

THESE DRAWINGS CONFORM TO THE REQUIREMENTS OF THE 2024 BC BUILDING CODE. ADDITIONAL SPECIFICATIONS BY A STRUCTURAL ENGINEER IS AN INTEGRAL PART OF THE DRAWINGS.

ALL LANDINGS ARE TO BE MOUNTED TO LEDGER BOARDS TO ALLOW FOR A CONTINUOUS AIR/VAPOUR BARRIER INSTALLATION.

REFER TO ATTACHED DETAILS AND ENGINEERS DRAWINGS FOR ADDITIONAL FOUNDATION REQUIREMENTS

PRESSURE TREATED POSTS ARE TO BE USED WITH IN-BUILT-UP COLUMNS OR IF EXPOSED TO THE WEATHER

ALL HEADERS TO BE 2X10 UNO. & PLACED SO WINDOW SILL IS AT...  
8'-0" FOR 10' CLOS  
7'-0" FOR 9' CLOS  
6'-0" FOR 8' CLOS  
5'-0" FOR 7' CLOS  
4'-0" FOR 6' CLOS  
3'-0" FOR 5' CLOS  
2'-0" FOR 4' CLOS  
1'-0" FOR 3' CLOS  
UNO.

NOTE:  
SUITE TO BE ELECTRIC BASEBOARD HEATING CW PASSIVE AIR  
INTAKE

NOTE:  
SMOKE ALARMS TO BE INSTALLED IN ALL BEDROOMS

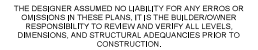
ALL LUMBER TO BE K.D.-S.P.F. #2 OR BETTER

ATTIC HATCHES TO BE WEATHERSTRIPPED

NOTE:  
ELECTRICAL PANEL LOCATION AS PER  
CONTRACTOR



BCR: 2024 - 9.10.14.1 -  
**5.10.14.1.1**  
 IN A DWELLING WITH A SECONDARY SILE, DWELLING UNITS SHALL BE SEPARATED FROM EACH OTHER AND FROM ANCELLARY SPACES AND COMMON SPACES WITH A FIRE RESISTANCE RATING OF NOT LESS THAN 45 MIN. WHEN ADDITIONAL SMOKE ALARMS ARE NOT INSTALLED AND INTERCONNECTED.  
**SMOKE ALARMS**  
 BCR: 2024 - 9.10.15.1 -  
**5.10.15.1.1**  
 IN CASE MORE THAN ONE SMOKE ALARM IS REQUIRED IN A DWELLING UNIT, THE SMOKE ALARMS SHALL BE INTERCONNECTED SO THAT THE ACTIVATION OF ONE ALARM WILL CAUSE ALL OTHERS WITHIN THE DWELLING UNIT TO SOUND.  
**5.10.15.1.2**  
 ADDITIONAL SMOKE ALARMS AND INTERCONNECTION OF SMOKE ALARMS BETWEEN DWELLING UNITS AND COMMON SPACES IN A HOUSE WITH A SECONDARY SILE, SHALL BE REQUIRED IF THE FIRE SEPARATIONS HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN 45 MIN.

[illegible]

Project Number	21xxx
Date	2025-08-06
Drawn By	GD
Checked By	IK

Scale	As indicated
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## CEILING ASSEMBLIES

CEILING BELOW ATTICS-COMMON TRUSSES			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
25MM (1") PLASTER BOARD (1/2" Gypsum Board) INSULATION FOR ATTICS 2/4 BOTTOM CHASE @ 24" O.C.	RSI 0.24 (R-40)	RSI 0.47 (R-84.3)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) EXTERIOR AIR FILM	0.03		
(2) ROOFING ASPHALT SHINGLES	0.03		
(3) 1/2" PLASTER BOARD SHEATHING	0.01		
(4) 1/2" GYPSUM BOARD	0.06		
(5) 1/2" GYPSUM BOARD	0.06		
(6) INTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE		RSI 0.61 (R-108.9)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR CEILING BELOW ATTICS		RSI 0.47 (R-84.3)	

## ABOVE GRADE WALL ASSEMBLIES

ABOVE GRADE WALL ASSEMBLY (6.25mm FIBRE CEMENT BOARD 1/4")			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 6 WOOD FRAMING AT 16" O.C.	RSI 3.34 (R-19)	RSI 3.28 (R-18.4)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) EXTERIOR AIR FILM	0.03		
(2) 1/4" FIBRE CEMENT BOARD 1/4"	0.03		
(3) 1/2" AIR SPACE FOR RAIN SCREEN	0.16		
(4) SHEATHING MEMBRANE	0.01		
(5) 1/2" O.S.B. SHEATHING	0.08		
(6) POLYETHYLENE	0.01		
(7) 1/2" GYPSUM WALL BOARD	0.08		
(8) INTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE		RSI 3.85 (R-14.8)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 3.78 (R-15.78)	

ABOVE GRADE WALL ASSEMBLY (VENEERED STONE)			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 6 WOOD FRAMING AT 16" O.C.	RSI 3.34 (R-19)	RSI 3.28 (R-18.4)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) EXTERIOR AIR FILM	0.03		
(2) STONE (VENEERED OR SANDSTONE)	0.009		
(3) EXTERIOR SETTING CEMENT BED (4) LATH OR MESH	0.009		
(5) 1/2" AIR SPACE FOR RAIN SCREEN	0.16		
(6) SHEATHING MEMBRANE	0.01		
(7) 1/2" O.S.B. SHEATHING	0.08		
(8) POLYETHYLENE	0.01		
(9) 1/2" GYPSUM WALL BOARD	0.08		
(10) INTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE		RSI 3.82 (R-16.4)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 3.78 (R-15.78)	

ABOVE GRADE WALL ASSEMBLY (STUCCO)			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 6 WOOD FRAMING AT 16" O.C.	RSI 3.34 (R-19)	RSI 3.28 (R-18.4)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) EXTERIOR AIR FILM	0.03		
(2) STUCCO (3) EXTERIOR SETTING CEMENT BED (4) LATH OR MESH	0.009		
(5) 1/2" AIR SPACE FOR RAIN SCREEN	0.16		
(6) SHEATHING MEMBRANE	0.01		
(7) 1/2" O.S.B. SHEATHING	0.08		
(8) POLYETHYLENE	0.01		
(9) 1/2" GYPSUM WALL BOARD	0.08		
(10) INTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE		RSI 3.82 (R-16.4)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 3.78 (R-15.78)	

## RSI & R-VALUE REQUIREMENTS

WINDOWS, DOORS & SKYLIGHTS			
COMPONENTS	THERMAL CHARACTERISTIC	ZONE 4-U	
WINDOWS & DOORS	MAX U VALUE	1.80	
SKYLIGHTS	MAX U VALUE	2.30	
ABOVE GRADE - NO HRV			
COMPONENTS	ZONE 4-RSI	ZONE 4-R	
CEILING BELOW ATTICS	6.91	26.20	
CATHEDRAL CEILINGS & FLAT ROOFS	4.67	26.52	
WALLS	2.78	19.78	
FLOORS OVER UNHEATED SPACE	4.67	26.52	
BELOW GRADE - NO HRV			
COMPONENTS	ZONE 4-RSI	ZONE 4-R	
FOUNDATION WALLS	1.90	11.30	
BELOW FROST LINE	UNINSULATED	UNINSULATED	
ABOVE FROST LINE	1.96	11.33	
ALL FLOORS PERMAFROST	N/A	N/A	
HEATED FLOORS	2.82	13.18	
SLAB ON GRADE W/ INTERIOR FOOTING	1.96	11.33	

## FLOOR ASSEMBLIES

FLOORS OVER UNHEATED SPACES (HARDWOOD FLOORING)			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 12" O.C.	RSI 4.93 (R-28)	RSI 4.46 (R-25.4)	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 16" O.C.	RSI 4.93 (R-28)	RSI 4.14 (R-23.6)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) INTERIOR AIR FILM	0.12		
(2) FLOORING MATERIAL: HARDWOOD	0.14		
(3) 1/4" PLANK SUBFLOOR	0.12		
(4) 1/4" AIR BAR	0.18		
(5) POLYETHYLENE	0.01		
(6) 1/2" GYPSUM CEILING BOARD	0.08		
(7) EXTERIOR AIR FILM	0.03		
TOTAL EFFECTIVE INSULATION VALUE (12" O.C. FRAMING)		RSI 4.75 (R-26.8)	
TOTAL EFFECTIVE INSULATION VALUE (16" O.C. FRAMING)		RSI 4.61 (R-26.8)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.07 (R-23.6)	

FLOORS OVER UNHEATED SPACES (CARPET FLOORING)			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 12" O.C.	RSI 4.93 (R-28)	RSI 4.46 (R-25.4)	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 16" O.C.	RSI 4.93 (R-28)	RSI 4.14 (R-23.6)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) INTERIOR AIR FILM	0.12		
(2) FLOORING MATERIAL: CARPET & RUBBER	0.22		
(3) 1/4" PLANK SUBFLOOR	0.14		
(4) 1/4" AIR BAR	0.18		
(5) POLYETHYLENE	0.01		
(6) 1/2" GYPSUM CEILING BOARD	0.08		
(7) EXTERIOR AIR FILM	0.03		
TOTAL EFFECTIVE INSULATION VALUE (12" O.C. FRAMING)		RSI 4.86 (R-26.8)	
TOTAL EFFECTIVE INSULATION VALUE (16" O.C. FRAMING)		RSI 4.61 (R-26.8)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.07 (R-23.6)	

## RIM JOIST ASSEMBLIES

RIM JOIST SPACE (6.25mm FIBRE CEMENT BOARD 1/4")			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 12" O.C.	RSI 4.93 (R-28)	RSI 4.46 (R-25.4)	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 16" O.C.	RSI 4.93 (R-28)	RSI 4.14 (R-23.6)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) EXTERIOR AIR FILM	0.03		
(2) 6.25mm FIBRE CEMENT BOARD 1/4"	0.03		
(3) 1/2" AIR SPACE FOR RAIN SCREEN	0.16		
(4) SHEATHING MEMBRANE	0.01		
(5) 1/2" O.S.B. SHEATHING	0.08		
(6) POLYETHYLENE	0.01		
(7) 1/2" GYPSUM WALL BOARD	0.08		
(8) INTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE		RSI 5.26 (R-23.6)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 5.26 (R-23.6)	

## FIRE PLACE ASSEMBLIES

FIREPLACE FLOOR BURN-OUT / CAVITY FLOOR			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 16" O.C.	RSI 4.93 (R-28)	RSI 4.14 (R-23.6)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) EXTERIOR AIR FILM	0.03		
(2) NON-VENTILATED CAVITY	0.11		
(3) SHEATHING MEMBRANE	0.01		
(4) 1/2" O.S.B. SHEATHING	0.08		
(5) POLYETHYLENE	0.01		
(6) 1/2" GYPSUM WALL BOARD	0.08		
(7) EXTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE (16" O.C. FRAMING)		RSI 4.73 (R-26.8)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.07 (R-23.6)	

## BELOW GRADE WALL ASSEMBLIES

BELOW GRADE WALL ASSEMBLY			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 6 WOOD FRAMING AT 16" O.C.	RSI 3.34 (R-19)	RSI 3.28 (R-18.4)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) DAMPPROOFING	---		
(2) 1/4" AIR SPACE	0.16		
(3) POLYETHYLENE	0.01		
(4) 1/2" GYPSUM WALL BOARD	0.08		
(5) INTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE		RSI 3.29 (R-18.4)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR BELOW GRADE WALLS		RSI 3.19 (R-18.4)	

FLOORS OVER UNHEATED SPACES (CERAMIC TILE FLOORING)			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 12" O.C.	RSI 4.93 (R-28)	RSI 4.46 (R-25.4)	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 16" O.C.	RSI 4.93 (R-28)	RSI 4.14 (R-23.6)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) INTERIOR AIR FILM	0.12		
(2) FLOORING MATERIAL: CERAMIC TILE	0.14		
(3) 1/4" PLANK SUBFLOOR	0.12		
(4) 1/4" AIR BAR	0.18		
(5) POLYETHYLENE	0.01		
(6) 1/2" GYPSUM CEILING BOARD	0.08		
(7) EXTERIOR AIR FILM	0.03		
TOTAL EFFECTIVE INSULATION VALUE (12" O.C. FRAMING)		RSI 4.68 (R-26.8)	
TOTAL EFFECTIVE INSULATION VALUE (16" O.C. FRAMING)		RSI 4.61 (R-26.8)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.07 (R-23.6)	

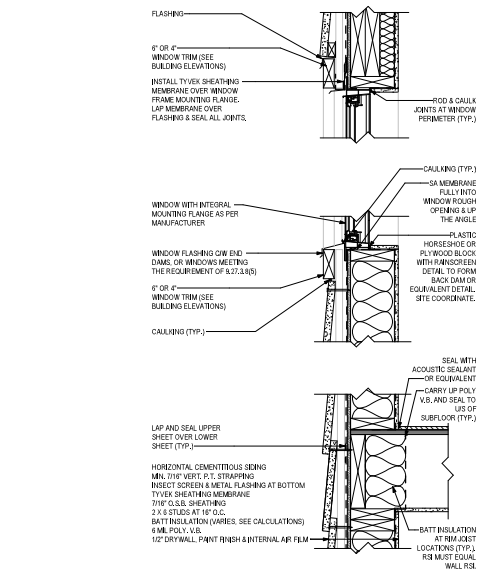
SLAB ON GRADE			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
ASSEMBLY DESCRIPTION			
4" CONCRETE SLAB	0.08		
2" EXPANDED POLYSTYRENE INSULATION	2.03		
4" GRANULAR FILL	0.01		
INSULATION CALC: 3.8R VALUE PER INCH			
(1) INTERIOR AIR FILM	0.12		
(2) FLOORING MATERIAL: CARPET & RUBBER	0.22		
(3) 1/4" PLANK SUBFLOOR	0.14		
(4) 1/4" AIR BAR	0.18		
(5) POLYETHYLENE	0.01		
(6) 1/2" GYPSUM CEILING BOARD	0.08		
(7) EXTERIOR AIR FILM	0.03		
TOTAL EFFECTIVE INSULATION VALUE (12" O.C. FRAMING)		RSI 4.86 (R-26.8)	
TOTAL EFFECTIVE INSULATION VALUE (16" O.C. FRAMING)		RSI 4.61 (R-26.8)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.07 (R-23.6)	

RIM JOIST SPACE (HOLLOW BACKED VINYL LONGBOARD 3/8")			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 12" O.C.	RSI 4.93 (R-28)	RSI 4.46 (R-25.4)	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 16" O.C.	RSI 4.93 (R-28)	RSI 4.14 (R-23.6)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) EXTERIOR AIR FILM	0.03		
(2) VINYL CLADDING: HOLLOW BACKED	0.11		
(3) SHEATHING MEMBRANE	0.01		
(4) 1/2" O.S.B. SHEATHING	0.08		
(5) POLYETHYLENE	0.01		
(6) 1/2" GYPSUM WALL BOARD	0.08		
(7) EXTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE		RSI 5.26 (R-23.6)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 5.26 (R-23.6)	

FIREPLACE WALL ASSEMBLY (HOLLOW BACKED VINYL LONGBOARD 3/8")			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 12" O.C.	RSI 4.93 (R-28)	RSI 4.46 (R-25.4)	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 16" O.C.	RSI 4.93 (R-28)	RSI 4.14 (R-23.6)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) EXTERIOR AIR FILM	0.03		
(2) VINYL CLADDING: HOLLOW BACKED	0.11		
(3) SHEATHING MEMBRANE	0.01		
(4) 1/2" O.S.B. SHEATHING	0.08		
(5) POLYETHYLENE	0.01		
(6) 1/2" GYPSUM WALL BOARD	0.08		
(7) EXTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE		RSI 5.26 (R-23.6)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 5.26 (R-23.6)	

FIREPLACE WALL ASSEMBLY (HOLLOW BACKED VINYL LONGBOARD 3/8")			
AS PER CBC 3.9.1 LATEST REVISION WITH NO HEAT RECOVERY VENTILATOR			
DESCRIPTION	NOMINAL	EFFECTIVE	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 12" O.C.	RSI 4.93 (R-28)	RSI 4.46 (R-25.4)	
R-20 BATT INSULATION IN 2 X 10 WOOD FRAMING AT 16" O.C.	RSI 4.93 (R-28)	RSI 4.14 (R-23.6)	
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION			
(1) EXTERIOR AIR FILM	0.03		
(2) VINYL CLADDING: HOLLOW BACKED	0.11		
(3) SHEATHING MEMBRANE	0.01		
(4) 1/2" O.S.B. SHEATHING	0.08		
(5) POLYETHYLENE	0.01		
(6) 1/2" GYPSUM WALL BOARD	0.08		
(7) EXTERIOR AIR FILM	0.12		
TOTAL EFFECTIVE INSULATION VALUE		RSI 5.26 (R-23.6)	
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 5.26 (R-23.6)	

## 9.36.2.5 BLDG ENVELOPE - CONT. OF INSULATION



SCALE: 1 1/2" = 1'-0"



SCALE: 1" = 1'-0"

