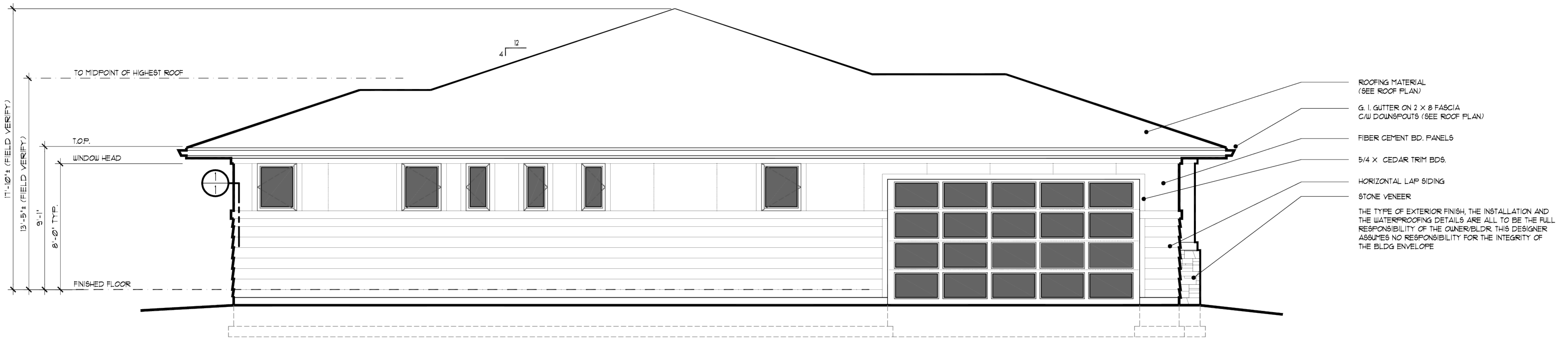
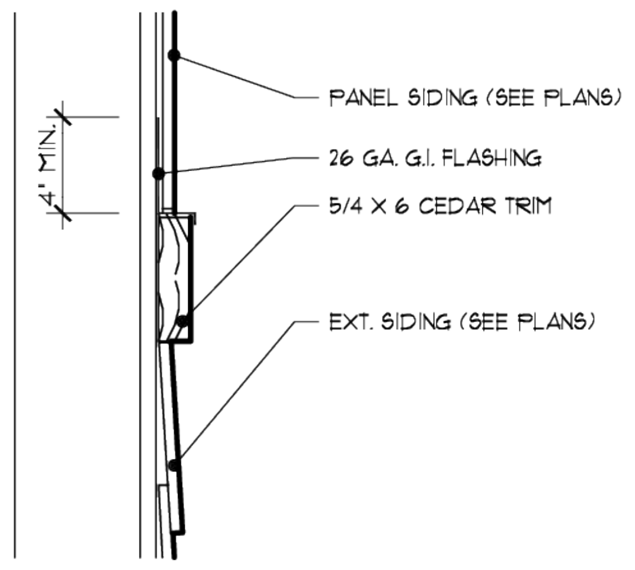


THE TYPE OF EXTERIOR FINISH, THE INSTALLATION AND THE WATERPROOFING DETAILS ARE ALL TO BE THE FULL RESPONSIBILITY OF THE OWNER/BLDR. THIS DESIGNER ASSUMES NO RESPONSIBILITY FOR THE INTEGRITY OF THE BLDG ENVELOPE

LEFT SIDE ELEVATION

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



1 TRIM DETAIL

SCALE : 1½" = 1'-0"

TRIMDTL4

FRONT ELEVATION

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

THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR THE CORRECT INSTALLATION OF ALL EXTERIOR FINISHES AND WEATHERPROOFING.

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COLLECTION

A general note and specification sheet is always an integral part of the set.

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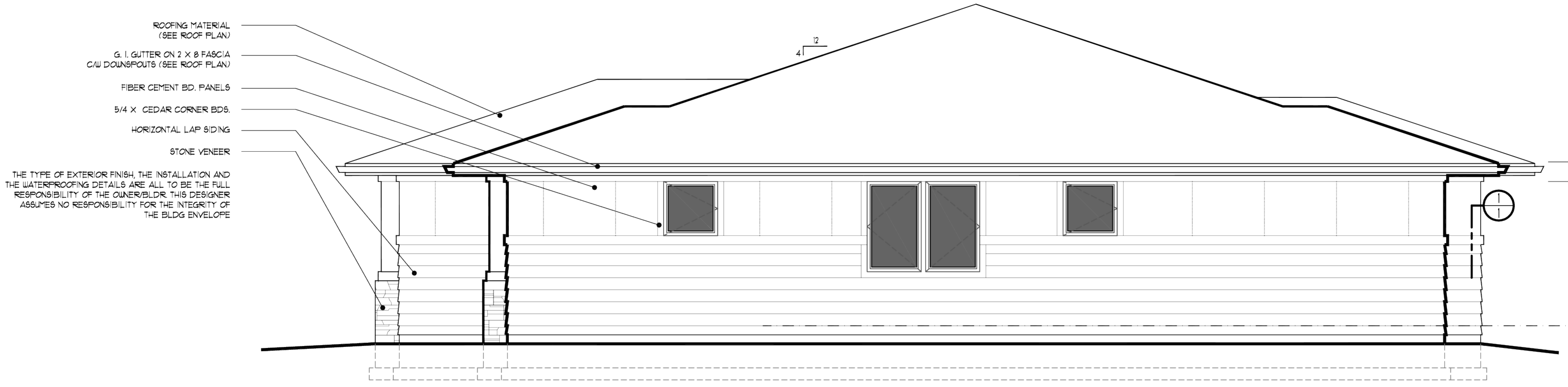
1247-1M
PROJECT MANAGER:EAS
DRAWN 05/22/13 LAW

25# SNOW LOAD

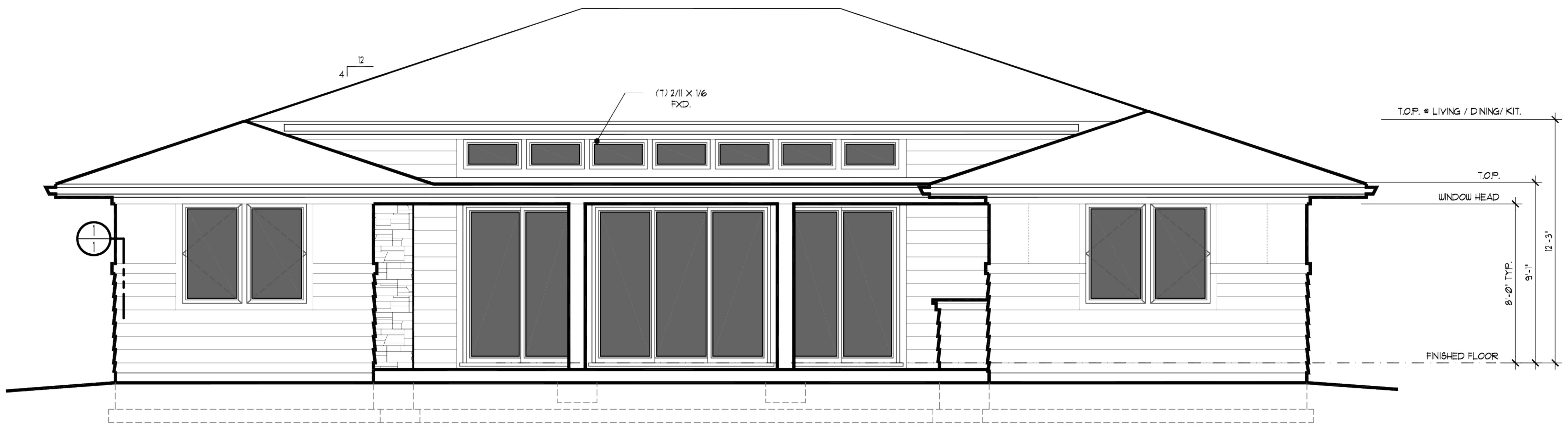
MAIN FLOOR	2135 SQ. FT.
TOTAL AREA	2135 SQ. FT.
GARAGE AREA	+ 496 SQ. FT.

1247
1 M



RIGHT SIDE ELEVATION

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



REAR ELEVATION

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

THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR THE CORRECT INSTALLATION OF ALL EXTERIOR FINISHES AND WEATHERPROOFING.

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COLLECTION

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1247-2M
PROJECT MANAGER:EAS
DRAWN 05/22/13 LAW

25# SNOW LOAD

MAIN FLOOR	2135 SQ. FT.
TOTAL AREA	2135 SQ. FT.
GARAGE AREA	+ 496 SQ. FT.

1247
2 M

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
- SPEAKER LOCATION
- ◎ SMOKE / CO DETECTOR (SEE 'GENERAL NOTES' FOR OTHER SPEC'S)
- ■ BEARING POINT LOCATION (PROVIDE SOLID BEAR'G - MIN. OF MEMBER WIDTH U.N.O.)
- POINT LOAD FROM ABOVE
- 4 X 4 POST FROM ROOF HIP, VALLEY OR RIDGE DOWN TO BEARING POINT ON WALL BELOW (MAX. OF 45° FROM VERT.)
- BEARING WALL SUPPORTING STRUCTURE ABOVE
- 4 X 10 HDR. @ BEARING WALL INT. DOOR & OPENINGS W/ MIN (2) 2 X SUPPORT EA END (U.N.O.)
- DROPPED STRUCT. MEMBER BEARING @ WALL

S-FLRLGND 07/18/16

ENERGY ENVELOPE KEY

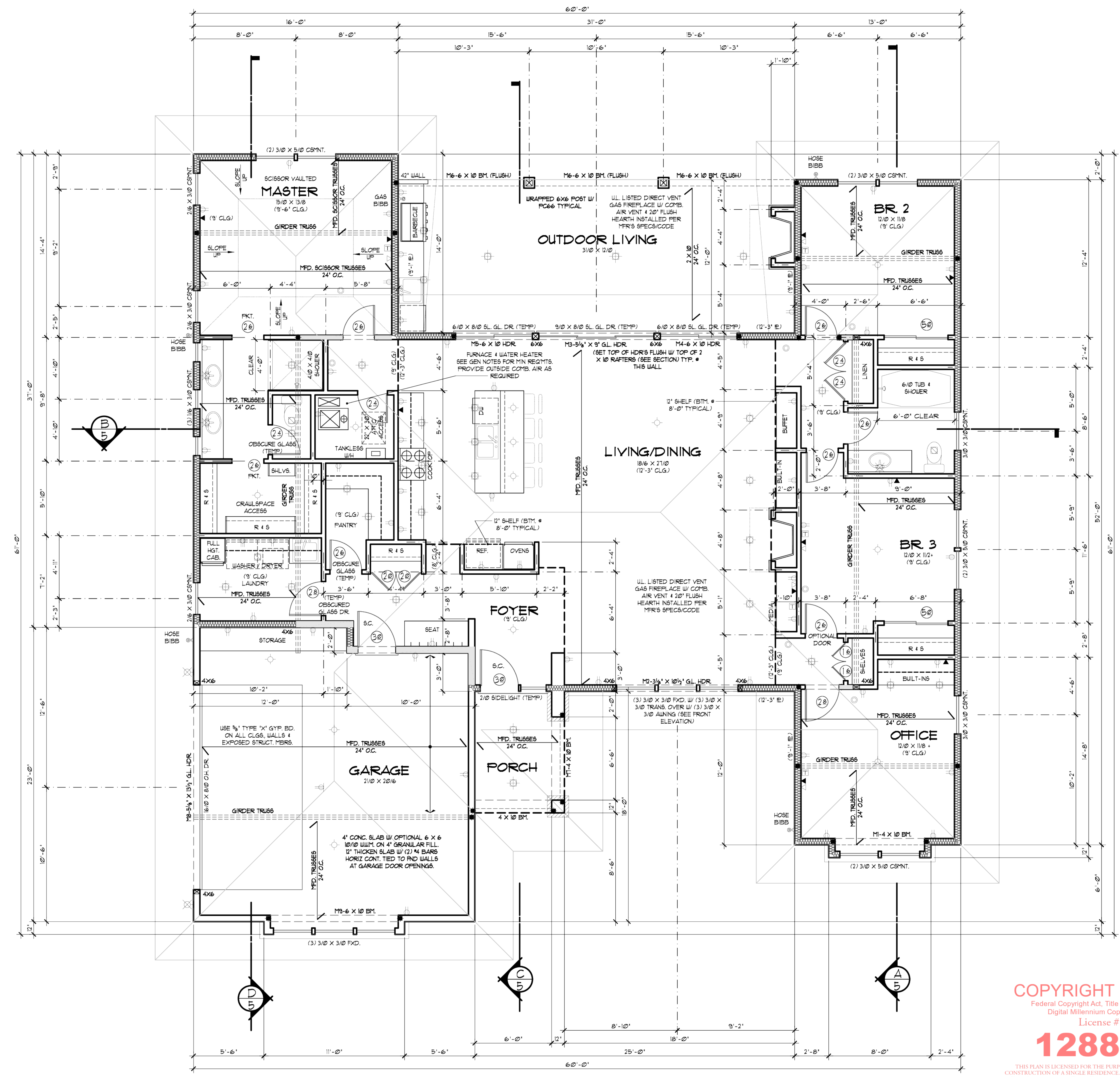
- WALL/FLR/CLG. INSUL.
- FOUNDATION INSUL.

(SEE SHEET 'G' 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 'G' FOR ADD'L INFO)



MAIN FLOOR PLAN

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

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

Mascord COLLECTION

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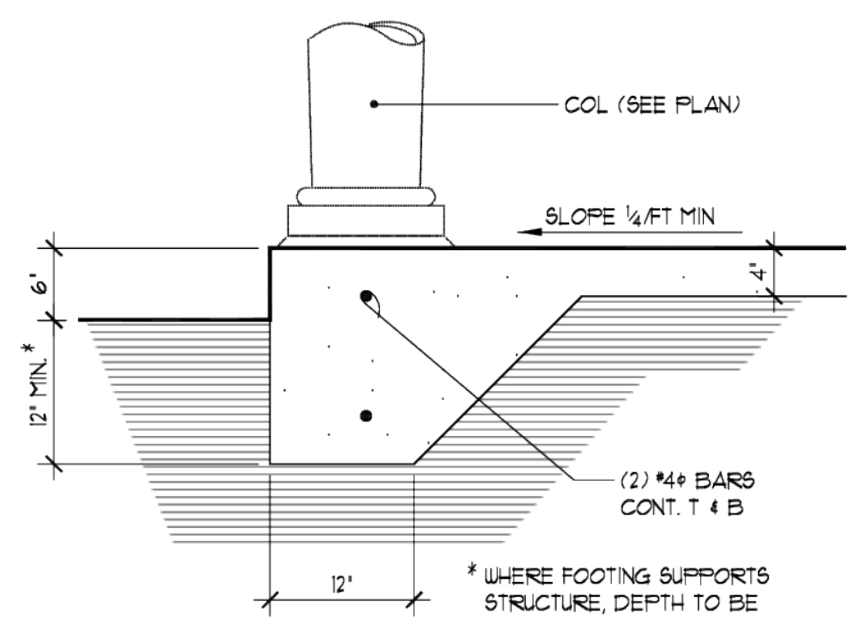
1247-3M
PROJECT MANAGER:EAS
DRAWN 05/22/13 LAW

25# SNOW LOAD

MAIN FLOOR	2135 SQ. FT.
TOTAL AREA	2135 SQ. FT.
GARAGE AREA	+ 496 SQ. FT.

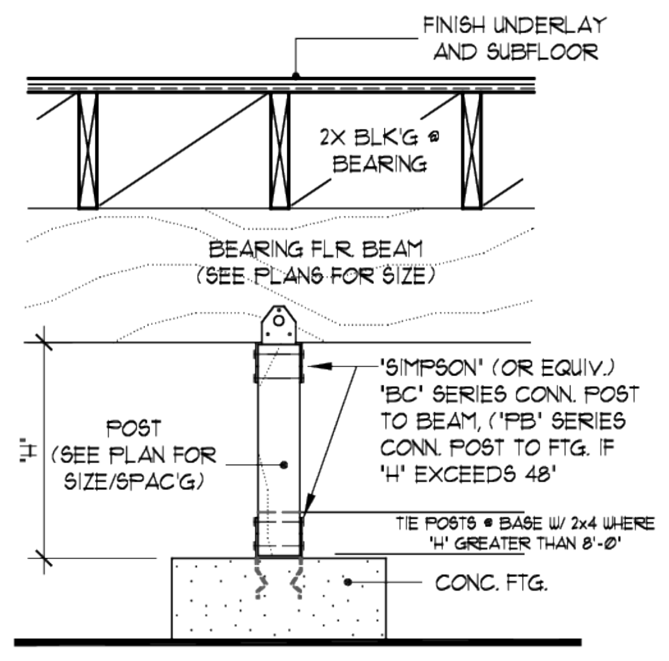
1247
3 M



1

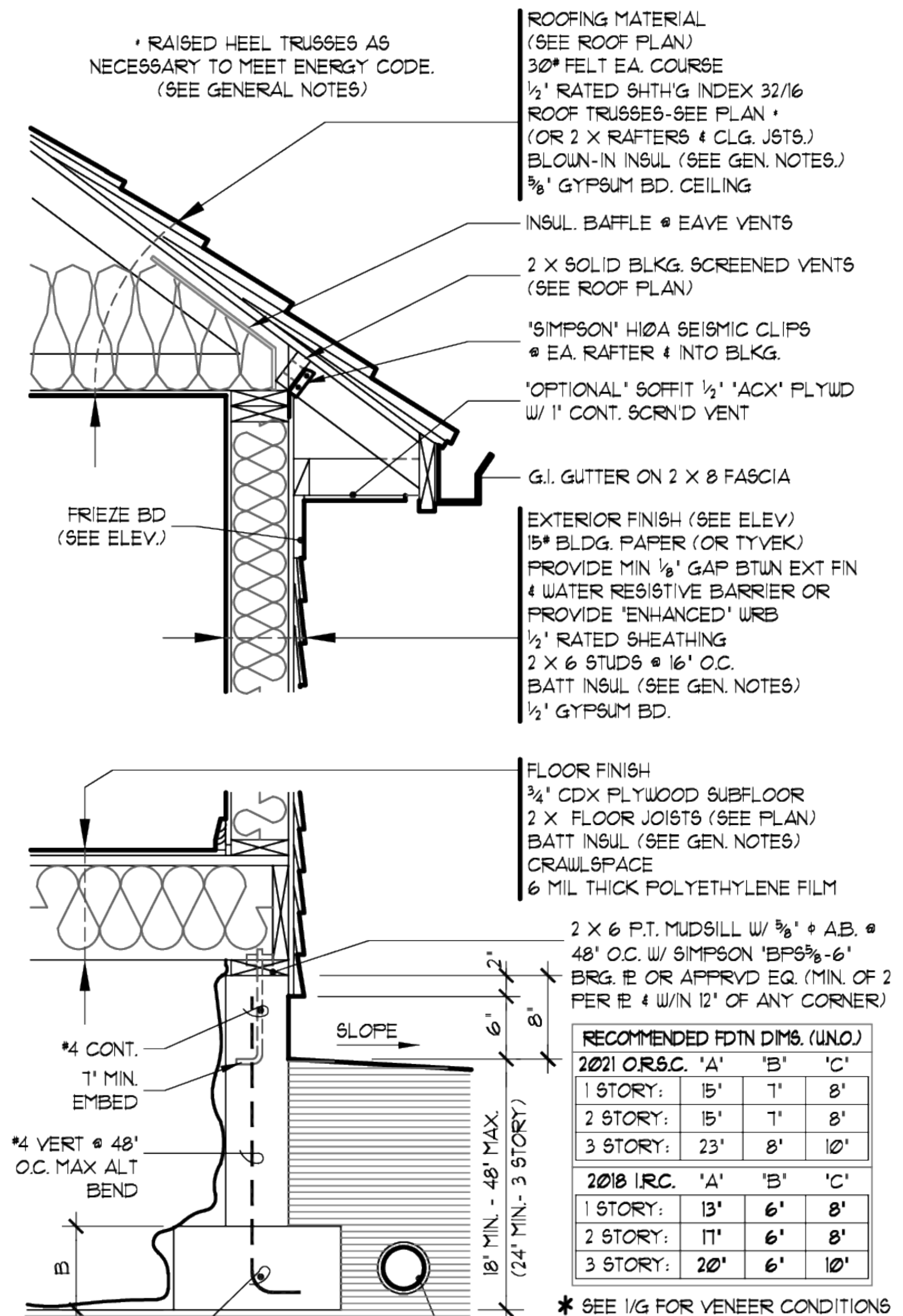
DETAIL

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



JOIST FLR. CONN.

¾" = 1'-0" JSTCONN



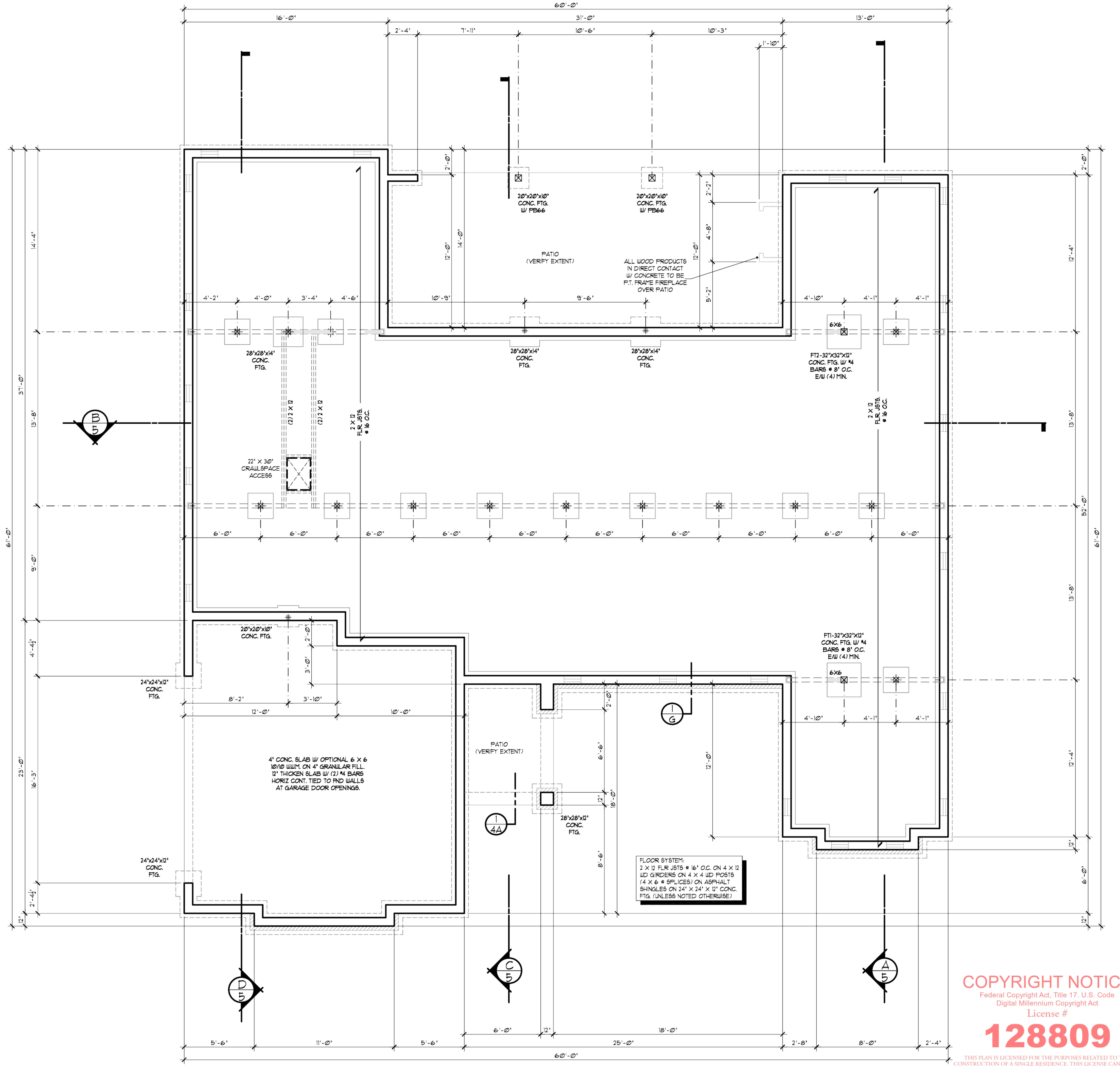
RECOMMENDED FDTN DIMS. (U.N.O.)			
2021 O.R.S.C.	'A'	'B'	'C'
1 STORY:	15"	7"	8"
2 STORY:	15"	7"	8"
3 STORY:	23"	8"	10"
2018 I.R.C.	'A'	'B'	'C'
1 STORY:	13"	6"	8"
2 STORY:	17"	6"	8"
3 STORY:	20"	6"	10"

* SEE 1/G FOR VENEER CONDITIONS

* SEE OPT. 'L' SHEETS FOR OTHER CONDITIONS THAT MAY APPLY.

TYP. WALL SECTION

SCALE : 3/4" = 1'-0" REV. 04/20/21 1J6SWS00



4" CONC. SLAB W/ OPTIONAL 6 X 6 10/10 W.W.M. ON 4" GRANULAR FILL. 12" THICKEN SLAB W/ (2) #4 BARS HORIZ CONT. TIED TO FND WALLS AT GARAGE DOOR OPENINGS.

ALL WOOD PRODUCTS IN DIRECT CONTACT W/ CONCRETE TO BE P.T. FRAME FIREPLACE OVER PATIO

FLOOR SYSTEM:
2 X 12 FLR JSTS @ 16" O.C. ON 4 X 12 WD GIRDERS ON 4 X 4 WD POSTS (4 X 6 @ SPLICES) ON ASPHALT SHINGLES ON 24" X 24" X 12" CONC. FTG. (UNLESS NOTED OTHERWISE)

FOUNDATION PLAN

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

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

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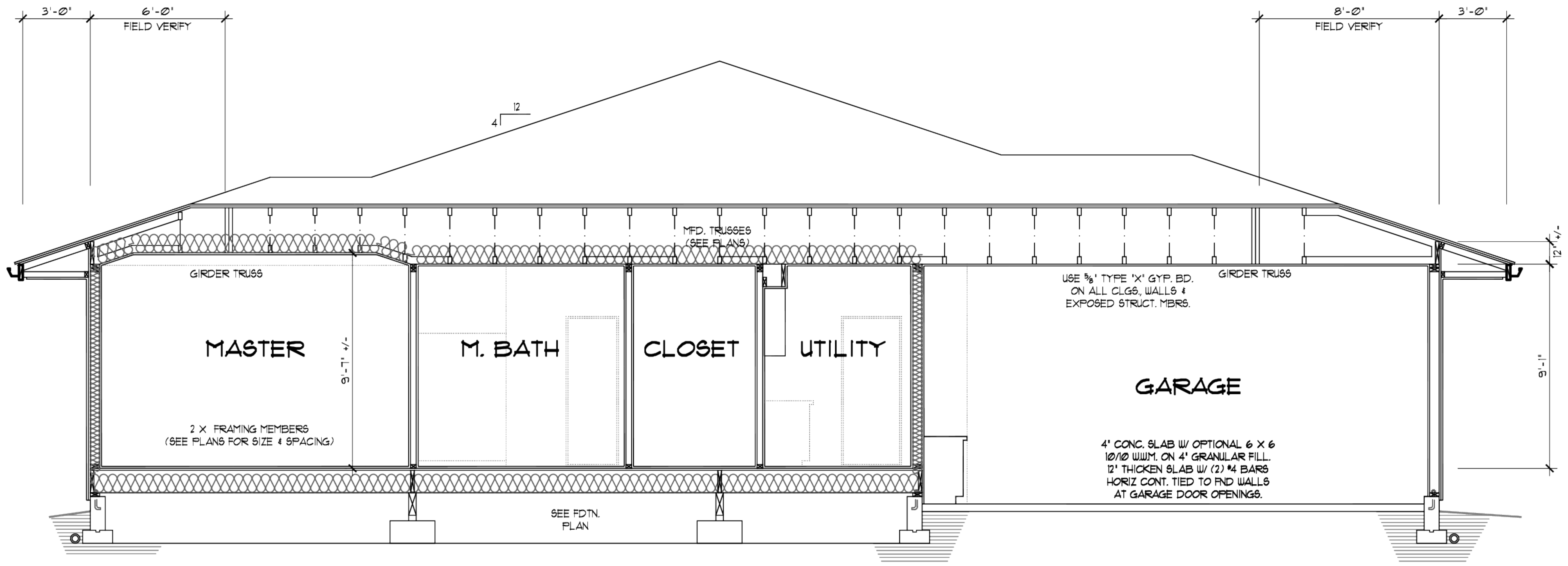
1247-4AM
PROJECT MANAGER:EAS
DRAWN 05/22/13 LAW

25# SNOW LOAD

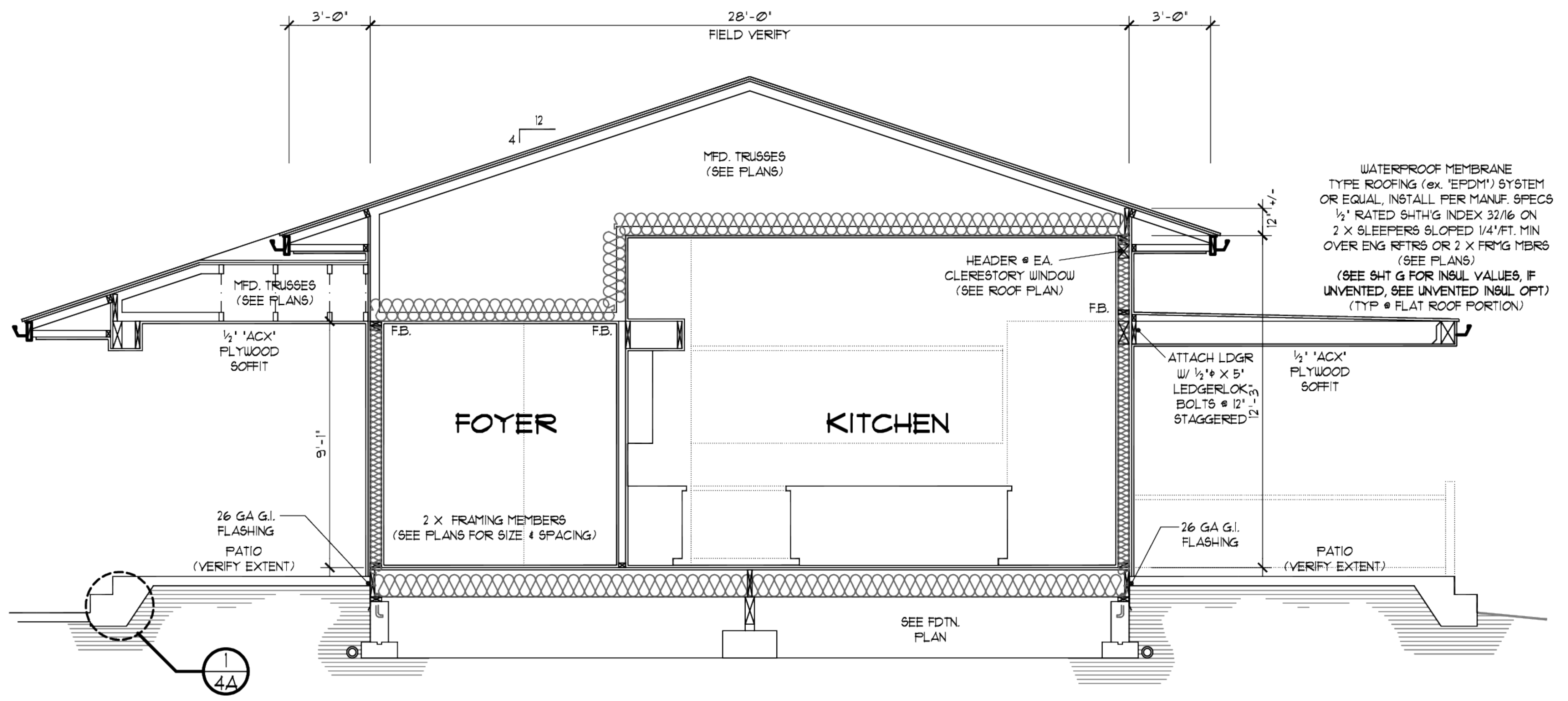
MAIN FLOOR	2135 SQ. FT.
TOTAL AREA	2135 SQ. FT.
GARAGE AREA	+ 496 SQ. FT.

1247
4AM



D BUILDING SECTION

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



C BUILDING SECTION

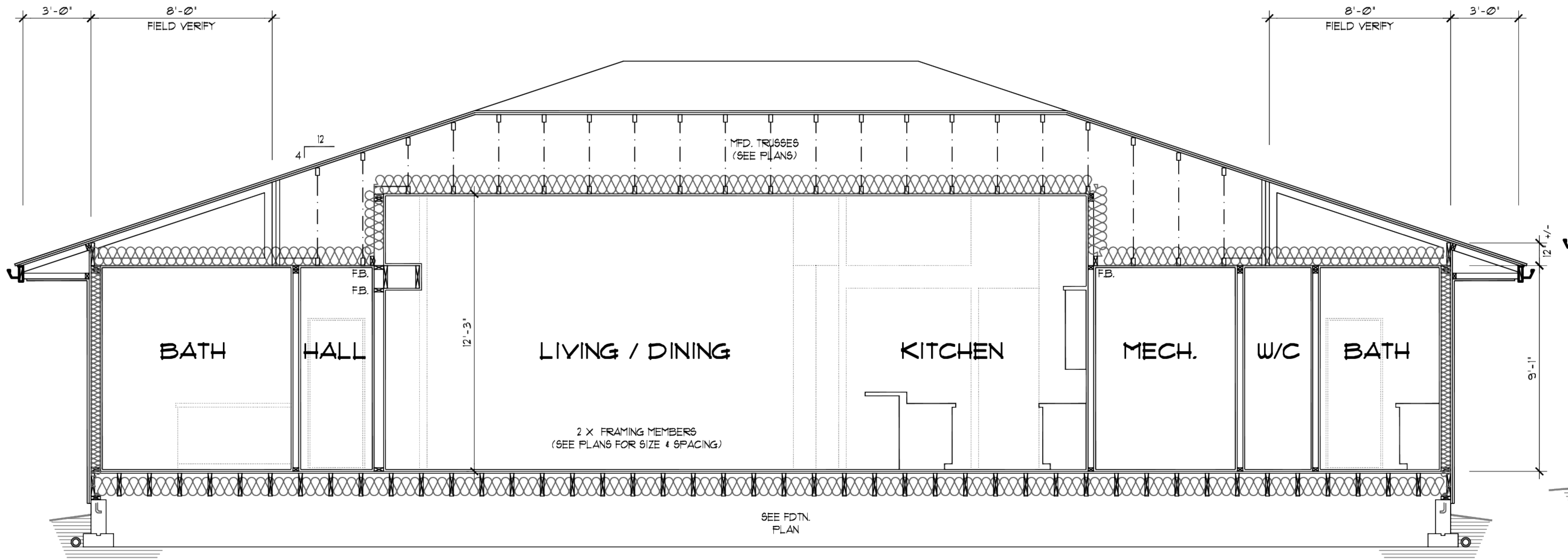
SCALE : 1/4" = 1'-0"

ENERGY ENVELOPE KEY

▨ WALL/FLR/CLG. INSUL.

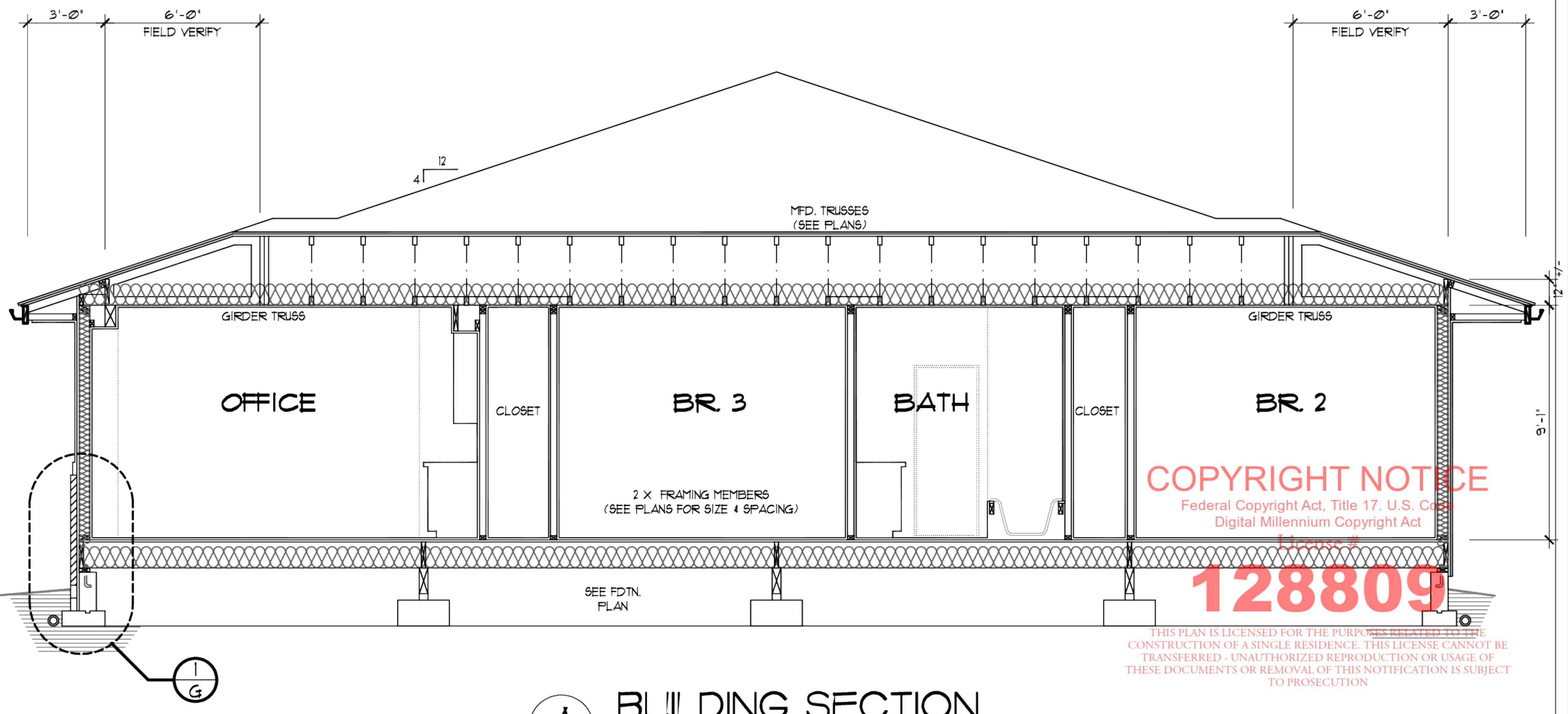
▤ FOUNDATION INSUL.

(SEE SHEET 'G' FOR INSULATION VALUES)



B BUILDING SECTION

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



A BUILDING SECTION

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

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1247-5M
PROJECT MANAGER:EAS
DRAWN 05/22/13 LAW

25# SNOW LOAD

MAIN FLOOR 2135 SQ. FT.
TOTAL AREA 2135 SQ. FT.
GARAGE AREA + 496 SQ. FT.

1247
5M

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 (SNOW)	25.0 PSF	3.25 PSF	AVE.(WET)
FRAMING MATERIALS:	2.0 PSF		
SHEATHING MATERIALS:	1.5 PSF	33.25 PSF	ACTUAL REQ'D
MISC. MATERIALS:	1.5 PSF	6.75 PSF	SAFETY FACTOR
		40.0	PSF TL

ROOFING TYPE	DRY / WET
MED SHAKES	2.0 / 3.25 PSF
HVY SHAKES	3.0 / 4.0 PSF
SHINGLES	2.0 / 3.25 PSF
COMPOSITION	2.5 / 3.0 PSF

GYPSUM MATERIALS: ADD 2.0 PSF FOR VAULTED AREAS (COVERED IN SAFETY FACTOR)

NOTE: HIPS, VALLEYS & RIDGES SHALL NOT BE LESS IN DEPTH 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 (MIN. (2) 2 X 4 REQ'D AT WALL BEARING POINT) NOTE: SPLICES IN HIPS & VALLEYS CAN ONLY OCCUR @ POST DOWN LOCATIONS
●	49 SQ. IN. ROOF VENTS (SEE VENT TABLE FOR QTY. - 50%/50% SHOWN)
▮	2X4 PURLIN WALL TO BM. OR WALL BELOW. (FRAM'G AT 24" O.C.)
▨	SHADED AREA DENOTES ROOF FRAMED OVER RAFTERS BELOW
■ D.S.	DOWNSPOUTS

COMP/SHAKE ROOF

MAXIMUM SPANS
PER 2004 W.W.P.A. TBL. RR-28
#2 D.F. L/240
25# LL & 15# DL

SIZE	SPACING	SPAN
2X6	12" O.C.	14'-0"
	16" O.C.	12'-1"
	24" O.C.	9'-10"
2X8	12" O.C.	17'-8"
	16" O.C.	15'-4"
	24" O.C.	12'-6"
2X10	12" O.C.	21'-7"
	16" O.C.	18'-9"
	24" O.C.	15'-3"
2X12	12" O.C.	25'-1"
	16" O.C.	21'-8"
	24" O.C.	17'-9"

ROOF VENTS

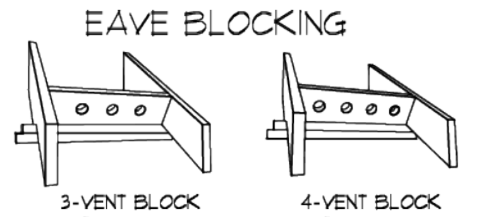
ROOF AREA (ft^2) = 3070				EAVE-BLOCK'G		ROOF VENTS
% EAVE	AREA (in^2)	% ROOF	AREA (in^2)	3-VENT	4-VENT	49 in^2
60	884.2	40	589.4	94	70	12
56.7	835.5	43.3	638.1	89	66	13
53.3	785.4	46.7	688.2	83	63	14
50	736.8	50	736.8	78	59	15

PER 2018 I.R.C. - R806.2 THE MIN. NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE.

EXCEPTION: THE MIN. NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:

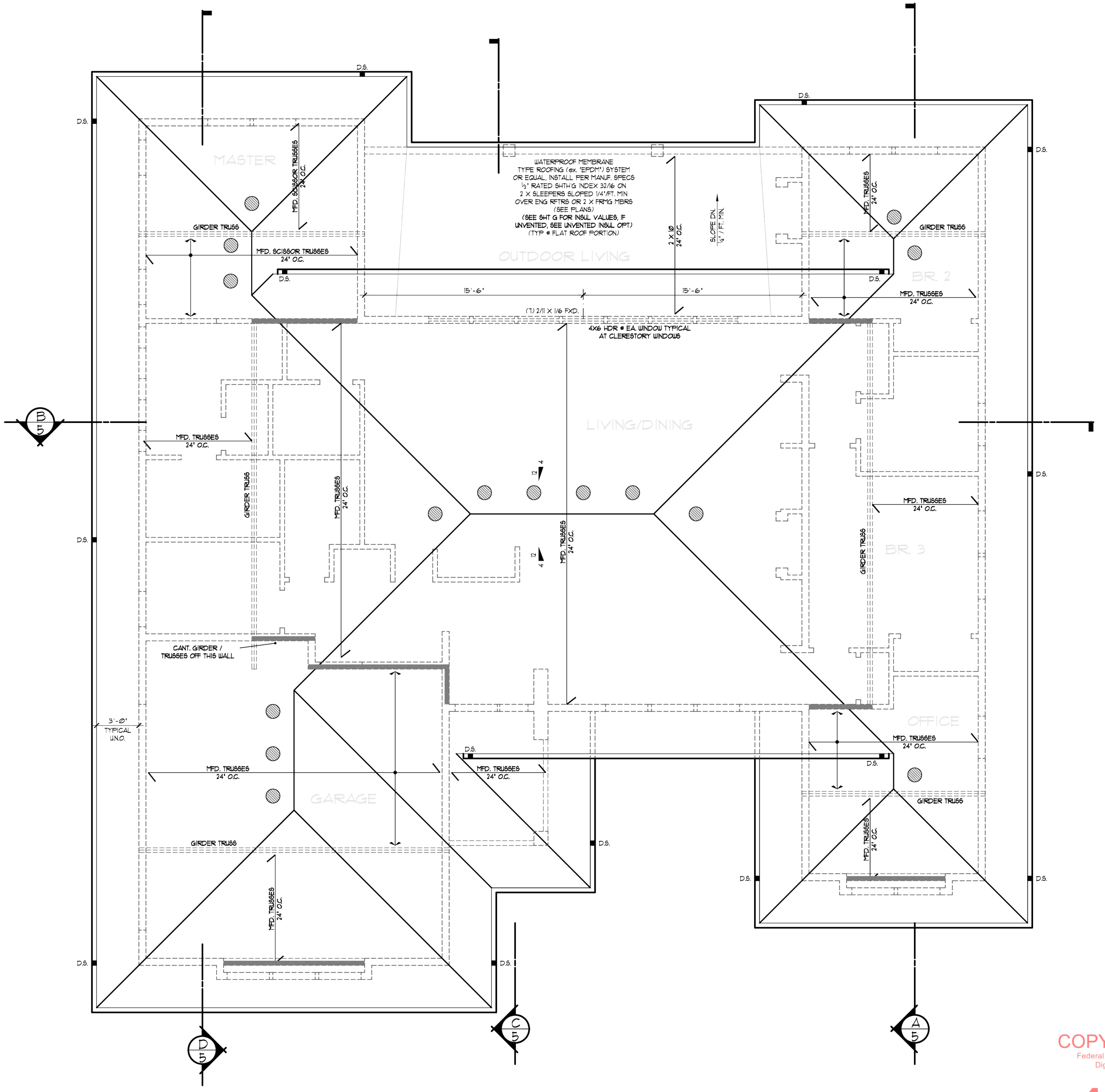
IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING.
NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NOT MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

EAVE BLOCKING



3-VENT BLOCK
(3) 2-5/16"φ (MIN.) HOLES
(9.45 in^2 EA.)

4-VENT BLOCK
(4) 2-5/16"φ (MIN.) HOLES
(12.6 in^2 EA.)



ROOF FRAMING PLAN

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

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

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1247-6SM
PROJECT MANAGER:EAS
DRAWN 05/22/13 LAW

25# SNOW LOAD

MAIN FLOOR	2135 SQ. FT.
TOTAL AREA	2135 SQ. FT.
GARAGE AREA	+ 496 SQ. FT.

1247
6 SM

DISCLAIMER
5/18/12

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 RE-USED 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.

MASCORD PREPARES ITS PLANS CAREFULLY FOR USE BY ITS CUSTOMERS. HOWEVER, ADAPTATION OF THE PLANS TO MEET SPECIFIC STATE AND LOCAL BUILDING CODES AND REGULATIONS, AND SPECIFIC SITE CONDITIONS, IS THE RESPONSIBILITY OF THE CONTRACTOR. IN ADDITION, MASCORD WILL NOT BE RESPONSIBLE FOR ANY DAMAGES RELATING TO THE ACCURACY AND OVERALL INTEGRITY OF THE PLANS IN EXCESS OF THE LICENSE FEE PAID FOR THEIR USE. THE CONTRACTOR, THEREFORE, MUST CAREFULLY INSPECT ALL DIMENSIONS AND DETAILS IN THE PLANS FOR ERRORS OR OMISSIONS.

UNAUTHORIZED USE OR COPYING OF THESE PLANS, OR THE DESIGN THEY DEPICT, INFRINGES RIGHTS UNDER THE COPYRIGHT ACT. INFRINGERS FACE LIABILITIES THAT INCLUDE PENALTIES OF UP TO $20,000 PER WORK INFRINGED, AND UP TO $100,000 PER WORK INFRINGED WILLFULLY.

GENERAL NOTES:
12/27/19

1. ALL WORK IS TO COMPLY WITH THE LATEST ADOPTED VERSION OF THE 2018 INTERNATIONAL RESIDENTIAL CODE (I.R.C.) 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	L.L.	D.L.
UNINHAB. ATTIC W/O STORAGE	10	10
UNINHAB. ATTIC W/ LIMITED STORAGE	20	10
HABITABLE ATTICS & ATTICS SERVED BY STAIR	30	10
BALCONIES (EXTERIOR) & DECKS	40	10
GUARD RAILS & HAND RAILS	200	-
GUARD RAIL IN-FILL COMPONENTS	50	-
PASSENGER VEHICLE GARAGE (3,000# POINT)	50	VARIES
ROOMS OTHER THAN SLEEPING ROOMS	40	10
SLEEPING ROOMS	30	10
STAIRS	40	10

TBL-1

(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[a]:

CLIMATE ZONE	1	2	3	4 Except Marine	5 And Marine 4	6	7 and 8
FENESTRATION U-FACTOR b	NR	0.40	0.32	0.32	0.30	0.30	0.30
SKYLIGHT U-FACTOR b	0.75	0.65	0.55	0.55	0.55	0.55	0.55
GLAZED FENESTRATION SHGC b, e	0.25	0.25	0.25	0.40	NR	NR	NR
CLG R-VALUE j	30	38	38	49	49	49	49
WOOD FRAME WALL R-VALUE	13	13	20 or 13+5 h	20 or 13+5 h	20 or 13+5 h	20+5 or 13+10 h	20+5 or 13+10 h
MASS WALL R-VALUE i	3/4	4/6	8/13	8/13	13/17	15/20	19/21
FLOOR R-VALUE	13	13	19	19	30 g	30 g	38 g
BASEMENT WALL R-VALUE c	0	0	5/13 f	10/13	15/19	15/19	15/19
SLAB R-VALUE AND DEPTH d	0	0	0	10, 2 ft	10, 2 ft	10, 4ft	10, 4ft
CRAWL SPACE WALL R-VALUE c	0	0	5/13	10/13	15/19	15/19	15/19

TBL-2

For SI: 1 foot = 304.8 mm

UP TO 15 ft² GLAZED FENESTRATION & (1) SIDE HINGED SOLID DR UP TO 24 ft² IS PERMITTED TO BE EXEMPTED FROM THE U-FACTOR SHGC REQ'MT OF TABLE R402.1.1

AREA WEIGHTED AVERAGE OF FENESTRATION PRODUCTS SHALL BE PERMITTED TO SATISFY THE U-FACTOR REQ'MTS

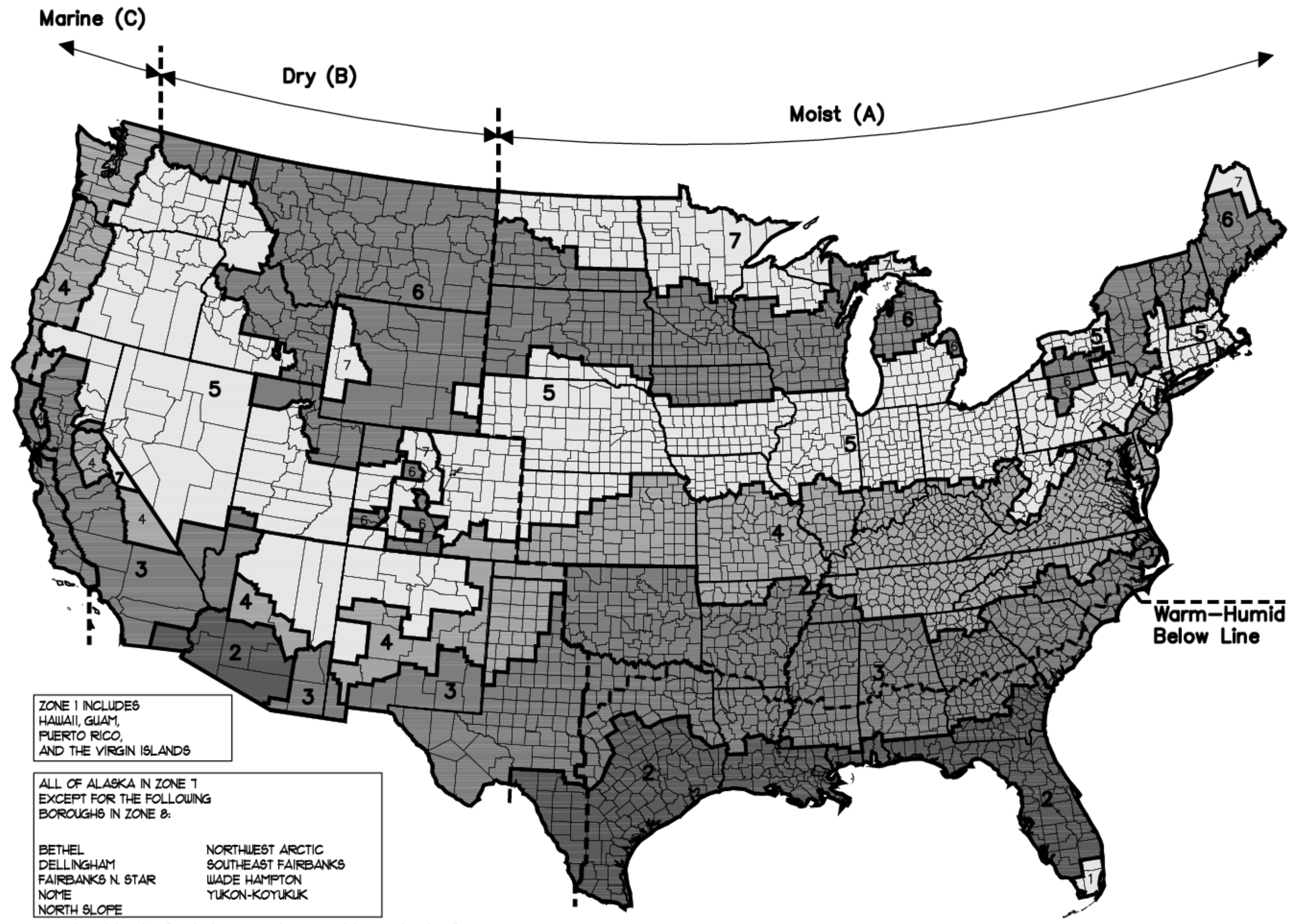
SUPPLY DUCTS IN ATTICS SHALL BE INSULATED TO MIN. OF R-8. ALL OTHER DUCTS SHALL BE INSULATED TO MIN. R-6

a. R-values are minimums. U-factors and SHGC are maximums. When insul. in installed in a cavity which is less than the label or design thickness of the insul., the installed R-value of the insul. shall not be less than the R-value specified in the table.
b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: Skylights may be excluded from glazed fenestration SHGC req'mts. in Climate Zones 1 thru 3 where the SHGC for such skylights does not exceed 0.30.
c. "15/19" means R-15 cont. insul. on the int. or ext. of the home or R-19 cavity insul. at the int. of the bsmt. wall. "15/19" shall be permitted to be met w/ R-13 cavity insul. on the int. of the bsmt. wall plus R-5 cont. insul. on the int. or ext. of the home. "10/13" means R-10 cont. insul. on the int. or ext. of the home, or R-13 cavity insul. @ the int. of the bsmt. wall.
d. R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the ftg. or 2'-0", whichever is less in Zones 1 thru 3 for heated slabs.
e. There are no SHGC requirements in the Marine Zone.
f. Basement wall insul. is not req'd in warm-humid locations. (see climate map)
g. Or insulation sufficient to fill the framing cavity, R-19 min.
h. First value is cavity insul., second is cont. insul. or insulated siding, so "13+5" means R-13 cavity insul. plus R-5 cont. insul. or insulated siding. If struct. sheathing covers 40% or less of the ext., cont. insul R-value shall be permitted to be reduced by no more than R-3 in locations where struct. sheathing is used - to maintain a consistent total sheathing thickness.
i. The second R-value applies when more than half the insul. is on the interior of the mass wall.
j. Under prescriptive building thermal envelope, R-30 shall be deemed to satisfy the req'mt for R-38 wherever the full height of uncompressed R-30 insul. extends over the wall top plate at the eaves. Similarly, R-38 satisfies the req'mt for R-49. In limited areas (500 sq. ft. or 20% of total insul. clg area, whichever is less) roof/clg assembly thermal envelope req'mt. may be reduced to R-30.

AIR BARRIER: CONT. AIR BARRIER SHALL BE INSTALLED IN THE BDLG. ENVELOPE. BREAKS/JOINTS IN THE AIR BARRIER SHALL BE SEALED. AIR PERMEABLE INSUL. SHALL NOT BE USED AS A SEALING MATERIAL. INSUL. SHALL BE INSTALLED PER MANUF. GUIDELINES.

INFILTRATION: THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION. THE FOLLOWING SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OR OTHERWISE SEALED WITH AN AIR BARRIER MATERIAL, SUITABLE FILM OR SOLID MATERIAL

TESTING: DWELLING SHALL BE TESTED TO VERIFY LEAKAGE RATE DOES NOT EXCEED 5 AIR CHANGES PER HOUR IN ZONES 1 & 2, AND 3 AIR CHANGES PER HOUR IN ZONES 3-8 BY BLOWER DR. TEST AT A PRESSURE OF 0.2 IN W.G. (50 PASCALS). WHERE REQ'D BY BUILDING OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY. SEE N1102.4.1.2 (R402.4.1.2), FOR TESTING PROCEDURES AND DOCUMENTATION REQ'MTS.



CLIMATE ZONE MAP

- SPACE BETWEEN WINDOWS/DOOR JAMBS & FRAMING AND SKYLIGHTS & FRAMING.
- DUCTS, SHAFTS, UTILITY PENETRATIONS & FLUE SHAFTS OPENING TO EXT. OR UNCONDITIONED SPACE.
- JUNCTIONS OF FOUNDATION & SILL PLATE & JUNCTION OF THE TOP PLATE & TOP OF EXT. WALLS.
- HVAC REGISTER BOOTS THAT PENETRATE BLDG. THERMAL ENVELOPE (SEAL TO SUBFLOOR/DRYWALL).
- RECESSED LIGHT FIXTURES INSTALLED IN THE BLDG. THERMAL ENVELOPE SHALL BE AIR TIGHT, IC-RATED (SEALED TO THE DRYWALL).
- BETWEEN GARAGE AND CONDITIONED SPACES.
- AIR BARRIER TO BE INSTALLED ON FIREPLACE WALLS - FIREPLACE TO HAVE GASKETED DOORS.
- OPENINGS AT PENETRATIONS OF UTILITY SERVICES THROUGH THE ROOF, WALLS, AND FLOORS
- BUILDING ASSEMBLIES USED AS DUCTS OR PLENUMS
- JOINTS, SEAMS, AND PENETRATIONS OF VAPOR RETARDERS
- ALL OTHER OPENINGS IN THE BUILDING ENVELOPE

CAVITIES IN WALL CORNERS & HDRS. TO BE FULLY INSULATED TO R3/in & SHALL BE SEALED. FLOORS, INCLUDING ABOVE GARAGE AND CANTILEVERED FLOORS - INSUL. SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT W/ UNDERSIDE OF SUBFLOOR DECKING. (EXCEPTIONS PER N1102.2.8) THE AIR BARRIER SHALL BE INSTALLED AT ANY EXPOSED EDGE OF INSUL. RIM JOIST SHALL BE INSULATED & INCLUDE AIR BARRIER. KNEE WALLS SHALL BE SEALED

CEILING/ATTIC - AIR BARRIER @ DROPPED CEILING/SOFFIT SHALL BE ALIGNED W/ THE INSUL. AND ANY GAPS IN AIR BARRIER SEALED. ACCESS OPENINGS, DROP-DOWN STAIR, ETC. INTO UNCONDITIONED ATTIC SPACE SHALL BE SEALED. BATT INSUL. INSTALLED IN ATTIC ROOF ASSEMBLIES MAY BE COMPRESSED @ EXT. WALL LINES TO ALLOW FOR REQ'D ATTIC VENTILATION.

WHERE PROVIDED @ CRAWLSPACE, IN LIEU OF FLOOR INSUL., INSUL. SHALL BE PERMANENTLY ATTACHED TO THE CRAWLSPACE WALLS. EXPOSED EARTH IN UNVENTED EARTH SHALL BE COVERED WITH A CLASS-1 VAPOR RETARDER W/ OVERLAPPING JOINTS TAPED.

BATT INSUL. SHALL BE CUT NEATLY TO FIT AROUND WIRING & PLUMBING IN EXT. WALLS WITHOUT VOIDS/GAPS. AIR BARRIER SHALL EXTEND BEHIND ELECTRICAL/COMMUNICATION BOXES OR INSTALL AIR SEALED BOXES.

EXT. WALLS ADJACENT TO TUBS/SHOWERS TO BE INSULATED AND AIR BARRIER SHALL SEPARATE THE INSULATED WALL FROM THE SHOWER/TUB.

AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR EA. SEPARATE HEATING AND COOLING SYSTEM. WITH FORCED AIR HEATING, AT LEAST ONE THERMOSTAT SHALL BE DAILY PROGRAMMABLE

DUCTS, AIR HANDLERS & FILTER BOXES SHALL BE SEALED (N1103.3.2) JOINTS & SEAMS SHALL COMPLY W/ IMC OR M1601.4.1 EXCEPTIONS ALLOWED FOR AIR- IMPERMEABLE SPRAY FOAM PRODUCTS (EXCEPTION 1) OR DUCTS MEETING SPECIFIC PRESSURE & JOINT REQ'MTS (EXCEPTION 2). DUCTS SHALL BE PRESSURE TESTED PER N1103.3.3 (MANDATORY) BY EITHER ROUGH-IN TEST OR POST CONSTRUCTION TEST AS DESCRIBED IN CODE, UNLESS DUCTS & AIR HANDLERS ARE LOCATED ENTIRELY WITHIN THERMAL BLDG. ENVELOPE. A WRITTEN TEST REPORT, SIGNED BY THE TESTER, SHALL BE PROVIDED TO THE BUILDING OFFICIAL. TOTAL DUCT LEAKAGE SHALL MEET (PRESCRIPTIVE) REQ'MTS OF N1103.3.4.1 ROUGH-IN TEST, OR N1103.3.4.2 POST CONSTRUCTION TEST.

6. ALL EXPOSED INSUL. TO HAVE A FLAME SPREAD RATING NOT TO EXCEED 25. SMOKE-DEVELOPED INDEX NOT TO EXCEED 450, WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL723, AND WHERE INSTALLED ON ATTIC FLOORS, ALL HAVE A CRITICAL RADIANT FLUX NOT LESS THAN 0.12 WATTS PER cm² PER ASTM E 790.

7. INSULATE ALL ACCESS DOOR/HATCHES TO CRAWLSPACES AND ATTICS TO THE EQUIV. RATING OF THE WALL, FLOOR, OR CEILING THROUGH WHICH THEY PENETRATE, EXCEPTION: VERTICAL ACCESS DOORS TO UNCONDITIONED SPACE SHALL BE PERMITTED TO MEET THE WALL R-VALUE A MIN. OF 90% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICACY LAMPS.

8. ALL WINDOWS WITHIN 24" OF ANY DOOR (REGARDLESS OF WALL PLANE), AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE FLOOR OR WALKING SURFACE SHALL HAVE TEMPERED GLAZING.

9. SKYLIGHTS ARE ASSUMED TO BE PRE-MFR UNIT SKYLIGHTS. UNIT SKYLIGHTS SHALL COMPLY WITH THE REQUIREMENTS OF AAMA/WDMA/CSA 101/I.S.2/A440.

10. A PERMANENT CERTIFICATE SHALL BE COMPLETED AND POSTED ON OR IN THE ELEC. DIST. PANEL LISTING THE PREDOMINANT R-VALUES OF INSUL. INSTALLED IN OR ON CLG/ROOF, WALLS, FDTN. (SLAB, BSMT WALL, CRAWLSPACE WALL AND / OR FLOOR) AND DUCTS OUTSIDE COND. SPACES. - FENESTRATION U-FACTORS/SHGC AND RESULTS FROM ANY REQ'D. ENVELOPE AIR LEAKAGE TESTING, ALONG WITH TYPES AND EFFICIENCIES OF HEATING, COOLING AND SERVICE WATER HEATING EQUIP. PER N1101.14 (R401.3)

11. ALL EXTERIOR WINDOWS ARE TO BE DOUBLE GLAZED AND ALL EXTERIOR DOORS ARE TO BE SOLID CORE WITH WEATHER-STRIPPING. PROVIDE 1/2" IN. DEAD BOLT LOCKS ON ALL EXTERIOR DOORS, AND LOCKING DEVICES ON ALL DOORS AND WINDOWS WITHIN 10 FT. (VERTICAL) OF GRADE. PROVIDE PEEPHOLE 54" - 66" ABOVE FIN. FLOOR ON EXTERIOR ENTRY DOORS. OPERABLE WINDOWS LOCATED MORE THAN 72" ABOVE FINISHED GRADE OR SURFACE SHALL HAVE LOWEST PART OF CLEAR OPENING A MIN. OF 24" ABOVE FINISHED FLOOR. GLAZING BETWEEN FIN FLOOR AND 24" SHALL BE FIXED OR HAVE OPENINGS THROUGH WHICH A 4" DIA. SPHERE CANNOT PASS OR CODE APPROVED WINDOW GUARD. (COMPLIANT W/ ASTM F2090).

12. DOORS BETWEEN GARAGE AND RESIDENCE SHALL BE SOLID WOOD NOT LESS THAN 1-3/8" THICKNESS OR 20 MINUTE RATED FIRE-RATED, AND TO BE EQUIPPED WITH A SELF-CLOSING DEVICE.

13. GLAZING IN DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS & SHOWERS, AND IN ANY PART OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS, WHERE BOTTOM EDGE OF GLAZING IS LESS THAN 60" MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE, TO BE TEMPERED GLAZING.

14. BASEMENTS, EVERY SLEEPING ROOM AND HABITABLE ATTICS TO HAVE MIN. WINDOW OPENING OF 5.7 SQ. FT. WITH A MIN. WIDTH OF 20" AND A SILL HGT. NOT MORE THAN 44" ABOVE FIN. FLOOR.

15. SMOKE DETECTORS SHALL BE INSTALLED IN EA. SLEEPING ROOM, OUTSIDE THE IMMEDIATE VICINITY OF EA. SLEEPING AREA AND ON EA. STORY OF THE DWELLING. CARBON MONOXIDE ALARMS SHALL BE LOCATED IN EA. BEDROOM OR W/IN 15 FEET OUTSIDE OF EA. BEDROOM DR. BEDROOMS ON SEPARATE FLR LEVELS IN A STRUCTURE OF TWO OR MORE STORIES SHALL HAVE SEPARATE CARBON MONOXIDE ALARMS SERVING EA. STORY. ALL SMOKE DETECTORS AND/OR COMBINATION SMOKE/CARBON MONOXIDE ALARMS SHALL BE INTERCONNECTED SUCH THAT THE ACTUATION OF ONE ALARM WILL ACTUATE ALL THE ALARMS AND WILL BE AUDIBLE IN ALL SLEEPING AREAS OVER BACKGROUND NOISE LEVELS WITH ALL INTERVENING DOORS CLOSED. SINGLE STATION CARBON MONOXIDE ALARMS THAT ARE HARD WIRED SHALL BE EQUIPPED W/ BATTERY BACKUP.

16. ELECTRICAL RECEPTACLES IN BATHROOMS, KITCHENS, EXTERIOR LOCATIONS AND GARAGES SHALL BE G.F.I. OR G.F.I.C. PER NATIONAL ELECTRICAL CODE (N.E.C.) REQUIREMENTS.

17. INTERIOR & EXTERIOR STAIRS SHALL HAVE A MEANS TO ILLUMINATE THE STAIRS, INCLUDING LANDINGS & TREADS. INTERIOR STAIRS OF 6 STEPS OR MORE SHALL HAVE THE REQUIRED LIGHTING IN THE IMMEDIATE VICINITY OF THE TOP & BOTTOM OF THE STAIRS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF STAIR. EXTERIOR STAIRS LEADING FROM GRADE TO BASEMENT SHALL HAVE AN ARTIFICIAL LIGHT SOURCE IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF STAIRS. LIGHTING FOR INTERIOR STAIRS SHALL BE CONTROLLED FROM TOP & BOTTOM OF EA. STAIR. SEE I.R.C. 303.7

18. PROVIDE COMBUSTION AIR VENTS (W/ SCREEN AND BACK DAMPER) FOR FIREPLACES, WOOD STOVES, AND ANY APPLIANCES WITH AN OPEN FLAME. FIREPLACE FLUE DAMPERS SHALL BE TIGHTLY FITTING AND OPERATED BY A READILY ACCESSIBLE MANUAL OR APPROVED AUTOMATIC CONTROL.

19. LOCAL EXHAUST : BATHROOMS-TOILET ROOMS, UTILITY ROOMS & INDOOR SWIMMING POOLS & SPAS ARE TO BE VENTED WITH A FAN CAPABLE OF PRODUCING A MIN. 50 CFM INTERMITTENT OR 20 CFM CONT. AND KITCHENS CAPABLE OF 100 CFM INTERMITTENT OR 25 CFM CONT., DUCT LENGTH, DIA., & TYPE TO BE DETERMINED PER TABLE M1506.2 ALL EXHAUST VENTS TO BE VENTED TO EXTERIOR. WHERE IT EXCEEDS 35', THE EQUIVALENT LENGTH OF THE DRYER EXHAUST DUCT SHALL BE IDENTIFIED ON A PERMANENT LABEL OR TAG LOCATED WITHIN 6 FEET OF THE EXHAUST DUCT CONNECTION.

20. WHOLE HOUSE MECHANICAL VENTILATION : SYSTEM SHALL CONSIST OF ONE OR MORE SUPPLY OR EXHAUST FANS, OR A COMBINATION OF SUCH, AND ASSOCIATED DUCTS AND CONTROLS. LOCAL EXHAUST OR SUPPLY FANS ARE PERMITTED TO SERVE AS SUCH A SYSTEM. OUTDOOR AIR DUCTS CONNECTED TO THE RETURN SIDE OF A AIR HANDLER SHALL BE CONSIDERED TO PROVIDE SUPPLY VENTILATION. SYSTEM SHALL BE PROVIDED WITH MANUAL OVERRIDE CONTROLS. (MECH.-HVAC CONTRACTOR TO SIZE VENTILATION SYSTEM IN ACCORDANCE WITH SECTION M1507.3, REGARDING AREA SERVED AND SYSTEM TYPE.)

21. SPECIFIC MANUFACTURES AND MATERIALS DEPICTED ON THESE PLANS ARE AN INDICATION OF QUALITY AND STRENGTH. VERIFY ALL CONSTRUCTION MATERIAL SUBSTITUTIONS WITH CURRENT APPLICABLE BUILDING CODES AND LOCAL BUILDING OFFICIALS PRIOR TO INSTALLATION / SUBSTITUTION.

22. THIS DESIGN, UNLESS PURCHASED WITH ITS SPECIFIC ENGINEERED ANALYSIS, HAS NOT BEEN REVIEWED FOR ANY SPECIFIC LATERAL DESIGN REQUIREMENTS.

FOUNDATION NOTES:
12/27/19

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 2018 IRC TABLE R403.1(1) - SOIL BEARING VALUE OF 1500 PSF, 30# SNOW LOAD, LIGHT FRAME CONSTRUCTION BASED ON 32' 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 FDTNS.

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

5. CONCRETE: - MIX AND 28 DAY STRENGTH OF CONCRETE.

- BASEMENT WALLS & FOUNDATIONS NOT EXPOSED TO WEATHER:	2,500 PSI
- BASEMENT & INTERIOR SLABS ON GRADE:	2,500 PSI
- BASEMENT WALLS & FOUNDATIONS EXPOSED TO THE WEATHER:, AND GARAGE SLABS	3,000 PSI
- PORCHES, STEPS, & CARPORT SLABS EXPOSED TO WEATHER:	3,500 PSI

TBL-3

MORTAR & GROUT TO BE MIXED PER MFR REQ'MTS

6. GARAGE FLOORS TO SLOPE 1/8"/FT MIN. TOWARDS OPENING AS REQUIRED FOR DRAINAGE. CONCRETE SLABS TO HAVE CONTROL JOINTS AT 25' FT. (MAX.) INTERVALS EA. WAY. SLABS ARE TO BE 5-7% AIR ENTRAINED

7. CONCRETE SIDEWALKS TO HAVE 3/4" IN. TOOLED JOINTS AT 5' FT. (MIN.) O.C.

8. REINFORCING STEEL TO BE A-615 GRADE 60. OPTIONAL WELDED WIRE MESH TO BE A-185.

9. EXCAVATE SITE TO PROVIDE A MIN. OF 18" CLEARANCE UNDER ALL GIRDERS.

10. COVER ENTIRE CRAWL SPACE WITH CLASS I VAPOR RETARDER (e.g. 6 MIL POLYETHYLENE FILM). & INSTALL A RADON VENT BETWEEN GROUND COVER AND SOIL (PER IRC APPENDIX F,- SEE SHEET R), AS REQ'D WHERE VENT AREA IS LESS THAN 1/150 OF CRAWLSPACE AREA OR OPERABLE LOUVERS ARE INSTALLED AT CRAWLSPACE VENTS.

11. PROVIDE A MIN. OF 1 SQ. FT. OF VENTILATION AREA FOR EACH 1500 SQ. FT. OF CRAWL SPACE AREA. LOCATE VENTS TO PROVIDE CROSS VENTILATION OF THE SPACE. IF CLASS I VAPOR RETARDER NOT USED, PROVIDE 1 SQ. FT. OF VENTILATION AREA FOR EA. 150 SQ. FT. OF CRAWL SPACE AREA, AND VENTS TO BE EVENLY SPACED TO PROVIDE CROSS VENTILATION, EXCEPT ONE SIDE OF BUILDING MAY HAVE NO VENT OPENING. VENTS ARE TO BE COVERED WITH 1/8" IN. MESH CORROSION RESISTANT SCREEN, OR APPROVED ALTERNATE PER R408.2. VENTS SHALL BE LOCATED WITHIN 3 FEET OF EACH BUILDING CORNER.

12. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED OR PROTECTED WITH 55# ROLL ROOFING.

13. BEAM POCKETS IN CONCRETE TO HAVE 1/2" IN. AIRSPACE AT SIDES AND ENDS WITH A MIN. BEARING OF 3" IN.

14. WATERPROOF BASEMENT WALLS BEFORE BACKFILLING. PROVIDING A 4" IN. DIA. PERFORATED DRAIN TILE BELOW THE TOP OF THE FOOTING (SEE BUILDING SECTIONS).

15. PROVIDE MIN. 18" X 24" CRAWLSPACE ACCESS THROUGH FLOOR OR MIN. 16" X 24" CRAWLSPACE ACCESS THROUGH WALL.

FRAMING NOTES:
12/27/19

1. ALL EXTERIOR WALL OPENINGS & BEARING WALL OPENINGS TO HAVE 4 X 10 HEADERS UNLESS OTHERWISE INDICATED. IF BUILDING BUILT WITH 88⅝" IN. STUDS USE 4 X 8 HEADERS UNLESS OTHERWISE NOTED ON THE PLAN.

2. ALL EXTERIOR WALLS TO BE BUILT OF 2 X 6 STUDS @ 16" O.C. TYPICALLY UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS ARE TO BE BUILT OF 2 X 4 STUDS @ 16" O.C. TYPICALLY UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS SUPPORTING TWO OR MORE FLOORS AND 1 OR MORE ROOF/CEILING ASSEMBLIES SHALL BE 2 X 6 STUDS @ 16" O.C. FOUNDATION CRIPPLE WALLS SHALL BE FRAMED OF STUDS NOT LESS IN SIZE THAN THE STUDDING ABOVE. WHEN EXCEEDING 4'-0" IN HEIGHT, SUCH WALLS SHALL BE FRAMED OF STUDS HAVING THE SIZE REQUIRED FOR AN ADDITIONAL STORY UNLESS SPECIFIED OTHERWISE.

3. ALL METAL CONNECTORS TO BE 'SIMPSON' OR EQUIVALENT. U.N.O. JOISTS HUNG ON FLUSH BEAMS TO BE ATTACHED WITH U210 OR EQUIVALENT. MULTIPLE JOISTS USE U210-2/U210-3 AS REQUIRED. USE OF 10d X 1-1/2" NAILS ARE ALLOWED WITH THESE TYPE OF HANGERS UNLESS NOTED ON THE PLANS. SEE NAIL CONVERSION CHART FROM CONNECTOR MANUFACTURES. CATALOG FOR OTHER NOTES AND RESTRICTIONS THAT MAY APPLY. 'USP' CONNECTORS CONSIDERED APPROVED EQUAL.

4. PROVIDE DOUBLE JOISTS UNDER ALL WALLS ABOVE, RUNNING PARALLEL TO JOISTS AND SOLID BLOCKING BELOW ALL BEARING WALLS RUNNING PERPENDICULAR TO FLOOR JOISTS.

5. PROVIDE POSITIVE VENTILATION AT EACH END OF EACH RAFTER SPACE AT VAULTED CLG AREAS, AND INSULATION BAFFLES AT EAVE VENTS BETWEEN RAFTERS. RAFTER VENTILATION IS ALSO REQUIRED AT BLOCKING LOCATIONS ABOVE THE PLATE.

6. PROVIDE FIRE BLOCKING PER 2018 I.R.C. R302.11 & DRAFT STOPS PER 2018 I.R.C. R302.12

7. HIPS, VALLEY'S AND RIDGES SHALL NOT BE LESS IN DEPTH THAN THE END CUT OF THE RAFTER.

8. UNLESS NOTED OTHERWISE, CONNECT POST TO BEAM WITH 'SIMPSON' BC SERIES CAP/BASE (OR APPROVED EQUAL) CONNECTORS. AT EXTERIOR APPLICATIONS USE 'SIMPSON' EPB SERIES BASES U.N.O. AND AT INTERIOR GARAGE POSTS AT FINISH FLOOR, (POST NOT EMBEDDED) USE 'SIMPSON' CB SERIES BASES. 'USP' CONNECTORS CONSIDERED APPROVED EQUAL.

9. FASTENERS FOR PRESERVATIVE-TREATED WOOD INCLUDING NUTS AND WASHERS SHALL BE HOT-DIPPED, ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL.

10. LUMBER SPECIES:

A. POSTS, BEAMS, HEADERS JOISTS AND RAFTERS	NO. 2 DOUGLAS FIR		
B. SILLS, PLATES, BLOCKING BRIDGING ETC.	NO. 3 DOUGLAS FIR		
C. STUDS	STUD GRADE D.F.		
D. STUDS OVER 10' HIGH	NO. 2 OR BETTER D/F		
E. POST & BEAM DECKING	UTILITY GRADE D.F.		
F. PLYWOOD SHEATHING	½" CDX PLY, 32/16		
G. GLU-LAM BEAMS (EXT. ADH @ EXT. CONDITIONS)	Fb-2400, DRY ADH.		
H. PSL MATERIALS *	Fb = 2900	E = 2.0	Fv = 290
LVL. MATERIALS **	Fb = 2900	E= 2.0	Fv = 285
	Fb = 2600	E= 1.9	Fv = 285
LSL MATERIALS ***	Fb = 2335	E= 1.55	Fv = 525

* PSL INDICATES PARALLEL STRAND LUMBER
** LVL INDICATES LAMINATED VENEER LUMBER
*** LAMINATED STRAND LUMBER
I. METAL HANGERS & FASTENERS USED WITH P.T. LUMBER TO BE STAINLESS STEEL OR HOT DIPPED GALVINIZED.

TBL-4

11. FASTENING SCHEDULE:

ROOF	BLK'G BETWEEN CEIL JSTS OR RFTRS TO TOP PL	4-8d BOX (2½"x0.113")	TOE NAIL
	CLG JST TO TOP PL	4-8d BOX (2½"x0.113")	FACE NAIL
	CLG JST LAPPED AT PARTITION	4-10d BOX (3"x0.128")	TOE NAIL
	CEIL JSTS TO RAFTER	PER TABLE 802.5.1(9)	FACE NAIL EA. RFTR
	COLLAR TIE TO RAFTER	4-10d BOX (3"x0.128")	TOE NAIL
	RAFTER/TRUSS TO PL	3-16d BOX (3½"x0.135")	END NAIL
	RAFTER TO RIDGE/HIP/VALLEY (MIN. 2")	3-16d BOX (3½"x0.135")	12" O.C. FACE
WALL	STUD TO STUD & INTSECTING WALL CORNERS	16d BOX (3½"x0.135")	16" O.C. EA. EDGE
	BUILT-UP HDR 2X MEMBERS	16d COM (3½"x0.162")	TOE NAIL
	CONT. HDR TO STUD	5-8d BOX (2½"x0.113")	12" O.C. FACE
	TOP PL TO TOP PL	2-16d COM (3½"x0.162")	FACE EA. SIDE
	DBL. TOP PL SPLICE	12-16d COM (3½"x0.162")	16" O.C. FACE
	SOLE PL TO JST, RIM OR BLK'G	16d COM (3½"x0.162")	END NAIL
	TOP OR BOTTOM PL TO STUD	3-16d BOX(3½"x0.135")	FACE NAIL
	TOP PL LAPS @ CORNER/INTERSECTION	2-16d COM (3½"x0.162")	
			TOE NAIL
FLOOR / OTHER	JOIST TO SILL, TOP PL OR GIRDER	4-8d BOX (2½"x0.113")	4" O.C. TOE NAIL
	RIM JST OR BLKG TO SILL OR TOP PL	8d BOX (2½"x0.113")	@ EA BEAR'G
	2" SUBFLR TO JST/GIRDER	3-16d BOX (2½"x0.135")	@ EA BEAR'G
	2" PLANKS (P & B FLR AND ROOF)	3-16d BOX (2½"x0.135")	END NAIL
	RIM JST. TO JST.	3-16d COM (3½"x0.162")	24" O.C. FACE TOP &
	BUILT-UP GIRDERS/BEAMS (2" LAYERS)	10d BOX (3"x0.128")	BTM & STAGGERED 6" EDGE/12" FIELD
	⅜"-½" WOOD STRUCTURAL PANELS	8d COM (2½"x0.131")	6" EDGE/12" FIELD
	19/32"-1" WOOD STRUCTURAL PANELS	8d COM (2½"x0.131")	6" EDGE/12" FIELD
	1⅛"-1¼" WOOD STRUCTURAL PANELS	10d COM (3"x0.148")	7" EDGE/7" FIELD
	½" GYPSUM WALL/CLG. BD. (U.N.O.)	1¼" TYPE 'S'/'W' SCREW	7" EDGE/7" FIELD
	⅝" GYPSUM WALL/CLG. BD. (U.N.O.)	1⅝" TYPE 'S'/'W' SCREW	

TBL-5

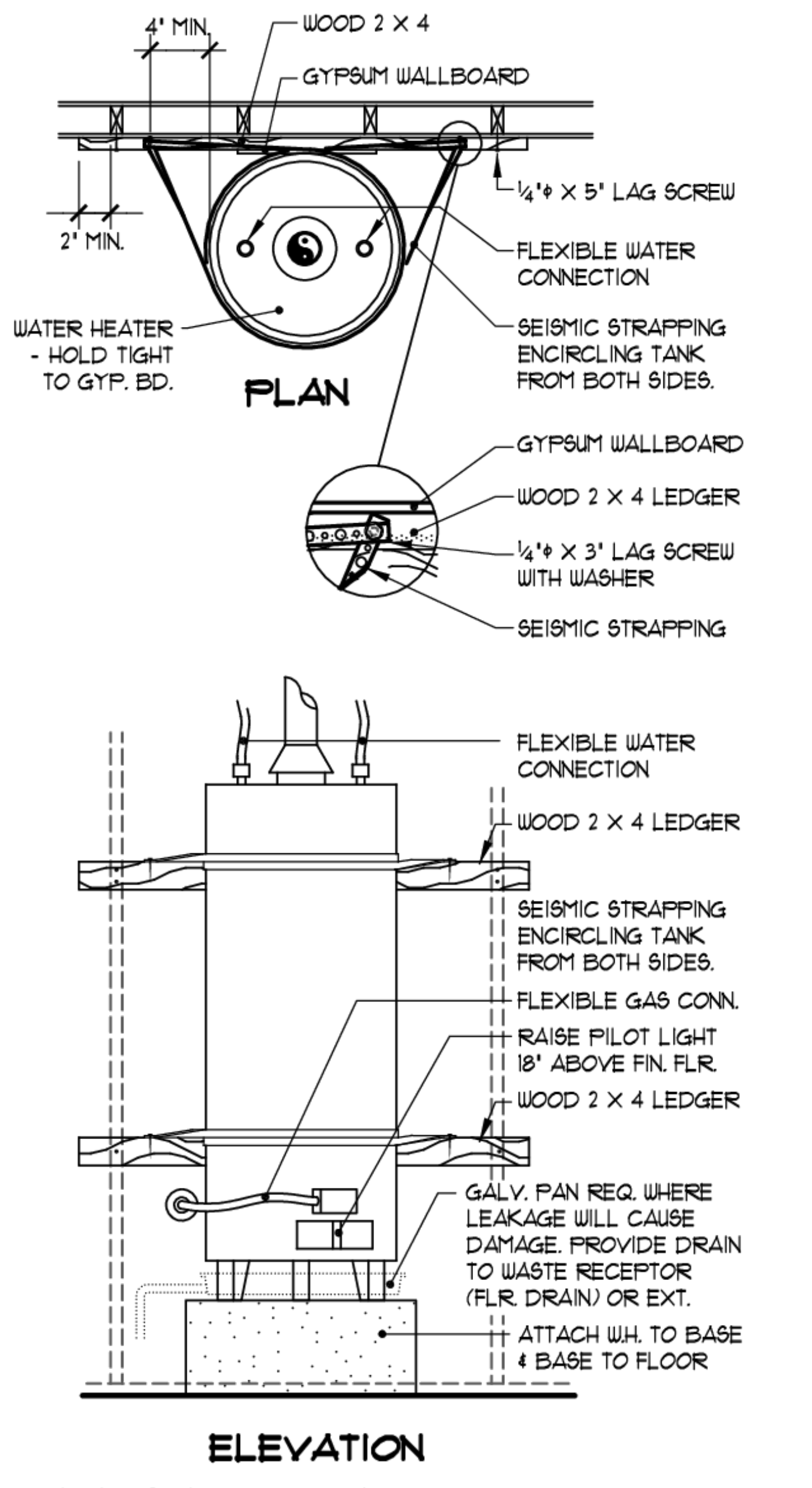
SEE TABLE R602.3(1) FOR ADDITIONAL FASTENER ALLOWANCES

SPAN TABLES

BASED ON 2015 I.R.C. TABLE R502.3.1(1), R502.3.1(2), R802.5(1), AND R802.5(2)

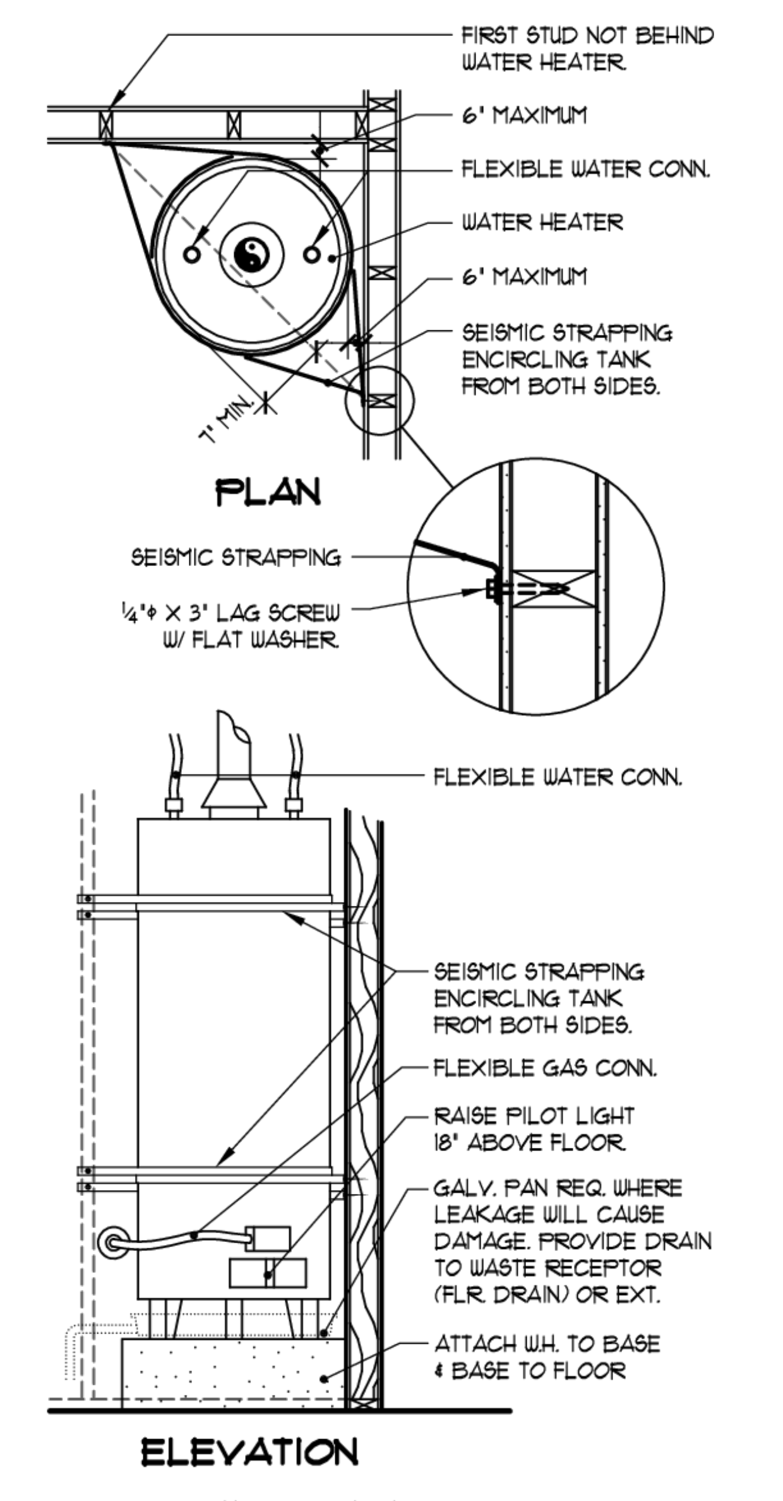
JOISTS		FLOOR (40# LL/10# DL) (L/360)	FLOOR (30# LL/10# DL) (L/360)	JOISTS		CEILING (20# LL/10# DL) (L/240)	CEILING (10# LL/5# DL) (L/240)
D.F. #2	SPAC'G O.C.	MAX. SPAN	MAX. SPAN	D.F. #2	SPAC'G O.C.	MAX. SPAN	MAX. SPAN
2 X 6	12"	10'-9"	11'-10"	2 X 4	12"	9'-10"	12'-5"
	16"	9'-9"	10'-9"		16"	8'-11"	11'-3"
	24"	8'-3"	9'-3"		24"	7'-3"	9'-10"
2 X 8	12"	14'-2"	15'-7"	2 X 6	12"	15'-0"	19'-6"
	16"	12'-9"	14'-2"		16"	13'-0"	17'-8"
	24"	10'-5"	11'-8"		24"	10'-8"	15'-0"
2 X 10	12"	18'-0"	19'-10"	2 X 8	12"	19-1"	25-8"
	16"	15'-7"	17'-5"		16"	16'-6"	23'-4"
	24"	12'-9"	14'-3"		24"	13'-6"	19'-1"
2 X 12	12"	20'-11"	23'-4"	2 X 10	12"	23'-3	26'-0"
	16"	18'-1"	20'-3"		16"	20'-2"	26'-0"
	24"	14'-9"	16'-6"		24"	16'-5"	23'-3"

TBL-6



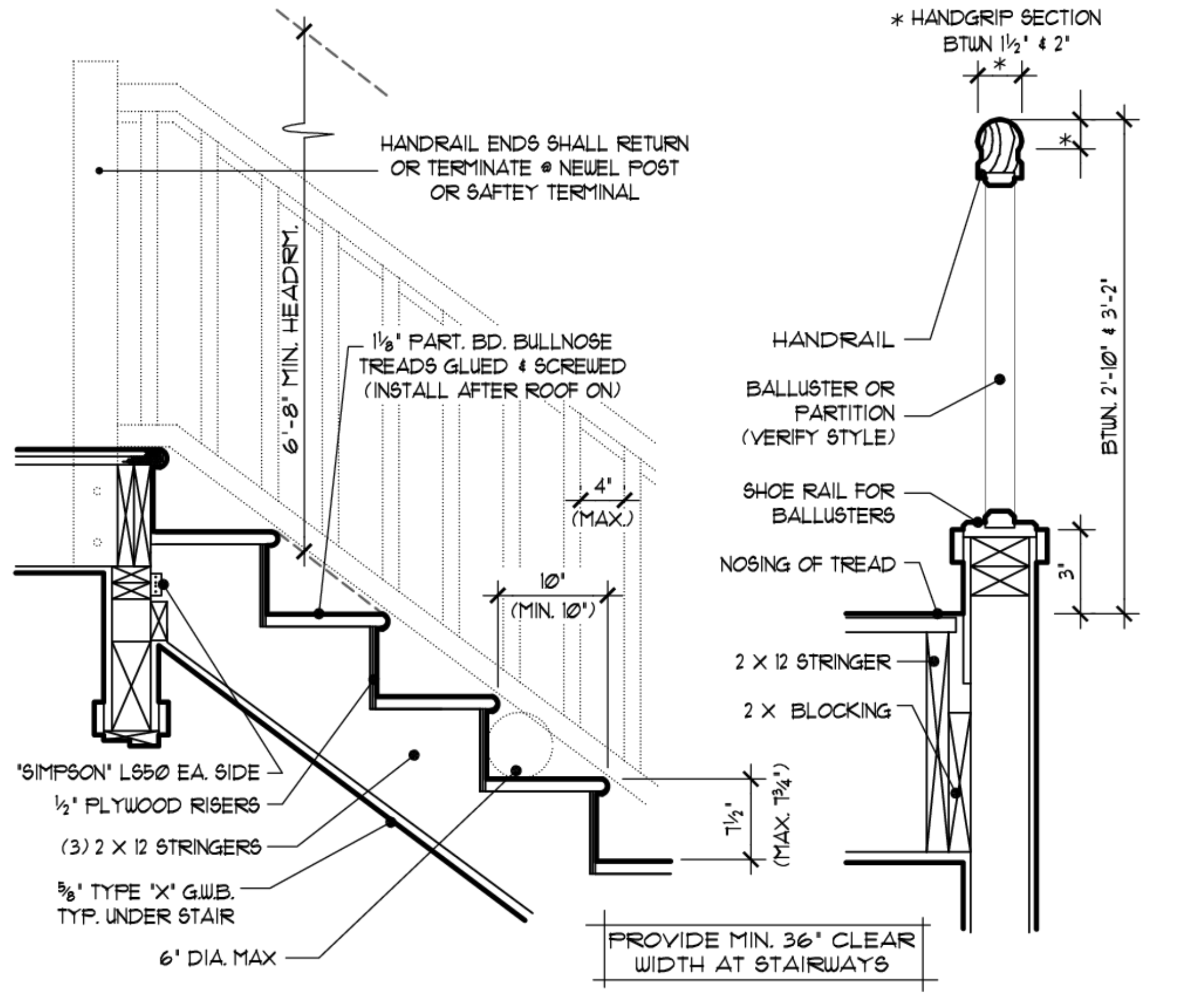
W.H. SUPPORT

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



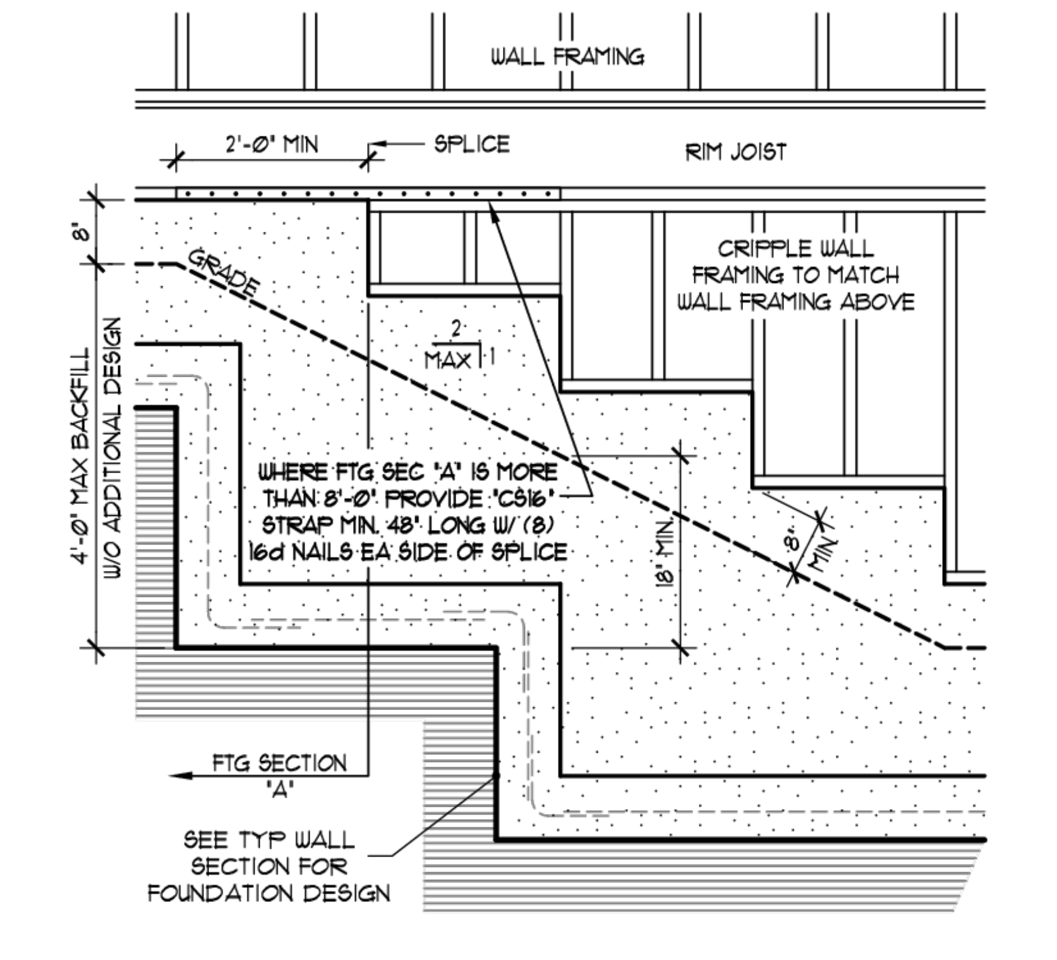
CORNER W.H.

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



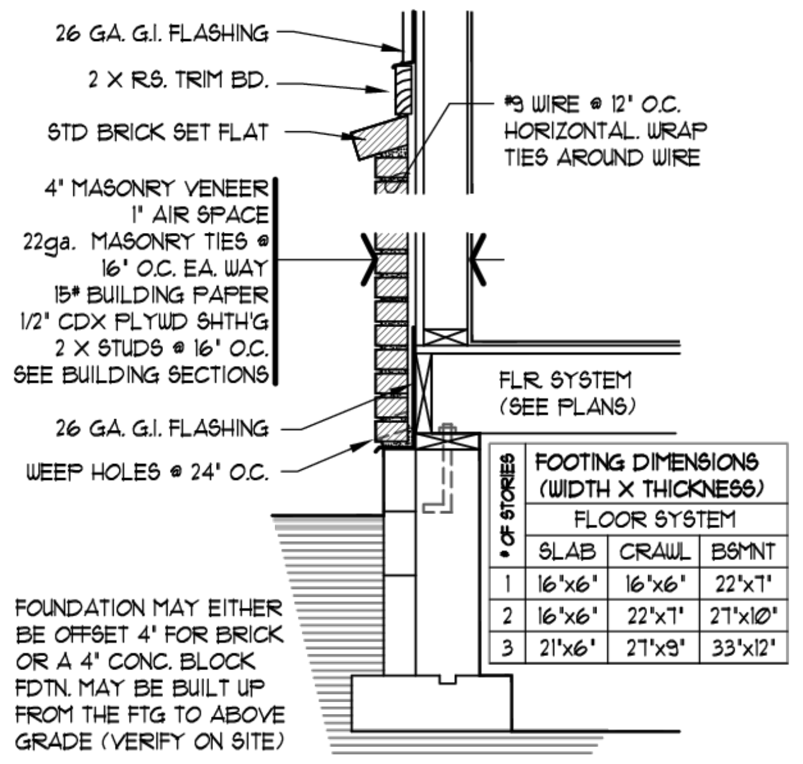
STAIR DETAIL

SCALE : 3/4" = 1'-0" M-STAIR1 07/15/08



STEP FOOTING DETAIL

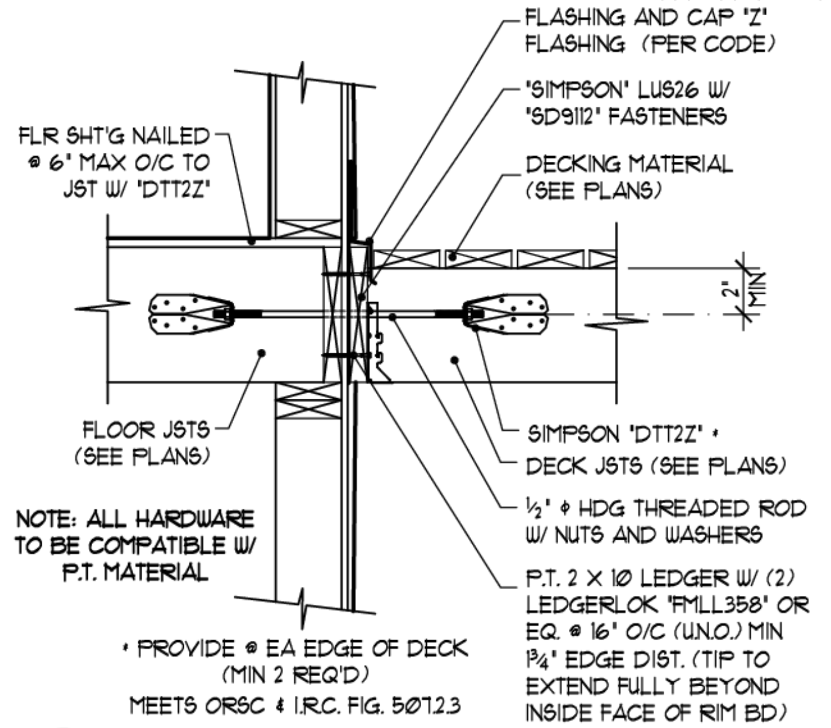
½" = 1'-0" STEPFTG



# OF STORIES	FOOTING DIMENSIONS (WIDTH X THICKNESS)		
	FLOOR SYSTEM		
	SLAB	CRAWL	BSMNT
1	16"x6"	16"x6"	22"x7"
2	16"x6"	22"x7"	27"x10"
3	21"x6"	27"x9"	33"x12"

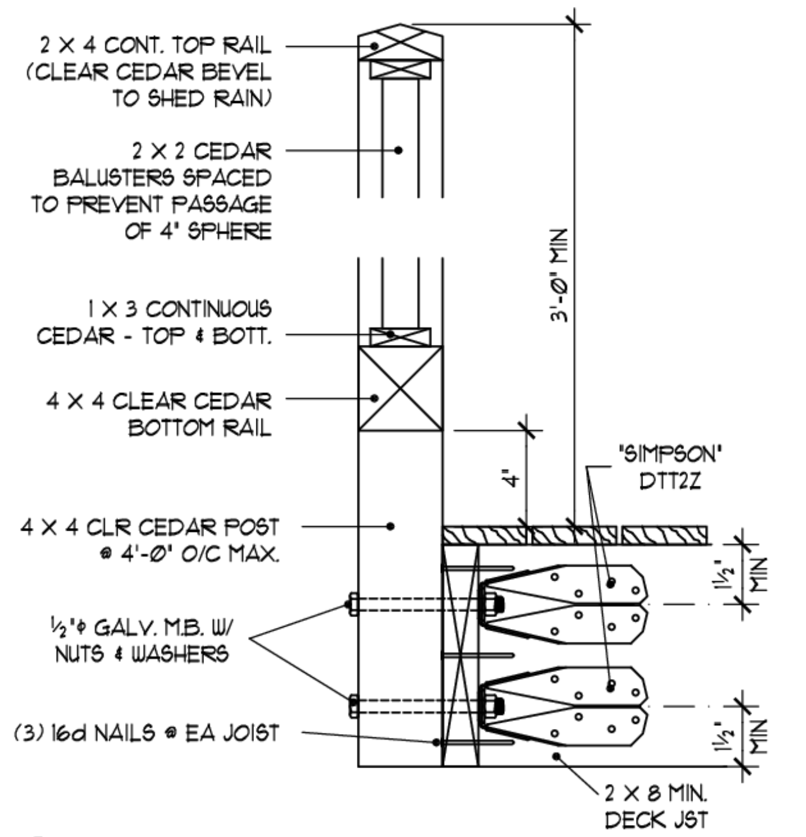
1 MASONRY VENEER DTL

SCALE : 1/2" = 1'-0" M-BRKDET 7/01/16



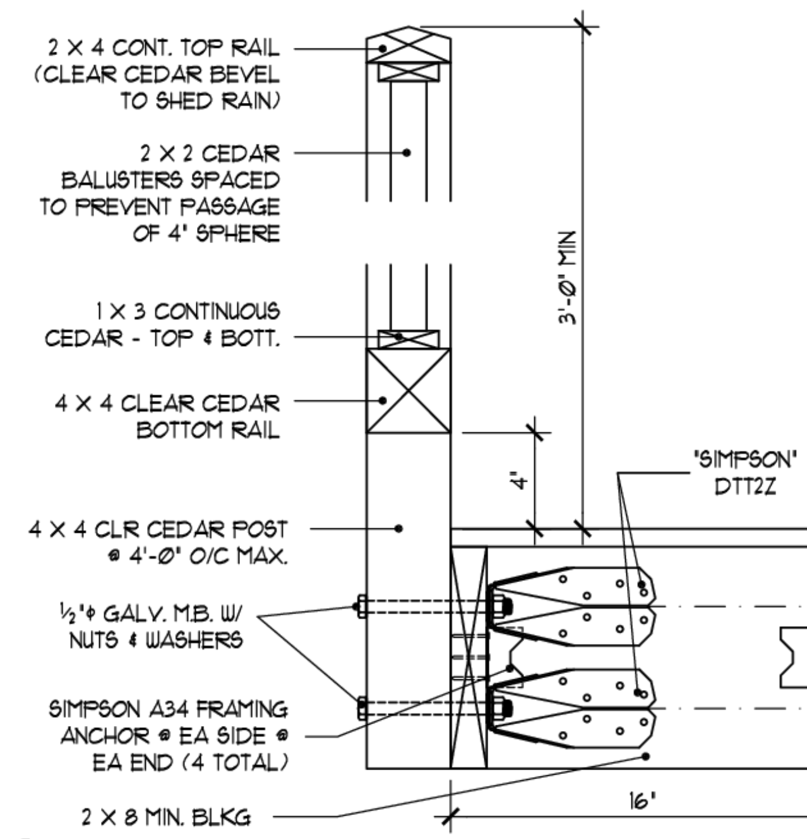
2 DECK LEDGER (TYP U.N.O.)

¾" = 1'-0" DECKLATCONN



3 DECK RAILING

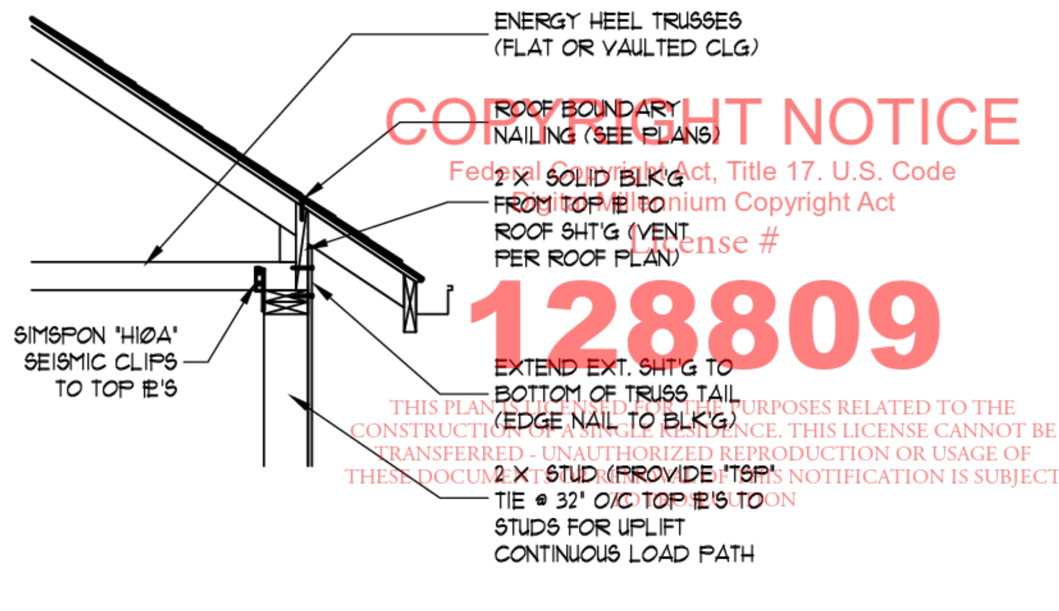
SCALE : 1 1/2" = 1'-0" M-DRAIL5 REV. 01/04/18



4 DECK RAILING

@ DECK SIDES

SCALE : 1 1/2" = 1'-0" M-DRAIL6 REV. 01/04/18



5 TRUSS CONNECTION

SCALE : 1/2" = 1'-0" TYP @ ENERGY HEEL TRUSS

01/09/15 ENERGY-HEEL-TRUSS-CONN

MASCORD GENERAL NOTES 12/27/19

MASCORD COLLECTION

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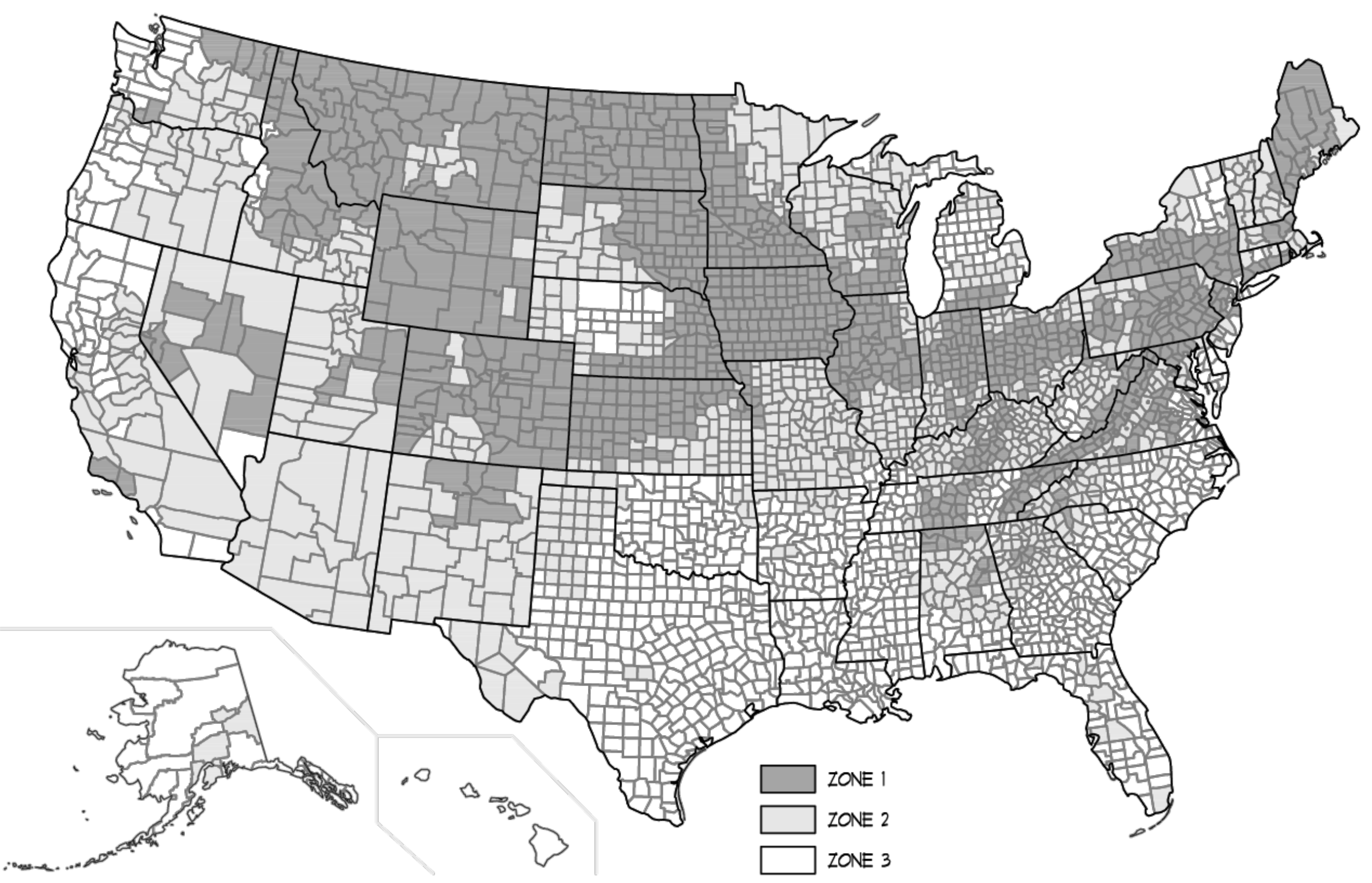
1247-GN
PROJECT MANAGER:EAS
DRAWN 05/22/13 LAW

25# SNOW LOAD

MAIN FLOOR	2135 SQ. FT.
TOTAL AREA	2135 SQ. FT.
GARAGE AREA	+ 496 SQ. FT.

1247
GN



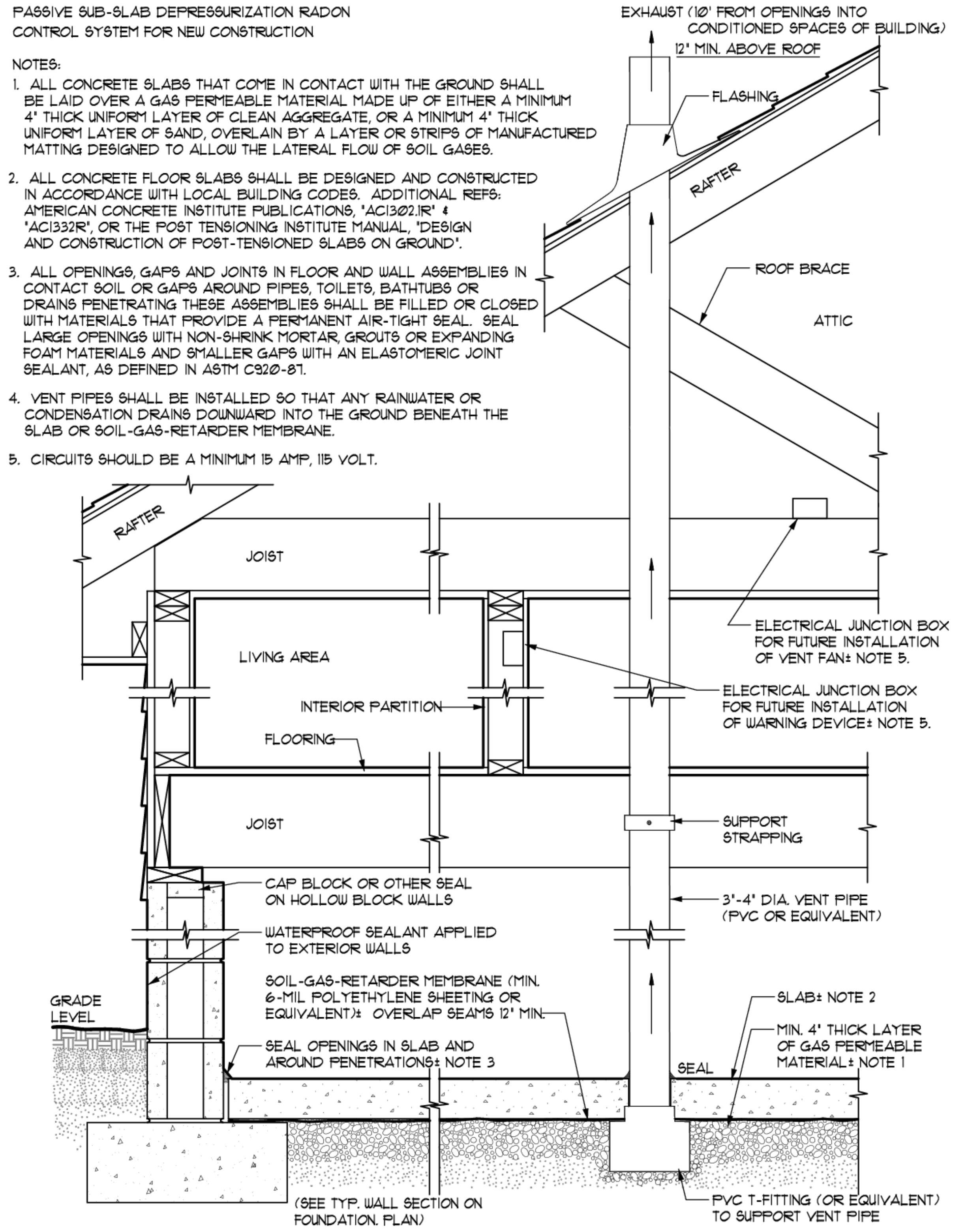
EPA RADON ZONES

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.

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, "ACI302.1R" & "ACI332R", 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 AIR-TIGHT 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, 115 VOLT.

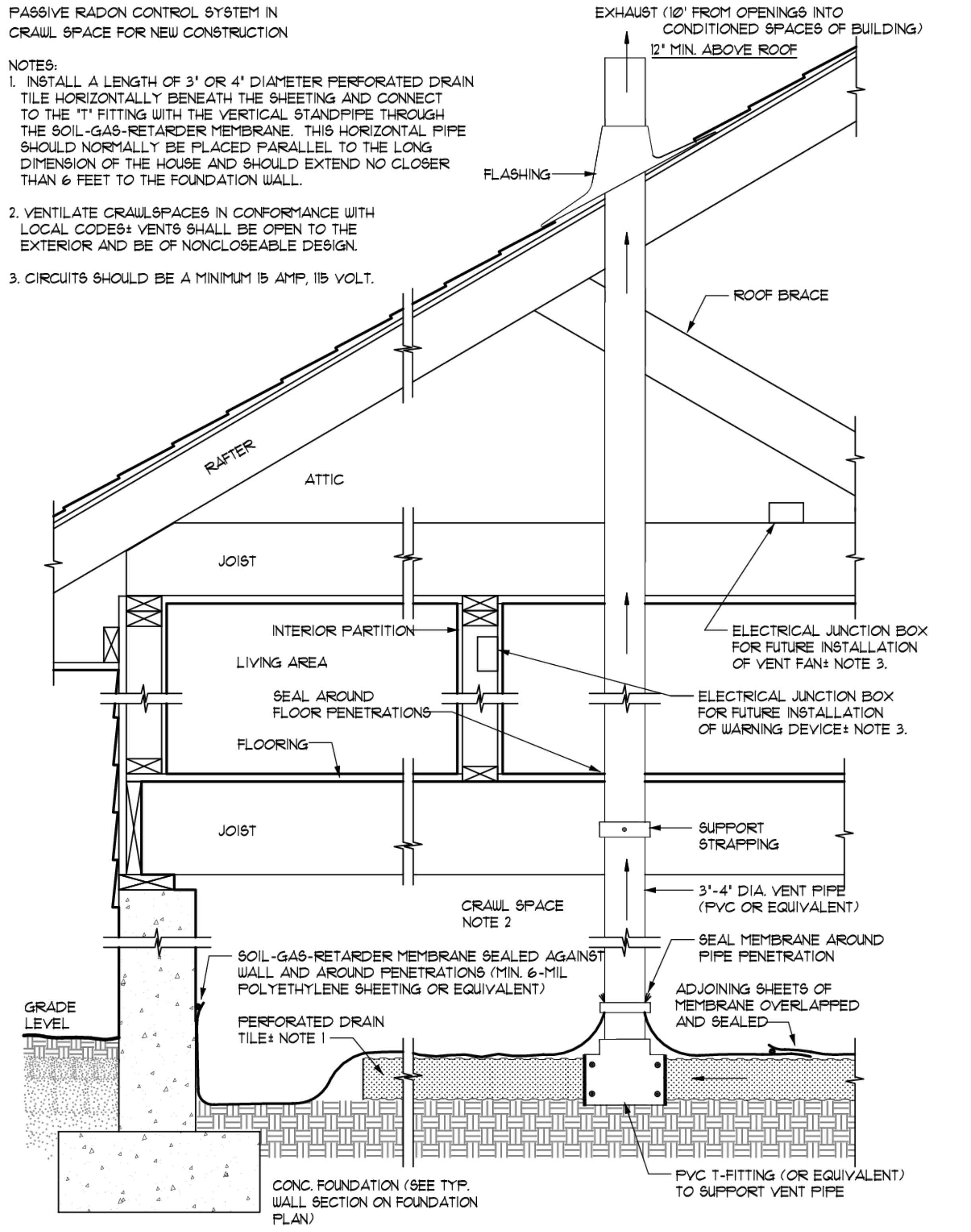


SLAB ON-GRADE/BELOW-GRADE (BASEMENTS) SUB-MEMBRANE DEPRESSURIZATION SYSTEM

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, 115 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 O.R.S.C., 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 2015 I.R.C./WAC 51-51-60101 (AF101 & AF103).

FOLLOWING THE U.S. E.P.A. "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 VARIANTS 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 SOME 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 SOME 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 DECOMPRESSION SYSTEM, THE LID MUST BE DESIGNED TO ACCOMMODATE THE VENT PIPE. WHERE USED AS A FLOOR DRAWING, 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 ¼", 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 (AF103.5, EXCEPTION)

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

METHOD #2 - PASSIVE SUB-MEMBRANE DEPRESSURIZATION SYSTEM (AF103.5.1)

- 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 PASCAL'S 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 N1101.1(3).

VENTILATION AIR REQUIREMENTS (cfm)

FLOOR AREA (FT.²)	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-7	>7
<1,500	30	45	60	75	90
1,501-3,000	45	60	75	90	105
3,001-4,500	60	75	90	105	120
4,501-6,000	75	90	105	120	135
6,000-7,500	90	105	120	135	150
>7,500	105	120	135	150	165

TABLE M1507.3.3(1)

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 SMALL ENOUGH TO PASS THROUGH A 2" SIEVE AND BE RETAINED BY A ¼" 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 INCRAWLSPACES 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 INSTERED 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 LABLE ON EACH FLOOR AND IN ACCESSIBLE ATTICS. THE LABEL SHALL READ: "RADON REDUCTION SYSTEM."

POWER SOURCE REQUIREMENT

- TO ACCOMMODATE FUTURE INSTALLATION OF AN ACTIVE SUB-MEMBRANE 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).

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1247-R
PROJECT MANAGER:EAS
DRAWN 05/22/13 LAW

25# SNOW LOAD

MAIN FLOOR 2135 SQ. FT.
TOTAL AREA 2135 SQ. FT.
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