SCHEERHOORN COTTAGE

ELEVATION:

ELEVATION:

KEY MAP 2 OR SCHEMATIC SITE PLAN:

ENERGY EFFICIENCY DESIGN AS PER OBC 2012 SB-12:

GROSS WALL AREA - 2,504.92 SQ FT (232.72M2)
GROSS WINDOWS, GLASS AREA ETC. - 456.95 SQ FT (42.45M2)
RATIO - 18.24%

TABLE 3.1.1.2.A (IP)
ZONE 1 - COMPLIANCE PACKAGES FOR SPACE HEATING EQUIPMENT WITH AFUE ≥ 92%
FORMING PART OF SENTENCE 3.1.1.2.(1)

COMPONENT	THERMAL VALUES [3]	COMPLIANCE PACKAGES					
		A1	A2	A3	A4	A5	A6
CEILING WITH ATTIC SPACE	MIN. NOMINAL R[1]	60	50	50	60	50	60
	MAX. U[4]	0.017	0.017	0.020	0.017	0.020	0.017
	MIN. EFFECTIVE R[6]	59.22	59.22	49.23	59.22	49.23	59.22
CEILING WITHOUT ATTIC SPACE	MIN. NOMINAL R[1]	31	31	31	31	31	31
	MAX. U[4]	0.036	0.036	0.036	0.036	0.036	0.036
	MIN. EFFECTIVE R[6]	27.65	27.65	27.65	27.65	27.65	27.65
EXPOSED FLOOR	MIN. NOMINAL R[1]	31	31	35	31	35	31
	MAX. U[4]	0.034	0.034	0.031	0.034	0.031	0.034
	MIN. EFFECTIVE R[6]	29.80	29.80	32.02	29.80	32.02	29.80
WALLS ABOVE GRADE	MIN. NOMINAL R[1]	22	19 + 5ci	14 + 7.5ci	22 + 5ci	19 + 5ci	22 + 5ci
	MAX. U[4]	0.059	0.049	0.054	0.047	0.049	0.047
	MIN. EFFECTIVE R[6]	17.03	20.32	18.62	21.40	20.32	21.40
BASEMENT WALLS[6]	MIN. NOMINAL R[1]	20ci	12 + 10ci	20ci	20ci	12 + 5ci	20ci
	MAX. U[4]	0.047	0.048	0.047	0.047	0.063	0.047
	MIN. EFFECTIVE R[6]	21.12	20.84	21.12	21.12	15.96	21.12
BELOW GRADE SLAB ENTIRE SURFACE > 600MM BELOW GRADE	MIN. NOMINAL R[1]	-	-	-	-	-	-
	MAX. U[4]	-	-	-	-	-	-
	MIN. EFFECTIVE R[6]	-	-	-	-	-	-
HEATED SLAB OR SLAB ≤ 600MM BELOW GRADE	MIN. NOMINAL R[1]	10	10	10	10	10	10
	MAX. U[4]	0.090	0.090	0.090	0.090	0.090	0.090
	MIN. EFFECTIVE R[6]	11.13	11.13	11.13	11.13	11.13	11.13
EDGE OF BELOW GRADE SLAB ≤ 600MM BELOW GRADE	MIN. NOMINAL R[1]	10	10	10	10	10	10
WINDOWS AND SLIDING GLASS DOORS	MAX. U[5]	0.28	0.28	0.25	0.28	0.28	0.28
	ENERGY RATING	25	25	29	25	25	25
SKYLIGHTS	MAX. U[5]	0.49	0.49	0.49	0.49	0.49	0.49
SPACE HEATING EQUIP.	MIN. AFUE	96%	95%	94%	96%	94%	92%
HRV	MIN. SRE	75%	75%	81%	75%	70%	65%
DOM. WATER HEATER[7]	MIN. EF	0.80	0.70	0.67	0.67	0.80	0.80
COLUMN 1	2	3	4	5	6	7	8

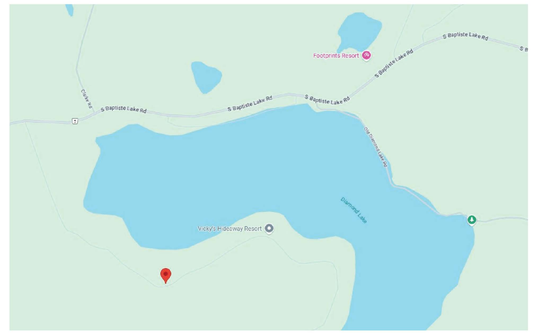
SB-12, 3.1.1.1.
(B) EXCEPT AS PERMITTED IN SENTENCES 3.1.1.11.(3), WHERE THE RATIO OF THE GROSS AREA OF WINDOWS, SIDELIGHTS, SKYLIGHTS, GLAZING IN DOORS AND SLIDING GLASS DOORS TO THE GROSS AREA OF PERIPHERAL WALLS MEASURED FROM GRADE TO THE TOP OF THE UPPER MOST CEILING IS MORE THAN 17% BUT NOT MORE THAN 22% THE BUILDING SHALL COMPLY WITH A COMPLIANCE PACKAGE SELECTED FROM TABLES 3.1.1.2.A TO 3.1.1.2.C, TABLES 3.1.1.3.A TO 3.1.1.3.D AND TABLE 3.1.1.11 AND THE OVERALL COEFFICIENT OF HEAT TRANSFER OF THE FENESTRATION SHALL BE UPGRADED TO
(A) 1.6 WHERE 1.8 IS REQUIRED BY THE SELECTED COMPLIANCE PACKAGE OR PERMITTED BY ARTICLE 3.1.1.4.,
(B) 1.4 WHERE 1.6 IS REQUIRED BY THE SELECTED COMPLIANCE PACKAGE OR PERMITTED BY ARTICLE 3.1.1.4.,
(C) 1.2 WHERE 1.4 IS REQUIRED BY THE SELECTED COMPLIANCE PACKAGE OR PERMITTED BY ARTICLE 3.1.1.4.,
(D) 1.0 WHERE 1.2 IS REQUIRED BY THE SELECTED COMPLIANCE PACKAGE OR PERMITTED BY ARTICLE 3.1.1.4., (SEE APPENDIX A.)

NOTES TO TABLE 3.1.1.2.A (IP):
(1) THE VALUES LISTED ARE MINIMUM NOMINAL R VALUES FOR THE THERMAL INSULATION COMPONENT ONLY
(2) U-VALUE AND EFFECTIVE R VALUE SHALL INCLUDE ENTIRE CEILING ASSEMBLY COMPONENTS, FROM INTERIOR AIR FILM TO VENTED SPACE AIR FILM ABOVE INSULATION
(3) U-VALUE AND EFFECTIVE R VALUE SHALL INCLUDE ENTIRE EXPOSED FLOOR OR ABOVE GRADE WALL ASSEMBLY COMPONENTS, FROM INTERIOR AIR FILM TO EXTERIOR AIR FILM
(4) U-VALUE AND EFFECTIVE R VALUE SHALL INCLUDE ENTIRE BASEMENT WALL OR SLAB ASSEMBLY COMPONENTS AND INTERIOR AIR FILM
(5) U-VLAUE IS THE OVERALL COEFFICIENT OF HEAT TRANSFER FOR A WINDOW ASSEMBLY, SLIDING GLASS DOOR ASSEMBLY OR SKYLIGHT ASSEMBLY EXPRESSED IN Btu/(h•ft²•F)
(6) IN THE CASE OF BASEMENT WALL ASSEMBLIES, WHERE R20ci IS REQUIRED R12 + 10ci IS PERMITTED TO BE USED OR VISE VERSA; OR WHERE R12 + 5ci IS REQUIRED, R15ci IS PERMITTED TO BE USED OR VICE VERSA
(7) IF AN EF OF A WATER TANK IS NOT INDICATED IN A COMPLIANCE PACKAGE, THERE IS NO EF REQUIREMENT FOR WATER FOR THAT SPECIFIC COMPLIANCE PACKAGE.
(8) NOMINAL AND EFFECTIVE R VALUES ARE EXPRESSED IN (h•ft² •F)/Btu AND U-VALUES ARE EXPRESSED IN Btu/(h•ft²•F)

SPACE HEATING FUEL: [X] NATURAL GAS [ ] PROPANE [ ] ELECTRICITY [ ] SOLID FUEL [X] OIL [X] EARTH ENERGY

HEATING EQUIPMENT EFFICIENCY: [X] >92% AFUE [ ] >84% - <92% AFUE

OTHER CONDITIONS: [ ] SLAB-ON-GRADE [ ] WALK-OUT BASEMENT [ ] BLOWN-IN INSULATION ABOVE GRADE WALL [X] ICF BASEMENT [X] ICF ABOVE GRADE [ ] SPRAY-APPLIED FOAM INSULATION ABOVE GRADE WALL [X] LOG/POST & BEAM [X] DRAIN WATER HEAT RECOVERY UNIT PROVIDED



KEY MAP 1:

2024 ONTARIO BUILDING CODE MATRIX - PARTS 3 & 9

PROJECT DESCRIPTION:	[X] NEW CONSTRUCTION [ ] ADDITION [ ] RENOVATION [ ] CHANGE OF USE [ ] ADDITION AND RENOVATION DESCRIPTION:			[ ] PART 3 (DIVISION) 1.3.3.(A)	[X] PART 9 (DIVISION) 1.3.3.(A) / 9.10.1.3.(B)
MAJOR OCCUPANCY(S):	C - RESIDENTIAL OCCUPANCY			3.1.2.1.(1)(B)	9.10.2.(B)
SUPERIMPOSED MAJOR OCCUPANCY(S):	[ ] YES [ ] NO [X] N/A DESCRIPTION:			3.2.2.7. (B)	9.10.2.(B)
BUILDING AREA (M²):	EXISTING: 0.00	NEW: 66.43	TOTAL: 66.43	1.4.1.2.(A)	1.4.1.2.(A)
GROSS AREA (M²):	EXISTING: 0.00	NEW: 132.85	TOTAL: 132.85	1.4.1.2.(A)	1.4.1.2.(A)
MEZZANINE AREA (M²):	EXISTING: 0.00	NEW: 0.00	TOTAL: 0.00	3.2.1.1.(B)	9.10.4.1.(B)
BUILDING HEIGHT:	ABOVE GRADE: 2	BELOW GRADE: 1	ABOVE GRADE (M): 9.67	1.4.1.2.(A) / 3.2.1.1.(B)	1.4.1.2.(A) / 9.10.4.(B)
HIGH BUILDING:	[ ] YES	[X] NO		3.2.6.(B)	
NUMBER OF STREETS (FIRE ROUTES):	1			3.2.2.10.(B) / 3.2.5.(B)	9.10.20.(B)
BUILDING CLASSIFICATION:	C - RESIDENTIAL OCCUPANCY			3.2.2.20-93.(B)	9.10.2.(B)
SPRINKLERED BUILDING:	[X] NOT REQUIRED [ ] REQUIRED PROVIDE: [ ] ENTIRE BUILDING [ ] SELECTED COMPARTMENTS [ ] SELECTED FLOOR AREAS [ ] BASEMENT [ ] IN LIEU OR ROOF RATING [ ] NONE DESCRIPTION:			3.2.2.20-93.(B) 3.2.2.18.,21.,22.,29.(B) 3.2.4.1., 3.2.4.9., 3.2.4.12.(B) 3.2.5.12-14.(B)	9.10.8.2.-4.(B) 3.2.4.7.(4)(B)
STANDPIPE REQUIRED:	[X] NOT REQUIRED [ ] REQUIRED			3.2.5.8-11(B)	
FIRE ALARM SYSTEM REQUIRED:	[X] NOT REQUIRED [ ] REQUIRED TYPE PROVIDED: [ ] SINGLE STAGE [ ] TWO STAGE [X] NONE			3.2.4.(B)	9.10.18.(B)
ADEQUATE FIRE FIGHTING WATER SUPPLY:	[X] YES	[ ] NO		3.2.5.7.(B)	9.31.3.(B)
PERMITTED CONSTRUCTION:	[X] COMBUSTIBLE [ ] NON-COMBUSTIBLE [ ] ENCAPSULATED MASS TIMBER			3.2.2.20.-93.(B)	9.10.6.(B), 3.1.5.(B), AND 3.1.4.7.(B)
ACTUAL CONSTRUCTION:	[X] COMBUSTIBLE [ ] NON-COMBUSTIBLE [ ] ENCAPSULATED MASS TIMBER [ ] COMBINATION ENCAPSULATED MASS TIMBER AND NON-COMBUSTIBLE			3.1.6.(B)	
HEAVY TIMBER CONSTRUCTION:	[X] NO	[ ] YES		3.1.4.6-7.(B), 3.2.2.16.(B)	
IMPORTANCE CATAGORY:	[ ] LOW [ ] LOW HUMAN OCCUPANCY [ ] POST-DISASTER SHELTER [X] NORMAL [ ] [ ] HIGH [ ] MINOR STORAGE BUILDING [ ] EXPLOSIVE OR HAZARDOUS SUBSTANCE [ ] POST-DISASTER			4.1.2.1.(3)(B), T4.1.2.1.(B)	1.3.3.2.(A) AND PART 4
SEISMIC CATEGORY:	SEISMIC CATEGORY: SITE CLASS: SEISMIC DESIGN FOR TABLE 4.1.8.18, ITEMS 6 TO 22: [ ] REQUIRED [X] NOT REQUIRED REASON:			4.1.8.4.(1)(B) T4.1.8.5.-8(B) 4.1.8.18.(B)	
OCCUPANT LOAD BASED ON:	OCCUPANCY TYPE	BASED ON	OCCUPANT LOAD (PERSONS)	3.1.17.(B)	9.9.1.3.(B)
DWELLING UNIT:	C - RESIDENTIAL	3 BEDROOM UNIT	6 PERSONS		
BARRIER FREE DESIGN:	[ ] YES [X] NO EXPLANATION:			3.8.(B)	9.5.2.(B) AND 3.8.(B)
BARRIER FREE ENTRANCES:	NUMBER: N/A EXPLANATION:			3.8.1.2.(B)	
HAZARDOUS SUBSTANCES: (SPECIAL PROTECTION)	[ ] YES [X] NO EXPLANATION:			3.3.1.2.(B) / 3.3.1.21.(B)	9.10.1.3.(B)
FIRE RESISTANCE RATING:	FIRE RESISTANCE RATING (H)	SUPPORTING ASSEMBLY (H)	NONCOMBUSTIBLE IN LIEU OF RATING?	3.2.2.20.-93.(B) 3.2.1.2.(B) 3.2.1.4.(B) 3.2.2.15.(B) 3.3.2.1.(B)	9.10.8.(B) AND 9.10.11.(B)
HORIZONTAL ASSEMBLY	N/A	N/A	[ ] YES [ ] NO [X] N/A		
STOREYS BELOW GRADE:	N/A	N/A	[ ] YES [ ] NO [X] N/A		
FLOORS OVER BASEMENT:	N/A	N/A	[ ] YES [ ] NO [X] N/A		
FLOORS:	N/A	N/A	[ ] YES [ ] NO [X] N/A		
MEZZANINE:	N/A	N/A	[ ] YES [ ] NO [X] N/A		
ROOF:	N/A	N/A	[ ] YES [ ] NO [X] N/A		
SPATIAL SEPARATION: (CONSTRUCTION OF EXTERIOR WALLS) - OF NEW CONSTRUCTION ONLY				3.2.3.(B)	9.10.14.(B) OR 9.10.15.(B)

WALL (PROPOSED BUILDING)	AREA OF EBF (M²)	L.D. (M)	L/H OR H/L	PERMITTED MAX. % OF OPENINGS	PROPOSED % OF OPENINGS	F.R.R. (HOURS)	LISTED DESIGN OR DESCRIPTION	WALL CONST.	CLADDING
SOUTHEAST (FRONT)	66.13	140.2±	-	100.00	16.00	-		COMB., NON-COMB., ENCAPSULATED MASS TIMBER	COMB.,
NORTHEAST (RIGHT)	43.0	8.534±	-	100.00	0.00	-		COMB.,	COMB.,
NORTHWEST (REAR)	80.59	13.41±	-	100.00	37.15	-		COMB.,	COMB.,
SOUTHWEST (LEFT)	43.0	1.524±	-	8.00	4.54	-		COMB.,	COMB.,

PLUMBING FIXTURE REQUIREMENTS: -OF NEW CONSTRUCTION ONLY RATIO: MALE:FEMALE = 50:50 EXCEPT AS NOTED OTHERWISE								3.7.4.(B) 3.8.2.3.(B)	9.10.14.(B) OR 9.10.15.(B)
FLOOR LEVEL AREA:	OCCUPANT LOAD	OBC REFERENCE	WC'S REQ'D	WC'S PROVIDED	BF WC'S PROVIDED	BF WC'S PROVIDED	UNIVERSAL WASHROOM REQ'D	UNIVERSAL WASHROOM PROVIDED	
BASEMENT FLOOR:	N/A								
MAIN FLOOR:	N/A								
SECOND FLOOR:	N/A								
THIRD FLOOR:	N/A								

ENERGY EFFICIENCY:	NON-RESIDENTIAL COMPLIANCE OPTION: [ ] SB-10 PRESCRIPTIVE (DIV. 4) [ ] SB-10 PERFORMANCE (DIV. 2) [ ] SB-10 PRESCRIPTIVE (DIV. 2)	RESIDENTIAL COMPLIANCE OPTION: [X] SB-12 PRESCRIPTIVE COMPLIANCE PKG [ ] SB-12 PERFORMANCE COMPLIANCE [ ] SB-12 OTHER: ENERGY STAR FOR NEW HOMES [ ] ENERGUIDE FOR NEW HOUSES	12.2.1.2.(B)	12.2.(B)
	CLIMATIC ZONE: 5	DEGREE DAYS BELOW 18 C: 4740	SB-1 TABLE 2	SB-1 TABLE 2
	FENESTRATION:	GROSS WALL AREA (M2): / GROSS WINDOW AREA: (M2) / RATIO (%):		
	VERTICAL (W+D)	238.4M2 / 42.45M2 / 17.81%		
	SKYLIGHTS	N/A / N/A / N/A		
SOUND TRANSMISSION DESIGN:	IS THERE MORE THAN 1 DWELLING UNIT PER BUILDING? [ ] YES [X] NO MIN. STC RATING OF:		SB-3 5.8.1.2.(2)., 5.8.1.4.(B) & 5.8.1.5(B)	9.11.1.4.(B) 5.8.1.4.(B) & 5.8.1.5(B)
ALTERNATIVE SOLUTIONS:			1.2.1.1.(A) AND 2.1.(C)	1.2.1.1.(A) AND 2.1.(C)

DRAWING LIST:

A0 - COVER SHEET
A1 - FLOOR PLANS
A2 - ROOF PLAN & ELEVATIONS
A3 - ELEVATIONS
A4 - DETAILS & SECTIONS
A5 - GENERAL NOTES
A6 - GENERAL NOTES
A7 - GENERAL NOTES & DETAILS
A8 - AIR BARRIER DETAILS

GENERAL NOTES:

1. BOTH THE CLIENT AND THE CONTRACTOR, INCLUDING ALL SUB-TRADES, SHALL REVIEW ALL DRAWINGS AND VERIFY ALL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CLIENT AND THE CONTRACTOR TO REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
2. THESE DRAWINGS ARE TO BE READ AND NOT TO BE SCALED.
3. THE CONTRACTOR/OWNER IS RESPONSIBLE FOR NOTIFYING THE GOVERNING MUNICIPALITIES FOR ALL REQUIRED INSPECTIONS.
4. IF INSPECTIONS ARE REQUIRED BY THE ENGINEER NOTIFY THE ENGINEER'S OFFICE A MINIMUM OF 24 HOURS IN ADVANCE FOR ANY OF THE FOLLOWING INSPECTIONS THAT MAY APPLY:
   A. EXCAVATION - PRIOR TO POURING FOOTINGS
   B. FLOOR - DURING POUR TO VERIFY CONCRETE & THICKNESS
   C. ALL CONCRETE POURS IN WHICH REINFORCING STEEL IS SPECIFIED.
   D. ROUGH FRAMING - PRIOR TO CLOSE-IN.
   E. TRUSS FRAMING AND BRACING - PRIOR TO CLOSE-IN.
   F. ERECTION OF STRUCTURAL STEEL & WELDING - PRIOR TO CLOSE-IN.
   G. FINAL INSPECTION FOR CERTIFICATION - TO BE COMPLETED WITH BOTH OWNER & CONTRACTOR PRESENT.
5. ALL FOOTINGS TO BEAR DIRECTLY ONTO UNDISTURBED SOIL, THE SOIL BEARING CAPACITY HAS BEEN DESIGNED FOR 1500psf (75kPa). THE SOIL BEARING CAPACITY IS TO BE CONFIRMED ON SITE BY A QUALIFIED SOILS TECHNICIAN PRIOR TO POURING FOOTINGS IF POOR SOILS CONDITIONS ARE ENCOUNTERED WHEN EXCAVATING. THE SOILS REPORT FOR THIS IS TO BE PROVIDED TO THE ENGINEERS OFFICE FOR REVIEW PRIOR TO POURING FOOTINGS IF REQUIRED.
6. CONTRACTOR/OWNER TO COMPLETE AND SUBMIT COPIES OF ALL CONCRETE TESTS AS PER C.S.A. A23.1.
   - ONE TEST REQUIRED PER 100M MINIMUM. IF PROJECT REQUIRED SUCH TEST.
7. ALL TRUSS DRAWINGS AND/OR ENGINEERED FLOOR DRAWINGS SHALL BE DESIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER (PROVINCE OF ONTARIO). CONTRACTOR/OWNER TO SUBMIT TRUSS DRAWINGS AND/OR ENGINEERED FLOOR DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION OF TRUSSES OR ENGINEERED FLOOR. STAMPED TRUSS DRAWINGS AND/OR ENGINEERED FLOOR DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEERS & C.B.O. OFFICES BY THE CONTRACTOR/OWNER PRIOR TO FRAMING INSPECTION.
8. ALL TRUSS BRACING TO BE INSTALLED AS PER TRUSS MANUFACTURERS DESIGN & SPECIFICATIONS AND AS PER ENGINEERS DESIGN & SPECIFICATIONS.
9. CONTRACTOR/OWNER TO SUBMIT SHOP DRAWINGS OF ALL PRECAST AND / OR PRE-ENGINEERED ELEMENTS FOR REVIEW.
9. THE DESIGN ON THESE DRAWINGS IS THE PROPERTY OF THE ENGINEER AND IS NOT TO BE USED OR COPIED WITHOUT CONSENT IN WRITING.
11. CHANGES OR SUBSTITUTIONS ARE NOT TO BE MADE WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
12. CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF TEMPORARY BRACING DURING CONSTRUCTION.

SYMBOLS LEGEND:

- EXISTING WALLS TO BE REMAIN
- EXISTING WALLS TO BE REMOVED
- NEW WALLS
- EXHAUST FAN VENTED TO EXTERIOR SEE HVAC PLAN FOR DETAILS
- 3/A9 BUILDING SECTION REFERENCE
- 2 GRID REFERENCE
- W1 CONSTRUCTION ASSEMBLY REFERENCE
- SD SEE 9.10.18.2 AND 9.10.19 FOR SMOKE DETECTOR REQUIREMENTS
- SD CO SEE 9.32.3.9A FOR CARBON MONOXIDE ALARMS REQUIREMENTS

ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
BM	BEAM
C.L.	CENTRE LINE
CO	CARBON MONOXIDE DETECTOR
CONC.	CONCRETE
CW	COMPLETE WITH
DIA.	DIAMETER
DJ	DOUBLE JOIST
DW	DISHWASHER
EA	EACH
ENG	ENGINEERED
ERV	ENERGY RECOVERY UNIT
E.O.	EACH WAY
F.D.	FLOOR DRAIN
F.F.R.	FIRE RESISTANCE RATING
HR	HOUR
HRV	HEAT RECOVERY UNIT
HVAC	HEATING VENTILATION AIR CONDITIONING
HWT	HOT WATER TANK
O.C.	ON CENTRE
OTA	OPEN TO ABOVE
OTB	OPEN TO BELOW
PL	POINT LOAD
RWL	RAIN WATER LEADER
SB	SOLID BEARING
SBG	SOLID BEARING GIRDER
SD	SMOKE DETECTOR
SJ	SINGLE JOIST
S.T.C.	SOUND TRANSMISSION CLASS
TJ	TRIPLE JOIST
T/O	TOP OF
TYP	TYPICAL
U/S	UNDERSIDE
W/	WITH
W/O	WITH OUT
WD	WOOD
WIC	WALK-IN CLOSET

CONSTRUCTION NORTH

NO:	REVISION:	BY:	DATE:
1	ISSUED FOR PRELIMINARY REVIEW	TS	NOV 26, 2024
2	ISSUED FOR PRELIMINARY REVIEW	TS	NOV 29, 2024
3	ISSUED FOR PRELIMINARY REVIEW	TS	DEC 18, 2024
4	ISSUED FOR FINAL REVIEW	TS	JAN 9, 2025
5	ISSUED FOR FINAL REVIEW	TS	JAN 23, 2025
6	ISSUED FOR PERMIT & CONSTRUCTION	TS	APRIL 14, 2025
7	RE-ISSUED FOR PERMIT & CONSTRUCTION	TS	JUNE 19, 2025

MUNICIPALITY:

MUNICIPALITY OF HASTINGS HIGHLANDS
33011 HWY 62N, P.O. BOX 130,
MAYNOOTH ON, K0L 2S0
PHONE: 613-338-2811

CONSTRUCTED BY:

DESIGNED BY:

girard ENGINEERING
2478153 ONTARIO INC.
682 PEEL SREET
WOODSTOCK ON, N4S 1L3
TEL: 1-519-879-6875
EMAIL: INFO@GIRARDENGINEERING.CA

APPROVED BY:

M. K. VASANTHA 100154B — June 19, 2025 — PROVINCE OF ONTARIO

NOTE: THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER AND ARE NOT VALID UNLESS SEALED WITH RED INK. THESE DRAWINGS ARE NOT TO BE REPRODUCED UNLESS AUTHORIZED BY THE ENGINEER.

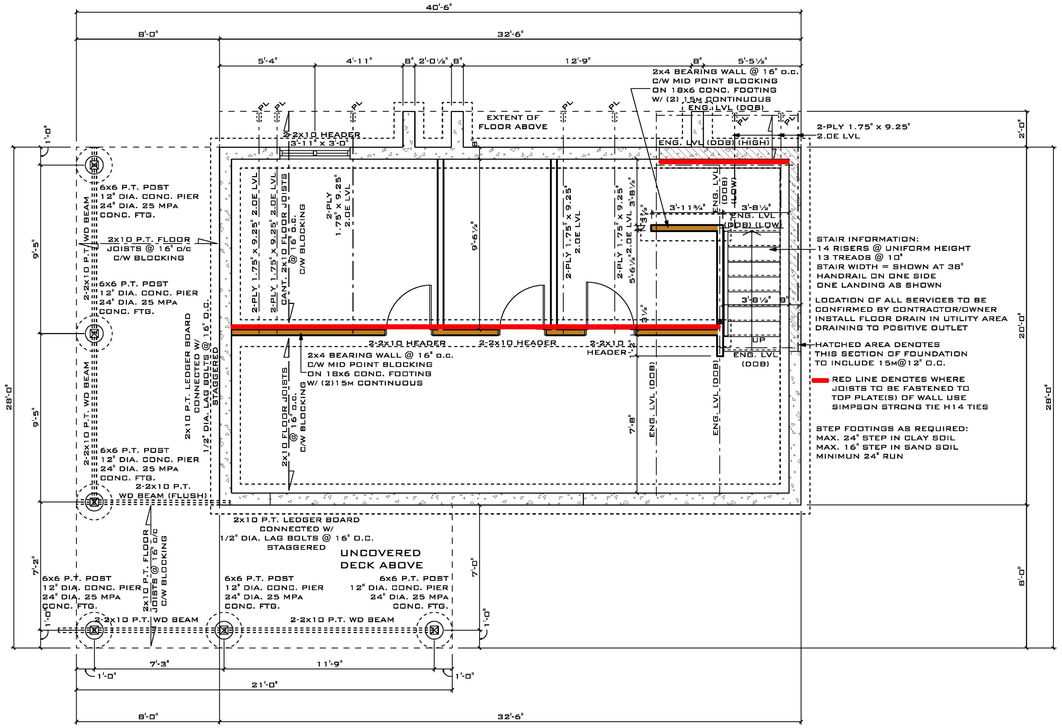
DESIGNED FOR:

DALE & TASHA SCHEERHORN
227 WEST DIAMOND LAKE ROAD
HIGHLAND GROVE, ONTARIO, K0L 2A0
TEL: 519-535-0658
EMAIL: DALEGHSERVICES@GMAIL.COM

PROPOSED COTTAGE

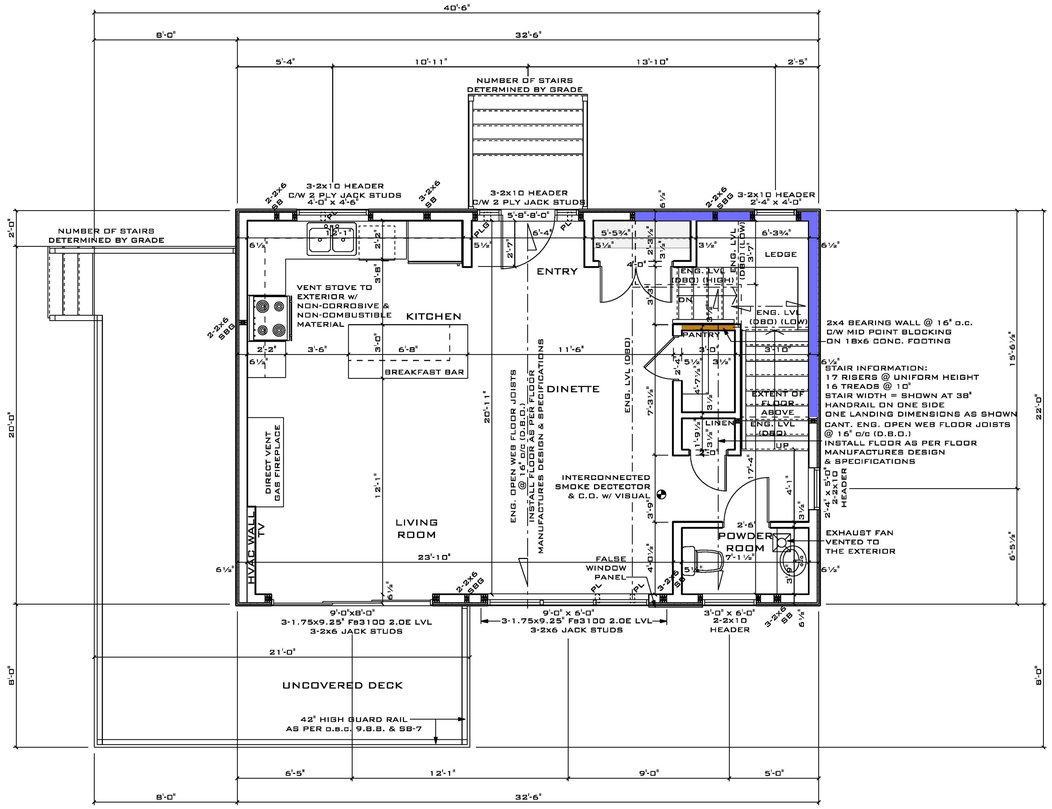
COVER SHEET

SCALE:	1/4" = 1'-0"
DATE:	APRIL 18, 2025
DRAWING BY:	T. STREATCH
DESIGNED/CHECKED BY:	M. VASANTHA
PROJECT NO:	24-286
DRAWING NO:	A-0



FOUNDATION PLAN

SCALE: 1/4" = 1'-0"



MAIN FLOOR PLAN

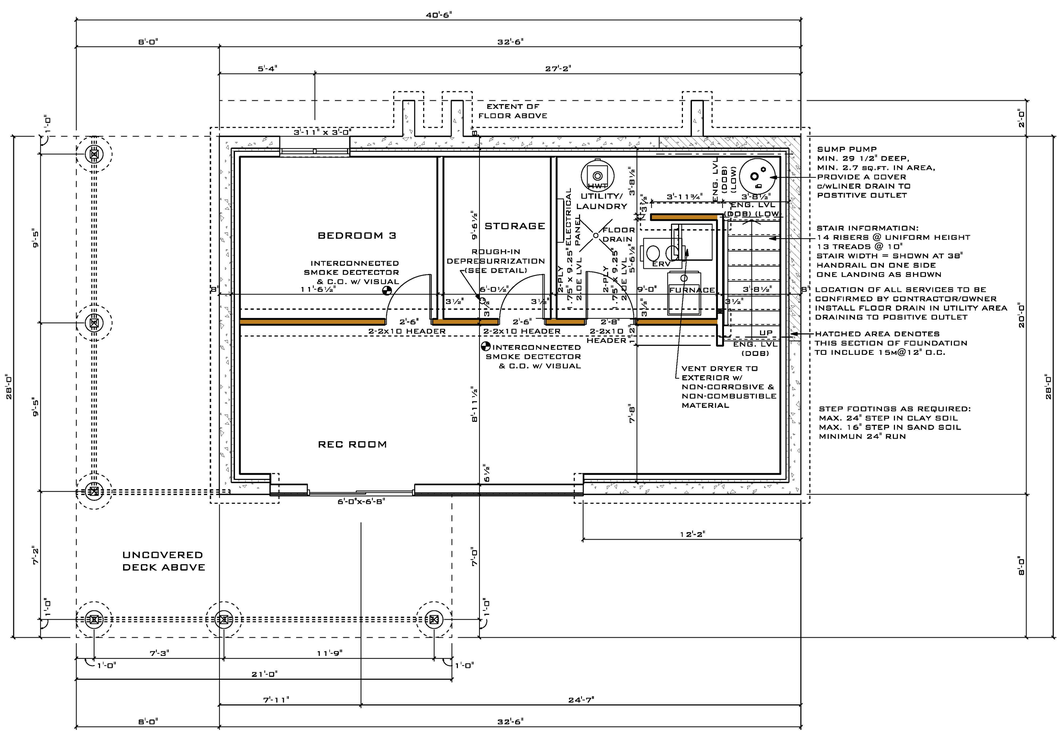
AREAS:
UNFIN. BASEMENT PLAN = 650 SQ.FT.
MAIN FLOOR PLAN = 715 SQ.FT.
UPPER FLOOR PLAN = 715 SQ.FT.

BLUE DENOTES TALL WALL CONSTRUCTION:
HARDI BOARD & BATTEN
STRAPPING AS PER MANUFACTURERS SPECIFICATIONS
"TYVEK" BUILDING WRAP (OR EQUAL)
R5 INSULATION BOARD
2-2x6 STUDS @ 16" O.C. MAX. C/W BLOCK @ 48" O.C.
R19 BATT INSULATION
6 MIL POLY VAPOUR BARRIER
1/2" GYPSUM BOARD

NOTES:
-ALL SMOKE & C.O. DETECTORS MUST BE PROVIDED WITH A BATTERY BACK UP THAT IS CAPABLE OF SUPPLYING POWER FOR AT LEAST 7 DAYS AND IS FOLLOWED BY 4 MINUTE ALARM

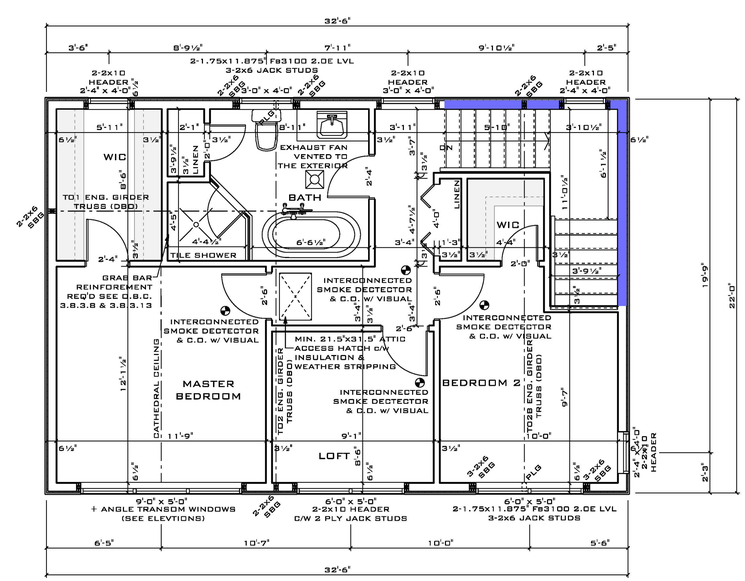
MAIN FLOOR PLAN

SCALE: 1/4" = 1'-0"



BASEMENT PLAN

SCALE: 1/4" = 1'-0"



UPPER FLOOR PLAN

SCALE: 1/4" = 1'-0"

CONSTRUCTION NORTH

MUNICIPALITY:

MUNICIPALITY OF HASTINGS HIGHLAND
33011 HWY 62N, P.O. BOX 130
MAYNOOTH, K0L 2S0
TEL: 613-338-2811

CONSTRUCTED BY:

DESIGNED BY:

girard ENGINEERING
2478153 ONTARIO INC.
682 PEEL ST
WOODSTOCK ON, N4S 1L3
TEL: 1-519-879-6875
EMAIL INFO@GIRARDENGINEERING.CA

M. K. VASANTHA 100075548 June 19, 2025 LICENSE OF QUALITY

NOTE: THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER AND ARE NOT VALID UNLESS SEALED WITH RED INK. THESE DRAWINGS ARE NOT TO BE REPRODUCED UNLESS AUTHROIZEDBY THE ENGINEER.

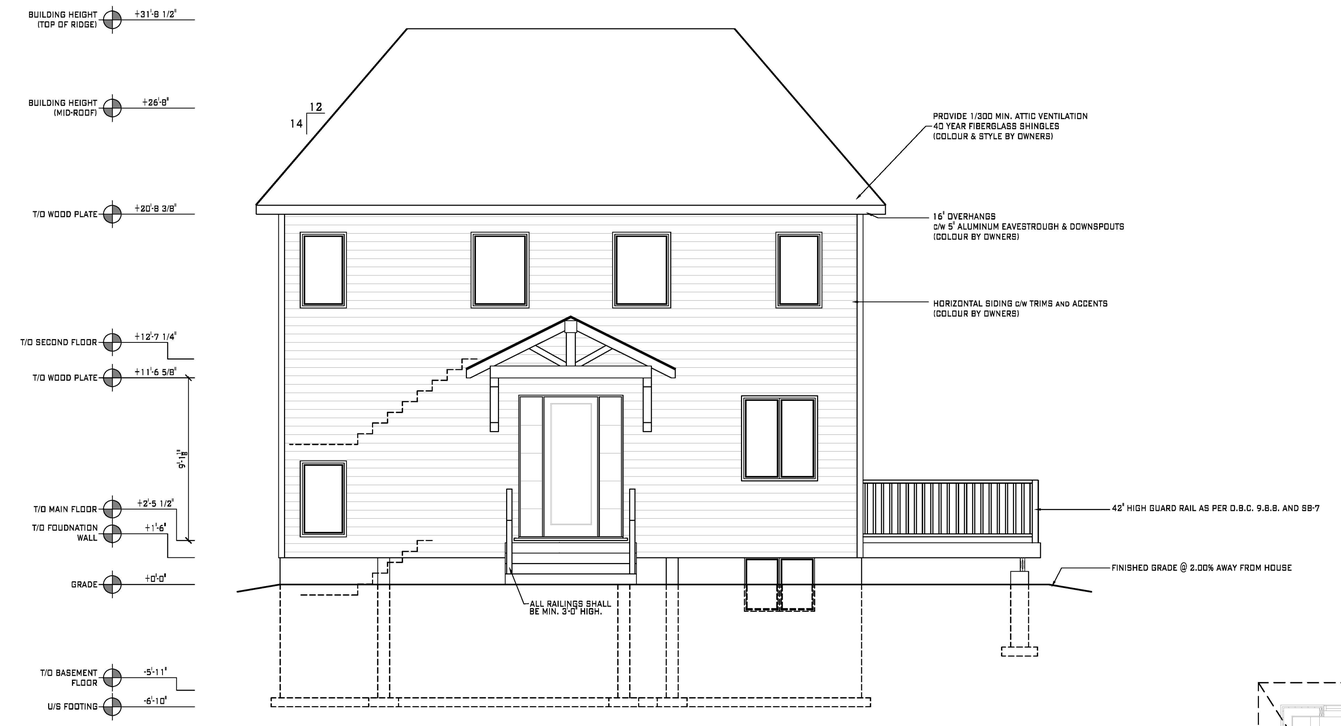
DESIGNED FOR:

DALE & TASHA SCHEERHOORN
227 WEST DIAMOND LAKE ROAD
HIGHLAND GROVE, ON

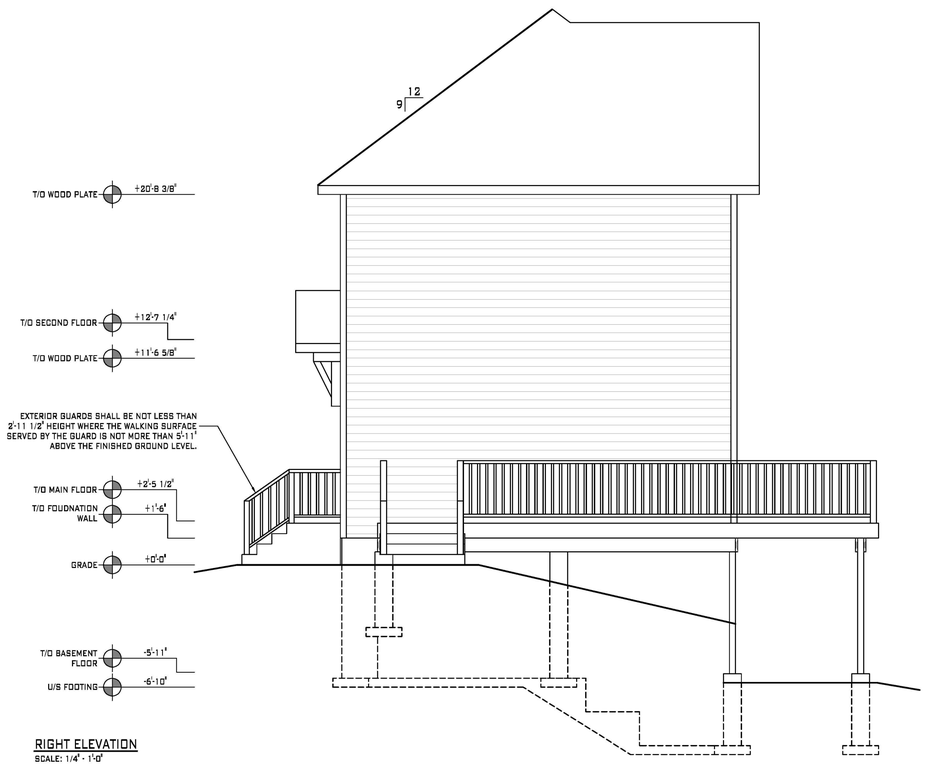
PROPOSED COTTAGE

FLOOR PLANS

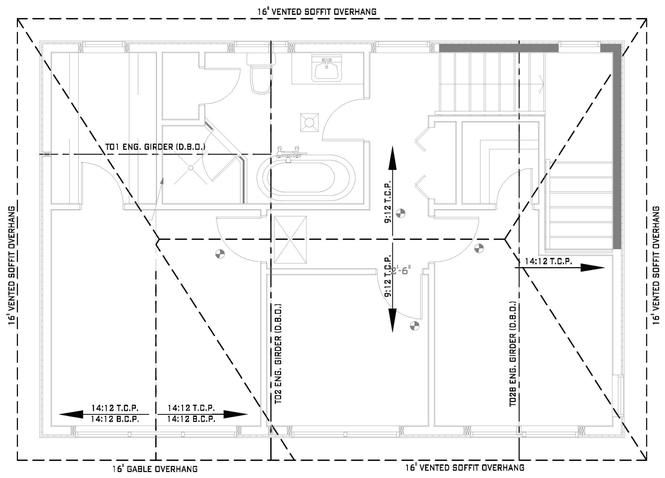
SCALE:	1/4" = 1'-0"	
DATE:	WEDNESDAY, JUNE 18, 2025	PAGE:
DRAWING BY:	T.STREATCH	A-1
DESIGNED/CHECKED BY:	M. VASANTHA	
PROJECT NO:	24-286	



FRONT ELEVATION
SCALE: 1/4" = 1'-0"



RIGHT ELEVATION
SCALE: 1/4" = 1'-0"



ROOF PLAN
SCALE: 1/4" = 1'-0"

CONSTRUCTION NORTH

MUNICIPALITY:

MUNICIPALITY OF HASTINGS HIGHLANDS
33011 HWY 62N, P.O. BOX 130,
MAYNOOTH ON, K0L 2S0
PHONE: 613-338-2811

CONSTRUCTED BY:

DESIGNED BY:

girard ENGINEERING
2478153 ONTARIO INC.
682 PEEL SREET
WOODSTOCK ON, N4S 1L3
TEL: 1-519-879-6875
EMAIL: INFO@GIRARDENGINEERING.CA

APPROVED BY:

M. K. VASANTHA
100075148
June 19, 2025
PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

DESIGNED FOR:

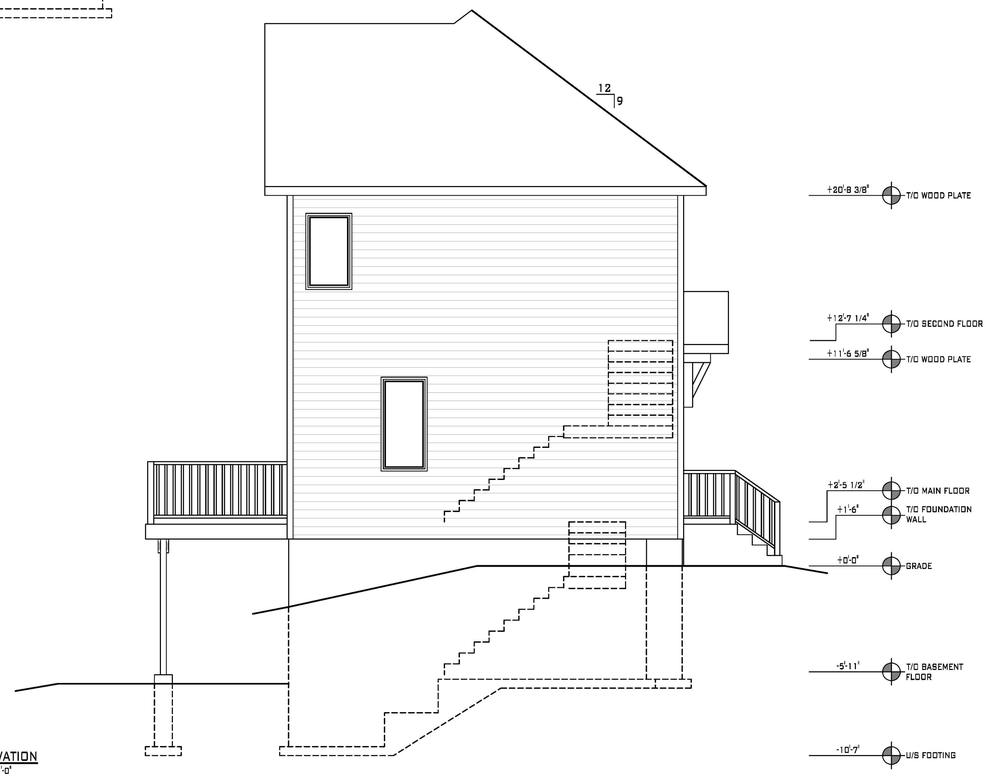
DALE & TASHA SCHEERHORN
227 WEST DIAMOND LAKE ROAD
HIGHLAND GROVE, ONTARIO, K0L 2A0
TEL: 519-535-0658
EMAIL: DALEBHSERVICES@GMAIL.COM

PROPOSED COTTAGE

ROOF PLAN & ELEVATIONS

SCALE:	1/4" = 1'-0"	DRAWING NO:
DATE:	APRIL 14, 2025	A-2
DRAWING BY:	T. STREATCH	
DESIGNED/CHECKED BY:	M. VASANTHA	
PROJECT NO:	24-286	

REAR ELEVATION
SCALE: 1/4" = 1'-0"



LEFT ELEVATION
SCALE: 1/4" = 1'-0"

CONSTRUCTION NORTH

MUNICIPALITY:

MUNICIPALITY OF HASTINGS HIGHLANDS
33011 HWY 62N, P.O. BOX 130,
MAYNOOTH ON, K0L 2S0
PHONE: 613-338-2811

CONSTRUCTED BY:

DESIGNED BY:

girard ENGINEERING
2478153 ONTARIO INC.
682 PEEL SREET
WOODSTOCK ON, N4S 1L3
TEL: 1-519-879-6875
EMAIL: INFO@GIRARDENGINEERING.CA

APPROVED BY:

M. K. VASANTHA
100751468
June 19, 2025
PROVINCE OF ONTARIO

DESIGNED FOR:

DALE & TASHA SCHEERHORN
227 WEST DIAMOND LAKE ROAD
HIGHLAND GROVE, ONTARIO, K0L 2A0
TEL: 519-535-0658
EMAIL: DALEBHSERVICES@GMAIL.COM

PROPOSED COTTAGE

ROOF PLAN & ELEVATIONS

SCALE:	1/4" = 1'-0"	
DATE:	APRIL 14, 2025	DRAWING NO:
DRAWING BY:	T. STREATCH	A-3
DESIGNED/CHECKED BY:	M. VASANTHA	
PROJECT NO:	24-286	

COVERED FRONT ENTRY FRAMING DETAIL

SCALE: N.T.S.

TYPICAL WALL SECTION

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

TYPICAL WALL SECTION

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

CONSTRUCTION NORTH

MUNICIPALITY:

MUNICIPALITY OF HASTINGS HIGHLANDS
33011 HWY 62N, P.O. BOX 130,
MAYNOOTH ON, K0L 2S0
PHONE: 613-338-2811

CONSTRUCTED BY:

DESIGNED BY:

girard ENGINEERING
2478153 ONTARIO INC.
682 PEEL SREET
WOODSTOCK ON, N4S 1L3
TEL: 1-519-879-6875
EMAIL: INFO@GIRARDENGINEERING.CA

APPROVED BY:

M. K. VASANTHA
100751w8
June 19, 2025
PROVINCE OF ONTARIO

DESIGNED FOR:

DALE & TASHA SCHEERHORN
227 WEST DIAMOND LAKE ROAD
HIGHLAND GROVE, ONTARIO, K0L 2A0
TEL: 519-535-0658
EMAIL: DALEBHSERVICES@GMAIL.COM

PROPOSED COTTAGE

SECTION & DETAILS

SCALE:	AS NOTED
DATE:	APRIL 14, 2025
DRAWING BY:	T. STREATCH
DESIGNED/CHECKED BY:	M. VASANTHA
PROJECT NO:	24-286

DRAWING NO: A-4

DESIGN LOADS - HIGHLAND GROVE, ONTARIO

GROUND SNOW LOAD SS 3.1KPA (64.74PSF)
SR 0.40KPA (8.35PSF)
WIND LOADS 1/50 - 0.32KPA (6.68PSF)
1/10 FOR DEFLECTION - 0.25KPA (5.22PSF)
SEISMIC DATA SA(0.2) - 0.151

GENERAL NOTES:

1. THESE GENERAL NOTES SHALL BE READ IN CONJUNCTION WITH THE LATEST REVISION OF DESIGN DRAWINGS AND SPECIFICATIONS PREPARED BY ALL ENGINEERING AND ARCHITECTURAL DISCIPLINES.
2. ALL WORK INCLUDING DESIGN, PROJECT SITE CONDITIONS, DETAILING, SHOP DRAWINGS, CONSTRUCTION, MATERIALS, EQUIPMENT AND SHORING SHALL CONFORM TO THE LATEST EDITIONS OF THE ONTARIO BUILDING CODE, LOCAL BY-LAWS, OCCUPATIONAL HEALTH AND SAFETY ACT, AND THE MINISTRY OF LABOUR REGULATIONS FOR CONSTRUCTION PROJECTS.
3. ALL ITEMS OR SYSTEMS THAT ARE VOLUNTARILY INSTALLED MUST MEET ALL REQUIREMENTS OF THE O.B.C 2024.
4. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES ON THESE DRAWINGS TO THE ENGINEER AND/OR ARCHITECT PRIOR TO CONSTRUCTION.
5. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.
6. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL SUBCONTRACTORS.
7. OPERATIONS OF THE EXISTING FACILITY ARE NOT TO BE INTURRUPTED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR LOSS CAUSED BY CONSTRUCTION OPERATIONS.
8. ALL SHOP DRAWINGS SHALL BE STAMPED BY A LICENSED PROFESSIONAL ENGINEER (PROVINCE OF ONTARIO).
9. THE CONTRACTOR SHALL VERIFY DIMENSIONS OF EXISTING STRUCTURES PRIOR TO THE COMMENCEMENT OF WORK.
10. ALL STRUCTURAL ELEMENTS NOT OBTAINABLE THROUGH O.B.C. CHARTS TO BE ENGINEERED APPROVED (STRUCTURAL ENGINEER TO REVIEW, CALCULATE LOADS AND SIZES, STAMP, AND APPROVE).
11. REFER TO PLANS, CROSS SECTIONS, AND DETAILS FOR ALL TYPICAL CONSTRUCTION DETAILS AND NOTES.
12. ALL UNDERPINNING OF FOUNDATIONS TO BE CONSTRUCTED BELOW THE LEVEL OF THE FOOTINGS OF AN ADJACENT BUILDING AND IS WITHIN THE ANGLE OF REPOSE OF THE SOIL, AS DRAWN FROM THE BOTTOM OF THE FOOTINGS MUST BE DESIGNED BY A PROFESSIONAL ENGINEER AND DURING CONSTRUCTION A PROFESSIONAL ENGINEER IS TO REVIEW THE CONSTRUCTION PROCESS.

SOIL & FOUNDATION NOTES:

1. ALLOWABLE SOIL BEARING CAPACTIY FOR THIS PROJECT HAS BEEN ASSUMED AT 1750 PSF (75 KPA).
2. THE CONTRACTOR SHALL REPORT ANY UNSTABLE SOIL CONDITIONS TO THE ENGINEER. FOOTINGS SHALL NOT BE POURED UNTIL THE EXCAVATION HAS BEEN INSPECTED AND APPROVED BY THE ENGINEER OR SOIL CONSULTANT.
3. THE DIRECTION OF THE SOIL CONSULTANT SHALL BE STRICTLY FOLLOWED.
4. ALL EXTERIOR FOOTINGS SHALL BE POURED ON UNDISTURBED NATIVE SOIL (OR APPROVED ENGINEERED FILL) AT A MINIMUM DEPTH OF 4'-0" (1.20M) BELOW FINISHED GRADE AND AT THE GRADES SHOWN ON THE DRAWINGS.
5. EXCAVATIONS SHALL CONFORM TO THE LATEST EDITIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND THE MINISTRY OF LABOUR REGULATIONS FOR CONSTRUCTION PROJECTS.
6. WALLS TO BE BACKFILLED ON BOTH SIDES SHALL BE BACKFILLED EVENLY UNLESS SHORED ON ONE SIDE TO THE SATISFACTION OF THE ENGINEER. PIT WALLS SHALL NOT BE BACKFILLED UNLESS BRACED AT THE TOP TO THE SATISFACTION OF THE ENGINEER. BACKFILL SHALL BE APPROVED MATERIAL COMPACTED TO 95% S.P.D. UNLESS OTHERWISE NOTED.
7. INSTALLATION DETAILS FOR WATERSTOPS AT WALL/FOOTING INTERFACE AND IN VERTICAL JOINTS SHALL BE PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
8. WALLS AND PIERS SHALL BE CENTRED ON FOOTINGS WITHIN THE MIDDLE THIRD OF THE FOOTING.

CONCRETE AND REINFORCED CONCRETE NOTES:

1. ALL CONCRETE SHALL CONFORM TO CAN/CSA-A23.1., "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION" WITH A MAXIMUM AGGREGATE SIZE OF 3/4" (19MM), TYPE 10 NORMAL PORTLAND CEMENT (UNLESS OTHERWISE NOTED), AND A COMPRESSIVE STRENGTH AT 28 DAYS.
2. SUPPLY AND PLACE CONCRETE AS FOLLOWS: FOOTINGS - 25 MPA, MAX. W/C RATIO OF 0.50, AIR CONTENT 6% ± 1% FOUNDATION WALLS - 25 MPA, MAX. W/C RATIO OF 0.50, AIR CONTENT 6% ± 1%
   PIERS - 25 MPA, MAX. W/C RATIO OF 0.45, AIR CONTENT 6% ± 1%
   SLABS ON GRADE - 25 MPA, MAX. W/C RATIO OF 0.50, NO AIR CONTENT REQUIRED
   PIT WALLS & FLOORS (SUBJECT TO ACID ATTACK)
   - 32 MPA TYPE 50 CEMENT (OR EQUIVALENT), MAX. W/C RATIO OF 0.40, AIR CONTENT 6% ± 1%
   SIDEWALKS, EXPOSED CURBS, AND OTHER CONCRETE
   - 32 MPA, MAX. W/C RATIO OF 0.45, AIR CONTENT 6% ± 1%
3. ALL REINFORCEMENT SHALL CONFORM TO CSA G30.3, G30.5 & G30.18 (LATEST EDITION) WITH A YIELD STRENGTH OF 400 MPA FOR DEFORMED BARS OR 360 MPA FOR WELDED WIRE MESH.
4. MINIMUM CORNER REINFORCING SHALL BE 24"X24" (600MMX600MM) 'L'-BARS.
5. MINIMUM COVER ON REINFORCING FOR FORMED CONCRETE EXPOSED TO EARTH OR WEATHER SHALL BE 2" (50MM) FOR 20M OR LARGER BARS, 1 1/2" (38MM) FOR 15M OR SMALLER BARS, 3" (75MM) FOR REINFORCING IN FOOTINGS AND UNFORMED CONCRETE AGAINST EARTH, 1" (25MM) FOR SLABS AND WALLS NOT EXPOSED TO EARTH OR WEATHER, 1 1/2" (38MM) FOR REINFORCING IN BEAMS, AND 2" (50MM) FOR MAIN PIER STEEL.
6. CONDUITS OR PIPES IN SLABS SHALL NOT EXCEED 1/3 OF THE SLAB THICKNESS IN DIAMETER AND SHALL HAVE A MINIMUM COVER OF 1" (25MM).
7. CONTROL JOINTS SHALL BE INSTALLED AS SHOWN OR AS NOTED ON DRAWINGS WITH A MAXIMUM SPACING OF 30'-0" (9.00M) IN WALLS. MAXIMUM SLAB POUR LENGTH OF 100'-0" (30.00M). ALL SAW CUTS SHALL BE A MINIMUM OF 1/3 OF THE SLAB DEPTH AND SHALL BE CUT WITHIN 24 HOURS OF THE POUR.

STRUCTURAL STEEL NOTES:

1. STEEL SHALL CONFORM TO CAN/CSA-S16-14 "DESIGN OF STEEL STRUCTURES".
2. THE GENERAL REQUIREMENTS FOR STRUCTURAL STEEL SHALL CONFORM TO CAN/CSA G40.23-13 / G40.21-13 FORWALLS - 25 MPA, STRUCTURAL STEEL QUALITY GRADES OF MATERIAL (UNLESS NOTED OTHERWISE):
   - HOLLOW STRUCTURAL STEEL SECTIONS - 350W, CLASS 'C'
   - STRUCTURAL PIPE - ASTM A53 (240MPA)
   - OTHER STRUCTURAL STEEL & MISCELLANEOUS METAL - 350W
   - BOLTS, NUTS & WASHERS (STEEL TO STEEL) - ASTM A325
   - ANCHOR BOLTS - ASTM A307
   - WELDS - E49XX (490MPA)
3. WELDING SHALL BE PERFORMED BY PERSONS CERTIFIED BY THE CANADIAN WELDING BUREAU IN CONFORMANCE WITH MINIMUM THE LATEST CSA STANDARD FOR WELDING - CLAUSE 24.3 OF S16-01.
4. SHOP DRAWINGS FOR ALL FABRICATED STEEL MEMBERS SHALL BE STAMPED BY A LICENSED PROFESSIONAL ENGINEER (PROVINCE OF ONTARIO) AND SUBMITTED TO THE ENGINEER PRIOR TO CONSTRUCTION.

WOOD NOTES:

1. STRUCTURAL WOOD ELEMENTS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH CAN/CSA 086-01 "ENGINEERING DESIGN IN WOOD" AND THE WOOD DESIGN MANUAL (CANADIAN WOOD COUNCIL) LATEST EDITIONS.
2. WOOD TRUSSES SHALL BE DESIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER (PROVINCE OF ONTARIO). THE CONTRACTOR SHALL SUBMIT TRUSS SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
3. WOOD STUDS, JOISTS, NAILERS, BLOCKING, BUILT-UP BEAMS, AND COLUMNS SHALL BE S.P.F. NO. 2 (CONSTRUCTION GRADE) OR BETTER - CONFORMING TO CAN/CSA-041-91 "SOFT WOOD LUMBER". GRADING SHALL CONFORM TO THE NATIONAL LUMBER GRADES AUTHORITY "STANDARD GRADING RULES FOR CANADIAN LUMBER". WOOD FRAME CONSTRUCTION SHALL CONFORM TO THE ONTARIO BUILDING CODE 2006 - SECTION 9.23.
4. PLYWOOD SHEATHING SHALL CONFORM TO CSA STANDARD 0121-M1978 "DOUGLAS FIR PLYWOOD" AND 0151-M1978 "CANADIAN SOFT WOOD PLYWOOD".
5. WAFERBOARD AND O.S.B. SHALL CONFORM TO CSA STANDARD CAN3-0437.1-M85 "WAFERBOARD AND STRANDBOARD".
6. FASTENING DEVICES (NAILS) SHALL CONFORM TO CSA STANDARD B111-1974 "WIRE NAILS, SPIKES, AND STAPLES".
7. TRUSS TIE DOWNS, JOIST HANGERS, ETC, SHALL CONFORM TO "ACCEPTANCE CRITERIA FOR JOIST HANGERS AND SIMILAR DEVICES" (THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS) AND SHALL BE A MINIMUM OF 20 GUAGE GALVANIZED STEEL.

OBC 2024 REFERNECES:

9.1. -GENERAL

9.1.1.7. RADON
(1) IN ADDITION TO ALL OTHER REQUIREMENTS, A BUILDING IN THE FOLLOWING DESIGNATED AREAS SHALL BE DESIGNED AND CONSTRUCTED SO THAT THE ANNUAL AVERAGE CONCENTRATION OF RADON 222 DOES NOT EXCEED 200 BQ/M3 IF AIR AND THE ANNUAL AVERAGE CONCENTRATION OF THE SHORT LIVED DAUGHTERS OF RADON 222 DOES NOT EXCEED 0.02 WORKING LEVEL INSIDE THE BUILDING FOR,
(A) THE CITY OF ELLIOT LAKE IN THE TERRITORIAL DISTRICT OF ALGOMA,
(B) THE TOWNSHIP OF FARADAY IN THE COUNTY OF HASTINGS, AND
(C) THE GEOGRAPHIC TOWNSHIP OF HYMAN IN THE TERRITORIAL DISTRICT OF SUDBURY

9.1.1.9.- SITE ASSEMBLED AND FACTORY-BUILT BUILDINGS
(1) EXCEPT AS PROVIDED IN SENTENCE (2) AND IN SENTENCES 12.2.1.2(1) AND (2), A MANUFACTURED BUILDING IS DEEMED TO COMPLY WITH THIS CODE IF IT IS DESIGNED AND CONSTRUCTED IN COMPLIANCE WITH
(A) CSA Z240.2.1, "STRUCTURAL REQUIREMENTS FOR MANUFACTURED HOMES", IF THE BUILDING IS CONSTRUCTED IN SECTION NOT WIDER THAN 4.88M, OR
(B) CSA A277, "PROCEDURE FOR CERTIFICATION OF PREFABRICATED BUILDINGS, MODULES, AND PANELS.

9.3.-MATERIALS, SYSTEMS AND EQUIPMENT

9.3.1.1. GENERAL
(1) EXCEPT AS PROVIDED IN SENTENCE (2) AND ARTICLES 9.3.1.6. AND 9.3.1.7. UNREINFORCED AND NOMINALLY REINFORCED CONCRETE SHALL BE DESIGNED, MIXED, PLACED, CURED AND TESTED IN ACCORDANCE WITH THE REQUIREMENT FOR "R" CLASS CONCRETE STATED IN SECTION 9 OF CSA A23.1, "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION."

9.3.1.4. AGGREGATES
(1) AGGREGATES SHALL
(A) CONSIST OF SAND, GRAVEL, CRUSHED ROCK, CRUSHED AIR-COOLED BLAST FURNACE SLAG, EXPANDED SHALE OR EXPANDED CLAY CONFORMING TO CSA A23.1, "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION." AND
(B) BE CLEAN, WELL-GRADED AND FREE OF INJURIOUS AMOUNT OF ORGANIC AND OTHER DELETERIOUS MATERIAL.

9.3.1.6.- COMPRESSIVE STRENGTH
(1) EXCEPT AS PROVIDED ELSEWHERE IS THIS PART, THE COMPRESSIVE STRENGTH OF UNREINFORCED CONCRETE AFTER 28 DAYS SHALL BE NOT LESS THAN,
(A) 32 MPA FOR GARAGE FLOORS, CARPORT FLOORS AND ALL EXTERIOR FLATWORK,
(B) 20 MPA FOR INTERIOR FLOOR OTHER THAN THOSE FOR GARAGE AND CARPORTS, AND
(C) 15 MPA FOR ALL OTHER APPLICATIONS
(2) SITE-BATCH CONCRETE USED FOR GARAGE FLOORS, CARPORT FLOORS AND EXTERIOR FLATWORK SHALL HAVE AIR ENTRAINMENT OF 5-8%.

9.3.1.7. CONCRETE MIXES
(1) FOR PRE-MIXED CONCRETE AND FOR THE SITE-BATCHED CONCRETE MIXES DESCRIBED IN TABLE 9.3.1.7., THE MAXIMUM RATIO OF WATER TO CEMENTING MATERIALS MEASURED BY EIGHT SHALL NOT EXCEED
(A) 0.45 FOR GARAGE FLOORS, CARPORT FLOORS AND ALL EXTERIOR FLATWORK,
(B) 0.65 FOR INTERIOR FLOORS OTHER THAN THOSE FOR GARAGE AND CARPORTS, AND
(C) 0.70 FOR ALL OTHER APPLICATIONS
(2) THE SIZE OF AGGREGATE IN UNREINFORCED SITE-BATCHED CONCRETE MIXES REFERRED TO IN SENTENCE (1) SHALL NOT EXCEED,
(A) 1/5 THE DISTANCE BETWEEN THE SIDES OF VERTICAL FORMS, OR
(B) 1/3 THE THICKNESS OF FLATWORK

9.3.1.8. ADMIXTURES
(1) ADMIXTURES SHALL CONFORM TO ASTM C260/C26M, "STANDARD SPECIFICATION FOR AIR-ENTRAINING ADMIXTURES FOR CONCRETE, "STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE," AS APPLICABLE.

9.3.2. LUMBER AND WOOD PRODUCTS
9.3.2.1. GRADING MARKING
(1) LUMBER FOR JOISTS, RAFTERS, TRUSSES AND BEAMS AND FOR THE USES LISTED IN TABLE 9.3.2.1. SHALL BE IDENTIFIED BY A GRADE STAMP TO INDICATE ITS GRADE AS DETERMINED BY THE NLGA, "STANDARD GRADING RULES FOR CANADIAN LUMBER."
(2) EXCEPT FOR JOISTS, RAFTERS, TRUSSES AND BEAMS, VISUALLY GRADED LUMBER SHALL CONFORM TO THE GRADES IN TABLE 9.3.2.1.

9.3.2.6. LUMBER DIMENSIONS
(1) LUMBER DIMENSIONS REFERRED TO IN THIS PART ARE ACTUAL DIMENSIONS DETERMINED IN CONFORMANCE WITH CSA 0141, "SOFTWOOD LUMBER."

9.4. STRUCTURAL REQUIREMENTS

9.4.1.1. GENERAL
(1) SUBJECT TO THE APPLICATION LIMITATIONS DEFINED ELSEWHERE IN THIS PART, STRUCTURAL MEMBERS AND THEIR CONNECTIONS SHALL
(A) CONFORM TO REQUIREMENTS PROVIDED ELSEWHERE IN THIS PART,
(B) BE DESIGNED ACCORDING TO GOOD ENGINEERING PRACTICE SUCH AS PROVIDED IN THE CWC 2014, "ENGINEERING GUIDE FOR WOOD FRAME CONSTRUCTION." OR
(C) BE DESIGNED ACCORDING TO PART 4 USING THE LOADS AND DEFLECTION AND VIBRATION LIMITS SPECIFIED IN,
(I) THIS PART OR
(II) PART 4

9.5. DESIGN OF AREAS, SPACES AND DOORWAYS

9.5.2.1.- BARRIER-FREE DESIGN
(1) EXCEPT AS PROVIDED IN SENTENCE (2) AND ARTICLE 3.8.1.1, EVERY BUILDING SHALL BE DESIGNED IN CONFORMANCE WITH SECTION 3.8
(2) THE REQUIREMENTS OF SECTION 3.8. NEED NOT BE PROVIDED FOR DETACHED HOUSES, SEMI-DETACHED HOUSES, HOUSES WITH A SECONDARY SUITE, DUPLEXES, TRIPLEXES, ROW HOUSES AND BOARDING OR ROOMING HOUSES WITH FEWER THAN EIGHT BOARDERS OR ROOMERS.

9.5.2.4. STUD WALL REINFORCEMENT
(1) IF WOOD STUDS OR SHEET STEEL WALL STUDS ENCLOSE THE MAIN BATHROOM IN A DWELLING UNIT, REINFORCEMENT SHALL BE INSTALLED TO PERMIT THE FUTURE INSTALLATION OF THE FOLLOWING:
(A) FOR A WATER CLOSET, A GRAB BAR DESCRIBED IN CLAUSES 3.8.3.8.(3)(A) AND A GRAB BAR DESCRIBED IN CLAUSE 3.8.3.8.(3)(C).
(B) FOR A SHOWER, A GRAB BAR DESCRIBED IN CLAUSE 3.8.3.13.(2)(G), AND
(C) FOR A BATHTUB, A GRAB BAR DESCRIBED IN CLAUSE 3.8.3.13(7)(E).

9.5.3. CEILING HEIGHTS
9.5.3.1. CEILING HEIGHTS OF ROOMS AND SPACES
(1) EXCEPT AS PROVIDED IN SENTENCES (2) AND (3), THE CEILING HEIGHTS AND CLEAR HEIGHTS IN ROOMS OR SPACES IN RESIDENTIAL OCCUPANCIES AND LIVE/WORK UNITS SHALL CONFORM TO TABLE 9.5.3.1
(2) CEILING HEIGHTS IN SECONDARY SUITES SHALL BE NOT LESS THAN 6'-5"
(3) CLEAR HEIGHTS UNDER BEAMS AND DUCTS IN SECONDARY SUITES SHALL BE NOT LESS THAN 6'-1".
(4) AREAS IN ROOMS OR SPACES OVER WHICH CEILING HEIGHT AND CLEAR HEIGHT ARE NOT LESS THAN THE MINIMUM SPECIFIED IN TABLE 9.5.3.1. OR SENTENCE (2) OR (3) SHALL BE CONTIGUOUS WITH THE ENTRY OR ENTRIES TO THOSE ROOM OR SPACES.
9.5.3A-F.2..- ROOM AREAS
ALL MIN. ROOM AREAS TO CONFORM TO THIS SECTION

9.5.5.- DOORWAY SIZES
ALL DOORWAY SIZES TO CONFORM TO THIS SECTION INCLUDING TABLE 9.5.5.1.

9.7. WINDOWS, DOORS AND SKYLIGHTS

9.7.2.2.(9) WINDOWS AND SKYLIGHTS INSTALLED TO PROVIDED REQUIRED NON-HEATING SEASON VENTILATION SHALL CONFORM TO ARTICLE 9.32.2.2. AND TABLE 9.32.2.2.(1)

9.7.2.3.(1) EXCEPT AS REQUIRED IN ARTICLE 9.9.10.1. AND SENTENCE (3), THE MINIMUM WINDOW GLASS AREAS FOR ROOM IN BUILDING OF RESIDENTIAL OCCUPANCY OR ROOMS THAT ARE USED FOR SLEEPING SHALL CONFORM TO TABLE 9.7.2.3

9.7.4.2. GENERAL
(1) MANUFACTURED AND PRE-ASSEMBLED WINDOWS, DOORS AND SKYLIGHTS AND THEIR INSTALLATION SHALL CONFORM TO
(A) AAMA/WDMA/CSA 101/I.S.2/A440, "NORTH AMERICAN FENESTRATION STANDARD/SPECIFICATION FOR WINDOWS, DOORS, AND SKYLIGHTS" (HARMONIZED STANDARDS).
(B) CSA A440S1, "CANADIAN SUPPLEMENT TO AAMA/WDMA/CAS 101/I.S.2/A440-17, NORTH AMERICAN FENESTRATION STANDARD/SPECIFICATION FOR WINDOWS, DOORS AND SKYLIGHTS."
(C) THE REMAINDER OF THIS SUBSECTION, AND
(D) THE APPLICABLE REQUIREMENTS IN SUBSECTION 9.7.6.

9.7.4.3. PERFORMANCE REQUIREMENTS
(4) EXTERIOR WOOD DOORS SHALL CONFORM TO CAN/CSA-O132.2 SERIES, "WOOD FLUSH DOORS," AND SHALL HAVE LEGIBLY INDICATED ON THEM
(A) THE NAME OF THE MANUFACTURER,
(B) THE STANDARD TO WHICH THEY WERE PRODUCED, AND
(C) THE THEY ARE OF AN EXTERIOR TYPE.

9.7.5.2. RESISTANCE TO FORCED ENTRY FOR DOOR
9.7.5.3. RESISTANCE TO FORCED ENTRY FOR WINDOWS
-DOORS AND WINDOWS TO COMPLY WITH THESE ARTICLES

9.9.10. EGRSS FROM BEDROOMS
9.9.10.1. EGRESS WINDOWS OR DOORS FOR BEDROOMS
(1) EXCEPT WHERE A DOOR ON THE SAME FLOOR LEVEL AS THE BEDROOM PROVIDES DIRECT ACCESS TO THE EXTERIOR, EVERY FLOOR LEVE CONTANING A BEDROOM IN A SUITE SHALL BE PROVIDED WITH AT LEAST ONE OUTSIDE WINDOW THAT
(A) IS OPENABLE FROM THE INSIDE WITHOUT THE USE OF TOOLS,
(B) PROVIDES AN INDIVIDUAL, UNOBSTRUCTED OPEN PORTION HAVE A MINIMUM AREA OF 3.8 SQ.FT. WITH NO DIMENSION LESS THAN 15", AND
(C) MAINTAINS THE REQUIRED OPENING DESCRIBED IN CLAUSE (B) WITHOUT THE NEED FOR ADDITIONAL SUPPORT.
(2) EXCEPT FOR BASEMENT AREAS, THE WINDOW REQUIRED IN SENTENCE (1) SHALL HAVE A MAXIMUM SILL HEIGHT OF 3'-3" ABOVE THE FLOOR
(3) WHERE A WINDOW REQUIRED IN SENTENCE (1) OPENS INTO A WINDOW WELL, A CLEARANCE OF NOT LESS THAN 21 1/2"SHALL BE PROVIDED IN FRONT OF THE WINDOW.

9.14.6. SURFACE DRAINAGE
(1) EVERY WINDOW WELL SHALL BE DRAINED TO THE FOOTING LEVEL OR OTHER SUITABLE LOCATION.

9.8.- STAIRS, RAMPS, HANDRAILS & GUARDS

9.8.2.1. STAIR WIDTH
(1) EXCEPT AS PROVIDED IN SENTENCE (2) AND ARTICLE 9.8.4.7. REQUIRED EXIT STAIRS AND PUBLIC STAIRS SERVING BUILDING OF RESIDENTIAL OCCUPANCY SHALL HAVE A WIDTH OF NOT LESS THAN 2'-11 1/2"
(2) EXIT STAIRS SERVING A SINGLE DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL HAVE A WIDTH OF NOT LESS THAN 2'-10".

9.8.2.2. HEIGHT OVER STAIRS
(3) EXCEPT AS PROVIDED IN ARTICLE 9.8.4.7. THE CLEAR HEIGHT OVER STAIRS SERVING A SINGLE DWELLING UNIT OR HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL NOT BE LESS THAN 6'-5".
(4) THE CLEAR HEIGHT OVER STAIRS THAT ARE LOCATED UNDER BEAMS AND DUCTING IN SECONDARY SUITE SHALL NOT BE LESS THAN 6'-1".

9.8.3. STAIR CONFIGURATIONS
9.8.3.3. MAXIMUM HEIGHT OF STAIRS
(1) THE VERTICAL HEIGHT OF ANY FLIGHT OF STAIRS SHALL NOT EXCEED 12'-1".

9.5.4. STEP DIMENSIONS
9.8.4.1. DIMENSIONS FOR RISERS
(1) EXCEPT AS PROVIDED IN ARTICLE 9.8.4.7., THE RISE, WHICH IS MEASURED AS THE VERTICAL NOSING-TO-NOSING DISTANCE, SHALL CONFORM TO TABLE 9.8.4.1.
TABLE 9.8.4.1. RISE FOR RECTANGULAR TREADS, TAPERED TREADS AND WINDERS AND RUN FOR RECTANGULAR TREADS
MAX. RISE =7 7/8" FOR ALL STEPS
MIN. RISE =5" FOR ALL STEPS
MAX. RUN =14" FOR RECTANGULAR TREADS
MIN. RUN =10" FOR RECTANGULAR TREADS

9.8.4.3. DIMENSIONS OF TAPERED TREADS
(1) EXCEPT AS PROVIDED IN SENTENCE (2) AND ARTICLES 9.8.4.6. AND 9.8.4.7., TAPERED TREADS SHALL HAVE A RUN THAT
(A) IS NOT LESS THAN 6" AT THE NARROW END OF THE TREAD, AND
(B) COMPLIES WITH THE DIMENSIONS FOR RECTANGULAR TREADS STATED IN TABLE 9.8.4.1. WHEN MEASURED AT A POINT 12" FROM THE CENTER LINE OF THE HANDRAIL AT THE NARROW END OF THE TREAD.

9.8.4.4. UNIFORMITY AND TOLERANCES FOR RISERS, RUNS AND TREADS
(1) EXCEPT AS PROVIDED IN SENTENCE (2), RISERS SHALL BE OF UNIFORM HEIGHT IN ANY ONE FLIGHT WITH A MAXIMUM TOLERANCE OF
(A) 3/16" BETWEEN ADJACENT TREADS OF LANDINGS, AND
(B) 3/8" BETWEEN THE TALLEST AND SHORTEST RISERS IN A FLIGHT .

9.8.4.6. WINDERS
(1) STAIRS WITHIN UNITS ARE PERMITTED TO CONTAIN WINDERS THAT CONVERGE TO A CENTER POINT PROVIDED
(A) THE WINDERS TURN THROUGH AN ANGLE OF NOT LESS THAN 90°
(B) INDIVIDUAL TREADS TURN THROUGH AN ANGLE OF NOT LESS THAN 30° OR NOT MORE THAN 45°, AND
(C) ADJACENT WINDERS TURN THROUGH THE SAME ANGLE.
(2) WHERE MORE THAN ONE SET OF WINDERS DECRIBED IN SENTENCE (1) IS PROVIDED IN A SINGLE STAIRWAY BETWEEN ADJACENT FLOOR LEVELS, SUCH WINDERS SHALL BE SEPARATED IN PLAN BY AT LEAST 3'-11".

9.8.4.7. SPIRAL STAIRS
(1) SPIRAL STAIRS SHALL HAVE
(A) HANDRAILS ON BOTH SIDES, THE OUTER HANDRAIL BEING NOT LESS THAN MIN. 3'-6" HIGH,
(B) A CLEAR WIDTH NOT LESS THAN 26" BETWEEN HANDRAILS,
(C) RISERS THAT ARE NOT MORE THAN 9 1/2" HIGH,
(D) TREAD THAT
(I) ARE A MINIMUM OF 7 1/2" DEEP AT A POINT 12" FROM THE CENTER LINE OF THE HANDRAILS AT THE NARROWER EDGE,
(II) HAVE A CONSISTENT ANGLE AND UNIFORM DIMENSIONS, AND
(III) TRUN IN THE SAME DIRECTION, AND
(E) NOT LESS THAN 6'-7" CLEAR HEIGHT.
(2) SPIRAL STAIRS CONFORMING TO SENTENCE (1) ARE NOT PERMITTED TO BE USED AS THE ONLY MEANS OF EGRESS WHERE THEY SERVE NOT MORE THAN 3 PERSONS.
(3) EXCEPT AS PERMITTED BY SENTENCE (2), SPIRAL STAIRS SHALL NOT SERVE AS AN EXIT.

9.8.4.9- OPEN RISERS
(1) EXCEPT AS PROVIDED IN SENTENCE (2), STAIRS SHALL HAVE NO OPEN RISERS.
(2) OPEN RISERS ARE PERMITTED IN
(A) INTERIOR AND EXTERIOR STAIRS THAT SERVE A SINGLE DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE,
(B) FIRE ESCAPE STAIRS,
(C) STAIRS THAT ARE PRINCIPALLY USED FOR MAINTENANCE,
(D) STAIRS THAT SERVE SERVICE ROOMS, AND
(E) STAIRS THAT SERVE INDUSTRIAL OCCUPANCIES OTHER THAN STORAGE GARAGES.

9.8.5. RAMPS

9.8.5.2. RAMP WIDTH
(1) EXCEPT AS PROVIDED IN SENTENCE (2) RAMPS SHALL NOT BE LESS THAN 3'-7 1/2" WIDE.
(2) RAMPS SERVING A SINGLE DWELLING UNIT OR A HOUSE WITH SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL NOT LESS THAN 2'-10" WIDE.

9.8.5.3. HEIGHT OVER RAMPS
(1) EXCEPT AS PERMITTED BY SENTENCE (2), THE CLEAR HEIGHT OVER RAMPS SHALL BE NOT LESS THAN 6'-9".
(2) THE CLEAR HEIGHT OVER RAMPS SERVING A SINGLE DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL BE NOT LESS THAN 6'-5".

9.8.4.5. RAMP SLOPE
(1)THE SLOPE OF RAMPS SHALL BE NOTE MORE THAN
(A) 1 IN 10 FOR EXTERIOR RAMPS,
(B) 1 IN 10 FOR INTERIOR RAMPS SERVING RESIDENTIAL OCCUPANCIES,
(C) 1 IN 6 FOR INDUSTRIAL OCCUPANCIES, AND
(D) 1 IN 8 FOR ALL OTHER OCCUPANCIES

9.8.6. -LANDINGS
9.8.6.2. REQUIRED LANDINGS
(1) EXCEPT AS PROVIDED IN SENTENCES (2) TO (4) AND SENTENCE 9.9.6.6.(2), A LANDING SHALL BE PROVIDED
(A) AT THE TOP AND BOTTOM OF EACH FLIGHT OF INTERIOR AND EXTERIOR STAIRS, INCLUDING SITARS IN GARAGES,
(B) AT THE TOP AND BOTTOM OF EVERY RAMP WITH A SLOPE GREATER THAN 1 IN 50, AND
(C) WHERE A DOORWAY OPENS ONTO A STAIR OR RAMP

9.8.6.3. DIMENSIONS OF LANDINGS
(1) EXCEPT AS PROVIDED IN SENTENCES (2) TO (7), LANDINGS SHALL BE AT LEAST AS WIDE AND AS LONG AS THE WIDTH OF THE STAIR OR RAMP IN WHICH THEY OCCUR.

9.8.6.4. HEIGHT OVER LANDINGS
(1) EXCEPT AS PERMITTED BY SENTENCE (2), THE CLEAR HEIGHT OVER LANDINGS SHALL BE NOT LESS THAN 6'-9".
(2) THE CLEAR HEIGHT OVER LANDINGS SERVING A SINGLE DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL BE NOT LESS THAN 6'-5".

9.8.7. HANDRAILS

(1) EXCEPT AS PROVIDED IN SENTENCES (2) TO (4), HANDRAILS SHALL BE INSTALLED ON STAIRS AND RAMPS IN CONFORMANCE WITH TABLE 9.8.7.1.
TABLE 9.8.7.1. NUMBER OF SIDES OF STAIR OR RAMP REQUIRED TO HAVE A HANDRAIL WITHIN A DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE-1 HANDRAIL FOR STAIRS, 1 HANDRAIL FOR RAMPS < 3'-7", 2 HANDRAILS FOR RAMPS >3'-7"
(3) HANDRAILS ARE NOT REQUIRED FOR STAIRS AND RAMPS SERVING A SINGLE DWELLING UNIT, WHERE
(A) INTERIOR STAIRS MAX 2 RISERS,
(B) EXTERIOR STAIRS HAVE NOT MORE THAN 3 RISERS
(C) RAMPS RISE NOT MORE THAN 1'-4".
(4) ONLY ONE HANDRAIL IS REQUIRED ON EXTERIOR STAIRS HAVING MORE THAN 3 RISERS PROVIDED SUCH STAIRS SERVE NOT MORE THAN ONE DWELLING UNIT OR HOUSE WITH A SECONDARY SUITE.
(5) EXCEPT FOR STAIRS WITH WINDERS, WHERE A FLIGHT OF STAIRS WITHIN A DWELLING UNIT CONSISTS OF TAPERED TREADS, OR A MIX OF TAPERED TREADS AND RECTANGULAR TREADS, ONE HANDRAIL SHALL BE INSTALLED ALONG THE NARROW END OF THE TREADS.

9.8.7.2. CONTINUITY OF HANDRAILS
(1) EXCEPT AS PROVIDED IN SENTENCE (3), REQUIRED HANDRAILS SHALL BE CONTINUOUSLY GRASPABLE THROUGHOUT THE LENGTH OF
(A) RAMPS, AND
(B) FLIGHTS OF STAIRS, FROM THE BOTTOM RISER TO TOP RISER.
(3) FOR STAIR OR RAMPS SERVING A SINGLE DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES, A HANDRAIL IS PERMITTED TO START FROM A NEWEL POST OR VOLUTE INSTALLED ON THE BOTTOM TREAD

9.8.7.4. HEIGHT OF HANDRAILS
(2) EXCEPT AS PROVIDED IN SENTENCE (3), CLAUSE 3.8.3.4.(1)(E), AND SENTENCE 9.8.4.7.(1), REQUIRED HANDRAILS SHALL BE 2'-10" TO 3'-6" HIGH.

9.8.7.5. ERGONOMIC DESIGN
(1) THE CLEARANCE BETWEEN A HANDRAIL AND ANY SURFACE BEHIND IT SHALL BE NOT LESS THAN
(A) 2 1/4", IF THE SURFACE BEHIND THE HANDRAIL IS ROUGH OR ABRASIVE, OR
(B) 2", IN ALL OTHER CASES.
(2) ALL HANDRAILS SHALL BE CONSTRUCTED SO AS TO BE CONTINUALLY GRASPABLE ALONG THEIR ENTIRE LENGTH WITH NO OBSTRUCTION ON OR ABOVE THEM TO BREAK A HANDHOLD.

9.8.7.6 PROJECTIONS INTO STAIRS AND RAMPS
(1) HANDRAILS AND PROJECTIONS BELOW HANDRAILS, INCLUDING HANDRAIL SUPPORTS AND STAIR STRINGERS, SHALL NOT PROJECT MORE THAN 4" INTO THE REQUIRED WIDTH OF A STAIR OR RAMP.

9.8.8. GUARDS

9.8.8.1. REQUIRED GUARDS
(1) EXCEPT AS PROVIDED IN SENTENCE (2) AND EXCEPT AT THE LEADING EDGE AT THE TOP OF A FLIGHT, EVERY SURFACE TO WHICH ACCESS IS PROVIDED, INCLUDING BUT NOT LIMITED TO FLIGHTS OF STEPS AND RAMPS, EXTERIOR LANDINGS, PORCHES, BALCONIES, MEZZANINES, GALLERIES AND RAISED WALKWAYS, SHALL BE PROTECTED BY A GUARD ON EACH SIDE THAT IS NOT PROTECTED BY A WALL FOR THE LENGTH WHERE THE DIFFERENCE IN ELEVATION IS MORE THAN 2'-0" BETWEEN THE WALKING SURFACE AND THE ADJACENT SURFACE WITHIN 3'-11".
(3) DOORS IN BUILDING OF RESIDENTIAL OCCUPANCY, WHERE THE FINISHED FLOOR ON E ONE SIDE OF THE DOOR IS MORE THAN 2'-0"ABOVE THE FLOOR OTHER CONSTRUCTED SURFACE OR GROUND LEVEL ON TEH OTHER SIDE OF THE DOOR, SHALL BE PROTECTED BY
(A) GUARD, OR
(B) A MECHANISM CAPABLE OF CONTROLLING THE FREE SWINGING OF THE DOOR SO AS TO LIMIT ANY CLEAR UNOBSTRUCTED OPENING NOT MORE THAN 4" MEASURED EITHER VERTICALLY OR HORIZONTALLY.
(4) EXCEPT AS PROVIDED IN SENTENCE (5), OPENABLE WINDOWS IN BUILDINGS OF RESIDENTIAL OCCUPANCY SHALL BE PROTECTED BY
(A) A GUARD, OR
(B) A MECHANISM THAT CAN ONLY BE RELEASED WITH THE USE OF TOOLS OR SPECIAL KNOWLEDGE TO CONTROL THE FREE SWINGING OR SLIDING OPERATION OF THE OPENABLE PART OF THE WINDOW SO AS TO LIMIT ANY CLEAR UNOBSTRUCTED OPENING TO NOT MORE THAN 4" MEASURED EITHER VERTICALLY OR HORIZONTALLY.
(5) WINDOWS NEED NOT BE PROTECTED IN ACCORDANCE WITH SENTENCE (4), WHERE THE BOTTOM EDGE OF THE OPENABLE PORTION OF THE WINDOW IS LOCATED
(A) MORE THAN 2'-11 1/2" ABOVE FINISHED FLOOR, OR
(B) LESS THAN 5'-11" ABOVE THE FLOOR OR GROUND ON THE OTHER SIDE OF THE WINDOW.
(6) EXCEPT AS PROVIDED IN SENTENCE (7), GLAZING INSTALLED OVER STAIRS, RAMPS AND LANDINGS THAT EXTENDS TO LESS THAN 3'-6" ABOVE THE SURFACE OF THE TREADS, RAMP OR LANDING SHALL BE
(A) PROTECTED BY GUARDS IN ACCORDANCE WITH THIS SUBSECTION, OR
(B) NON-OPENABLE AND DESIGNED TO WITHSTAND SPECIFIC LATERAL LOADS FROM GUARDS IN ARTICLE 4.1.5.14.
(7) IN DWELLING UNITS, GLAZING INSTALLED OVER STAIRS, RAMPS AND LANDINGS THAT EXTENDS TO LESS THAN 2'-11 1/2" ABOVE THE SURFACE OF THE TREADS, RAMP OR LANDING SHALL BE
(A) PROTECTED BY GUARDS IN ACCORDANCE WITH THIS SUBSECTION, OR
(B) NON-OPENABLE AND DESIGNED TO WITHSTAND THE SPECIFIED LATERAL LOADS FOR GUARDS AS PROVIDED IN ARTICLE 4.1.5.14.

9.8.8.3. HEIGHT OF GUARDS
(1) EXCEPT AS PROVIDED IN SENTENCES (2) TO (3.1) ALL GUARDS SHALL BE NOT LESS THAN 3'-6" HIGH.
(2) ALL GUARDS WITHIN DWELLING UNITS OR WITHIN HOUSES WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL BE NOT LESS THAN 2'-11 1/2"
(3) EXTERIOR GUARDS SERVING NOT MORE THAN ONE DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL BE NOT LESS THAN 2'-11 1/2" HEIGHT WHERE THE WALKING SURFACE SERVED BY THE GUARD IS NOT MORE THAN 5'-11" ABOVE THE FINISHED GROUND LEVEL.

9.8.8.5. OPENINGS IN GUARDS
(1) EXCEPT AS PERMITTED IN SENTENCES (3) AND (4), OPENINGS THROUGH GUARDS SHALL BE OF A SIZE THAT PREVENTS THE PASSAGE OF A SPHERICAL OBJECT HAVING A DIAMETER OF 4".
(2) EXCEPT FOR GUARDS THAT SERVE INDUSTRIAL OCCUPANCIES, THE TRIANGULAR OPENINGS FORMED BY STAIR RISERS, STAIR TREADS AND THE BOTTOM ELEMENT OF A REQUIRED GUARD SHALL BE OF A SIZE THAT PREVENTS THE PASSAGE OF A 6"Ø SPHERE.

9.8.8.6. GUARDS DESIGNED NOT TO FACILITATE CLIMBING
(1) GUARDS REQUIRED BY ARTICLE 9.8.8.1. EXCEPT THOSE IN INDUSTRIAL OCCUPANCIES AND WHERE IT CAN BE SHOWN THAT THE LOCATION AND SIZE OF OPENINGS TO NOT REPRESENT A HAZARD, SHALL BE DESIGNED SO THAT NO MEMBER, ATTACHMENT OR OPENING LOCATED BETWEEN 5 1/2" AND 2'-11 1/2" ABOVE THE FLOOR OR WALKING SURFACE PROTECTED BY THE GUARD WILL FACILITATE CLIMBING.

9.8.8.7. GLASS IN GUARDS
(1) GLASS IN GUARDS SHALL BE
(A) SAFETY GLASS OF LAMINATED OR TEMPERED TYPE CONFORMING TO CAN/CGSB-12.1, "SAFETY GLAZING," OR
(B) WIRED GLASS CONFORMING TO CAN/CGSB-12.11-M, "WIRED SAFETY GLASS."

9.8.9. CONSTRUCTION
9.8.9.2. EXTERIOR CONCRETE STAIRS
(1) EXTERIOR CONCRETE STAIR WITH MORE THAN 2 RISERS AND 2 TREADS SHALL BE
(A) SUPPORTED ON UNIT MASONRY OR CONCRETE WALLS OR PIERS NOT LESS THAN 6" IN CROSS-SECTION, OR
(B) CANTILEVERED FROM THE MAIN FOUNDATION WALL.

9.8.9.3. EXTERIOR WOOD STEPS
(1) EXTERIOR WOOD STEPS SHALL NOT BE IN DIRECT CONTACT WITH THE GROUND UNLESS SUITABLY TREATED WITH A WOOD PRESERVATIVE.

9.9. MEANS OF EGRESS

9.9.1.3. OCCUPANT LOAD
(1) THE OCCUPANT LOAD OF A FLOOR AREA OR PART OF A FLOOR AREA SHALL BE BASED ON
(A) TWO PERSONS PER SLEEPING ROOM OR SLEEPING AREA IN A DWELLING UNIT OR SUITE, AND
(B) FOR OCCUPANCIES OTHER THAN AS DESCRIBED IN CLAUSE (A), THE NUMBER PERSONS,
(I) FOR WHICH THE AREA IS DESIGNED, OR
(II) DETERMINED FOR TABLE 3.1.17.1.

9.9.3 DIMENSIONS OF MEAN OF EGRESS
9.9.3.1. APPLICATION
(1) THIS SUBSECTION APPLIES TO EVERY MEANS OF EGRESS EXCEPT
(A) EXISTS THAT SERVE NOT MORE THAN ONE DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES, AND
(B) ACCESS TO EXITS WITHIN DWELLING UNITS AND WITHIN HOUSES WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES.

9.9.3.3. WIDTH OF CORRIDORS
(1) THE WIDTH OF EVERY PUBLIC CORRIDOR, CORRIDOR USED BY THE PUBLIC, AND EXIT CORRIDOR SHALL BE NOT LESS THAN 3'-7".

9.9.3.4. CLEAR HEIGHT
(1) EXCEPT FOR STAIRWAYS, DOORWAYS AND STORAGE GARAGES, THE MINIMUM CLEAR HEIGHT IN EXITS AND ACCESS TO EXITS SHALL BE 6'-11"
(2) THE CLEAR HEIGHT IN EXITS AND ACCESS TO EXITS IN A STORAGE GARAGE SHALL BE NOT LESS THAN 6'-7".

9.9.4.1. APPLICATION
(1) EXCEPT AS PROVIDED IN ARTICLES 9.9.4.4. AND 9.9.4.6., THIS SUBSECTION APPLIES TO THE FIRE PROTECTION OF ALL EXITS EXCEPT EXITS SERVING NOT MORE THAN ONE DWELLING UNIT.

9.9.4.4. OPENINGS NEAR UNENCLOSED EXTERIOR EXIT STAIRS AND RAMPS
(1) WHERE AN ENCLOSED EXTERIOR EXIT STAIR OR RAMP PROVIDES THE ONLY MEANS OF EGRESS FROM A SUITE, AND IS EXPOSED TO FIRE FROM OPENINGS IN THE EXTERIOR WALLS OF ANOTHER FIRE COMPARTMENT, OR ANOTHER DWELLING UNIT, ANCILLARY SPACE OR COMMON SPACE IN A HOUSE WITH A SECONDARY SUITE, THE OPENINGS IN THE EXTERIOR WALLS OF THE BUILDING SHALL BE PROTECTED WITH WIRED GLASS IN FIXED STEEL FRAMES OR GLASS BLOCK CONFORMING TO 9.10.13.5. AND 9.10.13.7. WHEN THE OPENINGS IN THE EXTERIOR WALLS OF THE BUILDING ARE WITHIN 9'-10" HORIZONTALLY AND LESS THAN 32'-10" BELOW OR LESS THAN 16'-5" ABOVE THE EXIT STAIR OR RAMP.

9.9.4.6. OPENING NEAR EXIT DOORS
(1) THIS ARTICLE APPLIES TO
(A) EXIT DOOR SERVING OTHER THAN AN INDIVIDUAL UNIT, AND
(B) EXIT DOORS SERVING AN INDIVIDUAL UNIT WHERE THERE IS NO SECOND AND SEPARATE EXIT FROM THE DWELLING UNIT.
(2) WHERE AN EXTERIOR EXIT DOOR DESCRIBED IN SENTENCE (1) IN ONE FIRE COMPARTMENT IS WITHIN 9'-10" HORIZONTALLY OF AN UNPROTECTED OPENING IN ANOTHER FIRE COMPARTMENT AND THE EXTERIOR WALLS OF THESE FIRE COMPARTMENTS INTERSECT AT AN ANGLE OF LESS THAN 135° THE OPENING SHALL BE PROTECTED WITH WIRED GLASS IN FIXED STEEL FRAMES OR GLASS BLOCK CONFORMING TO ARTICLES 9.10.13.5 AND 9.10.13.7 OR WITH A RATED CLOSURE CONFORMING TO TABLE 9.10.13.1 WITH RESPECT TO THE RATING OF THE FIRE SEPARATION BETWEEN THE TWO COMPARTMENTS.

9.9.5.9. ANCILLARY ROOMS
(1) EXCEPT IN HOUSES WITH A SECONDARY SUITE, ANCILLARY ROOMS SUCH AS STORAGE ROOMS, WASHROOMS, TOILET ROOMS, LAUNDRY ROOMS AND SERVICE ROOMS SHALL NOT OPEN DIRECTLY INTO AN EXIT.

9.9.6. DOORS IN MEANS OF EGRESS
9.9.6.3. CLEAR OPENING WIDTH AT DOORWAYS
(1) EXCEPT AS PROVIDED IN SENTENCE (4), THE CLEAR OPENING WIDTH OF DOORWAYS SHALL COMPLY WITH SENTENCE (2) AT
(A) EXIT DOORS, AND
(B) DOORS THAT OPEN INTO OR ARE LOCATED WITHIN A PUBLIC CORRIDOR OR OTHER FACILITY THAT PROVIDES ACCESS TO EXIT FROM A SUITE.
(3) IN DOORWAYS DESCRIBED IN SENTENCE (1) THAT HAVE A MULTIPLE-LEAF DOORS INSTALLED,
(A) NO ACTIVE LEAF SHALL BE LESS THAN 2'-8" WIDE WHERE ONLY ONE LEAF IS ACTIVE, AND
(B) NO SINGLE LEAF SHALL BE LESS THAN 2'-0" WIDE WHERE TWO LEAVES ARE ACTIVE.

9.9.6.6. NEARNESS OF DOORS TO STAIRS
(1) EXCEPT AS PROVIDED IN SENTENCE (2), THE DISTANCE BETWEEN A STAIR RISER AND THE LEADING EDGE OF A DOOR DURING ITS SWING, EXCEPT FOR DOORS SERVING A SINGLE DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE, SHALL BE NOT LESS THAN 12".

9.9.7.3. DEAD-END CORRIDORS
(2) DEAD-END PUBLIC CORRIDORS IN C & D OCCUPANCIES SHALL CONTAIN ONLY SUITE DOOR OPENINS ARRANGED SO THAT NOT MORE THAN 2 SUCH DOOR HAVE TO BE PASSED REACH THE NEAREST EIXT.
(3) MAX. 0.69 SQ.FT. AREA OF WIRED GLASS IN DOORS REQUIRED BY SENTENCE (2).

9.9.9. EGRESS FROM DWELLING UNITS
9.9.9.1. TRAVEL LIMIT TO EXITS OR EGRESS DOORS
(1) DWELLING UNIT CONTAINING MORE THAN 1 STOREY SHALL HAVE EXITS OR EGRESS DOOR LOCATED SO THAT IT SHALL NOT BE NECESSARY TO TRAVEL UP OR DOWN MORE THAN 1 STOREY TO REACH A LEVEL SERVED BY
(A) AN EGRESS DOOR TO A PUBLIC CORRIDOR, ENCLOSED EXIT STAIR OR EXTERIOR PASSAGEWAY, OR
(B) AN EXIT DOORWAY NOT MORE THAN 1.5M ABOVE ADJACENT GROUND LEVEL.
(2) WHERE A DWELLING UNIT IS NOT LOCATED ABOVE OR BELOW ANOTHER SUITE, THE TRAVEL LIMIT FROM A FLOOR LEVEL IN THE DWELLING UNIT TO A AN EXISTING OR EGRESS DOOR MAY EXCEED 1 STOREY WHERE THE FLOOR LEVEL IS SERVED BY AN OPENABLE WINDOW OR DOOR
(A) PROVIDING AN UNOBSTRUCTED OPENING OF NOT LESS THAN 1M IN HEIGHT AND 0.55M IN WIDTH, AND
(B) LOCATED SO THAT THE SILL IS NOT MORE THAN
(I) 1M ABOVE THE FLOOR, AND
(II) 7M ABOVE ADJACENT GROUND LEVEL.
(3) THE TRAVEL LIMIT FROM A FLOOR LEVEL IN A DWELLING UNIT TO AN EXIT OR EGRESS DOOR MAY EXCEED 1 STOREY WHERE THE FLOOR LEVEL HAS DIRECT ACCESS TO A BALCONY

9.9.9.2. TWO SEPARATE EXITS
(1) EXCEPT AS PROVIDED IN SENTENCE 9.9.7.3.(1) AND EXCEPT FOR DWELLING UNITS IN A HOUSE WITH A SECONDARY SUITE, WHERE AN EGRESS DOOR FROM A SWELLING UNIT OPENS ONTO A PUBLIC CORRIDOR OR EXTERIOR PASSAGEWAY IT SHALL BE POSSIBLE FORM THE LOCATION WHERE THE EGRESS DOOR OPEN ONTO THE CORRIDOR OR EXTERIOR PASSAGEWAY TO GO IN OPPOSITE DIRECTIONS TO 2 SEPARATE EXITS UNLESS THE DWELLING UNIT HAS A SECOND AND SEPARATE MEANS OF EGRESS.

9.9.9.3 SHARED EGRESS FACILITES
(1) EXCEPT FRO DWELLING UNITS IN A HOUSE WITH A SECONDARY SUITE, A DWELLING UNIT SHALL BE PROVIDED WITH A SECOND AND SPEARATE MEANS OF GRESS WHERE AN EGRESS DOOR FROMT HE DWELLING UNIT OPENING ONTO
(A) AN EXIT STAIRWAY SERVING MORE THAN ONE SUITE,
(B) A PUBLIC CORRIDOR
(I) SERVING MORE THAN ONE SUITE, AND
(II) SERVED BY A SINGLE EXIT,
(C) AN EXTERIOR PASSAGEWAY
(I) SERVING MORE THAN ONE SUITE,
(II) SERVED BY A SINGLE EXIT STAIRWAY OR RAMP, AND
(III) MORE THAN 4'-11" ABOVE ADJACENT GROUND LEVEL.
(2) WHERE A DWELLING UNIT IS LOCATED ABOVE ANOTHER DWELLING UNIT OR COMMON SPACE IN A HOUSE WITH A SECONDARY SUITE THE UPPER DWELLING UNIT SHALL BE PROVIDED WITH A SECOND AND SEPARATE MEANS OF EGRESS WHERE AN EGRESS DOOR FROM THE DWELLING UNIT OPENS ONTO AN EXTERIOR PASSAGEWAY THAT
(A) HAS A FLOOR ASSEMBLY WITH A FIRE-RESISTANCE RATING LESS THAN 45 MIN.
(B) IS SERVED BY A SINGLE EXIT STAIRWAY OR RAMP, AND
(C) IS LOCATED MORE THAN 4'-11" ABOVE ADJACENT GROUND LEVEL.

9.9.10.1. EGRESS FROM BEDROOMS
9.9.10.1. EGRESS WINDOWS OR DOORS FOR BEDROOMS
(1)EXCEPT WHERE A DOOR ON THE SAME FLOOR LEVEL AS THE BEDROOM PROVIDE DIRECT ACCESS TO THE EXTERIOR, EVERY FLOOR LEVEL CONTAINING A BEDROOM IN A SUITE SHALL BE PROVIDED WITH AT LEASE ONE OUTSIDE WINDOW THAT
(A) IS OPENABLE FROM THE INSIDE WITHOUT THE USE OF TOOLS,
(B) PROVIDES AN INDIVIDUAL, UNOBSTRUCTED OPEN PORTION HAVING A MIN. AREA OF 0.35M2 WTIH NO DIMENSION LESS THAN 1'-3", AND
(C) MAINTAINS THE REQUIRED OPENING DESCRIBED IN CLAUSE (B) WITHOUT THE NEED FOR ADDITIONAL SUPPORT
(2) EXCEPT FOR BASEMENT AREAS, THE WINDOW REQUIRED IN SENTENCE (1) SHALL HAVE A MAX. SILL HEIGHT OF 3'-4" ABOVE THE FLOOR
(3) WHERE A WINDOW REQUIRED IN SENTENCE (1) OPENS INTO A WINDOW WELL, A CLEARANCE OF NOT LESS THAN 1'-10" SHALL BE PROVIDED IN FRONT OF THE WINDOW.
(4) WHERE THE SASH OF A WINDOW REFERRED TO IN SENTENCE (3) SWINGS TOWARDS THE WINDOW WELL, THE OPERATION OF THE SASH SHALL NOT REDUCE THE CLEARANCE IN A MANNER THAT WOULD RESTRICT AN ESCAPE IN AN EMERGENCY.
(5) WHERE A PROTECTIVE ENCLOSURE IS INSTALLED OVER THE WINDOW WELL REFERRED TO IN SENTENCE (3), THE ENCLOSURE SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE OF THE OPENING MECHANISM
(6) WHEN SLIDING WINDOWS ARE USED, THE MINIMUM DIMENSION DESCRIBED IN SENTENCE (1) SHALLAPPLY TO TEH OPENABLE PORTION OF THE WINDOW

9.10. FIRE PROTECTION

9.10.1.1. SLOPED ROOFS
(1) FOR THE PURPOSES OF THIS SECTION, ROOF WITH SLOPES OF 60° OR MORE TO THE HORIZONTAL AND THAT ARE ADJACENT TO A ROOM OR SPACE INTENDED FOR OCCUPANCY SHALL BE CONSIDERED AS A WALL.

9.10.8. FIRE-RESISTANCE AND COMBUSTIBILITY IN RELATION TO OCCUPANCY, HEIGHT AND SUPPORTED ELEMENTS
9.10.8.1. FIRE-RESISTANCE RATINGS FOR FLOOR AND ROOFS
(1) EXCEPT AS OTHERWISE PROVIDED IN THIS SUBSECTION, THE FIRE-RESISTANCE RATING OF FLOOR AND ROOFS SHALL CONFORM TO TABLE 9.10.8.1. (SEE 9.10.2. FOR MIXED OCCUPANCIES AND 9.10.21 FOR CONSTRUCTION CAMPS.)

9.10.8.3. FIRE-RESISTANCE RATINGS FOR WALLS, COLUMNS AND ARCHES
(1) EXCEPT AS OTHERWISE PROVIDED IN THIS SUBSECTION, ALL LOADBEARING WALLS, COLUMNS AND ARCHES IN THE STOREY IMMEDIATELY BELOW A FLOOR OR ROOF ASSEMBLY SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN THAT REQUIRED FOR THE SUPPORTED FLOOR OR ROOF ASSEMBLY.
(2) LIGHT-FRAME WALLS, COLUMNS ARCHES AND BEAMS AS WELL AS LOADBEARING STEEL ELEMENTS THAT SUPPORT FLOORS BETWEEN DWELLING UNITS IN A HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL BE PROTECTED BY NOT LESS THAN 5/8" THICK TYPE-X GYPSUM BOARD.

9.10.8.10. NON-APPLICATION TO HOUSES
(1) TABLE 9.10.8.1. DOES NOT APPLY TO
(A) A DWELLING UNIT THAT HAS NO OTHER DWELLING UNIT ABOVE OR BELOW IT,
(B) HOUSES WITH A SECONDARY SUITE, WHERE THE FLOOR FRAMING IS PROTECTED ON THE UNDERSIDE BY A CONTINUOUS SMOKE-TIGHT BARRIER OF NOT LESS THAN 5/8" THICK TYPE 'X' GYPSUM BOARD, OR
(C) A DWELLING UNIT THAT IS NOT ABOVE OR BELOW ANOTHER MAJOR OCCUPANCY.

9.10.9. FIRE SEPARATIONS AND SMOKE-TIGHT BARRIERS BETWEEN ROOMS AND SPACES WITHIN BUILDINGS
9.10.9.1. APPLICATION
(1) THIS SUBSECTION APPLIES TO
(A) FIRE SEPARATIONS REQUIRED BETWEEN ROOM AND SPACES IN BUILDINGS, AND
(B) SMOKE-TIGHT BARRIERS REQUIRED IN HOUSES WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES.

9.10.9.2. CONTINUOUS BARRIER
(1) EXCEPT AS PERMITTED IN ARTICLE 9.10.9.3., A WALL OR FLOOR ASSEMBLY REQUIRED TO BE A FIRE SEPARATION SHALL BE CONSTRUCTED AS A CONTINUOUS BARRIER AGAINST THE SPREAD OF FIRE AND RETARD THE PASSAGE OF SMOKE.
(2) EXCEPT AS PERMITTED IN ARTICLE 9.10.9.3., A WALL OR FLOOR ASSEMBLY REQUIRED TO BE AS SMOKE-TIGHT BARRIER SHALL BE CONSTRUCTED AS A CONTINUOUS BARRIER AGAINST THE SPREAD OF SMOKE.
(3) EXCEPT AS PROVIDED IN SENTENCE (6), THE CONTINUITY OF A FIRE SEPARATION WHERE IT ABUTS ANOTHER FIRE SEPARATION OR SMOKE-TIGHT BARRIER, A FLOOR, A CEILING OR A FLOOR SHALL BE MAINTAINED BY A FIRESTOP THAT, WHEN SUBJECTED TO THE FIRE TEST METHOD IN CAN/ULC-S115, "STANDARD METHOD OF FIRE TESTS OF FIRESTOP SYSTEMS," HAS AN FT RATING NOT LESS THAN THE FIRE-RESISTANCE RATING FOR THE ABUTTING FIRE SEPARATION.

9.10.9.9. PENETRATIONS BY RACEWAYS, SPRINKLERS AND FIRE DAMPERS
(5) FIRE DAMPERS ARE PERMITTED TO PENETRATE A FIRE SEPARATION OR A MEMBRANE FORMING PART OF AN ASSEMBLY REQUIRED TO HAVE A FIRE-RESISTANCE RATING WITHOUT HAVING TO MEET THE FIRESTOP REQUIREMENT OF SENTENCE 9.10.9.6.(1), PROVIDED THE FIRE DAMPER IS
(A) INSTALLED IN CONFORMANCE WITH NFPA 80, "STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVE,"
(B) SPECIFICALLY DESIGNED WITH A FIRESTOP, OR
(C) PROVIDED IN CONFORMANCE WITH SENTENCE 9.10.5.1.(3)

9.10.9.13 SEPARATION OF RESIDENTIAL OCCUPANCIES
(1) EXCEPT AS PROVIDED IN SENTENCES (2) AND (4), RESIDENTIAL OCCUPANCIES SHALL BE SEPARATED FROM ALL OTHER MAJOR OCCUPANCIES BY A FIRE SEPARATION HAVING A FIRE-RESISTANCE RATING OF NOT LESS THAN 1H

9.10.9.15. SEPARATION OF SUITES
(1) EXCEPT AS REQUIRED IN ARTICLE 9.10.9.16 AND PERMITTED BY SENTENCE (2), EACH SUITE IN OTHER THAN BUSINESS AND PERSONAL SERVICES OCCUPANCIES SHALL BE SEPARATED FROM ADJOINING SUITES BY A FIRE SEPARATION HAVING A FIRE-RESISTANCE RATING OF NOT LESS THAN 45 MIN.

9.10.9.16 SEPARATION OF RESIDENTIAL SUITES
(1) EXCEPT AS PROVIDED IN SENTENCES (2) AND (3) AND ARTICLE 9.10.21.2., SUITES IN RESIDENTIAL OCCUPANCIES SHALL BE SEPARATED FROM ADJACENT ROOMS AND SUITES BY A FIRE SEPARATION HAVING A FIRE-RESISTANCE RATING OF NOT LESS THAN 45 MIN.
(3) EXCEPT AS PROVIDED IN SENTENCES (4) AND (5), DWELLING UNITS THAT CONTAIN 2 OR MORE STOREY INCLUDING BASEMENTS SHALL BE SEPARATED FROM THE REMAINDER OF THE BUILDING BY A FIRE SEPARATION HAVING A FIRE-RESISTANCE RATING OF NOT LESS THAN 1H
(4) WALLS AND FLOOR-CEILING FRAMING IN A HOUSE WITH SECONDARY SUITE THAT SEPARATE DWELLING UNITS FROM EACHOTHER OR DWELLING UNITS FROM ANCILLARY SPACES AND COMMON SPACES NEED NOT COMPLY WITH SENTENCE (1), WHERE THE WALLS AND FLOOR-CEILING FRAMING ARE PROTECTED BY A CONTINUOUS SMOKE-TIGHT BARRIER OF NOT LESS THAN 5/8" THICK TYPE X GYPSUM BOARD INSTALLED ON (A) BOTH SIDES OF WALLS, AND (B) THE UNDERSIDE OF FLOOR-CEILING FRAMING

9.10.9.18. SEPARATION BETWEEN DWELLING UNITS AND GARAGES
(4) A STORAGE GARAGE ATTACHED TO A BUILDING OF RESIDENTIAL OCCUPANCY SHALL HAVE AN AIR BARRIER SYSTEM BETWEEN THE GARAGE AND REMAIN OF BUILDING TO PROVIDE AN EFFECTIVE BARRIER TO GAS AND EXHAUST FUMES, AND
(B) EVERY DOOR BETWEEN THE GARAGE AND REMAINDER OF THE BUILDING SHALL HAVE A DOOR COMPLETE WITH WEATHER STRIPPING AND A SELF CLOSER CONFORMING TO 9.10.13.15.

9.10.10.4 LOCATIONS OF FUEL-FIRED APPLIANCES
(1) EXCEPT AS PROVIDED IN SENTENCES (2) AND (3) AND ARTICLES 9.10.10.5., FUEL-FIRED APPLIANCES SHALL BE LOCATED IN A SERVICE ROOM SEPARATED FROM THE REMAINDER OF THE BUILDING BY A FIRE SEPARATION HAVING NOT LESS THAN A 1H FIRE-RESISTANCE RATING.
(2) EXCEPT AS REQUIRED IN THE APPLIANCE INSTALLATION STANDARDS REFERENCED IN SENTENCES 6.2.1.5.(1) AND 9.33.5.3.(1), FUEL-FIRED SPACE-HEATING APPLIANCES, SPACE-COOLING APPLIANCES AND SERVICE WATER HEATERS NEED NOT BE SEPARATED FROM THE REMAINDER OF THE BUILDING AS REQUIRED IN SENTENCE (1).
(A) WHERE THE APPLIANCES SERVE
(I) NOT MORE THAN ONE ROOM OR SUITE, OR
(II) A BUILDING WITH A BUILDING AREA OF NOT MORE THAN 4,305 SQ.FT. AND A BUILDING HEIGHT OF NOT MORE THAN 2 STOREY, OR
(B) WHERE THE APPLIANCES
(I) SERVE A HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES, AND
(II) ARE LOCATED IN A SERVICE ROOM WHERE BOTH SIDES OF ANY WALL ASSEMBLIES AND THE UNDERSIDE OF ANY FLOOR-CEILING FRAMING SEPARATING THIS ROOM FROM BOTH DWELLING UNITS OR THEIR COMMON SPACES ARE PROTECTED BY A CONTINUOUS SMOKE-TIGHT BARRIER CONSISTING OF NOT LESS THAN 5/8" TYPE 'X' GYPSUM BOARD.

9.10.11.2 . FIREWALLS NOT REQUIRED
(1) A PARTY WALL ON A PROPERTY LINE OF A BUILDING OF RESIDENTIAL OCCUPANCY NEED NO BE CONSTRUCTED AS A FIREWALL, PROVIDED IT IS CONSTRUCTED AS A FIRE SEPARATION HAVING NOT LESS THAN A 1H FIRE-RESISTANCE RATING, WHERE THE PARTY WALL SEPARATES
(A) TWO DWELLING UNITS WHERE THERE IS NO DWELLING UNIT ABOVE ANOTHER DWELLING UNIT,
(B) A DWELLING UNIT AND A HOUSE WITH A SECONDARY SUITS INCLUDING THEIR COMMON SPACES, OR
(C) TWO HOUSES WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES.
(3) THE WALL DESCRIBED IN SENTENCE (1) SHALL PROVIDE CONTINUOUS PROTECTION FROM THE TOP OF THE FOOTINGS TO THE UNDERSIDE OF THE ROOF DECK
(4) ANY SPACE BETWEEN THE TOP OF THE WALL DESCRIBED IN SENTENCE (1) THE ROOF DECK SHALL BE TIGHTLY FILLED WITH MINERAL WOOL OR NONCOMBUSTIBLE MATERIAL

9.10.11.4. FIREWALLS IN DETACHED GARAGE
(1)WHERE A GARAGE IS DETACHED FROM A DWELLING UNIT BUT ATTACHED TO ANOTHER GARAGE REQUIRES MIN. 45 MIN. FRR FIRE SEPARATION.

9.10.12.3. EXTERIOR WALLS MEETING AT AN ANGLE
(1) EXCEPT AS PROVIDED IN ARTICLE 9.9.4.5., WHERE EXTERIOR WALLS OF A BUILDING MEET AT AN EXTERNAL ANGLE OF 135° OR LESS, THE HORIZONTAL DISTANCE FROM AN UNPROTECTED OPENING IN ONE EXTERIOR WALL TO AN UNPROTECTED OPENING IN THE OTHER EXTERIOR WALL SHALL BE NOT LESS THAN 3'-11', WHERE THESE OPENINGS ARE
(A) IN DIFFERENT FIRE COMPARTMENTS, OR
(B) IN DIFFERENT DWELLING UNITS, ANCILLARY SPACES OR COMMON SPACES IN A HOUSE WITH A SECONDARY SUITE.
(2) EXCEPT AS PROVIDED IN SENTENCE (3), THE EXTERIOR WALL OF EACH FIRE COMPARTMENT REFERRED TO IN SENTENCE (1) WITHIN THE 3'-11" DISTANCE SHALL HAVE A FIRE-RESISTANCE RATING NOT LESS THAN THAT REQUIRED FOR THE INTERIOR VERTICAL FIRE SEPARATION BETWEEN THE COMPARTMENT AND THE REMINDER OF THE BUILDING.
(3) WHERE INTERIOR WALLS BETWEEN DWELLING UNITS, ANCILLARY SPACES OR COMMON SPACES IN A HOUSE WITH A SECONDARY SUITE ARE NOT CONSTRUCTED AS A FIRE SEPARATIONS, THE EXTERIOR WALL OF EACH DWELLING UNIT, ANCILLARY SPACE OR COMMON SPACE REFERRED TO IN SENTENCE (1) WITHIN THE 3'-11" DISTANCE SHALL BE FINISHED ON THE INTERIOR WITH NOT LESS THAN 5/8" THICK TYPE X GYPSUM BOARD.

9.10.12.4. PROTECTION OF SOFFITS
(1) THIS ARTICLE APPLIES TO THE PORTION OF ANY SOFFIT ENCLOSING A PROJECTION THAT IS
(A) LESS THAN 8'-2 1/2" VERTICALLY ABOVE A WINDOW OR A DOOR, AND
(B) LESS THAN 3'-11" FROM EITHER SIDE OF THE WINDOW OR DOOR.
(2) EXCEPT AS PROVIDED IN SENTENCES (4) AND (5), THE CONSTRUCTION DESCRIBED IN SENTENCE (1) SHALL HAVE NO UNPROTECTED OPENINGS AND SHALL BE PROTECTED IN ACCORDANCE WITH SENTENCE (3), WHERE THE SOFFIT ENCLOSES
(A) A COMMON ATTIC OR ROOF SPACE THAT SPANS MORE THAN 2 SUITES OF RESIDENTIAL OCCUPANCY AND PROJECTS BEYOND THE EXTERIOR WALL OF THE BUILDING.
(B) A FLOOR SPACE WHERE AN UPPER STOREY PROJECTS BEYOND THE EXTERIOR WALL OF A LOWER STOREY AND
(I) A FIRE SEPARATION IS REQUIRED AT THE FLOOR BETWEEN THE TWO, OR
(II) THE FLOOR SEPARATES DWELLING UNITS FROM EACH OTHER OR A DWELLING UNIT FROM AN ANCILLARY SPACE OR A COMMON SPACE IN A HOUSE WITH SECONDARY SUITE, OR
(C) A FLOOR SPACE WHERE AN UPPER STOREY PROJECTS BEYOND THE EXTERIOR WALL OF A LOWER STOREY, AND THE PROJECTION IS CONTINUOUS ACROSS
(I) A VERTICAL FIRE SEPARATION SEPARATING TWO SUITES, OR
(II) A WALL SEPARATING A DWELLING UNITS FROM EACHOTHER OR A DWELLING UNIT FROM AN ANCILLARY SPACE OR A COMMON SPACE IN A HOUSE WITH A SECONDARY SUITE.

9.10.13. DOORS, DAMPERS AND OTHER CLOSURES IN FIRE SEPARATIONS
9.10.13.1. CLOSURES
(1) EXCEPT AS PROVIDED IN ARTICLE 9.10.13.2., OPENINGS IN REQUIRED FIRE SEPARATIONS SHALL BE PROTECTED WITH A CLOSURE CONFORMING TO TABLE 9.10.13.1. AND SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 80, "STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES," UNLESS OTHERWISE SPECIFIED IN THIS PART.

9.10.14. SPATIAL SEPARATION BETWEEN BUILDINGS
9.10.14.1. APPLICATION
(1) THIS SUBSECTION APPLIES TO BUILDINGS OTHER THAN THOSE TO WHICH SUBSECTION 9.10.15. APPLIES.
(2) THIS SUBSECTION DOES NOT APPLY TO A HOUSE WITH A SECONDARY SUITE.

9.10.14.2. AREA AND LOCATION OF EXPOSING BUILDING FACE
(1) THE AREA OF AN EXPOSING BUILDING FACE SHALL BE
(A) TAKEN AS THE EXTERIOR WALL AREA FACING IN ONE DIRECTION ON ANY SIDE OF A BUILDING, AND
(B) CALCULATED AS,
(I) THE TOTAL AREA MEASURED FROM THE FINISHED GROUND LEVEL TO THE UPPERMOST CEILING, OR
(II) THE AREA FOR EACH FIRE COMPARTMENT, WHERE A BUILDING IS DIVIDED INTO FIRE COMPARTMENTS BY A FIRE SEPARATIONS WITH FIRE-RESISTANCE RATINGS NOT LESS THAN 45 MIN.

9.10.14.4. OPENINGS IN EXPOSING BUILDING FACE
(1) EXCEPT AS PROVIDED IN SENTENCES (6) TO (10) AND SENTENCES 9.10.14.6.(1) , THE MAXIMUM AGGREGATE AREA OF UNPROTECTED OPENINGS IN AN EXPOSING BUILDING FACE SHALL
(A) CONFORM TO TALBE 9.10.14.4.,
(B) CONFORM TO SUBSECTION 3.2.3., OR
(C) WHERE THE LIMITING DISTANCE IS NOT LESS THAN 3'-11", BE EQUAL TO OR LESS THAN
(I) THE LIMITING DISTANCE SQUARED, FOR RESIDENTIAL OCCUPANCIES, BUSINESS AND PERSONAL SERVICES OCCUPANCIES AND LOW-HAZARD INDUSTRIAL OCCUPANCIES, AND
(II) HALF THE LIMITING DISTANCE SQUARED, FOR MERCANTILE OCCUPANCIES AND MEDIUM-HAZARD INDUSTRIAL OCCUPANCIES.

9.10.14.5. CONSTRUCTION OF EXPOSING BUILDING FACE AND WALLS ABOVE EXPOSING BUILDING FACE
(1) EXCEPT AS PROVIDED IN SENTENCES (4) TO (14), EACH EXPOSING BUILDING FACE AND ANY EXTERIOR WALL LOCATED ABOVE AN EXPOSING BUILDING FACE THAT ENCLOSES AN ATTIC OR ROOF SPACE SHALL BE CONSTRUCTED IN CONFORMANCE WITH TABLE 9.10.14.5. AND SUBSECTION 9.10.8.

CONSTRUCTION NORTH

MUNICIPALITY:
MUNICIPALITY OF HASTINGS HIGHLANDS
33011 HWY 62N, P.O. BOX 130,
MAYNOOTH ON, K0L 2S0
PHONE: 613-338-2811

CONSTRUCTED BY:

DESIGNED BY:
girard ENGINEERING
2478153 ONTARIO INC.
682 Peel Street
Woodstock ON, N4S 1L3
Tel: 1-519-879-6875
Email: info@girardengineering.ca

APPROVED BY:
M. K. VASANTHA

NOTE: THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER AND ARE NOT VALID UNLESS SEALED WITH RED INK. THESE DRAWINGS ARE NOT TO BE REPRODUCED UNLESS AUTHORIZED BY THE ENGINEER.

DESIGNED FOR:
DALE & TASHA SCHEERHORN
227 WEST DIAMOND LAKE ROAD
Highland Grove, Ontario, K0L 2A0
Tel: 519-535-0658
Email: dalebhservices@gmail.com

PROPOSED COTTAGE

GENERAL NOTES

SCALE: 1/4" = 1'-0"
DATE: APRIL 14, 2025
DRAWING BY: T. STREATCH
DESIGNED/CHECKED BY: M. VASANTHA
DRAWING NO: A-5
PROJECT NO: 24-286

9.10.14.5.
(12) WHERE ROOF SOFFITS PROJECT TO LESS THAN 3'-11" FROM THE PROPERTY LINE, THE CENTRE LINE OF A PUBLIC WAY, OR AN IMAGINARY LINE BETWEEN TWO BUILDINGS OR FIRE COMPARTMENTS ON THE SAME PROPERTY, THEY SHALL
(A) HAVE NO OPENINGS, AND
(B) BE PROTECTED BY
 (I) NOT LESS THAN 0.38MM THICK SHEET STEEL,
 (II) NOT LESS THAN 1/2" THICK GYPSUM SOFFIT BOARD OR GYPSUM CEILING BOARD INSTALLED ACCORDING TO CSA A82.31-M, "GYPSUM BOARD APPLICATION,"
 (IV) NOT LESS THAN 11MM THICK PLYWOOD,
 (V) NOT LESS THAN 7/16" THICK OSB, OR WAFERBOARD, OR
 (VI) NOT LESS THAN 7/16" THICK LUMBER

9.10.15. SPATIAL SEPARATION BETWEEN HOUSES
9.10.15.1. APPLICATION
(1) THIS SUBSECTION APPLIES TO
(A) BUILDINGS THAT CONTAIN ONLY DWELLING UNITS AND HAVE NO DWELLING UNIT ABOVE ANOTHER DWELLING UNIT, AND
(B) HOUSES WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES. (EG. SINGLE, SEMI-DETACHED AND STANDARD ROWHOUSES)

9.10.15.2. AREA AND LOCATION OF EXPOSING BUILDING FACE
(1) THE AREA OF AN EXPOSING BUILDING FACE SHALL BE
(A) TAKEN AS THE EXTERIOR WALL AREA FACING IN ONE DIRECTION ON ANY SIDE OF A BUILDING, AND
(B) CALCULATED AS,
 (I) THE TOTAL AREA MEASURED FROM THE FINISHED GROUND LEVEL TO THE UPPERMOST CEILING,
 (II) THE AREA FOR EACH FIRE COMPARTMENT, WHERE A BUILDING IS DIVIDED INTO FIRE COMPARTMENTS BY A FIRE SEPARATIONS WITH FIRE-RESISTANCE RATINGS NOT LESS THAN 45 MIN., OR
 (III) WHERE TABLE 9.10.15.4. IS USED TO DETERMINE THE MAXIMUM AGGREGATE AREA OF GLAZED OPENINGS, THE AREA OF ANY NUMBER OF INDIVIDUAL PORTIONS OF THE EXPOSING BUILDING FACE

9.10.15.4. GLAZED OPENINGS IN EXPOSING BUILDING FACE
(1) EXCEPT AS PROVIDED IN SENTENCES (6) TO (9), THE MAXIMUM AREA OF GLAZED OPENING IN AN EXPOSING BUILDING FACE SHALL
(A) CONFORM TO TABLE 9.10.15.4.,
(B) CONFORM TO SUBSECTION 3.2.3., AS IF THE GLAZED OPENINGS WERE UNPROTECTED OPENINGS, OR
(C) WHERE THE LIMITING DISTANCE IS NOT LESS THAN 3'-11", BE EQUAL TO OR LESS THAN THE LIMITING DISTANCE SQUARED.

9.10.15.5. CONSTRUCTION OF EXPOSING BUILDING FACE OF HOUSES
(1) EXCEPT AS PROVIDED IN SENTENCES (1.1),(2), (4) AND (6), EACH EXPOSING BUILDING FACE AND ANY EXTERIOR WALL LOCATED ABOVE AN EXPOSING BUILDING FACE THAT ENCLOSES AN ATTIC OR ROOF SPACE SHALL BE CONSTRUCTED IN CONFORMANCE WITH SUBSECTION 9.10.B.,
(A) FOR THE EXPOSING BUILDING FACE AS A WHOLE, OR
(B) FOR ANY NUMBER OF SEPARATE PORTIONS OF THE EXPOSING BUILDING FACE.

9.10.16. FIRE BLOCKS
9.10.16.1. REQUIRED FIRE BLOCKS IN CONCEALED SPACES
(1) CONCEALED SPACES IN INTERIOR WALLS, CEILINGS, FLOORS AND CRAWL SPACES SHALL BE SEPARATED BY FIRE BLOCKS FROM CONCEALED SPACES IN EXTERIOR WALLS AND ATTIC OR ROOF SPACES.
(5) WHERE NOT SPRINKLERED, CONCEALED SPACED OF COMBUSTIBLE CONSTRUCTION CREATED BY A CEILING, ROOF OR UNOCCUPIED ATTIC SPACE SHALL BE SEPARATED BY FIRE BLOCKS INTO COMPARTMENTS
(A) NOTE MORE THAN 196'-10" IN GREATEST DIMENSIONS, AND
(B) WHERE SUCH SPACE CONTAINS EXPOSED CONSTRUCTION MATERIALS HAVING A SURFACE FLAME-SPREAD RATING GREATER THAN 25, NOT MORE THAN 3,229 SQ.FT. IN AREA.
(6) NO DIMENSIONS OF THE COMPARTMENT DESCRIBED IN CLAUSE (5)(B) SHALL EXCEED 65'-7".

9.10.16.3. FIRE BLOCK MATERIALS
(1) EXCEPT AS PERMITTED IN SENTENCES (2) AND (3), FIRE BLOCKS SHALL BE CONSTRUCTED OF MATERIALS THAT WILL REMAIN IN PLACE AND PREVENT THE PASSAGE OF FALMES FOR NOT LESS THAN 15 MIN. WHEN SUBJECTED TO THE STANDARD FIRE EXPOSURE IN CAN/ULC/S101, "STANDARD METHOD OF FIRE ENDURANCE TESTS OF BUILDING CONSTRUCTION AND MATERIALS."
(2) FIRE BLOCKS ARE DEEMED TO COMPLY WITH SENTENCE (1) IF THEY ARE CONSTRUCTED OF NOT LESS THAN,
(A) 1/6" (0.388MM) SHEET STEEL,
(B) 1/2" (12.7MM) GYPSUM BOARD,
(C) 1/2" (12.5MM) PLYWOOD, OSB OR WAFERBOARD W/ JOISTS HAVING CONTINUOUS SUPPORTS,
(D) TWO LAYERS OF LUMBER, EACH MIN. 3/4" (19MM) THICK, WITH JOINTS STAGGERED OR
(E) 1 1/2" (38MM) LUMBER

9.10.17. FLAME SPREAD LIMITS
9.10.17.10. PROTECTION OF FOAMED PLASTICS
(1) EXCEPT AS PROVIDED IN SENTENCES (2) AND (3), FOAMED PLASTICS THAT FORM PART OF A WALL OR CEILING ASSEMBLY SHALL BE PROTECTED FROM ADJACENT SPACE IN THE BUILDING, OTHER THAN ADJACENT CONCEALED SPACES WITHIN ATTIC OR ROOF SPACES, CRAW SPACES, WALL ASSEMBLIES AND CEILING ASSEMBLIES
(A) BY ONE OF THE INTERIOR FINISHES DESCRIBED IN SUBSECTION 9.29.4. TO 9.29.9. (PLASTERING, GYPSUM BOARD FINISH (TAPPED JOINTS), PLYWOOD, HARDBOARD FINISH, INSULATING FIBREBOARD FINISH, PARTICLEBOARD, OSB OR WAFERBOARD FINISH)
(B) PROVIDED THE BUILDING DOES NOT CONTAIN A GROUP C MAJOR OCCUPANCY, BY SHEET METAL THAT
 (I) IS MECHANICALLY FASTENED TO THE SUPPORTING ASSEMBLY INDEPENDENT OF THE INSULATION,
 (II) IS NOT LESS THAN 0.38MM THICK, AND
 (III) HAS A MELTING POINT NOT LESS THAN 650°C, OR
(C) ANY THERMAL BARRIER THAT MEETS THE REQUIREMENTS OF SENTENCE 3.1.5.15.(2).

9.10.18. ALARM AND DETECTION SYSTEMS
9.10.18.2. FIRE ALARM SYSTEM REQUIRED
(2) EXCEPT AS PROVIDED IN SENTENCE (5), A FIRE ALARM SYSTEM SHALL BE INSTALLED
(A) IN EVERY BUILDING THAT CONTAINS MORE THAN 3 STOREYS, INCLUDING STOREYS BELOW THE FIRST STOREY,
(B) WHERE THE TOTAL OCCUPANT LOAD EXCEEDS 300, OR
(C) WHEN THE OCCUPANT LOAD FOR ANY MAJOR OCCUPANCY IN TABLE 9.10.18.2. IS EXCEEDED (RESIDENTIAL, OCCUPANT LOAD-10 (SLEEPING ACCOMMODATIONS)
(5) A FIRE ALARM SYSTEM IS NOT REQUIRED IN A RESIDENTIAL OCCUPANCY WHERE AN EXIT OR PUBLIC CORRIDOR SERVES NOT MORE THAN 4 SUITES OR WHERE EACH SUITE HAS DIRECT ACCESS TO AN EXTERIOR EXIT FACILITY LEADING TO GROUND LEVEL.

9.10.19. SMOKE ALARMS
9.10.19.3. LOCATIONS OF SMOKE ALARMS
(1) EXCEPT AS PERMITTED IN ARTICLE 9.10.19.8., WITHIN DWELLING UNITS SUFFICIENT SMOKE ALARMS SHALL BE INSTALLED SO THAT
(A) THERE IS AT LEAST ONE SMOKE ALARM INSTALLED ON EACH STOREY, INCLUDING BASEMENTS, AND
(B) ON ANY STOREY OF A DWELLING UNIT CONTAINING SLEEPING ROOMS, A SMOKE ALARM IS INSTALLED
 (I) IN EACH SLEEPING ROOM, AND
 (II) IN A LOCATION BETWEEN THE SLEEPING ROOMS AND THE REMAINDER OF THE STOREY, AND IF THE SLEEPING ROOMS ARE SERVED BY A HALLWAY, THE SMOKE ALARM SHALL BE LOCATED IN THE HALLWAY.
(1.1) EXCEPT AS PERMITTED IN ARTICLE 9.10.19.8., WITHIN A HOUSE WITH A SECONDARY SUITE THAT CONTAINS AN INTERIOR SHARED MEANS OF EGRESS OR COMMON AREA, A SMOKE ALARM SHALL BE INSTALLED IN EACH SHARED MEANS OF EGRESS AND COMMON AREA.
(3) SMOKE ALARMS REQUIRED IN ARTICLE 9.10.19.1. AND SENTENCES (1) AND (1.1) SHALL BE INSTALLED ON OR NEAR THE CEILING.

9.10.19.4. POWER SUPPLY
(1) EXCEPT AS PROVIDED IN SENTENCES (2) AND (3), SMOKE ALARMS DESCRIBED IN SENTENCE 9.10.19.1.(1) AND 9.10.19.3.(1.1) SHALL
(A) BE INSTALLED WITH PERMANENT CONNECTIONS TO AN ELECTRIAL CIRCUIT,
(B) HAVE NO DISCONNECT SWITCH BETWEEN THE OVERCURRENT DEVICE AND THE SMOKE ALARM, AND
(C) INCASE THE REGULAR POWER SUPPLY TO THE SMOKE ALARM IS INTERRUPTED, WITH A BATTERY AS AN ALTERNATIVE POWER SOURCE THAT CAN CONTINUE TO PROVIDE POWER TO THE SMOKE ALARM FOR A PERIOD OF NOT LESS THAN 7 DAYS IN THE NORMAL CONDITION, FOLLOWED BY 4 MINUTES OF ALARM.

9.10.19.5. INTERCONNECTION OF SMOKE ALARMS
(1) WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED IN A DWELLING UNIT, THE SMOKE ALARMS SHALL BE WIRED SO THE ACTIVATION OF ONE ALARM WILL CAUSE ALL ALARMS WITHIN THE DWELLING UNIT TO SOUND.
(2) SMOKE ALARMS IN A HOUSE W/ A SECONDARY SUITE SHALL BE WIRELESSLY INTERCONNECTED OR INTERCONNECTED BY HARD-WIRING SO THAT THE ACTIVATION OF ANY ONE SMOKE ALARM CAUSES ALL SMOKE ALARMS WITHIN THE HOUSE WITH A SECONDARY SUITE TO SOUND.

9.11. SOUND TRANSMISSION
9.11.1. PROTECTION OF AIRBORNE NOISE
9.11.1.1. REQUIRED PROTECTION
(1) EXCEPT AS PROVIDED IN SENTENCE (3), A DWELLING UNIT AND A SUITE IN HOTELS SHALL BE SEPARATED FROM EVERY OTHER SPACE IN A BUILDING IN WHICH NOISE MAY BE GENERATED BY
(A) A SEPARATING ASSEMBLY AND ADJOINING CONSTRUCTIONS, WHICH, TOGETHER, PROVIDED AN APPARENT SOUND TRANSMISSION CLASS (ASTC) RATING OF NOT LESS THAN 47, OR
(B) A SEPARATING ASSEMBLY THAT PROVIDES A SOUND TRANSMISSION CLASS (STC) RATING OF AT LEAST 50 AND ADJOINING CONSTRUCTIONS THAT CONFORMS TO ARTICLE 9.11.1.4.

9.12. EXCAVATING
9.12.2.2. MINIMUM DEPTH OF FOUNDATIONS
(1) EXCEPT AS PROVIDED IN SENTENCES (4) TO (7), THE MINIMUM DEPTH OF FOUNDATIONS BELOW FINISHED GROUND LEVEL SHALL CONFORM TO TABLE 9.12.2.2.

-ALL EXCAVATION & BACKFILL WORK TO COMPLY WITH O.B.C. 2024 SECTION 9.12.
-BOTTOM OF EXCAVATION TO BE FREE OF ALL ORGANIC MATERIAL.
-EXCAVATION SHALL EXTEND TO UNDISTURBED SOIL.
-ALL ENGINEERED FILL TO BE DESIGNED AND APPROVED BY A CERTIFIED SOIL CONSULTANT.
-EXCAVATIONS SHALL CONFORM TO THE LATEST EDITIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND THE MINISTRY OF LABOUR REGULATIONS FOR CONSTRUCTION PROJECTS.
-WALLS TO BE BACKFILLED ON BOTH SIDES SHALL BE BACKFILLED EVENLY UNLESS SHORED ON ONE SIDE TO THE SATISFACTION OF THE ENGINEER. PIT WALLS SHALL NOT BE BACKFILLED UNLESS BRACED AT THE TOP TO THE SATISFACTION OF THE ENGINEER. BACKFILL SHALL BE APPROVED MATERIAL COMPACTED TO 95% S.P.D. UNLESS OTHERWISE NOTED.

9.13. DAMPPROOFING, WATERPROOFING, AND SOIL GAS CONTROL
9.13.4.1. APPLICATION AND SCOPE
(1) THIS SUBSECTION APPLIES TO
(A) WALL, ROOF AND FLOOR ASSEMBLIES SEPARATING CONDITIONED SPACE FROM THE GROUND, AND
(B) THE ROUGH-IN TO ALLOW THE FUTURE PROTECTION OF CONDITIONED SPACE THAT IS SEPARATED FROM THE GROUND BY A WALL, ROOF OR FLOOR ASSEMBLY.
(2) THIS SUBSECTION ADDRESSES THE LEAKAGE OF SOIL GAS FROM THE GROUND INTO THE BUILDING.
(3) IN AREAS OF PROVINCE WHERE RADON GASES ARE KNOWN TO BE A PROBLEM, THE BUILDING SHALL BE DESIGNED AND CONSTRUCTED TO MEET THE RADON LIMITATIONS IN ARTICLE 9.1.1.7.

9.13.4.2. PROTECTION FROM SOIL GAS INGRESS
(1) EXCEPT AS PROVIDED IN SENTENCE (1.1), ALL WALL, ROOF AND FLOOR ASSEMBLIES IN CONTACT WITH THE GROUND SHALL BE CONSTRUCTED TO RESIST THE LEAKAGE OF SOIL GAS FROM THE GROUND INTO THE BUILDING IN ACCORDANCE WITH SUBSECTION 9.25.3. OR MMAH SUPPLEMENTARY STANDARD SB-9, "REQUIREMENTS FOR SOIL GAS CONTROL."

(1.1) CONSTRUCTION TO RESIST LEAKAGE OF SOIL GAS INTO THE BUILDING IS NOT REQUIRED FOR GARAGES AND UNENCLOSED PORTIONS OF BUILDINGS.

(2) UNLESS THE SPACE BETWEEN THE AIR BARRIER SYSTEM AND THE GROUND IS DESIGNED TO BE ACCESSIBLE FOR THE FUTURE INSTALLATION OF A SUBFLOOR DEPRESSURIZATION SYSTEM, DWELLING UNITS AND BUILDING CONTAINING RESIDENTIAL OCCUPANCIES SHALL BE PROVIDED WITH THE ROUGH-IN FOR A RADON EXTRACTION SYSTEM CONFORMING TO ARTICLE 9.13.4.3.

9.13.4.3. PROVIDING FOR THE ROUGH-IN FOR A SUBFLOOR DEPRESSURIZATION SYSTEM
(1) FLOORS-ON GROUND SHALL BE PROVIDED WITH A ROUGH-IN FOR SUBFLOOR DEPRESSURIZATION CONSISTING OF
(A) A GAS-PERMEABLE LAYER, AN INLET AND AN OUTLET AS DESCRIBED IN SENTENCE (2), OR
(B) CLEAN GRANULAR MATERIAL AND A PIPE AS DESCRIBED IN SENTENCE (3)
(2) THE ROUGH-IN REFERRED TO IN CLAUSE (1)(A) SHALL INCLUDE
(A) A GAS-PERMEABLE LAYER INSTALLED IN THE SPACE BETWEEN THE AIR BARRIER AND THE GROUND TO ALLOW THE DEPRESSURIZATION OF THAT SPACE,
(B) AN INLET THAT ALLOWS FOR THE EFFECTIVE DEPRESSURIZATION OF TEH GAS-PERMEABLE LAYER, AND
(C) AN OUTLET IN THE CONDITIONED SPACE THAT
 (I) PERMITS CONNECTION TO DEPRESSURIZATION EQUIPMENT,
 (II) IS SEALED TO MAINTAIN THE INTEGRITY OF THE AIR BARRIER SYSTEM, AND
 (III) IS CLEARLY LABELED TO INDICATE THAT IT IS INTENDED ONLY FOR THE REMOVAL OF RADON FROM BELOW THE FLOOR-ON GROUND.
(3) THE ROUGH-IN REFERRED TO IN CLAUSE (1)(B) SHALL INCLUDE
(A) CLEAN GRANULAR MATERIAL INSTALLED BELOW THE FLOOR-ON-GROUND IN ACCORDANCE WITH SENTENCE 9.16.2.1.(1), AND
(B) PIPE NOT LESS THAN 4" IN DIAMETER INSTALLED THROUGH THE FLOOR, SUCH THAT
 (I) ITS BOTTOM END OPENS INTO THE GRANULAR LAYER REQUIRED IN CLAUSE (A) AT OR NEAR THE CENTER OF THE FLOOR AND NO LESS THAN 4" OF GRANULAR MATERIAL PROJECTS BEYOND THE TERMINUS OF THE PIPE MEASURED ALONG ITS AXIS,
 (II) ITS TOP END PERMITS CONNECTION TO DEPRESSURIZATION EQUIPMENT AND IS PROVIDED WITH AN AIRTIGHT CAP, AND
 (III) THE PIPE IS CLEARLY LABELED NEAR THE CAP AND, IF APPLICABLE EVERY 5'-11" AND AT EVERY CHANGE IN DIRECTION TO INDICATE THAT IT IS INTENDED ONLY FOR REMOVAL OF RADON FROM BELOW THE FLOOR-ON GROUND.

9.14. DRAINAGE
9.14.2.1. FOUNDATION WALL DRAINAGE
(1) UNLESS IT CAN BE SHOWN TO BE UNNECESSARY, DRAINAGE SHALL BE PROVIDED AT THE BOTTOM OF EVERY FOUNDATION WALL THAT CONTAINS THE BUILDING INTERIOR.

9.14.3. DRAINAGE TILE AND PIPE
9.14.3.1. MATERIAL STANDARDS
(1) DRAIN TILE AND DRAIN PIPE FOR FOUNDATION DRAINAGE SHALL CONFORM TO THE STANDARDS LISTED IN THE OBC 2024.

9.14.3.2. MINIMUM SIZE
(1) DRAIN TILE OR PIPE USED FOR FOUNDATION DRAINAGE SHALL BE NOT LESS THAN 4"Ø.

9.14.3.3. INSTALLATION
(1) DRAIN TILE OR PIP SHALL BE LAID ON UNDISTURBED OR WELL-COMPACTED SOIL SO THAT THE TOP OF TEH TILE OR PIPE IS BELOW THE BOTTOM OF THE FLOOR SLAB OR THE GROUND COVER OF THE CRAWL SPACE.
(4) THE TOP AND SIDES OF DRAIN PIPE OR TILE SHALL BE COVERED WITH NOT LESS THAN 6" OF CRUSHED STONE OR OTHER COARSE CLEAN GRANULAR MATERIAL CONTAINING NOT MORE THAN 10% OF MATERIAL THAT WILL PASS A 4MM SIEVE.

9.14.5. DRAINAGE DISPOSAL
9.14.5.2. SUMP PITS
(1) WHERE A SUMP PIT IS PROVIDED IT SHALL BE
(A) NOT LESS THAN 29 1/2" (750MM) DEEP,
(B) NOT LESS THAN 2.7 SQ.FT. (0.25M2) IN AREA, AND
(C) PROVIDED WITH A COVER
(2) COVERS FOR SUMP PITS SHALL BE DESIGNED
(A) RESIST REMOVAL BY CHILDREN, AND
(B) BE AIRTIGHT IN ACCORDANCE WITH SENTENCE 9.25.3.3.(7)
(3) WHERE GRAVITY DRAINAGE IS NOT PRACTICAL, AN AUTOMATIC SUMP PUMP SHALL BE PROVIDED TO DISCHARGE THE WATER FROM THE SUMP PIT DESCRIBED IN SENTENCE (1) INTO A SEWER, DRAINAGE DITCH OR DRY WELL.

9.15 FOOTINGS AND FOUNDATIONS
9.15.1.1.
EXCEPT AS PROVIDED IN ARTICLES 9.15.1.2. AND 9.15.1.3., THIS SECTION APPLIES TO
(A) CONCRETE OR UNIT MASONRY FOUNDATION WALLS AND CONCRETE FOOTINGS NOT SUBJECT TO SURCHARGE
 (I) ON STABLE SOILS WITH AN ALLOWABLE BEARING PRESSURE OF 1570 PSF (75 KPA)
 (II) FOR BUILDINGS OF WOOD-FRAME OR MASONRY CONSTRUCTION.
(B) WOOD-FRAME FOUNDATION WALLS AND WOOD OR CONCRETE FOOTINGS NOT SUBJECT TO SURCHARGE
 (I) ON STABLE SOILS WITH AN ALLOWABLE BEARING PRESSURE OF 1570 PSF (75KPA) OR GREATER, AND
 (II) FOR BUILDINGS OF WOOD-FRAME CONSTRUCTION, AND
(C) FLAT INSULATING CONCRETE FROM FOUNDATION WALLS AND CONCRETE FOOTINGS NOT SUBJECT TO SURCHARGE 9.15.1.1.(1)(C) AND 9.20.1.1.(1)(B)
 (I) ON STABLE SOILS WITH AN ALLOWABLE BEARING PRESSURE OF 1570 PSF (75KPA) OR GREATER, AND
 (II) FOR BUILDINGS OF LIGHT-FRAME OR FLAT INSULATING CONCRETE FROM CONSTRUCTION THAT ARE NOT MORE THAN 2 STOREYS IN BUILDING HEIGHT, WITH A MAXIMUM FLOOR-TO-FLOOR HEIGHT OF 9'-10"

9.15.3.9. STEP FOOTINGS
(1) WHERE STEP FOOTINGS ARE USED,
(A) THE VERTICAL RISE BETWEEN HORIZONTAL PORTIONS SHALL NOT EXCEED 24", AND
(B) THE HORIZONTAL DISTANCE BETWEEN RISERS SHALL BE NOT LESS THAN 24"

-MAX. 16" VERTICAL RISE AND HORIZONTAL DISTANCE IN SANDY CONDITIONS

9.15.4.2. FOUNDATION WALL THICKNESS AND REQUIRED LATERAL SUPPORT
(1) EXCEPT AS REQUIRED IN SENTENCE (2), THE THICKNESS OF FOUNDATION WALLS MADE OF UNREINFORCED CONCRETE BOCK, CONCRETE CORE IN FLAT WALL INSULATING CONCRETE FORMS OR SOLID CONCRETE AND SUBJECT TO LATERAL EARTH PRESSURE SHALL CONFORM TO TABLE 9.15.4.2.-A FOR WALLS NOT EXCEEDING 9'-10" IN UNSUPPORTED HEIGHT

9.15.4.7. REDUCTION IN THICKNESS
(1) WHERE THE TOP OF A FOUNDATION WALL IS REDUCED IN THICKNESS TO PERMIT THE INSTALLATION OF FLOOR JOISTS, THE REDUCED SECTION SHALL BE NOT MORE THAN 13 3/4" (350MM) HIGH AND NOT LESS THAN 3 1/2" (90MM) THICK.

9.15.4.3. FOUNDATION WALLS CONSIDERED TO BE LATERALLY SUPPORTED AT THE TOP
(3) UNLESS THE WALL AROUND AN OPENING IS REINFORCED TO WITHSTAND EARTH PRESSURE, THE PORTION OF THE FOUNDATION WALL BENEATH AN OPENING SHALL BE CONSIDERED LATERALLY UNSUPPORTED IF
(A) THE OPENING IS MORE THAN 3'-11" WIDE, OR
(B) THE TOTAL WIDTH OF THE OPENINGS IN THE FOUNDATION WALL CONSTITUTES MORE THAN 25% OF THE LENGTH OF THE WALL.
(4) FOR THE PURPOSES OF SENTENCES (3), THE COMBINED WIDTH OF THE OPENINGS SHALL BE CONSIDERED AS A SINGLE OPENING IF THE AVERAGE WIDTH IS GREATER THAN THE WIDTH OF SOLID WALL BETWEEN THEM.

9.15.4.9. CRACK CONTROL JOISTS
(1) CRACK CONTROL JOISTS SHALL BE PROVIDED IN FOUNDATION WALLS MORE THAN 82'-0" (25M) LONG AT INTERVALS NOT MORE THAN 49'-2 1/2" (15M).

9.15.5.2. SUPPORT OF BEAMS
(1) NOT LESS THAN 7 1/2" DEPTH OF SOLID MASONRY SHALL BE PROVIDED BENEATH BEAMS SUPPORTED ON MASONRY.

9.15.6. PARGIN AND FINISHING OF MASONRY FOUNDATION WALLS
9.15.6.1. FOUNDATION WALLS BELOW GRADE
(1) CONCRETE BLOCK FOUNDATION WALL SHALL BE PARGED ON THE EXTERIOR FACE BELOW GROUND LEVEL AS REQUIRED BY 9.13.

9.15.6.2. FOUNDATION WALL ABOVE GROUND
(1) EXTERIOR SURFACES OF CONCRETE BLOCK FOUNDATION WALLS ABOVE GROUND LEVEL SHALL HAVE TOOLED JOINTS, OR SHALL BE PARGED OR OTHERWISE SUITABLY FINISHED

9.16. FLOORS-ON-GROUND
(1) EXCEPT AS PROVIDED IN SENTENCE (2), NOT LESS THAN 4" OF COURSE CLEAN GRANULAR MATERIAL CONTAINING NOT MORE THAN 10% OF MATERIAL THAT WILL PASS A 4MM SIEVE SHALL BE PLACED BENEATH FLOORS-ON-GROUND.
(2) GRANULAR MATERIAL NEED NOT BE INSTALLED UNDER
(A) SLABS IN GARAGES, CARPORTS OR ACCESSORY BUILDINGS, OR
(B) BUILDINGS OF INDUSTRIAL OCCUPANCY WHERE THE NATURE OF THE PROCESS CONTAINED THEREIN PERMITS OR REQUIRES THE USE OF LARGE OPENINGS IN THE BUILDING ENVELOP EVEN DURING THE WINTER.

9.16.4.3. THICKNESS
(1) CONCRETE SLABS SHALL BE NOT LESS THAN 3" THICK EXCLUSIVE OF CONCRETE TOPPING.

9.17. COLUMNS

9.17.4.3. COLUMNS IN CONTACT WITH CONCRETE
(1) WOOD COLUMNS SHALL BE SEPARATED FROM CONCRETE IN CONTACT WITH THE GROUND BY 0.05MM POLYETHYLENE FILM OR TYPE S ROLL ROOFING.

-ALL COLUMNS TO BE CENTERED ON FOOTINGS AND FASTENED TO SUPPORTED MEMBER TO PREVENT LATERAL MOVEMENT.

9.18. CRAWL SPACES
9.18.1.1. APPLICATION
(1) IN THIS SECTION, A CRAWL SPACE REFERS TO AN ENCLOSED SPACE BETWEEN THE UNDERSIDE OF FLOOR ASSEMBLY AND GROUND COVER DIRECTLY BELOW, WITH CLEARANCE NOT LESS THAN 5'-11" (1800MM) HEIGHT.
9.18.2. ACCESS
9.18.2.1. ACCESS OPENINGS
(1) AN ACCESS OPENING OF NOT LESS THAN 1'-9 1/2"x2'-11 1/2" SHALL BE PROVIDED TO EACH CRAWL SPACE WHERE THE CRAWL SPACE SERVES A SINGLE DWELLING UNIT, AND NOT LESS THAN 1'-8"x2'-3 1/2" FOR OTHER CRAWL SPACES.

9.18.4.1. ACCESS WAY TO SERVICES
(1) WHERE EQUIPMENT REQUIRING SERVICING SUCH AS PLUMBING CLEANOUTS, TRAPS AND BURNERS IS LOCATED IN CRAWL SPACES, AN ACCESS WAY WITH A HEIGHT AND WIDTH OF NOT LESS THAN 2'-0" SHALL BE PROVIDED FROM THE ACCESS DOOR TO THE EQUIPMENT AND FOR A DISTANCE OF 3'-0" ON THE SIDE OR SIDES OF THE EQUIPMENT TO BE SERVED.

9.18.6.1. GROUND COVER IN UNHEATED CRAWL SPACES
(1) WHERE A CRAWL SPACE IS UNHEATED, A GROUND COVER SHALL BE PROVIDED CONSISTING OF NOT LESS THAN
(A) 2" (50MM) ASPHALT,
(B) 4" (100MM) OF 15 MPA CONC.,
(C) TYPE S ROLL ROOFING,
(D) 0.10MM POLYETHYLENE.
(2) JOINTS IN SHEET-TYPE GROUND COVER REQUIRED IN SENTENCE (1) SHALL BE LAPPED NOT LESS THAN 4" (100MM) AND WEIGHTED DOWN.

9.18.6.2. GROUND COVER IN HEATED CRAWL SPACES
(1) WHERE A CRAWL SPACE IS HEATED, A GROUND COVER CONSISTING OF NOT LESS THAN 0.15MM POLYETHYLENE SHEET CONFORMING TO CAN/CGSB-51.34-M, "VAPOUR BARRIER, POLYETHYLENE SHEET, FOR USE IN BUILDING CONSTRUCTION," SHALL BE INSTALLED AS PART OF AN AIR BARRIER SYSTEM IN ACCORDANCE WITH SUBSECTION 9.25.3.
(2) THE GROUND COVER REQUIRED IN SENTENCE (1) SHALL HAVE ITS JOISTS LAPPED NOT LESS THAN 12" AND,
(A) BE SEALED AND EVENLY WEIGHTED DOWN, OR
(B) BE COVERED WITH CONCRETE NOT LESS THAN 2" THICK.

9.19. ROOF SPACE VENTING
9.19.1.2. VENT REQUIREMENTS
(1) EXCEPT AS PROVIDED IN SENTENCE (2), THE UNOBSTRUCTED VENT UNOBSTRUCTED VENT AREA TO BE NOT LESS THAN 1/300 OF THE INSULATED CEILING AREA.
(2) WHERE THE ROOF SLOPE IS LESS THAN 1 IN 6 OR IN ROOFS THAT ARE CONSTRUCTED WITH ROOF JOISTS, THE UNOBSTRUCTED VENT AREA SHALL BE NOT LESS THAN 1/150 OF THE INSULATED CEILING AREA.

9.19.1.3. CLEARANCES
(1) EXCEPT AS PROVIDED IN SENTENCE (2), WHERE VENTING IS PROVIDED TO A ROOF JOISTS SPACE, NOT LESS THAN 2 1/2" OF SPACE SHALL BE PROVIDED BETWEEN THE TOP OF THE INSULATION AND THE UNDERSIDE OF THE ROOF SHEATHING.

9.19.2.1. ACCESS
(2) THE HATCH REQUIRED IN SENTENCE (1) SHALL NOT BE LESS THAN 22"x35.5" EXCEPT THAT, WHERE THE HATCH SERVES NOT MORE THAN ONE DWELLING UNIT, THE HATCH MAY BE REDUCED TO 0.32M2 IN AREA WITH NO DIMENSION LESS THAN OR 20".

9.20. MASONRY AND INSULATING CONCRETE FORM WALLS NOT IN CONTACT WITH THE GROUND
9.20.1.1.
(1) EXCEPT AS PROVIDED IN ARTICLE 9.20.1.2., THIS SECTION APPLIES TO
(A) UNREINFORCED MASONRY AND MASONRY VENEER WALLS NOT IN CONTACT WITH THE GROUND, WHERE
 (I) THE HEIGHT OF THE WALLS CONSTRUCTED ON THE FOUNDATION WALLS DOES NOT EXCEED 36'-1", AND
 (II) THE ROOF OR FLOOR ASSEMBLY ABOVE THE FIRST STOREY IS NOT OF CONCRETE CONSTRUCTION, AND
(B) FLAT INSULATING CONCRETE FORM WALLS NOT IN CONTACT WITH THE GROUND THAT
 (I) HAVE A MAX. FLOOR-TO FLOOR HEIGHT OF 9'-10",
 (II) ARE ERECTED IN BUILDINGS NOT MORE THAN 2 STOREYS IN BUILDING HEIGHT, AND
 III) ARE ERECTED IN LOCATIONS WHERE THE SEISMIC SPECTRAL RESPONSE ACCELERATION, SA(0.2), IS NOT GREATER THAN 0.4.
(2) FOR WALLS OTHER THAN THOSE DESCRIBED IN SENTENCE (1) , OR WHERE THE MASONRY WALLS OR INSULATING CONCRETE FORM WALLS NOT IN CONTACT WITH THE GROUND ARE DESIGNED FOR SPECIFIED LOADS ON THE BASIS OF ULTIMATE AND SERVICEABILITY LIMIT STATES, SUBSECTION 4.3.2. SHALL APPLY

SEE 9.20.2.1 FOR MASONRY UNIT STANDARDS
SEE 9.20.2.6 FOR CONCRETE UNITS EXPOSED TO THE WEATHER
SEE 9.20.2.7(1) FOR COMPRESSIVE STRENGTH OF CONCRETE BLOCKS
SEE 9.20.3. FOR MORTAR
SEE 9.20.4. FOR MORTAR JOINTS

9.20.5. MASONRY SUPPORT
9.20.5.1. MASONRY SUPPORT
(1) ALL MASONRY SHALL BE SUPPORTED ON MASONRY, CONCRETE OR STEEL, EXCEPT THAT MASONRY VENEER WALLS MAY BE SUPPORTED ON FOUNDATIONS OF WOOD FRAME CONSTRUCTION IN CONFORMANCE WITH SENTENCE 9.15.2.4(1).

9.20.5.2. LINTELS OR ARCHES
(3.1) STEEL LINTELS DESCRIBED IN SENTENCES (2) AND (3) SHALL (A) HAVE EVEN AND LEVEL BEARING AND SHALL HAVE NOT LESS THAN 150MM LENGTH OF BEARING AT ENDS SUPPORTS, AND (B) BEAR ON MASONRY, CONCRETE OR STEEL UNLESS OTHERWISE NOTED.
(4) STEEL ANGLE LINTELS SUPPORTING MASONRY SHALL BE PRIME PAINTED OR OTHERWISE PROTECTED FROM CORROSION.

9.20.8.3. BEARING OF BEAMS AND JOISTS
(2) IN NO CASE SHALL THE MINIMUM LENGTH OF END BEARING OF BEAMS SUPPORTED ON MASONRY BE LESS THAN 3 1/2".
(3) THE LENGTH OF END BEARING OF FLOOR, ROOF OR CEILING JOISTS SUPPORTED ON MASONRY SHALL BE NOT LESS THAN 1 1/2".

9.20.8.5. PROJECTION OF MASONRY VENEER BEYOND SUPPORTING MEMBERS
(1) MASONRY VENEER OF SOLID MASONRY UNITS RESTING ON A BEARING SUPPORT SHALL NOT PROJECT MORE THAN ONE-THIRD OF THE THICKNESS OF THE VENEER.

9.20.9. BONDING AND TYING
9.20.9.5. TIES FOR MASONRY VENEER
(1) MASONRY VENEER 2 3/4" OR MORE IN THICKNESS AND RESTING ON A BEARING SUPPORT SHALL BE TIED TO MASONRY BACKING OR TO WOOD FRAMING MEMBERS WITH STRAPS THAT ARE
(A) CORROSION-RESISTANT,
(B) NOT LESS THAN 0.76MM THICK,
(C) NOT LESS THAN 7/8" WIDE,
(D) SHAPED TO PROVIDE A KEY WITH MORTAR,
(E) PRE-BENT DURING MANUFACTURE TO A RIGHT ANGLE WITHIN 1/4" OF THE FASTENER HOLE,
(F) FASTENED WITH
 (I) CORROSION-RESISTANT WOOD SCREWS CONFORMING TO SENTENCE 9.23.3.1.(3) THAT HAVE A MIN. DIA. OF 3/16" (NO.8) AND A WOOD PENETRATION OF NOT LESS THAN 1 1/2", OR
 (II) CORROSION-RESISTANT COMMON SPIRAL NAILS CONFORMING TO SENTENCE 9.23.3.1.(1) THAT ARE NOT LESS THAN63MM, AND
(G) SPACED AS PER TABLE 9.20.9.5.
(3) TIES FOR MASONRY VENEER SUPPORTED BY MASONRY OR WOOD-FRAME BACKING SHALL BE SECURED TO THE BACKING AS PER 4.3.2.
(4) THE STRAPS DESCRIBED IN SENTENCE (1) MAY BE INSTALLED AGAINST ONE OF THE SHEATHINGS LISTED IN TABLE 9.23.17.2-A PROVIDED THAT
(A) THE TIE IS IN CONTACT WITH THE EXTERIOR SURFACE OF THE SHEATHING, AND
(B) THE SHEATHING BENEATH THE TIE IS NOT COMPRESSED

9.20.12. CORBELLING
9.20.12.1. CORBELLING
(2) SOLID MASONRY UNITS SHALL BE CORBELLED SO THAT THE HORIZONTAL PROJECTION OF ANY UNIT DOES NOT EXCEED 1" AND THE TOTAL PROJECTION DOES NOT EXCEED ONE-THIRD OF THE TOTAL WALL THICKNESS

9.20.13. CONTROL OF RAINWATER PENETRATION
9.20.13.8. REQUIRED WEEP HOLES
(1) WEEP HOLES SHALL BE SPACED AT 31" ON CENTER MAXIMUM AND SHALL BE PROVIDED A THE BOTTOM OF (A) CAVITIES IN CAVITY WALLS, AND (B) CAVITIES OR AIR SPACES IN THE MASONRY VENEER WALLS

9.21.4. MASONRY AND CONCRETE CHIMNEY CONSTRUCTION
9.21.4.4. HEIGHT OF CHIMNEY FLUES
(1) CHIMNEY FLUE SHALL EXTENT NOT LESS THAN
(A) 3'-0" ABOVE THE HIGHEST POINT AT WHICH THE CHIMNEY COMES IN CONTACT WITH THE ROOF, AND
(B) 2'-0" ABOVE THE HIGHEST ROOF SURFACE OR STRUCTURE OR STRUCTURE WITHIN 9'-10" OF THE CHIMNEY.

9.21.4.5. LATERAL STABILITY
(1) A CHIMNEY NEED NO BE LATERALLY BRACED PROVIDED (A) NO HORIZONTAL OUTSIDE DIMENSION IS LESS THAN 16", AND (B) THE CHIMNEY EXTENDS MAX. 11'-9 3/4" ABOVE A ROOF OR THE MASONRY WALL OF WHICH IT FORMS A PART.

9.22. FIREPLACES
9.22.1.4. COMBUSTION AIR
(0.1) EVERY SOLID FUEL-FIRED FIREPLACE, INCLUDING A FACTOR-BUILT FIREPLACE, SHALL HAVE A SUPPLY OF COMBUSTION AIR FROM OUTDOORS IN ACCORDANCE WITH SENTENCES (0.2) TO 1.

9.23. WOOD FRAME CONSTRUCTION

WOOD STUDS, JOISTS, NAILERS, BLOCKING, BUILT-UP BEAMS, AND COLUMNS SHALL BE S.P.F. NO. 2 (CONSTRUCTION GRADE) OR BETTER - CONFORMING TO CAN/CSA-041-91 "SOFT WOOD LUMBER". GRADING SHALL CONFORM TO THE NATIONAL LUMBER GRADES AUTHORITY "STANDARD GRADING RULES FOR CANADIAN LUMBER". WOOD FRAME CONSTRUCTION SHALL CONFORM TO THE O.B.C. 2024- SECTION 9.23.
TRUSS TIE DOWNS, JOIST HANGERS, ETC, SHALL CONFORM TO "ACCEPTANCE CRITERIA FOR JOIST HANGERS AND SIMILAR DEVICES" (THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS) AND SHALL BE A MINIMUM OF 20 GUAGE GALVANIZED STEEL.

9.23.2.3. PROTECTION FROM DAMPNESS
(1) EXCEPT AS PERMITTED IN SENTENCE 2, WOOD FRAMING MEMBERS THAT ARE NOT PRESSURE-TREATED WITH A WOOD PRESERVATIVE AND THAT ARE SUPPORTED ON CONCRETE IN CONTACT WITH THE GROUND OR FILL SHALL BE SEPARATED FROM THE CONCRETE BY NOT LESS THAN 0.05MM POLYETHYLENE FILM OR TYPE S ROLL ROOFING.
(2) DAMPROOFING MATERIAL REFERRED TO IN SENTENCE (1) IS NOT REQUIRED WHERE THE WOOD MEMBER IS AT LEAST 6" ABOVE THE GROUND.

9.23.3. FASTERNERS AND CONNECTORS
9.23.3.1. STANDARDS FOR NAILS AND SCREWS
(1) EXCEPT AS PROVIDED IN SENTENCE (2) AND UNLESS OTHERWISE INDICATED, NAILS SPECIFIED IN THIS SECTION SHALL BE COMMON STEEL WIRE NAILS OR COMMON SPIRAL NAILS, CONFORMING TO
(A) ASTM F1667, "STANDARD SPECIFICATION FOR DRIVEN FASTENERS: NAILS, SPIKES AND STAPLES," OR
(B) CSA B111, "WIRE NAILS, SPIKES AND STAPLES."
(2) NAILS USED TO COMPLY WITH TABLE 9.23.3.4. SHALL HAVE A DIAMETER NOT LESS THAN THAT STATED IN TABLE 9.23.3.1.
(3) WOOD SCREWS SPECIFIED IN THIS SECTION SHALL CONFORM TO ANSI/ASME B18.6.1., "WOOD SCREWS (INCH SERIES)".

9.23.3.4. NAILING OF FRAMING
(1) EXCEPT AS PROVIDED IN SENTENCE (2) NAILING AND FRAMING SHALL CONFORM TO TABLE 9.23.3.4.

9.23.3.5. FASTENING FOR SHEATHING OR SUBFLOORING
(1) EXCEPT AS REQUIRED BY SENTENCES (2) TO (4), FASTENING OF SHEATHING AND SUBFLOORING SHALL CONFORM TO TABLE 9.23.3.5.-A.
(2) FASTENING OF ROOF SHEATHING AND SHEATHING IN REQUIRED BRACED WALL PANELS SHALL CONFORM TO TALBE 9.23.3.5.-B, WHERE
(A) THE 1-IN-50 HOURLY WINDOW PRESSURE (HWP) IS EQUAL TO OR GREATER THAN 0.8KPA AND LESS THAN 1.2KPA AND THE SEISMIC SPECTRAL ACCELERATION, S(0.2, IS NOT MORE THAN 0.90, OR
(B) THE SEISMIC SPECTRAL ACCELERATION, SA(0.2), IS GREATER THAN 0.70 AND NOT MORE THAN 0.90.
(3) FASTENING OF ROOF SHEATHING AND SHEATHING IN REQUIRED BRACED WALL PANELS SHALL CONFORM TO TABLE 9.23.3.5.-C, WHERE
(A) THE 1-IN-50 HOURLY WIND PRESSURE (HWP) IS EQUAL TO OR GREATER THAN 0.8KPA AND LESS THAN 1.2KPA AND THE SPECTRAL ACCELERATION, SA(0.2), IS GREATER THAN 0.90 AND NOT MORE THAN 1.8 OR
(B) THE SEISMIC SPECTRAL ACCELERATION, SA(0.2), IS GREATER THAN 0.90 AND NOT MORE THAN 1.8.

9.23.4.2. SPANS, FOR JOISTS, RAFTERS AND BEAMS
(1) EXCEPT AS REQUIRED IN SENTENCE (2) AND ARTICLE 9.23.14.10, SPANS FOR WOOD JOISTS AND RAFTERS SHALL CONFORM TO THE SPANS SHOWN IN SPAN TABLES 9.23.4.2.-A TO 9.23.4.2.-G FOR THE UNIFORM LIVE LOADS SHOWN IN THE TABLES.
(2) SPANS FOR FLOOR JOISTS THAT ARE NOT SELECTED FROM SPAN TABLES 9.23.4.2-A AND 9.23.4.2-B AND THAT ARE REQUIRED TO BE DESIGNED FOR THE SAME LOADING CONDITIONS, SHALL NOT EXCEED THE DESIGN REQUIREMENT FOR UNIFORM LOADING AND VIBRATION CRITERIA.
(3) SPANS FOR BUILT-UP WOOD AND GLUED-LAMINATED TIMBER FLOOR BEAMS SHALL CONFORM TO THE SPANS IN SPAN TABLES 9.23.4.2.-H TO 9.23.4.2.-K
(4) SPANS FOR ROOF RIDGE MEANS SHALL CONFORM TO THE SPANS IN SPAN TABLE 9.23.4.2-L FOR THE UNIFORM SNOW LOAD SHOWN.

9.23.4.3. STEEL BEAMS
(1) THE SPANS FOR STEEL BEAMS WITH LATERALLY SUPPORTED TOP FLANGES SHALL CONFORM TO TABLE 9.23.4.3. FOR FLOORS AND SPAN TABLES 9.23.4.3.-A TO 9.23.4.3.-J FOR ROOF AND FLOORS.
(2) BEAMS DESCRIBED IN SENTENCE (1) SHALL AT LEAST MEET THE REQUIREMENTS FOR GRADE 350W STEEL IN CSA G40.21, "STRUCTURAL QUALITY STEEL."

-ALL NOTCHING AND DRILLING IN FRAMING MEMBERS SHALL CONFORM TO O.B.C. 2024, 9.23.5.

9.23.6. ANCHORAGE
9.23.6.1. ANCHORAGE OF BUILDING FRAMES
(2) EXCEPT AS PROVIDED IN SENTENCES (3) TO (6), ANCHORAGE SHALL BE PROVIDED BY (A) EMBEDDING THE ENDS OF THE FIRST FLOOR JOISTS IN CONCRETE, OR (B) FASTENING THE SILL PLATE TO THE FOUNDATION WITH NOT LESS THAN 1/2"Ø ANCHOR BOLTS SPACED NOT MORE THAN 7'-10" MINIMUM
(4) FOR BUILDING SUPPORTED BY FRAME WALLS THAT ARE IN AREAS WHERE THE SEISMIC SPECTRAL ACCELERATION, SA(0.2), IS GREATER THAN 0.70 BUT NOT GREATER THAN 1.8 AND THE 1-IN-50 HOURLY WIND PRESSURE (HWP) IS NOT GREATER THAN 1.2 KPA, ANCHORAGE SHALL BE PROVIDED BY FASTENING THE SILL PLATE TO THE FOUNDATION WITH NOT LESS THAN TWO ANCHOR BOLTS PER BRACED WALL PANEL LOCATED WTIHIN 20" OF THE END OF THE FOUNDATION AND SPACED IN ACCORDANCE WITH TABLE 9.23.6.1.
(5) ANCHOR BOLTS REFERRED TO IN SENTENCES (2) TO (4) SHALL BE (A) FASTENED TO THE SILL PLATE WITH NUTS AND WASHERS, (B) EMBEDDED NOT LESS THAN 100MM IN TEH FOUNDATION, AND (C) SO DESIGNED THAT THEY MAY BE TIGHTENED WITHOUT WITHDRAWING THEM FROM THE FOUNDATION.

9.23.8. BEAMS TO SUPPORT FLOORS
9.23.8.1. BEARING FOR BEAMS
(1) BEAMS SHALL HAVE EVEN AND LEVEL BEARING AND THE BEARING AT END SUPPORTS SHALL BE NOT LESS THAN 3 1/2" LONG, EXCEPT AS STATED IN THE NOTES TO SPAN TABLES.-H TO 9.23.4.2.-K.

9.23.8.2. PRIMING OF STEEL BEAMS
(1) EXTERIOR STEEL BEAMS SHALL BE SHOP PRIMED WITH RUST-INHIBITIVE PAINT.

9.23.9. FLOOR JOISTS
9.23.9.1. END BEARING FOR JOISTS
(1) EXCEPT WHEN SUPPORTED ON RIBBON BOARDS, FLOOR JOISTS SHALL HAVE NOT LESS THAN 3 1/2" LENGTH OF END BEARING.

9.23.10. WALL STUDS
9.23.10.1. STUD SIZE AND SPACING
(1) EXCEPT AS PROVIDED IN SENTENCE (2), THE SIZE AND SPACING OF STUDS SHALL CONFORM TO TABLE 9.23.10.1.
(2) STUDS FOR WALLS NOT LISTED IN TABLE 9.23.10.1. AND SUPPORTING ROOF LOADS SHALL CONFORM TO SPAN TABLES 9.23.10.1.-A TO 9.23.10.1.-D PROVIDED (A)-(F).

9.23.14. ROOF AND CEILING FRAMING
9.23.14.1. CONTINUITY OF RAFTERS AND JOISTS
(1) ROOF RAFTER AND JOISTS AND CEILING JOISTS SHALL BE CONTINUOUS OR SHALL BE SPLICED OVER VERTICAL SUPPORTS THAT EXTENT TO SUITABLE BEARING.

9.23.14.3. END BEARING LENGTH
(1) THE LENGTH OF END BEARING OF JOISTS RAFTERS SHALL BE NOT LESS THAN 1 1/2"

23.16.1. ROOF SHEATHING
9.23.16.1. REQUIRED ROOF SHEATHING
(1) EXCEPT WHERE THE 1-IN50 HOURLY WIND PRESSURE IS LESS THAN 0.8KPA AND THE SEISMIC SPECTRAL ACCELERATION, SA(0.2), IS LESS THAN OR EQUAL TO 0.70, CONTINUOUS LUMBER OR PANEL TYPE ROOF SHEATHING SHALL BE INSTALLED TO SUPPORT THE ROOFING.

9.23.17. WALL SHEATHING
9.23.17.1. REQUIRED SHEATHING
(1) EXTERIOR WALLS AND GABLE ENDS SHALL BE SHEATHED WHEN THE EXTERIOR CLADDING REQUIRED INTERMEDIATE FASTENING BETWEEN SUPPORTS OR IF THE EXTERIOR CLADDING REQUIRED SOLID BLOCKING.

9.23.17.2. THICKNESS, RATING AND MATERIAL STANDARDS
(1) WHERE WALL SHEATHING IS REQUIRED FOR THE PURPOSE OF COMPLYING WITH THIS SECTION, IT SHALL CONFORM TO TABLE9.23.17.2.-A OR TABLE 9.23.17.2.-B

9.24. SHEET STEEL STUD WALL FRAMING
9.24.1.1. APPLICATION
(1) THIS SECTION APPLIES TO SHEET STEEL STUDS FOR USE IN NON-LOADBEARING EXTERIOR AND INTERIOR WALLS. (2) WHERE LOADBEARING STEEL STUDS ARE USED, THEY SHALL BE DESIGNED IN CONFORMANCE WITH PART 4.

9.25. HEAT TRANSFER, AIR LEAKAGE AND CONDENSATION CONTROL
- ALL AIR BARIER SYSTEMS AND VAPOUR BARRIER AS PER O.B.C. 2024 9.25. .,
9.25.2.1. APPLICATION
(1) ALL WALLS, CEILING AND FLOORS SEPARATING HEATED SPACE FROM UNHEATED SPACE, THE EXTERIOR AIR OR THE EXTERIOR SOIL SHALL BE
(A) PROVIDED WITH
 (I) SUFFICIENT THERMAL INSULATION CONFORMING TO SUBSECTION 9.25.2.,
 (II) AN AIR BARRIER SYSTEM CONFORMING TO 9.25.3.2., AND
 (III) A VAPOUR BARRIER CONFORMING TO SUBSECTION 9.25.4. AND
(B) CONSTRUCTION IN SUCH A WAY THAT THE PROPERTIES AND RELATIVE POSITION OF ALL MATERIAL CONFORM TO SUBSECTION 9.25.5.

9.25.2. THERMAL INSULATION
9.25.2.1. REQUIRED INSULATION
(1) ALL WALLS, CEILING AND FLOOR SEPARATING HEATED SPACE FROM UNHEATED SPACE, THE EXTERIOR AIR OR THE EXTERIOR SOIL SHALL BE PROVIDED WITH SUFFICIENT THERMAL INSULATION TO PREVENT MOISTURE CONDENSATION ON THEIR ROOM SIDE DURING THE WINTER AND TO ENSURE COMFORTABLE CONDITIONS FOR THE OCCUPANTS.

9.25.2.2. INSULATION MATERIALS
(1) EXCEPT AS REQUIRED IN SENTENCE (2), THERMAL INSULATION SHALL CONFORM TO THE REQUIREMENTS OF (A)-(I)
(2) THE FLAME-SPREAD RATING REQUIREMENTS CONTAINED IN THE STANDARDS LISTED IN SENTENCE (1) SHALL NOT APPLY.

9.25.2.3. INSULATION OF THERMAL INSULATION
(1) INSULATION SHALL BE INSTALLED SO THAT THERE IS A REASONABLY UNIFORM INSULATING VALUE OVER THE ENTIRE FACE OF THE INSULATING AREA.
(2) INSULATION SHALL BE APPLIED TO THE FULL WIDTH AND LENGTH OF THE SPACE BETWEEN FURRING OR FRAMING.
(3) EXCEPT WHERE THE INSULATION PROVIDES THE PRINCIPAL RESISTANCE TO AIR LEAKAGE, THERMAL INSULATION SHALL BE INSTALLED SO THAT AT LEAST ONE FACE IS IN FULL AND CONTINUOUS CONTACT WITH AN ELEMENT WITH LOW AIR PERMEANCE.
(4) INSULATION SHALL BE INSTALLED OVER THE FULL HEIGHT OF FOUNDATION WALLS ENCLOSING A BASEMENT OR HEATED CRAWL SPACE.
(5) INSULATION AROUND CONCRETE SLAB-ON-GROUND SHALL BE LOCATED SO THAT HEAT FROM THE BUILDING IS NOT RESTRICTED FROM REACHING THE GROUND BENEATH THE PERIMETER, WHERE EXTERIOR WALLS ARE NOT SUPPORTED BY FOOTINGS EXTENDING BELOW FRONT LEVEL.
(6) WHERE INSULATION IS EXPOSED TO THE WEATHER AND SUBJECT TO MECHANICAL DAMAGE, IT SHALL BE PROTECTED WITH NOT LESS THAN (A) 1/4" PRESERVATION-TREATED PLYWOOD, OR (B) 1/2" CEMENT PARGING ON WIRE LATH APPLIED TO THE EXPOSED FACE AND EDGE.
(7) EXCEPT AS PERMITTED IN SENTENCE (7.1) INSULATION AND VAPOUR BARRIER LOCATED IN AREAS WHERE IT MAY BE SUBJECT TO MECHANICAL DAMAGE SHALL BE PROTECTED BY A COVERING SUCH AS GYPSUM BOARD, PLYWOOD, PARTICLEBOARD, OSB, WAFERBOARD OR HARDBOARD.
(7.1) IN UNFINISHED BASEMENTS, THE PROTECTION REQUIRED IN SENTENCE (7) NEED NOT BE PROVIDED FOR MINERAL FIBRE INSULATION, PROVIDED IT IS COVERED WITH A MEMBRANE WHICH COMPLIES WITH THE REQUIREMENT OF SECTION 9.25.4.

9.25.2.4.(1) EXCEPT AS PROVIDED IN SENTENCES (2) TO (6), LOOSE-FILL INSULATION SHALL BE USED ON HORIZONTAL SURFACES ONLY
(2) WHERE LOOSE-FILL INSULATION IS INSTALLED IN AN UNCONFINED SLOPED SPACE, SUCH AS AN ATTIC SPACE OVER A SLOPED CEILING, THE SUPPORTING SLOPE SHALL NOT BE MORE THAN (A) 4.5 IN 12 FOR MINERAL FIBRE OR CELLULOSE FIBRE INSULATION, AND (B) 2.5 IN 12 FOR OTHER TYPES OF INSULATION.
(6) WHERE SOFFIT VENTING IS USED, MEASURES SHALL BE TAKEN (A) TO PREVENT LOOSE-FILL INSULATION FROM BLOCKING THE SOFFIT VENTS AND TO MAINTAIN AN OPEN PATH FOR CIRCULATION OF AIR FROM THE VENTS INTO THE ATTIC OR ROOF SPACE, AND (B) TO MINIMIZE AIRFLOW INTO THE INSULATION NEAR THE SOFFIT VENTS TO MAINTAIN THE THERMAL PERFORMANCE OF THE MATERIAL.
9.26.2.5.(1) SPRAY-APPLIED POLYURETHANE INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH CAN/ULC-S705.2, "STANDARD FOR THERMAL INSULATION -SPRAY APPLIED RIGID POLYURETHANE FOAM, MEDIUM DENSITY-APPLICATION."

9.25.3. AIR BARRIER SYSTEMS
9.25.3.1. REQUIRED BARRIER TO AIR LEAKAGE
(1) WALL, CEILING AND FLOOR ASSEMBLIES THAT SEPARATE CONDITIONED SPACE FROM UNCONDITIONED SPACE OR FROM THE GROUND SHALL BE CONSTRUCTED SO AS TO INCLUDE AN AIR BARRIER SYSTEM THAT WILL PROVIDE A CONTINUOUS BARRIER TO AIR LEAKAGE (A) FROM THE INTERIOR OF THE BUILDING INTO WALL, FLOOR, ATTIC OR ROOF SPACES SUFFICIENT TO PREVENT EXCESSIVE MOISTURE CONDENSATION IN SUCH SPACES DURING THE WINTER, AND (B) FROM THE EXTERIOR OR THE GROUND INWARD SUFFICIENT TO (I) PREVENT MOISTURE CONDENSATION ON THE ROOM SIDE DURING WINTER, (II) ENSURE COMFORTABLE CONDITIONS FOR THE OCCUPANTS, AND (III) MINIMIZE THE INGRESS OF SOIL GAS.
(2) THE CONTINUITY OF THE AIR BARRIER SYSTEM SHALL EXTEND THROUGHOUT THE BASEMENT.

9.25.3. AIR BARRIER SYSTEMS
9.25.3.2. AIR BARRIER SYSTEM PROPERTIES
(2) WHERE POLYETHYLENE SHEET IS USED TO PROVIDE THE AIRTIGHTNESS IN THE AIR BARRIER SYSTEM, IT SHALL CONFORM TO CAN/CGDB-51.34-M, " VAPOUR BARRIER, POLYETHYLENE SHEET FOR USE IN BUILDING CONSTRUCTION."

9.25.4. VAPOUR BARRIERS
9.25.4.1. REQUIRED BARRIER TO VAPOUR DIFFUSION
(1) THERMALLY INSULATED WALL, CEILING AND FLOOR ASSEMBLIES SHALL BE CONSTRUCTED WITH A VAPOUR BARRIER SO AS TO PROVIDE A BARRIER TO DIFFUSION OF WATER VAPOUR FROM THE INTERIOR INTO WALL SPACES, FLOOR SPACES, OR ATTIC OR ROOF SPACES.

9.25.4.3. INSTALLATION OF VAPOUR BARRIERS
(1) PRODUCTS INSTALLED TO FUNCTION AS THE VAPOUR BARRIER SHALL PROTECT THE WARM SIDE OF THE WALL, CEILING AND FLOOR ASSEMBLIES.

9.26. ROOFING
9.26.1.2. REQUIRED PROTECTION
(1) ROOFS SHALL BE PROTECTED WITH ROOFING, INCLUDING FLASHING, INSTALLED SO AS TO (A) EFFECTIVELY SHED WATER, (B) PREVENT THE INGRESS OF WATER AND MOISTURE INTO BUILDING ASSEMBLIES AND OCCUPIED SPACE, AND (C) MINIMIZE THE INGRESS OF WATER DUE TO ICE DAMMING INTO BUILDING ASSEMBLIES.

9.26.1.4. SOLAR COLLECTOR SYSTEMS
(1) A SOLAR COLLECTOR SYSTEM IS PERMITTED TO BE INSTALLED ABOVE ROOFING MATERIALS CONFORMING TO 9.26.2.1.(1)
9.26.2.1.(1) WHERE MATERIALS USED FOR THE PREPARATION OF THE SUBSTRATE FOR ROOFING ARE COVERED IN THE SCOPE OF A STANDARD LISTED IN TABLE 9.26.2.1.-A THEY SHALL CONFORM TO THAT STANDARD.
(2) WHERE ROOF MATERIALS ARE COVERED IN THE SCOPE OF A STANDARD LISTED IN TABLE 9.26.2.1.-B THEY SHALL CONFORM TO THAT STANDARD.

9.26.3. SLOPE OF ROOF SURFACES
9.26.3.1. SLOPE
(1) EXCEPT AS PROVIDED IN SENTENCE (2) AND (3) THE SLOPES ON WHICH ROOF COVERINGS MAY BE APPLIED SHALL CONFORM TO TABLE 9.26.3.1.
(2) ASPHALT AND GRAVEL OR COAL TAR AND GRAVEL ROOFS MY BE CONSTRUCTED WITH LOWER SLOPES THAN REQUIRED IN SENTENCE (1) WHEN EFFECTIVE DRAINAGE IS PROVIDED BY ROOF DRAINS LOCATED AT THE LOWEST POINTS ON THE ROOFS.
(3) PROFILED METAL ROOF CLADDING SYSTEMS SPECIFICALLY DESIGNED FOR LOW-SLOPE APPLICATIONS ARE PERMITTED TO BE INSTALLED WITH LOWER SLOPES THAN REQUIRED IN SENTENCE (1), PROVIDED THEY ARE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.

-ALL FLASHING AT INTERSECTIONS TO COMPLY WITH O.B.C. 2024 9.26.4.
-ALL TYPES OF ROOFING TO COMPLY WITH O.B.C. 2024 9.26.5.-9.26.17.

9.26.18. ROOF DRAINS AND DOWNSPOUT
9.26.18.2. DOWNSPOUTS
(1)WHERE DOWNSPOUT ARE PROVIDED AND ARE NOT CONNECTED TO A SEWER, EXTENSIONS SHALL BE PROVIDED TO CARY RAINWATER AWAY FROM THE BUILDING IN A MANNER THAT WILL PREVENT SOIL EROSION.

9.27. CLADDING
- ALL CLADDING TO COMPLY WITH O.B.C. 2024 9.27.
9.27.5. ATTACHEDMNET OF CLADDING
9.27.5.4. ATTACHMENT
(1) NAIL OR STAPLE SIZE AND SPACING FOR THE ATTACHMENT OF CLADDING AND TRIM TO WOOD FRAMING, FURRING MEMBERS OR BLOCKING SHALL CONFORM TO TABLE 9.27.5.4.-A
(2) SCREW SIZE AND SPACING FOR THE ATTACHMENT OF CLADDING, TRIM AND FURRING MEMBERS TO THE WEB FASTENING STRIPS OF FLAT WALL INSULATING FORM (ICF) UNITS SHALL CONFORM TO TABLE 9.27.5.4.-B WHERE THE 1-IN-50 HOURLY WIND PRESSURE (HWP) IS LESS THAN OR EQUAL TO 0.60KPA.

9.28. STUCCO
9.28.1.4. CLEARANCE OVER GROUND LEVEL
(1) STUCCO SHALL BE NOT LESS THAN 8" ABOVE FINISHED GROUND LEVEL EXCEPT WHEN IT IS APPLIED OVER CONCRETE OR MASONRY.

9.28.6. STUCCO APPLICATION
9.28.6.1. LOW TEMPERATURE CONDITIONS
(1) THE BASE FOR STUCCO SHALL BE MAINTAINED ABOVE FREEZING.
(2) STUCCO SHALL BE MAINTAINED AT A TEMPERATURE OF NOT LESS THAN 10°C DURING APPLICATION AND FAR NOT LESS THAN 48H AFTERWARDS.

9.28.6.2. NUMBER OF COATS AND TOTAL THICKNESS
(1) STUCCO SHALL BE APPLIED WITH AT LEAST 2 BASE COATS AND ONE FINISH COAT, PROVIDING A TOTAL THICKNESS OF NOT LESS THAN 1/2", MEASURED FROM THE FACE OF THE LATH OR FACE OF THE MASONRY WHERE NO LATH IS USED.

9.29. INTERIOR WALL AND CEILING FINISHES
9.29.2. WATERPROOF WALL FINISH
9.29.2.1. WHERE REQUIRED
(1) WATERPROOF FINISH SHALL BE PROVIDED TO A HEIGHT OF NOT LESS THAN
(A) 5'-11" ABOVE THE FLOOR IN SHOWER STALLS,
(B) 3'-11" ABOVE THE RIMS OF BATHTUBS, EQUIPPED WITH SHOWERS, AND
(C) 16" ABOVE THE RIMS OF BATHTUBS NOT EQUIPPED WITH SHOWERS.

9.29.2.2. MATERIALS
(1) WATERPROOF FINISH SHALL CONSIST OF CERAMIC, PLASTIC OR METAL TILE, SHEET VINYL, TEMPERED HARDBOARD, LAMINATED THERMOSETTING DECORATIVE SHEETS OR LINOLEUM.

9.31. PLUMBING
9.31.4. REQUIRED FACILITIES
9.31.4.1. REQUIRED FIXTURES
(1) A KITCHEN SINK, LAVATORY, BATHTUB OR SHOWER, AND WATER CLOSET SHALL BE PROVIDED FOR EVERY DWELLING UNIT WHERE A WATER DISTRIBUTION SYSTEM IS AVAILABLE.

9.31.4.1A. LAUNDRY FIXTURES
(1) LAUNDRY FACILITIES OR A SPACE FOR LAUNDRY FACILITIES SHALL BE PROVIDED IN EVERY DWELLING UNIT OR GROUPED ELSEWHERE IN THE BUILDING IN A LOCATION CONVENIENTLY ACCESSIBLE TO OCCUPANTS OF EVERY DWELLING UNIT.

9.32. VENTILATION
9.32.3.9A. LOCATION OF CARBON MONOXIDE ALARMS
(1) A CARBON MONOXIDE ALARM SHALL BE INSTALLED IN A SUITE OF RESIDENTIAL OCCUPANCY WHERE
(A) A FUEL-BURNING APPLIANCE OR A FLUE IS INSTALLED IN THE SUITE,
(B) A FORCED-AIR FUEL BURNING APPLIANCE PROVIDES HEATED AIR DIRECTLY TO THE SUITE,
(C) A FUEL-BURNING APPLIANCE OF A FLUE IS LOCATED IN A ROOM, SUITE OR AREA THAT SHARES A COMMON WALL OR FLOOR OR CEILING ASSEMBLY WITH THE SUITE, OR
(D) A STORAGE GARAGE SHARES A COMMON WALL OR FLOOR OR CEILING ASSEMBLY WITH THE SUITE.
(2) WHERE A CARBON MONOXIDE ALARM IS REQUIRED BY SENTENCE (1) TO BE INSTALLED IN A SUITE OF RESIDENTIAL OCCUPANCY, OTHER THAN A SUITE THAT CONSISTS OF A COMBINED LIVING AND SLEEPING AREA, A CARBON MONOXIDE ALARM SHALL BE INSTALLED (A) ADJACENT TO EACH SLEEPING ROOM IN THE SUITE, AND (B) ON EACH STOREY WITHOUT A SLEEPING ROOM IN THE SUITE.
(3) WHERE A CARBON MONOXIDE ALARM IS REQUIRED BY SENTENCE (1) TO BE INSTALLED IN A SUITE OF RESIDENTIAL OCCUPANCY THAT CONSISTS OF A COMBINED LIVING AND SLEEPING AREA, A CARBON MONOXIDE ALARM SHALL BE INSTALLED IN THE COMBINED LIVING AND SLEEPING AREA.
(4) IN ADDITION, A CARBON MONOXIDE ALARM SHALL BE INSTALLED IN EACH SLEEPING ROOM WITHIN THE SUITE WHERE THE SLEEPING ROOM
(A) CONTAINS A FUEL-BURNING APPLIANCE OR A FLUE, OR
(B) SHARES A COMMON WALL OR FLOOR OR CEILING ASSEMBLY
 (I) WITH A ROOM, SUITE OR AREA THAT IS LOCATED OUTSIDE THE SUITE AND CONTAINS A FUEL-BURNING APPLIANCE OR A FLUE,
 II) WITH A STORAGE GARAGE, OR
 (III) THAT IS ADJACENT TO AN ATTIC OR CRAWL SPACE TO WHICH THE STORAGE GARAGE IS ALSO ADJACENT.
(5) CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN PUBLIC CORRIDORS SERVING SUITES OF RESIDENTIAL OCCUPANCY WHERE THE CORRIDOR IS DIRECTLY HEATED BY A FORCED-AIR FUEL-BURNING APPLIANCE.

9.32.3.9C. INSTALLATION AND CONFORMANCE TO STANDARDS
(1) THE CARBON MONOXIDE ALARMS REQUIRED BY ARTICLE 9.32.3.9A. AND 9.32.3.9B SHALL
(A) EXCEPT AS PERMITTED IN SENTENCE (2), BE PERMANENTLY CONNECTED TO AN ELECTRICAL CIRCUIT AND SHALL HAVE NO DISCONNECT SWITCH BETWEEN THE OVERCURRENT DEVICE AND THE CARBON MONOXIDE ALARM,
(B) INCASE THE REGULAR POWER SUPPLY TO THE CARBON MONOXIDE ALARM IS INTERRUPTED, BE PROVIDED WITH A BATTERY AS AN ALTERNATIVE POWER SOURCE THAT CAN CONTINUE TO PROVIDE POWER TO THE CARBON MONOXIDE ALARM FOR A PERIOD OF NOT LESS THAN 8H IN THE STANDBY CONDITION, FOLLOWED BY THE OPERATION OF THE CARBON MONOXIDE ALARM FOR AN ALARM SIGNAL FOR AT LEAST 12H,
(C) BE WIRED SO THAT
 (I) ACTIVATION OF ONE CARBON MONOXIDE ALARM WITHIN A SUITE OF RESIDENTIAL OCCUPANCY WILL ACTIVATE ALL CARBON MONOXIDE ALARMS WITHIN THE SUITE,
 (II) ACTIVATION OF ONE CARBON MONOXIDE ALARM WITHIN A HOUSE WITH A SECONDARY SUITE WILL ACTIVATE ALL CARBON MONOXIDE ALARMS WITHIN THE HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES, AND
 (III) ACTIVATION OF ONE CARBON MONOXIDE ALARM LOCATED IN A PUBLIC CORRIDOR SERVING SUITES OF RESIDENTIAL OCCUPANCY WILL ACTIVATE ALL CARBON MONOXIDE ALARMS WITHIN THE CORRIDOR,
(D) BE AUDIBLE WITHIN SLEEPING ROOMS WHEN THE INTERVENING DOORS ARE CLOSED, WHERE LOCATED ADJACENT TO A SLEEPING ROOM IN A SUITE OF RESIDENTIAL OCCUPANCY, AND
(E) CONFORM TO
 (I) CAN/CSA-6.19 "RESIDENTIAL CARBON MONOXIDE ALARMING DEVICES," OR
 (II) UL 2034, "SINGLE AND MULTIPLE STATION CARBON MONOXIDE ALARMS."
(3) EXCEPT AS PERMITTED IN SENTENCE (2), CARBON MONOXIDE ALARMS REQUIRED BY ARTICLES 9.32.3.9A. AND 9.32.3.9B. SHALL HAVE VISUAL SIGNALING COMPONENT CONFORMING TO THE REQUIREMENTS IN 18.5.3. OF NFPA 72, "NATIONAL FIRE ALARM SIGNALING CODE."
(5) THE VISUAL SIGNALING COMPONENT NEED NOT
(A) BE INTEGRATED WITH THE CARBON MONOXIDE ALARM PROVIDED IT IS INTERCONNECTED TO IT, (B) BE ON BATTERY BACKUP, OR (C) HAVE SYNCHRONIZED FLASH RATES, WHEN INSTALLED IN A DWELLING UNIT.
(6) CARBON MONOXIDE ALARMS SHALL BE INSTALLED
(A) AT MANUFACTURER'S RECOMMENDED HEIGHT, OR
(B) ON OR NEAR THE CEILING.

9.33. HEATING AND AIR-CONDITIONING
9.33.1.1. APPLICATION
(3) AIR DUCT DISTRIBUTION SYSTEMS SERVING ONE OF THE DWELLING UNITS IN A HOUSE WITH A SECONDARY SUITE SHALL NOT BE DIRECTLY INTERCONNECTED WITH OTHER PARTS OF THE HOUSE.

9.33.6. AIR DUCT SYSTEMS
9.33.6.4. COVERINGS, LININGS AND INSULATION
(5) EXCEPT AS PERMITTED BY SENTENCES (5) AND (6), FOAMED PLASTIC INSULATION SHALL NOT BE USED AS PART OF AN AIR DUCT OR FOR INSULATING AN AIR DUCT.
(6) FOAM PLASTIC INSULATION CONFORMING TO ARTICLE 9.25.2.2. IS PERMITTED TO BE USED TO INSULATE A GALVANIZED STEEL, STAINLESS STEEL OR ALUMINUM AIR DUCT, PROVIDED
(A) THE FOAMED PLASTIC INSULATION APPLIED TO SUPPLY DUCTWORK IS NOT LESS THAN 3M FROM THE FURNACE BONNET,
(B) THE TEMPERATURE WITHIN THE DUCTWORK WHERE THE INSULATION INSTALLED IS NOT GREATER THAN 50°C,
(C) DUCT JOINTS ARE TAPED WITH A PRODUCT CONFORMING TO SENTENCE 9.33.6.3.(1),
(D) RETURN AIR PLENUMS ARE SEPARATED FROM THE FOAMED PLASTIC INSULATION, AND
(E) THE FOAMED PLASTIC INSULATION IS PROTECTED IN ACCORDANCE WITH 9.10.17.10
(7) FOAMED PLASTIC INSULATION IS PERMITTED TO BE USED IN A CEILING SPACE THAT ACTS AS RETURN AIR PLENUM PROVIDED THE FOAMED PLASTIC INSULATION IS PROTECTED FROM EXPOSURE TO THE PLENUM IN ACCORDANCE WITH 3.1.5.14.(4).

9.33.6.7. CONSTRUCTION OF DUCTS AND PLENUMS
(1) AIR DUCT SYSTEMS SERVING GARAGES SHALL NOT BE INTERCONNECTED WITH OTHER PARTS OF THE DWELLING UNIT.

CONSTRUCTION NORTH

MUNICIPALITY:
MUNICIPALITY OF HASTINGS HIGHLANDS
33011 HWY 62N, P.O. BOX 130,
MAYNOOTH ON, K0L 2S0
Phone: 613-338-2811

CONSTRUCTED BY:

DESIGNED BY:
girard ENGINEERING
2478153 ONTARIO INC.
682 Peel Street
Woodstock ON, N4S 1L3
Tel: 1-519-879-6875
Email: info@girardengineering.ca

APPROVED BY:
M. K. VASANTHA
100175149
June 19, 2025

NOTE: THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER AND ARE NOT VALID UNLESS SEALED WITH RED INK. THESE DRAWINGS ARE NOT TO BE REPRODUCED UNLESS AUTHORIZED BY THE ENGINEER.

DESIGNED FOR:
DALE & TASHA SCHEERHORN
227 WEST DIAMOND LAKE ROAD
Highland Grove, Ontario, K0L 2A0
Email: dalebhservices@gmail.com

PROPOSED COTTAGE

GENERAL NOTES

SCALE: 1/4" = 1'-0"
DATE: APRIL 14, 2025
DRAWING BY: T. STREATCH
DESIGNED/CHECKED BY: M. VASANTHA
DRAWING NO: A-6
PROJECT NO: 24-286

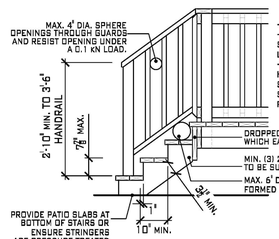
9.33.6.13. RETURN-AIR SYSTEM
(7.1) RETURN-AIR FROM A DWELLING UNIT SHALL NOT BE RECIRCULATED TO ANY OTHER DWELLING UNIT.

9.39. PARK MODEL TRAILERS
9.392.1. GENERAL
(1) EXCEPT AS PROVIDED IN SUBSECTION 9.39.3., A MANUFACTURED BUILDING USED OR INTENDED TO BE USED AS A SEASONAL RECREATION BUILDING OF RECREATION BUILDING OF RESIDENTIAL OCCUPANCY IS DEEMED TO COMPLY WITH THE CODE IF IT IS DESIGNED AND CONSTRUCTION IN CONFORMANCE WITH CAN/CSA-Z241, "PARK MODEL TRAILERS."

9.38.3.3. FOUNDATIONS AND ANCHORAGE
(1) BUILDINGS DESCRIBED IN ARTICLE 9.39.1.1. SHALL BE SUPPORTED AND ANCHORED IN CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS OR AS OTHERWISE NOTED.

9.40. REINFORCED CONCRETE SLABS
-SLAB CONSTRUCTION TO BE INSTALLED AS PER CODE UNLESS OTHERWISE NOTED.

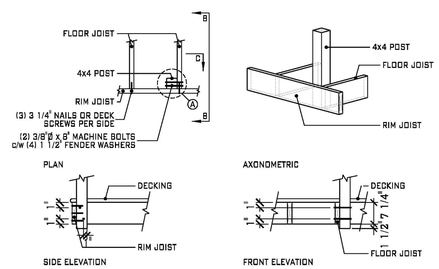
9.40.1.4. SLAB CONSTRUCTION
(1) CONCRETE SHALL BE CAST AGAINST FORMWORK IN ACCORDANCE WITH CSA A23.1, "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION".
(2) THE SLAB SHALL NO BE LESS THAN 5" THICK
(3) THE SLAB SHALL BE REINFORCED WITH 10M BARS SPACED NOT MORE THAN 8" O.C., IN EACH DIRECTION, WITH 30MM CLEAR COVER FROM THE BOTTOM OF THE SLAB TO THE FIRST LAYER OF BARS, AND THE SECOND LAYER OF BARS LAID DIRECTLY ON TOP OF THE LOWER LAYER IN THE OPPOSITE DIRECTION.
(4) THE SLAB SHALL BEAR NOT LESS THAN 3" ON THE SUPPORTING FOUNDATION WALLS AND BE ANCHORED TO THE WALLS WITH 24"x24" 10M BENT DOWELS SPACED NOT MORE THAN 24" O.C.
(5) EXPOSED SLABS SHALL BE SLOPED TO EFFECTIVELY SHED WATER AWAY FROM THE EXTERIOR WALL.



-ALL GUARDS SHALL BE NOT LESS THAN 3'-6" HIGH.
-ALL GUARDS WITHIN DWELLING UNITS OR WITHIN HOUSES WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL BE NOT LESS THAN 2'-11 1/2".
-EXTERIOR GUARDS SERVING NOT MORE THAN ONE DWELLING UNIT OR A HOUSE WITH A SECONDARY SUITE INCLUDING THEIR COMMON SPACES SHALL BE NOT LESS THAN 2'-11 1/2" HEIGHT WHERE THE WALKING SURFACE SERVED BY THE GUARD IS NOT MORE THAN 5'-11" ABOVE THE FINISHED GROUND LEVEL.

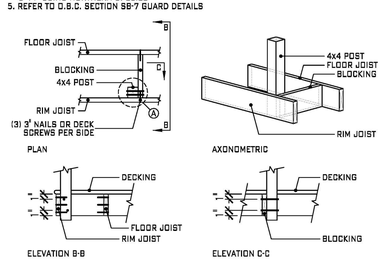
DECK STAIR DETAIL
SCALE: N.T.S.

NOTES:
1. PROVIDE HANDRAIL ON STAIRS IF MORE THAN THREE RISERS - 2'-10" MIN. OR 3'-6" MAX. HIGH



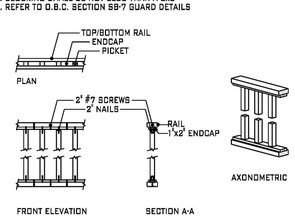
POST CONNECTION DETAIL (EB-4)
EXTERIOR CONNECTION: POST BOLTED TO FLOOR JOISTS
SCALE: N.T.S.

NOTES:
1. DECKING IS OMITTED FROM THE PLAN VIEW AND THE AXONOMETRIC VIEW FOR CLARITY
2. 1 1/2" POST PROJECTION BELOW FLOOR JOISTS IS NOT REQUIRED WHERE THE MAX. SPACING BETWEEN POSTS DOES NOT EXCEED 3'-11" - JOISTS MAY BE SPACED AT 16" OR 24" O.C.
3. WHERE FLOOR JOISTS ARE SPACED AT 24" O.C., DECKING SHALL HAVE A MINIMUM THICKNESS OF 1 1/2" AND SHALL BE FASTENED TO THE FLOOR JOISTS W/ (2) 3" NAILS
4. MAX SPACING BETWEEN POSTS 4'-11" USING DOUGLAS FIR LARCH, HEM-FIR, OR SPRUCE PINE FIR AND 3'-11" USING NORTHERN SPECIES
5. REFER TO O.B.C. SECTION 9B-7 GUARD DETAILS



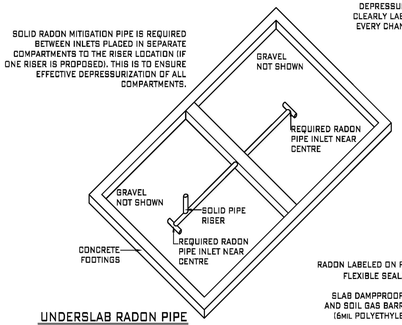
POST CONNECTION DETAIL (EB-6)
EXTERIOR CONNECTION: POST FASTENED TO FLOOR, GUARD PARALLEL TO FLOOR JOISTS
SCALE: N.T.S.

NOTES:
1. USE ANY OF THE CONNECTION DETAILS SHOWN ON DETAILS EB-1 TO EB-5 AT LOCATION 'A'. CONNECTION DETAIL EB-4 IS SHOWN IN THIS DETAIL AS AN EXAMPLE
2. MAXIMUM SPACING BETWEEN POSTS IS DETERMINED FROM CONNECTION DETAIL USED AT LOCATION 'A'
3. DECKING IS OMITTED FROM THE PLAN VIEW AND THE AXONOMETRIC VIEW FOR CLARITY
4. BLOCKING SHALL BE NOT LESS THAN A 2X8
5. REFER TO O.B.C. SECTION 9B-7 GUARD DETAILS

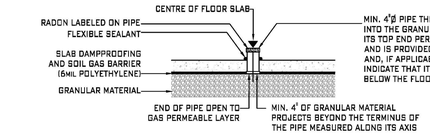


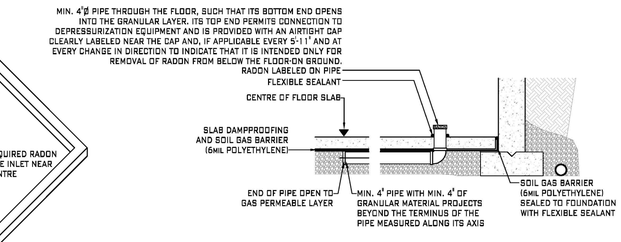
PICKET CONNECTION DETAIL (EC-1)
EXTERIOR CONNECTION: INFILL PICKET NAILED TO ENDCAP / ENDCAP SCREWED TO RAIL
SCALE: N.T.S.

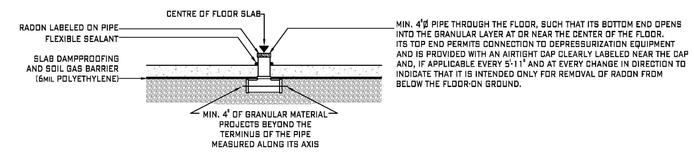
NOTES:
1. FASTEN EACH END OF EACH PICKET TO ENDCAPS WITH (2) 2" NAILS
2. FASTEN ENDCAPS TO RAILS WITH #7 2" SCREWS @ 12" O.C.
3. PICKETS TO BE MIN. 1 1/2X1 1/2"



UNDERSLAB RADON PIPE
SCALE: NOT TO SCALE

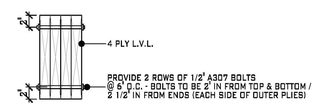




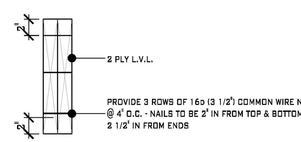


SUBFLOOR DEPRESSURIZATION SYSTEM DETAILS
SCALE: NOT TO SCALE

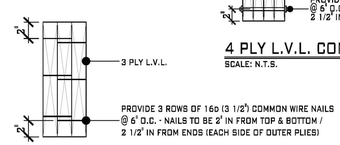
9.1.1.7. RADON
(1) IN ADDITION TO ALL OTHER REQUIREMENTS, A BUILDING IN THE FOLLOWING DESIGNATED AREAS SHALL BE DESIGNED AND CONSTRUCTED SO THAT THE ANNUAL AVERAGE CONCENTRATION OF RADON 222 DOES NOT EXCEED 200 Bq/m3 IF AIR AND THE ANNUAL AVERAGE CONCENTRATION OF THE SHORT LIVED DAUGHTERS OF RADON 222 DOES NOT EXCEED 0.02 WORKING LEVEL INSIDE THE BUILDING FOR,
(A) THE CITY OF ELLIOT LAKE IN THE TERRITORIAL DISTRICT OF ALGOMA,
(B) THE TOWNSHIP OF FARADAY IN THE COUNTY OF HASTINGS, AND
(C) THE GEOGRAPHIC TOWNSHIP OF HYMAN IN THE TERRITORIAL DISTRICT OF SUDBURY, OR
(D) AS PER DIRECTION OF LOCAL MUNICIPALITY



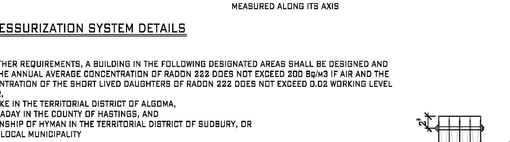
4 PLY L.V.L. CONNECTION DETAIL
SCALE: N.T.S.



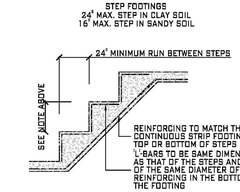
NAILING PATTERN FOR 2 PLY L.V.L.
SCALE: N.T.S.



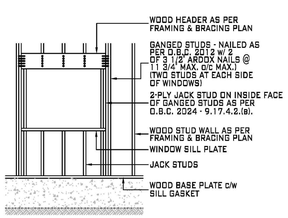
NAILING PATTERN FOR 3 PLY L.V.L.
SCALE: N.T.S.



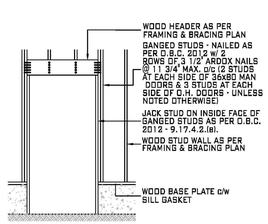
WINDOW OPENING DETAIL
SCALE: N.T.S.



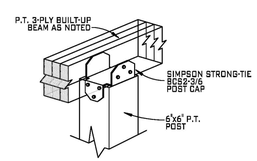
STEPPED FOOTING DETAIL
SCALE: N.T.S.



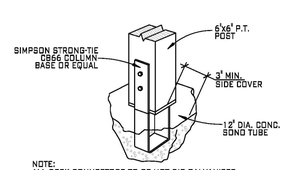
WINDOW FRAMING DETAIL
SCALE: NOT TO SCALE



DOOR FRAMING DETAIL
SCALE: NOT TO SCALE

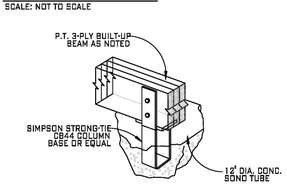


BEAM TO POST
SCALE: NOT TO SCALE



NOTE:
ALL DECK CONNECTORS TO BE HOT DIP GALVANIZED (FOR USE W/ ALL P.T. LUMBER).

POST TO SONO TUBE
SCALE: NOT TO SCALE



BEAM TO SONO TUBE
SCALE: NOT TO SCALE

CONSTRUCTION NORTH

MUNICIPALITY:
MUNICIPALITY OF HASTINGS HIGHLANDS
33011 HWY 62N, P.O. BOX 130, MAYNOOTH ON, K0L 2S0
PHONE: 613-338-2811

CONSTRUCTED BY:

DESIGNED BY:
girard ENGINEERING
2478153 ONTARIO INC.
682 PEEL SREET
WOODSTOCK ON, N4S 1L3
TEL: 1-519-879-6875
EMAIL: INFO@GIRARDENGINEERING.CA

APPROVED BY:
M. K. VASANTHA 100175148 June 19, 2025 PROVINCE OF ONTARIO

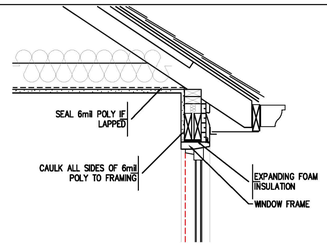
NOTE: THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER AND ARE NOT VALID UNLESS SEALED WITH RED INK. THESE DRAWINGS ARE NOT TO BE REPRODUCED UNLESS AUTHORIZED BY THE ENGINEER.

DESIGNED FOR:
DALE & TASHA SCHEERHORN
227 WEST DIAMOND LAKE ROAD
HIGHLAND GROVE, ONTARIO, K0L 2A0
TEL: 519-535-0658
EMAIL: DALEBHSERVICES@GMAIL.COM

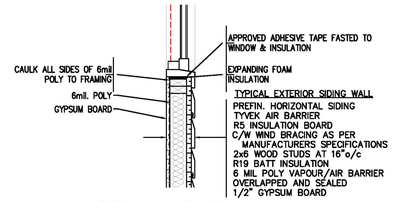
PROPOSED COTTAGE

GENERAL NOTES & DETAILS

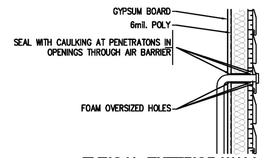
SCALE:	1/4" = 1'-0"	DRAWING NO:
DATE:	APRIL 14, 2025	A-7
DRAWING BY:	D. FALLOWFIELD	
DESIGNED/CHECKED BY:	M. VASANTHA	
PROJECT NO:	24-286	



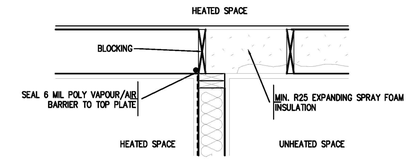
TYPICAL SECOND STOREY WINDOW HEADER



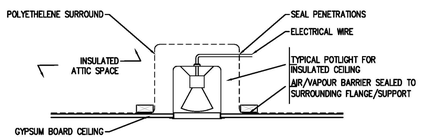
TYPICAL WINDOW SILL



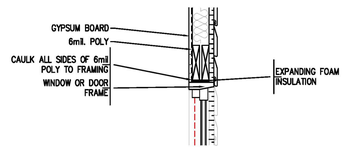
TYPICAL EXTERIOR WALL PENETRATION



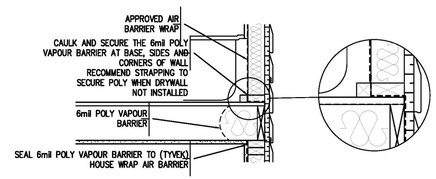
TYPICAL INTERIOR GARAGE WALL



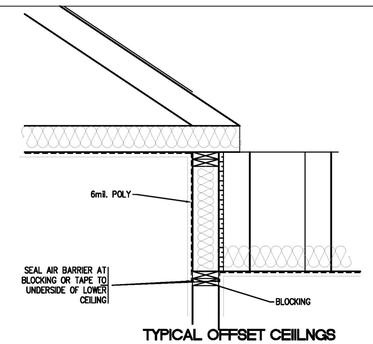
TYPICAL CEILING LIGHT PENETRATION



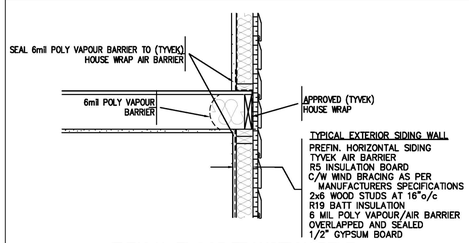
TYPICAL WINDOW OR DOOR FRAME



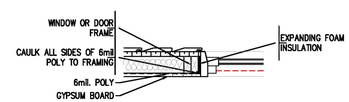
SEAL AIR BARRIER MATERIALS AT BOTTOM PLATE BEHIND TUB/SHOWER



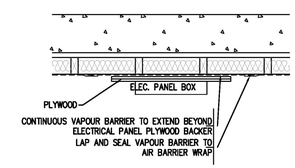
TYPICAL OFFSET CEIILNGS



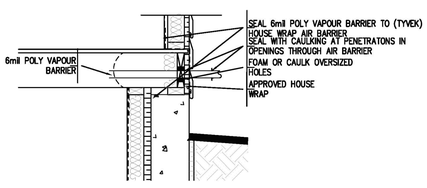
TYPICAL FLOOR TRANSITION BELT



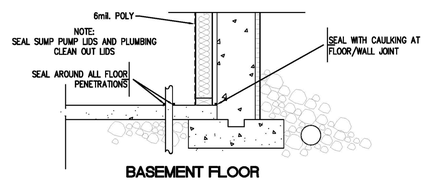
TYPICAL WINDOW OR DOOR FRAME



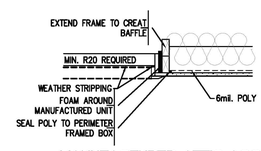
ELECTRICAL PANELS



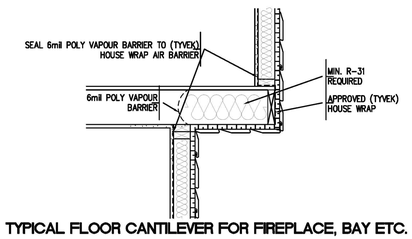
BELT WALL PENETRATIONS



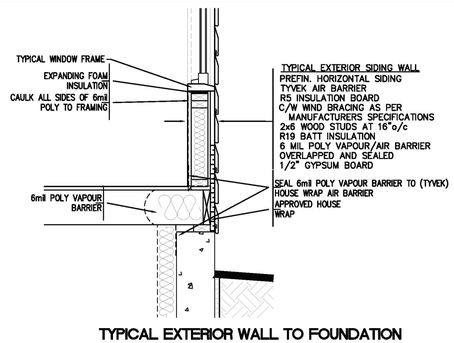
BASEMENT FLOOR



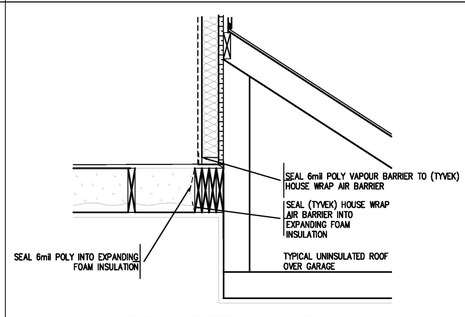
MANUFACTURED ATTIC ACCESS LID



TYPICAL FLOOR CANTILEVER FOR FIREPLACE, BAY ETC.



TYPICAL EXTERIOR WALL TO FOUNDATION



TYPICAL EXTERIOR ABOVE GARAGE

SUPPLEMENTARY AIR BARRIER DETAILS

AIR BARRIER IS A SEPARATE INSPECTION WHICH MUST BE CALLED PRIOR TO ANY EXTERIOR FINISH (BRICK, SIDING) BEING INSTALLED. BUILDER IS RESPONSIBLE TO ENSURE AIR BARRIER DETAILS ARE IN PLACE WHEN INSPECTION CALLED. DIV. C ADMINISTRATIVE PROVISIONS, PT. 1 GENERAL, NOTICES AND INSPECTIONS, 1.3.5.1. PRESCRIBED NOTICES, 1.3.5.1(2)(F)

9.25. HEAT TRANSFER, AIR LEAKAGE AND CONDENSATION CONTROL
9.25.1.1. SCOPE AND APPLICATION
(2) ALL WALLS, CEILING AND FLOOR SEPARATING CONDITIONED SPACE FROM UNCONDITIONED SPACE THE EXTERIOR AIR OR THE GROUND SHALL BE,
(A) PROVIDE WITH
(I) THERMAL INSULATION CONFORMING TO SUBSECTION 9.25.2.,
(II) AN AIR BARRIER SYSTEM CONFORMING TO SUBSECTION 9.25.3., AND
(III) A VAPOUR BARRIER CONFORMING TO SUBSECTION 9.25.4., AND
(B) CONSTRUCTED IN SUCH A WAY THAT THE PROPERTIES AND RELATIVE POSITION OF ALL MATERIAL CONFORM TO SUBSECTION 9.25.5.
(3) INSULATING AND SEALING OF HEATING AND VENTILATING DUCTS SHALL CONFORM TO SUBSECTIONS 9.32., 9.33

9.25.3.3. CONTINUITY OF THE AIR BARRIER SYSTEM
(1) WHERE THE AIR BARRIER SYSTEM CONSISTS OF AIR-IMPERMEABLE PANEL-TYPE MATERIAL, ALL JOINTS SHALL BE SEALED TO PREVENT AIR LEAKAGE.

(2) WHERE THE AIR BARRIER SYSTEM CONSIST OF FLEXIBLE SHEET MATERIAL, ALL JOINTS SHALL BE
(A) SEALED WITH COMPATIBLE MATERIAL SUCH AS TAPE OR FLEXIBLE SEALANT, OR
(B) EXCEPT AS REQUIRED BY SENTENCE (2.1), LAPPED NOT LESS THAN 4" AND CLAMPED, SUCH AS BETWEEN FRAMING MEMBERS, FURRING OR BLOCKING, AND RIGID PANELS.

(2.1) WHERE AN AIR BARRIER SYSTEM CONSISTING OF FLEXIBLE SHEET MATERIAL IS INSTALLED AT LOCATIONS WHERE IT IS NOT SUPPORTED BY AN INTERIOR FINISH, SUCH AS BEHIND A BATHTUB, SHOWER ENCLOSURE OR FIREPLACE, THE CONTINUITY OF THE AIR BARRIER SHALL BE MAINTAINED BY SEALING ITS JOINTS.

(3) WHERE AN INTERIOR WALL MEETS AN EXTERIOR WALL, CEILING, FLOOR OR ROOF REQUIRED TO BE PROVIDED WITH AIR BARRIER PROTECTION, THE AIR BARRIER SYSTEM SHALL EXTEND ACROSS THE INTERSECTION AND SHALL BE SEALED IN ACCORDANCE WITH SENTENCES (1) AND (2)

(4) WHERE AN INTERIOR WALL PROJECTS THROUGH A CEILING OR EXTENDS TO BECOME AN EXTERIOR WALL, SPACES IN THE ALL SHALL BE BLOCKED TO PROVIDE CONTINUITY ACROSS THOSE SPACES WITH THE AIR BARRIER SYSTEM IN THE ABUTTING WALLS OR CEILING BY
(A) SEALING EACH AIR BARRIER TO THE BLOCKING, OR
(B) WRAPPING EACH AIR BARRIER AROUND THE TRANSITION AND SEALING IN ACCORDANCE WITH SENTENCES (1) AND (2)

(5) WHERE AN INTERIOR FLOOR PROJECTS THROUGH AN EXTERIOR WALL TO BECOME AN EXTERIOR FLOOR,
(A) THE AIR BARRIER OF THE WALL UNDER THE FLOOR SHALL BE CONTINUOUS WITH OR SEALED TO THE SUBFLOOR OR THE AIR BARRIER ON THE UNDERSIDE OF THE FLOOR,
(B) THE AIR BARRIER OF THE WALL ABOVE THE FLOOR SHALL BE CONTINUOUS WITH OR SEALED TO THE SUBFLOOR OR THE AIR BARRIER ON THE TOP OF THE FLOOR, AND
(C) THE SPACES BETWEEN FLOOR JOISTS SHALL BE BLOCKED AND SEALED.

(6) PENETRATIONS OF THE AIR BARRIER SYSTEM, SUCH AS THOSE CREATED BY THE INSTALLATION OF ELECTRICAL WIRING, ELECTRICAL BOXES, PIPING OR DUCTWORK, SHALL BE SEALED TO MAINTAIN THE INTEGRITY OF THE AIR BARRIER SYSTEM OVER THE ENTIRE SURFACE.

(6.1) WHERE AN INTERIOR AIR BARRIER IS PENETRATED BY DOORS, WINDOWS AND OTHER FENESTRATION, THE AIR BARRIER SHALL BE SEALED TO THE DOOR FRAME OR WINDOW FRAME WITH
(A) COMPATIBLE TAPE, OR
(B) SPRAY FOAM INSULATION.

(7) WHERE ACCESS HATCHES AND SUMP PIT COVERS ARE INSTALLED THROUGH ASSEMBLIES CONSTRUCTED WITH AN AIR BARRIER SYSTEM, THEY SHALL BE WEATHERSTRIPPED AROUND THEIR PERIMETERS TO PREVENT AIR LEAKAGE.

(8) CLEARANCES BETWEEN CHIMNEYS OR GAS VENTS AND THE SURROUNDING CONSTRUCTION THAT WOULD PERMIT AIR LEAKAGE FROM WITHIN THE BUILDING INTO A WALL OR ATTIC OR ROOF SPACE SHALL BE SEALED BY NONCOMBUSTIBLE MATERIAL TO PREVENT SUCH LEAKAGE AND SHALL BE SEALED TO THE AIR BARRIER WITH TAPE OR ANOTHER COMPATIBLE MATERIAL, AND TO THE VENT WITH HIGH TEMPERATURE CAUSING IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

(9) RESERVED

(10) SUMP PIT COVERS SHALL BE SEALED TO MAINTAIN CONTINUITY OF THE AIR BARRIER SYSTEM.

IF THE AIR BARRIER IS LOCATED ON EXTERIOR, SEAL GAPS BETWEEN RIGID INSULATION AND DOOR OR WINDOW FRAMES. RIGID INSULATION IS TO BE CAULKED TO THE TOP AND BOTTOM PLATES.
NOTE: PETROLEUM BASED TAR PRODUCTS ARE NOT TO COME IN CONTACT WITH RIGID FOAM SHEATHING.

AIR BARRIER TO BE CONTINUOUS THROUGHOUT ENTIRE BASEMENT. MAINTAIN AIR BARRIER BETWEEN COLD ROOM AND BASEMENT.

CONSTRUCTION NORTH

MUNICIPALITY:
MUNICIPALITY OF HASTINGS HIGHLANDS
33011 HWY 62N, P.O. BOX 130,
MAYNOOTH ON, K0L 2S0
PHONE: 613-338-2811

CONSTRUCTED BY:

DESIGNED BY:
girard ENGINEERING
2478153 ONTARIO INC.
682 PEEL SREET
WOODSTOCK ON, N4S 1L3
TEL: 1-519-879-6875
EMAIL: INFO@GIRARDENGINEERING.CA

APPROVED BY:
PROFESSIONAL ENGINEER M. K. VASANTHA 100751A8 June 18, 2025 PROVINCE OF ONTARIO

NOTE: THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER AND ARE NOT VALID UNLESS SEALED WITH RED INK. THESE DRAWINGS ARE NOT TO BE REPRODUCED UNLESS AUTHORIZED BY THE ENGINEER.

DESIGNED FOR:
DALE & TASHA SCHEERHORN
227 WEST DIAMOND LAKE ROAD
HIGHLAND GROVE, ONTARIO, K0L 2A0
TEL: 519-535-0658
EMAIL: DALEBHSERVICES@GMAIL.COM

PROPOSED COTTAGE

AIR BARRIER DETAILS

SCALE:	1/4" = 1'-0"	DRAWING NO:
DATE:	APRIL 14, 2025	A-8
DRAWING BY:	T. STREATCH	
DESIGNED/CHECKED BY:	M. VASANTHA	
PROJECT NO:	24-286	