

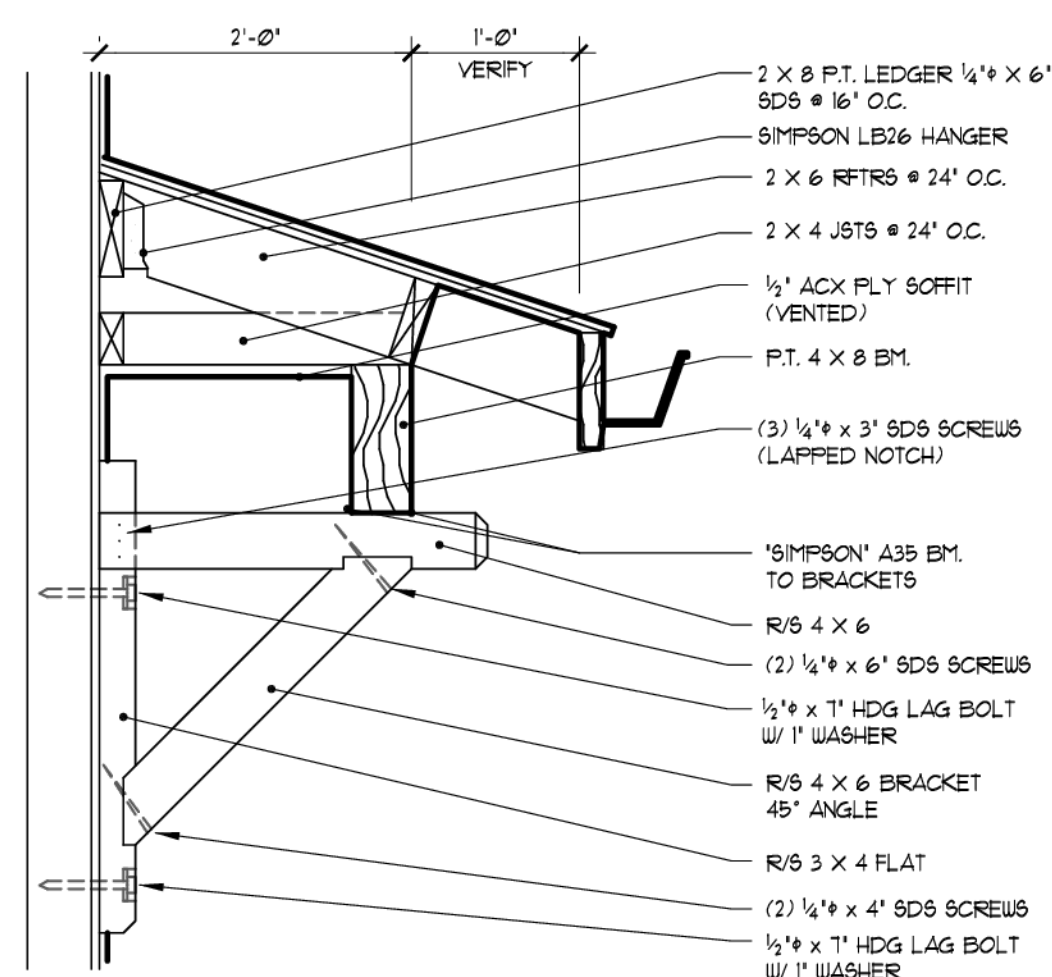
RIGHT SIDE ELEVATION

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



REAR ELEVATION

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



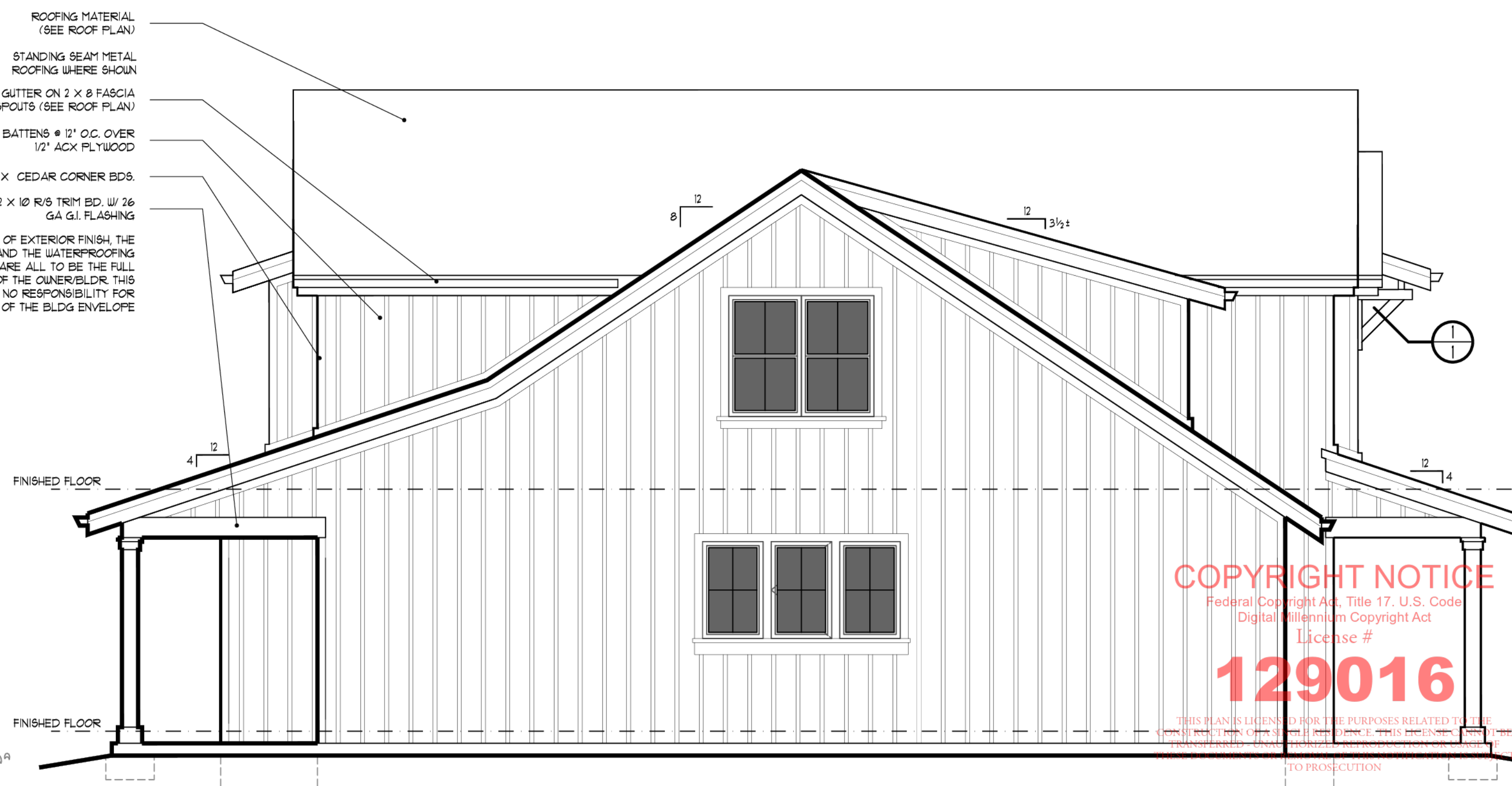
1 SHED ROOF

SCALE : 1" = 1'-0"



FRONT ELEVATION

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



LEFT SIDE ELEVATION

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

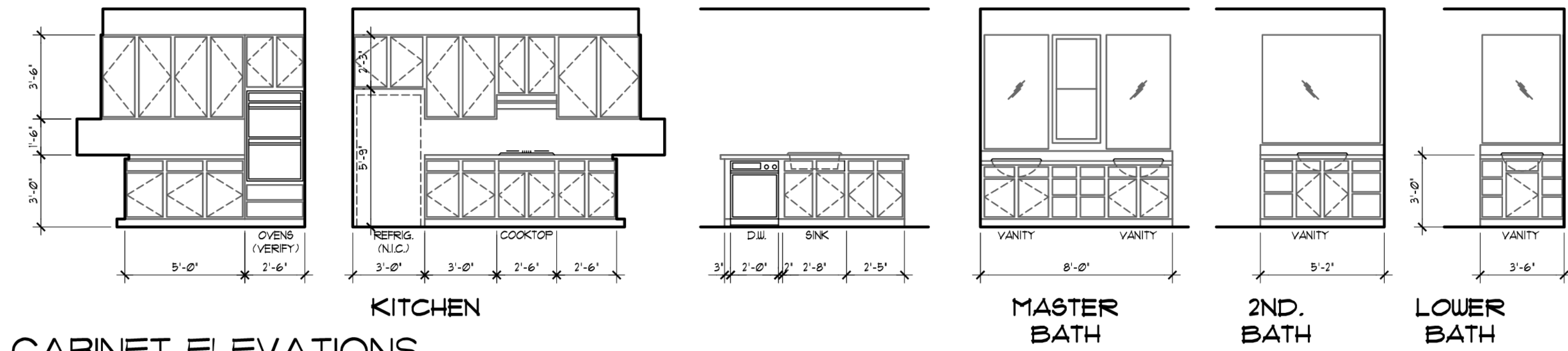
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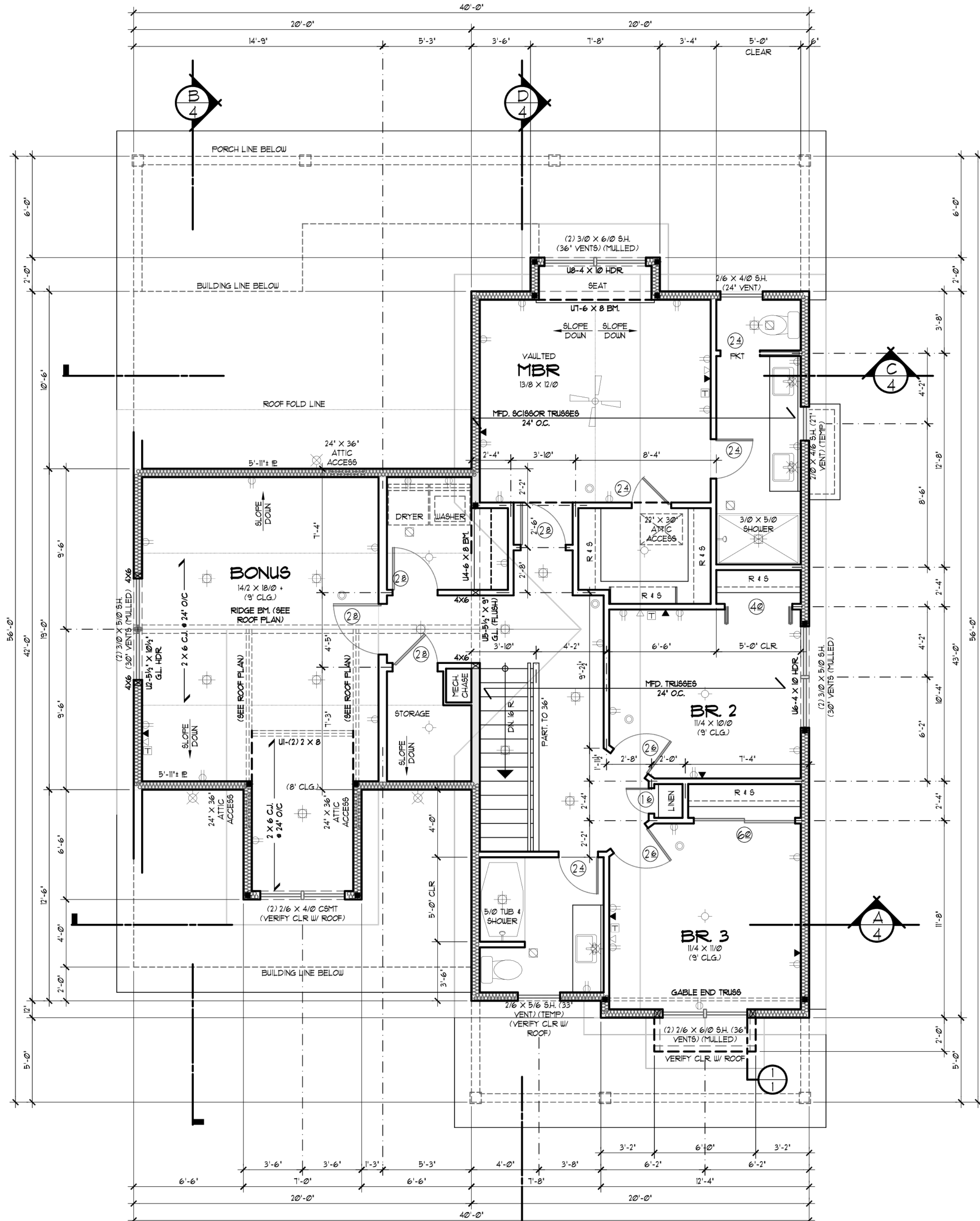
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UPPER FLOOR	936 SQ. FT.	BONUS ROOM	321 SQ. FT.
MAIN FLOOR	1175 SQ. FT.	GARAGE AREA	520 SQ. FT.
SUB TOTAL	2112 SQ. FT.		



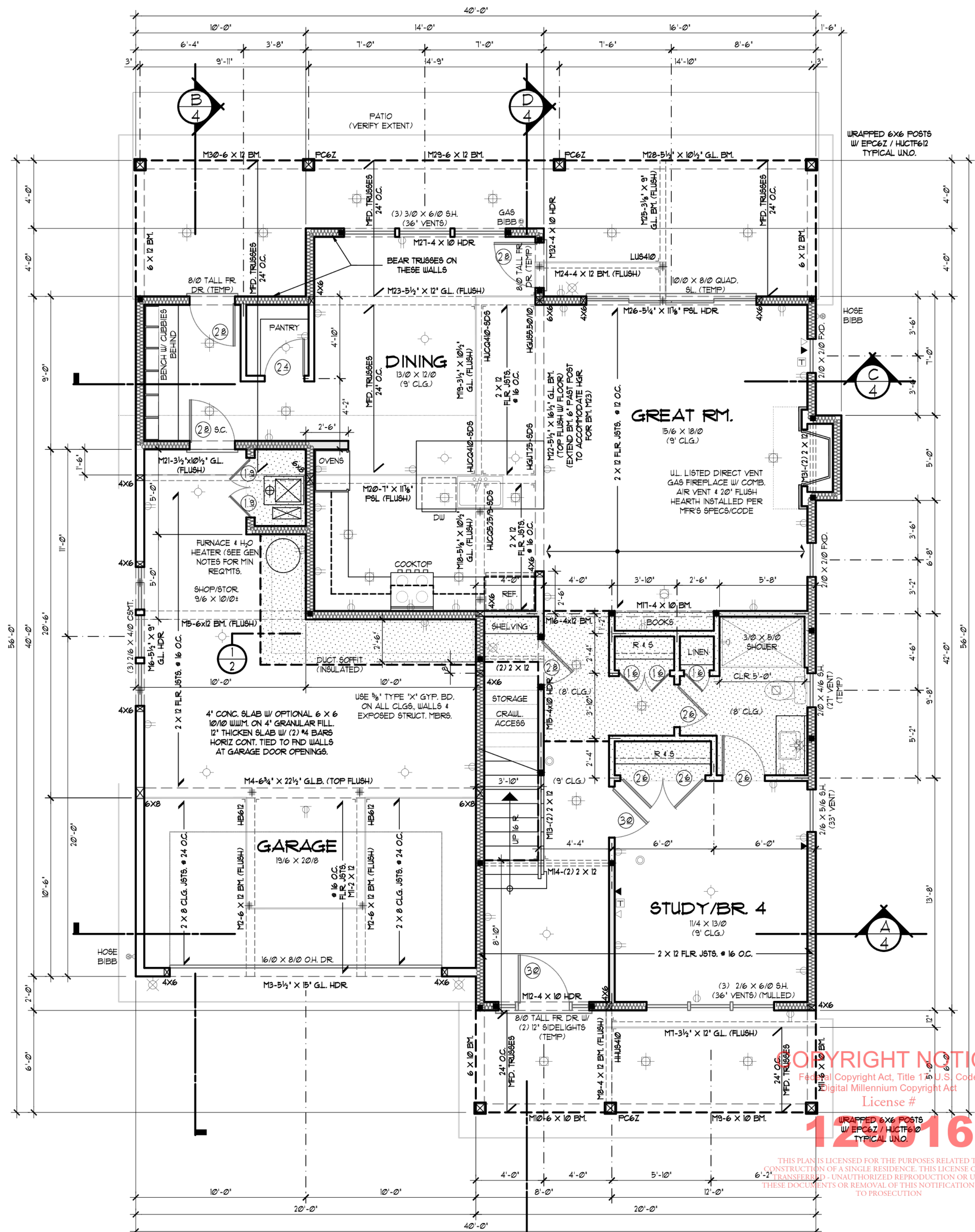
CABINET ELEVATIONS

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



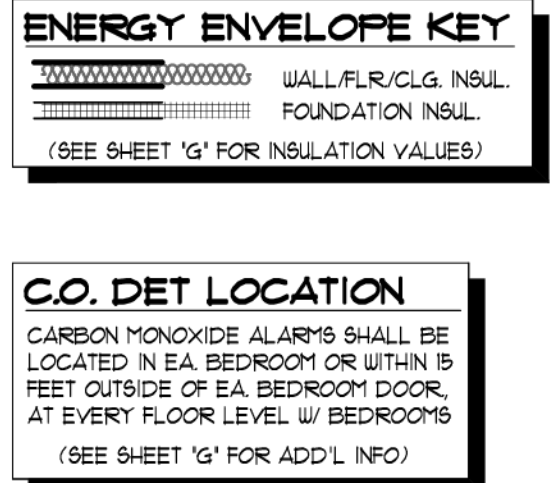
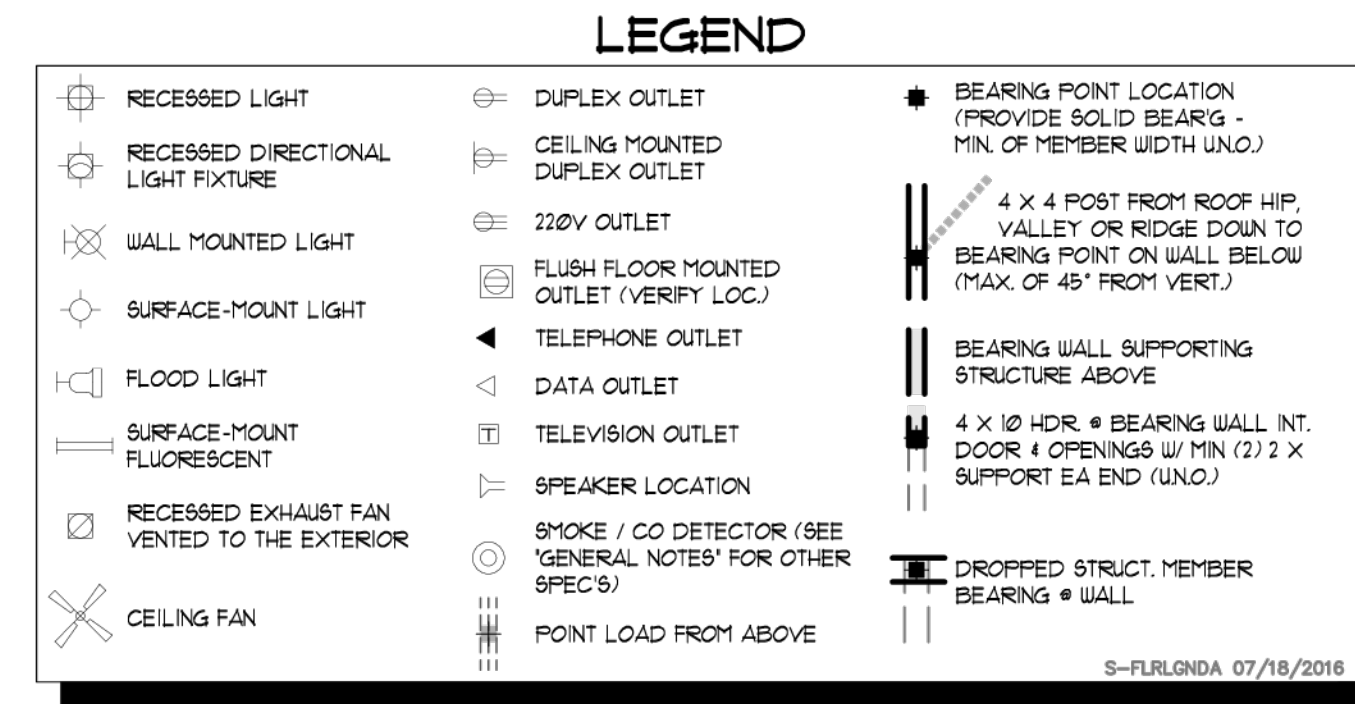
UPPER FLOOR PLAN

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



MAIN FLOOR PLAN

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



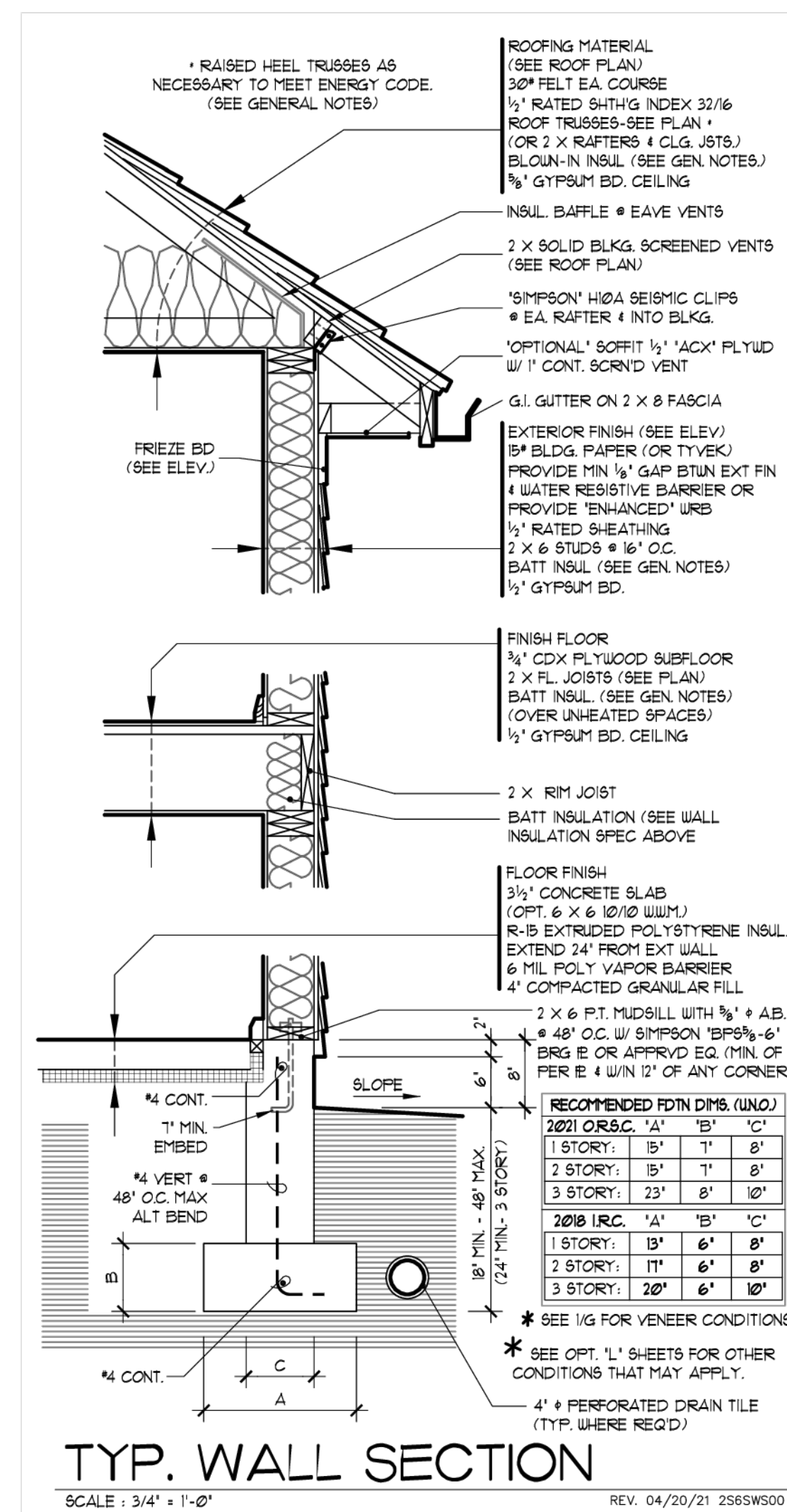
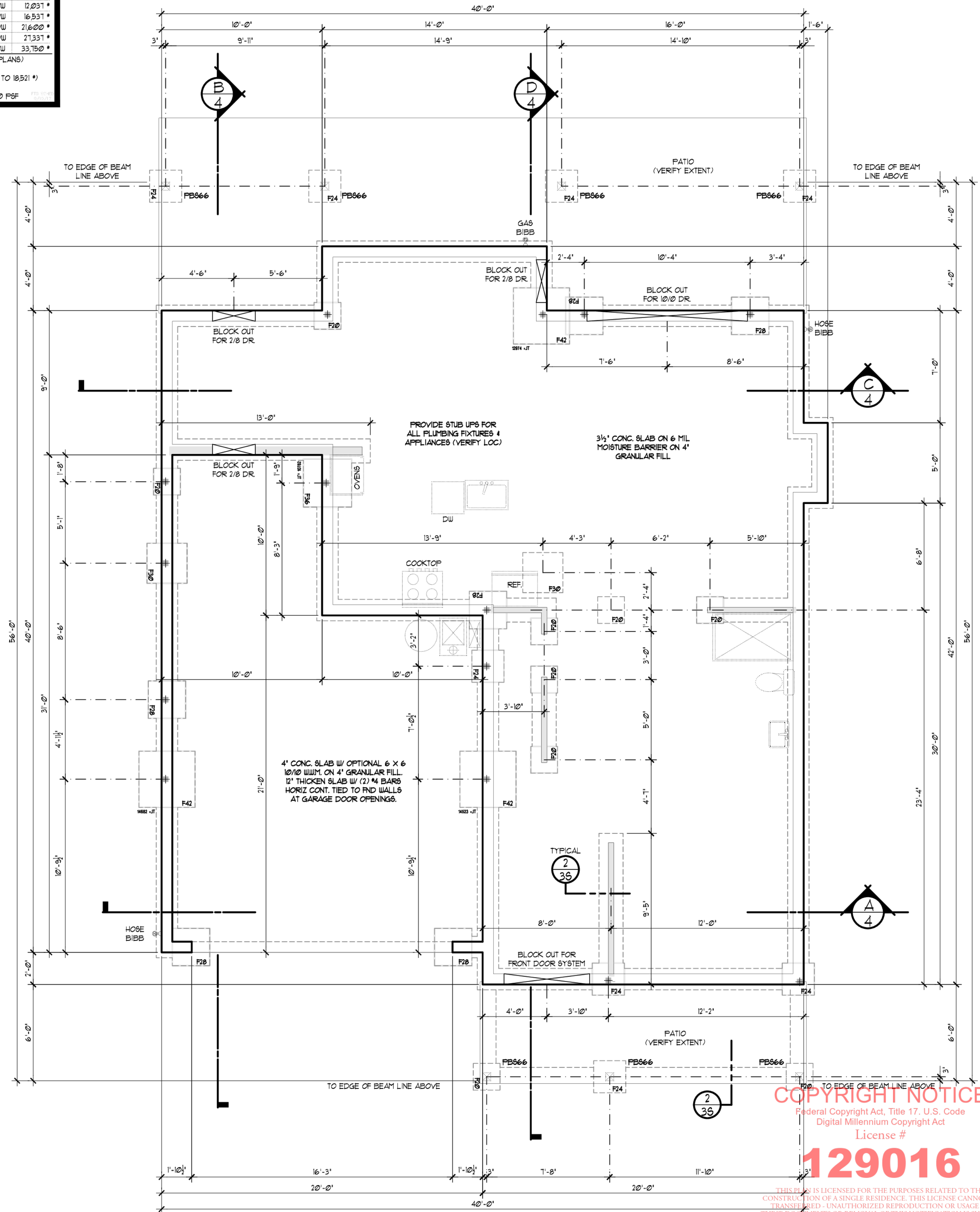
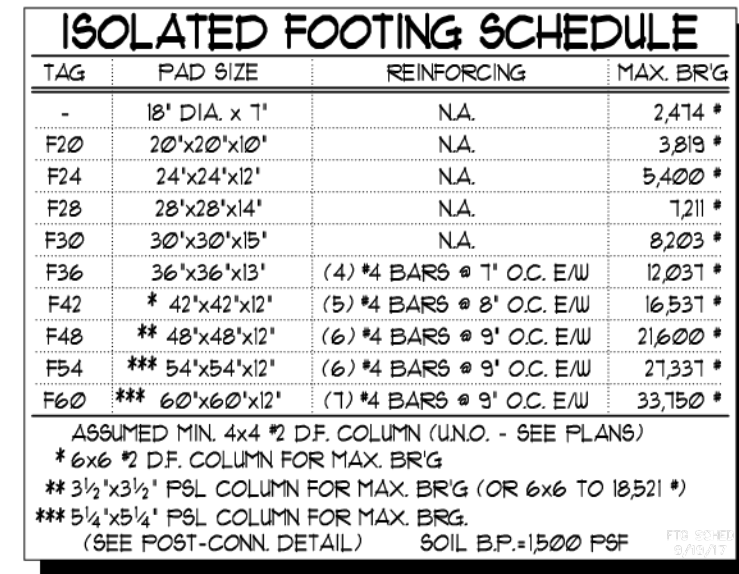
2164F
2 M

25# SNOW LOAD

UPPER FLOOR	938 SQ. FT.	176 SQ. FT.	212 SQ. FT.	321 SQ. FT.	520 SQ. FT.
MAIN FLOOR					
SUB TOTAL					
BONUS ROOM					
GARAGE AREA					

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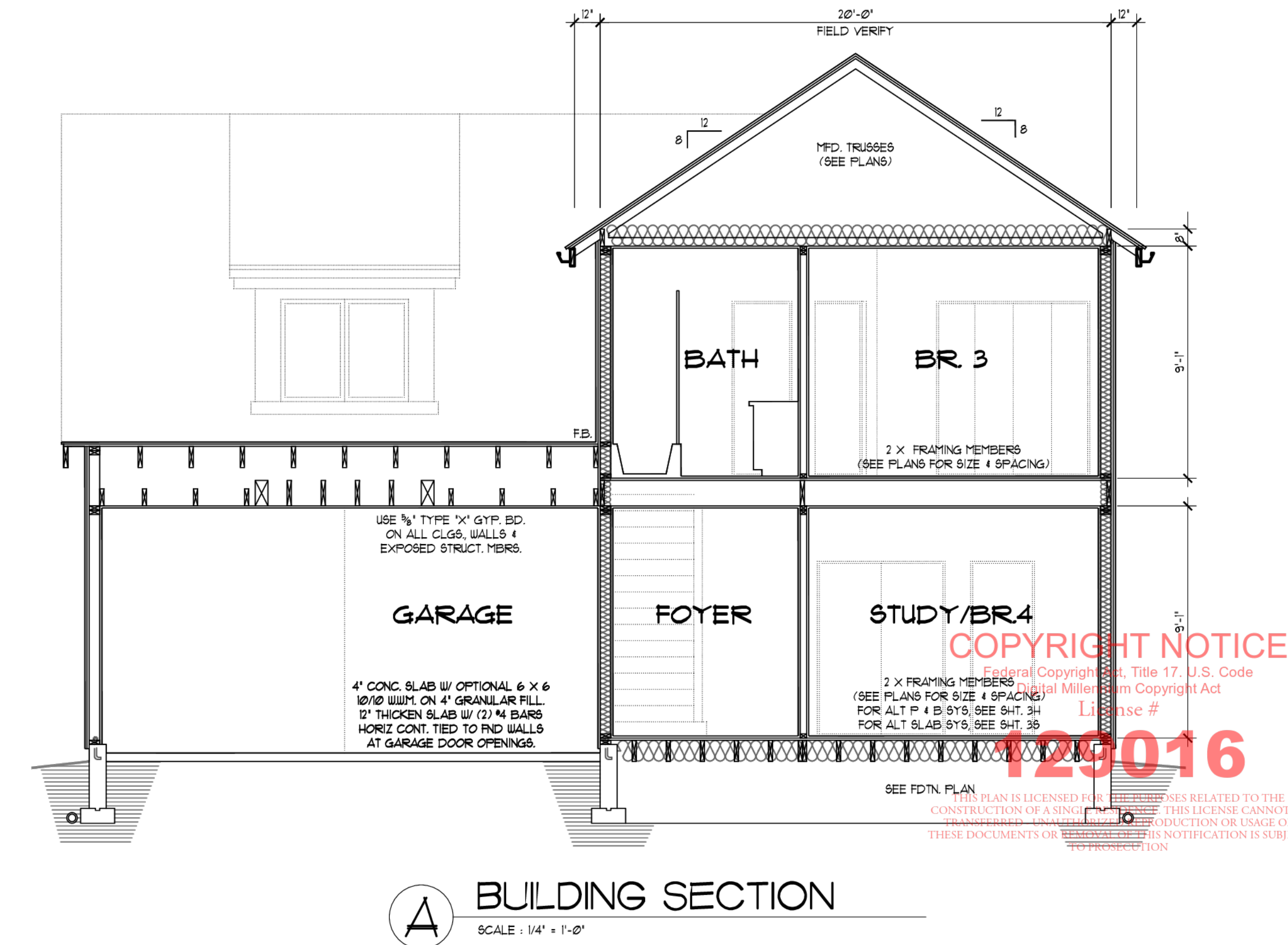
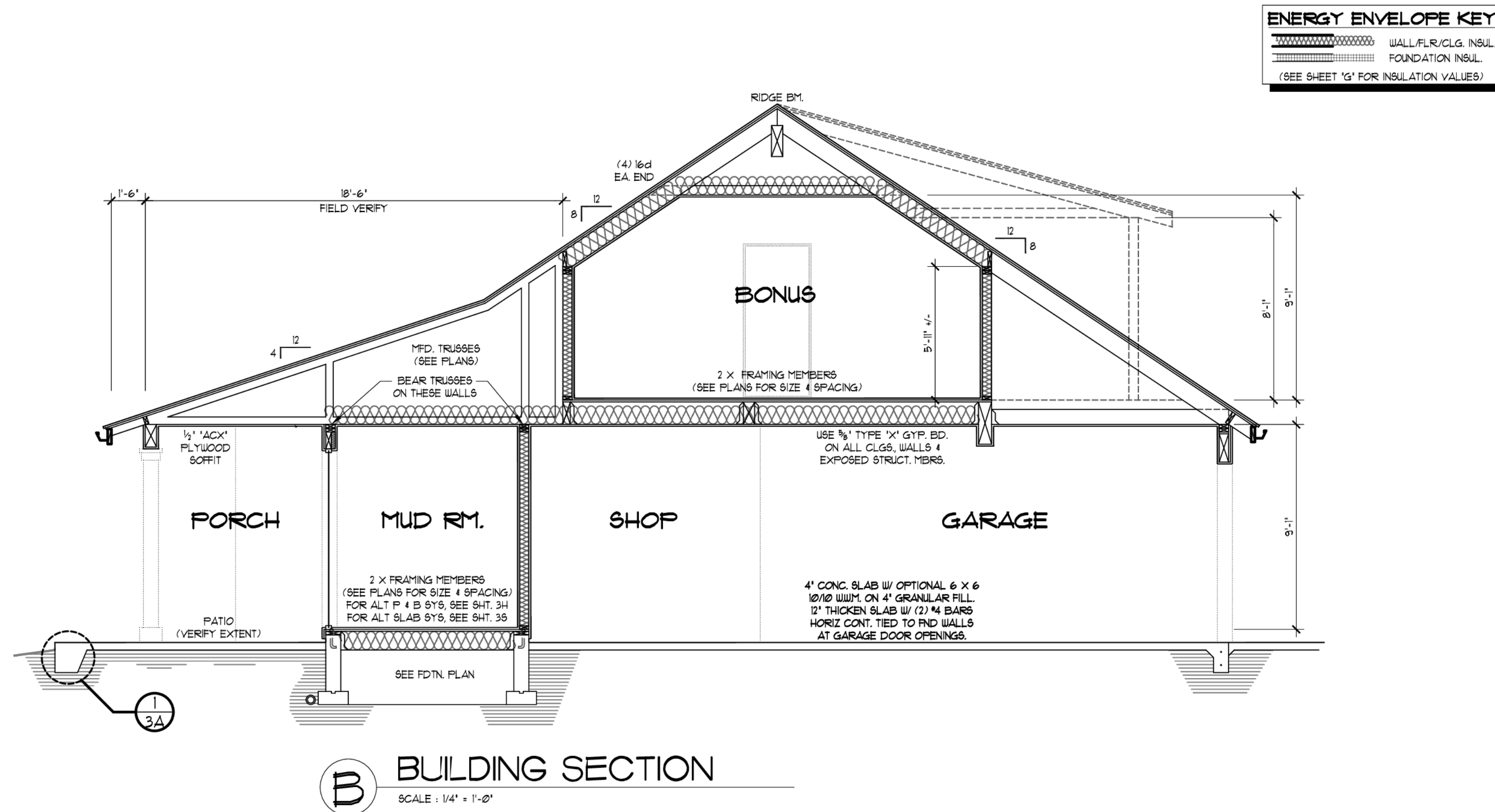
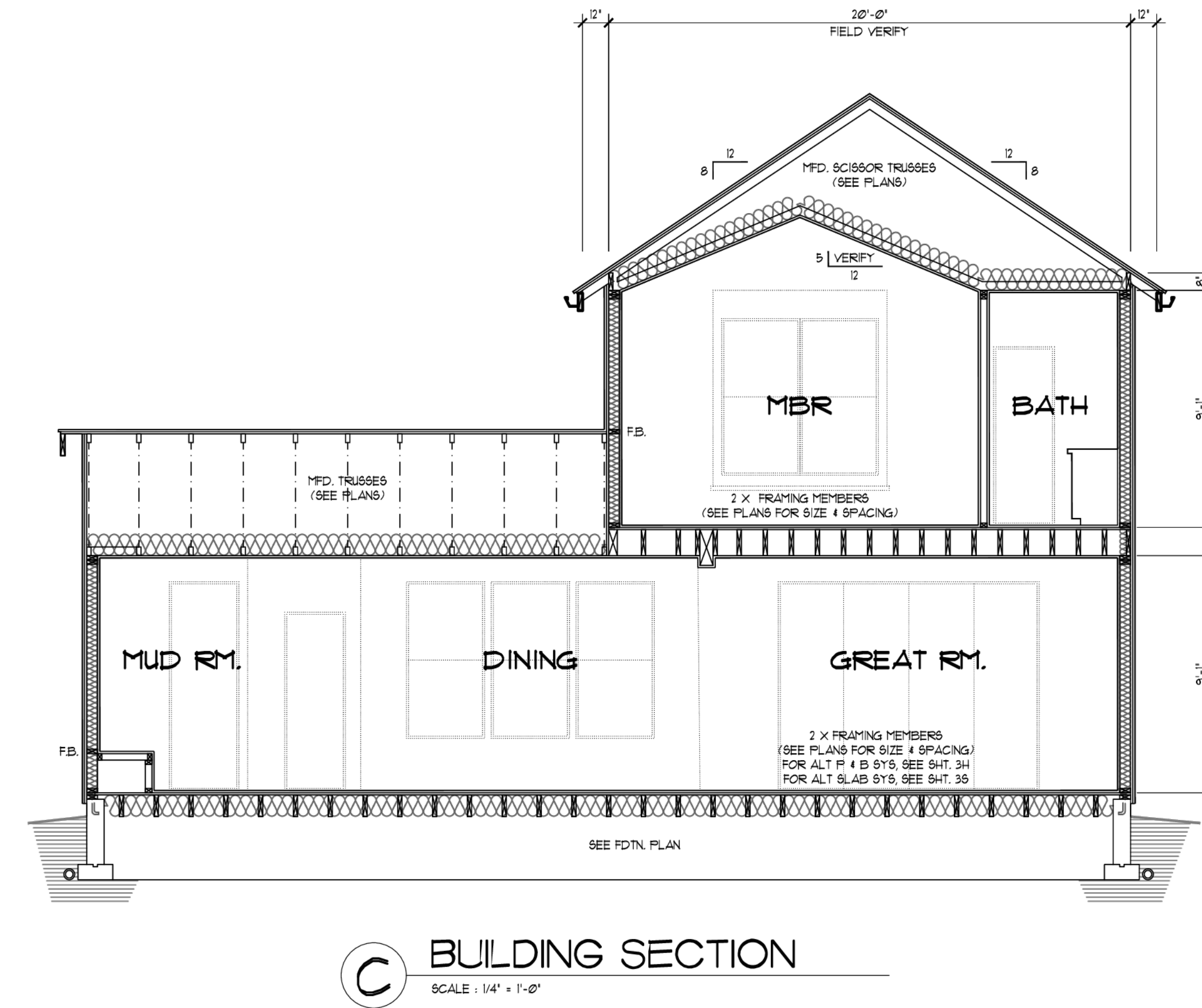
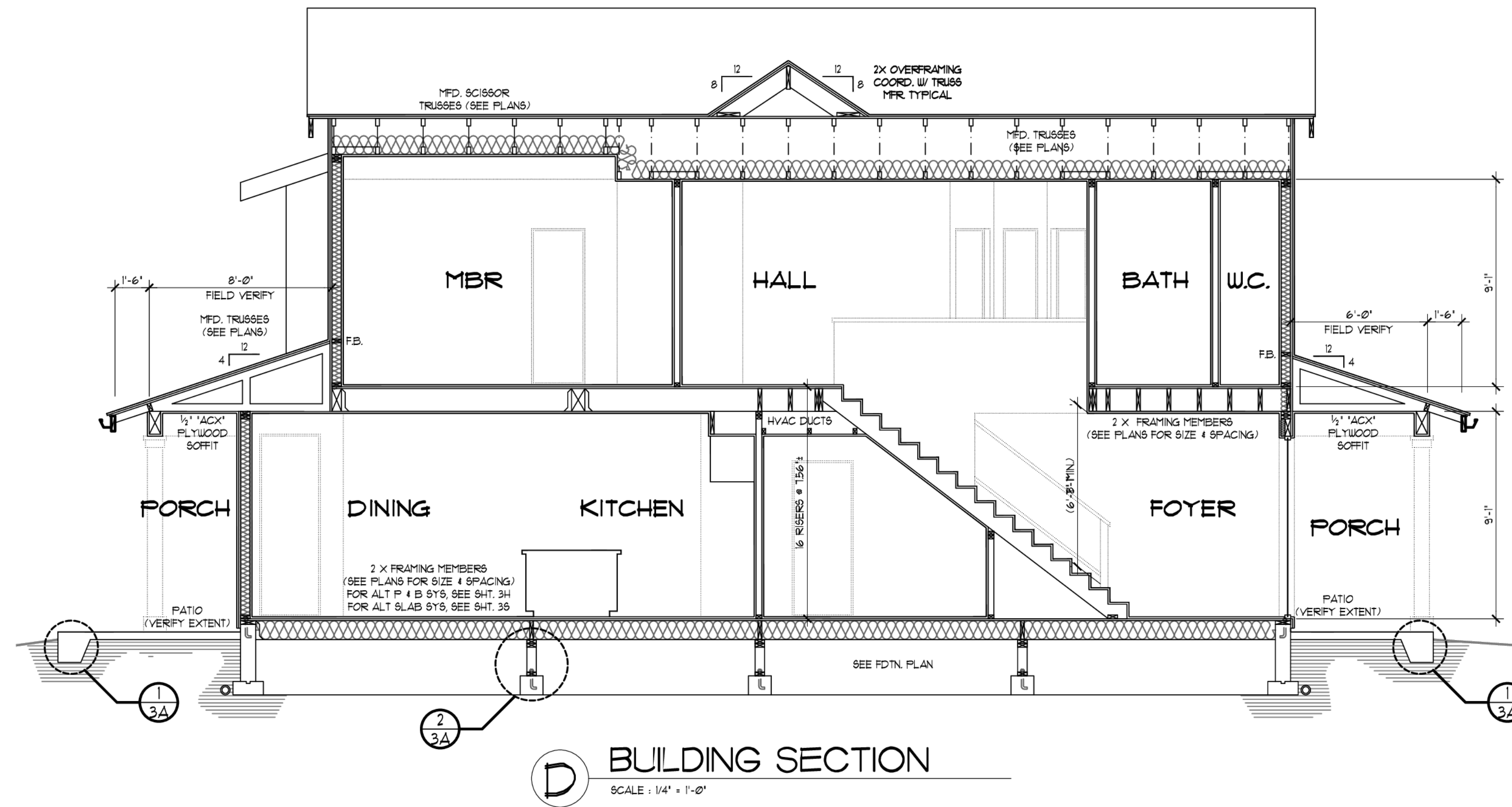
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PROJECT MANAGER: JEFFREY MASCORD
DRAWN: 07/28/20 LAW
REV: 10/05/21 JRE



FOUNDATION PLAN

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

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ENERGY ENVELOPE KEY	
	WALL/FLOOR/CEILING INSUL.
	FOUNDATION INSUL.
(SEE SHEET 'G' FOR INSULATION VALUES)	

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2164F
4 M

25# SNOW LOAD

UPPER FLOOR	938 SQ. FT.		
MAIN FLOOR	1175 SQ. FT.		
SUB TOTAL	2113 SQ. FT.		
BONUS ROOM	+ 321 SQ. FT.		
GARAGE AREA	+ 520 SQ. FT.		

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	325 PSF	AVE (NET)
FRAMING MATERIALS:	2.0 PSF	3325 PSF	ACTUAL REQ'D
SHEATHING MATERIALS:	15 PSF	6.75 PSF	SAFETY FACTOR
MISC. MATERIALS:	15 PSF		
ROOFING TYPE	DRY / WET	40.0	PSF TL
MED SHAKES	2.0 / 3.25 PSF		
W/VT SHAKES	3.0 / 4.0 PSF		
SHINGLES	2.0 / 3.25 PSF		
COMPOSITION	2.5 / 3.0 PSF		
GYPSUM MATERIALS: ADD 3.0 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
- 0" DOWNSPOUTS

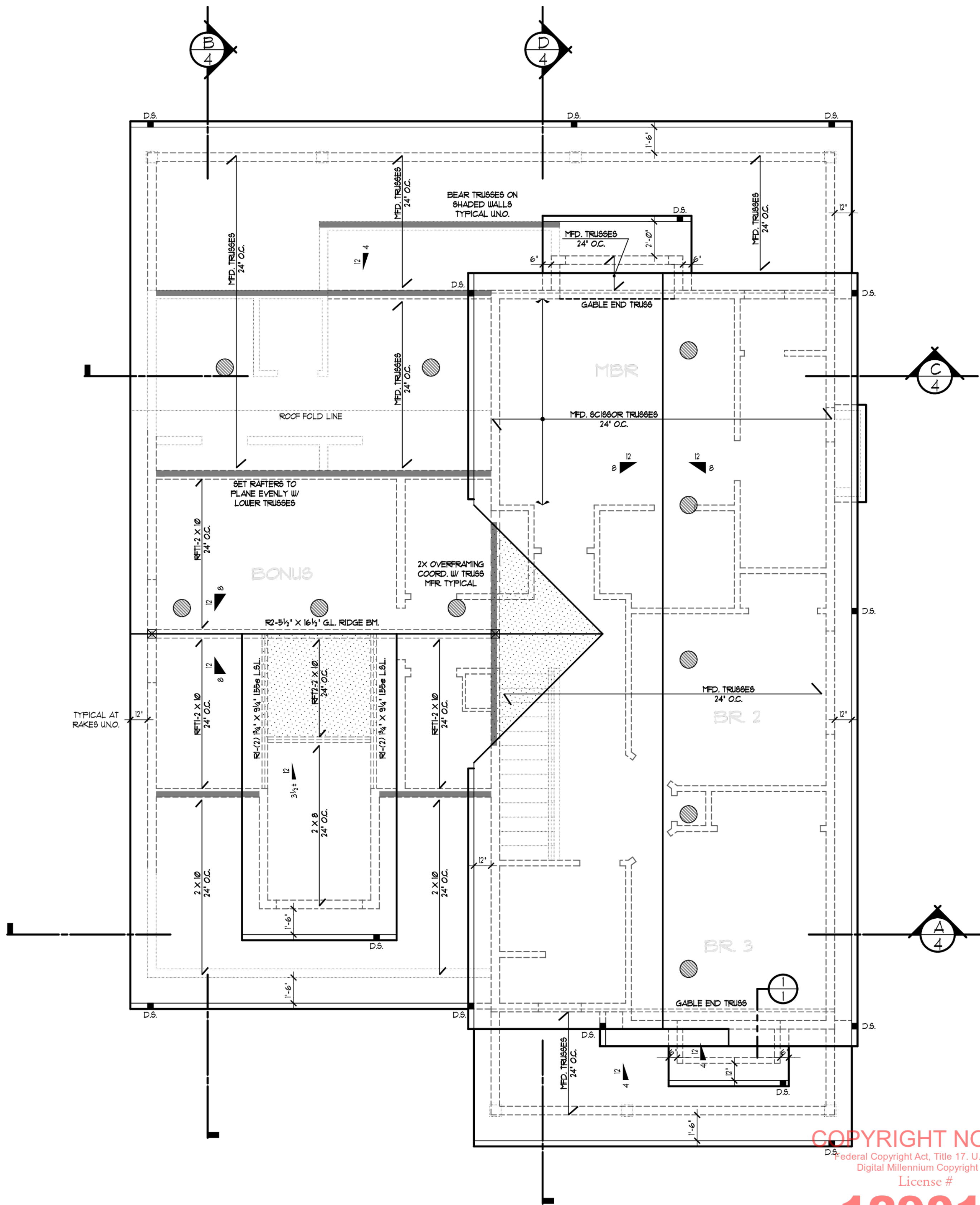
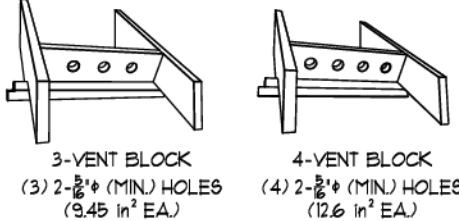
COMP/SHAKE ROOF

MAXIMUM SPANS		
PER 2004 WUPA TEL RR-28		
25' LL 4" 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'-1"
	16' O.C.	18'-9"
	24' O.C.	15'-3"
2X12	12' O.C.	25'-1"
	16' O.C.	21'-9"
	24' O.C.	17'-9"

ROOF VENTS					
ROOF AREA (ft ²) + 2000			EAVE-BLOCK'G		
% EAVE	AREA (ft ²)	% ROOF	AREA (ft ²)	3-VENT	4-VENT
60	599.0	40	399.4	64	48
56.7	566.1	43.3	432.3	60	45
53.3	532.1	46.7	466.3	56	42
50	499.2	50	499.2	53	40

PER 2004 IBC - R902.2 THE MIN NET FREE VENTILATING AREA SHALL BE 1/600 OF THE AREA OF THE VENTED SPACE.
EXCEPTION: THE MIN NET FREE VENTILATING 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 1 OR 1 VAPOR RETARDER IS INSTALLED ON THE WARM-INTERIOR SIDE OF THE CEILING.
NOT LESS THAN 40 PERCENT AND NOT MORE THAN 80 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR UPPER SPACE. UPPER VENTILATORS SHALL BE LOCATED NOT MORE THAN 3 FEET FROM THE RIDGE OR HIGHEST POINT OF THE SPACE REMAINING VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. THE LOCATION OF WALL OR ROOF FINISHING FEATURES CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS. INSTALLATION MORE THAN 3 FEET FROM THE RIDGE OR HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

EAVE BLOCKING



ROOF FRAMING PLAN

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

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

ROOF PLAN TO BE VERIFIED W/ TRUSS LAYOUT AND DESIGN BY TRUSS MFR. SEE LAYOUT, TRUSS DRAWINGS AND ENGINEERING, BY MFR, FOR ADDITIONAL SPECIFICATIONS AND INSTALLATION REQUIREMENTS.

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25# SNOW LOAD

UPPER FLOOR	936 SQ. FT.	BONUS ROOM	321 SQ. FT.
MAIN FLOOR	1176 SQ. FT.	GARAGE AREA	520 SQ. FT.
SUB TOTAL	2112 SQ. FT.		

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 2015 I.R.C./WAC 51-51-60101 (AF101) & AF103).

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 VARIANTS TO THESE GUIDELINES.

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:

- 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.

- CRACKS IN SUBFLOORING AND FLOORING
- SPACES BEHIND STUD WALLS AND BRICK VENEER WALLS THAT REST ON UNCAAPPED 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

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 DRAINING, THE SUMP PIT LID SHALL HAVE A TRAPPED INLET.

DUCTWORK PASSING THROUGH A CRAWLSPACE MUST HAVE ALL SEAMS AND JOINTS SEALED (PER M160.41). 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.

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

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

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

- 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)

- 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.
- DUELLINGS SHALL BE TESTED WITH A BLOWER DOOR DEPRESSURIZING TEST TO DUELLINGS TO DUELLINGS FROM ADJACENT CONDITIONS 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 N101(3).

FLOOR AREA (sq.ft.)	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-1	>1
<1501	30	45	60	75	90
1501-3,000	45	60	75	90	105
3,001-4,500	60	75	90	105	120
4,501-6,000	75	90	105	120	135
6,000-15,000	90	105	120	135	150
>15000	105	120	135	150	165

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.

- 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:

- THE SOIL IN CRAWL SPACES 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.

- A PLUMBING TEE OR OTHER APPROVED CONNECTION SHALL BE INSTALLED HORIZONTALLY BENEATH THE SOIL-GAS-RETARDER BELOW THE CONCRETE CONSTRUCTION. THE TEE SHALL BE WITH A VERTICAL VENT PIPE INSTALLED THROUGH THE SHEETING.
- THE VENT PIPE SHALL BE EXTENDED UP THROUGH THE BUILDING FLOOR JOIST SPACE TO THE FINISHED FLOOR SURFACE IN A LOCATION AT LEAST 10 FEET AWAY FROM ANY WINDOW OR OTHER OPENING INTO THE CONDITIONED SPACES OF THE BUILDING THAT IS IN CONTACT WITH THE EXTERIOR AIR. THE VENT PIPE SHALL BE INSTALLED WHERE INTERIOR FOOTINGS OR OTHER BARRIERS SEPARATE THE SUB-IRREVERSIBLE AIR FROM THE FINISHED FLOOR 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 FOR 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 EXTERIOR BENEATH THE SLAB OR SOIL-GAS-RETARDER
- RADON VENT PIPES SHALL BE ACCESSIBLE FOR FUTURE FAN INSTALLATION THROUGH THE ROOF OR THROUGH THE EXISTING 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".

• 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 AT AREA

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).



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.

