RATED 5/8" (16mm) GYPSUM BOARD, TYPE X 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C C/W 3 1/2" (89mm) ACOUSTIC BATT IN-FILL INSULATION 1" (25mm) AIR SPACE 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C C/W 3 1/2" (89mm) ACOUSTIC BATT IN-FILL INSULATION 5/8" (16mm) GYPSUM BOARD, TYPE X	FRR	1HR
			STC	57
			FRR BASED ON W13a AS PER NBC (AE) 9.10.3.1.-A	
P4		2x6 DEMISING WALL - LOAD BEARING, RATED 5/8" (16mm) GYPSUM BOARD, TYPE X 5 1/2" (140mm) WOOD STUD FRAMING (REFER TO STRUCTURAL) C/W 5 1/2" (140mm) ACOUSTIC BATT IN-FILL INSULATION 1" (25mm) AIR SPACE 5 1/2" (140mm) WOOD STUD FRAMING (REFER TO STRUCTURAL) C/W 5 1/2" (140mm) ACOUSTIC BATT IN-FILL INSULATION 5/8" (16mm) GYPSUM BOARD, TYPE X	FRR	1HR
			STC	61
			FRR BASED ON W13a AS PER NBC (AE) 9.10.3.1.-A	
P5		PLUMBING CHASE 5/8" (16mm) GYPSUM BOARD 1/2" (13mm) PLYWOOD SHEATHING (REFER TO STRUCTURAL) 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C	FRR	N/A
			STC	N/A

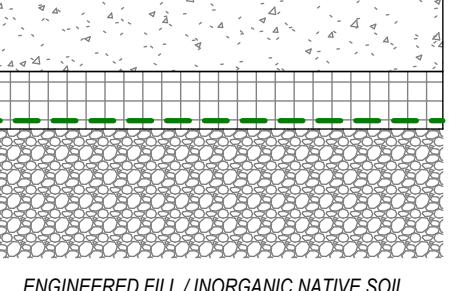
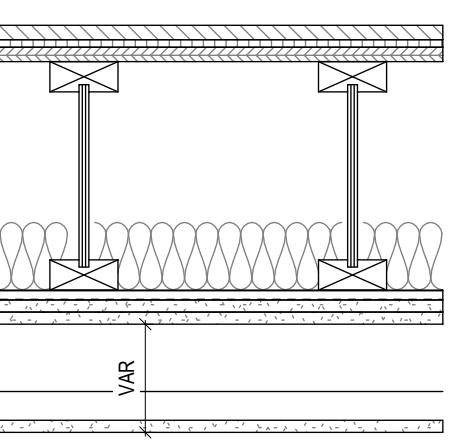
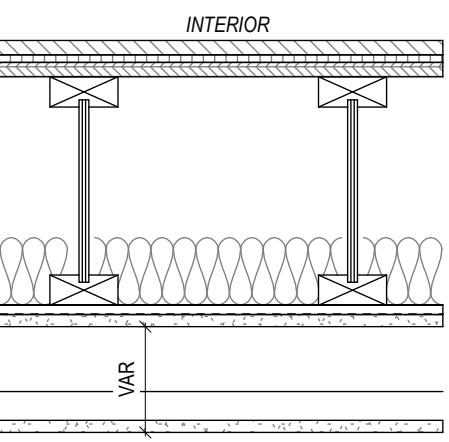
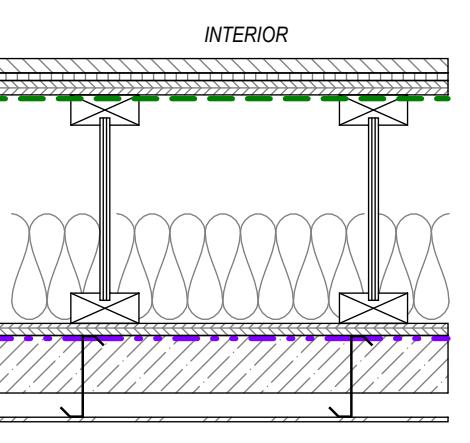
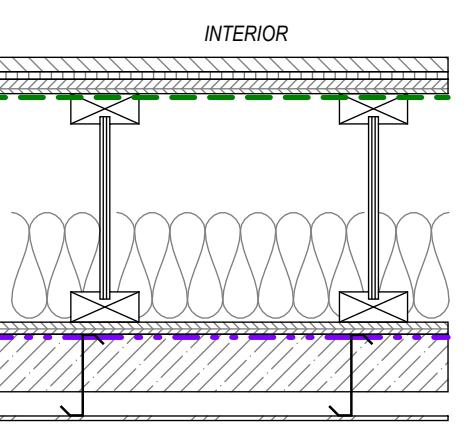
ASSEMBLY GENERAL NOTES

1. ALL LOAD BEARING WALLS SUPPORTING A RATED FLOOR ASSEMBLY SHALL HAVE A FIRE RESISTANCE RATING NOTLESS THAN THE SUPPORTED FLOOR ABOVE AS PER NBC(AE) 9.10.8.3.
2. 16MM (5/8") GYPSUM BOARD, TYPE X TO BE USED ON LOAD BEARING WALLS (SEE STRUCTURAL) TO PROVIDE FRR.
3. ALL WALL AND FLOOR ASSEMBLIES REQUIRED TO BE A FIRE SEPARATION SHALL BE CONSTRUCTED AS A CONTINUOUS BARRIER AGAINST THE SPREAD OF FIRE AND SMOKE AS PER NBC(AE) 9.10.9.2.
4. ALL PENETRATIONS THROUGH A REQUIRED FIRE SEPARATION TO MEET REQUIREMENTS OF NBC(AE) 9.10.9.6.
5. ALL PIPING PENETRATIONS THROUGH A RATED ASSEMBLY OR A MEMBRANE THAT FORMS PART OF A RATED ASSEMBLY TO CONFORM TO NBC(AE) 9.10.9.7.
6. ALL OPENINGS FOR ELECTRICAL OR SIMILAR OUTLET BOXES IN RATED ASSEMBLIES TO CONFORM TO NBC(AE) 9.10.9.8.
7. RECESSED LIGHTING FIXTURES SHALL NOT BE LOCATED IN INSULATED CEILINGS UNLESS THE FIXTURES ARE DESIGNED FOR SUCH INSTALLATIONS AS PER NBC(AE) 9.34.1.4.
8. **STRUCTURAL SLAB:** EFFECTIVE THERMAL RESISTANCE OF AN UNHEATED FLOOR ABOVE FROSTLINE IN CONTACT WITH GROUND WITH A HRV FOR CLIMATE ZONE 7A: MINIMUM EFFECTIVE THERMAL RESISTANCE RSI 1.8 . REFER TO NBC(AE) 9.36.
9. **WALLS:** EFFECTIVE THERMAL RESISTANCE OF ABOVE-GROUND OPAQUE ASSEMBLIES WITH A HRV IN CLIMATE ZONE 7A: RSI 6.1 . REFER TO NBC(AE) 9.36.
10. **ROOFS:** EFFECTIVE THERMAL RESISTANCE OF ABOVE-GROUND OPAQUE ASSEMBLIES WITH A HRV IN CLIMATE ZONE 7A: RSI 6.5 . REFER TO NBC(AE) 9.36.
11. FOAMED PLASTICS TO BE THERMALLY PROTECTED AS PER NBC(AE) 9.10.17.10.
12. ROOFING MATERIAL AND INSTALLATION AS PER NBC(AE) 9.26.2.
13. VAPOUR BARRIER AS PER NBC(AE) 9.27.
14. INSULATION AS PER NBC(AE) 9.25.2.1.
15. CLADDING AS PER NBC(AE) 9.25.4.
16. WHERE CLOSED CELL SPRAY INSULATION ACTS AS VAPOUR CONTROL, ENSURE SUFFICIENT QUANTITY TO MEET NBC(AE) 9.25.4.2 (8)

ROOF ASSEMBLIES

E	DIAGRAM	DESCRIPTION	PERFORMANCE
		EXTERIOR ENVELOPE ROOF - VAULTED CEILING	R-VALUE MIN. R 36.91 / MIN RSI 6.5
			INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36
			STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE
		EXTERIOR ENVELOPE ROOF - PRE FABRICATED ROOF TRUSS	R-VALUE MIN. R 36.91 / MIN RSI 6.5
			INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36
			STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE
		TERRACE ROOF	R-VALUE MIN. R 36.91 / MIN RSI 6.5
			FRR 1HR AS PER NBC (AE)3.3.1
			FRR BASED ON F4b AS PER NBC (AE) 9.10.3.1-B
			INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36
			STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE

LOOR ASSEMBLIES

DIAGRAM	DESCRIPTION	PERFORMANCE	
<p>INTERIOR</p>  <p>ENGINEERED FILL / INORGANIC NATIVE SOIL</p>	<p>SLAB ON GRADE</p> <p>/AR 3" (76mm) VAR 8" (200mm)</p> <p>CAST-IN-PLACE CONCRETE SLAB-ON-GRADE, REFER TO STRUCTURAL BELOW GRADE RIGID INSULATION VAPOR CONTROL BARRIER FREE-DRAINING GRANULAR BASE</p>	R-VALUE	MIN. R 13.82 / MIN RSI 2.43
INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36			
<p>INTERIOR</p>  <p>INTERIOR</p>	<p>WOOD FRAMED FLOOR, RATED</p> <p>3/4" (19mm) 3/8" (10mm) 3/4" (19mm) VAR 6" (152mm) 1/2" (13mm) 5/8" (16mm) 5/8" (16mm) VAR</p> <p>FLOOR FINISH RUBBER UNDERLAY T&G PLYWOOD SUBFLOOR, SCREWED & GLUED ENGINEERED WOOD JOIST OR I-JOIST (REFER TO STRUCTURAL) ACOUSTIC BATT IN-FILL INSULATION RESILIENT FURRING CHANNELS @ 600mm O/C INTERIOR GYPSUM BOARD, TYPE X INTERIOR GYPSUM BOARD, TYPE X WOOD FRAMED WITH GYPSUM BOARD BULKHEAD/SUSPENDED CEILING AT MECH DUCTS, REFER TO MECHANICAL</p>	FRR	1HR AS PER NBC (AE)3.3.1
FRR BASED ON F6b AS PER NBC (AE) 9.10.3.1-B			
<p>INTERIOR</p>  <p>INTERIOR</p>	<p>WOOD FRAMED FLOOR</p> <p>3/4" (19mm) 1/4" (10mm) 3/4" (19mm) VAR 3 1/2" (89mm) 1/2" (13mm) 5/8" (16mm) VAR</p> <p>FLOOR FINISH RUBBER UNDERLAY T&G PLYWOOD SUBFLOOR, SCREWED & GLUED ENGINEERED WOOD JOIST OR I-JOIST (REFER TO STRUCTURAL) ACOUSTIC BATT IN-FILL INSULATION RESILIENT FURRING CHANNELS INTERIOR GYPSUM BOARD WOOD FRAMED WITH GYPSUM BOARD BULKHEAD/SUSPENDED CEILING AT MECH DUCTS, REFER TO MECHANICAL</p>	FRR	N/A
STC 54			
IIC 48			
<p>INTERIOR</p>  <p>EXTERIOR</p>	<p>EXTERIOR ENVELOPE SOFFIT</p> <p>3/4" (19mm) 3/8" (10mm) 3/4" (19mm) VAR /AR 5 1/2" (140mm) 3/8" (16mm) /AR 3" (76mm) /AR 1/4" (6mm)</p> <p>FLOOR FINISH RUBBER UNDERLAY T&G PLYWOOD SUBFLOOR, SCREWED & GLUED VAPOR BARRIER ENGINEERED WOOD JOIST OR I-JOIST (REFER TO STRUCTURAL) STUD CAVITY IN-FILL INSULATION (R-24.0) EXTERIOR GRADE PLYWOOD AIR BARRIER, VAPOR PERMEABLE RIGID INSULATION (R-12.8) VENTED CAVITY W/ METAL Z-GIRTS METAL SOFFIT</p>	R-VALUE	MIN. R 10.22 / MIN RSI 1.8
INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36			
<p>INTERIOR</p>  <p>EXTERIOR</p>	<p>EXTERIOR ENVELOPE SOFFIT, RATED</p> <p>3/4" (19mm) 3/8" (10mm) 3/4" (19mm) AR VAR 5 1/2" (140mm) 3/8" (16mm) 3/8" (16mm) /AR 3" (76mm) /AR 1/4" (6mm)</p> <p>FLOOR FINISH RUBBER UNDERLAY T&G PLYWOOD SUBFLOOR, SCREWED & GLUED VAPOR BARRIER ENGINEERED WOOD JOIST OR I-JOIST (REFER TO STRUCTURAL) STUD CAVITY IN-FILL INSULATION (R-24.0) EXTERIOR GRADE GYPSUM BOARD, TYPE X EXTERIOR GRADE GYPSUM BOARD, TYPE X AIR BARRIER, VAPOR PERMEABLE RIGID INSULATION (R-12.8) VENTED CAVITY W/ METAL Z-GIRTS METAL SOFFIT</p>	R-VALUE	MIN. R 10.22 / MIN RSI 1.8
FRR BASED ON F4b AS PER NBC (AE) 9.10.3.1-B			
INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36			
STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE			

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MEMBRANE LEGEND

-  AIR BARRIER, VAPOUR PERMEABLE
-  BUTYL TAPE TRANSITION MEMBRANE
-  ROOF MEMBRANE
-  ROOF MEMBRANE, 2-PLY MOD-BIT
-  VAPOUR CONTROL BARRIER
-  FOUNDATION DAMP PROOFING
-  PRE-FIN METAL FLASHING

INSULATION LEGEND

The diagram illustrates three types of insulation materials. The first, 'RIGID INSULATION', is represented by a grid of small squares. The second, 'BELOW GRADE RIGID INSULATION', is represented by a series of diagonal hatching lines. The third, 'MINERAL WOOL, BATT', is represented by a wavy, zigzag line.

PROJECT:

ALBERTA CAN

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OR CONSTRUCTION**

SHEET TITLE:

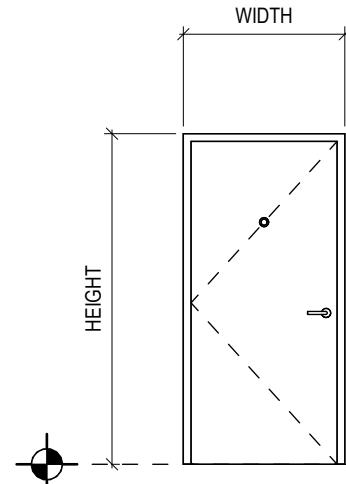
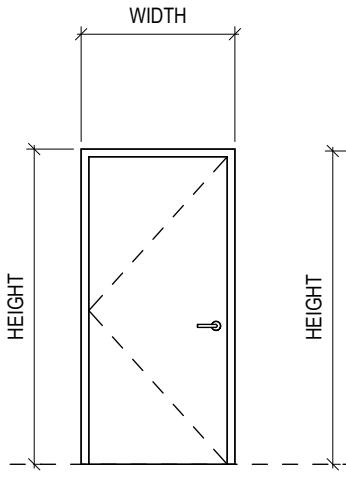
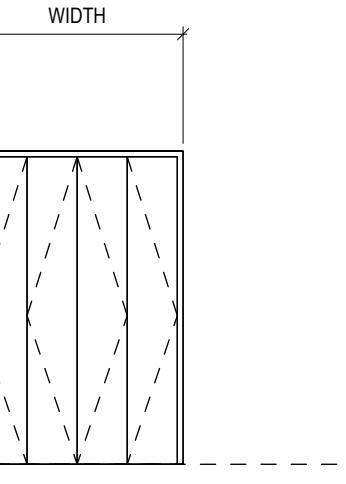
AB Rowhouse 01

PROJECT NO: 241058

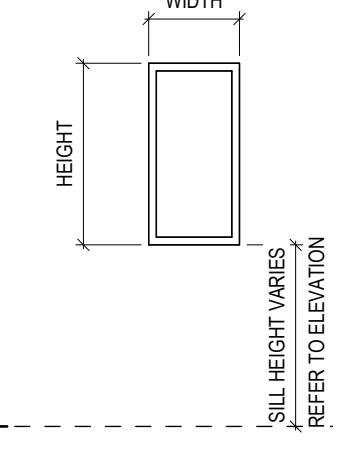
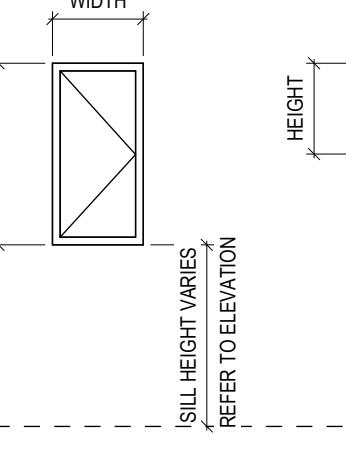
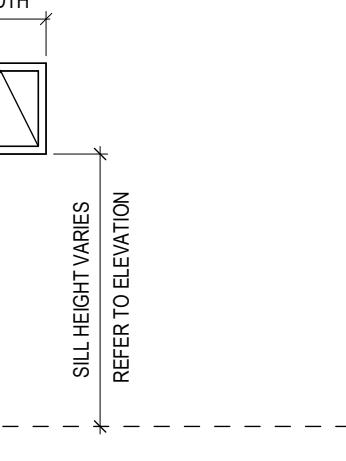
SCALE:

SHEET NO:

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DOOR TYPES		
	DOOR TYPE A EXTERIOR SOLID PANEL WITH DOOR VIEWER	WIDTH HEIGHT
	DOOR TYPE B INTERIOR SOLID PANEL	WIDTH HEIGHT
	DOOR TYPE C INTERIOR 4 PANEL FOLDING CLOSET DOOR	WIDTH HEIGHT

DOOR SCHEDULE							
TAG	TYPE	METRIC SIZE (mm)		IMPERIAL SIZE (FT-IN")		FIRE RATING	COMMENTS
		WIDTH	HEIGHT	WIDTH	HEIGHT		
DA01	DOOR TYPE A	965	2349	3'-2"	7'-8 1/2"	N/A	
DB01	DOOR TYPE B	914	2032	3'-0"	6'-8"	N/A	
DB02	DOOR TYPE B	711	2032	2'-4"	6'-8"	N/A	
DC01	DOOR TYPE C	1355	2032	4'-5 3/8"	6'-8"	N/A	
DC02	DOOR TYPE C	1600	2032	5'-3"	6'-8"	N/A	
DC03	DOOR TYPE C	2000	2032	6'-6 3/4"	6'-8"	N/A	

WINDOW TYPES		
	WINDOW TYPE A FIXED	WIDTH HEIGHT SILL HEIGHT VARIES REFER TO ELEVATION
	WINDOW TYPE B CASEMENT	WIDTH HEIGHT SILL HEIGHT VARIES REFER TO ELEVATION
	WINDOW TYPE C AWNING	WIDTH HEIGHT SILL HEIGHT VARIES REFER TO ELEVATION

DOOR, WINDOW & SKYLIGHT GENERAL NOTES							
<ol style="list-style-type: none"> WINDOWS AND DOORS TO CONFORM TO REQUIREMENTS OF NBC(AE) 9.7.3 AND NBC(AE) 9.7.4 MAXIMUM U-VALUE FOR WINDOWS TO CONFORM TO ABC TABLE NBC(AE) 9.7.3 AND NBC(AE) 9.36.2.7-A ALL OPERABLE WINDOWS WITH A SILL HEIGHT OR OPERABLE SECTION LESS THAN 900mm ABOVE FINISHED FLOOR AND 1800mm ABOVE THE FLOOR OR GROUND ON THE OTHER SIDE OF THE WINDOW SHALL BE PROTECTED BY A SWING LIMITER RESTRICTING THE SWING TO NOT MORE THAN 100mm EITHER VERTICALLY OR HORIZONTALLY PER NBC(AE) 9.8.8.1.5. ALL GLASS TO MEET MATERIAL STANDARDS PER NBC(AE) 9.6.1.2 ALL SIDELIGHTS OR GLAZING AT INDOOR/ENTRIES TO DWELLING UNITS TO BE TEMPERED OR LAMINATED PER NBC(AE) 9.6.1.4 MINIMUM REQUIRED THERMAL CHARACTERISTIC OF FENESTRATION AND DOORS HAS BEEN SHOWN AS CLIMATE ZONE 7A: MAX. U-VALUE 2.0. PROFESSIONAL DESIGNER TO REVISE AS REQUIRED FOR SITE CONDITION. MIN. ALL PRINCIPAL ENTRANCE DOORS, EXIT DOORS OR DOORS TO SUITES INCLUDING EXTERIOR DOORS TO DWELLING UNITS SHALL BE OPERABLE FROM THE INSIDE WITHOUT KEYS AND DOOR RELEASE HARDWARE: SHALL BE GRASPABLE WITH ONE HAND; AND INSTALLED AT 900mm ABOVE FINISHED FLOOR PER NBC(AE) 9.9.6.7. ALL EXTERIOR DOORS TO HAVE INSULATED CORE & INSTALLED WITH WEATHERSTRIPPING. EACH BEDROOM TO HAVE AT LEAST ONE WINDOW OR EXTERIOR DOOR IN COMPLIANCE WITH NBC(AE) 9.9.10.1. FOR EGRESS WINDOWS OR DOORS FOR BEDROOMS. DOORS, DAMPERS, AND OTHER CLOSURES IN FIRE SEPARATIONS TO BE INSTALLED AS PER NBC(AE) 9.10.13. DOOR STOP REQUIRED AS PER NBC(AE) 9.10.13.16. FLAME-SPREAD RATING OF ALL WINDOWS TO CONFORM TO NBC(AE) 9.10.17.1 REFER TO NBC(AE) 9.7.2.2 FOR ADDITIONAL REQUIREMENTS FOR WINDOWS & DOORS. ALL GLAZING SHOWN AS TRIPLE 							

WINDOW SCHEDULE						
TAG	TYPE	METRIC SIZE (mm)		IMPERIAL SIZE (ft-in")		COMMENTS
		WIDTH	HEIGHT	WIDTH	HEIGHT	
WA01	WINDOW TYPE A	600	600	1'-11 5/8"	1'-11 5/8"	
WA02	WINDOW TYPE A	800	450	2'-7 1/2"	1'-5 11/16"	
WA03	WINDOW TYPE A	1200	2000	3'-11 1/4"	6'-6 3/4"	
WA04	WINDOW TYPE A	450	700	1'-5 11/16"	2'-3 9/16"	
WB01	WINDOW TYPE B	650	2000	2'-19 9/16"	6'-6 3/4"	
WB02	WINDOW TYPE B	600	1200	1'-11 5/8"	3'-11 1/4"	EGRESS CLEARANCES AS PER NBC(AE) 9.9.10
WB03	WINDOW TYPE B	800	2000	2'-7 1/2"	6'-6 3/4"	
WB04	WINDOW TYPE B	800	1550	2'-7 1/2"	5'-1"	
WC01	WINDOW TYPE C	600	700	1'-11 5/8"	2'-3 9/16"	

1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

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OR CONSTRUCTION**

SHEET TITLE:
OPENINGS SCHEDULE

AB Rowhouse 01

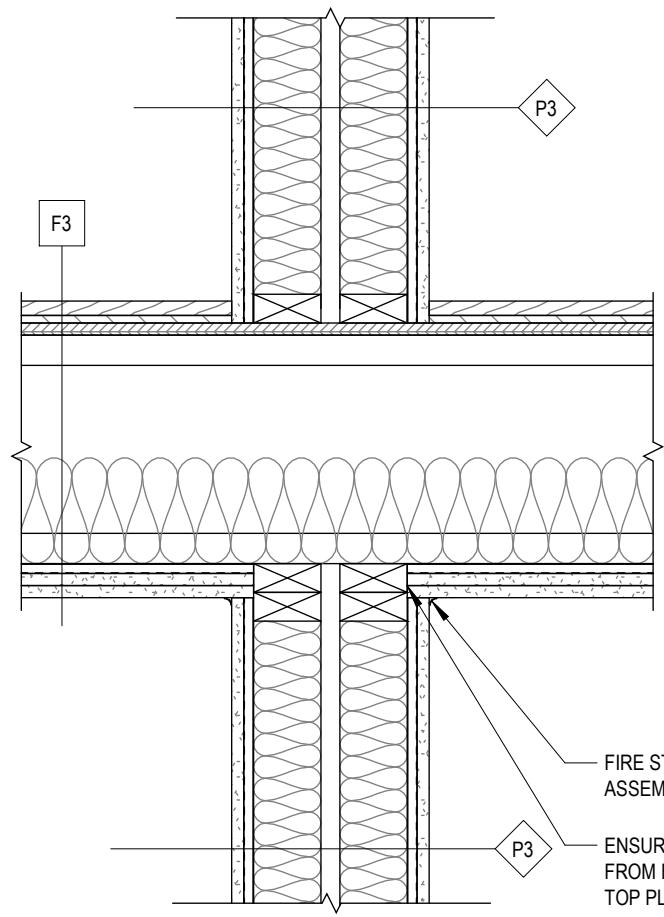
PROJECT NO: 241058
 SCALE: 1:50

SHEET NO:

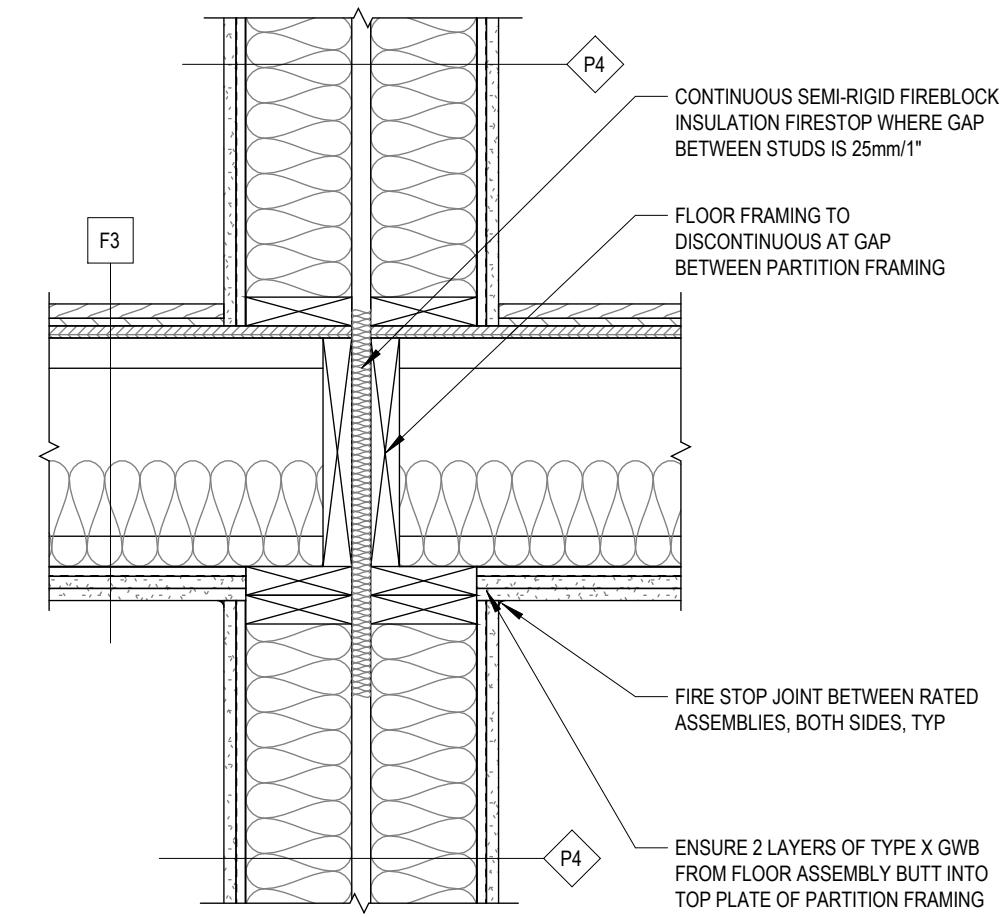
A004

DISCLAIMER

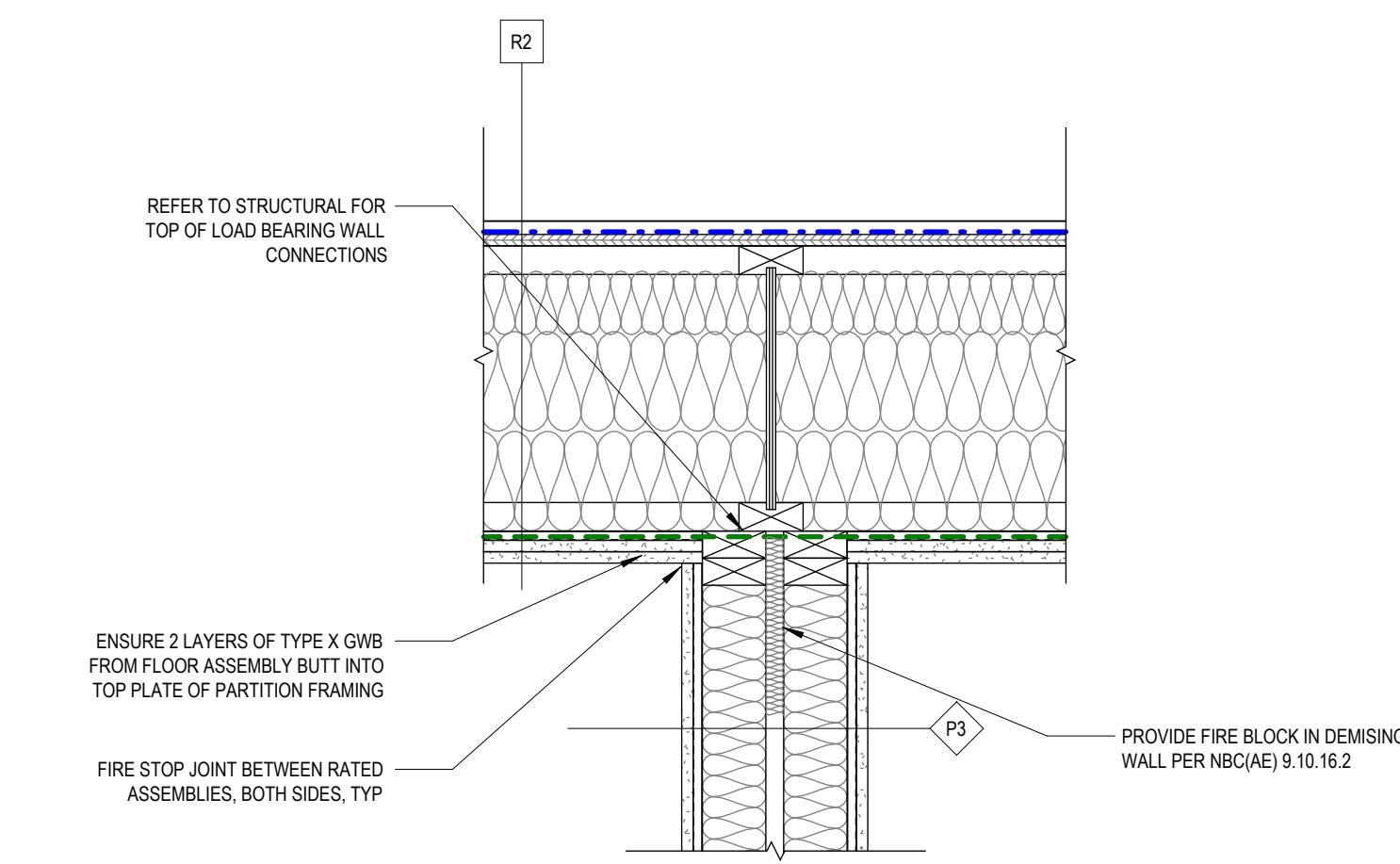
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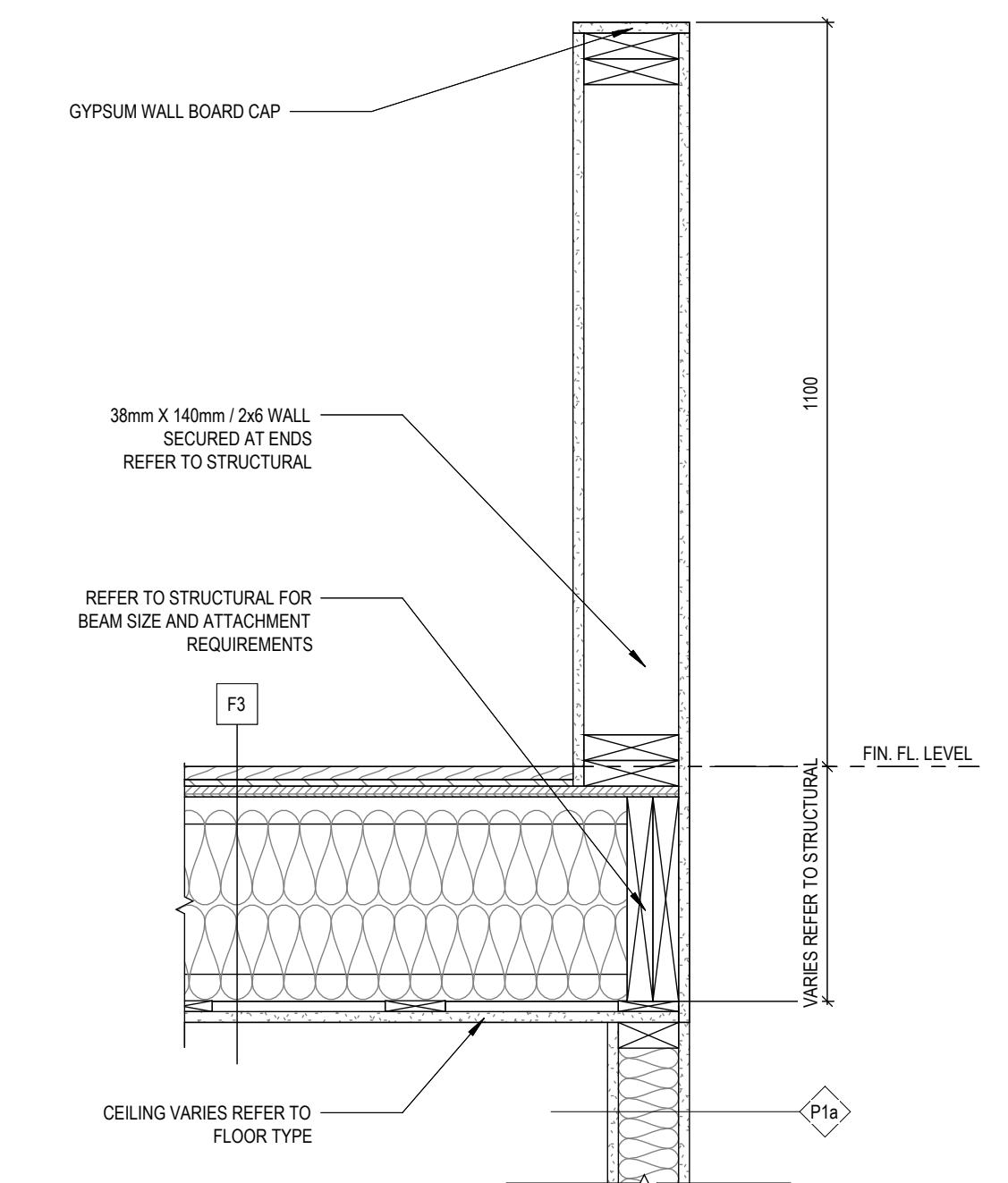
1 SECTION - FIRE SEPARATION, NON-LOAD BEARING WALL TO FLOOR
A005 1 : 10



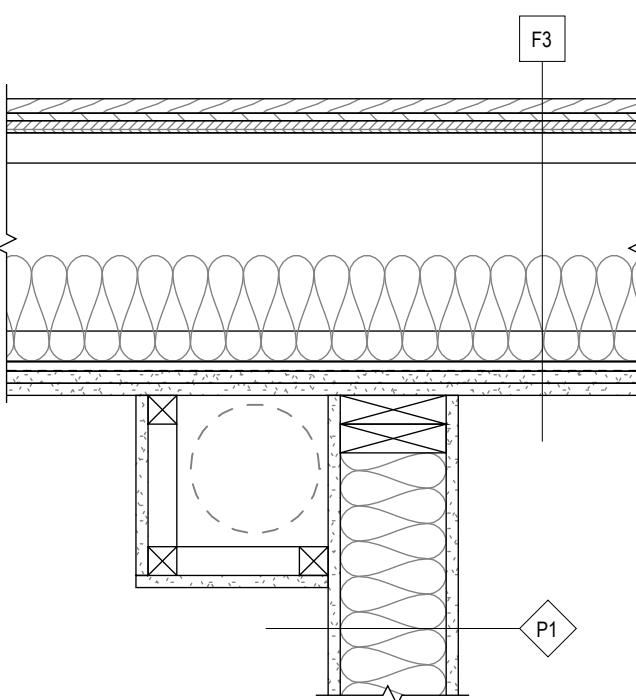
2 SECTION - FIRE SEPARATION, LOAD BEARING WALL TO FLOOR
A005 1 : 10



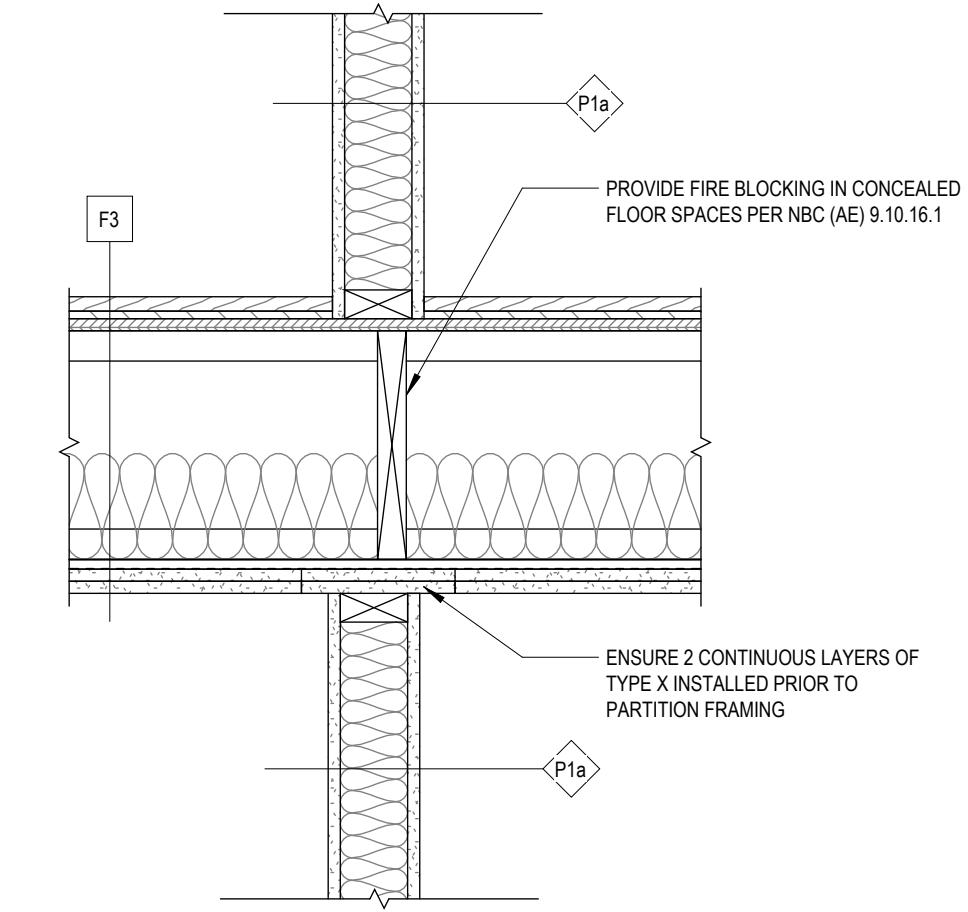
3 SECTION - FIRE SEPARATION, LOAD BEARING WALL TO RATED ROOF
A005 1 : 10



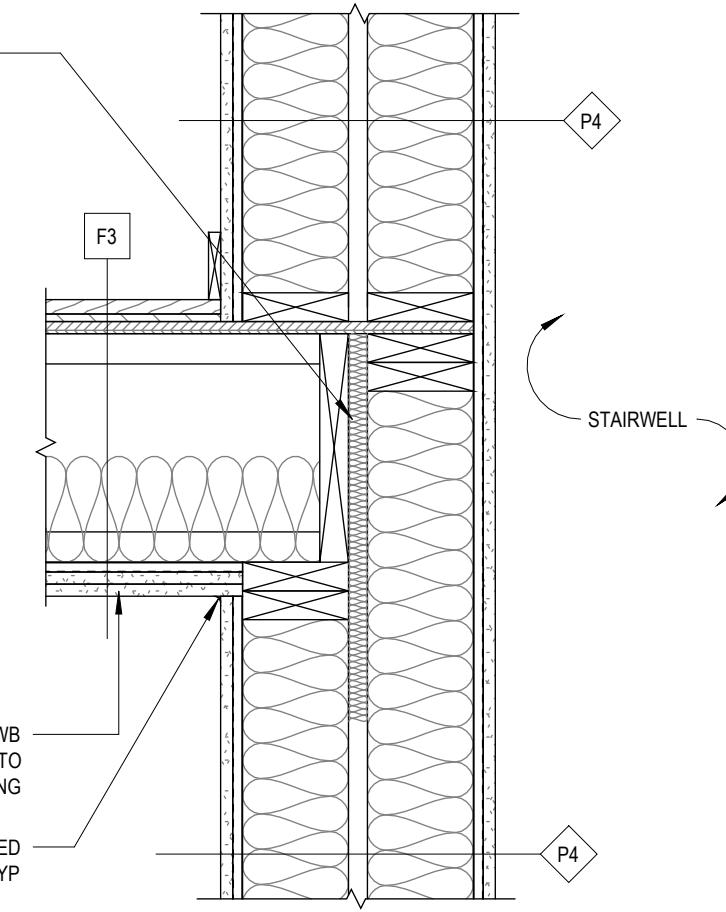
4 SECTION - TYP. INTERIOR GUARD
A005 1 : 10



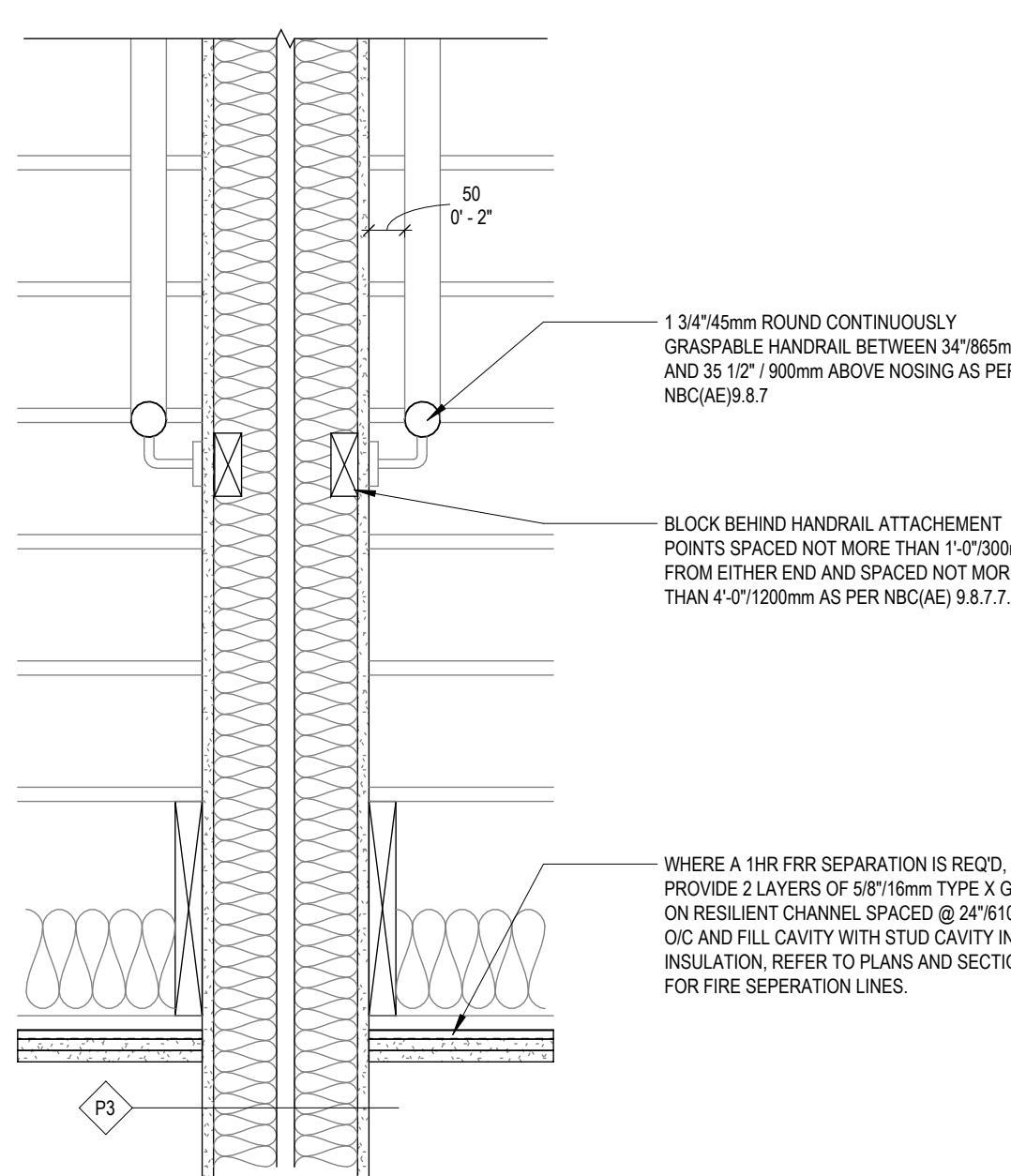
5 SECTION - FIRE SEPARATION, PARTITION & BULKHEAD TO FLOOR
A005 1 : 10



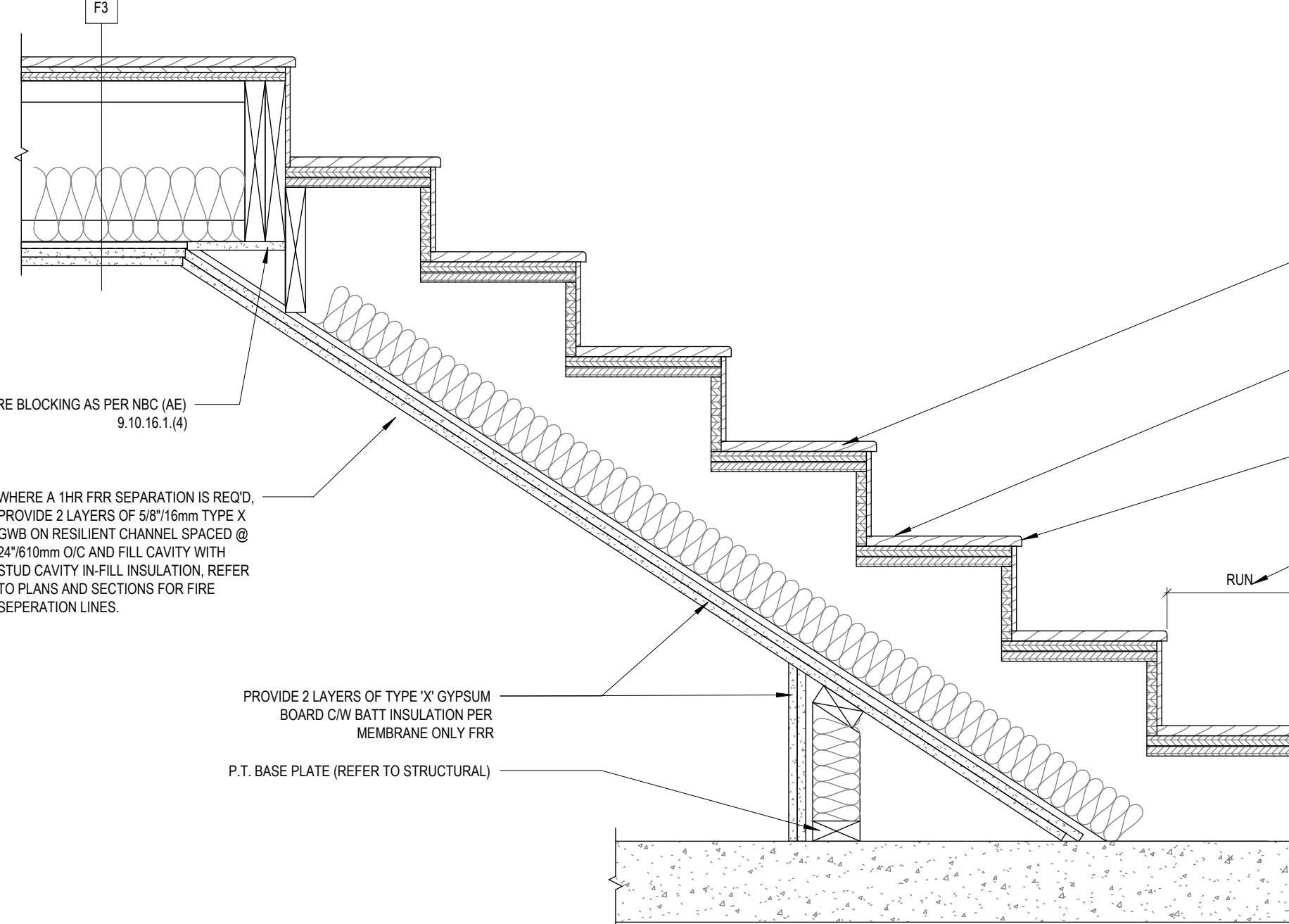
6 SECTION - FIRE SEPARATION, RATED FLOOR, NON-LOAD BEARING PARTITION
A005 1 : 10



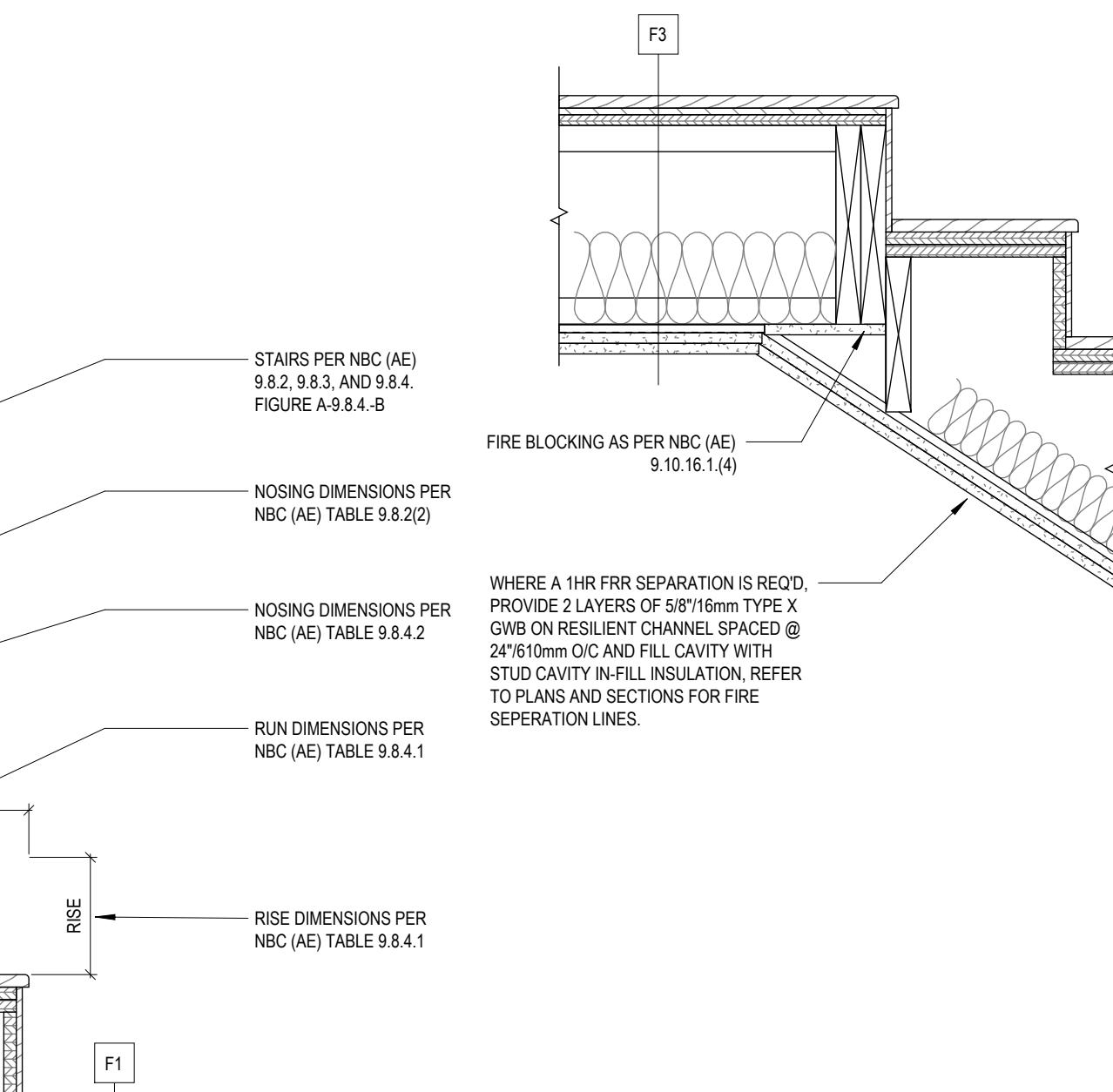
7 SECTION - FIRE SEPARATION, LOAD BEARING WALL TO FLOOR @ STAIRWELL
A005 1 : 10



8 SECTION - FIRE SEPARATION, STAIR 02
A005 1 : 10



9 SECTION - FIRE SEPARATION, STAIR
A005 1 : 10



10 SECTION - FIRE SEPARATION, UPPER STAIRS
A005 1 : 10

1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
FIRE RATING DETAILS

AB Rowhouse 01

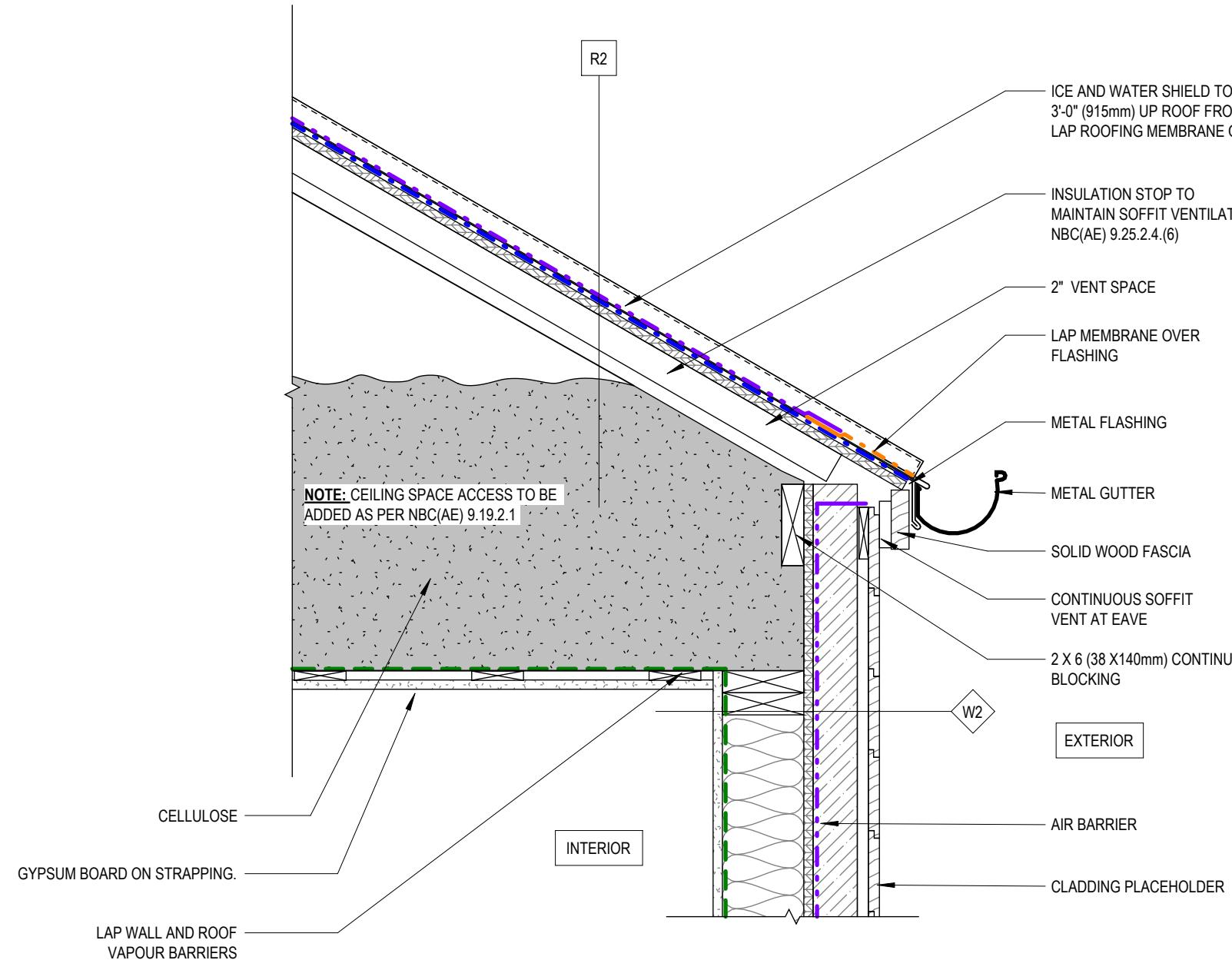
PROJECT NO: 241058
SCALE: 1 : 10

SHEET NO:

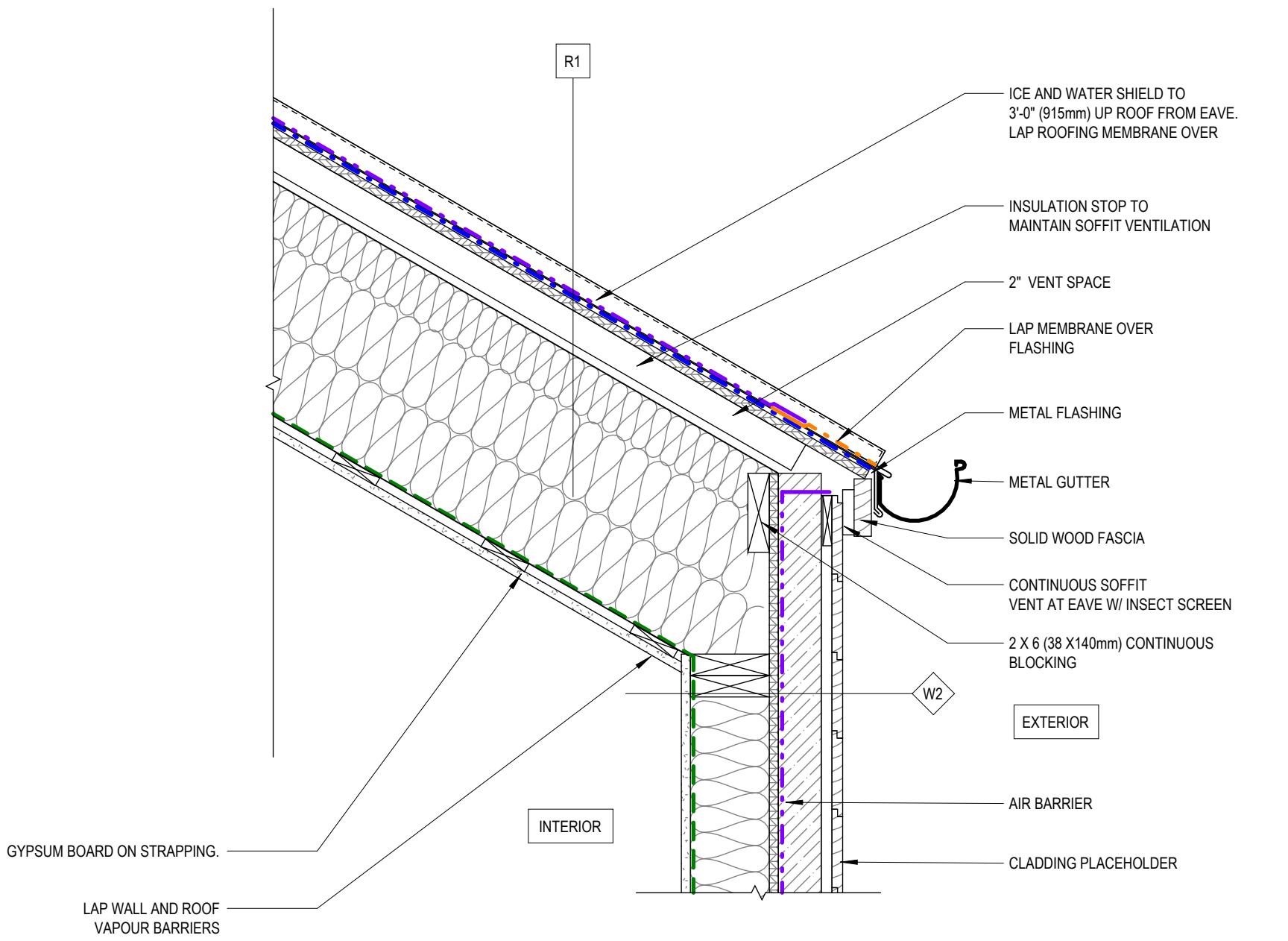
A005

DISCLAIMER

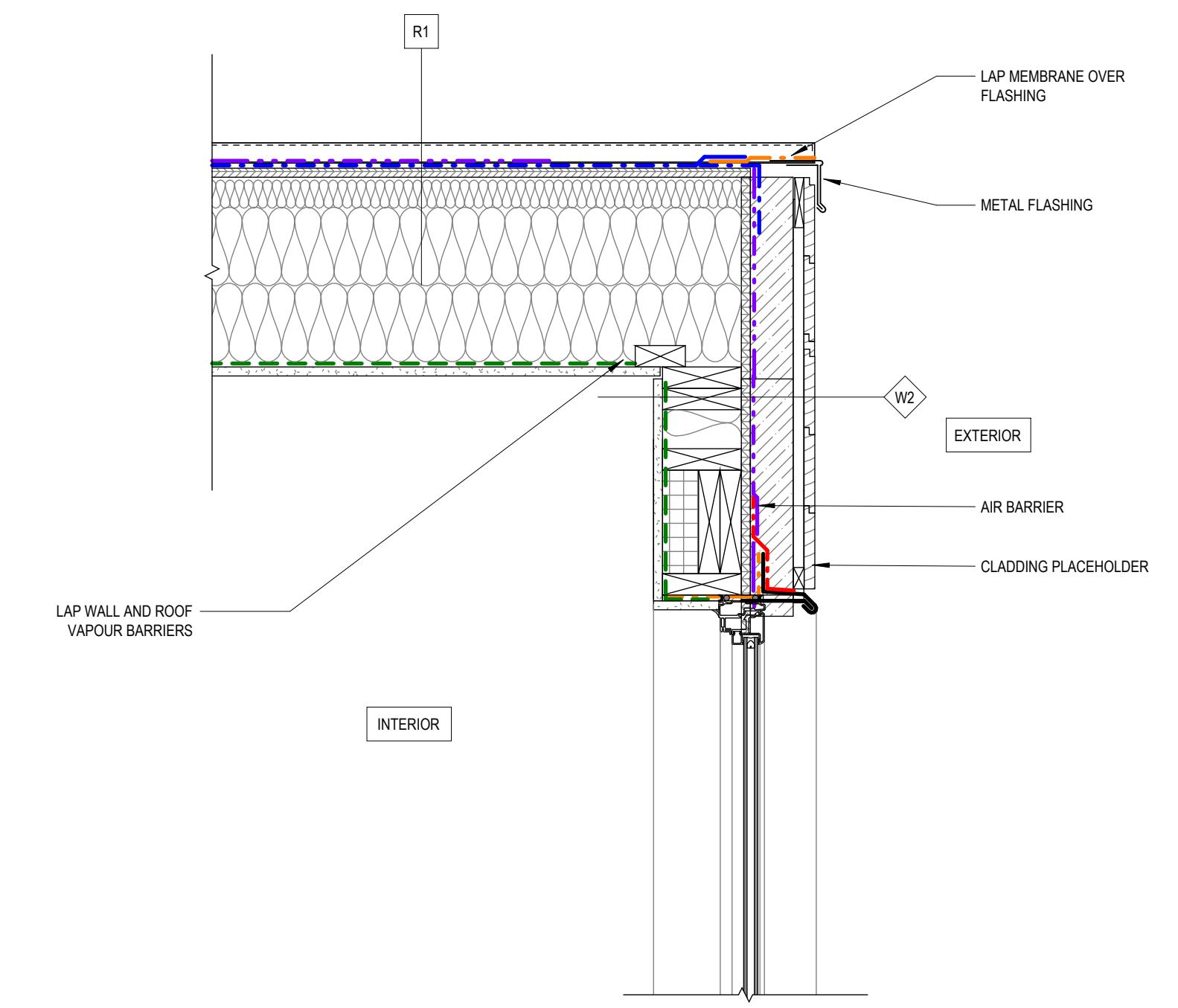
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SECTION DETAIL - TYP. R2 EAVE W/ GUTTER
1 A006 1 : 10



SECTION DETAIL - TYP. R1 EAVE W/ GUTTER
2 A006 1 : 10



SECTION DETAIL - ROOF RIDGE
3 A006 1 : 10

MEMBRANE LEGEND	
	AIR BARRIER, VAPOUR PERMEABLE
	AIR BARRIER, NON-VAPOUR PERMEABLE
	TRANSITION MEMBRANE
	THROUGH-WALL FLASHING
	VAPOUR CONTROL BARRIER
	FOUNDATION DAMP PROOFING
	PRE-FIN METAL FLASHING

INSULATION LEGEND	
	MINERAL WOOL, SEMI-RIGID
	EXTRUDED POLYSTYRENE
	EXPANDED POLYISOCYANURATE
	SPRAY FOAM
	MINERAL WOOL BATT

1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

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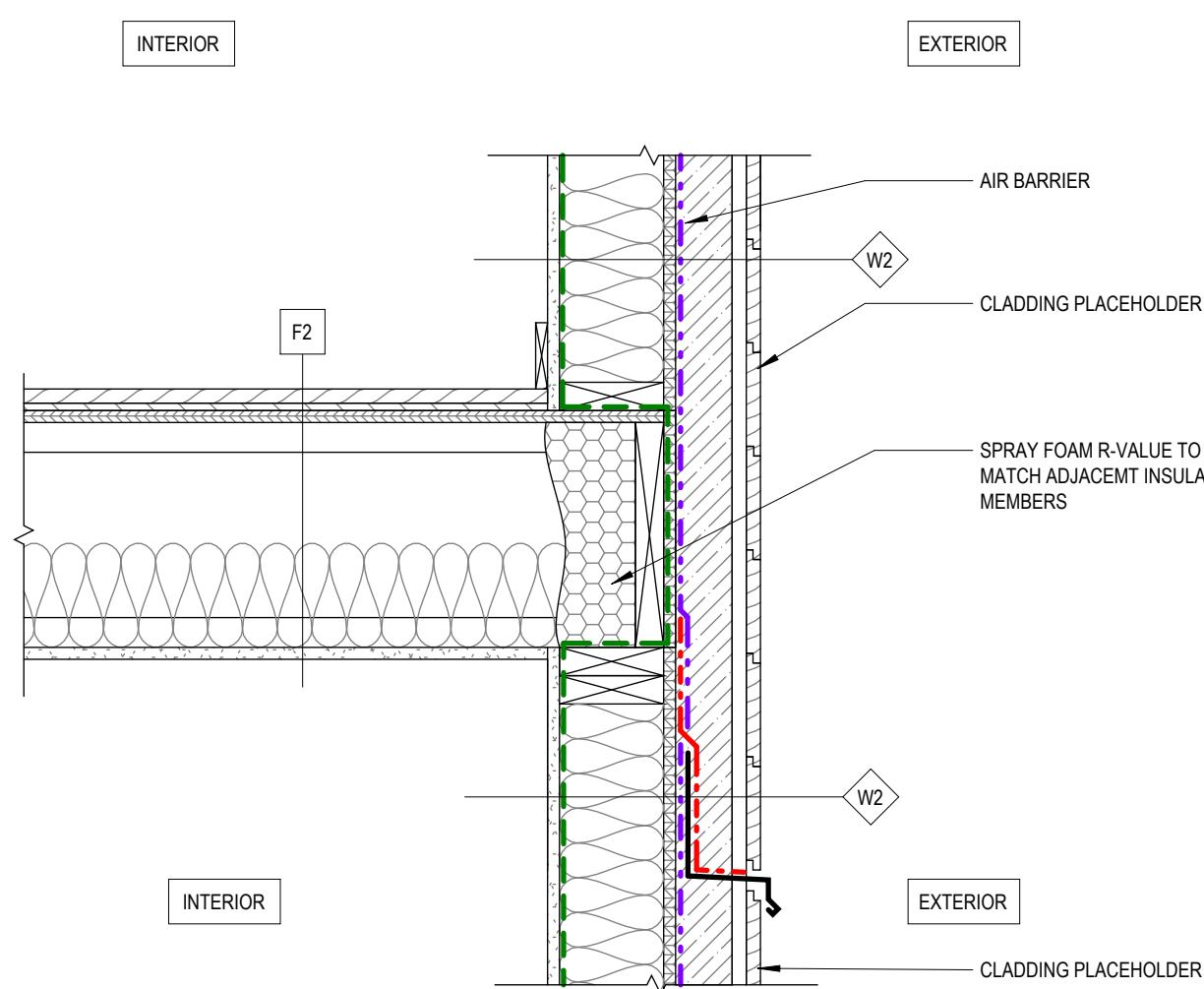
SHEET TITLE:
TYP. DETAILS

PROJECT NO: 241058
SCALE: As indicated

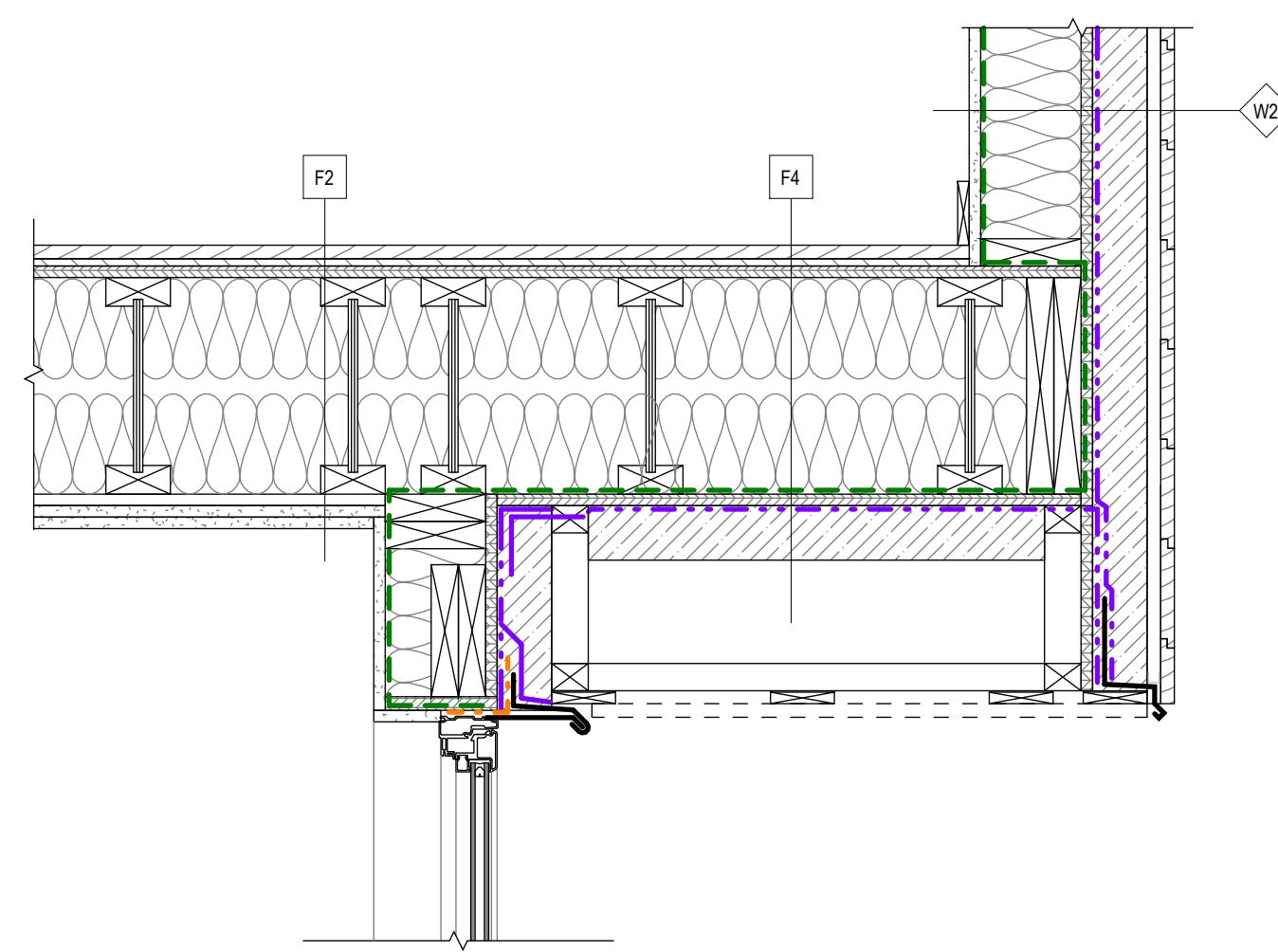
SHEET NO:
A006

DISCLAIMER

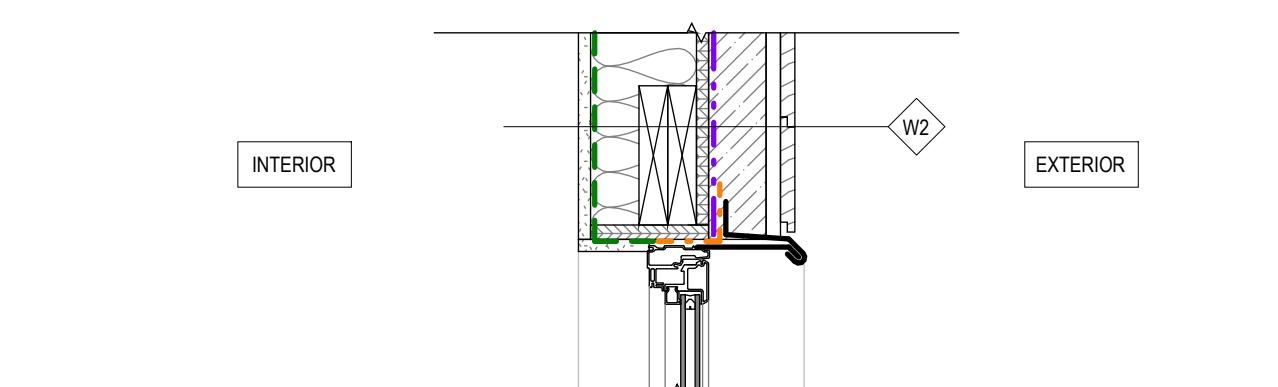
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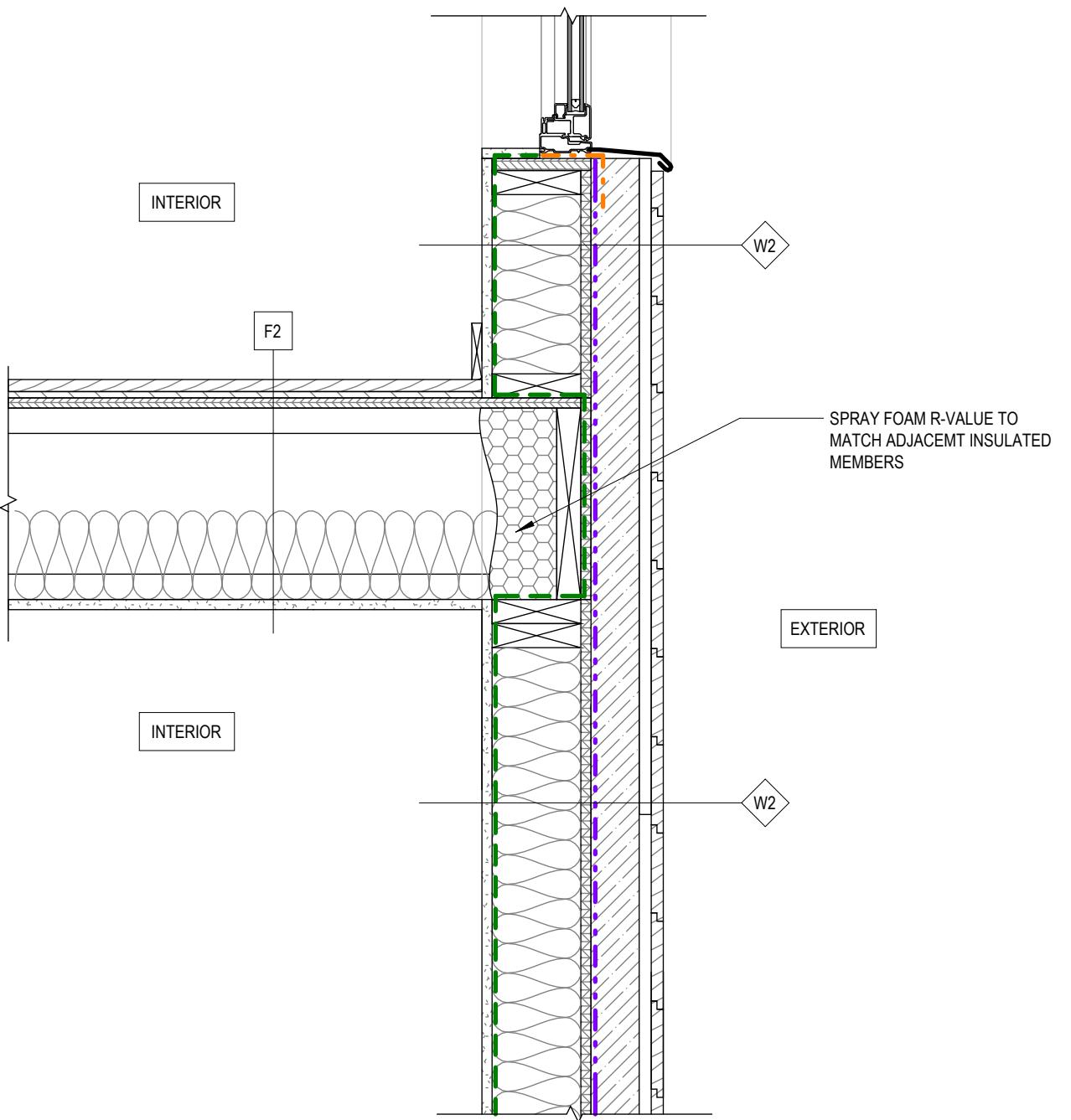
1 SECTION - TYP. THRU WALL FLASHING AT FLOOR
A007 1 : 10



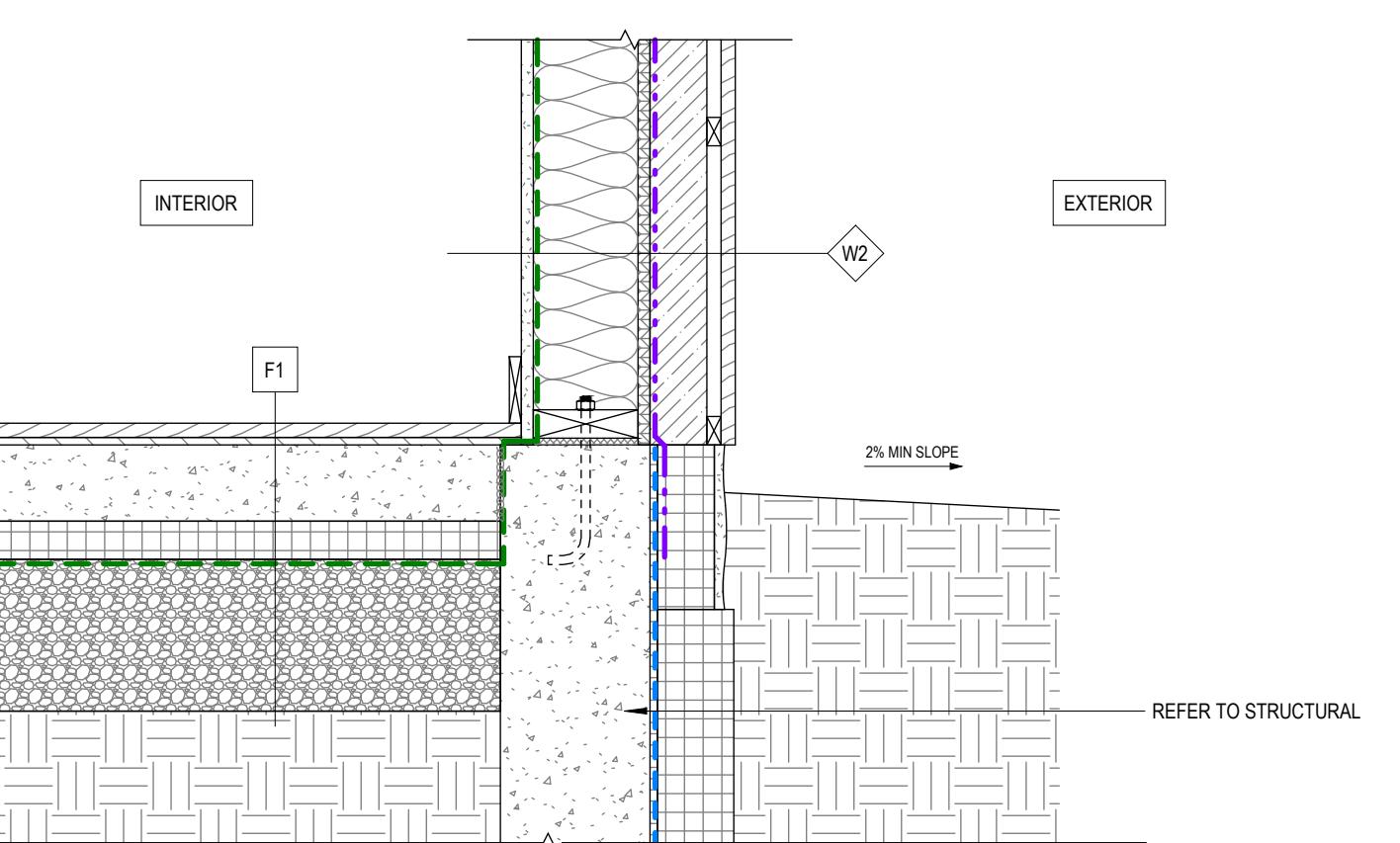
2 SECTION - TYP. WINDOW SOFFIT DETAIL
A007 1 : 10



3 SECTION DETAIL - TYP. EAVE & WINDOW HEAD
A007 1 : 10



4 SECTION DETAIL - TYP. FLOOR TO WALL & WINDOW SILL
A007 1 : 10



5 SECTION DETAIL - TYP. FOUNDATION DETAIL
A007 1 : 10

MEMBRANE LEGEND

- - - AIR BARRIER, VAPOUR PERMEABLE
- - - AIR BARRIER, NON-VAPOUR PERMEABLE
- - - TRANSITION MEMBRANE
- - - THROUGH-WALL FLASHING
- - - VAPOUR CONTROL BARRIER
- - - FOUNDATION DAMP PROOFING
- - - PRE-FIN METAL FLASHING

INSULATION LEGEND

- MINERAL WOOL, SEMI-RIGID
- EXTRUDED POLYSTYRENE
- EXPANDED POLYISOCYANURATE
- SPRAY FOAM
- MINERAL WOOL BATT

1 2025-02-21 Issued as Prototypical Drawing

NO. DATE DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

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SHEET TITLE:
TYP. DETAILS

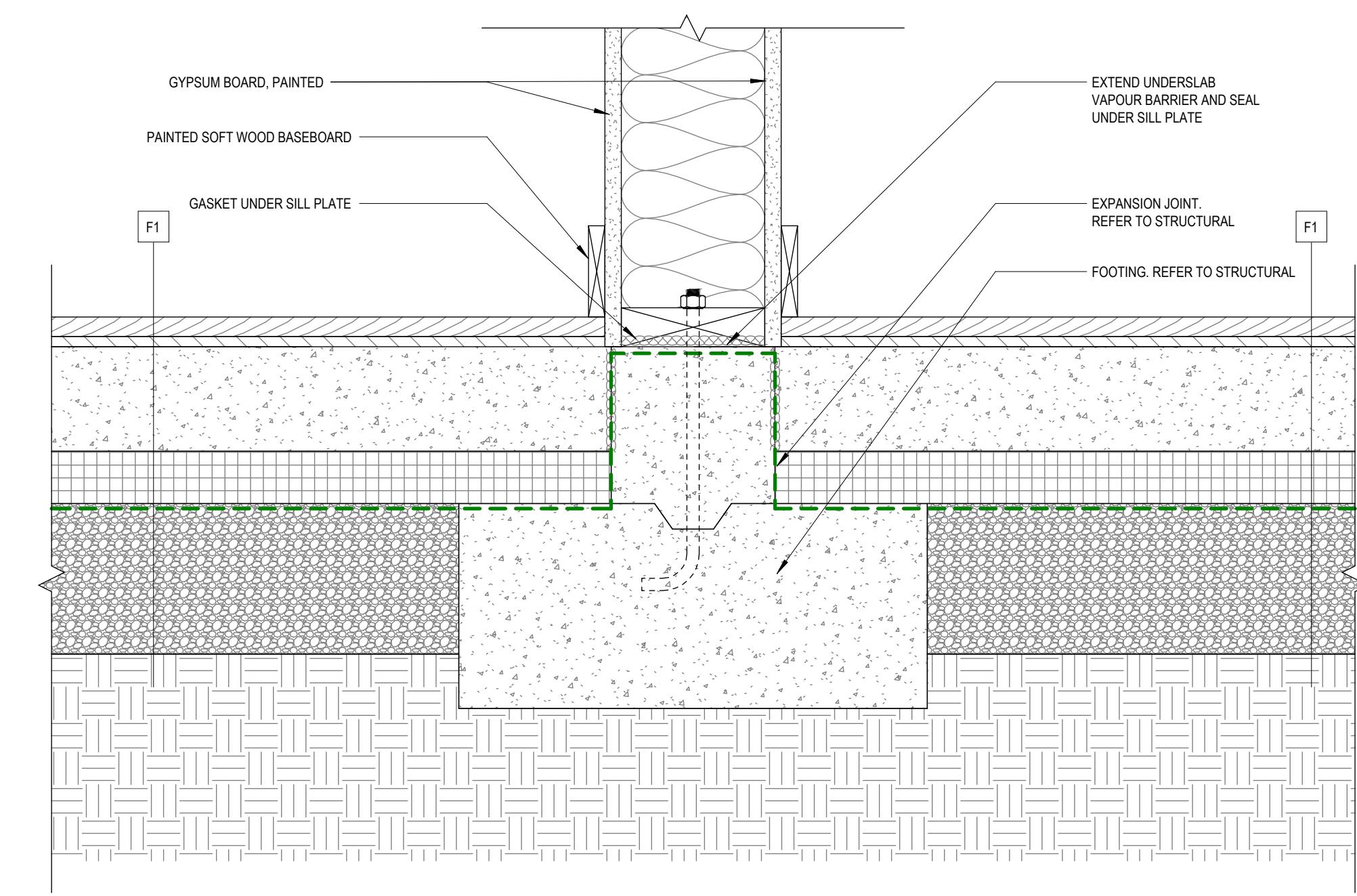
PROJECT NO: 241058
SCALE: As indicated

SHEET NO:

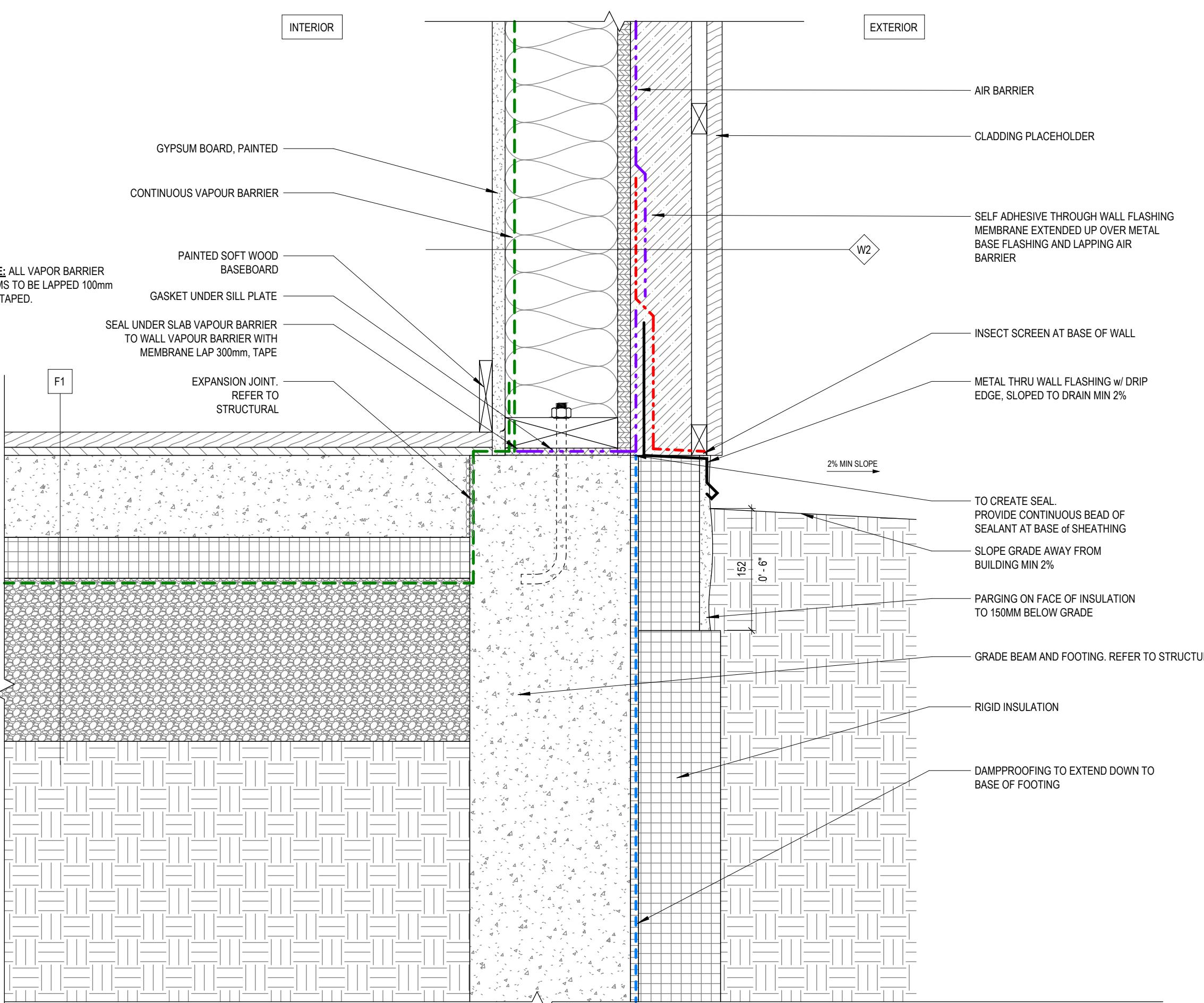
A007

DISCLAIMER

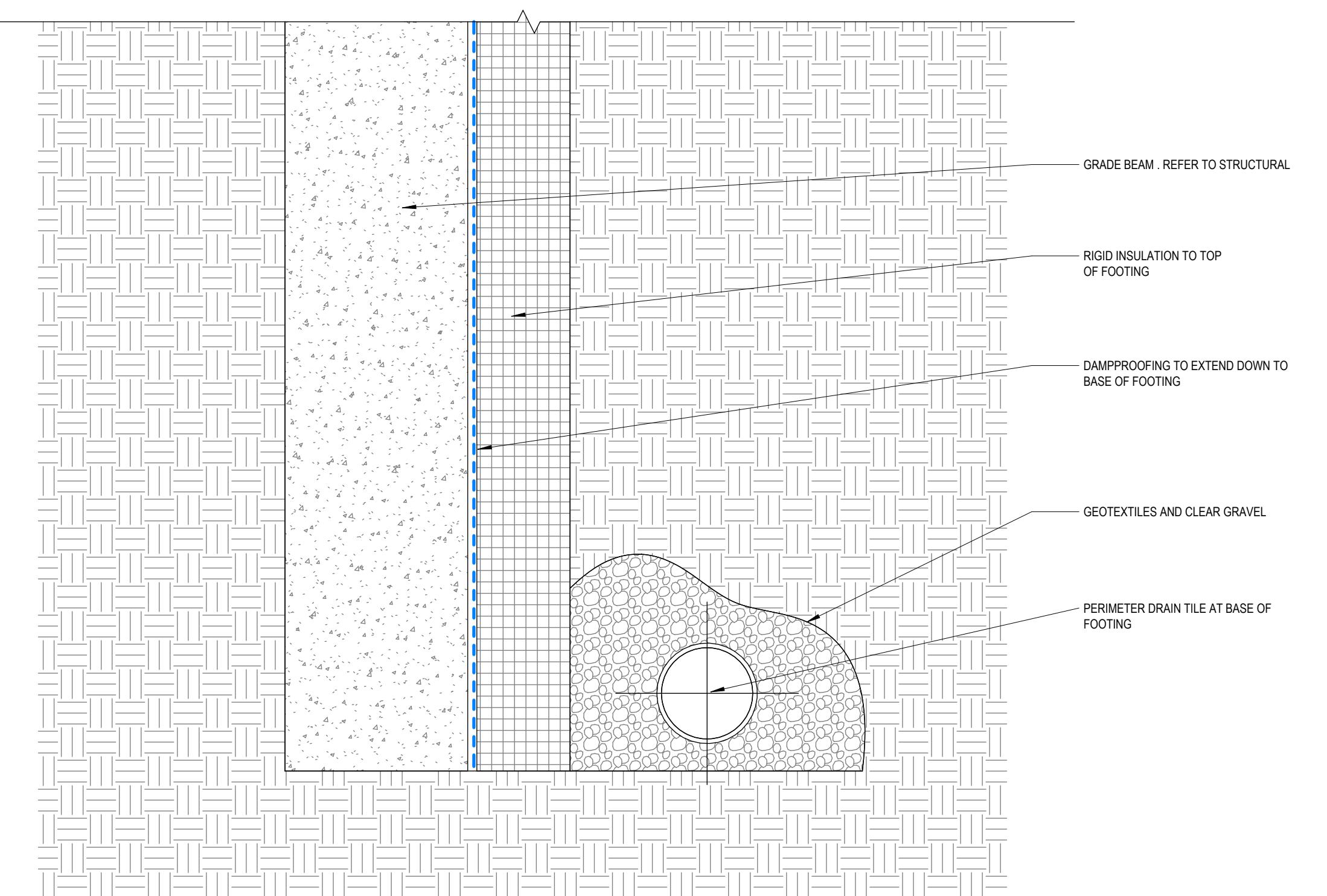
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1 SECTION DETAIL - TYP. STRIP FOOTING
A008 1 : 5



2 SECTION DETAIL - SECTION - TYP. FOOTING
A008 1 : 5



3 SECTION DETAIL - SECTION - TYP. WALL TO FOUNDATION
A008 1 : 5

1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

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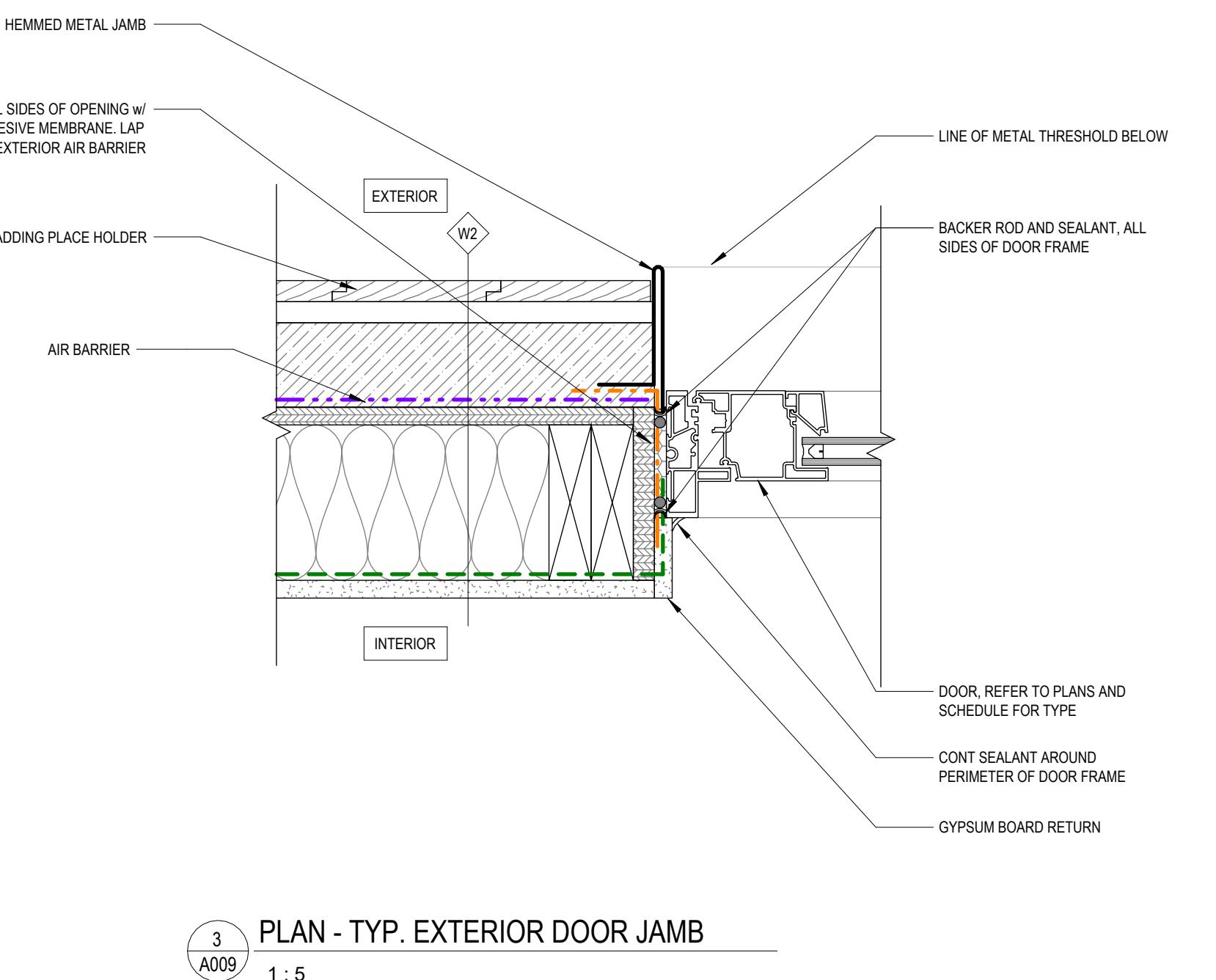
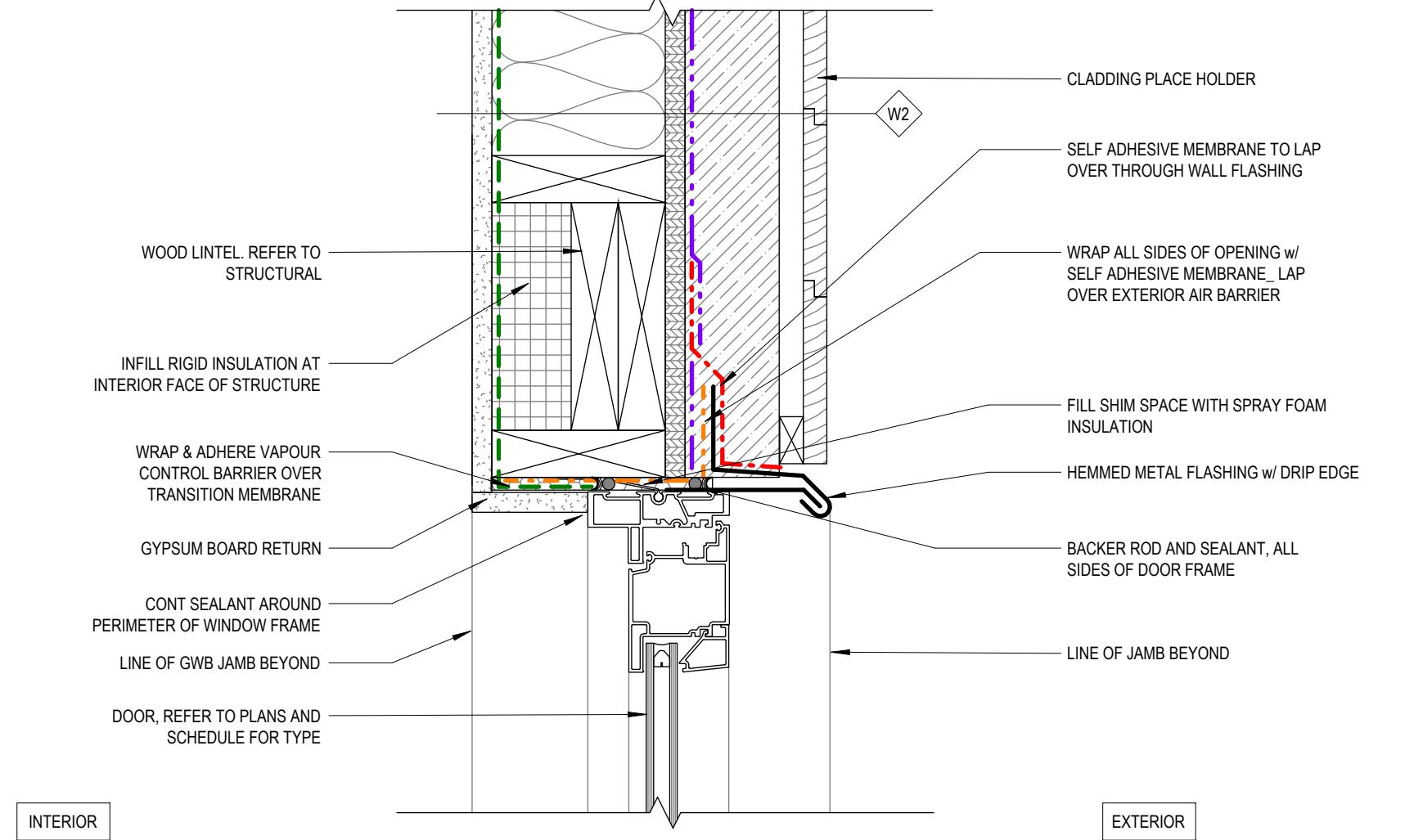
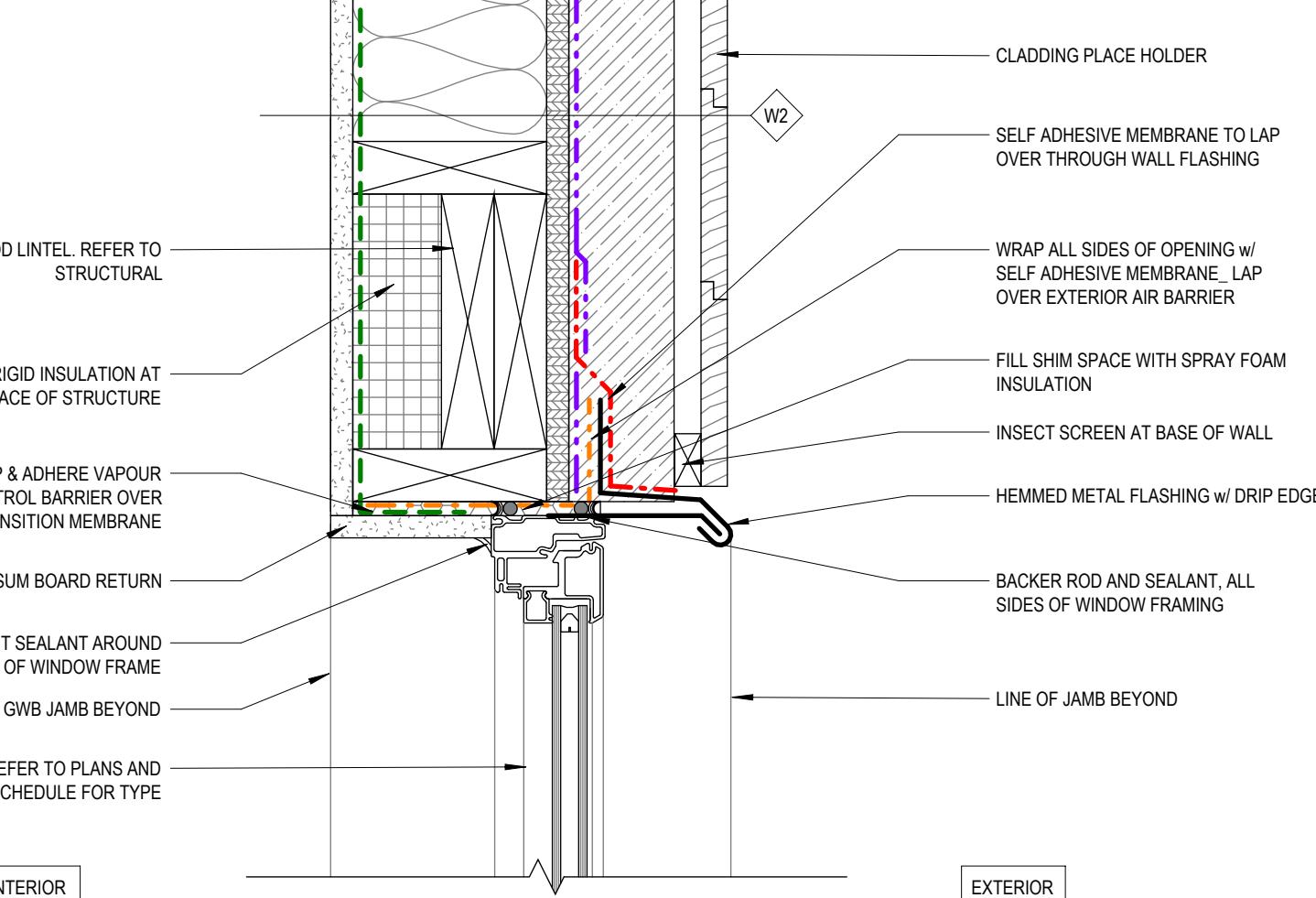
SHEET TITLE:
TYP. DETAILS

PROJECT NO: 241058
SCALE: As indicated

SHEET NO:
A008

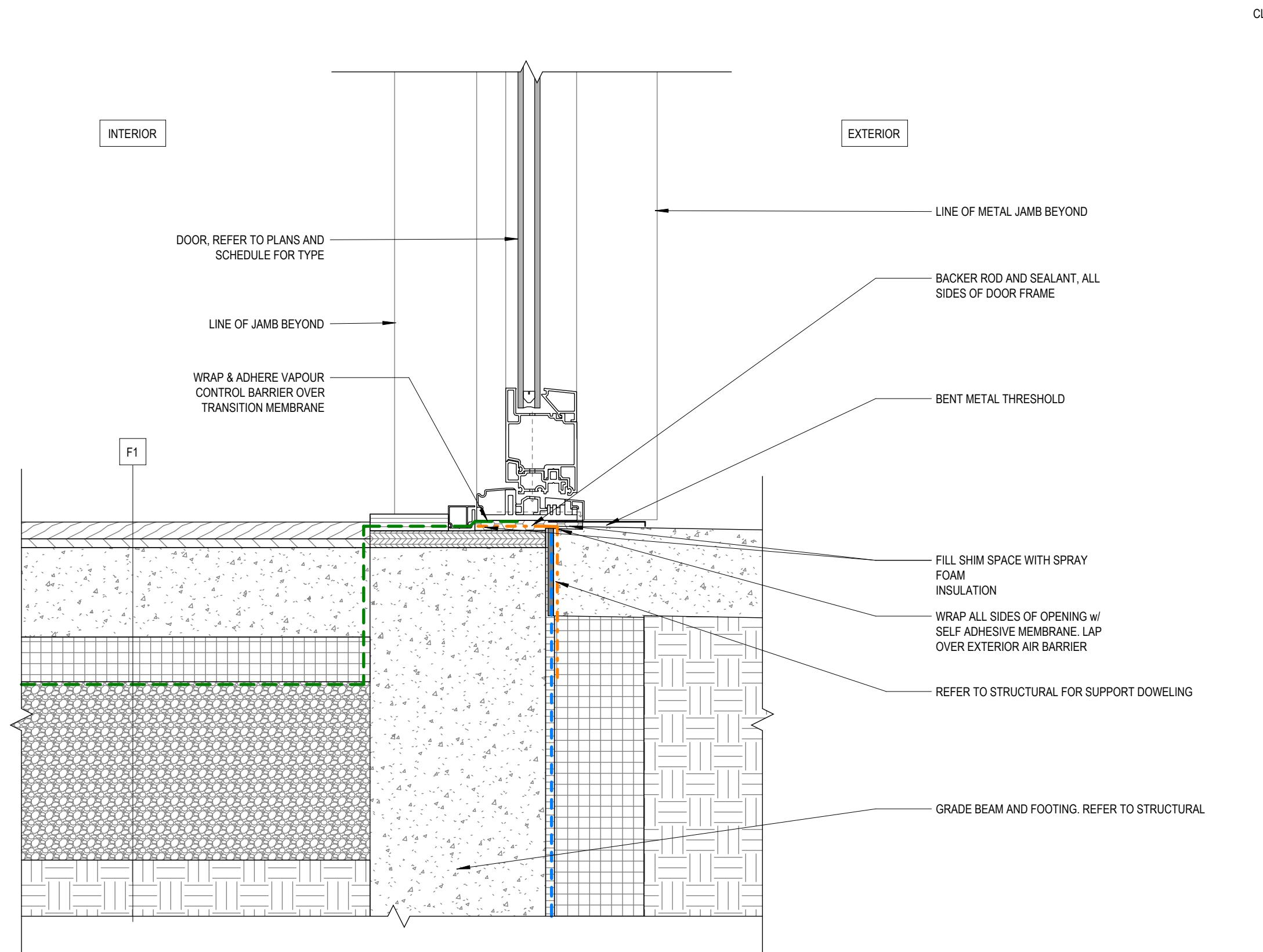
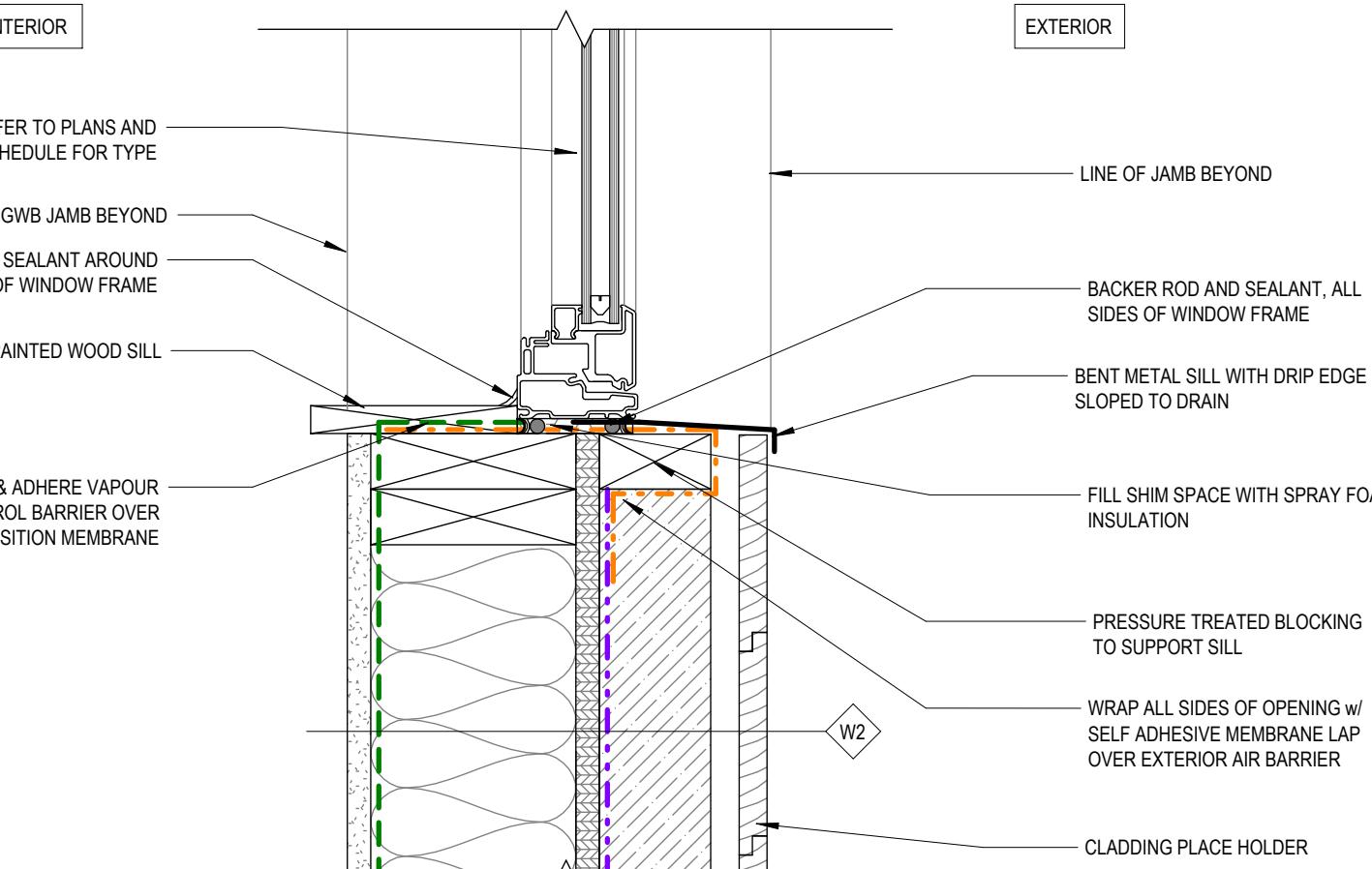
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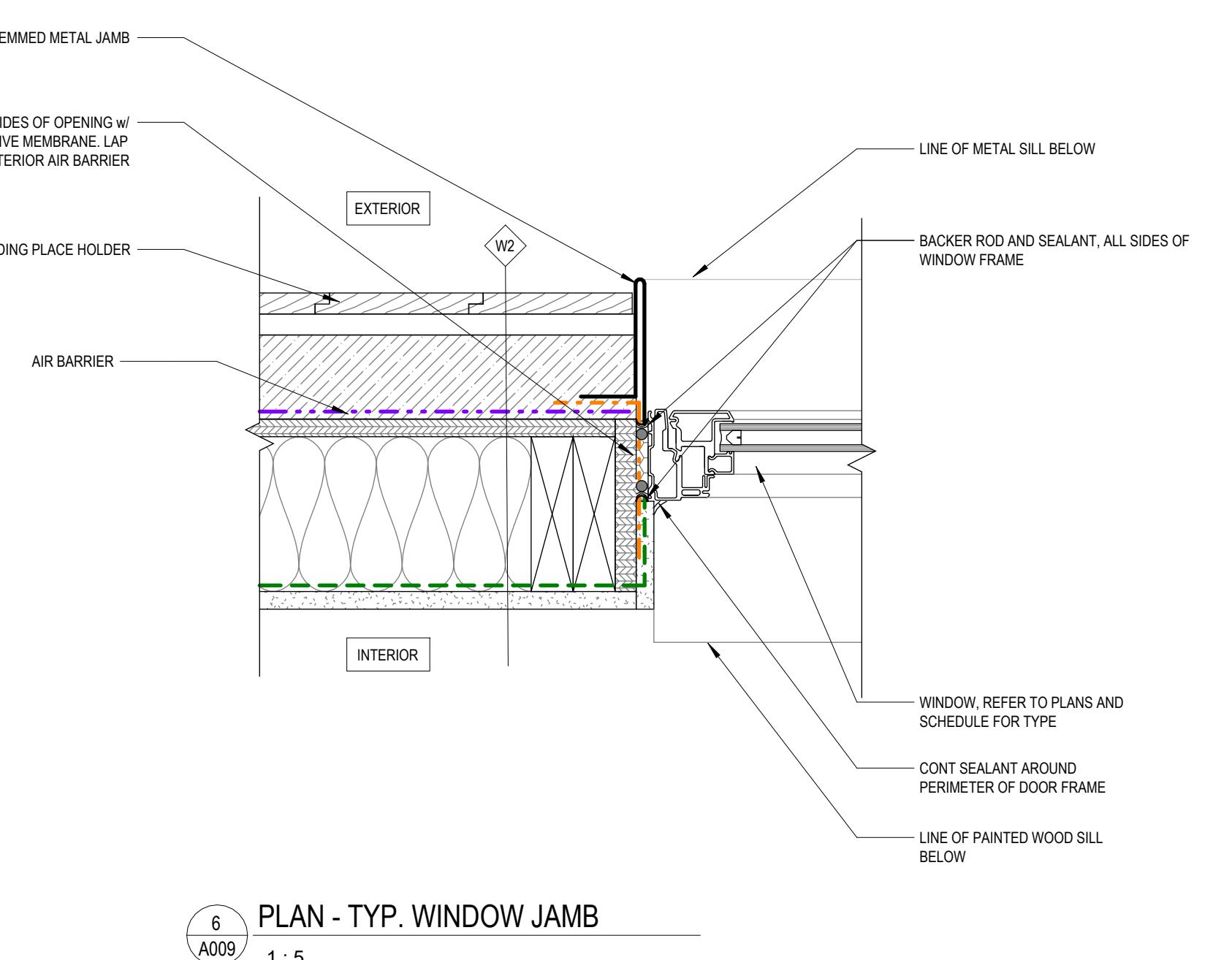


1 SECTION DETAIL - TYP. WINDOW HEAD
A009 1 : 5

2 SECTION DETAIL - TYP. EXT. DOOR HEAD
A009 1 : 5



3 PLAN - TYP. EXTERIOR DOOR JAMB
A009 1 : 5



4 SECTION DETAIL - TYP. WINDOW SILL
A009 1 : 5

5 SECTION DETAIL - TYP. EXT. DOOR THRESHOLD
A009 1 : 5

MEMBRANE LEGEND

- AIR BARRIER, VAPOUR PERMEABLE
- AIR BARRIER, NON-VAPOUR PERMEABLE
- TRANSITION MEMBRANE
- THROUGH-WALL FLASHING
- VAPOUR CONTROL BARRIER
- FOUNDATION DAMP PROOFING
- PRE-FIN METAL FLASHING

INSULATION LEGEND

- MINERAL WOOL, SEMI-RIGID
- EXTRUDED POLYSTYRENE
- EXPANDED POLYISOCYANURATE
- SPRAY FOAM
- MINERAL WOOL BATT

1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

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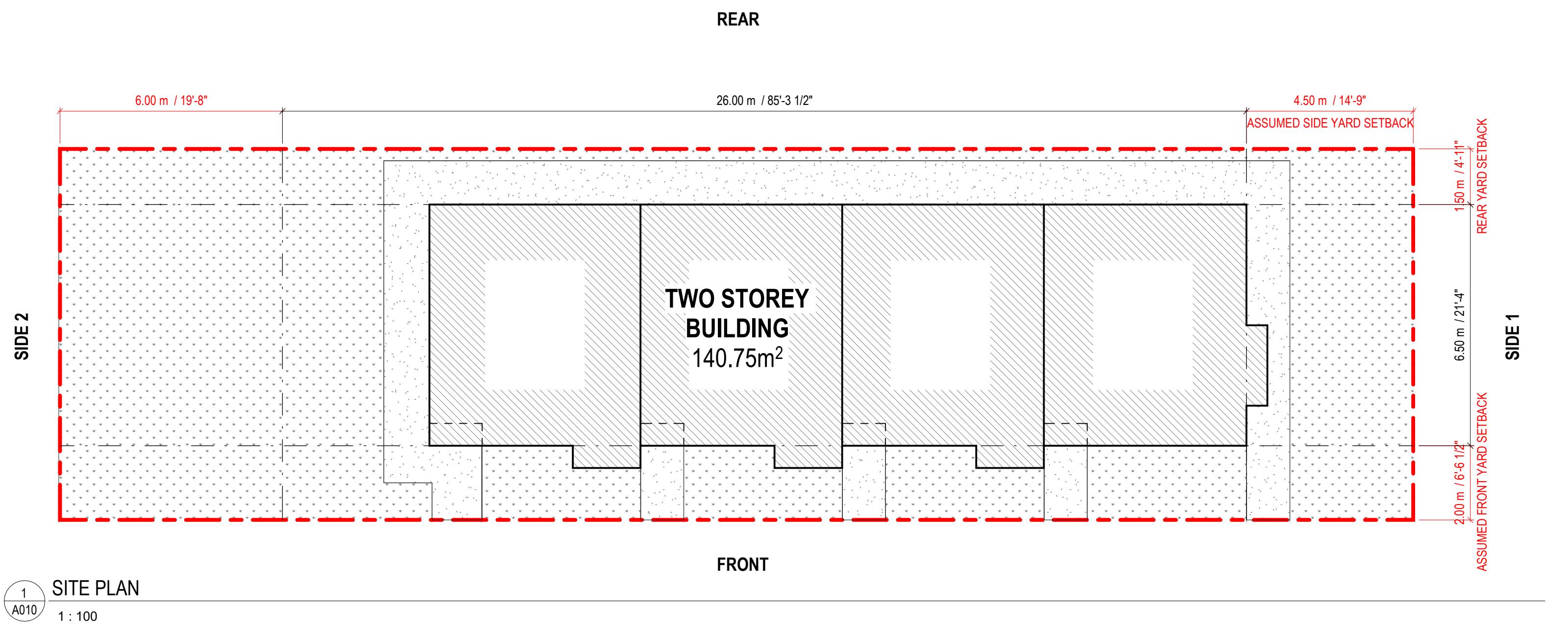
SHEET TITLE:
TYP. DETAILS

PROJECT NO: 241058
SCALE: As indicated

SHEET NO:
A009

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SITE LEGEND	
	ASSUMED PROPERTY LINE
	SETBACK
	BUILDING
	SOFTSCAPE
	HARDSCAPE

SITE DATA	
ADDRESS	N/A
LOT & PLAN NO.	N/A
ZONING	N/A
EXISTING	
LOT AREA	365.00 m ²
BUILDING AREA	140.75m ²
COVERAGE	38.6%
LANDSCAPED OPEN SPACE	224.25 m ²
SOFTSCAPE AREA	160.65 m ² (44%)
HARDSCAPE AREA	56.55 m ² (16%)
PARKING SPOTS	-
SETBACKS	
FRONT	ASSUMED 2.00 m
SIDE	ASSUMED 1.50 m
REAR	ASSUMED 4.50 m
SIDE	ASSUMED 2.00m
BUILDING DEPTH	-

SITE PLAN GENERAL NOTES	
1.	SITE DESIGN TO CONFORM TO FIREFIGHTING ACCESS REQUIREMENTS AS PER NBC(AE) 9.10.20.3.
2.	GRADE TO BE SLOPED AWAY FROM BUILDING AS PER NBC(AE) 9.14.6.1.
3.	DOWNSPOUT TO CONFORM TO NBC(AE) 9.26.18.2.
4.	SITE DESIGN TO CONFORM TO BARRIER FREE REQUIREMENTS AS PER NBC(AE) 3.8.1.1. FOR ACCESS TO BARRIER FREE UNITS
5.	ENTRANCE TO BARRIER FREE UNIT TO CONFORM TO NBC(AE) 3.8.1.2. AND NBC(AE) 3.8.3.3.
6.	EXTERIOR WALKS THAT FORM PART OF A BARRIER-FREE PATH OF TRAVEL TO CONFORM FOR NBC(AE) 3.8.3.2.

ALBERTA BUILDING CODE DATA MATRIX						
PART 9 - HOUSING AND SMALL BUILDINGS						
BUILDING CODE VERSION	NATIONAL BUILDING CODE 2023 ALBERTA EDITION	ELEVENTH EDITION 2023	NBC(AE) REFERENCE			
PROJECT TYPE	NEW CONSTRUCTION RESIDENTIAL OCCUPANCY					[A] 1.3.3.
MAJOR OCCUPANCY CLASSIFICATION	GROUP / DIVISION: C DESCRIPTION: 2 STOREY 4 DWELLING BUILDING	USE: RESIDENTIAL				9.10.2.
SUPERIMPOSED MAJOR OCCUPANCIES	NO					9.10.2.3.
BUILDING AREA (m ²)	DESCRIPTION: NEW CONSTRUCTION FLOOR LEVEL: 147.75	TOTAL (m ²): 147.75				[A] 1.4.1.2.
GROSS AREA (m ²)	DESCRIPTION: GROUND FLOOR 140.27 SECOND FLOOR 147.75	TOTAL (m ²): 295.02				[A] 1.4.1.2.
BUILDING HEIGHT	2 STOREYS ABOVE GRADE 0 STOREYS BELOW GRADE	6.89 m ABOVE AVERAGE GRADE				[A] 1.4.1.2. AND 9.10.4.
'NUMBER OF STREETS	TBC					9.10.20
SPRINKLER SYSTEM	NOT REQUIRED	PROVIDED: N/A				9.10.8.2.
FIRE ALARM SYSTEM	NOT REQUIRED	TYPE PROVIDED: N/A				9.10.18
'WATER SUPPLY IS ADEQUATE						
CONSTRUCTION TYPE	PERMITTED: COMBUSTIBLE PROPOSED: COMBUSTIBLE	CONSTRUCTION: NEW CONSTRUCTION SLAB ON GRADE: WOOD FRAMING CONSTRUCTION				9.10.6
POST-DISASTER BUILDING	NO					[A] 1.3.3.
OCCUPANT LOAD	FLOOR LEVEL: GROUND FLOOR UNIT #: UNIT 1 DESCRIPTION: RESIDENTIAL NUMBER OF SLEEPING ROOMS: 0	UNIT #: UNIT 2 DESCRIPTION: RESIDENTIAL NUMBER OF SLEEPING ROOMS: 0	OCCUPANCY TYPE: RESIDENTIAL BASED ON: 0 SLEEPING ROOMS	BASED ON: 0 SLEEPING ROOMS	OCCUPANT LOAD (PERSONS): 0	3.1.17(1)b AND 9.9.13.2
BARRIER-FREE DESIGN	REQUIRED					9.5.2.
HAZARDOUS SUBSTANCES	NO					9.10.13.3(4)
REQUIRED FIRE RESISTANCE RATINGS	HORIZONTAL ASSEMBLY: N/A FLOORS EXCEPT CRAWL SPACE: N/A	RATING: N/A SUPPORTING ASSEMBLY: N/A				9.10.8.8.3
'SPATIAL SEPARATION	WALL: FRONT 105.6 REAR 132.2 SIDE 1 47.5 SIDE 2 43.6	EBF AREA (m ²): 6.00 min. 1.50 4.5 10.0	LD (m): 19m 7% 4.5% 10.0%	% OPENINGS MAX: 16.9% 4.99% 13.2% 1.82%	RATING: N/A TBC TBC TBC TBC	CONSTRUCTION TYPE: TBC TBC TBC TBC TBC
PLUMBING FIXTURE REQUIREMENTS	A KITCHEN SINK, LAVATORY, BATHTUB OR SHOWER SHALL BE PROVIDED FOR EVERY DWELLING UNIT					9.31.
NOTES	01 ALL REFERENCES ARE TO DIVISION B OF THE NATIONAL BUILDING CODE UNLESS PRECEDED BY [A] FOR DIVISION A.					

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NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
SITE PLAN & CODE MATRIX

AB Rowhouse 01

PROJECT NO: 241058
SCALE: As indicated

SHEET NO:

A010

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FLOOR PLAN GENERAL NOTES	
1.	ALL DIMENSIONS ARE TAKEN TO THE FINISH FACE OF THE INTERIOR PARTITIONS AND EXTERIOR WALLS, UNLESS NOTED OTHERWISE.
2.	ALL DIMENSIONS AT EXTERIOR WINDOWS AND DOORS ARE TAKEN TO THE OUTSIDE EDGE OF THE FRAME, UNLESS NOTED OTHERWISE.
3.	LOCATE ROUGH OPENINGS OF INTERIOR DOORS 100mm FROM INSIDE FACE IF INTERSECTING PARTITION, UNLESS NOTED OTHERWISE.
4.	CLOSET DOORS TO BE CENTERED ALONG INTERIOR CLOSET WIDTH, UNLESS NOTED OTHERWISE.
5.	ALL DROPPED CEILINGS AND BULKHEADS FOR MECHANICAL TO PROVIDE MIN 2100mm CLEAR BELOW.
6.	MIN CEILING HEIGHTS AS PER ABC TABLE 9.5.3.1 BATHROOMS & HALLWAYS = 2100mm BEDROOM = 2100mm LIVING/DINING/KITCHEN = 2100mm
7.	REFER TO LANDSCAPE DOCUMENTS FOR EXTERIOR HARSCAPE AND PLANTING ELEMENTS, AND PAVING TERMINATION DETAILS ADJACENT TO THE BUILDING.

FIRE RATED RESISTANCE LEGEND	
	1 HOUR F.R.R.

FLOOR PLAN LEGEND	
	FLOOR MOUNTED TOILET
	PRE-FAB TUB
	KITCHEN SINK
	WASHROOM SINK
	WASHER
	DRYER
	DOMESTIC HOT WATER
	AIR HANDLER
	RANGE, TYPICAL
	REFRIGERATOR
	CLOSET COAT ROD

1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

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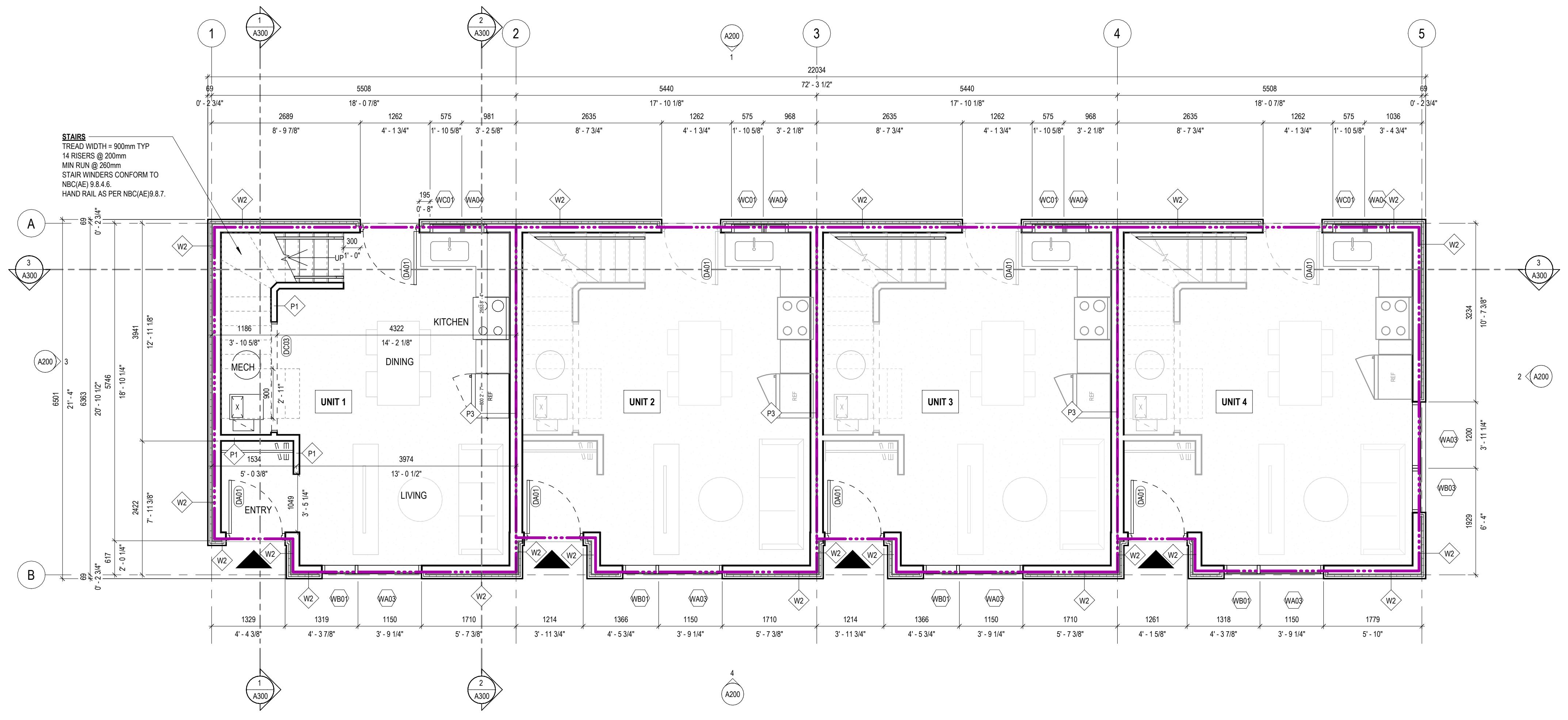
SHEET TITLE:
MAIN FLOOR PLAN

AB Rowhouse 01

PROJECT NO: 241058
 SCALE: 1:50

SHEET NO:

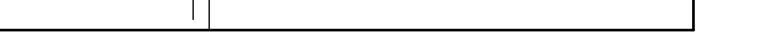
A101

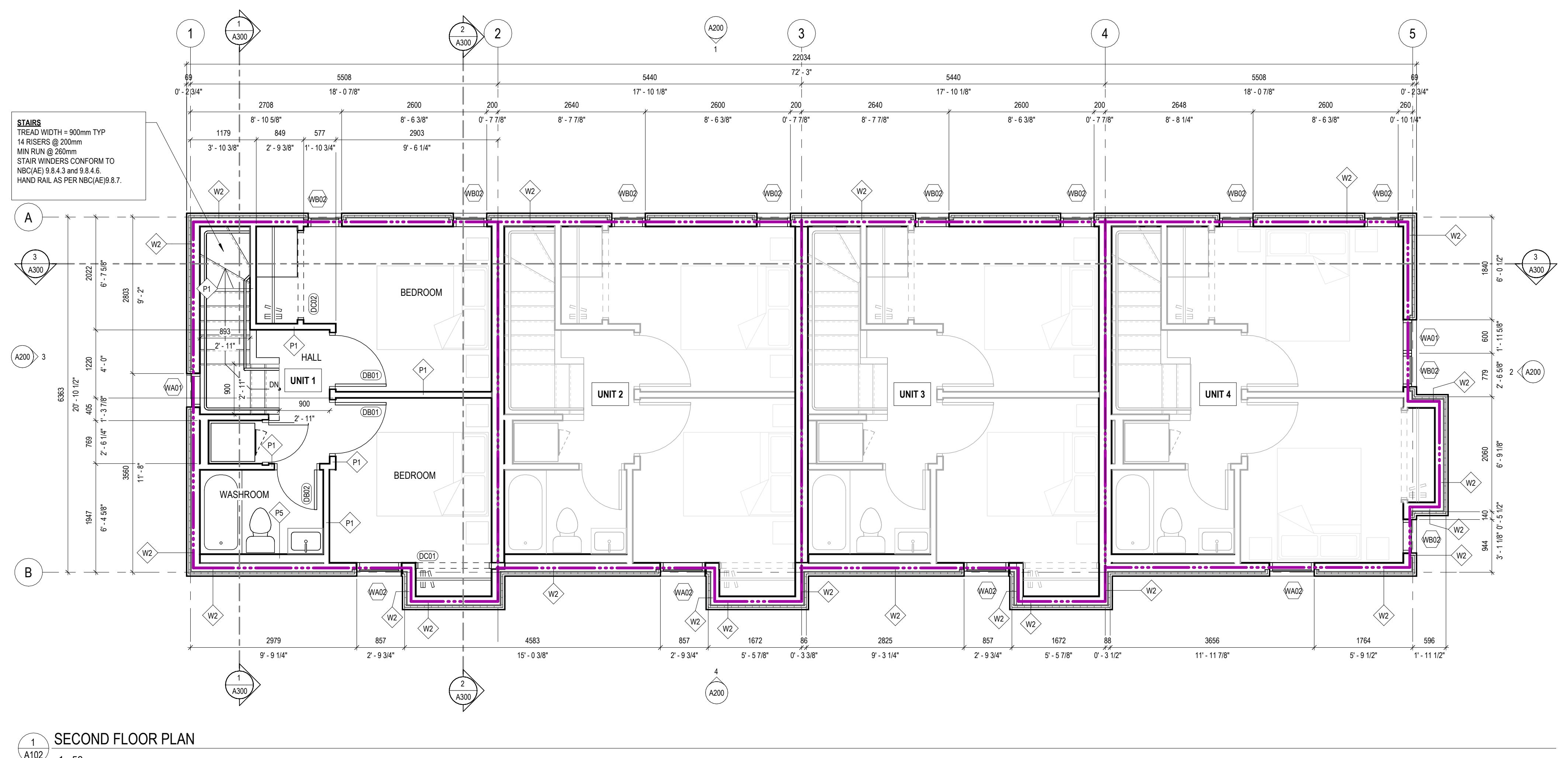


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FLOOR PLAN GENERAL NOTES	
1.	ALL DIMENSIONS ARE TAKEN TO THE FINISH FACE OF THE INTERIOR PARTITIONS AND EXTERIOR WALLS, UNLESS NOTED OTHERWISE.
2.	ALL DIMENSIONS AT EXTERIOR WINDOWS AND DOORS ARE TAKEN TO THE OUTSIDE EDGE OF THE FRAME, UNLESS NOTED OTHERWISE.
3.	LOCATE ROUGH OPENINGS OF INTERIOR DOORS 100mm FROM INSIDE FACE IF INTERSECTING PARTITION, UNLESS NOTED OTHERWISE.
4.	CLOSET DOORS TO BE CENTERED ALONG INTERIOR CLOSET WIDTH, UNLESS NOTED OTHERWISE.
5.	ALL DROPPED CEILINGS AND BULKHEADS FOR MECHANICAL TO PROVIDE MIN 2100mm CLEAR BELOW.
6.	MIN CEILING HEIGHTS AS PER ABC TABLE 9.5.3.1 BATHROOMS & HALLWAYS = 2100mm BEDROOM = 2100mm LIVING/DINING/KITCHEN = 2100mm
7.	REFER TO LANDSCAPE DOCUMENTS FOR EXTERIOR HARSCAPE AND PLANTING ELEMENTS, AND PAVING TERMINATION DETAILS ADJACENT TO THE BUILDING.

FIRE RATED RESISTANCE LEGEND	
	1 HOUR F.R.R.

FLOOR PLAN LEGEND	
	FLOOR MOUNTED TOILET
	PRE-FAB TUB
	KITCHEN SINK
	WASHROOM SINK
	WASHER
	DRYER
	DOMESTIC HOT WATER
	AIR HANDLER
	RANGE, TYPICAL
	REFRIGERATOR
	CLOSET COAT ROD



1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
SECOND FLOOR PLAN

AB Rowhouse 01

PROJECT NO: 241058
 SCALE: 1 : 50

SHEET NO:

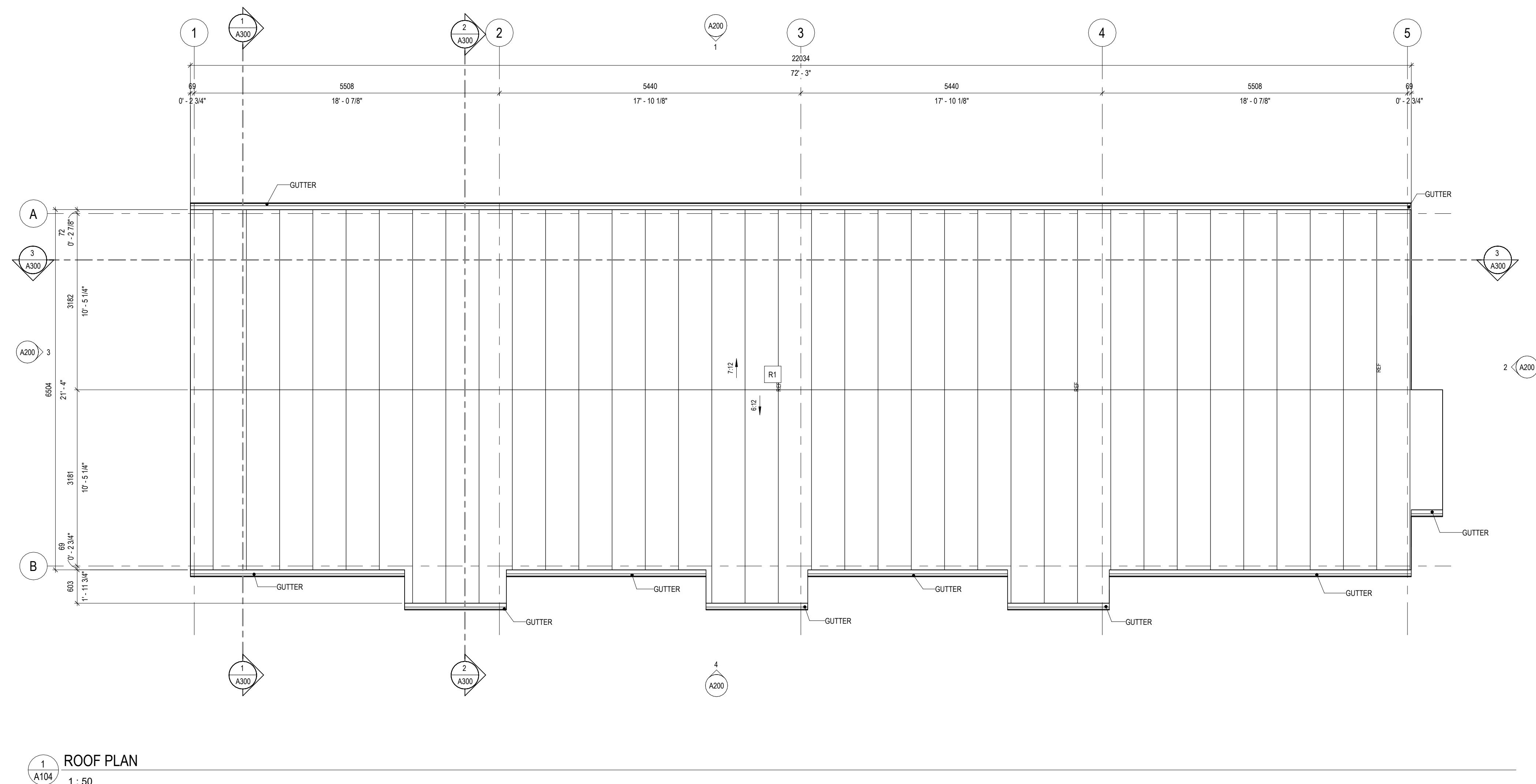
A102

ROOF PLAN GENERAL NOTES

1. ALL ROOFING TYPES TO COMPLY WITH REQUIRED MINIMUM SLOPES AS PER ABC(AE) 9.26.3 AND MANUFACTURER REQUIREMENTS FOR SPECIFIED ROOFING TYPES
2. ALL ROOFS, GUTTERS AND TROUGHS HAVE POSITIVE SLOPE TO DRAIN.
3. ROOF VENTING TO COMPLY WITH 9.19.1.2

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1 2025-02-21 Issued as Prototypical Drawing		
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

**NOT FOR PERMIT
OR CONSTRUCTION**

SHEET TITLE:
ROOF PLAN

AB Rowhouse 01

PROJECT NO: 241058
SCALE: 1 : 50

SHEET NO:

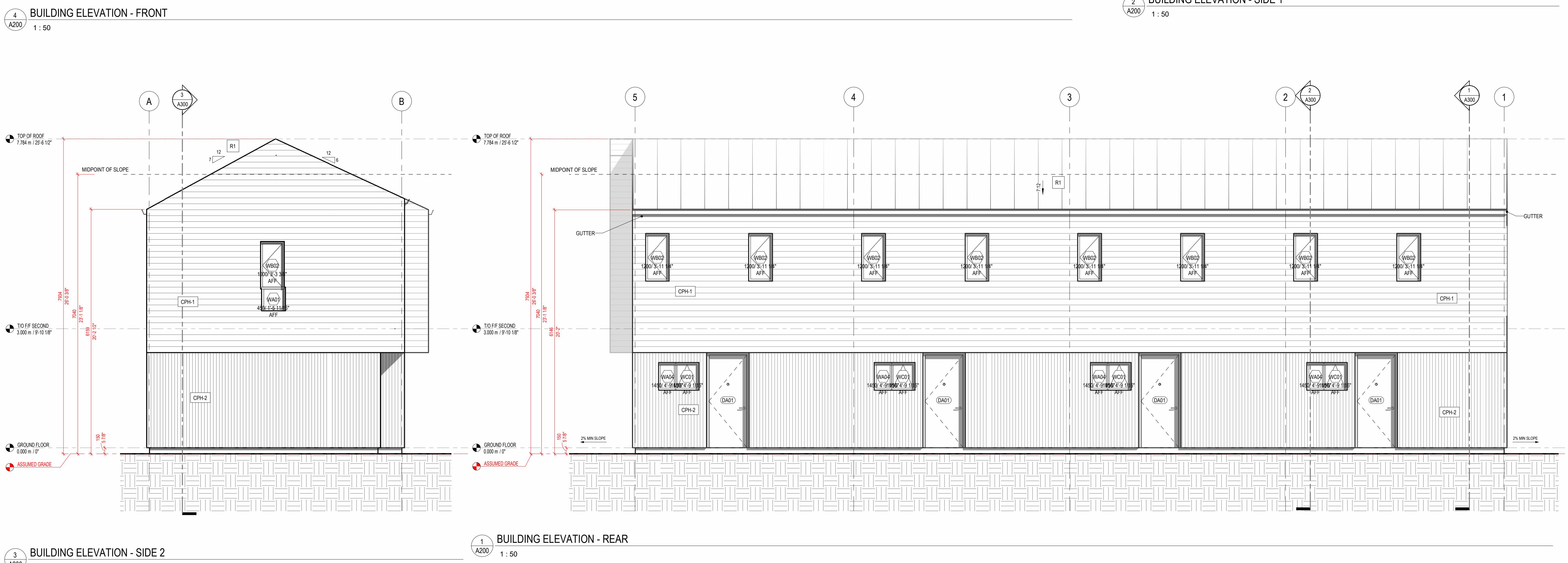
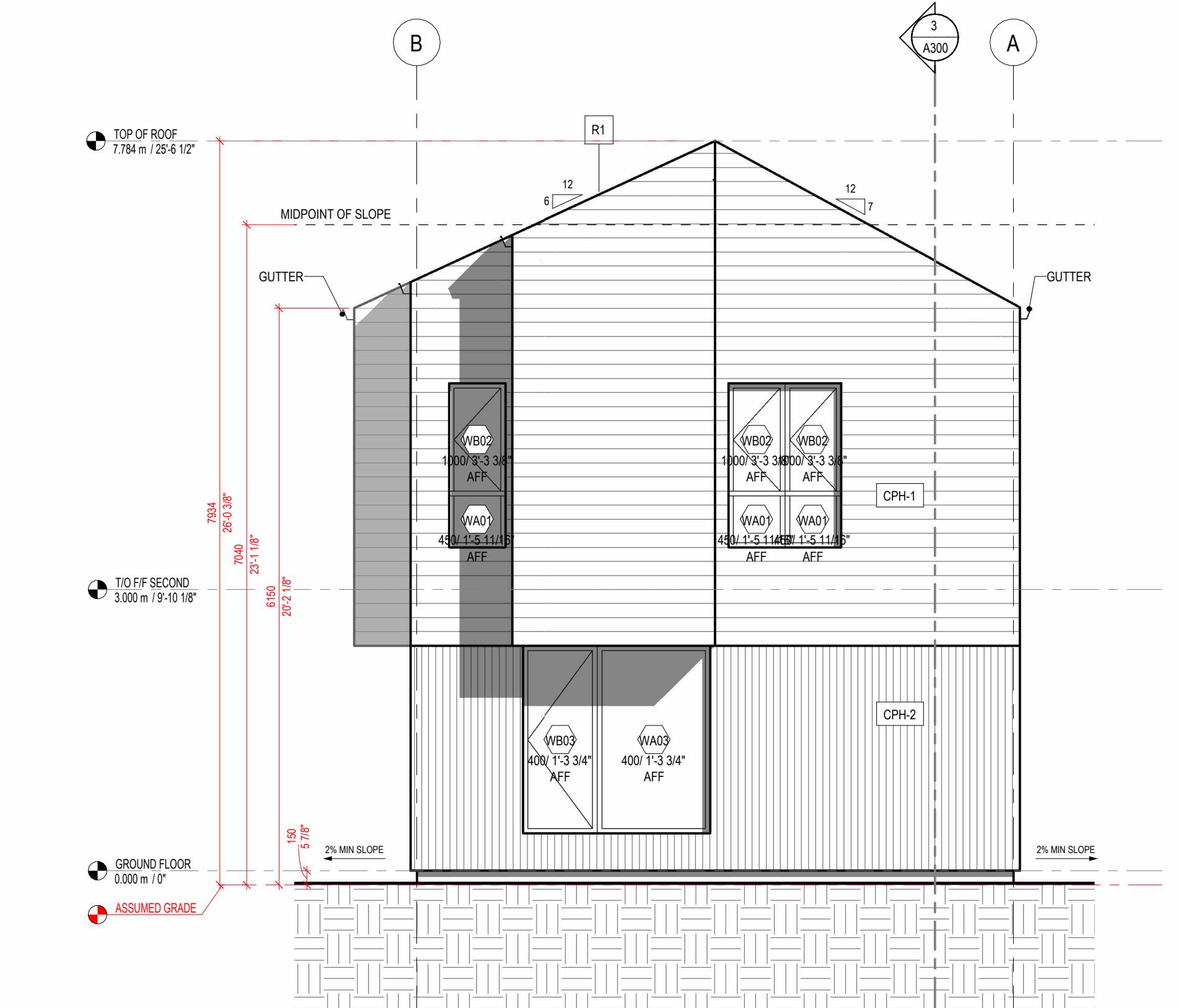
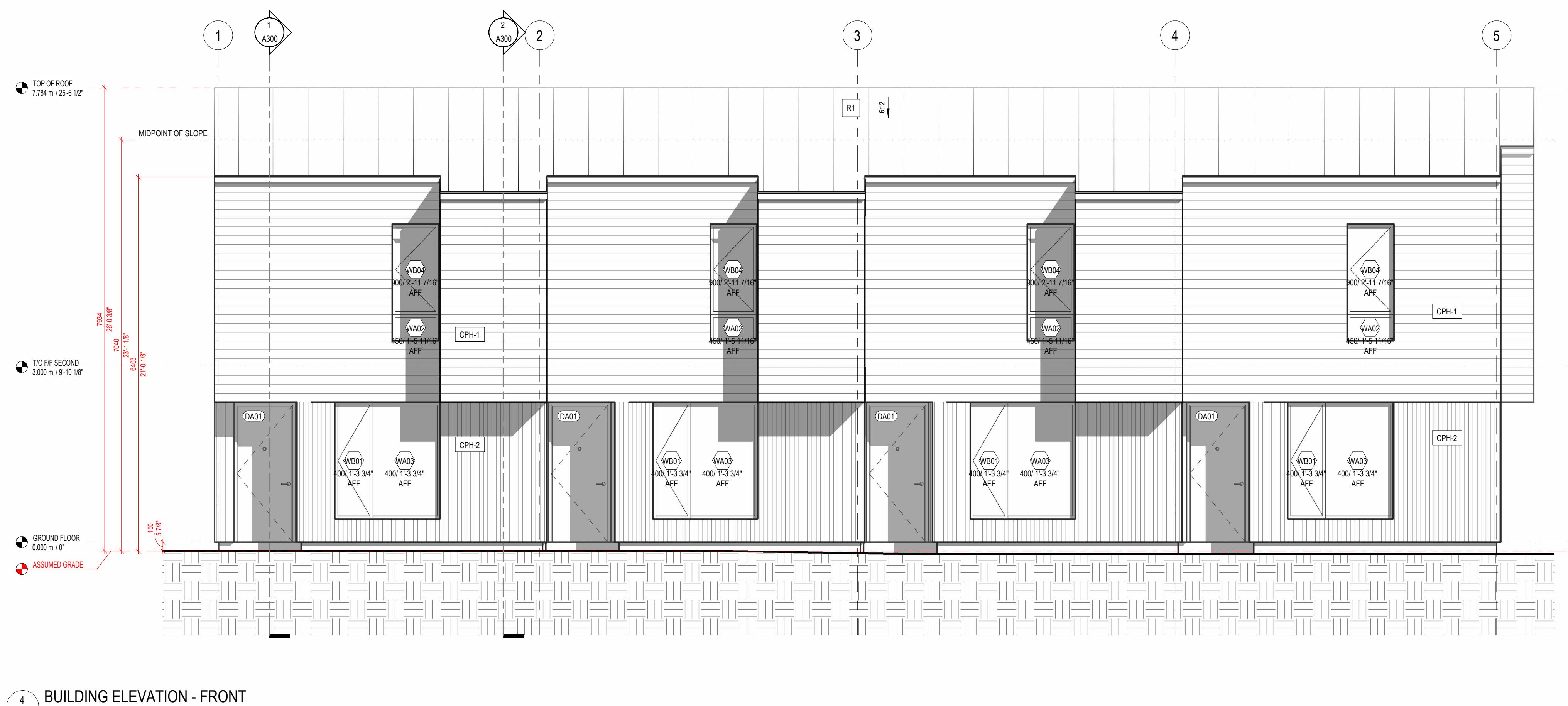
A104

ELEVATION MATERIAL SCHEDULE	
TAG	MATERIAL
CPH-1	CLADDING PLACEHOLDER, TYPE 1
CPH-2	CLADDING PLACEHOLDER, TYPE 2

NOTE: CLADDING FINISHES WITHIN 200MM OF GRADE ARE TO BE MOISTURE RESISTANT

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1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING
CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT
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SHEET TITLE:
ELEVATIONS

AB Rowhouse 01

PROJECT NO: 241058
SCALE: 1:50

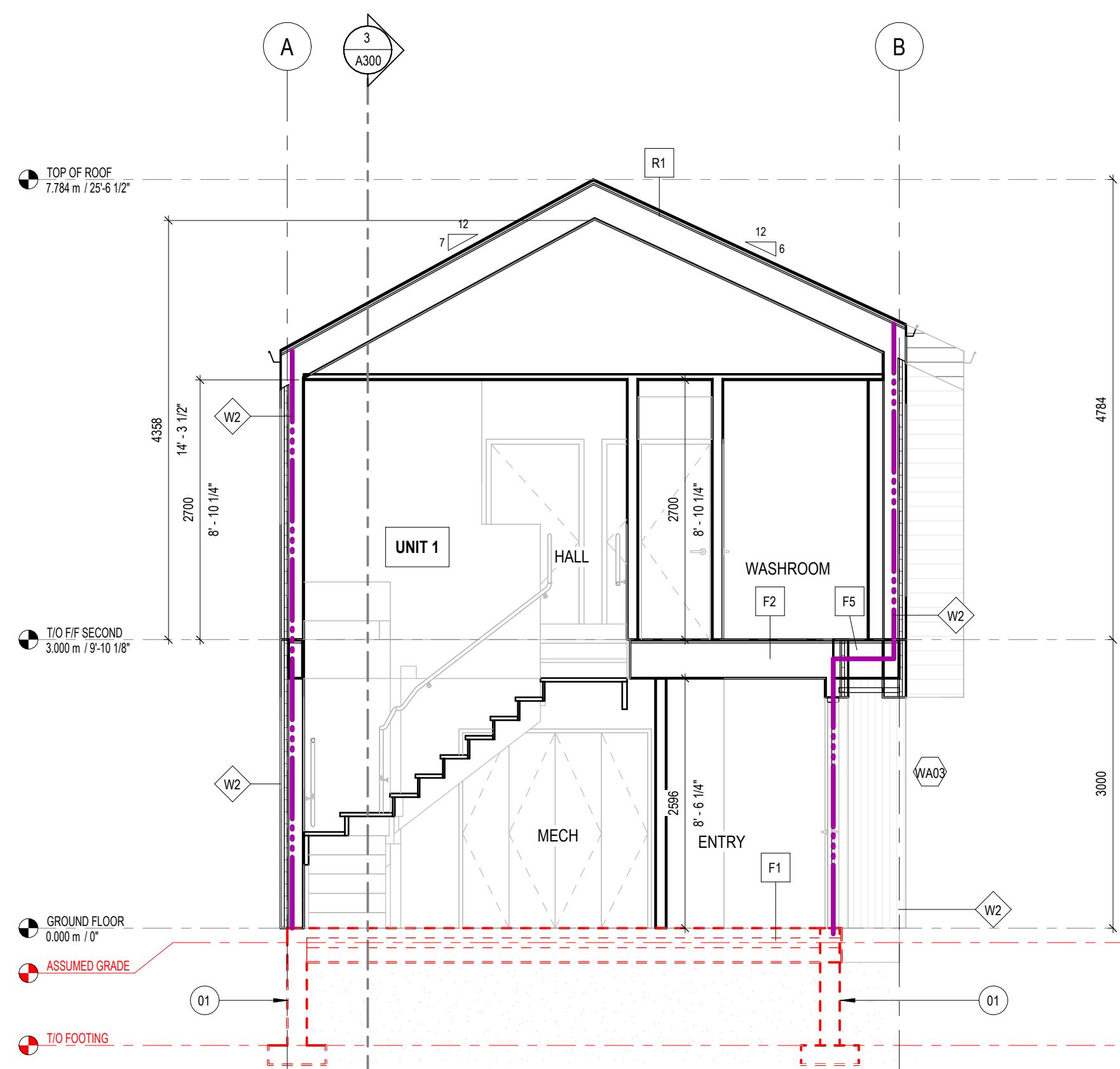
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A200

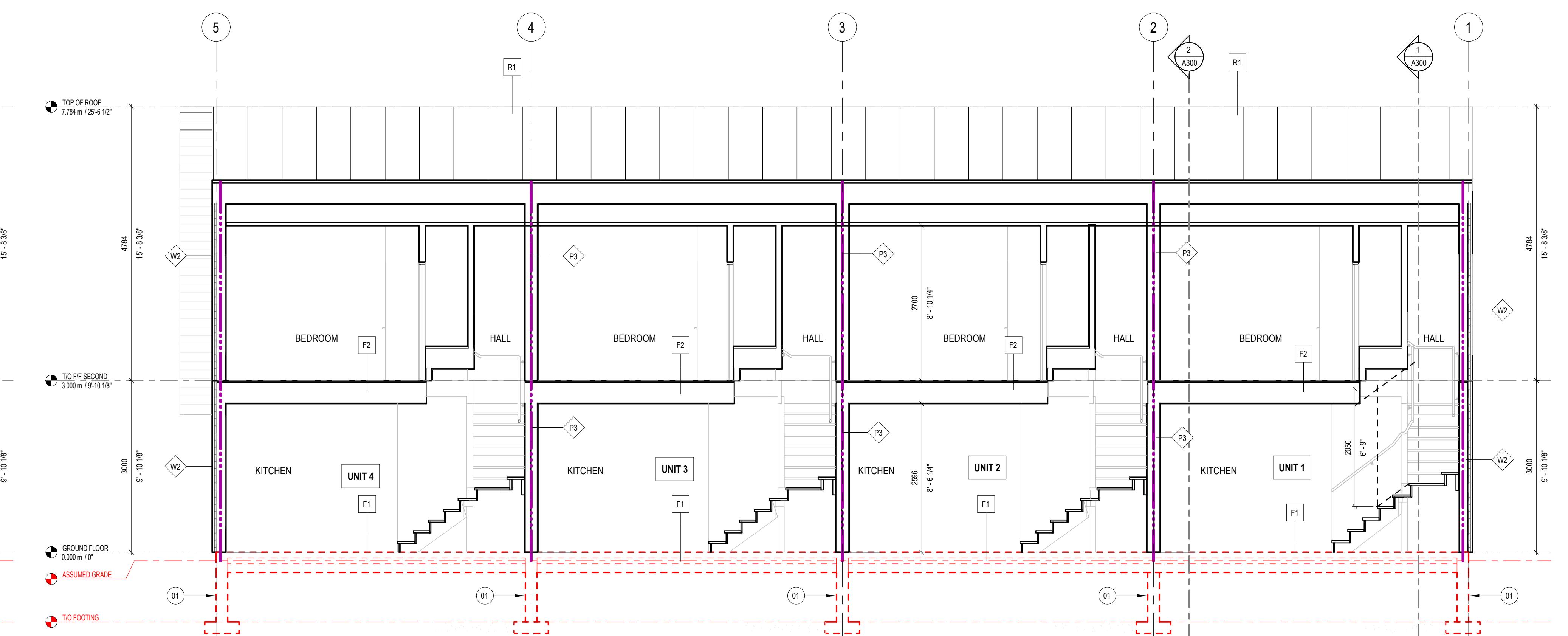
FIRE SEPARATION LEGEND	
	1 HOUR F.R.R.
SECTION KEYNOTES	
01	FOUNDATIONS: ASSUMED. REFER TO STRUCTURAL DRAWINGS

DISCLAIMER

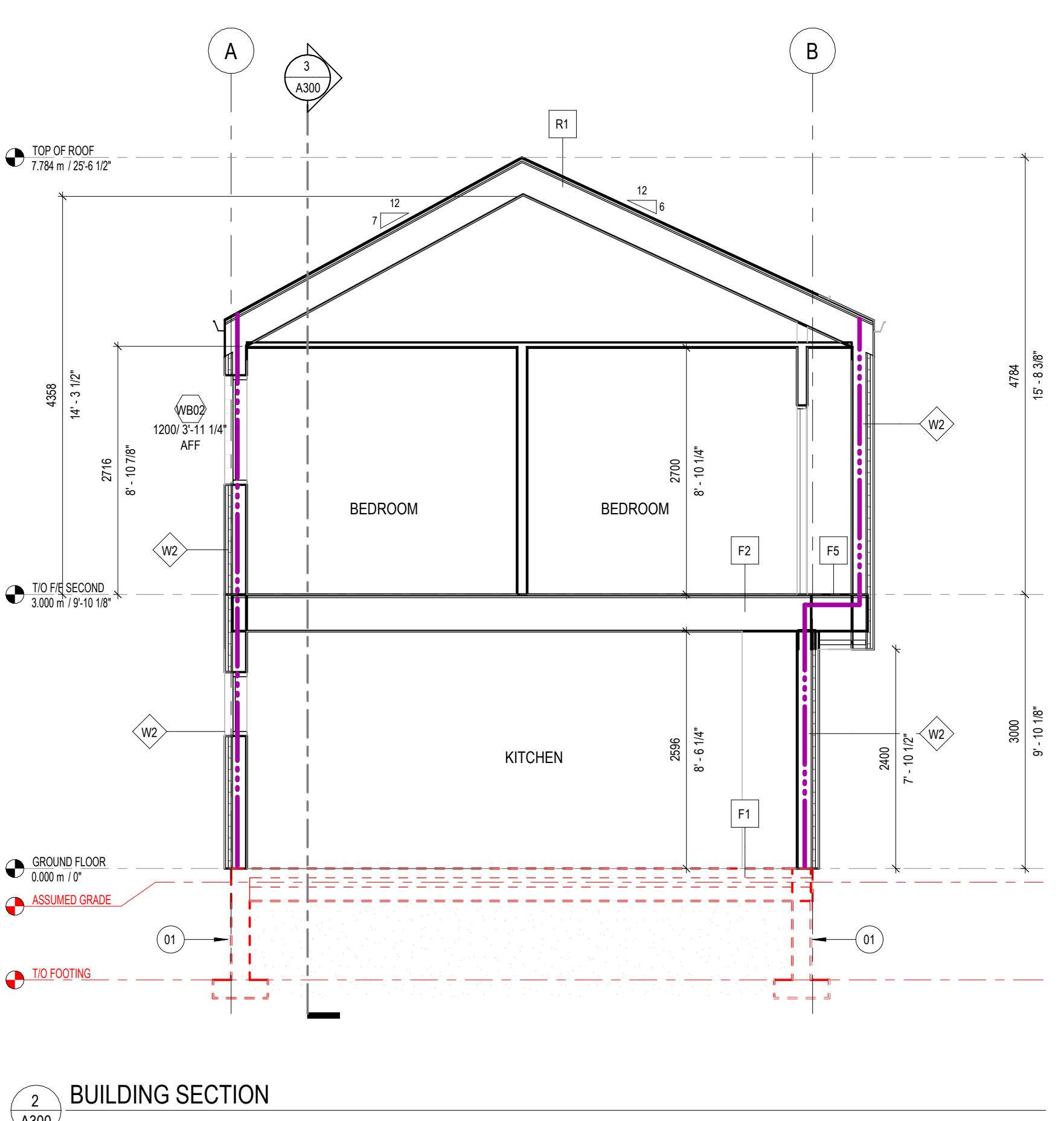
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1 BUILDING SECTION
A300
1 : 50



3 BUILDING SECTION
A300
1 : 50



2 BUILDING SECTION
A300
1 : 50

1	2025-02-21	Issued as Prototypical Drawing
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

SHEET TITLE:
SECTIONS

AB Rowhouse 01

PROJECT NO: 241058
SCALE: 1:50

SHEET NO:

A300

CMHC HOUSING DESIGN CATALOGUE

ROWHOUSE 01

STRUCTURAL DRAWINGS

STRUCTURAL DRAWING LIST	
DWG. No.	DRAWING NAME
S000	COVER SHEET
S101	TYPICAL NOTES
S102	TYPICAL DETAILS
S103	TYPICAL DETAILS
S104	TYPICAL DETAILS
S105	STRUCTURAL SPECIFICATIONS
S201	FOUNDATION PLAN
S301	FRAMING PLANS
S302	BUILDING SECTIONS
S401	TYPICAL FOUNDATION SECTIONS
S501	TYPICAL FLOOR SECTIONS
S601	TYPICAL ROOF SECTIONS

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STRUCTURAL ABBREVIATIONS	
A.B.	ANCHOR BOLT
ALT.	ALTERNATE
ANCHS.	ANCHORS
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
B.P.L.	BASE PLATE
BLK.	BLOCK
BM.	BEAM
BOT.	BOTTOM
BT.PL.	BEAM PLATE
C.W.	COMPLETE WITH
C.J.	CONTROL JOINT
CL.	CENTER LINE
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
DET.	DETAIL
DIA. OR Ø	DIAMETER
DIM.	DIMENSION
DJ	DOUBLE JOIST
DO	DOWN TO
DP	DEEP
DWG.	DRAWING
E.F.	EACH FACE
ELEC.	ELECTRICAL
E.S.	EACH SIDE
E.W.	EACH WAY
E.A.	EACH
ELEV.	ELEVATION
EQ.	EQUAL
EXIST.	EXISTING
F.F.	FINISHED FLOOR
FDN.	FOUNDATION
ft	FOOT
FTG.	FOOTING
Ga	GAUGE
GB	GRADE BEAM
GH.V.	GAUZED
GRD.	GRADE
HORZ.	HORIZONTAL
H.D.	HEAVY DUTY
H.D.G.	HOT DIPPED GALVANIZED
H.P.	HIGH POINT
H.P.T.	HIGH POINT
in.	INCH
I.D.	INSIDE DIAMETER
kN.	KILOWTON
kPa	KILOPASCAL
L	ANGLE
L.G.	LONG
L.P.	LOW POINT
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MAX.	MAXIMUM
MED.H.	MEDICAL
MID.	MIDDLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
m	METRE
mm	MILLIMETRE
MPa	MEGAPASCAL
N.T.S.	NOT TO SCALE
No.	NUMBER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
PL.	PLATE
psf	POUNDS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
R.C.	REINFORCED CONCRETE
R.D.	ROOF DRAWS
R.O.	ROUND OPENING
REF.	REFERENCE
REINF.	REINFORCED
REQD.	REQUIRED
RTU	ROOF TOP UNIT
SECT.	SECTION
S.G.G.	SLAB ON GRADE
S.S.	STAINLESS STEEL
STL.	STEEL
STRUCT.	STRUCTURAL
T.&B.	TOP AND BOTTOM
TO	TOP OF
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UIS	UNDERSIDE
VERT.	VERTICAL
W.	WORKING POINT
W.P.	WELDED WIRE MESH
W.W.M.	SPACED AT

2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING
CATALOGUE

ALBERTA, CANADA

**NOT FOR PERMIT
 OR CONSTRUCTION**

SHEET TITLE:
COVER SHEET

AB Rowhouse 01

PROJECT NO: 02500462
 SCALE: 1:20

SHEET NO:

S000

GENERAL STRUCTURAL NOTES

1. READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, LANDSCAPE, MECHANICAL AND ELECTRICAL DRAWINGS.
2. CHECK AND VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS BEFORE COMMENCING WITH WORK.
3. DRAWINGS SHOW COMPLETED STRUCTURE ONLY. TEMPORARY SUPPORT AND BRACING FOR CONSTRUCTION LOADING CONDITIONS IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION".
5. READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS.
6. GENERAL CONTRACTOR TO VERIFY AND MARK ALL UNDERGROUND LINES AND RE-ENSURE THAT NEW FOUNDATION LOCATIONS DO NOT INTERFERE WITH ANY UNDERGROUND UTILITY LINES.
7. VERIFY AND LOCATE ALL EXISTING FOUNDATIONS AND COORDINATE WITH THE LOCATIONS OF NEW FOUNDATIONS PRIOR TO COMMENCING WITH WORK.
8. ANY CLARIFICATIONS IN REGARDS TO STRUCTURAL DRAWINGS CONTACT THE ENGINEER ON RECORD.

SITE REVIEW

1. NOTIFY THE ENGINEER 48 HOURS IN ADVANCE FOR REVIEW OF THE FOLLOWING:

CONCRETE REINFORCEMENT BEFORE EACH POUR
WOOD FRAMING BEFORE COVERING UP

ENGINEERING SITE REVIEWS WILL BE REQUIRED IN ORDER TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

SHOP DRAWINGS REVIEWS WILL BE REQUIRED FOR THIRD PARTY WORK. THE REVIEW IS NOT AN APPROVAL OF THE DESIGN, DETAILS AND DIMENSIONS INHERENT IN THE DESIGNS SUBMITTED BY OTHERS. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

BUILDING CODE AND STANDARDS

- NATIONAL BUILDING CODE - 2023 ALBERTA EDITION
- ALBERTA INFRASTRUCTURE TECHNICAL DESIGN REQUIREMENTS, VERSION 7 (AUGUST 2022)
- CSA A23.1-14 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION
- CSA A23.6 DESIGN OF CONCRETE STRUCTURES
- CSA S304 DESIGN OF MASONRY STRUCTURES
- CSA S136 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS

DESIGN LOADS

UNLESS NOTED OTHERWISE LOADS NOTED BELOW ARE SPECIFIED LOADS. LOADS ARE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION

NOTE:

THIS PROTOTYPE HAS BEEN PREPARED BASED ON THE CONDITIONS SPECIFIC TO EDMONTON. ALL LOAD CONSIDERATIONS MUST BE REVIEWED AND VERIFIED BASED ON THE EXACT LOCATION OF EACH PROJECT. THE STRUCTURE DESIGN MUST ADHERE TO THE LATEST ASSESSMENTS, BUILDING CODES, AND GEOTECHNICAL REPORTS APPLICABLE TO THE SITE.

1. LATERAL LOADS FROM WIND

• WIND LOADS:
REFERRER WIND PRESSURE (q 1/10) 0.36 kPa
REFERRER WIND PRESSURE (q 1/50) 0.45 kPa
INTERNAL PRESSURE CATEGORY 2
ULS IMPORTANCE FACTOR 1 (HIGH IMPORTANCE)
SLS IMPORTANCE FACTOR 0.75 (HIGH IMPORTANCE)
WIND INTERSTORY DRIFT LIMIT H/500
(WHERE H IS THE HEIGHT OF THE STOREY)

• EARTHQUAKE LOADS:
SITE CLASSIFICATION CLASS D-XD (ASSUMED, BASED ON EDMONTON AREA),
Sa (0.2, Xc) 0.199
Sa (0.1, Xc) 0.167
Sa (1.0, Xc) 0.017
Sa (2.0, Xc) 0.048
Sa (5.0, Xc) 0.024
Sa (10.0, Xc) 0.0146
PGA (Xc) 0.126
Po (Xc) 0.104
SEISMIC CATEGORY SC1
ULS IMPORTANCE FACTOR 1
Rd 3
Rd = 1.7
SEISMIC INTERSTORY DEFLECTION LIMIT 0.01 hs (FOR POST-DISASTER)
0.05 hs (FOR HIGH IMPORTANCE)
0.025 hs (FOR NORMAL IMPORTANCE)
(WHERE hs IS THE INTERSTORY HEIGHT OF THE STRUCTURE)

• LATERAL LOADS FROM WIND AND EARTHQUAKE ARE RESISTED BY SHEAR WALLS. DIAPHRAGM ACTION OF THE ROOF AND THE FLOOR PLATES IS USED TO TRANSFER LATERAL LOADS HORIZONTALLY TO THE BRACING SYSTEM.

2. FLOOR LOADS

DEAD LOAD
(SPECIFIED DEAD LOADS HAVE INCORPORATED A SUPERIMPOSED DEAD LOAD OF 1.0 kPa FOR PARTITION LOADS)

MAIN FLOOR	1.7 kPa
SECOND FLOOR	1.7 kPa

LIVE LOAD
MAIN FLOOR 1.9 kPa
SECOND FLOOR 1.9 kPa

OTHER LOADS:
• FLOOR JOISTS ABOVE MECHANICAL ROOM TO BE DESIGNED FOR AN ADDITIONAL BOTTOM CHORD LIVE LOAD OF 10 kPa.
• DULLEY HEADS 10 psf REFER TO ARCH DRAWINGS FOR LOCATIONS.

• MISCELLANEOUS LOADS SHOWN DIRECTLY ON THE PLANS.

• WATER LINE LOADS SEE THIS DRAWING.

3. ROOF LOADS

DEAD LOAD 1.2 kPa
LIVE LOAD 1.46 kPa
SNOW LOAD 1.7 kPa
S 1.46 kPa+ SNOW PILING

RAIN LOAD 0.1 kPa

ULS IMPORTANCE FACTOR 1

SLS IMPORTANCE FACTOR 0.9

RAIN 97mm (ONE DAY RAIN)

OTHER LOADS:
• ALLOW FOR ADDITIONAL 75 psf SNOW PILING IN ALL VALLEYS. SNOW PILING TO BE TAPERED TO REGULAR SNOW LOAD AT 300mm EACH SIDE OF VALLEY.
• WIND UPLIFT LOADS - TRUSS SUPPLIER TO DESIGN ROOF TRUSSES FOR WIND UPLIFT ACCORDING TO THE LATEST BUILDING CODE.
• BULL HEADS 10 psf REFER TO ARCH DRAWINGS FOR LOCATIONS.

• MISCELLANEOUS LOADS SHOWN DIRECTLY ON THE PLANS.

• WATER LINE LOADS SEE THIS DRAWING.

4. TEMPORARY CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN PARAMETERS AND SHALL NOT BE APPLIED BEFORE THE STRUCTURE HAS SUFFICIENT STRENGTH AND STABILITY.

NON-STRUCTURAL ELEMENTS

1. NON-STRUCTURAL ELEMENTS TO BE DESIGNED BY OTHERS.
2. EXAMPLES OF NON-STRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:
 - A. ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, LADDER, FLAG POSTS, AWNINGS, CEILINGS, MILLWORK ETC.
 - B. LANDSCAPE ELEMENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, ETC.
 - C. CLADDING, GLAZING, WINDOW MULLIONS, PARTITION WALLS.
 - D. ARCHITECTURAL PRECAST, PRECAST CLADDING.
 - E. SIGN LIGHTS.
 - F. MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS AND THEIR ATTACHMENT DETAILS.
 - G. WINDOW WASHING EQUIPMENT AND THEIR ATTACHMENTS.
 - H. ESCALATORS, ELEVATORS AND CONVEYING SYSTEMS.
 - I. BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
 - J. NON STRUCTURAL CONCRETE TOPPINGS.

3. SHOP DRAWINGS FOR NON STRUCTURAL ELEMENTS WHICH MAY AFFECT THE PRIMARY STRUCTURAL SYSTEM SHALL BE SUBMITTED TO ENGINEER ON RECORD (E.O.R.). THESE DRAWINGS WILL BE REVIEWED ONLY FOR THE EFFECT OF THE ELEMENT ON THE PRIMARY STRUCTURAL SYSTEM.

4. PERIMETER STEEL FRAMING ABOVE WINDOWS IN STEEL STUD WALLS HAS BEEN DESIGNED TO L/240 TOTAL LOAD DEFLECTION - U.N.O.

5. ROOF BEAMS AND JOISTS HAVE BEEN DESIGNED TO L/240 TOTAL LOAD DEFLECTION - U.N.O.

6. FLOOR BEAMS AND JOISTS HAVE BEEN DESIGNED TO L/360 TOTAL LOAD DEFLECTION - U.N.O.

7. EXPECTED SLAB ON GRADE MOVEMENT TO BE +/- 1". CONFIRM WITH GEOTECHNICAL REPORT.

GEOTECHNICAL NOTES

1. GEOTECHNICAL EVALUATION OF THE SITE WILL BE REQUIRED PRIOR TO COMMENCING WITH THE PREPARATION OF DRAWINGS AND / OR CONSTRUCTION. EOR TO REVIEW THE GEOTECHNICAL REPORT AND REVISE THE FOUNDATIONS ACCORDINGLY.
2. REFER TO FOUNDATION PLAN FOR ADDITIONAL NOTES REGARDING THE APPLICABLE FOUNDATION SYSTEM.
3. LATERAL SOIL PRESSURE ON WALLS INCLUDING SURCHARGE SHALL BE AS FOLLOWS. UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT
4. ALL BACKFILL MATERIALS AND BACKFILL INSTALLATION SHALL BE REVIEWED BY A GEOTECHNICAL ENGINEER TO ENSURE COMPLIANCE WITH THE RECOMMENDATIONS AS NOTED IN THE GEOTECHNICAL REPORT.
5. EXCAVATION REQUIREMENTS SHALL BE REVIEWED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PROCEEDING WITH WORK.
6. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR DAMP PROOFING OR WATER STOP REQUIREMENTS.
7. FOR GROUND ELEVATIONS AND DRAINAGE SLOPES, SEE ARCHITECTURAL DRAWINGS.

CONCRETE COVER SCHEDULE	
	FIRE RESISTANCE RATING (SEE ARCHITECTURAL DRAWINGS) UP TO
GRADE BEAMS	2 HRS.
SLAB ON GRADE	50mm
SINGLE-LAYER REINFORCEMENT	PLACE REINFORCEMENT AT MID DEPTH

• COVER IS TO PRIMARY REINFORCEMENT, NOT TO STIRRUPS OR TIES
• APPLIES TO NORMAL EXPOSURE ONLY

CONTRACTOR TO CONFIRM FIRE RATING REQUIREMENTS FOR ALL CONCRETE ELEMENTS WITH ARCHITECTURAL DRAWINGS.
CONTRACTOR TO ENSURE CLEAR COVER REQUIREMENTS AS PER THE CONCRETE COVER SCHEDULE ARE MET.

8. SUBMIT TO ENGINEER ON RECORD (E.O.R.) FOR REVIEW THE LOCATIONS OF ALL SLEEPS AND OPENINGS NOT SHOWN ON THE DRAWINGS. ENGINEER ON RECORD (E.O.R.) WILL PROVIDE STRUCTURAL DETAILS UPON REQUEST.
9. SLEEVES SHALL NOT BE PLACED HORIZONTALLY ALONG OR VERTICALLY THROUGH BEAMS UNLESS AUTHORIZED BY ENGINEER ON RECORD (E.O.R.)

MINIMUM REQUIREMENTS

UNLESS OTHERWISE NOTED ON DRAWINGS

BAR EMBEDMENT AND LAP SPLICE TABLE				
BAR SIZE	TENSION		COMPRESSION	
	EMBEDMENT LENGTH	LAP SPLICE LENGTH	EMBEDMENT LENGTH	LAP SPLICE LENGTH
10M	16" (400mm)	20" (500mm)	8" (200mm)	12" (300mm)
15M	24" (600mm)	30" (750mm)	12" (300mm)	18" (450mm)
20M	30" (750mm)	40" (1000mm)	16" (400mm)	24" (600mm)
25M	48" (1200mm)	62" (1500mm)	20" (500mm)	30" (750mm)
30M	58" (1450mm)	74" (1850mm)	24" (600mm)	36" (900mm)
35M	60" (1500mm)	86" (2150mm)	28" (700mm)	42" (1050mm)

TABLE NOTES:
1. BASED ON NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.

2. NORMAL DENSITY CONCRETE OF STRENGTH AT LEAST 25 MPa.

3. ENCLOSED BY MINIMUM STIRRUPS OR TIES.

4. CLEAR COVER AT LEAST 1.0 X BAR DIAMETER.

5. CLEAR SPACING AT LEAST 1.4 X BAR DIAMETER.

6. INCREASE LENGTHS TO 1.31 X LENGTH LISTED FOR EPOXY COATED REINFORCING.

MINIMUM SLAB ON GRADE REINFORCEMENT TABLE U.N.O. ON DRAWINGS	
SLAB THICKNESS	SLABS ON GRADE
≤ 4" (100mm)	10M @ 14" (350mm)
≤ 5" (130mm)	10M @ 12" (300mm)
≤ 6" (150mm)	10M @ 12" (300mm)
≤ 7" (175mm)	10M @ 11" (275mm)
≤ 8" (200mm)	10M @ 10" (250mm)
≤ 9" (225mm)	10M @ 10" (250mm)
≤ 10" (250mm)	10M @ 10" (250mm)
≤ 12" (300mm)	10M @ 10" (250mm)

TABLE NOTES:
1. MINIMUM THICKNESS OF SLABS ON GRADE IS 4" (100mm).

2. ALL SLABS ON GRADE ARE TO BE DESIGNED AS PER THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.

3. ENCLOSED BY MINIMUM STIRRUPS OR TIES.

4. CLEAR COVER AT LEAST 1.0 X BAR DIAMETER.

5. CLEAR SPACING AT LEAST 1.4 X BAR DIAMETER.

6. INCREASE LENGTHS TO 1.31 X LENGTH LISTED FOR EPOXY COATED REINFORCING.

7. FOR ADDITIONAL NOTES AND REQUIREMENTS SEE SPECIFICATIONS.

CONCRETE

1. CONCRETE TO CONFORM TO THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS BEING NORMAL WEIGHT MEETING THE FOLLOWING REQUIREMENTS / THE REQUIREMENTS IN THE SPECIFICATIONS.

2. ADMIXTURES CONTAINING CALCIUM CHLORIDE ARE NOT PERMITTED.

3. SUPERPLASTICIZING ADMIXTURE IS PERMITTED TO ALLOW PUMPING OR IMPROVE SURFACE FINISHING OF CONCRETE. SUPERPLASTICIZING TO BE IN STRICT ACCORDANCE WITH THE CONCRETE SUPPLIER'S RECOMMENDATIONS.

4. FOR FLOOR SLABS, DESIGN THE CONCRETE MIXTURE WITH AGGREGATE GRADING AND WATER TO CEMENTING MATERIALS RATIO THAT MINIMIZES SHRINKAGE.

5. REJECT ALL CONCRETE WHEN TIME BETWEEN BATCHING AND PLACING EXCEEDS TWO HOURS.

6. DO NOT ADD WATER TO THE CONCRETE ON SITE UNLESS AUTHORIZED BY THE CONCRETE SUPPLIER.

7. PROTECT CONCRETE FROM ADVERSE WEATHER CONDITIONS IN ACCORDANCE WITH THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.

8. FOR ADDITIONAL NOTES AND REQUIREMENTS SEE SPECIFICATIONS.

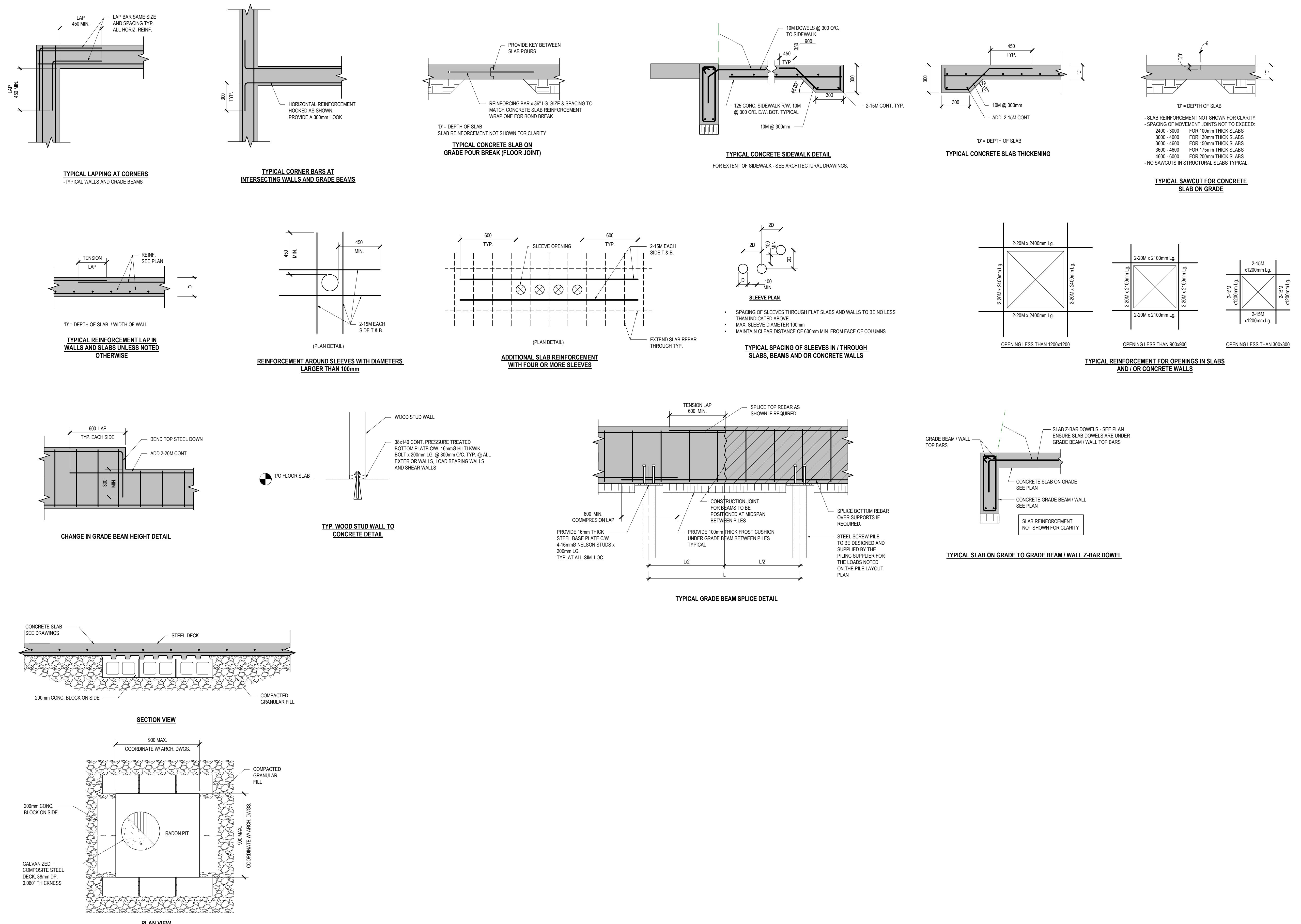
CONCRETE STRENGTH AND MIX SPECIFICATIONS

EXPOSURE CLASS	USE	CEMENT TYPE	MIN. STRENGTH	
----------------	-----	-------------	---------------	--

ISCI AIMER

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AB Bowhouse 01

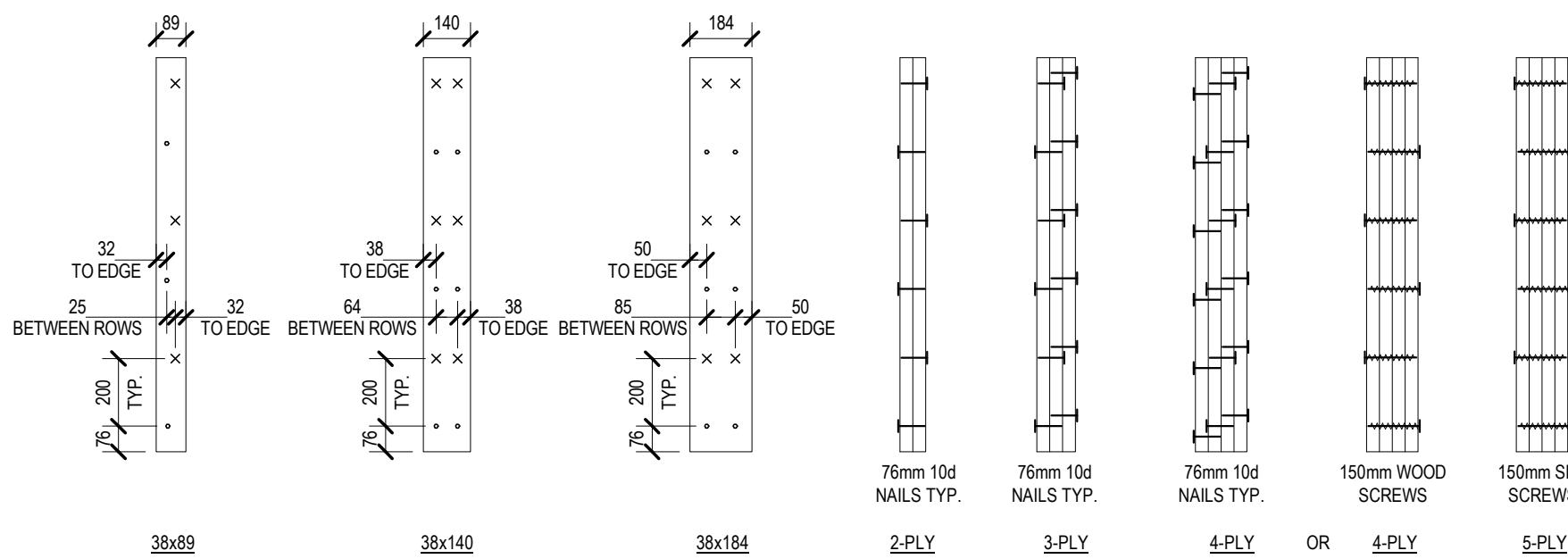
PROJECT NO: 02500462
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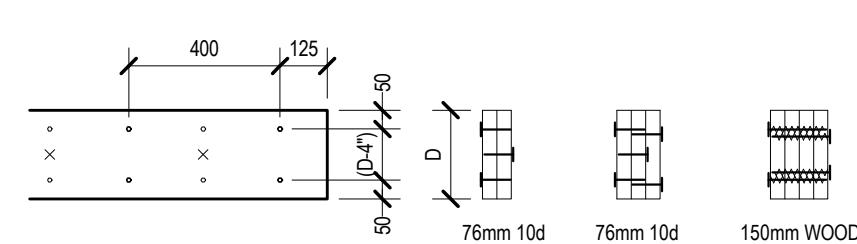
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DISCLAIMER

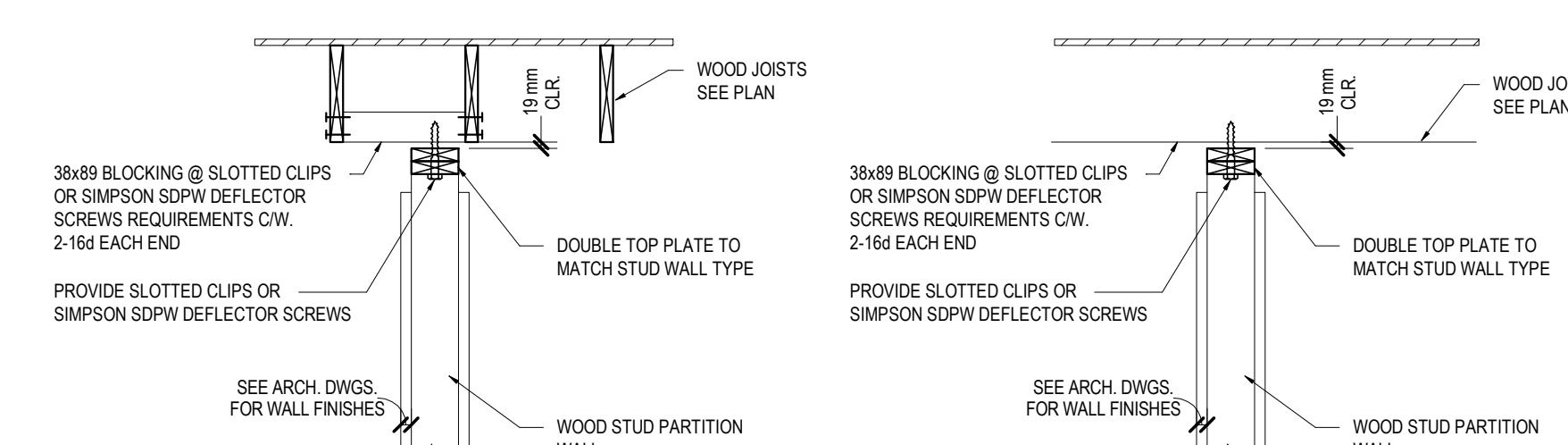
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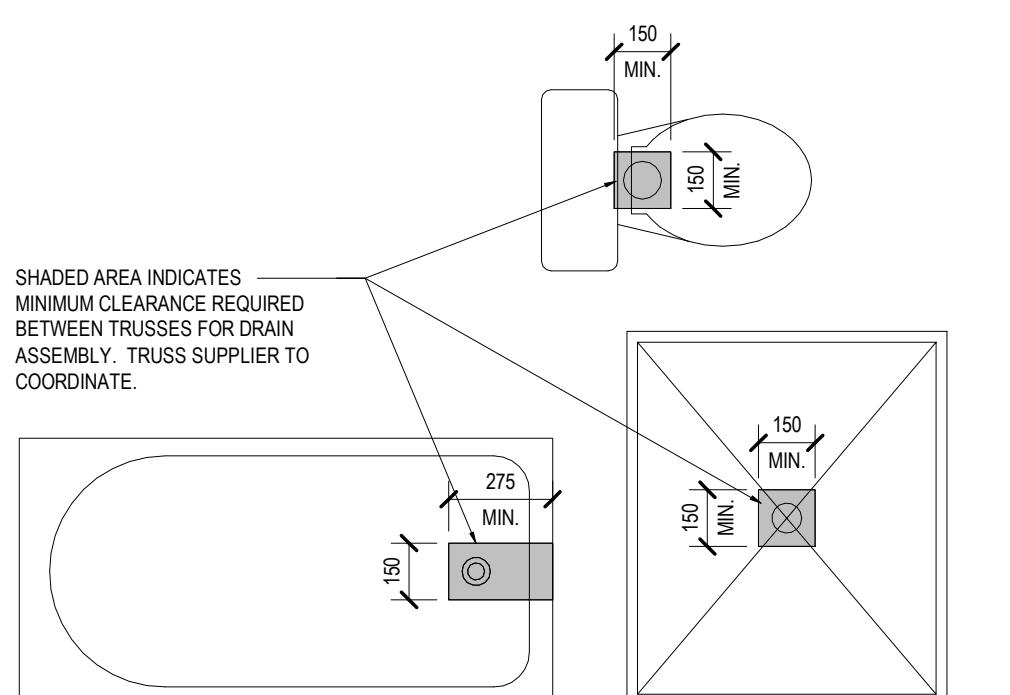
BUILT-UP COLUMN NAILING PATTERN
1. BUILT-UP STRUCTURAL COMPOSITE LUMBER (LVL, LSL) COLUMNS TO BE FASTENED AS PER MANUFACTURER'S REQUIREMENTS



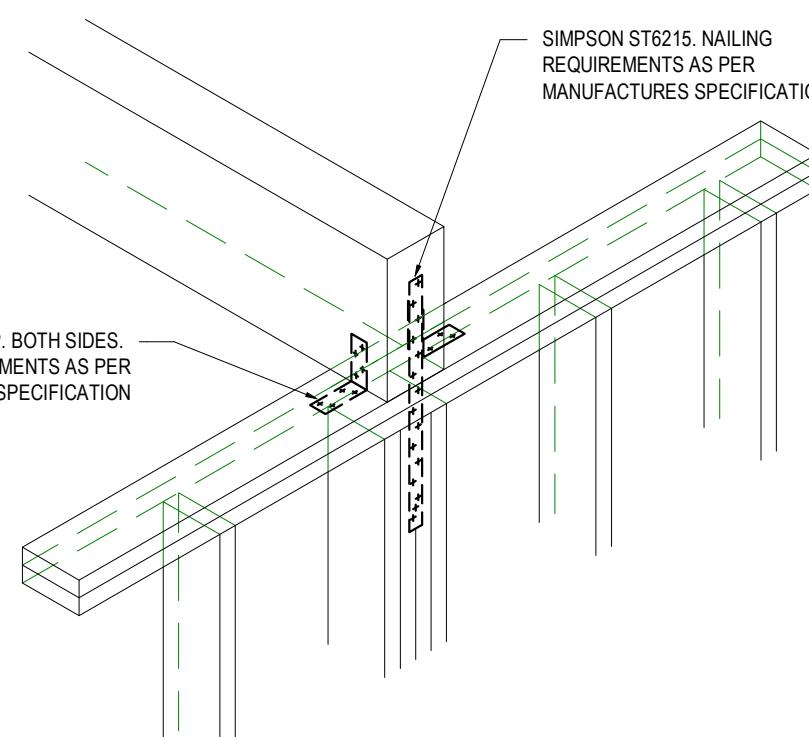
BUILT-UP BEAM NAILING PATTERN
1. BUILT-UP STRUCTURAL COMPOSITE LUMBER (LVL, LSL) COLUMNS TO BE FASTENED AS PER MANUFACTURER'S REQUIREMENTS



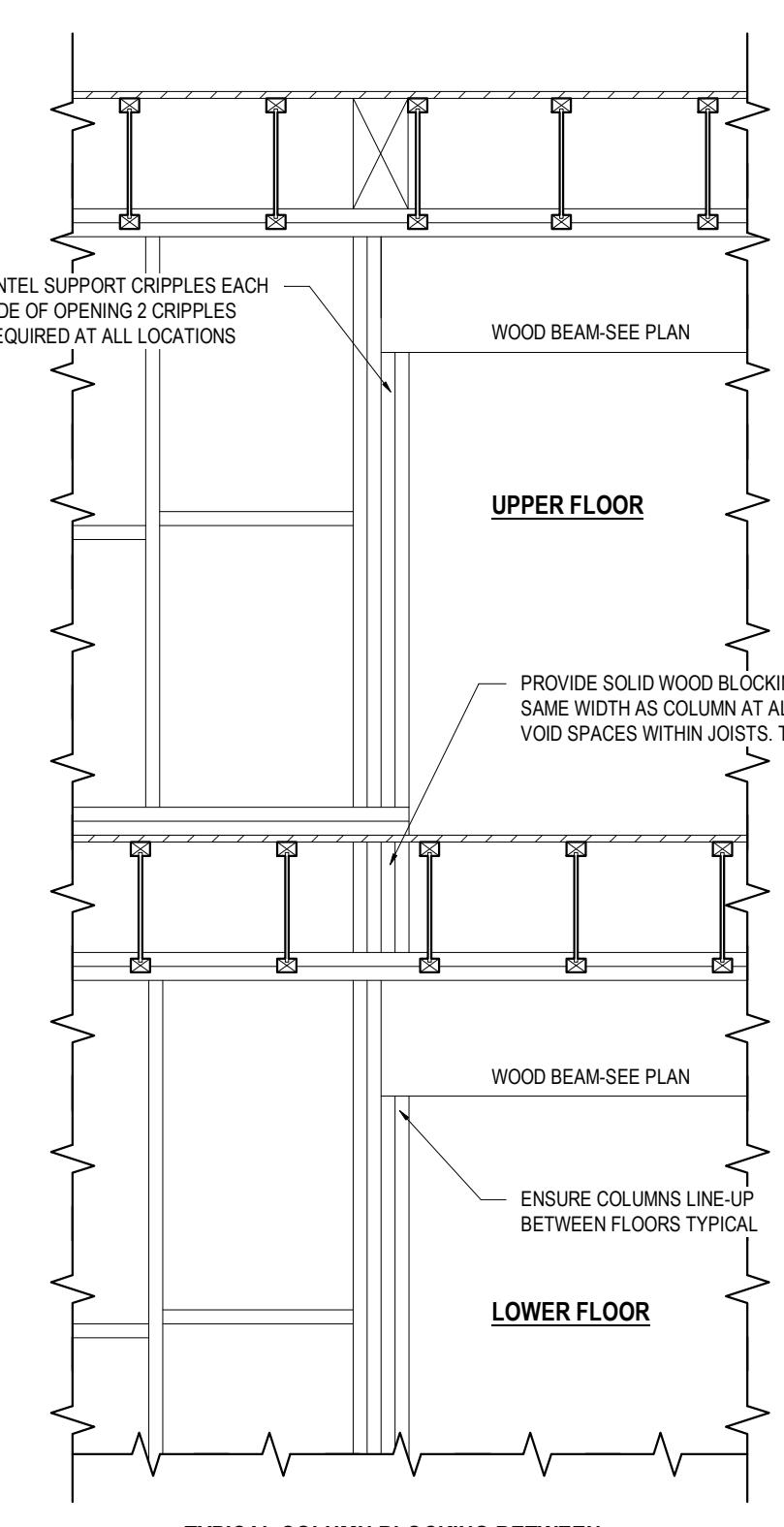
WOOD STUD PARTITION WALL DETAIL



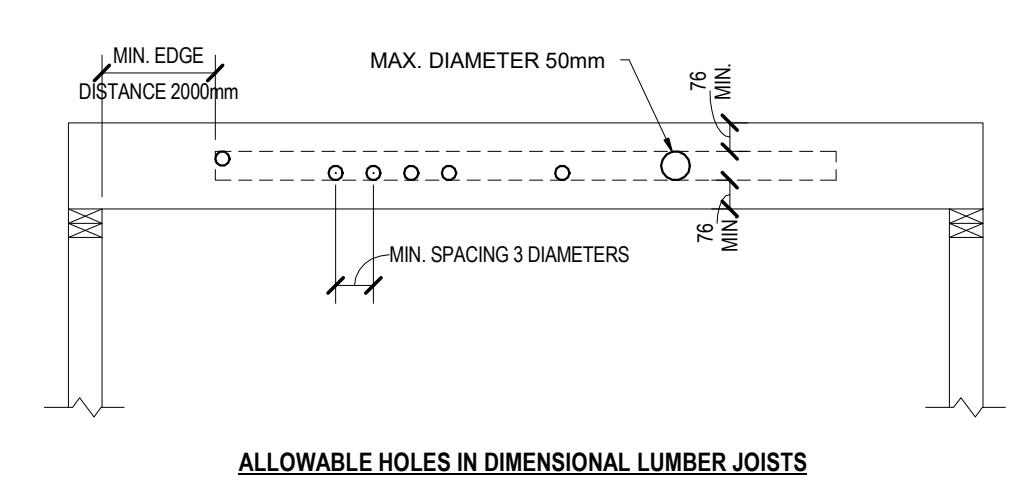
FRAMING REQUIREMENTS UNDER TUBS AND SHOWERS
(SEE ARCHITECTURAL DRAWINGS FOR TUB AND SHOWER LOCATIONS)



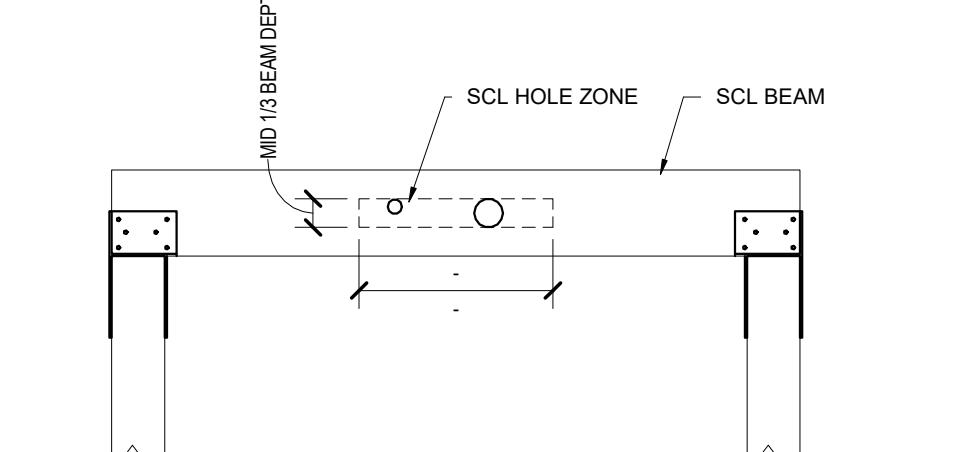
TYPICAL WOOD BEAM TO WOOD COLUMN WITHIN STUD WALL CONNECTION (WALL PERPENDICULAR TO BEAM)



TYPICAL COLUMN BLOCKING BETWEEN FLOORS

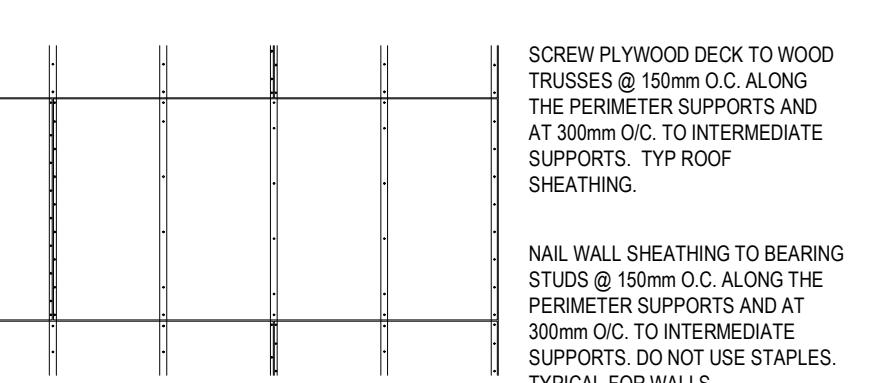


ALLOWABLE HOLES IN DIMENSIONAL LUMBER JOISTS

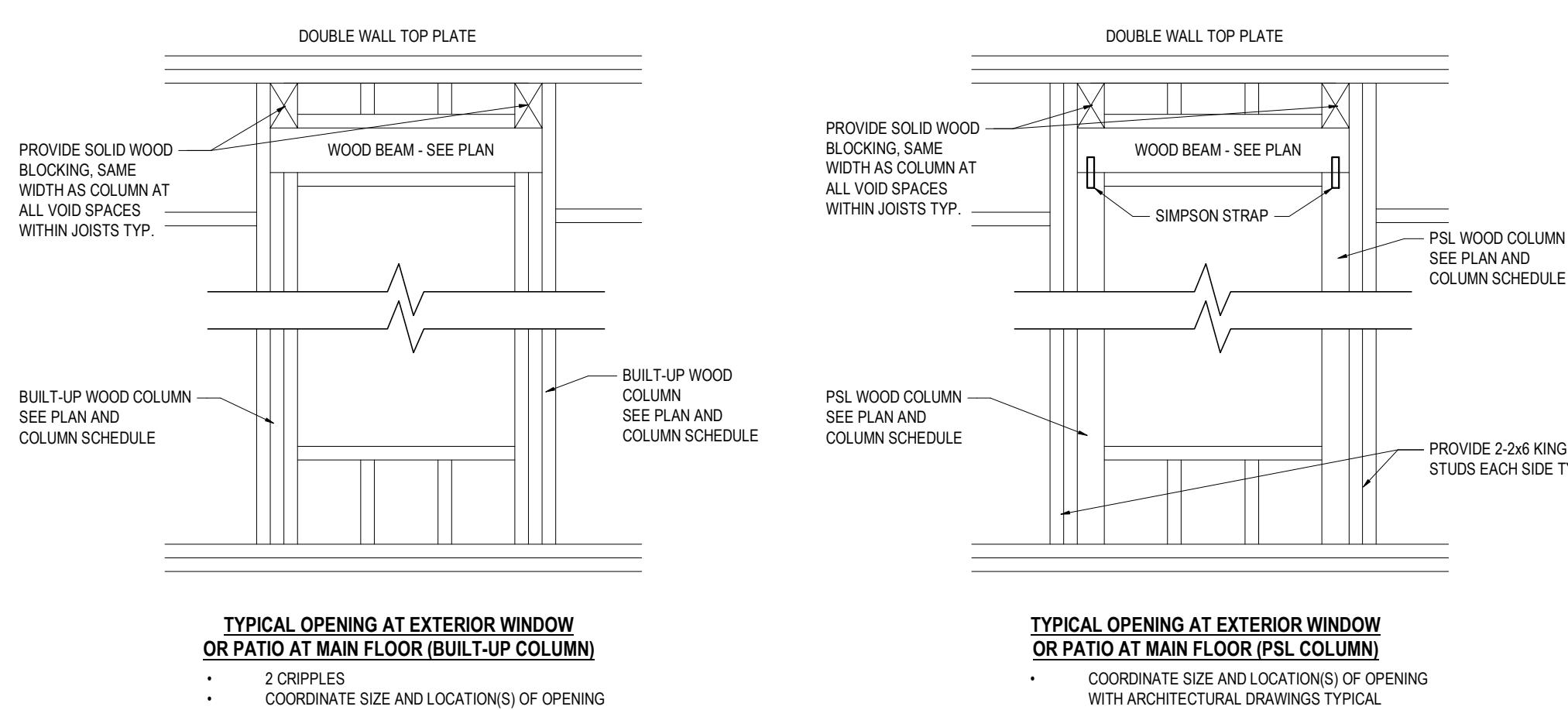


NOTES:
1. ALLOWED HOLE ZONE SUITABLE FOR LVL BEAM WITH UNIFORM LOAD ONLY
2. ROUND HOLE
3. HOLE IN CANTILEVER
4. NO HOLES IN LVL BEAM IN PLANK ORIENTATION
5. MAXIMUM ROUND HOLE SIZE: 50mm DIA.

STRUCTURAL COMPOSITE ALLOWABLE FIELD LUMBER (SCL) MODIFICATION

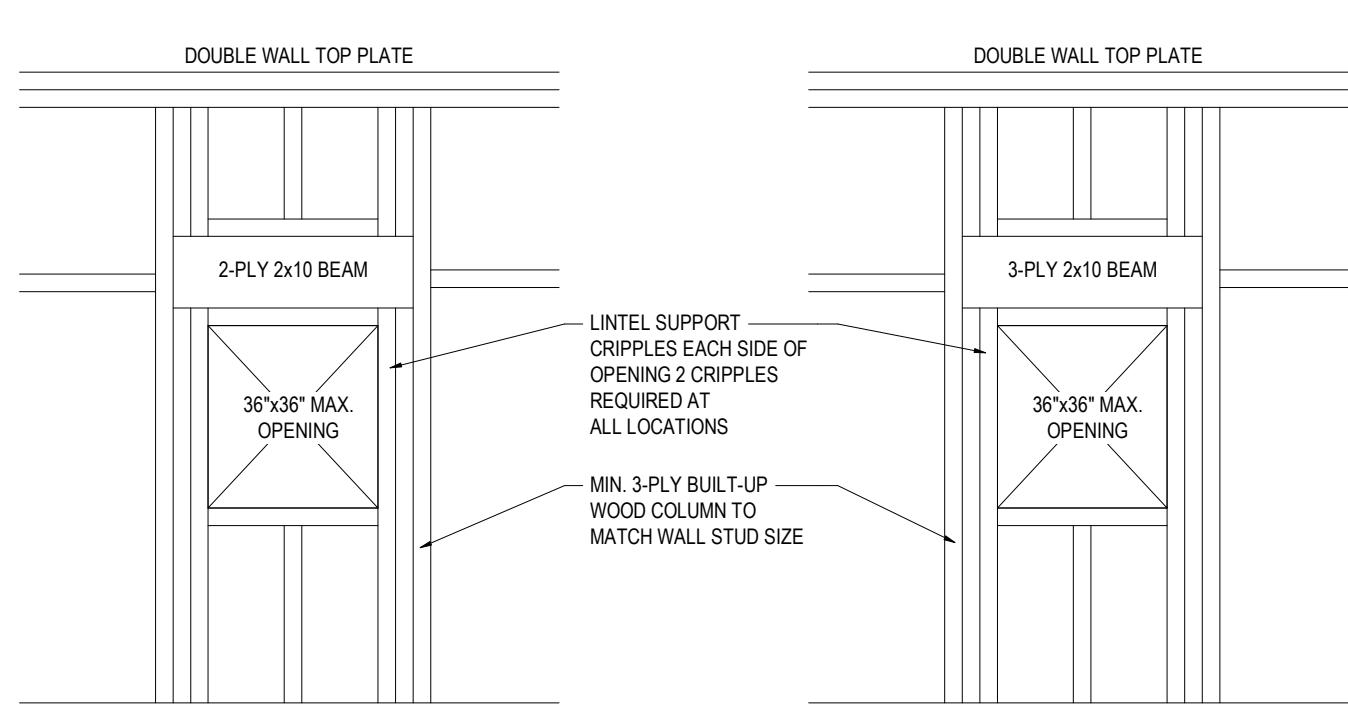


PLYWOOD SHEATHING NAILING REQUIREMENTS



TYPICAL OPENING AT EXTERIOR WINDOW OR PATIO AT MAIN FLOOR (BUILT-UP COLUMN)

- 2 CRIPPLES
- COORDINATE SIZE AND LOCATION(S) OF OPENING WITH ARCHITECTURAL DRAWINGS TYPICAL



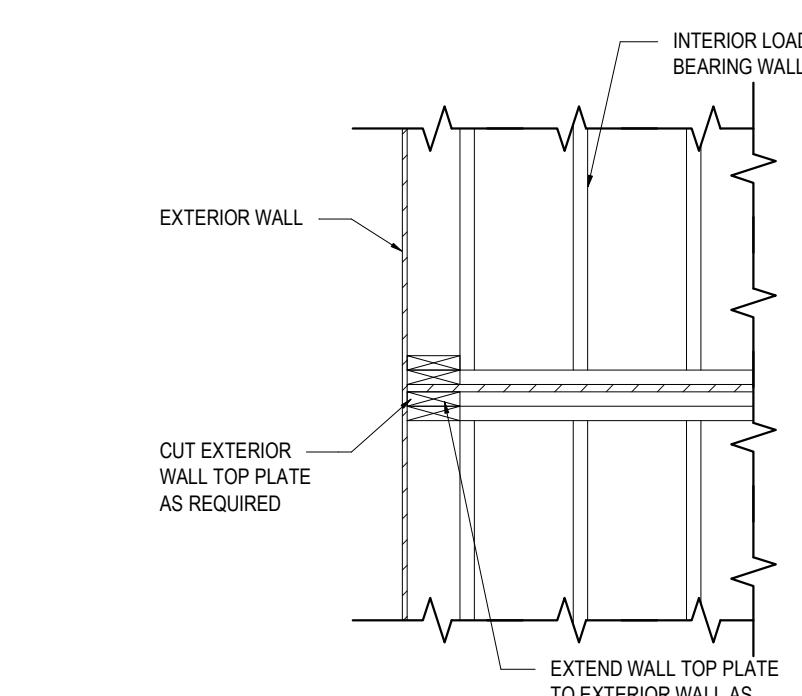
TYPICAL OPENING AT EXTERIOR WINDOW OR PATIO AT MAIN FLOOR (PSL COLUMN)

- COORDINATE SIZE AND LOCATION(S) OF OPENING WITH ARCHITECTURAL DRAWINGS TYPICAL

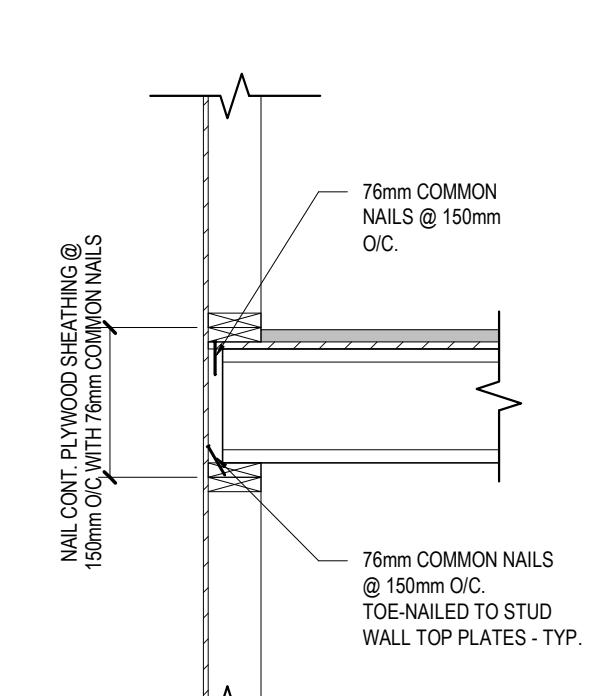
MECHANICAL DUCT OPENINGS IN 2x4 WALLS

TYPICAL STUD WALL OPENING AT MECHANICAL DUCTS

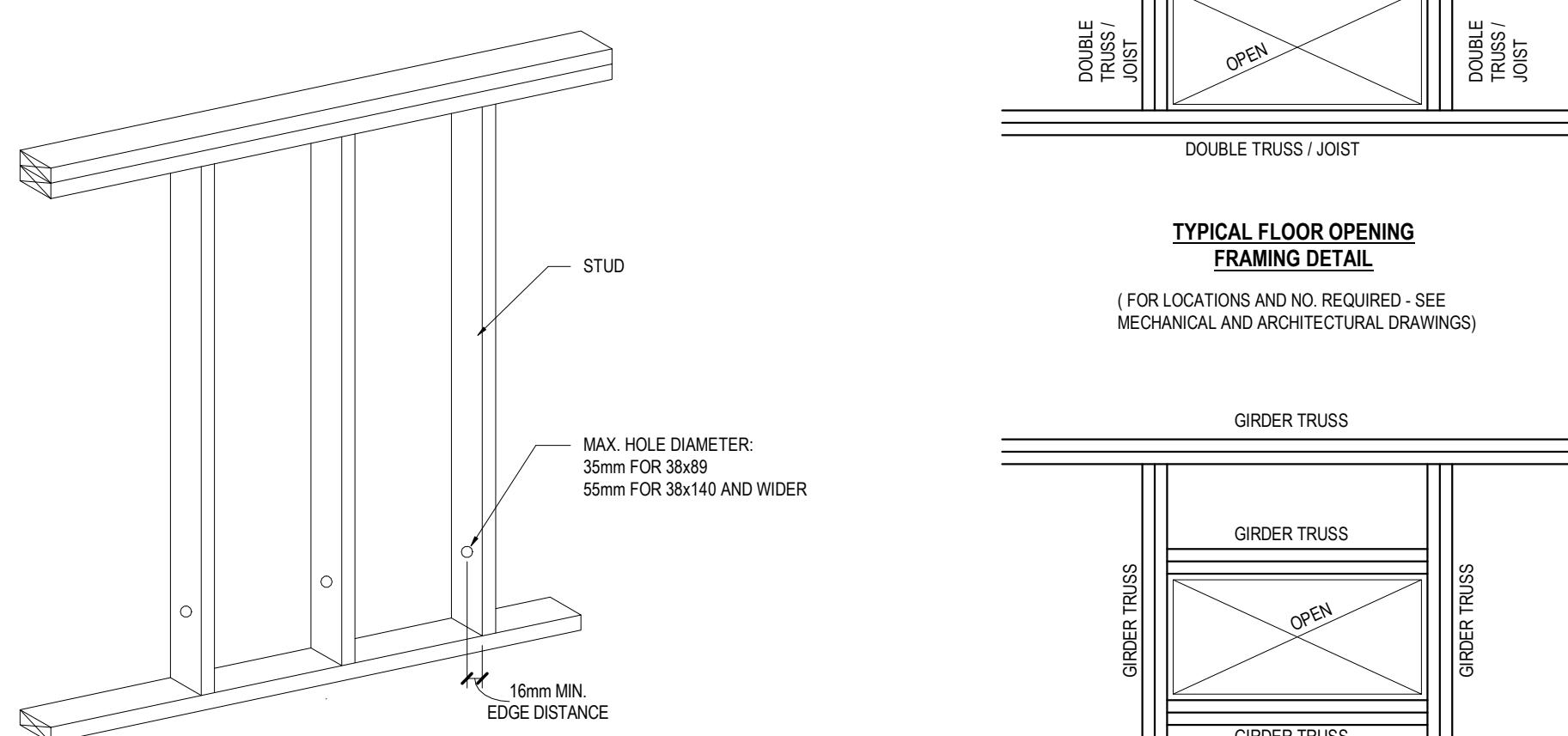
- COORDINATE SIZE AND LOCATION(S) OF OPENING WITH MECHANICAL DRAWINGS TYPICAL



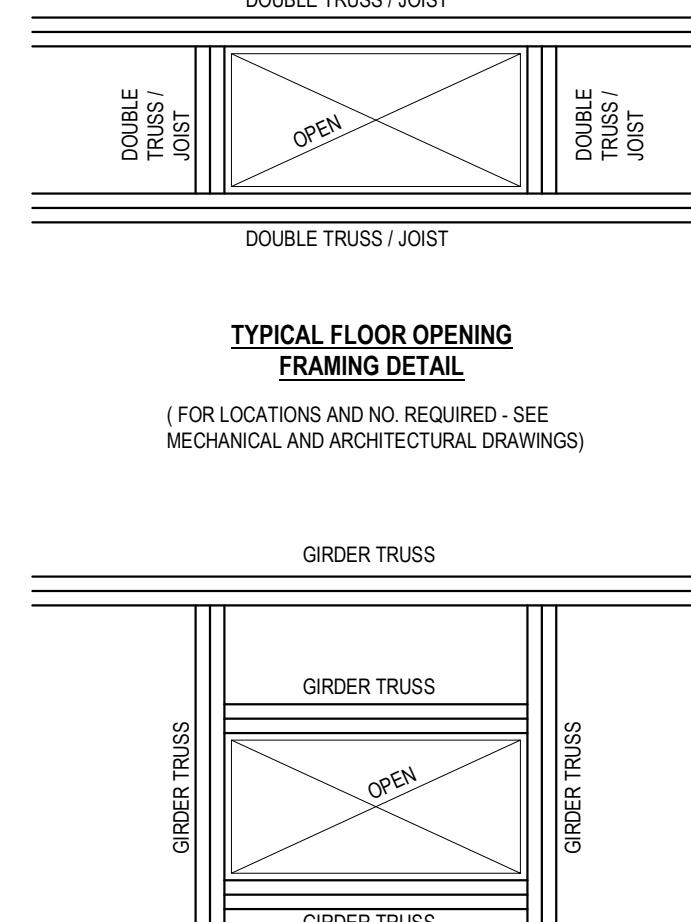
INTERIOR LOAD BEARING WALL TO EXTERIOR WALL DETAIL



NAILING REQUIREMENTS FOR WOOD I-JOISTS AT EXTERIOR WALLS

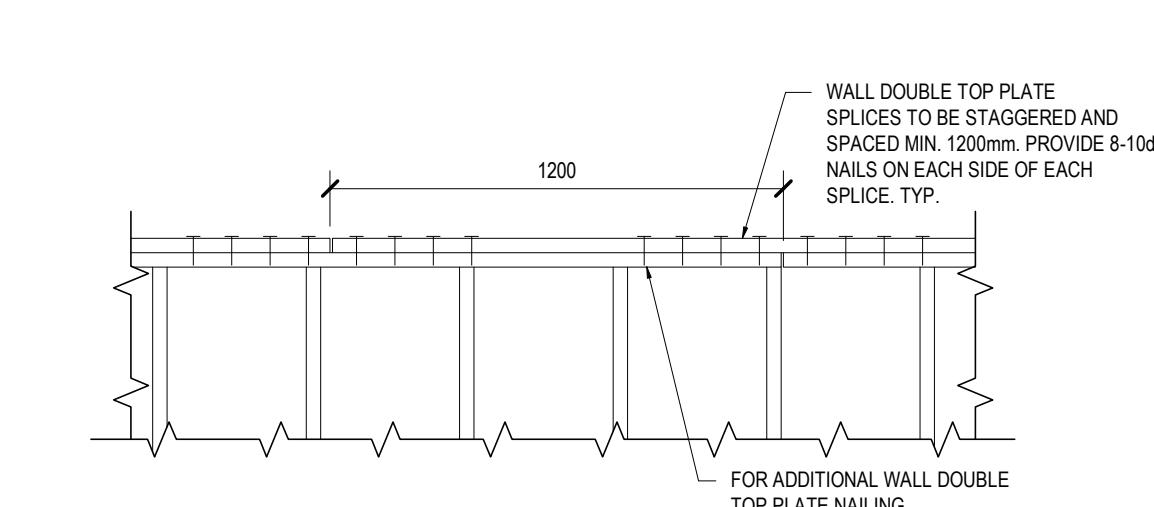


DRILLING DETAIL FOR WALL STUDS

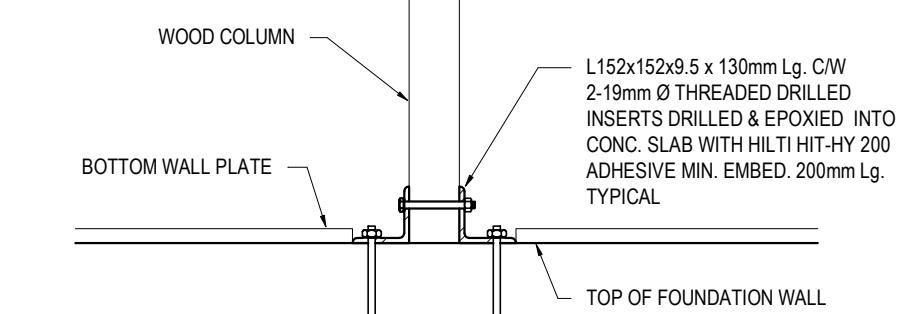


TYPICAL FLOOR OPENING FRAMING DETAIL

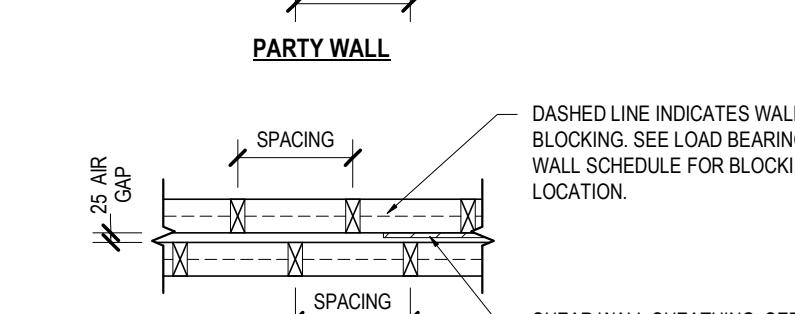
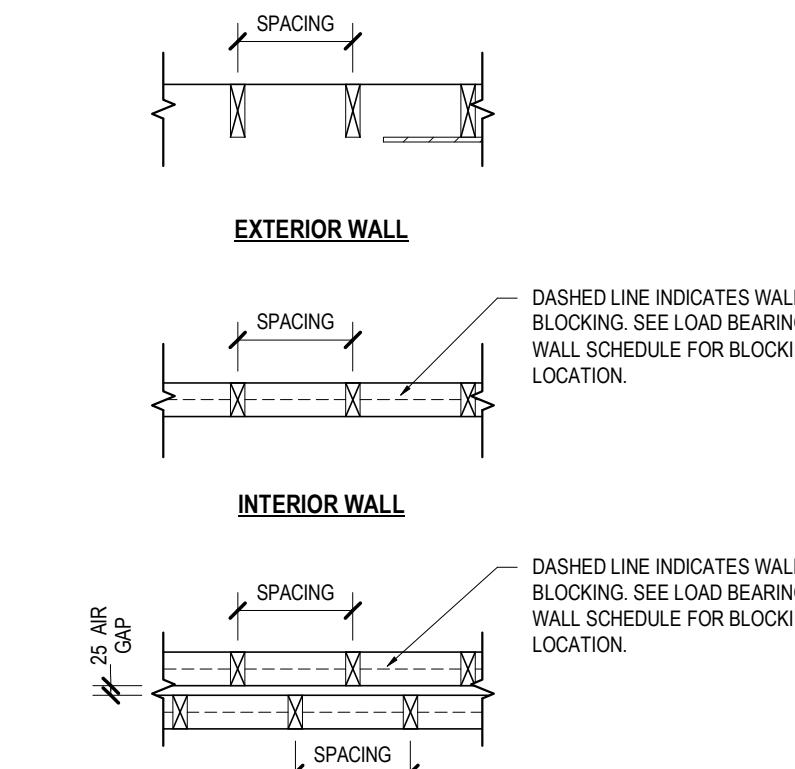
(FOR LOCATIONS AND NO. REQUIRED - SEE MECHANICAL AND ARCHITECTURAL DRAWINGS)



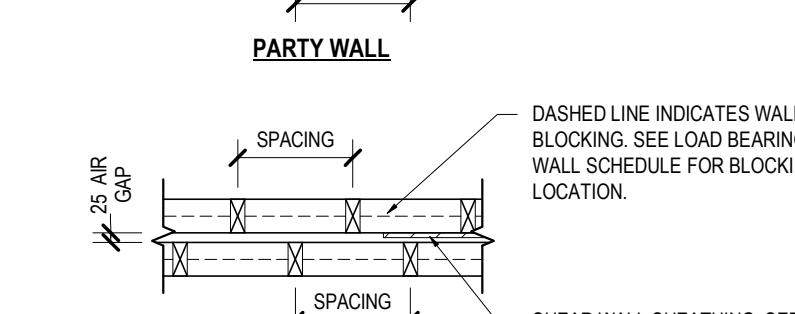
TYPICAL WALL TOP PLATE SPLICING CONNECTION



WOOD COLUMN TO FOUNDATION WALL CONNECTION (EXCEPT BUILT-UP COLUMNS)



EXTERIOR WALL TO INTERIOR WALL



INTERIOR STUD ATTACHED TO BLOCKING

PARTY WALL

EXTERIOR WALL TO INTERIOR WALL

INTERIOR STUD ATTACHED TO STUD

INTERIOR STUD ATTACHED AFTER DRYWALL INSTALLATION

PARTY WALL (SHEAR)

EXTERIOR WALL TO INTERIOR WALL

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INTERIOR STUD ATTACHED AFTER DRYWALL INSTALLATION

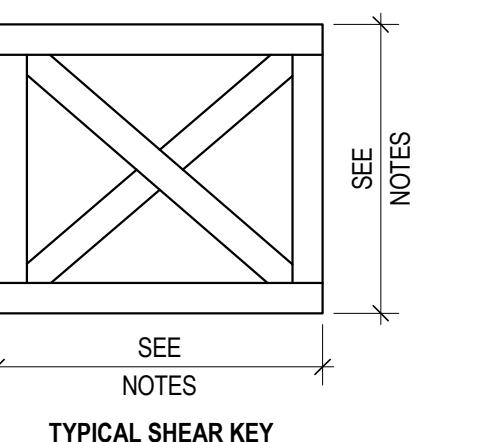
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MINIMUM TRUSS/JOIST SQUASH BLOCKING TABLE	
LEVEL	MINIMUM REQUIREMENTS
2ND FLOOR FRAMING	ONE EACH SIDE
3RD FLOOR FRAMING	ONE EACH SIDE
4TH FLOOR FRAMING	ONE PER TRUSS/JOIST
ROOF FRAMING	NONE

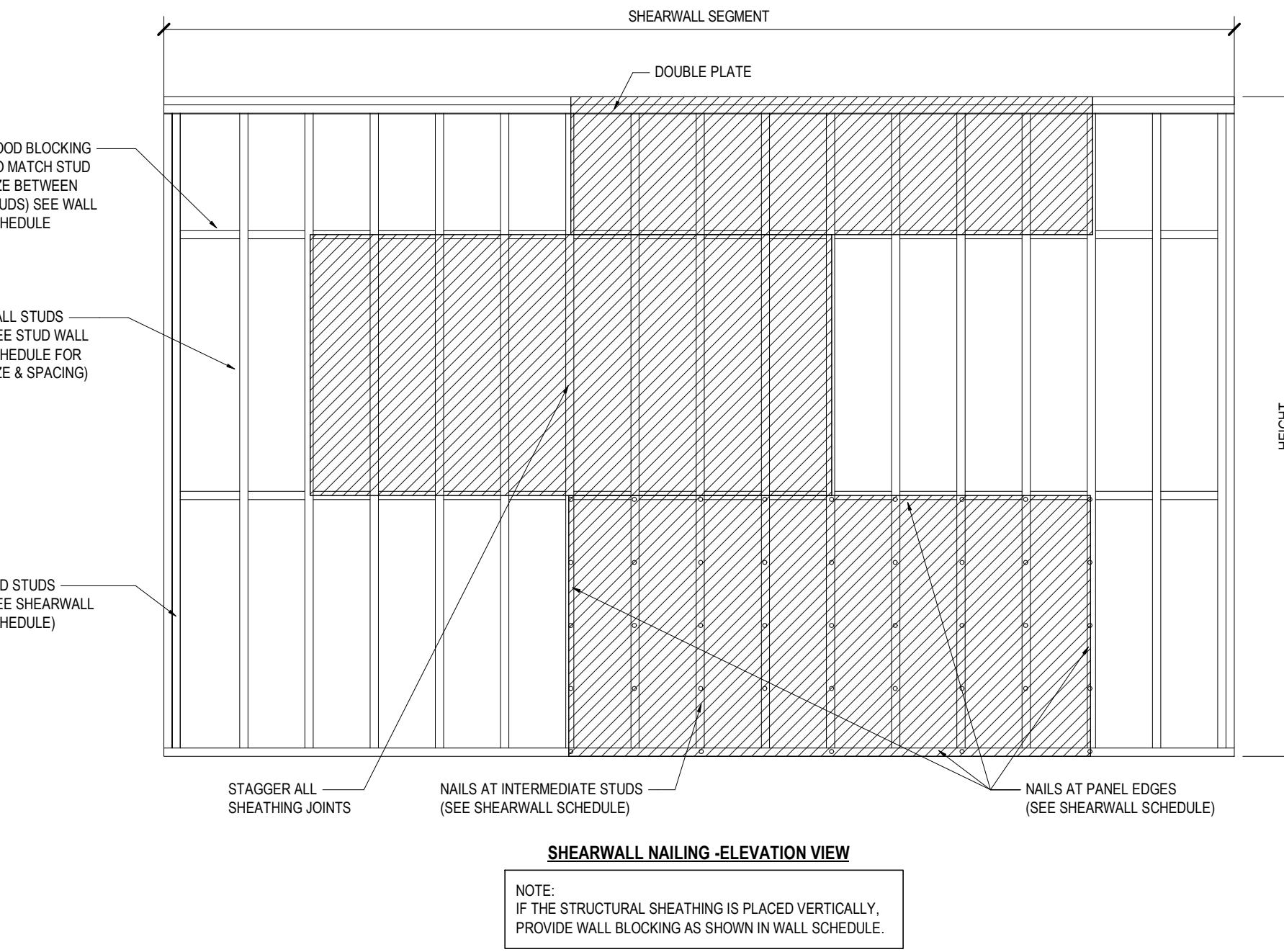
1. ADDITIONAL SQUASH BLOCKS MAY BE REQUIRED AS PER TRUSS JOIST MANUFACTURER'S RECOMMENDATIONS

SHEAR KEY TABLE	
WALL TYPE	MINIMUM REQUIREMENTS
EXTERIOR WALLS	3 PER SUITE
CORRIDOR WALLS	3 PER SUITE
LOAD BEARING PARTY WALLS	3 PER WALL EQUALLY SPACED
INTERIOR LOAD BEARING WALLS	3 PER SUITE

ADDITIONAL SHEAR KEYS MAY BE REQUIRED AS PER TRUSS SUPPLIERS MANUFACTURER'S RECOMMENDATIONS

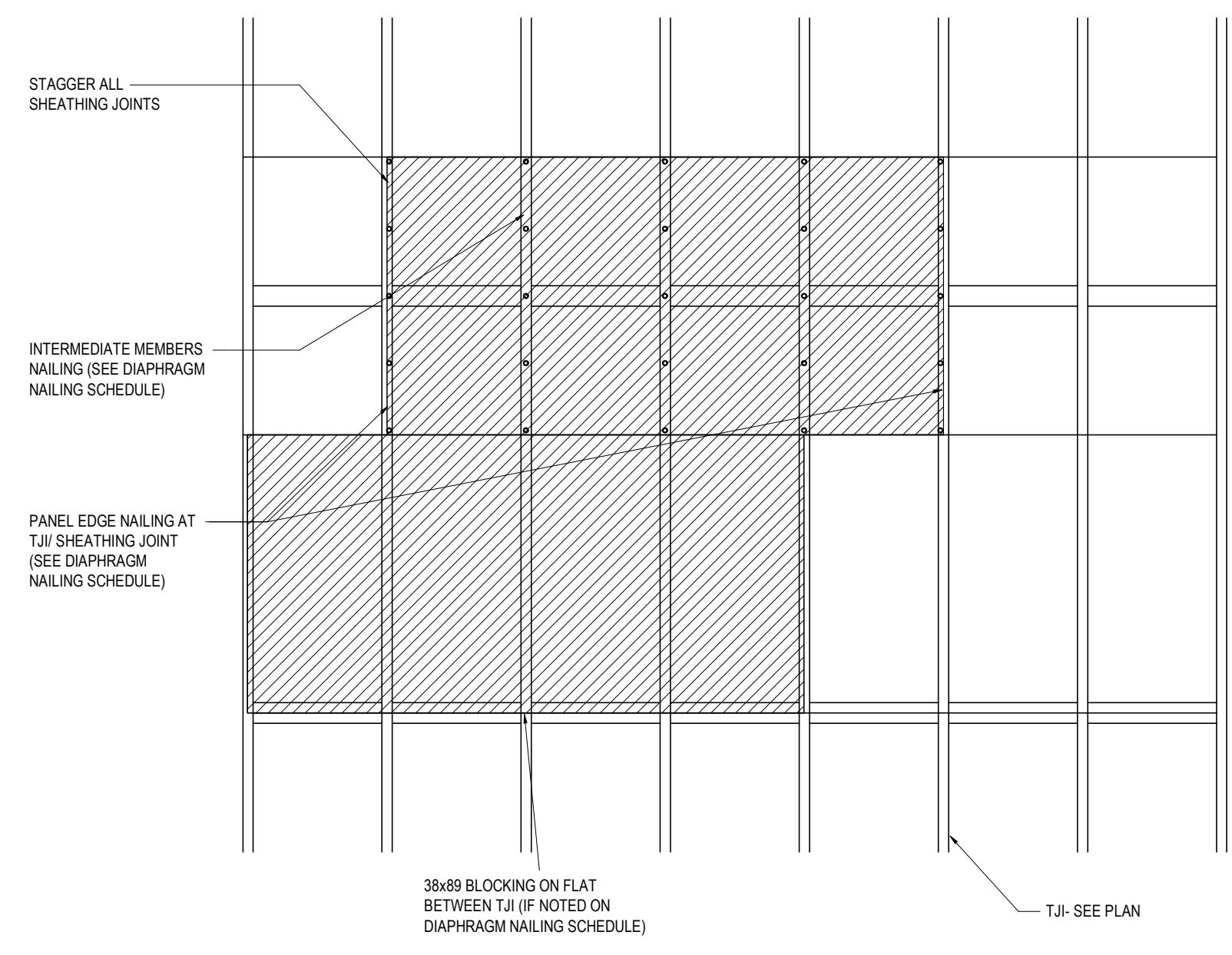


Typical Shear Key

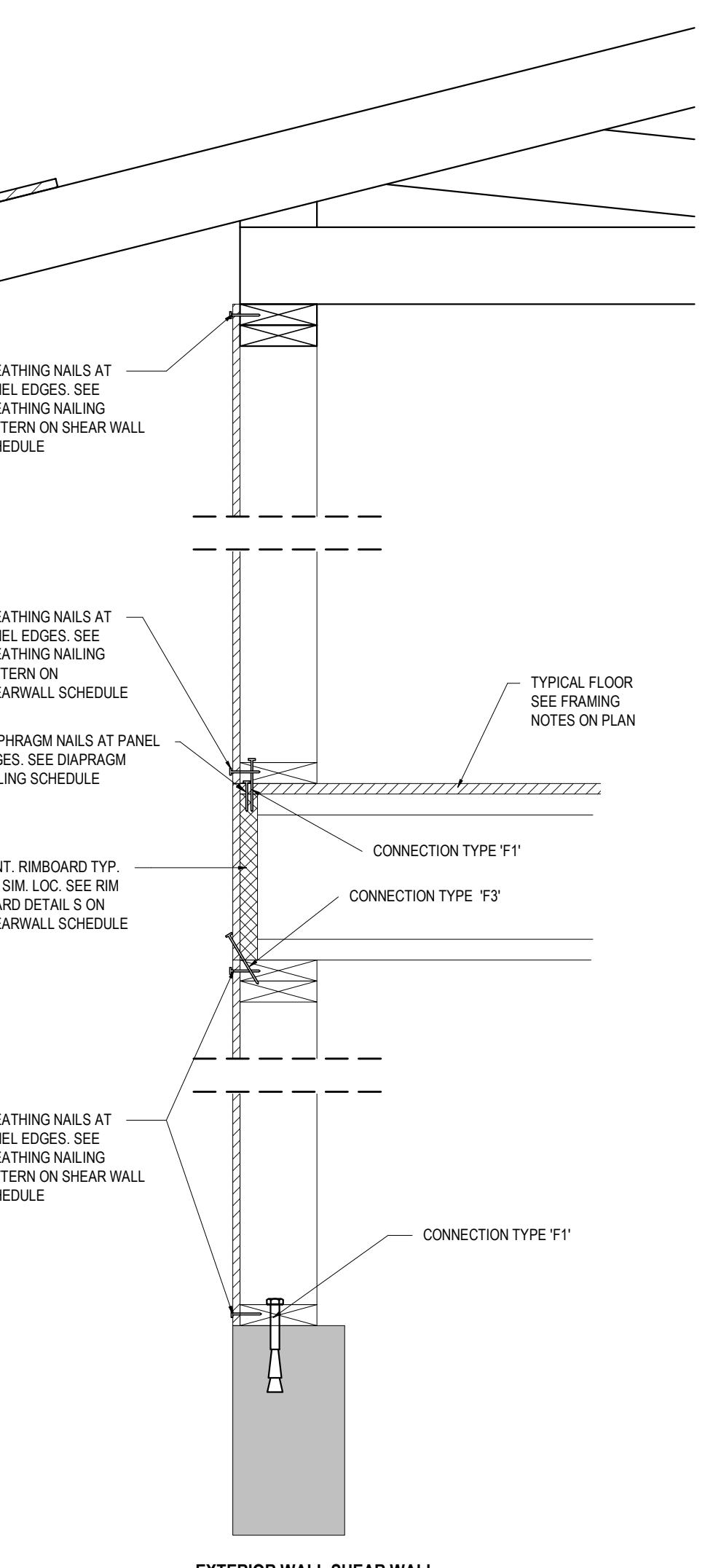
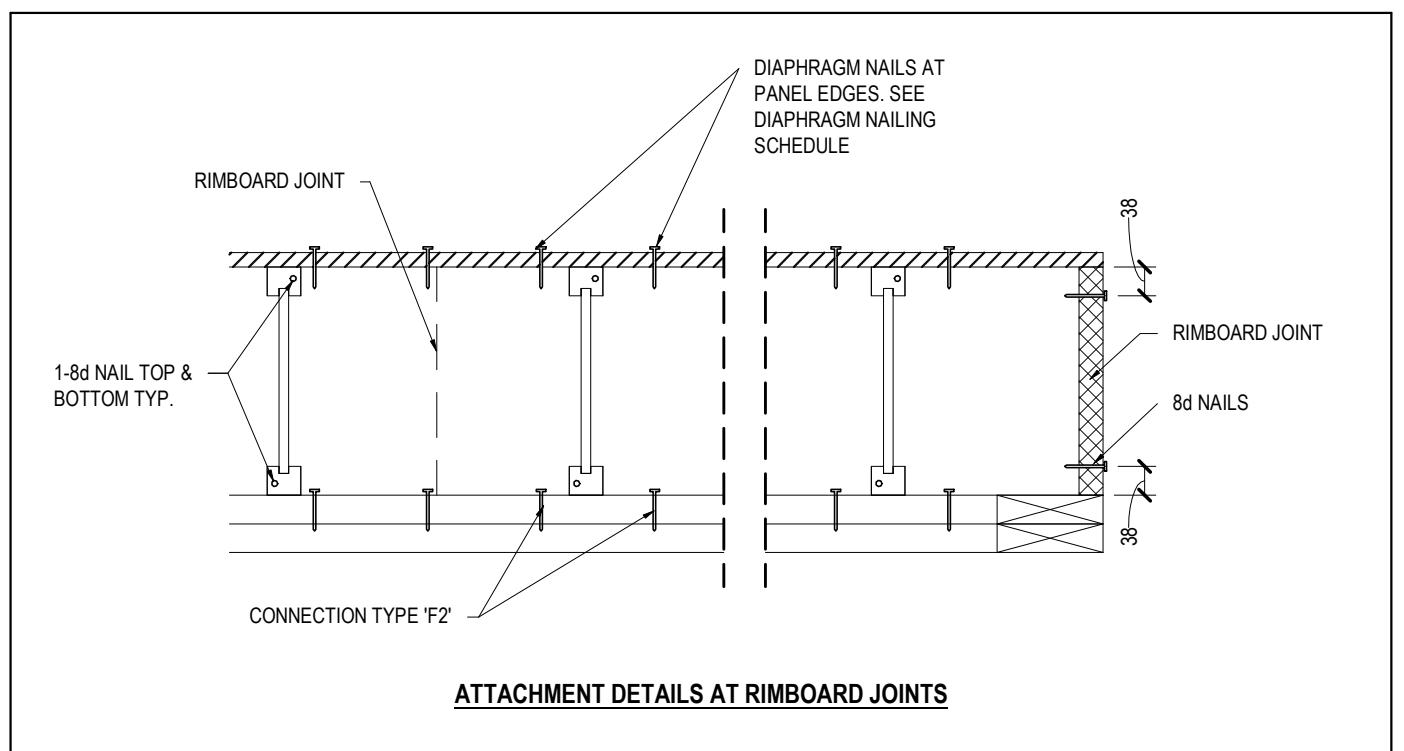


SHEAR WALL AND DIAPHRAGM NOTES:

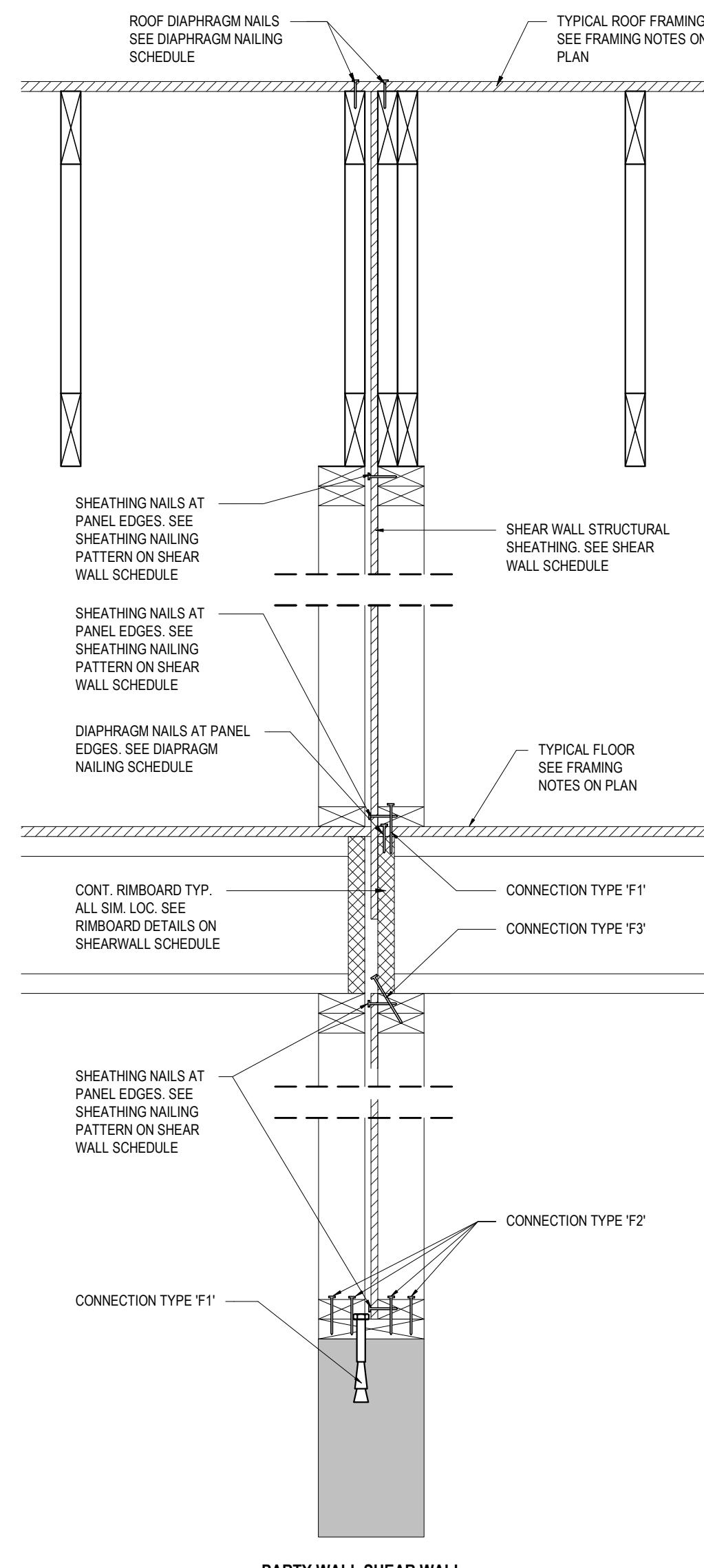
1. ALL NAILS TO BE COMMON WIRE NAILS BY LENGTH AND SPACING NOTED.
2. WHERE NAILS ARE SPACED 50MM ON CENTER, STUDS AND BLOCKING ADJOINING PANEL EDGES TO BE DOUBLED AND NAILS TO BE 10MM @ 100MM OC. NAILS AT PANEL EDGES TO BE STAGGERED.
3. HOLLOW STUDS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION.
4. SHEAR WALL BOTTOM PLATES TO BE CONNECTED TO CONCRETE WITH 16mm O/C HILTI KWIK BOLT 1 CS ANCHORS @ 600mm O/C. 100mm EMBED. ANCHORS TO BE INSTALLED 98mm FROM FACE TO CONCRETE.
5. WALL SHEATHING PANELS TO BE STAGGERED AND PLACED HORIZONTALLY. PROVIDE BLOCKING AT ALL HORIZONTAL SHEATHING JOINTS.
6. FLOOR SHEATHING TO BE INSTALLED WITH STRONG AXIS AT RIGHT ANGLES TO JOISTS/JROSSES.
7. FLOOR ROOF SHEATHING TO BE CONTINUOUS ABOVE PARTY WALLS (SHEATHING CANNOT BE CUT FOR IMPROVED ACOUSTICS).
8. NAILS TO BE PLACED NOT LESS THAN 9.5mm FROM FRAMING EDGES AND SHALL NOT BE OVERRIVEN.
9. A MINIMUM OF 3mm GAP TO BE LEFT BETWEEN ADJACENT WALL AND FLOOR/ROOF SHEATHING PANELS.
10. FOR LOAD-BEARING WALLS THAT ARE NOT SHEAR WALLS, WALL-TO-FLOOR CONNECTION DETAILS TO MATCH 9.7.1.
11. RIMBOARD THICKNESS INDICATED IN SHEAR WALL SCHEDULES ARE MIN. REQUIRED AND APPLY TO SHEAR WALLS ONLY. AT OTHER LOCATIONS, RIM BOARD THICKNESS CAN BE REDUCED AS PER FLOOR SUPPLIER'S SHOP DRAWINGS BUT CANNOT BE LESS THAN 32mm.



DIAPHRAGM NAILING - PLAN VIEW



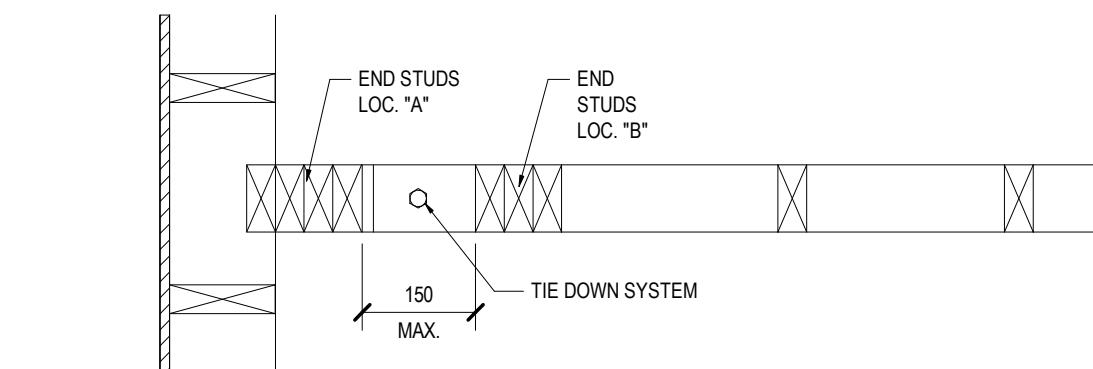
EXTERIOR WALL SHEAR WALL



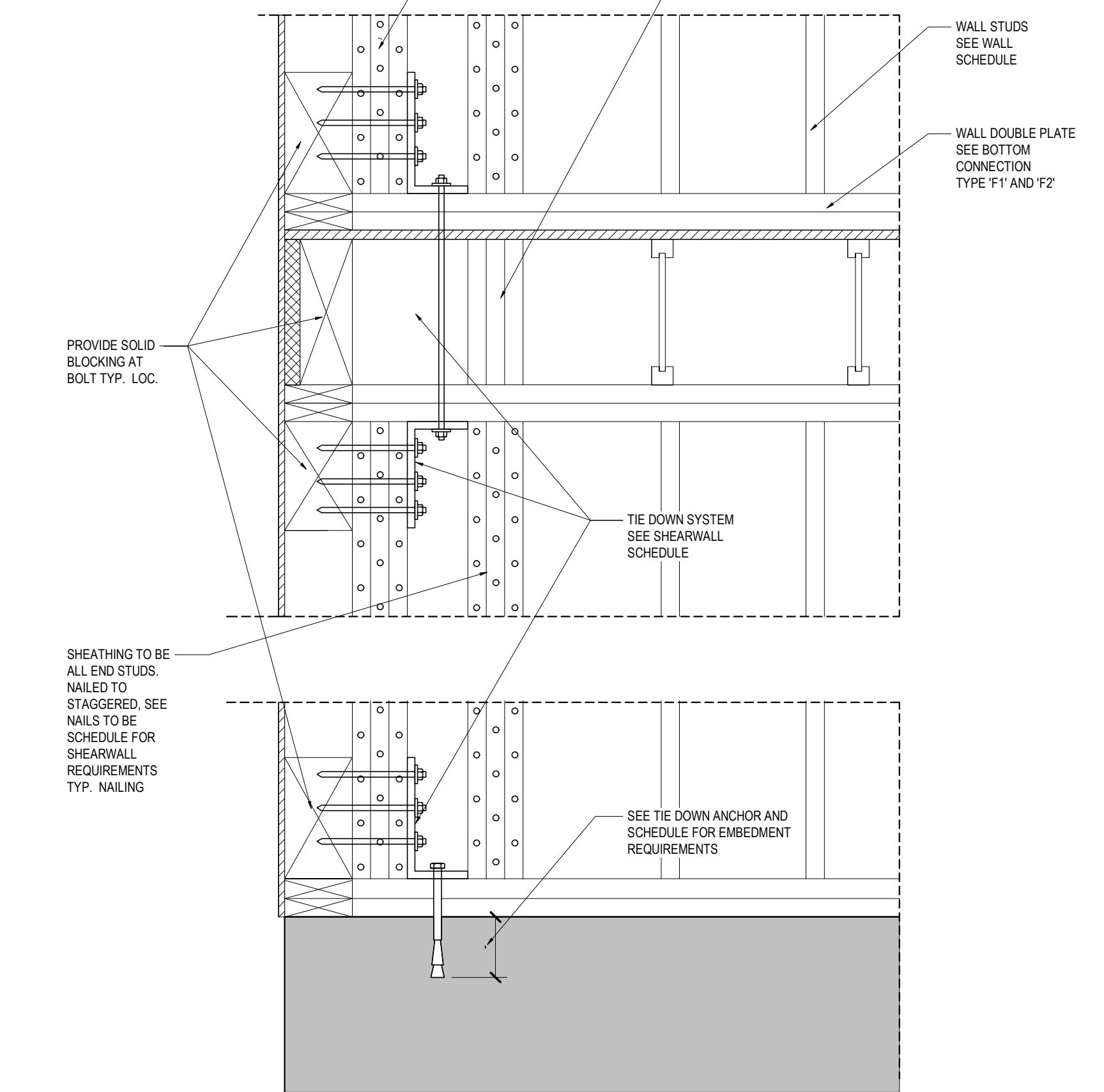
PARTY WALL SHEAR WALL

WOOD FRAMING NAILING SCHEDULE	MIN. LENGTH OF NAILS	MIN. NUMBER OF NAILS / MAX. NAIL SPACING
WALL STUDS TO WALL TOP / BOTTOM PLATES - TOE NAILS	2 1/2"	4
WALL STUDS TO WALL TOP / BOTTOM PLATES - END NAILS	3 1/4"	2
WALL DOUBLE TOP / BOTTOM PLATES	3"	24" O/C
BOTTOM WALL PLATE OR SOLE PLATE TO FLOOR JOISTS, RIM JOISTS OR BLOCKING - EXTERIOR WALLS	3 1/4"	6" O/C
BOTTOM WALL PLATE OR SOLE PLATE TO FLOOR JOISTS, RIM JOISTS OR BLOCKING - INTERIOR WALLS	3 1/4"	16" O/C
DOUBLED STUDS AT OPENINGS, WALL ENDS	3"	12" O/C
WALL BLOCKING TO WALL STUDS - TOE NAILS	2 1/2"	2 EACH SIDE
LUMBER JOISTS OR BLOCKING TO WALL TOP PLATES - TOE NAILS	3"	2 EACH SIDE
RIM BOARD TO WALL TOP PLATES - TOE NAILS	3 1/4"	6" O/C
JOISTS BLOCKING TO LUMBER JOISTS - END NAILS	3"	2 EACH SIDE
DOOR / WINDOW HEADERS TO STUDS - TOE NAILS	3 1/4"	3 EACH SIDE

1. REFER TO SHEARWALL SCHEDULE ON DWG. SX.X FOR ADDITIONAL NAILING REQUIREMENTS AT SHEARWALL LOCATIONS.



PLAN VIEW



TIE-DOWN SYSTEM - HOLDOWNS AT EACH END OF A SHEARWALL

1. 2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING
NO. DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
TYPICAL DETAILS

AB Rowhouse 01

PROJECT NO: 02500462
 SCALE: As indicated

SHEET NO:

S104

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SECTION 03100 CONCRETE FORMWORK

- CONCRETE FORMWORK SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
 - NATIONAL BUILDING CODE - 2019 ALBERTA EDITION
 - CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION"
 - CSA S29.1 "FAIRWORKS AND FORMWORK"
- THE DESIGN OF CONCRETE FORMWORK AND ADEQUATE SHORING SYSTEMS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONSTRUCT FORMWORK TO MAINTAIN THE FOLLOWING MAXIMUM TOLERANCES UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE DRAWINGS:
 - DEVIATION FROM HORIZONTAL AND VERTICAL LINES 3/8" (10mm) IN 6 ft (20m).
 - DEVIATION OF BUILDING DIMENSIONS NOT MORE THAN 3/16" (6mm).
 - DEVIATION OF CROSS SECTIONAL DIMENSIONS OF COLUMNS OR BEAMS +/- 1/8" (3mm).

SECTION 03200 CONCRETE REINFORCEMENT

- CONCRETE REINFORCEMENT SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
 - ACI 355.1 ACI DETAILING MANUAL
 - CSA A23.1 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION
 - CSA G40.20 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL"
 - CSA S29.1 "WELDED DEFORMED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT"
 - CAN/CSA G30.18 "CARBON STEEL BARS FOR CONCRETE REINFORCEMENT"
 - CAN/CSA W18.6 "WELDING OF REINFORCING BARS FOR CONCRETE CONSTRUCTION"
 - ASTM A775 "EPOXY-COATED STEEL REINFORCING BARS"
- SUBMIT SHOP DRAWINGS FOR ALL REINFORCING STEEL.
- REINFORCING STEEL TO CSA G30.18 400 MPa YIELD GRADE SPECIAL LOW ALLOY DEFORMED STEEL, 12.5% TENSILE STRAIN, WITH A TENSILE STRENGTH NOT EXCEEDING 500 AND AN END BENDING RADIUS SMALLER THAN RECOMMENDED STANDARDS.
- SHOP BEND BARS COLD IDENTIFY STEEL, HOOKS, BENDS, CAPS AND SIMILAR DETAILS TO ACI DETAILING MANUAL 315.
- CLEAN REINFORCEMENT TO CSA A23.1.
- CONCRETE REINFORCEMENT DETAILS AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS, USE THE GREATER VALUE OF CODE IN THIS SPECIFICATION OR ON THE DRAWINGS.
- LAP HORIZONTAL STEEL IN ACCORDANCE WITH CSA A23.1.
- PROVIDE ADDITIONAL REINFORCEMENT TO THAT INDICATED ON DRAWINGS AS FOLLOWS:
 - 2-15M VERTICALS AT ENDS OF WALLS.
 - 2-15M HORIZONTALS ABOVE AN OPENINGS IN WALLS. EXTEND REINFORCEMENT 18" (450mm) BEYOND EDGE OF OPENING ON EACH SIDE.
 - PROVIDE CORNER BARS TO ALL CORNERS AND INTERSECTIONS.

SECTION 03300 CAST-IN-PLACE CONCRETE

- CAST-IN-PLACE CONCRETE SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
 - NATIONAL BUILDING CODE - 2019 ALBERTA EDITION
 - CAN/CSA-A100 PORTLAND CEMENT
 - CSA A23.1 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION
 - CSA A23.2 "TEST METHODS AND STANDARD PRACTICES FOR CONCRETE"
 - CAN 3-265-M18 "CHEMICAL ADMIXTURES FOR CONCRETE"
 - CSA G40.20 "TEST METHODS FOR CONCRETE TESTING LABORATORIES"
 - CSA G265-M18 "AIR-ENTRAINING ADMIXTURES FOR CONCRETE"
- TO ENSURE THAT THE REQUIRED CONCRETE STRENGTHS ARE BEING ACHIEVED, TESTING SHALL BE PERFORMED BY A RECOGNIZED TESTING LABORATORY AS FOLLOWS:
 - ONE SET OF THREE (3) STANDARD TEST SPECIMENS, TO BE MADE FOR EACH CLASS OF CONCRETE, ON THE DAY POUR OR MORE THAN ONE DAY AFTER POURING FOR POURS OF MORE THAN 80 CUBIC METRES, OR ONE SET OF THREE (3) TEST SPECIMENS.
 - ONE ADDITIONAL STANDARD TEST SPECIMEN TO BE MADE DURING COLD WEATHER.
 - CONCRETE TO BE SAMPLED AT THE POINT OF DEPOSIT OF THE CONCRETE.
 - FOR EACH SET OF TEST SPECIMENS A SLUMP TEST AND ENTRAINED AIR TEST IS TO BE INCLUDED.
- CONCRETE REQUIREMENTS:
 - REFRAIN FROM CONCRETE TO ASTM CM (LATEST VERSION).
 - REFER TO CONCRETE SCHEDULE FOR MIX REQUIREMENTS.
 - AGGREGATES TO CSA A23.1 AND ASTM C330-17A MAXIMUM SIZE 3/4" (20mm) COARSE AGGREGATE.
- CONCRETE WORKS BE WITHIN THE TOLERANCE LISTED BELOW:
 - VARIATION OF THE LINEAR BUILDING LINES LESS THAN 3/16" (6mm).
 - VARIATION OF GROSS SECTION OF THICKNESS OF SLABS +/- 1/4" (6mm).
 - VARIATION FROM LEVEL OR FROM GRADES INDICATED FOR SURFACES OF SLAB SHALL NOT EXCEED UNDER A 3m STRAIGHT EDGE IMMEDIATELY AFTER TROWELLING.

5. CONDUITS, PIPES AND SLEEVES IN CONCRETE:

ACCURATELY LOCATE AND SET IN PLACE ITEMS WHICH ARE TO BE CAST DIRECTLY INTO CONCRETE.

COORDINATE WORK WITH OTHER TRADES.

PLACEMENT OF CONDUITS, SLEEVES, ETC. SHALL NOT IMPAIR THE STRUCTURAL STRENGTH OF STRUCTURE. CENTER LINE SPACING TO BE NOT LESS THAN 3 CONDUIT DIAMETERS. CENTER LINE SPACING FOR PARALLEL CONDUITS AND REINFORCEMENT SLEEVES SHALL NOT EXCEED 10 CONDUIT DIAMETERS.

SLEEVES OR CONDUITS THROUGH COLUMNS NOT ALLOWED.

SLEEVES THROUGH BEAMS NOT ALLOWED.

DO NOT PLACE SLEEVES NEXT TO COLUMNS. MAINTAIN SLEEVES 4 ft (1200mm) MINIMUM DISTANCE AWAY FROM FACE OF COLUMN.

SPREAD SLEEVES THROUGH SLABS TO BE 2 TIMES THE DIAMETERS MINIMUM.

SUPPORT SLAB BUTT JACKET REINFORCEMENT ON SLAB BOLSTERS TO MAINTAIN CONCRETE PROTECTION AS REQUIRED.

SLAB POURS SHALL NOT EXCEED 8500 FT².

LAYOUT CONSTRUCTION JOINTS PRIOR TO PLACEMENT OF CONCRETE. CONSTRUCTION JOINTS ARE TO BE REVIEWED AND APPROVED BY THE CONSULTANT.

HOOKS ON COLUMNS CULD BEND 135°.

DO NOT MOVE FORMWORK BEFORE CONCRETE HAS REACHED 75% OF SPECIFIED 28 DAY STRENGTH.

11. CURING:

- CONCRETE CURING TO CSA A23.1.
- KEEP CONCRETE SURFACE CONTINUOUSLY MOIST UNTIL CONCRETE TEMPERATURE IS 10°C AND CURING HAS PEAKED AND DROPPED SEVERAL DEGREES, OR FOR THREE DAYS AT A MINIMUM TEMPERATURE OF 10°C.
- ADDITIONAL CURING: IMMEDIATELY FOLLOWING BASIC CURING AND BEFORE THE CONCRETE HAS DRIED, CURE FOR AN ADDITIONAL FOUR DAYS, MAINTAINING THE TEMPERATURE OF THE AIR IN CONTACT WITH THE CONCRETE ABOVE 10°C.
- ACCEPTABLE CURING METHODS:
 - WATER SPRINKLING.
 - ABSORBENT MAT OR FABRIC KEPT CONTINUOUSLY WET.
 - DAMP SAND, EARTH, OR SIMILAR MOIST MATERIAL.
 - CONTINUOUS STEAM VAPOUR MIST BATH NOT EXCEEDING 70°C.
 - CURING COMPOUND.
 - WATERPROOFING OR PLASTIC FILM.
 - OTHER CURE-RETAINING METHODS APPROVED BY THE CONSULTANT.
 - FORMS IN CONTACT WITH CONCRETE SURFACE.

DO NOT USE CURING COMPOUNDS ON CONCRETE SURFACES, WHICH ARE RECEIVED TO RECEIVING, TIPPING, HARDENING, OR OTHER TYPE OF BONDING FINISH UNLESS APPROVED BY THE CONSULTANT.

PROJECT CONSULTANT PLACED AND CONSOLIDATED CONCRETE AGAINST DAMAGE OR DEFECTS FROM ADVERSE WEATHER CONDITIONS.

EXPOSED CONCRETE WALKING SURFACES NOT TO RECEIVE AN INTEGRAL HARDEENER.

COAT WITH CURING COMPOUND OR CURING METHOD THAT PROVIDES PERMANENT SEAL IN AREAS WITH AN EXPOSED CONCRETE FLOOR SURFACE. APPLY THE HARDEENER AND DUST-PROOFING AGENT STRICTLY TO THE MANUFACTURER'S INSTRUCTIONS.

SUMMIT APPROVED METHODS OF PROTECTION AND CURING WHEN AIR TEMPERATURE IS AT OR ABOVE 25°C OR AT OR BELOW 5°C, OR LIKELY TO BE SO WITHIN 24 HOURS OF PLACING TIME.

WATER FOR CURING SHALL BE CLEAN AND FREE FROM MATERIALS THAT WILL CAUSE STAINING OR DISCOLORATION OF THE CONCRETE.

IF DAMP SAND, EARTH OR SIMILAR MOIST MATERIAL IS USED, THE SLAB SURFACES, SPREAD 2" (50mm) OVER THE ENTIRE SURFACE AND KEEP SATURATED WITH WATER.

FOR VERTICAL SURFACES SUCH AS WALLS, COLUMNS, PIERs, LOOSEN THE FORMS, LEAVE FORM IN PLACE.

IF MOIST CURING IS NOT USED, THEN SPRAYED CURING COMPOUNDS ARE TO BE USED.

CURING COMPOUNDS USED FOR EXPOSED CONCRETE MUST NOT DISCOLOR THE CONCRETE, NOR BE SUCH AS TO PROHIBIT THE SUBSEQUENT APPLICATION OF PAINT, TILES, PAVING OR OTHER COMPLETED SURFACES.

FOR CONCRETE SURFACES SUCH AS WALLS, THE COMPLETION OF FINISHING OPERATIONS AND IMMEDIATELY AFTER THE DISAPPEARANCE OF SURFACE MOISTURE, APPLY THE SPRAYED CURING COMPOUND.

SECTION 316223 SCREW PILES

- SCREW PILES SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
 - ASTM A36/A38 "CARBON STEEL".
 - ASTM A252 "WELDED AND SEAMLESS STEEL PIPE".
 - ASTM F1132 "WELDED AND SEAMLESS METAL PIPE FOR DEEP FOUNDATIONS UNDER STATIONARY AND COMPRESSIVE LOAD".
 - CSA/CSA-G40.20/40.21 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL".
 - CSA W47.1 "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL".
 - CSA W48 "FILLER METALS AND ALLIED MATERIALS FOR METAL ARC WELDING".
 - CSA W59 "WELDED STEEL CONSTRUCTION (METAL ARC WELDING)".

2. DESIGN REQUIREMENTS:

- DESIGN PILES FOR THE LOADING SHOWN ON DRAWINGS.
- DESIGN CONNECTIONS TO RESIST ALL LOADS INDICATED ON DRAWINGS.
- PILE DESIGN SHALL BE SIGNED AND SEALED BY A P.ENG DESIGNATED IN THE PROVINCE OF ALBERTA.

3. SHOP DRAWINGS:

- INCLUDE THE FOLLOWING INFORMATION:
 - PILE LAYOUT.
 - TYPE OF PILE.
 - PILE LENGTH.
 - GRADE AND DETAILS OF STEEL.
 - ELEVATION OF PILE BASES.
 - ELEVATION OF TOP OF PILE CAPS.
- SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA.

4. QUALITY ASSURANCE:

- PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS OF CSA G40.21, UNLESS INDICATED OTHERWISE HEREIN.
- SUPERVISION: PILING IS TO BE INSTALLED UNDER THE DIRECT SUPERVISION OF A GEORADAR CONTRACTOR OR EQUIVALENT FOR PROVIDING THE GEOREADAR REPORT, RETAINED AND PAID FOR BY THE CONTRACTOR, AND APPROVED BY THE CONSULTANT.
- INSPECTION OF CAP PLATES AND WELDED ANCHORS.
- MATERIALS AND WORKMANSHIP WILL BE SUBJECT TO INSPECTION AND TESTING BY AN INDEPENDENT INSPECTOR APPROVED BY THE CONSULTANT IN ACCORDANCE WITH CSA W78.1, RETAINED AND PAID FOR BY THE CONTRACTOR AND APPROVED BY THE CONSULTANT.
- TESTING CONDUCTED TO CSA W59 AND CAN/CSA S16.1 STANDARDS, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
 - GENERAL EXAMINATION OF ALL WELDS AND WORKMANSHIP THAT ARE READILY ACCESSIBLE (100%).
 - RANDOM MAGNETIC PARTICLE TESTING OF SELECTED FIELD WELDS OF ALL COMPONENTS (10% OF CONSTRUCTION).
 - BOLT SPECIFICATIONS, GRADED AND FASTENING VERIFICATION (10% OF CONNECTIONS).
 - REVIEW OF DRAWINGS, WELDING PROCEDURES, WELDING CERTIFICATIONS, DATA SHEETS AND WELDING CONSUMABLES STOCK (FIELD).
 - TRACKING OF ALL NOTED DEFICIENCIES, TIMELY FAXING OF TECHNICAL REPORTS TO ALL RELEVANT PARTIES, IMMEDIATE CORRESPONDENCE OF IMPORTANT ISSUES TO THE ENGINEER OF RECORD, AND A FINAL SUMMARY REPORT INCLUDING ALL RELATED DOCUMENTATION THE FINAL PROJECT STATUS.

5. QUALITY ASSURANCE:

- MEET OR EXCEED REQUIREMENTS OF CSA 086-19.
- DESIGN STRUCTURAL MEMBERS UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND LICENSED IN THE PROVINCE WHERE THE PROJECT IS LOCATED.

SECTION 061733 WOOD I-JOISTS
Part 1 GENERAL

- REFERENCES
 - NATIONAL BUILDING CODE - 2019 ALBERTA EDITION
 - CSA 086 ENGINEERING DESIGN IN WOOD.
 - NLGA 14: STANDARD GRADING RULES FOR CANADIAN LUMBER.
 - CSA 0121: CONSTRUCTION SHEATHING.
 - CSA 0111: CANADIAN SOFTWOOD PLYWOOD.
 - CSA-0325: CONSTRUCTION SHEATHING.
 - ASTM D5955: STANDARD SPECIFICATION FOR ESTABLISHING AND MONITORING STRUCTURAL CAPACITIES OF PREFABRICATED WOOD I-JOISTS.
 - ISOIEC 17065: CONFORMITY ASSESSMENT - REQUIREMENTS FOR BODIES CERTIFYING PRODUCTS AND SERVICES.
 - CSA 0122 SERIES: CSA STANDARDS FOR WOOD ADHESIVES

2. DESIGN REQUIREMENTS:

- DESIGN WOOD I-JOISTS, BRACING, BLOCKING, FRAMED OPENINGS, AND CONNECTIONS IN ACCORDANCE WITH CSA 086 TO SAFELY CARRY ALL LOADS INDICATED ON DRAWINGS INCLUDING MECHANICAL AND OTHER EQUIPMENT NOT LISTED.
- LIMIT ROOF LOAD DEFLECTION TO L360 AND FLOOR LOAD DEFLECTION TO L480.
- LIMIT ROOF TOTAL LOAD DEFLECTION TO L240 AND FLOOR TOTAL DEFLECTION TO L360.

3. DELIVERY, STORAGE, AND PROTECTION:

- INCLUDE THE FOLLOWING INFORMATION:
 - PILE LAYOUT.
 - TYPE OF PILE.
 - PILE LENGTH.
 - GRADE AND DETAILS OF STEEL.
 - ELEVATION OF PILE BASES.
 - ELEVATION OF TOP OF PILE CAPS.
- PROTECT I-JOISTS FROM WEATHER AND STORE THEM ON JOB SITE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROVIDE BEARING SUPPORTS AND BRACINGS TO PREVENT BENDING OR OVERTURNING DURING TRANSIT AND STORAGE.

4. SHOP DRAWINGS:

- SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.
- CLEARLY INDICATE THE TYPE OF PRODUCT, LAYOUT, DESIGN LOADS INCLUDING SNOW DRIFT LOADS, EARTHQUAKE LOADS, CHIMNEY LOADS AND ETC, CONNECTION DETAILS, INCLUDING JOINTS, FASTENERS, BEARING CONDITIONS AND CONNECTION HARDWARE, ALSO QUANTITY OF ALL MEMBER TYPES, CONNECTIONS AND ACCESSORIES, AS WELL AS ALL BRACING, BLOCKING AND FRAMING ACCESSORIES REQUIRED FOR INSTALLATION.

4. PRODUCT MATERIALS:

- PILE: LUMBER SHALL BE MARKED WITH A RECOGNIZED, VISIBLE GRADE STAMP.
- GRADE: USE CLS GRADE MARKED LUMBER CONFORMING TO THE STANDARD GRADES RULES FOR CANADIAN LUMBER PUBLISHED BY THE NATIONAL LUMBER GRADES AUTHORITY (NLGA).
- LUMBER GRADES FOR STRUCTURAL LIGHT FRAMING TO CAN/CSA L110-12 SURFACE GRADES GRADED AND STAMPED IN ACCORDANCE WITH CURRENT NATIONAL LUMBER GRADES AUTHORITY (NLGA) STANDARD GRADING RULES FOR CANADIAN LUMBER. EACH PIECE OF LUMBER MUST BEAR GRADE MARK, STAMP, OR OTHER IDENTIFYING MARKS INDICATING GRADES OF MATERIAL AND RULES OR STANDARDS UNDER WHICH PRODUCED ANY LUMBER NOT GRADED MARKED WILL BE GRADED AS GRADE 1.
- MOISTURE CONTENT: MAXIMUM 10% AT TIME OF INSTALLATION.
- FINGER JOINTED LUMBER IS NOT ACCEPTABLE.
- FRAMING AND BOARD LUMBER: IN ACCORDANCE WITH ABC AND AS SPECIFIED IN SCHEDULES.
- FRAMING, BLOCKING, NAILING STRIPS, GROUNDS, ROUGH BUCKS, CANTS, CURBS, FASCIA, SCAFFOLDING AND SLEEPERS: S4S - STANDARD OR BETTER GRADE FOR BOARD POST AND TIMBER SIZES; STANDARD LIGHT FRAMING OR BETTER FOR DIMENSION SIZES.

5. MATERIALS:

- PANEL PRODUCTS: CANADIAN SOFTWOOD PLYWOOD, MANUFACTURED AND IDENTIFIED IN ACCORDANCE WITH CSA 0121. THICKNESS AS INDICATED ON DRAWINGS.
- ORIENTED STRAND BOARD (OSB): OSB PANELS TO CSA 0325, THICKNESS AS INDICATED ON DRAWINGS. GRADE STAMP SHALL INDICATE SPAN RATING.
- ADHESIVES: FOR STRUCTURAL JOINTS FOR STRUCTURAL PANELS SHALL MEET THE REQUIREMENTS OF CSA 0112.6 OR CSA 0112.10.
- STEEL CONNECTIONS: TYPE 350W.

6. FABRICATION:

- PANELS SHALL BE MANUFACTURED IN A PLANT APPROVED FOR FABRICATION BY THE BUILDING CODE AND UNDER THE SUPERVISION OF AN APPROVED THIRD PARTY INSPECTION AGENCY.
- STRUCTURAL CONNECTIONS: HOT DIP GALVANIZING TO ASTM F3125/F3123M.
- CAMBER FOR JOISTS SPANNING OVER 5 METRES: 1.5 TO 2 TIMES DEAD LOAD DEFLECTION.

8. INSTALLATION:

- DO NOT COMMENCE WITH FABRICATION OF I-JOISTS UNTIL SHOP DRAWINGS HAVE BEEN APPROVED.
- FARENSON I-JOISTS IN ACCORDANCE WITH THE REVIEWED SHOP DRAWINGS.
- ENSURE ALL MEMBERS ARE ACCURATELY CUT TO LENGTH, ANGLE, AND TRUE TO LINE TO ENSURE TIGHT JOINTS.
- ACCURATELY PLACE ALL CONNECTORS TO LOCATION INDICATED ON THE APPROVED SHOP DRAWINGS.

Part 3 EXECUTION
1. ERECTION:

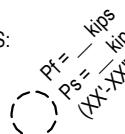
- ERECT MEMBERS IN ACCORDANCE WITH REVIEWED SHOP DRAWINGS.
- COORDINATE I-JOIST INSTALLATION WITH WORK OF OTHER TRADES FOR PROPER TIME AND SEQUENCE TO AVOID CONSTRUCTION DELAYS.
- COMPLY WITH MANUFACTURER'S PRODUCT DATA, INCLUDING PRODUCT TECHNICAL BULLETINS, PRODUCT CATALOG, INSTALLATION INSTRUCTIONS AND PRODUCT CARTON INSTRUCTIONS FOR INSTALLATION.
- INSTALL I-JOISTS PLUMB, LEVEL AND AS INDICATED.
- FASTEN JOISTS TO SUPPORTING FRAMING AS RECOMMENDED BY THE I-JOIST MANUFACTURER AND HANGER MANUFACTURER.
- PROVIDE TEMPORARY BRACING AS RECOMMENDED BY THE MANUFACTURER TO HOLD JOISTS UNTIL PERMANENT BRACING IS SECURED.
- CUT OPENINGS IN JOIST WEBS ONLY AS ALLOWED BY THE MANUFACTURER.
- PROVIDE A MINIMUM 40 MM GAP BETWEEN NON-LOAD BEARING PARTITION WALLS BELOW AND THE BOTTOM CHORD OF I-JOISTS TO ALLOW FOR DEFLECTIONS.

2. FIELD QUALITY CONTROL:

- REPORT ON SITE REPORT FROM MANUFACTURER VERIFYING COMPLIANCE OF WORK IN HANDLING, INSTALLING, PROTECTING AND CLEANING OF PRODUCT.
- SUBMIT MANUFACTURER'S FIELD SERVICES CONSISTING OF PRODUCT USE RECOMMENDATIONS AND PERIODIC SITE VISITS FOR INSPECTION OF PRODUCT INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- ENSURE MANUFACTURER'S REPRESENTATIVE PRESENT BEFORE AND DURING CRITICAL PERIODS OF INSTALLATION.
- FIELD PROTECTION: IF REQUESTED, GIVE ADEQUATE ADVANCE NOTICE TO CONSULTANT OF PROPOSED ERECTION SCHEDULES. CONSULTANT SHALL CONDUCT INSPECTIONS DURING PROGRESS OF THE ERECTION OPERATION AS PROJECT MAY WARRANT

FOUNDATION PLAN

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1. SEE DRAWINGS ON S100 SERIES FOR GENERAL NOTES & TYPICAL DETAILS.
2. LEAVE GRADE BEAM FORMS INTACT UNTIL CONCRETE HAS REACHED 70% OF ITS SPECIFIED STRENGTH.
3. C.J. ON PLAN INDICATES CONTROL JOINT. FILL JOINTS WITH WATERPROOF SEALANT. CONTROL JOINTS ARE NOT TO BE PLACED IN STRUCTURAL SLABS. VERIFY WITH ARCH. DWGS. FOR TILE FLOOR LAYOUT PATTERNS BEFORE COMMENCING WITH WORK.
4. T/O CONCRETE SLAB ELEVATION = 0.000 U.N.O. IS SHOWN ON PLAN AS THUS:
5. T/O PILE ELEVATION U.N.O. IS SHOWN ON PLAN AS THUS:

6. SLOPE SLAB TO DRAINS AS PER ARCHITECTURAL AND MECHANICAL DRAWINGS. MAINTAIN FULL SLAB THICKNESS THROUGHOUT.
7. CONCRETE SLAB ON GRADE TO CONSIST OF 130mm THICK CONCRETE SLAB R/W. 10M @ 300 EACH WAY MIDDLE, ON SOIL GAS IMPERMEABLE MEMBRANE / VAPOUR BARRIER (15 mil) ON RADON ROCK ON COMPACTED GRANULAR FILL TYP. U.N.O. ON PLAN. COORDINATE AND CONFIRM THE ABOVE WITH ARCHITECTURAL, MECHANICAL AND GEOTECHNICAL REPORT. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
8. FOR FLOOR CURBS, TRENCHES AND MISCELLANEOUS DETAILS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS. FOR LOCATION OF ALL SIDEWALKS AND / OR CONCRETE STOOPS SEE ARCHITECTURAL DRAWINGS.
9. PROVIDE BLOCKOUT IN GRADE BEAMS AT DOORWAYS TYP. SHOWN ON PLAN AS THUS: 
10. ENSURE ALL GRADE BEAMS ARE TEMPORARILY BRACED AND LATERALLY SUPPORTED.
11. PILE MINIMUM SIZE SHALL BE 400mmØ AND REINFORCEMENT SHALL BE 4-15M VERTICAL FULL LENGTH. PROVIDE 10M @ 300mm O/C. TIES.
12. UNLESS NOTED OTHERWISE ON DRAWINGS, PROVIDE 4-15M x 1200mm LG. DOWELS AT ALL PILE TO GRADE BEAM LOCATIONS AND 6-15M x 1200mm LG. DOWELS AT ALL PILE TO CONCRETE PIER LOCATIONS.
13. UNLESS NOTED OTHERWISE PROVIDE 1200mm LONG DOWELS FROM PILES TO MATCH SIZE AND NUMBER OF VERTICAL REINFORCEMENT IN CONCRETE COLUMNS ABOVE.
14. PROVIDE A FULL TENSION SPLICE AT ALL LAPS IN SLAB REBAR.
15. REFER TO ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATIONS OF SLAB DEPRESSIONS. MAINTAIN FULL SLAB THICKNESS THROUGHOUT.
16. PROTECT SUBGRADE FROM WEATHER ELEMENTS BEFORE, DURING AND AFTER SLAB ON GRADE IS POURED. PROVIDE ADEQUATE PROTECTION TO MAINTAIN SUBGRADE TEMPERATURES ABOVE 5°C.

IMPORTANT NOTE:
CONTROL JOINTS ARE NOT TO BE PLACED IN STRUCTURAL SLABS.

SUBGRADE / SUB-BASE PREPARATION FOR GRADE SUPPORTED FLOOR SLABS

1. THE CONTRACTOR SHALL REVIEW AND FOLLOW THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT FOR PREPARATION / PROTECTION OF SUBGRADE / SUB-BASE. PREPARATION OF THE SUB-GRADE / SUB-BASE AND NEW FILL REQUIREMENTS SHALL BE REVIEWED AND APPROVED BY A GEOTECHNICAL ENGINEER WITHIN 24 HOURS PRIOR TO POURING CONCRETE.
2. REMOVE ALL ORGANIC TOPSOIL, FILL AND OTHER DELETERIOUS MATERIAL FROM THE BUILDING SLAB AREA. DEPTHS OF TOP SOIL AND FILL MAY VARY THROUGHOUT THE SITE GEOTECHNICAL ENGINEER TO REVIEW AND ADVISE.
3. FOLLOWING THE SUBCUTTING OF THE ORGANIC TOPSOIL AND FILL LAYERS, THE GRADE SHALL BE COMPAKTED AND ANY SOFT SOILS BE IDENTIFIED AND ROLL PROOFED PRIOR TO PLACEMENT OF THE NEW BACKFILL. GEOTECHNICAL ENGINEER TO ADVISE CONTRACTOR ACCORDINGLY.
4. NEW ENGINEERED FILL SHALL BE COMPAKTED AS PER THE GEOTECHNICAL REPORT. FILL MATERIAL SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
5. PROVIDE 15 mil POLYETHYLENE VAPOUR BARRIER WITH TAPED JOINTS TO THE UNDERSIDE OF SLAB ON GRADE. LAP ALL JOINTS 200mm (8") MIN.
6. PROTECT SUBGRADE FROM WEATHER ELEMENTS BEFORE, DURING AND AFTER SLAB ON GRADE IS POURED. PROVIDE ADEQUATE PROTECTION TO MAINTAIN SUBGRADE TEMPERATURE ABOVE 5°C.
7. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

2025-02-19 ISSUED FOR PROTOTYPICAL DRAWING

JECT:
**MHC HOUSING
CATALOGUE**

BERTA CANADA

NOT FOR PERMIT OR CONSTRUCTION

SECRET TITLE

STREET TITLE:

2021

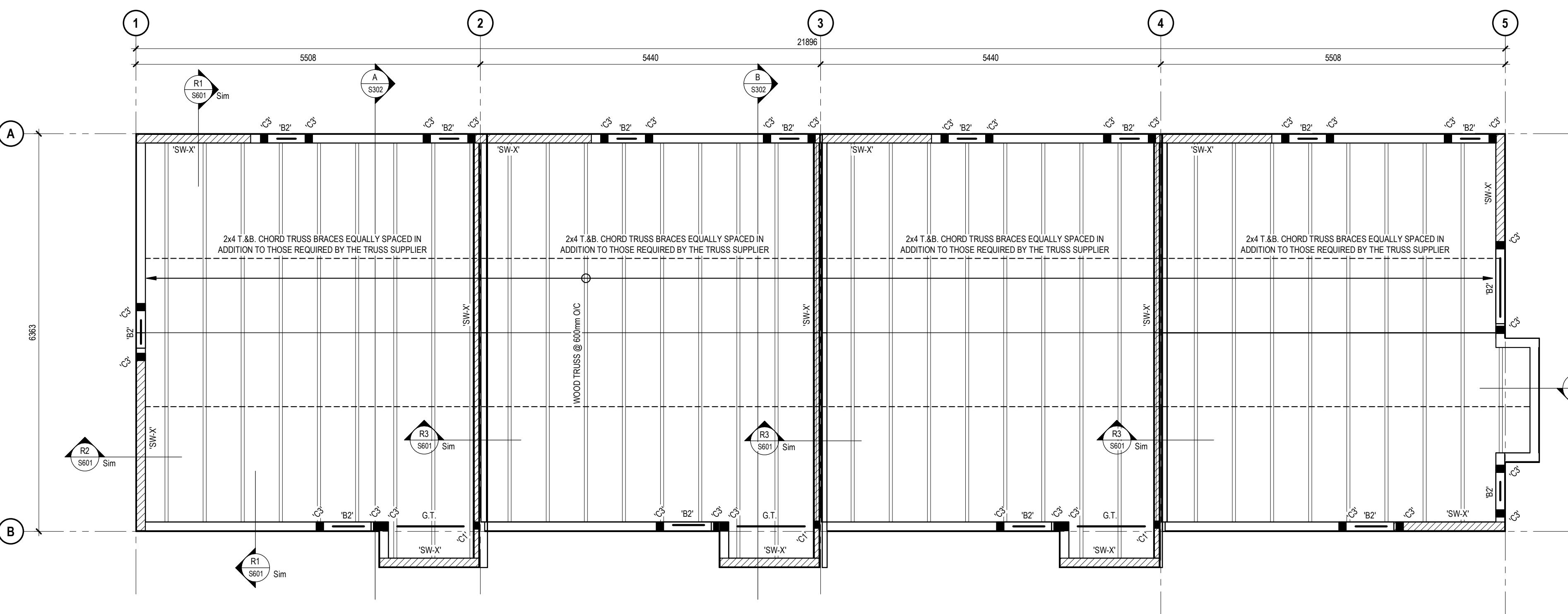
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FEET NO:

S201

DISCLAIMER

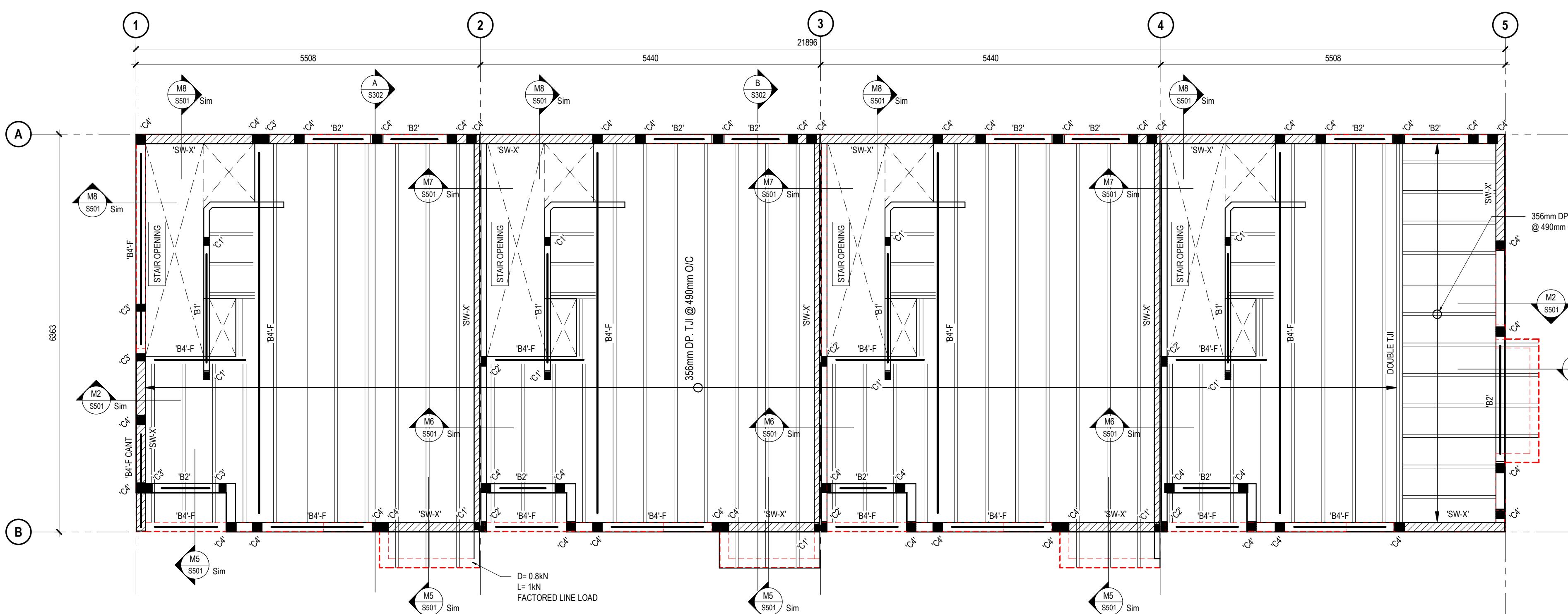
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ROOF FRAMING PLAN

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ROOF PLAN NOTES:

- SEE ARCH. DWGS. FOR ROOF ELEVATIONS AND ROOF SLOPES.
- SLOPED ROOF FRAMING TO CONSIST OF 11mm OSB SHEATHING WITH H-CLIPS OVER WOOD TRUSSES UNLESS NOTED OTHERWISE ON PLAN. TRUSS SPACING NOT TO EXCEED 600mm O/C. DECREASE SPACING IF REQUIRED UPON ENGINEER'S WRITTEN APPROVAL.
- SEE DRAWINGS S100 SERIES FOR TYPICAL NOTES, DETAILS & SPECIFICATIONS.
- VERIFY ALL DIMENSIONS ON SITE PRIOR TO TRUSS FABRICATION.
- ROOF TRUSSES AND ALL MISCELLANEOUS ROOF FRAMING SHALL BE DESIGNED AND SUPPLIED BY THE TRUSS SUPPLIER FOR THE LOADS STATED IN THE GENERAL NOTES UNDER 'DESIGN LOADS'.
- SUPERSTRUCTURE HAS BEEN DESIGNED BASED ON THE ABOVE ROOF FRAMING. TRUSS SUPPLIER TO ADVISE THE ENGINEER ON RECORD ACCORDINGLY IF LAYOUT CHANGES AS SUPERSTRUCTURE DESIGN MAY HAVE TO BE REVISED.
- ALL BEAMS TO BE FLUSH BEAMS, EXCEPT DOORWAY AND WINDOW HEADERS.
- UNLESS NOTED OTHERWISE IN WALL TYPE SCHEDULE, PROVIDE MID-HEIGHT BLOCKING IN ALL LOAD BEARING WALLS.
- UPON COMPLETION OF TRUSS INSTALLATION THE ENGINEER RESPONSIBLE FOR THE DESIGN OF THE TRUSS SHALL REVIEW THE INSTALLATION ON SITE AND CONFIRM IN WRITING THAT THEY MEET THE DESIGN PARAMETERS. FINAL REPORT MUST BE SIGNED AND SEALED BY P. ENG. REGISTERED IN THE PROVINCE OF ALBERTA.
- EXTEND SHEAR WALLS TO U.I.S. OF ROOF SHEATHING, SEE ROOF SECTIONS.
- BRACES NOTED ON FRAMING PLAN ARE IN ADDITION TO THOSE REQUIRED BY THE TRUSS SUPPLIER TYP.
- WOOD TRUSS TO WALL, WOOD TRUSS TO TRUSS CONNECTIONS INCLUDING ALL GIRDER CONNECTIONS TO BE DESIGNED AND SUPPLIED BY THE TRUSS SUPPLIER.
- ALLOW FOR ADDITIONAL 74 mm SNOW PILING IN ALL VALLEYS. SNOW PILING TO BE TAPERED TO REGULAR ROOF SNOW LOAD AT 300mm EACH SIDE OF VALLEYS.
- PROVIDE 3x6 COLUMN IN 2x6 WALLS AND 2x4 COLUMN IN 2x4 WALLS AT ALL GIRDER SUPPORT LOCATIONS U.N.O. SUCH COLUMNS TO EXTEND DOWN TO FOUNDATIONS.


2ND FLOOR FRAMING PLAN

1 : 50

WOOD FLOOR FRAMING PLAN NOTES:

- SEE ARCH. DWGS. FOR 2ND FLOOR ELEVATION.
- SEE DRAWINGS S100 SERIES FOR TYPICAL NOTES, DETAILS & SPECIFICATIONS.
- TYPICAL FLOOR TO CONSIST OF 19mm T & G OSB SHEATHING OVER 356mm DP TJI @ 490mm O/C FOR JOIST SERIES AND LAYOUT. SEE SUPPLIER'S SHOP DRAWINGS. TJI SPACING NOT TO EXCEED 490mm O/C. DECREASE SPACING IF REQUIRED UPON ENGINEER'S WRITTEN APPROVAL.
- VERIFY ALL DIMENSIONS ON-SITE PRIOR TO JOIST FABRICATION.
- FLOOR JOISTS SHALL BE DESIGNED AND SUPPLIED BY THE JOIST SUPPLIER FOR THE LOADS STATED IN THE GENERAL NOTES UNDER 'DESIGN LOADS'.
- FOR FRAMING AROUND FLOOR OPENINGS SEE TYPICAL DETAILS.
- ALL BEAMS TO BE FLUSH BEAMS EXCEPT DOORWAY AND WINDOW HEADERS.
- FOR STAIRCASE FRAMING SEE ARCHITECTURAL DRAWINGS.
- UNLESS NOTED OTHERWISE IN WALL TYPE SCHEDULE, PROVIDE MID-HEIGHT BLOCKING IN ALL LOAD BEARING WALLS.
- JOISTS RUNNING PARALLEL TO EXTERIOR WALLS TO HAVE TJI BLOCKING INSTALLED AT 800mm O/C TYP. UNLESS WALLS ARE BALLOON FRAMED. NOT SHOWN ON PLAN FOR CLARITY, SEE FLOOR SECTIONS.
- CONTRACTOR TO COORDINATE ALL FLOOR JOIST LOCATIONS TO AVOID CONFLICT WITH PLUMBING FIXTURE DROPS AND PLUMBING RISER LOCATIONS.
- UPON COMPLETION OF JOIST INSTALLATION THE ENGINEER RESPONSIBLE FOR THE DESIGN OF THE JOISTS SHALL REVIEW THE INSTALLATION ON SITE AND CONFIRM IN WRITING THAT THEY MEET THE DESIGN PARAMETERS. REPORTS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA.
- WOOD JOIST TO WALL, WOOD JOIST TO JOIST CONNECTIONS TO BE DESIGNED AND SUPPLIED BY THE JOIST SUPPLIER TYP.
- ADD DOUBLE JOISTS UNDER ALL POINT LOADS AT CANTILEVER LOCATIONS TYP.. NOT SHOWN ON PLAN FOR CLARITY.

1. ALL COLUMNS TO BE COUPLED WITH SOLID BLOCKING THROUGH A FLOOR SYSTEM. SUCH BLOCKING TO BE OF THE SAME SIZE AS THE COLUMN ABOVE. REFER TO TYP. DETAILS.

16. WALLS SHOWN ON PLAN AS THUS:  REPRESENT SHEAR WALLS.

SHEARWALL ASSEMBLY SCHEDULE		
SHEAR WALL TYPE	SHEATHING ASSEMBLY	
	SHEATHING TYPE	SHEATHING FACE
EXTERIOR WALLS	11mm OSB	EXTERIOR / 1 SIDE

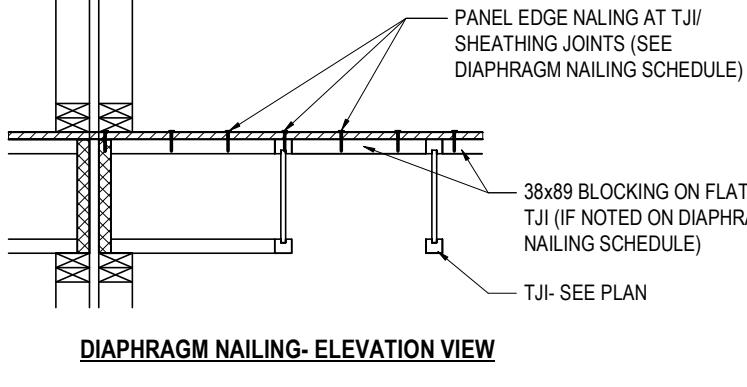
TYPICAL WALL STUD SPACING		
WALL HEIGHT	STUD SPACING	GRADE
STUDS UP TO 15'	2x6 @ 400mm O/C	SPF No.2
STUDS UP TO 18'	2-2x6 @ 400mm O/C	SPF No.2

LEVEL	NAIL LENGTH	OSB THICKNESS	NAIL SPACING	
			PANEL EDGES	INTERIOR STUD LOCATIONS
ROOF	64mm	10mm	100mm	250mm
3RD FLOOR	64mm	10mm	100mm	250mm
2ND FLOOR	64mm	10mm	100mm	250mm

WOOD BEARING WALL SCHEDULE

WALL TYPE	SECOND FLOOR FRAMING (MAIN FLOOR WALLS)	ROOF FRAMING (SECOND FLOOR WALLS)	GRADE
EXTERIOR WALLS	2x6 @ 400mm O/C C/W 10mm OSB SHEATHING. PROVIDE BLOCKING @ SHEATHING JOINTS.	2x6 @ 400mm O/C C/W 10mm OSB SHEATHING. PROVIDE BLOCKING @ SHEATHING JOINTS.	SPF No.2 OR BETTER
LOAD BEARING PARTY / SHEAR WALLS (EACH WALL)	2x4 @ 400mm O/C C/W MID-HEIGHT BLOCKING (EACH WALL) AT SHEAR WALLS. PROVIDE 10mm OSB SHEATHING ON ONE SIDE AND BLOCKING AT ALL HORIZONTAL SHEATHING JOINTS.	2x4 @ 400mm O/C C/W MID-HEIGHT BLOCKING (EACH WALL) AT SHEAR WALLS. PROVIDE 10mm OSB SHEATHING ON ONE SIDE AND BLOCKING AT ALL HORIZONTAL SHEATHING JOINTS.	SPF No.2 OR BETTER
INTERIOR WALLS	2x4 @ 400mm O/C C/W MID-HEIGHT BLOCKING	N/A	SPF No.2 OR BETTER

- ALL WALL TYPES ARE TYPICAL UNLESS NOTED OTHERWISE.
- WALL TYPES INDICATED REPRESENT BEARING WALLS ONLY.
- WALL VERTICAL ALIGNMENT TO BE WITHIN 13mm OVER ENTIRE HEIGHT OF BUILDING TYPICAL ALL LOAD BEARING WALLS.
- ALL TOP & BOTTOM CON. PLATES TO BE SPF No.2.



COLUMN SCHEDULE 'C'		
TYPE	SIZE	REMARKS
'C1'	3-2x4	SPF No.1 No.2 BUILT-UP
'C2'	4-2x4	SPF No.1 No.2 BUILT-UP
'C3'	3-2x6	SPF No.1 No.2 BUILT-UP
'C4'	4-2x6	SPF No.1 No.2 BUILT-UP

BEAM SCHEDULE 'B'		
TYPE	SIZE	REMARKS
'B1'	2-2x10	SPF No.1 No.2 BUILT-UP
'B2'	3-2x10	SPF No.1 No.2 BUILT-UP
'B3'	133x356	2.2E PSL
'B4'		

AB Rowhouse 01

PROJECT NO: 02500462
SCALE: As indicated

SHEET NO:

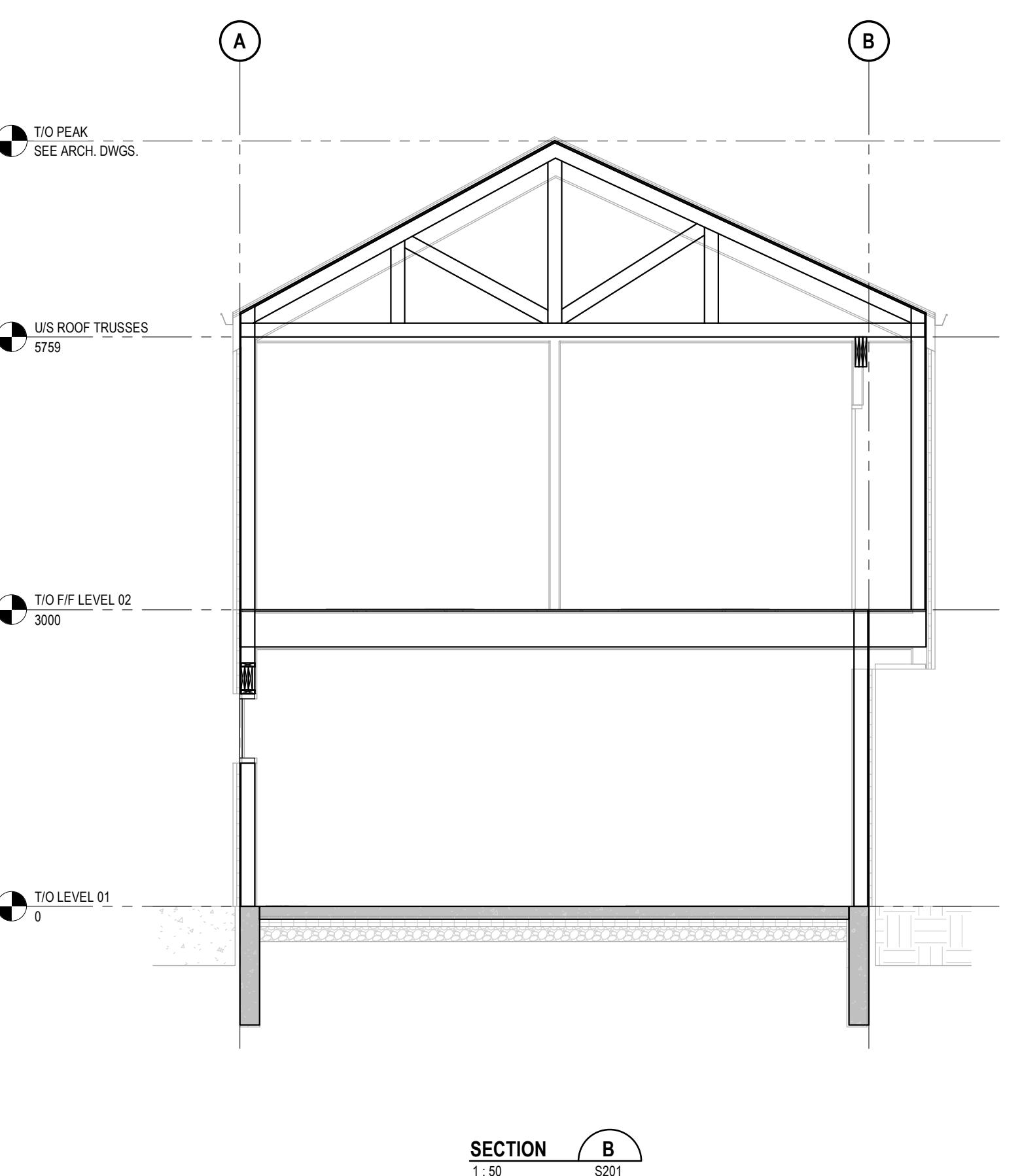
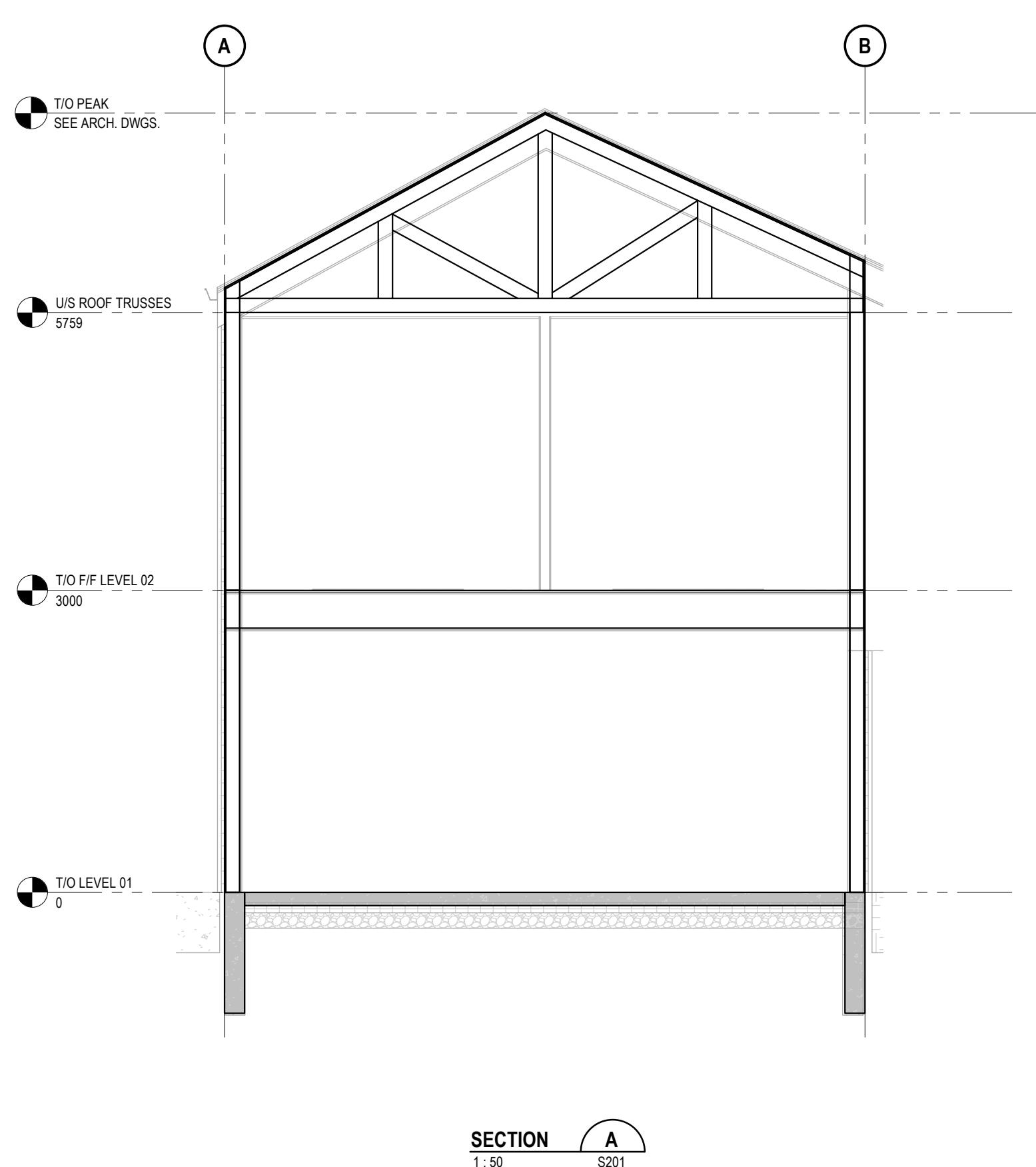
S301

NOT FOR PERMIT
OR CONSTRUCTION

SHEET TITLE:
FRAMING PLANS

DISCLAIMER

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1	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING
CATALOGUE

ALBERTA, CANADA

**NOT FOR PERMIT
OR CONSTRUCTION**

SHEET TITLE:
BUILDING SECTIONS

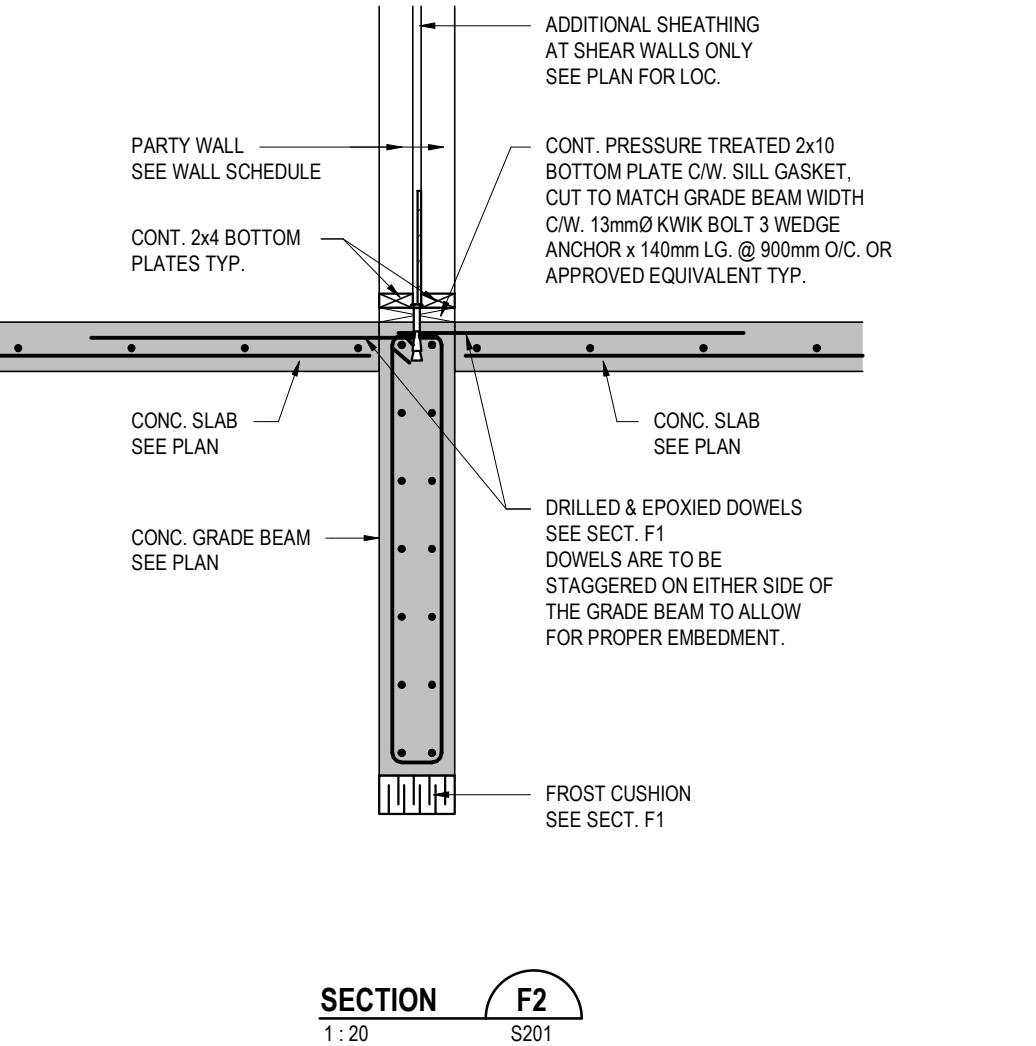
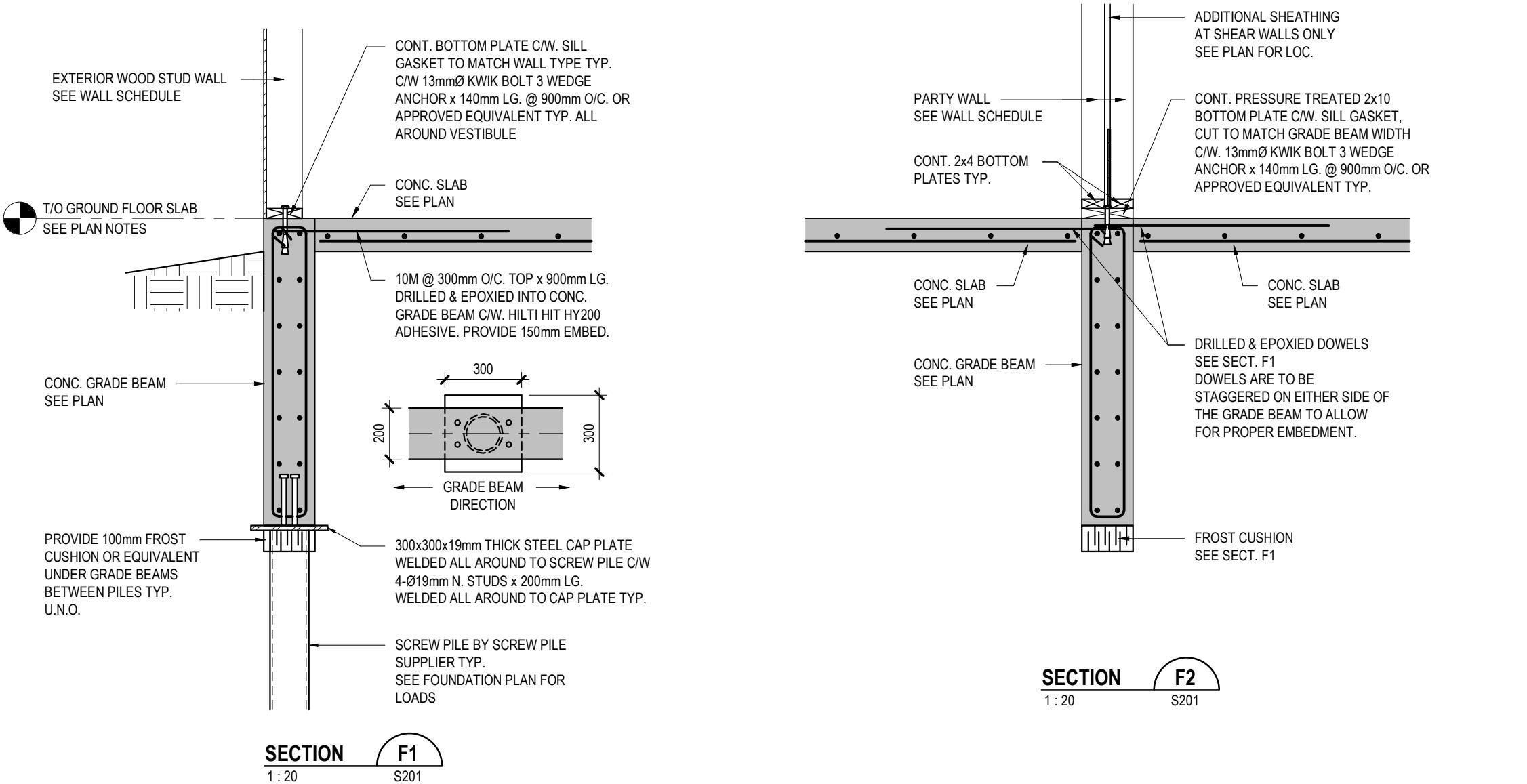
AB Rowhouse 01

PROJECT NO: 02500462
SCALE: 1:50

SHEET NO:

S302

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SECTION F1
1:20 S201

SECTION F2
1:20 S201

1	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
TYPICAL FOUNDATION SECTIONS

AB Rowhouse 01

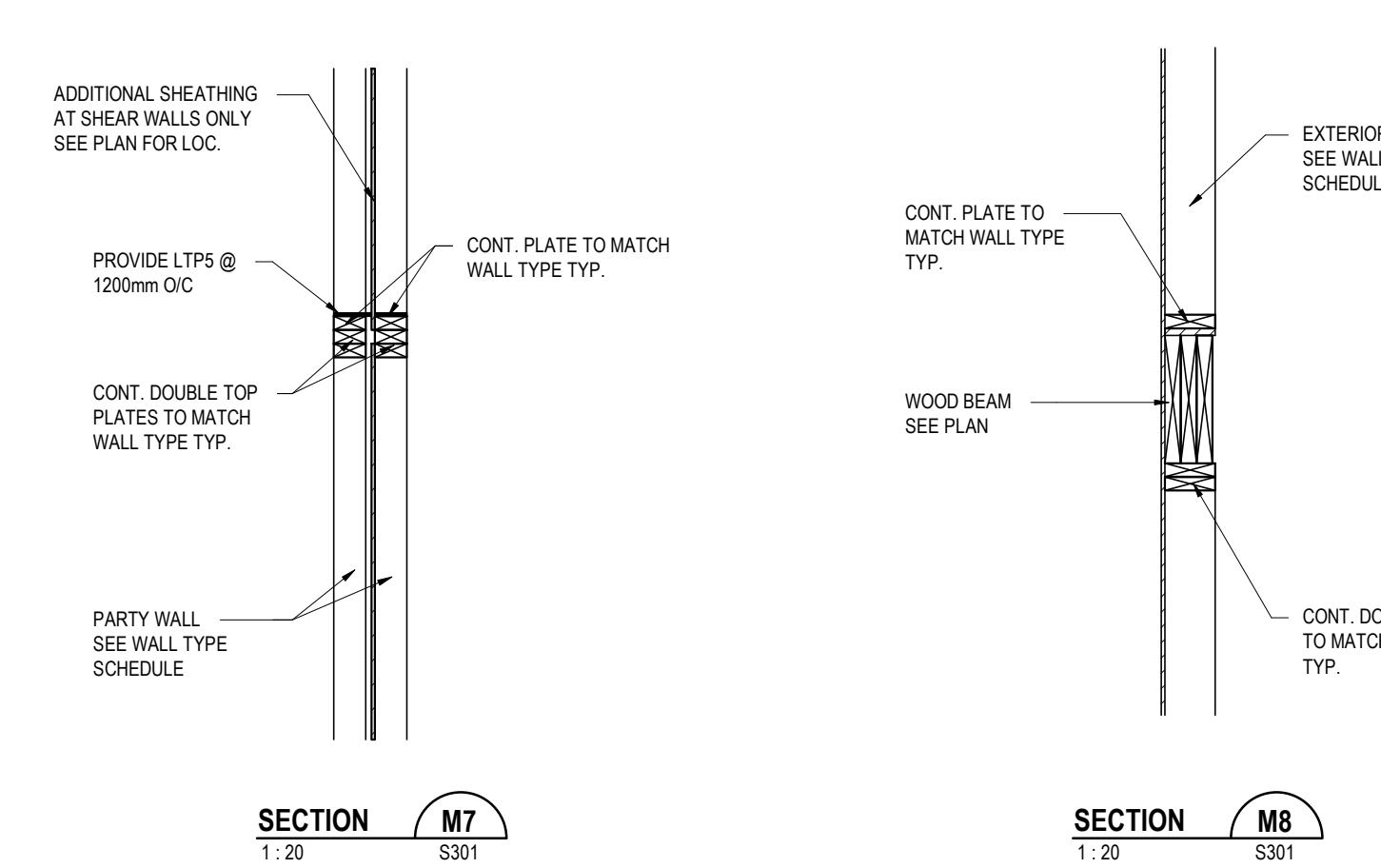
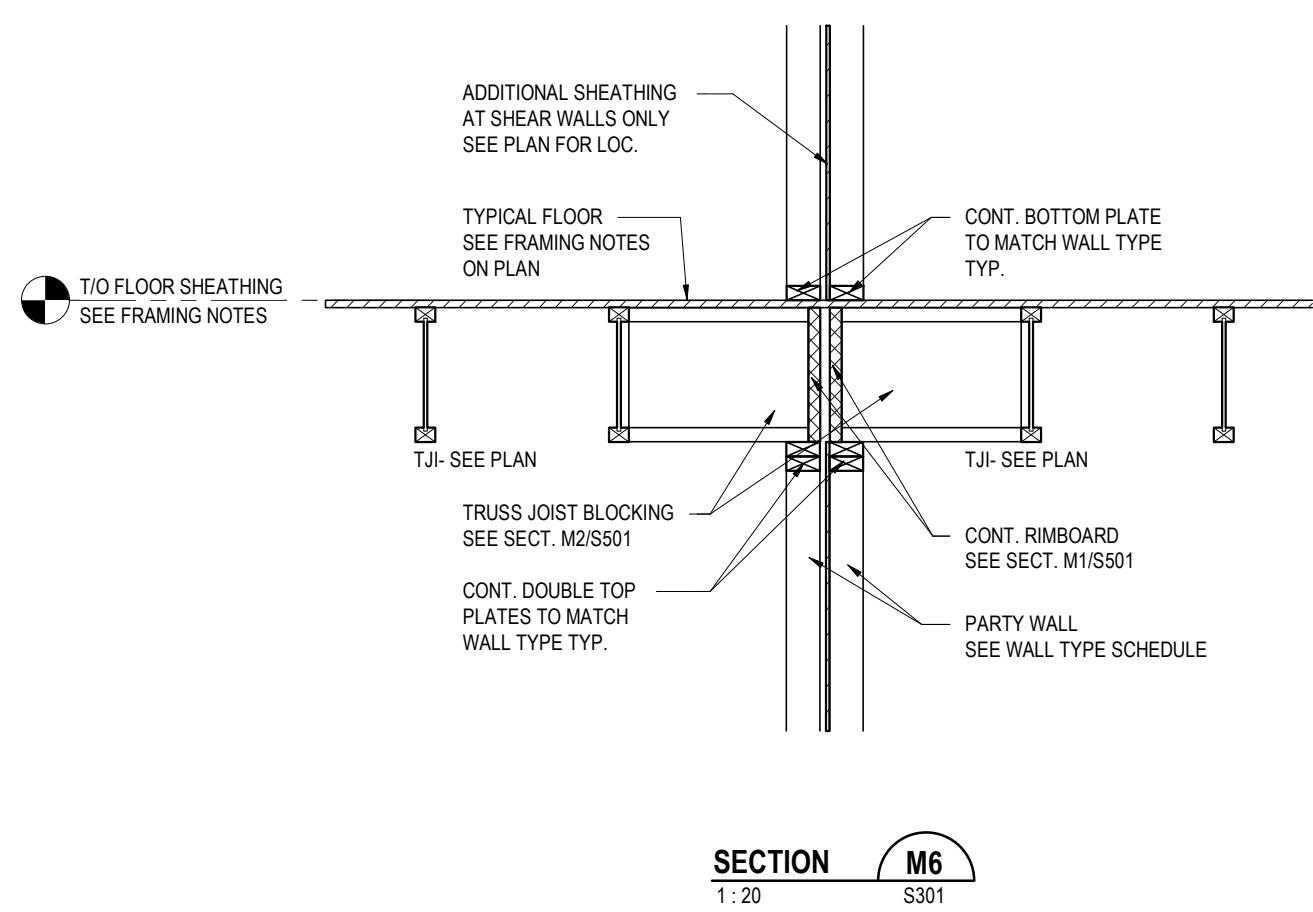
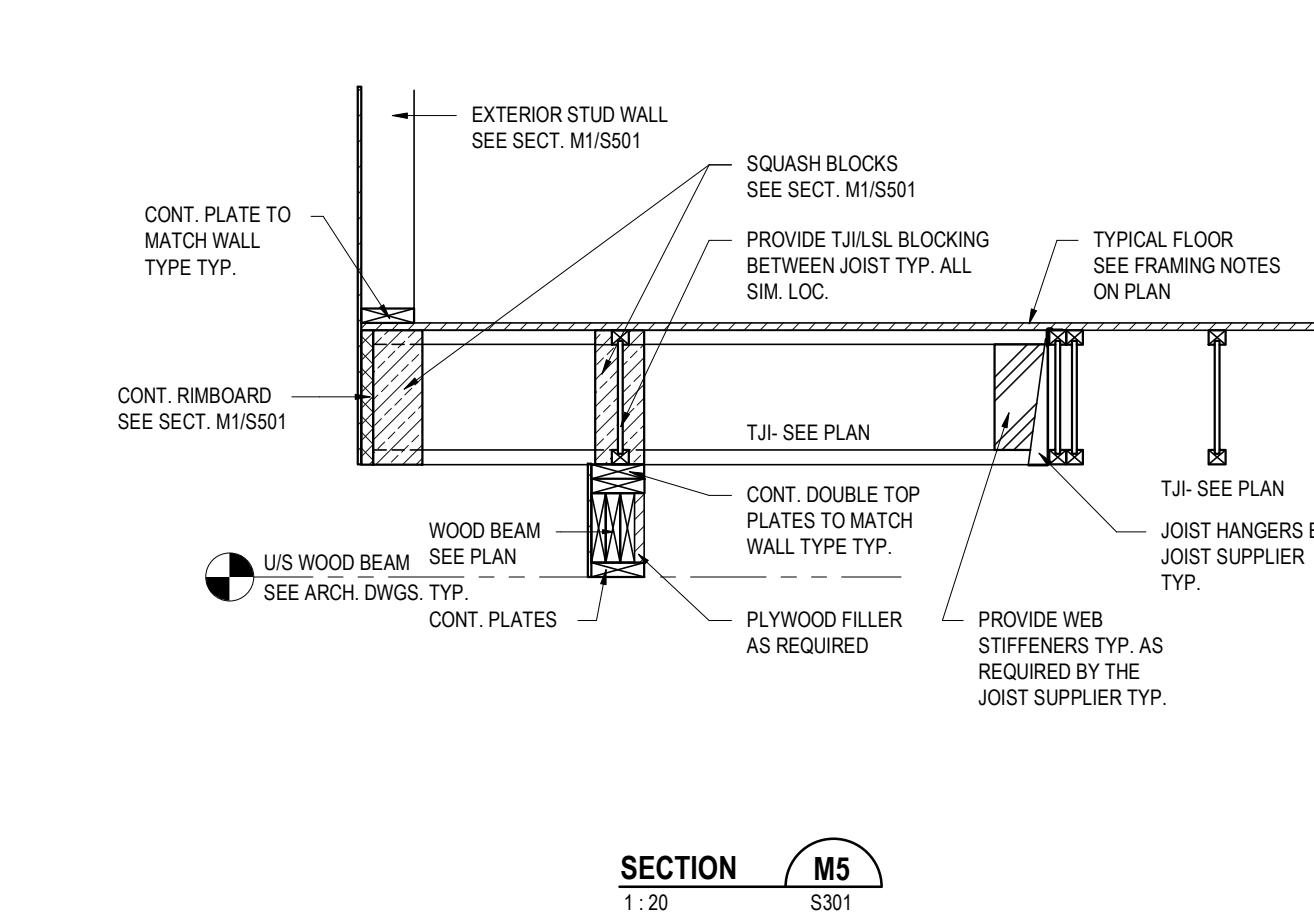
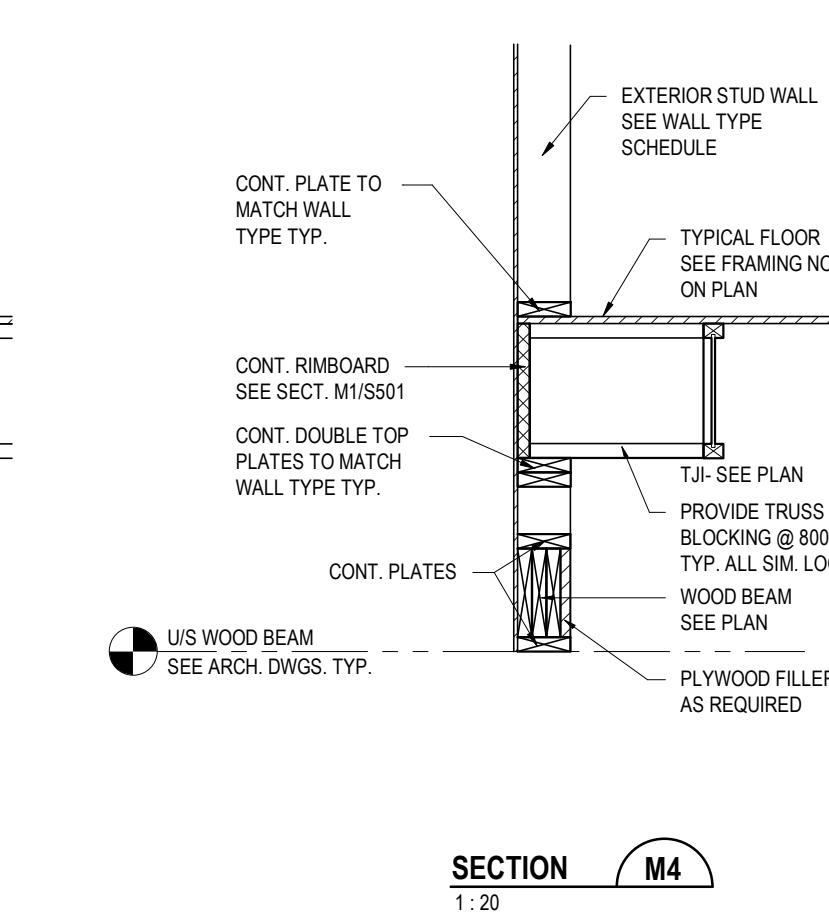
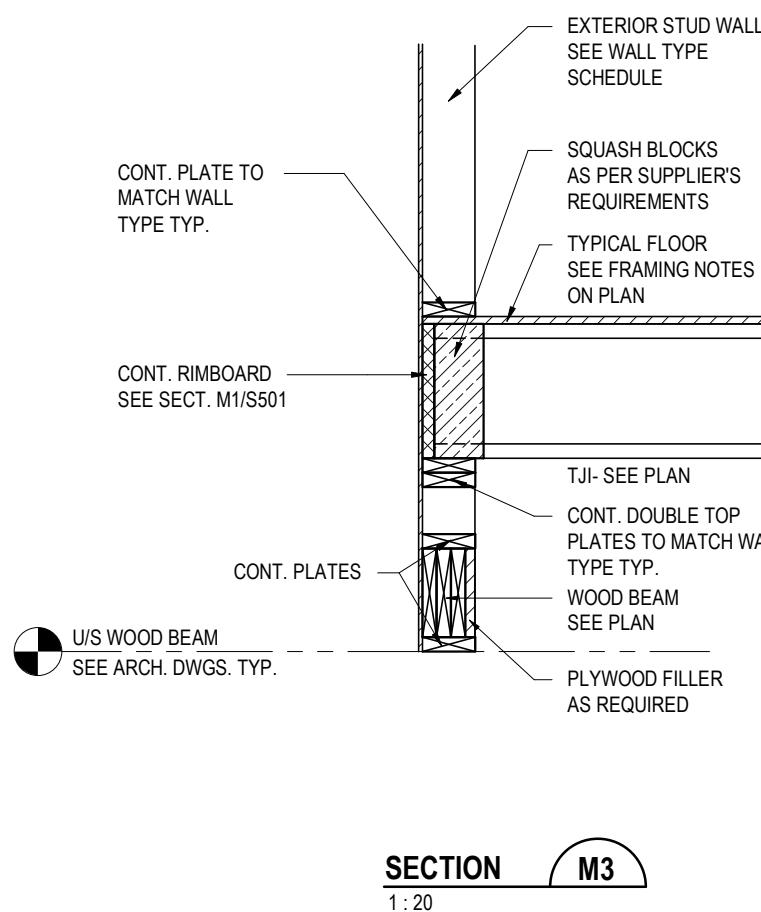
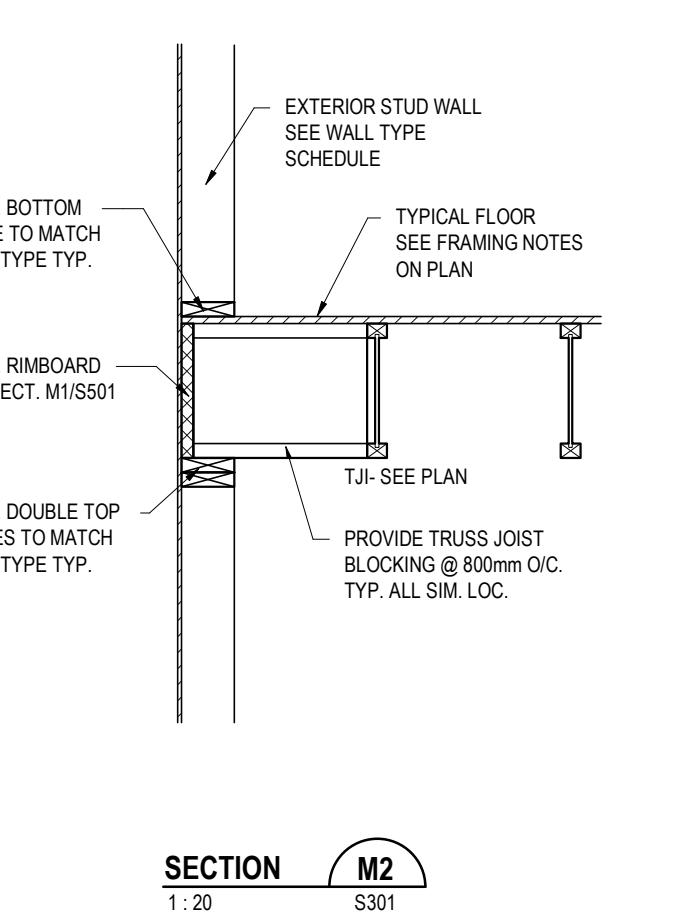
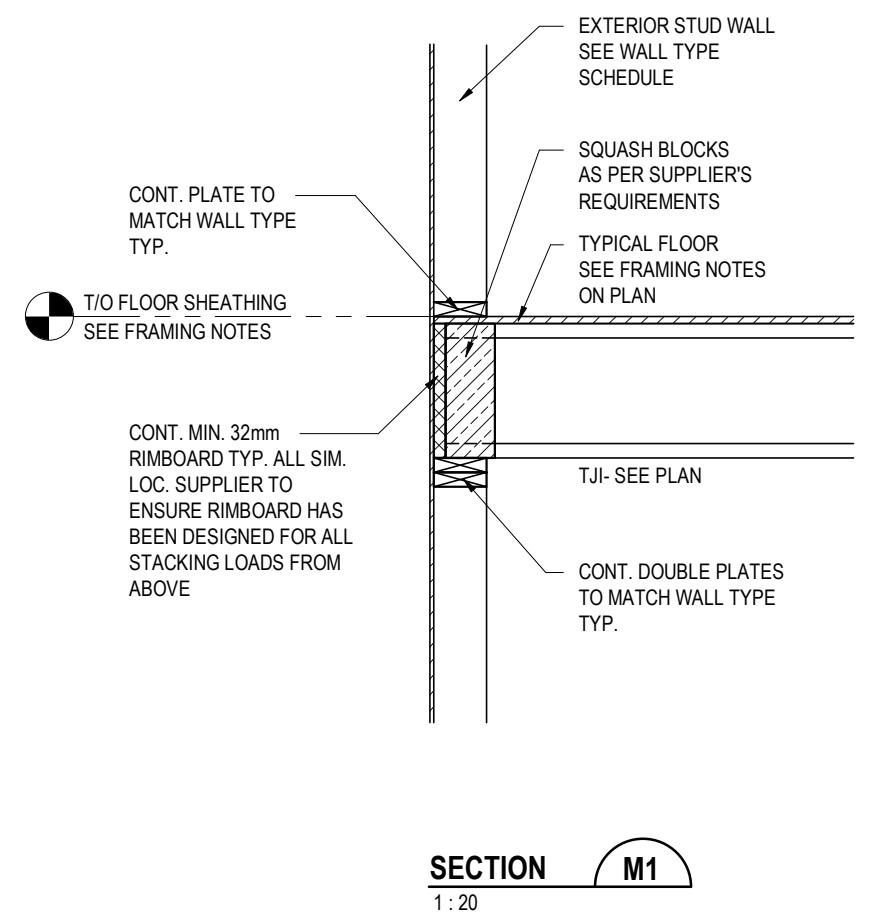
PROJECT NO: 02500462
 SCALE: 1:20

SHEET NO:

S401

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1	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING
CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT
OR CONSTRUCTION

SHEET TITLE:
TYPICAL FLOOR
SECTIONS

AB Rowhouse 01

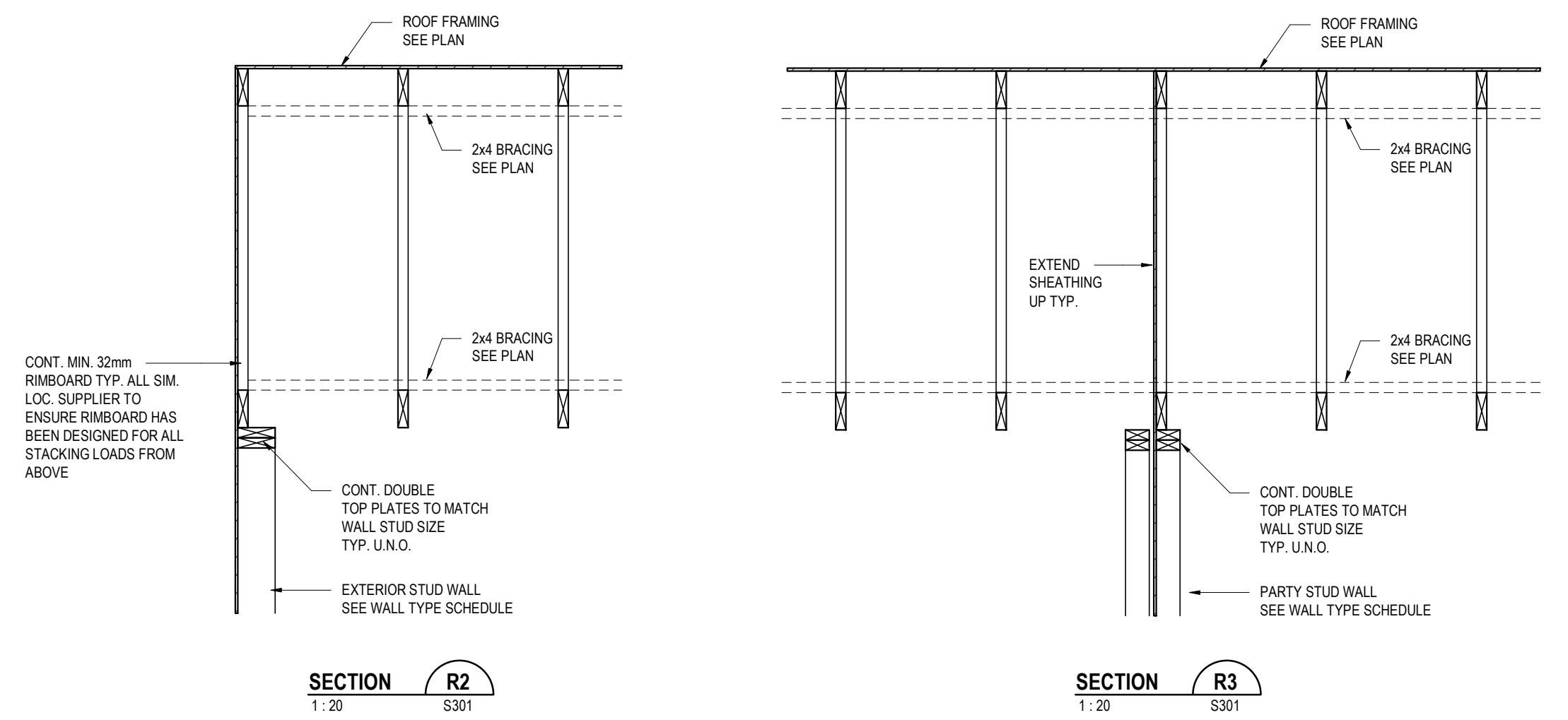
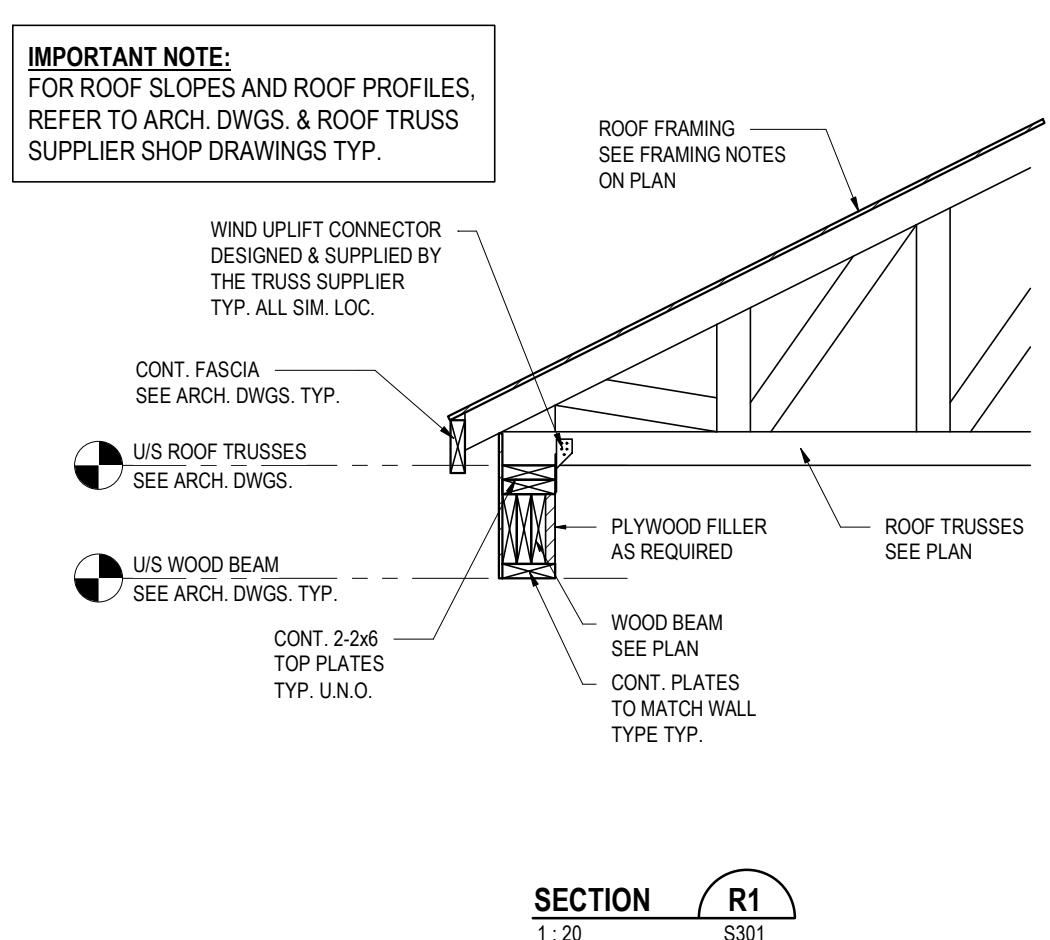
PROJECT NO: 02500462
SCALE: 1:20

SHEET NO:

S501

DISCLAIMER

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SECTION R3
1:20 S301

1	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
TYPICAL ROOF SECTIONS

AB Rowhouse 01

PROJECT NO: 02500462
SCALE: 1:20

SHEET NO:

S601

CMHC HOUSING DESIGN CATALOGUE
AB ROWHOUSE 01
MECHANICAL DRAWINGS

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MECHANICAL SHEET LIST ROW 01	
NO.	SHEET NAME
M000	MECHANICAL COVER SHEET
M001	MECHANICAL LEGENDS
M100	FOUNDATION PLAN
M101	GROUND FLOOR PLUMBING PLAN
M102	SECOND FLOOR PLUMBING PLAN
M201	GROUND FLOOR VENTILATION PLAN
M202	SECOND FLOOR VENTILATION PLAN
M300	MECHANICAL SCHEMATICS & DETAILS
M400	MECHANICAL SCHEDULES
M500	MECHANICAL SPECIFICATIONS

1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING DESIGN CATALOGUE

Project Address

**NOT FOR PERMIT
OR CONSTRUCTION**

SHEET TITLE:
MECHANICAL COVER SHEET

AB Rowhouse 01

PROJECT NO: 024-07-769
SCALE:

SHEET NO:
M000

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MECHANICAL LEGEND	
NOTE: SOME SYMBOL REFERENCES MAY NOT BE USED ON THIS PROJECT	
LINETYPES	
— - - - -	CONTROLS WIRING
— SAN —	SANITARY PIPING
— STM —	STORM PIPING
— - - V - - -	SANITARY VENT BRANCH PIPING
— - - V - - ->	SANITARY VENT UP TO NEXT LEVEL
— - - V - - -<	SANITARY VENT UP THROUGH ROOF
— - -	DOMESTIC COLD WATER PIPING
— - -	DOMESTIC HOT WATER PIPING
— - -	DOMESTIC HOT WATER RECIRC. PIPING
— G —	NATURAL GAS PIPING
— C —	CONDENSATE PIPING
— RS —	REFRIGERANT SUPPLY PIPING
— RR —	REFRIGERANT RETURN PIPING
PLUMBING	
—>	PIPE FLOW ARROW
—>—	PIPE CAP
—>—	PIPE CONNECTION
—>—	PIPE DROP
—>—	PIPE RISE
—>—	PIPE TEE (BELOW)
—>—	PIPE TEE (ABOVE)
—>—	SANITARY P-TRAP
—>—	RUNNING P-TRAP
—>—	HEAT TRACING
—>—	FLOOR DRAIN
—>—	ROOF DRAIN
—>—	HOSE BIBB
—>—	CLEANOUT
—>—	BUILDING CLEANOUT
—>—	GAS METER
—>—	WATER METER
—>—	THRUST BLOCK
CONTROLS	
—>—	CO = CARBON MONOXIDE
—>—	THERMOSTAT (COVER/NO COVER)
—>—	WALL SWITCH (ON-OFF/VARIABLE)
TAGS	
TYPE	S-1
NECK (mm)	200 ^b
FLOW (L/s)	120
DETAIL NUMBER	1
DRAWING NUMBER	MX
SECTION/ELEVATION	REFERENCE
DETAIL NUMBER	1
DRAWING NUMBER	MX
P-1	EQUIPMENT TAG
KEYNOTE	REFERENCE
VENTILATION	
—>—	OUTDOOR AIR DUCT UP/DOWN
—>—	SUPPLY AIR DUCT UP/DOWN
—>—	RETURN AIR DUCT UP/DOWN
—>—	EXHAUST AIR DUCT UP/DOWN
—>—	ROUND DUCT UP/DOWN
—>—	ACOUSTIC DUCT INSULATION
—>—	BALANCING DAMPER
—>—	BD = BACKDRAFT DAMPER
—>—	FD = FIRE DAMPER
—>—	SD = SMOKE DAMPER
—>—	SIDEWALL GRILLE
—>—	SQUARE DIFFUSER C/W TAKEOFF AND BALANCING DAMPER
—>—	ROUND DIFFUSER C/W TAKEOFF AND BALANCING DAMPER
—>—	TURNING VAVES
FIRE PROTECTION	
—>—	FIRE EXTINGUISHER
SCHEMATICS	
—>—	HOSE END WITH CAP & CHAIN FOR DRAINING
—>—	FLEX PIPE CONNECTION
—>—	2-WAY CONTROL VALVE
—>—	3-WAY CONTROL VALVE
—>—	BACKFLOW PREVENTER
—>—	NORMALLY OPEN BACKWATER VALVE
—>—	CIRCUIT BALANCING/MEASUREMENT VALVE
—>—	CHECK VALVE
—>—	ISOLATION VALVE
—>—	MANUAL BALANCING VALVE
—>—	PRESSURE/TEMPERATURE PORT
—>—	PRESSURE REGULATING VALVE
—>—	SOLENOID VALVE
—>—	UNION
—>—	AIR SEPARATOR
—>—	AIR VENT - AUTOMATIC
—>—	AIR VENT - AUTOMATIC
—>—	CARTRIDGE FILTER
—>—	PUMP
—>—	WYE STRAINER C/W BALL VALVE, CAP & CHAIN
—>—	PRESSURE SAFETY VALVE
—>—	PRESSURE GAUGE C/W ISOLATION
—>—	TEMPERATURE GAUGE
—>—	TS = TEMPERATURE SWITCH
—>—	CENTRIFUGAL FAN

ABBREVIATIONS	
BT	BATHTUB
CO	CLEANOUT
CP	CONDENSATE PUMP
CU	CONDENSING UNIT
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DWH	DOMESTIC WATER HEATER
ERV	ENERGY RECOVERY VENTILATOR
ET	EXPANSION TANK
F/A	"FROM ABOVE"
F/B	"FROM BELOW"
FD	FLOOR DRAIN
FN	FURNACE
GSV	GAS SHUTOFF VALVE
HB	HOSE BIBB
LAV	LAVATORY
NC	"NORMALLY CLOSED"
NO	"NORMALLY OPEN"
P	PUMP
PRV	PRESSURE REDUCING VALVE
RD	ROOF DRAIN
RH	KITCHEN RANGE HOOD
SH	SHOWER
SK	SINK
T/A	"TO ABOVE"
T/B	"TO BELOW"
UNO	"UNLESS NOTED OTHERWISE"
UTR	"UP THROUGH ROOF"
WC	WATER CLOSEST

SITE-SPECIFIC DESIGN REQUIREMENTS

ALL SITE-SPECIFIC ELEMENTS TO BE REVIEWED & DESIGNED BY THE RESPONSIBLE DESIGN PROFESSIONAL ISSUING THE DRAWINGS FOR PERMIT & CONSTRUCTION AT THE LOCATION DETERMINED. THIS INCLUDES:

- 1 SITE SERVICING: INCOMING WATER, GAS, SANITARY & STORM SEWER CONNECTIONS TO BE CONFIRMED FOR SITE.
- 2 ENERGY EFFICIENCY: ISSUING DESIGN PROFESSIONAL TO REVIEW & CONFIRM ALL RELEVANT SITE DATA INCLUDING CLIMATE ZONE, HEATING/COOLING DEGREE DAYS, ORIENTATION, ADJACENT BUILDINGS (ROW/HOUSE), MECHANICAL SYSTEM, ENVELOPE & GLAZING PERFORMANCE IN ORDER TO ACCURATELY DETERMINE:
 - i. EQUIPMENT SIZING FURNACE, AIR CONDITIONING, AND/OR HEAT PUMP CAPACITIES & ASSOCIATED DUCT SIZING TO BE DESIGNED & REVIEWED BY THE ISSUING DESIGN PROFESSIONAL IN ACCORDANCE WITH THE LOCAL CLIMATIC CONDITIONS AS OUTLINED ABOVE.

1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING DESIGN
CATALOGUE

Project Address

NOT FOR PERMIT
OR CONSTRUCTION

SHEET TITLE:
MECHANICAL LEGENDS

AB Rowhouse 01

PROJECT NO: 024-07-769
SCALE: 1:1

SHEET NO:

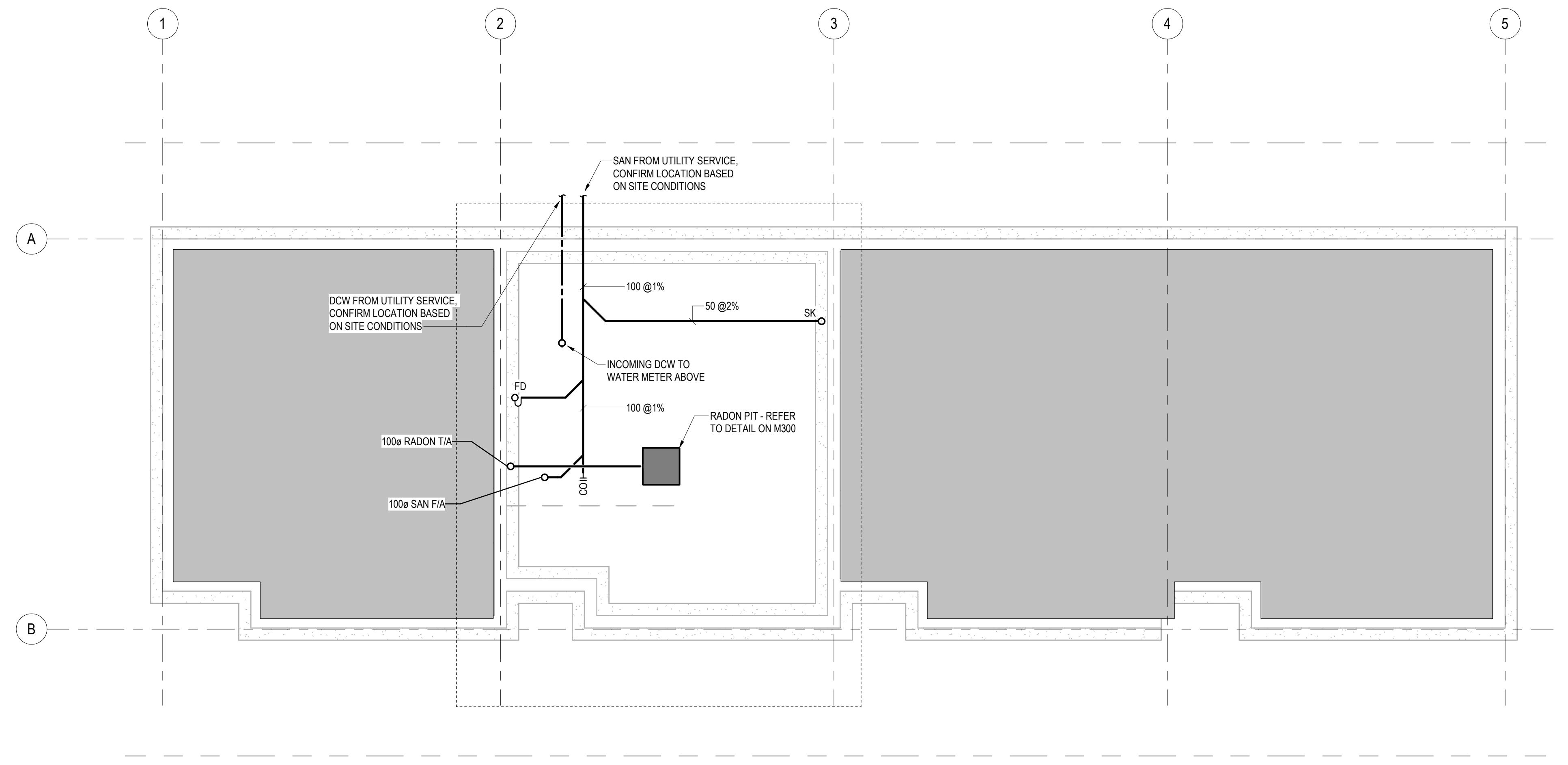
M001

FOUNDATION GENERAL NOTES

1 CONNECT RAIN WATER LEADERS TO UNDERGROUND STORM SERVICE WHERE REQUIRED BY LOCAL CODE.

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1 M100 FOUNDATION TYPE F

SCALE: 1 : 50



AB Bowhouse 01

PROJECT NO: 024-07-769
SCALE: 1 : 50

STREET NO:

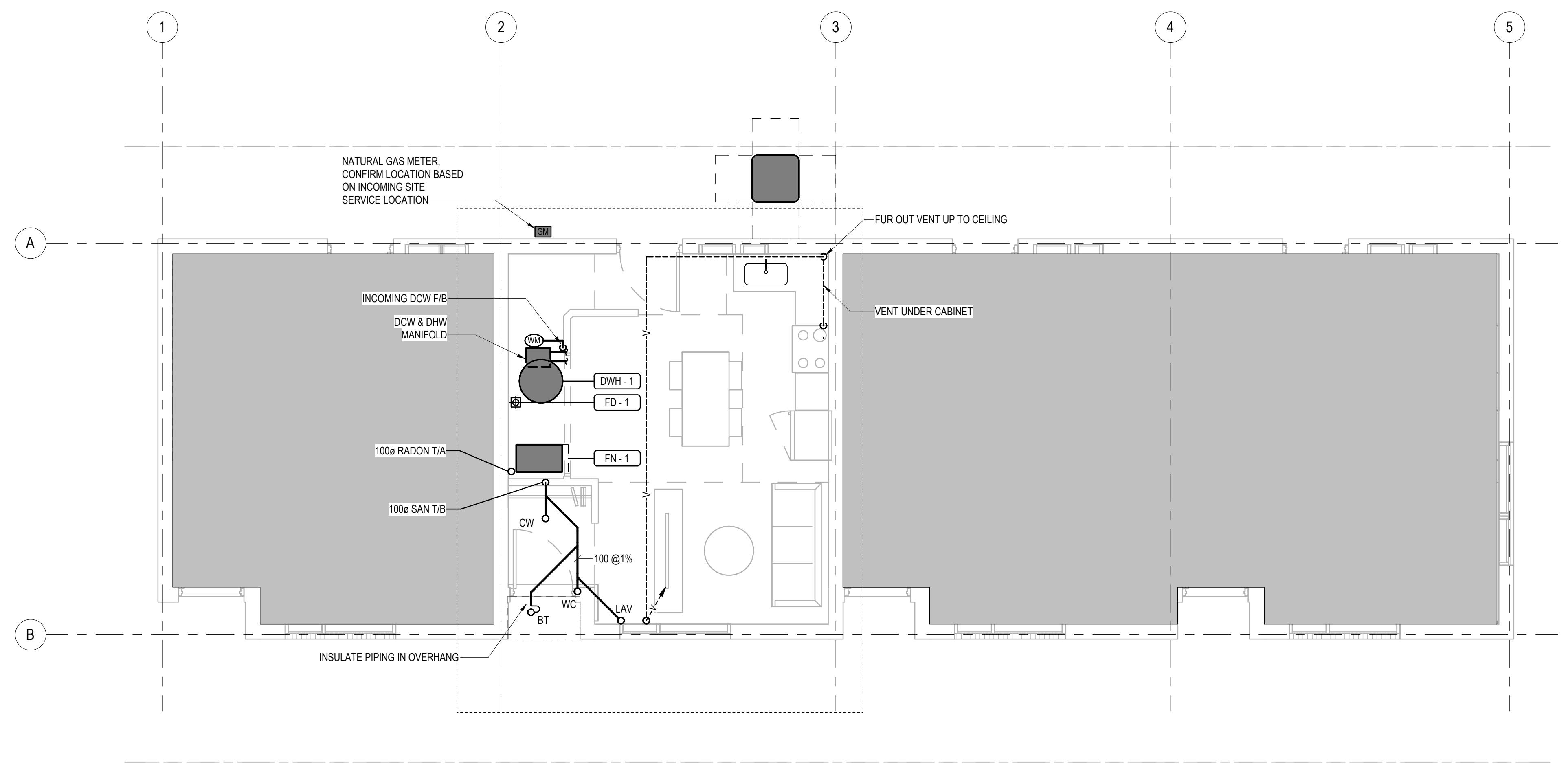
M100

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PLUMBING GENERAL NOTES

- 1 RUN INDIVIDUAL DOMESTIC HOT WATER AND COLD WATER LINES TO ALL PLUMBING FIXTURES AS REQUIRED.
- 2 NATURAL GAS METERS TO BE LOCATED A MINIMUM OF 3.0M AWAY FROM ANY OPERABLE WINDOWS OR DOORS.
- 3 INSTALL NATURAL GAS PIPING FROM THE UTILITY METER TO ALL GAS-FIRED APPLIANCES IN ACCORDANCE WITH CSA B149.1.



1 GROUND FLOOR PLUMBING TYPE F
M101 SCALE: 1:50

0 1250 2500

AB Rowhouse 01

PROJECT NO: 024-07-769
SCALE: 1:50

SHEET NO:

M101

1 2025-02-21 ISSUED AS PROTOTYPICAL DRAWING

NO. DATE DESCRIPTION

PROJECT:
CMHC HOUSING DESIGN
CATALOGUE

Project Address

**NOT FOR PERMIT
OR CONSTRUCTION**

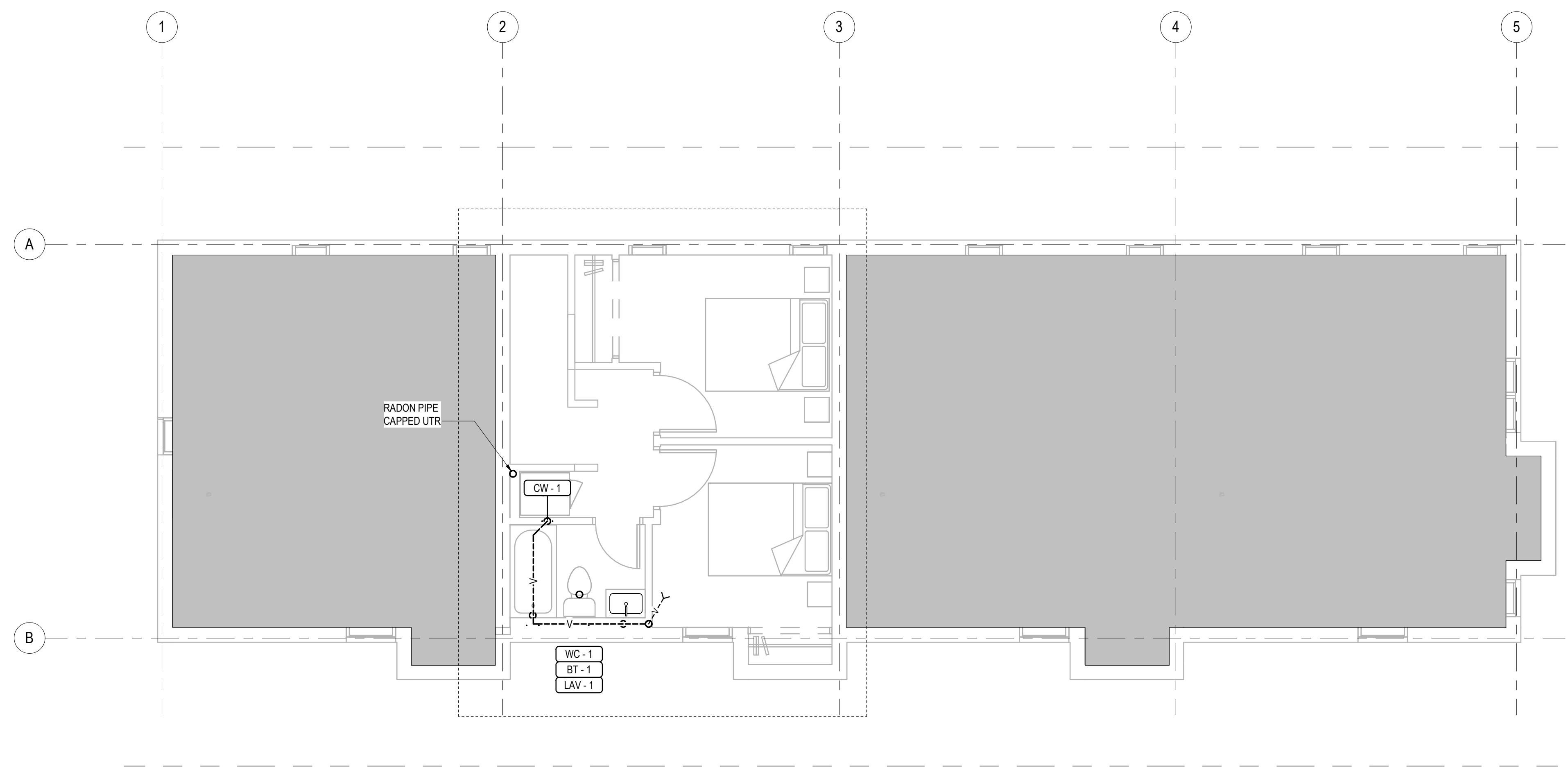
SHEET TITLE:
GROUND FLOOR
PLUMBING PLAN

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PLUMBING GENERAL NOTES

- 1 RUN INDIVIDUAL DOMESTIC HOT WATER AND COLD WATER LINES TO ALL PLUMBING FIXTURES AS REQUIRED.
- 2 NATURAL GAS METERS TO BE LOCATED A MINIMUM OF 3.0M AWAY FROM ANY OPERABLE WINDOWS OR DOORS.
- 3 INSTALL NATURAL GAS PIPING FROM THE UTILITY METER TO ALL GAS-FIRED APPLIANCES IN ACCORDANCE WITH CSA B149.1.



1 **SECOND FLOOR PLUMBING TYPE F**
M102

SCALE: 1:50
0 1250 2500

AB Rowhouse 01

PROJECT NO: 024-07-769
SCALE: 1:50

SHEET NO:
M102

1 2025-02-21 ISSUED AS PROTOTYPICAL DRAWING
NO. DATE DESCRIPTION

PROJECT:
CMHC HOUSING DESIGN CATALOGUE

Project Address

**NOT FOR PERMIT
OR CONSTRUCTION**

SHEET TITLE:
**SECOND FLOOR
PLUMBING PLAN**

DISCLAIMER

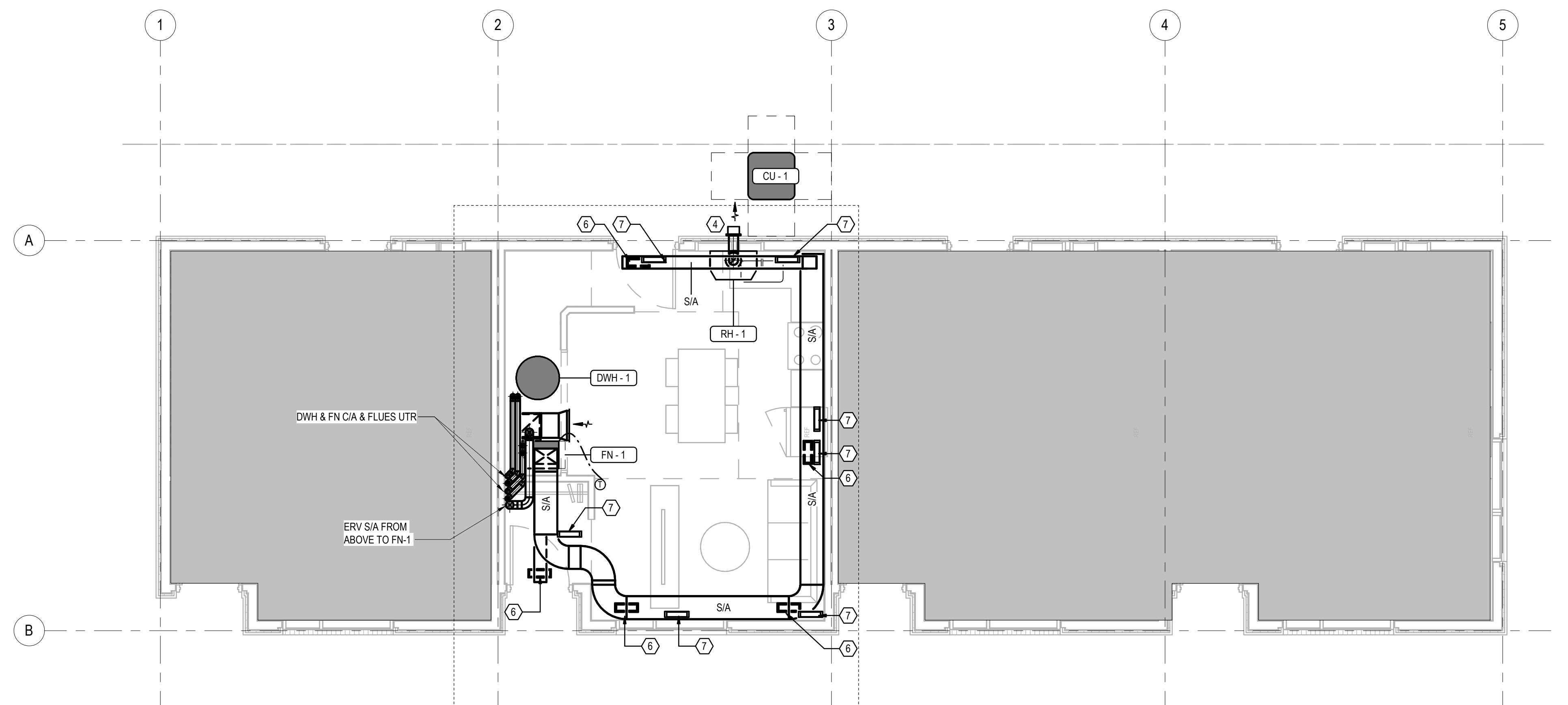
This design was created for use solely as part of the CMHC Housing Design Catalogue. It is a sample of standardized housing design, reflecting general design intention only and does not incorporate any elements of other information specific to any location or project. This design is provided for illustrative purposes only and must not be used for construction or permitting purposes. In using this design, you are responsible for your compliance with the Terms and Conditions, including but not limited to engaging the services of a Qualified Professional.

VENTILATION GENERAL NOTES

1 SUPPLY AIR GRILLES TO BE COMPLETE WITH INTEGRAL OPPOSED-BLADE DAMPER FOR BALANCING.

M 201 KEYNOTES

1 INSULATE ALL DUCTS RUN IN ATTIC
 2 ERV OA INTAKE - MAINTAIN MINIMUM 1800 CLEARANCE FROM ALL EXHAUSTS/VENTS
 3 ERV E/A OUTLET
 4 RH-1 E/A OUTLET
 5 LAUNDRY E/A OUTLET
 6 S/A GRILLE (CEILING)
 7 TO FLOOR S/A GRILLE ABOVE
 8 BATHROOM E/A GRILLE



1 GROUND FLOOR VENTILATION TYPE F
 M201

SCALE: 1:50

0 1250 2500

1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING DESIGN CATALOGUE

Project Address

**NOT FOR PERMIT
OR CONSTRUCTION**

SHEET TITLE:
**GROUND FLOOR
VENTILATION PLAN**

AB Rowhouse 01

PROJECT NO: 024-07-769
 SCALE: 1:50

SHEET NO:

M201

DISCLAIMER

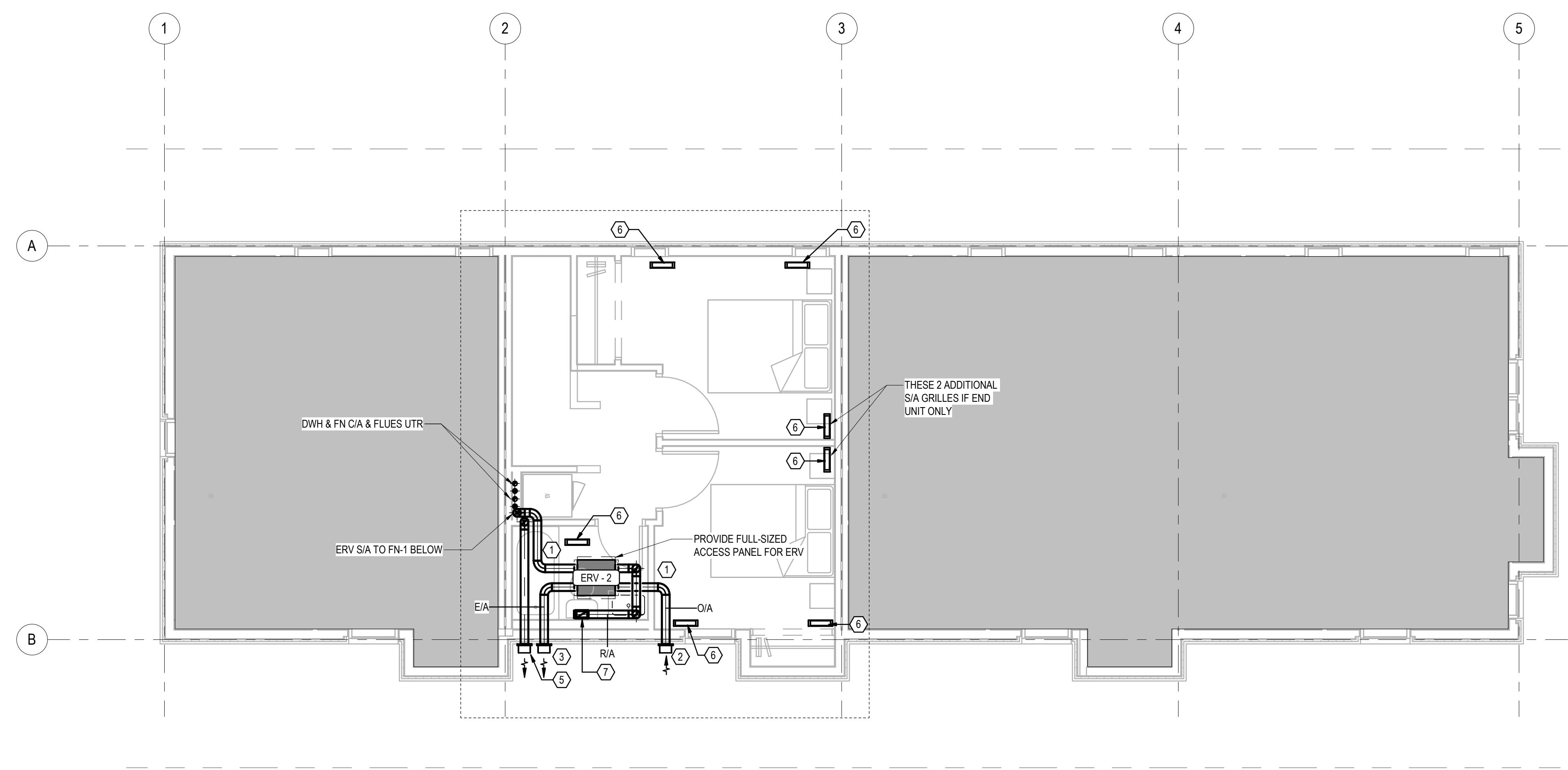
This design was created for use solely as part of the CMHC Housing Design Catalogue. It is a sample of standardized housing design, reflecting general design intention only and does not incorporate any elements of other information specific to any location or project. This design is provided for illustrative purposes only and must not be used for construction or permitting purposes. In using this design, you are responsible for your compliance with the Terms and Conditions, including but not limited to engaging the services of a Qualified Professional.

VENTILATION GENERAL NOTES

1 SUPPLY AIR GRILLES TO BE COMPLETE WITH INTEGRAL OPPOSED-BLADE DAMPER FOR BALANCING.

M 202 KEYNOTES

1 INSULATE ALL DUCTS RUN IN ATTIC
 2 ERV O/A INTAKE - MAINTAIN MINIMUM 1800 CLEARANCE FROM ALL EXHAUSTS/VENTS
 3 ERV E/A OUTLET
 4 RH-1 E/A OUTLET
 5 LAUNDRY E/A OUTLET
 6 S/A GRILLE (FLOOR)
 7 BATHROOM E/A GRILLE



1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING DESIGN CATALOGUE

Project Address

**NOT FOR PERMIT
OR CONSTRUCTION**

SHEET TITLE:
**SECOND FLOOR
VENTILATION PLAN**

AB Rowhouse 01

PROJECT NO: 024-07-769
 SCALE: 1:50

SHEET NO:

M202

1 **SECOND FLOOR VENTILATION TYPE F**
 M202

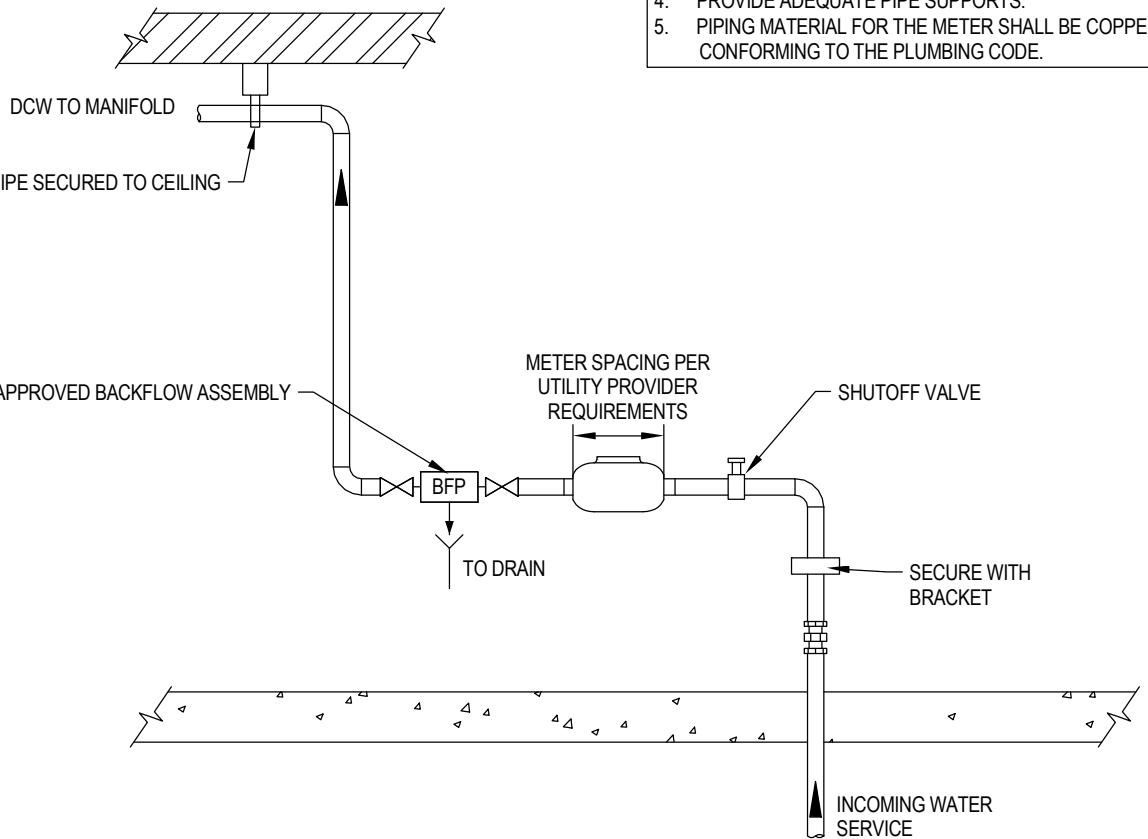
SCALE: 1:50

0 1250 2500

DISCLAIMER
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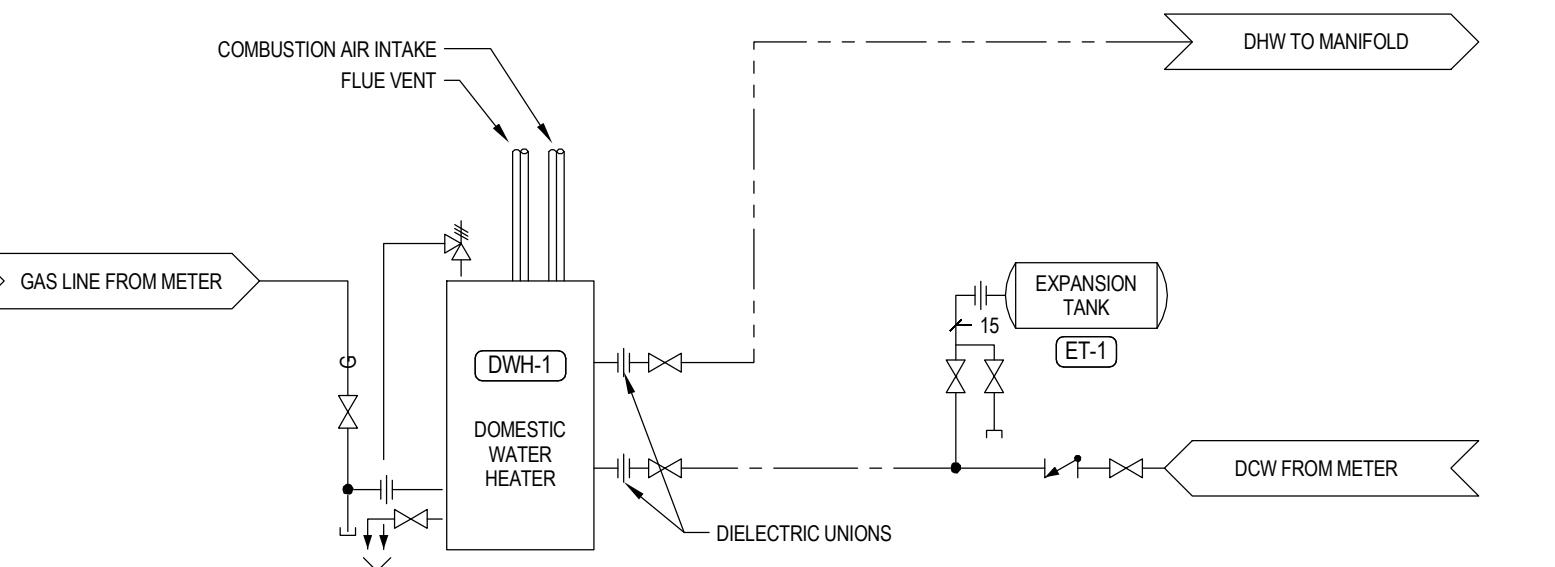
GENERAL NOTES:

1. SPACE FOR METER INSTALLATION TO BE AS REQUIRED BY UTILITY PROVIDER
2. APPROVED BACKFLOW ASSEMBLY, APPROPRIATE FOR THE HAZARD CLASSIFICATION MUST BE INSTALLED WITHIN 3m OF SERVICE ENTRY
3. PROVIDE A SUITABLE SITE FOR THE WATER METER AT A HORIZONTAL SETTING, WITHIN 2m OF POINT OF ENTRY FOR THE WATER SERVICE CONNECTION INSIDE THE BUILDING
4. PROVIDE APPROVED PIPE SUPPORTS
5. PIPING MATERIAL FOR THE METER SHALL BE COPPER OR STAINLESS STEEL CONFORMING TO THE PLUMBING CODE



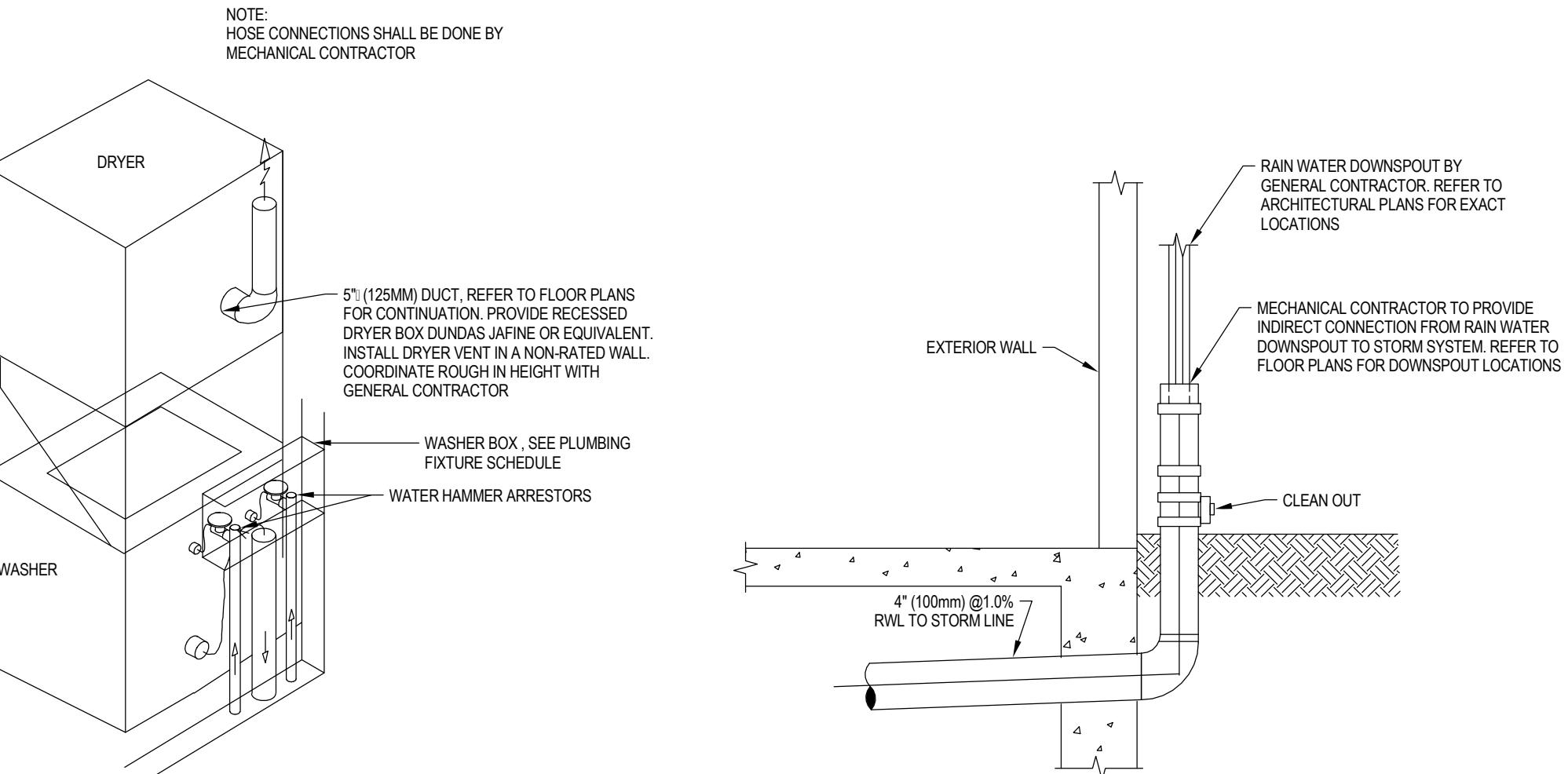
TYPICAL WATER METER INSTALLATION

SCALE: N.T.S



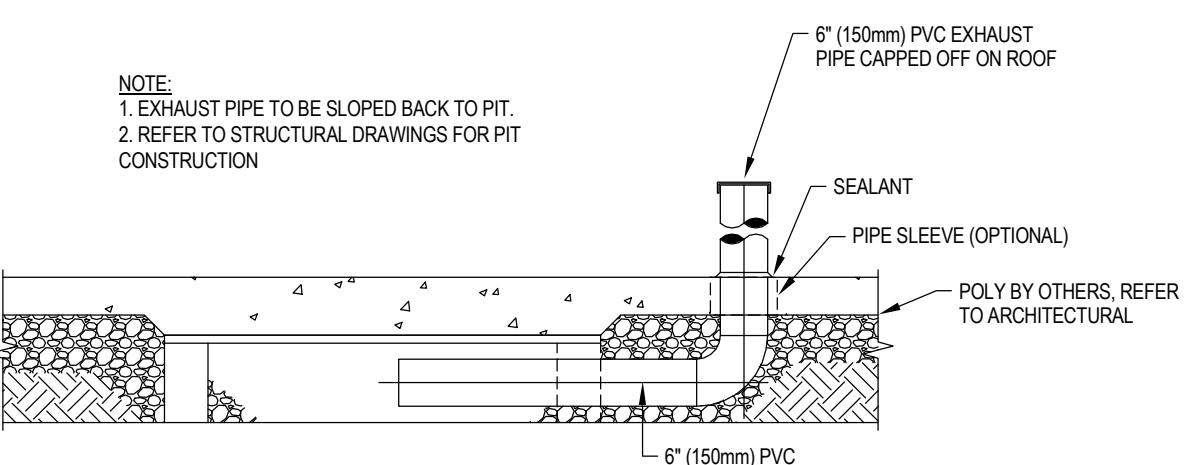
TYPICAL DOMESTIC WATER HEATER INSTALLATION

SCALE: N.T.S



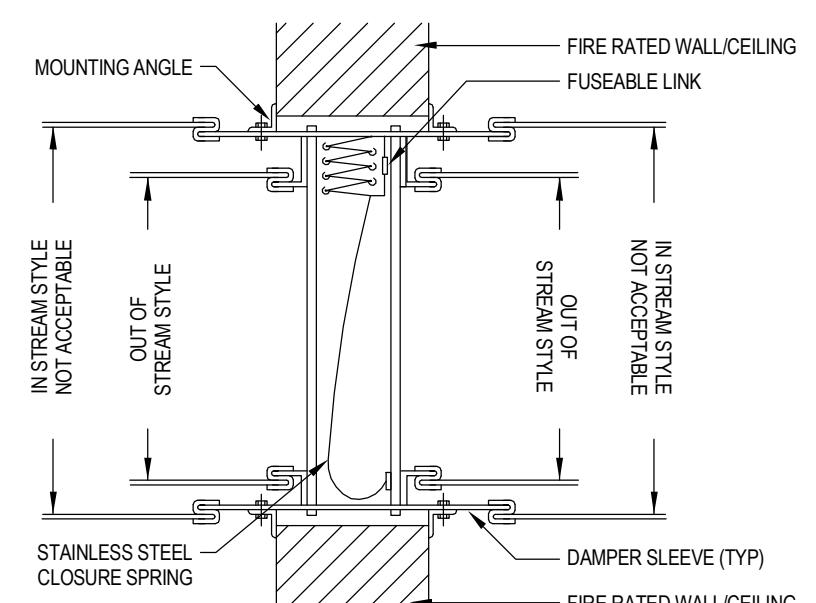
TYPICAL WASHER & DRYER ROUGH-IN DETAIL

SCALE: N.T.S



RADON SUCTION PIT PIPING DETAIL

SCALE: N.T.S



FIRE DAMPER DETAIL

SCALE: N.T.S

NOTES:

- 1) EXHAUST PIPE TO BE SLOPED BACK TO PIT.
- 2) REFER TO STRUCTURAL DRAWINGS FOR PIT CONSTRUCTION
- 3) 6" (150mm) PVC EXHAUST PIPE CAPPED OFF ON ROOF
- 4) PIPE SLEEVE (OPTIONAL)
- 5) SEALANT
- 6) POLY BY OTHERS, REFER TO ARCHITECTURAL

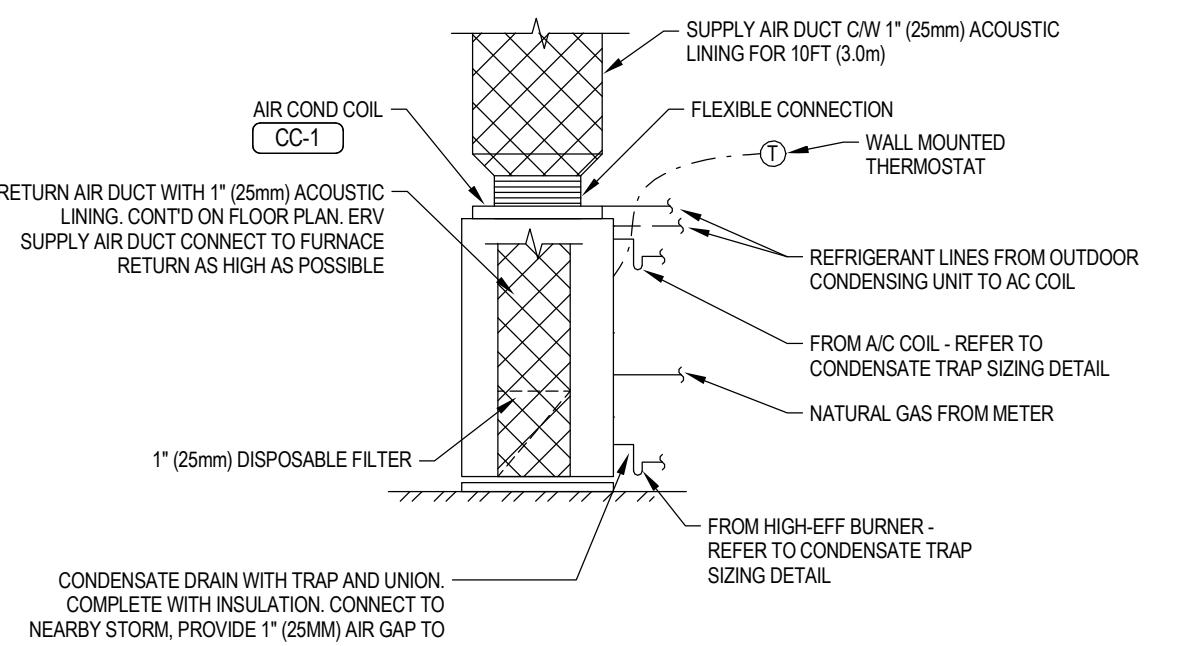
NOTE:
1) PROVIDE MINIMUM 8"x8" (200x200mm) ACCESS DOOR TO SERVICE FIRE DAMPER

NOTES:

- 1) IN-STREAM STYLE FIRE DAMPERS ARE NOT ACCEPTABLE.
- 2) OUT-OF-STREAM STYLE
- 3) IN-STREAM DUCT TO SLEEVE CONNECTIONS SHALL BE BREAKAWAY STYLE.
- 4) FOR SQUARE DUCTWORK THE FOLLOWING CONNECTIONS ARE ACCEPTABLE:
PLAIN OR HEMMED OR STANDING S-SLIP, REINFORCED STANDING S-SLIP, INSIDE SLIP JOINT, DOUBLE S-SLIP, BREAKAWAY DUCTMATE TYPE, AND ONLY 4" (100mm) WIDE GRAWBAND CONNECTION IS ACCEPTABLE FOR ROUND OR OVAL DUCTWORK
- 5) DUCT TO SLEEVE CONNECTIONS SHALL BE EQUAL TO OR LESS THAN SLEEVE THICKNESS. SHOULD ANY OTHER DUCT TO SLEEVE CONNECTIONS BE USED, SLEEVE SHALL BE MIN. 16 GAUGE FOR DAMPERS UP TO 36" WIDE BY 24" (600mm) HIGH AND 14 GAUGE FOR ANY DAMPER EXCEEDING 36" WIDE OR 24" (600mm) HIGH.
- 6) ALL CONNECTIONS AND SLEEVE GAUGE REQUIREMENTS ARE DEPICTED IN THE SMACNA FIRE, SMOKE AND RADIATION DAMPER INSTALLATION GUIDE.
- 7) DAMPER SLEEVES SHALL BE 10 TO 26 GAUGE STEEL IF FIELD SUPPLIED.
- 8) DAMPER SLEEVES ARE NOT TO EXTEND FURTHER THAN 6" (150mm) BEYOND THE FIRE RATED WALL OR PARTITION UNLESS THE DAMPER IS EQUIPPED WITH A FACTORY INSTALLED ACCESS DOOR. THE DAMPER SLEEVE CAN EXTEND 16" (405mm) BEYOND THE WALL ON ONE SIDE WHEN SLEEVE CONTAINS A FACTORY INSTALLED ACCESS DOOR.
- 9) FOR WALL OPENINGS, INDIVIDUAL DAMPER JOINING AND OTHER SPECIAL REQUIREMENTS REFER TO THE MANUFACTURER'S INSTALLATION/OPERATION MANUAL.

NOTES:

- 1) MOUNTING ANGLES SHALL BE MIN. 1/2" x 1/2" (38x38mm) 16 GAUGE FASTENED TO DAMPER SLEEVES WITH NO. 10 BOLTS OR SCREWS, 1/2" (13mm) LONG WELDS, OR 3/8" (9mm) RIVETS. MIN. 2 CONNECTIONS PER SIDE AND TOP AND BOTTOM OF DAMPER WALLS.
- 2) MOUNTING ANGLES FOR GALVANIZED DAMPERS 50W X 60H (1270x1525mm) OR 60W X 50H (1525x1270mm) AND LESS CAN BE A MINIMUM OF 1/2" x 1/2" (38x38mm) x 16 GAUGE. MAXIMUM FASTENER SPACING OF 16 GAUGE MOUNTING ANGLES IS 12" (300mm) CENTER TO CENTER.



GAS FURNACE WITH AIR COND COIL DETAIL

SCALE: N.T.S

1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
MECHANICAL SCHEMATICS & DETAILS

PROJECT NO: 024-07-769
SCALE:

SHEET NO:

M300

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BASE OPTION - PRIMARY GAS-FIRED FURNACE WITH AIR CONDITIONING
FURNACE SCHEDULE

TAG	AFUE (%)	BLOWER MOTOR TYPE	GAS VALVE TYPE	FUEL	COOLING COIL	NOTES
FN-1	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	CC-1	1,2
FN-2	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	CC-2	1,2

NOTES:
1. FURNACE TO BE SUPPLIED WITH 24V 7-DAY PROGRAMMABLE THERMOSTAT WITH FAN-ON MODE
2. ALL CONDENSING APPLIANCES: INTAKE AND FLUE PIPING TO BE RUN INDEPENDENTLY TO EXTERIOR OF BUILDING, OBSERVE REQUIRED SPACING PER MANUFACTURER AND CODE REQUIREMENTS. CONCENTRIC VENT KITS NOT ACCEPTABLE. PIPE PENETRATIONS TO EXTERIOR TO BE C/W BIRDSCREEN, NO PIPE CAP TO BE PROVIDED FOR VENT PIPING. PROVIDE CONDENSATE NEUTRALIZATION KIT FOR ALL CONDENSATE DRAINAGE POINTS. INSTALL CONDENSATE NEUTRALIZER C/W BYPASS WHERE REQUIRED.

ALTERNATE OPTION 1 - PRIMARY COLD-CLIMATE AIR SOURCE HEATPUMP WITH SUPPLEMENTARY GAS HEATING
FURNACE SCHEDULE

TAG	AFUE (%)	BLOWER MOTOR TYPE	GAS VALVE TYPE	FUEL	HEATING/COOLING COIL	NOTES
FN-1	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	HP-1	1,2,3
FN-2	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	HP-2	1,2,3

NOTES:
1. FURNACE TO BE SUPPLIED WITH 24V 7-DAY PROGRAMMABLE THERMOSTAT WITH FAN-ON MODE
2. ALL CONDENSING APPLIANCES: INTAKE AND FLUE PIPING TO BE RUN INDEPENDENTLY TO EXTERIOR OF BUILDING, OBSERVE REQUIRED SPACING PER MANUFACTURER AND CODE REQUIREMENTS. CONCENTRIC VENT KITS NOT ACCEPTABLE. PIPE PENETRATIONS TO EXTERIOR TO BE C/W BIRDSCREEN, NO PIPE CAP TO BE PROVIDED FOR VENT PIPING. PROVIDE CONDENSATE NEUTRALIZATION KIT FOR ALL CONDENSATE DRAINAGE POINTS. INSTALL CONDENSATE NEUTRALIZER C/W BYPASS WHERE REQUIRED.
3. PRIMARY HEATING TO BE PROVIDED BY HEAT PUMPS HP-1/2, GAS HEATING TO BE SECOND-STAGE HEAT.

CONDENSING UNIT SCHEDULE

TAG	COMPRESSOR STAGES	REFRIGERANT	SERVES	SEER
CU-1	1	R410A	FN-X	17.0

ENERGY RECOVERY VENTILATOR SCHEDULE

TAG	LOCATION	TYPE	SENSIBLE EFFICIENCY (%)	SUPPLY FAN			EXHAUST FAN			ELECTRICAL (V/Ph/Hz)	NOTES
				AIRFLOW (CFM)	MOTOR (HP)	ESP (in.W.G.)	AIRFLOW (CFM)	MOTOR (HP)	ESP (in.W.G.)		
ERV-1	1-BEDROOM UNITS	ENTHALPY CORE	67.0	45	FRAC	0.40	45	FRAC	0.40	120/160	1,2
ERV-2	2-BEDROOM UNITS	ENTHALPY CORE	67.0	50	FRAC	0.40	50	FRAC	0.40	120/160	1,2
ERV-3	3-BEDROOM UNITS	ENTHALPY CORE	67.0	60	FRAC	0.40	60	FRAC	0.40	120/160	1,2
ERV-4	4-BEDROOM UNITS	ENTHALPY CORE	67.0	75	FRAC	0.40	75	FRAC	0.40	120/160	1,2

NOTES:
1. ERV CONTROL:
ERV CENTRAL SWITCH (ON/OFF) FOR LOW SPEED LOCATED AND LABELLED AS 'VENTILATION FAN' LOCATED BESIDE FN TSTAT
PROVIDE TIMER SWITCHES IN ALL WASHROOMS.
2. PROVIDE BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST AIR DUCTS

COOLING COIL SCHEDULE

TAG	SERVES	CONDENSING UNIT	REFRIGERANT	SEER	NOTES
CC-1	FN-1	CU-1	R410A	17.0	1,2
CC-2	FN-2	CU-1	R410A	17.0	1,2

NOTES:
1. PROVIDE INDIRECT CONNECTION TO DRAIN
2. COIL TO BE HEAT RESISTANT

DOMESTIC WATER HEATER SCHEDULE (GAS)

TAG	LOCATION		ENERGY FACTOR	NOTES
DWH-1	WATER HEATER CLOSET		0.7	1,2,3

NOTES:
1. LOCATE FLOOR DRAIN IN WATER HEATER ROOM NEAR T&P VALVE
2. ALL CONDENSING APPLIANCES: INTAKE AND FLUE PIPING TO BE RUN INDEPENDENTLY TO EXTERIOR OF BUILDING, OBSERVE REQUIRED SPACING PER MANUFACTURER AND CODE REQUIREMENTS. CONCENTRIC VENT KITS NOT ACCEPTABLE. PIPE PENETRATIONS TO EXTERIOR TO BE C/W BIRDSCREEN, NO PIPE CAP TO BE PROVIDED FOR VENT PIPING. PROVIDE CONDENSATE NEUTRALIZATION KIT FOR ALL CONDENSATE DRAINAGE POINTS. INSTALL CONDENSATE NEUTRALIZER C/W BYPASS WHERE REQUIRED.
3. PROVIDE DRAIN PAN.

FAN SCHEDULE

TAG	TYPE	FUNCTION	LOCATION	AIR CAPACITY (CFM)	ESP (in.W.C.)	MOTOR (HP)	_SOUND LEVEL (SONES)	ELECTRICAL (V/Ph/Hz)	DRIVE
RH-1	UNDER CABINET	RANGE HOOD	KITCHEN (TYPICAL)	100	0.25	FRAC	6.5	115/160	DIRECT

PLUMBING FIXTURE PIPE SIZE SCHEDULE

TAG	DCW		DHW		DRAIN		VENT		DRAIN UNDERGROUND	
	in	mm	in	mm	in	mm	in	mm	in	mm
WC (TANK)	1/2	15	-	-	3	75	1 1/2	40	3	75
LAV	1/2	15	1/2	15	1 1/2	40	1 1/4	30	2	50
SK	1/2	15	1/2	15	1 1/2	40	1 1/4	30	2	50
SH	1/2	15	1/2	15	2	50	1 1/2	40	2	50
BT	1/2	15	1/2	15	1 1/2	40	1 1/4	30	2	50
FD	-	-	-	-	4	100	1 1/2	40	4	100
HB	3/4	20	-	-	-	-	-	-	-	-
CW (DOM.)	1/2	15	1/2	15	2	50	1 1/2	40	2	50

NOTES:
1. REFER TO MANUFACTURER'S SPECIFICATIONS

ALTERNATE OPTION 1 - PRIMARY COLD-CLIMATE AIR SOURCE HEATPUMP WITH SUPPLEMENTARY GAS HEATING
FURNACE SCHEDULE

TAG	AFUE (%)	BLOWER MOTOR TYPE	GAS VALVE TYPE	FUEL	HEATING/COOLING COIL	NOTES
FN-1	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	HP-1	1,2,3
FN-2	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	HP-2	1,2,3

NOTES:
1. FURNACE TO BE SUPPLIED WITH 24V 7-DAY PROGRAMMABLE THERMOSTAT WITH FAN-ON MODE
2. ALL CONDENSING APPLIANCES: INTAKE AND FLUE PIPING TO BE RUN INDEPENDENTLY TO EXTERIOR OF BUILDING, OBSERVE REQUIRED SPACING PER MANUFACTURER AND CODE REQUIREMENTS. CONCENTRIC VENT KITS NOT ACCEPTABLE. PIPE PENETRATIONS TO EXTERIOR TO BE C/W BIRDSCREEN, NO PIPE CAP TO BE PROVIDED FOR VENT PIPING. PROVIDE CONDENSATE NEUTRALIZATION KIT FOR ALL CONDENSATE DRAINAGE POINTS. INSTALL CONDENSATE NEUTRALIZER C/W BYPASS WHERE REQUIRED.
3. PRIMARY HEATING TO BE PROVIDED BY HEAT PUMPS HP-1/2, GAS HEATING TO BE SECOND-STAGE HEAT.

CONDENSING UNIT SCHEDULE

TAG	COMPRESSOR STAGES	REFRIGERANT	SERVES	SEER
CU-1	1	R410A	FN-X	17.0

NOTES:
1. OUTDOOR UNIT C/W ULTRA-LOW AMBIENT KIT, RATED TO -40°C/F

ENERGY RECOVERY VENTILATOR SCHEDULE

TAG	LOCATION	TYPE	SENSIBLE EFFICIENCY (%)	SUPPLY FAN			EXHAUST FAN			ELECTRICAL (V/Ph/Hz)	NOTES

CMHC HOUSING DESIGN CATALOGUE

AB ROWHOUSE 01

ELECTRICAL DRAWINGS

ACCESSIBILITY - GENERAL NOTES

1. THE FOLLOWING REQUIREMENTS ARE REFERENCED FROM CSA B652 - ACCESSIBILITY STANDARDS CANADA (ASC).
2. CLAUSE 4.3.3-b-ii - PARKING AND GARAGES:
 - a) ILLUMINATION IS TO BE PROVIDED FOR ANY EXTERIOR MOTION SENSOR CONTROLS.
 - b) WHERE VISUAL DISPLAYS ARE REQUIRED TO BE READ, DISPLAYS ARE REQUIRED TO BE ILLUMINATED TO ACHIEVE A MINIMUM OF 200LX ON SIGNAGE.
 - c) WHERE DISPLAYS ARE NOT REQUIRED TO BE READ OR BACKLIGHTING HAS BEEN ACHIEVED, ILLUMINATION BETWEEN 50LX AND 100LX IS NECESSARY ON SIGNAGE.
3. CLAUSE 4.3.5.1-b) - GENERAL - OPERATING CONTROLS:
 - a) WHERE VISUAL DISPLAYS ARE REQUIRED TO BE READ, DISPLAYS ARE REQUIRED TO BE ILLUMINATED TO ACHIEVE A MINIMUM OF 200LX ON SIGNAGE.
 - b) WHERE DISPLAYS ARE NOT REQUIRED TO BE READ OR BACKLIGHTING HAS BEEN ACHIEVED, ILLUMINATION BETWEEN 50LX AND 100LX IS NECESSARY ON SIGNAGE.
4. CLAUSE 4.3.5.1-e) - GENERAL ILLUMINATION: MINIMUM LIGHTING LEVELS (4.8), REFER TO THE FOLLOWING REQUIREMENTS:
 - a) GENERAL ILLUMINATION: 50LX AT FLOOR LEVEL
 - b) KITCHEN SULTAN: 300LX, COUNTER-TOP: 750LX
 - c) ADULT BEDROOM: 300LX, READING DESK: 300LX
 - d) CHILD BEDROOM: 500LX, READING DESK: 800LX
 - e) BATHROOM: 300LX, MIRROR (VERTICAL): 300-700LX
 - f) LIVING ROOM: 300LX, READING: 500LX
 - g) FAMILY ROOM / THEATRE: 300LX (150LX FOR TV VIEWING), READING / TABLE: 500LX
 - h) LAUNDRY / UTILITY: 200LX, COUNTERTOP: 300LX
 - i) DINING ROOM: 200LX
 - j) HALLWAY, STAIR: 100-500LX
 - k) HOME OFFICE: 500LX, DESK / READING: 800LX
 - l) GARAGE: 500LX, WORKTABLE: 750LX
 - m) WORKSHOP: 800LX, BENCH: 1100LX
 - n) EXTERIOR PERIMETER: 50LX
5. CLAUSE 4.3.5.2 - DOORS:
 - a) DOOR HARDWARE - ROUGH-IN ELECTRICAL TO BE PROVIDED FOR FUTURE INSTALLATION OF A POWER ASSISTED DOOR AT THE BATHROOM, MAIN ENTRANCE AND GARAGE ENTRANCE
 - b) CONTROLS FOR POWER-ASSISTED DOORS SHOULD BE LOCATED ALONG THE ACCESSIBLE PATH OF TRAVEL, CLEARLY VISIBLE BEFORE REACHING THE DOOR, ADJACENT TO A CLEAR FLOOR AREA OF 620x1390mm AND BETWEEN 600-1500mm FROM LATCH EDGE OF DOOR.
6. CLAUSE 5.9.6 - BATHROOM ILLUMINATION - MINIMUM REQUIREMENTS:
 - a) BATHROOM: 300LX
 - b) MIRROR TASK LIGHTING: 300-700LX, BE MOUNTED BETWEEN 300-500mm PERPENDICULAR TO THE MIRROR SIDE, AND AT 1000-1700mm
 - c) BE DIMMABLE BETWEEN 50LX AND 300LX.
 - d) SHOWER OR BATHUB LIGHTING SHALL HAVE AS A MINIMUM, ONE FIXTURE CENTERED IN THE CEILING.
7. CLAUSE 5.9.8 - BATHROOM:
 - 2xGFCI REQUIRED:
 - a) NEXT TO THE SINK 150mm FROM THE FRONT EDGE OF FRONT FACE OF THE VANITY AND
 - b) NEXT TO THE TOILET 150mm FROM THE FRONT EDGE AND 300-600mm AFF.
8. CLAUSE 5.10.5 - KITCHEN:
 - OPERATING CONTROLS SHALL BE:
 - a) ACCESSIBLE
 - b) SWITCHES AND OUTLETS INSTALLED ON FRONT FACES OF COUNTERS
 - c) INCLUDED IN SIDE WALL OUTLETS
 - d) WHERE PROVIDED, RANGE HOODS OPERABLE FROM SEATED POSITION
9. CLAUSE 5.11.5 - BEDROOM:
 - ELECTRICAL:
 - a) SHALL BE ACCESSIBLE
 - b) PROVIDE AT LEAST ONE SWITCH BESIDE BED AT A HEIGHT BETWEEN 550-650mm AFF.
 - c) HAVE TWO WALLS WITH A MINIMUM OF TWO QUAD RECEPTACLES PER WALL
 - d) HAVE OUTLETS PLACED AT A MINIMUM 600mm FROM THE CORNER OF THE ROOM AND A MAXIMUM DISTANCE OF 2080mm BETWEEN EACH
10. CLAUSE 5.11.6 - BEDROOM:
 - OUTLET CONNECTIONS:
 - a) ONE OUTLET FOR COMPUTER NETWORK AT A HEIGHT BETWEEN 400-1100mm AFF, LESS THAN 600mm HORIZONTALLY FROM BED EDGE AND IN A LOCATION WHERE ACCESS IS NOT IMPEDED BY FURNITURE.
11. CLAUSE 5.14 - HOME AUTOMATION:
 - a) USER INTERFACE, PROVIDE MINIMUM 200LX WHERE READING IS NECESSARY.
12. CLAUSE 5.16 - ALERT & SIGNAL DEVICES:
 - a) EMERGENCY ALERT AND SIGNAL DEVICES SHALL BE EQUIPPED TO PROVIDE BOTH VISUAL AND AUDIBLE SIGNALS.

ELECTRICAL SYMBOL LEGEND

NOTE: SOME SYMBOL REFERENCES MAY NOT BE PART OF THIS PROJECT	
LIGHTING	
↪ LINE VOLTAGE SWITCH	□ RECESSED MOUNTED LIGHT FIXTURE
↪ WALL MOUNT OCCUPANCY SENSOR SWITCH	□ SURFACE MOUNTED LIGHT FIXTURE
↪ CEILING MOUNT OCCUPANCY SENSOR	□ SUSPENDED LIGHT FIXTURE
↪# LOW VOLTAGE SWITCH, # INDICATES BUTTONS	□ STRIP LIGHT FIXTURE
↪ CEILING MOUNT EXIT SIGN, LINE DENOTES FACE	□ WALL MOUNTED LINEAR LIGHT FIXTURE
↪ EXIT SIGN C/W EMERGENCY HEADS	□ SURFACE MOUNTED LIGHT FIXTURE
↪ REMOTE EMERGENCY HEADS	□ RECESSED DOWNLIGHT
↪ BATTERY PACK C/W EMERGENCY HEADS	□ PENDANT MOUNT LIGHT FIXTURE
□ HATCH INDICATES EMERGENCY FIXTURE	□ TRACK LIGHT, NO. OF HEADS AS PER PLANS
↪ FIXTURE TYPEMARKER	□ STRIP LIGHT FIXTURE
CCT CIRCUIT	□ ILLUMINATED BOLLARD
a / Z1 SWITCH ID / LIGHTING CONTROL ZONE	□ POLE MOUNTED LIGHT FIXTURE
900AFF MOUNTING HEIGHT / SUSPENSION LENGTH	

LIGHTING SYMBOL ANNOTATIONS:

PEC	PHOTOELECTRIC CELL	D	DIMMER
TC	TIMECLOCK	DT	DUAL TECHNOLOGY
NL	NIGHTLIGHT (UN-SWITCHED)	VAC	VACANCY SENSOR (MANUAL ON, AUTO OFF)
3	3-WAY	EM	FIXTURE POWERED FROM EMERGENCY SOURCE
LV	LOW VOLTAGE	EM#	EMERGENCY BATTERY PACK ID.

POWER

↪ DUPLEX RECEPTACLE	↪ SPECIAL RECEPTACLE
↪ QUAD RECEPTACLE	○ JUNCTION BOX
↪ GFI RECEPTACLE	□ PAC POLE
↪ SPLIT FED RECEPTACLE	○ MOTOR
↪ HALF SWITCHED RECEPTACLE	□ DISCONNECT SWITCH
↪ ISOLATED GROUND RECEPTACLE	MS / VFD MAGNETIC STARTER / VFD
↪ PEDESTAL MOUNTED RECEPTACLE	SPD SURGE PROTECTION DEVICE

POWER SYMBOL ANNOTATIONS:

T-SLOT (20A)	TR TAMPER RESISTANT
WP WEATHERPROOF	U USB CHARGER

DISTRIBUTION

■ SURFACE MOUNTED PANELBOARD	□ UTILITY METER STACK
■ RECESSED MOUNTED PANELBOARD	□ UTILITY METER
■ COMMUNICATIONS BACKBOARD	■ GROUND BAR
□ LOW TENSION PANEL / CABINET	□ TRANSFORMER

DISTRIBUTION SYMBOL ANNOTATIONS:

MDP	MAIN DISTRIBUTION PANEL	LVRC	LOW VOLTAGE RELAY PANEL
CDP	CENTRAL DISTRIBUTION PANEL	CB	COMMUNICATIONS BACKBOARD
MCC	MOTOR CONTROL CENTER	TX	TRANSFORMER

LOW TENSION

↪ DATA NETWORK JACK	WAP WIRELESS ACCESS POINT
↪ TELEPHONE JACK	WAP WIRELESS ACCESS POINT
↪ COMBINATION TELEPHONE / DATA JACK	WAP WIRELESS ACCESS POINT
↪ TELEVISION COAX OUTLET	WAP WIRELESS ACCESS POINT
↪ HDMI OUTLET	WAP WIRELESS ACCESS POINT
↪ DOORBELL BUZZER / DOORBELL CHIME	WAP WIRELESS ACCESS POINT
○ THERMOSTAT	CO2 / NO CO2 / NO SENSORS

LOW TENSION SYMBOL ANNOTATIONS:

NUMBER INDICATES QUANTITY OF CABLES / DROPS AT EACH LOCATION

FIRE ALARM	
FF1 HORN	FT HEAT DETECTOR - FIXED TEMPERATURE
FF2 HORN STROBE	HT HEAT DETECTOR - RATE OF RISE
FF3 STROBE	SMOKE DETECTOR
FF4 MANUAL STATION	SA SMOKING ALARM (120V)
FF5 SPEAKER	SC SMOKING ALARM CO2 COMBINATION
FF6 SPEAKER STROBE	EL END OF LINE RESISTOR
FF7 ELECTROMAGNETIC DOOR HOLD OPEN	FL FIRE ALARM MODULE
FF8 FIRE ALARM PANEL	FP FIRE PHONE

FIRE ALARM SYMBOL ANNOTATIONS:

# CANDELA RATING FOR STROBE	MM MONITORING MODULE
FAOP FIRE ALARM CONTROL PANEL	CM CONTROL MODULE
FAAP FIRE ALARM ANNUNCIATOR PANEL	FS FLOW SWITCH
IM ISOLATOR MODULE	TS TAMPER SWITCH

SECURITY

○ MOTION SENSOR	77 SECURITY DEVICE
○ VISUAL INDICATOR LIGHT	SC SECURITY CAMERA (CAT6 OUTLET)

SECURITY SYMBOL ANNOTATIONS:

CR CARD READER	KP KEY PAD
ES ELECTRIC STRIKE	GB GLASS BREAK
DC DOOR CONTACT / DOOR POSITION SWITCH	ML MAGNETIC LOCK
RTX REQUEST TO EXIT	EC ELECTRONIC CLOSER

ANNOTATIONS

— UNDERGROUND / UNDERSLAB CONDUIT	KEY NOTE
— OVERHEAD / SURFACE MOUNT CONDUIT	DOT ABOVE ANY SYMBOL INDICATES ABOVE COUNTER MOUNTING HEIGHT
— CONDUIT STUB	DOT ABOVE ANY SYMBOL INDICATES FLOOR MOUNT DEVICE
1 DRAWING REFERENCE	SQUARE AROUND ANY SYMBOL INDICATES CEILING MOUNT DEVICE
EX SECTION REFERENCE	CIRCLE AROUND ANY SYMBOL INDICATES CEILING MOUNT DEVICE
X# SINGLE LINE DIAGRAM WIRE TAG, Y = WYE, D = DELTA CONFIGURATION	

ELECTRICAL SHEET LIST

NO.	SHEET NAME
E100	AB ROWHOUSE 01 - COVER PAGE
E200	AB ROWHOUSE 01 - ELECTRICAL FLOOR PLAN
E300	AB ROWHOUSE 01 - DETAILS
E400	AB ROWHOUSE 01 - SPECIFICATION



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PROJECT:
CMHC HOUSING
CATALOGUE

ADDRESS:
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SHEET TITLE:
AB ROWHOUSE 01 -
COVER PAGE

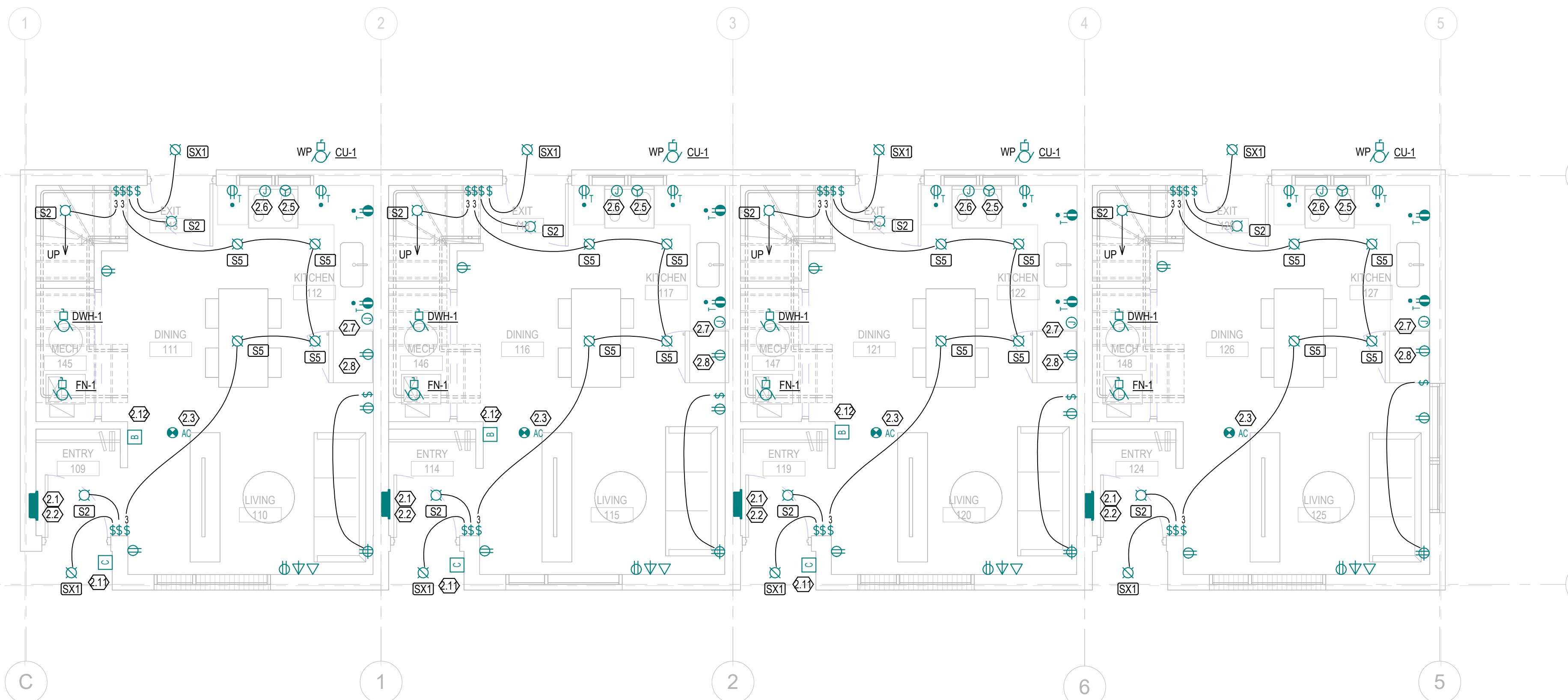
PROJECT NO: 241058
SCALE: 1:1
SHEET NO:
E100

GENERAL SUITE NOTES

- 1 PROVIDE ARC FAULT BREAKERS FOR ALL RECEPTACLES IN RESIDENTIAL SUITES IN ACCORDANCE WITH CEC 26-68.
- 2 PROVIDE TAMPER RESISTANT RECEPTACLES IN EACH SUITE TO CEC 26-706.
- 3 PROVIDE GROUND FAULT CIRCUIT INTERRUPTION FOR RECEPTACLES WITHIN 1.5m OF ANY SINK OR WASHBASIN AND FOR EXTERIOR PATIOS.
- 4 TO PREVENT SOUND TRANSMISSION BETWEEN ROOMS, PROVIDE HORIZONTAL SEPARATION OF AT LEAST 1 STUD SPACE FOR RECESSED WALL JUNCTION BOXES IN SUITE WALLS WHEN THE JUNCTION BOXES ARE INSTALLED ON EITHER SIDE OF THE WALL.
- 5 PROVIDE MOLDABLE FIRE RESISTANT PUTTY PADS (3M FIRE BARRIER OR EQUAL) IN SUITE PARTITION WALLS WHERE JUNCTION BOXES ARE INSTALLED WITHIN THE SAME STUD SPACE ON EITHER SIDE OF THE WALL. WHERE PRACTICAL, EFFORT SHOULD BE MADE TO AVOID PLACING JUNCTION BOXES IN THE SAME STUD SPACE. CONFIRM WITH ENGINEER.
- 6 PROVIDE RECEPTACLES IN SUITES WITH APPROPRIATE SPACING IN ACCORDANCE WITH SECTION 26 OF THE CEC WHETHER SHOWN CORRECTLY ON THE DRAWINGS OR NOT. ALLOW FOR ADDITIONAL RECEPTACLES AS REQUIRED. NO EXTRAS WILL BE PERMITTED FOR NOT COMPLYING WITH CEC SPACING REQUIREMENTS.
- 7 PROVIDE SWITCHES FOR BEDROOMS, KITCHENS, LIVING ROOMS, UTILITY ROOMS, DINING ROOMS, LAUNDRY ROOMS, BATHROOMS, HALLWAYS, STORAGE ROOMS, FRONT ENTRY, BALCONY OR THE LATCH SIDE OF THE DOOR. CONFIRM DOOR SWING ON SITE PRIOR TO ROUGH IN. INSTALL WITHIN 50mm OF THE DOOR. PROVIDE ADDITIONAL BLOCKING IF REQUIRED.
- 8 BALCONY LIGHT FIXTURES TO BE ALIGNED IN A VERTICAL LINE BETWEEN FLOORS. FROM GROUND FLOOR TO HIGHEST FLOOR IF POSSIBLE. REFER TO ARCHITECTURAL ELEVATIONS.
- 9 ALL SUITE LIGHT SWITCHES AND RECEPTACLES TO BE DECORA STYLE, RESIDENTIAL GRADE.
- 10 REFER TO LATEST MECHANICAL ENGINEER'S PLANS FOR THERMOSTAT AND HUMIDISTAT LOCATIONS. REFER TO SPECIFICATIONS.
- 11 REFER TO LATEST MECHANICAL ENGINEER'S PLANS FOR VENTILATION EQUIPMENT OR HEATING/COOLING EQUIPMENT ELECTRICAL REQUIREMENTS (FURNACES, FAN COILS, CONDENSING UNITS, RADIATOR ZONE VALVES ETC). CONNECT ALL MECHANICAL HEATING/COOLING EQUIPMENT. CONTACT ENGINEER IF DISCREPANCIES EXIST.
- 12 CONFIRM EXACT PLACEMENT OF LIGHT FIXTURES WITH OWNER.
- 13 PROVIDE SUITE PATIO RECEPTACLE NEAR BBQ GAS CONNECTION IF POSSIBLE. COORDINATE WITH MECHANICAL TRADE AND RELOCATE IF REQUIRED.
- 14 ALL SUITE TELEPHONE AND DATA JACKS TO BE CAT6 TO ALLOW FOR PATCHING FOR USE AS EITHER TELEPHONE OR DATA.

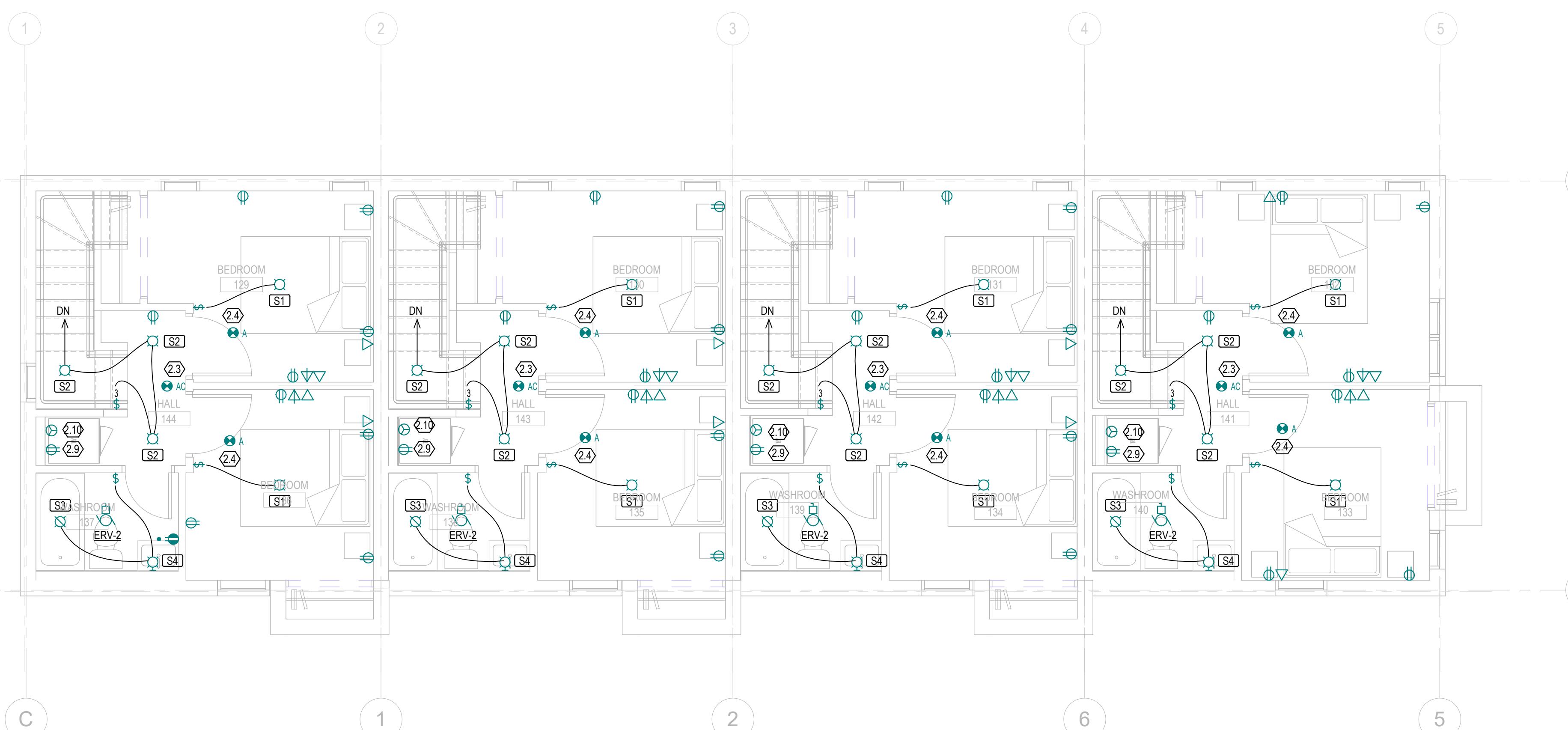
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MAIN FLOOR PLAN

SCALE: 1:50



KEYNOTES - SUITES

- 2.1 SUITE PANEL: PANEL TO BE FLUSH MOUNTED CW HINGED SMOOTH COVER.
- 2.2 SUITE COMMUNICATION CABINET: SUPPLIED BY UTILITY. INSTALLED BY ELECTRICAL CONTRACTOR CW HINGED SMOOTH COVER. INCLUDE NETWORK PATCH PANEL MODULE, 6 PORT VOICE/DATA MODULE, CATV SPLITTER, TELEPHONE MODULE AND RECEPTACLE. HOME RUN TELEPHONE, CATV AND DATA LINES TO THIS LOCATION.
- 2.3 SMOKE/CO ALARM: PROVIDE AND INSTALL 120V DETECTOR CW BATTERY BACKUP AND MANUAL SILENCE BUTTON. WHERE MULTIPLE ALARMS ARE SHOWN WITHIN EACH SUITE, INTERLOCK SUCH THAT ALL UNITS WILL ALARM TOGETHER.
- 2.4 SMOKE ALARMS - PROVIDE AND INSTALL A 120V CW BATTERY BACK UP. WHERE MULTIPLE ALARMS ARE SHOWN WITHIN EACH SUITE, INTERLOCK SUCH THAT ALL DEVICES WILL ALARM TOGETHER INCLUDING COMBINATION CO/ALARMS. BATTERY TO BE TYPE 'A'. ALL SUITE SMOKE ALARMS AND OR CO DETECTORS TO BE WIRED WITH LIGHTING ON NON ARC FAULT CIRCUIT.
- 2.5 RANGE: PROVIDE AND INSTALL 40A, 240V (OR 208V), 1 PHASE RECEPTACLE AT MAXIMUM 130mm AFF TO CENTER OF BOX.
- 2.6 FAN HOOD: PROVIDE INSTALLATION OF RANGE HOOD FAN / LIGHTS.
- 2.7 DISHWASHER - PROVIDE ELECTRICAL INSTALLATION FOR A DISHWASHER. COORDINATE INSTALLATION WITH APPLIANCE SUPPLIER.
- 2.8 REFRIGERATOR: PROVIDE DEDICATED RECEPTACLE.
- 2.9 WASHING MACHINE - PROVIDE DEDICATED 120V CIRCUIT FOR CLOTHES WASHER.
- 2.10 DRYER - PROVIDE AND INSTALL 30A, 208V (OR 240V), 1 PHASE RECEPTACLE.
- 2.11 CHIME - PROVIDE ROUGH IN FOR A DOOR CHIME NUTONE LA11WH. PROVIDE ALL WIRING AND ACCESSORIES FOR COMPLETE OPERATION INCLUDING (BUT NOT LIMITED TO) 16V TRANSFORMER, WHITE LIGHTED PUSHBUTTON(S) ETC.
- 2.12 DOOR BUZZER (CHIME) - PROVIDE AND INSTALL A DOOR CHIME NUTONE LA11WH. PROVIDE ALL WIRING AND ACCESSORIES FOR COMPLETE OPERATION INCLUDING (BUT NOT LIMITED TO) 16V TRANSFORMER, WHITE LIGHTED EXTERIOR DOOR PUSHBUTTON.

TYPICAL SUITE PANEL

DESCRIPTION	BRKR	CCT	CCT	BRKR	DESCRIPTION
LIGHTING & POWER	15A	1	2	40A	RANGE
LIGHTING & POWER	15A	3	4		
LIGHTING & POWER	15A	5	6		
LIGHTING & POWER	15A	7	8		
LIGHTING & POWER	15A	9	10	15A	WASHER
KITCHEN	20A	11	12	20A	ERV-2
KITCHEN	20A	13	14		
KITCHEN	20A	15	16		
MICROWAVE	15A	17	18		
DISHWASHER	15A	19	20	15A	FN-1
FRIDGE	15A	21	22	15A	DWH-1
	15A	23	24		
	15A	25	26		
	15A	27	28		
	15A	29	30	15A	
	15A	31	32	15A	
	15A	33	34	15A	
SPARE	15A	35	36	15A	SPARE
SPARE	15A	37	38	15A	SPARE
SPARE	15A	39	40	15A	SPARE
SPARE	15A	41	42	15A	SPARE

NOTES:
- DO NOT EXCEED 10 DEVICES PER CIRCUIT.
- REFER TO MECH SHOP DRAWINGS OR LATEST PLANS FOR ELECTRICAL REQUIREMENTS OF HVAC & AC EQUIPMENT.
- PANEL TO BE 24 CCT (48 MINI BREAKERS) EQUIPPED WITH 100A RATED BUS, 1 PHASE, 120/240V.
- PROVIDE ARC FAULT BREAKERS FOR ALL RECEPTACLES IN RESIDENTIAL SUITES IN ACCORDANCE WITH CEC 26-68.

SECOND FLOOR PLAN

SCALE: 1:50

1	03/26/25	ISSUED AS PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ADDRESS

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
AB ROWHOUSE 01 - ELECTRICAL FLOOR PLAN

PROJECT NO: 241058
SCALE: As indicated

SHEET NO:

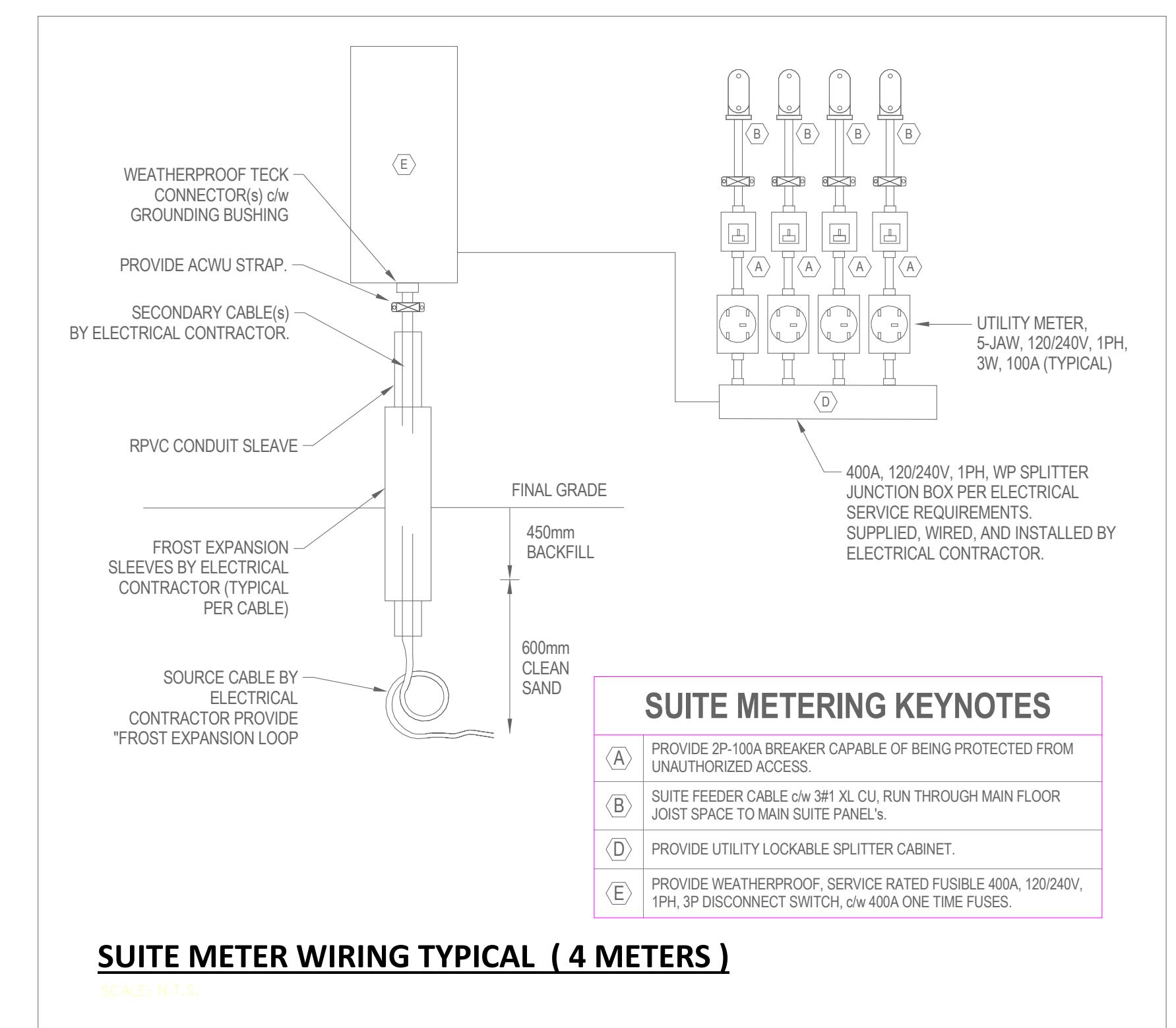
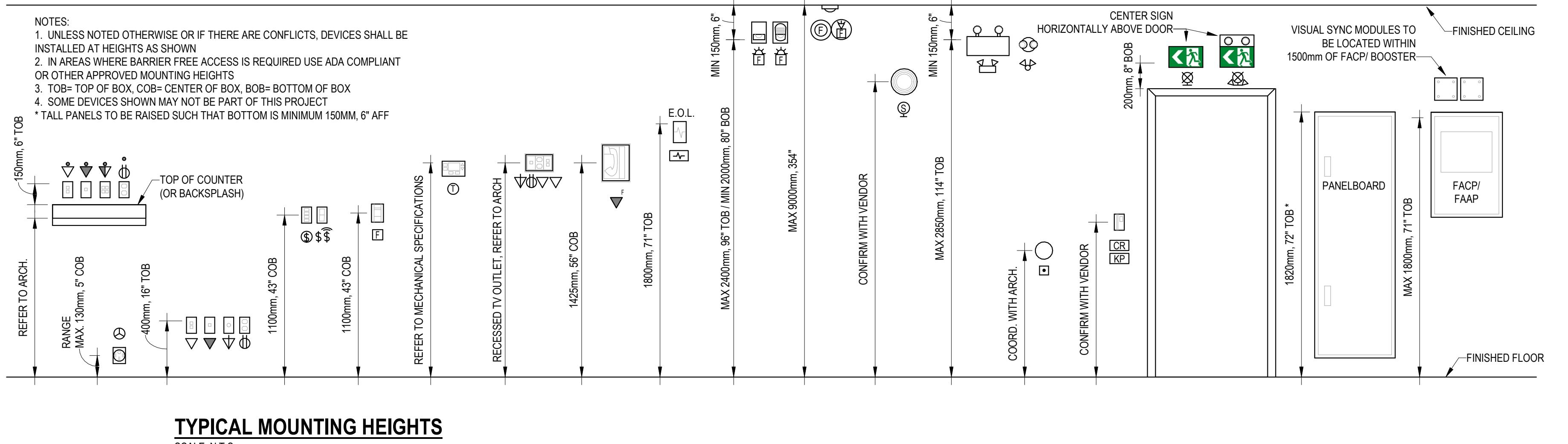
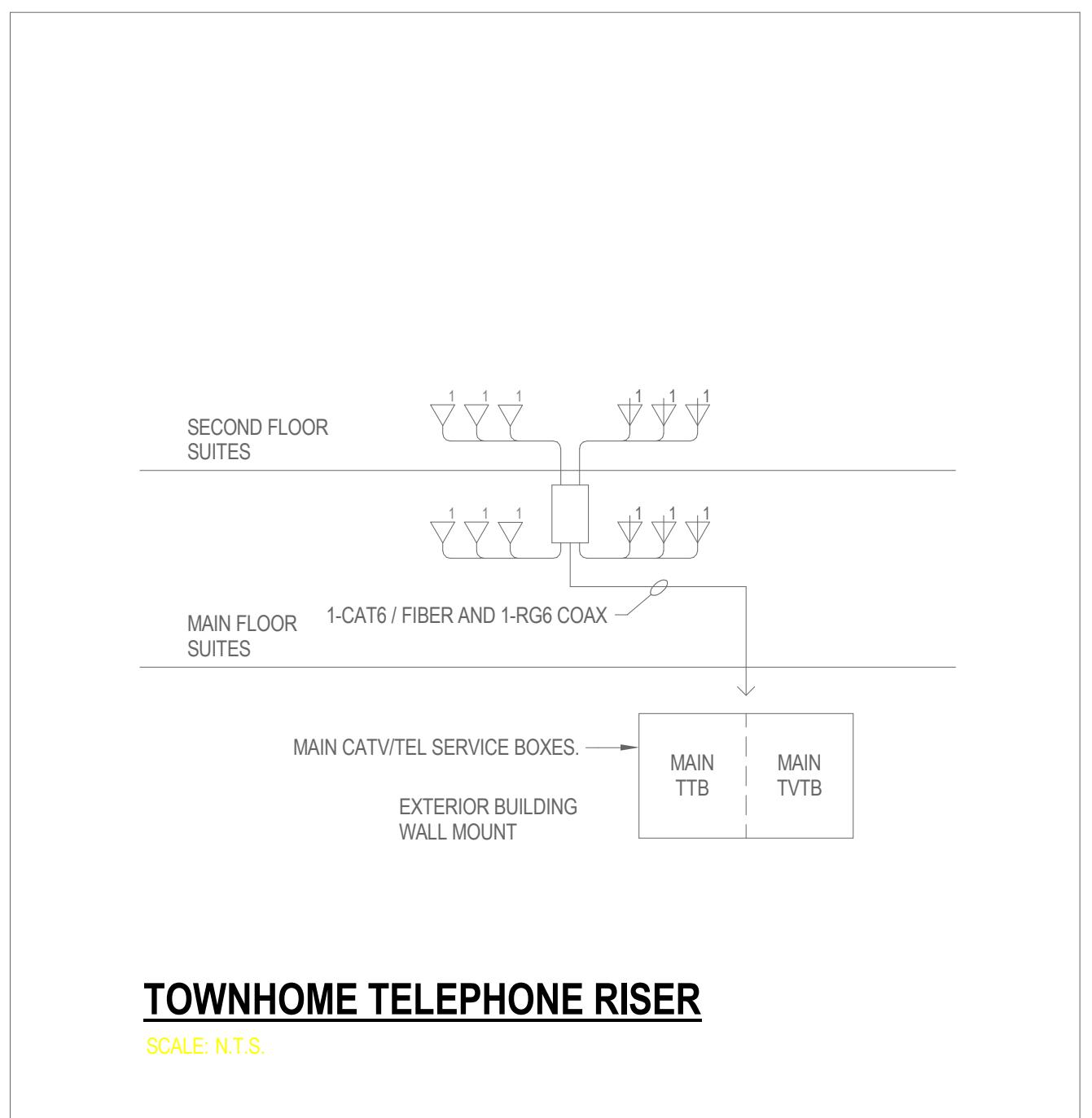
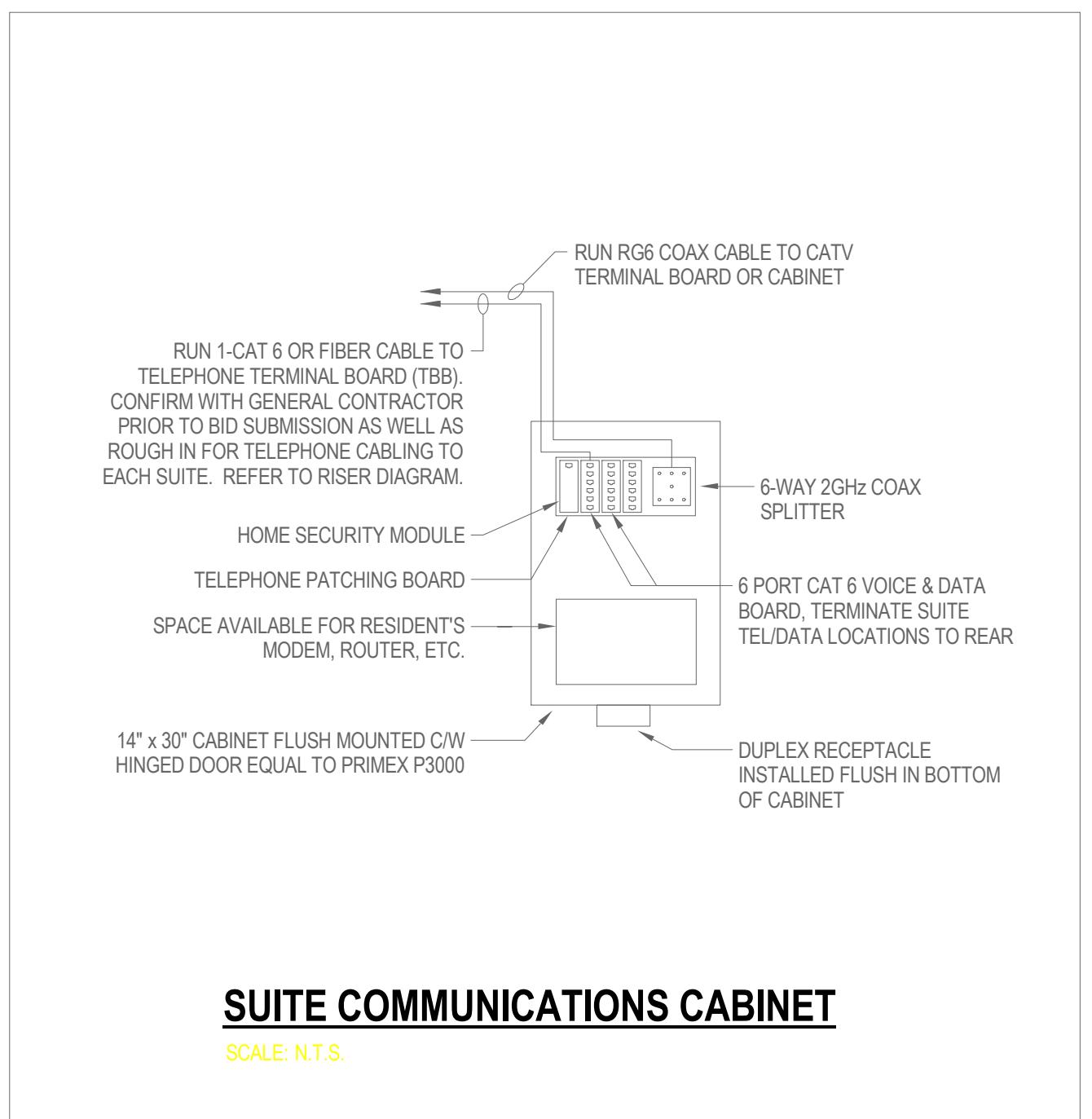
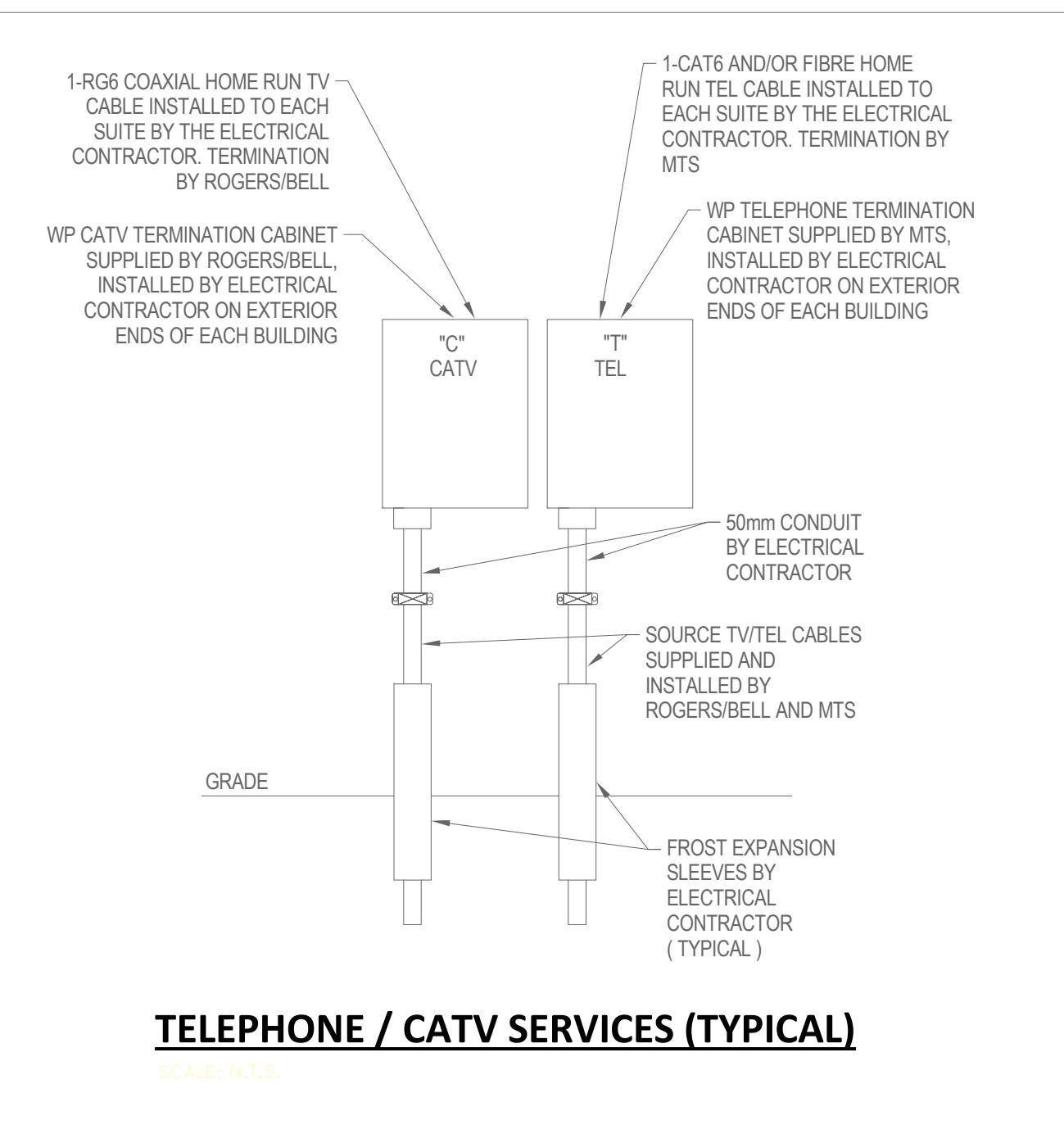
E200

DISCLAIMER

This design was created for use solely as part of the CMHC Housing Design Catalogue. It is a sample of standardized housing design, reflecting general design intention only and does not incorporate any elements of other information specific to any location or project. This design is provided for illustrative purposes only and must not be used for construction or permitting purposes. In using this design, you are responsible for your compliance with the Terms and Conditions, including but not limited to engaging the services of a Qualified Professional.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	MODEL NUMBER	VOLTAGE	WATTAGE	LAMP	MOUNTING	DESCRIPTION
INTERIOR							
S1	BY CONTRACTOR	BY CONTRACTOR	120 V	21 VA	1815 LUMEN LED	SURFACE MOUNT	13" DIAMETER, WHITE FINISH, DIMMING
S2	BY CONTRACTOR	BY CONTRACTOR	120 V	15 VA	1300 LUMEN LED	SURFACE MOUNT	10" DIAMETER, WHITE FINISH, DIMMING
S3	BY CONTRACTOR	BY CONTRACTOR	120 V	10 VA	784 LUMEN LED	RECESSED	4" LED WET LISTED DOWNLIGHT, PHASE DIMMABLE SPRING CLIP MOUNTED C/W UNIVERSAL MOUNTING PLATE.
S4	BY CONTRACTOR	BY CONTRACTOR	120 V	30 VA	- LUMEN LED	WALL MOUNT	WALL MOUNT VANITY, TRIAC DIMMABLE, 3xMED BASE E26 SCREW-IN LAMPS.
S5	BY CONTRACTOR	BY CONTRACTOR	120 V	10 VA	650 LUMEN LED	RECESSED	4" RECESSED LED OPEN DOWNLIGHT - REGRESSED BAFFLE, SPRING CLIP C/W UNIVERSAL MOUNTING PLATE
SX1	BY CONTRACTOR	BY CONTRACTOR	120 V	23 VA	784 LUMEN LED	RECESSED	4" LED WET LISTED DOWNLIGHT, PHASE DIMMABLE SPRING CLIP MOUNTED C/W UNIVERSAL MOUNTING PLATE.


SUITE METER WIRING TYPICAL (4 METERS)

1	03/26/25	ISSUED AS PROTOTYPICAL DRAWING
NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

NOT FOR PERMIT
OR CONSTRUCTION

SHEET TITLE:
AB ROWHOUSE 01 -
DETAILS

PROJECT NO: 241058
SCALE: N.T.S.

SHEET NO:
E300

ELECTRICAL CONTRACTOR GENERAL REQUIREMENTS

General Requirements, Division 1, shall form part of this Division, and all instructions to bidders, General Conditions, amendments thereto, and General Requirements of that Division apply to and govern the work of:

- This section contains requirements applicable and supplementary to other Divisions, and are to be read in conjunction with those Divisions.
- "Utility" shall hereafter mean the electrical power supply company, telephone supply company, fibre network supply company and cable TV supply company.
- The electrical installation shall adhere to the latest edition of the Canadian Electrical Code (CEC), applicable building code, and all other codes in force by the local Authority Having Jurisdiction (AHJ).
- Electrical drawings and these specifications are complementary to each other. Treat discrepancies between them as requirement to adhere to the most restrictive conditions. Contact Engineer 5 days prior to tender close if discrepancies or errors are found.
- Provide all necessary measurements and assistance to the inspection authority to facilitate the complete installation and testing of all systems described herein.
- Obtain exact dimensions and coordinate placement of electrical conduit, conduits and fittings from architectural and structural drawings. Make any necessary adjustments to accommodate structural and architectural conditions without additional charge. Notify engineer prior to all significant revisions.
- Materials are to be new, inferior to the quality specified, and conform to standards issued by CSA, UL, or any other Canadian standards agency.
- Where materials are specified by technical description, provide the best commercial qualities available for the purpose.
- Maintain uniformity of manufacture, type, and style within a particular group or class of equipment throughout the work.
- Provide all necessary measurements and assistance to the inspection authority to facilitate the complete installation and testing of all systems described herein.
- Inform Engineer of all inspections by AHJ at least 48 hours in advance.
- Provide all necessary measurements and assistance to Engineer on his visits to the site at any phase of the project, including after completion.
- No deviations from the drawings shall be permitted without written permission from the Engineer.
- Workmanship:

 - A. All work is to be executed in a neat and orderly manner, with all surface conduit following building lines, and concrete-embedded conduit having minimum 25% of slab thickness coverage. Coordinate with structural engineer.
 - B. Keep a competent foreman on the project for its duration, unless able to provide satisfactory reasons for changing that person.
 - C. Tradesmen under foreman, including specialty Electrical sub-trades, are to be competent in all aspects of work to which they are assigned. Specialty sub-trades include, but may not be limited to, audiovisual systems, voice/data infrastructure (provide copy of equipment manufacturer), public address, intercommunication, security/access control, and lighting control.
 - D. Do not post any drawings based on Electrical drawings unless dimensions are shown. Determine placement of device boxes from Architectural drawings. If placement is not shown, consult with Architect or engineer for clarification.
 - a. Place adjacent device boxes horizontally and vertically so their centres align. Boxes on opposite sides of a wall are to be separated by at least one stud space, unless directed otherwise, or provide sound-deadening material between them.
 - b. Locating devices 3 meters or less from position shown on drawings as directed by engineer at rough-in shall not entitle contractor to any extra charges.
 - c. Protect all finished and unfinished walls and equipment.
 - d. All work is to be done in a neat and orderly manner, with all surface conduit following building lines, and concrete-embedded conduit having minimum 25% of slab thickness coverage. Coordinate with structural engineer.
 - e. Provide all necessary measurements and assistance to the inspection authority to facilitate the complete installation and testing of all systems described herein.
 - f. Prior to commencing any work, the electrical contractor is responsible for reviewing all mechanical / electrical services including deep service to avoid any possible conflict. Refer to Mechanical and Civil drawings for site details.
 - 15. Visit site, premises before tender to ascertain working conditions. No extras will be paid based on site or working conditions.
 - 16. Provide sleeves, inserts, etc., as required, to General Contractor for placement in concrete, and supervise their placement. Correct placement at own expense.
 - A. X-Ray scan all concrete prior to cutting, coring, etc. Provide results to owner/engineer upon request. Review results with all disciplines with infrastructure that may be affected by cutting, coring, etc.
 - 17. Remove daily debris and surplus materials resulting from this trade's work.
 - 18. No consideration will be given to requests for extras or equipment substitution due to late ordering of material, including delays due to rejection of shop drawings.

SHOP DRAWINGS SUBMITTALS

1. All shop drawings shall be manufacturers' data sheets and information. Provide shop drawings in electronic PDF format. No facsimiles, screen captures, blank catalogue pages, or poor quality reproductions will be accepted.

Include only information relative to the equipment for which the shop drawing is submitted. Where equipment choices exist on sheets, indicate the proposed equipment with arrows or highlighting. Additionally, provide a list of the submitted equipment. Shop drawings to clearly state equipment substitutions.

3. All shop drawings submitted to the Engineer must bear the approval of the Contractor prior to engineer review. Work shall not proceed with items until Engineer's reviews are complete and shop drawings are returned.

4. Consultant's review will be for conformity with the design concept and requirements of any and all related construction documents, and that the materials suit the site conditions and fit in the available space.

5. Supply shop drawings for at least the following items if not type:

- A. Distribution and sub-distribution panels, panelboards, disconnect switches, transformers, SPDs, circuit breakers, fuses, and their characteristics, instrument transformers, protective relays, etc., and complete fault and coordination study.
- B. Motor control equipment, including starters, contactors, overload heaters, control relays, time-delay relays, motor circuit and control fuses and breakers, pilot lights, control transformers, and selector switches.
- C. All light fixtures and controls (allow voltage controls).
- D. All low voltage systems comprising, including fire alarm, structured cabling, etc.
- E. Wiring and cabling devices including receptacles, switches, floor boxes, power poles, cable tray, data racks, UPS systems, and disconnected switches.
- F. Emergency gasket and transfer switch equipment (where specified).
- G. Firestopping system details (See the stopping section).

ALTERNATES

1. No alternates will be allowed without written acceptance on alternate submittals from the engineer prior to close of tender.

2. The contractor remains solely responsible for ensuring that the materials meet or exceed the requirements of any and all related construction documents, and that the materials will suit the site conditions and fit in the available space.

PERMITS, CERTIFICATES, and FEES

1. Obtain, pay for, and submit all permits and necessary documents (including drawing approvals by the Electrical Inspection Authority) necessary for the electrical work to commence.

2. On completion of the work, submit a Certificate of Acceptance from the Inspection Authority to the Engineer.

FIRE STOPPING

1. The electrical contractor, in coordination with the general contractor, is responsible for the installation of all fire stopping systems relating to electrical penetrations through fire rated ceilings, walls or assemblies. The fire stopping systems utilized, shall maintain an effective barrier against the spread of flames, smoke and hot gases and shall have passed the CAN/ULC-S115 approved testing procedure.

2. The electrical contractor must provide adequate notification to the electrical engineer that firestopping has been completed to allow for field observations and reporting prior to concealment.

3. Submit shop drawings for approval, of all fire stopping system details, including but not limited to, product manufacturer's specifications, technical data for each material and CEC approved documentation.

PROGRESS CLAIMS, EXTRAS, and CREDITS

1. Immediately after award of contract, provide Engineer with an itemized schedule of the tender price, with major items, milestones, etc. as line items: Mobilization, Conduit, Service Equipment, Luminaires, Wiring, Voice/Data system) shown, totaling to the quoted price. Thereafter, when submitting progress claims, schedule shall be used, and claims shall be made based upon percentage completed of the electrical item. Extras and other items added or removed.

2. Any claim for extras or other cost of electrical equipment must be accompanied by a complete breakdown of labour and materials, together with explanation of any condition warranting additional consideration. Failure to supply such information will result in immediate rejection of the claim or offer.

A. Such claim must show quantities, unit price, labour rates and hours, suppliers' invoices, and any other substantiating documentation.

B. All equipment and material related to a claim must be installed or stored on site in a secure and safe location.

C. Where agreement cannot be arrived at, claims are to be dealt with under General Conditions, and proposed changes are to be enacted as directed in writing.

INSPECTIONS and TESTS

1. Before energizing any portion of the electrical system, provide and pay for testing equipment as part of this contract to perform 1000 volt megger tests (L-L, N-L, G) on all feeders and branch circuits, and verify results conform to the Canadian Electrical Code, and to the satisfaction of the Inspection Authority and to the Engineer.

ENGINEER SITE OBSERVATIONS

1. Complete the Engineer for field reviews at the following stages of construction (provide 5 (five) working days notice):

- A. Rough-in
- B. Substantial Completion
- C. Completion of Deficiencies (if required)

2. The following items are to be completed prior to substantial inspection:

- A. Fire alarm system and fire detection and warning engineer's certificate to be completed. Send copies to Engineer.
- B. Operation of fire alarm system to central monitoring agency per UL-2651 to be complete and operational with certificate.
- C. All emergency and exit lighting to be installed, operational and fully charged as per drawings. Contractor to conduct load test prior to review.
- D. All devices not installed must have wiring terminated into a junction box (no exposed wiring).
- E. All electrical equipment to have covers and doors installed.
- F. Failure to inform the Engineer of construction progress as described above may result in the Engineer being unable to issue an "Assurance of Professional Review and Compliance" (Schedule 'C') to the local authority which is required for occupancy.
- G. Cost for additional site reviews required due to failure to comply with these requirements will be charged to the contractor.

AS-BUILT DRAWINGS

1. Maintain at the job site, one set of prints on which is recorded, day-by-day, all outlets, conduct, fixtures, and equipment as installed; together with any changes made to the work. Checking of progress on the preparation of the as built drawings will be carried out by the supervising engineer regularly.

2. Dimension underground services installed relative to the structure, clearly defining and marking, to ensure ease of locating of future date, all concealed conduits and/or other equipment.

3. Upon completion, the most current floor plan from the engineer and transpose all as-built markings onto a clean set and scan to PDF.

OPERATION and MAINTENANCE MANUALS

1. Provide to the Owner electronic copy of OEM Manuals for the electrical systems and equipment in PDF format. PDF shall be organized with bookmarked chapters and sections. Manuals to include written system description and operating procedures, drawing list, maintenance and installation brochures, test certificates, start-up reports, maintenance schedules, shop drawings, warranty letter, list of subcontractors and equipment suppliers, c/w addresses and phone numbers. Instruct the Owner in the operation and maintenance of the electrical systems. A suitable hardware holdback will be retained until the above and related Contract close-out requirements are completed.

GUARANTEE/WARRANTY

1. All electrical equipment and systems installed and connected shall be guaranteed free of defective material and workmanship for a period of the greater of one year or any manufacturer offered extended warranty on specific items or systems, with time started from date of substantial completion (or system start-up, later than substantial completion). Any defects shall be remedied without cost to Owner during this period.

2. Provide documents of guarantee/warranty in the OEM Manuals, stating commencement of warranty period. Any manufacturer's extended warranty/warranties shall be provided as part of these documents, and drawn to the Owner's notice on turnover of manuals.

IDENTIFICATION and LABELING

1. All items of new electrical equipment such as power, lighting, signal, telephone panels, disconnected switches, manual and automatic control devices, etc., shall have nameplates. These nameplates shall be, unless otherwise specified, black plastic laminated with engraved white lettering. Nameplates shall be neat and uniform in appearance.

2. Nameplates shall indicate the use and type of equipment, as specified and shown on the drawings.

A. Panels: Voltage, phase, identification

B. Low Voltage Panels: System name

C. Manual Contactors: Current rating controlled

D. Automatic Contactors: Identify all on schematic diagrams

3. Distribution panels shall have date of installation and individual nameplates indicating each circuit's use.

4. Branch circuit panels shall have typed circuit directories behind clear plastic, on the inside of the panel door.

5. Identify all receptacle coverplates with clear self-adhesive Mylar tape with black lettering indicating panel and circuit number (i.e. "A25"). Alternatively coverplates can be mechanically engraved.

6. All fusible disconnects and breakers with adjusted trip settings to have lamescoid label stating "MOOF: _A_".

7. Identify all types of fuses and junction boxes.

A. Each panel, junction box and junction box cover shall be colour coded by system type carried.

B. Voltage colour identification for line voltage equipment shall be as follows:

a. 120/208 V or 120/240 V Grey

b. 277/480 V Maroon

c. 347/600 V Sand

d. 480/575 V Orange

C. System colour identification for low voltage equipment shall be as follows:

a. Fire Alarm / Telephone Red

b. Security CCTV Yellow

c. Data / Telephone Wiring Green

d. Access Control Yellow

e. Intercom

f. LV Emergency Lighting

g. Low Voltage Switching

h. Nurse Call

Green

8. Conductors to be colour coded per following schedule for 120V and above:

Phase 'A' Red

Phase 'B' Black

Phase 'C' Blue

Neutral White

Ground Green

GROUNDING and BONDING

1. Provide system ground via a ground rod network in accordance with CEC Section 10 and Table 16.

2. Ground rods to be 1/2" diameter, total minimum of three rods spaced 300mm apart.

3. Minimum resistance to ground shall be 20 ohms.

4. Buried grounding conductors shall be #20 AWG bare copper. Use approved connection method only, refer to local inspection department and utility service provider requirements.

5. Above grade grounding conductors shall be #10 AWG bare copper. Use approved connection method only, refer to CEC Table 16.

6. Bond all electrically powered equipment to ground using suitable connectors. Equipment bonding conductors shall be sized according to CEC Table 16.

7. Install #12 green ground wires in all conductors.

8. Bond all cable conductors together to be connected to ground.

9. Bond all pools, jacuzzis, hot tubs and spas per CEC section 63. Ensure all metal parts, railings, fittings, re-bar have been properly bonded to ground and inform both the electrical inspection department having jurisdiction and electrical engineer when completed to facilitate an inspection prior to concealment. Coordinate additional requirements with pool supplier.

10. Bond all pools, jacuzzis, hot tubs and spas per CEC section 63 to main building ground.

11. Bond all pools, jacuzzis, hot tubs and spas per CEC section 63. Ensure all metal parts, railings, fittings, re-bar have been properly bonded to ground and inform both the electrical inspection department having jurisdiction and electrical engineer when completed to facilitate an inspection prior to concealment. Coordinate additional requirements with pool supplier.

12. Provide grounding bus bar c/w lugs at all telephone/TV backboards, communications cabinets, and data racks. Bond all wall or free standing data racks to ground with #6 green insulated ground wire.

13. Provide all required ground connections to be coordinated with other trades prior to rough-in. All devices to be clearly visible. Contractor to relocate devices as required.

14. Provide all required ground connections to be coordinated with other trades prior to rough-in. All devices to be clearly visible. Contractor to relocate devices as required.

15. Provide all required ground connections to be coordinated with other trades prior to rough-in. All devices to be clearly visible. Contractor to relocate devices as required.

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42. Provide all required ground connections to be coordinated with other trades prior to rough-in. All devices to be clearly visible. Contractor to relocate devices as required.

43. Provide all required ground connections to be coordinated with