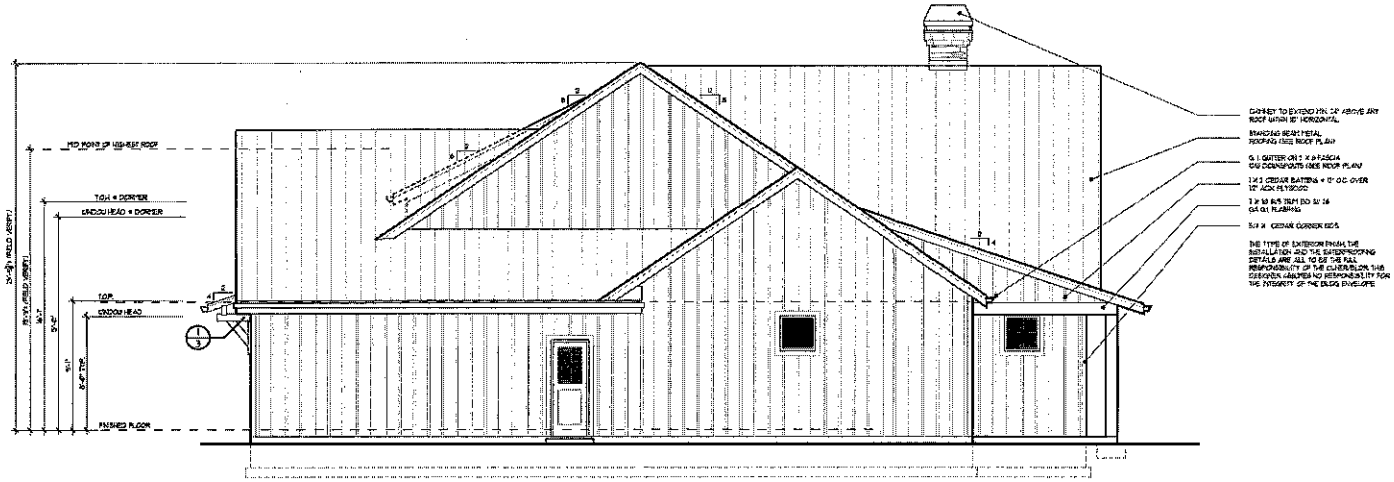
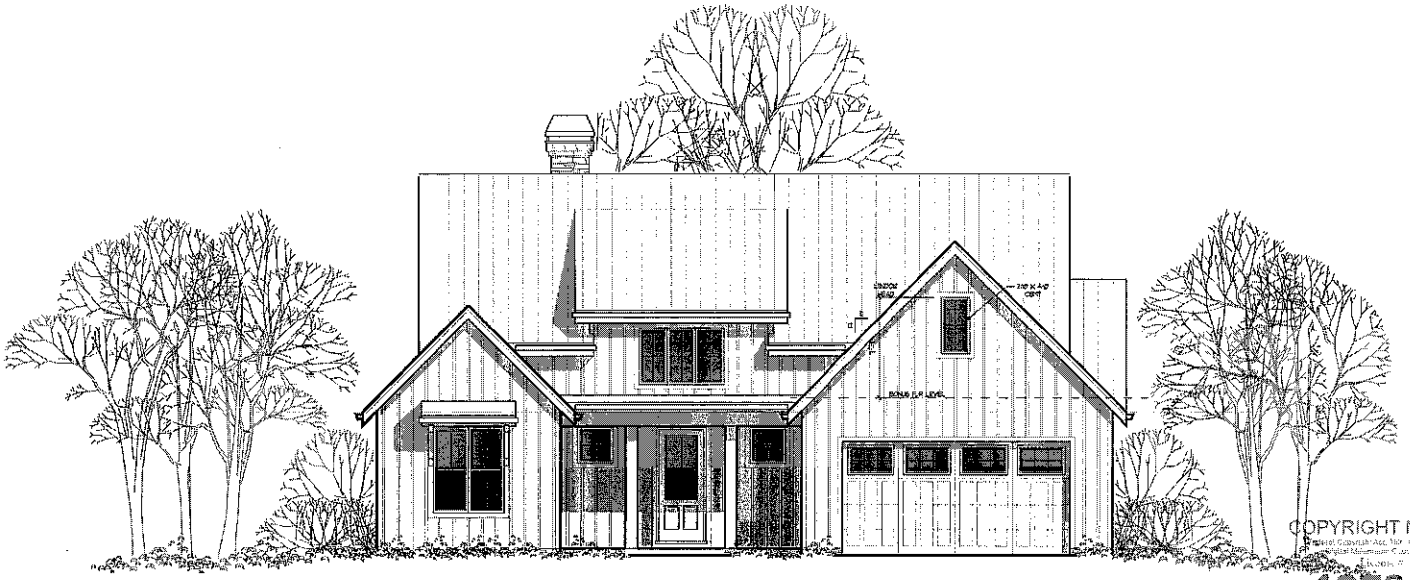


RIGHT SIDE ELEVATION

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



FRONT ELEVATION

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

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Alascord COLLECTION

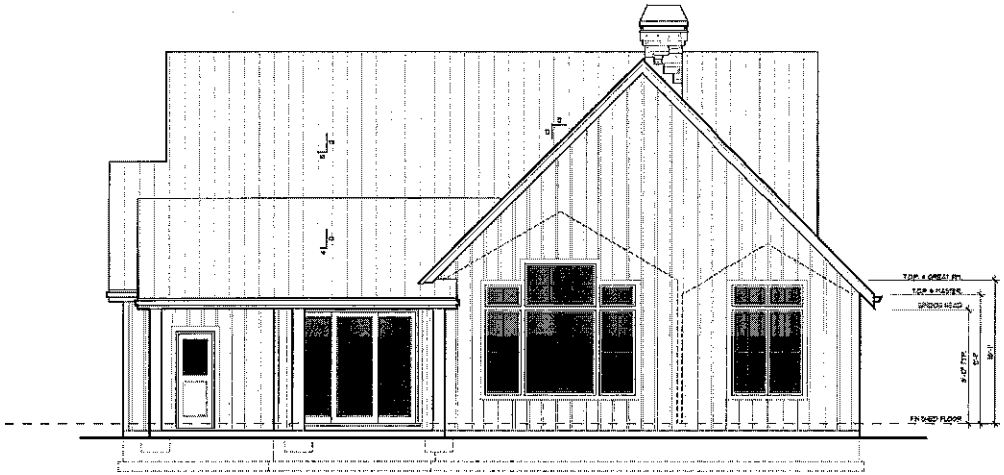
1152C-1M-BON
PROJECT MANAGER: JJB
DRAWN: 04/08/19 JJB

30# SNOW LOAD

MAIN FLOOR	2229 SQ. FT.		
TOTAL AREA	2229 SQ. FT.		
LIVING SPACE		= 2229 SQ. FT.	
GARAGE AREA		= 746 SQ. FT.	

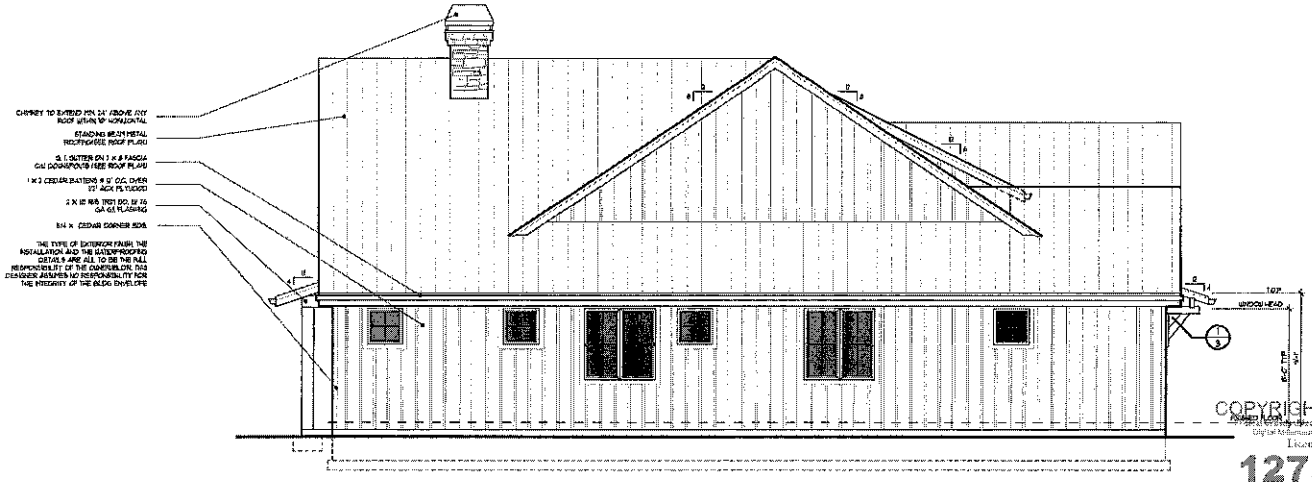
1152C

1 M



REAR ELEVATION

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



LEFT SIDE ELEVATION

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

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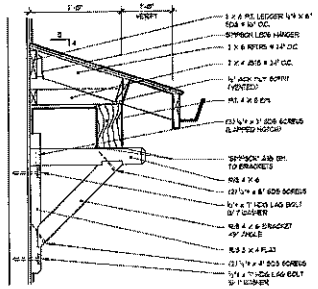
Mascord COLLECTION

1152C - 2M - 13-0A
PROJECT MANAGER: JRE
DRAWN: 03/05/18 PVB

30# SNOW LOAD

MAIN FLOOR	1519 SQ. FT.
TOTAL AREA	1862 SQ. FT.
GARB. BORDS	+ 300 SQ. FT.
GARAGE (PRO)	+ 343 SQ. FT.

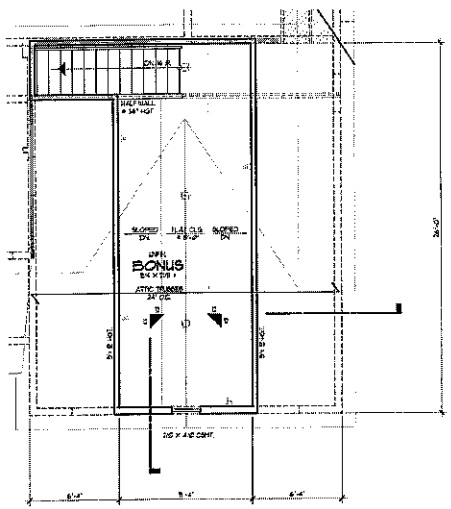
1152C
2 M



1 SHED ROOF
SCALE: 1" = 1'-0"

LEGEND

- RECESSED LIGHT
- RECESSED DIRECTIONAL LIGHT FIXTURE
- WALL MOUNT LIGHT
- SURFACE-MOUNT LIGHT
- FLOOD LIGHT
- SURFACE MOUNTED FLUORESCENT
- RECESSED EXHAUST FAN VENTED TO THE EXTERIOR
- CEILING FAN
- DUPLEX OUTLET
- CEILING MOUNTED DUPLEX OUTLET
- 220V OUTLET
- FLUSH FLOOR MOUNTED OUTLET (VERIFY LOC.)
- TELEPHONE OUTLET
- DATA OUTLET
- TELEVISION OUTLET
- BREAKER LOCATION
- SMOKE / CO DETECTOR (SEE GENERAL NOTES FOR OTHER SPECS)
- BEARING POINT LOCATION (PROVIDE SOLID BEARING - NO OF MEMBER BOTH SIDES)
- FRONT LOAD TRUSS ABOVE
- 4 X 4 POST FROM ROOF SUP HALLEY OR ROOM DOWN TO BEARING POINT OR WALL BELOW (MAX. OF 4'0" FROM VERT.)
- BEARING WALL SUPPORTING STRUCTURE ABOVE
- 4 X 10 HDR. @ BEARING WALL NT. DOOR & OPENINGS @ PIN (1) 2 X SUPPORT EA END (UNO)
- CROSSED STRUCT MEMBER BEARING @ WALL



ENERGY ENVELOPE KEY

EXTERIOR WALL
FOUNDATION WALL
(SEE SHEET 10 FOR INSULATION VALUES)

C.O. DET LOCATION

CARBON MONOXIDE ALARMS SHALL BE LOCATED IN EA. BEDROOM OR WITHIN 15 FEET OUTSIDE OF EA. BEDROOM DOOR AT EVERY FLOOR LEVEL W/ BEDROOMS
(SEE SHEET 10 FOR ADDL. INFO)

BONUS ROOM PLAN
SCALE: 1/4" = 1'-0"
(SEE ROOF PLAN)

MAIN FLOOR PLAN
SCALE: 1/4" = 1'-0"

IF LATERAL ENGINEERING IS REQUIRED, REFER TO ENGINEERING SHEETS FOR LATERAL SPECIFICATIONS.

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Mascord COLLECTION

1152-3M-SOH
PROJECT MANAGER: PB
DRAWN: 03/26/19 PB

30# SNOW LOAD

MAIN FLOOR	1859 SQ. FT.	UNFIN. BONUS	1 SQ. FT.
TOTAL AREA	1859 SQ. FT.	GARAGE AREA	1,746 SQ. FT.

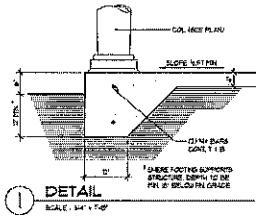
1152C

3 M

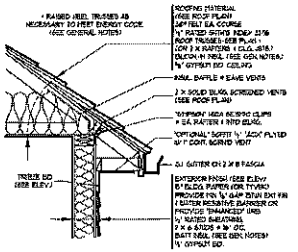
ISOLATED FOOTING SCHEDULE

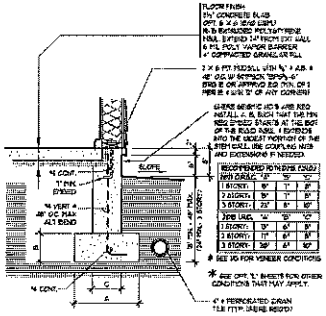
TAG	PAD SIZE	REINFORCING	PUSH BARS
-	8" DIA x 7"	NA	2,494 #
F22	18"x18"x12"	NA	3,891 #
F24	14"x14"x12"	NA	5,400 #
F26	36"x36"x24"	NA	7,281 #
F30	36"x36"x18"	NA	8,203 #
F36	36"x36"x12"	(6) #4 BARS @ 7" O.C. E/W	8,891 #
F42	42"x42"x12"	(6) #4 BARS @ 8" O.C. E/W	9,891 #
F48	48"x48"x12"	(6) #4 BARS @ 9" O.C. E/W	11,000 #
F54	54"x54"x12"	(6) #4 BARS @ 9" O.C. E/W	12,231 #
F60	60"x60"x12"	(7) #4 BARS @ 9" O.C. E/W	13,594 #

AREA PER 4x4 TYP. COLUMN BASE - SEE PLANS
* 4x4 TYP. COLUMN FOR MAX. BRG.
# (4) 3/4"x3/4" PSL COLUMN FOR MAX. BRG. (OR 6x6 TO 16'SQ)
(6) 3/4"x3/4" PSL COLUMN FOR MAX. BRG.
(SEE POST-CONC DETAIL) SOIL BEARING PER



1 DETAIL
SCALE : 3/4" = 1'-0"



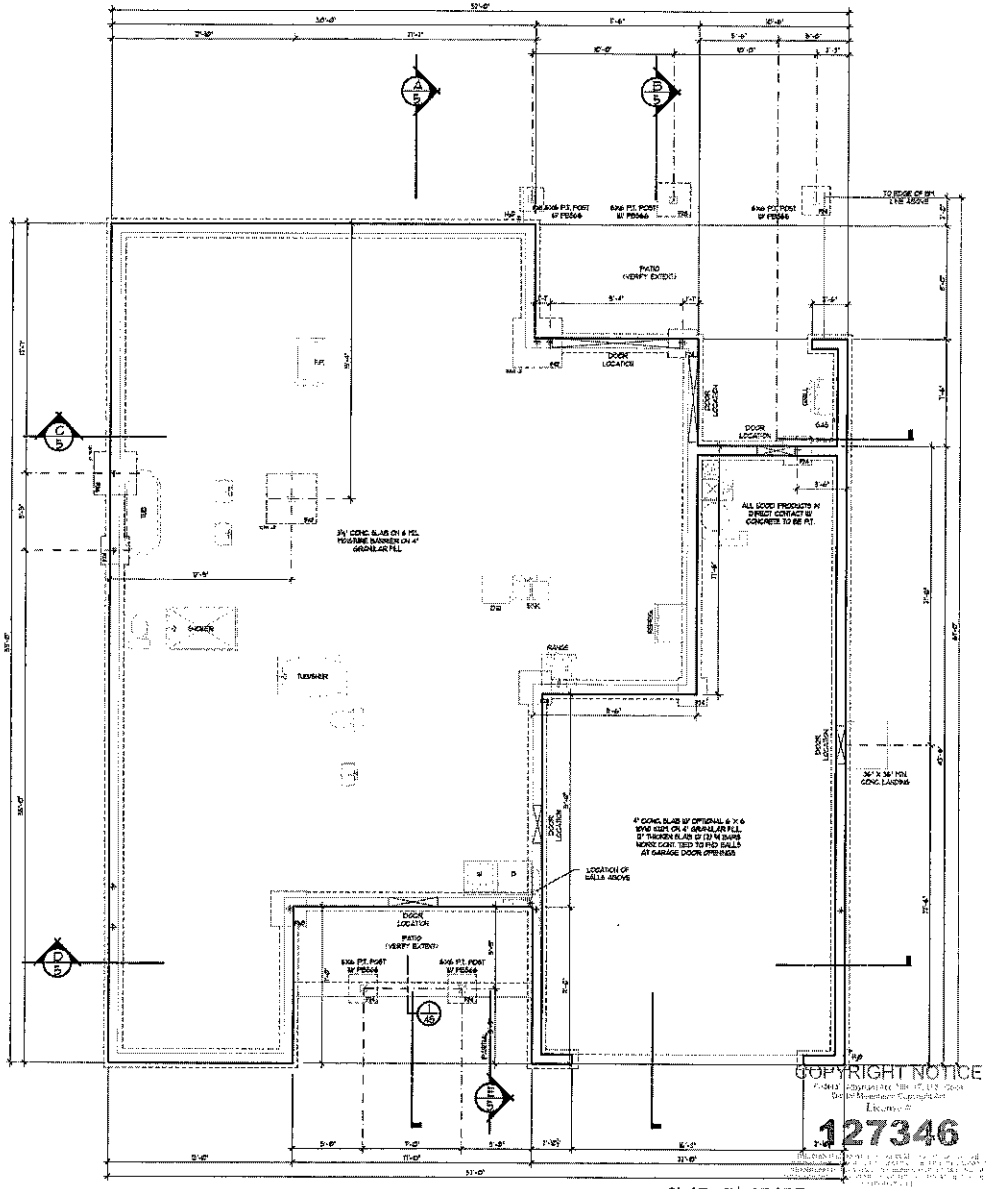


	RECOMMENDED TO MEET CODE	
WIND GRADE:	"B"	"C"
1 STORY:	8"	7"
2 STORY:	9"	7"
3 STORY:	12"	8"
ZONE LIMIT:	"A"	"B"
1 STORY:	9"	6"
2 STORY:	11"	6"
3 STORY:	16"	6"

* SEE 3G FOR VENEER CONDITIONS

* SEE CHT. "L" SHEETS FOR OTHER CONDITIONS THAT MAY APPLY.

TYP. WALL SECTION
SCALE : 3/4" = 1'-0"



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

SLAB-ON-GRADE
IF LATERAL ENGINEERING IS REQUIRED, REFER TO ENGINEERING SHEETS FOR LATERAL SPECIFICATIONS

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Masford COLLECTION

30# SNOW LOAD

AVG. FLOOR	1929 SQ. FT.		
TOTAL AREA	1929 SQ. FT.		
GARAGE AREA	1 CAR 320 SQ. FT.		
	2 CAR 576 SQ. FT.		

1152C
4 SM

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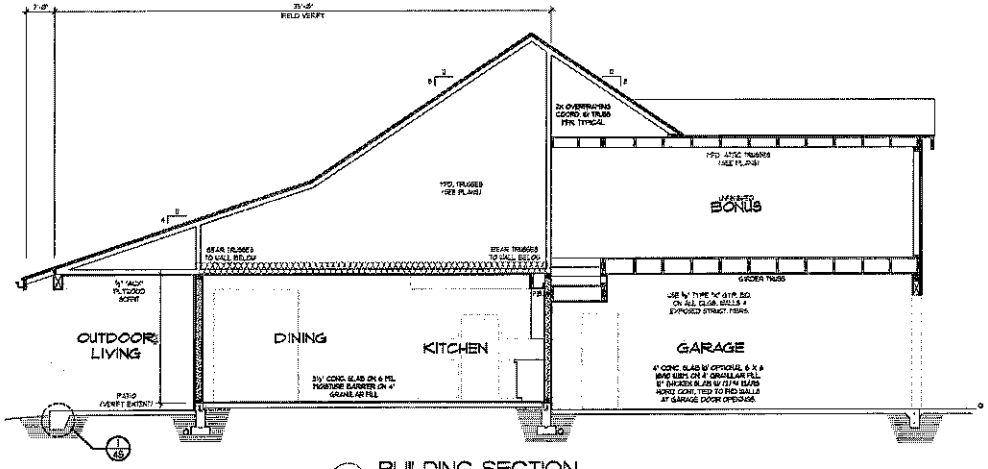
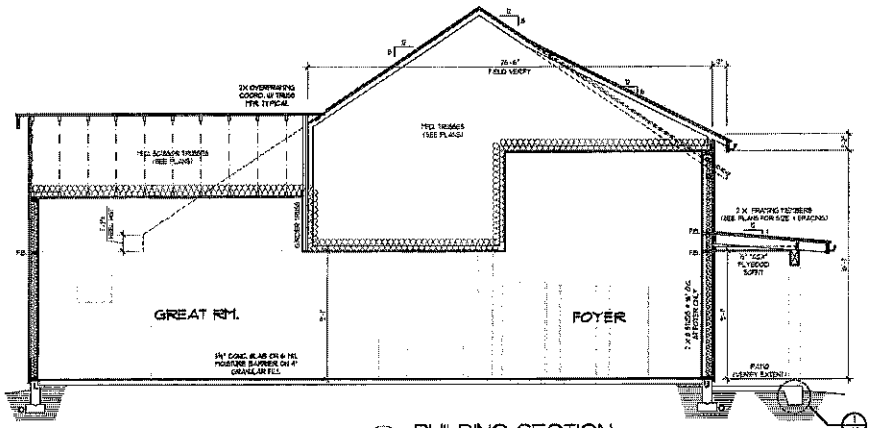
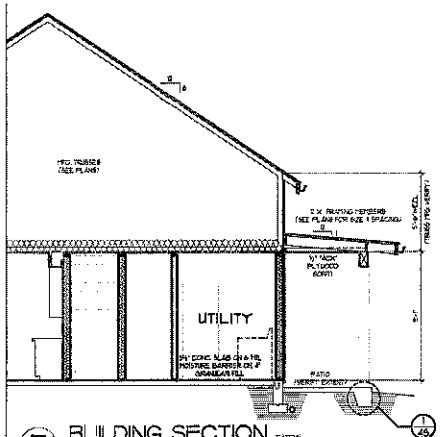


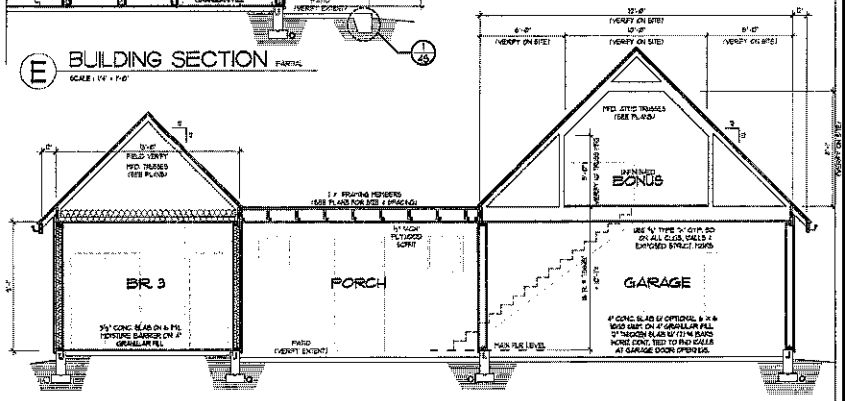
B BUILDING SECTION
SCALE: 1/4" = 1'-0"



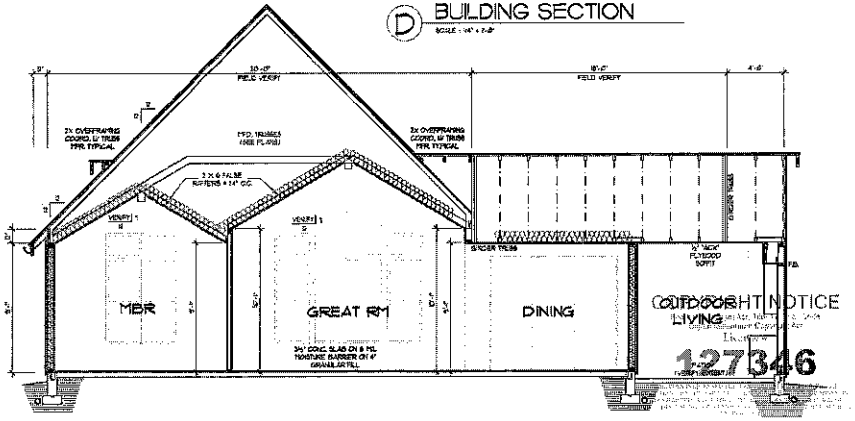
A BUILDING SECTION
SCALE: 1/4" = 1'-0"



E BUILDING SECTION PARTIAL
SCALE: 1/4" = 1'-0"



D BUILDING SECTION
SCALE: 1/4" = 1'-0"



C BUILDING SECTION
SCALE: 1/4" = 1'-0"

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Masford COLLECTION

30# SNOW LOAD

127346

1152C

5 SHT

ROOF DESIGN NOTES

THIS ROOF HAS BEEN DESIGNED TO SUPPORT CEDAR SHAKE ROOFING MATERIALS AND COMPOSITION ROOFING OF VARIOUS TYPES. THE TABLE BELOW DESCRIBES IN DETAIL THE ASSUMPTIONS MADE IN THE DESIGN OF THE ROOF STRUCTURE OF THIS BUILDING.

ROOF LIVE LOAD (20PSF)	20.0 PSF	3.75 PSF	AVERAGE
FRAMING MATERIALS	3.0 PSF		
SHEATHING MATERIALS	1.5 PSF	3.0 PSF	ACTUAL ROOF
TOTAL MATERIALS	1.5 PSF	4.5 PSF	SAFETY FACTOR
ROOFING TYPES	DRY / WET	45.0	PSF TL
MED SHAKES	3.0 / 3.75 PSF		
HVY SHAKES	3.0 / 4.0 PSF		
SHINGLES	3.0 / 3.25 PSF		
CONFIGURATION	3.5 / 3.0 PSF		

GYPSUM MATERIALS ADD 1.0 PSF FOR VAULTED AREAS (COVERED IN SAFETY FACTOR)

NOTE: HIPS, VALLEYS & RIDGES SHALL NOT BE LESS IN SIZE THAN THE END CUT OF THE RAFTERS (FIELD VERIFY ALL CONDITIONS)

LEGEND

4 X 4 WOOD POST FROM RIDGE (HIP OR VALLEY) TO WALL BELOW (TOP CUT 3" X RIDGE AT WALL BEARING POINT) NOTE: SPLICES IN POSTS & VALLEYS CAN ONLY OCCUR 4 POST DOWN LOCATIONS

48 SQ. IN. ROOF VENTS (SEE VENT TABLE FOR QTY. - NOT SHOWN BELOW)

TRIM PARTIAL WALL TO BYE OR WALL BELOW (FRAMED AT 24" O.C.)

SHADED AREA DENOTES ROOF FRAMED OVER RAFTERS BELOW

DOWNSPOUTS

METAL ROOF

MAXIMUM SPANS

PER 2004 UBC/IRC TBL. R802.5.1 (5) OR L/240 30# LL + 10# DL

SIZE	SPACING	SPAN
2X6	12" O.C.	10'-2"
	16" O.C.	9'-1"
	24" O.C.	8'-0"
2X8	12" O.C.	13'-8"
	16" O.C.	12'-3"
	24" O.C.	10'-8"
2X10	12" O.C.	16'-11"
	16" O.C.	15'-2"
	24" O.C.	13'-2"
2X12	12" O.C.	19'-7"
	16" O.C.	17'-6"
	24" O.C.	15'-3"

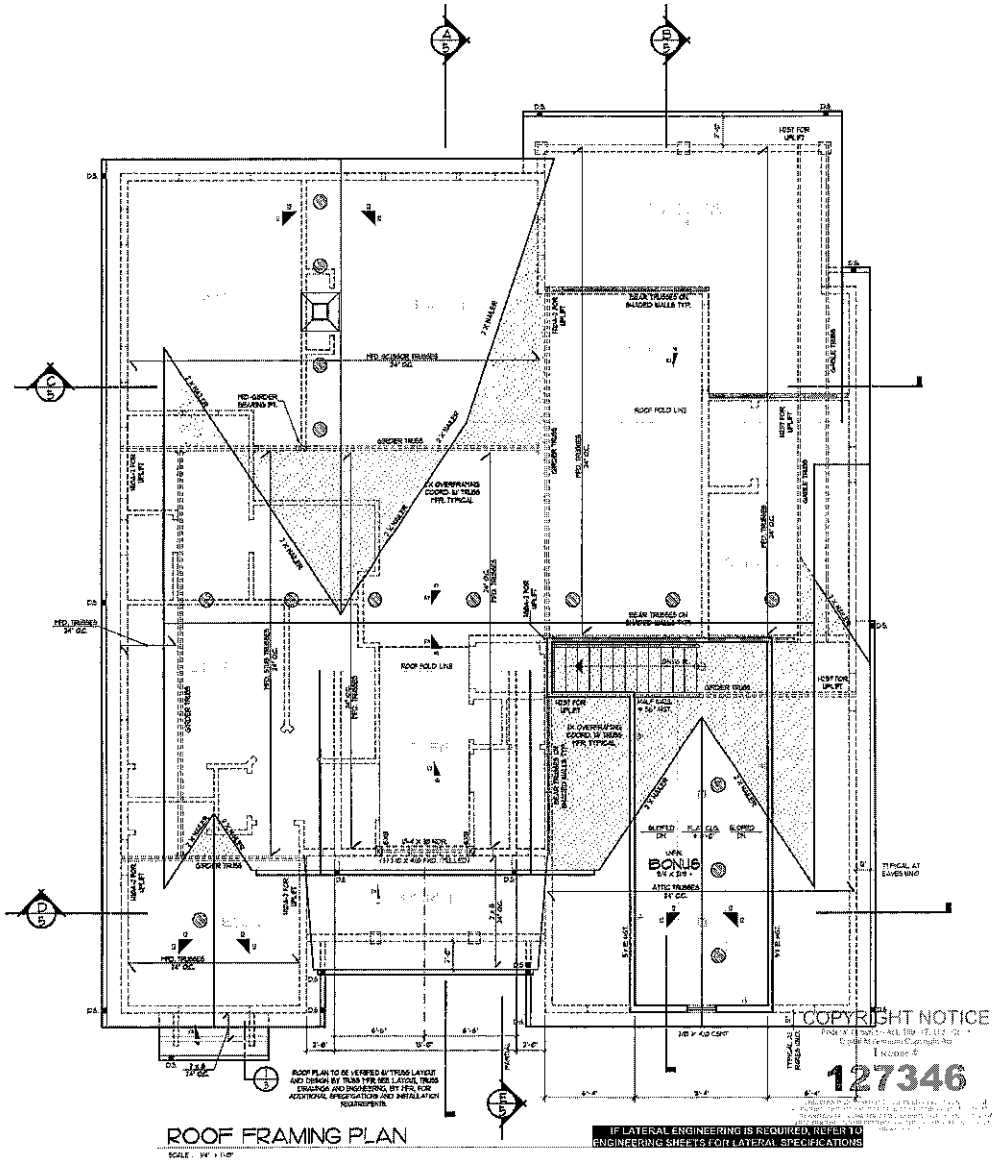
ROOF VENTS

ROOF AREA (FT²) + VENTS				EAVE-BLOCKING		ROOF VENTS
% EDGE	AREA (FT²)	% ROOF	AREA (FT²)	3-VENT	4-VENT	48 in²
50	2442.2	46	2718	10	6.5	17
56.1	2821	48.3	2852	11	6.5	13
55.3	3136	46.1	2743	11	6.1	14
50	1315	50	1315	7.5	5.1	8

EAVE BLOCKING

3-VENT BLOCK (47" x 24" OVERHANGS 15.0 ft² EAV)

4-VENT BLOCK (47" x 24" OVERHANGS 20.0 ft² EAV)



ROOF FRAMING PLAN

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

IF LATERAL ENGINEERING IS REQUIRED, REFER TO ENGINEERING SHEETS FOR LATERAL SPECIFICATIONS

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Mascord COLLECTION

1152C-SIM-BOH
PROJECT MANAGER: JRB
DRAWN: 02/08/18 F.S.

30# SNOW LOAD

MAIN FLOOR	1610 SQ. FT.		
TOTAL AREA	1610 SQ. FT.		
GAR. BONUS		358 SQ. FT.	
GARAGE AREA		358 SQ. FT.	

1152C

6 SM

DISCLAIMER

THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR USE IN THE CONSTRUCTION OF ONE BUILDING ONLY AND ARE SUBJECT TO THE CONDITIONS OF LICENSE ACCEPTED BY THE CUSTOMER. (MULTI-USE BUILDING LICENSES ARE AVAILABLE). USE OF ANY PART OF THE PLANS BY ANY PARTY OTHER THAN THE CUSTOMER, EXCEPT ON LOAN BY THE CUSTOMER TO THIRD PARTIES NECESSARY TO ASSIST THE CUSTOMER IN USING THE PLANS SUCH AS CONTRACTORS AND SUBCONTRACTORS, IS STRICTLY PROHIBITED. THE PLANS MAY NOT BE REUSED OR COPIED IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION FROM ALAN MASCORD DESIGN ASSOCIATES, INC. (MASCORD) WHICH RETAINS COPYRIGHTS TO, & OWNERSHIP OF THE PLANS.

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GENERAL NOTES:

1. ALL WORK IS TO COMPLY WITH THE LATEST ADOPTED VERSION OF THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) AND/OR ANY APPLICABLE STATE, COUNTY OR LOCAL JURISDICTION.

2. THE CONTRACTOR IS RESPONSIBLE TO CHECK THE PLANS AND IS TO NOTIFY THE DESIGNER OF ANY ERRORS OR OMISSIONS PRIOR TO THE START OF CONSTRUCTION. OWNER/CONTRACTOR SHALL VERIFY WITH LOCAL BLDG. DEPT. WHICH CLIMATE ZONE THE PROJECT WILL BE BUILT IN.

3. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.

4. DESIGN LOADS:

USE	LL	DL
UNINHABITABLE ATTICS W/O STORAGE	10	10
UNINHABITABLE ATTICS W/ LIMITED STORAGE	20	10
HABITABLE ATTICS & ATTICS SERVED BY STAIRS	30	10
BALCONIES (EXTERIOR) & DECKS	40	10
GUARD RAILS & HAND RAILS	200	-
GUARD RAIL INFILL COMPONENTS	50	-
PASSENGER VEHICLE GARAGE (USE OF POINT)	50	[illegible]
ROOMS OTHER THAN SLEEPING ROOMS	40	10
SLEEPING ROOMS	30	10
STAIRS	40	10

(IF YOUR LOCAL AREA REQUIRES DIFFERENT DESIGN LOADS CONSULT WITH A LOCAL QUALIFIED PROFESSIONAL TO DETERMINE THE APPROPRIATE REVISIONS)

5. INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT:

[illegible]

FOUNDATION NOTES:

1. FOOTINGS ARE TO BEAR ON UNDISTURBED LEVEL SOIL DEVOID OF ANY ORGANIC MATERIAL AND STEPPED AS REQUIRED TO MAINTAIN THE REQUIRED DEPTH BELOW THE FINAL GRADE.

2. CONTINUOUS FOOTINGS ARE DESIGNED PER [illegible] SOIL BEARING VALUE OF 1500 PSF, [illegible] LIGHT FRAME CONSTRUCTION BASED ON [illegible] WIDE HOUSE WITH CENTER BEARING WALL.

3. MAX. SLOPE OF CUTS AND FILLS TO BE TWO (2) HORIZ. TO ONE (1) VERT. FOR BLDG. STRUCTURES AND [illegible]

4. ANY FILL UNDER GRADE SUPPORTED SLABS TO BE A MIN. OF 4" IN. GRANULAR FILL COMPACTED TO 95%

5. CONCRETE: [illegible] STRENGTH OF CONCRETE:

• BASEMENT WALLS & FOUNDATIONS NOT EXPOSED TO WEATHER:	2500 PSI	MORTAR & GROUT TO BE MIXED PER [illegible]
• BASEMENT & INTERIOR SLABS ON GRADE:	2500 PSI	
• BASEMENT WALLS & FOUNDATIONS EXPOSED TO THE WEATHER, AND GARAGE SLABS	3000 PSI	
• PORCHES, STEPS, & CARPORT SLABS EXPOSED TO WEATHER	3500 PSI	

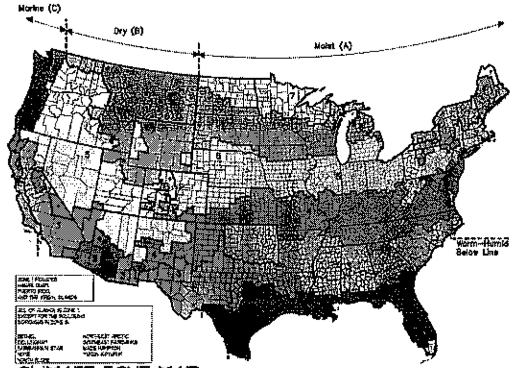
[illegible]

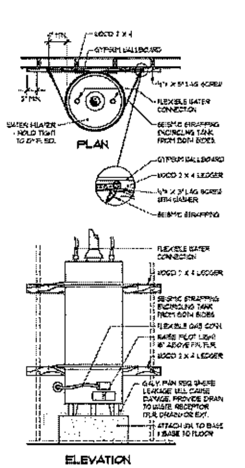
FRAMING NOTES:

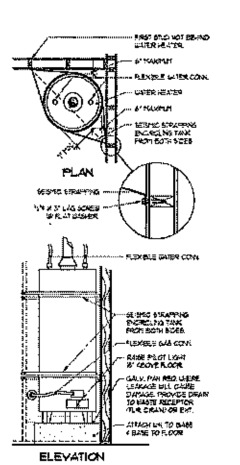
[illegible]

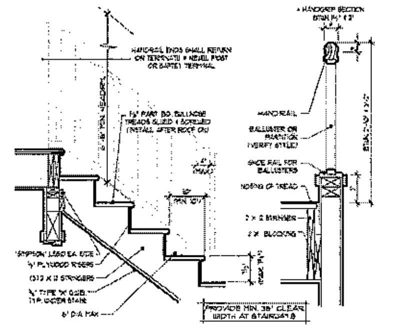
SPAN TABLES

[illegible]

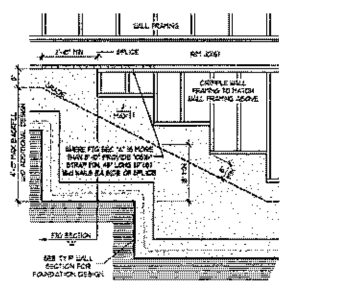

CLIMATE ZONE MAP

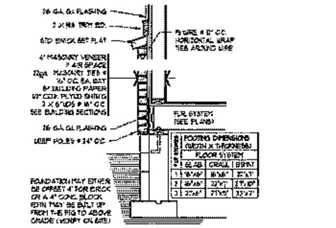

W.H. SUPPORT

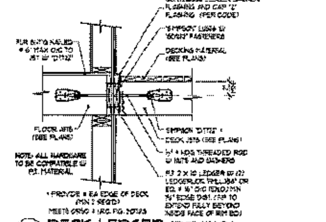

CORNER W.H.

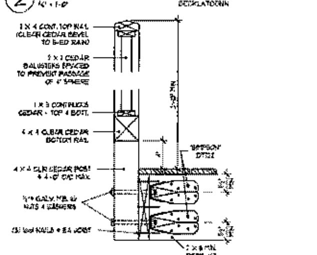

STAIR DETAIL

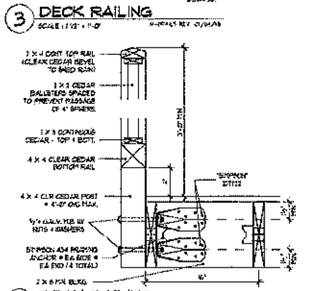
SCALE: 3/4" = 1'-0"

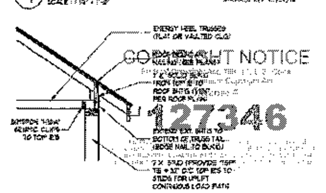

STEP FOOTING DETAIL


1 MASONRY VENEER DTL


2 DECK LEDGER (TYP. U.N.O.)


3 DECK RAILING


4 DECK RAILING


5 TRUSS CONNECTION

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MASCORD GENERAL NOTES 12/22/15

30# SNOW LOAD

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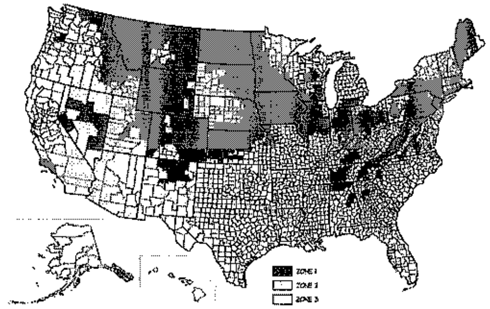
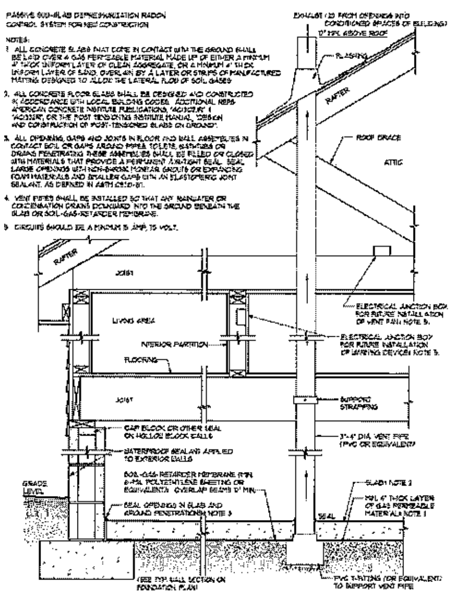


DISCLAIMER: THE PURPOSE OF THIS MAP IS TO ASSIST NATIONAL, STATE AND LOCAL ORGANIZATIONS TO TARGET THEIR RESOURCES AND TO IMPLEMENT RADON-RESISTANT BUILDING CODES. ALL HOMES SHOULD BE TESTED REGARDLESS OF GEOGRAPHIC LOCATION. EPA RECOMMENDS THAT THIS MAP BE SUPPLEMENTED WITH ANY AVAILABLE LOCAL DATA IN ORDER TO FURTHER UNDERSTAND AND PREDICT THE RADON POTENTIAL FOR A SPECIFIC AREA.

EPA RADON ZONES

PASSIVE SUB-SLAB DEPRESSURIZATION RADON CONTROL SYSTEM FOR NEW CONSTRUCTION

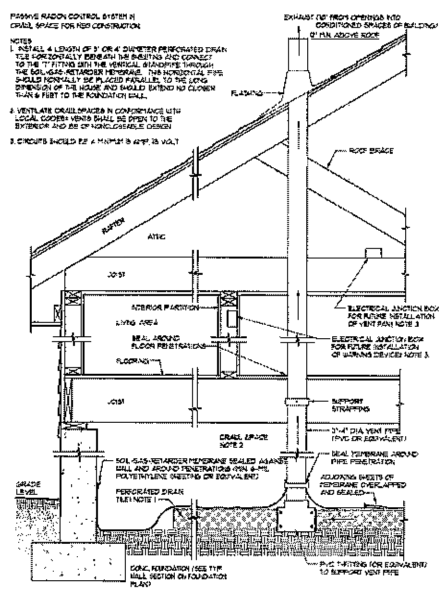
NOTES:
1. ALL CONCRETE SLABS THAT COME IN CONTACT WITH THE GROUND SHALL BE LAID OVER A GAS PERMEABLE MATERIAL MADE UP OF EITHER A MINIMUM 4" THICK UNIFORM LAYER OF CLEAN AGGREGATE, OR A MINIMUM 4" THICK UNIFORM LAYER OF SAND, OVERLAIN BY A LAYER OR STRIPS OF MANUFACTURED MATTING DESIGNED TO ALLOW THE LATERAL FLOW OF SOIL GASES.
2. ALL CONCRETE FLOOR SLABS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL BUILDING CODES. ADDITIONAL REFS: AMERICAN CONCRETE INSTITUTE PUBLICATIONS "ACI 332R" OR THE POST TENSIONING INSTITUTE MANUAL "DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS ON GROUND".
3. ALL OPENINGS, GAPS AND JOINTS IN FLOOR AND WALL ASSEMBLIES IN CONTACT SOIL OR GAPS AROUND PIPES, TOILETS, BATHTUBS OR DRAINS PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED WITH MATERIALS THAT PROVIDE A PERMANENT AIRTIGHT SEAL. SEAL LARGE OPENINGS WITH NON-SHRINK MORTAR, GROUTS OR EXPANDING FOAM MATERIALS AND SMALLER GAPS WITH AN ELASTOMERIC JOINT SEALANT, AS DEFINED IN ASTM C920-87.
4. VENT PIPES SHALL BE INSTALLED SO THAT ANY RAINWATER OR CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS-RETARDER MEMBRANE.
5. CIRCUITS SHOULD BE A MINIMUM 15 AMP, 15 VOLT.



SLAB ON-GRADE/BELOW-GRADE (BASEMENTS) SUB-MEMBRANE DEPRESSURIZATION SYSTEM

PASSIVE RADON CONTROL SYSTEM IN CRAWL SPACE FOR NEW CONSTRUCTION

NOTES
1. INSTALL A LENGTH OF 3" OR 4" DIAMETER PERFORATED DRAIN TILE HORIZONTALLY BENEATH THE SHEETING AND CONNECT TO THE "T" FITTING WITH THE VERTICAL STANDPIPE THROUGH THE SOIL-GAS-RETARDER MEMBRANE. THIS HORIZONTAL PIPE SHOULD NORMALLY BE PLACED PARALLEL TO THE LONG DIMENSION OF THE HOUSE AND SHOULD EXTEND NO CLOSER THAN 6 FEET TO THE FOUNDATION WALL.
2. VENTILATE CRAWLSPACES IN CONFORMANCE WITH LOCAL CODES. VENTS SHALL BE OPEN TO THE EXTERIOR AND BE OF NONCLOSEABLE DESIGN.
3. CIRCUITS SHOULD BE A MINIMUM 15 AMP, 15 VOLT.



CRAWLSPACE SUB-MEMBRANE DEPRESSURIZATION SYSTEM

RADON MITIGATION

THE FOLLOWING CONSTRUCTION TECHNIQUES AND MEASURES ARE INTENDED TO MITIGATE RADON ENTRY IN NEW CONSTRUCTION. THESE TECHNIQUES MAY BE REQUIRED ON A JURISDICTION BY JURISDICTION BASIS. FOR EXAMPLE, IN THE STATE OF OREGON, PER 2017 ORSC, THE COUNTIES OF MULTNOMAH, WASHINGTON, CLACKAMAS, POLK, YAMHILL, HOOD RIVER AND BAKER REQUIRE RADON MITIGATION, AS DO THE COUNTIES OF CLARK, FERRY, OKANOGAN, PEND OREILLE, SKAMANIA, SPOKANE AND STEVENS, IN THE STATE OF WASHINGTON PER 2018 (WAC 51-51-60102) (APPENDIX F).

FOLLOWING THE U.S. EPA "MODEL STANDARDS AND TECHNIQUES FOR CONTROL OF RADON IN NEW RESIDENTIAL BUILDINGS", THESE SPECIFICATIONS MEET MOST NATIONAL CODES. THE BUILDER AND HOME OWNER SHOULD CHECK FOR ANY LOCAL VARIANCE TO THESE GUIDELINES.

BUILDING TIGHTNESS MEASURES

THE FOLLOWING ARE POINTS OF ENTRY TO PROTECT FROM PASSAGE OF RADON GAS INTO LIVING SPACE - PROVIDE POLYURETHANE CAULK OR EQUIVALENT SEALANT AT THE FOLLOWING CRITICAL POINTS

SLAB ON-GRADE AND BASEMENT WALLS

- CRACKS IN CONCRETE SLABS
- COLD JOINT BETWEEN TWO CONCRETE POURS
- PORES AND JOINTS IN CONCRETE BLOCKS
- FLOOR-TO-WALL CRACK OR FRENCH DRAIN
- EXPOSED SOIL, AS IN A SUMP
- WEEPING (DRAIN) TILE, IF DRAINED TO OPEN SUMP
- MORTAR JOINTS
- LOOSE FITTING PIPE PENETRATIONS
- OPEN TOPS OF BLOCK WALLS
- WATER FROM CORE WELLS
- UNTRAPPED FLOOR DRAIN TO A DRY WELL OR SEPTIC SYSTEM

CRAWL SPACE

- CRACKS IN SUBFLOORING AND FLOORING
- SPACES BEHIND STUD WALLS AND BRICK VENEER WALLS THAT REST ON UNCAPPED HOLLOW-BLOCK FOUNDATION
- ELECTRICAL PENETRATIONS
- LOOSE-FITTING PIPE PENETRATIONS
- OPEN TOPS OF BLOCK WALLS
- WATER FROM CORE WELLS
- HEATING DUCT REGISTER PENETRATIONS
- COLD-AIR RETURN DUCTS IN CRAWL SPACE

CONDENSATE DRAINS SHALL BE RUN TO THE EXTERIOR USING NON PERFORATED PIPE OR SHALL BE PROVIDED WITH AN APPROVED TRAP.

SUMP PITS THAT SERVE AS END POINT FOR A SUB-SLAB OR EXTERIOR DRAIN TILE LOOP SYSTEM, AND SUMP PITS WHICH ARE NOT SEALED FROM THE SOIL SHALL BE FITTED WITH A GASKETED OR SEALED LID. WHERE THE SUMP IS USED AS THE SUCTION POINT IN A SUB-SLAB DEPRESSURIZATION SYSTEM, THE LID MUST BE DESIGNED TO ACCOMMODATE THE VENT PIPE. WHERE USED AS A FLOOR DRAIN, THE SUMP PIT LID SHALL HAVE A TRAPPED INLET.

DUCTWORK WHICH PASSES THROUGH OR BENEATH A CONCRETE FLOOR SLAB SHALL BE FREE OF SEAMS AND MUST BE PERFORMANCE TESTED.

DUCTWORK PASSING THROUGH A CRAWLSPACE MUST HAVE ALL SEAMS AND JOINTS SEALED (PER M1601.4.1): ALL JOINTS OF DUCT SYSTEMS USED IN THE HEATING OR COOLING OF A CONDITIONED SPACE SHALL BE SEALED BY MEANS OF TAPES, MASTIC, AEROSOL SEALANT, GASKETING OR OTHER APPROVED CLOSURE SYSTEMS. WHERE MASTIC IS USED TO SEAL OPENINGS GREATER THAN 1/4", A COMBINATION OF MASTIC AND MESH SHALL BE USED.

CRAWLSPACE ACCESS, OR UNDER-FLOOR MECHANICAL EQUIPMENT ACCESS, OR ANY OTHER ACCESS POINT FROM THE HABITABLE SPACE INTO THE CRAWL SPACE, SUCH AS DOORS OR PANELS, MUST BE CLOSED AND GASKETED TO CREATE AN AIRTIGHT SEPARATION.

AIR HANDLING UNITS IN CRAWL SPACES SHALL BE SEALED TO PREVENT AIR FROM BEING DRAWN INTO THE UNIT.

CRAWL SPACE RADON MITIGATION

IN ADDITION TO THE CRAWL SPACE SEALING REQUIREMENTS ONE OF THREE RADON MITIGATION METHODS SHALL BE IMPLEMENTED.

METHOD 1 - MECHANICAL VENTILATION (AF103 EXCEPTION)

- PROVIDE AN APPROVED MECHANICAL CRAWL SPACE VENTILATION SYSTEM OR OTHER EQUIVALENT SYSTEM.

METHOD 2 - PASSIVE SUB-MEMBRANE DEPRESSURIZATION SYSTEM (AF103.5)

- PROVIDE FOUNDATION VENTILATION SYSTEM (SEE FOUNDATION NOTES FOR CRAWLSPACE VENTING)
- PROVIDE A SOIL GAS RETARDER SUCH AS 6 MIL POLYETHYLENE OR EQUIVALENT (SEE GAS-RETARDER NOTES)
- PROVIDE A VENT STACK (SEE VENT STACK NOTES)

METHOD 3 - CRAWLSPACE VENTILATION AND BUILDING TIGHTNESS

- PROVIDE NO LESS THAN ONE NET SQ. FT. OF CRAWLSPACE FOUNDATION VENT AREA PER EACH 150 SQ. FT. OF UNDER-FLOOR AREA (SEE FOUNDATION NOTES FOR CRAWLSPACE VENTING LOCATION REQUIREMENTS)
- OPERABLE LOUVERS, DAMPERS, OR OTHER MEANS TO TEMPORARILY CLOSE OFF VENT OPENINGS ARE NOT ALLOWED TO MEET THE REQUIREMENTS OF THIS RADON MITIGATION METHOD.
- DWELLINGS SHALL BE TESTED WITH A BLOWER DOOR, DEPRESSURIZING THE DWELLING TO 50 PASCALS FROM AMBIENT CONDITIONS AND FOUND TO EXHIBIT NO MORE THAN 5.0 AIR CHANGES PER HOUR.
- INSTALL A MECHANICAL EXHAUST, SUPPLY, OR COMBINATION VENTILATION SYSTEM PROVIDING WHOLE-BUILDING VENTILATION RATES AS PER TABLE M1505.4.3(1).

VENTILATION AIR REQUIREMENTS (cfm)

FLOOR AREA (ft²)	NUMBER OF BEDROOMS 0-1	2-3	4-5	6-7	>7
<1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
>7500	105	120	135	150	165

SLAB-ON-GRADE/BASEMENT RADON MITIGATION

A PASSIVE SUB-SLAB DEPRESSURIZATION SYSTEM SHALL BE INSTALLED DURING CONSTRUCTION IN BASEMENT OR SLAB-ON-GRADE BUILDINGS. FOLLOW THE NOTES HERE REGARDING BUILDING TIGHTNESS MEASURES AND ASSEMBLE THE FOLLOWING ELEMENTS OF THIS MITIGATION SYSTEM.

- PROVIDE A RADON VENT PIPE, EXTENDING FROM A GAS PERMEABLE LAYER BENEATH THE SLAB FLOOR SYSTEM, THROUGH THE FLOORS OF THE DWELLING AND TERMINATING AT THE ROOF.
- SEE NOTES REGARDING VENT PIPE, SOIL-GAS-RETARDER AND SLAB SUBFLOOR PREPARATION.

SLAB SUB-FLOOR PREPARATION

- A LAYER OF GAS-PERMEABLE MATERIAL SHALL BE PLACED UNDER ALL CONCRETE SLABS AND OTHER FLOOR SYSTEMS THAT DIRECTLY CONTACT THE GROUND, AND ARE WITHIN THE WALLS OF THE LIVING SPACES OF THE BUILDING. THE GAS-PERMEABLE LAYER SHALL CONSIST OF ONE OF THE FOLLOWING:

1. A UNIFORM LAYER OF CLEAN AGGREGATE, A MINIMUM OF 4 INCHES THICK. THE AGGREGATE SHALL CONSIST OF MATERIAL SHALL ENOUGH TO PASS THROUGH A 2" SIEVE AND BE RETAINED BY A 1/4" SIEVE.
2. A UNIFORM LAYER OF SAND (NATIVE OR FILL), A MINIMUM OF 4 INCHES THICK, OVERLAIN BY A LAYER OR STRIPS OF GEO-TEXTILE DRAINAGE MATTING DESIGNED TO ALLOW THE LATERAL FLOW OF SOIL GASES.

SOIL-GAS-RETARDER

- THE SOIL IN CRAWLSPACES SHALL BE COVERED WITH A CONTINUOUS LAYER OF MINIMUM 6-MIL POLYETHYLENE SOIL-GAS-RETARDER. THE GROUND COVER SHALL BE LAPPED A MINIMUM OF 12 INCHES AT JOINTS AND SHALL EXTEND TO ALL FOUNDATION WALLS ENCLOSING THE CRAWL SPACE AREA.
- THE SHEETING SHALL FIT CLOSELY AROUND ANY PIPE, WIRE OR OTHER PENETRATIONS OF THE MATERIAL.
- ALL PUNCTURES OR TEARS IN THE MATERIAL SHALL BE SEALED OR COVERED WITH ADDITIONAL SHEETING.

VENT PIPE (RADON)

- A PLUMBING TEE OR OTHER APPROVED CONNECTION SHALL BE INSERTED HORIZONTALLY BENEATH THE SOIL-GAS-RETARDER SHEETING AND CONNECTED TO A 3" OR 4" DIAMETER FITTING WITH A VERTICAL VENT PIPE INSTALLED THROUGH THE SHEETING.
- THE VENT PIPE SHALL BE EXTENDED UP THROUGH THE BUILDING FLOORS TO TERMINATE AT LEAST 12 INCHES ABOVE THE ROOF SURFACE IN A LOCATION AT LEAST 10 FEET AWAY FROM ANY WINDOW OR OTHER OPENING INTO THE CONDITIONED SPACES OF THE BUILDING THAT IS LESS THAN 2 FEET BELOW THE EXHAUST POINT, AND 10 FEET FROM ANY WINDOW OR OTHER OPENING IN ADJOINING OR ADJACENT BUILDINGS.
- IN BUILDINGS WHERE INTERIOR FOOTINGS OR OTHER BARRIERS SEPARATE THE SUB-SLAB AGGREGATE OR OTHER GAS-PERMEABLE MATERIAL, EACH AREA SHALL BE FITTED WITH AN INDIVIDUAL VENT PIPE.
- MULTIPLE VENT PIPES SHALL CONNECT TO A SINGLE VENT THAT TERMINATES ABOVE THE ROOF OR EACH INDIVIDUAL VENT PIPE SHALL TERMINATE ABOVE THE ROOF.
- ALL COMPONENTS OF THE RADON VENT PIPE SYSTEM SHALL BE INSTALLED TO PROVIDE POSITIVE DRAINAGE TO THE GROUND BENEATH THE SLAB OR SOIL-GAS-RETARDER.
- RADON VENT PIPES SHALL BE ACCESSIBLE FOR FUTURE FAN INSTALLATION THROUGH AN ATTIC OR OTHER AREA OUTSIDE THE HABITABLE SPACE, OR AN APPROVED ROOF TOP ELECTRICAL SUPPLY MAY BE PROVIDED FOR FUTURE USE FOR A POWERED RADON VENT FAN
- ALL EXPOSED AND VISIBLE INTERIOR RADON VENT PIPES SHALL BE IDENTIFIED WITH AT LEAST ONE LABEL ON EACH FLOOR AND IN ACCESSIBLE ATTICS. THE LABEL SHALL READ: "RADON REDUCTION SYSTEM"

POWER SOURCE REQUIREMENT

- TO ACCOMMODATE FUTURE INSTALLATION OF AN ACTIVE SUBMEMBRANE OR SUB-SLAB DEPRESSURIZATION SYSTEM, AN ELECTRICAL CIRCUIT TERMINATED IN AN APPROVED BOX SHALL BE INSTALLED DURING CONSTRUCTION IN THE ATTIC OR OTHER ANTICIPATED LOCATION OF VENT PIPE FANS. AN ELECTRICAL SUPPLY SHALL ALSO BE ACCESSIBLE IN ANTICIPATED LOCATION OF SYSTEM FAILURE ALARMS.

COMBINATION FOUNDATIONS

- COMBINATION BASEMENT/CRAWL SPACE OR SLAB-ON-GRADE/CRAWL SPACE FOUNDATIONS SHALL HAVE SEPARATE RADON MITIGATION SYSTEMS IN EACH TYPE OF FOUNDATION AREA. PASSIVE SUB-SLAB AND PASSIVE SUB-MEMBRANE RADON VENT PIPES MAY BE CONNECTED TO A SINGLE VENT TERMINATING ABOVE THE ROOF, OR EACH VENT MAY INDIVIDUALLY CONTINUE TO TERMINATE ABOVE THE ROOF (SEE VENT PIPE NOTES).

NOTICE
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1152C-R-BON
PROJECT MANAGER: PR
DRAWN: 03/08/18 P.B

30# SNOW LOAD

MAIN FLOOR	1509 SQ. FT.
TOTAL AREA	1509 SQ. FT.
BONUS ROOM	+ 308 SQ. FT.
GARAGE AREA	+ 748 SQ. FT.

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